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Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: Starway Village Apartments

Project Location: 2346 Carolina Beach Rd. (U.S. Highway 421), Wilmington, New Hanover County, North Carolina 28401

Federal Agency: U.S. Department of Housing and Urban Development (HUD)

Responsible Entity: North Carolina Office for Recovery and Resiliency (NCORR)

Project Administrator: North Carolina Housing Finance Agency (NCHFA)

Grant Recipient: Starway Village I/II, LLC

State/Local Identifier: B-19-DV-37-0001 and B19-DV-37-0002

Preparer: Andrea Gievers, Environmental SME, NCORR

Certifying Officer Name and Title: Laura Hogshead, Director, NCORR

Consultant: Chris Daves, P.W.S. – Senior Scientist, S&ME, Inc.

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Project Location:

The project area site is located at 2346 Carolina Beach Road (U.S. Highway 421) in Wilmington, New Hanover County, North Carolina 28401 (Attachment 1). This project area is comprised of approximately 15.67 acres consisting of the following four contiguous tax parcels: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre).

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The proposed project involves the construction of an affordable multifamily apartment complex with 278 units (34 one-bedroom, 154 two-bedroom, and 90 three-bedroom) in seven buildings, two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. The buildings will be three (3) and four (5) stories tall. An extension of Maryland Avenue east across the southern portion of the site to Carolina Beach Road is also proposed. The proposed project will be conducted in two phases with Phase I consisting of the eastern and northern portions of the overall site. Water and sewer utilities are located along nearby streets and only short connections to the site will be necessary.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The purpose and need of the proposal is to provide quality, affordable housing opportunities to low- to moderate-income families and others in an area that needs it. Demand for low- to moderate-income and market-rate housing is driven by a lack of affordable housing in this area of Wilmington.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families. Therefore, funding for the proposed project will be provided in part by the HUD CDBG-DR North Carolina's Affordable Housing Development Fund Program for Hurricane Florence storm recovery activities in North Carolina.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The proposed project site is primarily open land situated in a mixed-used area in the southern portion of the City of Wilmington. The proposed project site was historically, mainly used as a commercial flea market (Starway Flea Market) with the associated infrastructure remaining vacant on the site. Two single-family residences (one occupied and one vacant) and Carolina Auto Sales are located on the southeastern portion of the proposed project site, and will be demolished prior to site construction.

Immediately surrounding land uses consist of single-family residences (Sunset Park) to the west; the Pine Terrace Mobile Home Park to the south; a Duke/Progress Energy substation to the north; and commercial parcels located east, northeast, and southeast along Carolina Beach Road. Commercial parcels consist of numerous car and boat repair/parts businesses, a restaurant (Merritt's Burger House), an ABC store, and South Square Plaza. Additional residential, commercial, and recreation parcels are located within a 0.25-mile radius of the site.

Multiple commercial facilities, including convenience stores and restaurants, are located within a two-mile radius of the proposed project site. Banks, schools, medical facilities, pharmacies, retailers, and service providers are also located within several miles of the proposed project site along Carolina Beach Road to the northeast and southeast and surrounding downtown Wilmington area approximately two miles north.

In the absence of the proposed project, the proposed project site is likely to remain vacant and will not be used to create value by generating tax revenue, creating affordable housing for low- to moderate-income families, and improving the character and neighborhood dynamics of the area. In addition, the City's need for affordable housing would not be addressed.

Funding Information

Grant Number	HUD Program	Funding Amount
B-19-DV-37-0001 and B-19-DV-37-0002	CDBG-DR	$9,000,000.00

Estimated Total HUD Funded Amount: $9,000,000.00

Non-HUD Funding Source: Bank Loan
Non-HUD Funding Amount: $25,816,088.00
Non-HUD Funding Source: City of Wilmington Loan (ARPA)
Non-HUD Funding Amount: $3,500,000.00
Non-HUD Funding Source: Federal LIHTC
Non-HUD Funding Amount: $28,546,647.00
Non-HUD Funding Source: New Hanover County Loan (ARPA)
Non-HUD Funding Amount: $1,896,698

Estimated Total Non-HUD Funded Amount: $59,759,433.00

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $68,759,433.00

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, & REGULATIONS LISTED AT 24 CFR 50.4 & 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The proposed project site is not located within a Runway Protection/Clear Zone (2,500′ from civil airport runway) or Accident Potential Zone (15,000′ from military airport runway). The proposed project is in compliance with Airport Hazards requirements. See Airport Hazards Exhibit (**Attachment 2**).
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	This proposed project is not located in or in proximity to a Coastal Barrier Resources System (CBRS) unit. However, New Hanover County does contain CBRS units. The closest unit is located 5.4 miles away from the proposed project site based on the U.S. Fish and Wildlife Service (USFWS) CBRS Mapper. Therefore, this proposed project has no potential to impact a CBRS Unit or Otherwise Protected Area (OPA), and is in compliance with the Coastal Barrier Resources Act. See CBRS exhibit (**Attachment 3**).
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel Number 3720312600K (eff. 8/28/18), the proposed project site is wholly located in Zone X (Areas of Minimal Flood Hazard), outside of the Special Flood Hazard Area (SFHA) and 100-year floodplain. The proposed project site does not include any areas of regulatory floodway. There are no Preliminary FIRMs available at the FEMA Flood Map Service Center for the proposed project site. Therefore, flood insurance is not required for the proposed project. While flood insurance is not mandatory

		for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The proposed project is in compliance with flood insurance requirements. See FEMA FIRM and county mapping (**Attachment 4**).
STATUTES, EXECUTIVE ORDERS, & REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	According to the EPA NC Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants (Green Book) dated October 31, 2022, the proposed project site is not located in a county in nonattainment or maintenance status for any criteria pollutants. The construction and operation of the facility is exempted from NC State air quality permit requirements under 15A NCAC 02Q. 0102(d) since emissions will be below the established thresholds. Thus, the proposed project's emissions are automatically considered de minimis (40 CFR § 93.153(c)(2)) and the proposed project is considered compliant with the State Implementation Plan. The proposed project would not exceed de minimis emissions levels for federal general conformity purposes (40 CFR §93.153(c)(2)). The proposed project involves new construction of a multifamily residential structure with amenities. The proposed project will not generate significant levels of vehicular traffic. The proposed project would generate minor emissions from additional vehicle traffic after construction. However, the number of vehicle trips associated with this proposed project and the anticipated airborne emissions would be relatively imperceptible within the context of the region's airshed. Public transportation is currently available to the proposed project site. Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM-10) such as fugitive dust and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The proposed project will conform

		to NC Air Quality Management regulations during and following construction. The contractor will use Best Management Practices (BMPs) to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and construction vehicles and machinery will operate at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting use of vehicles and other machinery to construction hours only and removal once construction is completed. Based on the EPA's Radon Zone Map, the proposed project site is located within Zone 3 with predicted average indoor radon screening levels less than 2 pCi/L (Low Potential). Due to the low potential for elevated indoor radon levels, no additional steps are required for radon mitigation. Therefore, the proposed project is in compliance with the Clean Air Act, as amended, and 40 CFR Parts 6, 51, 93. See attached Air Quality Exhibit (**Attachment 5**). Also, Recent Updates: Federal Register Notices Published or Effective After October 31, 2022 | Green Book | US EPA online.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The proposed project involves new construction and is located in a coastal zone, but it has been determined to be consistent with the State coastal management program (CZMP). The attached coastal zone map depicts the site location relative to the nearest coastal zone. Therefore, the NC Division of Coastal Management (NC DCM) was contacted to determine whether the proposed project is consistent with the State CZMP's consistency criteria. Mr. Dan Govoni of NC DCM reviewed the proposed project information submitted pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code, and concurred that the proposed activity is

		consistent with North Carolina's approved CZMP. NC DCM's correspondence and email determination are attached. The proposed project is in compliance with the Coastal Zone Management Act, sections 307 (c) and (d). See CZMA exhibit and correspondence (**Attachment 6**).
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	The proposed project site is not listed on an EPA Superfund National Priorities or Comprehensive Environmental Response Superfund National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list compiled by the US EPA and is not located within 3,000 feet of a toxic or solid waste landfill site (see EPA NEPAssist data in **Attachment 7**). A Phase I Environmental Site Assessment (ESA) (November 2021) and site inspection (11/9/2021) were completed for the property by Kimley-Horn. The Phase I ESA revealed no evidence of controlled recognized environmental conditions (CREC) or historical RECs (HREC) in connection with the property. One REC, two oil 55-gallon metal drums in poor condition, was observed at the rear of the large commercial building on the western portion of the proposed project site. A Tier 1 Vapor Encroachment Screening (VES) was completed and did not identify any Vapor Encroachment Conditions (VEC). According to the NC DEQ Underground Storage Tank (UST) Section in the State Environmental Clearinghouse comments, "no reported petroleum releases are known to exist at this location, nor are there any records of registered USTs." In response to the REC, Terracon prepared a Limited Site Investigation (2/16/2022) (see **Attachment 7**). Two borings were advanced in the area of the two 55-gallon drums and four additional borings were advanced around the onsite commercial building. Soil and groundwater samples were collected for laboratory analysis. Laboratory results of soil samples indicated the targeted analyte concentrations in soil around the drums do not exceed NC Department of Environmental Quality's (DEQ) soil-to-groundwater, residential, and/ or industrial/

		commercial Maximum Soil Contaminant Concentration Levels (MSCCs). Laboratory results of the shallow groundwater samples collected around the large, commercial structure indicate that the targeted analyte concentrations do not exceed the Title 15 North Carolina Administrative Code Section 2L.0202 – Groundwater Quality Standards. No further investigation was warranted. There are currently five buildings present on the proposed project site that were tested and will be demolished in accordance with all applicable laws below. These include: 1) a 1,500-sf, dilapidated brick commercial building (2346 Carolina Beach Rd.); 2) a large, 18,000-sf, metal commercial building with bay doors (2346 Carolina Beach Rd.); 3) a 1,240-sf, single-family residence (2370 Carolina Beach Rd.); 4) a 1,176-sf, single-family residence (2374 Carolina Beach Rd.). 5) a 250-sf, commercial outbuilding (2370-B Carolina Beach Rd.) with Carolina Auto Sales. A Limited Asbestos and Lead Paint Inspection was conducted by Terracon (3/15/2022) for these structures (**Attachment 7**). Asbestos was not detected in samples from the structures; however, some structures were not accessible and asbestos-containing materials (ACM) may be present. If suspect ACM is found during demolition activities, they should be assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. Lead was detected in paints above laboratory reporting limits at 2346, 2370, and 2374 Carolina Beach Rd. Contractors should be made aware of the presence of the identified lead coatings, so that they may maintain compliance with worker protection regulations, employ lead-safe work practices, and/or conduct a negative exposure assessment per OSHA (29 CFR 1926.62 – Lead Exposure in Construction). The NC Department of Health and Human Services and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos

		professionals in accordance with all applicable federal, State and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, and North Carolina Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC Department of Health & Human Services Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607. Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations. According to NEPAssist, there are no Superfund, Brownfields, Toxic Substances Control Act (TSCA) sites located within a one-mile radius of the proposed project site. According to NEPAssist, there are 35 RCRA hazardous waste sites, three Toxic Release Inventory sites, 12

		NPDES water discharger sites, and 16 air emission facility sites located within one mile of the proposed project site. The ECHO and Facility information available for these sites are included in the attachments. Based on a review of this information and the type of these facilities along with the Phase I ESA, it has been determined that these sites do not pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the subject property. According to the NC DEQ Division of Waste Management (DWM) Superfund Section in the State Environmental Clearinghouse (SCH) Comments, there are 12 contamination sites located within one mile of the proposed project site. Due to the regulatory status, distance, municipal water supply to the site, and direction of groundwater flow, these sites (7 Inactive Hazardous Sites, one DSCA Site, one Pre-Regulatory Landfill Site, and three Brownfields Sites) have been determined to not pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the subject property. These facilities are discussed in further detail in **Attachment 7**. Based on a site visit, Phase I ESA, Limited Site Investigation, Limited Asbestos and Lead Paint Inspection (and required survey and abatement) , and review of available environmental records for the proposed project site and surrounding area, the site is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the subject property. Therefore, the proposed project is in compliance with Contamination and Toxic Substances, 24 CFR 58.5(i)(2). The Asbestos and Lead-based Paint Surveys/ Clearance Reports and applicable permits will be appended to this Environmental Review Record (ERR). If any USTs are discovered, then DWM's UST Section will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100.

		See Contamination and Toxic Substance ddocumentation (**Attachment 7**) and State Environmental Clearinghouse Comments (**Attachment 34**).
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	According to the Phase I ESA and Protected Species Assessment site visits, the proposed project site consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors formerly operated as the Starway Flea Market. The smaller parcels along Carolina Beach Road consist of two single-family residential lots with grass lawns, a commercial car retail outbuilding, and associated parking areas. There are approximately 3 acres of pine-mixed hardwood wooded areas, a depressional, basin wetland (0.24-acre) surrounded by uplands on the northern portion of the site, and a manmade ditch on the southern and eastern portions of the proposed project site. The proposed project site is situated in an area of dense residential, commercial, and industrial development (see **Attachments 7** and **8**). A Protected Species Assessment was prepared by S&ME which included a review of the USFWS and the North Carolina Natural Heritage Program (NCNHP) websites to determine those species currently listed as federally protected (threatened and endangered), candidate, or proposed in New Hanover County. According to the USFWS Information for Planning and Consultation (IPaC) Official Species List prepared for the proposed project site, a total of 15 threatened, endangered, or candidate species were identified. The NCNHP database query report identified six federally-listed or candidate species within a one-mile radius of the proposed project site. However, based on the USFWS IPaC and Critical Habitat Mapper results, there are no critical habitats identified within the proposed project area. Also, the NCNHP database query report identified no records for rare species, important natural communities, natural areas, and/ or conservation/ managed areas within the proposed project boundary. New Hanover County is identified as a Northern Long-eared Bat (NLEB) known-presence county (See NLEB Map in **Attachment 8**). Potential habitat for NLEB was observed in the wooded

		areas of the proposed project site. Accordingly, site development "may affect, but is not likely to adversely affect" the NLEB. On October 14, 2022, Judith Ratcliffe with the NCNHP issued an emailed response regarding the NLEB and the proposed project site. The response stated "[t]here are no documented Northern Long-eared Bat maternity roost trees within 150 feet of this project boundary. There are no documented Northern Long-eared Bat hibernacula within 0.25 mile of this project boundary." Thus, this proposed project may rely on the USFWS January 5, 2016, Programmatic Biological Opinion (BO) on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill its Section 7(a)(2) consultation obligation. A "no effect" determination was made for the remaining listed protected (threatened or endangered), candidate and proposed species because the proposed project site does not provide suitable habitat. The IPaC, NC NHP email, and the NC NHP Database Query Report are included in **Attachment 8**. In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. It is anticipated that temporary impacts might occur during construction. NCORR submitted the Self-certification Letter with "*no effect*" determinations for federally-listed, protected (threatened or endangered), candidate and proposed species, except for the NLEB, and a "*no Eagle Act permit required*" determination, 10-step project review package, and signed NLEB 4(d) Rule Streamlined Consultation Form to the USFWS on October 17, 2022 as notification of its determination and requested acknowledgement of receipt and determination that the proposed action "*may affect, but is not likely to adversely affect the NLEB"* (see **Attachment 8**). Under the NLEB 4(d) Rule Streamlined Consultation Form, "[i]f the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the

		best available information and that its project responsibilities under7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. USFWS has not contacted NCORR for additional information. A response has not been received from the USFWS, however, if a response is received then it will be included in the Environmental Review Record (ERR). **The Grant Recipient will update this determination annually for multi-year activities.** *The USFWS recommends to avoid tree clearing from April 1 to October 31 for the NLEB. It is also recommended to conduct vegetation and tree clearing from September 1-April 30 to avoid impacts to nesting migratory birds (nesting season is typically May-August).* This proposed project is in compliance with the Endangered Species Act. See Self-certification Letter, 10-step project review package, and signed NLEB 4(d) Rule Streamlined Consultation Form (**Attachment 8**).
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	The proposed project does not involve development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries). The Phase I ESA conducted at the proposed project site did not identify explosive or flammable hazards at the site or in close proximity to the site. Additionally, the site reconnaissance did not identify explosive or flammable hazards on or adjacent to the site. Based on a review of NEPAssist, NC DEQ records, interviews, and aerial and topographic maps, multiple ASTs were located within a one-mile radius of the proposed project site. Interviews were conducted with persons having knowledge of the identified ASTs (fire department, City, Port of Wilmington, private owners). The proposed project site is located further than the Acceptable Separation Distances (ASDs) from the identified ASTs. Thus, these ASTs do not pose a hazard to the proposed project site or its occupants, and no mitigation is required.

		A Thermal and Explosives Hazards Worksheet was completed for the proposed project based on the information collected. The proposed project is in compliance with explosive and flammable hazard requirements. See completed Thermal and Explosives Hazards Worksheet, data sheets, exhibits, and interviews (**Attachment 9**).
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The proposed project includes activities that could potentially convert agricultural land to a non-agricultural use, but an exemption applies. According to 7 CFR Part 658.2(a) "[f]armland does not include land already committed to urban development." Further, the regulation defines "[f]armland already in urban development" as land "identified as an 'urbanized area' (UA) on the Census Bureau Map." According to NEPAssist, the proposed project site is located in an UA per data derived from the 2019 U.S. Census Bureau TIGER/Line Urban Areas. Urbanized Areas are contiguous areas of populations greater than 50,000. According to the USDA NRCS Web Soil Survey, over 76% of the proposed project site consists of Urban Land soils and 6.6% is Kureb-Urban soils which are not protected farmland soil types. The only farmland of unique importance soils present at the proposed project site are Leon Sand (11%) and Lynn Haven fine sand (5.9%). The proposed project is exempt from the Farmlands Protection Policy Act, and in compliance with this section. See Farmlands Protection Policy Act exhibit (**Attachment 10**).
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	According to FEMA FIRM Panel Number 3720312600K (eff. 8/28/18), the proposed project site is wholly located in Zone X (Areas of Minimal Flood Hazard), outside of the SFHA and 100-year floodplain. The proposed project site does not include any areas of regulatory floodway. There are no Preliminary FIRMs available at the FEMA Flood Map Service Center for the proposed project site. The proposed project is in compliance with floodplain management requirements.

		See FEMA FIRM and county mapping (**Attachment 11**).
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	The proposed project site's Area of Potential Effects (APE) was reviewed for historic resources. According to the National Register of Historic Places database, two historic sites are located within a 0.25-mile APE radius, Sunset Park Historic District and the "Eligible for Listing" Wilmington National Guard Armory. There are no historic properties or districts in the vicinity of the proposed project site according to the Wilmington Historic Preservation Commission (https://www.wilmingtonnc.gov/departments/planning-development-and-transportation/boards-commissions/historic-preservation-commission). The North Carolina State Historic Preservation Office (NC SHPO) was consulted for a concurrence that the proposed project would result in "No Historic Properties Affected" pursuant to 36 CFR 800.4(d)(1). NCORR submitted the proposed project to the NC SHPO via email and the State Environmental Clearinghouse on October 17, 2022 and the NC SHPO responded on November 14, 2022 "[w]e have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed." The Catawba Indian Nation is the only federally-recognized Tribe identified with interests in New Hanover County on the Tribal Directory Assessment Tool (TDAT). NCORR consulted with the Catawba Indian Nation for discussion of historic properties in the proposed project area that may have religious and cultural significance. On November 10, 2022, the Catawba Indian Nation's Tribal Historic Preservation Office (THPO) responded that "[t]he Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project**."

		See SHPO submission and response and the Catawba Indian Nation submission and response (**Attachment 12**).
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	The proposed project does not site a noise generating facility. The surrounding area was screened for noise generators. According to NEPAssist and the NCDOT Annual Average Daily Traffic (AADT) Mapping Application, there is one road (Carolina Beach Road/ US Highway 421) with NCDOT AADT data available located within 1,000 feet of the proposed project site. The Wilmington International Airport is the only airport located within 15 miles of the proposed project site (4.6 miles), and the airport data and noise contour map are in **Attachment 13**. The Wilmington Terminal Railroad is the only railroad located within 3,000 feet of the proposed project site (2,200 feet), and the railroad data is included in **Attachment 13**. A noise assessment was completed for the proposed project site. The combined (airports, roads, and railroads) day/night noise level (DNL) was calculated to be 65 dB or less (using 2045 NCDOT AADT forecasts) for multiple Noise Assessment Locations (NALs), which is within HUD's **Acceptable** range according to HUD regulation 24 CFR 51.103(c). No mitigation is necessary. Short-term construction work will adhere to local noise control standards/regulations. Construction noise will be limited to daytime hours. Construction equipment will be required to meet sound control requirements. The proposed project is in compliance with the Noise Control Act of 1972, 24 CFR Part 51 Subpart B. See Noise Assessment and maps (**Attachment 13**) and Transportation Impact Analysis (**Attachment 31**).
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	According to the EPA, sole source aquifers are not present in North Carolina. No further action is required. The proposed project is in compliance with the Safe Drinking Water Act of 1974, 40 CFR Part 149.

		See Sole Source Aquifer exhibit (**Attachment 14**).
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☒ No ☐	There are no USFWS National Wetlands Inventory (NWI) mapped wetlands located on the proposed project site or adjoining the site. Based on a U.S. Army Corps of Engineers (USACE) Jurisdictional Determination (JD), the proposed project involves new construction within an isolated, freshwater, emergent/scrub-shrub wetland (0.24-acre) on the northern portion of the site. The HUD definition of wetlands under 24 CFR 55.2(b)(11) includes non-jurisdictional, isolated wetlands. The proposed project is considered new construction in wetlands because the development will involve fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings (Building 2). Therefore, Executive Order [EO] 11990 Protection of Wetlands and 24 CFR 55.20 apply to this noncritical action. According to USACE, the proposed project will not require a Clean Water Act (CWA) Section 404 Permit. However, the NC DEQ, Division of Water Resources (DWR) State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000) issued on July 15, 2022 applies to this project. This General Permit is issued in conformity with the requirements of North Carolina regulations in 15A NCAC 02H .1300, as amended by Session Law 2015-286, for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina. Per the North Carolina Wetland Assessment Method (NCWAM) manual, the onsite wetland has been classified as a Basin Wetland. A manmade ditch on the southern and eastern portions of the proposed project site is not considered a HUD wetland or open water. According to the NC DEQ DWR-WQRS Section comments (**Attachment 34**), it is "recommended to schedule a site visit with 401 Water quality staff to discuss the proposal and to ensure compliance will be maintained per 401 surface Water requirements, surface water standards and buffer rules. If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization."

		The proposed project will have a state stormwater permit, Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. The Protection of Wetlands (EO 11990) Determination for the proposed project documents the 8-step process under 24 CFR 55.20 in **Attachment 15**. The proposed project is in compliance with this section. See Protection of Wetlands (EO 11990) Determination (**Attachment 15**) and State Environmental Clearinghouse Comments (**Attachment 34**).
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	According to the attached U.S. National Park Service's Nationwide Rivers Inventory (NRI) Map and the National Wild and Scenic River System Map, the proposed project site is not located in proximity to wild and scenic rivers. The closest wild and scenic river is located approximately 3 miles from the proposed project site. The proposed project is in compliance with this section.

		See Wild and Scenic Rivers/ Nationwide Rivers Inventory exhibits (**Attachment 16**).
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	According to the EPA Environmental Justice Screening and Mapping Tool (EJScreen), the proposed project site is located in a potential Environmental Justice area. The demographic indicators for a one-mile radius of the proposed project site show that there is a higher percentage of minority and low-income population in the proposed project area as compared to the State and U.S. averages. This area has an approximately 43% minority population compared to 37% in the State and 40% in the U.S. This area has an approximately 51% low-income population compared to 33% in the State and 30% in the U.S. According to the NC DEQ Community Mapping System, the proposed project site is located in a NC DEQ Potentially Underserved Block Group (2019). (See EJScreen Report and NC DEQ Community Map in **Attachment 17**.) No adverse environmental impacts were identified during the proposed project's 24 CFR 58 environmental review. The proposed project does not facilitate development which would result in disproportionate adverse environmental impacts on low-income or minority populations. Rather, the proposed project will benefit low- and moderate-income residents through the new construction of safe, affordable residential rental housing. The proposed project is in compliance with Environmental Justice, Executive Order 12898. See EPA EJ Screen and NC DEQ Community Mapping System information (**Attachment 17**) and Contamination and Toxic Substances Documentation (**Attachment 7**).

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features, and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable, and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	On September 21, 2021, the Wilmington City Council granted Rezoning Approval for the proposed project site from Community Business (CB) and Commercial Services (CS) to High Density-Multiple Dwelling Residential (MD-17) which permits the apartments and overall development. Per the City, the MD-17 district is intended to be applied within the urban core of the city and other areas with a full range of amenities and commercial services. MD-17 zoning is intended to provide a mix of densities and housing forms in a compact urban environment through redevelopment, infill on relatively small sites, and within mixed-use areas. Higher development intensity at appropriate locations is encouraged to support transit use, minimize traffic congestion, and provide a range of housing types. Per a zoning confirmation letter (December 22, 2021) from Miranda Garmenn with the City of Wilmington Planning Division, the proposed development conforms with the zoning designation. One of the goals of the New Hanover County Strategic Plan for 2018-2023 is to encourage the development of complete communities in the unincorporated county by increasing housing diversity and access to basic goods and services. While the project area is within the city limits, the proposed project meets this goal by infilling a site with existing community services nearby. One major purpose of the Wilmington - New Hanover County Joint Coastal Area Management Plan (2006) is to support and

		enhance affordable housing and minimum housing programs. A goal within the plan included safe, sanitary, and affordable housing to be available to its citizens. The proposed project fits within the purposes and goals of the plan. According to the Create Wilmington Comprehensive Plan (2016), envisioning suitable infill and redevelopment and optimizing existing development is critical to the community's wellbeing, not only downtown, but within neighborhoods across the city. Balancing the need for open space and a well-designed built environment will be key to future development. The proposed project site is identified as a Potential Redevelopment Land and an area of Suburban Commercial Retrofit. The proposed project meets this goal by infilling a site with existing community services nearby. Goal XV in the New Hanover County Comprehensive Plan (2016) is to provide for a range of housing types, opportunities, and choices with a desired outcome to ensure citizens are not overburdened with the costs or availability of housing. The proposed project fits within the purposes and goals of the plan. The proposed project is compatible with local land use and zoning regulations and plans. This proposed project will provide an opportunity to create much needed affordable housing on an ideal, vacant, infill site. See zoning and land use documentation (**Attachment 18**) and the Public Outreach section of this EA.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	According to USDA NRCS Web Soil Survey, onsite soils are somewhat well-suited for development with a some limiting factors. Urban Land soils have been previously disturbed, are generally well-suited for urban development, and comprise over 77% of the site. Kureb-Urban Land Complex soils are generally considered well-suited for urban development, with a limitation of high erosional qualities, and account for over 7% of onsite soils. Leon and Lynn-Haven soil series are generally poorly suited for urban development with limitations due to depth to the saturated zone and wetness and comprise 16% of the site. Slopes are listed from 0-8%; however the site has been previously graded and is nearly level/flat. These limitations can be alleviated by proper design/ grading/ construction installation to mitigate adverse effects. Terracon Consultants conducted a detailed Geotechnical Engineering Report (July 22, 2021) to confirm soil conditions. Per the report, recommendations for site preparation, earthwork, floor slab design, foundations, subsurface conditions, pavements and groundwater were provided to assist in successful site development.

		The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County. *Any externally-sourced fill material will come from an approved source, and applicable NC regulations on erosion control will be complied with. The soils will be confirmed to be "clean" fill and that it meets project requirements prior to importing the material.* See USDA NRCS Web Soil Survey, Geotechnical Engineering Report, site plan, and general soils information (**Attachment 19**), as well as, the State Environmental Clearinghouse Comments (**Attachment 34**).
Hazards and Nuisances including Site Safety and Noise	2	Based upon the site inspection, NEPAssist and NC DWM search results, and the Phase I ESA, no onsite or surrounding hazards were identified that could affect the health and safety of occupants or conflict with the intended utilization of the subject property (see **Attachment 7** for full details). A noise assessment was completed for the proposed project site. The combined (airports, roads, and railroads) day/night noise level (DNL) was calculated to be 65 dB or less (using 2045 NCDOT AADT forecasts) for multiple Noise Assessment Locations (NALs), which is within HUD's Acceptable range according to HUD regulation 24 CFR 51.103(c). No mitigation is necessary. The operation of the proposed project will not increase noise levels in the area. Short-term construction work will adhere to local noise control standards/regulations. Construction noise will be limited to daytime hours. Construction equipment will be required to meet sound control requirements. (See Noise Abatement and Control section.) Construction related activities (land clearing, grading) could cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust leaving the construction site and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. Thus, there will be no

		significant impact to air quality from the proposed project. (See Clean Air Act section.) Hazards and nuisances including site safety and noise associated with the proposed project will not negatively impact the occupants and surrounding properties. There are five buildings present on the site that will be demolished prior to site development. See Hazards and Nuisances Checklist (**Attachment 20**), Contamination and Toxics documentation (**Attachment 7**) and the State Environmental Clearinghouse Comments (**Attachment 34**).
Energy Consumption	2	The proposed project will cause an increase in energy use as compared to its current use. However, the proposed project will be connected into an existing grid and will not require additional infrastructure. The existing power infrastructure can support the proposed project which is not expected to require large, additional consumptions of energy. The proposed project will incorporate energy efficient LED lighting, water sense low flow fixtures, and Energy Star Certified appliances. The proposed project will be governed by Energy Star Multifamily New Construction Version 1 which incorporates the latest sustainability and energy efficiency guidelines. Some additional measures implemented will include indoor air quality, building envelope sealing, Energy Star windows, thermal building envelopes, and energy efficient HVAC mechanical systems. (See **Attachment 21**.)
Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMICS		
Employment and Income Patterns	2	The proposed project will provide affordable housing to low-income families in a densely-populated residential area. New temporary construction jobs will be created as a result of this development. New residents will help to support nearby existing and planned commercial development, which may generate additional job opportunities for these residents. The residents will provide an employee and customer base to local businesses. The proposed project will not adversely impact traffic during construction or operation. Employment options including retail, service, and industrial businesses are located near the proposed project site. Therefore, the proposed project is not expected to impact the employment and income patterns for the area.
Demographic Character Changes, Displacement	3	The proposed project is compatible with the surrounding area and will not result in negative demographic or character changes. Additionally, residents are expected to come from the surrounding communities and should not contribute to demographic character changes in the area. The proposed project will not deny any population within the local community potential for growth. The proposed project will not act as an

		isolation feature within the local area or community. The proposed project will not significantly impact the demographics of the local community. Local institutions (churches, community centers, elderly centers, etc.) will not be adversely impacted by the development. Three residential tenants, comprised of two separate households, reside at 2374 Carolina Beach Road, and one commercial tenant operates a small used car sales operation (Carolina Auto Sales) at 2370-B Carolina Beach Road. For the displacement of residents and Uniform Relocation Act (URA) compliance, upon approval of City of Wilmington/ New Hanover County ARPA loans in late 2021, preliminary URA notices were mailed in January 2022 to the residents of the two occupied structures. Separately, a preliminary URA notice was mailed in January 2022 to the commercial tenant as well. Certified mail indicated that notice to the commercial tenant was undeliverable and no subsequent contact has been established. A subsequent URA notice was provided to a new commercial tenant on November 17, 2022 who began occupying the vacated commercial space in September 2022. A copy of those preliminary notices and the URA relocation plan was provided to NCHFA in January 2022 with the final 4% tax credit application. The applicant has subsequently worked with each group to process the following forms (Certification of Lawful Presence, Income Certification, Decent Safe and Sanitary Inspection Form, Intake Interview Form) and determined the tenants are eligible to receive compensation via the URA as they will be permanently displaced by the proposed project. The applicant will be following the applicable rules and regulations associated with the URA with respect to eligible tenants. See Proposed Relocation Plan documentation (**Attachment 22**).
Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	School-aged children living in the proposed development would be assigned to Sunset Park Elementary School, Williston Middle School, and New Hanover High School. Dr. Charles Foust, New Hanover County School System Superintendent, was contacted and requested to provide information associated with impacts to the local school system. Assistant Superintendent Eddie Anderson responded indicating that the site development is located in an area that schools are not considered high-risk or poor performing, except for Williston Middle School. The letter indicated the development will not adversely impact the schools serving the project area. A copy of this response is attached.

		The City experienced a tremendous loss in housing inventory from the recent Hurricanes Matthew and Florence. Since many of the proposed project's residents are expected to come from within the community, there might be less impacts if students are already enrolled in the school/ district. In addition, the increased tax base from the proposed development should provide extra funding for the community. Multiple libraries, museums, and other cultural facilities are available in the area. The proposed project is not anticipated to have any adverse effects on local cultural facilities. See Educational/ Libraries/ Cultural Facilities exhibits and documentation (**Attachment 23**).
Commercial Facilities	2	Adequate commercial facilities are located near the proposed project area. There are many grocery stores, food outlets, and pharmacies located near the proposed project site. Numerous commercial facilities (retail, restaurants, gas stations, offices, barber shops, etc.) are located within a 1- to 2-mile radius of the proposed project site. Downtown Wilmington is located approximately two miles north of the proposed project site. The development will increase the customer base for these local businesses that might still be suffering losses experienced during the Covid-19 pandemic. Additionally, the development should increase the employee availability to the area. Thus, the proposed project will not have an adverse effect on local commercial facilities. See Commercial/ Retail exhibits and documentation (**Attachment 24**).
Health Care and Social Services	2	The proposed project is located in an area with close proximity to local health care and social services providers. Additionally, the development should increase the employee availability to the local area. An increase in tax base will support this and other services. Tonya Jackson, Director of the New Hanover County Social Services, was contacted and requested to respond regarding impacts that the proposed project will have on their local services. Also, David Howard, Director of the New Hanover County Health Department, was contacted and requested to provide a response of impacts that the proposed project will have on their local services. Responses to our requests have not been provided yet and will be included in the ERR if received at a later date. It is anticipated that many residents of the proposed project will come from within the community and are potentially already served by these health care and social services. Therefore, there should only be a negligible increase in demand for services.

		See Health and Social Services exhibits and documentation (**Attachment 25**).
Solid Waste Disposal / Recycling	2	Solid waste disposal and recycling will be available to the proposed project site by a private solid waste/ recycling service. An appropriate quantity of dumpsters will be provided to meet the proposed project's demands. Per David Mayes, the Director of the City of Wilmington's Public Services Department, the City of Wilmington does not provide dumpster service. New Hanover County Department of Environmental Management, Director, Joe Suleyman, was contacted and requested to provide a response of impacts that the proposed project will have on their local services (landfill). Director Suleyman responded the department can provide adequate services and will not be adversely affected by the proposed project. A copy of this response is attached. The NC DEQ DWM Solid Waste Section (Section) generally notes that "for any planned or proposed projects, it is recommended that during any land clearing, demolition and construction, the responsible party and/or its contractors would make every feasible effort to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by and of the projects that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility permitted by the Division. The Section strongly recommends that the responsible party require all contractors to provide proof of proper disposal for all generated waste to permitted facilities." In addition, any open burning associated with proposed project must be in compliance with 15 A NCAC 2D.1900. Thus, the proposed project is unlikely to have an adverse effect on the solid waste and recycling services in the area. See Solid Waste/ Recycling documentation (**Attachment 26**).
Waste Water / Sanitary Sewers	2	Public waste water and sanitary sewer services will be provided to the proposed project site by the Cape Fear Public Utility Authority (CFPUA). The waste water treatment facilities associated with the proposed project site will be able to handle the additional waste generated. David Dailey with the CFPUA Engineering Department was contacted and requested to provide a response on impacts that the proposed project would have on waste water services. Mr. Dailey responded that the public sewer is available and adequate to serve the proposed project. Waste water/ sewer utilities are currently in place along city streets (Carolina Beach Road) near the proposed project site with only short connections to make.

		A permit to construct and operate wastewater treatment facilities, non-standard sewer system extensions and sewer systems that do not discharge into state surface waters and a permit to construct and operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system might be required. Also, a NPDES permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters might be required. All applicable federal, State and local permits will be obtained for the proposed project prior to construction and activities will comply with their requirements and conditions. Therefore, the proposed project is not anticipated to have an adverse impact on waste water/ sanitary sewers and capacity onsite and in the surrounding area. See Waste Water/ Sanitary Sewers documentation (**Attachment 27**).
Water Supply	2	Water supply wells were not identified on the proposed project site. A public water supply will be provided to site by CFPUA. The increased water demand due to the site development will be adequately supplied via mainline from CFPUA. David Dailey with the CFPUA Engineering Department was contacted and requested to provide a response on impacts that the proposed project would have on potable water services. Mr. Dailey responded that the public sewer is available and adequate to serve the proposed project. Water supply utilities are currently in place along city streets (Carolina Beach Road) near the proposed project site with only short connections needed. According to Progress Design Studio (architect), lead-free pipes, solder, and flux will be used in the proposed project design and construction (Safe Drinking Water Act). According to the NC DEQ comment, plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/ Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq. In addition, all public water supply systems must comply with State and federal drinking water monitoring requirements. If any wells are discovered on the proposed project site, then abandonment of wells must be in accordance with Title 15A. Subchapter 2C.0100. Further, NC DEQ notes that any relocation of existing water lines will require plans to be submitted to the Division of Water Resources/ Public Water Supply Section prior to construction. All applicable federal, State and local permits will be obtained for the proposed project prior to construction and activities will comply with their requirements and conditions. Therefore, the proposed project is not anticipated to

		have an adverse impact on water supply onsite and in the surrounding area. See Water Supply documentation and letters from CFPUA and project architect (**Attachment 28**) and the State Environmental Clearinghouse Comments (**Attachment 34**).
Public Safety: Police, Fire, and Emergency Medical Services	2	The City of Wilmington Police Department meets the needs of the proposed development and local area. The Police Department provides routine patrol in the proposed project site area with the nearest station (Southeast Patrol Division) located approximately 3.5 miles east of the proposed project site. City of Wilmington Police Chief, Donny Williams, was contacted and requested to provide a response on impacts that the proposed project will have on their local services. Chief Williams responded via e-mail that his department cannot give a response on projecting policing services for this proposed complex. The City of Wilmington Fire Department meets the needs of the proposed development and local area. City of Wilmington Fire Chief, Jon S. Mason, was contacted and requested to provide a response on impacts that the proposed project will have on their local services. Fire Chief Mason responded that the nearest station (Station 5) is located within one mile of the proposed project site with an average response time of 3 minutes, 39 seconds. The New Hanover County EMS meets the needs of the proposed project site development and local area. The proposed project site is located approximately 1.5 miles from the New Hanover Regional Medical Center (hospital). New Hanover County Emergency Medical Services Director, Mr. Steven Still, was contacted and requested to provide a response on impacts the proposed project will have on their local services. A response to our request has not been provided yet and will be included in the ERR if received at a later date. It is anticipated that many residents of the proposed project will come from within the community and there will be a negligible increased demand for services. Thus, the proposed project is not anticipated to have an adverse impact on local public safety services. See Public Safety documentation (**Attachment 29**).
Parks, Open Space, and Recreation	2	The Legions Sports Complex and the Greenfield Lake Park are located approximately 0.25 mile northeast of the proposed project site. Other public parks are located within one mile of the proposed project site. Two playgrounds and a pool/ clubhouse complex are included in the proposed project's site plans. The site development will not adversely impact local open space or recreational facilities.

		City of Wilmington Parks and Recreation was contacted and requested to provide a response on impacts that the proposed project will have on their local services. Amy Beatty, the Community Services Director for the City of Wilmington, responded indicating that adequate recreational services and facilities are available to the site and the proposed project will not adversely affect their services. It is also anticipated that many residents of the proposed project will come from within the community and there will be a negligible increased demand for resources. Thus, the proposed project is not anticipated to have an adverse impact on parks, open spaces, and recreation centers. See Parks, Open Space, and Recreation information (**Attachment 30**).
Transportation and Accessibility	3	The proposed project site is provided with public bus transportation that is available through the Cape Fear Public Transportation Authority/ WAVE Bus System. The proposed project site is located along the Carolina Beach Road (201) Route and just north of the Long Leaf Park (205) Route. The proposed project site is located in an area within walking distance of businesses, churches, schools, and recreational facilities. Marie Parker, Executive Director of the Cape Fear Public Transportation Authority/ WAVE Transit, was contacted and requested to provide a response on impacts that the proposed project will have on their local services. Ms. Parker responded that bus service was available with a shelter stop 435 ft. south of the site on Carolina Beach Road, and 488 ft. north of the proposed project site. Ms. Parker suggested the installation of a shelter and bench directly in front of the project based on the anticipated need and use based on the number of units and project type. A Transportation Impact Analysis for Starway Redevelopment (10/12/21) was conducted by Davenport to assess the potential traffic impacts of the development and identify transportation improvements that will be required to accommodate the impacts of both background traffic and new development traffic. Two access points are proposed along Carolina Beach Road: the northern access point will be an exit-only right out, while the southern access point will be left-in/right-in/right-out. One access point to the west on the southern portion of the site is proposed to connect to the existing Maryland Avenue stub. The conceptual site plan reflects an extension of Maryland Avenue from the existing stub west of the site through the development to Carolina Beach Road, and until accepted for maintenance by

		the City of Wilmington as a dedicated public roadway, it will function as an extension of the site driveways. Regarding intersection improvements at the two access points at Carolina Beach Road, the following are proposed: • Provide a single ingress and a single egress lane. • A 100-foot southbound right-turn taper is required. • For the southbound U-turn, 75 feet of storage is required utilizing the two-way left-turn lane for deceleration length. • For the northbound left-turn lane, 75 feet of storage is required utilizing the two-way left turn lane for deceleration length. • Site drive should be designed in accordance with applicable NCDOT and City of Wilmington standards. (See **Attachment 31** for further details on recommendations.) The Transportation Impact Analysis was performed based on the scope agreed upon with NCDOT and WMPO. NCDOT did not have any additional comments during the State Environmental Clearinghouse inter-agency review. See Transportation and Accessibility documentation (**Attachment 31**) and the State Environmental Clearinghouse Comments (**Attachment 34**).
Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	**<u>Unique Natural Features</u>** Unique features or geological features were not identified onsite or in the vicinity of the site. A query of the NC NHP database resulted in no records for important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary (**Attachment 8**). Two Natural Areas (Greenfield Lake and CPF/ Lower Cape Fear River Aquatic Habitat) along with four Managed Areas were identified within one mile of the proposed project site. However, based on the proposed project activities and distance from these areas, there are no impacts anticipated from the proposed project activities. Unique agricultural lands will not be adversely impacted by the proposed development (**Attachment 10**). **<u>Water Resources</u>** Water resources (groundwater, streams, etc.) will not be impacted, except for a small, isolated wetland (0.24-acre) on the northern portion of the site. A manmade ditch on the southern and eastern portions of the proposed project site is not considered a HUD wetland or open water. Wild and scenic rivers will not be affected by the proposed project (**Attachment 16**). The proposed

		project will not include the discharge of sewer to surfaces of the site or surrounding properties. The site will be provided with waste water/ water services through CFPUA. Per the site plan, new construction within a freshwater, emergent/scrub-shrub, basin wetland (0.24-acre) on the northern portion of the site will be necessary and involve fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings. According to USACE, the proposed project will not require a CWA Section 404 Permit. However, the NC DEQ, DWR State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000) issued on July 15, 2022 applies to this project. This General Permit is issued in conformity with the requirements of North Carolina regulations in 15A NCAC 02H .1300, as amended by Session Law 2015-286, for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina. Per the NCWAM manual, the onsite wetland has been classified as a Basin Wetland. According to the NC DEQ DWR-WQRS Section comments (**Attachment 34**), it is "recommended to schedule a site visit with 401 Water quality staff to discuss the proposal and to ensure compliance will be maintained per 401 surface Water requirements, surface water standards and buffer rules. If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization." The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and

		appended to the environmental review record when received from the permitting agencies. See attached Natural Features Summary (**Attachment 32**) Endangered Species documentation (**Attachment 8**), Farmland Protection documentation (**Attachment 10**), Protection of Wetlands (EO 11990) Determination (**Attachment 15**), and the State Environmental Clearinghouse Comments (**Attachment 34**).
Vegetation, Wildlife	2	There are approximately 3 acres of pine-mixed hardwood wooded areas, a depressional, basin wetland (0.24-acre) surrounded by uplands on the northern portion of the site, and a manmade ditch on the southern and eastern portions of the proposed project site. The proposed project site is situated in an area of dense residential, commercial, and industrial development (see **Attachments 7** and **8**). The proposed project will not affect protected species, cause major habitat disruption, or introduce non-native species. Non-significant impacts to vegetation and wildlife will occur during site development. Surface water controls (BMPs, stormwater management ponds, etc.) will be implemented during development to minimize surface runoff from the project site. The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. Native plants will be utilized during grass planting and landscaping activities at the site. It was determined using the USFWS Raleigh Ecological Services' online 10-step project review process that the proposed project would have "no effect" on proposed/ listed species and/ or proposed/ designated critical habitat and a "no Eagle Act permit required" determination made for eagles. See Endangered Species documentation (**Attachment 8**).
Environmental Justice EA Factor	1	According to the EPA Environmental Justice Screening and Mapping Tool (EJScreen), the proposed project site is located in a potential Environmental Justice area. The demographic indicators for a one-mile radius of the proposed project site show that there is a higher percentage of minority and low-income population in the proposed project area as compared to the State and U.S. averages. This area has an approximately 43% minority population compared to 37% in the State and 40% in the U.S. This area has an approximately 51% low-income population compared to 33% in the State and 30% in the U.S. According to the NC DEQ Community Mapping System, the proposed project site is located in a NC DEQ Potentially Underserved Block Group (2019). (See EJScreen Report and NC DEQ Community Map in **Attachment 17**.)

		Several of the EJScreen indicators for a one-mile radius of the proposed project site are the same or higher than the State and/or U.S. averages and include Diesel Particulate Matter, Air Toxics Cancer Risk, Air Toxics Respiratory Hazard Index, Traffic Proximity, Lead Paint, Superfund Proximity, Risk Management Plan (RMP) Facility Proximity, Hazardous Waste Proximity, and USTs. Air quality reports indicate that New Hanover County is not listed for Non-Attainment or Maintenance status in any of the targeted National Ambient Air Quality Standard (NAAQS) monitoring parameters, which include ozone. Based on a site visit, Phase I ESA, Limited Site Investigation, Limited Asbestos and Lead Paint Inspection (and required survey and abatement), and review of available environmental records for the proposed project site and surrounding area, the site is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the subject property. Therefore, these indicators are not considered to have a negative effect on the proposed development. The proposed project does not site a nuisance or hazard in a potential environmental justice area, but rather provides much needed safe (non-LBP, etc.), affordable housing in an area that needs it. According to Ms. Katrina Knight, Executive Director of the Good Shepherd Center, the "current affordable housing shortage has been estimated at 10,000 units" and in "17 years and the housing situation has never been as dire as it is now." She further "stated this community runs on people earning salaries under $40,000 per year and the City has a responsibility to ensure they can live in the community where they work." (See City Council Meeting Minutes on Rezoning Approval, September 21, 2021 in **Attachment 18**.) The proposed project will not subject the community to environmental conditions that could have disproportional effects on low-income or minority populations. Rather, this proposed project will provide much needed affordable housing rental options within the community following a decrease in housing inventory after Hurricanes Matthew and Florence. All of the proposed units are affordable. Thus, the proposed project does not contribute to or promote environmental injustice. See EPA EJ Screen and NC DEQ Community Mapping System information (**Attachment 17**) and Contamination and Toxic Substances documentation (**Attachment 7**).
Air Quality EA Factor	2	According to the EJScreen Report for the proposed project in **Attachment 17**, the site is: 1% in US for Particulate Matter 2.5 (ug/m3), 16% for Ozone (ppb), 50-60% for 2017 Diesel Particulate Matter (ug/m3), 80-90% for 2017 Air Toxics Cancer Risk (lifetime risk per million), and 90-95% for 2017 Air Toxics

		Respiratory HI. Air quality is not a significant concern at the site even with exacerbation of effects from Climate Change (see EJScreen and CDC Reports in **Attachment 17**). According to the EPA, "Climate change can impact air quality and, conversely, air quality can impact climate change. Changes in climate can result in impacts to local air quality. Atmospheric warming associated with climate change has the potential to increase ground-level ozone in many regions, which may present challenges for compliance with the ozone standards in the future. The impact of climate change on other air pollutants, such as particulate matter, is less certain, but research is underway to address these uncertainties. Emissions of pollutants into the air can result in changes to the climate. Ozone in the atmosphere warms the climate, while different components of particulate matter (PM) can have either warming or cooling effects on the climate. For example, black carbon, a particulate pollutant from combustion, contributes to the warming of the Earth, while particulate sulfates cool the earth's atmosphere." (See https://www.epa.gov/air-research/air-quality-and-climate-change-research.) There will be no significant impact to air quality from the proposed project. The operation of the proposed project following the completion of construction activities will not increase emissions. Any air quality impacts would be short-term and localized during construction, and no significant adverse impacts to air quality are anticipated. See EJScreen and CDC Reports in **Attachment 17** and Clean Air Section.
Climate Change EA Factor EO 14008	2	According to NOAA, climate change is likely increasing the intensity of tropical cyclones. The proposed project site is not located within a Special Flood Hazard Area or a coastal area. No portions of the site are located within 100- or 500-year floodplain. According to the EJScreen website's Climate Change Data, the proposed project site has a 0.67 average change in drought (5-year SPEI), no projected coastal flood hazards, no projected 100-year floodplain, no projected sea level rise, the census block group contains 89% properties at wildfire risk in 2022 and 85% properties at wildfire risk in 2052, and the census block group contains 0% properties at flood risk in 2022 and 44% properties at flood risk in 2052. The data from the EJScreen is representative for the area, and lower risk percentiles than some portions of the surrounding area. According to the Climate Mapping For Resilience and Adaptation Tool data for the proposed project site's census tract, there is a relatively moderate risk (National Risk Index Ratings) of Extreme Heat, no rating for Drought, relatively low risk for Wildfire, and very low risk

		for Flooding and Coastal Inundation (**Attachment 33**). Thus, the reviewed data does not present any additional significant site concerns. The proposed development will provide much needed affordable housing rental options within the community. Due to the increased frequency of high-intensity storms and the resultant housing inventory shortage, the proposed project site was determined most suitable and necessary for providing the community with safe, affordable housing rental options. See **Attachment 33**, https://www.climate.gov/news-features/understandingclimate/climate-change-probably-increasing-intensitytropical-cyclones, https://ejscreen.epa.gov/mapper/, and https://livingatlas.arcgis.com/assessment-tool/home.
Other Factors	2	No other factors were identified which would be impacted by the proposed project.

Additional Studies Performed:

- Jurisdictional Waters Assessment/ Request for Jurisdictional Determination by Kimley-Horn.
- Phase I ESA on November 2021 by Kimley-Horn.
- Limited Site Investigation on February 16, 2022 by Terracon Consultants, Inc.
- Limited Asbestos and Lead Paint Inspection on March 16, 2022 by Terracon Consultants, Inc.
- Protected Species Assessment on September 8, 2022 by S&ME, Inc.
- Geotechnical Engineering Report on July 22, 2022 by Terracon Consultants, Inc.
- Transportation Impact Analysis (Starway Redevelopment) on October 12, 2021 by Davenport.

No additional studies were performed specifically as part of this EA.

Field Inspection (Date and completed by):

- Mr. Chris Daves, PWS, Senior Scientist, S&ME, Inc., on September 1, 2022.
- Mr. Jason Hartshorn, PWS, Kimley-Horn, a qualified environmental Professional, and Mrs. Mackenzie Richards, PWS, Kimley-Horn, on November 9, 2021.

List of Sources, Agencies, and Persons Consulted [40 CFR 1508.9(b)]:

General

- Crystal Best, State Environmental Clearinghouse (crystal.best@doa.nc.gov) State.Clearinghouse@doa.nc.gov.

Airport Hazards

- ESRI World Street Maps.
- EPA NEPAssist: https://www.epa.gov/nepa/nepassist.
- Google Earth.
- AirNav: http://airnav.com/.
- Federal Aviation Administration: https://www.faa.gov/.
- North Carolina Department of Transportation – Division of Aviation: https://www.ncdot.gov/divisions/aviation/Pages/default.aspx.
- Airport IQ 5010 Airport Master Records and Reports: https://www.gcr1.com/5010web/.

Coastal Barriers Resources

- USFWS - Coastal Barrier Resources System: https://www.fws.gov/cbra/Maps/Mapper.html.

Floodplains

- FEMA Flood Map Service Center: http://msc.fema.gov/portal.
- New Hanover County Flood Zones: https://nhcgov.maps.arcgis.com/apps/webappviewer/index.html?id=3e3e0eab5fa946878fbdea642e7fa068.

Air Quality

- United States EPA – Air Quality: https://www.epa.gov/green-book.
- United States Environmental Protection Agency – Air Quality: https://www3.epa.gov/airquality/greenbook/map/mapnpoll.pdf.

Coastal Zone Management

- North Carolina DEQ: https://deq.nc.gov/about/divisions/coastal-management/coastal-management-permit-guidance/permit-required.
- NOAA: https://coast.noaa.gov/czm/mystate/#northcarolina.
- Dan Govoni, Policy Analyst, Federal Consistency Coordinator, NC Division of Coastal Management (daniel.govoni@ncdenr.gov).

Contamination and Toxic Substances

- NEPAssist: https://www.epa.gov/nepa/nepassist.
- EPA Superfund: http://www.epa.gov/superfund/sites/npl/nc.htm.
- EPA Superfund: https://www.epa.gov/superfund.
- EPA: https://enviro.epa.gov/enviro/em4ef.home.
- Kimley Horn: Phase I ESA (November 2021).
- Terracon Consultants, Inc: Limited Site Investigation (February 16, 2022).
- Terracon Consultants, Inc.: Limited Asbestos and Lead Paint Inspection (March 16, 2022).
- NCDEQ UST Incidents Map Database: https://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/waste-management-gis-maps/rust-map.
- NCDEQ Laserfiche: https://edocs.deq.nc.gov/WasteManagement/Search.aspx.
- DEQ Clearinghouse Comments (November 17, 2022).

Endangered Species

- John Ellis and Leigh Mann, USFWS Raleigh ES FO (john_ellis@fws.gov and leigh_mann@fws.gov).
- North Carolina Natural Heritage Program Online Data Search. 2022. Department of Environment and Natural Resources, Office of Land and Water Stewardship, Raleigh, NC. www.ncnhp.org; Accessed September 1, 2022.
- North Carolina Wildlife Resources Commission. http://www.ncwildlife.org/Learning/Species; Accessed September 1, 2022.
- USFWS ECOS. Critical Habitat for Threatened and Endangered Species. https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77; Accessed September 1, 2022.
- USFWS Eastern North Carolina Ecological Services. 2022. https://www.fws.gov/office/eastern-north-carolina and https://www.fws.gov/office/eastern-north-carolina/project-planning-and-consultation; Accessed September 1, 2022.
- USFWS. 2022. IPaC. https://ecos.fws.gov/ipac/; Accessed August 28, 2022.
- USDA. Soil Conservation Service. Soil Survey of New Hanover County, 1977.
- USDA. National Resources Conservation Service. Web Soil Survey, 2022. http://websoilsurvey.nrcs.usda.gov/app/; Accessed September 1, 2022.
- USACE. JD Letter – Action ID SAW-2021-01647, dated August 4, 2021.

Explosives and Flammable Materials

- City of Wilmington Fire Department (Fire Chief Jon "Steve" Mason: 910-343-3906) – (https://www.wilmingtonnc.gov/departments/fire-department).
- City of Wilmington Planning and Development (Linda Painter – Director: 910-341-7806) (Linda.painter@wilmingtonnc.gov); (https://www.wilmingtonnc.gov/departments/planning-development-and-transportation).
- North Carolina Ports Authority (Stephanie Ayers – Planner: 910-763-1621) (stephanie.ayers@ncports.com); (https://ncports.com/).
- Freedom of Information Request (FOI) Form submitted to the City of Wilmington Clerk's Office (Penny Spicer: 910-341-7816) (penny.spicer-sidbury@wilmingtonnc.gov) – (https://www.wilmingtonnc.gov/departments/city-clerk)
- New Hanover County GIS Aerial Photographs – (https://nhcgov.maps.arcgis.com/home/index.html)
- City of Wilmington GIS Aerial Photographs: https://wilmingtonnc.maps.arcgis.com/home/index.html.
- New Hanover County GIS Aerial Photographs: https://maps.nhcgov.com/
- USGS 7.5-Minute Topographic Quadrangle Map.
- 1994-2021 Google Earth Aerial Photographs – Google Earth Mapping Software.
- HUD Acceptable Separation Distance (ASD) Electronic Assessment Tool - https://www.hudexchange.info/programs/environmental-review/asd-calculator/.
- Fact Sheet – Hazardous Operations: https://files.hudexchange.info/resources/documents/Fact-Sheet-Final-Propane-Rule-24-CFR-Part-51-Subpart-C.pdf.
- National Fire Protection Association (NFPA) Code 58.
- NCDENR AST Database – (https://data-ncdenr.opendata.arcgis.com/datasets/rast).
- NCDEQ Aboveground Storage Tanks - https://deq.nc.gov/about/divisions/waste-management/ust/ast-program
- Code Finder – https://codefinder.nfpa.org.

Farmlands

- USEPA – NEPAssist: https://www.epa.gov/nepa/nepassist.
- USDA – NRCS: Web Soil Survey: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
- USDA – Soil Conservation Service: Soil Survey of New Hanover County, NC.
- USDA – Field Office Technical Guide: https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg/.
- U.S. Census Bureau Tigerline Data: https://tigerweb.geo.census.gov/tigerwebmain/tigerweb_main.html.

Historic Preservation

- NC Department of Natural & Cultural Resources – HPOWEB 2.0: https://nc.maps.arcgis.com/apps/webappviewer/index.html?id=79ea671ebdcc45639f0860257d5f5ed7.
- National Park Service, U.S Department of the Interior – National Register of Historic Places: https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466.
- Tribal Directory Assessment Tool: https://egis.hud.gov/tdat/.
- NC SHPO – Renee Gledhill-Early Letter (November 14, 2022).
- Catawba Indian Nation THPO: Caitlin Rogers Letter/E-Mails (November 10, 2022).
- HUD CPD 12-006– Process for Tribal Consultation in Projects That Are Reviewed Under 24 CFR Part 58 (June 15, 2012).
- Wilmington Historic Preservation Commission: (https://www.wilmingtonnc.gov/departments/planning-development-and-transportation/boards-commissions/historic-preservation-commission).

Noise Abatement

- Bureau of Transportation Statistics: https://www.bts.gov/geospatial/national-transportation-noise-map.
- The Noise Guidebook: (https://www.hudexchange.info/resource/313/hud-noise-guidebook/.
- Day/Night Noise Level Electronic Assessment Tool: https://www.hudexchange.info/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/.
- NC Department of Transportation (NCDOT) - Average Annual Daily Traffic (AADT): https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx.
- NC Department of Transportation (NCDOT) truck routes: https://connect.ncdot.gov/resources/State-Mapping/Documents/NCDOT_2020_Traffic_Segments_Shapefile_Description.pdf.
- NC Department of Transportation (NCDOT) - Division Office for Future Projects: https://connect.ncdot.gov/projects/planning/Pages/default.aspx.
- Division Boundaries and Contacts: https://www.ncdot.gov/divisions/highways/Pages/contact.aspx.
- 10-Year Forecasting: https://connect.ncdot.gov/projects/planning/Pages/ProjectLevelTrafficForecasting.aspx.
- Federal Railroad Administration – Office of Safety Analysis: http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx.
- Safety Map: https://fragis.fra.dot.gov/GISFRASafety/.
- Airport IQ 5010: https://www.airportiq5010.com/5010Web.
- Wilmington Terminal Railroad: https://www.gwrr.com/wtry/.
- Davenport – Transportation Impact Analysis for Starway Redevelopment (October 2021).

- HNTB – Final No-Build Traffic Forecast for STIP Project U-4738 (September 24, 2019): https://connect.ncdot.gov/projects/planning/Traffic%20Forecasts/U-4738%20Brunswick%20New%20Hanover%20TF/U-4738%20Brunswick%20New%20Hanover%202019%20TF.pdf.

Sole Source Aquifers

- USEPA Region 4: Groundwater Protection, Sole Source Aquifers in the Southeast: https://archive.epa.gov/pesticides/region4/water/groundwater/web/html/r4ssa.html.
- USEPA: Sole Source Aquifers Mapper: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b.

Wetland Protection

- Kimley Horn – Request for Jurisdictional Determination Package.
- USDA. Soil Conservation Service. Soil Survey of New Hanover County, 1977.
- USDA. National Resources Conservation Service. Web Soil Survey, 2022. http://websoilsurvey.nrcs.usda.gov/app/.
- USACE. JD Letter – Action ID SAW-2021-01647, dated August 4, 2021.
- USFWS. National Wetlands Inventory: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper.
- 8-Step Process for Wetland Impacts.

Wild and Scenic Rivers

- National Wild and Scenic Rivers System: https://www.rivers.gov/north-carolina.php.
- US DOI – National Park Service – Nationwide Rivers Inventory: https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm.
- USEPA NEPAssist: https://www.epa.gov/nepa/nepassist.

Environmental Justice

- USEPA NEPAssist: https://www.epa.gov/nepa/nepassist.
- EPA EJ SCREEN: https://www.epa.gov/ejscreen.
- NEPAssist: https://www.epa.gov/nepa/nepassist.
- EPA Superfund: http://www.epa.gov/superfund/sites/npl/sc.htm.
- EPA Superfund: https://www.epa.gov/superfund.
- EPA: https://enviro.epa.gov/enviro/em4ef.home.
- NC DEQ Community Mapping System: https://deq.nc.gov/outreach-education/environmental-justice/deq-north-carolina-community-mapping-system
- NC DEQ UST Incidents Map Database: https://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/waste-management-gis-maps/rust-map).
- NC DEQ Laserfiche: https://edocs.deq.nc.gov/WasteManagement/Search.aspx.
- Kimley Horn: Phase I ESA (November 2021).
- Terracon Consultants, Inc: Limited Site Investigation (February 16, 2022).

Land Development – Zoning and Land Use

- City of Wilmington Planning and Development (Zoning): https://www.wilmingtonnc.gov/departments/planning-development-and-transportation.
- Miranda Garmenn, City of Wilmington Planning and Development -Planning Division: Zoning Verification Forms (December 21, 2021).
- New Hanover County Office of Strategy – 2022 Strategic Plan: https://strategy.nhcgov.com/strategic-plan-2/2018-2023-strategic-priorities/.
- Wilmington-New Hanover County 2006 CAMA Plan Update (2006): https://www.wilmingtonnc.gov/home/showpublisheddocument/1604/635976990697400000.
- Create Wilmington Comprehensive Plan (2016): https://www.wilmingtonnc.gov/departments/planning-development-and-transportation/comprehensive-plan.
- New Hanover County Comprehensive Plan (2016): https://laserfiche.nhcgov.com/weblink/0/edoc/3270860/PlanNHC_LR.pdf.

Land Development – Soil Suitability/Slope/Erosion/Drainage/SW Runoff

- Geotechnical Engineering Report on July 22, 2022 by Terracon Consultants, Inc.
- USDA-NRCS Web Soil Survey: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
- USDA-SCS: Soil Survey of New Hanover County, NC.
- Site Plan

Community Facilities and Services

- Eddie Anderson, Assistant Superintendent – New Hanover County School System (Education).
- Joe Suleyman, Director – New Hanover County Department of Environmental Management (Solid Waste).
- David Dailey, Engineering Department Cape Fear Public Utility Authority (Waste Water/Water).
- Fire Chief Jon S. Mason - City of Wilmington Fire Department (Public Safety – Fire).
- Ann Beatty, Community Services Director for the City of Wilmington (Parks, Open Space, Recreation).
- Marie Parker, Executive Director – Cape Fear Public Transportation Authority/WAVES (Transportation and Accessibility).
- Wave Public Transit:https://www.wavetransit.com/wp-content/uploads/2022/08/SystemMap-July22-web.pdf.
- Davenport – Transportation Impact Analysis (Starway Redevelopment).
- Cape Fear Moving Forward 2045 Metropolitan Transportation Plan (https://www.wmpo.org/plans/) and Wilmington MPO MTP (Transportation and Accessibility).

Climate Change

- https://www.climate.gov/news-features/understandingclimate/climate-change-probably-increasing-intensitytropical-cyclones
- https://ejscreen.epa.gov/mapper/
- https://livingatlas.arcgis.com/assessment-tool/home

List of Permits to be Obtained(later identified permits will be added to the ERR):

All applicable federal, State and local permits will be identified and obtained prior to starting construction. Permits that might be required include, but are not limited, to:

- Wilmington Subdivision Plan Approval
- Wilmington Site Plan Approval
- Wilmington/ NC DEQ NPDES Construction Stormwater Permit (NCG010000)
- New Hanover County Grading/Erosion and Sedimentation Control Plan Approval
- NCDOT Driveway Permit
- NCDOT Encroachment Permit
- Cape Fear Public Utility Authority Approval
- NC DEQ Sewer Extension Permit
- North Carolina Public Water Supply Section - Water Extension Permit
- NC DEQ DWR State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000)

Public Outreach [24 CFR 50.23 & 58.43]:

- Wilmington Planning Commission, Recommendation of Approval (http://wilmington.granicus.com/DocumentViewer.php?file=wilmington_fb31f271119f0fecd21d8f30f08f9c8a.pdf&view=1) on 7/7/21.
- Wilmington City Council, Motion to continue to 9/21/21 City Council Hearing (https://wilmington.granicus.com/GeneratedAgendaViewer.php?view_id=25&clip_id=5879) on 9/7/21.
- Wilmington City Council, Rezoning Approval (https://wilmington.granicus.com/GeneratedAgendaViewer.php?view_id=25&clip_id=5892) on 9/21/21.
- New Hanover County Board of Commissioners, Gap Funding Approval (https://laserfiche.nhcgov.com/WebLink/DocView.aspx?id=4863837&dbid=0&repo=NHC) on 10/18/21.
- Wilmington City Council, Gap Funding Approval (https://wilmington.granicus.com/GeneratedAgendaViewer.php?view_id=25&clip_id=5933) on 11/16/21.
- State Environmental Clearinghouse Review of: Scoping Package for NCORR, October 17 to November 16, 2022 (SCH File No. 22-E-4600-0064), Early Notice and Public Review of a Proposed Activity in a Wetland, and FONSI/ NOIRROF/ Final Notice (**Attachment 34**).
- Wilmington Star News – Early Notice and Public Review of a Proposed Activity in a Wetland (https://www.starnewsonline.com/public-notices/notice/10/21/2022/early-notice-and-public-review-of-a-2022-10-21-starnews-north-carolina-336d5e) on October 21, 2022.
- Wilmington Star News – FONSI/ NOIRROF/ Final Notice and Public Explanation of a Proposed Activity in a Wetland on November 18, 2022.

In addition to the public meetings, newspaper articles discussing the proposed project has been published by Port City Daily and include:

- Article (September 9, 2021) in the Port City Daily (Wilmington) https://portcitydaily.com/local-news/2021/09/09/leery-council-purses-contract-with-developers-of-planned-apartments-wants-guaranteed-affordable-housing/.
- Article (November 17, 2021) in the Port City Daily (Wilmington) https://portcitydaily.com/local-news/2021/11/17/starway-affordable-housing-project-secures-5-3m-in-gap-financing-from-city-county/.
- Article (March 16, 2022) in the Port City Daily (Wilmington) https://portcitydaily.com/deep-dives/2022/03/16/rouzer-moves-on-bill-that-would-push-starway-pass-hurdle/.

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project will be an affordable, multifamily housing complex that will provide new, safe housing that is needed in the area. The proposed project site was found to be a very suitable site for the development with no onsite or nearby recognized environmental conditions that would adversely affect the proposed project use or its occupants. This analysis has revealed the proposed project would not have significant adverse impacts associated with cumulative effects. Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions. This site was found to be appropriate for much needed multifamily affordable housing with minimal adverse environmental impacts and close proximity to community services. The benefits of this proposed project to the local economy and low-income community in the City of Wilmington cannot be understated.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

The site selection process was driven by finding a 10+ acre property in one of New Hanover County's Qualified Census Tracts (which provides significant financing advantage for 4% LIHTC projects like Starway Village) suitable for apartments. Wilmington is a land-locked city with limited available real estate that meets each of those criteria. The following sites were evaluated before selecting the preferred site (Starway Village) for the proposed development.

- 1149 N. Kerr Avenue, Wilmington NC 28405: This site was unfeasible for three reasons: (1) NCDOT is improving the Kerr/MLK intersection and the contemplated future southbound turn lane on Kerr Avenue will block access to the site; (2) the site location required building an expensive bridge over an environmentally sensitive creek; and (3) the site location sits at the back end of the Wilmington International Airport and there was concerned about noise pollution adversely impacting future tenants.

- 316 Marlboro St., Wilmington NC 28403: This site was unfeasible because the seller was unwilling to sell at a price that allowed the applicant to build a 100% affordable apartment development.

- 5529 Park Avenue, Wilmington NC 28403: This site was unfeasible because the seller was unwilling to sell at a price that allowed the applicant to build a 100% affordable apartment development.

In summary, alternative sites were evaluated but they were not as competitive within the State's scoring criteria for LIHTC awards. This preferred site was chosen because it met most of the NCHFA 2021 QAP scoring criteria. There are very few sites in the southern Wilmington area that fall within the 1.5-mile driving distances from grocery stores, pharmacies, etc., that make up the most consequential portion of the scoring criteria. Ultimately, this site was chosen as the most suitable for the proposed project.

No Action Alternative [24 CFR 58.40(e)]:

With the "No Action" Alternative, affordable housing would not be provided for low-income families in the local community. The City would need to find other options to address the shortage in affordable housing inventory exacerbated by the effects of hurricanes that recently damaged or destroyed hundreds of homes in North Carolina. In the absence of the proposed project, the site would not generate additional tax revenue or create affordable housing for residents, which are of greater benefit to the community than leaving the property in its current state. Thus, the "No Action" Alternative is not feasible in relation to the desired objective of creating affordable housing options in the City.

Summary of Findings and Conclusions:

The preceding Statutory Checklist and Environmental Assessment Checklist, and the discussion below, document that the proposed project work will comply with regulations in 24 CFR part 58 and that there are no direct or cumulative adverse environmental impacts anticipated as a result of the proposed project.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state, and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state, and local environmental permits and clearances may jeopardize federal funding. Guidelines, recommendations, and requirements identified during the State Environmental Clearinghouse inter-agency review shall be considered and required, where applicable.

Law, Authority, or Factor	Mitigation Measures
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM-10) such as fugitive dust and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The proposed project will conform to NC Air Quality Management regulations during and following construction. The contractor will use BMPs to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and construction vehicles and machinery will operate at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting use of vehicles and other machinery to construction hours only and removal once construction is completed.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	The NC Department of Health and Human Services and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable federal, State and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, and North Carolina Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC Department of Health & Human Services Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607.

Law, Authority, or Factor	Mitigation Measures
	Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations. The Asbestos and Lead-based Paint Surveys/ Clearance Reports and applicable permits will be appended to this Environmental Review Record (ERR). If any USTs are discovered, then DWM's UST Section will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B **Hazards and Nuisances including Site Safety and Site-Generated Noise**	Short-term construction work will adhere to local noise control standards/regulations. Construction noise will be limited to daytime hours. Construction equipment will be required to meet sound control requirements. *See also the Clean Air Act and Contamination and Toxic Substances sections' mitigation measures.*
Wetlands Protection Executive Order 11990, particularly sections 2 and 5 **Unique Natural Features, Water Resources**	New construction within a freshwater, emergent/scrub-shrub, basin wetland (0.24-acre) is proposed on the northern portion of the site involving fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings. Therefore, EO 11990 Protection of Wetlands and 24 CFR 55.20 apply to this noncritical action. According to USACE, the proposed project will not require a Clean Water Act (CWA) Section 404 Permit. However, the NC DEQ, Division of Water Resources (DWR) State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000) issued on July 15, 2022 applies to this project. This General Permit is issued in conformity with the requirements of North Carolina regulations in 15A NCAC 02H .1300, as amended by Session Law 2015-286, for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina. Per the North Carolina Wetland Assessment Method (NCWAM) manual, the onsite wetland has been classified as a Basin Wetland. A

Law, Authority, or Factor	Mitigation Measures
	manmade ditch on the southern and eastern portions of the proposed project site is not considered a HUD wetland or open water. According to the NC DEQ DWR-WQRS Section comments (**Attachment 34**), it is "recommended to schedule a site visit with 401 Water quality staff to discuss the proposal and to ensure compliance will be maintained per 401 surface Water requirements, surface water standards and buffer rules. If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization." The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. See Protection of Wetlands (EO 11990) Determination (**Attachment 15**).
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County.

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Law, Authority, or Factor	Mitigation Measures
	Any externally-sourced fill material will come from an approved source, and applicable NC regulations on erosion control will be complied with. The soils will be confirmed to be "clean" fill and that it meets project requirements prior to importing the material.
Demographic Character Changes, Displacement	Three residential tenants, comprised of two separate households, reside at 2374 Carolina Beach Road, and one commercial tenant operates a small used car sales operation (Carolina Auto Sales) at 2370-B Carolina Beach Road. The permanent displacement of eligible tenants will be in compliance with the Uniform Relocation Act (URA) and all applicable federal, State, and local laws, and regulations.
Transportation and Accessibility	Per Davenport's Transportation Impact Analysis (Starway Redevelopment), mitigation will include multiple recommendations regarding intersection improvements, ingress/egress, turn lanes, and the extension of Maryland Avenue. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. (See **Attachment 31**.)

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Andrea Sievers Date: 11/17/2022

Name/Title/Organization: Andrea Gievers, Environmental SME, NCORR

Certifying Officer Signature: DocuSigned by: Laura H. Hogshead D8561D53476B499... Date: 11/17/2022

Name/Title: Laura H. Hogshead, Director, NCORR

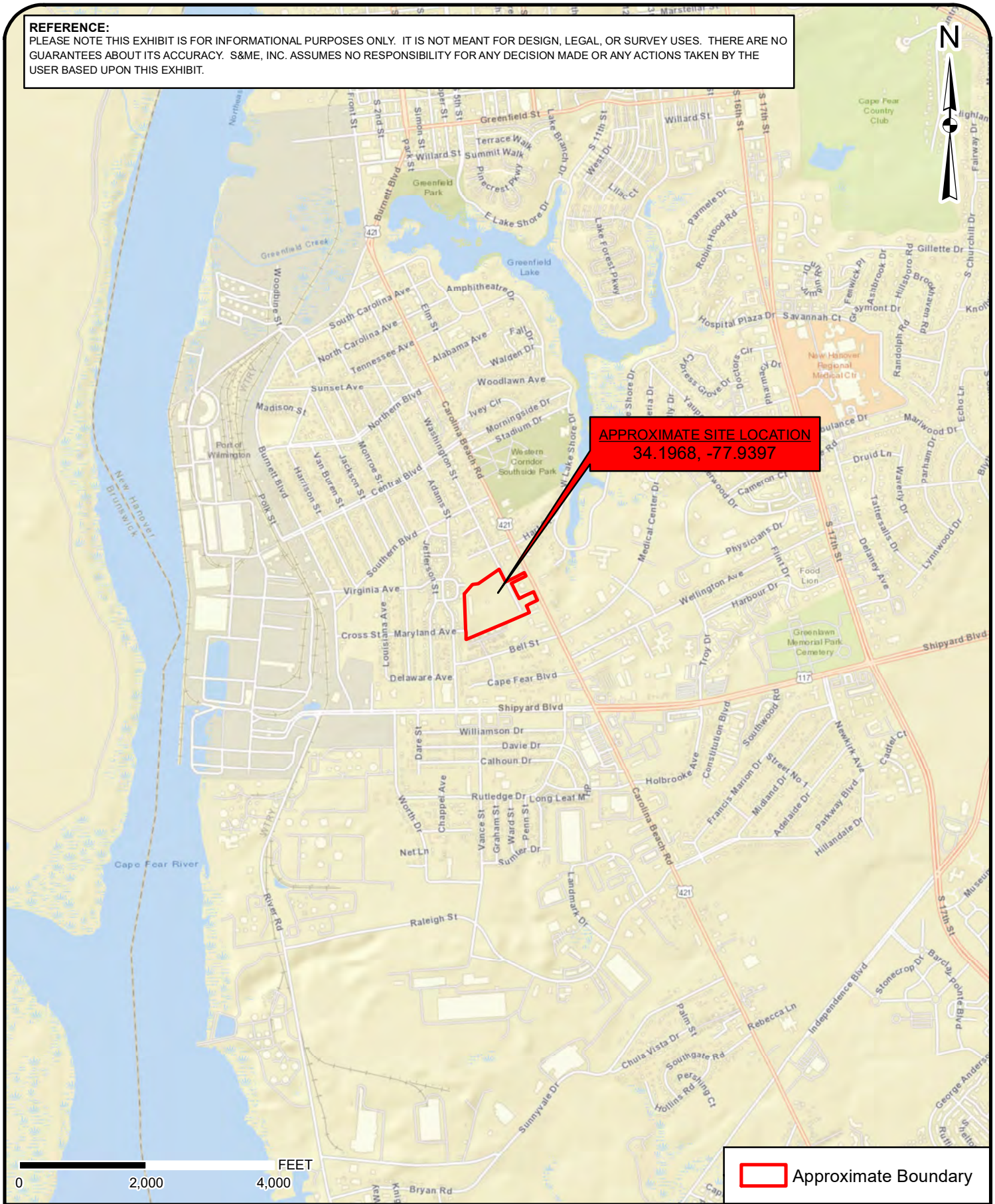
This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

ATTACHMENT 1

Site Location Exhibits and Site Plans

Exhibit 1 – Vicinity Exhibit
Exhibit 2 – Topographic Exhibit
Exhibit 3 – Aerial Exhibit
Tax Parcel Exhibit
Site Plans

REFERENCE:
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Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

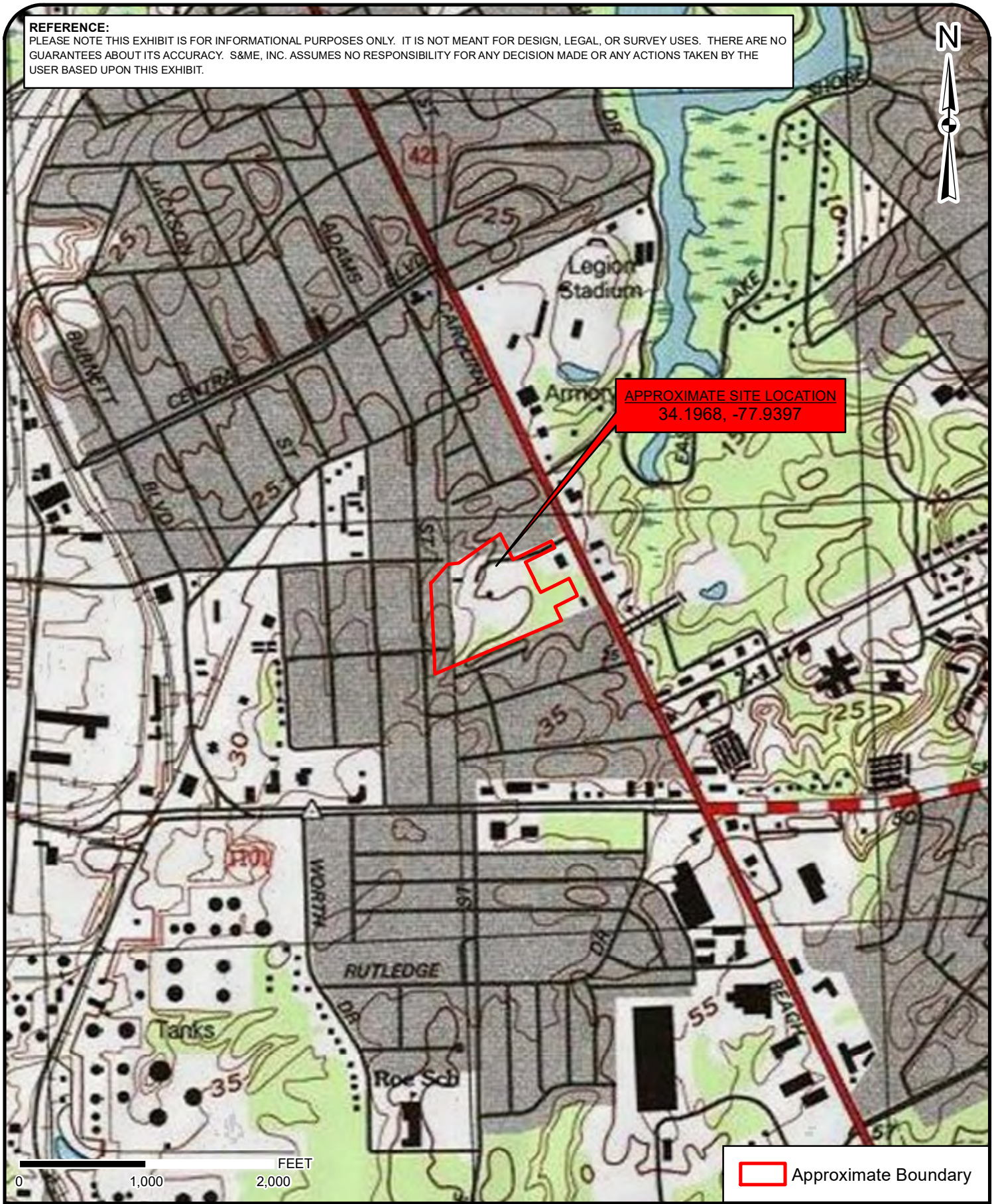
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
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Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

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Aerial Exhibit

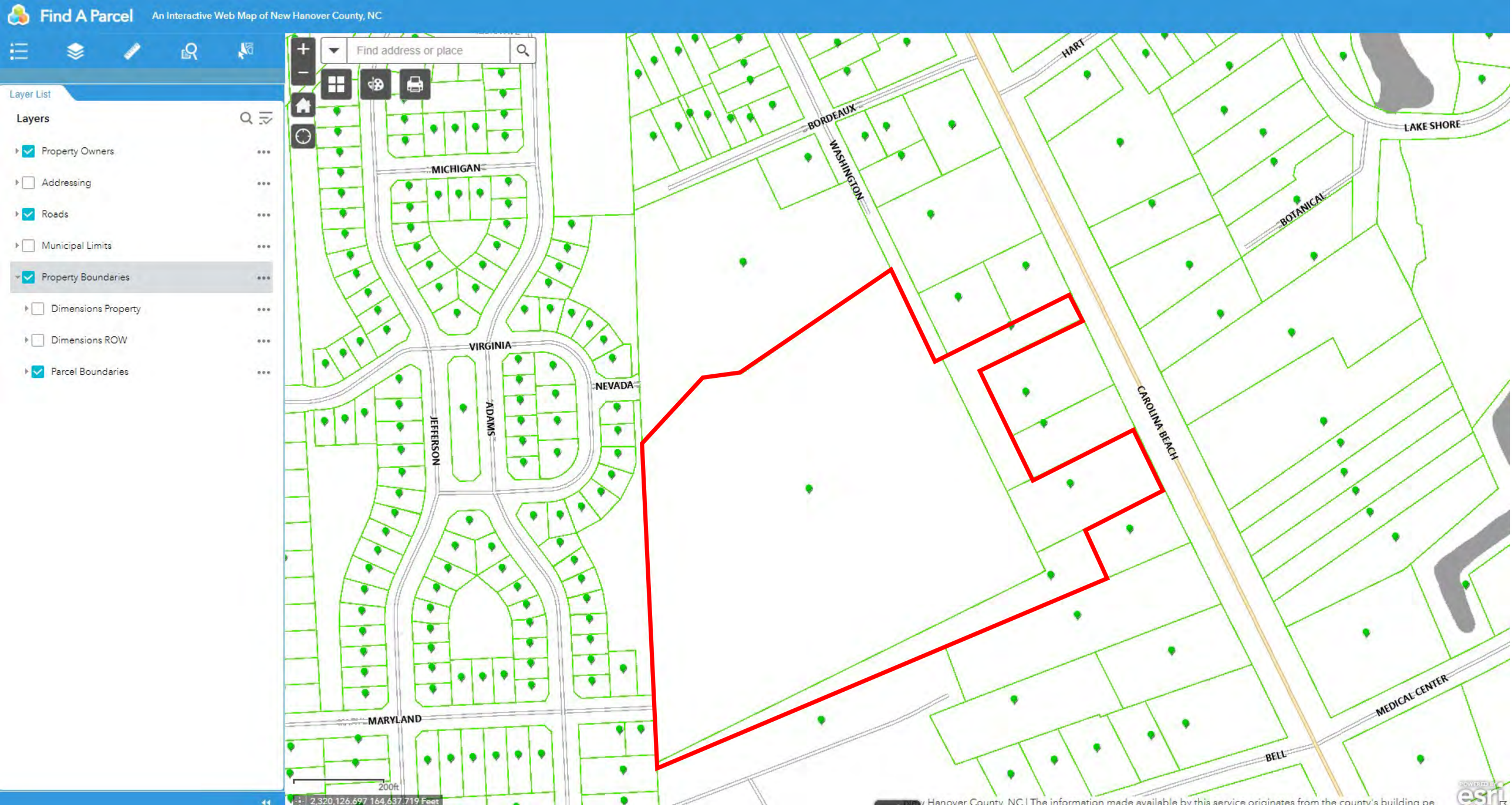
Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020

SCALE:	EXHIBIT NO.
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DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022


Find A Parcel
An Interactive Web Map of New Hanover County, NC
Find address or place
Layer List
Layers
Property Owners
Addressing
Roads
Municipal Limits
Property Boundaries
Dimensions Property
Dimensions ROW
Parcel Boundaries
MICHIGAN
VIRGINIA
NEVADA
JEFFERSON
ADAMS
MARYLAND
BORDEAUX
WASHINGTON
HART
LAKE SHORE
BOTANICAL
CAROLINA BEACH
MEDICAL CENTER
BELL
200ft
2,320,126.697 164,637.719 Feet



PRELIMINARY SITE LAYOUT

SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 August 25, 2021 02:54:48pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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Adams St
Virginia Ave
Adams St
Washington St
Carolina Beach Rd
U.S. 421 – CAROLINA BEACH ROAD
(80' PUBLIC RIGHT-OF-WAY)
Botanical
MARYLAND AVE.
60' PUBLIC RIGHT-OF-WAY
MAP BOOK 45, PAGE 380
Adams St
Ave

Pond
Pool
Club-House
3
4-Story/
48 Units
2
4-Story/
48 Units
1
4-Story/
32 Units
Pond
PROPOSED PHASE 1
9.89 AC
4-Story/
48 Units
7
Playground
PROPOSED PHASE 2
5.65 AC
4
3-Story/
22 Units
6
4-Story/
48 Units
5
4-Story/
32 Units
MAIL
MAIL
Dumpster Pad & Enclosure
Dumpster Pad & Enclosure

N 55°15'41" E 408.07'
N 84°37'41" E 87.86'
N 41°30'39" E 182.54'
N 63°54'08" E 159.75'
N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI-TENANT PARKING SUMMARY

PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI-TENANT PARKING SUMMARY

NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0-1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'
BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE

2346 CAROLINA BEACH RD

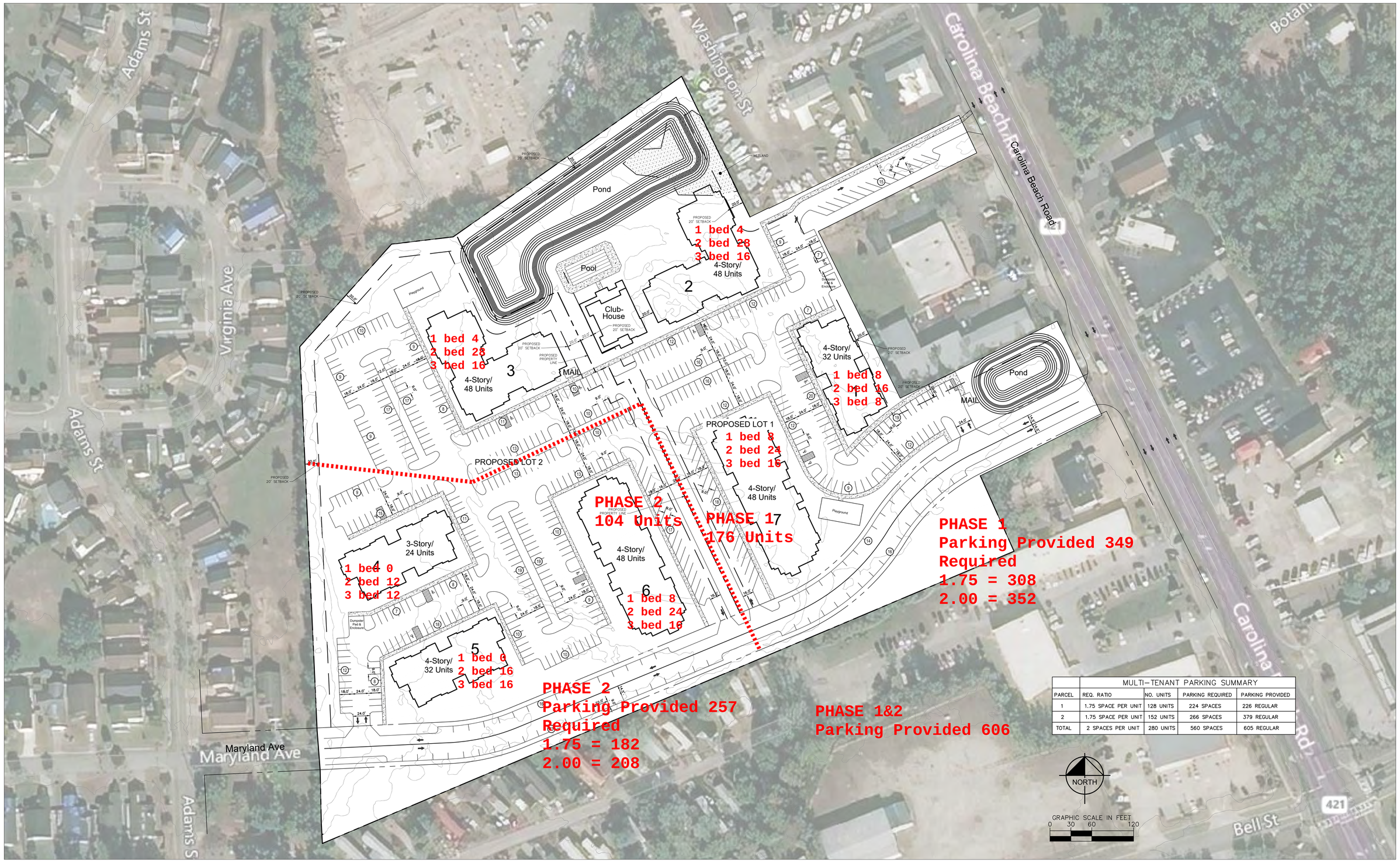
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1



	MULTI-TENANT PARKING SUMMARY			
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	128 UNITS	224 SPACES	226 REGULAR
2	1.75 SPACE PER UNIT	152 UNITS	266 SPACES	379 REGULAR
TOTAL	2 SPACES PER UNIT	280 UNITS	560 SPACES	605 REGULAR

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	07/29/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE
2346 CAROLINA BEACH RD
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT
PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Plotted By: Kolb, Katie Sheet Set: Holly Springs Retail Layout: Layout1 July 29, 2021 12:25:45pm \\kimley-horn.com\SE_RAL\RAL_JOBS\013856002 — Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-07-29 Wilmington MF PSD.dwg
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ATTACHMENT 1-A

Site Photographs



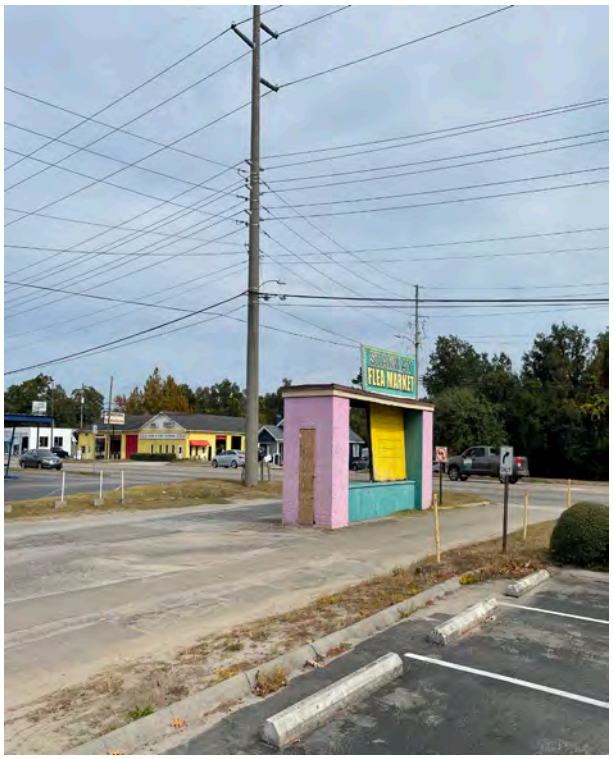


Photo 1 –These photos depict a typical view of the driveway entrance and access road to the subject property off of Carolina Beach Road and the overhead powerlines that run along the Site.



Photo 2 – This photo was taken within the Site, facing northeast towards the entrance, and it depicts a typical view of the cleared, dirt commercial lot with parking areas for the Starway Flea Market.







Photo 3 – These photos the dilapidated brick commercial retail building (2346 Carolina Beach Road) with wooden and shingle roofing and an associated metal storage shed with a metal roof located in the center of the Site. Discarded propane tank visible in photo was empty and was covering a hole in the ground





Photo 4 – These photos depict multiple metal shipping containers arranged for use as vendor stalls in the vicinity of the brick commercial retail building and the adjacent wooden vendor stands within the center of the Site.





Photo 5 – These photos depict the front of the large multi-bay metal warehouse, the Starway Flea Market, located along the western boundary of the subject property.



Photo 6 – This photo depicts the back of the large multi-bay metal warehouse, Starway Flea Market.





Photo 7 – These photos depict the two 55-gallon metal drums observed at the rear of the large multi-bay metal warehouse, the Starway Flea Market. The two drums were observed to be sealed and labelled to contain used cooking oil. A grease trap was observed on the ground behind the rear of the commercial building adjacent to the two 55-gallon metal drums.





Photo 8 – The two metal drums were visibly weeping, and stressed vegetation was observed around the base the two drums (photo on left). Unknown oil was found pooled on top of one of the metal drums after workers were observed discarding automotive oil into the drums following an oil change on a personal vehicle (photo on right).



Photo 9 – This photo depicts the front view of the single-family residential home (2370 Carolina Beach Road) and adjacent commercial outbuilding, Prime Automotive Group Inc. (2370-B Carolina Beach Road) located in the southeastern corner of the Site.





Photo 10 – The photo on the left depicts the side view of the of the single-family residential home (2370 Carolina Beach Road) and the phot on the right depicts the back on the adjacent commercial outbuilding.




Photo 11 – These photos depict the other single-family residential home (2374 Carolina Beach Road) and associated wooden storage shed located within the southeastern portion of the subject property.






Photo 12– Typical view of de minimis dumping of metal debris, tires, wood, household debris and appliances, and furniture observed throughout the subject property



Photo 13 – This photo depicts the adjacent Carolina Paint & Body, Inc facility adjacent to the subject property observed to be used for boat and marine equipment repair.





Photo 14 – These photos depict the neighboring commercial lots to the east of the project boundary including an AutoZone and an automotive center off of Carolina Beach Road.



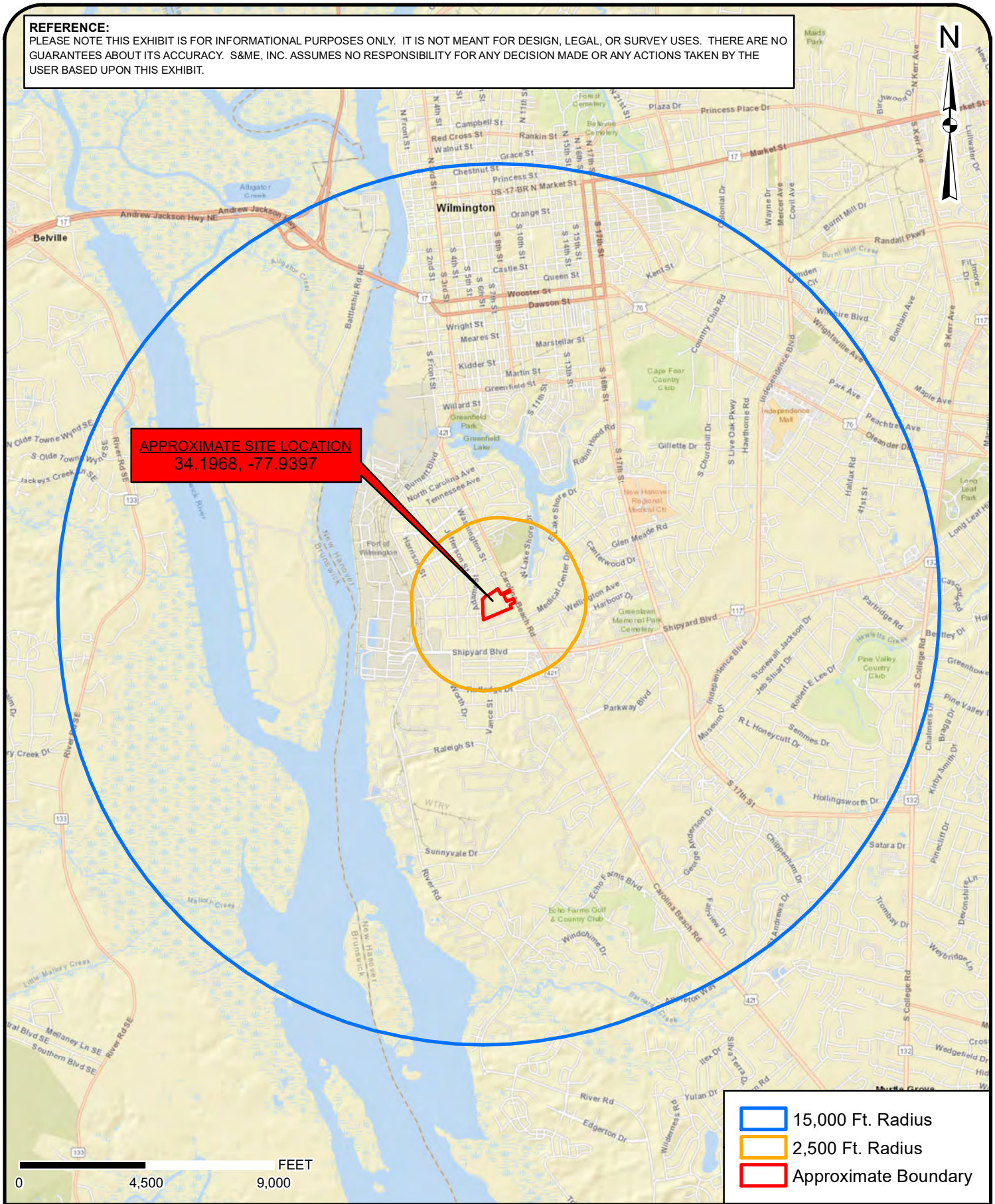


Photo 15 – These photos depict the commercial developments that are located to the southeast of the project boundary, including an ABC Spirits and South Square Plaza shopping mall off of Carolina Beach Road.

ATTACHMENT 2

Airport Hazards

REFERENCE:
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Airport Hazards Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

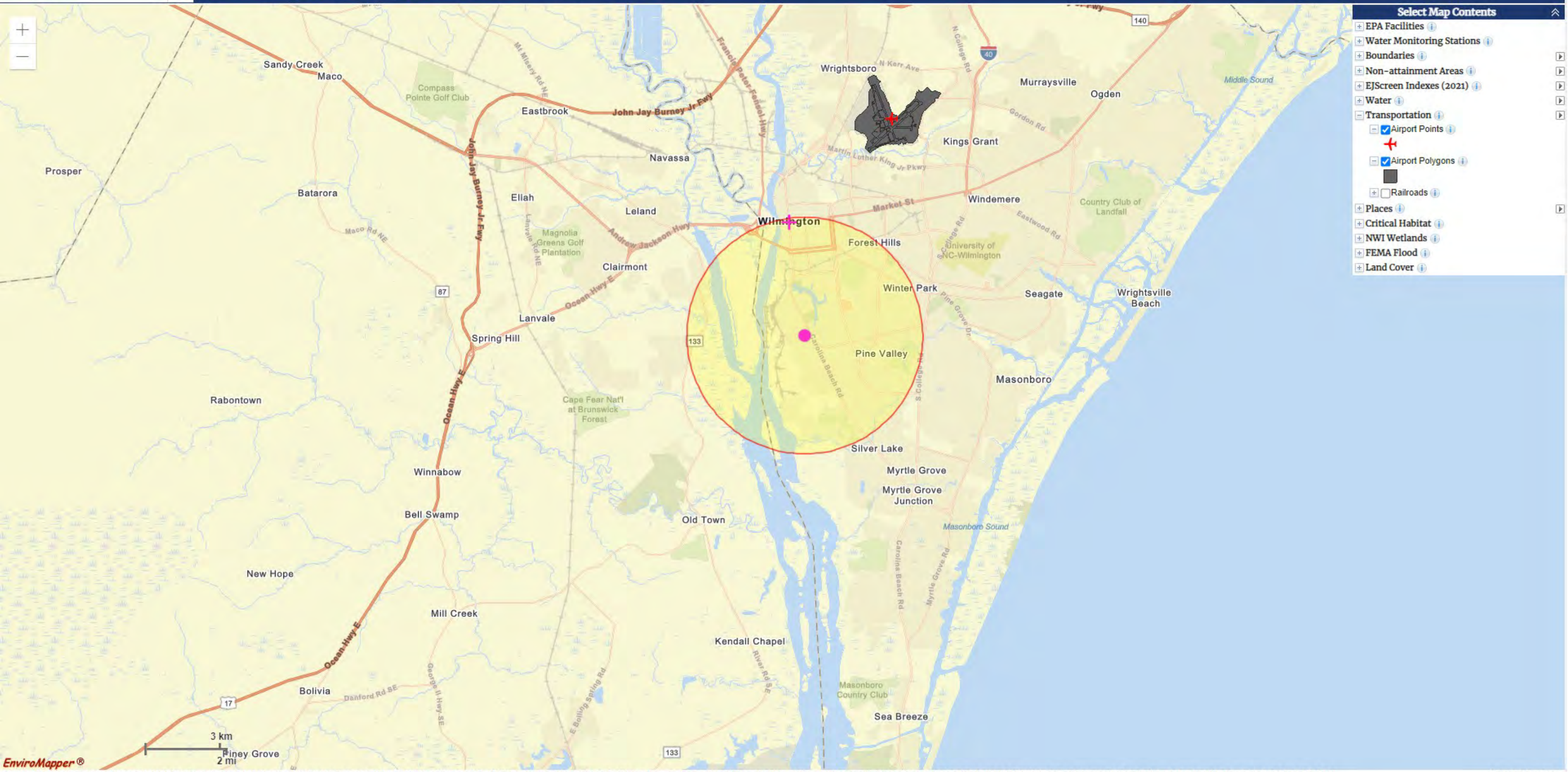
Source: World Street Map and NEPAssist

SCALE:	EXHIBIT NO.
1 " = 4,500 '	
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Airport Hazards Exhibit.mxd plotted by chandley 08-29-2022

wilmington, nc

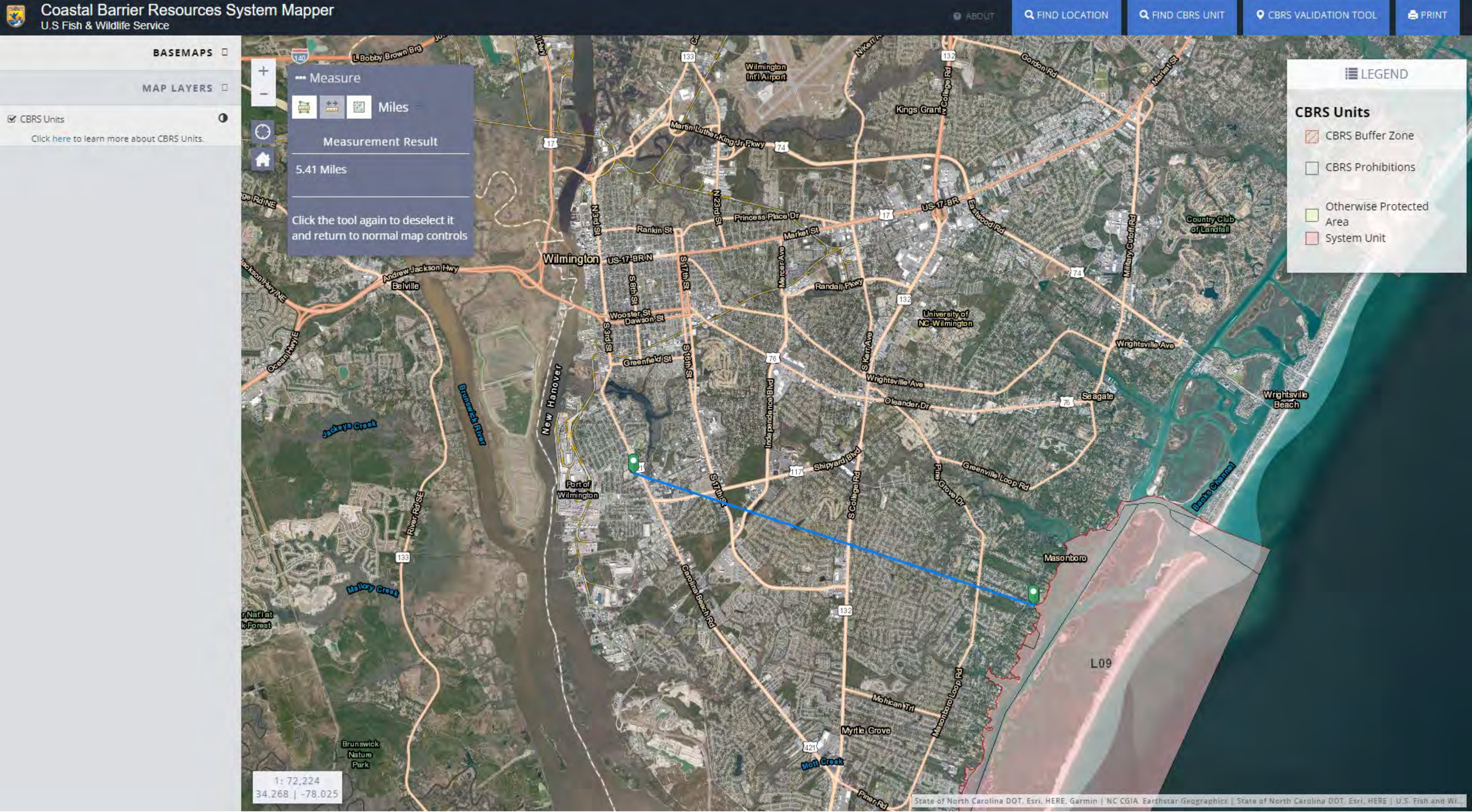
Basemap | Imagery | Draw | Erase | Save Session | Tools | More Data



State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA | EPA OEI | U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS) | U.S. Environmental Protection Agency, Headquarters | EPA OEI, OFA
Powered by Esri

ATTACHMENT 3

Coastal Barrier Resources


Coastal Barrier Resources System Mapper
U.S Fish & Wildlife Service
ABOUT
FIND LOCATION
FIND CBRS UNIT
CBRS VALIDATION TOOL
PRINT
BASEMAPS
MAP LAYERS
CBRS Units
Click here to learn more about CBRS Units.
Measure
Miles
Measurement Result
5.41 Miles
Click the tool again to deselect it and return to normal map controls
LEGEND
CBRS Units
CBRS Buffer Zone
CBRS Prohibitions
Otherwise Protected Area
System Unit
Wilmington
Belville
Masonboro
Wrightsville Beach
Seagate
Myrtle Grove
Brunswick Nature Park
Port of Wilmington
University of NC-Wilmington
Country Club of Landfall
Wilmington Int'l Airport
L09
1: 72,224
34.268 | -78.025
State of North Carolina DOT, Esri, HERE, Garmin | NC CGIA, Earthstar Geographics | State of North Carolina DOT, Esri, HERE | U.S. Fish and Wi...

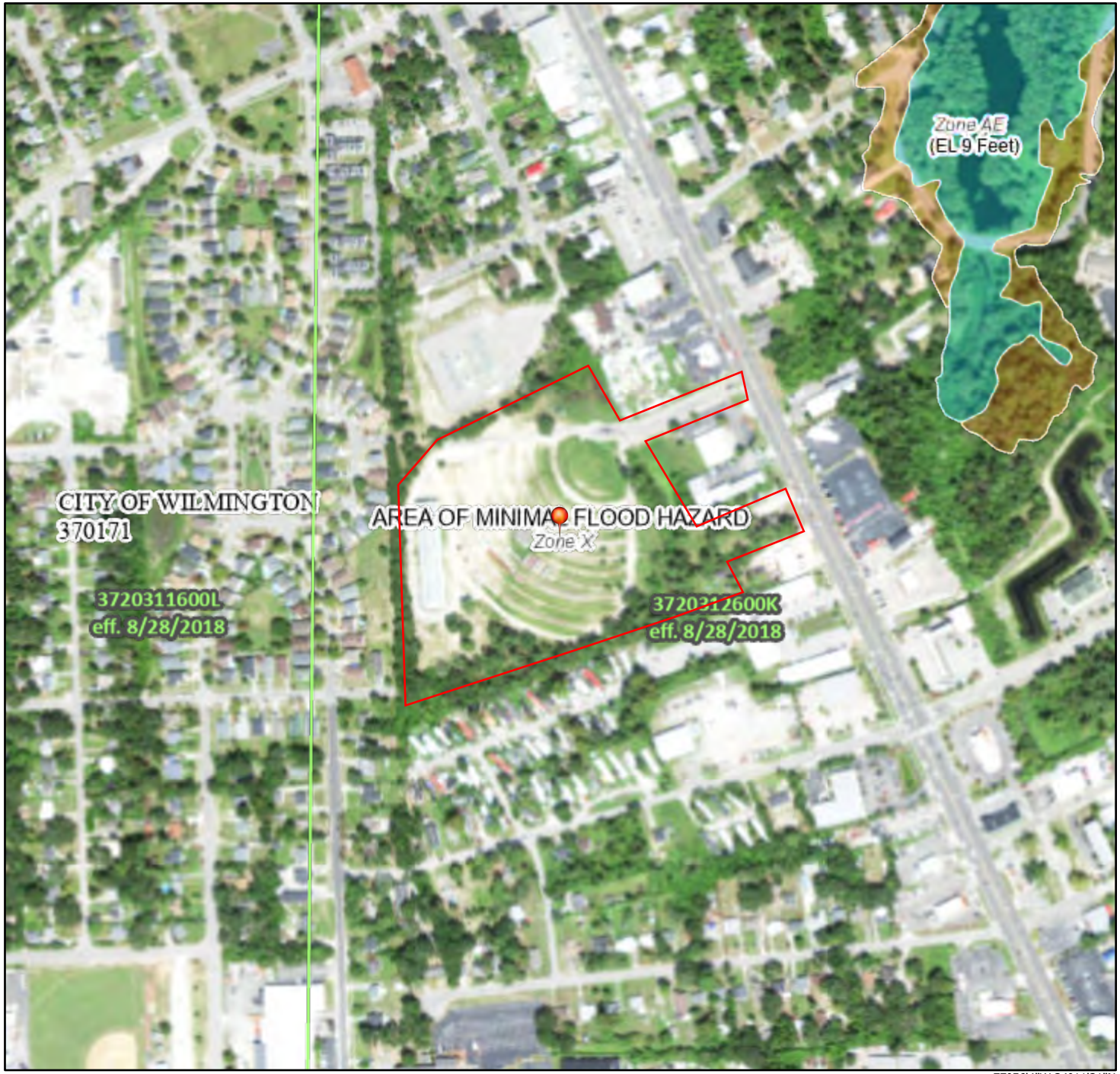
ATTACHMENT 4

Flood Insurance

National Flood Hazard Layer FIRMette

FEMA

77°56'41"W 34°12'1"N



77°56'4"W 34°11'31"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/31/2022 at 6:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

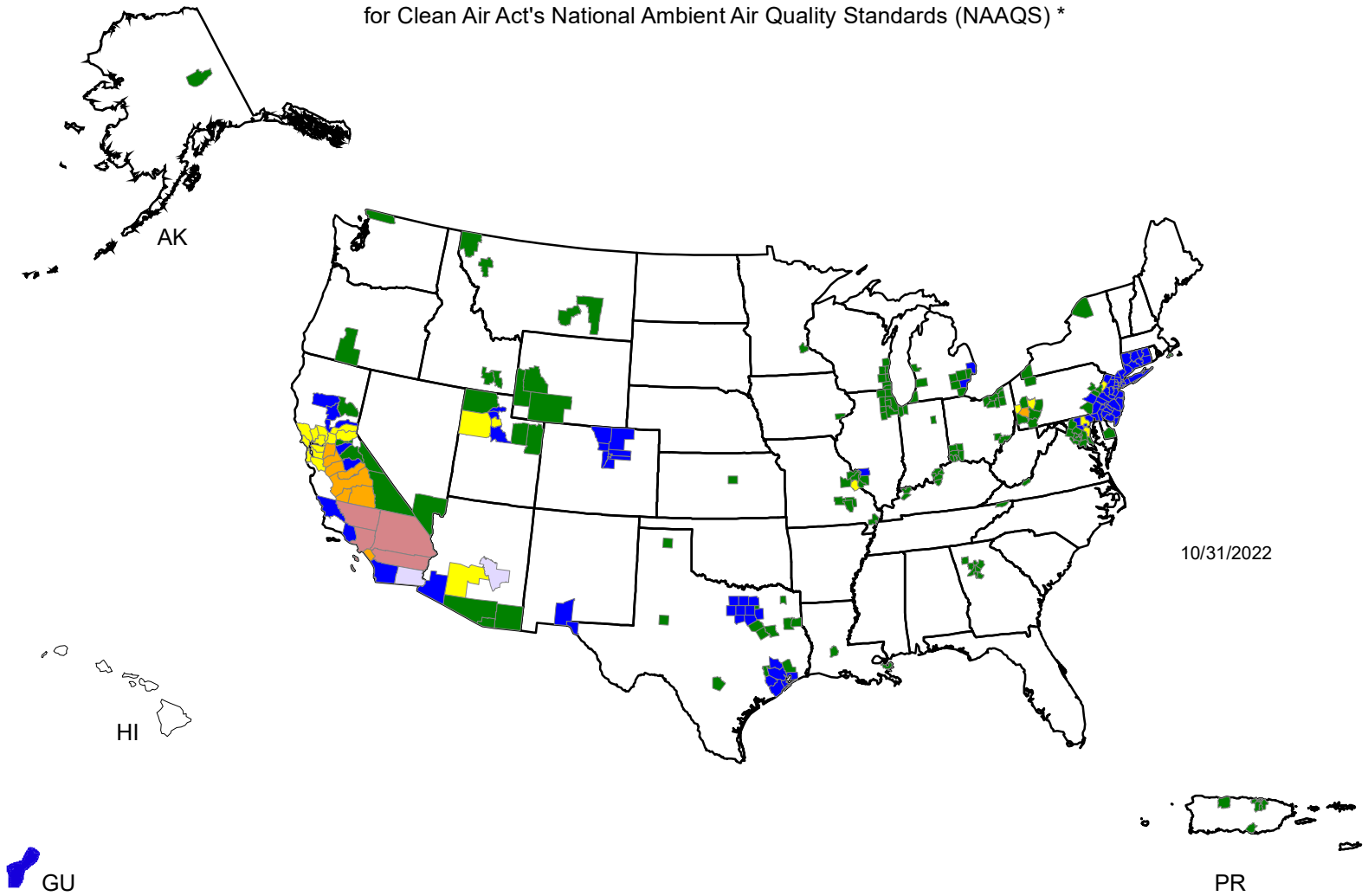

Flood Zones 2018
An Interactive Web Map of New Hanover County, NC
maryland ave
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
-9999 BFE
X
-9999 BFE
MARYLAND AVE
VIRGINIA AVE
DELAWARE AVE
SHIPYARD BLV
NORTHERN BLV
CENTRAL BLV
SOUTHERN BLV
CAROLINA BEACH RD
BURNETT BLV
POLK ST
WILLIAMSON DR
REFLECTIONS LP
RUTLEDGE DR
MARION DR
SILVER STREAM LN
BUCKINGHAM AVE
WELLINGTON AVE
PHYSICIANS DR
PRIVATE
600ft
2,314,278.958 166,488.587 Feet
New Hanover County, NC | New Hanover County, NC

ATTACHMENT 5

Clean Air /Air Quality

Counties Designated "Nonattainment"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *



Legend **

- County Designated Nonattainment for 6 NAAQS Pollutants
- County Designated Nonattainment for 5 NAAQS Pollutants
- County Designated Nonattainment for 4 NAAQS Pollutants
- County Designated Nonattainment for 3 NAAQS Pollutants
- County Designated Nonattainment for 2 NAAQS Pollutants
- County Designated Nonattainment for 1 NAAQS Pollutant

* The National Ambient Air Quality Standards (NAAQS) are health standards for Carbon Monoxide, Lead (1978 and 2008), Nitrogen Dioxide, 8-hour Ozone (2008), Particulate Matter (PM-10 and PM-2.5 (1997, 2006 and 2012), and Sulfur Dioxide.(1971 and 2010)

** Included in the counts are counties designated for NAAQS and revised NAAQS pollutants. Revoked 1-hour (1979) and 8-hour Ozone (1997) are excluded. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of October 31, 2022

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m^3) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State: NORTH CAROLINA GO

New Hanover County is not listed below.

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
NORTH CAROLINA								
Cabarrus County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	178,011	37/025
Cabarrus County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	176,928	37/025
Catawba County	PM-2.5 (1997)-NAAQS revoked	Hickory-Morganton-Lenoir, NC	05 06 07 08 09 10	12/19/2011 *	Former Subpart 1	Whole	154,358	37/035
Chatham County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Part	32,372	37/037
Davidson County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	162,878	37/057
Davidson County	PM-2.5 (1997)-NAAQS revoked	Greensboro-Winston Salem-High Point, NC	05 06 07 08 09 10	12/19/2011 *	Former Subpart 1	Whole	162,878	37/057

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Davie County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Part	1	37/059
Durham County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	9293	06/17/1994	Moderate	Whole	267,587	37/063
Durham County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	267,587	37/063
Durham County	Carbon Monoxide (1971)	Raleigh-Durham, NC	929394	09/18/1995	Moderate <= 12.7ppm	Whole	267,587	37/063
Edgecombe County	8-Hour Ozone (1997)-NAAQS revoked	Rocky Mount, NC	040506	01/05/2007	Former Subpart 1	Whole	56,552	37/065
Forsyth County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	350,670	37/067
Forsyth County	Carbon Monoxide (1971)	Winston-Salem, NC	9293	11/07/1994	Moderate <= 12.7ppm	Whole	350,670	37/067
Franklin County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	60,619	37/069
Gaston County	1-Hour Ozone (1979)-NAAQS revoked	Charlotte-Gastonia, NC	929394	07/05/1995	Moderate	Whole	206,086	37/071
Gaston County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Whole	206,086	37/071
Gaston County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	190,849	37/071

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Granville County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	9293	06/17/1994	Moderate	Part	17,725	37/077
Granville County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	59,916	37/077
Guilford County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	488,406	37/081
Guilford County	PM-2.5 (1997)-NAAQS revoked	Greensboro-Winston Salem-High Point, NC	050607080910	12/19/2011 *	Former Subpart 1	Whole	488,406	37/081
Haywood County	8-Hour Ozone (1997)-NAAQS revoked	Haywood and Swain Counties (Great Smoky NP), NC	040506070809	01/06/2010	Former Subpart 1	Part	985	37/087
Iredell County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Part	68,089	37/097
Iredell County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	65,899	37/097
Johnston County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	168,878	37/101
Lincoln County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Whole	78,265	37/109
Lincoln County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	64,189	37/109

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Mecklenburg County	1-Hour Ozone (1979)-NAAQS revoked	Charlotte-Gastonia, NC	92 93 94	07/05/1995	Moderate	Whole	919,628	37/119
Mecklenburg County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	919,628	37/119
Mecklenburg County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Whole	919,628	37/119
Mecklenburg County	Carbon Monoxide (1971)	Charlotte, NC	92 93 94	09/18/1995	Not Classified	Whole	919,628	37/119
Nash County	8-Hour Ozone (1997)-NAAQS revoked	Rocky Mount, NC	04 05 06	01/05/2007	Former Subpart 1	Whole	95,840	37/127
Orange County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	133,801	37/135
Person County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	39,464	37/145
Rowan County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	138,428	37/159
Rowan County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	130,057	37/159
Swain County	8-Hour Ozone (1997)-NAAQS revoked	Haywood and Swain Counties (Great Smoky NP), NC	04 05 06 07 08 09	01/06/2010	Former Subpart 1	Part	3,288	37/173

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Union County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	201,292	37/179
Union County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	176,055	37/179
Wake County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	92 93	06/17/1994	Moderate	Whole	900,993	37/183
Wake County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	900,993	37/183
Wake County	Carbon Monoxide (1971)	Raleigh-Durham, NC	92 93 94	09/18/1995	Moderate <= 12.7ppm	Whole	900,993	37/183

Important Notes

Discover.

Connect.

Ask.

Follow.

2022-10-31

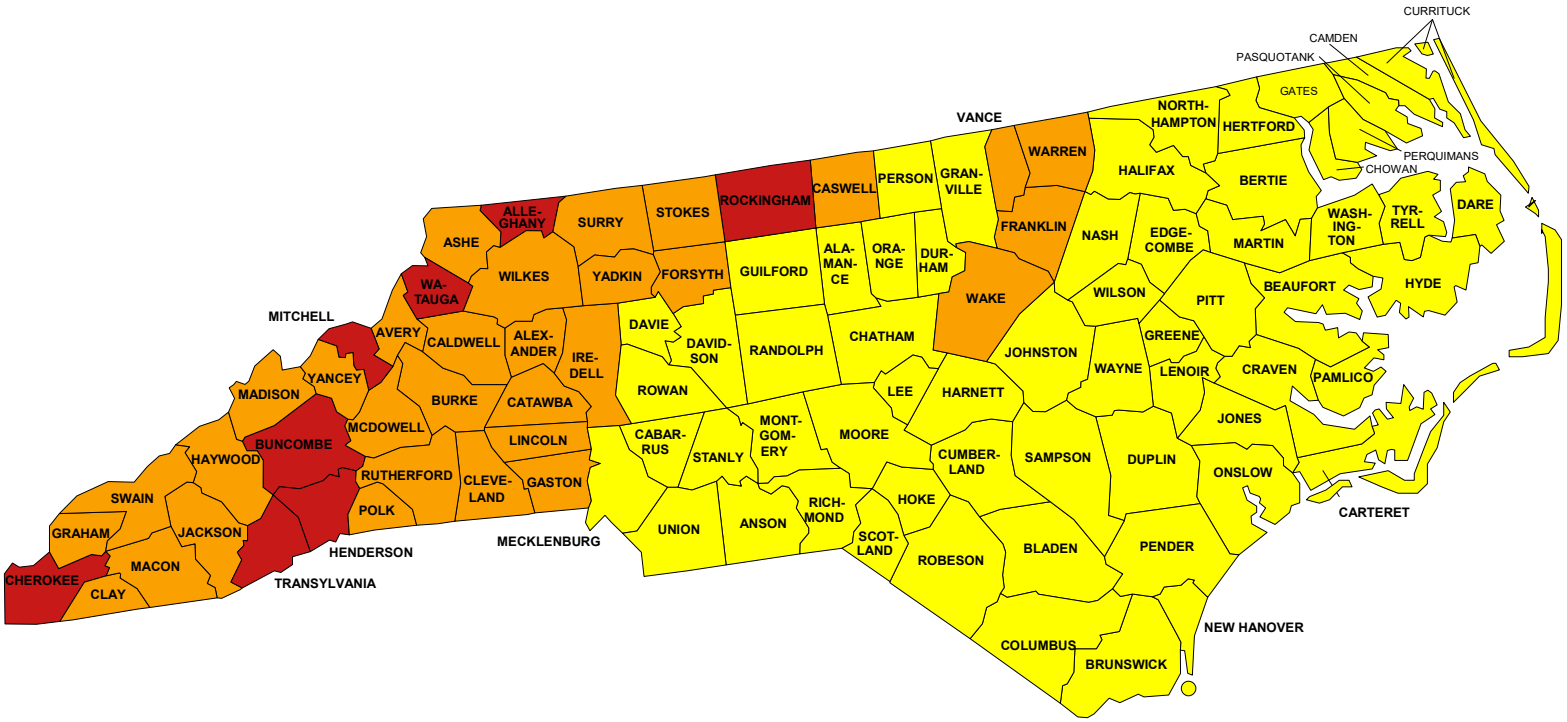
NORTH CAROLINA - EPA Map of Radon Zones

http://www.epa.gov/radon/zonemap.html

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

All homes should be tested, regardless of zone designation.



Zone 1 Zone 2 Zone 3

IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of North Carolina" (USGS Open-file Report 93-292-D) before using this map. http://energy.cr.usgs.gov/radon/grpinfo.html This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

ATTACHMENT 6

Coastal Zone Management

Gievers, Andrea

From: Govoni, Daniel
Sent: Tuesday, November 8, 2022 9:26 AM
To: Gievers, Andrea
Subject: RE: CZMA Federal Consistency Determination - Starway Village DCM2022058

Hello Andrea,

North Carolina's coastal zone management program consists of, but is not limited to, the Coastal Area Management Act, the State's Dredge and Fill Law, Chapter 7 of Title 15A of North Carolina's Administrative Code, and the land use plan of the County and/or local municipality in which the proposed project is located. It is the objective of the Division of Coastal Management (DCM) to manage the State's coastal resources to ensure that proposed federal actions would be compatible with safeguarding and perpetuating the biological, social, economic, and aesthetic values of the State's coastal waters.

DCM has reviewed the submitted information pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code and concurs that the proposed activity is consistent with North Carolina's approved coastal management program.

Prior to the initiation of the activities described, the applicant should obtain any other required State approvals or authorizations. Should the proposed action be modified further, a revised consistency determination could be necessary. This might take the form of either a supplemental consistency determination pursuant to 15 CFR 930.46, or a new consistency determination pursuant to 15 CFR 930.36. Likewise, if further project assessments reveal environmental effects not previously considered, a supplemental consistency certification may be required. If you have any questions, please contact me at (252) 515-5435. Thank you for your consideration of the North Carolina Coastal Management Program.

Daniel M. Govoni
Policy Analyst
Federal Consistency Coordinator
NC Division of Coastal Management
Department of Environmental Quality

252-515-5435
Daniel.Govoni@ncdenr.gov

400 Commerce Avenue
Morehead City, NC 28557

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, October 14, 2022 5:11 PM
To: Govoni, Daniel <daniel.govoni@ncdenr.gov>
Subject: CZMA Federal Consistency Determination - Starway Village

Hello Dan:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed *affordable housing* project, **Starway Village Apartments, 2346 Carolina Beach Road,**

Wilmington, New Hanover County, NC 28401. I have attached the Determination Letter and supporting documentation to assist in your review. Please feel free to contact me if you have any questions. Thank you so much for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Chris Daves

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, October 14, 2022 5:11 PM
To: Govoni, Daniel
Subject: CZMA Federal Consistency Determination - Starway Village
Attachments: NCORR CZMA Federal Consisency Letter Starway VIllage rdcd.pdf

Hello Dan:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed *affordable housing* project, **Starway Village Apartments, 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401.** I have attached the Determination Letter and supporting documentation to assist in your review. Please feel free to contact me if you have any questions. Thank you so much for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

October 14, 2022

Mr. Daniel Govoni
Federal Consistency Coordinator
NC Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557-3421

RE: CZMA Federal Consistency Determination Submission
Proposed Starway Village Apartments
2346 Carolina Beach Road
Wilmington, New Hanover County, NC 28401

Sent via Email to: daniel.govoni@ncdenr.gov
State.Clearinghouse@doa.nc.gov

Dear Mr. Govoni:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed affordable housing project, **Starway Village Apartments located at 2346 Carolina Beach Road in Wilmington, New Hanover County, NC 28401**. The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families. Starway Village Apartments exemplifies the type of mixed-income apartment development that the City of Wilmington and New Hanover County is encouraging in their community. Therefore, funding for the proposed project will be provided in part by the HUD CDBG-DR North Carolina Affordable Housing Development Fund Program for Hurricane Florence storm recovery activities in North Carolina. NCORR is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58, and processes environmental reviews for proposed projects on a case-by-case basis. This letter serves as an official request for concurrence from NC DCM that the proposed activity is consistent with North Carolina's approved coastal management program pursuant to the management objectives

and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code.

Proposed Project Location:

The project site is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina (see attached vicinity map). The project site is comprised of four contiguous parcels, R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.) that encompass approximately 15.67 acres (see attached New Hanover County GIS Map). The parcels have been zoned MD-17, High-density multiple-dwelling residential (see attached City of Wilmington Zoning Map). The project will be located on a site with street frontage on Carolina Beach Road, adjacent to commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences (see attached Aerial Map Map).

The site is relatively flat and consists primarily of open land (approximately 11 acres) associated with the former Starway Flea Market. Grassed lawns associated with two residences, developed areas (buildings, residences, paved/gravel drives), and pine-mixed hardwood wooded areas (approximately 3 acres) are also located on the site. A depressional, basin wetland (0.24 acre) surrounded by uplands was observed on the northern portion of the site. A man-made ditch was also observed on the southern and eastern portions of the site.

Proposed Project Activities:

The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques, for stormwater management. The conceptual plan proposes to utilize two stormwater detention ponds, which will treat collected runoff, from the added built upon area, before it discharges offsite and eventually into downstream receiving waters. It is important to note, that the Cape Fear Public Utility Authority have sewer and water lines in place, along Carolina Beach Road, thus there is no need to perform work outside the proposed project location. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases.

Approximately 15 acres of the project site will be disturbed, with approximately 15 acres being converted to built-upon area. Due to the proposed land disturbance exceeding 1 acre, a NC Division of Energy, Minerals and Land Resources NPDES NCG010000 permit is required and will ensure best management practices, such as installing silt fence, temporary sediment basins/traps and construction entrance, are installed prior undertaking land disturbance activities. The measures will be inspected at least every seven days and/or after a rain event that produces more than one inch of rain within a 24-hour period. Non-potable water will be used to contain dust, during the construction process.

NC and Federal Consistency Review:

Since the proposed project involves new construction of affordable housing, it must be reviewed to determine if there are any reasonably foreseeable effects on coastal uses and/or coastal resources as defined in 15 CFR 930.11. After a comprehensive review of available data, the proposed activity is consistent with the state's coastal zone management program and, pursuant to 15 CFR Part 930, the proposed project is consistent with the requirements objectives, policies, and standards of the Coastal Area Management Act. The proposed project will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. New Hanover County is one of North Carolina's 20 coastal counties, but the proposed project site is located more than 3.8 miles from Whiskey Creek to the east which is the nearest saltwater waterbody (see attached Distance to Nearest Saltwater Waterbody Map) and is not within an area designated as a Coastal Barrier Resource System Area.

The proposed project is compatible with the New Hanover County Comprehensive Plan (NHC CP). As noted in the NHC CP, "[w]e are a vibrant, prosperous, diverse coastal community, committed to building a sustainable future for generations to come." This proposed project aims to ensure affordable housing in an area of the County that needs it for generations to come. According to the NHC CP, There are currently only two affordable housing communities in the unincorporated area of the county: White Oak Apartments and Gresham Place Apartments.

A review of the Coastal Management Policies and Objectives identified that the proposed project does not impact public beaches and waters; development of energy resources and facilities; floating structures; adverse impacts to coastal lands and waters; degradation of water quality; or use of aircraft. State and federal agencies are being consulted individually and through the State Environmental Clearinghouse, and permits will be obtained before ground disturbance occurs. The U.S. Army Corps of Engineers (USACE) was consulted for a potential wetland and drainage ditch on the site. According to the USACE, "[t]here are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344)." An 8-step process is being conducted in accordance with 24 CFR 55 and the project design will minimize impacts to wetlands. The NHC CP includes implementation strategies such as "[p]reserve, conserve, and/or maintain coastal infrastructure features including natural and man-made, which are critical to our quality of life, economy, and coastal environment." The wetland is described in the attached USACE Approved Determination that "no potentially jurisdictional connections were observed flowing from the wetland feature nor was there any signatures on available lidar." The manmade ditch was noted as absent of hydric soils and "not a tributary under (a)(2), was not a tributary under (a)(2) when it was constructed, was not constructed in an adjacent wetland, and does not contribute surface flow to an (a)(1) water in a typical year." The proposed project will likely require the following permits: NCDEQ NPDES Construction Stormwater Permit (NCG010000), NCDEQ Stormwater Approval, NHC Stormwater Approval, NHC Erosion & Sedimentation Control Approval, NHC TRC Approval, NHC Tree Approval, CFPUA Approval, and NCDOT Driveway.

The New Hanover County Zoning Division administers the Minor Permit program under the Coastal Area Management Act (CAMA) on behalf of the State, in both the unincorporated County and City of Wilmington. The CAMA Minor Permit program involves issuance of permits for construction in and near the water; protection of dunes and marshes through construction

standards; and investigation of violations. An important part of the program is managing development in the coastal area by requiring permits for development in Areas of Environmental Concern (AECs). The proposed project does not involve excavation or filling within estuarine waters, tidelands, or State-owned lakes regulated under North Carolina Dredge and Fill Law (NCGS 113-229). The proposed project site is located more than 3.8 miles from Whiskey Creek to the east which is the nearest saltwater waterbody (see attached Distance to Nearest Saltwater Waterbody Map). However, the proposed project does involve wetland impacts on this former flea market site. Thus, it might require a CAMA major, minor or general permit. The proposed project information has been submitted to the State Environmental Clearinghouse for DCM review.

If you have any questions or require additional information regarding this project review request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

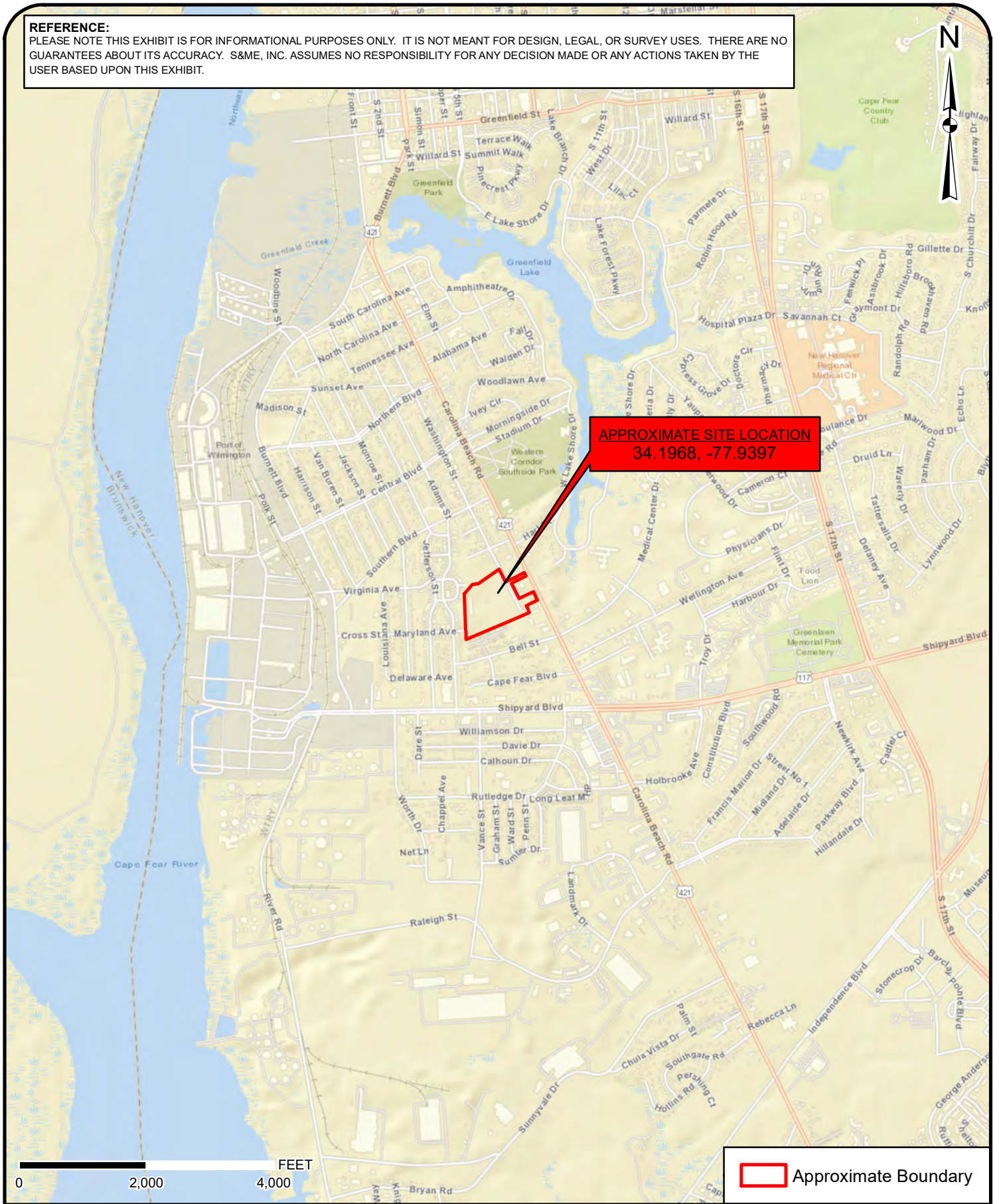
Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Attachments:

1. Vicinity Map
2. USGS Topographic Map
3. Aerial Map
4. New Hanover County GIS Map
5. City of Wilmington Zoning Map
6. Starway Village Apartments Conceptual Plans
7. NHC Future Land Use Map
8. Distance to Nearest Saltwater Waterbody Map
9. FEMA FIRMette Map
10. USACE Jurisdictional Determination Letter

REFERENCE:
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Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

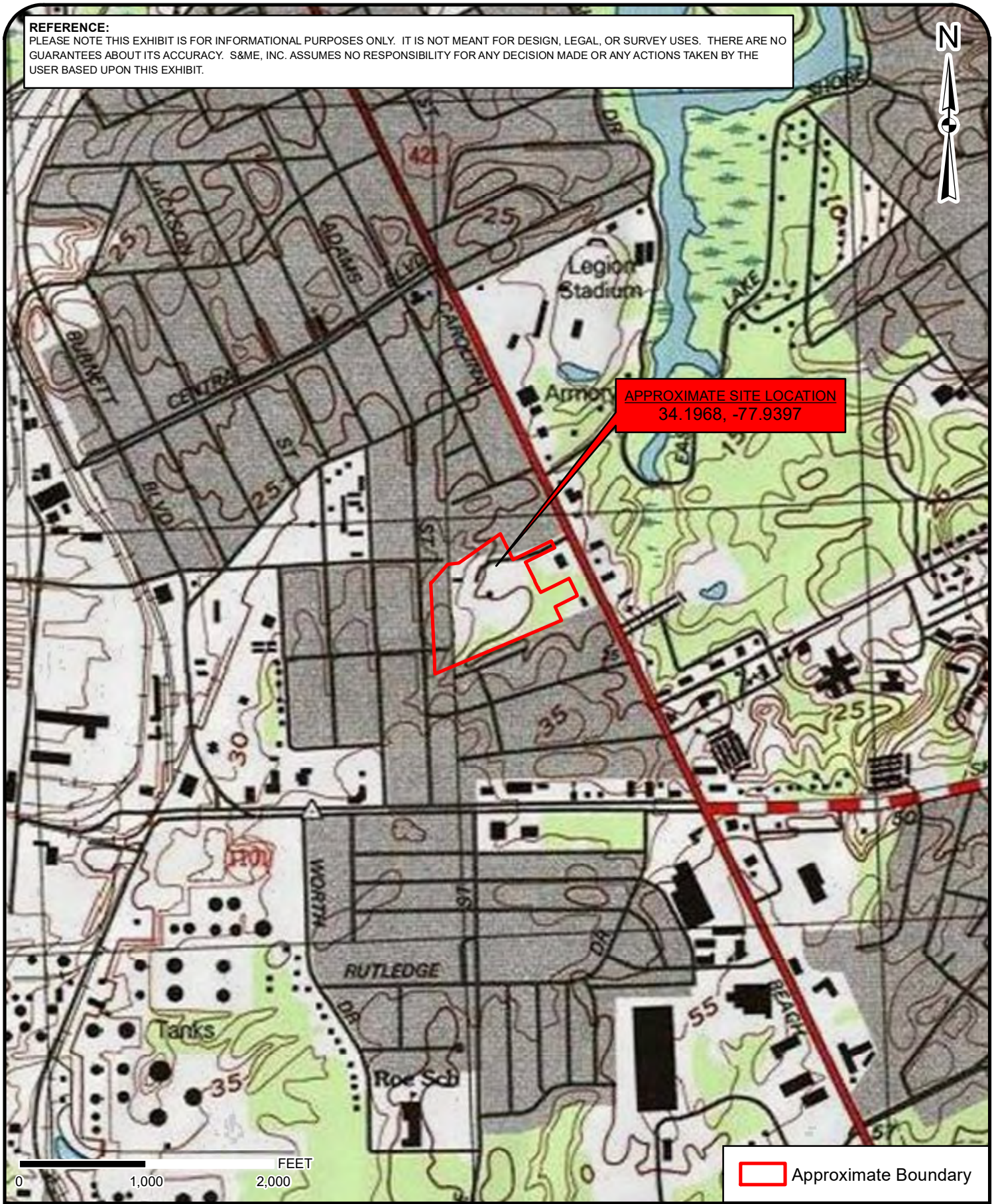
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

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Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

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Aerial Exhibit

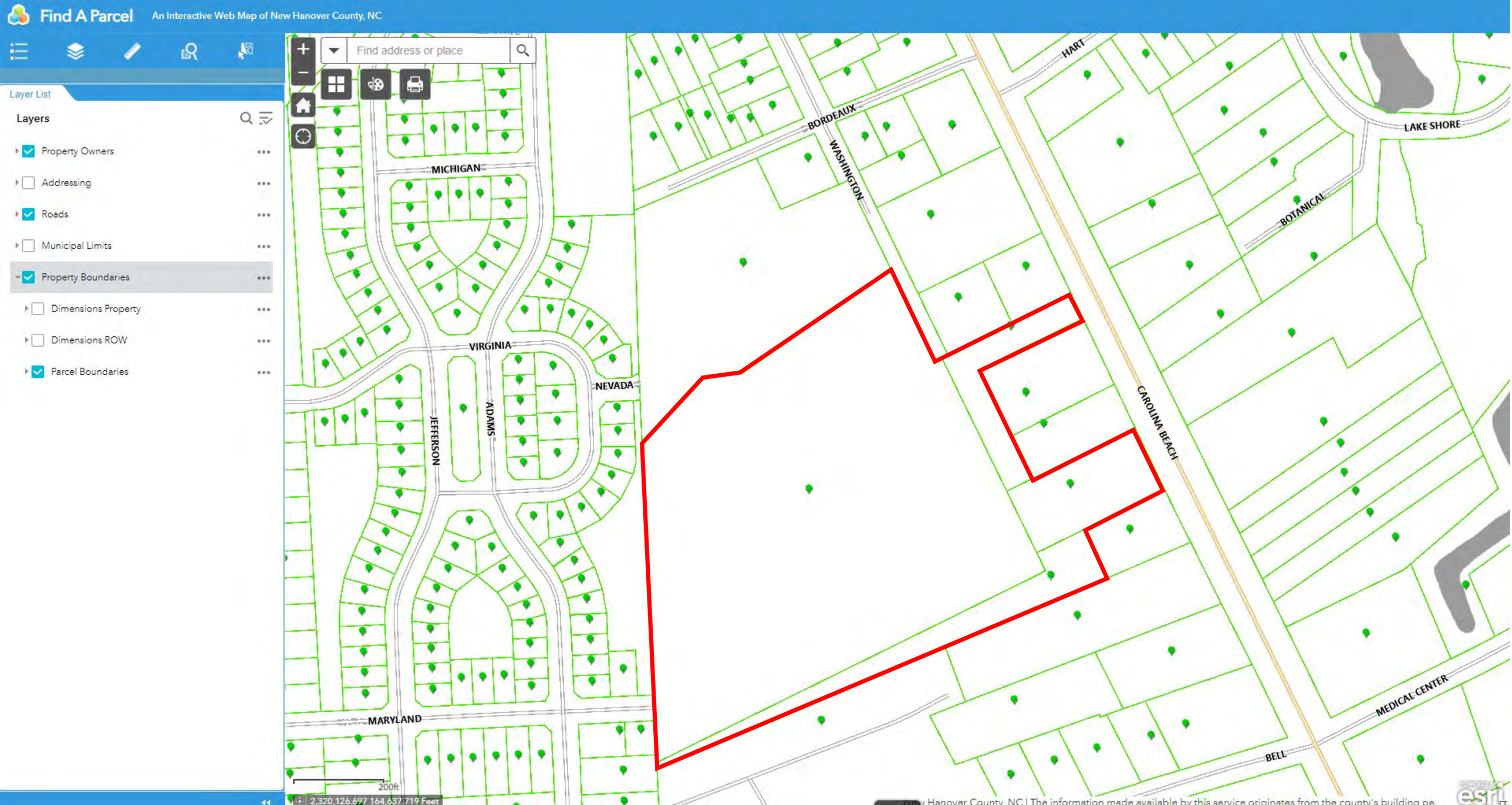
Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020

SCALE:	EXHIBIT NO.
1 " = 300 '	3
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022


Find A Parcel
An Interactive Web Map of New Hanover County, NC
Find address or place
Layer List
Layers
Property Owners
Addressing
Roads
Municipal Limits
Property Boundaries
Dimensions Property
Dimensions ROW
Parcel Boundaries
MICHIGAN
VIRGINIA
NEVADA
JEFFERSON
ADAMS
MARYLAND
BORDEAUX
WASHINGTON
HART
LAKE SHORE
BOTANICAL
CAROLINA BEACH
MEDICAL CENTER
BELL
200ft
2,320,126.697 164,637.719 Feet



SOURCE: North Carolina DEQ
https://deq.nc.gov/about/divisions/coastal-management/coastal-management-permit-guidance/permit-required

N

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	9-1-2022

COASTAL ZONE MANAGEMENT EXHIBIT
Starway Village Apartments
WILMINGTON, NEW HANOVER CO., NC
PROJECT NO: 21610025

EXHIBIT NO.

City of Wilmington Zoning Districts

Legend

Historic District Overlay

Frontage Standards

Frontage Type

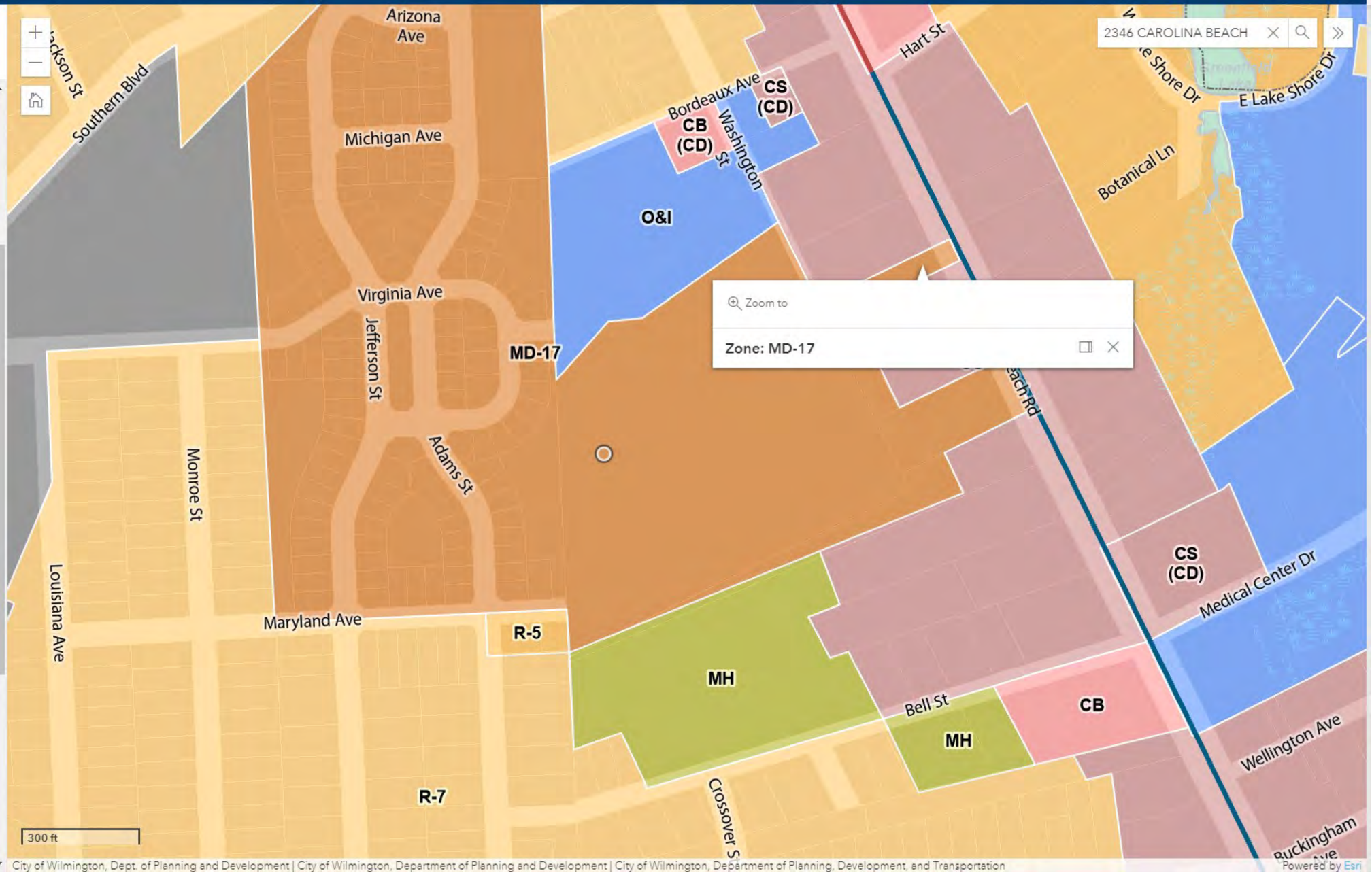
- Urban
- Semi-urban
- Suburban
- Wrightsville Ave

Zoning

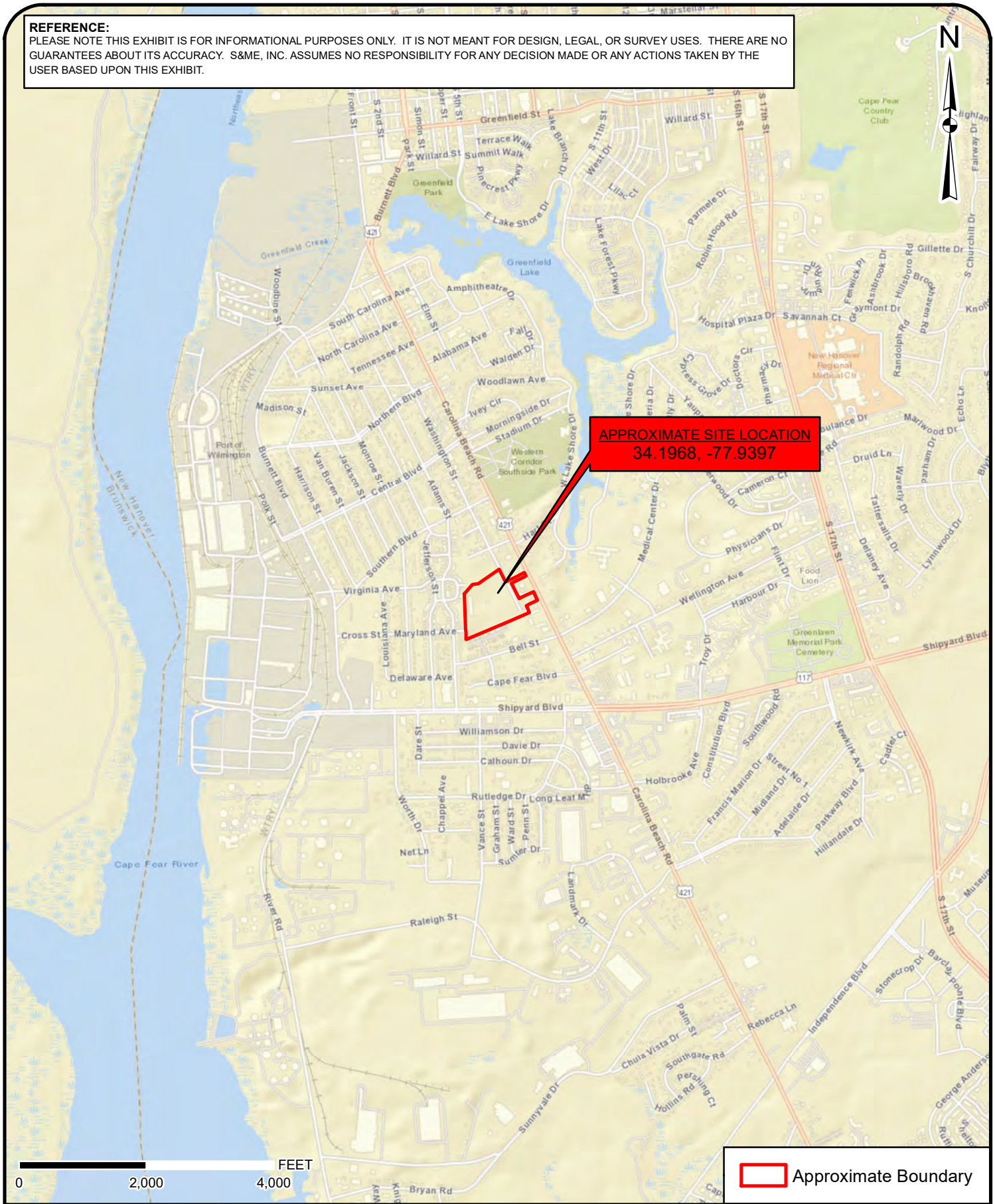
Zoning

Zoning (dissolved)

- R-20 (L)
- R-15
- R-10
- R-7
- R-5
- R-3
- MD-10
- MD-17
- MF-MH (L)
- MF-H (L)
- MH
- CBD
- UMX
- MX (L)
- RO



REFERENCE:
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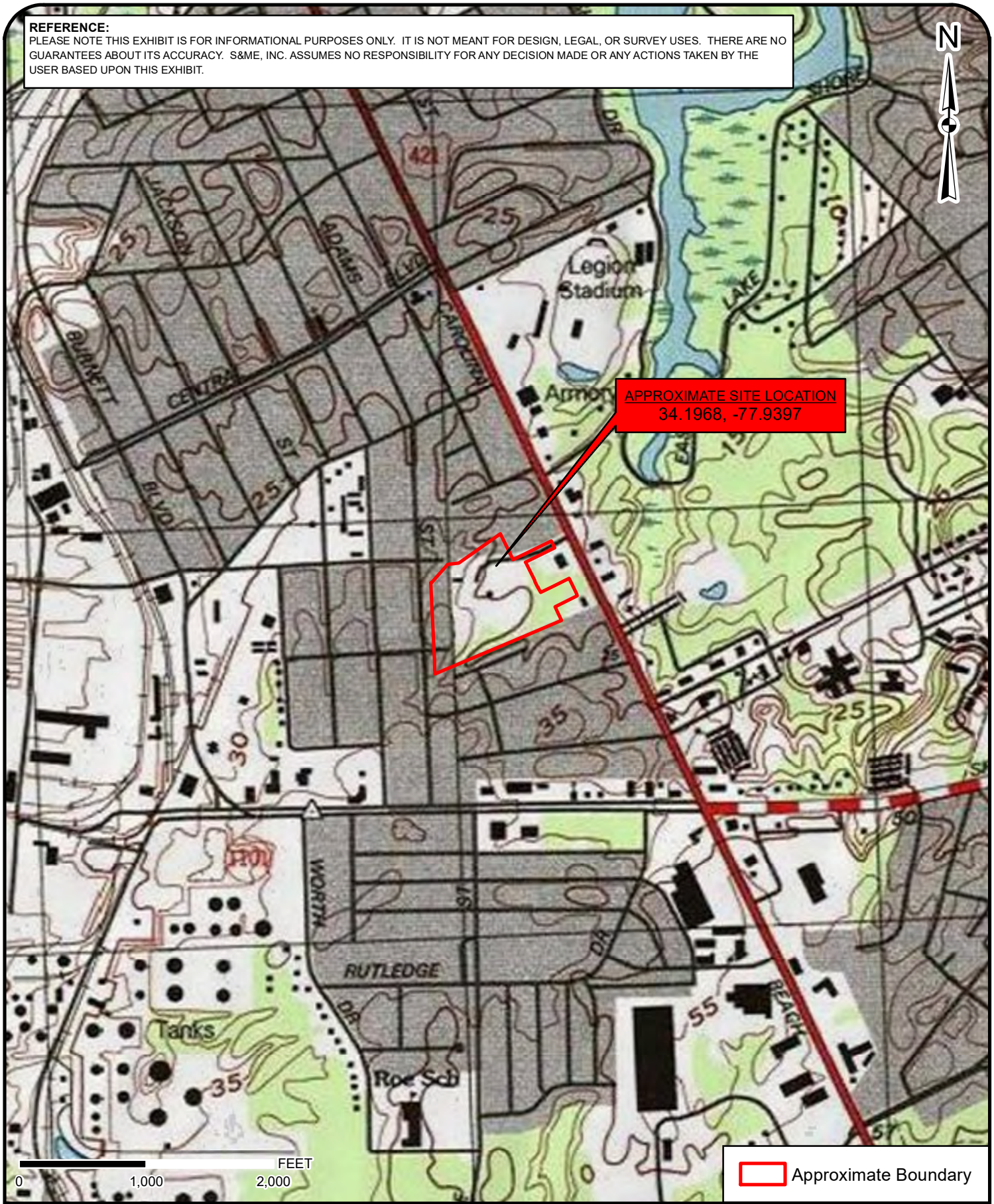
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Source: World Street Map

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Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020

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PRELIMINARY SITE LAYOUT

SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 August 25, 2021 02:54:48pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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Adams St
Virginia Ave
Adams St
Washington St
Carolina Beach Rd
U.S. 421 – CAROLINA BEACH ROAD
(80' PUBLIC RIGHT-OF-WAY)
Botanical
MARYLAND AVE.
60' PUBLIC RIGHT-OF-WAY
MAP BOOK 45, PAGE 380
Adams St
Ave

Pond
Pool
Club-House
3
4-Story/
48 Units
2
4-Story/
48 Units
1
4-Story/
32 Units
Pond
PROPOSED PHASE 1
9.89 AC
4-Story/
48 Units
7
Playground
PROPOSED PHASE 2
5.65 AC
4
3-Story/
22 Units
6
4-Story/
48 Units
5
4-Story/
32 Units
MAIL
MAIL
Dumpster Pad & Enclosure
Dumpster Pad & Enclosure

N 55°15'41" E 408.07'
N 84°37'41" E 87.86'
N 41°30'39" E 182.54'
N 63°54'08" E 159.75'
N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI-TENANT PARKING SUMMARY

PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI-TENANT PARKING SUMMARY

NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0-1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'
BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE

2346 CAROLINA BEACH RD

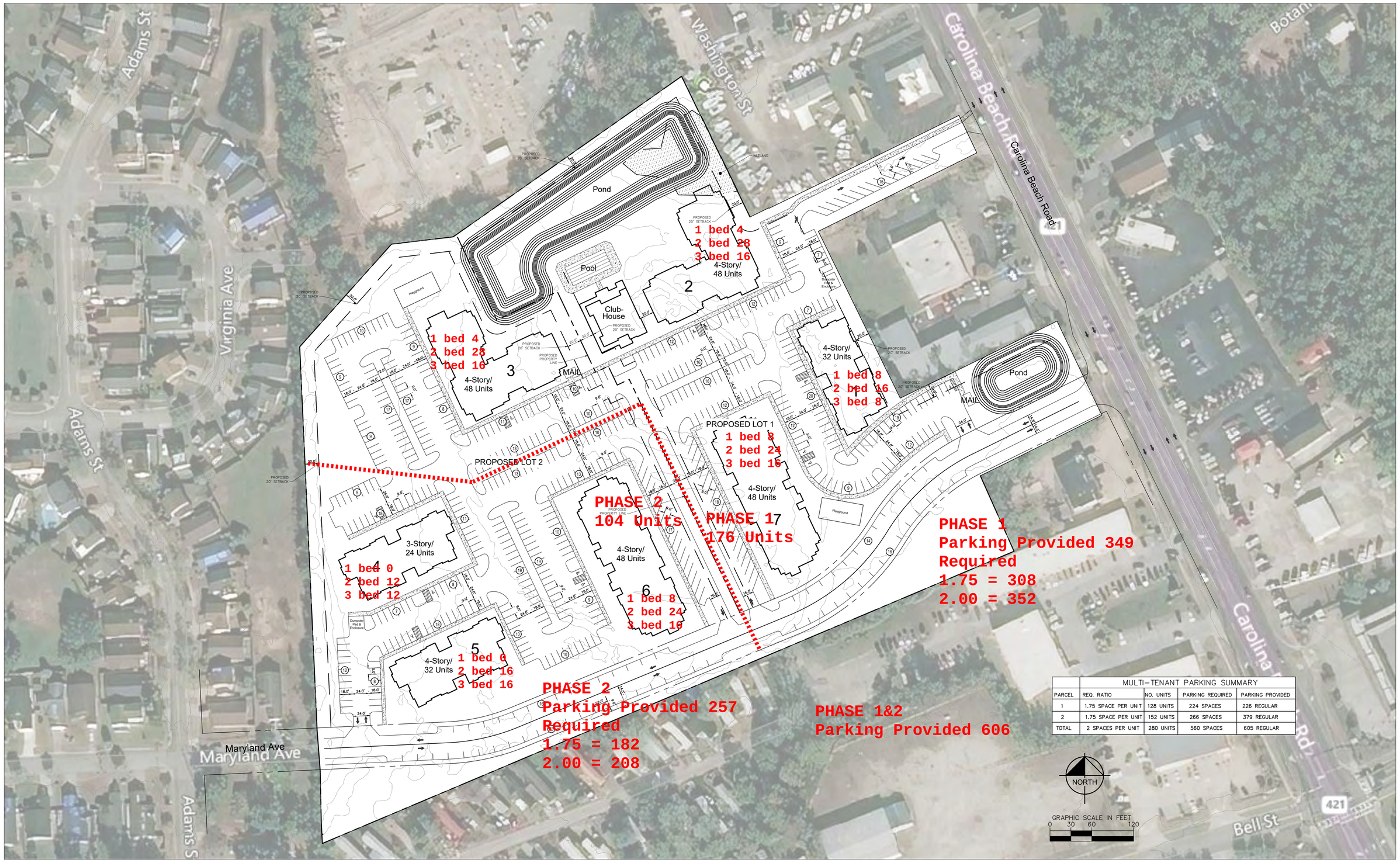
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1



MULTI-TENANT PARKING SUMMARY				
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	128 UNITS	224 SPACES	226 REGULAR
2	1.75 SPACE PER UNIT	152 UNITS	266 SPACES	379 REGULAR
TOTAL	2 SPACES PER UNIT	280 UNITS	560 SPACES	605 REGULAR

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	07/29/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE
2346 CAROLINA BEACH RD
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

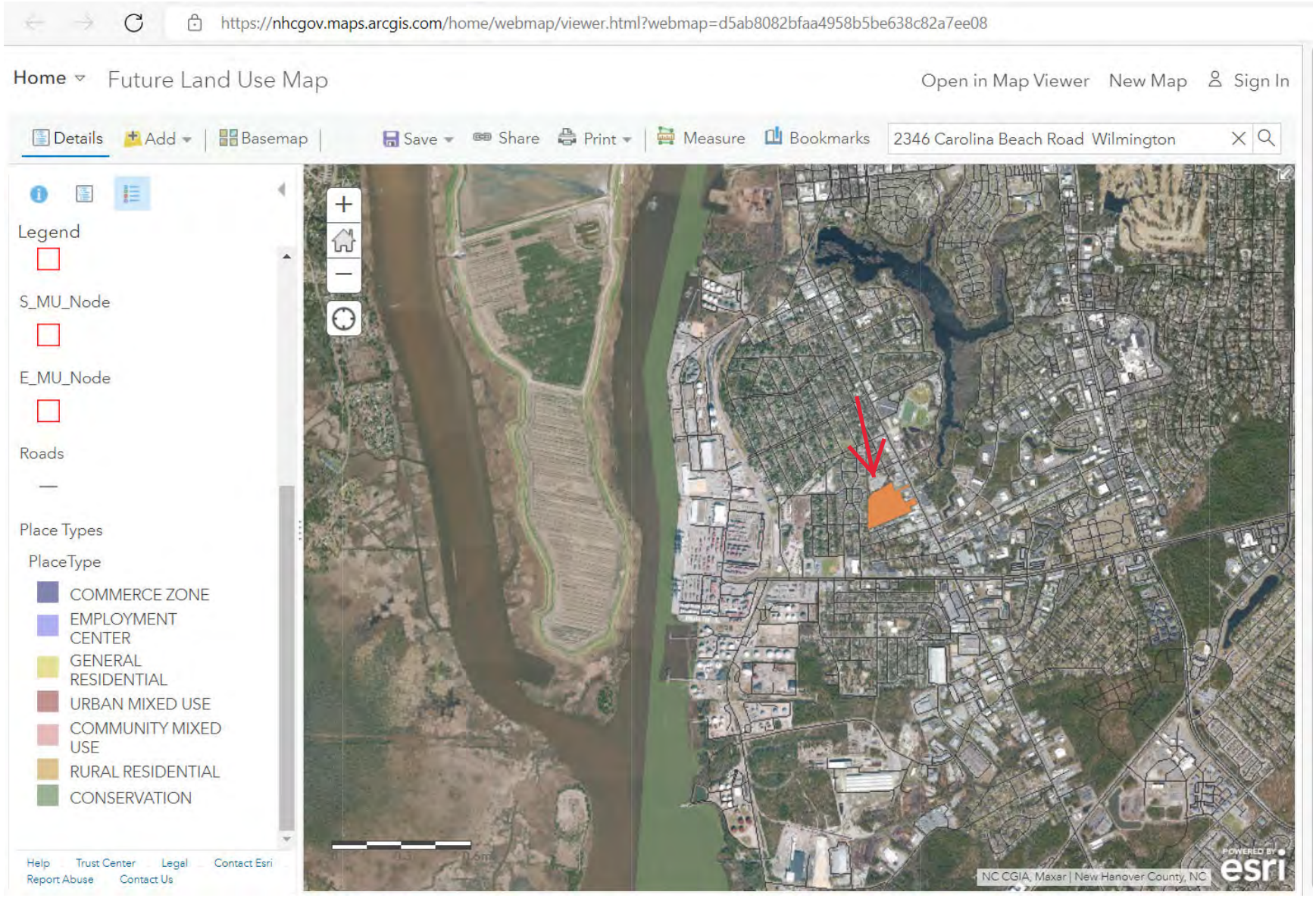
PRELIMINARY SITE LAYOUT
PREPARED FOR
KELLEY PROPERTIES

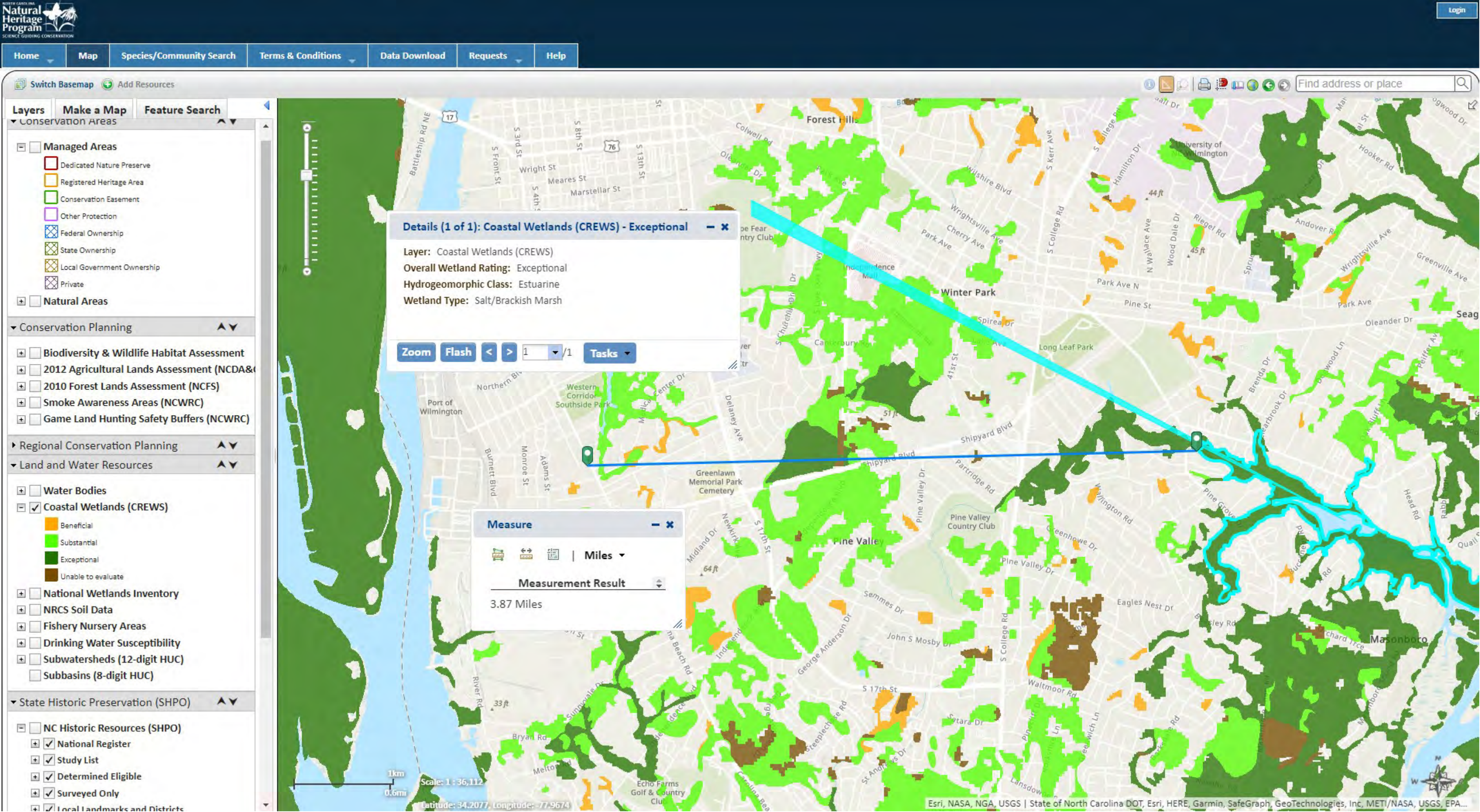
SHEET NUMBER
PSL-1

Plotted By: Kolb, Katie Sheet Set: Holly Springs Retail Layout: Layout1 July 29, 2021 12:25:45pm \\kimley-horn.com\SE_RAL\RAL_JOBS\013856002 — Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-07-29 Wilmington MF PSD.dwg

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STARWAY VILLAGE APARTMENTS – NHC FUTURE LAND USE MAP

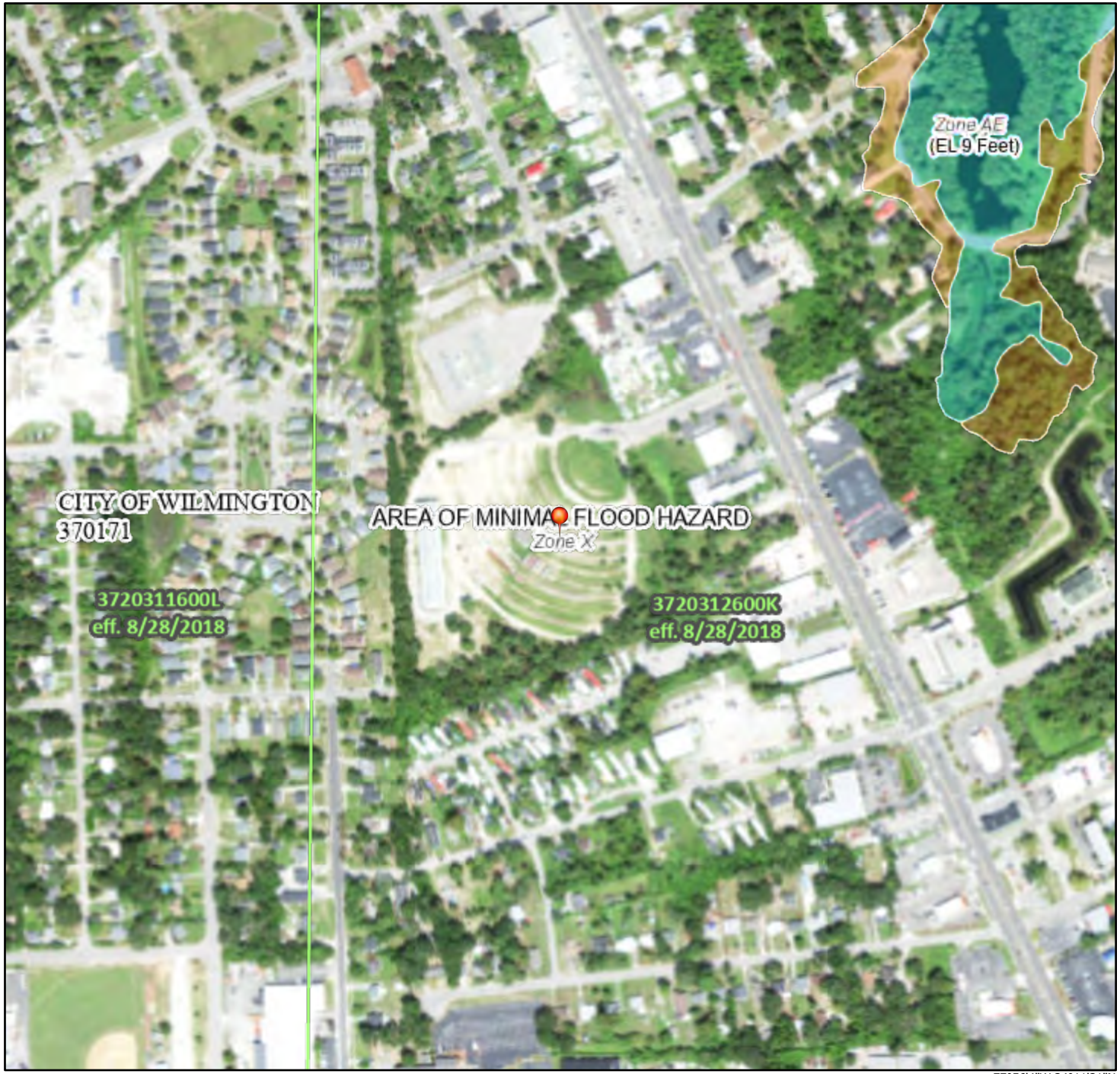



Natural Heritage Program
SCIENCE GUIDING CONSERVATION
Login
Home
Map
Species/Community Search
Terms & Conditions
Data Download
Requests
Help
Switch Basemap
Add Resources
Find address or place
Layers
Make a Map
Feature Search
Conservation Areas
Managed Areas
Dedicated Nature Preserve
Registered Heritage Area
Conservation Easement
Other Protection
Federal Ownership
State Ownership
Local Government Ownership
Private
Natural Areas
Conservation Planning
Biodiversity & Wildlife Habitat Assessment
2012 Agricultural Lands Assessment (NCDA&
2010 Forest Lands Assessment (NCFS)
Smoke Awareness Areas (NCWRC)
Game Land Hunting Safety Buffers (NCWRC)
Regional Conservation Planning
Land and Water Resources
Water Bodies
Coastal Wetlands (CREWS)
Beneficial
Substantial
Exceptional
Unable to evaluate
National Wetlands Inventory
NRCS Soil Data
Fishery Nursery Areas
Drinking Water Susceptibility
Subwatersheds (12-digit HUC)
Subbasins (8-digit HUC)
State Historic Preservation (SHPO)
NC Historic Resources (SHPO)
National Register
Study List
Determined Eligible
Surveyed Only
Details (1 of 1): Coastal Wetlands (CREWS) - Exceptional
Layer: Coastal Wetlands (CREWS)
Overall Wetland Rating: Exceptional
Hydrogeomorphic Class: Estuarine
Wetland Type: Salt/Brackish Marsh
Zoom
Flash
1
/1
Tasks
Measure
Miles
Measurement Result
3.87 Miles
Forest Hills
Winter Park
Long Leaf Park
Pine Valley
Pine Valley Country Club
Greenlawn Memorial Park Cemetery
Port of Wilmington
Western Corridor Southside Park
Masonboro
Echo Farms Golf & Country Club
1km
0.6mi
Scale: 1 : 36,112
Latitude: 34.2077, Longitude: -77.9674
Esri, NASA, NGA, USGS | State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA...

National Flood Hazard Layer FIRMette

FEMA

77°56'41"W 34°12'1"N



77°56'4"W 34°11'31"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/31/2022 at 6:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


Flood Zones 2018
An Interactive Web Map of New Hanover County, NC
maryland ave
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
-9999 BFE
X
-9999 BFE
MARYLAND AVE
VIRGINIA AVE
DELAWARE AVE
SHIPYARD BLV
NORTHERN BLV
CENTRAL BLV
SOUTHERN BLV
CAROLINA BEACH RD
BURNETT BLV
POLK ST
WILLIAMSON DR
REFLECTIONS LP
RUTLEDGE DR
MARION DR
SILVER STREAM LN
BUCKINGHAM AVE
WELLINGTON AVE
PHYSICIANS DR
PRIVATE
600ft
2,314,278.958 166,488.587 Feet
New Hanover County, NC | New Hanover County, NC

SAW-2021-01647

Electronically Transmitted

U.S. ARMY CORPS OF ENGINEERS

WILMINGTON DISTRICT

Action Id. **SAW-2021-01647** County: **New Hanover** U.S.G.S. Quad: **NC-Wilmington**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Bradley Housing Developers, LLC**
Brad Queener
Address: **P.O. Box 526**
Aynor, SC 29511
E-mail: **brad@bradleydevelopers.com**

Size (acres) **16**
Nearest Waterway **Cape Fear River**
USGS HUC **03030005**
Nearest Town **Wilmington**
River Basin **Cape Fear**
Coordinates Latitude: **34.196388**
Longitude: **-77.939694**

Location description: **The project area is located at 2346 Carolina Beach Road in Wilmington.**

Indicate Which of the Following Apply:

A. Preliminary Determination

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The **waters, including wetlands** have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. The approximate boundaries of these waters are shown on the enclosed delineation map dated **DATE**. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the **waters, including wetlands** have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the **waters, including wetlands** at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

B. Approved Determination

☐ There are Navigable Waters of the United States within the above described project area/property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are **waters, including wetlands**on the above described project area/property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐We recommend you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

☐The **waters, including wetlands** on your project area/property have been delineated and the delineation has been verified by the Corps. The approximate boundaries of these waters are shown on the enclosed delineation map dated. We strongly suggest

you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

☐ The **waters, including wetlands** have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on **DATE**. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☒ There are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in **Morehead City, NC, at (252) 808-2808** to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Brad Shaver at 910-251-4611 or brad.e.shaver@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the approved jurisdictional determination form dated 08/04/2021.

D. Remarks: *Desktop determination.*

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information **(This information applies only to approved jurisdictional determinations as indicated in B. above)**

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
AND
PHILIP.A.SHANNIN@USACE.ARMY.MIL

SAW-2021-01647

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **10/03/2021**.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Brad E Shaver Digitally signed by Brad Shaver Date: 2021.08.04 15:15:23 -04'00'

Date of JD: **08/04/2021** Expiration Date of JD: **08/03/2026**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy Furnished(electronic):

Kimley-Horn attn: Mackenzie Richards



Kimley»Horn

Figure 3: Delineated Features Map
Starway Village
Wilmington, New Hanover County, NC
June 2021

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 08/04/2021
ORM Number: SAW-2021-01647
Associated JDs: N/A
Review Area Location[1]: State/Territory: NC City: Wilmington County/Parish/Borough: New Hanover
Center Coordinates of Review Area: Latitude 34.196388 Longitude -77.939694

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1	0.24	acre(s)	(b)(1) Non-adjacent wetland.	Wetland W1 is a low lying, concave depression located in the northeast corner of the project site adjacent to a gravel roadway. Hydrology within wetland W1 was at the surface, with standing/ponded water present throughout the area. No potentially jurisdictional connections were observed flowing from the wetland feature nor was there any signatures on available lidar. Wetland W1 is not adjacent to an (a)(1), (2), or (3) water.
Ditch 1	733	Linear Feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	Ditch 1 is a manmade, constructed ditch within uplands. Ditch 1 is not a tributary under (a)(2), was not a tributary under (a)(2) when it was constructed, was not constructed in an adjacent wetland, and does not contribute surface flow to an (a)(1) water in a typical year. According to soils data the ditch was constructed in non-hydric soils, Lynchburg.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Title(s) and date(s)
  This information is sufficient for purposes of this AJD.
  Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).
- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- ☐ Photographs: Select. Title(s) and/or date(s).
- ☐ Corps site visit(s) conducted on: Date(s).
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
- ☒ USDA NRCS Soil Survey: NHC 1977

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

☐ USFWS NWI maps: Title(s) and/or date(s).
☒ USGS topographic maps: Wilmington

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	Lidar QL2

B. Typical year assessment(s): The results of the Antecedent Precipitation Tool (APT) indicate that prior to the day of our detail delineation (June 19, 2021), the project study area and its vicinity were experiencing normal conditions.

C. Additional comments to support AJD: N/A

ATTACHMENT 7

Contamination and Toxic Substances

November 2021

Phase I Environmental Site Assessment Report

STARWAY VILLAGE SITE
16.1-ACRE TRACT
NEW HANOVER COUNTY, NORTH CAROLINA

New Hanover County Parcel Numbers:

R06013-021-001-000
R06014-001-001-000
R06014-001-004-000
R06018-002-006-001

Prepared for:

Kelley Development Company, LLC
106 Hatfield Lane
Raleigh, NC 27603

Prepared by:

Kimley-Horn and Associates, Inc.
421 Fayetteville Street
Suite 600
Raleigh, NC 27601

Project No. 013856002

PHASE I ENVIRONMENTAL SITE ASSESSMENT

STARWAY VILLAGE SITE
16.1-ACRE TRACT
NEW HANOVER COUNTY, NORTH CAROLINA

Prepared for:

Kelley Development Company, LLC
106 Hatfield Lane
Raleigh, NC 27603

Prepared by:

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421 Fayetteville Street
Suite 600
Raleigh, NC 27601

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
Commercial Parcel
New Hanover County, North Carolina

1.0 SUMMARY

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Kelley Development Company, LLC (the "Client") to conduct a Phase I Environmental Site Assessment (ESA) on the approximate 16.1-acre Starway Village Site (referred to herein as the "subject property" or the "Site") located within the city limits of Wilmington in New Hanover County, North Carolina. The Site is bordered by one maintained roadway corridor, Carolina Beach Road (US 421) along the eastern boundary, commercial developments along the northern boundary, and residential developments along the western and southern boundaries (**Figure 1**). The Site is comprised of four individual property parcels currently owned by one property owner located off Carolina Beach Road in Wilmington, North Carolina. The Client intends to purchase the property parcels for the development of affordable housing. Information obtained from the New Hanover County Tax Department is attached in **Appendix A**.

This ESA was conducted in general accordance with the accepted principles and methods designed to comply with the procedures outlined in the American Society for Testing and Materials (ASTM) E1527-13*, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this Phase I ESA was to identify Recognized Environmental Conditions (RECs) as defined in ASTM E1527-13. The findings contained in this document are based on observations made by Kimley-Horn's professional staff and information obtained from readily available Federal, State, County, and City regulatory agencies at the time of the assessment.

1.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

A Recognized Environmental Condition is defined in the ASTM Standard *as the presence or likely presence of a hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment*. The following REC was identified in association with the subject property:

- Two 55-gallon metal drums were observed at the rear of the large commercial structure located in the western portion of the subject property. The two drums were observed to be sealed and labelled to contain used cooking oil. The two metal drums were in poor condition with extensive corrosion and rust, and the walls of the drums were visibly weeping. Stressed vegetation was observed around the base the two drums. During the site reconnaissance, Kimley-Horn staff observed individuals that appeared to be working at the commercial building open one of the bay doors on the rear of the building, complete an oil change on their personal vehicle, and dispose of the used automotive oil into the used cooking oil drums. The workers then resealed the used cooking oil drums. While the bay door was open, various automotive service materials and supplies were observed inside the open bay door of the building. Additionally, after this activity, Kimley-Horn staff observed an unknown oil pooled on top of one of the metal drums. Due to the unknown duration of the automotive service activities on the property, the unknown quantity of automotive oil in the drums, the condition of the drums, and the visible oil seepage through the drum walls, the two 55-gallon drums represent a REC for the subject property. **Figure 5** shows the locations of the two 55-gallon drums identified in the subject property, and **Appendix G** shows a photograph of the REC.

1.2 BUSINESS ENVIRONMENTAL RISKS

Business Environmental Risks (BERs) were identified in association with the current and/or historical use of the Site and adjoining properties. As identified in Section 3.2.11 of the ASTM E1527-13 Standard, BERs are indicative of a risk which can have a material environmentally driven impact on the business associated with the current or planned use of a property. A BER may not be subject to regulatory reporting or corrective measures. The following BER was identified in association with the subject property:

- A grease trap was observed on the ground behind the rear of the commercial building in the western portion of the subject property. The duration of use and the quantities of grease material in the grease trap is unknown. The grease trap will need to be pumped out and properly closed out as part of construction within the subject property.

1.3 DE MINIMIS CONDITIONS

De minimis conditions were identified in association with the current and/or historical use of the Site and adjoining properties. As identified in Section 3.2.23 of the ASTM E1527-13 Standard, de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The following de minimis conditions were identified in association with the subject property:

- De minimis dumping of scrap metal, tires, wood, household debris, appliances, and furniture was identified along the forested edges of the subject property. Dumping appeared to be primarily concentrated along the western, southern, and southeastern edges of the subject property. The duration of dumping and the quantities of discarded material in these areas are unknown. **Figure 5** shows the locations of de minimis debris dumping identified in the Site, and **Appendix G** shows a photograph of typical materials observed.

2.0 INTRODUCTION

The following is a summary of the purpose, scope of services, and limitations associated with this environmental site assessment.

2.1 PURPOSE

The primary purpose of this assessment was to identify RECs associated with the past or present uses of the Site and surrounding properties. The findings contained in this document are based on observations made by Kimley-Horn's professional staff and information obtained from readily available Federal, State, County, and local regulatory agencies available at the time of the investigation. This assessment was conducted using currently accepted principles and methods designed to comply with those procedures outlined in the ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

2.2 DETAILED SCOPE OF SERVICES

This assessment represents a reasonable attempt to identify RECs in association with the Site. Based on Section 7.2 of ASTM E1527-13, a Phase I ESA consists of the following components:

2.2.1 RECORDS REVIEW

The objective of the records review is to obtain and review records that will help identify RECs in connection with the property. The standard federal, state, and tribal environmental records were reviewed from the Radius Report provided by EDR, Inc. of Shelton, CT. The databases reviewed are included in the Database Findings Summary of the aforementioned EDR report (**Appendix B**).

In addition, historical data sources are reviewed to gather information of former use, occupants, conditions, etc. These sources of information include, but are not limited to, the following: aerial photographs, topographic maps, local street directories, and fire insurance maps.

2.2.2 SITE RECONNAISSANCE

The site reconnaissance is conducted in order to obtain information indicating the likelihood of identifying RECs in association with the Site. The reconnaissance shall include the visual and/or physical observation of exterior and interior settings at the Site.

2.2.3 INTERVIEWS

The objective of the interviews is to obtain information indicating RECs in connection with the property. Interviews with past and present owners, operators, and occupants of the property, along with state and/or local government officials, as applicable, are performed to gather information on past and present use and conditions of the subject property.

2.2.4 EVALUATION AND REPORT PREPARATION

The Environmental Professional (EP) shall evaluate the reasonable ascertainable regulatory and historical information and summarize the findings, including any identified RECs, in the Phase I Environmental Site Assessment (ESA).

2.3 SIGNIFICANT ASSUMPTIONS

Kimley-Horn assumes that all information provided by EDR regarding the regulatory status of facilities located within the minimum search radius and information obtained from the State and County files were complete, accurate, and current. Kimley-Horn also assumes that all information obtained through interviews was complete, accurate, and unbiased.

2.4 LIMITATIONS AND EXCEPTIONS

This assessment represents a reasonable attempt to identify RECs for the subject property through the implementation of the methodology and the use of resources described above. There is always the possibility that recognized environmental conditions have escaped detection due to the limitations of this study, the incompleteness or inaccuracy of governmental records, or the presence of undetected and unreported environmental accidents. In addition, Kimley-Horn assumes all information provided by Kelley Development Company, LLC and associated parties are accurate and complete. No limitations in data and resources were encountered during the preparation of this report.

Conclusions were based on practically reviewable information available within reasonable time and cost constraints. There is always the possibility that potential sources of contamination have escaped detection due to the limitations of this study, the inaccuracy of governmental records, or the presence of undetected and unreported environmental accidents.

2.5 SPECIAL TERMS AND CONDITIONS

The terms and conditions of the completion of the Phase I ESA are those defined in the contract with Kelley Development Company, LLC for preparation of this report.

2.6 USER RELIANCE

This report is provided for the sole use of Kimley-Horn and Associates, Inc. and Kelley Development Company, LLC. Use of this report by any third party will be at the party's sole risk, and Kimley-Horn disclaims any liability for any such uses or reliance by third parties.

Due to changing environmental regulatory conditions and potential on-site or adjacent activities occurring after this assessment, the client may not presume the continuing applicability to the subject property of the conclusions in this assessment for more than 180 days after the report's issuance date, per ASTM Standard Practice E1527-13, 4.6. As such, this Phase I ESA is no longer considered viable after May 23, 2022.

3.0 SITE DESCRIPTION

The following is a summary of the Site and the surrounding properties and their environmental setting.

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is situated within the city limits of Wilmington in New Hanover County, North Carolina. The Site is bordered by one maintained roadway corridor, Carolina Beach Road (US 421), scattered with residential and commercial properties along the eastern boundary. An electric substation and commercial developments are located along the northern boundary, and residential developments are situated along the western and southern boundaries (**Figure 1**). The Site is comprised of four individual property parcels currently owned by one property owner located off Carolina Beach Road in Wilmington, North Carolina. Property information was obtained from the New Hanover County Tax Department Property Assessment, accessed November 9, 2021, and is attached in **Appendix A**. The subject property is subject to the City of Wilmington zoning ordinances. The parcel is currently zoned under city jurisdiction as Commercial Service (CS) and Community Business (CB). The Site is located within the *Wilmington, North Carolina* United States Geological Survey (USGS) 2013, 7.5-minute topographic quadrangle map displayed in **Figure 2**.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The 16.1-acre subject property is located within the city limits of Wilmington in New Hanover County, North Carolina. The Site is bordered by Carolina Beach Road scattered with residential and commercial properties along the eastern boundary, an electric substation and commercial developments along the northern boundary, and residential developments along the western and southern boundaries (**Figure 1**). The Site primarily consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors currently operated as the Starway Flea Market. The smaller parcels of the subject property with road frontage along Carolina Beach Road consist of two single-family residential lots and a commercial car retail outbuilding. The Site is situated in an area of dense residential, commercial, and industrial development.

3.2.1 SITE ELEVATION AND TOPOGRAPHY

A review of the 2013 *Wilmington, North Carolina* USGS topographic map along with the EDR radius search report indicated that the Site and surrounding areas have relatively flat topographic relief ranging between 25 feet and 35 feet above mean sea level (**Figure 2**). EDR provided Kimley-Horn with the *Wilmington, North Carolina* topographic maps from 1942, 1948, 1970, 1979, 1993, and 2013. The historical topographic maps are included in **Appendix C**.

3.2.2 SURFACE SEDIMENTS

A Custom Soil Resource Report was obtained from the U.S. Department of Agriculture Natural Resource Conservation Services (USDA/NRCS) Web Soil Survey[1] mapping program for the Site. According to the custom report, four (4) soil types exist within the subject property and include the following:

- Ku Kureb-Urban land complex, 1 to 8 percent slopes
- Le Leon sand
- Ly Lynn Haven fine sand
- Ur Urban land

[1] U.S. Department of Agriculture – Natural Resources Conservation Service Web Soil Survey
Accessible via http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Based on the National List of Hydric Soils from the NRCS, Leon sand (Le) and Lynn Haven fine sand (Ly) is classified as hydric soils in New Hanover County. Kureb-Urban land complex (Ku) is classified as primarily non-hydric soils that may contain significant inclusions or hydric components IN New Hanover County. Urban Land (Ur) is classified as non-hydric soils in New Hanover County. The custom soil report detailing each soil series is included in **Appendix D**.

3.2.3 GEOLOGY/HYDROGEOLOGY

The site is located within the Coastal Plain Physiographic Province of North Carolina and consists of the Peedee Formation geologic unit. According to the 1985 Geologic Map of North Carolina, Peedee Formation geology of North Carolina's Coastal Plain Province consists of sand, clayey sand, and clay, greenish gray to olive black, massive, glauconitic, locally fossiliferous, and calcareous. It also consists of patches of sandy molluscan-mold limestone in the upper part. The dominant soil series in the subject property is Urban land (76.6% of the subject property) and topography within the Site is relatively flat. Surface water within the Site drains away from the center of the Site, either northeast towards Greenfield Lake or west towards the Cape Fear River.

3.2.4 SURFACE WATER FEATURES

The 2013 *Wilmington, North Carolina* USGS topographic map does not indicate the presence of any channelized streams, ponds, or wetland areas within the subject property. Additionally, the NRCS Soil Survey of New Hanover County (1977) indicates no streams or ponds, however, it does indicate a wet spot in the northeast corner of the subject property.

As part of the stream and wetland delineation effort conducted by Kimley-Horn, no streams or ponds were identified, however, one low-lying depressional area was identified within the northeast corner of the subject property. The low-lying area was determined to be a non-jurisdictional feature by the US Army Corps of Engineers (USACE) and not subject to Clean Water Act permitting.

3.3 CURRENT USE OF PROPERTY

The subject property consists of four property parcels. The large, central parcel (Parcel # R06013-021-001-000) and the eastern parcel (Parcel # R06014-001-004-000) are primarily utilized for the commercial Starway Flea Market and are bordered by a thin area of forested land. The southern parcel (Parcel # R06018-002-006-001) is a forested residential lot, and the southeastern parcel (Parcel # R06014-001-001-000) is a residential lot with an outbuilding utilized for commercial auto sales.

There are multiple commercial, industrial, and residential developments located in close proximity to the Site, with scattered pockets of forested areas and riparian corridors.

3.4 DESCRIPTIONS OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS OF THE SITE

The subject property is composed of four parcels; however, the Site primarily consists of a dirt parking lot with a large commercial building that is operated as the Starway Flea Market. Multiple shipping containers were present in the area in front of the commercial building, arranged in an ordered fashion that appeared to be used as vendor stalls for an outdoor portion of the Starway Flea Market. The majority of the Site is bound by narrow forested strips and a tall, corrugated metal fence. The eastern parcel is composed of a driveway entrance and access road into the subject property, and the southeastern parcel is a residential lot with a commercial outbuilding currently operated as the Prime Automotive Group Inc., a used car dealer. The southernmost parcel is a residential lot that is primarily forested. Multiple structures are located within the subject

property and detailed information pertaining to these structures based on the New Hanover County Tax Department parcel data and the site reconnaissance observations are detailed below:

- One dilapidated brick commercial retail building (2346 Carolina Beach Road) with wooden and shingle roofing and an associated metal storage shed with a metal roof located in the center of the Site. Structure's roof was partially collapsed, and windows were boarded up and doors were locked.
- Multiple metal shipping containers located in the center of the Site, all secured with padlocks but arranged such that they are likely used as vendor stalls associated with the flea market operation. Containers appeared to be in good condition.
- Two open frame wooden vendor stands located in the center of the Site
- One large commercial building with large bay doors, signed as the Starway Flea Market, located in the western portion of the subject property
- Two dilapidated wooden storage sheds with shingle roofing were located along the southern portion of the subject property
- One occupied single-family residence (2370 Carolina Beach Road) with wooden siding and shingle roofing and a gravel driveway/parking area located along the southeastern boundary of the Site. Adjacent to the residence was one commercial outbuilding, operating as the Prime Automotive Group Inc. (2370-B Carolina Beach Road), a used car dealer, was observed with wooden siding and shingle roofing located along the southeastern portion of the Site
- One occupied single-family residence (2374 Carolina Beach Road) with vinyl siding and shingle roofing, a gravel driveway, and an associated wooden storage shed with a corrugated metal roof located in the southeastern corner of the Site

Based on the New Hanover County Tax Department parcel data, the Starway Flea Market commercial building is an 18,000 square foot single-story warehouse constructed in 1991 and the Dollar Smart is a 1,500 square foot 1-story structure built in 1950.

The primary building located at 2370 Carolina Beach Road was observed to be a single-story single-family residence with a gravel driveway and parking. Additionally, based on the New Hanover County Tax Department parcel data, this building is 1,240 square feet and was built in 1937. A 240 square foot single-story commercial outbuilding was added north of the gravel parking lot in 1999.

Additionally, overhead powerlines border the Site along the Carolina Beach Road corridor and along the driveway entrance and access road into the Site.

3.5 CURRENT USE OF ADJOINING PROPERTIES

The following table provides information about the adjoining properties obtained during the site reconnaissance and through review of reasonably ascertainable information.

Table A – Current Use of Adjoining Properties

Property	Use
Northern Adjoining Properties	The subject property is bordered to the north by a powerline substation, an auto repair shop, and a boat service located south of Bordeaux Avenue and west of Carolina Beach Road. Additional commercial auto body repair shops and parts stores are located north of the Site along Carolina Beach Road.
Eastern Adjoining Property	The subject property is bordered to the east by Carolina Beach Road. A NC Car Inspection Center, an Auto Zone Auto Parts, an ABC Liquor Store, a boat service and repair facility, and a restaurant are located east of the Site along Carolina Beach Road. Additional undeveloped forested land fragmented by commercial developments were observed east of Carolina Beach Road. Overhead powerlines border the Site along the Carolina Beach Road roadway corridor.
Southern Adjoining Property	The subject property is bordered to the south by Pine Terrace, a residential mobile home park, along Bell Street and South Square Plaza shopping mall along Carolina Beach Road.
Western Adjoining Property	The subject property is bordered to the west by a single-family residential development located along Adams Street and Virginia Avenue.

4.0 USER PROVIDED INFORMATION

4.1 USER QUESTIONNAIRE

Kimley-Horn provided a user questionnaire to Mr. Ted Heilbron of Kelley Development Company, LLC for completion on October 25, 2021. Kimley-Horn received the completed document from Mr. Heilbron on November 9, 2021. No RECs or any other known environmental concerns within the subject property or adjacent properties were identified by Mr. Heilbron in the completed user questionnaire. The completed document is included for reference in **Appendix E**.

4.2 TITLE RECORDS

No title records associated with the subject property were provided to Kimley-Horn by the Client.

4.3 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

An Environmental Lien Report search was not conducted as part of this Phase I ESA. No activity and use limitations recorded for the Site were described in the EDR report.

4.4 SPECIALIZED KNOWLEDGE

Kimley-Horn has no specialized knowledge of the subject property.

4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Kimley-Horn was not informed of any reduction in the value of the subject property as a result of environmental issues.

4.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

As previously discussed in this report, the approximately 16.1-acre Site is located across four individual property parcels currently owned by Ellan R. Hibbard. The subject property primarily consists of a dirt parking lot and a large commercial building operating as the Starway Flea Market. The eastern parcel is composed of a driveway entrance and access road into the subject property. The southern parcel is a residential lot that is primarily forested, and the southeastern parcel is a residential lot with an outbuilding operating as the Prime Automotive Group Inc., a car dealer. New Hanover County property records are included in **Appendix A**.

4.7 REASON FOR PERFORMING THE ENVIRONMENTAL SITE ASSESSMENT

Kimley-Horn was contracted by Kelley Development Company, LLC to complete a Phase I ESA consistent with ASTM E1527-13.

5.0 RECORD REVIEW

The following is a summary of the historical record review conducted for the Site.

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

As a part of this assessment, Kimley-Horn reviewed various sources of information to obtain data pertaining to the release of regulated substances or petroleum products on or near the subject property.

An environmental database search for the Site and the surrounding area was performed by EDR using ASTM E1527-13, standard radii. A copy of the EDR Radius Report is attached in its entirety in **Appendix B**. A summary of these facilities is included in the table below:

Table B: Summary of Regulated Facilities in the Radius Report

Type	Regulatory Agency Database	Approximate Minimum Search Distance (AMSD)	Number of Sites within AMSD
Federal	RCRA-VSQG; RCRA NonGen / NLR	0.25 mile	5
Federal	SEMS-ARCHIVE	0.5 mile	1
Federal	FUDS	1 mile	1
State	NC UST; NC AST; NC DRYCLEANERS	0.25 mile	22
State	NC LAST; NC LUST; SC LUST; NC LUST TRUST; NC INST CONTROL; NC IMD	0.5 mile	83
State	NC HSDS; NC SHWS	1 mile	12
Private	EDR HIST AUTO	0.125 mile	4

5.1.1 SUBJECT PROPERTY LISTINGS

The subject property was not listed or identified in the EDR Radius Report.

5.1.2 ADJOINING/NEARBY LISTINGS

Kimley-Horn's review of the referenced databases also considered the potential or likelihood of contamination from adjoining and nearby sites. The following table summarizes the site-specific information provided by the database and/or gathered by for select facilities within 500 feet of the Site. Facilities are listed in order of proximity to the Site. Additional information for selected facilities is detailed below in **Table C**. To evaluate which of the adjoining and nearby sites identified in the regulatory database report present an environmental risk to the Site, Kimley-Horn considered the following criteria:

- The type of database on which the adjoining/nearby property is identified.
- The topographic position of the property relative to the Site.
- The direction and distance of the identified facility from the Site.
- Local soil conditions in the Site area.
- The known and/or inferred ground water flow direction in the Site area.
- The status of the respective regulatory agency-required investigations and/or cleanup associated with the identified facility.
- Surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, rivers, lakes, and ditches) located between the identified site and the Site.

Only those sites that are judged to present a potential environmental risk to the Site and/or warrant additional clarification are further evaluated and discussed below. Using the referenced criteria and based upon a review of readily available information contained within the regulatory database report, Kimley-Horn did not identify adjoining (i.e., bordering) or nearby sites (e.g., properties within a 500-foot radius) listed in the regulatory database report that were judged to present a potential environmental risk to the Site and/or warranted further clarification.

Table C: Listed Facilities in the Radius Report within 500 Feet of Site

Facility Name and Location	Estimated Distance / Direction/Gradient	Database Listings	Is a REC, CREC, or HREC to the Site
P.L. Smith Property 2357 Carolina Beach Road Wilmington, NC 28401	0.01 mile / Southeast / Up-gradient	UST	No – This record is only recording the presence of an underground storage tank. No leaks or contaminations have been recorded.
Carolina Paint and Body, Inc. 2326 Carolina Beach Road Wilmington, NC 28401	0.01 mile / East / Up-gradient	RCRA-VSQG	No, see discussion below
Rapers Texaco Service 2357 Carolina Beach Road Wilmington, NC 28401	0.02 mile / East / Down-gradient	EDR HIST AUTO	No – This record is indicating the presence of a gas service station between (1971-2000). No leaks or contaminations have been recorded, and any unknown release would move away from the subject property
Blackwelders Auto Repair 2357 Carolina Beach Road Wilmington, NC 28401	0.02 mile / East / Down-gradient	LUST, INST CONTROL, IMD	No, see discussion below

Facility Name and Location	Estimated Distance / Direction/Gradient	Database Listings	Is a REC, CREC, or HREC to the Site
Brown Oil Company of Wilmington 2305 Carolina Beach Road Wilmington, NC 28401	0.07 mile / Northeast / Down-gradient	AST	No – This record is indicating the presence of an aboveground storage tank. No leaks or contaminations have been recorded.
Harry's Amoco/Harry's Pine Valley Amoco 2305 Carolina Beach Road Wilmington, NC 28401	0.07 mile / Northeast / Down-gradient	LUST, UST, IMD, EDR HIST AUTO	No, see discussion below
Bowers Transmission Service 310 Bell Street Wilmington, NC 27401	0.08 mile / Southwest / Down-gradient	EDR HIST AUTO	No – This record is indicating the presence of an automotive service station between (1985-2010). No leaks or contaminations have been recorded.
A.C. Widenhouse /A.C. Widenhouse Trucking 2402 Carolina Beach Road Wilmington, NC 28401	0.08 mile / Southeast / Down-gradient	UST, LUST, INST CONTROL, IMD, LUST TRUST, RCRA-VSQG	No, see discussion below
A.C. Widenhouse, Inc. 2412 Carolina Beach Road Wilmington, NC 28401	0.09 mile / Southeast / Down-gradient	AST	No – This record is indicating the presence of an aboveground storage tank. No leaks or contaminations have been recorded.

Carolina Paint and Body, Inc.

This facility is adjoining the subject property to the north and is up-gradient. Due to the flat topography of the subject property and its vicinity, this facility likely drains southeast into the low-lying northern corner of the subject property. The facility is listed in the RCRA-VSQG database, with EPA ID: NCR000006635. The record originated in 1997 and noted the presence of a Conditionally Exempt Small Quantity Historic Generator that generated ignitable waste (Code D001) and other nonhalogenated solvents (Code F003 and F005). No generator related violations were found at this facility. During the site reconnaissance, this facility was found to be a repair facility for boats and other marine equipment. Multiple boats and vehicles were parked in the lot adjacent to the subject property, however the lot appears to be maintained and no leaks or releases from the parked vehicles were

observed. A low chain link fence separated the facility from the subject property. Due to the lack of recorded releases and no recorded violations, Carolina Paint and Body, Inc. is not considered a REC for the subject property.

Blackwelders Auto Repair

This facility is located east of the subject property, across Carolina Beach Road. This facility is listed in the LUST database, as well as IMD. Soil and groundwater contamination resulting from a petroleum leak associated with the investigation of an underground storage tank occurred in May 1991 and was reported in July 1991. The database records noted soil excavation in 2007 that removed a small amount of a free product. The incident was recorded as closed out by NCDEQ in December 2007. Institutional controls were filed for the facility in December 2007 with limitations to groundwater use. However, the facility is situated at a topographically lower elevation than the Site and surface waters surrounding the facility appear to drain northeast towards Greenfield Lake, further away from the subject property. Due to the status of the facility, topography, and direction of the natural drainageways in the area, the Blackwelders Auto Repair facility is not considered a REC for the subject property.

Harry's Amoco/Harry's Pine Valley Amoco

This facility is located north of the subject property and is across Carolina Beach Road from the subject property. This facility is listed in the UST, EDR HIST AUTO, LUST, and IMD databases. Four commercial USTs were recorded at this facility. Three of these tanks contain a gasoline/gas mix and were installed in 1966 and one tank contains kerosene/kerosene mix fuel and was installed in 1976. All four USTs had recorded permanent closure dates in 2006.

Soil and groundwater contamination resulting from a petroleum leak associated with one of the USTs was reported in April 2006 during removal of the USTs. Soil samples collected beneath Kerosene UST confirmed a release. The incident was recorded as closed out in May 2006. The facility is situated at a topographically lower elevation than the Site and surface waters surrounding the facility drain east towards Greenfield Lake, further away from the subject property. Due to the location, topography, and natural drainageways in the area of this facility, Harry's Amoco/Harry's Pine Valley Amoco is not considered a REC for the subject property.

A.C. Widenhouse /A.C. Widenhouse Trucking

This facility is located southeast of the subject property and is listed in the UST, LUST, LUST TRUST, IMD, INST CONTROL, and RCRA-VSQG databases. Six commercial USTs were previously installed at this facility. Three USTs contained diesel, one UST contained gasoline/gas mix fuel, one UST contained motor oil, and one UST contained new/used/mixed oil. All six USTs had recorded permanent closure dates between 1975 and 1991.

Soil and groundwater contamination was reported in two separate incidents in August 1991 and March 1992. The facility had institutional controls filed in April 2014 relating to groundwater use. Additionally, the facility is listed in the RCRA-VSQG database, with EPA ID: NCD067196816. The record originated in 1994 and noted the presence of a Conditionally Exempt Small Quantity Generator for ignitable waste (Code D001). No generator related violations were found at this facility. While the facility is situated at a topographically higher elevation than the Site, surface waters surrounding the facility appear to drain northeast across Carolina Beach Road towards Greenfield Lake, further away from the subject property. Due to the location, topography, and natural

drainageways in the area of this facility, the A.C. Widenhouse /A.C. Widenhouse Trucking facility is not considered a REC for the subject property.

The remaining facilities listed in the database report do not appear to represent RECs to the subject property at this time based upon regulatory status, apparent topographic gradient, and/or distance from the subject property.

Six additional facilities are recorded in the EDR Radius Report within the vicinity of the subject property as orphan records. These records are unmappable sites not considered in the foregoing analysis. These six facilities consist of NC OLI, NC DRY CLEANERS, NC LAST, and NC LUST records. Based on available data and address records provided by the EDR Radius Report, these facilities do not appear to be within 500 feet of the subject property. Additional detail on the facilities can be found in the EDR Radius Report in **Appendix B** (Page OR-1)**.**

5.2 PHYSICAL SETTING SOURCES

Site elevation and topography were reviewed using the 2013 *Wilmington, North Carolina* USGS 7.5-Minute topographic quadrangle maps shown in **Appendix C**. Information on surface sediments and geology/hydrogeology was obtained from the USDA/NRCS Web Soil Survey mapping program (**Appendix D**) and the NC Department of Natural Resources (NCDNR) Generalized Geologic Map of North Carolina[2] resource.

5.3 HISTORICAL USE INFORMATION ON THE PROPERTY

The following is a summary of the historic uses of the subject property.

5.3.1 AERIAL PHOTOGRAPH REVIEW

In order to ascertain the previous land uses of the Site, a review of historical aerial photographs was conducted. A series of photographs dated 1938, 1956, 1958, 1964, 1969, 1970, 1983, 1993, 1998, 2006, 2009, 2012, and 2016 were reviewed. Aerial photographs were obtained from EDR and can be reviewed in **Appendix F**. The photographs were examined for past physical conditions on the Site and adjacent areas.

The historical aerial photographs indicated that the majority of the subject property was forested with internal forestry roads visible in 1938. Between 1938 and 1956, the Site was cleared and graded to accommodate circular parking lanes, a central structure, and a large linear structure in the northeast corner of the cleared area. The footprint and layout of the development within the subject property appears to indicate use as a drive-in movie theatre, which is further confirmed by City Directory listings (**Appendix H**) for the subject property. Various residential and commercial buildings are present in the southeastern corner of the subject property along Carolina Beach Road in the 1956 and 1958 aerial photographs. Between 1983 and 1993, the current Starway Flea Market commercial building was constructed in the western portion of the Site. A portion of the forested areas along the boundary of the Site was cleared between 1993 and 1998.

Current land use in the Site vicinity consists of a large single-family residential development west of the Site and commercial developments along Carolina Beach Road, with pockets of forested land. Based on historical aerial imagery, Carolina Beach Road, Greenfield Lake, and a recreational stadium located northeast of the Site are visible on the earliest aerial photograph (1938). In 1938, the Site vicinity was primarily dominated

[2]North Carolina Geological Survey. 1985, Geologic Map of North Carolina: Raleigh, North Carolina Department of Natural Resources and Community Development, Geological Survey Section, scale 1:500,000 in color. Retrieved from http://ncdenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a8281cbd24b84239b29cd2ca798d4a10

by undeveloped forested tracts, which were converted into residential and commercial developments by 1956, as well as the construction of Shipyard Boulevard south of the Site. An additional commercial lot similar to the subject property was also constructed east of the Site between 1938 and 1956 and continued use until the late 1990s. Residential developments continued to expand surrounding the northern, western, and southern boundaries of the Site through the late 1960s. A multi-family residential development west of the Site was converted into single-family residential homes between 1998 and 2006. Between 1958 and 1964, land was cleared south of the subject property for the construction of an auto repair shop and storage lot. Between 1970 and 1983, the powerline substation was constructed north of the Site and the recreational stadium was converted into a large multi-sport complex. From 2006 through 2016, additional commercial developments were constructed along Carolina Beach Road and other major roadway corridors in the Site vicinity. Other than described above, no additional historical site use was noted in the available historical aerial photographs.

5.3.2 CHAIN OF TITLE REVIEW

No title documents were provided by the Client.

5.3.3 CITY DIRECTORY REVIEW

A city directory review was conducted as part of this Phase I ESA. The subject property and adjoining properties were researched for this report. City directory listings for the subject property included various residential and individual ownership, with no commercial, automotive, industrial, or other readily identifiable industrial facilities. The subject property appears as the Star Way Drive-In Theatre starting in 1975. The 1971 City Directory lists the Star Way Drive-In Theatre at 2410 Carolina Beach Road, but aerial imagery does not indicate any change in location. This indicates address numbering on Carolina Beach Road likely changed between 1971 and 1975. The subject property appears multiple times until 1990 when the address is listed as flea market and then Star Way Flea Market by 1992 until 2010 when it updates to Starway Flea Market. Adjoining properties appear in the City directory listings with various residential and commercial businesses, with no industrial, or other readily identifiable facilities adjoining the subject property. No RECs were identified for the subject property as a result of the city directory review. The results of the City Directory search can be found in **Appendix H**.

5.3.4 FIRE INSURANCE MAPS

A Certified Sanborn Fire Insurance Map review was conducted as part of this Phase 1 ESA. A series of fire insurance maps dated 1951, 1953, 1955, and 1964 were reviewed. No fire insurance mapping was provided for the subject property, however, the fire insurance maps indicated that the adjacent properties to the west of the Site were primarily apartments and single-family residences and properties to the west of the Site were primarily commercial. No RECs were identified within the subject property as a result of the Certified Sanborn Fire Insurance Maps. The Certified Sanborn Fire Insurance Map Report can be found in **Appendix H**.

5.3.5 HISTORICAL TOPOGRAPHIC MAPS

Historical topographic maps obtained from EDR for the subject Site are included in **Appendix C**. EDR provided the *Wilmington, North Carolina* topographic map from 2013. A series of historical quadrangle maps dated 1942, 1948, 1970, 1979, 1993, and 2013 were reviewed. The available historical topographic maps indicated the Site was undeveloped between 1942 and 1948 with an unpaved road running northwest to southeast parallel to Carolina Beach Road. The 1970 topographic map shows a structure within the center of the subject property, with the majority of the Site vicinity shown as

residential and commercial developments. Between 1970 to 2013, new residential roads are visible throughout the Site vicinity. In 1993, the historical topographic map shows the driveway entrance and access road off of Carolina Beach Road and an additional structure in the northwest corner of the subject property, while the southern portion of the Site is shown as forested. By 2013, the entire subject property is shown as developed land. No RECs were identified within the subject property as a result of the historical topographic map review.

5.3.6 OTHER ENVIRONMENTAL RECORDS

No other environmental records were provided to Kimley-Horn.

5.3.7 PAST USE OF SUBJECT PROPERTY

The past use of the subject property was primarily associated with the commercial flea market that is presently located within the Site. The Site was also previously a drive-in movie theatre prior to being utilized for a flea market. The historical aerial photographs indicated the majority of the subject property was forested in 1938. Between 1938 and 1956, the Site was cleared and graded for parking and the commercial retail building in the center of the subject property was constructed. Between 1983 and 1993, the commercial building with large bay doors was constructed in the western portion of the Site.

5.3.8 PAST GENERAL SURROUNDING LAND USES

The past use of the surrounding area was primarily undeveloped forestry tracts in 1938. Carolina Beach Road located along the eastern boundary of the Site is visible on the earliest aerial image (1938). Between 1938 and 1956 the majority of the Site vicinity was converted into residential and commercial developments. Residential developments continued to expand surrounding the northern, western, and southern boundaries of the Site through the late 1960s. A multi-family residential development west of the Site was converted into single-family residential homes between 1998 and 2006. Between 1970 and 1983, the powerline substation was constructed north of the Site. According to historical aerial photographs and the New Hanover County Tax Department parcel data, South Square Plaza shopping mall located along Carolina Beach Road, southeast of the Site was constructed between 1983 and 1993. From 2006 through 2016, additional commercial developments were constructed along Carolina Beach Road and other major roadway corridors in the Site vicinity.

6.0 SITE RECONNAISSANCE

The following is a summary of the methodology and observations of the site reconnaissance.

6.1 METHODOLOGY AND LIMITING CONDITIONS

On November 9, 2021, Mr. Jason Hartshorn, PWS of Kimley-Horn, a qualified environmental professional and Mrs. Mackenzie Richards, PWS of Kimley-Horn, visited the Site. The site visit was performed to make the necessary site observations for compliance with ASTM E1527-13. Site photographs are included in **Appendix G**. The weather conditions were sunny with temperatures ranging from approximately 46-77° F.

Mr. Hartshorn and Mrs. Richards were not escorted during the completion of site reconnaissance of the subject property. As part of the reconnaissance of the Site and surrounding properties, Kimley-Horn representatives drove the Site vicinity along Carolina Beach Road, Bell Street. Additionally, interior portions of the Site that are not accessible by vehicles were observed by pedestrian surveys.

6.2 GENERAL SITE SETTING

The subject property is primarily composed of a cleared, dirt commercial lot with storage and parking areas for the Starway Flea Market. The majority of the Site is bound by a thin strip of trees along a tall fence that is constructed from corrugated metal. The eastern parcel is composed of a paved driveway entrance into the subject property and pockets of forested area. The southeastern parcel is a residential lot with a commercial outbuilding utilized for car retail. The fourth and southernmost parcel is a residential lot that is primarily forested. Multiple structures are located within the subject property. The Site is bordered by one maintained roadway corridor, Carolina Beach Road (US 421) along the eastern boundary, commercial and industrial developments along the northern boundary, and residential developments along the western and southern boundaries. The subject property is bordered by four maintained roadway corridors. Residential housing developments are located along both Laurel Manor Court, to the south of the subject property, and Old Post Road, to the east of the subject property. The subject property was accessed by public roads and overland pedestrian access through the Starway Flea Market entrance and forested edges where practical.

The central area and majority of the subject property is primarily utilized for the Starway Flea Market and multiple structures associated with the flea market are located within this area. A dilapidated brick commercial retail building with a partially collapsed wood and shingle roof was observed in the center of the Site. Adjacent to this commercial building was a small metal storage shed with a metal roof. Scattered in the vicinity of these structures, multiple metal shipping containers and two wooden vendor stands were observed. Along the western boundary, one large multi-bay metal warehouse, Starway Flea Market, was observed. Two dilapidated wooden storage sheds with shingle roofing are located along the southern boundary of the Site. Two residential lots were observed in the southeastern corner of the Site. On one residential, a single-family residence (2370 Carolina Beach Road) with wooden siding and shingle roofing and a gravel driveway/parking area was observed. A commercial outbuilding, Prime Automotive Group Inc. (2370-B Carolina Beach Road), with wooden siding and shingle roofing was also observed on the same lot. The other residential lot has a single-family residence (2374 Carolina Beach Road) with vinyl siding and shingle roofing, a gravel driveway, and an associated wooden storage shed with a corrugated metal roof. A tractor was parked behind the shed that appeared to be used for mowing.

Additionally, overhead powerlines border the Site along the Carolina Beach Road corridor and along the driveway entrance and access road into the Site.

6.3 EXTERIOR OBSERVATIONS

The following is a discussion of the exterior observations from the site reconnaissance conducted on November 9, 2021.

6.3.1 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS IN CONNECTION WITH IDENTIFIED USES

No hazardous substances or petroleum products in connection with identified uses were observed in the subject property.

6.3.1 STORAGE TANKS

No storage tanks were observed within the subject property.

6.3.3 ODORS

No petroleum odors were detected within the subject property.

6.3.4 DRUMS

Two 55-gallon metal drums were observed at the rear of the large commercial structure located in the western portion of the subject property. The two drums were observed to be sealed and labelled to contain used cooking oil. The two metal drums were in poor condition with extensive corrosion and rust, and the walls of the drums were visibly weeping. Stressed vegetation was observed around the base the two drums. During the site reconnaissance, Kimley-Horn staff observed individuals that appeared to be working at the commercial building open one of the bay doors on the rear of the building, complete an oil change on their personal vehicle, and dispose of the used automotive oil into the used cooking oil drums. The workers then resealed the used cooking oil drums. While the bay door was open, various automotive service materials and supplies were observed inside the open bay door of the building. Additionally, after this activity, Kimley-Horn staff observed an unknown oil pooled on top of one of the metal drums. Due to the unknown duration of the automotive service activities on the property, the unknown quantity of automotive oil in the drums, the condition of the drums, and the visible oil seepage through the drum walls, the two 55-gallon drums represent a REC for the subject property. **Figure 5** shows the locations of the two 55-gallon drums identified in the subject property, and **Appendix G** shows a photograph of the REC.

6.3.5 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS CONTAINERS (NOT NECESSARILY IN CONNECTION WITH IDENTIFIED USES)

No hazardous substances or petroleum products containers were observed on the subject property.

6.3.6 UNIDENTIFIED SUBSTANCE CONTAINERS

No unidentified substance containers were observed on the subject property.

6.3.7 POLYCHLORINATED BIPHENYLS (PCBS)

PCBs were not observed on the Site. Powerline transformers were in good condition with no leakage observed.

6.3.8 PITS, PONDS, LAGOONS

No pits, ponds, or lagoons were observed within the subject property.

6.3.9 STAINED SOIL OR PAVEMENT

No pavement staining was observed within the subject property.

6.3.10 STRESSED VEGETATION

Kimley-Horn staff observed evidence of stressed vegetation around the base of the two 55-gallon metal drums located behind the large flea market warehouse that is on the western portion of the subject property.

6.3.11 SOLID WASTE

Evidence de minimis dumping of scrap metal, tires, wood, household debris, appliances, and furniture was observed in multiple places along the perimeter of the subject property, primarily concentrated along the western and southern boundaries of the subject property.

6.3.12 WASTE WATER

No waste water was observed at the subject property.

6.3.13 WELLS

No private drinking water wells were observed within the subject property. The subject property appears to be served by municipal water from the Cape Fear Public Utility Authority

6.3.14 SEPTIC SYSTEMS

No septic systems were observed within the subject property during the site reconnaissance. Sewer services for the subject property appear to be provided by the Cape Fear Public Utility Authority.

6.4 INTERIOR OBSERVATIONS

No interior observations were made during the completion of this Phase I ESA. Commercial and residential buildings within the subject property were locked and secured, and the shipping containers were all found to be padlocked and sealed.

7.0 INTERVIEWS

The following is a summary of the interviews conducted in support of this assessment.

7.1 INTERVIEW WITH OWNERS

Mrs. Richards of Kimley-Horn, under the supervision of Mr. Hartshorn, requested property owner contact information from Kelley Development Company, LLC, and was provided the email address of Mr. James Wicker. Mrs. Richards conducted a phone interview with Mr. Wicker on November 10, 2021.

During the phone interview, Mr. Wicker stated that he is the broker for the current landowner, Ms. Ellan Hibbard. Mr. Wicker stated that Ms. Hibbard has been managing the land over the past 31 years. Mr. Wicker stated that anything Ms. Hibbard might be aware of or have knowledge of pertaining to the subject property would have been communicated to Mr. Wicker. He stated he has spent ample time on the property both on-site and inside the buildings located within the subject property. Mr. Wicker stated that the property has always been commercial and residential in nature, has never supported any industrial activity. He stated that the occupants did not ever use, store, process, or dispose of industrial materials, hazardous materials, batteries, pesticides, paints, chemicals, or wastes. He also stated that, over the past 31 years, he is not aware of the property being used for automotive repair. Mr. Wicker stated that the residential properties within the subject property are on city water and he is not aware of any private drinking wells. Mr. Wicker said that the property has been largely utilized for a flea market and was also previously a drive-in movie theatre and that he was not aware of any spills in relation to the property's past use. No RECs or any other known environmental concerns within the subject property or adjacent properties were identified as a result of the interview with Mr. Wicker.

7.2 INTERVIEWS WITH GOVERNMENT OFFICIALS

Mrs. Richards of Kimley-Horn, under the supervision of Mr. Hartshorn, contacted the City Clerk for Wilmington on November 10, 2021 and submitted a public records request relating to hazardous materials incidents, records, or responses to the subject property. Ms. Heather Padgett, Deputy City Clerk, sent available records for 2346 Carolina Beach Road and 2370 Carolina Beach Road via email on November 22, 2021. The records included fire code inspection reports for the two addresses which stated that there are outstanding violations for both. The records indicate the Starway Flea Market at 2346 Carolina Beach Road is non-compliant and is required to have the hood system inspected bi-annually to comply. Carolina Auto Sales (now operating as Prime Automotive Group Inc.) at 2370 Carolina Beach Road has been non-compliant since the last inspection in 2011 and needs a fire extinguisher to be mounted to comply. According to the Deputy City Clerk, The Wilmington Fire Department does not have any other records of incidents related to structural fires, chemical spills, or of hazardous material concern for the subject property.

Mrs. Richards reviewed New Hanover County's ArcGIS Basic Interactive Web Map and the, the Find a Parcel Interactive Web Map, on November 9, 2021 for available permits, violations, incident reports, wastewater inquires, and septic system permits within the subject property parcels and none were identified.

Additionally, Mrs. Richards contacted the New Hanover County, Department of Health and Human Services, Division of Environmental Health on November 10, 2021 via email to inquire about any records or information that may be associated with the subject property relating to fires, incident reports, chemical spills, hazardous materials, and/or any other environmental concerns and no records were found. The New Hanover County, Department of Health and Human Services, Division of Environmental Health replied via email on November 12, 2021 and stated

that records for septic systems and wells in relation to the subject property were searched and they were not able to find any records.

No RECs or any other known environmental concerns within the subject property were identified as a result of the above coordination and interviews with government officials and agencies

8.0 VAPOR EVALUATION

The ASTM E1527-13 document standardizes the terms release and migration consistent with those used in CERCLA and AAI. As such, potentially harmful vapors must be evaluated during the completion of a Phase I ESA.

Kimley-Horn performed a Tier 1 Vapor Encroachment Screening (VES) as defined in ASTM E2600-10, with the purpose of identifying if a Vapor Encroachment Condition (VEC) exists in association with the subject Site. A VEC is defined as the presence or likely presence of contaminants of concern (COC) vapors in the subsurface of the subject Site caused by a release of hazardous substances and/or petroleum compounds into soil and groundwater.

Current and historical uses were evaluated within the Area of Concern (AOC) during the completion of the Tier 1 VES. As indicated in ASTM 2600-10, the radial distance of the AOC for non-petroleum hydrocarbon COCs (i.e., chlorinated VOCs) is 1/3-mile and 1/10 mile for petroleum hydrocarbons.

Table D: Facilities Identified within AOC

Facilities Identified	Address	Approximate Distance from Site	Chlorinated Solvent (CS) or Petroleum (P) Site	Information
Blackwelders Auto Repair	2357 Carolina Beach Road Wilmington, NC 28401	0.02 mile	P	Soil and groundwater contamination resulting from a petroleum leak associated with the investigation of an underground storage tank occurred in May 1991 and was reported in July 1991. The database records noted soil excavation in 2007 that removed a small amount of a free product. The incident was recorded as closed out by NCDEQ in December 2007.
Harry's Amoco/Harry's Pine Valley Amoco	2305 Carolina Beach Road Wilmington, NC 28401	0.07 mile	P	Soil and groundwater contamination resulting from a petroleum leak associated with one of the USTs was reported in April 2006 during removal of the USTs. Soil samples collected beneath Kerosene UST confirmed a release. The incident was recorded as closed out in May 2006.

Facilities Identified	Address	Approximate Distance from Site	Chlorinated Solvent (CS) or Petroleum (P) Site	Information
A.C. Widenhouse /A.C. Widenhouse Trucking	2402 Carolina Beach Road Wilmington, NC 28401	0.08 mile	P	Six commercial USTs were previously installed at this facility. Three USTs contained diesel, one UST contained gasoline/gas mix fuel, one UST contained motor oil, and one UST contained new/used/mixed oil. All six USTs had recorded permanent closure dates between 1975 and 1991. Soil and groundwater contamination was reported in two separate incidents in August 1991 and March 1992. The facility had institutional controls filed in April 2014 relating to groundwater use.

According to the reasonably ascertainable information reviewed during this screening process, Kimley-Horn has determined that a VEC cannot be ruled out because a VEC is likely to exist due to the presence of vapor sources within the Site and its vicinity.

This Tier I VES does not include vapor intrusion and/or indoor air quality considerations associated with existing and/or proposed structures. No vapor sampling was conducted in association with this VES for the subject Site.

9.0 SIGNIFICANT DATA GAPS

As discussed in Section 2.4, no limitations were identified during the completion of this Phase I ESA. As such, no significant data gaps were identified in the reasonably ascertainable information associated with the subject property.

Conclusions were based on practically reviewable information available within reasonable time and cost constraints. There is always the possibility that recognized environmental conditions have escaped detection due to the limitations of this study, the incompleteness or inaccuracy of governmental records, the presence of undetected and unreported environmental accidents, and/or inability to access the entire subject property. Kimley-Horn assumes all information provided by the Client and associated parties are accurate and complete.

10.0 FINDINGS

The following is a summary of the RECs and de minimis conditions identified during completion of this Phase I ESA and required in ASTM E1527-13, 12.5.

10.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

The term recognized environmental condition (REC) refers to the likely presence of any hazardous substances or petroleum products in, on, or at the Site 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment. The following REC was identified in association with the subject property:

- Two 55-gallon metal drums were observed at the rear of the large commercial structure located in the western portion of the subject property. The two drums were observed to be sealed and labelled to contain used cooking oil. The two metal drums were in poor condition with extensive corrosion and rust, and the walls of the drums were visibly weeping. Stressed vegetation was observed around the base the two drums. During the site reconnaissance, Kimley-Horn staff observed individuals that appeared to be working at the commercial building open one of the bay doors on the rear of the building, complete an oil change on their personal vehicle, and dispose of the used automotive oil into the used cooking oil drums. The workers then resealed the used cooking oil drums. While the bay door was open, various automotive service materials and supplies were observed inside the open bay door of the building. Additionally, after this activity, Kimley-Horn staff observed an unknown oil pooled on top of one of the metal drums. Due to the unknown duration of the automotive service activities on the property, the unknown quantity of automotive oil in the drums, the condition of the drums, and the visible oil seepage through the drum walls, the two 55-gallon drums represent a REC for the subject property. **Figure 5** shows the locations of the two 55-gallon drums identified in the subject property, and **Appendix G** shows a photograph of the REC.

10.2 HISTORICAL RECS

A historical recognized environmental condition (HREC), as defined in the ASTM Standard, is an environmental condition that in the past would has been identified as a REC but has been adequately addressed and, therefore, no longer represents a REC. Kimley-Horn has not identified any historical RECs in association with the subject property.

10.3 CONTROLLED RECS

A controlled recognized environmental condition (CREC), as defined in the ASTM Standard is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Kimley-Horn has not identified any CRECs in association with the subject property.

10.4 BUSINESS ENVIRONMENTAL RISKS

Business Environmental Risks (BERs) were identified in association with the current and/or historical use of the Site and adjoining properties. As identified in Section 3.2.11 of the ASTM E1527-13, Standard, BERs are indicative of a risk that can have a material environmentally driven impact on the business associated with the current or planned use of a property. A BER may not

be subject to regulatory reporting or corrective measures. The following BER was identified in association with the subject property:

- A grease trap was observed on the ground behind the rear of the commercial building in the western portion of the subject property. The duration of use and the quantities of grease material in the grease trap is unknown. The grease trap will need to be pumped out and properly closed out as part of construction within the subject property.

10.5 DE MINIMIS CONDITIONS

De minimis conditions were identified in association with the current and/or historical use of the Site and adjoining properties. As identified in Section 3.2.23 of the ASTM E1527-13 Standard, de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The following de minimis conditions were identified in association with the subject property:

- De minimis dumping of scrap metal, tires, wood, household debris, appliances, and furniture was identified along the forested edges of the subject property. Dumping appeared to be primarily concentrated along the western, southern, and southeastern edges of the subject property. The duration of dumping and the quantities of discarded material in these areas are unknown. **Figure 5** shows the locations of de minimis debris dumping identified in the Site, and **Appendix G** shows a photograph of typical materials observed.

11. 0 CONCLUSIONS

Kimley-Horn has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527-13 for the approximate 16.1-acre property located within the city limits of Wilmington in New Hanover County, North Carolina. The Site is bordered by Carolina Beach Road (US 421) to the east, an electrical substation to the north, and various residential and commercial properties to the west and south. Any exceptions to or deletions from this practice are described in Section 2.4 of this report. The Phase I portion of this assessment has revealed evidence of one REC in association with the subject property.

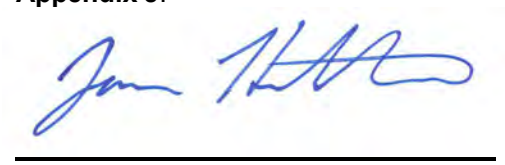
12.0 DEVIATIONS

As defined in ASTM Standard Method E1527-13, no deviations were part of this Phase I ESA.

13.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

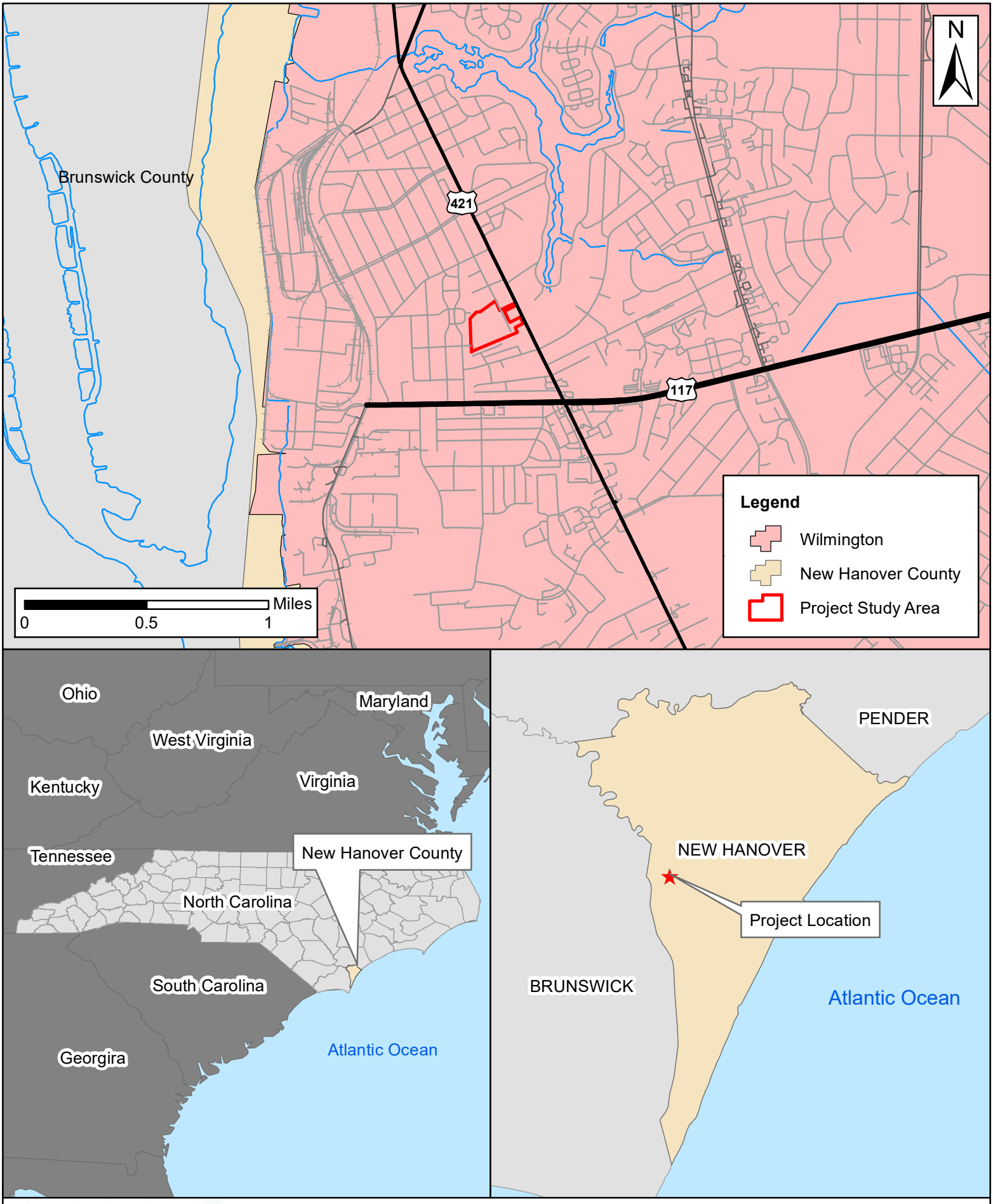
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed or directed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Please refer to the qualifications of personnel participating in this assessment attached in **Appendix J**.



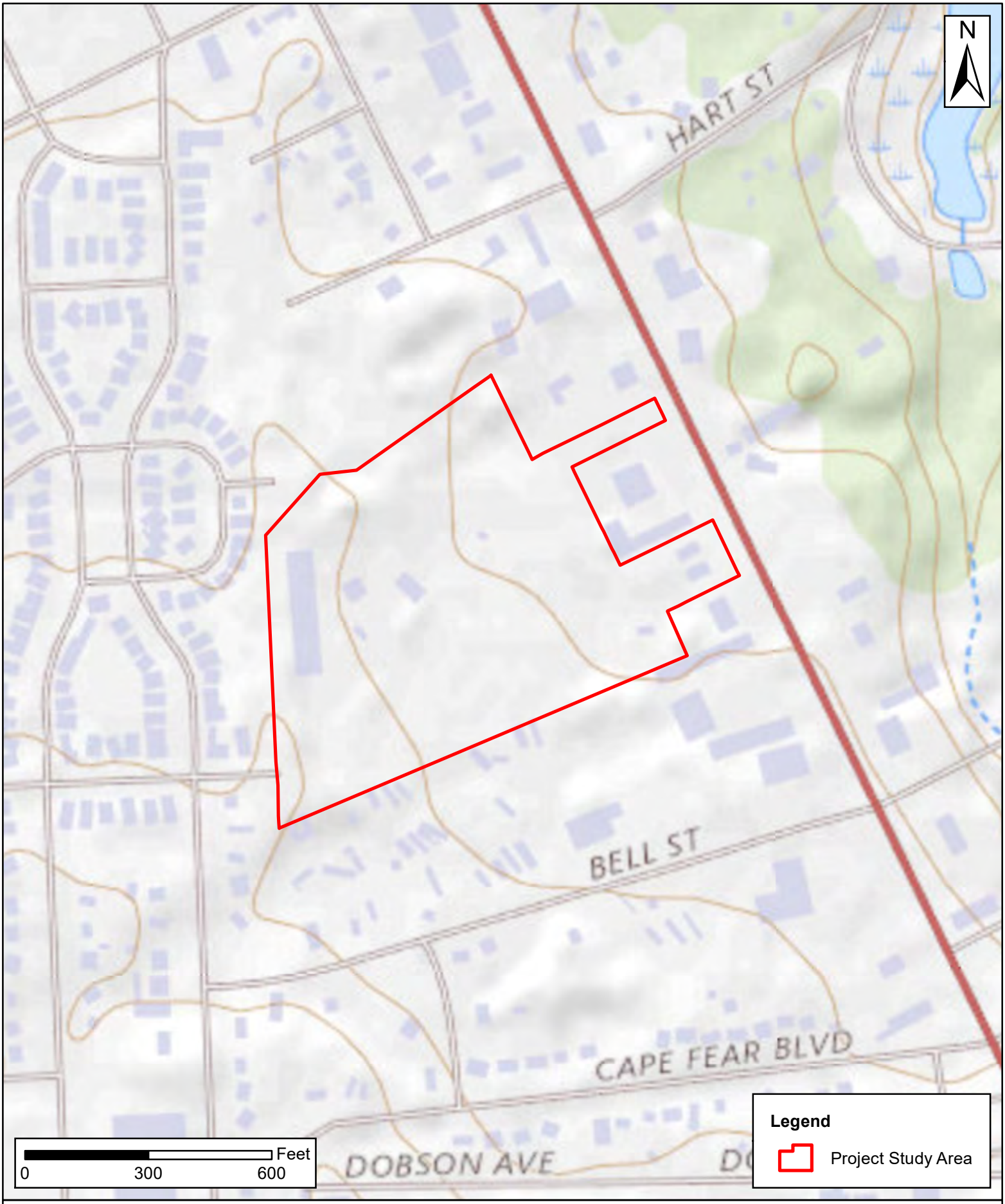
Jason R. Hartshorn, PWS

FIGURES



Kimley»Horn

Figure 1: Site Location Map
Starway Village Site
Wilmington, New Hanover County, NC
November 2021



Kimley»Horn

Figure 2: USGS Topographic Map
Starway Village Site
Wilmington, New Hanover County, NC
November 2021



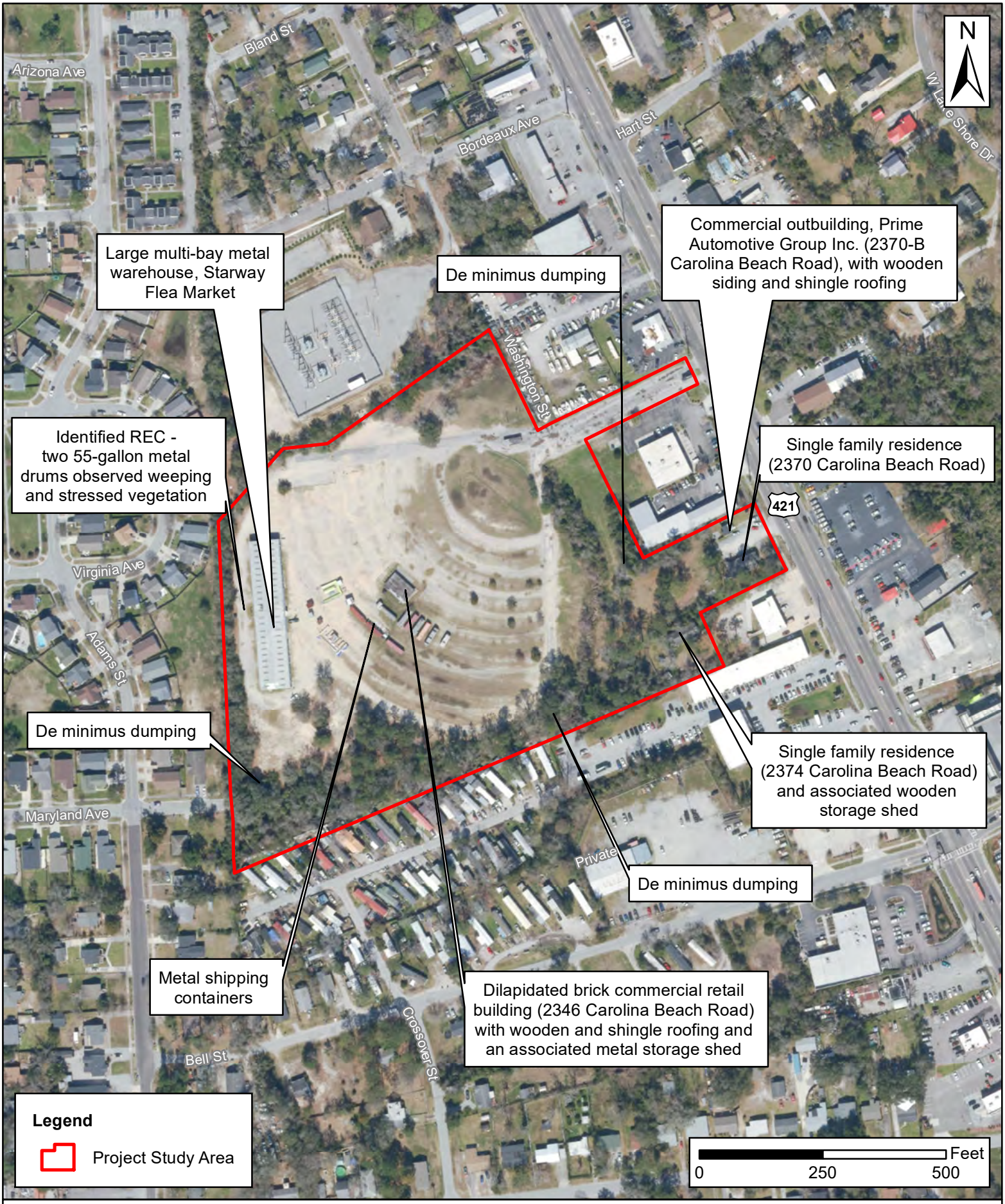
Kimley»Horn

Figure 3: Recent Aerial Photograph
Starway Village Site
Wilmington, New Hanover County, NC
November 2021



Kimley»Horn

Figure 4: NRCS Soil Survey Map
Starway Village Site
Wilmington, New Hanover County, NC
November 2021



Kimley»Horn

Figure 5: Site Reconnaissance Findings
Starway Village Site
Wilmington, New Hanover County, NC
November 2021

APPENDIX A
NEW HANOVER COUNTY
PROPERTY
DOCUMENTATION

PARID: R06013-021-001-000
HIBBARD ELLAN R

2346 CAROLINA BEACH RD

Parcel

Alt ID	312613.04.5192.000
Address	2346 CAROLINA BEACH RD
Unit	
City	WILMINGTON
Zip Code	-
Neighborhood	CIC00
Class	COM-Commercial
Land Use Code	599-Retail
Living Units	
Acres	
Zoning	CB-COMMUNITY BUSINESS

Legal

Legal Description	BORDEAUX DIV
Tax District	WM

Owners (On January1st)

Owner	HIBBARD ELLAN R
City	WILMINGTON
State	NC
Country	
Zip	28405

THE DATA IS FROM 2021

Sales

Sale Date	Sale Price	Grantee	Grantor	Book	Page	Sale Key
18-OCT-05	$0	HIBBARD ELLAN R	PENLEY DOYLE W	9910	1805	391063
19-JUL-90	$142,500	PENLEY DOYLE W ELLAN R	BUCKNELL ASSOCIATES	1504	1084	219744
10-JUL-90	$0	BUCKNELL ASSOCIATES	ESCO AGENCY INC	1503	1082	219743
01-DEC-88	$0	BUCKNELL ASSOCIATES	ESCO AGENCY INC	1440	1282	219742
01-DEC-86	$47,000	ESCO AGENCY INC	STEWART & EVERETT THEATRES	1357	1557	219741
01-JAN-01	$0	STEWART & EVERETT THEATRES	* NOT IN SYSTEM *	0000	0000	219740

Sale Details

1 of 6

Sale Date	18-OCT-05
Sale Key	391063
Sale Price	$.00
Grantee	HIBBARD ELLAN R
Grantor	PENLEY DOYLE W
Sale Source	D-Deed Stamps (Unverified)
Book	9910
Page	1805
Sale Type	
Sale Validity	U-Unqualified
Sale Flag	
STEB	
Instrument #	
Instrument Type	Death (Obituary)
Adj. Reason	
Adj. Price	
Adj. Amount	
Link	Click Here to view the deed for this parcel

Commercial

1 of 2

Card	1
Building Number	1
Structure Code/Description	RSO-RSO
Improvment Name	DOLLAR SMART
Units	1
Year Built	1950
Effective Year Built	
Grade	C
Class	-
Other Improvements	
Other Imp Value	
Total Under Roof	1500
Building Factor	1
Percent Complete	%
Percent Good	40%
Notes	

Other Feature Details

1 of 6

Card	1
Int/Ext Line	1
Area	
Measurement 1	732
Measurement 2	1
Identical Units	1

Summary of Interior/Exterior Data

Card	Line Number	Section	From Floor	To Floor	Area
1	1	1	01	01	1,500
2	1	1	01	01	18,000

Interior/Exterior Details

1 of 2

Card	1
Line Number	1
Section	1
From Floor	01
To Floor	01
Area	1,500
Use Group	RSO
Class	
Physical Condition	P
Construction	5-5
Wall Height	8
Interior Wall	2-2
Air	0-0
Plumbing	0-0
Units	
Functional Depr.	
Economic Depr.	

Summary of All Other Features

Card	Int/Ext Line	Area
1	1	
2	1	
2	1	
2	1	
2	1	
2	1	

THE DATA IS FROM 2021

Misc. Improvements

Card	Desc	Year Built	Grade	Width	Length	Area
1	PA-PA	1980	C	10	43	430
1	PA-PA	1980	C	16	490	7,840
1	UB-UB	1950	C			340

THE DATA IS FROM 2021

Permits

Permit #	Permit Date	Flag	Purpose	Amount
34471	01-NOV-1990	C		$432,420.00
65846	01-JAN-1997	C		$4,000.00
13-6797	14-JUN-2013	C	ELEC	$100.00

Land

Line Number	1
Land Type	A-ACREAGE
Land Code	COA
Square Feet	556248
Acres	

THE DATA IS FROM 2021

Values

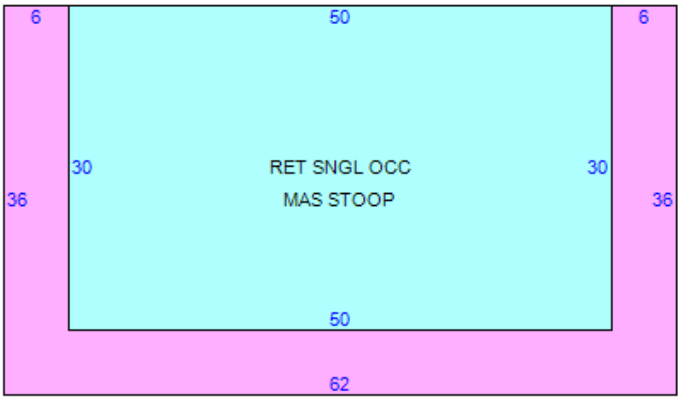
Year	2021
Total Land	$1,388,500
Total Buildings	$861,500
Appraised Total	$2,250,000

MARKET VALUE SHOWN - EXEMPTIONS TO BE REFLECTED IN AUG BILLS

THE DATA IS FROM 2021

Legal Description

Legal Description	BORDEAUX DIV
Tax District	WM
Subdivision Code	
Subdivision Name	



Item	Area
RET SNGL OCC - RSO:RETAIL SINGLE OCCUPANCY	1500
MAS STOOP - MST:MASONARY STOOP	732
UTIL/BLDG - UB:UTILITY BUILDING	340
PVMT/ASP - PA:PAVEMENT / ASPHALT	430
PVMT/ASP - PA:PAVEMENT / ASPHALT	7840

PARID: R06014-001-001-000
HIBBARD ELLAN R

2370 CAROLINA BEACH RD

Parcel

Alt ID	312613.14.1164.000
Address	2370 CAROLINA BEACH RD
Unit	
City	WILMINGTON
Zip Code	-
Neighborhood	CIDB1
Class	RES-Residential
Land Use Code	551-Auto Sales
Living Units	1
Acres	
Zoning	CS-COMMERCIAL SERVICE

Legal

Legal Description	LOTS 18-20 BORDEAUX
Tax District	WM

Owners (On January1st)

Owner	HIBBARD ELLAN R
City	WILMINGTON
State	NC
Country	
Zip	28405

THE DATA IS FROM 2021

Sales

Sale Date	Sale Price	Grantee	Grantor	Book	Page	Sale Key
18-OCT-05	$0	HIBBARD ELLAN R	PENLEY DOYLE W	9910	1805	391067
27-MAR-98	$200,000	PENLEY DOYLE W ELLAN R HIBBARD	MARTIN ANNA LAURA	2335	0600	219937
20-MAR-89	$0	MARTIN ANNA LAURA	MARTIN ANNA LAUR	9903	2089	219939
08-MAR-89	$0	MARTIN ANNA LAURA	MARTIN RUDOLPH D ANNA LAURA	9903	0889	219938
01-FEB-80	$0	MARTIN RUDOLPH D ANNA LAURA	* NOT IN SYSTEM *	1163	1947	219936

Sale Details

1 of 5

Sale Date	18-OCT-05
Sale Key	391067
Sale Price	$.00
Grantee	HIBBARD ELLAN R
Grantor	PENLEY DOYLE W
Sale Source	D-Deed Stamps (Unverified)
Book	9910
Page	1805
Sale Type	
Sale Validity	U-Unqualified
Sale Flag	
STEB	
Instrument #	
Instrument Type	Death (Obituary)
Adj. Reason	
Adj. Price	0
Adj. Amount	
Link	Click Here to view the deed for this parcel

Commercial

1 of 2

Card	1
Building Number	1
Structure Code/Description	RCL-RCL
Improvment Name	CAROLINA AUTO SALES
Units	
Year Built	1937
Effective Year Built	
Grade	C
Class	-
Other Improvements	
Other Imp Value	
Total Under Roof	1240
Building Factor	1
Percent Complete	%
Percent Good	50%
Notes	

Other Feature Details

1 of 3

Card	1
Int/Ext Line	1
Area	
Measurement 1	1
Measurement 2	150
Identical Units	1

Summary of Interior/Exterior Data

Card	Line Number	Section	From Floor	To Floor	Area
1	1	1	01	01	1,240
2	1	1	01	01	240

Interior/Exterior Details

1 of 2

Card	1
Line Number	1
Section	1
From Floor	01
To Floor	01
Area	1,240
Use Group	RSO
Class	
Physical Condition	A
Construction	1-1
Wall Height	8
Interior Wall	2-2
Air	1-1
Plumbing	0-0
Units	
Functional Depr.	
Economic Depr.	

Summary of All Other Features

Card	Int/Ext Line	Area
1	1	
1	1	
2	1	

THE DATA IS FROM 2021

Misc. Improvements

Card	Desc	Year Built	Grade	Width	Length	Area
1	CS-CS	1999	C	15	15	225

THE DATA IS FROM 2021

Permits

Permit #	Permit Date	Flag	Purpose	Amount
4000	01-APR-1999	C		$12,852.00
15-3557	13-FEB-2015	C	ELEC	$100.00

Land

Line Number	1
Land Type	S-SQUARE FOOT
Land Code	COS
Square Feet	45071
Acres	

THE DATA IS FROM 2021

Values

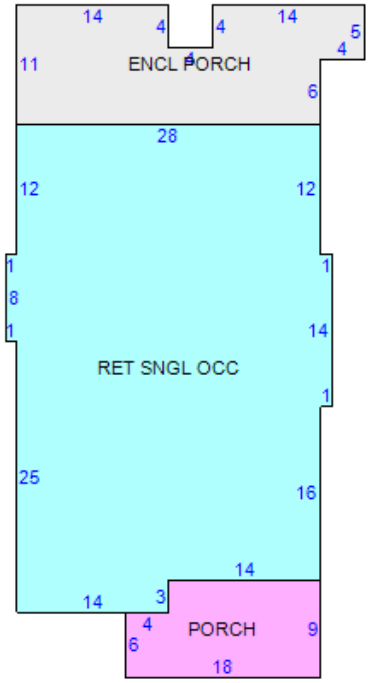
Year	2021
Total Land	$171,800
Total Buildings	$109,000
Appraised Total	$280,800

MARKET VALUE SHOWN - EXEMPTIONS TO BE REFLECTED IN AUG BILLS

THE DATA IS FROM 2021

Legal Description

Legal Description	LOTS 18-20 BORDEAUX
Tax District	WM
Subdivision Code	
Subdivision Name	



Item	Area
RET SNGL OCC - RSO:RETAIL SINGLE OCCUPANCY	1240
PORCH - POR:OPEN PORCH	150
ENCL PORCH - EPR:ENCL PORCH	312
CONC SLAB - CS:CONCRETE SLAB ON GROUND	225

PARID: R06014-001-004-000
HIBBARD ELLAN R

2346 CAROLINA BEACH RD

Parcel

Alt ID	312613.14.0439.000
Address	2346 CAROLINA BEACH RD
Unit	
City	WILMINGTON
Zip Code	-
Neighborhood	CIDB1
Class	COM-Commercial
Land Use Code	958-Unused Land
Living Units	
Acres	
Zoning	CS-COMMERCIAL SERVICE

Legal

Legal Description	LTS 12/31 & PT 13/27-30 BORDEAUX DIV
Tax District	WM

Owners (On January1st)

Owner	HIBBARD ELLAN R
City	WILMINGTON
State	NC
Country	
Zip	28405

THE DATA IS FROM 2021

Sales

Sale Date	Sale Price	Grantee	Grantor	Book	Page	Sale Key
18-OCT-05	$0	HIBBARD ELLAN R	PENLEY DOYLE W	9910	1805	391065
19-JUL-90	$142,500	PENLEY DOYLE W ELLAN R HIBBARD	BUCKNELL ASSOCIATES	1504	1084	219951
01-DEC-88	$0	BUCKNELL ASSOCIATES	ESCO AGENCY INC	1440	1282	219950
01-DEC-86	$47,000	ESCO AGENCY INC	STEWART & EVERETTE THEATRES	1357	1557	219949
01-JAN-01	$0	STEWART & EVERETTE THEATRES	* NOT IN SYSTEM *	0000	0000	219948

Sale Details

1 of 5

Sale Date	18-OCT-05
Sale Key	391065
Sale Price	$.00
Grantee	HIBBARD ELLAN R
Grantor	PENLEY DOYLE W
Sale Source	D-Deed Stamps (Unverified)
Book	9910
Page	1805
Sale Type	
Sale Validity	U-Unqualified
Sale Flag	
STEB	
Instrument #	
Instrument Type	Death (Obituary)
Adj. Reason	
Adj. Price	
Adj. Amount	
Link	Click Here to view the deed for this parcel

Land

Line Number	1
Land Type	S-SQUARE FOOT
Land Code	COS
Square Feet	29136
Acres	

THE DATA IS FROM 2021

Values

Year	2021
Total Land	$132,800
Total Buildings	$0
Appraised Total	$132,800

MARKET VALUE SHOWN - EXEMPTIONS TO BE REFLECTED IN AUG BILLS

THE DATA IS FROM 2021

Legal Description

Legal Description	LT 32 & PT 12-13;26-31 BLK 2; BORDEAUX DIV
Tax District	WM
Subdivision Code	003042
Subdivision Name	

Sub-parcel(s) Info

PARENT BOOK	PARENT PAGE	CHILD PARCEL	CHILD BOOK	CHILD PAGE	SPLIT/COMBO #	TAX YEAR
9910	1805	R06014-001-004-000			56193	2022

Sub-parcel(s) Info

SPLIT/COMBO #	56193
CODE	C
PARENT PARCEL	R06014-001-004-000
PARENT BOOK	9910
PARENT PAGE	1805
CHILD PARCEL	R06014-001-004-000
CHILD BOOK	
CHILD PAGE	
WHO	CADAVIS

Original Parcel Info

PARENT PARCEL	PARENT BOOK	PARENT PAGE	ACRES	SQ. FT.	CODE	SPLIT/COMBO #	TAX YEAR
R06013-020-008-000	9910	1805		2372	C	56193	2022
R06014-001-004-000	9910	1805	.72	31508	C	56193	2022



Sorry, no sketch available
for this record

Item	Area



PARID: R06018-002-006-001
HIBBARD ELLAN R

2374 CAROLINA BEACH RD

Parcel

Alt ID	312613.13.1923.000
Address	2374 CAROLINA BEACH RD
Unit	
City	WILMINGTON
Zip Code	-
Neighborhood	CIC00
Class	RES-Residential
Land Use Code	10-Single Family Residential
Living Units	1
Acres	
Zoning	CS-COMMERCIAL SERVICE

Legal

Legal Description	PT TRS 2/3 ADJ BORDEAUX
Tax District	WM

Owners (On January1st)

Owner	HIBBARD ELLAN R
City	WILMINGTON
State	NC
Country	
Zip	28405

THE DATA IS FROM 2021

Sales

Sale Date	Sale Price	Grantee	Grantor	Book	Page	Sale Key
18-OCT-05	$0	HIBBARD ELLAN R	PENLEY DOYLE	9910	1805	391061
30-APR-93	$0	PENLEY DOYLE W ELLAN R	LEWIS DENISE E EXECUTRIX	1662	1085	222113
14-MAR-91	$0	LEWIS DENISE E EXECUTRIX	HICKS ZERA LEE R HRS	9991	E151	222115
18-FEB-91	$0	HICKS ZERA LEE R HRS	HICKS ZERA LEE R	9802	1891	222114
01-JUL-82	$0	HICKS WILLIAM E ZERA LEE R	HICKS ZERA LEE R	1206	0104	222112
01-OCT-80	$0	HICKS ZERA LEE R	* NOT IN SYSTEM *	1175	1925	222111

Sale Details

1 of 6

Sale Date	18-OCT-05
Sale Key	391061
Sale Price	$.00
Grantee	HIBBARD ELLAN R
Grantor	PENLEY DOYLE
Sale Source	D-Deed Stamps (Unverified)
Book	9910
Page	1805
Sale Type	
Sale Validity	U-Unqualified
Sale Flag	
STEB	
Instrument #	
Instrument Type	Death (Obituary)
Adj. Reason	
Adj. Price	0
Adj. Amount	
Link	Click Here to view the deed for this parcel

Residential

Card	1
Stories	1 - 1 ST
Class	-
Physical Condition	-
Grade	C-AVERAGE QUALITY
CDU	FR-FAIR
Exterior Wall	03-VINYL/STEEL SIDING
Style	TD-TRADITIONAL
Year Built	1948
Effective Year Built	
Remodeled Year	
Living Area	1,176
Total Rooms	
Bedrooms	3
Family Rooms	
Attic	
Basement	NONE
Full Baths	1
Half Baths	0
Additional Fixtures	2
Total Fixtures	7
Heat	NONE
Heating System	Floorwall Furnace
Heating Fuel Type	Electric
Pre Fab Fireplace	0
Masonry Fireplaces	

Additions

Card	Addition Number	Description	Area
1	0		1,176
1	1	POR	128

Addition Details

Card	1
Addition Number	0
Lower	-
First	-
Second	-
Third	-
Year Built	1949
Area	1,176
Grade	C
CDU	AV

THE DATA IS FROM 2021

Permits

Permit #	Permit Date	Flag	Purpose	Amount
01	01-JAN-1994	C		$1.00

Land

Line Number	1
Land Type	S-SQUARE FOOT
Land Code	COS
Square Feet	50699
Acres	

THE DATA IS FROM 2021

Values

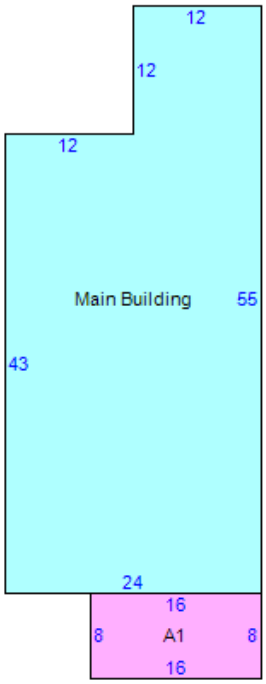
Year	2021
Total Land	$46,900
Total Buildings	$34,400
Appraised Total	$81,300

MARKET VALUE SHOWN - EXEMPTIONS TO BE REFLECTED IN AUG BILLS

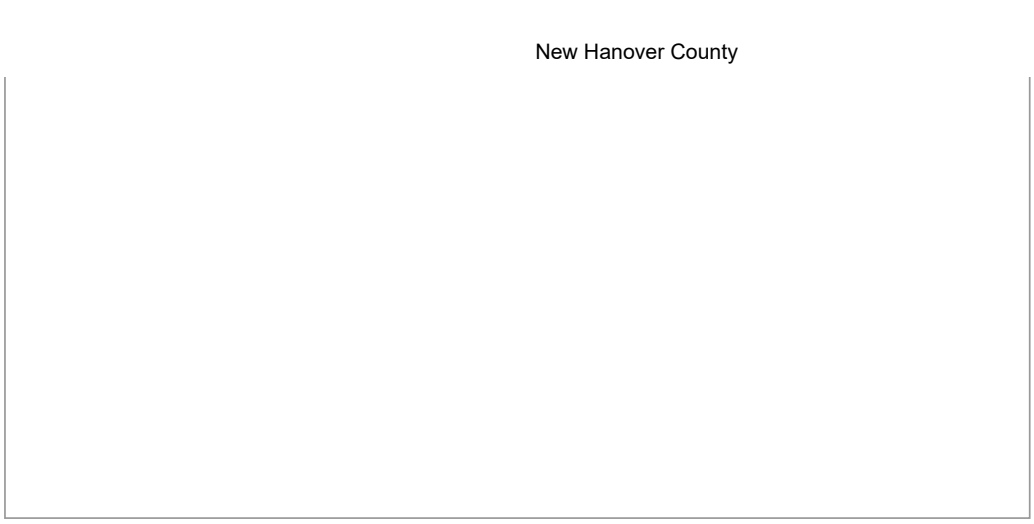
THE DATA IS FROM 2021

Legal Description

Legal Description	PT TRS 2/3 ADJ BORDEAUX
Tax District	WM
Subdivision Code	
Subdivision Name	



Item	Area
Main Building	1176
A1 - POR:OPEN PORCH	128



APPENDIX B
EDR RADIUS
REPORT

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.2s
October 23, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2346 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

COORDINATES

Latitude (North):	34.1963880 - 34° 11' 46.99''
Longitude (West):	77.9396940 - 77° 56' 22.89''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	229101.7
UTM Y (Meters):	3787644.2
Elevation:	23 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5945725 WILMINGTON, NC
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140523
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
2346 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	MOBIL OIL CORP.		NC HSDS	Same	4961, 0.940, SW
Reg	AMOCO OIL		NC HSDS	Same	4361, 0.826, SSW
1	P.L. SMITH	2357 CAN BCH RD	NC UST	Lower	66, 0.013, ESE
2	CAROLINA PAINT & BOD	2326 CAROLINA BEACH	RCRA-VSQG	Lower	70, 0.013, NE
A3	RAPERS TEXACO SERVIC	2357 CAROLINA BEACH	EDR Hist Auto	Lower	118, 0.022, ENE
A4	BLACKWELDERS AUTO RE	2357 CAROLINA BCH RD	NC LUST, NC INST CONTROL, NC IMD	Lower	118, 0.022, ENE
B5	BROWN OIL CO. OF WIL	2305 CAROLINA BEACH	NC AST	Lower	397, 0.075, NNE
B6	HARRY'S AMOCO	2305 CAROLINA BEACH	NC LUST, NC UST	Lower	397, 0.075, NNE
B7	HARRY'S AMOCO	2305 CAROLINA BEACH	NC IMD	Lower	397, 0.075, NNE
B8	HARRYS PINE VALLEY A	2305 CAROLINA BEACH	EDR Hist Auto	Lower	397, 0.075, NNE
9	BOWERS TRANSMISSION	310 BELL ST	EDR Hist Auto	Higher	438, 0.083, SSW
C10	A C WIDENHOUSE	2402 CAROLINA BEACH	NC UST	Higher	458, 0.087, ESE
C11	A. C. WIDENHOUSE, IN	2402 CAROLINA BCH RD	NC LUST, NC INST CONTROL, NC IMD	Higher	458, 0.087, ESE
C12	A C WIDENHOUSE	2402 CAROLINA BEACH	RCRA-VSQG	Higher	458, 0.087, ESE
C13	A.C. WIDENHOUSE TRUC	2402 CAROLINA BEACH	NC LUST TRUST	Higher	458, 0.087, ESE
C14	A C WIDENHOUSE INC	2412 CAROLINA BEACH	NC AST	Lower	494, 0.094, ESE
C15	SPEEDWAY #8191	2395 CAROLINA BEACH	NC UST, NC Financial Assurance	Lower	497, 0.094, ESE
C16	HINSON OIL CO.	2420 CAROLINA BEACH	NC LUST, NC UST, NC INST CONTROL	Lower	607, 0.115, ESE
C17	HINSON OIL CO.	2420 CAROLINA BEACH	NC IMD	Lower	607, 0.115, ESE
C18	HINSON OIL COMPANY	2420 CAROLINA BEACH	EDR Hist Auto	Lower	607, 0.115, ESE
D19	PEARSON PROPERTY-AST	2402 JEFFERSON STREE	NC SHWS, NC IMD	Higher	618, 0.117, WSW
E20	FUTURA INC	2242 CAROLINA BEACH	NC DRYCLEANERS	Lower	691, 0.131, North
E21	STAN'S WASHERETTE	2242 CAROLINA BEACH	NC DRYCLEANERS	Lower	691, 0.131, North
E22	CARQUEST OF CAROLINA	2234 CAROLINA BEACH	RCRA NonGen / NLR	Lower	773, 0.146, North
D23	MONROE ST-2401	2401 MONROE ST	NC LAST	Higher	835, 0.158, WSW
24	WERTHEIMER BAGS CO.	249 W. SHIPYARD BLVD	NC UST	Higher	914, 0.173, SSW
F25	MODERN LAUNDRY & DRY	2219 CAROLINA BEACH	NC DRYCLEANERS	Lower	1017, 0.193, North
F26	MODERN LAUNDRY & CLE	2219 CAROLINA BEACH	NC DRYCLEANERS	Lower	1017, 0.193, North
F27	NC ARMY NATIONAL GUA	2221 CAROLINA BEACH	NC LUST, NC UST, NC IMD	Lower	1021, 0.193, North
G28	S&W READY MIX CONCRE	2209 MONROE ST.	RCRA NonGen / NLR, FINDS, ECHO	Higher	1030, 0.195, WNW
G29	S & G CONCRETE COMPA	2209 MONROE ST PO BO	NC UST	Higher	1030, 0.195, WNW
F30	PLEASANT'S WASHERETT	2210 CAROLINA BEACH	NC DRYCLEANERS	Lower	1048, 0.198, North
H31	TOMMY'S QUICK SHOP S	2461 CAROLINA BEACH	NC LUST, NC UIC	Higher	1093, 0.207, SE
H32	WK HOBBS BP SITE	2461 CAROLINA BEACH	NC SHWS, NC LAST, NC INST CONTROL	Higher	1093, 0.207, SE
H33	CAROLINA BEACH CARDL	2461 CAROLINA BEACH	NC UST, NC Financial Assurance	Higher	1093, 0.207, SE
H34	WK HOBBS BP SITE	2461 CAROLINA BEACH	NC IMD	Higher	1093, 0.207, SE
H35	CONOCO # 33052	2461 CAROLINA BCH RD	NC LUST, NC INST CONTROL, NC IMD	Higher	1093, 0.207, SE
F36	ECON-O-WASH	2202 CAROLINA BEACH	NC DRYCLEANERS	Lower	1120, 0.212, North
I37	FORMER DILLONS GROCE	214 SOUTHERN BLVD	NC IMD	Higher	1129, 0.214, NW

MAPPED SITES SUMMARY

Target Property Address:
2346 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
I38	SUNSET LAUNDERETTE	216 SOUTHERN BOULEVA	NC DRYCLEANERS	Higher	1138, 0.216, NW
39	ECONO TRANSMISSION S	611 WELLINGTON AVENU	NC UST	Lower	1159, 0.220, ESE
J40	WECT TELEVISION	322 SHIPYARD BLVD.	NC IMD	Higher	1211, 0.229, SSW
J41	ATLANTIC TELECASTING	322 SHIPYARD BLVD.	NC UST	Higher	1211, 0.229, SSW
I42	SUNSET LAUNDERETTE	225 SOUTHERN BOULEVA	NC DRYCLEANERS	Higher	1227, 0.232, NW
K43	FAST FARE # 730	2158 CAROLINA BEACH	NC IMD	Higher	1236, 0.234, North
K44	FAST FARE NC 730	2158 CAROLINA BEACH	RCRA-VSQG	Higher	1236, 0.234, North
K45	NC-730	2158 CAROLINA BEACH	NC LUST, NC UST	Higher	1236, 0.234, North
46	S&G PRESTRESS	2295 BURNETT BOULEVA	NC LAST	Higher	1425, 0.270, West
47	ROYSTER TRANSPORT CO	200 SHIPYARD BLVD.	NC LUST	Higher	1434, 0.272, SSW
L48	SPRINGER-EUBANKS	123 SHIPYARD BOULEVA	NC IMD	Higher	1455, 0.276, SW
L49	CENAMA INC	123 SHIPYARD BLVD	SC LUST	Higher	1455, 0.276, SW
L50	SPRINGER EUBANK SHIP	123 W. SHIPYARD BLVD	NC IMD	Higher	1455, 0.276, SW
L51	SPRINGER EUBANK BULK	123 SHIPYARD BLVD	NC LAST, NC LUST, NC IMD	Higher	1455, 0.276, SW
M52	ROYSTER TRANSPORT CO	206 SHIPYARD BLVD.	NC IMD	Higher	1491, 0.282, SW
M53	ROYSTER TRANSPORT CO	206 SHIPYARD BLVD	NC SHWS, NC LAST, NC UST	Higher	1491, 0.282, SW
M54	ROYSTER TRANSPORT CO	206 SHIPYARD BLVD.	NC IMD	Higher	1491, 0.282, SW
N55	SCHONAUER PROPERTY (	2129 MONROE STREET	NC LUST	Higher	1531, 0.290, NW
N56	SCHONAUER PROPERTY (	2129 MONROE STREET	NC LUST TRUST	Higher	1531, 0.290, NW
57	JACKSON STREET 2137	2137 JACKSON STREET	NC LUST, NC LUST TRUST	Higher	1577, 0.299, WNW
L58	S T G TRANSPORT - SH	2501 FLORIDA AVENUE	NC LAST, NC IMD, FINDS, ECHO	Higher	1579, 0.299, SW
59	ADAMS PAINTING SERVI	722 WELLINGTON AVE	NC SHWS	Lower	1589, 0.301, ESE
N60	MONROE STREET - 2121	2121 MONROE STREET	NC LAST	Higher	1656, 0.314, NW
L61	STONE HEAVY VEHICLE	109 SHIPYARD BLVD	NC LAST, NC IMD	Higher	1665, 0.315, SW
62	HARRISON ST-2175	2175 HARRISON STREET	NC LUST, NC LUST TRUST, NC INST CONTROL	Lower	1752, 0.332, West
63	WILMINGTON HEALTH&RE	820 WELLINGTON AVENU	NC LUST, NC UST	Higher	1834, 0.347, East
O64	WAYNE'S EXXON	2606 CAROLINA BEACH	NC IMD	Higher	1885, 0.357, SE
O65	EXXON # 4-6476	2606 CAROLINA BCH RD	NC LUST, NC IMD	Higher	1885, 0.357, SE
O66	EXXON 46476	2606 CAROLINA BEACH	NC LUST, NC UST	Higher	1885, 0.357, SE
P67	HINSON PROPERTY HEAT	605 E. SHIPYARD BLVD	NC LUST	Higher	1979, 0.375, SE
P68	FORMER JIFFY LUBE	601 SHIPYARD BLVD	NC IMD	Higher	2038, 0.386, SE
Q69	NCSPA - UREA WAREHOU	NCPA 2202 BURNETT BL	NC IMD	Lower	2061, 0.390, West
Q70	NCSPA - DIESEL AGST	2202 BURNETT BLVD.	NC IMD	Lower	2102, 0.398, West
Q71	NORTH CAROLINA STATE	2202 BURNETT BOULEVA	NC SHWS, NC LAST, NC LUST, NC LUST TRUST, NC IMD,...	Lower	2102, 0.398, West
Q72	N.C. STATE PORTS	2200 BURNETT BOULEVA	NC LUST, NC UST	Lower	2109, 0.399, West
Q73	WHEELING CORRUGATION	2200 BURNETT BLVD.	NC IMD	Lower	2109, 0.399, West
R74	GAS WORLD #4	2607 CAROLINA BCH RD	NC LUST, NC INST CONTROL, NC IMD	Higher	2138, 0.405, SE
Q75	USMC CAMP LEJEUNE, B	SETH WILLIAMS BLVD	NC LUST, NC INST CONTROL, NC IMD	Lower	2202, 0.417, West
Q76	NC PORTS AUTHORITY-P		NC AST, NC IMD	Lower	2202, 0.417, West

MAPPED SITES SUMMARY

Target Property Address:
2346 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
S77	US MARINE CORPS RESE	2150 BURNETT BLVD	NC LUST, NC LAST, NC UST, NC ASBESTOS	Lower	2269, 0.430, West
S78	USMC RESERVE CENTER	2150 BURNETT BLVD.	NC IMD	Lower	2269, 0.430, West
79	FAST FARE NC 723	2069 CAROLINA BEACH	NC LUST, NC IMD, RCRA NonGen / NLR	Higher	2277, 0.431, North
T80	USA RESERVE XVIII AI	2144 LAKESHORE DRICE	SEMS-ARCHIVE	Lower	2279, 0.432, NNE
T81	US ARMY RESERVE CENT	2144 LAKE SHORE DR.	NC LUST, NC IMD	Lower	2301, 0.436, NNE
82	NC STATE PORTS AUTHO	45 SHIPYARD BLVD.	NC IMD	Higher	2313, 0.438, SW
R83	COASTAL DRYCLEANERS	2629 CAROLINA BEACH	NC IMD	Higher	2346, 0.444, SE
84	GREEN PROPERTY (WILL	121 CENTRAL BLVD	NC LUST TRUST	Higher	2410, 0.456, WNW
T85	ARMY RESERVE (WILMIN	2144 LAKESHORE DR	RCRA-VSQG, NC SHWS, FINDS, ECHO, DOCKET HWC	Lower	2452, 0.464, NNE
86	CANNON STATION-SUNSE	2039 CAROLINA BEACH	NC LUST, NC UST	Lower	2637, 0.499, North
87	KOCH FUELS REFINING	3225 RIVER ROAD	NC SHWS, NC IMD	Higher	3096, 0.586, SW
88	SUNOCO BULK TERMINAL	RIVER ROAD	NC SHWS	Lower	3635, 0.688, SW
89	ATLANTIC TRACKING AN		FUDS	Higher	4675, 0.885, SSE
90	EAST COAST OIL TRANS	3330 RIVER ROAD	NC SHWS, NC LAST, NC IMD	Lower	4769, 0.903, SW
91	TEREX USA, LLC	202 RALEIGH STREET	RCRA-VSQG, NC SHWS, NC IMD	Higher	5163, 0.978, South

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

NC SWF/LF ---------- List of Solid Waste Facilities
NC DEBRIS ---------- Solid Waste Active Disaster Debris Sites Listing
NC OLI ---------- Old Landfill Inventory
NC LCID ---------- Land-Clearing and Inert Debris (LCID) Landfill Notifications

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

NC VCP ---------- Responsible Party Voluntary Action Sites
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

NC BROWNFIELDS ---------- Brownfields Projects Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

NC SWRCY ---------- Recycling Center Listing
NC HIST LF ---------- Solid Waste Facility Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
NC SPILLS ---------- Spills Incident Listing

NC SPILLS 90 ---- SPILLS 90 data from FirstSearch
NC SPILLS 80 ---- SPILLS 80 data from FirstSearch

Other Ascertainable Records

DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
UXO ---- Unexploded Ordnance Sites
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
NC AIRS ---- Air Quality Permit Listing
NC COAL ASH ---- Coal Ash Disposal Sites
NC NPDES ---- NPDES Facility Location Listing
NC AOP ---- Animal Operation Permits Listing
NC CCB ---- Coal Ash Structural Fills (CCB) Listing
NC PCSRP ---- Petroleum-Contaminated Soil Remediation Permits
NC SEPT HAULERS ---- Permitted Septage Haulers Listing
MINES MRDS ---- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

NC RGA HWS ---- Recovered Government Archive State Hazardous Waste Facilities List

NC RGA LF Recovered Government Archive Solid Waste Facilities List
NC RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 07/29/2021 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
USA RESERVE XVIII AI Site ID: 0403173 EPA Id: NC0210021929	2144 LAKESHORE DRICE	NNE 1/4 - 1/2 (0.432 mi.)	T80	186

Federal RCRA generators list

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 09/13/2021 has revealed that there are

3 RCRA-VSQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A C WIDENHOUSE EPA ID:: NCD067196816	2402 CAROLINA BEACH	ESE 0 - 1/8 (0.087 mi.)	C12	35
FAST FARE NC 730 EPA ID:: NCD986175552	2158 CAROLINA BEACH	N 1/8 - 1/4 (0.234 mi.)	K44	90

Lower Elevation	Address	Direction / Distance	Map ID	Page
CAROLINA PAINT & BOD EPA ID:: NCR000006635	2326 CAROLINA BEACH	NE 0 - 1/8 (0.013 mi.)	2	10

State- and tribal - equivalent NPL

NC HSDS: The Hazardous Substance Disposal Sites list contains locations of uncontrolled and unregulated hazardous waste sites. The file contains sites on the national priority list as well as the state priority list. The data source is the North Carolina Center for Geographic Information and Analysis.

A review of the NC HSDS list, as provided by EDR, and dated 08/09/2011 has revealed that there are 2 NC HSDS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MOBIL OIL CORP.		SW 1/2 - 1 (0.940 mi.)	0	8
AMOCO OIL		SSW 1/2 - 1 (0.826 mi.)	0	8

State- and tribal - equivalent CERCLIS

NC SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environment & Natural Resources' Inactive Hazardous Sites Program.

A review of the NC SHWS list, as provided by EDR, and dated 05/12/2021 has revealed that there are 10 NC SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PEARSON PROPERTY-AST Facility Id: NONCD0002281	***2402 JEFFERSON STREE***	***WSW 0 - 1/8 (0.117 mi.)***	***D19***	***49***
WK HOBBS BP SITE Facility Id: NONCD0002750	***2461 CAROLINA BEACH***	***SE 1/8 - 1/4 (0.207 mi.)***	***H32***	***72***
ROYSTER TRANSPORT CO Facility Id: NONCD0002426	***206 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.282 mi.)***	***M53***	***115***
KOCH FUELS REFINING Facility Id: NONCD0002797	***3225 RIVER ROAD***	***SW 1/2 - 1 (0.586 mi.)***	***87***	***201***
TEREX USA, LLC	***202 RALEIGH STREET***	***S 1/2 - 1 (0.978 mi.)***	***91***	***210***

Facility Id: NONCD0001253

Lower Elevation	Address	Direction / Distance	Map ID	Page
ADAMS PAINTING SERVI Facility Id: NONCD0002781	722 WELLINGTON AVE	ESE 1/4 - 1/2 (0.301 mi.)	59	128
NORTH CAROLINA STATE Facility Id: NONCD0002194	***2202 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.398 mi.)***	***Q71***	***153***
ARMY RESERVE (WILMIN Facility Id: NC0210021929	***2144 LAKESHORE DR***	***NNE 1/4 - 1/2 (0.464 mi.)***	***T85***	***194***
SUNOCO BULK TERMINAL Facility Id: NONCD0002561	RIVER ROAD	SW 1/2 - 1 (0.688 mi.)	88	204
EAST COAST OIL TRANS Facility Id: NONCD0001723	***3330 RIVER ROAD***	***SW 1/2 - 1 (0.903 mi.)***	***90***	***205***

State and tribal leaking storage tank lists

NC LAST: A listing of leaking aboveground storage tank site locations.

A review of the NC LAST list, as provided by EDR, and dated 04/30/2021 has revealed that there are 10 NC LAST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONROE ST-2401 Close Out: 01/23/2017 Current Status: A	2401 MONROE ST	WSW 1/8 - 1/4 (0.158 mi.)	D23	57
WK HOBBS BP SITE Close Out: 09/13/2013 Incident Number: 14858 Current Status: A	***2461 CAROLINA BEACH***	***SE 1/8 - 1/4 (0.207 mi.)***	***H32***	***72***
S&G PRESTRESS Close Out: 10/12/2010 Incident Number: 94064 Current Status: A	2295 BURNETT BOULEVA	W 1/4 - 1/2 (0.270 mi.)	46	100
SPRINGER EUBANK BULK Incident Number: 87137 Current Status: C	***123 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.276 mi.)***	***L51***	***107***
ROYSTER TRANSPORT CO Incident Number: 18900 Current Status: C	***206 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.282 mi.)***	***M53***	***115***
S T G TRANSPORT - SH Close Out: 07/03/2002 Incident Number: 86296 Current Status: A	***2501 FLORIDA AVENUE***	***SW 1/4 - 1/2 (0.299 mi.)***	***L58***	***125***
MONROE STREET - 2121 Close Out: 01/13/2014 Incident Number: 94213 Current Status: C	2121 MONROE STREET	NW 1/4 - 1/2 (0.314 mi.)	N60	129
STONE HEAVY VEHICLE	***109 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.315 mi.)***	***L61***	***130***

Close Out: 12/19/1994
Incident Number: 13830
Current Status: A

Lower Elevation	Address	Direction / Distance	Map ID	Page
NORTH CAROLINA STATE Close Out: 05/28/1996 Close Out: 05/14/2008 Incident Number: 14300 Incident Number: 94015 Current Status: A	***2202 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.398 mi.)***	***Q71***	***153***
US MARINE CORPS RESE Close Out: 12/21/2016 Incident Number: 94338 Current Status: A	***2150 BURNETT BLVD***	***W 1/4 - 1/2 (0.430 mi.)***	***S77***	***174***

NC LUST: The Leaking Underground Storage Tank Incidents Management Database contains an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environment, & Natural Resources' Incidents by Address.

A review of the NC LUST list, as provided by EDR, and dated 04/30/2021 has revealed that there are 25 NC LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A. C. WIDENHOUSE, IN Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 6950 Incident Number: 7482 Current Status: File Located in Archives	***2402 CAROLINA BCH RD***	***ESE 0 - 1/8 (0.087 mi.)***	***C11***	***28***
TOMMY'S QUICK SHOP S Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 43081 Current Status: File Located in House	***2461 CAROLINA BEACH***	***SE 1/8 - 1/4 (0.207 mi.)***	***H31***	***70***
CONOCO # 33052 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 226 Current Status: File Located in Archives	***2461 CAROLINA BCH RD***	***SE 1/8 - 1/4 (0.207 mi.)***	***H35***	***78***
NC-730 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 14603 Current Status: File Located in Archives	***2158 CAROLINA BEACH***	***N 1/8 - 1/4 (0.234 mi.)***	***K45***	***94***
ROYSTER TRANSPORT CO Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 20865 Current Status: File Located in Archives	200 SHIPYARD BLVD.	SSW 1/4 - 1/2 (0.272 mi.)	47	101
SPRINGER EUBANK BULK	***123 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.276 mi.)***	***L51***	***107***

Incident Phase: Follow Up Product Type: PETROLEUM Incident Number: 32234 Incident Number: 32953 Current Status: File Located in House				
SCHONAUER PROPERTY (Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 32338 Current Status: File Located in Archives	2129 MONROE STREET	NW 1/4 - 1/2 (0.290 mi.)	N55	120
JACKSON STREET 2137 Product Type: PETROLEUM Incident Number: 32758 Current Status: File Located in House	***2137 JACKSON STREET***	***WNW 1/4 - 1/2 (0.299 mi.)***	***57***	***122***
WILMINGTON HEALTH&RE Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 32592 Current Status: File Located in Archives	***820 WELLINGTON AVENU***	***E 1/4 - 1/2 (0.347 mi.)***	***63***	***136***
EXXON # 4-6476 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 10154 Current Status: File Located in Archives	***2606 CAROLINA BCH RD***	***SE 1/4 - 1/2 (0.357 mi.)***	***O65***	***140***
EXXON 46476 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 32178 Current Status: File Located in Archives	***2606 CAROLINA BEACH***	***SE 1/4 - 1/2 (0.357 mi.)***	***O66***	***143***
HINSON PROPERTY HEAT Product Type: PETROLEUM Incident Number: 32830 Current Status: File Located in Archives	605 E. SHIPYARD BLVD	SE 1/4 - 1/2 (0.375 mi.)	P67	147
GAS WORLD #4 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 15716 Current Status: File Located in Archives	***2607 CAROLINA BCH RD***	***SE 1/4 - 1/2 (0.405 mi.)***	***R74***	***164***
FAST FARE NC 723 Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 6679 Current Status: File Located in Archives	***2069 CAROLINA BEACH***	***N 1/4 - 1/2 (0.431 mi.)***	***79***	***180***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BLACKWELDERS AUTO RE Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 7034 Current Status: File Located in Archives	***2357 CAROLINA BCH RD***	***ENE 0 - 1/8 (0.022 mi.)***	***A4***	***14***
HARRY'S AMOCO	***2305 CAROLINA BEACH***	***NNE 0 - 1/8 (0.075 mi.)***	***B6***	***18***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 32312
Current Status: File Located in Archives

HINSON OIL CO.	***2420 CAROLINA BEACH***	***ESE 0 - 1/8 (0.115 mi.)***	***C16***	***42***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 4002
Current Status: File Located in Archives

NC ARMY NATIONAL GUA	***2221 CAROLINA BEACH***	***N 1/8 - 1/4 (0.193 mi.)***	***F27***	***61***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 20623
Current Status: File Located in Archives

HARRISON ST-2175	***2175 HARRISON STREET***	***W 1/4 - 1/2 (0.332 mi.)***	***62***	***133***

Product Type: PETROLEUM
Incident Number: 32972
Current Status: File Located in House

NORTH CAROLINA STATE	***2202 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.398 mi.)***	***Q71***	***153***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 20371
Current Status: File Located in Archives

N.C. STATE PORTS	***2200 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.399 mi.)***	***Q72***	***160***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 11527
Current Status: File Located in Archives

USMC CAMP LEJEUNE, B	***SETH WILLIAMS BLVD***	***W 1/4 - 1/2 (0.417 mi.)***	***Q75***	***168***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 20385
Current Status: File Located in Archives

US MARINE CORPS RESE	***2150 BURNETT BLVD***	***W 1/4 - 1/2 (0.430 mi.)***	***S77***	***174***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 7090
Current Status: File Located in Archives

US ARMY RESERVE CENT	***2144 LAKE SHORE DR.***	***NNE 1/4 - 1/2 (0.436 mi.)***	***T81***	***187***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 15294
Current Status: File Located in Archives

CANNON STATION-SUNSE	***2039 CAROLINA BEACH***	***N 1/4 - 1/2 (0.499 mi.)***	***86***	***197***

Incident Phase: Closed Out
Product Type: PETROLEUM
Incident Number: 32511
Current Status: File Located in Archives

SC LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health & Environmental Control's Leaking UST list.

A review of the SC LUST list, as provided by EDR, and dated 04/21/2021 has revealed that there is 1 SC LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CENAMA INC No Action Required: 05/07/2013 Substance: PETRO Facility Id: 10682	123 SHIPYARD BLVD	SW 1/4 - 1/2 (0.276 mi.)	L49	105

NC LUST TRUST: This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

A review of the NC LUST TRUST list, as provided by EDR, and dated 07/02/2021 has revealed that there are 6 NC LUST TRUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A.C. WIDENHOUSE TRUC Facility Id: 0-000024 Site ID: 6950	2402 CAROLINA BEACH	ESE 0 - 1/8 (0.087 mi.)	C13	39
SCHONAUER PROPERTY (Site ID: 32338	2129 MONROE STREET	NW 1/4 - 1/2 (0.290 mi.)	N56	122
JACKSON STREET 2137 Site ID: 32758	***2137 JACKSON STREET***	***WNW 1/4 - 1/2 (0.299 mi.)***	***57***	***122***
GREEN PROPERTY (WILL Site ID: 32845	121 CENTRAL BLVD	WNW 1/4 - 1/2 (0.456 mi.)	84	193

Lower Elevation	Address	Direction / Distance	Map ID	Page
HARRISON ST-2175 Site ID: 32972	***2175 HARRISON STREET***	***W 1/4 - 1/2 (0.332 mi.)***	***62***	***133***
NORTH CAROLINA STATE Facility Id: 0-024651 Site ID: 12166	***2202 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.398 mi.)***	***Q71***	***153***

State and tribal registered storage tank lists

NC UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the NC UST list, as provided by EDR, and dated 04/30/2021 has revealed that there are 12 NC UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A C WIDENHOUSE	2402 CAROLINA BEACH	ESE 0 - 1/8 (0.087 mi.)	C10	25

Tank Status: Removed Facility Id: 00-0-0000000024				
WERTHEIMER BAGS CO. Tank Status: Removed Facility Id: 00-0-0000022350	249 W. SHIPYARD BLVD	SSW 1/8 - 1/4 (0.173 mi.)	24	59
S & G CONCRETE COMPA Tank Status: Removed Tank Status: Current Facility Id: 00-0-0000023038	2209 MONROE ST PO BO	WNW 1/8 - 1/4 (0.195 mi.)	G29	68
CAROLINA BEACH CARDL Tank Status: Temporarily Closed Tank Status: Current Facility Id: 00-2-0000022601 Facility Id: 00-0-0000022601	***2461 CAROLINA BEACH***	***SE 1/8 - 1/4 (0.207 mi.)***	***H33***	***74***
ATLANTIC TELECASTING Tank Status: Removed Facility Id: 00-0-0000025850	322 SHIPYARD BLVD.	SSW 1/8 - 1/4 (0.229 mi.)	J41	87
NC-730 Tank Status: Removed Facility Id: 00-0-0000001446	***2158 CAROLINA BEACH***	***N 1/8 - 1/4 (0.234 mi.)***	***K45***	***94***

Lower Elevation	Address	Direction / Distance	Map ID	Page
P.L. SMITH Tank Status: Removed Facility Id: 00-0-0000000937	2357 CAN BCH RD	ESE 0 - 1/8 (0.013 mi.)	1	8
HARRY'S AMOCO Tank Status: Removed Facility Id: 00-0-0000022139	***2305 CAROLINA BEACH***	***NNE 0 - 1/8 (0.075 mi.)***	***B6***	***18***
SPEEDWAY #8191 Tank Status: Current Facility Id: 00-0-0000037112	***2395 CAROLINA BEACH***	***ESE 0 - 1/8 (0.094 mi.)***	***C15***	***40***
HINSON OIL CO. Tank Status: Removed Facility Id: 00-0-0000022611	***2420 CAROLINA BEACH***	***ESE 0 - 1/8 (0.115 mi.)***	***C16***	***42***
NC ARMY NATIONAL GUA Tank Status: Removed Facility Id: 00-0-0000034006	***2221 CAROLINA BEACH***	***N 1/8 - 1/4 (0.193 mi.)***	***F27***	***61***
ECONO TRANSMISSION S Tank Status: Removed Facility Id: 00-0-0000003310	611 WELLINGTON AVENU	ESE 1/8 - 1/4 (0.220 mi.)	39	84

NC AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environment, Health, & Natural Resources' Petroleum Aboveground Storage Tank Database.

A review of the NC AST list, as provided by EDR, and dated 05/18/2021 has revealed that there are 2 NC AST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BROWN OIL CO. OF WIL	2305 CAROLINA BEACH	NNE 0 - 1/8 (0.075 mi.)	B5	18

Facility Id: 10001				
A C WIDENHOUSE INC Facility Id: 65003	2412 CAROLINA BEACH	ESE 0 - 1/8 (0.094 mi.)	C14	40

State and tribal institutional control / engineering control registries

NC INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring.

A review of the NC INST CONTROL list, as provided by EDR, and dated 09/04/2020 has revealed that there are 8 NC INST CONTROL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A. C. WIDENHOUSE, IN	***2402 CAROLINA BCH RD***	***ESE 0 - 1/8 (0.087 mi.)***	***C11***	***28***
WK HOBBS BP SITE	***2461 CAROLINA BEACH***	***SE 1/8 - 1/4 (0.207 mi.)***	***H32***	***72***
CONOCO # 33052	***2461 CAROLINA BCH RD***	***SE 1/8 - 1/4 (0.207 mi.)***	***H35***	***78***
GAS WORLD #4	***2607 CAROLINA BCH RD***	***SE 1/4 - 1/2 (0.405 mi.)***	***R74***	***164***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
BLACKWELDERS AUTO RE	***2357 CAROLINA BCH RD***	***ENE 0 - 1/8 (0.022 mi.)***	***A4***	***14***
HINSON OIL CO.	***2420 CAROLINA BEACH***	***ESE 0 - 1/8 (0.115 mi.)***	***C16***	***42***
HARRISON ST-2175	***2175 HARRISON STREET***	***W 1/4 - 1/2 (0.332 mi.)***	***62***	***133***
USMC CAMP LEJEUNE, B	***SETH WILLIAMS BLVD***	***W 1/4 - 1/2 (0.417 mi.)***	***Q75***	***168***

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

NC IMD: Incident Management Database.

A review of the NC IMD list, as provided by EDR, and dated 07/30/2021 has revealed that there are 33 NC IMD sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A. C. WIDENHOUSE, IN Facility Id: 7482 Facility Id: 6950	***2402 CAROLINA BCH RD***	***ESE 0 - 1/8 (0.087 mi.)***	***C11***	***28***
PEARSON PROPERTY-AST Facility Id: 16301	***2402 JEFFERSON STREE***	***WSW 0 - 1/8 (0.117 mi.)***	***D19***	***49***
WK HOBBS BP SITE Facility Id: 14858	2461 CAROLINA BEACH	SE 1/8 - 1/4 (0.207 mi.)	H34	77
CONOCO # 33052 Facility Id: 226	***2461 CAROLINA BCH RD***	***SE 1/8 - 1/4 (0.207 mi.)***	***H35***	***78***
FORMER DILLONS GROCE	214 SOUTHERN BLVD	NW 1/8 - 1/4 (0.214 mi.)	I37	83
WECT TELEVISION	322 SHIPYARD BLVD.	SSW 1/8 - 1/4 (0.229 mi.)	J40	85
FAST FARE # 730 Facility Id: 14603	2158 CAROLINA BEACH	N 1/8 - 1/4 (0.234 mi.)	K43	89
SPRINGER-EUBANKS	123 SHIPYARD BOULEVA	SW 1/4 - 1/2 (0.276 mi.)	L48	103

Facility Id: 87137				
SPRINGER EUBANK SHIP	123 W. SHIPYARD BLVD	SW 1/4 - 1/2 (0.276 mi.)	L50	106
SPRINGER EUBANK BULK	***123 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.276 mi.)***	***L51***	***107***
Facility Id: 32234				
ROYSTER TRANSPORT CO	206 SHIPYARD BLVD.	SW 1/4 - 1/2 (0.282 mi.)	M52	114
Facility Id: 18900				
ROYSTER TRANSPORT CO	206 SHIPYARD BLVD.	SW 1/4 - 1/2 (0.282 mi.)	M54	119
Facility Id: 20865				
S T G TRANSPORT - SH	***2501 FLORIDA AVENUE***	***SW 1/4 - 1/2 (0.299 mi.)***	***L58***	***125***
Facility Id: 86296				
STONE HEAVY VEHICLE	***109 SHIPYARD BLVD***	***SW 1/4 - 1/2 (0.315 mi.)***	***L61***	***130***
Facility Id: 13830				
WAYNE'S EXXON	2606 CAROLINA BEACH	SE 1/4 - 1/2 (0.357 mi.)	O64	138
Facility Id: 32178				
EXXON # 4-6476	***2606 CAROLINA BCH RD***	***SE 1/4 - 1/2 (0.357 mi.)***	***O65***	***140***
Facility Id: 10154				
FORMER JIFFY LUBE	601 SHIPYARD BLVD	SE 1/4 - 1/2 (0.386 mi.)	P68	149
GAS WORLD #4	***2607 CAROLINA BCH RD***	***SE 1/4 - 1/2 (0.405 mi.)***	***R74***	***164***
Facility Id: 15716				
FAST FARE NC 723	***2069 CAROLINA BEACH***	***N 1/4 - 1/2 (0.431 mi.)***	***79***	***180***
Facility Id: 6679				
NC STATE PORTS AUTHO	45 SHIPYARD BLVD.	SW 1/4 - 1/2 (0.438 mi.)	82	191
COASTAL DRYCLEANERS	2629 CAROLINA BEACH	SE 1/4 - 1/2 (0.444 mi.)	R83	192
Facility Id: 16374				

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
BLACKWELDERS AUTO RE	***2357 CAROLINA BCH RD***	***ENE 0 - 1/8 (0.022 mi.)***	***A4***	***14***
Facility Id: 7034				
HARRY'S AMOCO	2305 CAROLINA BEACH	NNE 0 - 1/8 (0.075 mi.)	B7	22
Facility Id: 32312				
HINSON OIL CO.	2420 CAROLINA BEACH	ESE 0 - 1/8 (0.115 mi.)	C17	46
Facility Id: 4002				
NC ARMY NATIONAL GUA	***2221 CAROLINA BEACH***	***N 1/8 - 1/4 (0.193 mi.)***	***F27***	***61***
Facility Id: 20623				
NCSPA - UREA WAREHOU	NCPA 2202 BURNETT BL	W 1/4 - 1/2 (0.390 mi.)	Q69	150
Facility Id: 20400				
NCSPA - DIESEL AGST	2202 BURNETT BLVD.	W 1/4 - 1/2 (0.398 mi.)	Q70	152
Facility Id: 14300				
NORTH CAROLINA STATE	***2202 BURNETT BOULEVA***	***W 1/4 - 1/2 (0.398 mi.)***	***Q71***	***153***
WHEELING CORRUGATION	2200 BURNETT BLVD.	W 1/4 - 1/2 (0.399 mi.)	Q73	163
Facility Id: 11527				
USMC CAMP LEJEUNE, B	***SETH WILLIAMS BLVD***	***W 1/4 - 1/2 (0.417 mi.)***	***Q75***	***168***
Facility Id: 20371				
NC PORTS AUTHORITY-P		***W 1/4 - 1/2 (0.417 mi.)***	***Q76***	***172***
Facility Id: 9402				
USMC RESERVE CENTER	2150 BURNETT BLVD.	W 1/4 - 1/2 (0.430 mi.)	S78	179
Facility Id: 7090				
US ARMY RESERVE CENT	***2144 LAKE SHORE DR.***	***NNE 1/4 - 1/2 (0.436 mi.)***	***T81***	***187***

EXECUTIVE SUMMARY

Facility Id: 15294

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 09/13/2021 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
S&W READY MIX CONCRE EPA ID:: NCS000002352	***2209 MONROE ST.***	***WNW 1/8 - 1/4 (0.195 mi.)***	***G28***	***65***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CARQUEST OF CAROLINA EPA ID:: NCD986204386	2234 CAROLINA BEACH	N 1/8 - 1/4 (0.146 mi.)	E22	51

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 05/04/2021 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ATLANTIC TRACKING AN		SSE 1/2 - 1 (0.885 mi.)	89	204

NC DRYCLEANERS: Potential and known drycleaning sites, active and abandoned, that the Drycleaning Solvent Cleanup Program has knowledge of and entered into this database.

A review of the NC DRYCLEANERS list, as provided by EDR, and dated 03/31/2021 has revealed that there are 8 NC DRYCLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SUNSET LAUNDERETTE	216 SOUTHERN BOULEVA	NW 1/8 - 1/4 (0.216 mi.)	I38	84
SUNSET LAUNDERETTE	225 SOUTHERN BOULEVA	NW 1/8 - 1/4 (0.232 mi.)	I42	88

Lower Elevation	Address	Direction / Distance	Map ID	Page
FUTURA INC	2242 CAROLINA BEACH	N 1/8 - 1/4 (0.131 mi.)	E20	50
STAN'S WASHERETTE	2242 CAROLINA BEACH	N 1/8 - 1/4 (0.131 mi.)	E21	51
MODERN LAUNDRY & DRY	2219 CAROLINA BEACH	N 1/8 - 1/4 (0.193 mi.)	F25	60
MODERN LAUNDRY & CLE	2219 CAROLINA BEACH	N 1/8 - 1/4 (0.193 mi.)	F26	60
PLEASANT'S WASHERETT	2210 CAROLINA BEACH	N 1/8 - 1/4 (0.198 mi.)	F30	69
ECON-O-WASH	2202 CAROLINA BEACH	N 1/8 - 1/4 (0.212 mi.)	F36	82

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 4 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOWERS TRANSMISSION	310 BELL ST	SSW 0 - 1/8 (0.083 mi.)	9	24

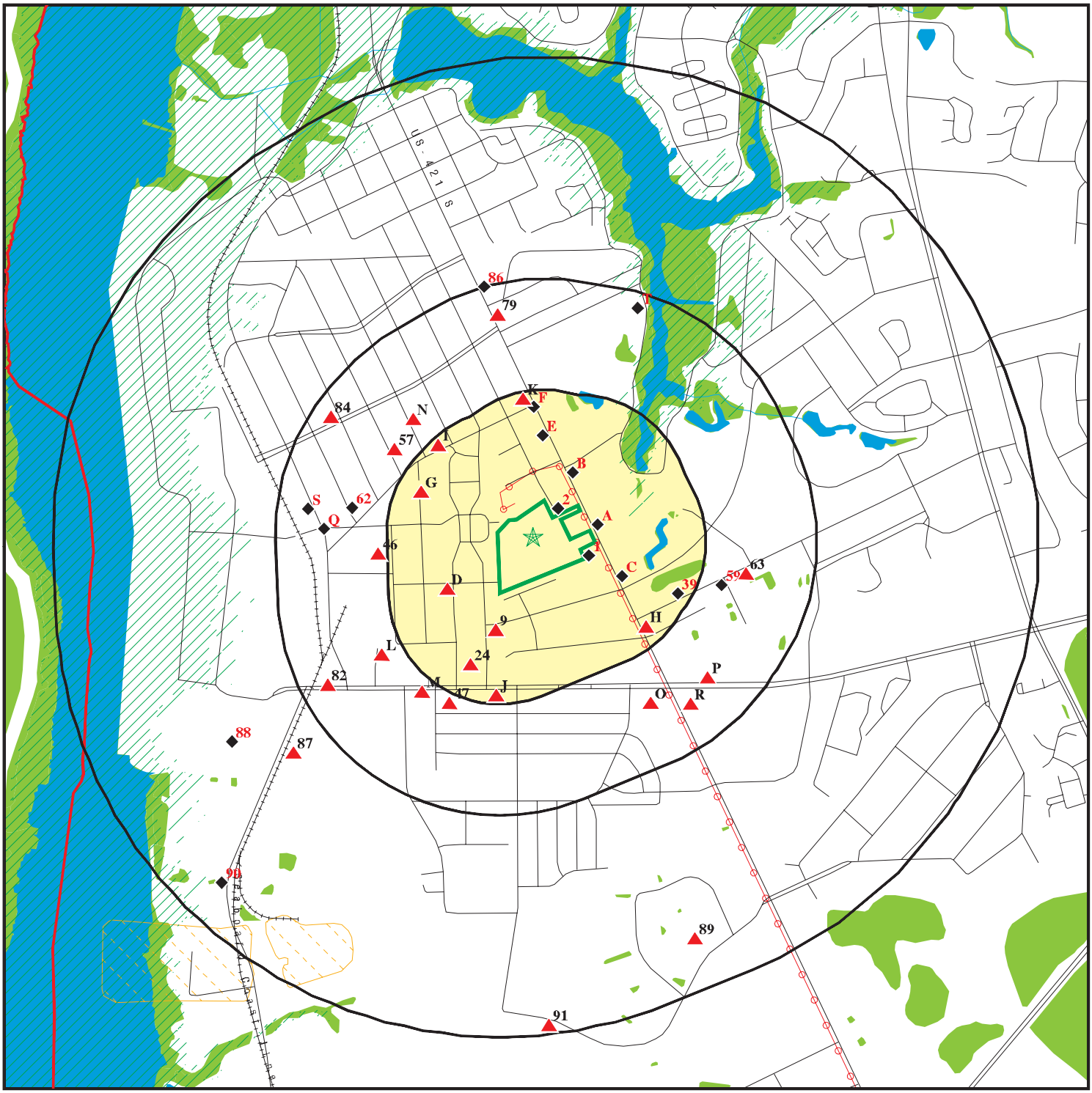
Lower Elevation	Address	Direction / Distance	Map ID	Page
RAPERS TEXACO SERVIC	2357 CAROLINA BEACH	ENE 0 - 1/8 (0.022 mi.)	A3	14
HARRYS PINE VALLEY A	2305 CAROLINA BEACH	NNE 0 - 1/8 (0.075 mi.)	B8	24
HINSON OIL COMPANY	2420 CAROLINA BEACH	ESE 0 - 1/8 (0.115 mi.)	C18	48

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
CAROLINA BEACH ROAD ACCIDENT	NC LAST
MODERN CLEANERS	NC DRYCLEANERS
FANCY CLEANERS	NC DRYCLEANERS
$2.50 CRYSTAL CLEANERS # 105	NC DRYCLEANERS
CENTRAL BOULEVARD - 121	NC LUST
FLEMINGTON LF	NC OLI

OVERVIEW MAP - 6717430.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Hazardous Substance Disposal Sites

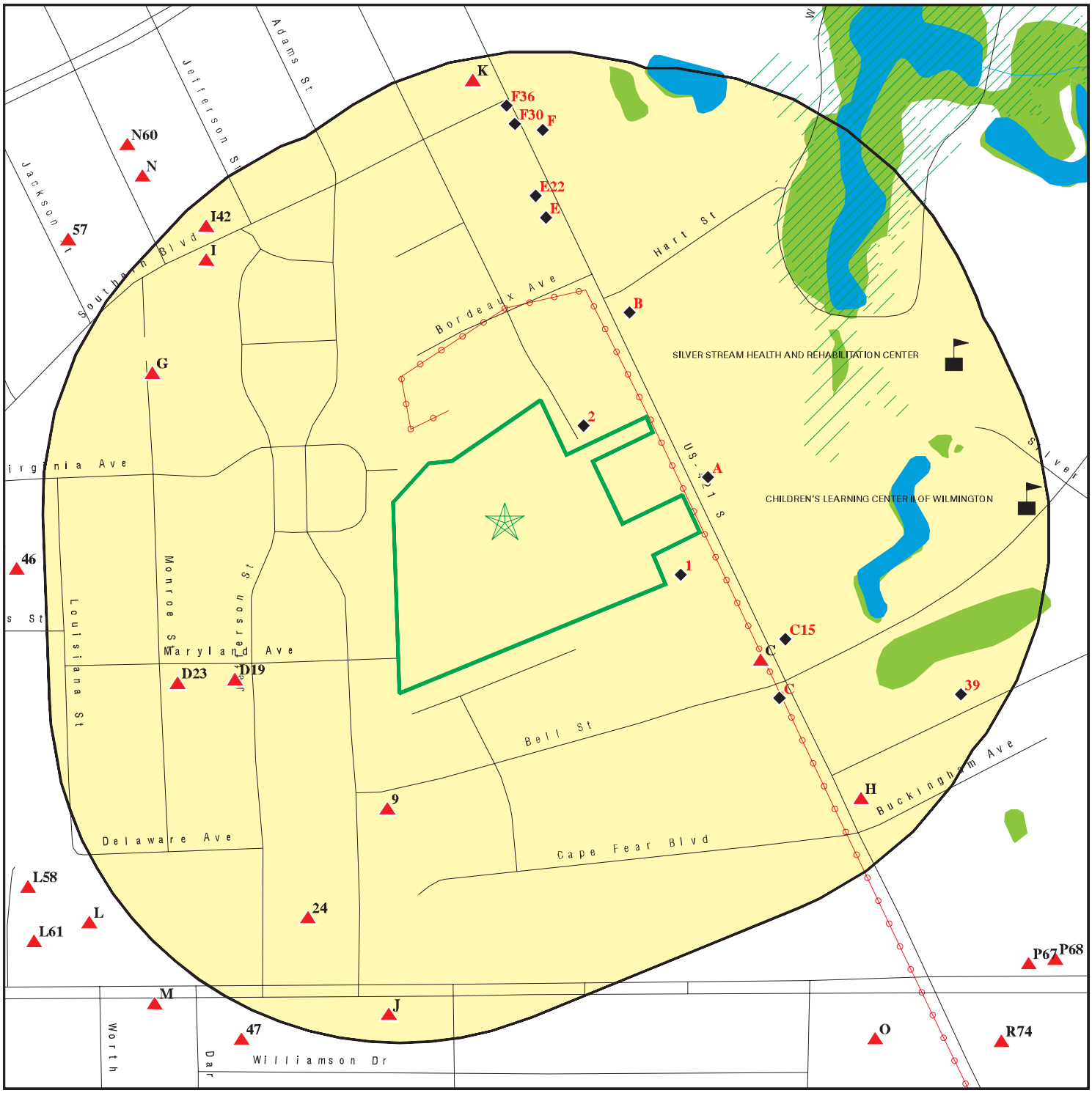
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Starway Village	CLIENT:	Kimley-Horn & Associates, Inc.
ADDRESS:	2346 Carolina Beach Road Wilmington NC 28401	CONTACT:	Mackenzie Richards
		INQUIRY #:	6717430.2s
LAT/LONG:	34.196388 / 77.939694	DATE:	October 23, 2021 1:22 am

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DETAIL MAP - 6717430.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Starway Village	CLIENT:	Kimley-Horn & Associates, Inc.
ADDRESS:	2346 Carolina Beach Road Wilmington NC 28401	CONTACT:	Mackenzie Richards
LAT/LONG:	34.196388 / 77.939694	INQUIRY #:	6717430.2s
		DATE:	October 23, 2021 1:25 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	1	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		2	1	NR	NR	NR	3
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
NC HSDS	1.000		0	0	0	2	NR	2
State- and tribal - equivalent CERCLIS								
NC SHWS	1.000		1	1	4	4	NR	10
State and tribal landfill and/or solid waste disposal site lists								
NC SWF/LF	0.500		0	0	0	NR	NR	0
NC DEBRIS	0.500		0	0	0	NR	NR	0
NC OLI	0.500		0	0	0	NR	NR	0
NC LCID	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal leaking storage tank lists								
NC LAST	0.500		0	2	8	NR	NR	10
NC LUST	0.500		4	4	17	NR	NR	25
SC LUST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
NC LUST TRUST	0.500		1	0	5	NR	NR	6
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
NC UST	0.250		5	7	NR	NR	NR	12
NC AST	0.250		2	0	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NC INST CONTROL	0.500		3	2	3	NR	NR	8
State and tribal voluntary cleanup sites								
NC VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NC BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
NC SWRCY	0.500		0	0	0	NR	NR	0
NC HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
NC SPILLS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NC IMD	0.500		5	6	22	NR	NR	33
NC SPILLS 90	0.001		0	NR	NR	NR	NR	0
NC SPILLS 80	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	2	NR	NR	NR	2
FUDS	1.000		0	0	0	1	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
NC AIRS	0.001		0	NR	NR	NR	NR	0
NC ASBESTOS	0.001		0	NR	NR	NR	NR	0
NC COAL ASH	0.500		0	0	0	NR	NR	0
NC DRYCLEANERS	0.250		0	8	NR	NR	NR	8
NC Financial Assurance	0.001		0	NR	NR	NR	NR	0
NC NPDES	0.001		0	NR	NR	NR	NR	0
NC UIC	0.001		0	NR	NR	NR	NR	0
NC AOP	0.001		0	NR	NR	NR	NR	0
NC CCB	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NC PCSRP	0.500		0	0	0	NR	NR	0
NC SEPT HAULERS	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
NC RGA HWS	0.001		0	NR	NR	NR	NR	0
NC RGA LF	0.001		0	NR	NR	NR	NR	0
NC RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	27	33	61	7	0	128

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

HSDS **MOBIL OIL CORP.** **NC HSDS** **S102442978**
Region **N/A**
SW
1/2-1 **, NC**
4961 ft.

HSDS:

Name:	MOBIL OIL CORP.
Address:	Not reported
City:	Not reported
Site Type:	1
Superfun Number:	Not reported
Total area in coverage units:	148347.84375
Total perimeter in coverage units:	1589.20397949
X-value coordinate in feet:	2316416
Y-value coordinate in feet:	158952.859375
Sites designated as superfund cleanup sites:	876
Length of feature in internal units:	1589.20406631
Area of feature in internal units squared:	148347.840846

HSDS **AMOCO OIL** **NC HSDS** **S102442977**
Region **N/A**
SSW
1/2-1 **, NC**
4361 ft.

HSDS:

Name:	AMOCO OIL
Address:	Not reported
City:	Not reported
Site Type:	1
Superfun Number:	Not reported
Total area in coverage units:	55690.0703125
Total perimeter in coverage units:	987.75671386
X-value coordinate in feet:	2317979.75
Y-value coordinate in feet:	159167.8125
Sites designated as superfund cleanup sites:	875
Length of feature in internal units:	987.756644557
Area of feature in internal units squared:	55690.0691904

---

1 **P.L. SMITH** **NC UST** **U001186638**
ESE **2357 CAN BCH RD** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.013 mi.
66 ft.

Relative:
Lower

Actual:
22 ft.

UST:

Name:	P.L. SMITH
Address:	2357 CAN BCH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000000937
Contact:	P.L. SMITH
Contact Address1:	2357 CAN BCH RD
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28401
FIPS County Desc:	New Hanover
Latitude:	0
Longitude:	0

P.L. SMITH (Continued) **U001186638**

Tank Id:	001
Tank Status:	Removed
Installed Date:	04/25/1976
Perm Close Date:	05/31/1991
Product Name:	Unknown
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	002
Tank Status:	Removed
Installed Date:	04/25/1976
Perm Close Date:	05/31/1991
Product Name:	Unknown
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	003
Tank Status:	Removed
Installed Date:	04/25/1976
Perm Close Date:	05/31/1991
Product Name:	Unknown
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes

P.L. SMITH (Continued) **U001186638**

Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	004
Tank Status:	Removed
Installed Date:	04/25/1976
Perm Close Date:	05/31/1991
Product Name:	Unknown
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

---

2 **CAROLINA PAINT & BODY INC** **RCRA-VSQG** **1001229089**
NE **2326 CAROLINA BEACH ROAD** **NCR000006635**
< 1/8 **WILMINGTON, NC 28401**
0.013 mi.
70 ft.

Relative: RCRA-VSQG:
Lower

Date Form Received by Agency:	19970324
Handler Name:	CAROLINA PAINT & BODY INC
Handler Address:	2326 CAROLINA BEACH ROAD
Handler City,State,Zip:	WILMINGTON, NC 28401
EPA ID:	NCR000006635
Contact Name:	WILLIAM LANIER
Contact Address:	2326 CAROLINA BEACH ROAD
Contact City,State,Zip:	WILMINGTON, NC 28401
Contact Telephone:	910-341-3055
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	04
Land Type:	Not reported
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported

Actual:
22 ft.

CAROLINA PAINT & BODY INC (Continued) **1001229089**

Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	CAROLINA BEACH ROAD
Mailing City,State,Zip:	WILMINGTON, NC 28401
Owner Name:	RON HUGHES
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported

CAROLINA PAINT & BODY INC (Continued) **1001229089**

Handler Date of Last Change: 20060104
Recognized Trader-Importer: No
Recognized Trader-Exporter: No
Importer of Spent Lead Acid Batteries: No
Exporter of Spent Lead Acid Batteries: No
Recycler Activity Without Storage: Not reported
Manifest Broker: Not reported
Sub-Part P Indicator: No

Hazardous Waste Summary:
Waste Code: D001
Waste Description: IGNITABLE WASTE

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: RON HUGHES
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 2326 CAROLINA BEACH ROAD
Owner/Operator City,State,Zip: WILMINGTON, NC 28401
Owner/Operator Telephone: 910-763-3535
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 19970324
Handler Name: CAROLINA PAINT & BODY INC
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No

CAROLINA PAINT & BODY INC (Continued) **1001229089**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19980708
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: NC032
Evaluation Responsible Sub-Organization: 07
Actual Return to Compliance Date: Not reported

CAROLINA PAINT & BODY INC (Continued) **1001229089**

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

A3 **RAPERS TEXACO SERVICE** **EDR Hist Auto** **1020692858**
ENE **2357 CAROLINA BEACH ROAD** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.022 mi.
118 ft. **Site 1 of 2 in cluster A**

Relative: EDR Hist Auto
Lower

Actual:
20 ft.

Year:	Name:	Type:
1971	RAPERS TEXACO SERVICE	Gasoline Service Stations
1972	RAPERS TEXACO SERVICE	Gasoline Service Stations
1973	RAPERS TEXACO SERVICE	Gasoline Service Stations
1974	RAPERS TEXACO SERVICE	Gasoline Service Stations
1975	RAPERS TEXACO SERVICE	Gasoline Service Stations
1987	BOBBYS WRECKER SERVICE	Automotive Services, NEC
1996	BLACKWELDERS AUTO SVC & SLS	General Automotive Repair Shops
1997	BLACKWELDERS AUTO SVC & SLS	General Automotive Repair Shops
1998	BLACKWELDERS AUTO SVC & SLS	General Automotive Repair Shops
1999	BLACKWELDERS AUTO SVC & SLS	General Automotive Repair Shops
2000	BLACKWELDERS AUTO SVC & SLS	General Automotive Repair Shops

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A4 **BLACKWELDERS AUTO REPAIR** **NC LUST** **S100343725**
ENE **2357 CAROLINA BCH RD** **NC INST CONTROL** **N/A**
< 1/8 **WILMINGTON, NC 28401** **NC IMD**
0.022 mi.
118 ft. **Site 2 of 2 in cluster A**

Relative: LUST:
Lower

Actual:
20 ft.

Name:	BLACKWELDERS AUTO REPAIR
Address:	2357 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-941
Incident Number:	7034
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	07/12/1991
Date Occur:	05/11/1991
Cleanup:	05/11/1991
Closure Request:	Not reported
Close Out:	12/07/2007
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported

BLACKWELDERS AUTO REPAIR (Continued) **S100343725**

NOV Issue Date:	Not reported
NORR Issue Date:	10/29/1991
Site Priority:	60E
Phase Of LSA Req:	Not reported
Site Risk Reason:	Surface water
Land Use:	Residential
MTBE:	No
MTBE1:	Yes
Flag:	No
Flag1:	No
LUR Filed:	12/06/2007
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	430
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1959 -77.9375
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	Not reported
Contact Person:	MR. PATRICK SMITH
Telephone:	Not reported
RP Address:	3825 RIVER ROAD
RP City,St,Zip:	WILMINGTON, NC 28412
RP County:	Not reported
Comments:	excavation in 2007 got rid of small amount of waste oil free product. No gcl's. will nrp site for groundwater. File pulled for archiving in 9/2011 by SAK.
5 Min Quad:	Not reported

PIRF:

Facility Id:	7034
Date Occurred:	5/11/1991
Date Reported:	10/31/1991
Description Of Incident:	UPON REMOVAL OF USTS, CONTAMINATED SOIL WAS DISCOVERED.
Owner/Operator:	MR. PATRICK SMITH
Ownership:	4
Operation Type:	6
Type:	4
Location:	1
Site Priority:	60E
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported

BLACKWELDERS AUTO REPAIR (Continued) **S100343725**

Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	12/7/2007
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	10/20/2003
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	BLACKWELDERS AUTO REPAIR
Address:	2357 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-941
Object ID:	1480
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	12/5/2007
Restricted Media:	Groundwater Only
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 12-5-2007
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2321304.3765
Y Coord:	164039.33517

IMD:

Facility ID:	7034
Name:	BLACKWELDERS AUTO REPAIR
Address:	2357 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	5/11/1991
Submit Date:	10/31/1991
Incident Desc:	UPON REMOVAL OF USTS, CONTAMINATED SOIL WAS DISCOVERED.

BLACKWELDERS AUTO REPAIR (Continued) **S100343725**

Operator:	MR. PATRICK SMITH
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	60E
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19583333
Longitude:	-77.9375
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported

BLACKWELDERS AUTO REPAIR (Continued) **S100343725**

Reference Number for Media Disk for Archived Record: Not reported
RP Owner?: Not reported
RP Operator?: Not reported
RP Landowner?: Not reported

Status:

Facility ID:	7034
Last Modified:	2007-12-07 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	2003-10-20 00:00:00
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

B5 **BROWN OIL CO. OF WILMINGTON** **NC AST** **A100186608**
NNE **2305 CAROLINA BEACH RD.** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.075 mi.
397 ft. **Site 1 of 4 in cluster B**

Relative: **Lower**
Actual: **21 ft.**

AST:

Name:	BROWN OIL CO. OF WILMINGTON
Address:	2305 CAROLINA BEACH RD.
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	10001
Registration Number:	10002101
Certificate Number:	Not reported
Status Change:	Not reported
Date Change:	Not reported
Date Application Received:	Not reported
Owner Name:	Not reported
Facility Phone:	Not reported
Coordinate Source:	Not reported
Certificate of Registration Issued:	Not reported
Lat/Long:	Not reported

B6 **HARRY'S AMOCO** **NC LUST** **U004138787**
NNE **2305 CAROLINA BEACH ROAD** **NC UST** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.075 mi.
397 ft. **Site 2 of 4 in cluster B**

Relative: **Lower**
Actual: **21 ft.**

LUST:

Name:	HARRY'S AMOCO
Address:	2305 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-7183
Incident Number:	32312
Contamination Type:	Soil

HARRY'S AMOCO (Continued) **U004138787**

Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	04/26/2006
Date Occur:	04/06/2006
Cleanup:	04/06/2006
Closure Request:	Not reported
Close Out:	05/08/2006
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	True
CD Num:	433
Reel Num:	0
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	34.1986 -77.9379
Testlat:	Not reported
Regional Officer Project Mgr:	JDP
Region:	WIL
Company:	Not reported
Contact Person:	RICK DUNN
Telephone:	9107963033
RP Address:	438 RALEIGH STREET
RP City,St,Zip:	WILMINGTON, NC 28412
RP County:	Not reported
Comments:	Four USTs removed. Soil samples collected beneath Kerosene UST confirmed release. Additional risk based soil samples are below soil-to-groundwater mscc. NFA letter sent 5-8-06. File pulled for archiving in 9/2011 by SAK.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32312
Date Occurred:	4/6/2006
Date Reported:	4/26/2006
Description Of Incident:	Four USTs removed. Soil sample collectd at Kerosene tank confirmed

HARRY'S AMOCO (Continued) **U004138787**

release.

Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	5
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	Not reported
Source:	Not reported
Ust Number:	P
Last Modified:	5/8/2006
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	HARRY'S AMOCO
Address:	2305 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000022139
Contact:	HARRY ULLOM
Contact Address1:	117 BUCCANEER ROAD
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28409
FIPS County Desc:	New Hanover
Latitude:	34.19867
Longitude:	-77.93808
Tank Id:	1
Tank Status:	Removed
Installed Date:	05/10/1966
Perm Close Date:	04/06/2006
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No

HARRY'S AMOCO (Continued) **U004138787**

Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	05/10/1966
Perm Close Date:	04/06/2006
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	05/10/1966
Perm Close Date:	04/06/2006
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	None
Spill Protection Name:	None
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

HARRY'S AMOCO (Continued) **U004138787**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	5
Tank Status:	Removed
Installed Date:	05/07/1976
Perm Close Date:	04/06/2006
Product Name:	Kerosene, Kero Mix
Tank Capacity:	250
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	None
Spill Protection Name:	None
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

B7 **HARRY'S AMOCO** **NC IMD** **U003137603**
NNE **2305 CAROLINA BEACH ROAD** **N/A**
< 1/8 **WILMINGTON, NC**
0.075 mi.
397 ft. **Site 3 of 4 in cluster B**

Relative: IMD:
Lower

Actual:
21 ft.

Facility ID:	32312
Name:	HARRY'S AMOCO
Address:	2305 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	4/6/2006
Submit Date:	4/26/2006
Incident Desc:	Four USTs removed. Soil sample collectd at Kerosene tank confirmed release.
Operator:	Rick Dunn
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1

HARRY'S AMOCO (Continued) **U003137603**

Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Y
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	32312
Last Modified:	2006-05-08 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

B8
NNE
< 1/8
0.075 mi.
397 ft.

HARRYS PINE VALLEY AMOCO — **EDR Hist Auto** — **1020266229**
2305 CAROLINA BEACH RD — **N/A**
WILMINGTON, NC 28401

Site 4 of 4 in cluster B

Relative:
Lower

Actual:
21 ft.

EDR Hist Auto

Year:	Name:	Type:
1985	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1986	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1987	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1988	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1989	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1990	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1991	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1992	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1993	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1994	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1995	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1996	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1997	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1998	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
1999	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
2000	HARRYS PINE VALLEY AMOCO	Gasoline Service Stations
2001	HARRYS AUTOMOTIVE	General Automotive Repair Shops
2002	HARRYS AUTOMOTIVE	General Automotive Repair Shops
2003	HARRYS AUTOMOTIVE	General Automotive Repair Shops
2004	HARRYS AUTOMOTIVE	General Automotive Repair Shops
2005	HARRYS AUTOMOTIVE	General Automotive Repair Shops

9
SSW
< 1/8
0.083 mi.
438 ft.

BOWERS TRANSMISSION SERVICE — **EDR Hist Auto** — **1020962463**
310 BELL ST — **N/A**
WILMINGTON, NC 28401

Relative:
Higher

Actual:
39 ft.

EDR Hist Auto

Year:	Name:	Type:
1985	BOWERS TRANSMISSION SERVICE	Automotive Repair Shops, NEC
1986	BOWERS TRANSMISSION SERVICE	Automotive Repair Shops, NEC
1987	BOWERS TRANSMISSION SERVICE	Automotive Repair Shops, NEC
1988	BOWERS TRANSMISSION SERVICE	Automotive Repair Shops, NEC
1989	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1990	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1991	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1992	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1993	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1994	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1995	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1997	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1998	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
1999	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
2000	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
2001	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
2002	BOWERS TRANSMISSION SERVICE	Automotive Transmission Repair Shops
2003	BOWERS RALPH	Automotive Transmission Repair Shops
2004	BOWERS RALPH	Automotive Transmission Repair Shops
2005	BOWERS RALPH	Automotive Transmission Repair Shops

BOWERS TRANSMISSION SERVICE (Continued) **1020962463**

2006	BOWERS RALPH	Automotive Transmission Repair Shops
2007	BOWERS RALPH	Automotive Transmission Repair Shops
2008	BOWERS RALPH	Automotive Transmission Repair Shops
2009	BOWERS RALPH	Automotive Transmission Repair Shops
2010	BOWERS RALPH	Automotive Transmission Repair Shops

C10 **A C WIDENHOUSE** **NC UST** **U004139080**
ESE **2402 CAROLINA BEACH RD** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.087 mi.
458 ft. **Site 1 of 9 in cluster C**

Relative: **Higher**

Actual: **23 ft.**

UST:

Name:	A C WIDENHOUSE
Address:	2402 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000000024
Contact:	A C WIDENHOUSE INC
Contact Address1:	400 OLD CHARLOTTE ROAD
Contact Address2:	Not reported
Contact City/State/Zip:	CONCORD, NC 28025
FIPS County Desc:	New Hanover
Latitude:	34.19452
Longitude:	-77.93614
Tank Id:	001
Tank Status:	Removed
Installed Date:	04/05/1972
Perm Close Date:	05/30/1992
Product Name:	Diesel
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	002
Tank Status:	Removed
Installed Date:	04/05/1972
Perm Close Date:	05/30/1992
Product Name:	Diesel
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported

A C WIDENHOUSE (Continued) **U004139080**

Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	003
Tank Status:	Removed
Installed Date:	04/08/1961
Perm Close Date:	05/01/1975
Product Name:	Diesel
Tank Capacity:	20000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	004
Tank Status:	Removed
Installed Date:	04/07/1966
Perm Close Date:	05/18/1991
Product Name:	Gasoline, Gas Mix
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

A C WIDENHOUSE (Continued) **U004139080**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	005
Tank Status:	Removed
Installed Date:	04/06/1969
Perm Close Date:	05/18/1991
Product Name:	Motor Oil
Tank Capacity:	2000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	006
Tank Status:	Removed
Installed Date:	04/06/1969
Perm Close Date:	05/18/1991
Product Name:	Oil, New/Used/Mix
Tank Capacity:	2000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

C11
ESE
< 1/8
0.087 mi.
458 ft.

A. C. WIDENHOUSE, INC.
2402 CAROLINA BCH RD
WILMINGTON, NC 28412

Site 2 of 9 in cluster C

NC LUST **S101523267**
NC INST CONTROL **N/A**
NC IMD

Relative:
Higher

Actual:
23 ft.

LUST:

Name:	A. C. WIDENHOUSE, INC.
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	00-0-000
UST Number:	WI-930
Incident Number:	6950
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	08/13/1991
Date Occur:	08/16/1991
Cleanup:	08/16/1991
Closure Request:	Not reported
Close Out:	04/23/2014
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	I
Risk Class Based On Review:	L
Corrective Action Plan Type:	pump and treat
NOV Issue Date:	Not reported
NORR Issue Date:	09/25/1991
Site Priority:	55B
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	Yes
Flag:	No
Flag1:	No
LUR Filed:	04/03/2014
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	579
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.195 -77.9381
Testlat:	Not reported
Regional Officer Project Mgr:	LEP
Region:	WIL
Company:	A.C. WIDENHOUSE, INC.
Contact Person:	MR. ROBERT BARBOUR
Telephone:	7047823196
RP Address:	P.O. BOX 5010

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

RP City,St,Zip:	CONCORD, NC 280275010
RP County:	CABARRUS
Comments:	MON RPT SUBMITTED 02/11/2002, 07/15/2002. GW MR received in WiRO on 3/27/2013: GW and soil sampling report. Soil above soil-to-GW but below Residential MSCCs. No WSW's within 1500 ft of source and site is not within a wellhead protection area. GW above 2L but below GCLs. NRP NORR sent to RP on 4/5/2013. 3/24/2014 NRP received in WiRO for approval, signed and sent out to be recorded. File pulled for archiving in 9/2015..
5 Min Quad:	Not reported

PIRF:

Facility Id:	6950
Date Occurred:	5/18/1991
Date Reported:	9/30/1991
Description Of Incident:	SOIL AND GROUNDWATER ARE CONTAMINATED AT THIS SITE.
Owner/Operator:	MR. ELZANA HARVEY
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	55B
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	7
Cause:	7
Source:	B
Ust Number:	P
Last Modified:	4/23/2014
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

Name:	A. C. WIDENHOUSE, INC.-DIESEL UST
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-976
Incident Number:	7482
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

Product Type:	PETROLEUM
Date Reported:	03/16/1992
Date Occur:	03/16/1992
Cleanup:	03/16/1992
Closure Request:	Not reported
Close Out:	04/23/2014
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	I
Risk Class Based On Review:	L
Corrective Action Plan Type:	pump and treat
NOV Issue Date:	Not reported
NORR Issue Date:	03/31/1992
Site Priority:	60B
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Industrial/commercial
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	04/03/2014
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	580
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1946 -77.9381
Testlat:	Not reported
Regional Officer Project Mgr:	LEP
Region:	WIL
Company:	A.C. WIDENHOUSE, INC.
Contact Person:	MR. ROBERT BARBOUR
Telephone:	7047823196
RP Address:	P.O. BOX 5010
RP City,St,Zip:	CONCORD, NC 280275010
RP County:	CABARRUS
Comments:	FP, 3 -10K GALLON DIESEL TANKS. MON RPT REC 02/11/2002, 07/15/2002. GW MR received in WiRO on 3/27/2013: GW and soil sampling report. Soil above soil-to-GW but below Residential MSCCs. No WSW's within 1500 ft of source and site is not within a wellhead protection area. GW above 2L but below GCLs. NRP NORR sent to RP on 4/5/2013. 3/24/2014 NRP received in WiRO for approval, signed and sent out to be recorded. File pulled for archiving in 9/2015
5 Min Quad:	Not reported

PIRF:

Facility Id:	7482
Date Occurred:	2/28/1992

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

Date Reported:	3/24/1992
Description Of Incident:	SOIL CONTAM. CONFIRMED UPON REMOVAL OF UST.
Owner/Operator:	MR. ELZANA HARVEY
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	60B
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	2
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	2
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	4/23/2014
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	A. C. WIDENHOUSE, INC.
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-930
Object ID:	1466
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	4/2/2014
Restricted Media:	Groundwater Only
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 4-2-2014
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2321130.6928
Y Coord:	163680.06293

Name:	A. C. WIDENHOUSE, INC.-DIESEL UST
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-976
Object ID:	1529
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	4/2/2014
Restricted Media:	Groundwater Only
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 4-2-2014
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2321112.8582
Y Coord:	163566.14025

IMD:

Facility ID:	7482
Name:	A. C. WIDENHOUSE, INC.-DIESEL
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	3/16/1992
Submit Date:	3/24/1992
Incident Desc:	SOIL CONTAM. CONFIRMED UPON REMOVAL OF UST.
Operator:	MR. ROBERT BARBOUR
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	60B
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	2
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19468752
Longitude:	-77.93816369
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	7482
Last Modified:	2014-04-23 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Facility ID:	6950
Name:	A. C. WIDENHOUSE, INC.
Address:	2402 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	8/16/1991
Submit Date:	9/30/1991
Incident Desc:	SOIL AND GROUNDWATER ARE CONTAMINATED AT THIS SITE.
Operator:	MR. ROBERT BARBOUR
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	55B
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.195
Longitude:	-77.93805555
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported

A. C. WIDENHOUSE, INC. (Continued) **S101523267**

RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	6950
Last Modified:	2014-04-23 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

C12 **A C WIDENHOUSE** **RCRA-VSQG** **1000831194**
ESE **2402 CAROLINA BEACH RD** **NCD067196816**
< 1/8 **WILMINGTON, NC 28401**
0.087 mi.
458 ft. **Site 3 of 9 in cluster C**

Relative: **Higher**

Actual: **23 ft.**

RCRA-VSQG:

Date Form Received by Agency:		19941101
Handler Name:	A C WIDENHOUSE	
Handler Address:		2402 CAROLINA BEACH RD
Handler City,State,Zip:		WILMINGTON, NC 28401
EPA ID:		NCD067196816
Contact Name:		JIM WILKERSON
Contact Address:		2402 CAROLINA BEACH RD
Contact City,State,Zip:		WILMINGTON, NC 28401
Contact Telephone:		910-762-2528
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		04
Land Type:		Private
Federal Waste Generator Description:		Conditionally Exempt Small Quantity Generator
Non-Notifier:		Not reported

A C WIDENHOUSE (Continued) **1000831194**

Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	CAROLINA BEACH RD
Mailing City,State,Zip:	WILMINGTON, NC 28401
Owner Name:	ELENA HARVEY
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No

A C WIDENHOUSE (Continued) **1000831194**

Financial Assurance Required:	Not reported
Handler Date of Last Change:	20060104
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ELENA HARVEY
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 10
Owner/Operator City,State,Zip:	CONCORD, NC 28025
Owner/Operator Telephone:	704-782-4103
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19941101
Handler Name: A C WIDENHOUSE	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violation:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported

A C WIDENHOUSE (Continued) **1000831194**

Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported

A C WIDENHOUSE (Continued) **1000831194**

SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	19990303
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC032
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19941024
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

C13 **A.C. WIDENHOUSE TRUCKING** **NC LUST TRUST** **S105218212**
ESE **2402 CAROLINA BEACH ROAD** **N/A**
< 1/8 **WILMINGTON, NC**
0.087 mi.
458 ft. **Site 4 of 9 in cluster C**

Relative:
Higher

Actual:
23 ft.

LUST TRUST:

Name:	A.C. WIDENHOUSE TRUCKING
Address:	2402 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Facility ID:	0-000024
Site ID:	6950
Site Note:	Separate incidents (6950 & 7482) on same property combined. Deductible adjusted to $70,000 (50 + 20). 5/13/97 - GCM.
Site Eligible?:	True
Commercial Find:	100% Commercial
Priority Rank:	High
Deductable Amount:	70000
3rd Party Deductable Amt:	100000

A.C. WIDENHOUSE TRUCKING (Continued) **S105218212**

Sum 3rd Party Amt Applied: 0

C14 **A C WIDENHOUSE INC** **NC AST** **A100187596**
ESE **2412 CAROLINA BEACH RD** **N/A**
< 1/8 **WILMINGTON, NC 00000**
0.094 mi.
494 ft. **Site 5 of 9 in cluster C**

Relative: AST:
Lower

Actual:
22 ft.

Name:	A C WIDENHOUSE INC
Address:	2412 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 00000
Facility Id:	65003
Registration Number:	65002003
Certificate Number:	Not reported
Status Change:	Not reported
Date Change:	Not reported
Date Application Received:	Not reported
Owner Name:	Not reported
Facility Phone:	Not reported
Coordinate Source:	Not reported
Certificate of Registration Issued:	Not reported
Lat/Long:	Not reported

C15 **SPEEDWAY #8191** **NC UST** **U004158495**
ESE **2395 CAROLINA BEACH ROAD** **NC Financial Assurance** **N/A**
< 1/8 **WILMINGTON, NC 28412**
0.094 mi.
497 ft. **Site 6 of 9 in cluster C**

Relative: UST:
Lower

Actual:
19 ft.

Name:	SPEEDWAY #8191
Address:	2395 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28412
Facility Id:	00-0-0000037112
Contact:	SPEEDWAY LLC
Contact Address1:	500 SPEEDWAY DRIVE
Contact Address2:	Not reported
Contact City/State/Zip:	ENON, OH 45323-1026
FIPS County Desc:	New Hanover
Latitude:	34.19497
Longitude:	-77.93592
Tank Id:	1
Tank Status:	Current
Installed Date:	03/15/2011
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	15000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported

SPEEDWAY #8191 (Continued) **U004158495**

Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: Not reported
Decode for TCONS_KEY: Double Wall FRP
Decode for PCONS_KEY: DW Flexible Piping
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 2
Tank Status: Current
Installed Date: 03/15/2011
Perm Close Date: Not reported
Product Name: Gasoline, Gas Mix
Tank Capacity: 8000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: Not reported
Decode for TCONS_KEY: Double Wall FRP
Decode for PCONS_KEY: DW Flexible Piping
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 3
Tank Status: Current
Installed Date: 03/15/2011
Perm Close Date: Not reported
Product Name: Diesel
Tank Capacity: 12000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: Not reported
Decode for TCONS_KEY: Double Wall FRP
Decode for PCONS_KEY: DW Flexible Piping
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

NC Financial Assurance 1:
Name: SPEEDWAY #8191

SPEEDWAY #8191 (Continued) **U004158495**

Address:	2395 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	00-0-0000037112
Region:	1
Financial Responsibility Desc:	Self-Insurance
Financial Responsibility Name:	WilcoHess LLC
Started Date:	Not reported
Ended Date:	Not reported

C16 **HINSON OIL CO.** **NC LUST** **U004138649**
ESE **2420 CAROLINA BEACH ROAD** **NC UST** **N/A**
< 1/8 **WILMINGTON, NC 28401** **NC INST CONTROL**
0.115 mi.
607 ft. **Site 7 of 9 in cluster C**

Relative: **Lower**

Actual: **22 ft.**

LUST:

Name:	HINSON OIL CO.
Address:	2420 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-786
Incident Number:	4002
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	11/13/1988
Date Occur:	11/13/1988
Cleanup:	11/13/1988
Closure Request:	Not reported
Close Out:	05/19/2005
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	natural attenuation (not an L-CAP
NOV Issue Date:	Not reported
NORR Issue Date:	09/09/2002
Site Priority:	55E
Phase Of LSA Req:	1
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	05/18/2005
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	271
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0

HINSON OIL CO. (Continued) **U004138649**

Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1942 -77.9365
Testlat:	Not reported
Regional Officer Project Mgr:	JDP
Region:	WIL
Company:	HINSON OIL COMPANY
Contact Person:	MR. MARVIN HINSON, JR.
Telephone:	Not reported
RP Address:	331 BELL STREET, LOT #4
RP City,St,Zip:	WILMINGTON, NC 28412
RP County:	Not reported
Comments:	LEAD AND CROMIUM ARE PRESENT IN SOIL AND GROUNDWATER ABOVE APPLICABLE ACTION LEVELS. SITE NEEDS SAR. 6-24-03, SAMPLES TAKEN FROM DETENTION POND ON-SITE BECAUSE FREE PRODUCT IS ODSERVED COMING FROM THE SOIL. Water sample analysis shows only 1.4 Benzene. NRP-NORR sent for closure. NFA sent 5-19-05. NOV failure to provide Public Notice 4-5-2006.
5 Min Quad:	Not reported

PIRF:

Facility Id:	4002
Date Occurred:	11/13/1988
Date Reported:	2/2/1989
Description Of Incident:	A SITE ASSESSMENT WAS PERFORMED BY ATEC AS A PRE- LIMINARY STEP TO SELL THE PROPERTY. SOIL AND GW CONTAM. WAS DISCOVERED.
Owner/Operator:	MR. MARVIN HINSON, JR.
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	55E
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	4
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	5/19/2005
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

HINSON OIL CO. (Continued) **U004138649**

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	HINSON OIL CO.
Address:	2420 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000022611
Contact:	CONTINENTAL CONSTRUCTION CO, INC
Contact Address1:	2420 CAROLINA BEACH ROAD
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28401
FIPS County Desc:	New Hanover
Latitude:	34.19435
Longitude:	-77.93605

Tank Id:	1
Tank Status:	Removed
Installed Date:	03/16/1951
Perm Close Date:	02/28/1989
Product Name:	Gasoline, Gas Mix
Tank Capacity:	25000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	03/16/1951
Perm Close Date:	02/28/1989
Product Name:	Kerosene, Kero Mix
Tank Capacity:	6000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

HINSON OIL CO. (Continued) **U004138649**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	03/16/1951
Perm Close Date:	02/28/1989
Product Name:	Diesel
Tank Capacity:	6000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	4
Tank Status:	Removed
Installed Date:	03/12/1966
Perm Close Date:	02/28/1989
Product Name:	Diesel
Tank Capacity:	8000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	5
Tank Status:	Removed
Installed Date:	03/16/1951
Perm Close Date:	02/28/1989
Product Name:	Kerosene, Kero Mix
Tank Capacity:	2000
Root Tank Id:	Not reported
Main Tank:	No

HINSON OIL CO. (Continued) **U004138649**

Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	HINSON OIL CO.
Address:	2420 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-786
Object ID:	1153
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	5/17/2005
Restricted Media:	Groundwater Only
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 5-17-2005
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2321588.5728
Y Coord:	163426.549

C17 **HINSON OIL CO.** **NC IMD** **U003145774**
ESE **2420 CAROLINA BEACH RD** **N/A**
< 1/8 **WILMINGTON, NC**
0.115 mi.
607 ft. **Site 8 of 9 in cluster C**

Relative: **Lower**

Actual: **22 ft.**

IMD:

Facility ID:	4002
Name:	HINSON OIL CO.
Address:	2420 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	11/13/1988
Submit Date:	2/2/1989
Incident Desc:	A SITE ASSESSMENT WAS PERFORMED BY ATEC AS A PRE- LIMINARY STEP TO

HINSON OIL CO. (Continued) **U003145774**

SELL THE PROPERTY. SOIL AND GW CONTAM. WAS DISCOVERED.

Operator:	MR. MARVIN HINSON, JR.
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	55E
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	4
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.194334424
Longitude:	-77.93628415
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported

HINSON OIL CO. (Continued) **U003145774**

Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	4002
Last Modified:	2005-05-19 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

C18 **HINSON OIL COMPANY** **EDR Hist Auto** **1021574368**
ESE **2420 CAROLINA BEACH RD** **N/A**
< 1/8 **WILMINGTON, NC 28401**
0.115 mi.
607 ft. **Site 9 of 9 in cluster C**

Relative: EDR Hist Auto
Lower

Actual:
22 ft.

Year:	Name:	Type:
1972	HINSON OIL CO	Gasoline Service Stations
1973	HINSON OIL CO	Gasoline Service Stations
1974	HINSON OIL COMPANY	Gasoline Service Stations
1975	HINSON OIL COMPANY	Gasoline Service Stations
1976	HINSON OIL COMPANY	Gasoline Service Stations
1977	HINSON OIL COMPANY	Gasoline Service Stations
1978	HINSON OIL COMPANY	Gasoline Service Stations
1979	HINSON OIL COMPANY	Gasoline Service Stations
1980	HINSON OIL COMPANY	Gasoline Service Stations
1986	CONTINENTAL CONSTRUCTION CO*	Gasoline Service Stations
1987	CONTINENTAL CONSTRUCTION CO*	Gasoline Service Stations
1988	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations
1989	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations, NEC
1990	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations, NEC
1991	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations, NEC
1992	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations, NEC
1993	CONTINENTAL CONSTRUCTION CO	Gasoline Service Stations, NEC

D19
WSW
< 1/8
0.117 mi.
618 ft.

PEARSON PROPERTY-AST OVERFILL
2402 JEFFERSON STREET
WILMINGTON, NC

Site 1 of 2 in cluster D

NC SHWS **S106022376**
NC IMD **N/A**

Relative:
Higher

Actual:
34 ft.

SHWS:

Name:	PEARSON PROPERTY-AST OVERFILL
Address:	2402 JEFFERSON STREET
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002281
Lat/Longitude:	34.194747 / -77.942893
Geolocation Method:	Geocode (address match)

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	16301
Name:	PEARSON PROPERTY-AST OVERFILL
Address:	2402 JEFFERSON STREET
City,State,Zip:	WILMINGTON, NC
Date Occurred:	9/26/1996
Submit Date:	9/27/1996
Incident Desc:	AWAITING ADDITIONAL INFO FROM ARM
Operator:	BROWN, LUTHER
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	7
Type:	11
Location:	7
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER INORGANICS
Location:	Residence
Current Risk Condition:	Not reported
Sampled By:	1
Samples Include:	2

PEARSON PROPERTY-AST OVERFILL (Continued) **S106022376**

Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	EE31S
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

E20 **FUTURA INC** **NC DRYCLEANERS** **S125085652**
North **2242 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.131 mi.
691 ft. **Site 1 of 3 in cluster E**

Relative: DRYCLEANERS:
Lower

Name:	FUTURA INC
Address:	2242 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Status:	City Directory
Priority:	Not reported
Rank:	Not reported
HCS Code:	50
HCS Ref:	Google API Geocoder
HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.199458 -77.939344
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.939344
Y Coordinates:	34.199458
Object ID:	3401
Comments:	Wilmington 1975 City Directory, Laundries - Self Serve Listing

Actual:
20 ft.

E21 **STAN'S WASHERETTE** **NC DRYCLEANERS** **S125085653**
North **2242 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.131 mi.
691 ft. **Site 2 of 3 in cluster E**

Relative: **Lower**
Actual: **20 ft.**

DRYCLEANERS:

Name:	STAN'S WASHERETTE
Address:	2242 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Status:	City Directory
Priority:	Not reported
Rank:	Not reported
HCS Code:	50
HCS Ref:	Google API Geocoder
HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.199458 -77.939344
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.939344
Y Coordinates:	34.199458
Object ID:	3402
Comments:	Wilmington 1970 City Directory, Laundries - Self Serve Listing

---

E22 **CARQUEST OF CAROLINA BEACH RD** **RCRA NonGen / NLR** **1000831727**
North **2234 CAROLINA BEACH RD** **NCD986204386**
1/8-1/4 **WILMINGTON, NC 28401**
0.146 mi.
773 ft. **Site 3 of 3 in cluster E**

Relative: **Lower**
Actual: **21 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	20030108
Handler Name:	CARQUEST OF CAROLINA BEACH RD
Handler Address:	2234 CAROLINA BEACH RD
Handler City,State,Zip:	WILMINGTON, NC 28401
EPA ID:	NCD986204386
Contact Name:	JEFF CLARK
Contact Address:	2234 CAROLINA BEACH RD
Contact City,State,Zip:	WILMINGTON, NC 28401
Contact Telephone:	910-343-0291
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	04
Land Type:	Private
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	CAROLINA BEACH RD
Mailing City,State,Zip:	WILMINGTON, NC 28401
Owner Name:	ROBERT E KIRKLAND JR.
Owner Type:	Private

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20150414
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

Hazardous Waste Summary:
Waste Code: D000
Waste Description: Not Defined

Waste Code: D008
Waste Description: LEAD

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: ROBERT E KIRKLAND JR.
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 1207
Owner/Operator City,State,Zip: WILSON, NC 27893
Owner/Operator Telephone: 919-243-2161
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 19990119
Handler Name: CARQUEST OF CAROLINA BEACH RD
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20010122
Handler Name: CARQUEST OF CAROLINA BEACH RD
Federal Waste Generator Description: Not reported
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20030108
Handler Name: CARQUEST OF CAROLINA BEACH RD
Federal Waste Generator Description: Not reported
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19970117
Actual Return to Compliance Date: 19970220
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19970217
Enforcement Identifier: 001
Date of Enforcement Action: 19970116

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

Enforcement Responsible Agency: State
Enforcement Docket Number: 97-40
Enforcement Attorney: NC
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NC099
Enforcement Responsible Sub-Organization: 11
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	19980727
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC032
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported

CARQUEST OF CAROLINA BEACH RD (Continued) **1000831727**

Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970116
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	NC099
Evaluation Responsible Sub-Organization:	11
Actual Return to Compliance Date:	19970220
Scheduled Compliance Date:	19970217
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19941024
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970220
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	NC099
Evaluation Responsible Sub-Organization:	11
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

D23 **MONROE ST-2401** **NC LAST** **S120840890**
WSW **2401 MONROE ST** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.158 mi.
835 ft. **Site 2 of 2 in cluster D**

Relative: LAST:
Higher

Name:	MONROE ST-2401
Address:	2401 MONROE ST
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-88526
Incident Number:	Not reported
Contamination Type:	SL

Actual:
34 ft.

MONROE ST-2401 (Continued) **S120840890**

Source Type:	Not reported	
Product Type:	P	
Date Reported:	01/09/2017	
Date Occur:	12/12/2016	
Cleanup:	01/09/2017	
Closure Request:	Not reported	
Close Out:	01/23/2017	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		N
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		L
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	Not reported	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	RES	
MTBE:	No	
MTBE1:	Unknown	
Flag:	Yes	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	A	
RBCA GW:	Not reported	
PETOPT:	4	
RPL:	True	
CD Num:	0	
Reel Num:	0	
RPOW:	True	
RPOP:	True	
Error Flag:	0	
Error Code:	N	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19470 -77.94367	
Testlat:	Not reported	
Regional Officer Project Mgr:		VM
Region:		WIL
Company:		Not reported
Contact Person:		Cynthia Bowers
Telephone:		Not reported
RP Address:		118 Chula Vista Drive
RP City,St,Zip:		Wilmington, NC 28412
RP County:		Not reported
Comments:	Not reported	
5 Min Quad:	Not reported	
Last Modified:		Not reported
Incident Phase:		**Not reported**
NOV Issued:		Not reported
NORR Issued:		Not reported
45 Day Report:		Not reported
Public Meeting Held:		Not reported
Corrective Action Planned:		Not reported

MONROE ST-2401 (Continued) **S120840890**

SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

24
SSW
1/8-1/4
0.173 mi.
914 ft.

WERTHEIMER BAGS CO.
249 W. SHIPYARD BLVD.
WILMINGTON, NC 28403

NC UST **U003137637**
N/A

Relative:
Higher

Actual:
41 ft.

UST:

Name:	WERTHEIMER BAGS CO.
Address:	249 W. SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC 28403
Facility Id:	00-0-0000022350
Contact:	WERTHEIMER BAGS CO.
Contact Address1:	249 W. SHIPYARD BLVD.
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28403
FIPS County Desc:	New Hanover
Latitude:	0
Longitude:	0

Tank Id:	1
Tank Status:	Removed
Installed Date:	03/19/1963
Perm Close Date:	11/13/1989
Product Name:	Diesel
Tank Capacity:	6000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	03/19/1963
Perm Close Date:	11/13/1989
Product Name:	Gasoline, Gas Mix
Tank Capacity:	500
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported

WERTHEIMER BAGS CO. (Continued) **U003137637**

Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

F25 **MODERN LAUNDRY & DRY CLEANERS INC** **NC DRYCLEANERS** **S125085610**
North **2219 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.193 mi.
1017 ft. **Site 1 of 5 in cluster F**

Relative: DRYCLEANERS:
Lower

Name:	MODERN LAUNDRY & DRY CLEANERS INC
Address:	2219 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Status:	City Directory
Priority:	Not reported
Rank:	Not reported
HCS Code:	51
HCS Ref:	Google API Geocoder
HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.2004639 -77.939506
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.939506
Y Coordinates:	34.2004639
Object ID:	3070
Comments:	Wilmington 1975 City Directory, Cleaners & Dyers Listing

Actual:
21 ft.

F26 **MODERN LAUNDRY & CLEANERS** **NC DRYCLEANERS** **S125089449**
North **2219 CAROLINA BEACH RD** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.193 mi.
1017 ft. **Site 2 of 5 in cluster F**

Relative: DRYCLEANERS:
Lower

Name:	MODERN LAUNDRY & CLEANERS
Address:	2219 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
Status:	NCDOL
Priority:	Not reported
Rank:	Not reported
HCS Code:	51
HCS Ref:	Google API Geocoder

Actual:
21 ft.

MODERN LAUNDRY & CLEANERS (Continued) **S125089449**

HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.2004639 -77.939506
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.939506
Y Coordinates:	34.2004639
Object ID:	7421
Comments:	NC Dept of Labor Drycleaner Boiler Inspection list. Date of Inspection 12/10/1973

F27 **NC ARMY NATIONAL GUARD ARMORY** **NC LUST U001958995**
North **2221 CAROLINA BEACH ROAD** **NC UST N/A**
1/8-1/4 **WILMINGTON, NC 28407** **NC IMD**
0.193 mi.
1021 ft. **Site 3 of 5 in cluster F**

Relative: **Lower**

Actual: **21 ft.**

LUST:

Name:	NC ARMY NATIONAL GUARD-WILMINGTON ARMORY
Address:	2221 CA.BCH.RD.
City,State,Zip:	WILMINGTON, NC 28407
Facility ID:	00-0-000
UST Number:	WI-1748
Incident Number:	20623
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	11/17/1995
Date Occur:	08/21/1995
Cleanup:	11/17/1995
Closure Request:	Not reported
Close Out:	07/27/2000
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	10/06/1999
Site Priority:	25
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	Not reported
RPL:	False
CD Num:	161
Reel Num:	3911

NC ARMY NATIONAL GUARD ARMORY (Continued) **U001958995**

RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.2002 -77.9389
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	NORTH CAROLINA NATIONAL GUARD
Contact Person:	MR. TODD PRETTY
Telephone:	9106646392
RP Address:	4105 REEDY CREEK RD.
RP City,St,Zip:	RALEIGH, NC 27607
RP County:	Not reported
Comments:	LSA SOME TIME AFTER UST CLOSURE, 29 UG/L LEAD IN GW
5 Min Quad:	Not reported

PIRF:

Facility Id:	20623
Date Occurred:	8/29/1995
Date Reported:	10/13/1999
Description Of Incident:	UST CLOSURE REPORT DOCUMENTS LEAD CONTAMINATION.
Owner/Operator:	TODD PREDDY
Ownership:	7
Operation Type:	1
Type:	4
Location:	1
Site Priority:	25L
Priority Update:	10/13/1999
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	DD31K
Source Code:	PIRF
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	8/10/2000
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	7/27/2000

Click here to access the North Carolina DEQ records for this facility:

NC ARMY NATIONAL GUARD ARMORY (Continued) **U001958995**

UST:

Name:	NC ARMY NATIONAL GUARD ARMORY
Address:	2221 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28407
Facility Id:	00-0-0000034006
Contact:	NC ARMY NATIONAL GUARD
Contact Address1:	1636 GOLD STAR DRIVE
Contact Address2:	Not reported
Contact City/State/Zip:	RALEIGH, NC 27607-3371
FIPS County Desc:	New Hanover
Latitude:	34.20069
Longitude:	-77.93887
Tank Id:	1
Tank Status:	Removed
Installed Date:	01/01/1955
Perm Close Date:	08/21/1995
Product Name:	Heating Oil/Fuel
Tank Capacity:	6000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	No
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	20623
Name:	NC ARMY NATIONAL GUARD-WILMING
Address:	2221 CA.BCH.RD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	8/21/1995
Submit Date:	10/13/1999
Incident Desc:	UST CLOSURE REPORT DOCUMENTS LEAD CONTAMINATION.
Operator:	MR. TODD PRETTY
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	7
Responsible Party Contact Name:	Not reported
Operation:	1
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	State
Operation Type:	Public Service

NC ARMY NATIONAL GUARD ARMORY (Continued) **U001958995**

Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	25L
Whether Tank is Regulated:	Not reported
Priority Update:	10/13/1999
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	DD31K
Intermediate Condition Present:	Not reported
Latitude:	34.20027777
Longitude:	-77.93888888
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	20623
Last Modified:	2000-08-10 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported

NC ARMY NATIONAL GUARD ARMORY (Continued) **U001958995**

SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2000-07-27 00:00:00

G28 **S&W READY MIX CONCRETE** **RCRA NonGen / NLR** **1019900938**
WNW **2209 MONROE ST.** **FINDS** **NCS000002352**
1/8-1/4 **WILMINGTON, NC 28401** **ECHO**
0.195 mi.
1030 ft. **Site 1 of 2 in cluster G**

Relative: **Higher**
Actual: **25 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	20161026
Handler Name:	S&W READY MIX CONCRETE
Handler Address:	2209 MONROE ST.
Handler City,State,Zip:	WILMINGTON, NC 28401
EPA ID:	NCS000002352
Contact Name:	HANK GAY
Contact Address:	MONROE ST.
Contact City,State,Zip:	WILMINGTON, NC 28401
Contact Telephone:	910-762-2399
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	CONTACT PERSON
EPA Region:	04
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	MONROE ST.
Mailing City,State,Zip:	WILMINGTON, NC 28401
Owner Name:	Not reported
Owner Type:	Not reported
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---

S&W READY MIX CONCRETE (Continued) **1019900938**

Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20161026
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Historic Generators:

Receive Date:	20161026
Handler Name:	S&W READY MIX CONCRETE
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

S&W READY MIX CONCRETE (Continued) **1019900938**

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 20160818
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: NC036
Evaluation Responsible Sub-Organization: 07
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

FINDS:
Registry ID: 110070121580

S&W READY MIX CONCRETE (Continued) **1019900938**

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1019900938
Registry ID:	110070121580
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070121580
Name:	S&W READY MIX CONCRETE
Address:	2209 MONROE ST.
City,State,Zip:	WILMINGTON, NC 28401

G29 **S & G CONCRETE COMPANY** **NC UST** **U003137731**
WNW **2209 MONROE ST PO BOX 540** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.195 mi.
1030 ft. **Site 2 of 2 in cluster G**

Relative:
Higher

Actual:
25 ft.

UST:

Name:	S & G CONCRETE COMPANY
Address:	2209 MONROE ST PO BOX 540
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000023038
Contact:	S & W READY MIX CONCRETE CO
Contact Address1:	907 WARSAW RD
Contact Address2:	Not reported
Contact City/State/Zip:	CLINTON, NC 28328
FIPS County Desc:	New Hanover
Latitude:	34.1984
Longitude:	-77.9442
Tank Id:	1
Tank Status:	Removed
Installed Date:	01/24/1976
Perm Close Date:	12/31/1988
Product Name:	Gasoline, Gas Mix
Tank Capacity:	1000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel

S & G CONCRETE COMPANY (Continued) **U003137731**

Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Current
Installed Date:	01/24/1976
Perm Close Date:	Not reported
Product Name:	Kerosene, Kero Mix
Tank Capacity:	500
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	No
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

F30 **PLEASANT'S WASHERETTE** **NC DRYCLEANERS** **S125085601**
North **2210 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.198 mi.
1048 ft. **Site 4 of 5 in cluster F**

Relative: DRYCLEANERS:
Lower

Actual: | | |
22 ft. | Name: | PLEASANT'S WASHERETTE |
Address:	2210 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Status:	City Directory
Priority:	Not reported
Rank:	Not reported
HCS Code:	51
HCS Ref:	Google API Geocoder
HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.2003599 -77.9397853
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.9397853
Y Coordinates:	34.2003599
Object ID:	3373
Comments:	Wilmington 1970 City Directory, Laundries - Self Serve Listing

H31 **TOMMY'S QUICK SHOP SITE** **NC LUST** **S121291045**
SE **2461 CAROLINA BEACH RD** **NC UIC** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.207 mi.
1093 ft. **Site 1 of 5 in cluster H**

Relative: **Higher**

Actual: **25 ft.**

LUST:

Name:	TOMMY'S GAS & SNAKS 2
Address:	2461 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-8049
Incident Number:	43081
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	07/19/2017
Date Occur:	07/19/2017
Cleanup:	07/19/2017
Closure Request:	Not reported
Close Out:	01/07/2021
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Free product
Land Use:	Not reported
MTBE:	No
MTBE1:	Unknown
Flag:	Yes
Flag1:	No
LUR Filed:	09/06/2013
Release Detection:	0
Current Status:	File Located in House
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	34.1935 -77.9352
Testlat:	Not reported
Regional Officer Project Mgr:	LEP
Region:	WIL
Company:	CBR Enterprise Inc.
Contact Person:	Ali Shamieh, Registered Agent
Telephone:	Not reported
RP Address:	4709 Wedgefield Dr.

TOMMY'S QUICK SHOP SITE (Continued) **S121291045**

RP City,St,Zip:	Wilmington, NC 28409
RP County:	Not reported
Comments:	NRP FILED ON SUBJECT PROPERTY FOR FORMER INCIDENT #14858(WI-14858) IN DEED BOOL 5767, PAGES 2182-2186
5 Min Quad:	Not reported

PIRF:

Facility Id:	43081
Date Occurred:	7/19/2017
Date Reported:	7/19/2017
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	N
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	8
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	1/7/2021
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

UIC:

Name:	TOMMY'S QUICK SHOP SITE
Address:	2461 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Permit Num:	WI0800532
Permit Type:	Injection Deemed In-situ Groundwater Remediation Well
Environmental Interest Number:	BIMS053309
Env Interest Status:	Proposed
Latitude:	Not reported
Longitude:	Not reported

H32 **WK HOBBS BP SITE** **NC SHWS** **U003137685**
SE **2461 CAROLINA BEACH ROAD** **NC LAST** **N/A**
1/8-1/4 **WILMINGTON, NC 28401** **NC INST CONTROL**
0.207 mi.
1093 ft. **Site 2 of 5 in cluster H**

Relative:
Higher

Actual:
25 ft.

SHWS:

Name:	WK HOBBS BP SITE
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002750
Lat/Longitude:	34.193333 / -77.935
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

LAST:

Name:	WK HOBBS BP SITE
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-14858
Incident Number:	14858
Contamination Type:	GW
Source Type:	2
Product Type:	P
Date Reported:	12/07/1995
Date Occur:	12/07/1995
Cleanup:	Not reported
Closure Request:	Not reported
Close Out:	09/13/2013
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	Not reported
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	Not reported
Risk Classification:	Not reported
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	60
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	RES
MTBE:	No
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	09/06/2013
Release Detection:	0
Current Status:	A
RBCA GW:	Not reported
PETOPT:	5
RPL:	False
CD Num:	612
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0

WK HOBBS BP SITE (Continued) **U003137685**

Error Code:	Not reported
Valid:	False
Lat/Long:	Not reported
Lat/Long Decimal:	34.19333 -77.93500
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	WK HOBBS INC.
Contact Person:	BILL HOBBS
Telephone:	Not reported
RP Address:	1332 CASTLE HAYNE ROAD
RP City,St,Zip:	WILMINGTON, NC
RP County:	Not reported
Comments:	RPT. SITE OF ASPHALT PLT. >30 YRS. File made April 2012 from Conoco file for UST incident (#226) on same property. The PIRF and other information related to this incident was located in that file. The UST incident originated on the west end of the property, and this incident is located on the east end of the property./// pulled for archive 3.16.2016 ///
5 Min Quad:	Not reported

PIRF:

Facility Id:	14858
Date Occurred:	Not reported
Date Reported:	Not reported
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	5
Operation Type:	8
Type:	Not reported
Location:	Not reported
Site Priority:	60E
Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	0
Samples Taken By:	Not reported
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Cause:	Not reported
Source:	Not reported
Source Type:	1
Last Modified:	8/5/2003
Incident Phase:	**CO**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

WK HOBBS BP SITE (Continued) **U003137685**

INST CONTROL:

Name:	WK HOBBS BP SITE
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-14858
Object ID:	2384
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	Spill
Received Date:	9/5/2013
Restricted Media:	Multi-Media
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 9-5-2013
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2322074.641
Y Coord:	163083.44535

H33 **CAROLINA BEACH CARDLOCK** **NC UST** **U004138552**
SE **2461 CAROLINA BEACH ROAD** **NC Financial Assurance** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.207 mi.
1093 ft. **Site 3 of 5 in cluster H**

Relative: Higher
Actual: 25 ft.

UST:

Name:	CAROLINA BEACH CARDLOCK
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-2-0000022601
Contact:	CBR ENTERPRISE INC.
Contact Address1:	4709 WEDGEFIELD DR
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28409-3954
FIPS County Desc:	New Hanover
Latitude:	34.19366
Longitude:	-77.93476
Tank Id:	1
Tank Status:	Temporarily Closed
Installed Date:	12/27/1995
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	12000
Root Tank Id:	211078
Main Tank:	Yes
Compartment Tank:	Yes

CAROLINA BEACH CARDLOCK (Continued) **U004138552**

Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel/FRP
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	1
Tank Status:	Current
Installed Date:	04/01/1983
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	1B
Tank Status:	Temporarily Closed
Installed Date:	12/27/1995
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	3000
Root Tank Id:	211078
Main Tank:	No
Compartment Tank:	Yes
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Single Wall Steel/FRP
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

CAROLINA BEACH CARDLOCK (Continued) **U004138552**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Current
Installed Date:	04/01/1983
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Current
Installed Date:	04/01/1983
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

NC Financial Assurance 1:

Name:	TOMMY'S GAS & SNAKS 2
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-0000022601
Region:	1
Financial Responsibility Desc:	Insurance & Risk Retension
Financial Responsibility Name:	Colony Insurance Company
Started Date:	Not reported

CAROLINA BEACH CARDLOCK (Continued) **U004138552**

Ended Date: Not reported

Name: CAROLINA BEACH CARDLOCK
Address: 2461 CAROLINA BEACH ROAD
City,State,Zip: WILMINGTON, NC 28401
Facility ID: 00-2-0000022601
Region: 1
Financial Responsibility Desc: Insurance & Risk Retension
Financial Responsibility Name: Colony Insurance Company
Started Date: Not reported
Ended Date: Not reported

H34 **WK HOBBS BP SITE** **NC IMD** **S103131549**
SE **2461 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.207 mi.
1093 ft. **Site 4 of 5 in cluster H**

Relative: **Higher**
Actual: **25 ft.**

IMD:

Facility ID:	14858
Name:	WK HOBBS BP SITE
Address:	2461 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	12/7/1995
Submit Date:	12/13/1995
Incident Desc:	RPT. SITE OF ASPHALT PLT. >30 YRS
Operator:	HOBBS, BILL
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	1
Type:	5
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER PETROLEUM PROD.
Location:	Not reported

WK HOBBS BP SITE (Continued) **S103131549**

Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

H35 **CONOCO # 33052** **NC LUST** **S105766326**
SE **2461 CAROLINA BCH RD.** **NC INST CONTROL** **N/A**
1/8-1/4 **WILMINGTON, NC 28401** **NC IMD**
0.207 mi.
1093 ft. **Site 5 of 5 in cluster H**

Relative:
Higher

Actual:
25 ft.

LUST:

Name:	CONOCO # 33052
Address:	2461 CAROLINA BCH RD.
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-727
Incident Number:	226
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	03/19/1982
Date Occur:	03/13/1982
Cleanup:	07/06/2001
Closure Request:	Not reported
Close Out:	08/24/2001
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	DS

CONOCO # 33052 (Continued) **S105766326**

NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	110B
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	Yes
Flag:	No
Flag1:	No
LUR Filed:	09/06/2013
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	160
Reel Num:	3911
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1936 -77.9352
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	CONOCO, INC.
Contact Person:	MR. PAUL TAYLOR
Telephone:	7132933305
RP Address:	600 NORTH DAIRY ASHFORD ROAD
RP City,St,Zip:	HOUSTON, TX 77079
RP County:	Not reported
Comments:	FP, TREATMENT SYSTEM IN OPERATION FILE INDICATES A RELEASE PER SHIVER REPORT DATED 8/81: SAME RELEASE? LAST MON RPT REC 07/06/2001. LEVELS REDUCED SINGIFICANTLY.
5 Min Quad:	Not reported

PIRF:

Facility Id:	226
Date Occurred:	Not reported
Date Reported:	12/4/1985
Description Of Incident:	Not reported
Owner/Operator:	MR. PAUL TAYLOR
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	L
Priority Update:	8/28/2002
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	Not reported
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported

CONOCO # 33052 (Continued) **S105766326**

Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	6/7/2002
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	8/24/2001

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	CONOCO # 33052
Address:	2461 CAROLINA BCH RD.
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-727
Object ID:	1066
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	9/5/2013
Restricted Media:	Multi-Media
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 9-5-2013
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2321982.8771
Y Coord:	163179.63971

IMD:

Facility ID:	226
Name:	CONOCO # 33052
Address:	2461 CAROLINA BCH RD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	3/13/1982
Submit Date:	12/4/1985
Incident Desc:	Not reported

CONOCO # 33052 (Continued) **S105766326**

Operator:	MR. PAUL TAYLOR
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	L
Whether Tank is Regulated:	Not reported
Priority Update:	8/28/2002
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19333333
Longitude:	-77.93527777
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported

CONOCO # 33052 (Continued) **S105766326**

Reference Number for Media Disk for Archived Record: Not reported
RP Owner?: Not reported
RP Operator?: Not reported
RP Landowner?: Not reported

Status:
Facility ID: 226
Last Modified: 2002-06-07 00:00:00
Incident Phase: CO
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Sighned: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: 2001-08-24 00:00:00

F36 **ECON-O-WASH** **NC DRYCLEANERS** **S125085579**
North **2202 CAROLINA BEACH ROAD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.212 mi.
1120 ft. **Site 5 of 5 in cluster F**

Relative: DRYCLEANERS:
Lower
Actual: Name: ECON-O-WASH
22 ft. Address: 2202 CAROLINA BEACH ROAD
City,State,Zip: WILMINGTON, NC
Facility ID: Not reported
Status: City Directory
Priority: Not reported
Rank: Not reported
HCS Code: 51
HCS Ref: Google API Geocoder
HCS Res: Not reported
HCS Scale: Not reported
Lat/Long: 34.2005594 -77.9398973
Shopping Center: Not reported
Certified Date: Not reported
Project Manager: Not reported
Phone Number: Not reported
X Coordinates: -77.9398973
Y Coordinates: 34.2005594
Object ID: 3351
Comments: Wilmington 1960 City Directory, Laundries - Self Serve Listing

I37
NW
1/8-1/4
0.214 mi.
1129 ft.

FORMER DILLONS GROCERY
214 SOUTHERN BLVD
WILMINGTON, NC 28443

Site 1 of 3 in cluster I

NC IMD **S127491869**
N/A

Relative:
Higher

Actual:
25 ft.

IMD:

Facility ID:		Not reported
Name:		FORMER DILLONS GROCERY
Address:		214 SOUTHERN BLVD
City,State,Zip:		WILMINGTON, NC 28443
Date Occurred:		Not reported
Submit Date:		Not reported
Incident Desc:	Not reported	
Operator:		Not reported
UST ID:		WI-7387
Incident ID:		Not reported
Initials of UST Regional Contact:		MEC
Regional Office:		WIL
Responsible Party/Company Name:		ESTATE OF EDNA SCHUPP
Ownership:		Not reported
Responsible Party Contact Name:		PEGGY SHUPP
Operation:		Not reported
Responsible Party Mailing Address:		PO BOX 86
Responsible Party City,State,Zip:		HAMPSTEAD, NC 28443
Ownership:		Not reported
Operation Type:		Not reported
Responsible Party County:		Not reported
Source of Contamination:		Not reported
Source:		Not reported
Type:		Not reported
Location:		Not reported
Petroleum Type:		PETROLEUM
Date Incident Reported:		2008-09-15 00:00:00
Whether Tank is Commercial or Non Commercial:		COMMERCIAL
Site Priority:		Not reported
Whether Tank is Regulated:		REGULATED
Priority Update:		Not reported
Notice of Regulatory Requirement:		Not reported
Wells Affected:		Not reported
Notice of Violation:		Not reported
Phase 1 or Phase 2:		Not reported
Num Affected:		Not reported
Site Priority:		Not reported
Type:		Not reported
Location:		Not reported
Current Risk Condition:		Not reported
Sampled By:		Not reported
Samples Include:		Not reported
Initial reported risk of incident (never changes):		L
7.5 Min Quad:		Not reported
5 Min Quad:		Not reported
Intermediate Condition Present:		Not reported
Latitude:		0
Longitude:		0
Use of Land, Industrial:		Not reported
Corrective Action Plan Selected - up to 5:		Not reported
RBCA:		Not reported
Date Close Review Requested From RP or Owner:		Not reported

FORMER DILLONS GROCERY (Continued) **S127491869**

Date Case Closed:	2008-09-15 00:00:00
Extent of Contamination:	None
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	0
Facility Phone Number:	9102701650
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	2008-09-15 00:00:00
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	GASOLINE/DIESEL/KEROSENE
Reference Number for Media Disk for Archived Record:	462
RP Owner?:	True
RP Operator?:	False
RP Landowner?:	False

I38 **SUNSET LAUNDERETTE** **NC DRYCLEANERS** **S125085522**
NW **216 SOUTHERN BOULEVARD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.216 mi.
1138 ft. **Site 2 of 3 in cluster I**

Relative: **Higher**
Actual: **25 ft.**

DRYCLEANERS:

Name:	SUNSET LAUNDERETTE
Address:	216 SOUTHERN BOULEVARD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Status:	City Directory
Priority:	Not reported
Rank:	Not reported
HCS Code:	51
HCS Ref:	Google API Geocoder
HCS Res:	Not reported
HCS Scale:	Not reported
Lat/Long:	34.1990211 -77.9434526
Shopping Center:	Not reported
Certified Date:	Not reported
Project Manager:	Not reported
Phone Number:	Not reported
X Coordinates:	-77.9434526
Y Coordinates:	34.1990211
Object ID:	2978
Comments:	Wilmington 1975 City Directory, Laundries - Self Serve Listing

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39 **ECONO TRANSMISSION SERVICE** **NC UST** **U004138734**
ESE **611 WELLINGTON AVENUE** **N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.220 mi.
1159 ft.

Relative: **Lower**
Actual: **15 ft.**

UST:

Name:	ECONO TRANSMISSION SERVICE
Address:	611 WELLINGTON AVENUE
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000003310

ECONO TRANSMISSION SERVICE (Continued) **U004138734**

Contact:	ECONO TRANSMISSION SERVICE
Contact Address1:	611 WELLINGTON AVENUE
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28401
FIPS County Desc:	New Hanover
Latitude:	0
Longitude:	0
Tank Id:	1
Tank Status:	Removed
Installed Date:	05/05/1983
Perm Close Date:	12/31/1989
Product Name:	Oil, New/Used/Mix
Tank Capacity:	500
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

J40 **WECT TELEVISION** **NC IMD** **S127494916**
SSW **322 SHIPYARD BLVD.** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.229 mi.
1211 ft. **Site 1 of 2 in cluster J**

Relative: **Higher**

Actual: **43 ft.**

IMD:

Facility ID:		Not reported
Name:		WECT TELEVISION
Address:		322 SHIPYARD BLVD.
City,State,Zip:		WILMINGTON, NC
Date Occurred:		Not reported
Submit Date:		Not reported
Incident Desc:	Not reported	
Operator:		Not reported
UST ID:		WI-488
Incident ID:		Not reported
Initials of UST Regional Contact:		NPM
Regional Office:		WIL
Responsible Party/Company Name:		Not reported
Ownership:		Not reported
Responsible Party Contact Name:		Not reported
Operation:		Not reported
Responsible Party Mailing Address:		Not reported
Responsible Party City,State,Zip:		Not reported
Ownership:		Not reported
Operation Type:		Not reported
Responsible Party County:		Not reported

WECT TELEVISION (Continued) **S127494916**

Source of Contamination:	Not reported
Source:	Not reported
Type:	Not reported
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	COMMERCIAL
Site Priority:	Not reported
Whether Tank is Regulated:	REGULATED
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	Not reported
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	L
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	0
Longitude:	0
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	1993-10-05 00:00:00
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	464
RP Owner?:	False
RP Operator?:	False
RP Landowner?:	False

J41 **ATLANTIC TELECASTING CORP.** **NC UST** **U004139681**
SSW **322 SHIPYARD BLVD.** **N/A**
1/8-1/4 **WILMINGTON, NC 28403**
0.229 mi.
1211 ft. **Site 2 of 2 in cluster J**

Relative: **Higher**

Actual: **43 ft.**

UST:

Name:	ATLANTIC TELECASTING CORP.
Address:	322 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC 28403
Facility Id:	00-0-0000025850
Contact:	ATLANTIC TELECASTING CORP.
Contact Address1:	322 SHIPYARD BLVD.
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28403
FIPS County Desc:	New Hanover
Latitude:	34.19103
Longitude:	-77.94147

Tank Id:	1
Tank Status:	Removed
Installed Date:	01/01/1964
Perm Close Date:	09/10/1993
Product Name:	Diesel
Tank Capacity:	1000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	01/01/1964
Perm Close Date:	09/10/1993
Product Name:	Gasoline, Gas Mix
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel

ATLANTIC TELECASTING CORP. (Continued) **U004139681**

Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 3
Tank Status: Removed
Installed Date: 01/01/1964
Perm Close Date: 09/10/1993
Product Name: Fuel Oil
Tank Capacity: 500
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

I42 **SUNSET LAUNDERETTE** **NC DRYCLEANERS** **S125085662**
NW **225 SOUTHERN BOULEVARD** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.232 mi.
1227 ft. **Site 3 of 3 in cluster I**

Relative: **Higher**
Actual: **24 ft.**

DRYCLEANERS:
Name: SUNSET LAUNDERETTE
Address: 225 SOUTHERN BOULEVARD
City,State,Zip: WILMINGTON, NC
Facility ID: Not reported
Status: City Directory
Priority: Not reported
Rank: Not reported
HCS Code: 50
HCS Ref: Google API Geocoder
HCS Res: Not reported
HCS Scale: Not reported
Lat/Long: 34.1994997 -77.9434125
Shopping Center: Not reported
Certified Date: Not reported
Project Manager: Not reported
Phone Number: Not reported
X Coordinates: -77.9434125
Y Coordinates: 34.1994997
Object ID: 3411
Comments: Wilmington 1970 City Directory, Laundries - Self Serve Listing

K43 **FAST FARE # 730** **NC IMD** **S101714842**
North **2158 CAROLINA BEACH** **N/A**
1/8-1/4 **WILMINGTON, NC**
0.234 mi.
1236 ft. **Site 1 of 3 in cluster K**

Relative: **Higher**

Actual: **24 ft.**

IMD:

Facility ID:	14603
Name:	FAST FARE # 730
Address:	2158 CAROLINA BEACH
City,State,Zip:	WILMINGTON, NC
Date Occurred:	11/16/1994
Submit Date:	10/3/1995
Incident Desc:	TANK CLOSURE REPORT CONFIRMED RELEASE FROM UST #3. GW CONTAM. CONFIRMED.
Operator:	MR. JOHN WOLF
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	40E
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.20027777
Longitude:	-77.94
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported

FAST FARE # 730 (Continued) **S101714842**

Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	14603
Last Modified:	2003-05-28 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	1995-09-29 00:00:00
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2003-05-28 00:00:00

K44 **FAST FARE NC 730** **RCRA-VSQG** **1000448917**
North **2158 CAROLINA BEACH RD** **NCD986175552**
1/8-1/4 **WILMINGTON, NC 28401**
0.234 mi.
1236 ft. **Site 2 of 3 in cluster K**

Relative: **Higher**
Actual: **24 ft.**

RCRA-VSQG:

Date Form Received by Agency:		19960916
Handler Name:	FAST FARE NC 730	
Handler Address:		2158 CAROLINA BEACH RD
Handler City,State,Zip:		WILMINGTON, NC 28401
EPA ID:		NCD986175552
Contact Name:		RICHARD GARVINE
Contact Address:		PO BOX 1168
Contact City,State,Zip:		BALTIMORE, MD 21203
Contact Telephone:		410-659-4845
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		04
Land Type:		Private
Federal Waste Generator Description:		Conditionally Exempt Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported

FAST FARE NC 730 (Continued) **1000448917**

Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 1168
Mailing City,State,Zip:	BALTIMORE, MD 21203
Owner Name:	CROWN CENTRAL PETROLEUM CORP
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported

FAST FARE NC 730 (Continued) **1000448917**

Handler Date of Last Change:	20060104
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROWN CENTRAL PETROLEUM CORP
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 1168
Owner/Operator City,State,Zip:	BALTIMORE, MD 21203
Owner/Operator Telephone:	410-539-7400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19960916
Handler Name: FAST FARE NC 730	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violation:

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19951019
Actual Return to Compliance Date:	19951103
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19951106
Enforcement Identifier:	001
Date of Enforcement Action:	19951019

FAST FARE NC 730 (Continued) **1000448917**

Enforcement Responsible Agency: State
Enforcement Docket Number: 95-710
Enforcement Attorney: NC
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NC022
Enforcement Responsible Sub-Organization: 11
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19951019
Actual Return to Compliance Date: 19951103
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19951106
Enforcement Identifier: 001
Date of Enforcement Action: 19951019
Enforcement Responsible Agency: State
Enforcement Docket Number: 95-710
Enforcement Attorney: NC
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NC022
Enforcement Responsible Sub-Organization: 11
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported

FAST FARE NC 730 (Continued) **1000448917**

SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	19951103
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	NC022
Evaluation Responsible Sub-Organization:	11
Actual Return to Compliance Date:	19951103
Scheduled Compliance Date:	19951106
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19951019
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	NC022
Evaluation Responsible Sub-Organization:	11
Actual Return to Compliance Date:	19951103
Scheduled Compliance Date:	19951106
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

K45 **NC-730** **NC LUST U003142625**
North **2158 CAROLINA BEACH RD** **NC UST N/A**
1/8-1/4 **WILMINGTON, NC 28401**
0.234 mi.
1236 ft. **Site 3 of 3 in cluster K**

Relative: **Higher**

Actual: **24 ft.**

LUST:

Name:	FAST FARE # 730
Address:	2158 CAROLINA BEACH
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-1280
Incident Number:	14603
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	11/16/1994
Date Occur:	11/16/1994
Cleanup:	11/16/1994
Closure Request:	Not reported

NC-730 (Continued) **U003142625**

Close Out:	05/28/2003
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	09/29/1995
Site Priority:	40E
Phase Of LSA Req:	1
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	245
Reel Num:	0
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	True
Lat/Long Decimal:	34.2002 -77.9399
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	CROWN CENTRAL PETROLEUM CORP.
Contact Person:	MR. JOHN WOLF
Telephone:	4105397400
RP Address:	P. O. BOX 1168
RP City,St,Zip:	BALTIMORE, MD 21203
RP County:	Not reported
Comments:	10/11/2002 - No contamination in excess of gw standards or soil-to-groundwater. Two irrigation wells within 250 feet. Lead in gw is above standards. Can lower risk possibly with additional round of sampling. Sampling on 02/20/03 showed no tetra ethyl l
5 Min Quad:	Not reported

PIRF:

Facility Id:	14603
Date Occurred:	11/16/1994
Date Reported:	10/3/1995
Description Of Incident:	TANK CLOSURE REPORT CONFIRMED RELEASE FROM UST #3. GW CONTAM. CONFIRMED.
Owner/Operator:	MR. MATTHEW GILMORE
Ownership:	4
Operation Type:	6
Type:	3
Location:	1

NC-730 (Continued) **U003142625**

Site Priority:	40E
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	5/28/2003
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	9/29/1995
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	5/28/2003

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	NC-730
Address:	2158 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000001446
Contact:	CROWN CENTRAL PETROLEUM CORP
Contact Address1:	PO BOX 1168 / 1 N CHARLES STREET
Contact Address2:	Not reported
Contact City/State/Zip:	BALTIMORE, MD 21203-1168
FIPS County Desc:	New Hanover
Latitude:	0
Longitude:	0
Tank Id:	001
Tank Status:	Removed
Installed Date:	03/01/1986
Perm Close Date:	11/15/1994
Product Name:	Gasoline, Gas Mix
Tank Capacity:	8000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin

NC-730 (Continued) **U003142625**

Leak Detection Name: MLLD
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 002
Tank Status: Removed
Installed Date: 03/01/1986
Perm Close Date: 11/15/1994
Product Name: Gasoline, Gas Mix
Tank Capacity: 5000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Auto Shutoff Device
Spill Protection Name: Catchment Basin
Leak Detection Name: MLLD
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 003
Tank Status: Removed
Installed Date: 03/01/1986
Perm Close Date: 11/15/1994
Product Name: Gasoline, Gas Mix
Tank Capacity: 3000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Auto Shutoff Device
Spill Protection Name: Catchment Basin
Leak Detection Name: MLLD
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 1
Tank Status: Removed
Installed Date: 05/04/1969

NC-730 (Continued) **U003142625**

Perm Close Date:	11/15/1994
Product Name:	Gasoline, Gas Mix
Tank Capacity:	8000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	05/04/1969
Perm Close Date:	11/15/1994
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	05/04/1969
Perm Close Date:	11/15/1994
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown

NC-730 (Continued) **U003142625**

Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 4
Tank Status: Removed
Installed Date: 05/04/1969
Perm Close Date: 11/15/1994
Product Name: Gasoline, Gas Mix
Tank Capacity: 2000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: No
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 5
Tank Status: Removed
Installed Date: 01/01/1964
Perm Close Date: 11/15/1994
Product Name: Unknown
Tank Capacity: 750
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

46
West
1/4-1/2
0.270 mi.
1425 ft.

S&G PRESTRESS
2295 BURNETT BOULEVARD
WILMINGTON, NC 28401

NC LAST **S110629616**
N/A

Relative:
Higher

Actual:
26 ft.

LAST:

Name:	S&G PRESTRESS	
Address:	2295 BURNETT BOULEVARD	
City,State,Zip:	WILMINGTON, NC 28401	
Facility ID:	Not reported	
UST Number:	WI-88180	
Incident Number:	94064	
Contamination Type:		SL
Source Type:	19	
Product Type:	P	
Date Reported:	04/24/2009	
Date Occur:	08/01/2008	
Cleanup:	Not reported	
Closure Request:	Not reported	
Close Out:	10/12/2010	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		N
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		U
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	Not reported	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	No	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	A	
RBCA GW:	Not reported	
PETOPT:	3	
RPL:	True	
CD Num:	473	
Reel Num:	0	
RPOW:	True	
RPOP:	True	
Error Flag:	0	
Error Code:	N	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19573 -77.94712	
Testlat:	Not reported	
Regional Officer Project Mgr:		BAR
Region:		WIL
Company:		Not reported
Contact Person:		S&G Prestress
Telephone:		Not reported

S&G PRESTRESS (Continued) **S110629616**

RP Address: Not reported
RP City,St,Zip: NC
RP County: Not reported
Comments: soil to be excavated mid-August 2009. Done. 4558 tons soil removed. No gw contamination detected. 2 supply wells on site, but they tested clean, and are reportedly for process water only. File pulled for acrchiving on 12/12/2012 by LEP.
5 Min Quad: Not reported

PIRF:
Facility Id: 94064
Date Occurred: 8/8/2008
Date Reported: 7/16/2009
Description Of Incident: Soil contamination was discovered at the subject site.
Owner/Operator: Not reported
Ownership: 4
Operation Type: 7
Type: 3
Location: 1
Site Priority: Not reported
Priority Update: Not reported
Wells Affected Y/N: n
Wells Affected Number: Not reported
Samples Taken By: y
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: 3
Cause: Not reported
Source: Not reported
Source Type: C

Last Modified: 10/12/2010
Incident Phase: **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

47
SSW
1/4-1/2
0.272 mi.
1434 ft.

ROYSTER TRANSPORT COMPANY **NC LUST** **S121425623**
200 SHIPYARD BLVD. **N/A**
WILMINGTON, NC 28403

Relative:
Higher

Actual:
43 ft.

LUST:
Name: ROYSTER TRANSPORT COMPANY
Address: 200 SHIPYARD BLVD.
City,State,Zip: WILMINGTON, NC 28403
Facility ID: 00-0-000
UST Number: WI-1765

ROYSTER TRANSPORT COMPANY (Continued) **S121425623**

Incident Number:	20865
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	08/05/1999
Date Occur:	08/05/1999
Cleanup:	08/05/1999
Closure Request:	Not reported
Close Out:	02/02/2001
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	11/12/1999
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	161
Reel Num:	3911
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1910 -77.9430
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	ROYSTER TRANSPORT COMPANY
Contact Person:	MR. BOBBY BURGIN
Telephone:	Not reported
RP Address:	720 S. LAFAYETTE ST.
RP City,St,Zip:	SHELBY, NC 28150
RP County:	Not reported
Comments:	Not reported
5 Min Quad:	Not reported

PIRF:

Facility Id:	20865
Date Occurred:	8/5/1999
Date Reported:	11/15/1999
Description Of Incident:	SOIL CONTAMINATION DISCOVERED ABOVE STANDARDS DURING UST CLOSURE
Owner/Operator:	ROYSTER TRANSPORT COMPANY

ROYSTER TRANSPORT COMPANY (Continued) **S121425623**

Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	11/15/1999
Wells Affected Y/N:	Not reported
Samples Include:	Not reported
7#5 Minute Quad:	Not reported
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	MIN_SOIL
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	5/3/2001
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2/2/2001

Click here to access the North Carolina DEQ records for this facility:

L48 **SPRINGER-EUBANKS** **NC IMD** **S106936421**
SW **123 SHIPYARD BOULEVARD** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.276 mi.
1455 ft. **Site 1 of 6 in cluster L**

Relative: **Higher**

Actual: **38 ft.**

IMD:

Facility ID:	87137
Name:	SPRINGER-EUBANKS
Address:	123 SHIPYARD BOULEVARD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	9/3/2004
Submit Date:	1/10/2005
Incident Desc:	Location coordinates estimated from online map at www.topozone.com. Heating oil release discovered during assessment of diesel release. Reported on 01/10/05.
Operator:	Brown, Luther
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8

SPRINGER-EUBANKS (Continued) **S106936421**

Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	14
Type:	11
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	OTHER INORGANICS
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.1922
Longitude:	-77.9455
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

L49 **CENAMA INC** **SC LUST** **S119008922**
SW **123 SHIPYARD BLVD** **N/A**
1/4-1/2 **WILMINGTON, SC 28412**
0.276 mi.
1455 ft. **Site 2 of 6 in cluster L**

Relative:
Higher

Actual:
38 ft.

LUST:

Name:	CENAMA INC
Address:	123 SHIPYARD BLVD
City,State,Zip:	WILMINGTON, NC 28412
Release Number:	1
Facility ID:	10682
Release Status Number:	3
Substance:	PETRO
Tank Owner Company Name:	CENAMA INC
Tank Owner Last Name:	CENAMA INC
Tank Owner First name:	Not reported
NFA Date:	05/07/2013
Tank Owner City:	WILMINGTON
Confirmed Date:	03/18/1992
Release Date:	12/30/1991
EID:	1760912
Local Facility District:	Unknown
SCRBCA Class Number:	3AC
Release Fin Type Code:	WS
Qualified:	Y
Release Source:	UST
Local Fac Last Name:	CENAMA INC
Local Fac First Name:	Not reported
User Name:	MARTINJM
Cleanup Initiated Date:	03/18/1992
Prefix:	N
Total Score:	47

LUST:

Release Date:	12/30/1991
Cleanup Complete Date:	Not reported
Depth to Ground Water:	1
Ground Water Flow Direction:	NE
Release Number:	1
Confirmed date:	03/18/1992
RP Name:	WORSLEY COMPANIES INC
RP Address:	1410 COMMONWEALTH DR #202
RP City:	WILMINGTON
RP State:	NC
RP Zip:	28403
SCRBCA Class Code:	CLASS3AC
Project Manager:	MARTIN, JAMES M
Release Fin Type Code:	WS

L50 **SPRINGER EUBANK SHIPYARD OFFICE** **NC IMD** **S127494268**
SW **123 W. SHIPYARD BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC 28401**
0.276 mi.
1455 ft. **Site 3 of 6 in cluster L**

Relative:
Higher

Actual:
38 ft.

IMD:

Facility ID:	Not reported
Name:	SPRINGER EUBANK SHIPYARD OFFICE
Address:	123 W. SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC 28401
Date Occurred:	Not reported
Submit Date:	Not reported
Incident Desc:	Not reported
Operator:	Not reported
UST ID:	WI-387
Incident ID:	Not reported
Initials of UST Regional Contact:	NPM
Regional Office:	WIL
Responsible Party/Company Name:	SPRINGER EUBANK
Ownership:	Not reported
Responsible Party Contact Name:	GRETA STANLEY
Operation:	Not reported
Responsible Party Mailing Address:	123 W. SHIPYARD BLVD
Responsible Party City,State,Zip:	WILMINGTON, NC 28412
Ownership:	Not reported
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	Not reported
Type:	Not reported
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	1994-02-16 00:00:00
Whether Tank is Commercial or Non Commercial:	COMMERCIAL
Site Priority:	Not reported
Whether Tank is Regulated:	NON REGULATED
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	Not reported
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	L
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	0
Longitude:	0
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported

SPRINGER EUBANK SHIPYARD OFFICE (Continued) **S127494268**

Date Case Closed:	1994-02-16 00:00:00
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	1994-02-16 00:00:00
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	464
RP Owner?:	False
RP Operator?:	False
RP Landowner?:	False

L51 **SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI** **NC LAST** **S106936297**
SW **123 SHIPYARD BLVD** **NC LUST** **N/A**
1/4-1/2 **WILMINGTON, NC 28412** **NC IMD**
0.276 mi.
1455 ft. **Site 4 of 6 in cluster L**

Relative: **Higher**
Actual: **38 ft.**

LAST:

Name:	SPRINGER-EUBANKS	
Address:	123 SHIPYARD BOULEVARD	
City,State,Zip:	WILMINGTON, NC 28402	
Facility ID:	Not reported	
UST Number:	WI-87137	
Incident Number:	87137	
Contamination Type:		GW
Source Type:	14	
Product Type:	P	
Date Reported:	09/03/2004	
Date Occur:	09/03/2004	
Cleanup:	Not reported	
Closure Request:	Not reported	
Close Out:	Not reported	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		Not reported
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		I
Risk Class Based On Review:		H
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	Not reported	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	F	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	Yes	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	C	

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

RBCA GW: Not reported
PETOPT: 3
RPL: False
CD Num: 0
Reel Num: 0
RPOW: True
RPOP: False
Error Flag: 0
Error Code: Not reported
Valid: False
Lat/Long: Not reported
Lat/Long Decimal: 34.19262 -77.94489
Testlat: Not reported
Regional Officer Project Mgr: LEP
Region: WIL
Company: Springer-Eubanks Co., Inc.
Contact Person: greta stanley
Telephone: Not reported
RP Address: 123 Shipyard Boulevard
RP City,St,Zip: Wilmington, NC 28402
RP County: Not reported
Comments: Location coordinates estimated from online map at www.topozone.com. Heating oil release discovered during assessment of diesel release. Reported on 01/10/05. UST release also confirmed at site. See UST incident 32234and 32953
5 Min Quad: Not reported

PIRF:
Facility Id: 87137
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 5
Operation Type: 8
Type: Not reported
Location: Not reported
Site Priority: NOD
Priority Update: Not reported
Wells Affected Y/N: Not reported
Wells Affected Number: Not reported
Samples Taken By: Not reported
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: Not reported
Cause: Not reported
Source: Not reported
Source Type: 1

Last Modified: 1/10/2005
Incident Phase: **AS**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

LUST:

Name:	SPRINGER-EUBANKS HEATING OIL TANK
Address:	123 SHIPYARD BLVD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	Not reported
UST Number:	WI-7865
Incident Number:	32234
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	01/11/2005
Date Occur:	09/22/2005
Cleanup:	09/22/2005
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	NON COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	H
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Free product
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in House
RBCA GW:	Not reported
PETOPT:	4
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	N
Valid:	True
Lat/Long Decimal:	34.1922 -77.9448
Testlat:	Not reported
Regional Officer Project Mgr:	LEP
Region:	WIL
Company:	SPRINGER EUBANK OIL COMPANY
Contact Person:	GRETA STANLEY

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

Telephone:	9103431991
RP Address:	123 SHIPARD BLVD
RP City,St,Zip:	WILMINGTON, NC 28412
RP County:	Not reported
Comments:	1000 gallon heating oil tank, see AST incident #87137. 12/2015 reoort shows free product.See also incident 32953 - waste oil. One water supply well sampled annually. See Incident 87137 for a complete reports tab. Comingled plumes.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32234
Date Occurred:	12/22/2004
Date Reported:	1/12/2005
Description Of Incident:	Soil samples collected around a heating oil UST reveal contamination above state action levels.
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	4
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	9
Cause:	Not reported
Source:	Not reported
Ust Number:	P
Last Modified:	11/16/2020
Incident Phase:	**Follow Up**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

Name:	SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI
Address:	123 SHIPYARD BLVD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	Not reported
UST Number:	WI-7888
Incident Number:	32953
Contamination Type:	Soil
Source Type:	Leak-underground

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

Product Type:	PETROLEUM
Date Reported:	03/09/2015
Date Occur:	01/26/2015
Cleanup:	01/12/2015
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	H
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in House
RBCA GW:	Not reported
PETOPT:	5
RPL:	True
CD Num:	0
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	N
Valid:	True
Lat/Long Decimal:	34.1920 -77.9449
Testlat:	Not reported
Regional Officer Project Mgr:	LEP
Region:	WIL
Company:	SPRINGER EUBANK
Contact Person:	GRETA STANLEY
Telephone:	Not reported
RP Address:	123 SHIPYARD BLVD.
RP City,St,Zip:	WILMINGTON, NC 28412
RP County:	Not reported
Comments:	A search for the cause of recurrent FP found two 1000 gallon USTS. Because they were halfway under the building they were abandoned in place. One soil sample exceeded the soil-to-gw msccs. See other incidents at this location 87137, 32234. Asked for one monitoring well to be installed and added to the semi-annual monitoring schedule already in place. No physical file. See other two files.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32953
Date Occurred:	1/15/2015
Date Reported:	3/20/2015

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

Description Of Incident:	in search of FP source, ground penetrating radar discovered two USTs partially beneath the building. Tanks were abandoned in place and one soil sample
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	5
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	n
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	Not reported
Incident Phase:	**Not reported**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	32234
Name:	SPRINGER-EUBANKS HEATING OIL T
Address:	123 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	1/7/2005
Submit Date:	1/12/2005
Incident Desc:	Soil samples collected around a heating oil UST reveal contamination above state action levels.
Operator:	MITCH ROSE
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Y
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19
Longitude:	-77.94
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	32234
Last Modified:	2020-11-16 00:00:00
Incident Phase:	FU
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported

SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI (Continued) **S106936297**

Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

M52 **ROYSTER TRANSPORT CO., INC.** **NC IMD** **1002714956**
SW **206 SHIPYARD BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.282 mi.
1491 ft. **Site 1 of 3 in cluster M**

Relative: **Higher**

Actual: **40 ft.**

IMD:

Facility ID:	18900
Name:	ROYSTER TRANSPORT CO., INC.
Address:	206 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	7/30/1998
Submit Date:	8/18/1998
Incident Desc:	RP APPEARS TO HAVE REMOVED SOILS AND SOLID WASTE. INSPECTION SUGGESTS SITE TO BE CLEAN. WRITTEN DOCUMENTATION OF SUCH DOESNT EXIST.
Operator:	BURGIN, BOBBY
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	OTHER ORGANICS
Source:	12
Type:	5
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER PETROLEUM PROD.
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported

ROYSTER TRANSPORT CO., INC. (Continued) **1002714956**

Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

M53 **ROYSTER TRANSPORT CO.** **NC SHWS** **U001199307**
SW **206 SHIPYARD BLVD** **NC LAST** **N/A**
1/4-1/2 **WILMINGTON, NC 28401** **NC UST**
0.282 mi.
1491 ft. **Site 2 of 3 in cluster M**

Relative:
Higher

Actual:
40 ft.

SHWS:

Name:	ROYSTER TRANSPORT CO., INC.
Address:	206 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002426
Lat/Longitude:	34.191111 / -77.943333
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

LAST:

Name:	ROYSTER TRANSPORT CO., INC.
Address:	206 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	Not reported
UST Number:	WI-18900
Incident Number:	18900
Contamination Type:	SL
Source Type:	12
Product Type:	P
Date Reported:	07/30/1998
Date Occur:	07/30/1998
Cleanup:	Not reported

ROYSTER TRANSPORT CO. (Continued) **U001199307**

Closure Request:	Not reported	
Close Out:	Not reported	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		Not reported
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		L
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	0	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	Unknown	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	C	
RBCA GW:	Not reported	
PETOPT:	5	
RPL:	False	
CD Num:	0	
Reel Num:	0	
RPOW:	False	
RPOP:	False	
Error Flag:	0	
Error Code:	Not reported	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19111 -77.94333	
Testlat:	Not reported	
Regional Officer Project Mgr:		MCW
Region:		WIL
Company:		ROYSTER TRANSPORT CO., INC.
Contact Person:		BOBBY BURGIN
Telephone:		Not reported
RP Address:		P.O. BOX 146
RP City,St,Zip:		SHELBY, NC
RP County:		Not reported
Comments:	RP APPEARS TO HAVE REMOVED SOILS AND SOLID WASTE. INSPECTION SUGGESTS SITE TO BE CLEAN. WRITTEN DOCUMENTATION OF SUCH DOESNT EXIST.Asphalt, diesel and oil	
5 Min Quad:	Not reported	

PIRF:

Facility Id:	18900
Date Occurred:	Not reported
Date Reported:	Not reported
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	5
Operation Type:	8
Type:	Not reported
Location:	Not reported

ROYSTER TRANSPORT CO. (Continued) **U001199307**

Site Priority:	0NOD
Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	0
Samples Taken By:	Not reported
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Cause:	Not reported
Source:	Not reported
Source Type:	1
Last Modified:	12/15/2006
Incident Phase:	**RE**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

UST:

Name:	ROYSTER TRANSPORT CO.
Address:	206 SHIPYARD BLVD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000020437
Contact:	ROYSTER TRANSPORT CO., INC.
Contact Address1:	720 S LAFAYETTE STREET
Contact Address2:	Not reported
Contact City/State/Zip:	SHELBY, NC 28150-5810
FIPS County Desc:	New Hanover
Latitude:	34.2229
Longitude:	-77.9298
Tank Id:	1
Tank Status:	Removed
Installed Date:	04/20/1976
Perm Close Date:	08/04/1999
Product Name:	Diesel
Tank Capacity:	7000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Unknown

ROYSTER TRANSPORT CO. (Continued) **U001199307**

Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 2
Tank Status: Removed
Installed Date: 04/20/1976
Perm Close Date: 08/04/1999
Product Name: Gasoline, Gas Mix
Tank Capacity: 1000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 3
Tank Status: Removed
Installed Date: 04/20/1976
Perm Close Date: 08/04/1999
Product Name: Oil, New/Used/Mix
Tank Capacity: 550
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Unknown
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

M54 **ROYSTER TRANSPORT COMPANY** **NC IMD** **S105766173**
SW **206 SHIPYARD BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.282 mi.
1491 ft. **Site 3 of 3 in cluster M**

Relative: **Higher**

Actual: **40 ft.**

IMD:

Facility ID:	20865
Name:	ROYSTER TRANSPORT COMPANY
Address:	206 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	8/5/1999
Submit Date:	11/15/1999
Incident Desc:	SOIL CONTAMINATION DISCOVERED ABOVE STANDARDS DURING UST CLOSURE
Operator:	MR. BOBBY BURGIN
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	11/15/1999
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.20472222
Longitude:	-77.94111111
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported

ROYSTER TRANSPORT COMPANY (Continued) **S105766173**

Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	20865
Last Modified:	2001-05-03 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2001-02-02 00:00:00

N55 **SCHONAUER PROPERTY (JEFF)** **NC LUST** **S108407919**
NW **2129 MONROE STREET** **N/A**
1/4-1/2 **WILMINGTON, NC 28409**
0.290 mi.
1531 ft. **Site 1 of 3 in cluster N**

Relative:
Higher

Actual:
24 ft.

LUST:

Name:	SCHONAUER PROPERTY (JEFF)
Address:	2129 MONROE STREET
City,State,Zip:	WILMINGTON, NC 28409
Facility ID:	Not reported
UST Number:	WI-7208
Incident Number:	32338
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	05/18/2006
Date Occur:	05/18/2006
Cleanup:	05/18/2006
Closure Request:	Not reported
Close Out:	11/30/2006
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	NON COMMERCIAL

SCHONAUER PROPERTY (JEFF) (Continued) **S108407919**

Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	1
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	4
RPL:	True
CD Num:	461
Reel Num:	7208
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	34.1997 -77.9441
Testlat:	Not reported
Regional Officer Project Mgr:	JDP
Region:	WIL
Company:	Not reported
Contact Person:	JEFF SCHONAUER
Telephone:	9103672606
RP Address:	6020 GNATTS TRAIL
RP City,St,Zip:	WILMINGTON, NC 28409
RP County:	Not reported
Comments:	heating oil UST removed. NFA sent 11-30-06. File pulled for archiving in 9/2011 by SAK.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32338
Date Occurred:	5/16/2006
Date Reported:	5/16/2006
Description Of Incident:	Heating oil UST removed. Groundwater encountered. 14.6 tons of contaminated soil removed.
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	3
Type:	4
Location:	7
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported

SCHONAUER PROPERTY (JEFF) (Continued) **S108407919**

Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	Not reported
Source:	Not reported
Ust Number:	P
Last Modified:	11/30/2006
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

N56 **SCHONAUER PROPERTY (JEFF)** **NC LUST TRUST** **S108437632**
NW **2129 MONROE STREET** **N/A**
1/4-1/2 **WILIMINGTON, NC**
0.290 mi.
1531 ft. **Site 2 of 3 in cluster N**

Relative: **Higher**
Actual: **24 ft.**

LUST TRUST:

Name:	SCHONAUER PROPERTY (JEFF)
Address:	2129 MONROE STREET
City,State,Zip:	WILIMINGTON, NC
Facility ID:	Not reported
Site ID:	32338
Site Note:	Noncommercial; 100% eligible; $0 deductible.[CGS 03/08/07]
Site Eligible?:	True
Commercial Find:	100% Non-Commercial
Priority Rank:	Not reported
Deductable Amount:	0
3rd Party Deductable Amt:	0
Sum 3rd Party Amt Applied:	0

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57 **JACKSON STREET 2137** **NC LUST** **S111826032**
WNW **2137 JACKSON STREET** **NC LUST TRUST** **N/A**
1/4-1/2 **WILMINGTON, NC 28401**
0.299 mi.
1577 ft.

Relative: **Higher**
Actual: **25 ft.**

LUST:

Name:	JACKSON STREET 2137
Address:	2137 JACKSON STREET
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-7668
Incident Number:	32758
Contamination Type:	Soil

JACKSON STREET 2137 (Continued) **S111826032**

Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	03/05/2012
Date Occur:	03/05/2012
Cleanup:	03/05/2012
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	NON COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	H
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in House
RBCA GW:	Not reported
PETOPT:	4
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	True
Lat/Long Decimal:	34.1992 -77.9450
Testlat:	Not reported
Regional Officer Project Mgr:	WER
Region:	WIL
Company:	Not reported
Contact Person:	DIEDIENNE FAUSER
Telephone:	9106863319
RP Address:	606 HUGHES RD
RP City,St,Zip:	HAMPSTEAD, NC 28443
RP County:	Not reported
Comments:	soil samples taken during tank removal revealed contamination. Gene assigned this incident to Debbie on 8/8/12. several irrigation wells present within 250 feet. Soil below Residential. Stop funding norr sent. 8/16/2012
5 Min Quad:	Not reported

PIRF:

Facility Id:	32758
Date Occurred:	3/5/2012
Date Reported:	3/5/2012
Description Of Incident:	Not reported

JACKSON STREET 2137 (Continued) **S111826032**

Owner/Operator:	Not reported
Ownership:	4
Operation Type:	3
Type:	4
Location:	7
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	3
Source:	A
Ust Number:	P
Last Modified:	Not reported
Incident Phase:	**Not reported**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

LUST TRUST:

Name:	JACKSON STREET 2137
Address:	2137 JACKSON STREET
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Site ID:	32758
Site Note:	Noncommercial; 100% eligible; $0 deductible.[CGS 5/23/12]
Site Eligible?:	True
Commercial Find:	100% Non-Commercial
Priority Rank:	Not reported
Deductable Amount:	0
3rd Party Deductable Amt:	0
Sum 3rd Party Amt Applied:	0

L58 **S T G TRANSPORT - SHIPYARD BLVD** **NC LAST** **1005540340**
SW **2501 FLORIDA AVENUE** **NC IMD** **N/A**
1/4-1/2 **WILMINGTON, NC 28401** **FINDS**
0.299 mi. **ECHO**
1579 ft. **Site 5 of 6 in cluster L**

Relative:
Higher

Actual:
34 ft.

LAST:

Name:	STG TRUCKING, INC.	
Address:	2501 FLORIDA AVENUE	
City,State,Zip:	WILMINGTON, NC 28401	
Facility ID:	Not reported	
UST Number:	WI-86296	
Incident Number:	86296	
Contamination Type:		SL
Source Type:	12	
Product Type:	P	
Date Reported:	11/20/2001	
Date Occur:	11/15/2001	
Cleanup:	Not reported	
Closure Request:	Not reported	
Close Out:	07/03/2002	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		Not reported
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		Not reported
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	0	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	Unknown	
Flag:	Yes	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	A	
RBCA GW:	Not reported	
PETOPT:	4	
RPL:	False	
CD Num:	473	
Reel Num:	0	
RPOW:	False	
RPOP:	False	
Error Flag:	0	
Error Code:	Not reported	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19261 -77.94643	
Testlat:	Not reported	
Regional Officer Project Mgr:		BAR
Region:		WIL
Company:		STG TRANSPORT, INC.
Contact Person:		SCOTT GRESHAM
Telephone:		Not reported

S T G TRANSPORT - SHIPYARD BLVD (Continued) **1005540340**

RP Address: 2501 FLORIDA AVENUE
RP City,St,Zip: WILMINGTON, NC
RP County: Not reported
Comments: APPROXIMATELY 500 GALLONS OF #2 FUEL OIL WERE RELEASED FROM A TANKER DUE TO AN ACT OF VANDALISM. CONTAMINATED SOILS WERE EXCAVATED AND SENT TO A PERMITTED INCINERATOR/DISPOSAL FACILITY. NO GROUNDWATER CONTAMINATION WAS DISCOVERED DURING THE EXCAVATION A. File in archiving.
5 Min Quad: Not reported

PIRF:
Facility Id: 86296
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 5
Operation Type: 8
Type: Not reported
Location: Not reported
Site Priority: 0NOD
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: 0
Samples Taken By: Not reported
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: Not reported
Cause: Not reported
Source: Not reported
Source Type: 1

Last Modified: 7/3/2002
Incident Phase: **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: 7/3/2002

IMD:
Facility ID: 86296
Name: STG TRUCKING, INC.
Address: 2501 FLORIDA AVENUE
City,State,Zip: WILMINGTON, NC
Date Occurred: 11/20/2001
Submit Date: 7/31/2003
Incident Desc: APPROXIMATELY 500 GALLONS OF #2 FUEL OIL WERE RELEASED FROM A TANKER DUE TO AN ACT OF VANDALISM. CONTAMINATED SOILS WERE EXCAVATED AND SENT TO A PERMITTED INCIN

S T G TRANSPORT - SHIPYARD BLVD (Continued) **1005540340**

Operator:	GRESHAM, SCOTT
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	OTHER ORGANICS
Source:	12
Type:	4
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	0
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	HEATING OIL
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.192777
Longitude:	-77.945833
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported

S T G TRANSPORT - SHIPYARD BLVD (Continued) **1005540340**

Reference Number for Media Disk for Archived Record: Not reported
RP Owner?: Not reported
RP Operator?: Not reported
RP Landowner?: Not reported

FINDS:
Registry ID: 110006720307

Click Here:

Environmental Interest/Information System:
NC-FITS (North Carolina - Facility Identification Template For States) is North Carolina Department of Environment and Natural Resources' (NCDENR) Facility Identification Template for States that provides a common facility identifier in order to improve accessibility to comprehensive information about environmental regulated entities in the state of North Carolina.
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1005540340
Registry ID: 110006720307
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110006720307
Name: S T G TRANSPORT - SHIPYARD BLVD
Address: 2501 FLORIDA AVENUE
City,State,Zip: WILMINGTON, NC 28401

59
ESE
1/4-1/2
0.301 mi.
1589 ft.

ADAMS PAINTING SERVICE **NC SHWS** **S109015382**
722 WELLINGTON AVE **N/A**
WILMINGTON, NC

Relative:
Lower

Actual:
18 ft.

SHWS:
Name: ADAMS PAINTING SERVICE
Address: 722 WELLINGTON AVE
City,State,Zip: WILMINGTON, NC
EPAID: NONCD0002781
Lat/Longitude: 34.19503 / -77.93239
Geolocation Method: On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

N60 **MONROE STREET - 2121** **NC LAST** **S115705266**
NW **2121 MONROE STREET** **N/A**
1/4-1/2 **WILMINGTON, NC 28401**
0.314 mi.
1656 ft. **Site 3 of 3 in cluster N**

Relative: LAST:
Higher

Actual:
24 ft.

Name:	MONROE STREET - 2121	
Address:	2121 MONROE STREET	
City,State,Zip:	WILMINGTON, NC 28401	
Facility ID:	Not reported	
UST Number:	WI-88371	
Incident Number:	94213	
Contamination Type:		SL
Source Type:	12	
Product Type:	P	
Date Reported:	12/18/2013	
Date Occur:	12/18/2013	
Cleanup:	12/20/2013	
Closure Request:	Not reported	
Close Out:	01/13/2014	
Level Of Soil Cleanup Achieved:		S3
Tank Regulated Status:		N
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		N
Risk Classification:		Not reported
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	Not reported	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	RES	
MTBE:	No	
MTBE1:	Unknown	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	C	
RBCA GW:	Not reported	
PETOPT:	4	
RPL:	False	
CD Num:	0	
Reel Num:	0	
RPOW:	True	
RPOP:	True	
Error Flag:	0	
Error Code:	N	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.20023 -77.94438	
Testlat:	Not reported	
Regional Officer Project Mgr:		VM
Region:		WIL
Company:		Spinger Eubank Company, Inc.
Contact Person:		Springer Eubank
Telephone:		9103431991

MONROE STREET - 2121 (Continued) **S115705266**

RP Address: 123 shipyard blvd
RP City,St,Zip: wilmington, NC 28412
RP County: Not reported
Comments: /// pulled for archive 3.16.2016 ///
5 Min Quad: Not reported

PIRF:
Facility Id: 94213
Date Occurred: 10/25/2013
Date Reported: 1/27/2014
Description Of Incident: spill from waste oil tank and marine fuel tanks
Owner/Operator: Not reported
Ownership: 4
Operation Type: 8
Type: a
Location: 1
Site Priority: Not reported
Priority Update: Not reported
Wells Affected Y/N: n
Wells Affected Number: Not reported
Samples Taken By: y
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: 4
Cause: Not reported
Source: Not reported
Source Type: D

Last Modified: 1/13/2014
Incident Phase: **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

L61 **STONE HEAVY VEHICLE SPECIALISTS** **NC LAST** **S103131431**
SW **109 SHIPYARD BLVD** **NC IMD** **N/A**
1/4-1/2 **WILMINGTON, NC 28412**
0.315 mi.
1665 ft. **Site 6 of 6 in cluster L**

Relative:
Higher

Actual:
37 ft.

LAST:
Name: STONE HEAVY VEHICLE SPECIALISTS
Address: 109 SHIPYARD BLVD
City,State,Zip: WILMINGTON, NC 28412
Facility ID: Not reported
UST Number: WI-13830
Incident Number: 13830
Contamination Type: NO
Source Type: 19

STONE HEAVY VEHICLE SPECIALISTS (Continued) **S103131431**

Product Type:	P	
Date Reported:	09/13/1994	
Date Occur:	09/13/1994	
Cleanup:	Not reported	
Closure Request:	Not reported	
Close Out:	12/19/1994	
Level Of Soil Cleanup Achieved:		Not reported
Tank Regulated Status:		Not reported
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		L
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	0	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	Unknown	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	A	
RBCA GW:	Not reported	
PETOPT:	5	
RPL:	False	
CD Num:	473	
Reel Num:	0	
RPOW:	False	
RPOP:	False	
Error Flag:	0	
Error Code:	Not reported	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19194 -77.94555	
Testlat:	Not reported	
Regional Officer Project Mgr:		Not reported
Region:		WIL
Company:		STONE HEAVY VEHICLE SPECIALIST
Contact Person:		DAN MILLER JR./OWNER
Telephone:		Not reported
RP Address:		109 SHIPYARD BLVD, WILMINGTON,
RP City,St,Zip:		WILMINGTON, NC
RP County:		Not reported
Comments:	MINOR SPILL. File pulled for archiving on 12/13/2012 by LEP.	
5 Min Quad:	Not reported	

PIRF:

Facility Id:	13830
Date Occurred:	Not reported
Date Reported:	Not reported
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	5
Operation Type:	8

STONE HEAVY VEHICLE SPECIALISTS (Continued) **S103131431**

Type:	Not reported
Location:	Not reported
Site Priority:	0NOD
Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	0
Samples Taken By:	Not reported
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Cause:	Not reported
Source:	Not reported
Source Type:	1
Last Modified:	12/19/1994
Incident Phase:	**CO**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	12/19/1994

IMD:

Facility ID:		13830
Name:		STONE HEAVY VEHICLE SPECIALIST
Address:		109 SHIPYARD BLVD
City,State,Zip:		WILMINGTON, NC
Date Occurred:		9/13/1994
Submit Date:		4/18/1995
Incident Desc:	MINOR SPILL	
Operator:		MILLER JR./OWNER, DAN
UST ID:		Not reported
Incident ID:		Not reported
Initials of UST Regional Contact:		Not reported
Regional Office:		Not reported
Responsible Party/Company Name:		Not reported
Ownership:		5
Responsible Party Contact Name:		Not reported
Operation:		8
Responsible Party Mailing Address:		Not reported
Responsible Party City,State,Zip:		Not reported
Ownership:		Federal
Operation Type:		Not reported
Responsible Party County:		Not reported
Source of Contamination:		OTHER ORGANICS
Source:		12
Type:		5
Location:		Not reported
Petroleum Type:		Not reported
Date Incident Reported:		Not reported

STONE HEAVY VEHICLE SPECIALISTS (Continued) **S103131431**

Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER PETROLEUM PROD.
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

62
West
1/4-1/2
0.332 mi.
1752 ft.

HARRISON ST-2175 **NC LUST** **S118128343**
2175 HARRISON STREET **NC LUST TRUST** **N/A**
WILMINGTON, NC 28405 **NC INST CONTROL**

Relative:
Lower

Actual:
21 ft.

LUST:

Name:	HARRISON ST-2175
Address:	2175 HARRISON STREET
City,State,Zip:	WILMINGTON, NC 28405
Facility ID:	Not reported
UST Number:	WI-7921
Incident Number:	32972
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM

HARRISON ST-2175 (Continued) **S118128343**

Date Reported:	05/28/2015
Date Occur:	05/28/2015
Cleanup:	05/28/2015
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	NON COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	H
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	03/23/2016
Release Detection:	0
Current Status:	File Located in House
RBCA GW:	Not reported
PETOPT:	4
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	34.1974 -77.9465
Testlat:	Not reported
Regional Officer Project Mgr:	WER
Region:	WIL
Company:	SEAVIEW PROPERTY SOLUTIONS
Contact Person:	CHERYL POMERANZ, MAMER MANAGER
Telephone:	9106049557
RP Address:	PO BOX 66
RP City,St,Zip:	CAROLINA BEACH, NC 28428
RP County:	Not reported
Comments:	Kirk McDonald consultant
5 Min Quad:	Not reported

PIRF:

Facility Id:	32972
Date Occurred:	5/8/2015
Date Reported:	5/8/2015
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	3
Type:	4
Location:	7

HARRISON ST-2175 (Continued) **S118128343**

Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	Not reported
Incident Phase:	**Not reported**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

LUST TRUST:

Name:	HARRISON ST-2175
Address:	2175 HARRISON STREET
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Site ID:	32972
Site Note:	SCAN-------Noncommercial; first apply a $1,000 deductible then reimburse 90% of subsequent approved costs until a maximum deductible of $2,000 is reached. Then reimburse at 100%. [CGS 10/28/15]
Site Eligible?:	True
Commercial Find:	100% Non-Commercial
Priority Rank:	Not reported
Deductable Amount:	2000
3rd Party Deductable Amt:	0
Sum 3rd Party Amt Applied:	0

INST CONTROL:

Name:	HARRISON ST-2175
Address:	2175 HARRISON STREET
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-7921
Object ID:	5108
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	Open
COC:	Multi COC
Contamination Source:	UST System

HARRISON ST-2175 (Continued) **S118128343**

Received Date:	3/22/2016
Restricted Media:	Multi-Media
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 3-22-2016
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2318561.3338
Y Coord:	164552.04445

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63 **WILMINGTON HEALTH&REHAB CENTER** **NC LUST** **U004144591**
East **820 WELLINGTON AVENUE** **NC UST** **N/A**
1/4-1/2 **WILMINGTON, NC 28401**
0.347 mi.
1834 ft.

Relative:
Higher

Actual:
24 ft.

LUST:

Name:	WILMINGTON HEALTH AND REHAB
Address:	820 WELLINGTON AVE
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-7486
Incident Number:	32592
Contamination Type:	None
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	11/20/2009
Date Occur:	10/28/2009
Cleanup:	10/28/2009
Closure Request:	Not reported
Close Out:	12/02/2009
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	No
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0

WILMINGTON HEALTH&REHAB CENTER (Continued) **U004144591**

Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	True
CD Num:	489
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	34.1942 -77.9312
Testlat:	Not reported
Regional Officer Project Mgr:	MEC
Region:	WIL
Company:	SAVA SENIOR CARE
Contact Person:	MR. KIM BLASKO
Telephone:	6784437004
RP Address:	1 RAVINA DR, SUITE 1500
RP City,St,Zip:	ATLANTA, GA 30346
RP County:	Not reported
Comments:	confirmatory soil and gw results below detection limits. NFA issued. File pulled for archieving in June 2013 by sak
5 Min Quad:	Not reported

PIRF:

Facility Id:	32592
Date Occurred:	10/28/2009
Date Reported:	10/28/2009
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	1
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	3
Source:	A
Ust Number:	P
Last Modified:	12/2/2009
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported

WILMINGTON HEALTH&REHAB CENTER (Continued) **U004144591**

RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	WILMINGTON HEALTH&REHAB CENTER
Address:	820 WELLINGTON AVENUE
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000037075
Contact:	NEW HANOVER REALTY, LLC
Contact Address1:	910 RIDGEBROOK ROAD
Contact Address2:	Not reported
Contact City/State/Zip:	SPARKS GLENCOE, MD 21152-9390
FIPS County Desc:	New Hanover
Latitude:	34.19493
Longitude:	-77.93269

Tank Id:	1
Tank Status:	Temporarily Closed
Installed Date:	01/01/1982
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	1500
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Not reported
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

O64 **WAYNE'S EXXON** **NC IMD** **S106684472**
SE **2606 CAROLINA BEACH ROAD** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.357 mi.
1885 ft. **Site 1 of 3 in cluster O**

Relative:
Higher

Actual:
42 ft.

IMD:

Facility ID:	32178
Name:	WAYNE'S EXXON
Address:	2606 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	8/25/2004
Submit Date:	10/18/2004
Incident Desc:	Two soil samples in side-wall are above 10 ppm.
Operator:	WAYNE PETERS
UST ID:	Not reported

WAYNE'S EXXON (Continued) **S106684472**

Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Y
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19194444
Longitude:	-77.93472222
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported

WAYNE'S EXXON (Continued) **S106684472**

RP Operator?: Not reported
RP Landowner?: Not reported

Status:
Facility ID: 32178
Last Modified: 2005-02-25 00:00:00
Incident Phase: CO
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Sighned: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: 2005-02-25 00:00:00

O65 **EXXON # 4-6476** **NC LUST S101168928**
SE **2606 CAROLINA BCH RD** **NC IMD N/A**
1/4-1/2 **WILMINGTON, NC 28403**
0.357 mi.
1885 ft. **Site 2 of 3 in cluster O**

Relative: **Higher**
Actual: **42 ft.**

LUST:
Name: EXXON # 4-6476
Address: 2606 CAROLINA BCH RD
City,State,Zip: WILMINGTON, NC 28403
Facility ID: 00-0-000
UST Number: WI-1063
Incident Number: 10154
Contamination Type: Groundwater/Both
Source Type: Leak-underground
Product Type: PETROLEUM
Date Reported: 04/19/1993
Date Occur: 01/11/1993
Cleanup: 01/11/1993
Closure Request: Not reported
Close Out: 06/30/1998
Level Of Soil Cleanup Achieved: Not reported
Tank Regulated Status: REGULATED
Of Supply Wells: 0
Commercial/NonCommercial UST Site: COMMERCIAL
Risk Classification: L
Risk Class Based On Review: L
Corrective Action Plan Type: Not reported
NOV Issue Date: Not reported
NORR Issue Date: 12/20/1993
Site Priority: 70D
Phase Of LSA Req: Not reported
Site Risk Reason: Not reported
Land Use: Not reported
MTBE: Not reported
MTBE1: Unknown
Flag: No
Flag1: No
LUR Filed: Not reported

EXXON # 4-6476 (Continued) **S101168928**

Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	159
Reel Num:	3911
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1911 -77.9347
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	EXXON
Contact Person:	MR. FRANK MEDLIN
Telephone:	7045294263
RP Address:	309 RED BARN TRAIL
RP City,St,Zip:	MATTHEWS, NC 28105
RP County:	Not reported
Comments:	NFA
5 Min Quad:	Not reported

PIRF:

Facility Id:	10154
Date Occurred:	1/11/1993
Date Reported:	4/30/1993
Description Of Incident:	GROUNDWATER MONITORING CONFIRMED CONTAMINATION.
Owner/Operator:	MR. FRANK MEDLIN
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	70D
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	DD31S
Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	11/17/1998
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported

EXXON # 4-6476 (Continued) **S101168928**

RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	10/12/1998

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	10154
Name:	EXXON # 4-6476
Address:	2606 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	1/11/1993
Submit Date:	4/30/1993
Incident Desc:	GROUNDWATER MONITORING CONFIRMED CONTAMINATION.
Operator:	MR. FRANK MEDLIN
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	70D
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	DD31S
Intermediate Condition Present:	Not reported
Latitude:	34.19083333
Longitude:	-77.91805555
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported

EXXON # 4-6476 (Continued) **S101168928**

RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	10154
Last Modified:	1998-11-17 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	1998-10-12 00:00:00

O66 **EXXON 46476** **NC LUST U004138645**
SE **2606 CAROLINA BEACH ROAD** **NC UST N/A**
1/4-1/2 **WILMINGTON, NC 28412**
0.357 mi.
1885 ft. **Site 3 of 3 in cluster O**

Relative:
Higher

Actual:
42 ft.

LUST:

Name:	WAYNE'S EXXON
Address:	2606 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	00-0-000
UST Number:	WI-2433
Incident Number:	32178
Contamination Type:	Soil
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	10/18/2004
Date Occur:	08/25/2004
Cleanup:	08/25/2004
Closure Request:	Not reported
Close Out:	02/25/2005
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED

EXXON 46476 (Continued) **U004138645**

# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	1
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to 2L.0202 standards
PETOPT:	3
RPL:	False
CD Num:	271
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1920 -77.9347
Testlat:	Not reported
Regional Officer Project Mgr:	JDP
Region:	WIL
Company:	WAYNE'S EXXON
Contact Person:	WAYNE PETERS
Telephone:	9103950792
RP Address:	3502 OLEADER DRIVE
RP City,St,Zip:	WILMINGTON, NC 28403
RP County:	Not reported
Comments:	Two TPH samples in side-wall of tank basin are above 10 ppm. Irrigation well identified at South East corner of site. Additional information needed before closure. Soils are below soil-to-groundwater mscc. NFA.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32178
Date Occurred:	8/25/2004
Date Reported:	10/18/2004
Description Of Incident:	Two soil samples in side-wall are above 10 ppm.
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported

EXXON 46476 (Continued) **U004138645**

7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	2/25/2005
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2/25/2005

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	EXXON 46476
Address:	2606 CAROLINA BEACH ROAD
City,State,Zip:	WILMINGTON, NC 28412
Facility Id:	00-0-0000020190
Contact:	CLIFFORD W PETERS DBA WAYNES
Contact Address1:	2606 CAROLINA BEACH RD
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28412-1806
FIPS County Desc:	New Hanover
Latitude:	34.19121
Longitude:	-77.93479
Tank Id:	1
Tank Status:	Removed
Installed Date:	06/10/1986
Perm Close Date:	08/27/2004
Product Name:	Gasoline, Gas Mix
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

EXXON 46476 (Continued) **U004138645**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	06/10/1986
Perm Close Date:	08/27/2004
Product Name:	Gasoline, Gas Mix
Tank Capacity:	12000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	06/10/1986
Perm Close Date:	08/27/2004
Product Name:	Gasoline, Gas Mix
Tank Capacity:	8000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	4
Tank Status:	Removed
Installed Date:	06/10/1986
Perm Close Date:	08/27/2004
Product Name:	Oil, New/Used/Mix
Tank Capacity:	1000
Root Tank Id:	Not reported
Main Tank:	No

EXXON 46476 (Continued) **U004138645**

Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	5
Tank Status:	Removed
Installed Date:	06/10/1986
Perm Close Date:	08/27/2004
Product Name:	Fuel Oil
Tank Capacity:	1000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	No
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

P67 **HINSON PROPERTY HEATING OIL** **NC LUST** **S113193192**
SE **605 E. SHIPYARD BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC 28412**
0.375 mi.
1979 ft. **Site 1 of 2 in cluster P**

Relative:
Higher

Actual:
44 ft.

LUST:

Name:	HINSON PROPERTY HEATING OIL
Address:	605 E. SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	Not reported
UST Number:	WI-7744
Incident Number:	32830
Contamination Type:	Soil
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	01/26/2009
Date Occur:	01/14/2009
Cleanup:	01/15/2009
Closure Request:	Not reported
Close Out:	03/31/2009

HINSON PROPERTY HEATING OIL (Continued) **S113193192**

Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	NON COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	4
RPL:	True
CD Num:	459
Reel Num:	7744
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	True
Lat/Long Decimal:	34.1920 -77.9319
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	Not reported
Contact Person:	JILES HINSON
Telephone:	Not reported
RP Address:	204 CALADAN ROAD
RP City,St,Zip:	CASTLE HAYNE, NC 28429
RP County:	Not reported
Comments:	exploratory borings around heating oil tank exhibited odors. Tank and 13 tons of contaminated soil excavated. Stockpile samples dirty, confirmation samples BQL. No groundwater encountered close out.
5 Min Quad:	Not reported

PIRF:

Facility Id:	32830
Date Occurred:	1/14/2009
Date Reported:	1/26/2009
Description Of Incident:	experimental soil borings were conducted around tank and yielded petroleum vapors. Tank was excavated and contaminated soil was disposed.
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	3
Type:	4
Location:	7
Site Priority:	Not reported

HINSON PROPERTY HEATING OIL (Continued) **S113193192**

Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	4
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	Not reported
Incident Phase:	**Not reported**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

P68 **FORMER JIFFY LUBE** **NC IMD** **S127491882**
SE **601 SHIPYARD BLVD** **N/A**
1/4-1/2 **WILMINGTON, NC 28412**
0.386 mi.
2038 ft. **Site 2 of 2 in cluster P**

Relative: **Higher**

Actual: **44 ft.**

IMD:

Facility ID:		Not reported
Name:		FORMER JIFFY LUBE
Address:		601 SHIPYARD BLVD
City,State,Zip:		WILMINGTON, NC 28412
Date Occurred:		Not reported
Submit Date:		Not reported
Incident Desc:	Not reported	
Operator:		Not reported
UST ID:		WI-7380
Incident ID:		Not reported
Initials of UST Regional Contact:		MEC
Regional Office:		WIL
Responsible Party/Company Name:		S&S COMPANY OF WILMINGTON
Ownership:		Not reported
Responsible Party Contact Name:		STEPHEN HAGAN
Operation:		Not reported
Responsible Party Mailing Address:		306 GREENWICH LANE
Responsible Party City,State,Zip:		WILMINGTON, NC 28412
Ownership:		Not reported
Operation Type:		Not reported
Responsible Party County:		Not reported
Source of Contamination:		Not reported
Source:		Not reported

FORMER JIFFY LUBE (Continued) **S127491882**

Type:	Not reported
Location:	Not reported
Petroleum Type:	PETROLEUM
Date Incident Reported:	2008-02-29 00:00:00
Whether Tank is Commercial or Non Commercial:	COMMERCIAL
Site Priority:	Not reported
Whether Tank is Regulated:	REGULATED
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	Not reported
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	L
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.192
Longitude:	-77.9328
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	2008-08-26 00:00:00
Extent of Contamination:	None
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	0
Facility Phone Number:	9106175475
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	2008-02-29 00:00:00
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	GASOLINE/DIESEL/KEROSENE
Reference Number for Media Disk for Archived Record:	461
RP Owner?:	True
RP Operator?:	True
RP Landowner?:	True

Q69 **NCSPA - UREA WAREHOUSE** **NC IMD** **S104913609**
West **NCPA 2202 BURNETT BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.390 mi.
2061 ft. **Site 1 of 7 in cluster Q**

Relative: IMD:
Lower

Facility ID:	20400
Name:	NCSPA - UREA WAREHOUSE
Address:	NCPA 2202 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	9/9/1999

Actual:
17 ft.

NCSPA - UREA WAREHOUSE (Continued) **S104913609**

Submit Date:	8/25/1999
Incident Desc:	NFA FOR NITRATE CONTAMINATION
Operator:	BEDSOLE, LAYTON
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	8
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	State/Fed Lead
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	OTHER ORGANICS
Source:	12
Type:	7
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	FERTILIZERS
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported

NCSPA - UREA WAREHOUSE (Continued) **S104913609**

RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Q70 **NCSPA - DIESEL AGST SPILL** **NC IMD** **S106022356**
West **2202 BURNETT BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.398 mi.
2102 ft. **Site 2 of 7 in cluster Q**

Relative: **Lower**

Actual: **17 ft.**

IMD:

Facility ID:	14300
Name:	NCSPA - DIESEL AGST SPILL
Address:	2202 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	5/20/1995
Submit Date:	7/25/1995
Incident Desc:	SEE FILE FOR FURTHER UPDATES/INFO. INITIAL SOIL ABATEMENT SUBMITTED (8/29/1995)
Operator:	LAYTON BEDSOLE, H.
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	8
Responsible Party Contact Name:	Not reported
Operation:	2
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	State/Fed Lead
Operation Type:	Agricultural
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	14
Type:	11
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER INORGANICS
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	2
Initial reported risk of incident (never changes):	Not reported

NCSPA - DIESEL AGST SPILL (Continued) **S106022356**

7.5 Min Quad:	Not reported
5 Min Quad:	DD31M
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Q71 **NORTH CAROLINA STATE PORTS AUTHORITY** **NC SHWS** **S109015515**
West **2202 BURNETT BOULEVARD** **NC LAST** **N/A**
1/4-1/2 **WILMINGTON, NC 28402** **NC LUST**
0.398 mi. **NC LUST TRUST**
2102 ft. **Site 3 of 7 in cluster Q** **NC IMD**
NC ASBESTOS

Relative:
Lower

Actual:
17 ft.

SHWS:

Name:	NCSPA BLDG C-1
Address:	2202 BURNETT BLVD
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002194
Lat/Longitude:	34.19964 / -77.95307
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

LAST:

Name:	NCSPA - DIESEL AGST SPILL
Address:	2202 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-14300
Incident Number:	14300
Contamination Type:	SL
Source Type:	14
Product Type:	P
Date Reported:	03/20/1995
Date Occur:	03/20/1995
Cleanup:	03/20/1995
Closure Request:	Not reported

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

Close Out: 05/28/1996
Level Of Soil Cleanup Achieved: Not reported
Tank Regulated Status: Not reported
Of Supply Wells: 0
Commercial/NonCommercial UST Site: Not reported
Risk Classification: L
Risk Class Based On Review: L
Corrective Action Plan Type: Not reported
NOV Issue Date: Not reported
NORR Issue Date: Not reported
Site Priority: 0
Phase Of LSA Req: Not reported
Site Risk Reason: Not reported
Land Use: Not reported
MTBE: No
MTBE1: Unknown
Flag: No
Flag1: No
LUR Filed: Not reported
Release Detection: 0
Current Status: A
RBCA GW: Not reported
PETOPT: 3
RPL: False
CD Num: 612
Reel Num: 0
RPOW: False
RPOP: False
Error Flag: 0
Error Code: Not reported
Valid: False
Lat/Long: Not reported
Lat/Long Decimal: 34.20166 -77.95333
Testlat: Not reported
Regional Officer Project Mgr: Not reported
Region: WIL
Company: NCSPA - DIESEL AGST SPILL
Contact Person: H. LAYTON BEDSOLE
Telephone: Not reported
RP Address: P.O. BOX 9002
RP City,St,Zip: WILMINGTON, NC
RP County: Not reported
Comments: SEE FILE FOR FURTHER UPDATES/INFO. INITIAL SOIL ABATEMENT SUBMITTED (8/29/1995). Reported date is approximate./// pulled for archive 3.16.2016 ///
5 Min Quad: Not reported

PIRF:
Facility Id: 14300
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 8
Operation Type: 2
Type: Not reported
Location: Not reported
Site Priority: 0NOD

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	0
Samples Taken By:	Not reported
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Cause:	Not reported
Source:	Not reported
Source Type:	1
Last Modified:	5/28/1996
Incident Phase:	**CO**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	5/28/1996

Name:	NORTH CAROLINA STATE PORTS AUTHORITY
Address:	2202 BURNETT BOULEVARD
City,State,Zip:	WILMINGTON, NC 28402
Facility ID:	Not reported
UST Number:	WI-88123
Incident Number:	94015
Contamination Type:	GW
Source Type:	16
Product Type:	P
Date Reported:	04/15/1997
Date Occur:	04/14/1997
Cleanup:	Not reported
Closure Request:	Not reported
Close Out:	05/14/2008
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	Not reported
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	Not reported
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

LUR Filed:	Not reported
Release Detection:	0
Current Status:	A
RBCA GW:	Not reported
PETOPT:	5
RPL:	True
CD Num:	473
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long:	Not reported
Lat/Long Decimal:	34.34444 -77.95000
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	NCSPA
Contact Person:	Todd Walton
Telephone:	Not reported
RP Address:	2202 Burnett Blvd
RP City,St,Zip:	Wilmington, NC 28402
RP County:	Not reported
Comments:	xylenes were detected in a gw sample, but are thought to be related to an existing xylene plume which transects the site.File in archiving.
5 Min Quad:	Not reported

PIRF:

Facility Id:	94015
Date Occurred:	4/15/1997
Date Reported:	5/7/1997
Description Of Incident:	Drums with an oily product and contaminated soil were discovered while excavating for a fiber optic line. The drums and soil were removed.
Owner/Operator:	Not reported
Ownership:	7
Operation Type:	3
Type:	5
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	n
Wells Affected Number:	Not reported
Samples Taken By:	3
Samples Include:	s
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	9
Cause:	Not reported
Source:	Not reported
Source Type:	E
Last Modified:	5/14/2008
Incident Phase:	**CO**
NOV Issued:	Not reported
NORR Issued:	Not reported

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

LUST:

Name:	NC STATE PORTS AUTHORITY-UREA WAREHOUSE
Address:	2202 BURNETT BLVD
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	0-020095
UST Number:	WI-1729
Incident Number:	20371
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	08/12/1999
Date Occur:	06/07/1999
Cleanup:	08/12/1999
Closure Request:	Not reported
Close Out:	09/30/1999
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	07/23/1999
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	162
Reel Num:	3911
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1946 -77.9497
Testlat:	Not reported
Regional Officer Project Mgr:	DTM

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

Region:	WIL
Company:	NC STATE PORTS AUTHORITY
Contact Person:	MR. H. LAYTON BEDSOLE, JR.
Telephone:	Not reported
RP Address:	P.O. BOX 9002
RP City,St,Zip:	WILMINGTON, NC 28402
RP County:	Not reported
Comments:	DIESEL UST REMOVED IN 90
5 Min Quad:	Not reported

PIRF:

Facility Id:	20371
Date Occurred:	6/7/1999
Date Reported:	8/12/1999
Description Of Incident:	SITE ASSESSMENT FOUND GW TO BE CONTAMINATED. USTS REMOVED IN 1990.
Owner/Operator:	LAYTON BEDSOLE
Ownership:	7
Operation Type:	5
Type:	3
Location:	8
Site Priority:	U
Priority Update:	8/12/1999
Wells Affected Y/N:	Not reported
Samples Include:	Not reported
7#5 Minute Quad:	Not reported
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	PIRF
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	5/3/2001
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	9/30/1999

Click here to access the North Carolina DEQ records for this facility:

LUST TRUST:

Name:	N.C. STATE PORTS AUTHORITY - STEVEDORE SHOPS
Address:	2202 BURNETT BOULEVARD
City,State,Zip:	WILMINGTON, NC
Facility ID:	0-024651
Site ID:	12166
Site Note:	Not reported
Site Eligible?:	True

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

Commercial Find: 100% Commercial
Priority Rank: Low
Deductable Amount: 20000
3rd Party Deductable Amt: 100000
Sum 3rd Party Amt Applied: 0

IMD:

Facility ID:	Not reported
Name:	NC STATE PORTS AUTHORITY-WILM/1
Address:	2202 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	Not reported
Submit Date:	Not reported
Incident Desc:	Not reported
Operator:	Not reported
UST ID:	WI-576
Incident ID:	Not reported
Initials of UST Regional Contact:	NPM
Regional Office:	WIL
Responsible Party/Company Name:	NC STATE PORTS AUTHORITY
Ownership:	Not reported
Responsible Party Contact Name:	MR. H. LAYTON BEDSOLE, JR.
Operation:	Not reported
Responsible Party Mailing Address:	P.O. BOX 9002
Responsible Party City,State,Zip:	WILMINGTON, NC 28402
Ownership:	Not reported
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	Not reported
Type:	Not reported
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	NON COMMERCIAL
Site Priority:	Not reported
Whether Tank is Regulated:	NON REGULATED
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	Not reported
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	L
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	0
Longitude:	0
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported

NORTH CAROLINA STATE PORTS AUTHORITY (Continued) **S109015515**

RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	1997-08-26 00:00:00
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	462
RP Owner?:	False
RP Operator?:	False
RP Landowner?:	False

ASBESTOS:

Name:	C1 FERTILIZER WAREHOUSE
Address:	2202 BURNETT BLVD
City,State,Zip:	WILMINGTON, NC
Permit Number:	NC30859
NESHAP Number:	60112
Contractor:	Demolition & Asbestos Removal Inc
Owner Name:	NC State Port Authority 20-23-2107
Phone:	(910) 540-8013
Removal Start Date:	01-27-20
Removal End Date:	02-14-20
Demo Start Date:	Not reported
Demo End Date:	Not reported
Linear Feet:	300
Square Feet:	0
Cubic Feet:	0
Type:	R

Q72 **N.C. STATE PORTS** **NC LUST U003137176**
West **2200 BURNETT BOULEVARD** **NC UST N/A**
1/4-1/2 **WILMINGTON, NC 28406**
0.399 mi.
2109 ft. **Site 4 of 7 in cluster Q**

Relative: **Lower**

Actual: **16 ft.**

LUST:

Name:	WHEELING CORRUGATION CO.
Address:	2200 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	0-010172
UST Number:	WI-1107
Incident Number:	11527
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	11/09/1993
Date Occur:	04/01/1987
Cleanup:	04/01/1987
Closure Request:	Not reported

N.C. STATE PORTS (Continued) **U003137176**

Close Out:	10/17/2018
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	20
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	Not reported
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to 2L.0202 standards
PETOPT:	5
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.1918 -77.9500
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	ROLL FORMED PRODUCTS, INC.
Contact Person:	UNKNOWN
Telephone:	Not reported
RP Address:	1320 CENTER ST,. STE 201
RP City,St,Zip:	NEWTON, MA 08159
RP County:	Not reported
Comments:	18,800 mg/kg heavy oil beneath bldg fndtn. Could be closed with a NRP for soil and gw. Advised NCSPA of this. Soil excavation to be conducted June/July 2018 as slab is being removed. On June 26 & 27, 2018, the remainder of the soil contamination identified at the site was removed. Rpt rec 8/14/2018 that documented the removal of the contaminated soil. Soil hauled for treatment. Requested several gw related reports that we did not have on 8/23/18. A June 1, 1999 report rec on 8/24/2018 indicates gw samples bdl for 610 and 8260.
5 Min Quad:	Not reported

PIRF:

Facility Id:	11527
Date Occurred:	4/1/1987
Date Reported:	1/25/1994
Description Of Incident:	PETROLEUM CONTAM. SOILS WERE REMOVED AROUND AN OLD DRUM STORAGE AREA
Owner/Operator:	Not reported
Ownership:	4

N.C. STATE PORTS (Continued) **U003137176**

Operation Type:	5
Type:	5
Location:	1
Site Priority:	20E
Priority Update:	Not reported
Wells Affected Y/N:	n
Samples Include:	0
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Min_Soil
Err Type:	4
Cause:	7
Source:	G
Ust Number:	P
Last Modified:	10/17/2018
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	N.C. STATE PORTS
Address:	2200 BURNETT BOULEVARD
City,State,Zip:	WILMINGTON, NC 28406
Facility Id:	00-0-0000020095
Contact:	ROLL FORM PRODUCTS, INC.
Contact Address1:	P.O. BOX 3431
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28406
FIPS County Desc:	New Hanover
Latitude:	34.19656
Longitude:	-77.94794
Tank Id:	1
Tank Status:	Removed
Installed Date:	05/03/1971
Perm Close Date:	12/31/1986
Product Name:	Diesel
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes

N.C. STATE PORTS (Continued) **U003137176**

Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Q73 **WHEELING CORRUGATION CO.** **NC IMD** **1001728947**
West **2200 BURNETT BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.399 mi.
2109 ft. **Site 5 of 7 in cluster Q**

Relative: **Lower**

Actual: **16 ft.**

IMD:

Facility ID:	11527
Name:	WHEELING CORRUGATION CO.
Address:	2200 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	4/1/1987
Submit Date:	1/25/1994
Incident Desc:	PETROLEUM CONTAM. SOILS WERE REMOVED AROUND AN OLD DRUM STORAGE AREA.
Operator:	UNKNOWN
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	5
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Industrial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	20E
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Not reported

WHEELING CORRUGATION CO. (Continued) **1001728947**

Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19166666
Longitude:	-77.90555555
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	11527
Last Modified:	2018-10-17 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

R74 **GAS WORLD #4** **NC LUST** **S102403289**
SE **2607 CAROLINA BCH RD** **NC INST CONTROL** **N/A**
1/4-1/2 **WILMINGTON, NC 28401** **NC IMD**
0.405 mi.
2138 ft. **Site 1 of 2 in cluster R**

Relative:
Higher

Actual:
48 ft.

LUST:

Name:	GAS WORLD #4
Address:	2607 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-1348
Incident Number:	15716
Contamination Type:	Groundwater/Both

GAS WORLD #4 (Continued) **S102403289**

Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	06/07/1996
Date Occur:	06/07/1996
Cleanup:	06/07/1996
Closure Request:	Not reported
Close Out:	01/03/2017
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	ANP
NOV Issue Date:	06/08/2000
NORR Issue Date:	06/27/1996
Site Priority:	140B
Phase Of LSA Req:	Not reported
Site Risk Reason:	FGS
Land Use:	Not reported
MTBE:	Not reported
MTBE1:	Yes
Flag:	No
Flag1:	No
LUR Filed:	12/08/2016
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	True
Lat/Long Decimal:	34.1912 -77.9336
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	WORSLEY COMPANIES, INC.
Contact Person:	MR. CECIL WORSLEY
Telephone:	Not reported
RP Address:	P.O. BOX 3227
RP City,St,Zip:	WILMINGTON, NC 28406
RP County:	Not reported
Comments:	SUSPECTED RELEASE LETTER 5/21/96,FP DISCOVERED IN 1997. USTS REMOVED JULY 1998. Free product check conducted on April 6, 2009 did not yield dthe presence of free product so no evaluation was completed and submitted by the consultant. THERE ARE ADDITIONAL FILES FOR THIS INCIDENT IN THE UST STORE ROOM/PRINTER ROOM. Below GCL's in 2015, now low-risk. NRP NORR sent Oct 2015. NRP filed 12/8/2016 Deed Book 6023, Page 92-102. //// RECORDS AARE IN THE "CLOSED OS OF 3.9.2017" IN "ARCHIEVE" FOLDER
5 Min Quad:	Not reported

GAS WORLD #4 (Continued) **S102403289**

PIRF:

Facility Id:	15716
Date Occurred:	6/7/1996
Date Reported:	6/28/1996
Description Of Incident:	FREE PRODUCT WAS FOUND IN AT LEAST ONE MONITOR WELL.
Owner/Operator:	MR. CECIL WORSLEY
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	140B
Priority Update:	5/30/1998
Wells Affected Y/N:	Not reported
Samples Include:	0
7#5 Minute Quad:	Not reported
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	1/3/2017
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	10/15/2015
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	GAS WORLD #4
Address:	2607 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Project Number:	WI-1348
Object ID:	2482
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	12/7/2016
Restricted Media:	Multi-Media
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective

GAS WORLD #4 (Continued) **S102403289**

Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 12-7-2016
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2322489.776
Y Coord:	162328.1214

IMD:

Facility ID:	15716
Name:	GAS WORLD #4
Address:	2607 CAROLINA BCH RD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	6/7/1996
Submit Date:	6/28/1996
Incident Desc:	FREE PRODUCT WAS FOUND IN AT LEAST ONE MONITOR WELL.
Operator:	MR. CECIL WORSLEY
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	140B
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported

GAS WORLD #4 (Continued) **S102403289**

5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.191245493
Longitude:	-77.93365421
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	15716
Last Modified:	2017-01-03 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	2015-10-15 00:00:00
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Q75 **USMC CAMP LEJEUNE, BLDG SBB-2633** **NC LUST** **S106349150**
West **SETH WILLIAMS BLVD** **NC INST CONTROL** **N/A**
1/4-1/2 **CAMP LEJEUNE, NC 28542** **NC IMD**
0.417 mi.
2202 ft. **Site 6 of 7 in cluster Q**

Relative:
Lower

Actual:
15 ft.

LUST:

Name:	USMC CAMP LEJEUNE, BLDG SBB-2633
Address:	SETH WILLIAMS BLVD
City,State,Zip:	CAMP LEJEUNE, NC 28542
Facility ID:	00-7-000
UST Number:	WI-1730
Incident Number:	20385
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	04/05/1996

USMC CAMP LEJEUNE, BLDG SBB-2633 (Continued) **S106349150**

Date Occur:	01/24/1996
Cleanup:	04/05/1996
Closure Request:	Not reported
Close Out:	03/26/2012
Level Of Soil Cleanup Achieved:	Residential
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	No
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	03/30/2012
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	True
CD Num:	519
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.7050 -77.3771
Testlat:	Not reported
Regional Officer Project Mgr:	BAR
Region:	WIL
Company:	COMMANDING OFFICER
Contact Person:	EMD ANDREW SMITH BLDG 12
Telephone:	9104519610
RP Address:	PSC BOX 20004
RP City,St,Zip:	CAMP LEJEUNE, NC 285420004
RP County:	Not reported
Comments:	Was intermediate because of product. Soil below resid., gw below gcl's, therefore eligible for NFA with land-use restriction/NRP. File pulled for archiving in 2/2014
5 Min Quad:	Not reported

PIRF:

Facility Id:	20385
Date Occurred:	1/24/1996
Date Reported:	8/19/1999
Description Of Incident:	FREE PRODUCT WAS DISCOVERED ON-SITE.
Owner/Operator:	COMMANDING GENERAL
Ownership:	2
Operation Type:	1
Type:	3

USMC CAMP LEJEUNE, BLDG SBB-2633 (Continued) **S106349150**

Location:	1
Site Priority:	50I
Priority Update:	8/19/1999
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	X24M
Source Code:	PIRF
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	3/26/2012
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	USMC CAMP LEJEUNE, BLDG SBB-2633
Address:	SETH WILLIAMS BLVD
City,State,Zip:	CAMP LEJEUNE, NC
Project Number:	WI-1730
Object ID:	2939
DWM Contact:	Wilmington Regional Office (910) 796-7215
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	3/29/2012
Restricted Media:	Groundwater Only
Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 3-29-2012
Plat:	Not reported
Plat Date:	Not reported
X Coord:	2487721.4387

USMC CAMP LEJEUNE, BLDG SBB-2633 (Continued) **S106349150**

Y Coord: 351556.61434

IMD:

Facility ID:	20371
Name:	NC STATE PORTS AUTHORITY-UREA
Address:	Not reported
City,State,Zip:	WILMINGTON, NC
Date Occurred:	6/7/1999
Submit Date:	8/12/1999
Incident Desc:	SITE ASSESSMENT FOUND GW TO BE CONTAMINATED. USTS REMOVED IN 1990.
Operator:	MR. H. LAYTON BEDSOLE, JR.
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	7
Responsible Party Contact Name:	Not reported
Operation:	5
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	State
Operation Type:	Industrial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	8
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	U
Whether Tank is Regulated:	Not reported
Priority Update:	8/12/1999
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Other
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported

USMC CAMP LEJEUNE, BLDG SBB-2633 (Continued) **S106349150**

Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	20371
Last Modified:	2001-05-03 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	1999-09-30 00:00:00

Q76 **NC PORTS AUTHORITY-PARAXYLENE** **NC AST** **S105425387**
West **NC IMD** **N/A**
1/4-1/2 **, NC**
0.417 mi.
2202 ft. **Site 7 of 7 in cluster Q**

Relative:
Lower

Actual:
15 ft.

AST:

Name:	NC PORTS AUTHORITY
Address:	Not reported
City,State,Zip:	MOREHEAD CITY, NC 00000
Facility Id:	16016
Registration Number:	16002016
Certificate Number:	Not reported
Status Change:	Not reported
Date Change:	Not reported
Date Application Received:	Not reported
Owner Name:	Not reported
Facility Phone:	Not reported
Coordinate Source:	Not reported
Certificate of Registration Issued:	Not reported
Lat/Long:	Not reported

IMD:

Facility ID:	9402
Name:	NC PORTS AUTHORITY-PARAXYLENE
Address:	Not reported
City,State,Zip:	NC

NC PORTS AUTHORITY-PARAXYLENE (Continued) **S105425387**

Date Occurred:		Not reported
Submit Date:		11/10/1992
Incident Desc:	Not reported	
Operator:		Not reported
UST ID:		Not reported
Incident ID:		Not reported
Initials of UST Regional Contact:		Not reported
Regional Office:		Not reported
Responsible Party/Company Name:		Not reported
Ownership:		Not reported
Responsible Party Contact Name:		Not reported
Operation:		Not reported
Responsible Party Mailing Address:		Not reported
Responsible Party City,State,Zip:		Not reported
Ownership:		Not reported
Operation Type:		Not reported
Responsible Party County:		Not reported
Source of Contamination:		GASOLINE/DIESEL/KEROSENE
Source:		3
Type:		Not reported
Location:		Not reported
Petroleum Type:		Not reported
Date Incident Reported:		Not reported
Whether Tank is Commercial or Non Commercial:		Not reported
Site Priority:		Not reported
Whether Tank is Regulated:		Not reported
Priority Update:		Not reported
Notice of Regulatory Requirement:		Not reported
Wells Affected:		Not reported
Notice of Violation:		Not reported
Phase 1 or Phase 2:		Not reported
Num Affected:		Not reported
Site Priority:		Not reported
Type:		Not reported
Location:		Not reported
Current Risk Condition:		Not reported
Sampled By:		Not reported
Samples Include:		Not reported
Initial reported risk of incident (never changes):		Not reported
7.5 Min Quad:		Not reported
5 Min Quad:		Not reported
Intermediate Condition Present:		Not reported
Latitude:		Not reported
Longitude:		Not reported
Use of Land, Industrial:		Not reported
Corrective Action Plan Selected - up to 5:		Not reported
RBCA:		Not reported
Date Close Review Requested From RP or Owner:		Not reported
Date Case Closed:		Not reported
Extent of Contamination:		Not reported
Number of Supply Wells Located on Property:		Not reported
MTBE in Well Y/N/U Yes, No or Unknown:		Not reported
Facility Phone Number:		Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:		Not reported
Date Land Use Restriction Filed:		Not reported
Date Cleanup Initiated:		Not reported
Record Status:		Not reported

NC PORTS AUTHORITY-PARAXYLENE (Continued) **S105425387**

RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

S77 **US MARINE CORPS RESERVE CENTER** **NC LUST** **U003137244**
West **2150 BURNETT BLVD** **NC LAST** **N/A**
1/4-1/2 **WILMINGTON, NC 28402** **NC UST**
0.430 mi. **NC ASBESTOS**
2269 ft. **Site 1 of 2 in cluster S**

Relative: **Lower**
Actual: **17 ft.**

LUST:

Name:	USMC RESERVE CENTER
Address:	2150 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-956
Incident Number:	7090
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	06/18/1991
Date Occur:	11/18/1991
Cleanup:	11/18/1991
Closure Request:	Not reported
Close Out:	01/18/1995
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	monitoring only
NOV Issue Date:	Not reported
NORR Issue Date:	12/09/1991
Site Priority:	35E
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	43
Reel Num:	3785
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported

US MARINE CORPS RESERVE CENTER (Continued) **U003137244**

Valid:	False
Lat/Long Decimal:	34.1975 -77.9490
Testlat:	Not reported
Regional Officer Project Mgr:	SAK
Region:	WIL
Company:	DEPT. OF THE NAVY
Contact Person:	H.J. FRASER
Telephone:	Not reported
RP Address:	P.O. BOX 10068
RP City,St,Zip:	CHARLESTON, SC 294110068
RP County:	Not reported
Comments:	NFA, was brp site+
5 Min Quad:	Not reported

PIRF:

Facility Id:	7090
Date Occurred:	6/18/1991
Date Reported:	12/12/1991
Description Of Incident:	CONTAMINATION WAS DISCOVERED DURING TANK CLOSURE.
Owner/Operator:	H.J. FRASER
Ownership:	2
Operation Type:	1
Type:	5
Location:	1
Site Priority:	35E
Priority Update:	12/4/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	2
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	2
Cause:	7
Source:	A
Ust Number:	P
Last Modified:	1/26/1995
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	1/18/1995

Click here to access the North Carolina DEQ records for this facility:

LAST:

Name:	FORMER MARINE CORPS RESERVE TRAINING CENTER
Address:	2150 BURNETT BOULEVARD
City,State,Zip:	WILMINGTON, NC 28401

US MARINE CORPS RESERVE CENTER (Continued) **U003137244**

Facility ID:	Not reported	
UST Number:	WI-88520	
Incident Number:	94338	
Contamination Type:		SL
Source Type:	Not reported	
Product Type:	P	
Date Reported:	12/21/2016	
Date Occur:	07/31/2015	
Cleanup:	07/31/2015	
Closure Request:	Not reported	
Close Out:	12/21/2016	
Level Of Soil Cleanup Achieved:		S3
Tank Regulated Status:		Not reported
# Of Supply Wells:	0	
Commercial/NonCommercial UST Site:		Not reported
Risk Classification:		Not reported
Risk Class Based On Review:		L
Corrective Action Plan Type:		Not reported
NOV Issue Date:	Not reported	
NORR Issue Date:	Not reported	
Site Priority:	Not reported	
Phase Of LSA Req:	Not reported	
Site Risk Reason:	Not reported	
Land Use:	Not reported	
MTBE:	No	
MTBE1:	Unknown	
Flag:	No	
Flag1:	No	
LUR Filed:	Not reported	
Release Detection:	0	
Current Status:	A	
RBCA GW:	Not reported	
PETOPT:	3	
RPL:	True	
CD Num:	666	
Reel Num:	0	
RPOW:	False	
RPOP:	False	
Error Flag:	0	
Error Code:	N	
Valid:	False	
Lat/Long:	Not reported	
Lat/Long Decimal:	34.19689 -77.94879	
Testlat:	Not reported	
Regional Officer Project Mgr:		bar
Region:		WIL
Company:		commanding officer, navfac mid
Contact Person:		bryan revell, code OPQE3
Telephone:		Not reported
RP Address:		9742 maryland ave
RP City,St,Zip:		norfolk, VA 23511
RP County:		Not reported
Comments:	source unknown, 81mg/kg TPHD, below action level of 100 mg/kg. Nfa. File archived 1/10/17.	
5 Min Quad:	Not reported	

PIRF:

Facility Id:	94338

US MARINE CORPS RESERVE CENTER (Continued) **U003137244**

Date Occurred:	Not reported
Date Reported:	Not reported
Description Of Incident:	TPH diesel soil result of 81 mg/kg. Source unknown. Below action level of 100. Saple obtained for real estate purposes.
Owner/Operator:	Not reported
Ownership:	2
Operation Type:	3
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	Not reported
Samples Taken By:	Y
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	9
Cause:	Not reported
Source:	Not reported
Source Type:	P
Last Modified:	12/21/2016
Incident Phase:	**CO**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

UST:

Name:	US MARINE CORPS RESERVE CENTER
Address:	2150 BURNETT BLVD
City,State,Zip:	WILMINGTON, NC 28402
Facility Id:	00-0-0000020504
Contact:	US MARINE CORPS RESERVE CENTER
Contact Address1:	2150 BURNETT BLVD
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28402
FIPS County Desc:	New Hanover
Latitude:	34.19754
Longitude:	-77.94903
Tank Id:	1
Tank Status:	Removed
Installed Date:	11/02/1985
Perm Close Date:	06/05/1995
Product Name:	Oil, New/Used/Mix
Tank Capacity:	500
Root Tank Id:	Not reported
Main Tank:	No

US MARINE CORPS RESERVE CENTER (Continued) **U003137244**

Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	11/02/1985
Perm Close Date:	06/05/1995
Product Name:	Oil, New/Used/Mix
Tank Capacity:	250
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Other
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

ASBESTOS:

Name:	FORMER MARINE CORPS RESERVE CENTER
Address:	2150 BURNETT BLVD
City,State,Zip:	WILMINGTON, NC
Permit Number:	NC28161
NESHAP Number:	54624
Contractor:	Rhem Insulation Inc
Owner Name:	US Navy
Phone:	(757) 341-0394
Removal Start Date:	01-22-18
Removal End Date:	02-28-18
Demo Start Date:	Not reported
Demo End Date:	Not reported
Linear Feet:	2,000
Square Feet:	0
Cubic Feet:	0
Type:	R

S78 **USMC RESERVE CENTER** **NC IMD** **S101168295**
West **2150 BURNETT BLVD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.430 mi.
2269 ft. **Site 2 of 2 in cluster S**

Relative: **Lower**

Actual: **17 ft.**

IMD:

Facility ID:	7090
Name:	USMC RESERVE CENTER
Address:	2150 BURNETT BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	11/18/1991
Submit Date:	12/12/1991
Incident Desc:	CONTAMINATION WAS DISCOVERED DURING TANK CLOSURE.
Operator:	H.J. FRASER
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	2
Responsible Party Contact Name:	Not reported
Operation:	Not reported
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Military
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	35E
Whether Tank is Regulated:	Not reported
Priority Update:	12/4/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	2
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.19444444
Longitude:	-77.94833333
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported

USMC RESERVE CENTER (Continued) **S101168295**

Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	7090
Last Modified:	1995-01-26 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	1995-01-18 00:00:00

79
North
1/4-1/2
0.431 mi.
2277 ft.

FAST FARE NC 723
2069 CAROLINA BEACH RD
WILMINGTON, NC 28401

NC LUST **1000448916**
NC IMD **NCD986175461**
RCRA NonGen / NLR

Relative:
Higher

Actual:
23 ft.

LUST:

Name:	FAST FARE 723
Address:	2069 CAROLINA BCH RD.
City,State,Zip:	WILMINGTON, NC 28403
Facility ID:	00-0-000
UST Number:	WI-910
Incident Number:	6679
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	04/11/1991
Date Occur:	04/11/1991
Cleanup:	04/11/1991
Closure Request:	Not reported
Close Out:	03/23/2005
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL

FAST FARE NC 723 (Continued) **1000448916**

Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	75E
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	No
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to 2L.0202 standards
PETOPT:	3
RPL:	False
CD Num:	271
Reel Num:	0
RPOW:	True
RPOP:	True
Error Flag:	0
Error Code:	Not reported
Valid:	True
Lat/Long Decimal:	34.2052 -77.9427
Testlat:	Not reported
Regional Officer Project Mgr:	JDP
Region:	WIL
Company:	CROWN CENTRAL PETROLEUM CORP.
Contact Person:	MR. JOHN WOLF
Telephone:	4105397400
RP Address:	P. O. BOX 1168
RP City,St,Zip:	BALTIMORE, MD 21203
RP County:	Not reported
Comments:	CROWN CENTRAL PETROLEUM CORP., Currently a Produce Market (2004). No wells identified during site visit. Site and residence served with public water. 158 tons of contaminated soils removed during closure. NFA sent 3-23-05 - See Aquifer Protection for additional sampling for PCE contaminate if applicable. TA non-directed for well abandonment.
5 Min Quad:	Not reported

PIRF:

Facility Id:	6679
Date Occurred:	4/11/1991
Date Reported:	6/27/1991
Description Of Incident:	TANK CLOSURE REPORT SHOWED SOIL AND GW CONTAMINATION PRESENT.
Owner/Operator:	MR. MATTHEW GILMORE
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	75E
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	1

FAST FARE NC 723 (Continued) **1000448916**

5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	3/23/2005
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	3/23/2005

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	6679
Name:	FAST FARE 723
Address:	2069 CAROLINA BCH RD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	4/11/1991
Submit Date:	6/27/1991
Incident Desc:	TANK CLOSURE REPORT SHOWED SOIL AND GW CONTAMINATION PRESENT.
Operator:	MR. JOHN WOLF
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	75E
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported

FAST FARE NC 723 (Continued) **1000448916**

Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	1
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.20527777
Longitude:	-77.94277777
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	6679
Last Modified:	2005-03-23 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2005-03-23 00:00:00

RCRA NonGen / NLR:

Date Form Received by Agency:		19970915
Handler Name:	FAST FARE NC 723	
Handler Address:		2069 CAROLINA BEACH RD

FAST FARE NC 723 (Continued) **1000448916**

Handler City,State,Zip:	WILMINGTON, NC 28401
EPA ID:	NCD986175461
Contact Name:	LEONARD EDMUNDSON
Contact Address:	658 SPENCE AVE
Contact City,State,Zip:	GOLDSBORO, NC 27534
Contact Telephone:	919-778-1892
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	04
Land Type:	Private
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	CAROLINA BEACH RD
Mailing City,State,Zip:	WILMINGTON, NC 28401
Owner Name:	MAOLA MILK AND ICE CREAM INC
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No

FAST FARE NC 723 (Continued) **1000448916**

TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20150414
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MAOLA MILK AND ICE CREAM INC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO DRAWER S 305 AVENUE C
Owner/Operator City,State,Zip:	NEW BERN, NC 28560
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19970915
Handler Name: FAST FARE NC 723	
Federal Waste Generator Description:	Not reported
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

FAST FARE NC 723 (Continued) **1000448916**

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

T80 **USA RESERVE XVIII AIRBORNE CORPS** **SEMS-ARCHIVE** **1015735048**
NNE **2144 LAKESHORE DRICE** **NC0210021929**
1/4-1/2 **WILMINGTON, NC 28401**
0.432 mi.
2279 ft. **Site 1 of 3 in cluster T**

Relative:
Lower

Actual:
7 ft.

SEMS Archive:
Site ID: 0403173
EPA ID: NC0210021929
Name: USA RESERVE XVIII AIRBORNE CORPS
Address: 2144 LAKESHORE DRICE
Address 2: Not reported
City,State,Zip: WILMINGTON, NC 28401
Cong District: 07
FIPS Code: 37129
FF: Y
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:
Region: 04
Site ID: 0403173
EPA ID: NC0210021929
Site Name: USA RESERVE XVIII AIRBORNE CORPS
NPL: N
FF: Y
OU: 00
Action Code: VS
Action Name: ARCH SITE
SEQ: 1
Start Date: Not reported
Finish Date: 2006-03-21 05:00:00
Qual: Not reported
Current Action Lead: EPA Perf In-Hse

Region: 04
Site ID: 0403173
EPA ID: NC0210021929
Site Name: USA RESERVE XVIII AIRBORNE CORPS
NPL: N
FF: Y
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1988-11-16 05:00:00
Finish Date: 1988-11-16 05:00:00

USA RESERVE XVIII AIRBORNE CORPS (Continued) **1015735048**

Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	04
Site ID:	0403173
EPA ID:	NC0210021929
Site Name:	USA RESERVE XVIII AIRBORNE CORPS
NPL:	N
FF:	Y
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	1990-08-29 04:00:00
Qual:	L
Current Action Lead:	Fed Fac
Region:	04
Site ID:	0403173
EPA ID:	NC0210021929
Site Name:	USA RESERVE XVIII AIRBORNE CORPS
NPL:	N
FF:	Y
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	2
Start Date:	1991-10-31 05:00:00
Finish Date:	2005-09-13 04:00:00
Qual:	N
Current Action Lead:	St Perf

T81 **US ARMY RESERVE CENTER-WILMINGTON** **NC LUST S102089288**
NNE **2144 LAKE SHORE DR.** **NC IMD N/A**
1/4-1/2 **WILMINGTON, NC 28401**
0.436 mi.
2301 ft. **Site 2 of 3 in cluster T**

Relative: LUST:
Lower

Actual:
13 ft.

Name:	US ARMY RESERVE CENTER-WILMINGTON
Address:	2144 LAKE SHORE DR.
City,State,Zip:	WILMINGTON, NC 284017297
Facility ID:	Not reported
UST Number:	WI-1313
Incident Number:	15294
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	02/16/1994
Date Occur:	12/01/1993
Cleanup:	02/16/1994
Closure Request:	Not reported
Close Out:	04/04/2001
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	NON REGULATED
# Of Supply Wells:	0

US ARMY RESERVE CENTER-WILMINGTON (Continued) **S102089288**

Commercial/NonCommercial UST Site:	NON COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	excavation
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	60E
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	161
Reel Num:	3911
RPOW:	True
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long Decimal:	34.2041 -77.9361
Testlat:	Not reported
Regional Officer Project Mgr:	DTM
Region:	WIL
Company:	DEPARTMENT OF ARMY
Contact Person:	LT. COL. WARREN MORGAN, JR.
Telephone:	Not reported
RP Address:	HEADQUAR. 120 ARMY RES. COMM.
RP City,St,Zip:	FORT JACKSON, SC 292076070
RP County:	Not reported
Comments:	FP
5 Min Quad:	Not reported

PIRF:

Facility Id:	15294
Date Occurred:	11/16/1993
Date Reported:	4/16/1996
Description Of Incident:	SITE ASSESSMENT DOCUMENTS GW CONTAMINATION.
Owner/Operator:	LT. COL. WARREN MORGAN, JR.
Ownership:	2
Operation Type:	1
Type:	4
Location:	1
Site Priority:	60E
Priority Update:	5/30/1998
Wells Affected Y/N:	N
Samples Include:	0
7#5 Minute Quad:	3
5 Minute Quad:	1
Pirf/Min Soil:	Not reported
Release Code:	DD31L

US ARMY RESERVE CENTER-WILMINGTON (Continued) **S102089288**

Source Code:	Pirf
Err Type:	Not reported
Cause:	Not reported
Source:	Not reported
Ust Number:	Not reported
Last Modified:	4/17/2001
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	4/6/2001

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	15294
Name:	US ARMY RESERVE CENTER-WILMING
Address:	2144 LAKE SHORE DR.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	12/1/1993
Submit Date:	4/16/1996
Incident Desc:	SITE ASSESSMENT DOCUMENTS GW CONTAMINATION.
Operator:	LT. COL. WARREN MORGAN, JR.
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	2
Responsible Party Contact Name:	Not reported
Operation:	1
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Military
Operation Type:	Public Service
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	60E
Whether Tank is Regulated:	Not reported
Priority Update:	5/30/1998
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported

US ARMY RESERVE CENTER-WILMINGTON (Continued) **S102089288**

Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	DD31L
Intermediate Condition Present:	Not reported
Latitude:	34.20416666
Longitude:	-77.93611111
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	15294
Last Modified:	2001-04-17 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	2001-04-06 00:00:00

82
SW
1/4-1/2
0.438 mi.
2313 ft.

NC STATE PORTS AUTHORITY-WILMINGTON
45 SHIPYARD BLVD.
WILMINGTON, NC

NC IMD **S127493206**
N/A

Relative:
Higher

Actual:
28 ft.

IMD:

Facility ID:	Not reported
Name:	NC STATE PORTS AUTHORITY-WILMINGTON
Address:	45 SHIPYARD BLVD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	Not reported
Submit Date:	Not reported
Incident Desc:	Not reported
Operator:	Not reported
UST ID:	WI-577
Incident ID:	Not reported
Initials of UST Regional Contact:	NPM
Regional Office:	WIL
Responsible Party/Company Name:	NC STATE PORTS AUTHORITY
Ownership:	Not reported
Responsible Party Contact Name:	MR. H. LAYTON BEDSOLE, JR.
Operation:	Not reported
Responsible Party Mailing Address:	P.O. BOX 9002
Responsible Party City,State,Zip:	WILMINGTON, NC 28402
Ownership:	Not reported
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	Not reported
Type:	Not reported
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	COMMERCIAL
Site Priority:	Not reported
Whether Tank is Regulated:	REGULATED
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Not reported
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	Not reported
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	L
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	0
Longitude:	0
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported

NC STATE PORTS AUTHORITY-WILMINGTON (Continued) **S127493206**

Date Case Closed:	1994-08-16 00:00:00
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	0
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	U
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	ARCHIVED RECORD
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	462
RP Owner?:	False
RP Operator?:	False
RP Landowner?:	False

R83 **COASTAL DRYCLEANERS GLAM-O-RAM** **NC IMD** **S103131665**
SE **2629 CAROLINA BEACH RD.** **N/A**
1/4-1/2 **WILMINGTON, NC**
0.444 mi.
2346 ft. **Site 2 of 2 in cluster R**

Relative: **Higher**
Actual: **53 ft.**

IMD:

Facility ID:	16374
Name:	COASTAL DRYCLEANERS GLAM-O-RAM
Address:	2629 CAROLINA BEACH RD.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	10/11/1996
Submit Date:	7/30/2003
Incident Desc:	DSHWM DOESNT WANT TO BE INVOLVED SITE WAS TRANFERRED TO THE DIVISION OF WASTE MANAGEMENT ON 4/11/2000
Operator:	ZIMMER, JEFFREY
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	7
Type:	11
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	80
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N

COASTAL DRYCLEANERS GLAM-O-RAM (Continued) **S103131665**

Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER INORGANICS
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.190555
Longitude:	-77.933055
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

84
WNW
1/4-1/2
0.456 mi.
2410 ft.

GREEN PROPERTY (WILLIE) **NC LUST TRUST** **S113486613**
121 CENTRAL BLVD **N/A**
WILMINGTON, NC

Relative:
Higher

Actual:
23 ft.

LUST TRUST:

Name:	GREEN PROPERTY (WILLIE)
Address:	121 CENTRAL BLVD
City,State,Zip:	WILMINGTON, NC
Facility ID:	Not reported
Site ID:	32845
Site Note:	Noncommercial; 100% eligible; $0 deductible.[CGS 8/13/13]
Site Eligible?:	True
Commercial Find:	100% Non-Commercial
Priority Rank:	Not reported
Deductable Amount:	0
3rd Party Deductable Amt:	0
Sum 3rd Party Amt Applied:	0

T85 **ARMY RESERVE (WILMINGTON)** **RCRA-VSQG** **1000102367**
NNE **2144 LAKESHORE DR** **NC SHWS** **NC0210021929**
1/4-1/2 **WILMINGTON, NC 28401** **FINDS**
0.464 mi. **ECHO**
2452 ft. **Site 3 of 3 in cluster T** **DOCKET HWC**

Relative: **Lower**
Actual: **7 ft.**

RCRA-VSQG:

Date Form Received by Agency:	19900810
Handler Name:	ARMY RESERVE XVIII AIRBORNE CORPS
Handler Address:	2144 LAKESHORE DR
Handler City,State,Zip:	WILMINGTON, NC 28401
EPA ID:	NC0210021929
Contact Name:	BRUCE PARKER
Contact Address:	2144 LAKESHORE DR
Contact City,State,Zip:	WILMINGTON, NC 28401
Contact Telephone:	910-396-8207
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	04
Land Type:	Federal
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	AFZA FE EE
Mailing City,State,Zip:	FORT BRAGG, NC 28307
Owner Name:	DEPARTMENT OF ARMY
Owner Type:	Federal
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	The land is federally-owned, The site is federally-owned
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

ARMY RESERVE (WILMINGTON) (Continued) **1000102367**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20060104
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	DEPARTMENT OF ARMY
Legal Status:	Federal
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19900810
Handler Name:	ARMY RESERVE XVIII AIRBORNE CORPS
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No

ARMY RESERVE (WILMINGTON) (Continued) **1000102367**

Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

SHWS:
Name: USA RESERVE XVIII AIRBORNE CORPS
Address: 2144 LAKESHORE DR
City,State,Zip: WILMINGTON, NC
EPAID: NC0210021929
Lat/Longitude: Not reported
Geolocation Method: Not reported

Click here to access the North Carolina DEQ records for this facility:

FINDS:
Registry ID: 110004014744

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
SUPERFUND (NON-NPL)

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000102367
Registry ID: 110004014744
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004014744
Name: ARMY RESERVE XVIII AIRBORNE CORPS
Address: 2144 LAKESHORE DR
City,State,Zip: WILMINGTON, NC 28401

DOCKET HWC:
Agency: ARMY
Facility ID: NC0210021929

ARMY RESERVE (WILMINGTON) (Continued) **1000102367**

Name:	ARMY RESERVE (WILMINGTON)
Address:	2144 LAKESHORE DR
City,State,Zip:	WILMINGTON, NC 28401
Reporting Mechanism:	RCRA 3010
Status:	On MDL
Added Date:	11/16/1988

86
North
1/4-1/2
0.499 mi.
2637 ft.

CANNON STATION-SUNSET AUTO **NC LUST U004138591**
2039 CAROLINA BEACH RD **NC UST N/A**
WILMINGTON, NC 28401

Relative:
Lower

Actual:
22 ft.

LUST:

Name:	FORMER KELLY LLOYD GARAGE
Address:	2039 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	00-0-000
UST Number:	WI-7395
Incident Number:	32511
Contamination Type:	Soil
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	10/01/2008
Date Occur:	09/30/2008
Cleanup:	09/30/2008
Closure Request:	Not reported
Close Out:	02/24/2009
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	BOTH AT SAME SITE
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	L
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Not reported
MTBE:	No
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	True
CD Num:	460
Reel Num:	7395
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False

CANNON STATION-SUNSET AUTO (Continued) **U004138591**

Lat/Long Decimal:	34.2047 -77.9414
Testlat:	Not reported
Regional Officer Project Mgr:	MEC
Region:	WIL
Company:	MAKE ART, LLC
Contact Person:	MATT SCHARFF
Telephone:	9104318777
RP Address:	1319 MILITARY CUTOFF # 172
RP City,St,Zip:	WILMINGTON, NC 28401
RP County:	Not reported
Comments:	MICHELE ATTENDED TANK PULL. 6 TANKS ALLTOGETHER, 3 GAS, 2 FUEL OIL, 1 KEROCENE. TRUST FUND ELIGIBILITY WAS NOT ANTICIPATED, SO AS MUCH SOIL AS WAS FEASIBLE WAS REMOVED BASED ON PID SAMPLES AND RUSHED LAB ANALYSIS. IAA REQUESTED 11/3. file pulled for archival 9/7/11
5 Min Quad:	Not reported

PIRF:

Facility Id:	32511
Date Occurred:	9/30/2008
Date Reported:	10/1/2008
Description Of Incident:	tank removal initiated by a property transfer- soil contamination discovered and confirmed with samples from below and around the USTs.
Owner/Operator:	Not reported
Ownership:	4
Operation Type:	6
Type:	3
Location:	1
Site Priority:	Not reported
Priority Update:	Not reported
Wells Affected Y/N:	N
Samples Include:	Not reported
7#5 Minute Quad:	Y
5 Minute Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Source Code:	Not reported
Err Type:	2
Cause:	4
Source:	A
Ust Number:	P
Last Modified:	2/24/2009
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Click here to access the North Carolina DEQ records for this facility:

UST:

CANNON STATION-SUNSET AUTO (Continued) **U004138591**

Name:	CANNON STATION-SUNSET AUTO
Address:	2039 CAROLINA BEACH RD
City,State,Zip:	WILMINGTON, NC 28401
Facility Id:	00-0-0000020431
Contact:	CANNON OIL CO
Contact Address1:	2017 ADAMS ST.
Contact Address2:	Not reported
Contact City/State/Zip:	WILMINGTON, NC 28401-6905
FIPS County Desc:	New Hanover
Latitude:	34.20443
Longitude:	-77.9416

Tank Id:	1
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Fuel Oil
Tank Capacity:	550
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Oil, New/Used/Mix
Tank Capacity:	550
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

CANNON STATION-SUNSET AUTO (Continued) **U004138591**

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Gasoline, Gas Mix
Tank Capacity:	4000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	4
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	5
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Gasoline, Gas Mix
Tank Capacity:	3000
Root Tank Id:	Not reported
Main Tank:	No

CANNON STATION-SUNSET AUTO (Continued) **U004138591**

Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	6
Tank Status:	Removed
Installed Date:	05/11/1970
Perm Close Date:	10/01/2008
Product Name:	Kerosene, Kero Mix
Tank Capacity:	1000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel
Decode for PCONS_KEY:	Single Wall Steel
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

---

87 **KOCH FUELS REFINING CO. (SOUTH** **NC SHWS** **S106022313**
SW **3225 RIVER ROAD** **NC IMD** **N/A**
1/2-1 **WILMINGTON, NC**
0.586 mi.
3096 ft.

Relative:
Higher

Actual:
23 ft.

SHWS:

Name:	KOCH NORTH PARAXYLENE
Address:	3225 RIVER RD
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002797
Lat/Longitude:	34.1894 / -77.9491
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

IMD:

Facility ID:	5304
Name:	KOCH FUELS REFINING CO. (SOUTH
Address:	3225 RIVER ROAD

KOCH FUELS REFINING CO. (SOUTH (Continued) **S106022313**

City,State,Zip:	WILMINGTON, NC
Date Occurred:	12/14/1989
Submit Date:	8/5/2003
Incident Desc:	EST. 2500-3000 GAL. GASOLINE SPILL
Operator:	STRICKLAND/KOCH REFINING C, JIM
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	7
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Mining
Responsible Party County:	Not reported
Source of Contamination:	OTHER ORGANICS
Source:	12
Type:	3
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	140
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.183333
Longitude:	-77.951944
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported

KOCH FUELS REFINING CO. (SOUTH (Continued) **S106022313**

Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported
Facility ID:	17437
Name:	KOCH FUELS REFINING CO. (SOUTH
Address:	3225 RIVER ROAD
City,State,Zip:	WILMINGTON, NC
Date Occurred:	6/17/1997
Submit Date:	8/5/2003
Incident Desc:	FP & CONSTITUENTS FOUND IN MWS
Operator:	SEGAR, THOMAS
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	7
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Mining
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	7
Type:	11
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	70
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	OTHER INORGANICS
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	DD31W
Intermediate Condition Present:	Not reported
Latitude:	34.183333
Longitude:	-77.951944

KOCH FUELS REFINING CO. (SOUTH (Continued) **S106022313**

Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

88
SW
1/2-1
0.688 mi.
3635 ft.

SUNOCO BULK TERMINAL **NC SHWS** **S109015485**
RIVER ROAD **N/A**
WILMINGTON, NC

Relative:
Lower

Actual:
16 ft.

SHWS:

Name:	SUNOCO BULK TERMINAL
Address:	RIVER ROAD
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0002561
Lat/Longitude:	34.18976 / -77.95151
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

89
SSE
1/2-1
0.885 mi.
4675 ft.

ATLANTIC TRACKING ANX **FUDS** **1024902945**
N/A
CARTERET COUNTY, NC

Relative:
Higher

Actual:
50 ft.

FUDS:

EPA Region:	4
Installation ID:	NC49799F487000
Congressional District Number:	7
Name:	ATLANTIC TRACKING ANX
FUDS Number:	I04NC0521
City:	CARTERET COUNTY
State:	NC
County:	CARTERET
Object ID:	1107
USACE Division:	SAD
USACE District:	Savannah District (SAS)
Status:	Properties without projects

ATLANTIC TRACKING ANX (Continued) **1024902945**

Current Owner:	Not reported
EMS Map Link:	https://fudsportal.usace.army.mil/ems/ems/inventory/map/map?id=60728
Eligibility:	Ineligible
Has Projects:	No
NPL Status:	Not on the NPL
Property History:	Not reported
Project Required:	No
Feature Description:	Not reported
Latitude:	34.183333330000004
Longitude:	-77.933333329999897

---

90 SW 1/2-1 0.903 mi. 4769 ft. **EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M** **NC SHWS S104913957**
3330 RIVER ROAD **NC LAST N/A**
WILMINGTON, NC 28401 **NC IMD**

Relative: Lower

Actual: 13 ft.

SHWS:

Name:	FLINT HILLS RESOURCES-CMT SITE
Address:	3330 RIVER ROAD
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0001723
Lat/Longitude:	34.18584 / -77.95271
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

LAST:

Name:	EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M
Address:	3330 RIVER ROAD
City,State,Zip:	WILMINGTON, NC 28401
Facility ID:	Not reported
UST Number:	WI-3279
Incident Number:	3279
Contamination Type:	GW
Source Type:	19
Product Type:	P
Date Reported:	09/03/1986
Date Occur:	09/03/1986
Cleanup:	Not reported
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	Not reported
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	Not reported
Risk Classification:	I
Risk Class Based On Review:	I
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	155
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	IND
MTBE:	No

EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M (Continued) **S104913957**

MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	C
RBCA GW:	Not reported
PETOPT:	5
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long:	Not reported
Lat/Long Decimal:	34.18444 -77.95194
Testlat:	Not reported
Regional Officer Project Mgr:	MCW
Region:	WIL
Company:	EAST COAST OIL TRANSPORT
Contact Person:	JAMES POWELL
Telephone:	Not reported
RP Address:	3330 RIVER ROAD
RP City,St,Zip:	WILMINGTON, NC
RP County:	Not reported
Comments:	SITE NOW ATLANTIC DIVING & MARINEDiesel and oil. See also 85426 and 5151.
5 Min Quad:	Not reported

PIRF:

Facility Id:	3279
Date Occurred:	Not reported
Date Reported:	Not reported
Description Of Incident:	Not reported
Owner/Operator:	Not reported
Ownership:	5
Operation Type:	8
Type:	Not reported
Location:	Not reported
Site Priority:	155NOD
Priority Update:	Not reported
Wells Affected Y/N:	N
Wells Affected Number:	0
Samples Taken By:	Not reported
Samples Include:	Not reported
7#5 Min Quad:	Not reported
5 Min Quad:	Not reported
Pirf/Min Soil:	Not reported
Release Code:	Not reported
Cause:	Not reported
Source:	Not reported
Source Type:	1
Last Modified:	12/15/2006
Incident Phase:	**FU**
NOV Issued:	Not reported

EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M (Continued) **S104913957**

NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Name:	ATLANTIC DIVING AND MARINE
Address:	3330 RIVER RD.
City,State,Zip:	WILMINGTON, NC 28412
Facility ID:	Not reported
UST Number:	WI-85426
Incident Number:	85426
Contamination Type:	GW
Source Type:	14
Product Type:	P
Date Reported:	08/21/1986
Date Occur:	08/21/1986
Cleanup:	04/26/1991
Closure Request:	Not reported
Close Out:	Not reported
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	N
# Of Supply Wells:	0
Commercial/NonCommercial UST Site:	C
Risk Classification:	I
Risk Class Based On Review:	I
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	40
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	IND
MTBE:	No
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	C
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	Not reported
Valid:	False
Lat/Long:	Not reported
Lat/Long Decimal:	34.18444 -77.95194
Testlat:	Not reported

EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M (Continued) **S104913957**

Regional Officer Project Mgr: LEP
Region: WIL
Company: ATLANTIC DIVING AND MARINE
Contact Person: KEVIN WALKER
Telephone: Not reported
RP Address: 6609 MARKET ST.
RP City,St,Zip: WILMINGTON, NC
RP County: Not reported
Comments: Diesel and oil from ASTs. See also 3279 and 5151.
5 Min Quad: Not reported

PIRF:
Facility Id: 85426
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 5
Operation Type: 8
Type: Not reported
Location: Not reported
Site Priority: 40D
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: 0
Samples Taken By: Not reported
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: Not reported
Cause: Not reported
Source: Not reported
Source Type: 0

Last Modified: 12/15/2006
Incident Phase: **FU**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

IMD:
Facility ID: 85426
Name: ATLANTIC DIVING AND MARINE
Address: 3330 RIVER RD.
City,State,Zip: WILMINGTON, NC
Date Occurred: 8/21/1986
Submit Date: 2/7/2001
Incident Desc: Not reported
Operator: WALKER, KEVIN

EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M (Continued) **S104913957**

UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	Not reported
Source:	14
Type:	3
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported

EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M (Continued) **S104913957**

RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

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91 South 1/2-1 0.978 mi. 5163 ft.

TEREX USA, LLC
202 RALEIGH STREET
WILMINGTON, NC 28412

RCRA-VSQG 1000841879
NC SHWS NCD980846877
NC IMD

Relative: Higher

Actual: 49 ft.

RCRA-VSQG:

Date Form Received by Agency:		20121010
Handler Name:	TEREX USA, LLC	
Handler Address:		202 RALEIGH STREET
Handler City,State,Zip:		WILMINGTON, NC 28412
EPA ID:		NCD980846877
Contact Name:		ROGER JONES
Contact Address:		RALEIGH STREET
Contact City,State,Zip:		WILMINGTON, NC 28412
Contact Telephone:		910-395-8504
Contact Fax:		910-395-8556
Contact Email:		ROGER.JONES@TEREX.COM
Contact Title:		DIRECTOR OF PRODUCT SUPPORT
EPA Region:		04
Land Type:		Private
Federal Waste Generator Description:		Conditionally Exempt Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		2011
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		RALEIGH STREET
Mailing City,State,Zip:		WILMINGTON, NC 28412
Owner Name:		TEREX CORPORATION
Owner Type:		Private
Operator Name:		TEREX CORPORATION
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		NN
Sub-Part K Indicator:		Not reported

TEREX USA, LLC (Continued) **1000841879**

Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20150414
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Biennial: List of Years
Year: 2011

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:
Waste Code: D001
Waste Description: IGNITABLE WASTE

Waste Code: D035
Waste Description: METHYL ETHYL KETONE

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR

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MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TEREX CORP
Legal Status:	Private
Date Became Current:	17760101
Date Ended Current:	Not reported
Owner/Operator Address:	500 POST RD E
Owner/Operator City,State,Zip:	WESTPORT, CT 06880
Owner/Operator Telephone:	203-222-7170
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TEREX CORP
Legal Status:	Private
Date Became Current:	19980801
Date Ended Current:	Not reported
Owner/Operator Address:	200 NYALA FARM RD
Owner/Operator City,State,Zip:	WESTPORT, CT 06880
Owner/Operator Telephone:	203-222-7170
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	TEREX CORPORATION
Legal Status:	Private
Date Became Current:	19980801
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TEREX CORP
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	500 POST RD E
Owner/Operator City,State,Zip:	WESTPORT, CT 06880

TEREX USA, LLC (Continued) **1000841879**

Owner/Operator Telephone: 203-222-7170
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TEREX CORP
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 500 POST RD E
Owner/Operator City,State,Zip: WESTPORT, CT 06880
Owner/Operator Telephone: 203-222-7170
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TEREX CORP
Legal Status: Private
Date Became Current: 19980801
Date Ended Current: Not reported
Owner/Operator Address: 200 NYALA FARM RD
Owner/Operator City,State,Zip: WESTPORT, CT 06880
Owner/Operator Telephone: 203-222-7170
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TEREX CORP
Legal Status: Private
Date Became Current: 19980801
Date Ended Current: Not reported
Owner/Operator Address: 200 NYALA FARM RD
Owner/Operator City,State,Zip: WESTPORT, CT 06880
Owner/Operator Telephone: 203-222-7170
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TEREX CORPORATION
Legal Status: Private
Date Became Current: 19980801
Date Ended Current: Not reported
Owner/Operator Address: 200 NYALA FARM ROAD
Owner/Operator City,State,Zip: WESTPORT, CT 06880
Owner/Operator Telephone: 203-222-7170
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TEREX CORP
Legal Status: Private
Date Became Current: 19980801

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Date Ended Current:	Not reported
Owner/Operator Address:	200 NYALA FARM RD
Owner/Operator City,State,Zip:	WESTPORT, CT 06880
Owner/Operator Telephone:	203-222-7170
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20121010
Handler Name: TEREX USA, LLC	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20050817
Handler Name: AMERICAN CRANE CORP	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20080731
Handler Name: TEREX CRANES WILIMINGTON INC	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19950808
Handler Name: AMERICAN CRANE CORP	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No

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Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20001115
Handler Name: AMERICAN CRANE CORP
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20110322
Handler Name: TEREX USA LLC - WILMINGTON OPERATION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20120113
Handler Name: TEREX USA LLC - WILMINGTON OPERATION
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19900226
Handler Name: THE AMERICAN CRANE CORP.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

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List of NAICS Codes and Descriptions:
NAICS Code: 33312
NAICS Description: CONSTRUCTION MACHINERY MANUFACTURING

Facility Has Received Notices of Violation:
Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19850806
Actual Return to Compliance Date: 19850809
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19850930
Enforcement Identifier: 001
Date of Enforcement Action: 19850909
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19951025
Actual Return to Compliance Date: 19960307
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19951101
Enforcement Identifier: 014
Date of Enforcement Action: 19951025
Enforcement Responsible Agency: State
Enforcement Docket Number: 96-019
Enforcement Attorney: NC
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NC009
Enforcement Responsible Sub-Organization: 07
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

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Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	20051020
Actual Return to Compliance Date:	20051121
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	20051120
Enforcement Identifier:	017
Date of Enforcement Action:	20051120
Enforcement Responsible Agency:	State
Enforcement Docket Number:	2006-032
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	NC036
Enforcement Responsible Sub-Organization:	07
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19871007
Actual Return to Compliance Date:	19871202
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19871130
Enforcement Identifier:	003
Date of Enforcement Action:	19871023
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19951025
Actual Return to Compliance Date:	19960307
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19951101
Enforcement Identifier:	014
Date of Enforcement Action:	19951025
Enforcement Responsible Agency:	State
Enforcement Docket Number:	96-019
Enforcement Attorney:	NC

TEREX USA, LLC (Continued) **1000841879**

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	NC009
Enforcement Responsible Sub-Organization:	07
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19851004
Actual Return to Compliance Date:	19860325
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19860314
Enforcement Identifier:	002
Date of Enforcement Action:	19860214
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	2000
Final Monetary Amount:	2000
Paid Amount:	Not reported
Final Count:	1
Final Amount:	2000

Evaluation Action Summary:

Evaluation Date:	19850806
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19850809
Scheduled Compliance Date:	19850930
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Evaluation Date:	20051121
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19910219
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19860325
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19930412
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20021205
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC036

TEREX USA, LLC (Continued) **1000841879**

Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19951116
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19920409
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960307
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	19960307
Scheduled Compliance Date:	19951101
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19881115
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19861030
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	20160607
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19940208
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	20001011
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19871202
Evaluation Responsible Agency:	State

TEREX USA, LLC (Continued) **1000841879**

Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20051020
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	20051121
Scheduled Compliance Date:	20051120
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19871007
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19871202
Scheduled Compliance Date:	19871130
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19951009
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	NC036
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19891017
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19951025
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	19960307
Scheduled Compliance Date:	19951101
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19940119
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	NC009
Evaluation Responsible Sub-Organization:	07
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19851004
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19860325
Scheduled Compliance Date:	19860314
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

SHWS:

Name:	AMERICAN CRANE CORPORATION
Address:	202 RALEIGH ST.
City,State,Zip:	WILMINGTON, NC
EPAID:	NONCD0001253
Lat/Longitude:	34.179444 / -77.939166
Geolocation Method:	On Screen Placement On Georeferenced Map

Click here to access the North Carolina DEQ records for this facility:

TEREX USA, LLC (Continued) **1000841879**

IMD:

Facility ID:	6650
Name:	AMERICAN CRANE CORPORATION
Address:	202 RALEIGH ST.
City,State,Zip:	WILMINGTON, NC
Date Occurred:	4/24/1991
Submit Date:	7/29/2003
Incident Desc:	SEE FILE FOR FURTHER INFO IF DESIRE
Operator:	DUNLAP, FACILITY MANAGER, DONALD
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	5
Responsible Party Contact Name:	Not reported
Operation:	8
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Federal
Operation Type:	Not reported
Responsible Party County:	Not reported
Source of Contamination:	OTHER ORGANICS
Source:	12
Type:	10
Location:	Not reported
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	125
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	0
Site Priority:	Not reported
Type:	METALS
Location:	Not reported
Current Risk Condition:	Not reported
Sampled By:	Not reported
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	34.179444
Longitude:	-77.939166
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported

TEREX USA, LLC (Continued) **1000841879**

Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Count: 6 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
NEW HANOVER COUNTY	S126477142	MODERN CLEANERS	2629 CAROLINA BEACH ROAD		NC DRYCLEANERS
NEW HANOVER COUNTY	S126477141	FANCY CLEANERS	5552-H CAROLINA BEACH ROAD		NC DRYCLEANERS
NEW HANOVER COUNTY	S126477147	$2.50 CRYSTAL CLEANERS # 105	5601- C CAROLINA BEACH RD		NC DRYCLEANERS
WILMINGTON	S127470302	CAROLINA BEACH ROAD ACCIDENT	5546 & 5548 CAROLINA BEACH RD		NC LAST
WILMINGTON	S123084306	CENTRAL BOULEVARD - 121	121 CENTRAL BLULVARD		NC LUST
WILMINGTON	S110630319	FLEMINGTON LF	I-40 EAST TO EXIT 416A, WEST O		NC OLI

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/24/2022
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/24/2022
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/05/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/14/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 61

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/21/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

HSDS: Hazardous Substance Disposal Site

Locations of uncontrolled and unregulated hazardous waste sites. The file includes sites on the National Priority List as well as those on the state priority list.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 11/08/2011
Date Made Active in Reports: 12/05/2011
Number of Days to Update: 27

Source: North Carolina Center for Geographic Information and Analysis
Telephone: 919-754-6580
Last EDR Contact: 10/14/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: No Update Planned

State- and tribal - equivalent CERCLIS

SHWS: Inactive Hazardous Sites Inventory

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/12/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 09/02/2021
Number of Days to Update: 84

Source: Department of Environment, Health and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: List of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: Department of Environment and Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 09/24/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

OLI: Old Landfill Inventory

Old landfill inventory location information. (Does not include no further action sites and other agency lead sites).

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/30/2020
Number of Days to Update: 82

Source: Department of Environment & Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 10/08/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

DEBRIS: Solid Waste Active Disaster Debris Sites Listing
NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

Date of Government Version: 01/06/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/02/2021
Number of Days to Update: 78
Source: Department of Environmental Quality
Telephone: 919-707-8247
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

LCID: Land-Clearing and Inert Debris (LCID) Landfill Notifications
A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

Date of Government Version: 05/11/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 88
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/08/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Regional UST Database
This database contains information obtained from the Regional Offices. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database. Sites in this database with Incident Numbers are considered LUSTs.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/21/2021
Number of Days to Update: 79
Source: Department of Environment and Natural Resources
Telephone: 919-707-8200
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tanks
A listing of leaking aboveground storage tank site locations.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78
Source: Department of Environment & Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

LUST TRUST: State Trust Fund Database
This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87
Source: Department of Environment and Natural Resources
Telephone: 919-733-1315
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

UST: Petroleum Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78

Source: Department of Environment and Natural Resources
Telephone: 919-733-1308
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

AST: AST Database
Facilities with aboveground storage tanks that have a capacity greater than 21,000 gallons.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 06/09/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 82

Source: Department of Environment and Natural Resources
Telephone: 919-715-6183
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring

A land use restricted site is a property where there are limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.

Date of Government Version: 09/04/2020
Date Data Arrived at EDR: 09/09/2020
Date Made Active in Reports: 12/03/2020
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 919-508-8400
Last EDR Contact: 09/10/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

VCP: Responsible Party Voluntary Action Sites
Responsible Party Voluntary Action site locations.

Date of Government Version: 05/12/2021
Date Data Arrived at EDR: 06/07/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 84

Source: Department of Environment and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Projects Inventory
A brownfield site is an abandoned, idled, or underused property where the threat of environmental contamination has hindered its redevelopment. All of the sites in the inventory are working toward a brownfield agreement for cleanup and liabitliy control.

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/17/2021
Number of Days to Update: 85

Source: Department of Environment and Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 09/28/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/10/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF: Solid Waste Facility Listing
A listing of solid waste facilities.

Date of Government Version: 11/06/2006
Date Data Arrived at EDR: 02/13/2007
Date Made Active in Reports: 03/02/2007
Number of Days to Update: 17

Source: Department of Environment & Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Center Listing
A listing of recycling center locations.

Date of Government Version: 01/28/2021
Date Data Arrived at EDR: 01/29/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 84

Source: Department of Environment & Natural Resources
Telephone: 919-707-8137
Last EDR Contact: 07/21/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/14/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/12/2021
Date Data Arrived at EDR: 09/13/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 15

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/13/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

SPILLS: Spills Incident Listing

A listing spills, hazardous material releases, sanitary sewer overflows, wastewater treatment plant bypasses and upsets, citizen complaints, and any other environmental emergency calls reported to the agency.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 06/08/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 83

Source: Department of Environment & Natural Resources
Telephone: 919-807-6308
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

IMD: Incident Management Database

Groundwater and/or soil contamination incidents

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 08/03/2021
Date Made Active in Reports: 08/06/2021
Number of Days to Update: 3

Source: Department of Environment and Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/27/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 06/14/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/04/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/15/2021
Next Scheduled EDR Contact: 01/24/2022
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/17/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/19/2021
Date Data Arrived at EDR: 07/19/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/20/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/18/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/08/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/18/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/03/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/27/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/14/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 2

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/12/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/01/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 89

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2021
Date Data Arrived at EDR: 05/25/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 78

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines
An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/15/2021
Date Data Arrived at EDR: 06/16/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 62

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/05/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 91

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/26/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/07/2021
Next Scheduled EDR Contact: 01/24/2022
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 81

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Quarterly

AIRS: Air Quality Permit Listing

A listing of facilities with air quality permits.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 06/07/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 81

Source: Department of Environmental Quality
Telephone: 919-707-8726
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

ASBESTOS: ASBESTOS
Asbestos notification sites

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/17/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 78

Source: Department of Health & Human Services
Telephone: 919-707-5973
Last EDR Contact: 10/18/2021
Next Scheduled EDR Contact: 01/31/2022
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites
A listing of coal combustion products distribution permits issued by the Division for the treatment, storage, transportation, use and disposal of coal combustion products.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/22/2021
Number of Days to Update: 92

Source: Department of Environment & Natural Resources
Telephone: 919-807-6359
Last EDR Contact: 09/24/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Sites
Potential and known drycleaning sites, active and abandoned, that the Drycleaning Solvent Cleanup Program has knowledge of and entered into this database.

Date of Government Version: 03/31/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/26/2021
Number of Days to Update: 84

Source: Department of Environment & Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78

Source: Department of Environment & Natural Resources
Telephone: 919-733-1322
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/03/2012
Date Made Active in Reports: 10/26/2012
Number of Days to Update: 23

Source: Department of Environmental & Natural Resources
Telephone: 919-508-8496
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information
Hazardous waste financial assurance information.

Date of Government Version: 06/02/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/25/2021
Number of Days to Update: 83
Source: Department of Environment & Natural Resources
Telephone: 919-707-8222
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/19/2021
Data Release Frequency: Varies

NPDES: NPDES Facility Location Listing
General information regarding NPDES(National Pollutant Discharge Elimination System) permits.

Date of Government Version: 07/07/2021
Date Data Arrived at EDR: 07/26/2021
Date Made Active in Reports: 10/19/2021
Number of Days to Update: 85
Source: Department of Environment & Natural Resources
Telephone: 919-733-7015
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing
A listing of uncerground injection wells locations.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 12/07/2020
Number of Days to Update: 7
Source: Department of Environment & Natural Resources
Telephone: 919-807-6412
Last EDR Contact: 09/03/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

AOP: Animal Operation Permits Listing
This listing includes animal operations that are required to be permitted by the state.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 05/27/2020
Number of Days to Update: 1
Source: Department of Environmental Quality
Telephone: 919-707-9129
Last EDR Contact: 09/10/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Semi-Annually

SEPT HAULERS: Permitted Septage Haulers Listing
This list of all active and permitted Septage Land Application Site (SLAS) and Septage Detention and Treatment Facility (SDTF) sites in North Carolina. The purpose of this map is to provide the public and government entities a visual overview of the businesses that manage septage and septage facilities throughout the state.

Date of Government Version: 03/25/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 79
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/08/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

CCB: Coal Ash Structural Fills (CCB) Listing

These are not permitted Coal Ash landfills A list all of the now closed Coal Ash Structural Fills (CCB) in North Carolina, in point data form. The purpose is to provide the public and other government entities a visual overview of coal ash structural fills throughout the state and increase public awareness of their current locations.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/08/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/30/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

PCSRP: Petroleum-Contaminated Soil Remediation Permits

To treat petroleum-contaminated soil in order to protect North Carolinaa??s environment and the health of the citizens of North Carolina.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/20/2013
Number of Days to Update: 172

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 03/24/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/28/2021
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/05/2021
Next Scheduled EDR Contact: 01/17/2022
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/07/2021
Next Scheduled EDR Contact: 01/24/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facility List
Source: Department of Health & Human Services
Telephone: 919-662-4499

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

STARWAY VILLAGE
2346 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

TARGET PROPERTY COORDINATES

Latitude (North):	34.196388 - 34° 11' 47.00''
Longitude (West):	77.939694 - 77° 56' 22.90''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	229101.7
UTM Y (Meters):	3787644.2
Elevation:	23 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5945725 WILMINGTON, NC
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

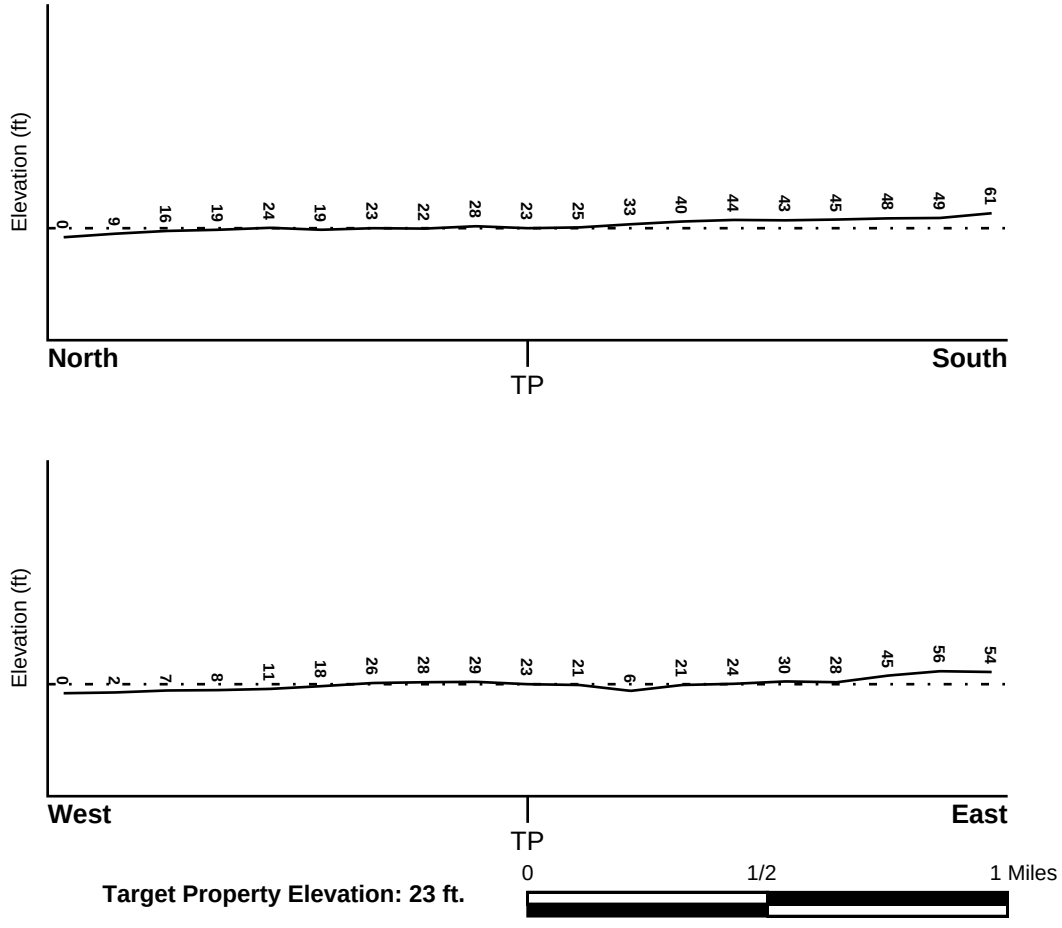
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
3720312600J	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
3720311600K	FEMA FIRM Flood data
3720311500K	FEMA FIRM Flood data
3720312500J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WILMINGTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Pleistocene
Code:	Qp *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	KUREB
Soil Surface Texture:	sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively. Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	LOW
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	80 inches	sand	Granular materials (35 pct. or less passing No. 200), Fine Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 20.00 Min: 6.00	Max: 7.30 Min: 3.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: muck
fine sand

Surficial Soil Types: muck
fine sand

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: loamy sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000881907	1/4 - 1/2 Mile NW
2	USGS40000881911	1/2 - 1 Mile NNW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	USGS40000881898	1/2 - 1 Mile WSW
4	USGS40000881895	1/2 - 1 Mile SSE
5	USGS40000881914	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

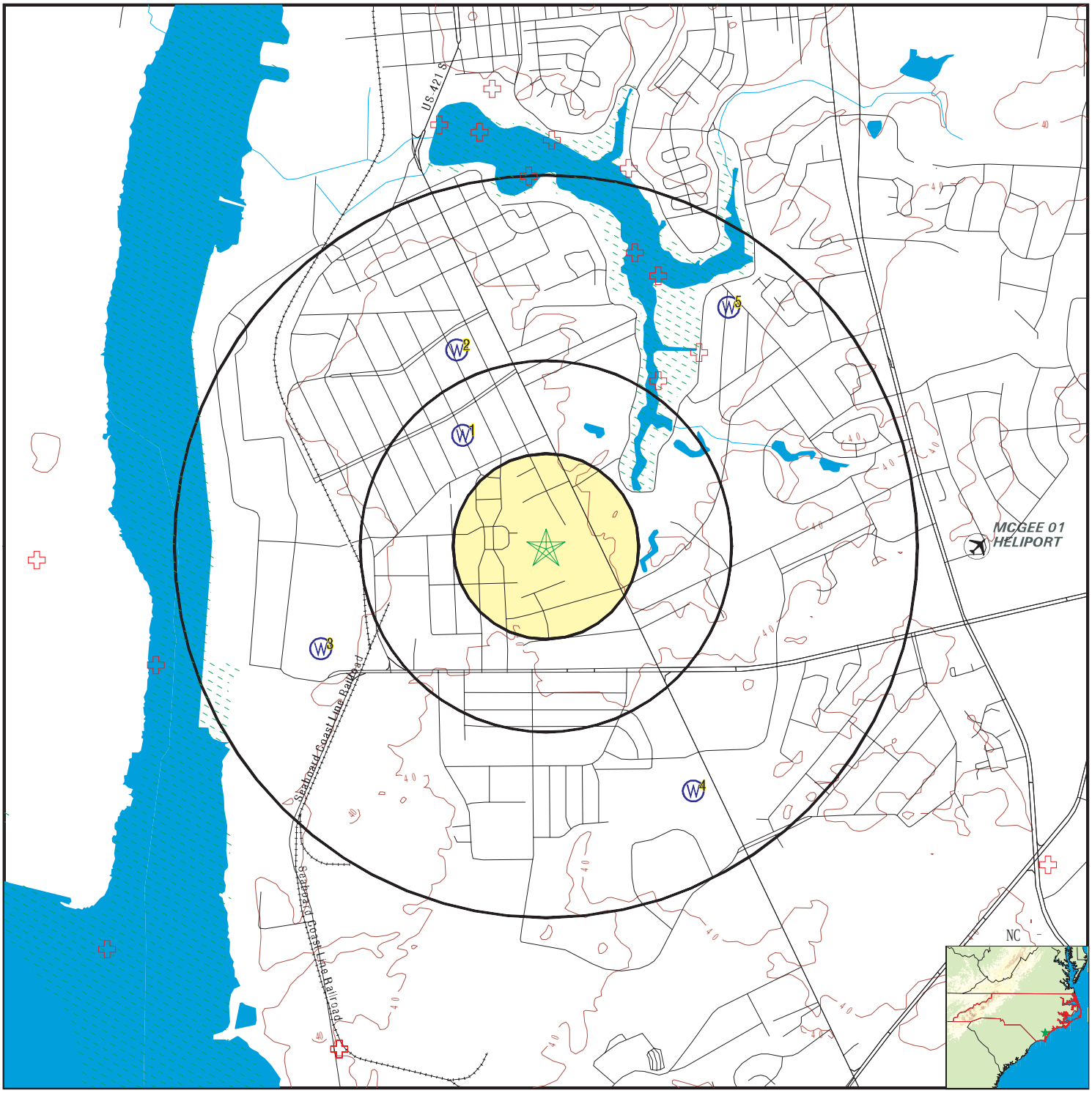
STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No Wells Found

OTHER STATE DATABASE INFORMATION

PHYSICAL SETTING SOURCE MAP - 6717430.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Wildlife Areas
- Natural Areas
- Rare & Endangered Species

SITE NAME:	Starway Village	CLIENT:	Kimley-Horn & Associates, Inc.
ADDRESS:	2346 Carolina Beach Road Wilmington NC 28401	CONTACT:	Mackenzie Richards
		INQUIRY #:	6717430.2s
LAT/LONG:	34.196388 / 77.939694	DATE:	October 23, 2021 1:26 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000881907**

Organization ID:	USGS-NC		
Organization Name:	USGS North Carolina Water Science Center		
Monitor Location:	NH-291 SUNSET CO	Type:	Well
Description:	Not Reported	HUC:	03030005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Castle Hayne aquifer	Formation Type:	Castle Hayne Limestone
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

2
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000881911**

Organization ID:	USGS-NC		
Organization Name:	USGS North Carolina Water Science Center		
Monitor Location:	NH-292 SUNSET CO 4	Type:	Well
Description:	Not Reported	HUC:	03030005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Castle Hayne aquifer	Formation Type:	Castle Hayne Limestone
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

3
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000881898**

Organization ID:	USGS-NC		
Organization Name:	USGS North Carolina Water Science Center		
Monitor Location:	NH-296 WILM SHIPYARD	Type:	Well
Description:	Not Reported	HUC:	03030005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Northern Atlantic Coastal Plain aquifer system		
Formation Type:	Peedee Formation	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000881895**

Organization ID:	USGS-NC		
Organization Name:	USGS North Carolina Water Science Center		
Monitor Location:	NH-541 HANOVER MILLS	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Northern Atlantic Coastal Plain aquifer system		
Formation Type:	Peedee Formation	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	157
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

5
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40000881914**

Organization ID:	USGS-NC		
Organization Name:	USGS North Carolina Water Science Center		
Monitor Location:	NH-288	Type:	Well
Description:	Not Reported	HUC:	03030005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Northern Atlantic Coastal Plain aquifer system		
Formation Type:	Peedee Formation	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50000301

Elclass: I
Eostat: X
Edr id: NC50000301
Precision1: M
Gisid: 12620

NC_NHEO NC50000464

Elclass: A
Eostat: H
Edr id: NC50000464
Precision1: M
Gisid: 182050

NC_NHEO NC50000826

Elclass: A
Eostat: H
Edr id: NC50000826
Precision1: M
Gisid: 461925

NC_NHEO NC50001353

Elclass: P
Eostat: H
Edr id: NC50001353
Precision1: G
Gisid: 42459

NC_NHEO NC50002977

Elclass: A
Eostat: H
Edr id: NC50002977
Precision1: G
Gisid: 81243

NC_NHEO NC50003948

Elclass: P
Eostat: E
Edr id: NC50003948
Precision1: M
Gisid: 223357

NC_NHEO NC50004398

Elclass: A
Eostat: E
Edr id: NC50004398
Precision1: M
Gisid: 212031

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50004916

Elclass:	A	Precision1:	M
Eostat:	H	Gisid:	132028
Edr id:	NC50004916		

NC_NHEO NC50004976

Elclass:	P	Precision1:	M
Eostat:	H	Gisid:	22581
Edr id:	NC50004976		

NC_NHEO NC50006888

Elclass:	A	Precision1:	M
Eostat:	E	Gisid:	533166
Edr id:	NC50006888		

NC_NHEO NC50007623

Elclass:	A	Precision1:	G
Eostat:	E	Gisid:	311197
Edr id:	NC50007623		

NC_NHEO NC50008912

Elclass:	A	Precision1:	M
Eostat:	H	Gisid:	421811
Edr id:	NC50008912		

NC_NHEO NC50009448

Elclass:	A	Precision1:	M
Eostat:	H	Gisid:	281720
Edr id:	NC50009448		

NC_NHEO NC50009868

Elclass:	I	Precision1:	M
Eostat:	H	Gisid:	12422
Edr id:	NC50009868		

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50010531

Elclass:	A	Precision1:	M
Eostat:	E	Gisid:	12332
Edr id:	NC50010531		

NC_NHEO NC50012881

Elclass:	I	Precision1:	G
Eostat:	X	Gisid:	12564
Edr id:	NC50012881		

NC_NHEO NC50013603

Elclass:	P	Precision1:	S
Eostat:	E	Gisid:	62486
Edr id:	NC50013603		

NC_NHEO NC50016231

Elclass:	A	Precision1:	M
Eostat:	E	Gisid:	82037
Edr id:	NC50016231		

NC_NHEO NC50016294

Elclass:	P	Precision1:	S
Eostat:	E	Gisid:	1931362
Edr id:	NC50016294		

NC_NHEO NC50018162

Elclass:	A	Precision1:	M
Eostat:	E	Gisid:	1122861
Edr id:	NC50018162		

NC_NHEO NC50022197

Elclass:	A	Precision1:	M
Eostat:	E	Gisid:	23217
Edr id:	NC50022197		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

NC_SNHA NC10003054

Acres:	147.88	Sitename:	GREENFIELD LAKE
Quality type:	Not Reported	Sig:	D
Site id:	3054	Edr id:	NC10003054

NC_SNHA NC10003426

Acres:	20425.71	Sitename:	LOWER CAPE FEAR RIVER AQUATIC HABITAT
Quality type:	Not Reported	Sig:	B
Site id:	3426	Edr id:	NC10003426

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for NEW HANOVER County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for NEW HANOVER COUNTY, NC

Number of sites tested: 10

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.240 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

North Carolina Public Water Supply Wells
Source: Department of Environmental Health
Telephone: 919-715-3243

OTHER STATE DATABASE INFORMATION

North Carolina Wildlife Resources/Game Lands
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
All publicly owned game lands managed by the North Carolina Wildlife Resources Commission and as listed in Hunting and Fishing Maps.

NC Natural Heritage Sites: Natural Heritage Element Occurrence Sites
Source: Natural Heritage Occurrence Sites Center for Geographic Information and Analysis
Telephone: 919-733-2090
A point coverage identifying locations of rare and endangered species, occurrences of exemplary or unique natural ecosystems (terrestrial or aquatic), and special animal habitats (e.g., colonial waterbird nesting sites).

NC Natural Areas: Significant Natural Heritage Areas
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
A polygon converage identifying sites (terrestrial or aquatic) that have particular biodiversity significance. A site's significance may be due to the presenceof rare species, rare or high quality natural communities, or other important ecological features.

RADON

State Database: NC Radon
Source: Department of Environment & Natural Resources
Telephone: 919-733-4984
Radon Statistical and Non Statiscal Data

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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APPENDIX C
HISTORICAL
TOPOGRAPHIC MAPS

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.4
October 22, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

10/22/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.4

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Kimley-Horn & Associates, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: Starway Village

Coordinates:

Latitude:	34.196388 34° 11' 47" North
Longitude:	-77.939694 -77° 56' 23" West
UTM Zone:	Zone 18 North
UTM X Meters:	229107.86
UTM Y Meters:	3787839.25
Elevation:	23.00' above sea level

Maps Provided:

2013
1993
1979
1970
1948
1942

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets



Wilmington
2013
7.5-minute, 24000

1993 Source Sheets



Wilmington
1993
7.5-minute, 24000
Aerial Photo Revised 1993

1979 Source Sheets



Wilmington
1979
7.5-minute, 24000
Aerial Photo Revised 1975

1970 Source Sheets



Wilmington
1970
7.5-minute, 24000
Aerial Photo Revised 1969

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1948 Source Sheets



Wilmington
1948
15-minute, 62500
Aerial Photo Revised 1942

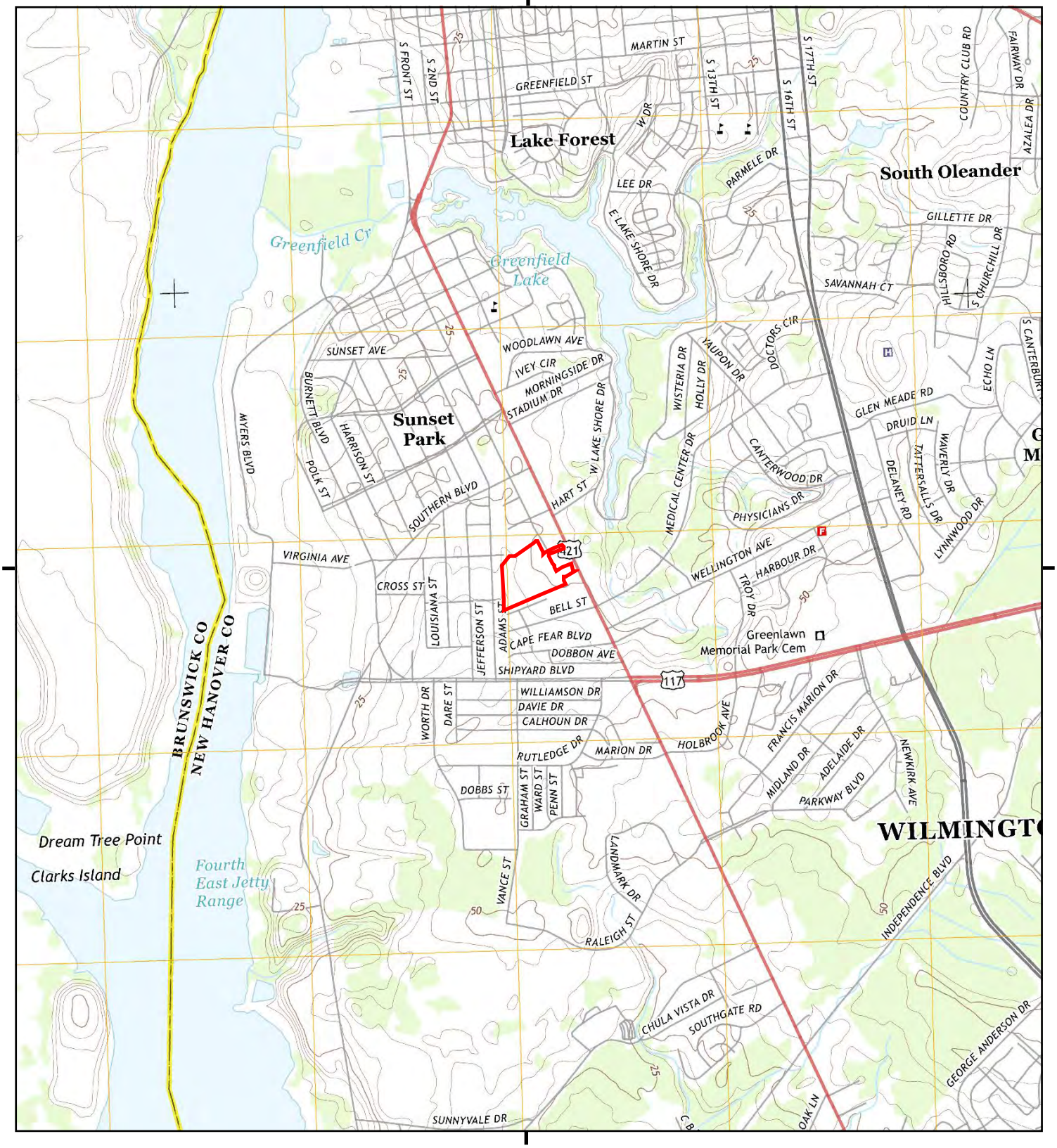
1942 Source Sheets



WILMINGTON
1942
15-minute, 50000

Historical Topo Map

2013



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

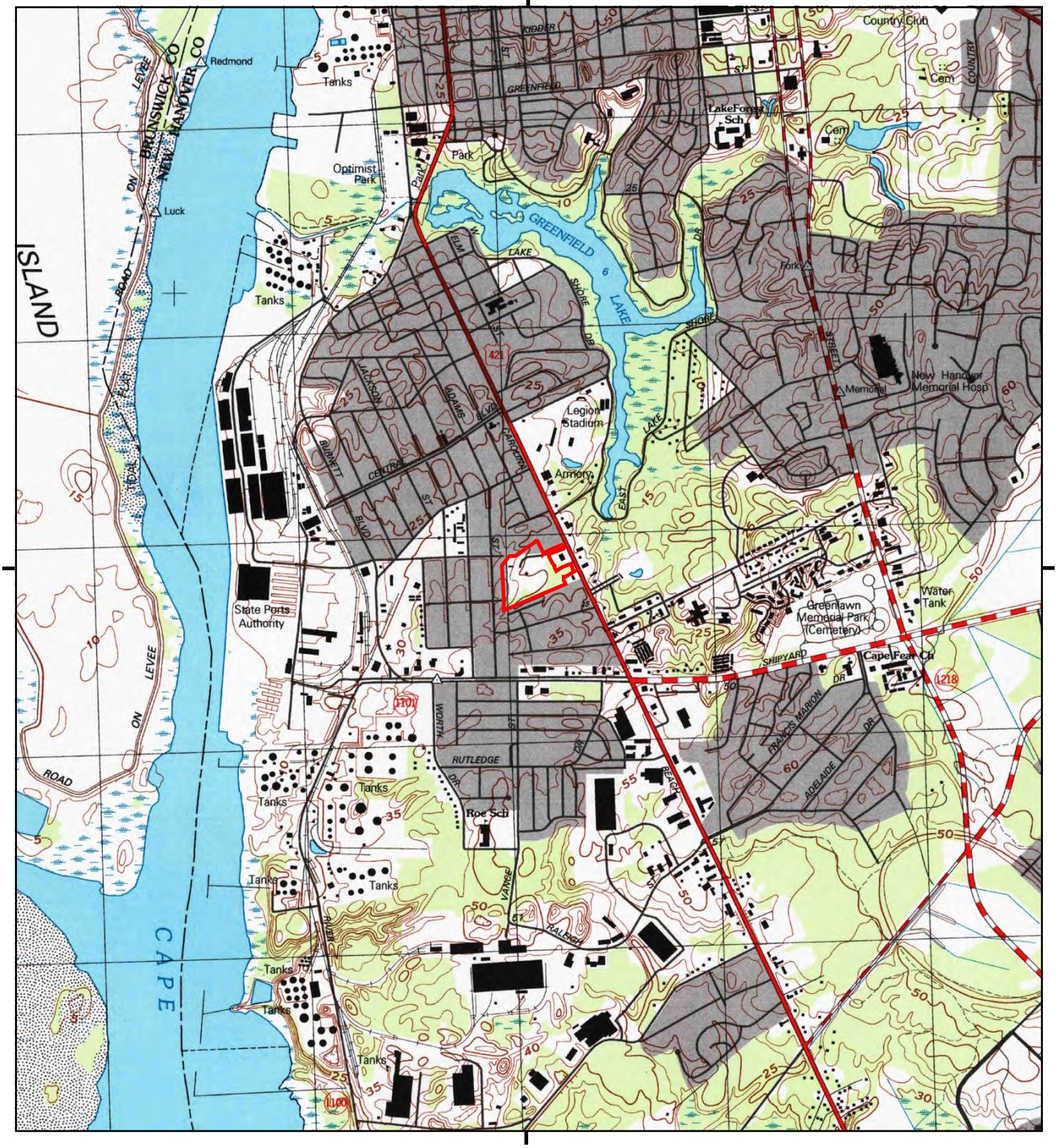
TP, Wilmington, 2013, 7.5-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N

Historical Topo Map

1993



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

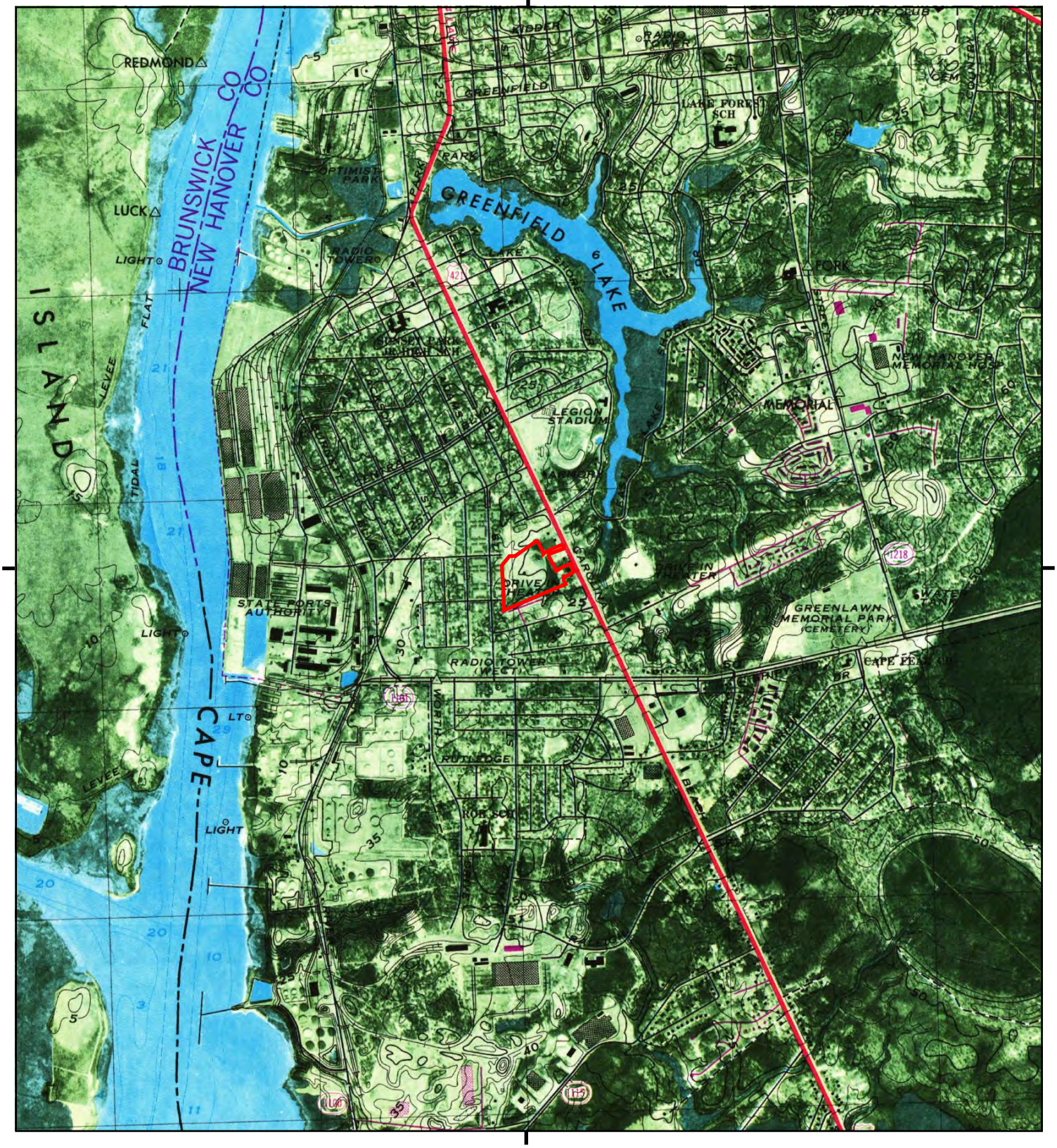
TP, Wilmington, 1993, 7.5-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N

Historical Topo Map

1979



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Wilmington, 1979, 7.5-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N



This report includes information from the following map sheet(s).

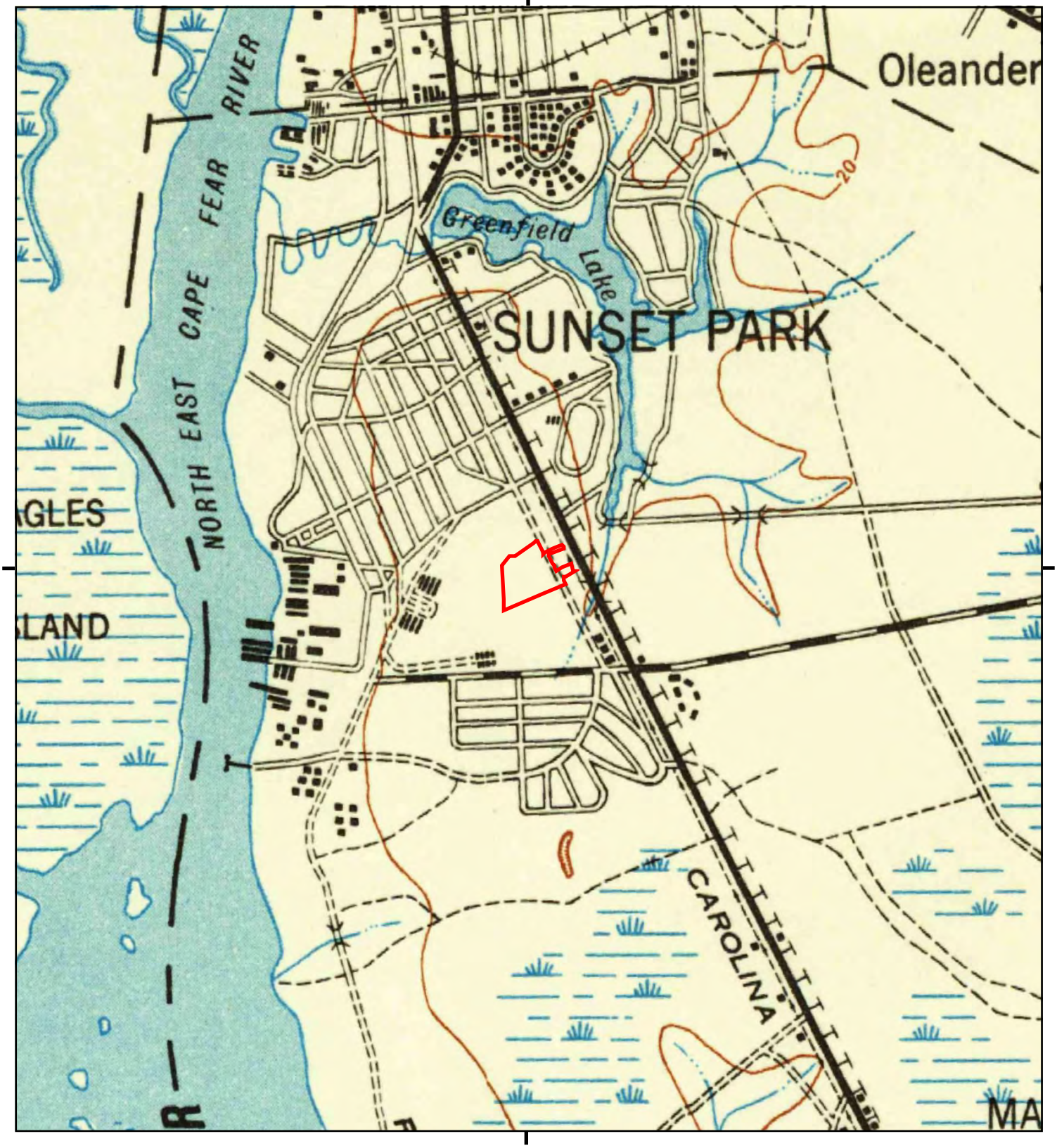
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Wilmington, 1970, 7.5-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N



This report includes information from the following map sheet(s).

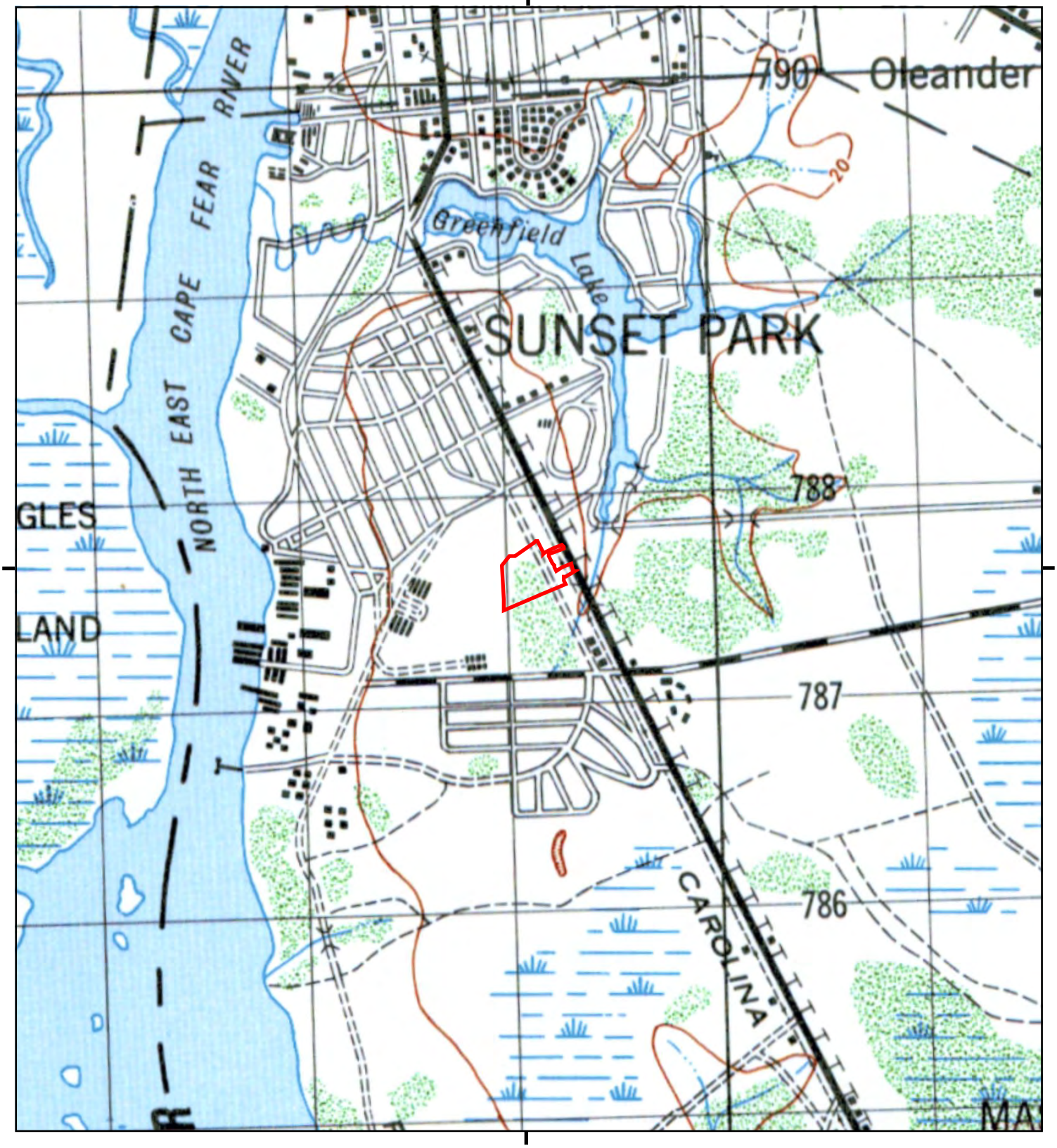
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Wilmington, 1948, 15-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, WILMINGTON, 1942, 15-minute

SITE NAME: Starway Village
ADDRESS: 2346 Carolina Beach Road
Wilmington, NC 28401
CLIENT: Kimley-Horn & Associates, Inc.

N

APPENDIX D
NRCS
SOIL RESOURCE
REPORT

United States Department of Agriculture

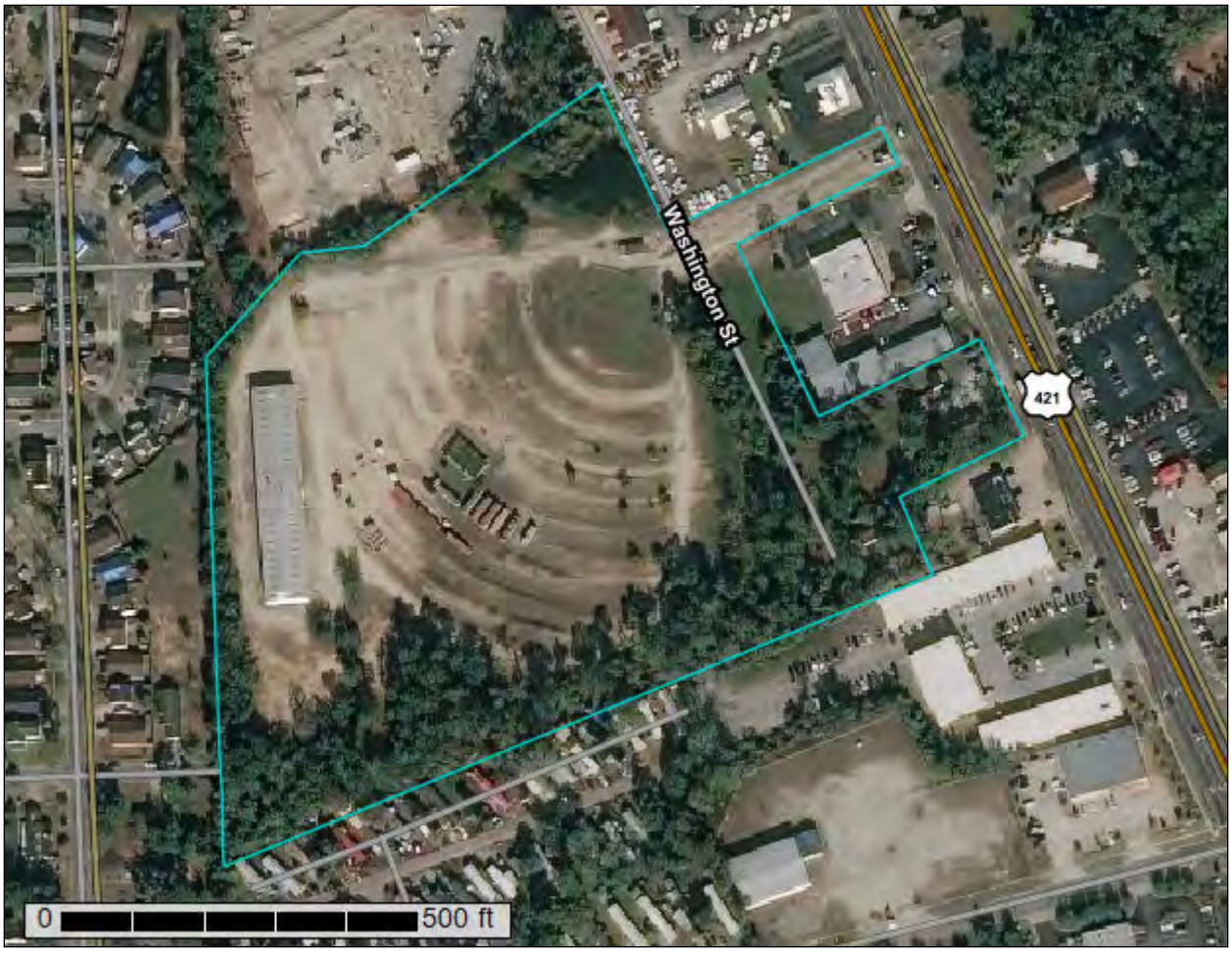
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for New Hanover County, North Carolina

Starway Village



October 22, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: New Hanover County, North Carolina
Survey Area Data: Version 22, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Nov 28, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ku	Kureb-Urban land complex, 1 to 8 percent slopes	1.1	6.6%
Le	Leon sand	1.8	11.0%
Ly	Lynn Haven fine sand	0.9	5.9%
Ur	Urban land	12.3	76.6%
Totals for Area of Interest		**16.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

New Hanover County, North Carolina

Ku—Kureb-Urban land complex, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3wr8
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Kureb and similar soils: 46 percent
Urban land: 44 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kureb

Setting

Landform: Rims on carolina bays, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian sands and/or sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 26 inches: sand
C/Bh - 26 to 89 inches: sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Le—Leon sand

Map Unit Setting

National map unit symbol: 3wrb
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Leon and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon

Setting

Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile

A - 0 to 3 inches: sand
E - 3 to 15 inches: sand
Bh - 15 to 30 inches: fine sand
BE - 30 to 33 inches: fine sand
E' - 33 to 66 inches: fine sand
B'h - 66 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Ly—Lynn Haven fine sand

Map Unit Setting
National map unit symbol: 3wrf
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Lynn haven, undrained, and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lynn Haven, Undrained

Setting
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile
A - 0 to 9 inches: sand
E - 9 to 12 inches: fine sand
Bh - 12 to 80 inches: sand

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Ur—Urban land

Map Unit Composition

Urban land: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

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APPENDIX E
USER QUESTIONNAIRE

,7190436Ã-6:25782Ã/,(Ã.' &)-&'Ä&,$+Ä#-##Ä*"*"Ä'& +*!%%*%!-

Phase I Environmental Site Assessment
User Questionnaire

Site Name: Starway Flea Market

Site Location: 2346 Carolina Beach Rd, Wilmington, NC 28401

Project: Starway Village

Please provide an answer to each question or attach pertinent information and identify a number for each attachment.

The following questions are taken from the ASTM E1527-13 Standard Practice for Phase I Environmental Site Assessments and must be answered in order to qualify for the Landowner Liability Protections ("LLPs") under the federal Comprehensive Environmental Response Compensation and Liability Act, otherwise known as "CERCLA" or the Superfund law. ***Note that the completion of this form, by itself, does not automatically qualify one for any of the three LLPs, all of which have additional eligibility criteria. Note further that state and local government agencies will often have their own, independent source of environmental liability not covered by any of the LLPs.*** *All questions regarding the source of, defenses to, and transactional, development-related, and operational strategies for managing environmental liability should be directed to legal counsel.*

I. User Questions for Application of Landowner Liability Protections (LLPs) as defined in E1527-13 Appendix X3

(1.) Environmental liens that are filed or recorded against the property (40 CFR 312.25).

Did a search of recorded land title records (or judicial records where appropriate, see Note 1 below) identify any environmental liens fled or recorded against the property under federal, tribal, state or local law?

NOTE 1-In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

(2.) Activity and use limitations that are in place on the property (40 CFR 312.26(a) (1) (v) and VI)).

Did a search of recorded land title records (or judicial records where appropriate, see Note 1 above) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been fled or recorded against the property under federal, tribal, state or local law?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

,7190436Ã-6:25782Ã/,(Ã.' &)-&'Ä&,$+À#-##Ä*"*"Ä'& +*!%%*%!-

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,

(a) Do you know the past uses of the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

Flea market, and previously, a drive through movie theatre

(b) Do you know of specific chemicals that are present or once were present at the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

(c.) Do you know of spills or other chemical releases that have taken place at the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

(d.) Do you know of any environmental cleanups that have taken place at the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

,7190436Ã-6:25782Ã/,(Ã.' &)-&'Ä&,$+Ä#-##Ä*"*"Ä'& +*!%%*%!-

(6.) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?

□ No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

_____

To the best of the signatory's knowledge, as of the date hereof, the answers given in this questionnaire are deemed accurate. No active environmental investigation has been personally conducted by the signatory. Furthermore, this certification shall not be construed to constitute a professional opinion or an all-inclusive report but, rather, merely a disclosure of information known to the signatory as of the date hereof.

DocuSigned by:
F142C5154E7E496...

Signature

Ted Heilbron

Name

Member Kelley Development Company LLC

Title

11/9/2021

Date

APPENDIX F
HISTORICAL AERIAL PHOTOGRAPHS

Starway Village

2346 Carolina Beach Road

Wilmington, NC 28401

Inquiry Number: 6717430.8

October 25, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

10/25/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.8

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1998	1"=500'	Acquisition Date: January 01, 1998	USGS/DOQQ
1993	1"=500'	Acquisition Date: February 03, 1993	USGS/DOQQ
1983	1"=500'	Flight Date: March 13, 1983	NHAP
1970	1"=500'	Flight Date: September 29, 1970	USGS
1969	1"=500'	Flight Date: April 08, 1969	USGS
1964	1"=500'	Flight Date: April 01, 1964	USGS
1958	1"=500'	Flight Date: November 21, 1958	USGS
1956	1"=500'	Flight Date: March 23, 1956	USDA
1938	1"=500'	Flight Date: April 04, 1938	USDA

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INQUIRY #: 6717430.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1998
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6717430.8

YEAR: 1993

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 6717430.8
YEAR: 1983
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1964
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1958
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1956
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1938
= 500'
N
EDR

APPENDIX G
SITE PHOTOGRAPHS



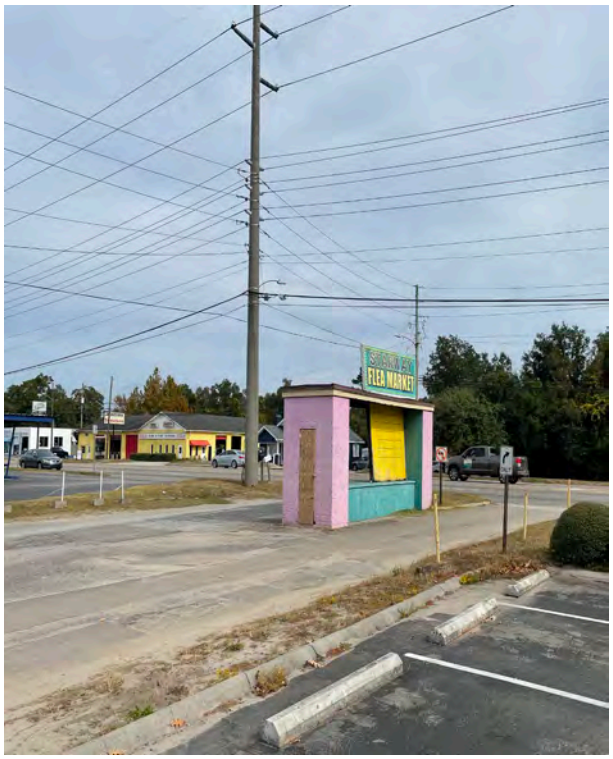


Photo 1 –These photos depict a typical view of the driveway entrance and access road to the subject property off of Carolina Beach Road and the overhead powerlines that run along the Site.



Photo 2 – This photo was taken within the Site, facing northeast towards the entrance, and it depicts a typical view of the cleared, dirt commercial lot with parking areas for the Starway Flea Market.







Photo 3 – These photos the dilapidated brick commercial retail building (2346 Carolina Beach Road) with wooden and shingle roofing and an associated metal storage shed with a metal roof located in the center of the Site. Discarded propane tank visible in photo was empty and was covering a hole in the ground





Photo 4 – These photos depict multiple metal shipping containers arranged for use as vendor stalls in the vicinity of the brick commercial retail building and the adjacent wooden vendor stands within the center of the Site.





Photo 5 – These photos depict the front of the large multi-bay metal warehouse, the Starway Flea Market, located along the western boundary of the subject property.



Photo 6 – This photo depicts the back of the large multi-bay metal warehouse, Starway Flea Market.





Photo 7 – These photos depict the two 55-gallon metal drums observed at the rear of the large multi-bay metal warehouse, the Starway Flea Market. The two drums were observed to be sealed and labelled to contain used cooking oil. A grease trap was observed on the ground behind the rear of the commercial building adjacent to the two 55-gallon metal drums.





Photo 8 – The two metal drums were visibly weeping, and stressed vegetation was observed around the base the two drums (photo on left). Unknown oil was found pooled on top of one of the metal drums after workers were observed discarding automotive oil into the drums following an oil change on a personal vehicle (photo on right).



Photo 9 – This photo depicts the front view of the single-family residential home (2370 Carolina Beach Road) and adjacent commercial outbuilding, Prime Automotive Group Inc. (2370-B Carolina Beach Road) located in the southeastern corner of the Site.





Photo 10 – The photo on the left depicts the side view of the of the single-family residential home (2370 Carolina Beach Road) and the phot on the right depicts the back on the adjacent commercial outbuilding.




Photo 11 – These photos depict the other single-family residential home (2374 Carolina Beach Road) and associated wooden storage shed located within the southeastern portion of the subject property.






Photo 12– Typical view of de minimis dumping of metal debris, tires, wood, household debris and appliances, and furniture observed throughout the subject property



Photo 13 – This photo depicts the adjacent Carolina Paint & Body, Inc facility adjacent to the subject property observed to be used for boat and marine equipment repair.





Photo 14 – These photos depict the neighboring commercial lots to the east of the project boundary including an AutoZone and an automotive center off of Carolina Beach Road.





Photo 15 – These photos depict the commercial developments that are located to the southeast of the project boundary, including an ABC Spirits and South Square Plaza shopping mall off of Carolina Beach Road.

APPENDIX H
CITY DIRECTORY

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.5
October 28, 2021

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1990	☑	☑	Polk's City Directory
1985	☑	☑	Polk's City Directory
1980	☑	☑	Hill's City Directory
1975	☑	☑	Hill's City Directory
1971	☑	☑	Hill's City Directory
1967	☑	☑	Hill's City Directory
1964	☑	☑	Hill's City Directory
1922	☐	☐	Hill's City Directory

EXECUTIVE SUMMARY

Year	Target Street	Cross Street	Source

FINDINGS

TARGET PROPERTY STREET

2346 Carolina Beach Road
Wilmington, NC 28401

Year	*CD Image*	*Source*	
CAROLINA BEACH RD			
2017	pg A2	EDR Digital Archive	
2014	pg A5	EDR Digital Archive	
2010	pg A9	EDR Digital Archive	
2005	pg A13	EDR Digital Archive	
2000	pg A15	EDR Digital Archive	
1995	pg A17	EDR Digital Archive	
1992	pg A20	EDR Digital Archive	
1990	pg A23	Polk's City Directory	
1985	pg A26	Polk's City Directory	
1985	pg A27	Polk's City Directory	
1980	pg A30	Hill's City Directory	
1980	pg A31	Hill's City Directory	
1975	pg A34	Hill's City Directory	
1975	pg A35	Hill's City Directory	
1971	pg A38	Hill's City Directory	
1971	pg A39	Hill's City Directory	
1967	pg A41	Hill's City Directory	
1964	pg A43	Hill's City Directory	
1964	pg A44	Hill's City Directory	
1922	-	Hill's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
BELL ST			
2017	pg. A1	EDR Digital Archive	
2014	pg. A4	EDR Digital Archive	
2010	pg. A7	EDR Digital Archive	
2005	pg. A11	EDR Digital Archive	
2000	pg. A14	EDR Digital Archive	
1995	pg. A16	EDR Digital Archive	
1992	pg. A19	EDR Digital Archive	
1990	pg. A21	Polk's City Directory	
1990	pg. A22	Polk's City Directory	
1985	pg. A24	Polk's City Directory	
1985	pg. A25	Polk's City Directory	
1980	pg. A28	Hill's City Directory	
1980	pg. A29	Hill's City Directory	
1975	pg. A32	Hill's City Directory	
1975	pg. A33	Hill's City Directory	
1971	pg. A36	Hill's City Directory	
1971	pg. A37	Hill's City Directory	
1967	pg. A40	Hill's City Directory	
1964	pg. A42	Hill's City Directory	
1922	-	Hill's City Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2017

310	BOWERS TOWING
	JENNIFERS AUTOMOTIVE
	UHAUL
317	BONNETT, DELTINA
321	STYES, MARY F
331	ACEVEDO, ANA L
	CORTES, RODOLFO
	EASON, DONALD R
	EDGAR, VAZQUEZ
	GONZALEZ, VICENTE
	HATCHELL, JOELLA D
	HERNANDEZ, JOSE
	HOUSAND, CLARENCE H
	JACKSON, BOBBY L
	MARTINEZ, ANTONIO
	NORDHAUSEN, WILLIAM A
	PARTON, PAUL P
	PHELPS, WILLIAM N
	VALERA, EDUARDA
340	SELF, JOSEPH L
402	BEST, KATRINA
418	DIFABIO, NANCY
	GANEY, KENNETH M
	PARKS, NORMA S
	RHODES, ANDY J
	ROBINSON, JORDAN E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2017

2245	BUZZS BARBER SHOP
	OPM PAWN CO
2250	EXTREME NEW & USED TIRE BARGAINS
2251	HEWETT, HELEN M
2253	ADDL
	AFFORDABLE DENTURES
	WALTER J WALTER DDS PA
2254	MCCORMICK AUTO SALES
2258	AFFORDABLE AUTO SERVICE LLC
2259	RIVENBARK, G
2300	AUTO WIZARD
2305	AARONS CUSTOM EXHAUST
2311	GENES TIRE & AUTOCARE SPECIALISTS
	GENES TIRE SERVICE
	UHAUL
2318	ADVANCE AUTO PARTS
2326	AUTO M D
	CAROLINA BOAT SERVICES
	J & K AUTO BODY
2329	EE BENTON ACCOUNTING SERVICES
2338	MERRITTS BURGER HOUSE
2346	STARWAY FLEA MARKET
2348	AUTOZONE
2351	AUTO SUPPLY COMPANY
	JEWELSTRICKLAND AUTO PARTS
2357	LOVITTS AUTO & TRUCK CENTER
2362	N C INSPECTION CENTER
2363	LOVITTS AUTO & TRUCK CENTER
2365	LOVITTS AUTO & TRUCK CENTER
2370	WOODCOOK, MARIA A
2374	LANCASTER, BEN D
2375	MEINEKE CAR CARE CENTER
2378	NEW HANOVER COUNTY ABC BOARDCAROLIN
2390	LA CHIQUITA MINI MART
	MOTOR VEHICLES NC DIVISION
	NAKOVICH INVESTMENT GROUP INC
	PLATINUM STYLZ
	STATE OF NORTH CAROLINA
	SUPERIOR INSURANCE
2392	GONYEA R A ACCOUNTING
	JONES DAVID INVESTMENTS
	PAWN USA
2394	HIRE ALTERNATIVES
	SOUTH SQUARE LAUNDROMAT
	SOUTHERN LOANS INC
	TOKYODELI
2395	WILCOHESS
2398	OREILLY AUTO PARTS
2409	BOJANGLES
2416	DOMINOS PIZZA

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2017 (Cont'd)

2416 ELECTRA VAPOR
MING WOK
2424 JACKS PLACE USED CARS
2432 THE SUB STOP
2445 CAPE FEAR APPLIANCE SERVICE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2014

310	BOWERS TOWING
313	OSULLIVAN, JOHN T
317	CHANDLER, MICHAEL
321	STYES, MARY F
324	GOLDBERG, GINA F
328	SLOAN, TIM W
331	CONARY, MELINDA R
	EASON, DONALD R
	GONZALEZ, CONSTANTINO
	GREEN, LISA
	GREGORY, ROBERT L
	GUTIERREZ, VICTORINA
	HATCHELL, JOELLA D
	HERNANDEZ, ROMAN
	JACKSON, BARBARA A
	NORDHAUSEN, WILLIAM A
	PARTON, PAUL P
	PENALOZA, FORTINO H
	PHELPS, BILLIE N
	PRICE, ROBERT D
	PRIDGEN, RICKY J
	SHACKLEFORD, JAMES T
	STANCIL, TERRIA
	VAZQUEZ, EDGAR
336	HOFFMAN, PERRY R
340	SELF, GARLAND
402	OCCUPANT UNKNOWN,
418	DIFABIO, NANCY
	HIGLEY, MARIANNA K
	PARKS, NORMA S
	ROBINSON, FLORENCE
422	SLOAN, TIM W

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2014

2245	BUZZS BARBER SHOP
	MERNITAS THRIFTY SHOP
	OPM PAWN CO
2250	EXTREME NEW & USED TIRE BARGAINS
2251	HEWETT, HELEN M
	OCCUPANT UNKNOWN,
	ROGGINA, JAMES A
2253	ADDL
	AFFORDABLE DENTURES
2254	MCCORMICK AUTO SALES
2258	AFFORDABLE AUTO SERVICE LLC
2259	LYONS, PATTY A
	OCCUPANT UNKNOWN,
	RIVENBARK, G
2300	AUTO WIZARD
2305	AARONS CUSTOM EXHAUST
2311	GENES TIRE & AUTOCARE SPECIALISTS
	UHAUL
2326	AUTO M D
	CAROLINA BOAT SERVICES
	J & K AUTO BODY
2329	EE BENTON ACCOUNTING SERVICES
2338	BURGER HOUSE THE RESTRNT
	MERRITTS BURGER HOUSE
2346	STARWAY FLEA MARKET
2348	AUTOZONE
2351	AUTO SUPPLY COMPANY
	JEWELSTRICKLAND AUTO PARTS
2357	LOVITTS AUTO & TRUCK CENTER
2362	N C INSPECTION CENTER
2363	LOVITTS AUTO & TRUCK CENTER
2365	LOVITTS AUTO & TRUCK CENTER
2370	ALES CAROLINA AUTO S
2374	ASHLEY, IAN M
2375	MEINEKE CAR CARE CENTER
2390	NCDOT DIVISION OF MOTOR VEHICLES SO
	NORTH CAROLINA STATE GOVERNMENT
	PLATINUM STYLZ
	SOUTH MINIMARKET
	SUPERIOR INSURANCE
2392	GONYEA R A ACCOUNTING
	JONES DAVID INVESTMENTS
	PAWN USA
2394	HIRE ALTERNATIVES
	SOUTH SQUARE LANDROMAT
	SOUTHERN LOANS INC
	TOKYODELI
2395	WILCOHESS
2398	OREILLY AUTO PARTS
2402	A C WIDENHOUSE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2014 (Cont'd)

2409 BOJANGLES
2416 CAROLINA AUTO FINANCE EASTERN
DOMINOS PIZZA
MING WOK
2424 JACKS PLACE USED CARS
2432 SUB STOP THE
2445 CAPE FEAR APPLIANCE SERVICE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2010

310	BOWERS TRANSMISSION SVC
313	CHERRY, WANDA
317	OCCUPANT UNKNOWN,
320	BLACKWELL, NINA
324	GOLDBERG, MICHAEL E
328	SLOAN, TIM W
331	BAUTISTA, OSCAR
	BETANCOURT, HECTOR
	CARRASCO, MONICA
	ENRIQUEZ, RODOLFO
	GONZALEZ, FRANCISCO
	GREEN, LISA
	GUTIERREZ-LAGOS, VICTORINA
	HATCHELL, JOELLA D
	HERNANDEZ, ROMAN
	HOUSAND, CLARENCE H
	JACKSON, BOBBY L
	LAGOS, MARIA
	LUGO, SANCHEZ
	LUNA, NICASIO
	MARTINEZ, MAGALY
	MELVIN, TERRIA P
	MEXICANO, CONSTANTINO
	MULLINS, JUDITH A
	NEAL, SHERRY
	NORDHOUSEN, WILLIAM
	PARTON, PAUL P
	PENALOZA, FORTINO H
	PEREZ, JOSEFINA
	PRICE, ROBERT D
	PRIDGEN, RICKY J
	QUINTANA, MARIA
	RENSHAW, TERRY D
	RIGGS, WILLIAM R
	SANTIAGO, BARBARA
	STANCIL, TERRIA
	TELLEZ, GRADIELA
	TRUJILLO, JUAN G
	TYLER, CINDI
	VAZQUEZ, EDGAR
	WATTS, JUDY A
	WHITCOMB, YVONNE M
336	HOFFMAN, PERRY R
340	DOWDEN, RIC
402	OCCUPANT UNKNOWN,
406	TYLER, RANDY
418	DIFABIO, NANCY
	HIGLEY, MARIANNA
	RHODES, ANDREW
422	SLOAN, TIM W

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2010 (Cont'd)

424 COTTLE, LISA M

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2010

2245	BUZZS BARBER SHOP
	CONCEPT TO COMPLIMENT
	L E DESIGNS
	OPM PAWN CO
2250	EXTREME TIRE & AUTO
2251	HEWETT, HELEN M
	ROGGINA, JAMES A
2253	ADDL
	WALTER J WULF PA
2258	ARTHURS TIRE & AUTO SVC
2259	CARISTO, JAMES A
	OCCUPANT UNKNOWN,
	RIVENBARK, G
2300	AUTO WIZARD
2305	AARONS CUSTOM EXHAUST
2311	GENES STARS SVC
	GENES TIRE & AUTOCARE SPECLST
2318	ADVANCE AUTO PARTS
2326	AUTO MD
	J & K AUTO BODY
2329	E E BENTON ACCOUNTING SER
2338	MERRITTS BURGER HOUSE
2346	STARWAY FLEA MARKET
2348	AUTOZONE
2351	AUTO SUPPLY CO INC
2362	N C INSPECTION CTR
2365	LOVITTS AUTO & TRUCK CTR
2374	OCCUPANT UNKNOWN,
2375	MEINEKE CAR CARE CTR
2377	GRAHAMS GARAGE
2390	LICENSE PLATE AGENCY
	MAJESTICS HAIR DESIGN
	MOTOR VEHICLE DEPT
	SOUTH MINIMARKET
	SUPERIOR INSURANCE
2392	CROSS ROADS INSURANCE
	DAVID JONES INVESTMENTS
	PAWN USA INC
	R A GONYEA ACCOUNTING
	USA CHECK CASHING & CHECK
2394	AMERICAN STAFFING RESOURCES
	CFC LAUNDRIES
	SOUTHERN LOANS INC
	TOKYODELI
2402	A C WIDENHOUSE INC
2416	ANDYS BURGERS SHAKES & FRIES
	DOLLAR GENERAL
	DOMINOS PIZZA
2419	JOHNSON, JAMES R
2424	JACKS PLACE USED CARS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2010 (Cont'd)

2432 SUB STOP
2445 SALVATION ARMY THRIFT STORE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2005

313	CHERRY, WANDA
317	GREENFIELD, RICHARD C
320	BLACKWELL, NINA
321	OCCUPANT UNKNOWN,
324	GOLDBERG, MICHAEL E
328	OCCUPANT UNKNOWN,
331	ANTONIO, SOTELO
	BAILON, ELVIA
	BRINSON, EDNA H
	BROWN, ANNIE M
	CAIN, ODELL F
	CANDIANI, HECTOR H
	CARRASCO, RAIMUNDO
	CASTELLANO, CORNELIO
	CRUZ, JULIAN
	ENRIQUEZ, RODOLFO
	FULCHER, CHRISTINE W
	GONZALEZ, CONSTANTINO
	GREEN, JOHNNIE F
	GREGORY, JOYCE C
	GRINDSTAFF, TRINA
	HATCHELL, JOELLA F
	HEAD, WAYNE
	HERNANDEZ, JESUS G
	HERNANDEZ, MARIO
	HERNANDEZ, PAULINA
	HERNANDEZ, ROBERTO L
	HERNANDEZ, ROMAN
	HOLLEMAN, ROBERT E
	HOUSAND, CLARENCE H
	JACKSON, BARBARA A
	JACKSON, BOBBY L
	LANIER, WANDA K
	LARIO, MARIA R
	LEE, JOHN P
	LOREDO, EDITH
	MARTINEZ, ESMERALDA
	MARTINEZ, MARGARITA
	MARTINEZ, VERONICA
	MELVIN, TERRIA
	MORAN, ZENAIDA
	NEAL, SHERRY
	PARTON, PAUL P
	PATE, WILLIAM
	PAZ, GENARO
	PENALOZA, FORTINO H
	PEREZ, AURELIA
	PEREZ-CONDE, AUGUSTINE
	PRICE, ROBERT
	PRIDGEN, RICKY J

BELL ST 2005 (Cont'd)

331	RECINO, UVALDO H
	RIGGS, MARY M
	RIVERA, YOLANY
	SANCHEZ, JUAN
	SANTIAGO, ELOY S
	SCHIAVONE, KENNETH M
	SHACKLEFORD, JAMES T
	STEVENS, TONIA N
	TEDDER, PATRICIA
	VELEZ, FELIPE
	WHITCOMB, MICHEAL A
336	LEHMAN, PAUL F
340	ARBIA, D
402	MCLEAN, DENNIS E
406	TYLER, RANDY
418	DIFABIO, NANCY
	ETHRIDGE, JAMES
	HIGLEY, MARIANNA
	VASQUEZ, ANGELICA
	ZACK S KNACK SHACH
422	SLOAN, TIM W
424	COTTLE, LISA M

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2005

2245	CONCEPT TO COMPLIMENT
	NEW MILLENIUM HAIR AND FASHION SALON
	OPM PAWN CO
2250	CAROLINA BOAT PARTS & SERVICES
2251	HEWETT, HELEN M
2259	CARISTO, LAWRENCE J
	LYONS, PATTY
	MOORE, GAIL E
	OCCUPANT UNKNOWN,
	RIVENBARK, G
2300	AUTO WIZARD
2311	GENES TIRE & AUTOCARE SPECIALISTS
2318	ADVANCE AUTO PARTS
2326	AUTO MD
	AUTOS 4 U
	J & K AUTO BODY
2338	MERRITTS BURGER HO
2346	STAR WAY FLEA MARKET
2348	AUTOZONE
2351	AUTO SUPPLY CO INC
	JEWEL STRICKLAND AUTO PARTS
2362	J & S CONCRETE INC
	NC INSPECTIONS CENTER
2365	K & L AUTO SALES INC
2374	OCCUPANT UNKNOWN,
2375	BEST TECHS INC
	MEINEKE CAR CARE CENTER
2390	BURLINGTON SPORTSWEAR
	HAIR CONNECTION
	MOTOR VEHICLES
	PORT SOUTH INSURANCE AGENCY INC
2392	DAVID JONES INVESTMENTS
	JOMUR LLC
	JONES, DAVID
	LEDGER PLUS
	MURJO CHECK CASHING AND CHECK ADVANC
	TRADING POST & AMUSEMENTS LLC
2394	SATELLINK COMMUNICATIONS
	SOUTHERN LOANS INC
2402	A C WIDENHO
2416	DOLLAR GENERAL STORE
2419	JOHNSON, JAMES R
2445	SALVATION ARMY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 2000

310	BOWERS TRANSMISSION SERVICE
331	BALLARD, MONICA U
	BRADLEY, BILL L
	BROBST, RONALD F
	BROWN, ANNIE M
	HATCHEL, DONALD M
	HEAD, WAYNE
	HORNE, JAMES
	HOUSAND, C
	JACKSON, BARBARA A
	JOHNSON, P
	LANIER, WANDA K
	MARTIN, M S
	MERRITT, ROSA
	RIDOLFI, E M
	RIGGS, MARY M
	RUSSELL, RON
	THOMAS, E D
	TRIPODES, ELIAS
336	LEHMAN, PAUL

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 2000

2245	ARNOLDS BAKERY OUTLET
	BUZZS BARBER SHOP
	CANDLELIGHT WEDDING CHAPEL
2251	ROGGINA, KELLY A
2254	MCCORMICK AUTO SALES
2258	ARTHURS TIRE & AUTO SERVICE
2259	BONSIGNORE, DANENE C
2305	HARRYS AUTOMOTIVE SERVICE
2311	GENES TIRE SERVICE
2318	ADVANCE AUTO PARTS
2326	GRAINGERS PAINT & BODY
	PORT CITY AUTO SALES
2329	BENTON E E ACCOUNTANTS
2338	BURGER HOUSE THE
	MERRITTS BURGER HOUSE
2346	STAR WAY FLEA MARKET
2348	AUTOZONE
2351	JEWEL STRICKLAND AUTO PARTS
	WALKER AUTO STORES
2357	BLACKWELDERS AUTO SERVICE & SALES
2362	ACDC ELECTRIC
	N C INSPECTION CENTER
	PROTO TECHNOLOGY
2365	DOUGS AUTO SALES
2375	J & K AUTO BODY
2377	GRAHAMS GARAGE
2381	PRIDGEN MOTOR COMPANY
	RYDER TRUCK RENTAL ONE WAY INCORPORATED
	TODDS USED CARS
2390	BURLINGTON SPORTSWEAR
	HAIR CONNECTION
	NORTH CAROLINA STATE GOVERNMENT TRANSPORTATION
	PORT SOUTH INSURANCE AGENCY
2392	FARMERS GRAIN EXPRESS
	JONES DAVID INVESTMENTS
	PAWN USA INCORPORATED
2394	B & B STAFFING INCORPORATED
	CIRCLE D WESTERN WEAR
2402	WIDENHOUSE A C INCORPORATED
2420	JACKS PLACE USED CARS
2432	SUB STOP THE
2445	PAYLESS SHOE SOURCE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 1995

310	BOWERS TRANSMISSION SVC
313	LOWE, CATHY L
316	GIBSON, EUNICE
317	ROSS, GILVEN
320	PICKETT, CLEMENT W
321	BARNES, CECIL
	FAULK, BLANCHE
324	OCCUPANT UNKNOWNN
328	SMITH, MARY C
331	ALDRIDGE, R G
	BARROWS, S
	BORDEAUX, LEO B
	BRADLEY, BILL L
	BROWN, ANNIE M
	CHRISTOPHER, DAVID
	CLORINGUS, DIANE
	COMER, DENNIS W
	COSTON, GEORGE F
	HEAD, WAYNE
	HINSON, MARVIN E JR
	IRVING, BETTY
	JACKSON, BARBARA A
	JONES, LURETTA M
	MERRITT, ROSA
	MINTZ, WALTER
	MOORING, EDNA
	PEPPER, THERESA
	PREVATTE, ELMER
	RIDOLFI, E M
	RIGGS, LISA
	RIGGS, MARY M
	RUSSELL, RON W
	SASSER, ROBERT G
	SNYDER, C R
	THOMAS, E D
	TRIPODES, ELIAS
	VONSCHOPPE, ERIK
	WAGNER, CHUCK
	ZAWILIN, VINCENT P
337	OCCUPANT UNKNOWNN
406	CLOVINGER, DIANE
424	SELF, GARLAND R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 1995

2245	AMON, JOYCE
	BUZZS BARBER SHOP
	CONCEPT TO COMPLIMENT
	DARLENES FAMILY HAIR CARE
	TODDS FLORIST
2251	ATKINSON, DEBORAH
2253	OCCUPANT UNKNOWNN
2254	HOLLIS AUTO SALES
	MC CORMICK AUTO SALES
2257	ATKINSON, DERETA
2258	ARTHURS TIRE & AUTO SVC
2259	RAY, SAM
2261	JACKSON, AUSTIN M
2263	MORGAN, MARGIE
2305	HARRYS AMOCO
2311	CAPE FEAR RECOVERY INC
	GENES TIRE SVC
2318	ADVANCE AUTO PARTS
2320	CHRISTENSEN, ANN
2326	J & K AUTO BODY
	PORT CITY AUTO SALES
	RYDER TRUCK RENTAL INC
	SMITH'S AUTO REPAIR
2329	BENTON, E E
	E E BENTON CPA
2338	MERRITTS BURGER HOUSE
2346	STAR WAY FLEA MARKET
2348	AUTO ZONE INC
2351	JEWELL STRICKLAND AUTO PARTS
2357	BLACKWELDERS AUTO SVC
2363	CARROLL, L W
	CHINA HOUSE
2370	JOHNS, BARBARA A
2375	ALLSTATE AUTO
	OCCUPANT UNKNOWNN
2377	GRAHAM'S GARAGE
	GRAHAM, RONALD
2381	HARRIS, EDWARD
	PRIDGEN MOTOR CO
	U HAUL CO
	U-HAUL CO INDEPENDENT DEALER
2389	AUTO SALES INC
2390	BURLINGTON SPORTSWEAR OUTLET
	HAIR CONNECTION
	LICENSE PLATE AGENCY
	MOTOR VEHICLE DEPT
	MOTOR VEHICLE LICENSE
	PAWN USA
2392	DAVID JONES INVESTMENTS
2394	LIQUIDATOR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 1995 (Cont'd)

2394 LITTLE CAESARS PIZZA
2402 A C WIDENHOUSE INC
2420 JACKS PLACE USED CARS
2424 PARKERS AUTO SALES
2432 SUB STOP
2445 PIC WAY SHOES

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BELL ST 1992

310	BOWERS TRANSMSN SVC
313	POPULUS, D L
316	GIBSON, EUNICE
320	PICKETT, C W
321	BARNES, CECIL
328	SMITH, MARY C
331	BRADLEY, DIANE
	COMER, LORA
	JAROSE, ROCKY
	MINTZ, WALTER
	MOCK, BURRNIE
	MOORING, EDNA
	PARRISH, DONALD F SR
	THOMAS, E D
	WHALEY, JERRY
3311	LONG, RHONDA F
3312	FREEMAN, C E JR
	HEAD, WAYNE
	SASSER, ROBERT G
3314	PITTMAN, JOHN L
3316	MERRITT, ROSA
3319	HINSON, MARVIN E JR
33111	RIDOLFE, EMMA M
33113	CARROLL, RAYMOND M
33115	IRVING, BETTY
33116	TRIPODES, ELIAS
33119	BRADLEY, BILL L
33121	GURGANIOUS, CECIL JR
33122	BORDEAUX, LEO B
33131	JACKSON, BARBARA A
33132	RIGGS, MARY M
33135	MARTIN, M S
33140	COSTON, GEORGE F
33145	BROWN, ANNIE M
33148	WOODY, ELAINE F

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAROLINA BEACH RD 1992

2245	BUZZ'S BARBER SHOP
	CAPE FEAR FANS
	DARLENE'S FAMILY HAIR CARE
	TODD'S FLORIST
2253	MIKSCH, DAVID
2254	HOLLIS AUTO SALES
	MCCORMICK AUTO SALES
2257	AMELANG, JEAN S
2258	ARTHUR GERALD
	ARTHUR'S TIRE & AUTO SERVICE
2263	GRADY, J E
2305	HARRY'S AMOCO
2311	GENE'S TIRE SERVICE
2318	ADVANCE AUTO PARTS
2326	COASTLINE DESIGN
	PORT CITY AUTO SALES
	RYDER TRUCK RENTAL ONE-WAY INC
2329	BENTON E E ACCT
	BENTON, E E
2338	MERRITT'S BURGER HSE
2346	STAR WAY FLEA MARKET
2348	AUTOZONE
2351	JEWELL-STRICKLAND AUTO PARTS CO STR #2
2357	BLACKWELDER'S AUTO SERVICE
2363	CHINA HOUSE RESTRNT
2365	DARRYL'S AUTO SALES
2374	HICKS Z L
	HICKS, ZERA L
2375	ALLSTATE MOTOR SALES
	P & P CREDIT
2381	GO TRAVELS
	J J'S AUTO REPAIR
	OXENDINE GAIL
	OXENDINE, GAIL
	PRIDGEN MOTOR CO
	U-HAUL CO NEIGHBORHOOD DEALERS
2389	TOM WEST AUTO SALES
2390	BURLINGTON SPORTSWEAR OUTLET
	HAIR CONNECTION
	NORTH CAROLINA PRECIOUS METALS &
	ST MOTOR VEHICLES LICENSE PLATES
	ST MTR VEHCL DEPT DRIVERS LICENSE
2394	LITTLE CAESARS PIZZA
	U-LEASE INC
2402	WIDENHOUSE A C HAULNG
2420	JACK'S PLACE USED CARS
2424	PARKER'S AUTO SALES
2432	SUB STOP THE
2445	PICWAY SHOES

Target Street	Cross Street	Source
-	✓	Polk's City Directory

BELL ST 1990

32

BELL ST –FROM CAROLINA BEACH RD WEST 1 NORTH OF CAPE FEAR BLVD

ZIP CODE 28401

310 Bowers Transmission Service 762-0441
313 Pirvo Benj R Jr ◎ 763-1654
316 Gibson Eunice M Mrs 763-4169
317★Lewallen Robt M
320 Brown Jas W 762-7001
321 Barnes Katie L Mrs ◎ 763-1238
324 Reeves Bradley G
328 Smith Wilbur A 762-4918
330★Britt Teena M 762-9406
★Riggs Ginger 762-9421
331 Hinson Mobile Home Sales & Park
763-2974
Lots

Target Street	Cross Street	Source
-	✓	Polk's City Directory

BELL ST 1990

331 Park 2
Lots
1★Long Windell
2 Sasser Robt G ◎ 763-3270
3 Barefoot Ethel L ◎ 763-2652
4★Bradley Wm 343-8784
5 Vacant
7 Freeman Lillian S Mrs ◎ 763-0890
331 Park 3
Lots
1★Long Betty Mrs ◎ 343-9856
2 Vacant
3 Comer Russell B ◎
4 Smith Dannis R ◎ 251-0132
5 Vacant
335★English Terry G 251-1583
336 No Return
340 Blankenship Jerry W
402 Hayes Leon 251-9786
406★Smith Ronald A
422 East Coast Roofers contrs 251-1915
Bermudez Wm A 251-1915
424 Pickett Sandra 763-6715

Target Street	Cross Street	Source
✓	-	Polk's City Directory

CAROLINA BEACH RD 1990



CAROLINA BEACH RD–Contd

2242 East Coast Warehouse 762-6538
2245 Buzz's Barber & Beauty Shop 251-0602
Todd's Florist 762-2909
2245c Lee's Majestic Cut's beauty shop 762-2433
2246 Thompson Charles E Jr ◎ 763-3729
2250★Schaefer Mitchell W
2251 No Return
2253 No Return
2254 Hollis Auto Sales 762-4905
2255★Taylor Wm R 251-1887
2257 Amelang Jean S 763-9676
2257½ Vacant
2258 Arthur's Tire Service 343-0944
2259 Hayes Nickie 762-8870
2259½ Vacant
2261 No Return
2263 Grady Inez R Mrs ◎ 762-6042
BORDEAUX AV BEGINS
2304 Super Boat & Car Wash 256-8075
2305 Harry's Amoco 762-7474
BORDEAUX ST INTERSECTS
HART ST INTERSECTS
2311 Gene's Tire Service 762-1779
Todd's Used Cars 762-1779
2326 Port City Auto Sales used cars 763-3535
2329 Benton Tax & Accounting Service 762-6588
2338 Merritt's Burger House restr 763-5844
2346 Flea Market
2351 Jewell-Strickland Auto Parts No 2 ret & whol 343-1301
2357 Blackwelders Auto Service auto repr 343-1492
2362 Vacant
2363 China House Restaurant 762-6014
2363½ Carroll's Properties 763-1300
2365 C & C Auto Sales used cars 763-7928
2375 Best Auto used 763-6000
2378 State A B C Store No 102 343-8336
2380 South Square Plaza shopping center
2381 Pridgen Motor Inc used cars sls 763-7299
Porter's Automotive Service auto repr 251-1450
2385 Vacant
2389 West Tom Auto Sales used 763-5534
2390 State Dept Motor Vehicles Plates Agency 763-6752
B2 Hair Connection beauty shop 763-3322
B4 Burlington Sportswear Outlet sportswear ret 251-9712
2392 N C Precious Metals & Pawns Inc buyers 251-1200
Game World leisure time equip 251-0022
Jones David Investments rental agts 763-6780
C203 Williford High & Downing cpa's 762-0004
2394 Little Caesars Pizza restr 762-2072
U-Lease Inc furn appl & video leasing 251-8661
2402 Widenhouse A C Inc trans lines 762-2528
2420 Hinson Oil Co gas sta 762-0514
Jack's Place used cars 762-5225
2424 Parker's Auto Sales used cars 763-6382
2432 Sub Stop sandwich shop 343-0097
2433 Rent-A-John 343-1101

Target Street	Cross Street	Source
-	✓	Polk's City Directory

BELL ST 1985

BELL ST —FROM CAROLINA BEACH RD WEST 1 NORTH OF CAPE FEAR BLVD

ZIP CODE 28401

310 Bowers Transmission Service 762-0441
313 Meares Frank ◎ 763-1410
316 Gibson Eunice M Mrs 763-4169
317 Meares Roy
320 Leonard Clyde E
321 Barnes Cecil ◎ 763-1238
324 Frink Charles
328 Smith Wilbur 762-4918
331 Hinson Trailer Park 762-0514
Lots
1 Upchurch James E ◎ 763-8728
2 Head Wayne ◎
3 Mintz Mabel ◎ 762-9701
4 Grice Hester ◎ 343-1231
5 Vacant
6 Merritt Rosa Mrs ◎ 763-1569
331★Fulford Jimmy ◎ 762-8382

Target Street	Cross Street	Source
-	✓	Polk's City Directory

BELL ST 1985

331 Park 3
Lots
1 Long Betty W
2★Lewis Chas
3★Comer Edw 763-3470
4★Pearson Gloria
5★Deal Sylvia
335 Nance James
336★Cope Connelly
340★Blankenship Jerry 343-8825
402 Hayes Leon 763-1797
406 Davis Charles C 762-2181
422 Hodges Hazel
424 Pickett Willy E

Target Street	Cross Street	Source
✓	-	Polk's City Directory

CAROLINA BEACH RD 1985

2246 Thompson Charles E Jr © 763-3729
2250 Vacant
2251 Atkinson Lawrence W
2251a La Brecque Jackie
2253★Merrell Brenda
2254 Hollis Auto Sales 762-4905
2255 Vacant
2257★Amalang Jean
2257½ Anderson Sharon
2258 Arthur's Tire Service 343-0944
2259★Ashley Robt
2259½★Norris Dale
2261 Davis Mildred E © 762-5591
2262 Vacant

Target Street	Cross Street	Source
✓	-	Polk's City Directory

CAROLINA BEACH RD 1985

CAROLINA BEACH RD—Contd

2263 Grady Inez R Mrs © 762-6042
BORDEAUX AV BEGINS
2300 K & M Car Wash
2305 Harry's Amoco 762-7474
BORDEAUX ST INTERSECTS
HART ST INTERSECTS
2311 Mc Lean Trucking Co 343-1159
2325 Deese Bus Line 762-8737
2326 Port City Auto Sales used cars 763-3535
2329 Benton Tax & Accounting Service 762-6588
2338 Merritt's Burger House 763-5844
2341 Vacant
2346 Star Way Drive-In Theatre 763-5520
2357 Cape Fear Wrecker & Salvage Co 762-9439
S & S Auto Sales 762-9439
2358 Ramsey's Portable Welding Saw Filing Service 763-1326
2362 Vacant
2363 Jing Wha House restr 762-6014
2365 C & C Auto Sales 763-7928
2370 Martin Rudolf D 763-2346
2374 Hicks Zeralee R Mrs © 762-1108
2375 Best Auto Service 762-5775
2378 County A B C Store No 102 343-8336
2381 Pridgen Motor Co 763-7299
2385 Sky-Line Drive In Theatre 763-4123
2386 Vacant
2389 West Tom Auto Sales 763-5534
2390 Vacant
2394 Stokely Enterprises 343-0899
2402 Widenhouse A C Inc 762-2528
2420 Hinson Oil Co gas sta 762-0514
Gene's Tire Service 762-1779
2424 Auto Sales Inc used cars 343-8873
2432 Sub Stop 343-0097
2433 Bradshaw Rental Toilets 763-0025
2445 Pic-Way Shoe Mart 762-8410
2448 Vacant

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1980

32

BELL ST —FROM CAROLINA BEACH RD WEST 1 NORTH OF CAPE FEAR BLVD

ZIP CODE 28401

310 Bowers Transmission Service 762-0441
313 Meares Frank ◎ 763-1410
316 Gibson Eunice M Mrs 763-4169
317 Meares Roy
320 Mc Neil Joe
321 Barnes Katie Mrs
324 Smith Wilbur A 762-4918
328★Fulwood Mark 763-7255
331 Hinson Trailer Park 762-0514

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1980

335 Rivenbark Wm H 762-9848
336★Hayes Leon 343-8305
340 Morgan Mona 763-1797
402 Cherry R D 763-9500
406 Davis Charles C 762-1181
422 Brannon Carl D 343-0907
424★Pickett Sandra 763-2397

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1980

2246 Thompson Charles E Jr ◎ 763-3729
2250 No Return
2251 ★Stancil B Ray 763-5188
2251½ No Return
2253 Le Wallen Marie M
2254 Vacant
2255 Vacant
2257 Allen TV 762-1384
2257½ ★Kloetzci Charles 763-2309
2261 Crawley Winston G 762-4067
2262 Vacant
2263 Grady Inez Mrs 762-6042
BORDEAUX AV BEGINS
2300 A A A Auto Liquidation Car Sls
2305 Earl's Exxon 762-0575

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1980

CAROLINA BEACH RD—Contd
BORDEAUX ST INTERSECTS
HEART ST INTERSECTS
2311 Marine Transport Co
2322 Hydro-Spray Car Wash
2325 Land Mark Realty Inc 762-8771
2326 Hardee's No 2 762-3904
2329 Benton Tax & Accounting Service 762-6588
2338 Merritt's Burger House 763-5844
2341 Vacant
2346 Star Way Drive-In Theatre 763-5520
2357 Malone's Texaco Service Station 762-8951
2358 Ramsey's Saw Filing Service 763-1326
2362 Azalea Refrigeration Heating & Air Conditioning 762-4885
2363 Bennett's Seafood Restr 763-8421
2365 Bradshaw Auto Sales used cars 763-9378
2370 Martin Rudolf D 763-2346
2374 Hicks Wm E © 762-1108
2377 Vacant
2378 A B C Store No 102
2385 Sky-Line Drive In Theatre 763-4123
2389 Dixie Auto Sales 763-8968
2390 Dixie Pig Drive-In Restaurant 343-9287
2394 Haas Wm C © 762-1523
2402 Widenhouse A C Transport Co Inc 762-2528
2420 Hinson Oil Co gas sta 762-0514
2424 Parker's Auto Sales 763-6382
2432 Carolina Trailer Park
Lots
1 Melton W W 763-1002
2 Vacant
4 Cottle Mildred
5 Watson Margt
6 Shiver Ethel
7 Parker Nancy
8 Cannon J B Mrs 762-6586
★Parkee Nancy
10 Johnson Dorothy
15 Millican Lonnie
19 Shelton Cecil A 762-5837
20 Vacant
21 Mintz Mable 762-9701
Sneeden Victor Real Estate Agency 791-4633
2433 Bradshaw Motors 763-0025
2445 Pic-Way Shoe Mart 343-9259
2448 Sub Stop restr 343-0097

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1975

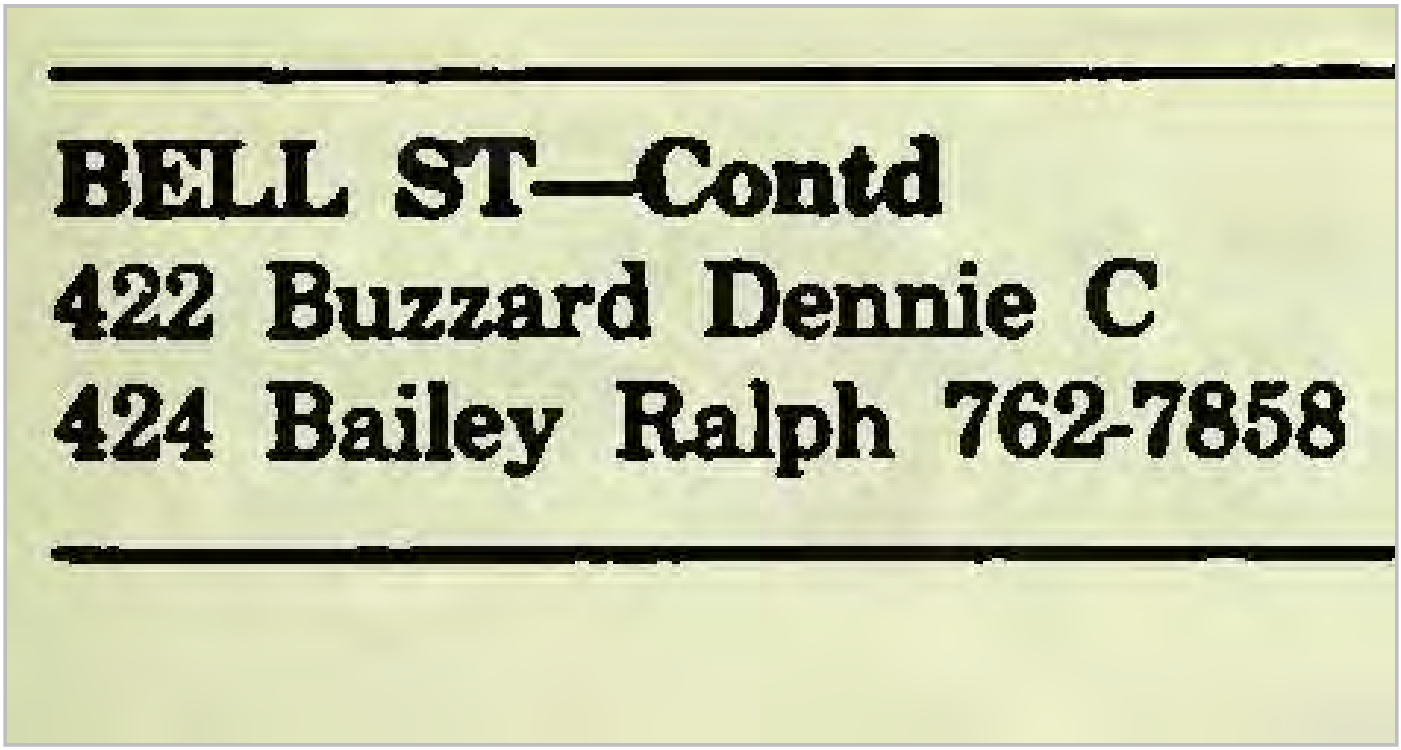
BELL ST --FROM CAROLINA BEACH RD WEST 1 NORTH OF CAPE FEAR BLVD

ZIP CODE 28401

313 Mears Frank ◎
316 Gibson Eunice M Mrs 763-4169
317★Mayner John F
320★Bean Robt C
321 Barnes Katie Mrs
324★Smith Wilbur A 762-4918
328 Raynor Jesse F 763-6125
331 Hinson Trailer Park 762-0514
Lots

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1975



BELL ST—Contd

422 Buzzard Dennie C

424 Bailey Ralph 762-7858

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1975

2246 Thompson Charles E Jr © 763-3729
2250 Blackman Robt W 763-5090
2251 Boggs Georgena E Mrs
2253★Bond James E 763-8934
2254 Vacant
2255 Ferrell Rich ©
2257 No Return
2263 Grady J E 762-6042
BORDEAUX AV BEGINS
2300 Bradshaw Auto Sales 762-2009
2305 Brown Oil Co fuel oil 762-8278
Earl's Exxon 762-8278
BORDEAUX ST INTERSECTS
2311 Laney Tank Lines 762-4472
2325 Cumber Leon C © 762-1446
2326 Hardee's Drive In 762-3904
2329 Vacant
2338 Merritt's Burger House 763-5844
2341 Hall's Tom Tire Service 762-1553
2346 Star Way Drive-In Theatre 763-5520
2357 Malones Texaco Service Station
762-8951
2358 Vacant
2362 Norge Quality Home Appliances
2363 Taco Casa 763-8603
2365 Flowers Motor Sales 763-1128
2370 Martin Orion N © 763-2346
2374 Hicks Wm E © 762-1108
2377 Blizzard Fred D © 762-3089

Target Street	Cross Street	Source
✓	-	Hill's City Directory

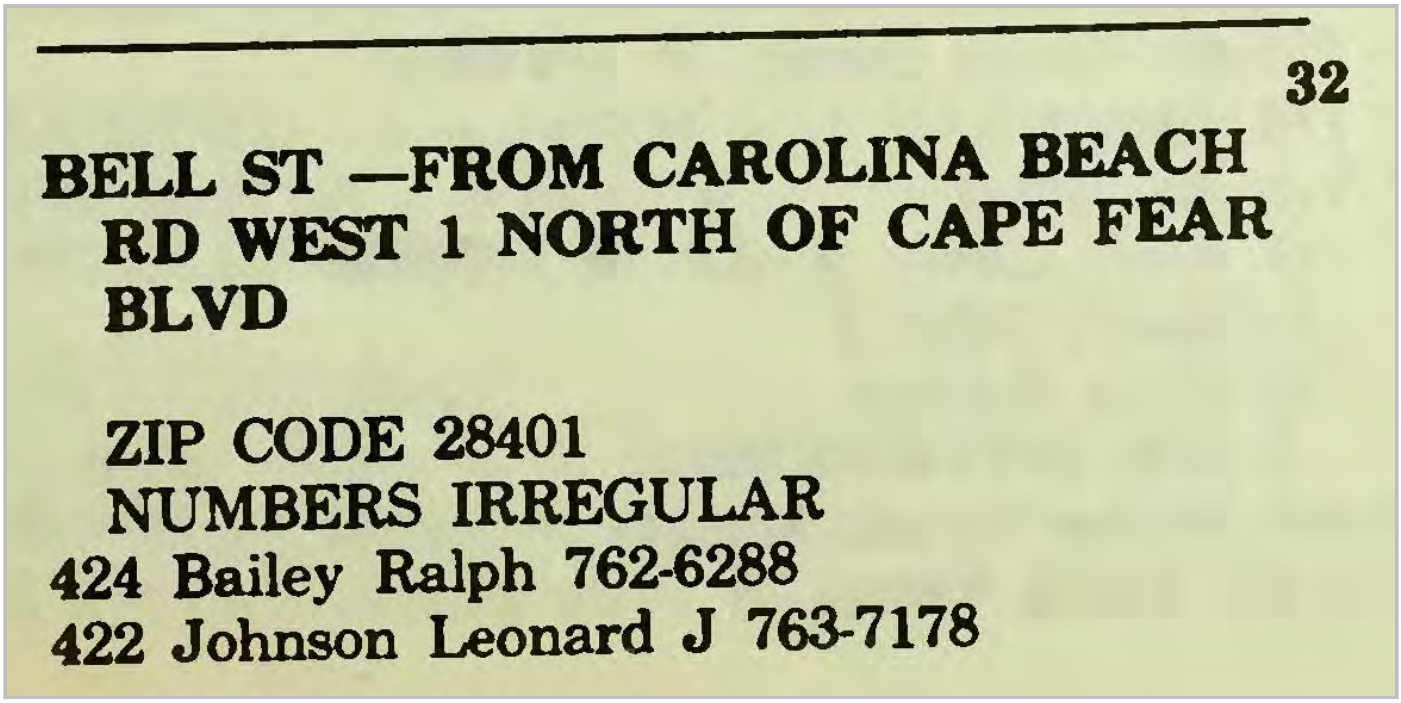
CAROLINA BEACH RD 1975

CAROLINA BEACH RD—Contd

2378 Farm Fresh Minute Market 762-9265
2385 Sky-Line Drive In Theatre 763-4123
2389 Dixie Auto Sales 763-8968
2390 Dixie Pig Drive-In Restaurant 762-9371
2394 Haas Wm C ◎ 762-1523
2402 Widenhouse A C Transport Co Inc 762-2528
2420 Hinson Oil Co gas sta 762-0514
2424 Parker's Auto Sales 763-6382
2432 Carolina Trailer Park
Lots
1 Johnson Fred
2 James Marion C ◎ 763-1305
3 Bailey John
4 Housand Everette 763-2086
5 Watson Margt T Mrs
6 Shiver Mae
7 Vacant
8 Cannon J B 763-7192
9 Shelton Cecil A 762-5837
10 Johnson Dorothy
11 Gain Yee 763-1968
12 Vacant
15 Creech Thos L 762-9934
16★Meltor Wm W ◎ 763-1002
17★Lennon John M ◎ 763-3249
18 Transient
19 Transient
20 Turner Jesse J ◎
21 Transient
2433 Bradshaw Motors 763-0025
2445 Pic-Way Shoe Mart 762-9336
2448 Sunset Wholesale beverage whol 763-5622

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1971



32

BELL ST —FROM CAROLINA BEACH RD WEST 1 NORTH OF CAPE FEAR BLVD

ZIP CODE 28401
NUMBERS IRREGULAR
424 Bailey Ralph 762-6288
422 Johnson Leonard J 763-7178

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1971

406 Jones Hal W 762-1978
402 Vacant
316 Gibson Zibe 763-4169
317 Nobles Herbert A 763-1808
320 Beam Melvin 763-0844
340 Mc Neil Darrell 763-6125
335 Davis Otis G 762-4750
336 Morgan Dwight E
331 Hinson Trailer Park 762-0514
Stafford Eliz
Coston Geo F 763-9550
Pridgen Robt E ◎
Gaskill John 76-7273
Irving Geo G ◎
Kershaw Jack E ◎
Kershaw Jack E Jr
Windham David 762-9705
Brown Larry C 763-7517
Edwards Ernest
Davis Octavia ◎ 762-1418
James Carey M 763-8959
Rhue Franklin 762-4266
313 Barnhill Raymond H 762-1151
335 Mooring Edna E Mrs ◎ 763-0972

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1971

2242 Stan's Washerette 762-9287
2853 Mc Alister Fred
2857 West Riley F Jr 763-6719
2861 Vacant
2846 Thompson Charles E Jr ◎ 763-3729
2847 Westphal August
2864 Blackman R Wayne 763-5090
2254 Cavanaugh Johnny H 763-7791
2256 Direct Oil gas sta 763-9205
PINECREST TER BEGINS
2301 North Carolina National Bank (Sunset Park Branch) 763-9951
2305 Brown Oil Co fuel oil 762-8278
BORDEAUX ST INTERSECTS
2309 No Return
2311 Laney Tank Lines 762-2620
2325 Vacant
2326 Hardee's Drive In 762-3904
2338 Merritt's Burger House 763-5844
2358 Cooper S E Co Inc wrecking contr 763-4163
2403 Hall's Tom Tire Service 762-1553
2409 Vacant
2410 Starway Drive-In Theatre 763-5520
2414 Vacant
2418 Register Walter R ◎
2357 Raper's Texaco Service Station 762-8951
2356 Martin Orion N ◎ 763-2346
2350 Martin Rudolph D
2363 Carroll's Drive In Restaurant 763-8603
Carroll Lawrence W ◎ 762-7220
2376 Hicks Wm E 762-1108
2378 Farm Fresh Minute Market 762-9265
2377 Bozeman Lacy ◎
2390 Dixie Pig Drive-In Restaurant 762-9371
2384 Blizzard Ella A Mrs ◎ 762-7960
Blizzard Fredk D

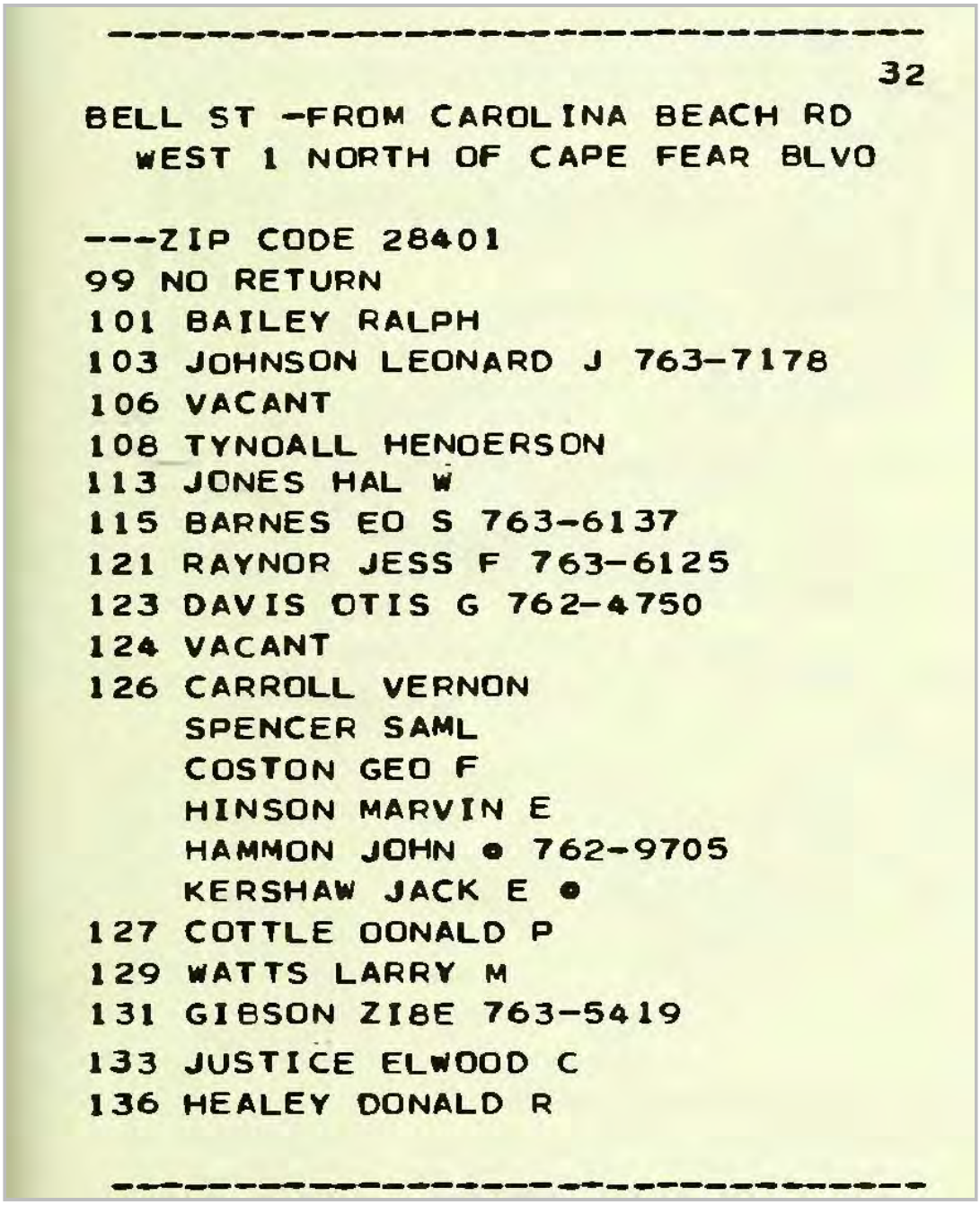
Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1971

2381 Vacant
2385 Sky-Line Drive In Theatre 763-4123
2394 Haas Wm C ◎ 762-1523
2402 Widenhouse A C Transport Co Inc
762-2528
2420 Hinson Oil Co gas sta 762-0514
2445 Pic-Way Shoe Mart 762-9336
2432 Carolina Trailer Park 763-6168
Lots
1 Brown Harlee 763-7818
2 Miller Wm I Jr 791-8697
3 Vacant
4 Vacant
5 Watson Margt T Mrs
6 Shiver Mae
7 Shinn Raymond
8 Vacant
9 Shelton Cecil A
10 Brown C D
11 Gain Wee
12 Vacant
14 Carter John
15 Creech Thos
16 Vacant
17 Vacant
18 Vacant
19 Vacant
21 Farmer W L
2448 Ding How Restaurant 763-5757
Wing Joe ◎ 763-6457
CAPE FEAR BLVD INTERSECTS
2406 Barnes Truck Lines
2502 Simmons Sunoco Station 762-9322
2416 Kayo Oil Co 763-9242
Ewell Ed
2515 Holt Robt E ◎ 762-8607

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1967



32

BELL ST -FROM CAROLINA BEACH RD
WEST 1 NORTH OF CAPE FEAR BLVD

---ZIP CODE 28401
99 NO RETURN
101 BAILEY RALPH
103 JOHNSON LEONARD J 763-7178
106 VACANT
108 TYNOALL HENDERSON
113 JONES HAL W
115 BARNES EO S 763-6137
121 RAYNOR JESS F 763-6125
123 DAVIS OTIS G 762-4750
124 VACANT
126 CARROLL VERNON
SPENCER SAML
COSTON GEO F
HINSON MARVIN E
HAMMON JOHN ● 762-9705
KERSHAW JACK E ●
127 COTTLE OONALD P
129 WATTS LARRY M
131 GIBSON ZIBE 763-5419
133 JUSTICE ELWOOD C
136 HEALEY DONALD R

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1967

2224 HORNE MILDRED M @ 762-8945
---TENNESSEE AV INTERSECTS
2301 NORTH CAROLINA NATIONAL BANK
(SUNSET PARK BRANCH)
763-9951
2302 GRANT JOHN D @ 762-0967
2304 MOORE G R JR
2308 SUNSET SEAFOOD & GROCERY
762-9293
2310 JOYNER CLYDE E @ 762-1353
2314 BRINSON ALONZA D REV @
2318 HELEN'S BEAUTY SHOPPE
763-3177
WOODCOCK JUDY
2321 QUALITY MOTORS
2324 WILMINGTON SEAFOOD MARKET
762-5636
2328 SUNSET BARBER SHOP 762-9366
REAR REGISTER HARRY L
SUNSET T V SERVICE RO3-4459
---ALABAMA AV BEGINS
2401 WHITE GRACE S MRS 762-8670
2406 HOROWITZ SARAH S MRS @
762-7153
2407 JACKSON JAMES W @ 762-1174
---NORTHERN BLVD BEGINS
SUNSET PARK ELEMENTARY SCHOOL
(ANNEX) 762-7834
2513 DOWNING AUTO BODY WORKS
762-0325

Target Street	Cross Street	Source
-	✓	Hill's City Directory

BELL ST 1964

BELL ST -FROM S FRONT WEST 1
NORTH OF CAPE FEAR BLVD

99 HINSON MARVIN E 763-0473
101 WATSON MACO P 762-6369
103 JOHNSON LEONARD RO3-7178
106 RACKLEY LUKE O
108 JONES HAL W 763-8759
113 THOMAS WALTER R 763-4057
115 CONWAY JOHN V 763-2240
121 RAYNOR JESS F 763-6125
123 DAVIS OTIS G 762-8809
124 INMAN PALMER A • 763-2725
126A PATRICK RODNEY C •
126B HUNEYCUTT JAMES C
126C DAVIS ED J • 762-0441
126D HARDISON LOUISE E MRS •
763-4321
126F ARTHURS WM S • 763-8591
127 MERRITTS C N RO2-8392
129 KING JAMES E
131 GIBSON ZIBE 763-6375
133 SPEIGHT LUTHER C
136 SMITH LLOYD L • 763-5682

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1964

2224 HORNE MILDRED M • 762-8945

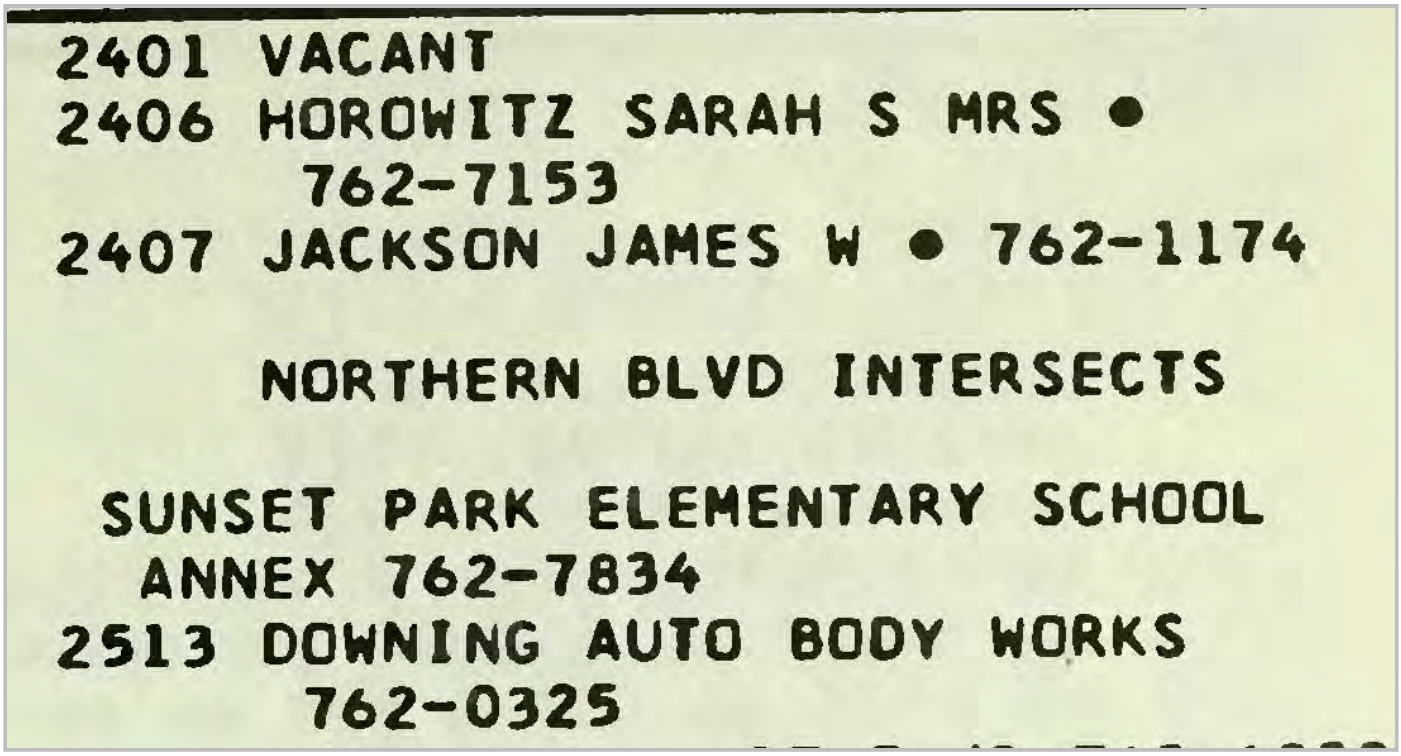
TENNESSEE AV INTERSECTS

2301 NORTH CAROLINA NATIONAL BANK
(SUNSET PARK BRANCH)
763-9951
2302 GRANT JOHN D • 762-0967
2304 BRAND JAMES M
2308 SUNSET SEAFOOD & GROCERY
762-9293
2310 JOYNER'S CASH GROCERY
REAR JOYNER CLYDE E • 762-1353
2314 VACANT
REAR BRINSON ALONZA D REV •
762-6338
2318 HELEN'S BEAUTY SHOPPPE
763-3177
2321 VACANT
2324 WILMINGTON SEAFOOD MARKET
762-5636
2328 SKILLCRAFTS WATCHMAKER
SUNSET BARBER SHOP 762-9366
REAR BROWN HARLEE • RO2-7818
REAR REGISTER HARRY L

ALABAMA AV BEGINS

Target Street	Cross Street	Source
✓	-	Hill's City Directory

CAROLINA BEACH RD 1964



2401 VACANT
2406 HOROWITZ SARAH S MRS ●
762-7153
2407 JACKSON JAMES W ● 762-1174

NORTHERN BLVD INTERSECTS

SUNSET PARK ELEMENTARY SCHOOL
ANNEX 762-7834
2513 DOWNING AUTO BODY WORKS
762-0325

APPENDIX I
FIRE INSURANCE MAPS

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.3
October 26, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/26/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.3

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Kimley-Horn & Associates, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 26C7-4714-972E

PO # NA

Project Starway Village

Maps Provided:

1964
1955
1953
1951

Sanborn® Library search results

Certification #: 26C7-4714-972E

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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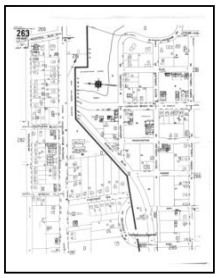
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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1964 Source Sheets



Volume 2, Sheet 263
1964



Volume 2, Sheet 282
1964



Volume 2, Sheet 283
1964

1955 Source Sheets



Volume 2, Sheet 263
1955



Volume 2, Sheet 283
1955

1953 Source Sheets



Volume 1, Sheet 82
1953

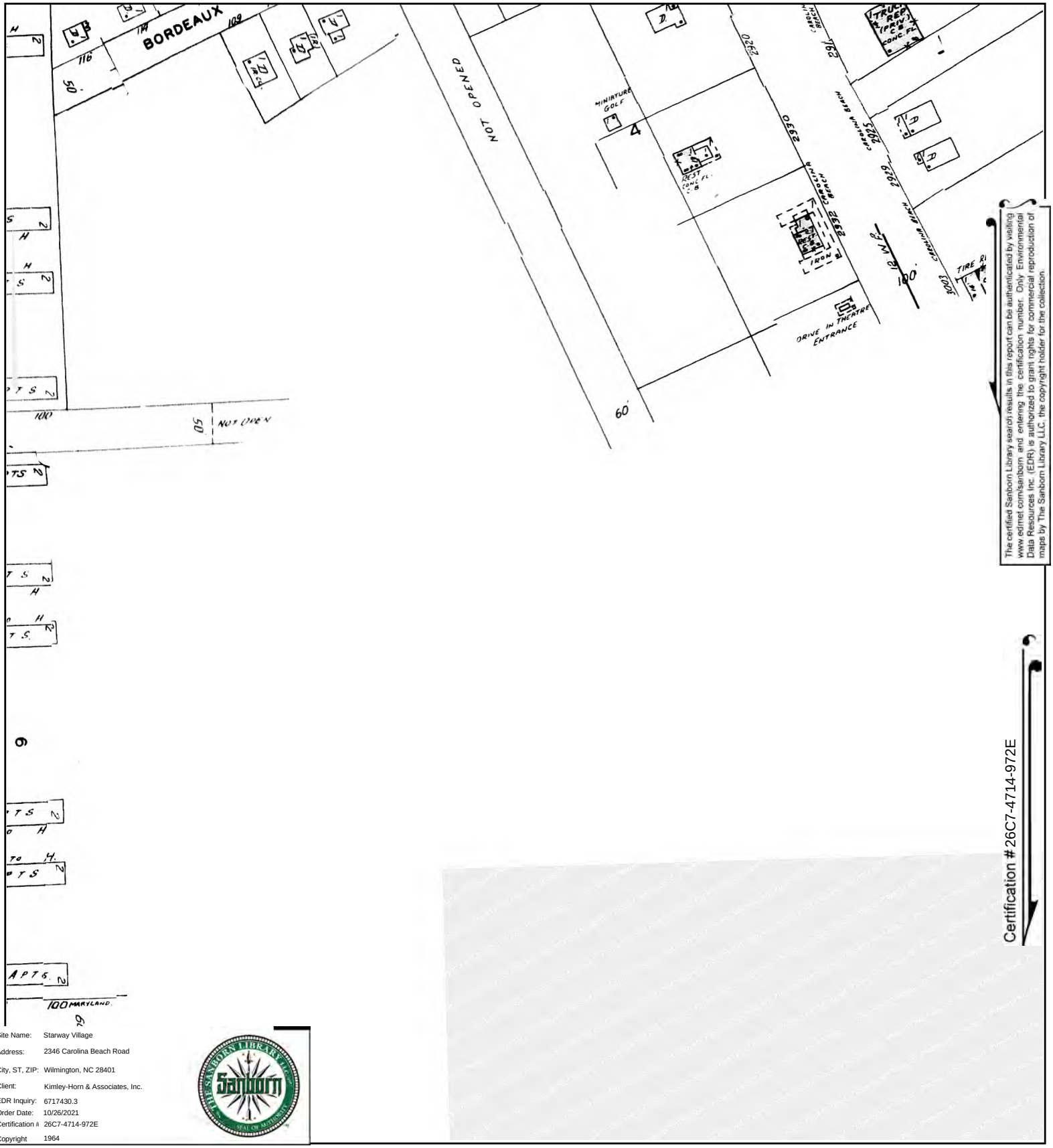


Volume 1, Sheet 83
1953

1951 Source Sheets



Volume 1, Sheet 82
1951

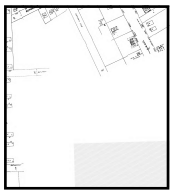


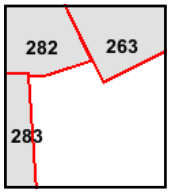
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Certification #26C7-4714-972E

Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright: 1964

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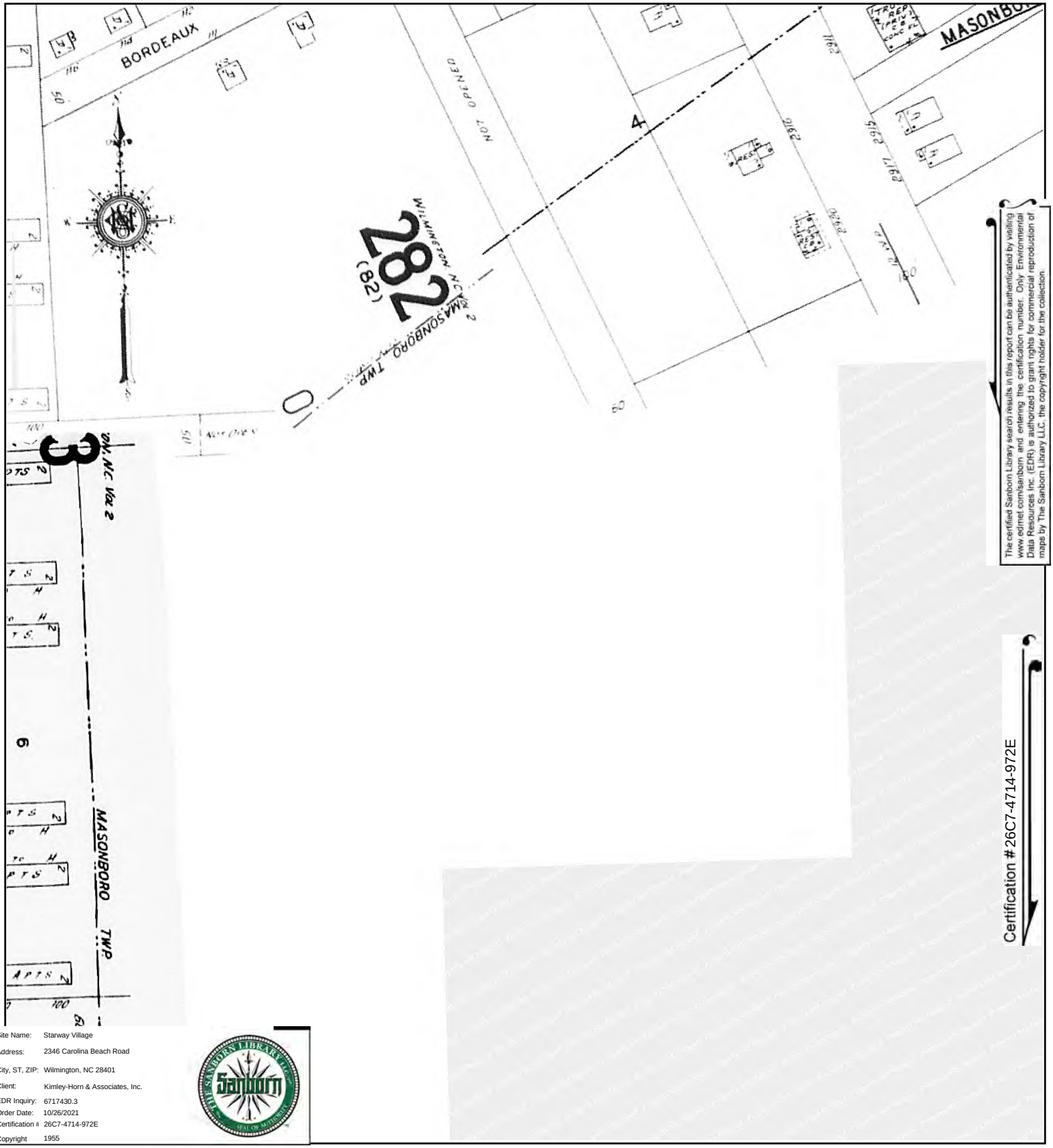




Volume 2, Sheet 283
Volume 2, Sheet 282
Volume 2, Sheet 263

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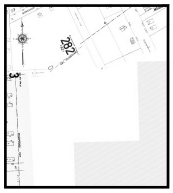


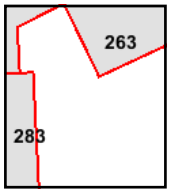
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Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
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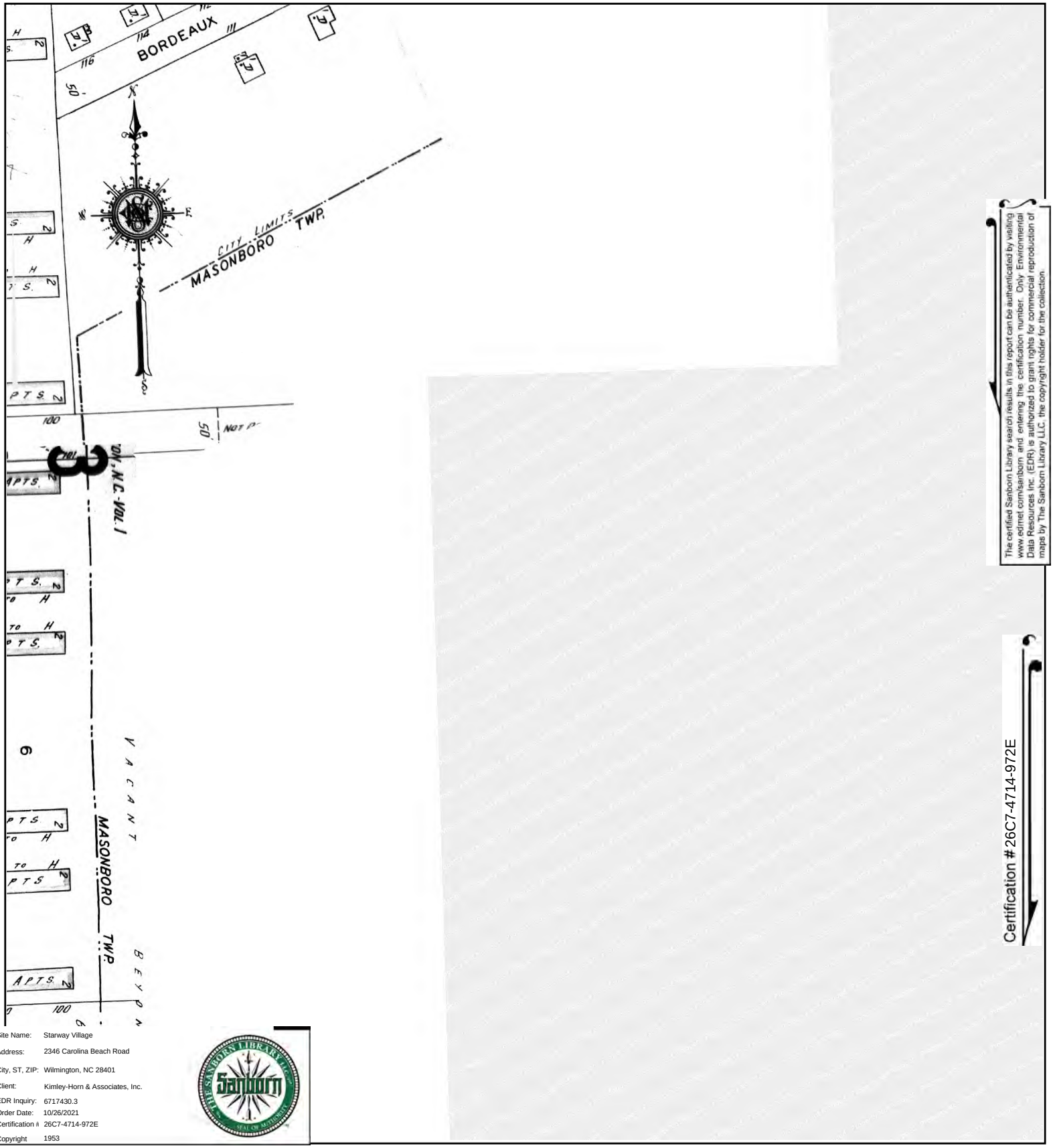




Volume 2, Sheet 283
Volume 2, Sheet 263

0 Feet 150 300 600

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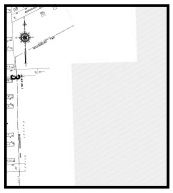


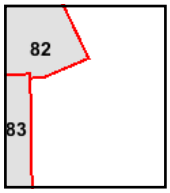
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Certification #26C7-4714-972E

Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
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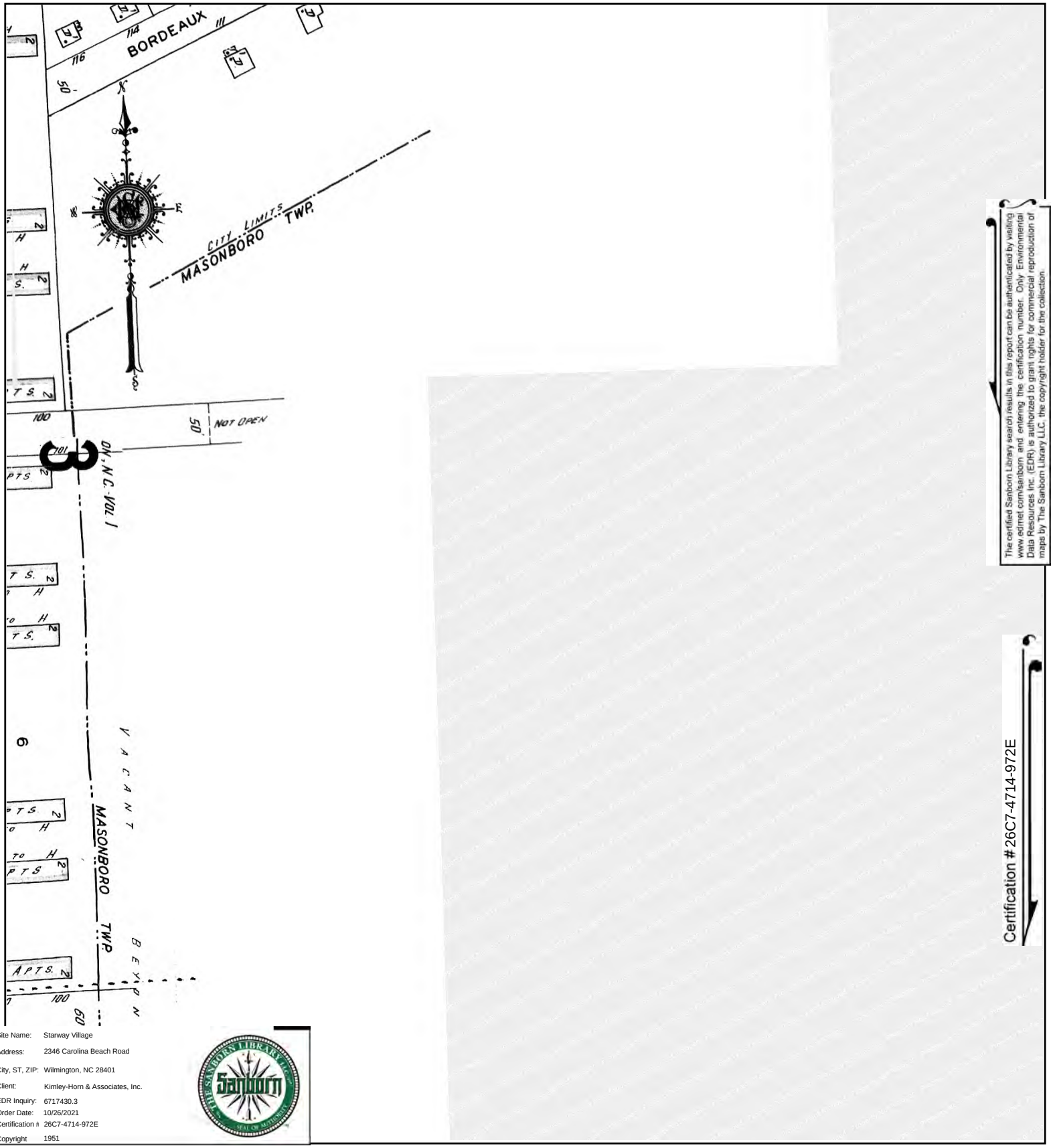




Volume 1, Sheet 83
Volume 1, Sheet 82

0 Feet 150 300 600

N

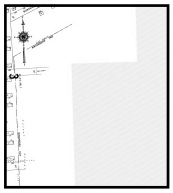


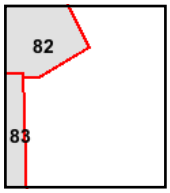
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Certification #26C7-4714-972E

Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright: 1951

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Volume 1, Sheet 82

0 Feet 150 300 600

N

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.3
October 26, 2021

Certified Sanborn® Map Report

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Shelton, CT 06484
Toll Free: 800.352.0050
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Certified Sanborn® Map Report

10/26/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.3

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

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Certified Sanborn Results:

Certification # 26C7-4714-972E

PO # NA

Project Starway Village

Maps Provided:

1964
1955
1953
1951

Sanborn® Library search results

Certification #: 26C7-4714-972E

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- ☑ Library of Congress
- ☑ University Publications of America
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Sanborn Sheet Key

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1964 Source Sheets



Volume 2, Sheet 282
1964



Volume 2, Sheet 283
1964

1955 Source Sheets



Volume 2, Sheet 282
1955



Volume 2, Sheet 283
1955

1953 Source Sheets



Volume 1, Sheet 82
1953



Volume 1, Sheet 83
1953

1951 Source Sheets



Volume 1, Sheet 82
1951

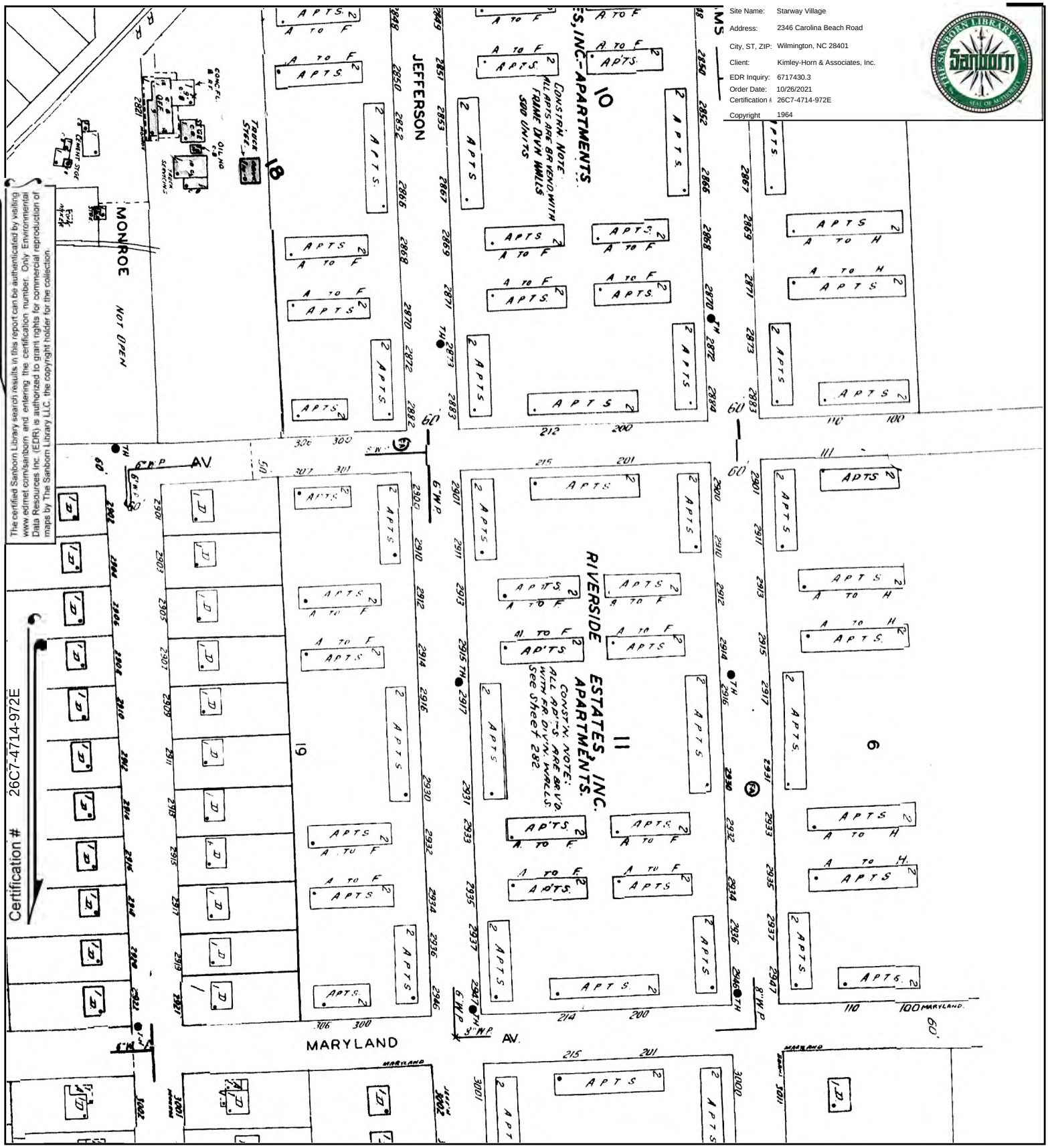


Volume 1, Sheet 83
1951

Certified Sanborn® Map

1964

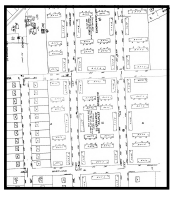
Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright 1964

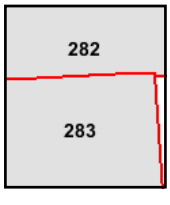


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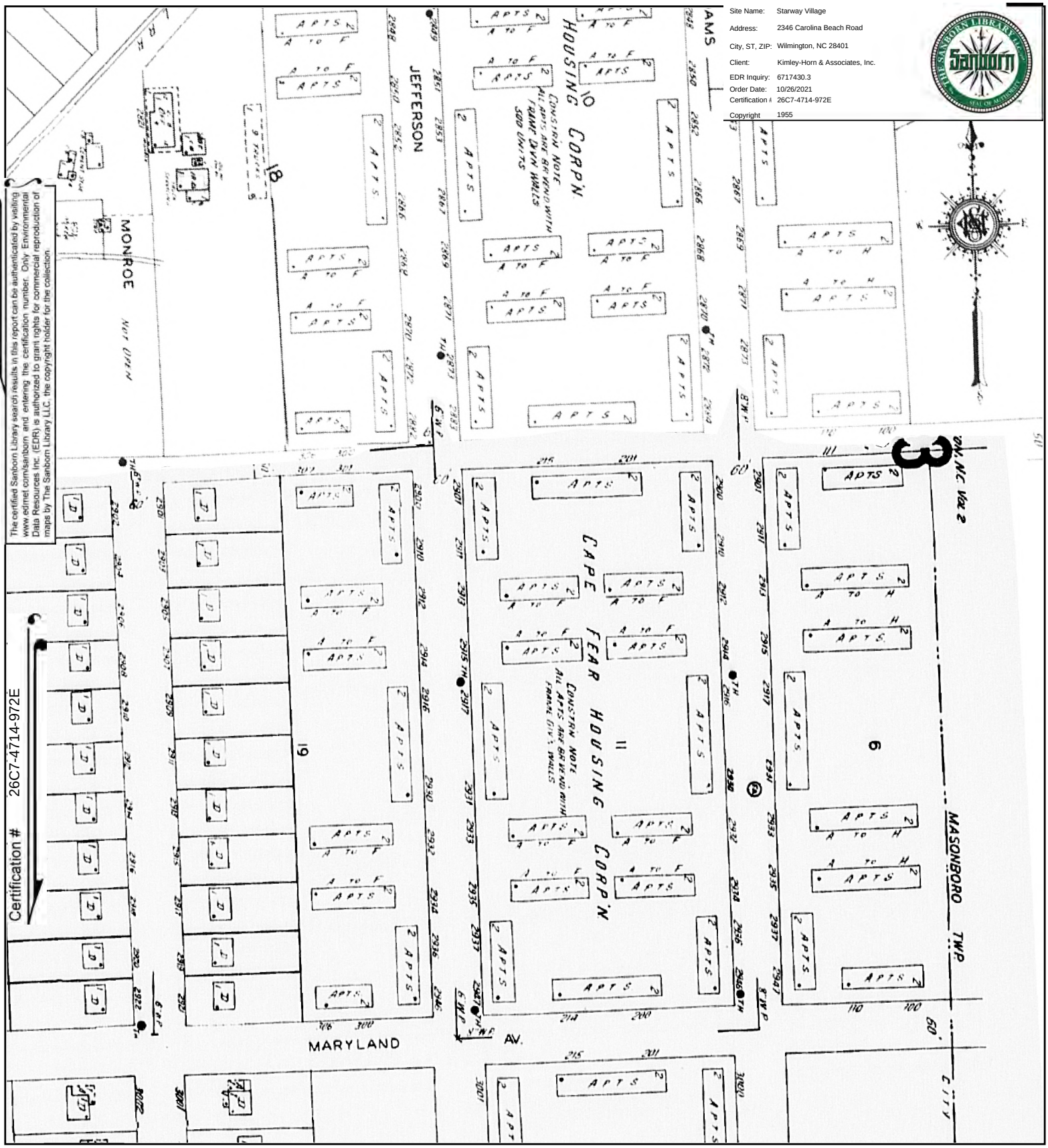




Volume 2, Sheet 283
Volume 2, Sheet 282

N

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City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright 1955

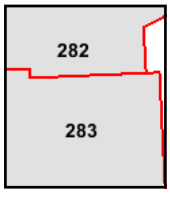


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0 Feet 150 300 600





Volume 2, Sheet 283
Volume 2, Sheet 282

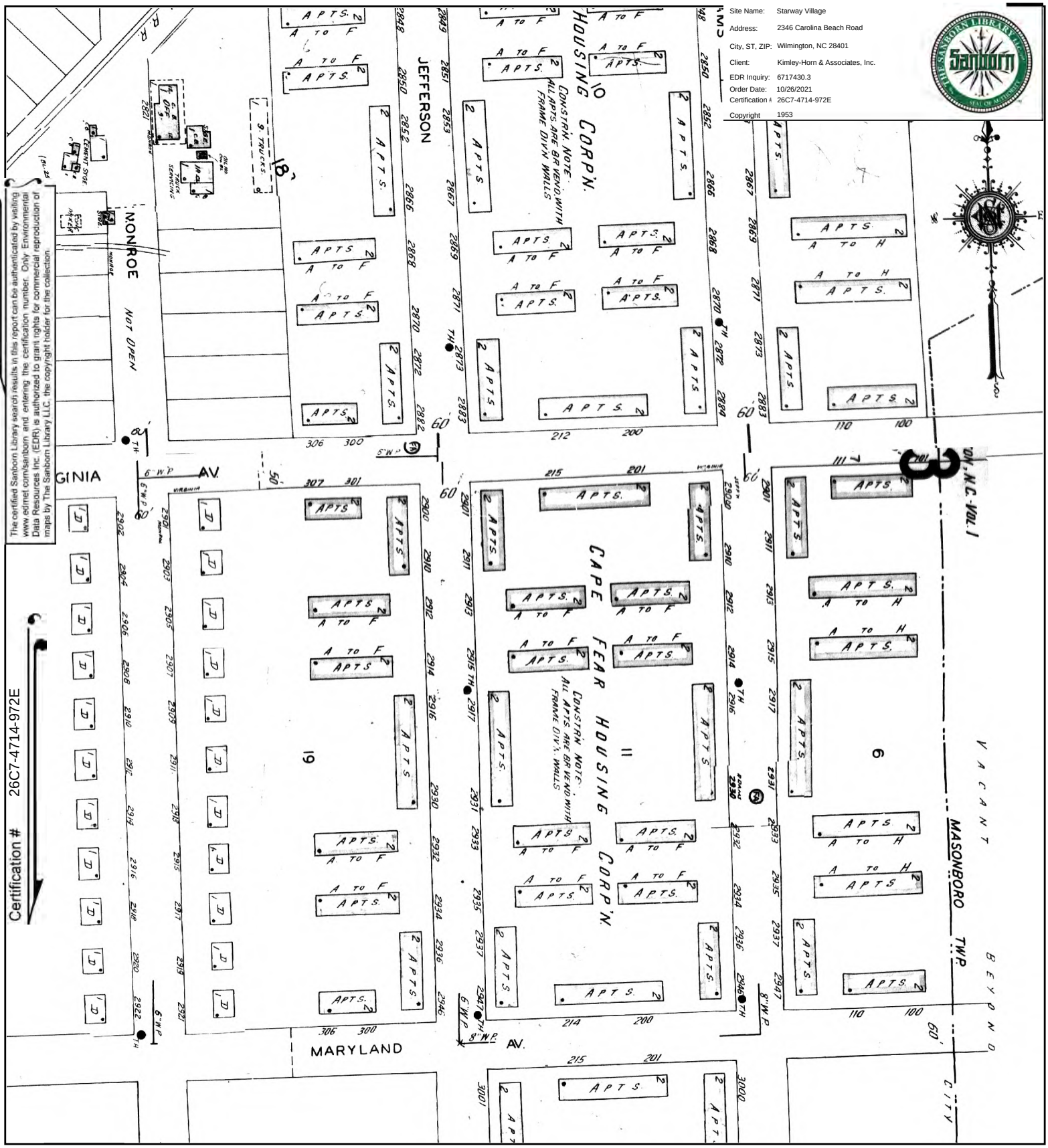
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Certified Sanborn® Map

1953

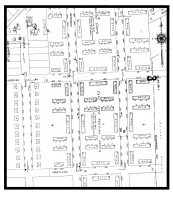
Site Name: Starway Village
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Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright 1953

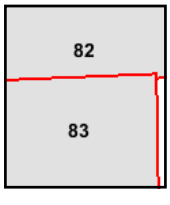
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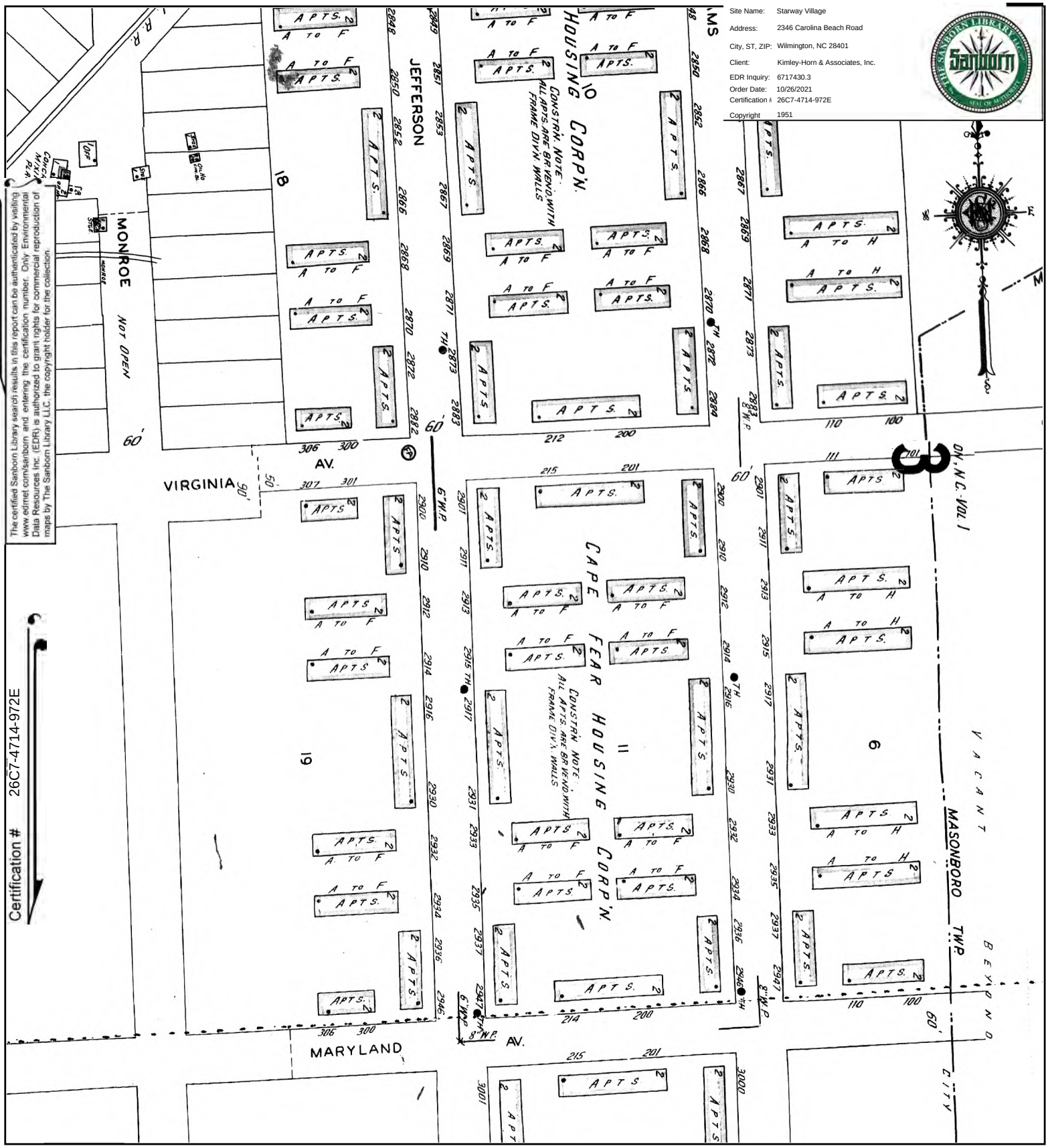




Volume 1, Sheet 83
Volume 1, Sheet 82

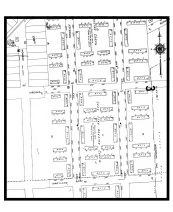
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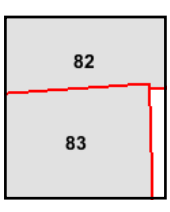
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Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
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Volume 1, Sheet 83
Volume 1, Sheet 82

0 Feet 150 300 600

N

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.3
October 26, 2021

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Certified Sanborn® Map Report

10/26/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.3

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

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Certified Sanborn Results:

Certification # 26C7-4714-972E

PO # NA

Project Starway Village

Maps Provided:

1964
1955
1953
1951

Sanborn® Library search results

Certification #: 26C7-4714-972E

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1964 Source Sheets



Volume 2, Sheet 283
1964

1955 Source Sheets



Volume 2, Sheet 283
1955

1953 Source Sheets

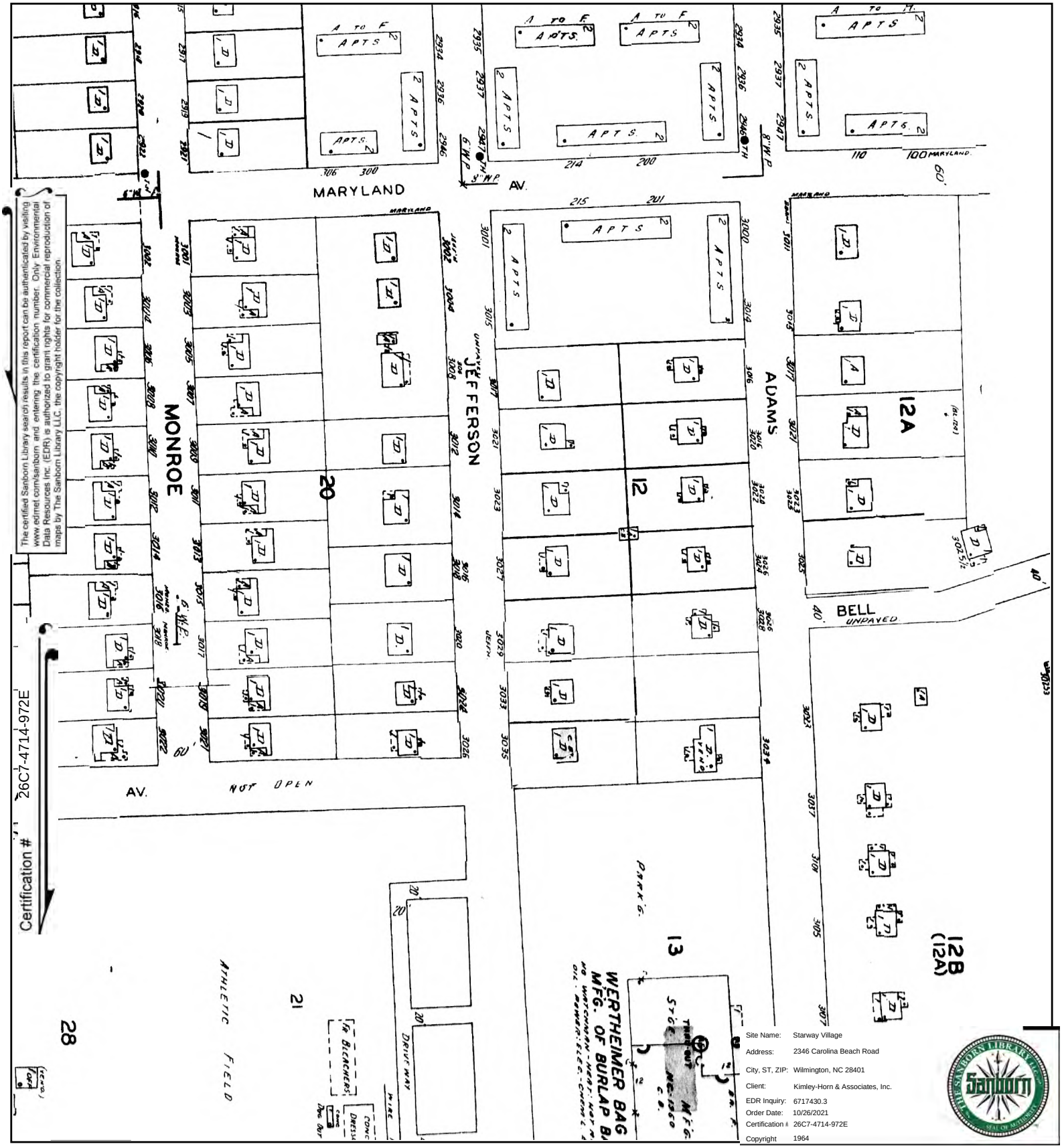


Volume 1, Sheet 83
1953

1951 Source Sheets



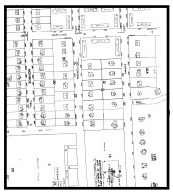
Volume 1, Sheet 83
1951

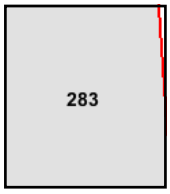


Site Name:	Starway Village
Address:	2346 Carolina Beach Road
City, ST, ZIP:	Wilmington, NC 28401
Client:	Kimley-Horn & Associates, Inc.
EDR Inquiry:	6717430.3
Order Date:	10/26/2021
Certification #:	26C7-4714-972E
Copyright	1964

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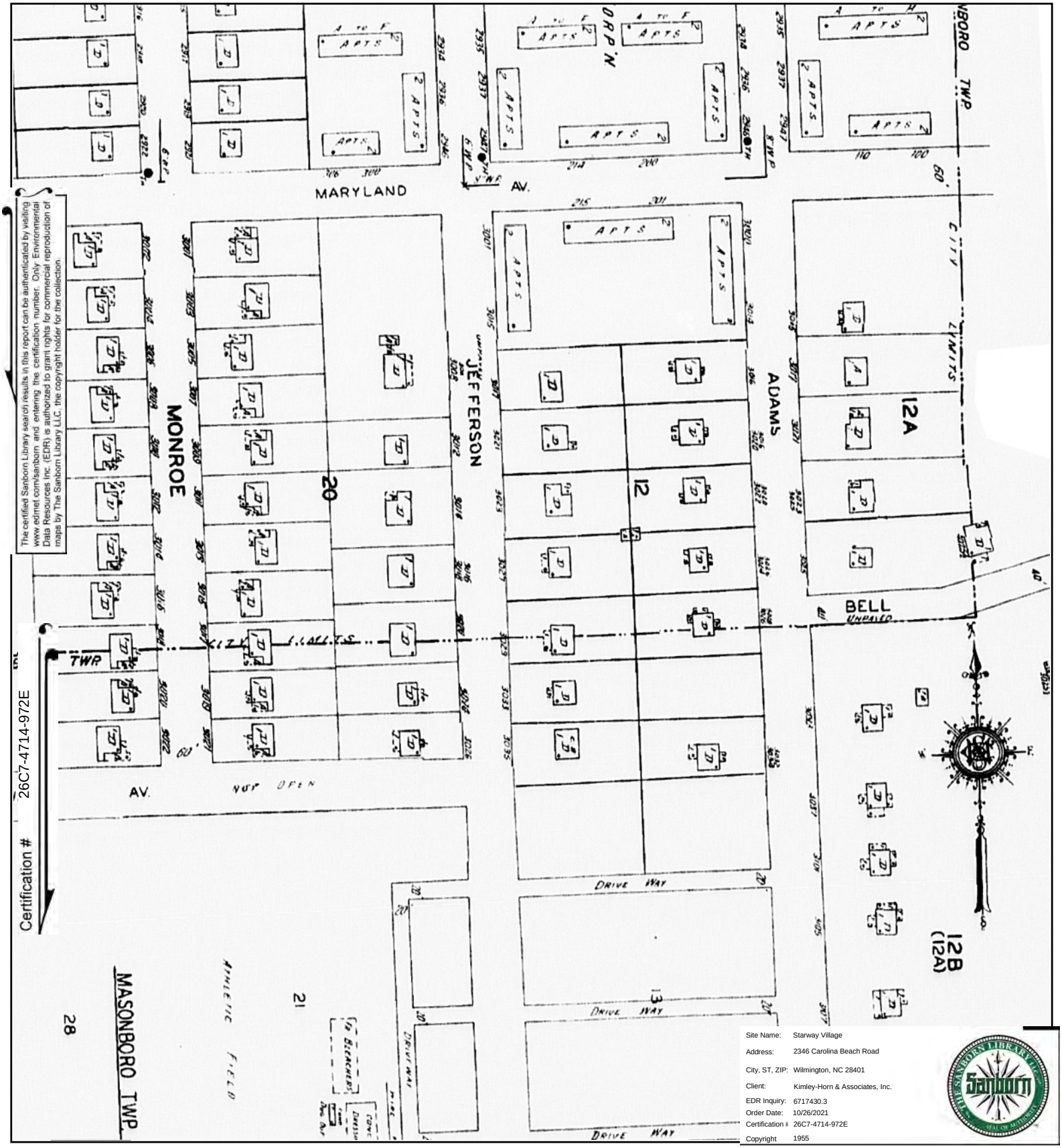
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Volume 2, Sheet 283

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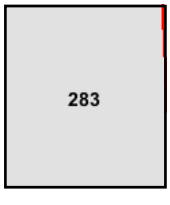
Certification # 26C7-4714-972E

Site Name:	Starway Village
Address:	2346 Carolina Beach Road
City, ST, ZIP:	Wilmington, NC 28401
Client:	Kimley-Horn & Associates, Inc.
EDR Inquiry:	6717430.3
Order Date:	10/26/2021
Certification #:	26C7-4714-972E
Copyright	1955

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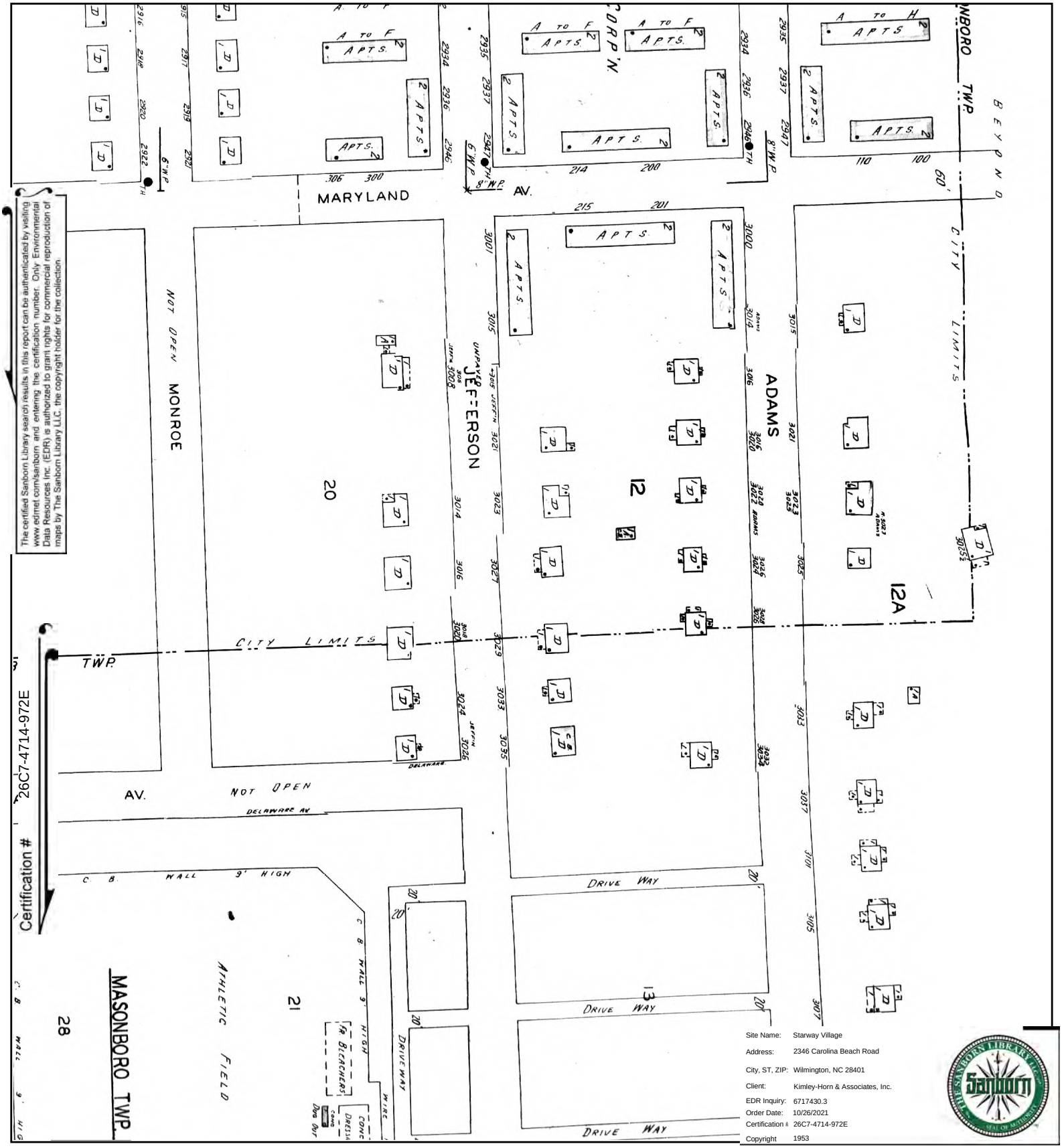
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Volume 2, Sheet 283

N



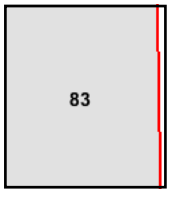
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Address:	2346 Carolina Beach Road
City, ST, ZIP:	Wilmington, NC 28401
Client:	Kimley-Horn & Associates, Inc.
EDR Inquiry:	6717430.3
Order Date:	10/26/2021
Certification #:	26C7-4714-972E
Copyright	1953

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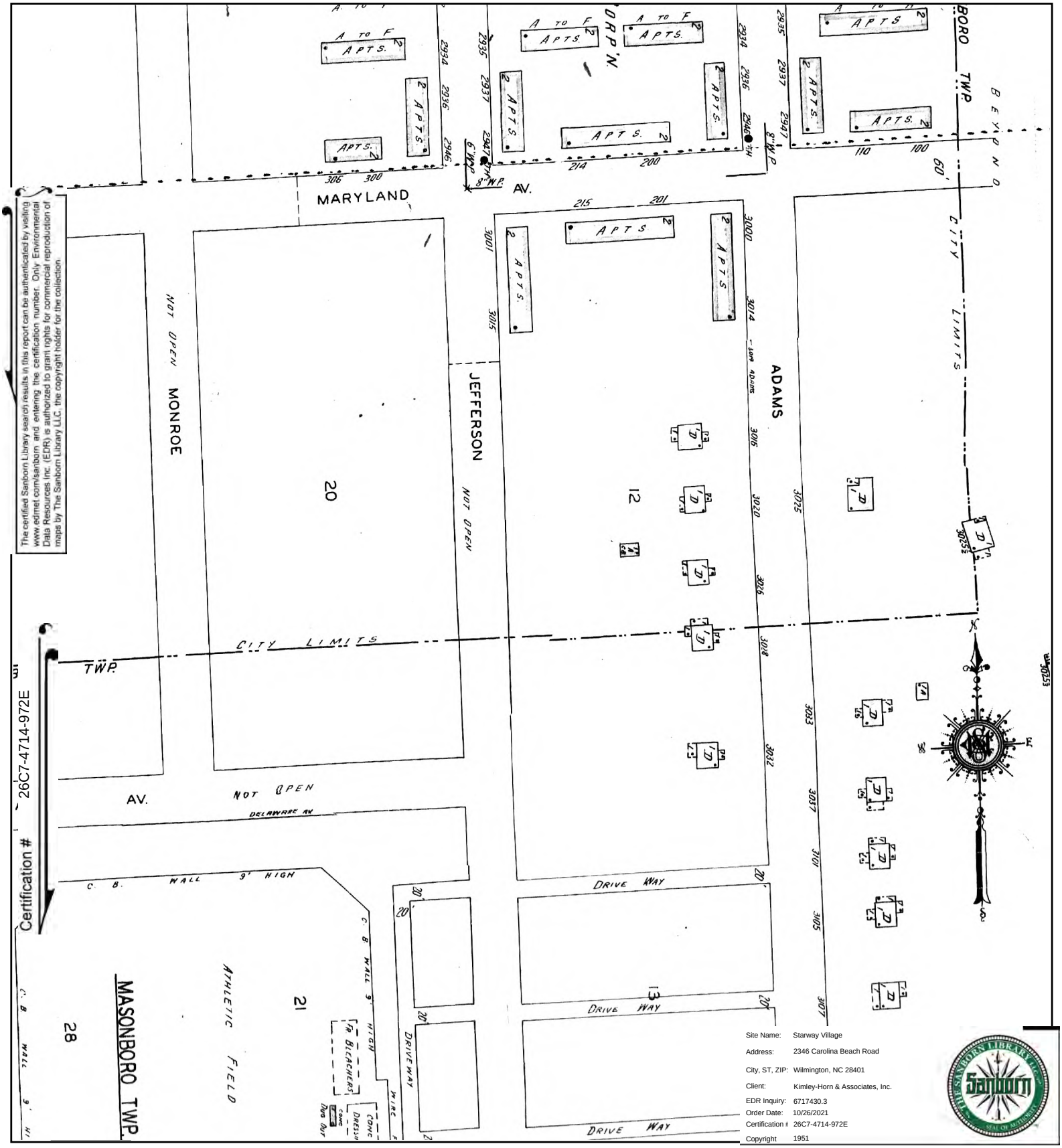
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Volume 1, Sheet 83

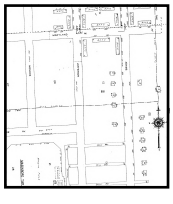
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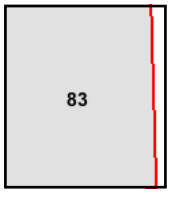


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0 Feet 150 300 600





Volume 1, Sheet 83

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401

Inquiry Number: 6717430.3
October 26, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
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Certified Sanborn® Map Report

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Certified Sanborn Results:

Certification # 26C7-4714-972E

PO # NA

Project Starway Village

Maps Provided:

1964
1955
1953
1951

Sanborn® Library search results

Certification #: 26C7-4714-972E

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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1964 Source Sheets



Volume 2, Sheet 283
1964

1955 Source Sheets



Volume 2, Sheet 283
1955

1953 Source Sheets

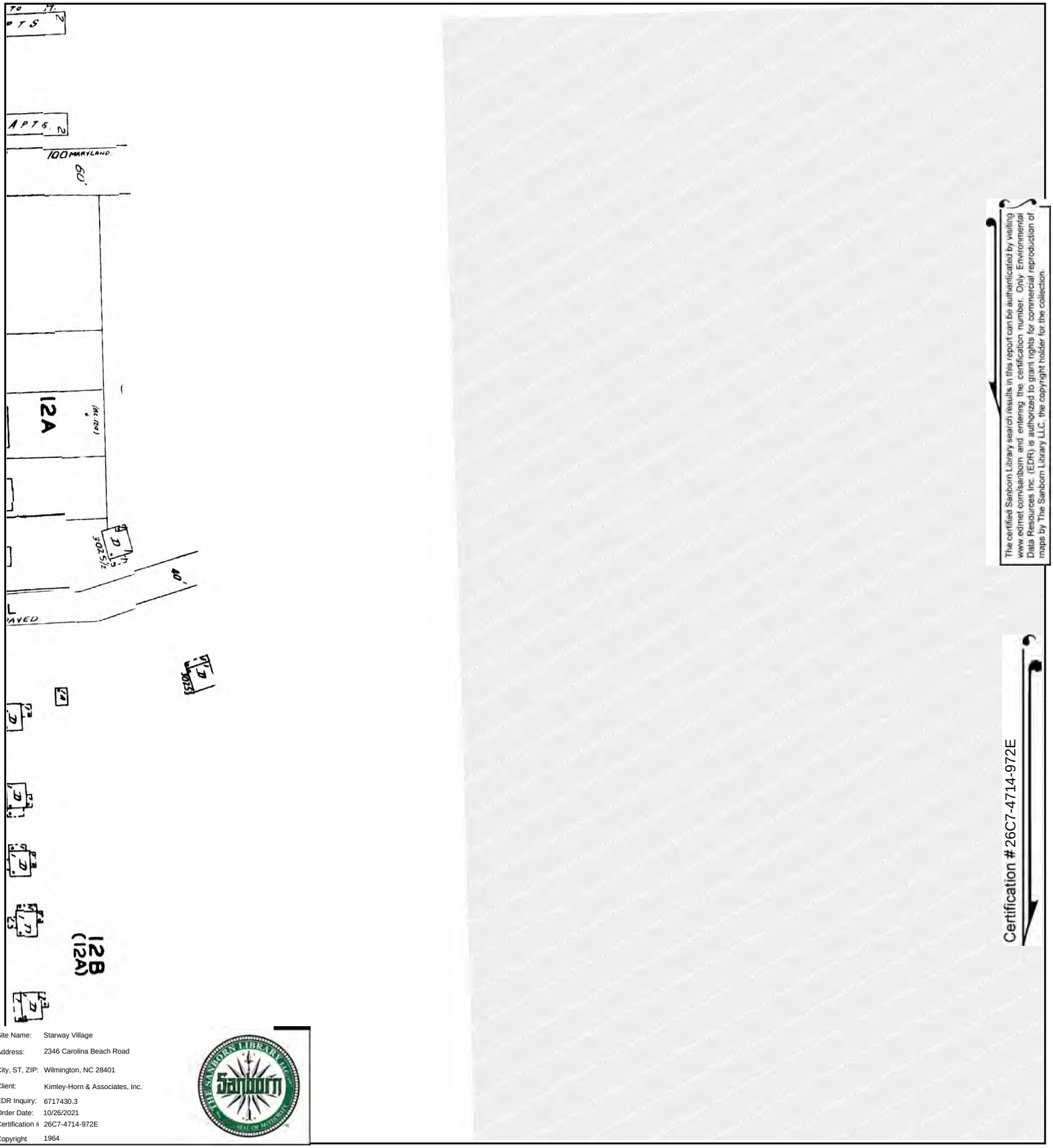


Volume 1, Sheet 83
1953

1951 Source Sheets



Volume 1, Sheet 83
1951

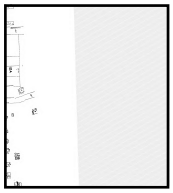


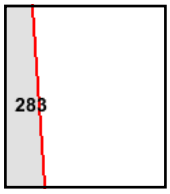
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Certification #26C7-4714-972E

Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
Copyright: 1964

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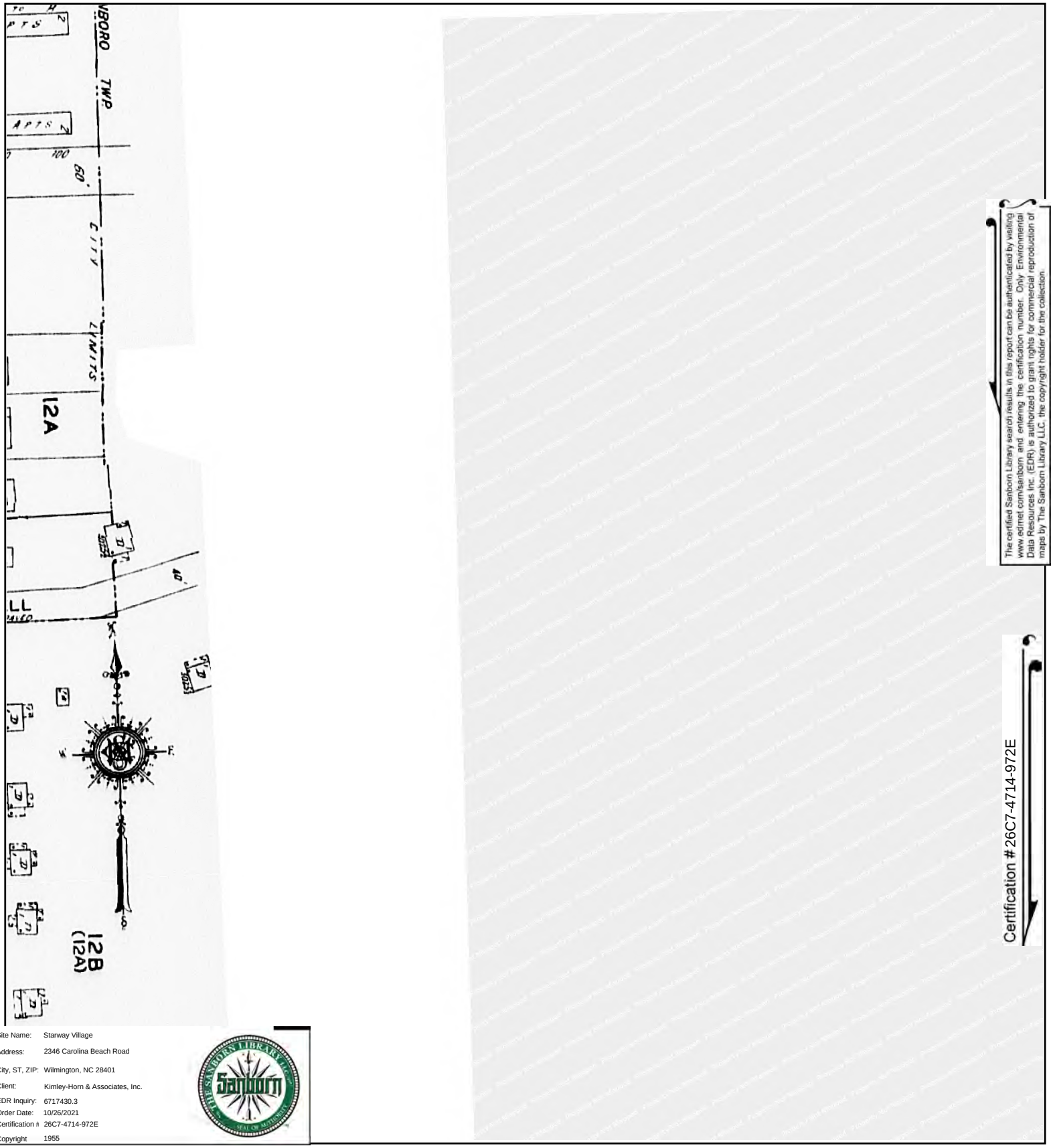




Volume 2, Sheet 283

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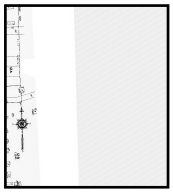


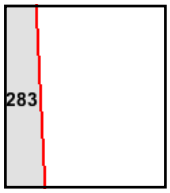
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Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
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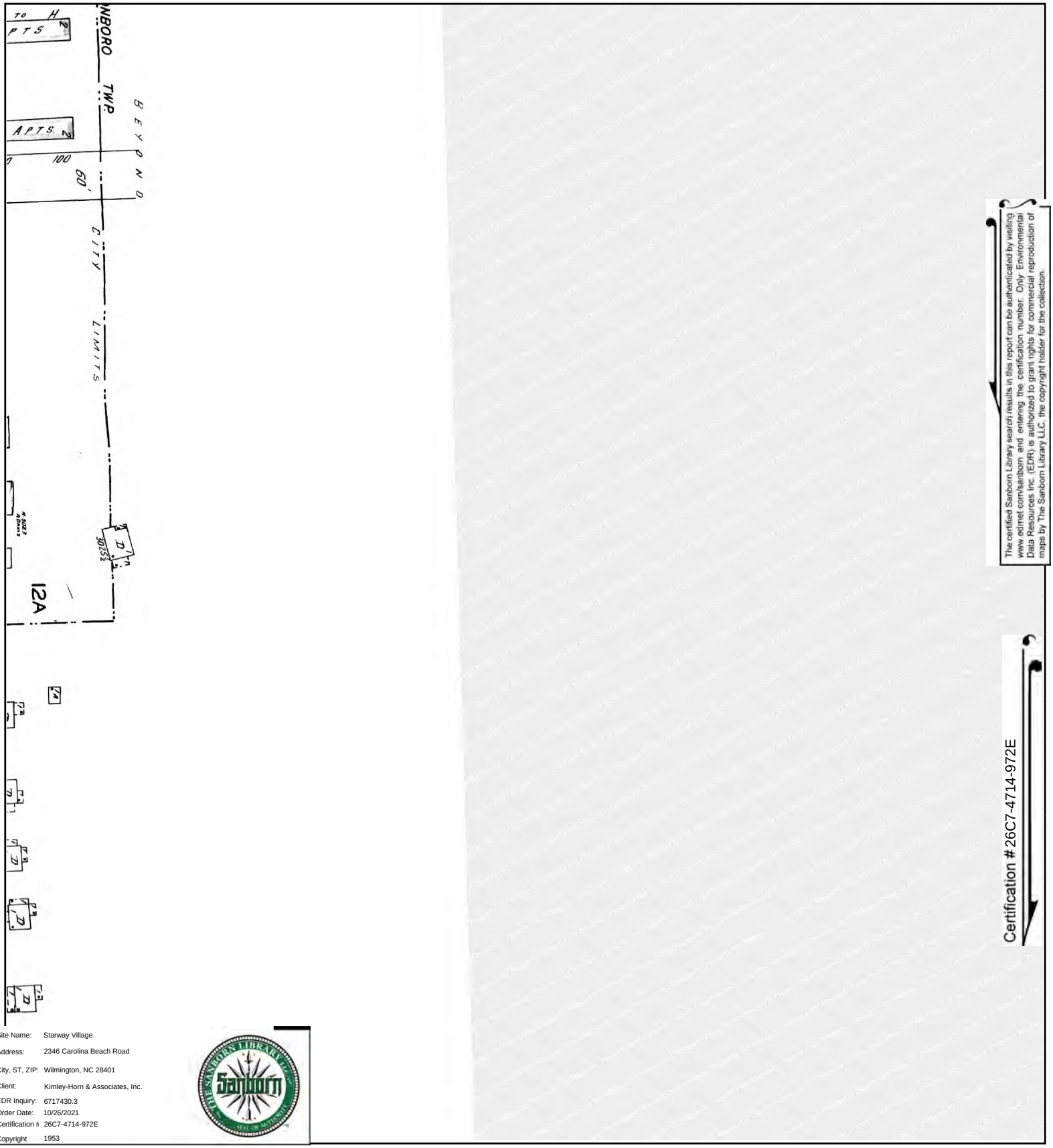




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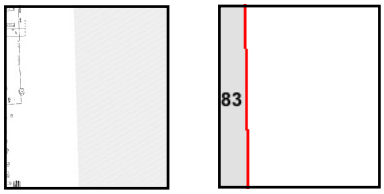


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Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
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Copyright: 1953

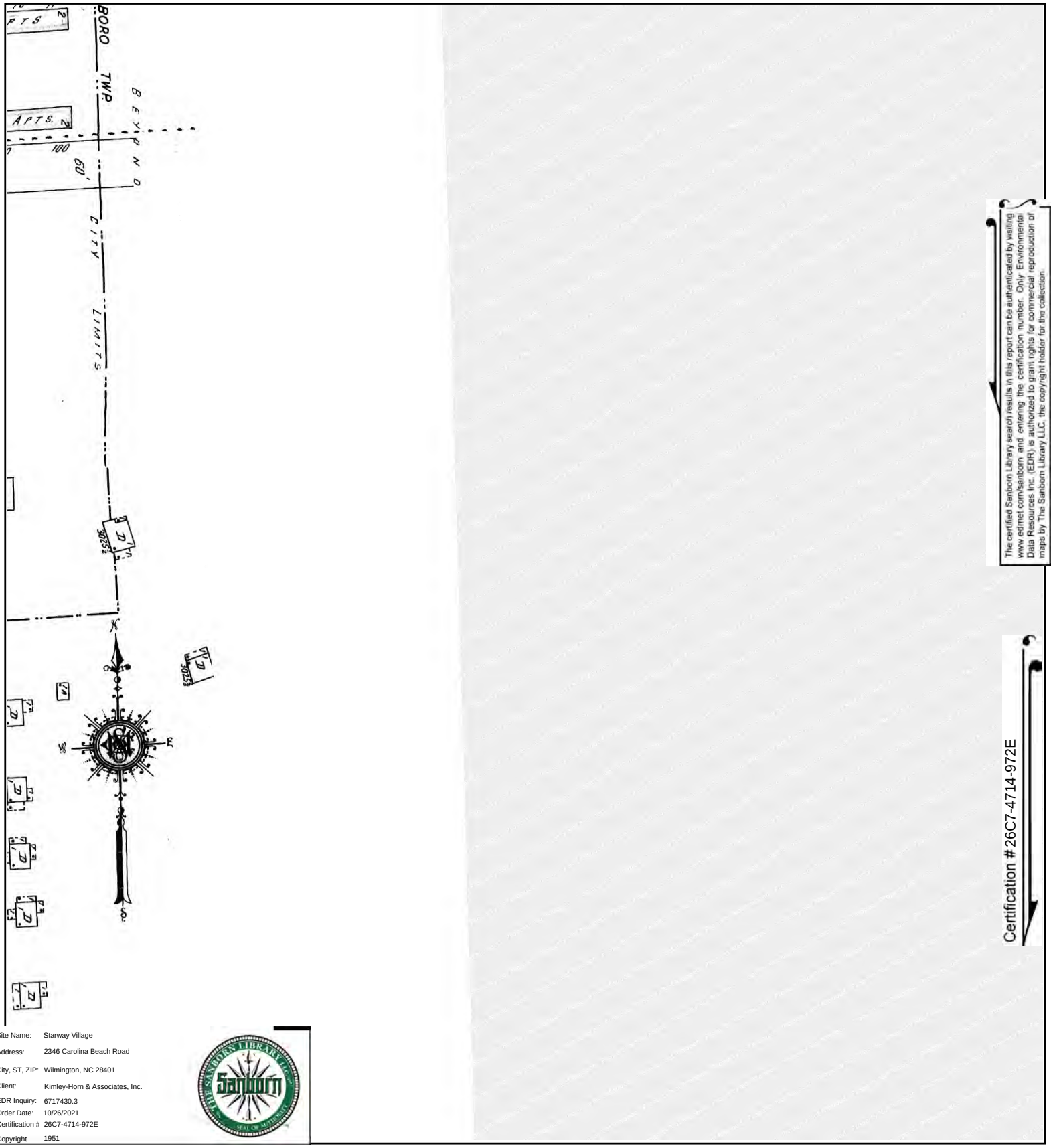
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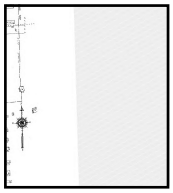


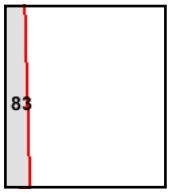
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Certification #26C7-4714-972E

Site Name: Starway Village
Address: 2346 Carolina Beach Road
City, ST, ZIP: Wilmington, NC 28401
Client: Kimley-Horn & Associates, Inc.
EDR Inquiry: 6717430.3
Order Date: 10/26/2021
Certification #: 26C7-4714-972E
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Volume 1, Sheet 83

0 Feet 150 300 600

N

APPENDIX J
PERSONNEL QUALIFICATIONS



Professional Credentials

Bachelor of Science, Environment Technology (minor in Environmental Toxicology), North Carolina State University, 2011

Professional Wetland Scientist

JASON HARTSHORN, PWS

GIS/GPS, Wetland/Stream Delineation/Permitting

Jason Hartshorn is an environmental scientist specializing in environmental due diligence investigations; GPS and GIS technologies; geospatial data collection and management; stream, wetland, and riparian buffer delineation; vegetative communities assessment; and rare, threatened, and endangered species habitat assessment and surveys. Jason has more than 10 years of experience working with state DOTs, various local municipalities, and private-sector clients throughout North Carolina, South Carolina, and Georgia.

Relevant Experience

HAZARDOUS MATERIALS SCREENING REPORTS

- Dickens Road Limited Hazardous Materials Screening Report, Wake County, NC
- Greensboro Streetscape Project Limited Hazardous Materials Screening Report, Guilford County, NC

PHASE I ESA REPORTS

- Fidelity Campus Recombination, Durham, NC
- Tryon Road Site, Cary, NC
- Novo Nordisk Bright Sky Project, Clayton, NC
- Baptist Retirement Homes Taylor Property, Concord, NC
- Project Titan, Wake County, NC
- Dearborn Drive Site, Durham County, NC
- Junction & Ferrell Site, Durham County, NC
- NC 55 & Hopson Site, Durham County, NC
- Hemingway Solar, Williamsburg County, SC
- Moncure Megasite, Chatham County, NC
- Oakley Parcel, Chatham County, NC
- Sweetleaf Solar, Halifax County, NC
- Perquimans Solar, Perquimans County, NC
- Penny Farm, Johnston County, NC
- Falls Center, Wake County, NC
- Cades Solar Farm, Williamsburg County, SC
- Tall Oaks Solar Farm, Lee County, SC
- American Beech Solar, Halifax County, NC



Professional Credentials

Master of Science, Renewable Natural Resources—Fisheries and Aquaculture, Louisiana State University, 2017

Bachelor of Science, Natural Resources—Ecosystem Assessment, North Carolina State University, 2015

Professional Wetland Scientist

MACKENZIE RICHARDS, PWS

GIS/GPS, Wetland/Stream Delineation/Permitting

Mackenzie Richards is an environmental analyst who specializes in GPS and GIS technologies; geospatial data collection and management; stream, wetland, and riparian buffer delineation; vegetative communities assessment; rare, threatened, and endangered species habitat assessment and surveys; and environmental documentation and permitting. Mackenzie has over 3 years of experience working with public-sector clients, such as state DOTs and various local municipalities, and numerous private-sector clients primarily throughout North Carolina, South Carolina, Virginia, and West Virginia.

Relevant Experience

NATURAL RESOURCES EXPERIENCE: STREAM/WETLAND DELINEATION/ PERMITTING; PROTECTED SPECIES HABITAT ASSESSMENT/SURVEYS

- Big Mill Farm Road Widening (TIP# U-5760), Forsyth County, NC — Individual Permit
- Spark – McCrimmon Parkway and Airport Boulevard, Wake County, NC — Stream/ Wetland Delineation and Verification
- Lakewood Avenue Sewer Replacement and Stream Enhancement, Durham County, NC — Stream/Wetland Delineation, Verification, and Permitting
- Emergency Watershed Protection (EWP) Streambank Repair, Durham County, NC — Stream/Wetland Delineation, Verification, and Permitting
- Project Bronco, Cumberland County, NC — Stream/Wetland Delineation and Verification
- Project P134 – Perimeter Security Compliance, Slocum Road Entry Control Facility, Craven County, NC — Stream/Wetland Delineation, Verification, and Individual Permit
- Upper Walnut Creek Sanitary Sewer Improvements, Raleigh, NC — Stream/Wetland Delineation, Verification, and Permitting
- Cades Solar Farm, Williamsburg County, NC — Stream/Wetland Delineation; Environmental Documentation; Protected Species Assessment
- American Beech Solar, Halifax County, NC — Stream/Wetland Delineation and Verification; Protected Species Assessment
- Durham Pedestrian Upgrade, Durham County, NC — Stream/Wetland Delineation; Protected Species Assessment
- Huntington Tri-State Airport Runway Safety Area (RSA) Improvements, Wayne County, WV — Stream/Wetland Delineation and Verification; Protected Species Assessment
- First Citizens Bank (Nationwide) — Section 106 Consultations
- Various Solar Sites, Confidential Clients, VA — Stream/Wetland Delineation
- SCDOT Projects, Various Locations, SC — Stream/Wetland Delineation

PHASE 1 ESA REPORTS

- Penny Farm, Johnston County, NC
- Tall Oaks Solar Farm, Lee County, SC
- Grey Commons Parcel, Washington County, TN

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Limited Site Investigation (Terracon)

2401 Brentwood Road, Suite 107
Raleigh, NC 27604
P (919) 873-2211
F (919) 873-9555
Terracon.com

February 16, 2022

Kimley-Horn & Associates, Inc
421 Fayetteville Street, Suite 600
Raleigh, North Carolina 27601

Attn: Mr. Jason Hartshorn, PWS
P: (919) 678-4155
E: jason.hartshorn@kimley-horn.com

Re: Limited Site Investigation
Starway Village Site
Carolina Beach Road
Wilmington, New Hanover County, North Carolina
Terracon Proposal No. P70217841

Dear Mr. Jason Hartshorn:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Limited Site Investigation for the above referenced site. This assessment was performed in accordance with Terracon's Proposal P70217841, dated December 8, 2021.

Terracon appreciates the opportunity to provide these services. If you have any questions concerning this report or need additional information, please contact us at 919-873-2211.

Sincerely,
Terracon Consultants, Inc.

Ethan Dinwiddie
Staff Geologist

Justin L. Fabriziani, RSM
Environmental Department Manager

Attachments

Limited Site Investigation

Starway Village

2436 Carolina Beach Road

Wilmington, New Hanover County, North Carolina

Terracon Project No. 70217841

February 16, 2022



Prepared for:
Kimley-Horn & Associates, Inc
Raleigh, North Carolina

Prepared by:
Terracon Consultants, Inc.
Raleigh, North Carolina

2401 Brentwood Road, Suite 107
Raleigh, NC 27604
P (919) 873-2211

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- Materials

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LIMITED SITE INVESTIGATION
STARWAY VILLAGE
2436 CAROLINA BEACH ROAD
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
TERRACON PROJECT NO. 70217841
FEBRUARY 16, 2022

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted a limited site investigation (LSI) at the Starway Village site located at 2436 Carolina Beach Road in Wilmington, New Hanover County, North Carolina (the site). The location of the site is shown on **Exhibit 1.**

A Phase I Environmental Site Assessment completed by the client (Kimley-Horn & Associates, Inc.) dated November 2021 (Kimley-Horn and Associates, Inc. [Kimley-Horn] Project No. 013856002) identified the following recognized environmental conditions (RECs) in association with the site:

- Two 55-gallon drums were observed adjacent to a large commercial structure on the western portion of the site (**Figure 1**). The drums were observed to be sealed and labeled to contain used cooking oil; however, during the Phase I ESA site reconnaissance, site workers were observed completing an oil change on a vehicle and placing the used oil into the drums. The drums were in poor condition with extensive corrosion and rust, and the walls of the drums were visibly weeping. Stressed vegetation was observed around the base the drums. The building that the drums were located adjacent to was observed to contain various automotive service materials and supplies. The client identified the unknown duration of the automotive service activities on the property, the unknown quantity of automotive oil in the drums, the condition of the drums, and the visible oil seepage through the drum walls as RECs to the site.

General locations of RECs are shown on **Figure 2.** This LSI was completed to evaluate if soil and shallow groundwater at the site are impacted as a result of the identified RECs. The LSI was not intended to delineate the extent of potential contamination or estimate remediation costs associated with potential contamination.

1.1 Site Description and History

The approximate 16.1-acre Starway Village site is located on Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The site consists of four (4) separate parcels identified as New Hanover County Parcel Numbers R06013-021-001-000, R06014-001-001-000, R06014-001-004-000, and R06018-002-006-001. The site is bordered by Carolina Beach Road and residential and commercial properties to the east; an electric substation and commercial properties to the north; and residential developments to the west and south (**Figure 2**). The site primarily consists of cleared dirt and gravel parking areas and a larger commercial building

currently operated as the Starway Flea Market. The smaller parcels of the subject property with road frontage along Carolina Beach Road consist of two single-family residential lots and a commercial car retail outbuilding (Kimley-Horn, 2021).

During a Phase I ESA site reconnaissance completed by Kimley-Horn on November 9, 2021, automotive service activities were observed in the large on-site commercial building. Used oil engine was observed being disposed of in two 55-gallon drums on the western side of the building. Visible oil seepage and stressed vegetation were observed near the 55-gallon drums (Kimley-Horn, 2021).

1.2 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either expressed or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These investigation services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-11.

1.3 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.4 Reliance

This report is prepared for the exclusive use and reliance of Kimley-Horn and Associates Inc, its respective subsidiaries, successors, assigns, advisors, affiliates, and lenders. Any rating agency, issuer, purchaser or underwriter of any security collateralized or otherwise backed by the property that is the subject of this report or any loans placed upon the property may further rely upon the report. Use or reliance by any other party is prohibited without the written authorization of Kimley-Horn and Terracon Consultants, Inc.

Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the Agreement for Services between Terracon and Kimley-Horn. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

2.0 FIELD INVESTIGATION METHODS

Terracon conducted field investigation activities on January 19 and January 26, 2022.

2.1 Utility Clearance

Prior to LSI drilling operations, public utility locators were notified via North Carolina 811. In addition, a Terracon utility locator marked and located utilities in the vicinity of the proposed sample locations.

2.2 Soil and Shallow Groundwater Investigation

Two (2) borings (SB-01 and SB-06) were advanced in the area of the two 55-gallon drums on the western side of the large commercial structure on the western portion of the site (**Figure 1**). Four (4) additional borings (SB-02 through SB-05) were advanced on the northern, eastern and southern sides of the large commercial structure. Terracon advanced the borings to depths between 7 and 9 feet below land surface (bls) using a decontaminated, stainless-steel hand auger.

Soil characteristics including soil type, color, moisture, and odor were observed in the field and recorded on boring logs (**Appendix A**). Soils encountered in the borings were generally characterized as brown and tan loose sand. Petroleum odor was not observed in soil removed from the borings. The soils were screened in the field for the presence of organic vapors using a photoionization detector (PID). PID values ranges between 0.4 parts-per-million (ppm) to 3.8 ppm were observed in the soil borings. Saturated soil was observed between approximately 6 to 8 feet below land surface in the soil borings.

Two soil samples were collected for laboratory analysis from SB-01 and SB-06 in the area adjacent to the two 55-gallon drums. The soil samples were collected at depths of highest potential for impact and based on the results of the field screening. Due to the shallow groundwater table observed during advancement of the soil borings, grab groundwater samples were collected from boring SB-01 through SB-05. Samples were collected in laboratory-supplied glassware, labeled and stored in an ice-packed cooler. The samples, along with chain-of-custody documentation, were delivered to Pace Analytical Services, LLC (Pace) in Mt. Juliet, Tennessee for analysis of volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Method 8260D and semi-volatile organic compounds (SVOCs) by USEPA Method 8270E.

Hand auger equipment and non-dedicated sampling equipment was decontaminated prior to use and between each soil boring using non-phosphate soap wash followed by a potable water rinse. After completion of sampling activities, the soil borings were plugged and abandoned in accordance with applicable state requirements. Investigative derived waste including soil cuttings was spread on-site.

3.0 FIELD INVESTIGATION RESULTS

The soil and groundwater analytical results are summarized in **Tables 1** and **2** respectively. A copy of the laboratory report is provided in **Appendix B**.

3.1 Soil Analytical Results

Analytical results were compared to North Carolina Department of Environmental Quality (NCDEQ) Maximum Soil Contaminant Concentration Levels (MSCCs). Chlorobenzene was detected below the soil-to-groundwater, residential, and industrial/commercial MSCCs in SB-01. Additional VOCs and SVOCs were not detected above the laboratory reporting limits in SB-01 and SB-06. The soil sample results for the are summarized in **Table 1**. Complete analytical results and laboratory chain-of-custody documentation are included in **Appendix B**.

3.2 Shallow Groundwater Analytical Results

Analytical results were compared to Title 15A of the North Carolina Administrative Code Section 2L .0202 – Groundwater Quality Standards (2L Standard). One VOC (chloroform) and four SVOCs (bis[2-ethylhexyl] phthalate, diethyl phthalate, dimethyl phthalate, and di-n-butyl phthalate) were detected below the 2L standards in SB-01, SB-02, SB-03, SB-04, and/or SB-05. Additional VOCs and SVOCs were not detected above the laboratory reporting limits in the shallow groundwater collected from SB-01 through SB-05. The groundwater analytical results are summarized in **Table 2**. Complete analytical results and laboratory chain-of-custody documentation are included in **Appendix B**.

4.0 SUMMARY

Based on this investigation, Terracon provides the following conclusions:

- Laboratory results of the soil samples indicate that the targeted analyte concentrations in soil around the 55-gallon drums do not exceed NCDEQ's soil-to-groundwater, residential, and/or industrial/commercial MSCCs; and
- Laboratory results of the shallow groundwater samples collected around the large commercial structure indicate that the targeted analyte concentrations do not exceed the 2L standards.

5.0 RECOMMENDATIONS

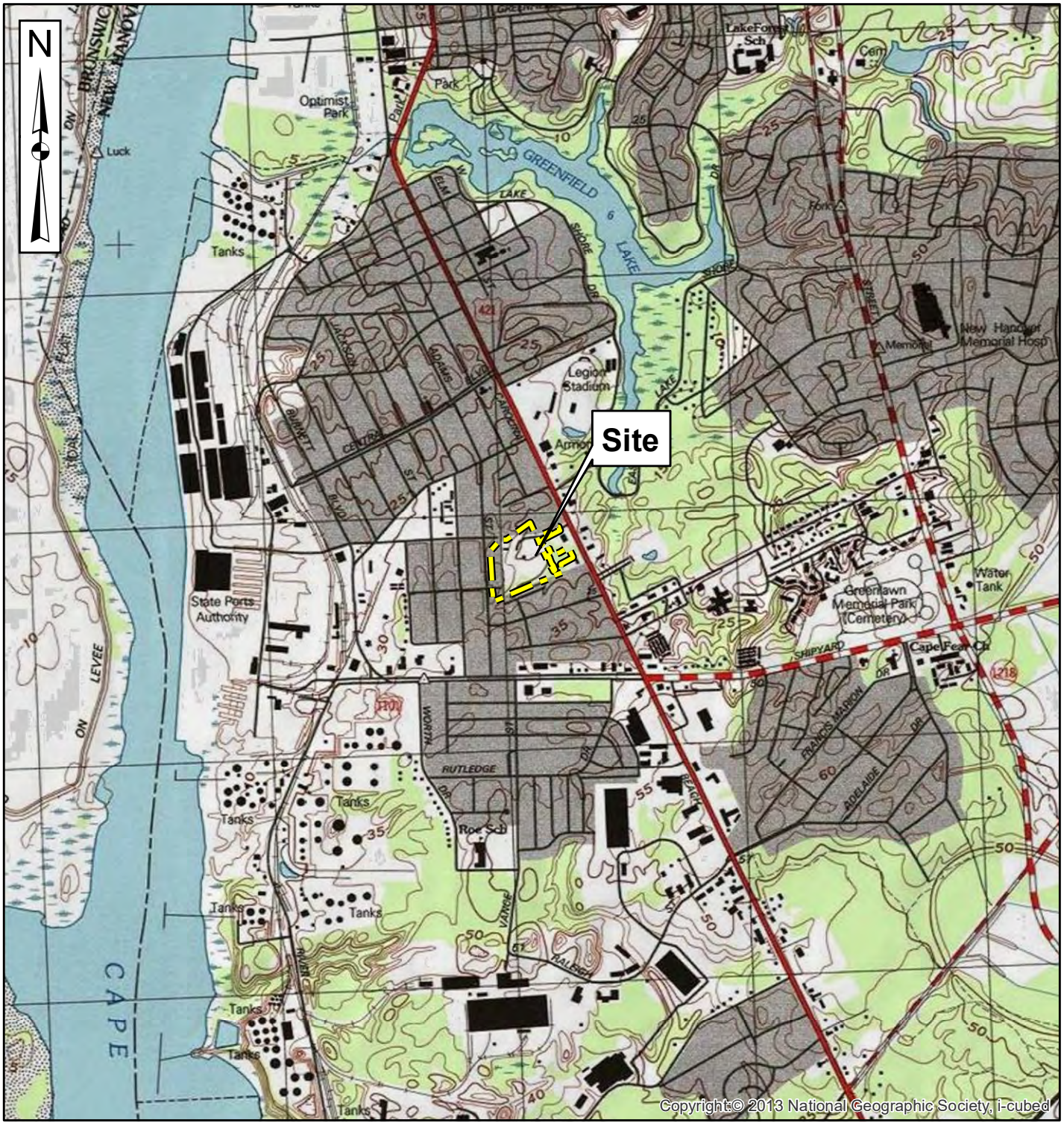
Based on the analytical results, Terracon recommends the following:

- Properly remove and dispose of the two 55-gallon drums reportedly containing used oil.
- Based on the results of this LSI, additional investigation of the identified REC is not warranted at this time.

6.0 REFERENCES

- Kimley-Horn and Associates, Inc., 2021. Phase I Environmental Site Assessment Report, Starway Village Site, Project No. 013856002. November 24.
- North Carolina Department of Environmental Quality (NCDEQ), 2013. 15A NCAC 02L .0202 Groundwater Standards. April 1.
- NCDEQ, 2021. Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement. May 17.

FIGURES



CONTOUR INTERVAL 1 FOOT

USGS TOPOGRAPHIC MAP
WILMINGTON, NC QUADRANGLE (1993)

PM: AAL	Project No. 70217841	Terracon	**Topographic Vicinity Map**	FIGURE NO.
Drawn By: ECD	Scale: 1:24,000		**Limited Site Investigation** **Starway Village Site** **Carolina Beach Road** **Wilmington, New Hanover County, North Carolina**	**1**
Checked By: AAL	File Path:			
Approved By: JLF	Date: February 2022	2401 Brentwood Drive, Suite 107 Raleigh, NC 27604 Phone: (919) 873-2211 Fax: (919) 873-9555		



PM: AAL	Project No. 70217841	Terracon	Sample Location Map	FIGURE NO.
Drawn By: ECD	Scale: 1 inch = 50 feet		Limited Site Investigation Starway Village Site Carolina Beach Rd Wilmington, New Hanover, County, North Carolina	2
Checked By: AAL	File Path: Site Diagram			
Approved By: JLF	Date: February 2022			

2401 Brentwood Road, Suite 107 Raleigh, NC 27604
Phone: (919) 873-2211 Fax: (919) 873-9555

Path: \\p70wfs01\Data\GIS\2021\70217841_StarwayLSI\Maps\Exhibit 2 - SiteDiagram.mxd

TABLES

Table 1
Summary of Soil Sample Analytical Results
Limited Site Investigation
Starway Village Site
2436 Carolina Beach Rd, Wilmington, New Hanover County, NC
Terracon Project No. 70217841

Sample ID:	SB-01	SB-06	Soil-to-Water MSCC	Residential MSCC	Ind/Com MSCC
Sample Collect Depth (ft bls):	0 - 2	6 - 7			
Sample Collection Date:	1/26/22	1/26/22			
Volatile Organic Compounds via EPA Method 8260D					
Chlorobenzene	0.000375	<0.00299	0.44	312	4,670

Notes:
Concentrations are reported in milligrams per kilogram (mg/kg).
Compounds detected in one or more samples are shown in the table.
Bold denotes concentration greater than the method detection limit.
Shaded concentrations exceed the applicable screening level.
<: Compound was not detected above laboratory reporting limits.
MSCC: North Carolina Maximum Soil Contaminant Concentration Levels, July 2021.
ft bls - feet below land surface.

Table 2
Summary of Shallow Groundwater Analytical Results
Limited Site Investigation
Starway Village Site
2436 Carolina Beach Rd, Wilmington, New Hanover County, NC
Terracon Project No. 70217841

Sample ID: / Sample Collection Date:	SB-01 1/26/22	SB-02 1/26/22	SB-03 1/26/22	SB-04 01/26/22	SB-05 01/26/22	2L Standard
Volatile Organic Compounds via EPA Method 8260D						
Chloroform	0.112 J	< 0.111	< 0.111	< 0.111	< 0.111	70
Semi Volatile Organic Compounds via EPA Method 8270E						
Bis(2-Ethylhexyl)phthalate	<3.00	<3.00	1.37 J	<3.00	<3.00	3
Diethyl phthalate	55.8	11.3	0.896 J	1.01 J	<3.00	6,000
Dimethyl phthalate	0.262 J	<3.00	<3.00	<3.00	<3.00	NE
Di-n-butyl phthalate	9.15	5.71	2.16 J	1.29 J	0.555 J	700

Notes:

Groundwater samples collected as grab samples from saturated interval of soil boring.

Concentrations are reported in micrograms per liter (µg/L).

Detected compounds in one or more samples are shown in the table.

Bold denotes concentration greater than the method detection limit.

Shaded concentrations exceed the applicable screening level.

<: Compound was not detected above laboratory reporting limits.

2L Standard: 15A North Carolina Adminstrative Code 2L Groundwater Quality Standards, April 2013.

J - The identification of the analyte is acceptable; however, the reported value is an estimate between the laboratory method detection limit and the laboratory reporting limit.

NE - Not established

APPENDIX A

BORING LOGS

BORING LOG NO. SB-01

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SAND (SP), tan and light brown, odor and staining not observed, moist			Grab	Full Recovery	1.2	SB-01 (0-2) VOCs 8260, SVOCs 8270
						2.5	
						2.1	
						1.4	
		5				1.3	
						2.2	
6.0							
	SAND (SP), light brown and yellow, odor and staining not observed, moist					1.7	
7.0							
	SAND (SP), light brown with reddish brown mottling, odor and staining not observed, moist					0.4	
8.0							
	SAND (SP), light brown, odor and staining not observed, saturated		▽	Grab		1.9	SB-01 (GW) VOCs 8260, SVOCs 8270
9.0							
	Boring Terminated at 9 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds
GW: groundwater
Groundwater samples collected as grab samples from saturated interval.

WATER LEVEL OBSERVATIONS

▽ *8.25 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022	Boring Completed: 01-26-2022
Drill Rig: Hand Auger	Logger: M. Perry
Project No.: 70217841	Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

BORING LOG NO. SB-02

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SAND (SP), tan and light brown, odor and staining not observed, dry					0.5	
						1.3	
						1.0	
						1.0	
						1.5	
		5			Full Recovery	1.7	
						1.3	
7.0							
	SAND (SP), tan and light brown, odor and staining not observed, moist					1.0	
8.0							
	SAND (SP), tan and light brown, odor and staining not observed, saturated		▽	Grab		1.0	SB-02 (GW) VOCs 8260, SVOCs 8270
9.0							
	Boring Terminated at 9 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds
GW: groundwater
Groundwater samples collected as grab samples from saturated interval.

WATER LEVEL OBSERVATIONS

▽ *8.80 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022	Boring Completed: 01-26-2022
Drill Rig: Hand Auger	Logger: A. Manolukas
Project No.: 70217841	Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

BORING LOG NO. SB-03

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SAND (SP), with gravel, dark brown, odor and staining not observed, dry					0.5	
1.0	**SAND (SP)**, tan and light brown, odor and staining not observed, dry					1.9	
						1.2	
						1.4	
		5			Full Recovery	1.3	
						2.4	
6.0	**SAND (SP)**, light gray, odor and staining not observed, dry					2.2	
7.0	**SAND (SP)**, tan and light brown, odor and staining not observed, moist					2.3	
8.0	**SAND (SP)**, tan and light brown, odor and staining not observed, saturated		▽	Grab		0.5	SB-03 (GW) VOCs 8260, SVOCs 8270
9.0	***Boring Terminated at 9 Feet***						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds
GW: groundwater
Groundwater samples collected as grab samples from saturated interval.

WATER LEVEL OBSERVATIONS

▽ *8.12 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022	Boring Completed: 01-26-2022
Drill Rig: Hand Auger	Logger: M. Perry
Project No.: 70217841	Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

BORING LOG NO. SB-04

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SAND (SP), dark brown, odor and staining not observed, moist					1.5	
1.0							
	SAND (SP), reddish brown and light brown, odor and staining not observed, moist					0.7	
2.0							
	SAND (SP), tan and light brown, odor and staining not observed, moist					2.0	
						1.0	
						1.1	
		5			Full Recovery	0.9	
						0.7	
7.0			▽				
	SAND (SP), tan and light brown, odor and staining not observed, saturated			Grab		1.6	SB-04 (GW) VOCs 8260, SVOCs 8270
8.0							
	Boring Terminated at 8 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds
GW: groundwater
Groundwater samples collected as grab samples from saturated interval.

WATER LEVEL OBSERVATIONS

▽ *6.92 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022	Boring Completed: 01-26-2022
Drill Rig: Hand Auger	Logger: A. Manolukas
Project No.: 70217841	Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

BORING LOG NO. SB-05

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
		LOCATION See Figure 2						
		SAND (SP), tan and light brown, odor and staining not observed, dry					1.3	
							2.8	
	2.0	**SAND (SP)**, tan and light brown, odor and staining not observed, moist					2.6	
							2.9	
	5.0	**SAND (SP)**, light brown with reddish brown mottling, odor and staining not observed, moist	5			Full Recovery	3.1	
	6.0						3.3	
		SAND (SP), reddish brown, odor and staining not observed, saturated		▽	Grab		3.8	SB-05 (GW) VOCs 8260, SVOCs 8270
	7.0	***Boring Terminated at 7 Feet***						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds
GW: groundwater
Groundwater samples collected as grab samples from saturated interval.

WATER LEVEL OBSERVATIONS

▽ *7.00 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022	Boring Completed: 01-26-2022
Drill Rig: Hand Auger	Logger: M. Perry
Project No.: 70217841	Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

BORING LOG NO. SB-06

PROJECT: Starway Village Site

CLIENT: Kimley-Horn & Associates, Inc.
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (Ft.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
		LOCATION See Figure 2						
		SAND (SP), tan and light brown, odor and staining not observed, dry					0.8	
							1.6	
							1.4	
							1.8	
							1.1	
	5.0		5					
		SAND (SP), tan and light brown, odor and staining not observed, moist					0.9	
	6.0							
		SAND (SP), tan and light brown, odor and staining not observed, wet			Grab		0.8	SB-06 (6-7) VOCs 8260, SVOCs 8270
	7.0			▽				
		Boring Terminated at 7 Feet						

Full Recovery

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

ft bls: feet below land surface
VOCs: volatile organic compounds
SVOCs: semi-volatile organic compounds

WATER LEVEL OBSERVATIONS

▽ *7.00 feet bls*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 01-26-2022 | Boring Completed: 01-26-2022

Drill Rig: Hand Auger | Logger: A. Manolukas

Project No.: 70217841 | Appendix A

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ADEM SMART LOG 70217841_BORING LOGS.GPJ TERRACON_DATATEMPLATE.GDT 2/15/22

APPENDIX B

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

ANALYTICAL REPORT

February 04, 2022

Revised Report

Terracon - Raleigh, NC

Sample Delivery Group:	L1455950
Samples Received:	01/28/2022
Project Number:	70217841
Description:	Starway Village Site

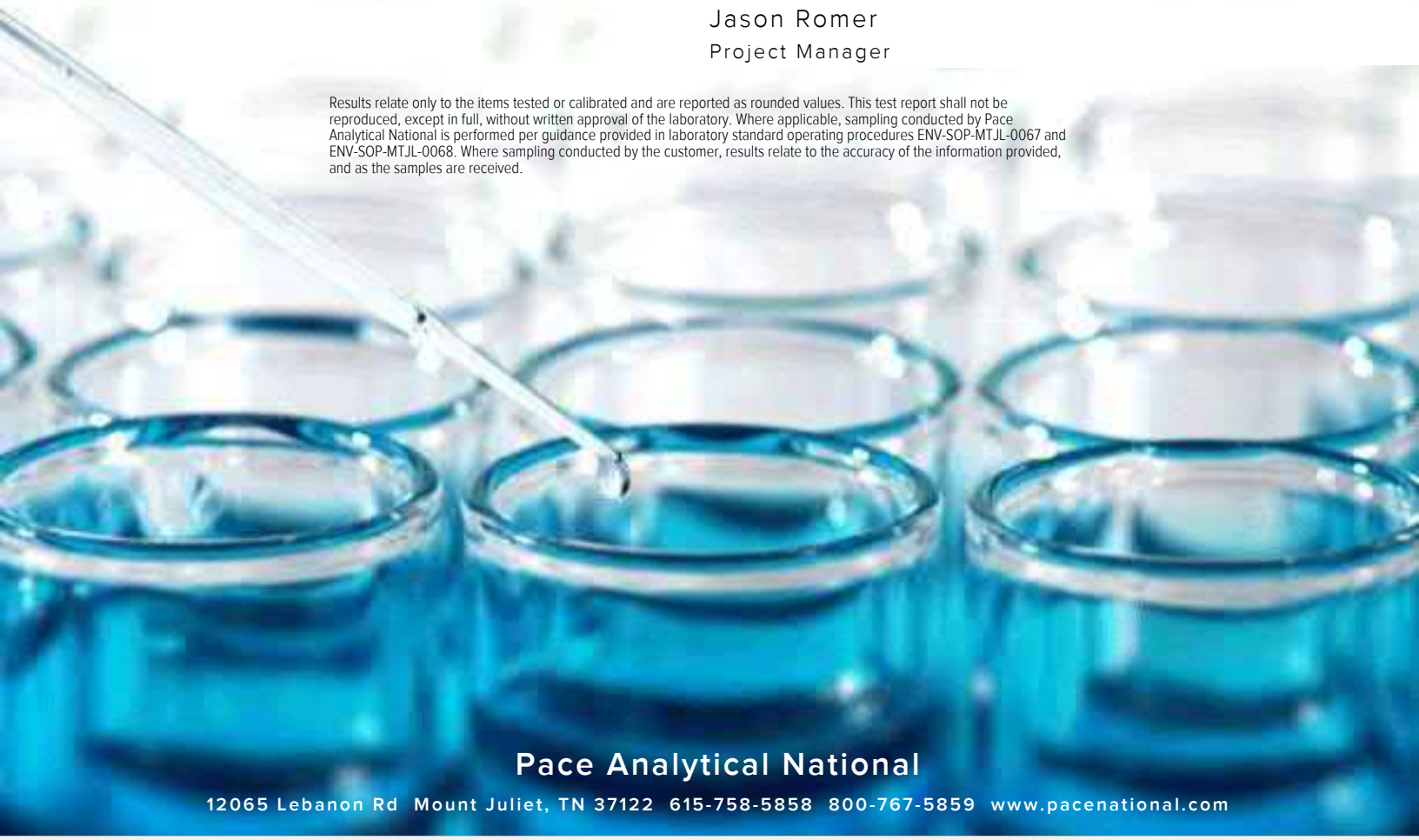
Report To:

Adam Lee
2401 Brentwood Rd
Ste 107
Raleigh, NC 27604

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SB-01 L1455950-01 GW

Collected by: MP | Collected date/time: 01/26/22 15:25 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810232	1	01/30/22 02:46	01/30/22 02:46	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1810840	1	02/01/22 16:11	02/02/22 01:17	JNJ	Mt. Juliet, TN

SB-02 L1455950-02 GW

Collected by: MP | Collected date/time: 01/26/22 15:55 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810232	1	01/30/22 03:08	01/30/22 03:08	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1810840	1	02/01/22 16:11	02/02/22 01:38	JNJ	Mt. Juliet, TN

SB-03 L1455950-03 GW

Collected by: MP | Collected date/time: 01/26/22 16:05 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810232	1	01/30/22 03:30	01/30/22 03:30	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1810840	1	02/01/22 16:11	02/02/22 01:59	JNJ	Mt. Juliet, TN

SB-04 L1455950-04 GW

Collected by: MP | Collected date/time: 01/26/22 16:20 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810232	1	01/30/22 03:51	01/30/22 03:51	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1810840	1	02/01/22 16:11	02/02/22 18:04	JNJ	Mt. Juliet, TN

SB-05 L1455950-05 GW

Collected by: MP | Collected date/time: 01/26/22 16:30 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810232	1	01/30/22 04:13	01/30/22 04:13	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1810840	1	02/01/22 16:11	02/02/22 17:42	JNJ	Mt. Juliet, TN

SB-01 (0-2) L1455950-06 Solid

Collected by: MP | Collected date/time: 01/26/22 15:40 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1810550	1	02/01/22 10:10	02/01/22 10:30	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810477	1	01/26/22 15:40	01/31/22 04:20	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810820	1	01/26/22 15:40	02/01/22 02:49	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1812020	1	02/02/22 16:40	02/03/22 01:35	AGW	Mt. Juliet, TN

SB-06 (6-7) L1455950-07 Solid

Collected by: MP | Collected date/time: 01/26/22 15:20 | Received date/time: 01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1810550	1	02/01/22 10:10	02/01/22 10:30	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1810820	1	01/26/22 15:20	02/01/22 03:10	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1812020	1	02/02/22 16:40	02/03/22 02:57	AGW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jason Romer
Project Manager

Report Revision History

Level II Report - Version 1: 02/04/22 15:18

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	01/30/2022 02:46	WG1810232
Acrolein	U		2.54	50.0	1	01/30/2022 02:46	WG1810232
Acrylonitrile	U		0.671	10.0	1	01/30/2022 02:46	WG1810232
Benzene	U		0.0941	1.00	1	01/30/2022 02:46	WG1810232
Bromobenzene	U		0.118	1.00	1	01/30/2022 02:46	WG1810232
Bromodichloromethane	U		0.136	1.00	1	01/30/2022 02:46	WG1810232
Bromoform	U		0.129	1.00	1	01/30/2022 02:46	WG1810232
Bromomethane	U	J4	0.605	5.00	1	01/30/2022 02:46	WG1810232
n-Butylbenzene	U		0.157	1.00	1	01/30/2022 02:46	WG1810232
sec-Butylbenzene	U		0.125	1.00	1	01/30/2022 02:46	WG1810232
tert-Butylbenzene	U		0.127	1.00	1	01/30/2022 02:46	WG1810232
Carbon tetrachloride	U		0.128	1.00	1	01/30/2022 02:46	WG1810232
Chlorobenzene	U		0.116	1.00	1	01/30/2022 02:46	WG1810232
Chlorodibromomethane	U		0.140	1.00	1	01/30/2022 02:46	WG1810232
Chloroethane	U		0.192	5.00	1	01/30/2022 02:46	WG1810232
Chloroform	0.112	J	0.111	5.00	1	01/30/2022 02:46	WG1810232
Chloromethane	U		0.960	2.50	1	01/30/2022 02:46	WG1810232
2-Chlorotoluene	U		0.106	1.00	1	01/30/2022 02:46	WG1810232
4-Chlorotoluene	U		0.114	1.00	1	01/30/2022 02:46	WG1810232
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/30/2022 02:46	WG1810232
1,2-Dibromoethane	U		0.126	1.00	1	01/30/2022 02:46	WG1810232
Dibromomethane	U		0.122	1.00	1	01/30/2022 02:46	WG1810232
1,2-Dichlorobenzene	U		0.107	1.00	1	01/30/2022 02:46	WG1810232
1,3-Dichlorobenzene	U		0.110	1.00	1	01/30/2022 02:46	WG1810232
1,4-Dichlorobenzene	U		0.120	1.00	1	01/30/2022 02:46	WG1810232
Dichlorodifluoromethane	U		0.374	5.00	1	01/30/2022 02:46	WG1810232
1,1-Dichloroethane	U		0.100	1.00	1	01/30/2022 02:46	WG1810232
1,2-Dichloroethane	U		0.0819	1.00	1	01/30/2022 02:46	WG1810232
1,1-Dichloroethene	U		0.188	1.00	1	01/30/2022 02:46	WG1810232
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/30/2022 02:46	WG1810232
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/30/2022 02:46	WG1810232
1,2-Dichloropropane	U		0.149	1.00	1	01/30/2022 02:46	WG1810232
1,1-Dichloropropene	U		0.142	1.00	1	01/30/2022 02:46	WG1810232
1,3-Dichloropropane	U		0.110	1.00	1	01/30/2022 02:46	WG1810232
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/30/2022 02:46	WG1810232
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/30/2022 02:46	WG1810232
2,2-Dichloropropane	U		0.161	1.00	1	01/30/2022 02:46	WG1810232
Di-isopropyl ether	U		0.105	1.00	1	01/30/2022 02:46	WG1810232
Ethylbenzene	U		0.137	1.00	1	01/30/2022 02:46	WG1810232
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/30/2022 02:46	WG1810232
Isopropylbenzene	U		0.105	1.00	1	01/30/2022 02:46	WG1810232
p-Isopropyltoluene	U		0.120	1.00	1	01/30/2022 02:46	WG1810232
2-Butanone (MEK)	U		1.19	10.0	1	01/30/2022 02:46	WG1810232
Methylene Chloride	U		0.430	5.00	1	01/30/2022 02:46	WG1810232
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/30/2022 02:46	WG1810232
Methyl tert-butyl ether	U		0.101	1.00	1	01/30/2022 02:46	WG1810232
Naphthalene	U		1.00	5.00	1	01/30/2022 02:46	WG1810232
n-Propylbenzene	U		0.0993	1.00	1	01/30/2022 02:46	WG1810232
Styrene	U		0.118	1.00	1	01/30/2022 02:46	WG1810232
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/30/2022 02:46	WG1810232
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/30/2022 02:46	WG1810232
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/30/2022 02:46	WG1810232
Tetrachloroethene	U		0.300	1.00	1	01/30/2022 02:46	WG1810232
Toluene	U		0.278	1.00	1	01/30/2022 02:46	WG1810232
1,2,3-Trichlorobenzene	U	J4	0.230	1.00	1	01/30/2022 02:46	WG1810232
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/30/2022 02:46	WG1810232

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.149	1.00	1	01/30/2022 02:46	WG1810232
1,1,2-Trichloroethane	U		0.158	1.00	1	01/30/2022 02:46	WG1810232
Trichloroethene	U		0.190	1.00	1	01/30/2022 02:46	WG1810232
Trichlorofluoromethane	U		0.160	5.00	1	01/30/2022 02:46	WG1810232
1,2,3-Trichloropropane	U		0.237	2.50	1	01/30/2022 02:46	WG1810232
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/30/2022 02:46	WG1810232
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 02:46	WG1810232
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 02:46	WG1810232
Vinyl chloride	U		0.234	1.00	1	01/30/2022 02:46	WG1810232
Xylenes, Total	U		0.174	3.00	1	01/30/2022 02:46	WG1810232
(S) Toluene-d8	*93.6*			*80.0-120*		*01/30/2022 02:46*	WG1810232
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*01/30/2022 02:46*	WG1810232
(S) 1,2-Dichloroethane-d4	*99.5*			*70.0-130*		*01/30/2022 02:46*	WG1810232

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0886	1.00	1	02/02/2022 01:17	WG1810840
Acenaphthylene	U		0.0921	1.00	1	02/02/2022 01:17	WG1810840
Anthracene	U		0.0804	1.00	1	02/02/2022 01:17	WG1810840
Benzidine	U		3.74	10.0	1	02/02/2022 01:17	WG1810840
Benzo(a)anthracene	U		0.199	1.00	1	02/02/2022 01:17	WG1810840
Benzo(b)fluoranthene	U		0.130	1.00	1	02/02/2022 01:17	WG1810840
Benzo(k)fluoranthene	U		0.120	1.00	1	02/02/2022 01:17	WG1810840
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/02/2022 01:17	WG1810840
Benzo(a)pyrene	U		0.0381	1.00	1	02/02/2022 01:17	WG1810840
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/02/2022 01:17	WG1810840
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/02/2022 01:17	WG1810840
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/02/2022 01:17	WG1810840
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/02/2022 01:17	WG1810840
2-Chloronaphthalene	U		0.0648	1.00	1	02/02/2022 01:17	WG1810840
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/02/2022 01:17	WG1810840
Chrysene	U		0.130	1.00	1	02/02/2022 01:17	WG1810840
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/02/2022 01:17	WG1810840
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/02/2022 01:17	WG1810840
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/02/2022 01:17	WG1810840
2,6-Dinitrotoluene	U		0.250	10.0	1	02/02/2022 01:17	WG1810840
Fluoranthene	U		0.102	1.00	1	02/02/2022 01:17	WG1810840
Fluorene	U		0.0844	1.00	1	02/02/2022 01:17	WG1810840
Hexachlorobenzene	U		0.0755	1.00	1	02/02/2022 01:17	WG1810840
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/02/2022 01:17	WG1810840
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/02/2022 01:17	WG1810840
Hexachloroethane	U		0.127	10.0	1	02/02/2022 01:17	WG1810840
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/02/2022 01:17	WG1810840
Isophorone	U		0.143	10.0	1	02/02/2022 01:17	WG1810840
Naphthalene	U		0.159	1.00	1	02/02/2022 01:17	WG1810840
Nitrobenzene	U		0.297	10.0	1	02/02/2022 01:17	WG1810840
n-Nitrosodimethylamine	U		0.998	10.0	1	02/02/2022 01:17	WG1810840
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/02/2022 01:17	WG1810840
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/02/2022 01:17	WG1810840
Phenanthrene	U		0.112	1.00	1	02/02/2022 01:17	WG1810840
Benzylbutyl phthalate	U		0.765	3.00	1	02/02/2022 01:17	WG1810840
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/02/2022 01:17	WG1810840
Di-n-butyl phthalate	9.15		0.453	3.00	1	02/02/2022 01:17	WG1810840
Diethyl phthalate	55.8		0.287	3.00	1	02/02/2022 01:17	WG1810840
Dimethyl phthalate	0.262	J	0.260	3.00	1	02/02/2022 01:17	WG1810840

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-n-octyl phthalate	U		0.932	3.00	1	02/02/2022 01:17	WG1810840
Pyrene	U		0.107	1.00	1	02/02/2022 01:17	WG1810840
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/02/2022 01:17	WG1810840
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/02/2022 01:17	WG1810840
2-Chlorophenol	U		0.133	10.0	1	02/02/2022 01:17	WG1810840
2,4-Dichlorophenol	U		0.102	10.0	1	02/02/2022 01:17	WG1810840
2,4-Dimethylphenol	U		0.0636	10.0	1	02/02/2022 01:17	WG1810840
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/02/2022 01:17	WG1810840
2,4-Dinitrophenol	U		5.93	10.0	1	02/02/2022 01:17	WG1810840
2-Nitrophenol	U		0.117	10.0	1	02/02/2022 01:17	WG1810840
4-Nitrophenol	U		0.143	10.0	1	02/02/2022 01:17	WG1810840
Pentachlorophenol	U		0.313	10.0	1	02/02/2022 01:17	WG1810840
Phenol	U		4.33	10.0	1	02/02/2022 01:17	WG1810840
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/02/2022 01:17	WG1810840
(S) 2-Fluorophenol	*42.4*			*10.0-120*		*02/02/2022 01:17*	WG1810840
(S) Phenol-d5	*27.4*			*10.0-120*		*02/02/2022 01:17*	WG1810840
(S) Nitrobenzene-d5	*70.8*			*10.0-127*		*02/02/2022 01:17*	WG1810840
(S) 2-Fluorobiphenyl	*75.0*			*10.0-130*		*02/02/2022 01:17*	WG1810840
(S) 2,4,6-Tribromophenol	*61.5*			*10.0-155*		*02/02/2022 01:17*	WG1810840
(S) p-Terphenyl-d14	*78.7*			*10.0-128*		*02/02/2022 01:17*	WG1810840

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/30/2022 03:08	WG1810232
Acrolein	U		2.54	50.0	1	01/30/2022 03:08	WG1810232
Acrylonitrile	U		0.671	10.0	1	01/30/2022 03:08	WG1810232
Benzene	U		0.0941	1.00	1	01/30/2022 03:08	WG1810232
Bromobenzene	U		0.118	1.00	1	01/30/2022 03:08	WG1810232
Bromodichloromethane	U		0.136	1.00	1	01/30/2022 03:08	WG1810232
Bromoform	U		0.129	1.00	1	01/30/2022 03:08	WG1810232
Bromomethane	U	J4	0.605	5.00	1	01/30/2022 03:08	WG1810232
n-Butylbenzene	U		0.157	1.00	1	01/30/2022 03:08	WG1810232
sec-Butylbenzene	U		0.125	1.00	1	01/30/2022 03:08	WG1810232
tert-Butylbenzene	U		0.127	1.00	1	01/30/2022 03:08	WG1810232
Carbon tetrachloride	U		0.128	1.00	1	01/30/2022 03:08	WG1810232
Chlorobenzene	U		0.116	1.00	1	01/30/2022 03:08	WG1810232
Chlorodibromomethane	U		0.140	1.00	1	01/30/2022 03:08	WG1810232
Chloroethane	U		0.192	5.00	1	01/30/2022 03:08	WG1810232
Chloroform	U		0.111	5.00	1	01/30/2022 03:08	WG1810232
Chloromethane	U		0.960	2.50	1	01/30/2022 03:08	WG1810232
2-Chlorotoluene	U		0.106	1.00	1	01/30/2022 03:08	WG1810232
4-Chlorotoluene	U		0.114	1.00	1	01/30/2022 03:08	WG1810232
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/30/2022 03:08	WG1810232
1,2-Dibromoethane	U		0.126	1.00	1	01/30/2022 03:08	WG1810232
Dibromomethane	U		0.122	1.00	1	01/30/2022 03:08	WG1810232
1,2-Dichlorobenzene	U		0.107	1.00	1	01/30/2022 03:08	WG1810232
1,3-Dichlorobenzene	U		0.110	1.00	1	01/30/2022 03:08	WG1810232
1,4-Dichlorobenzene	U		0.120	1.00	1	01/30/2022 03:08	WG1810232
Dichlorodifluoromethane	U		0.374	5.00	1	01/30/2022 03:08	WG1810232
1,1-Dichloroethane	U		0.100	1.00	1	01/30/2022 03:08	WG1810232
1,2-Dichloroethane	U		0.0819	1.00	1	01/30/2022 03:08	WG1810232
1,1-Dichloroethene	U		0.188	1.00	1	01/30/2022 03:08	WG1810232
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/30/2022 03:08	WG1810232
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/30/2022 03:08	WG1810232
1,2-Dichloropropane	U		0.149	1.00	1	01/30/2022 03:08	WG1810232
1,1-Dichloropropene	U		0.142	1.00	1	01/30/2022 03:08	WG1810232
1,3-Dichloropropane	U		0.110	1.00	1	01/30/2022 03:08	WG1810232
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/30/2022 03:08	WG1810232
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/30/2022 03:08	WG1810232
2,2-Dichloropropane	U		0.161	1.00	1	01/30/2022 03:08	WG1810232
Di-isopropyl ether	U		0.105	1.00	1	01/30/2022 03:08	WG1810232
Ethylbenzene	U		0.137	1.00	1	01/30/2022 03:08	WG1810232
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/30/2022 03:08	WG1810232
Isopropylbenzene	U		0.105	1.00	1	01/30/2022 03:08	WG1810232
p-Isopropyltoluene	U		0.120	1.00	1	01/30/2022 03:08	WG1810232
2-Butanone (MEK)	U		1.19	10.0	1	01/30/2022 03:08	WG1810232
Methylene Chloride	U		0.430	5.00	1	01/30/2022 03:08	WG1810232
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/30/2022 03:08	WG1810232
Methyl tert-butyl ether	U		0.101	1.00	1	01/30/2022 03:08	WG1810232
Naphthalene	U		1.00	5.00	1	01/30/2022 03:08	WG1810232
n-Propylbenzene	U		0.0993	1.00	1	01/30/2022 03:08	WG1810232
Styrene	U		0.118	1.00	1	01/30/2022 03:08	WG1810232
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/30/2022 03:08	WG1810232
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/30/2022 03:08	WG1810232
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/30/2022 03:08	WG1810232
Tetrachloroethene	U		0.300	1.00	1	01/30/2022 03:08	WG1810232
Toluene	U		0.278	1.00	1	01/30/2022 03:08	WG1810232
1,2,3-Trichlorobenzene	U	J4	0.230	1.00	1	01/30/2022 03:08	WG1810232
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/30/2022 03:08	WG1810232

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.149	1.00	1	01/30/2022 03:08	WG1810232
1,1,2-Trichloroethane	U		0.158	1.00	1	01/30/2022 03:08	WG1810232
Trichloroethene	U		0.190	1.00	1	01/30/2022 03:08	WG1810232
Trichlorofluoromethane	U		0.160	5.00	1	01/30/2022 03:08	WG1810232
1,2,3-Trichloropropane	U		0.237	2.50	1	01/30/2022 03:08	WG1810232
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/30/2022 03:08	WG1810232
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:08	WG1810232
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:08	WG1810232
Vinyl chloride	U		0.234	1.00	1	01/30/2022 03:08	WG1810232
Xylenes, Total	U		0.174	3.00	1	01/30/2022 03:08	WG1810232
(S) Toluene-d8	*92.2*			*80.0-120*		*01/30/2022 03:08*	WG1810232
(S) 4-Bromofluorobenzene	*98.7*			*77.0-126*		*01/30/2022 03:08*	WG1810232
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*01/30/2022 03:08*	WG1810232

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/02/2022 01:38	WG1810840
Acenaphthylene	U		0.0921	1.00	1	02/02/2022 01:38	WG1810840
Anthracene	U		0.0804	1.00	1	02/02/2022 01:38	WG1810840
Benzidine	U		3.74	10.0	1	02/02/2022 01:38	WG1810840
Benzo(a)anthracene	U		0.199	1.00	1	02/02/2022 01:38	WG1810840
Benzo(b)fluoranthene	U		0.130	1.00	1	02/02/2022 01:38	WG1810840
Benzo(k)fluoranthene	U		0.120	1.00	1	02/02/2022 01:38	WG1810840
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/02/2022 01:38	WG1810840
Benzo(a)pyrene	U		0.0381	1.00	1	02/02/2022 01:38	WG1810840
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/02/2022 01:38	WG1810840
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/02/2022 01:38	WG1810840
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/02/2022 01:38	WG1810840
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/02/2022 01:38	WG1810840
2-Chloronaphthalene	U		0.0648	1.00	1	02/02/2022 01:38	WG1810840
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/02/2022 01:38	WG1810840
Chrysene	U		0.130	1.00	1	02/02/2022 01:38	WG1810840
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/02/2022 01:38	WG1810840
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/02/2022 01:38	WG1810840
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/02/2022 01:38	WG1810840
2,6-Dinitrotoluene	U		0.250	10.0	1	02/02/2022 01:38	WG1810840
Fluoranthene	U		0.102	1.00	1	02/02/2022 01:38	WG1810840
Fluorene	U		0.0844	1.00	1	02/02/2022 01:38	WG1810840
Hexachlorobenzene	U		0.0755	1.00	1	02/02/2022 01:38	WG1810840
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/02/2022 01:38	WG1810840
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/02/2022 01:38	WG1810840
Hexachloroethane	U		0.127	10.0	1	02/02/2022 01:38	WG1810840
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/02/2022 01:38	WG1810840
Isophorone	U		0.143	10.0	1	02/02/2022 01:38	WG1810840
Naphthalene	U		0.159	1.00	1	02/02/2022 01:38	WG1810840
Nitrobenzene	U		0.297	10.0	1	02/02/2022 01:38	WG1810840
n-Nitrosodimethylamine	U		0.998	10.0	1	02/02/2022 01:38	WG1810840
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/02/2022 01:38	WG1810840
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/02/2022 01:38	WG1810840
Phenanthrene	U		0.112	1.00	1	02/02/2022 01:38	WG1810840
Benzylbutyl phthalate	U		0.765	3.00	1	02/02/2022 01:38	WG1810840
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/02/2022 01:38	WG1810840
Di-n-butyl phthalate	5.71		0.453	3.00	1	02/02/2022 01:38	WG1810840
Diethyl phthalate	11.3		0.287	3.00	1	02/02/2022 01:38	WG1810840
Dimethyl phthalate	U		0.260	3.00	1	02/02/2022 01:38	WG1810840

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-n-octyl phthalate	U		0.932	3.00	1	02/02/2022 01:38	WG1810840
Pyrene	U		0.107	1.00	1	02/02/2022 01:38	WG1810840
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/02/2022 01:38	WG1810840
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/02/2022 01:38	WG1810840
2-Chlorophenol	U		0.133	10.0	1	02/02/2022 01:38	WG1810840
2,4-Dichlorophenol	U		0.102	10.0	1	02/02/2022 01:38	WG1810840
2,4-Dimethylphenol	U		0.0636	10.0	1	02/02/2022 01:38	WG1810840
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/02/2022 01:38	WG1810840
2,4-Dinitrophenol	U		5.93	10.0	1	02/02/2022 01:38	WG1810840
2-Nitrophenol	U		0.117	10.0	1	02/02/2022 01:38	WG1810840
4-Nitrophenol	U		0.143	10.0	1	02/02/2022 01:38	WG1810840
Pentachlorophenol	U		0.313	10.0	1	02/02/2022 01:38	WG1810840
Phenol	U		4.33	10.0	1	02/02/2022 01:38	WG1810840
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/02/2022 01:38	WG1810840
(S) 2-Fluorophenol	*45.9*			*10.0-120*		*02/02/2022 01:38*	WG1810840
(S) Phenol-d5	*28.6*			*10.0-120*		*02/02/2022 01:38*	WG1810840
(S) Nitrobenzene-d5	*70.5*			*10.0-127*		*02/02/2022 01:38*	WG1810840
(S) 2-Fluorobiphenyl	*73.3*			*10.0-130*		*02/02/2022 01:38*	WG1810840
(S) 2,4,6-Tribromophenol	*62.5*			*10.0-155*		*02/02/2022 01:38*	WG1810840
(S) p-Terphenyl-d14	*82.3*			*10.0-128*		*02/02/2022 01:38*	WG1810840

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/30/2022 03:30	WG1810232
Acrolein	U		2.54	50.0	1	01/30/2022 03:30	WG1810232
Acrylonitrile	U		0.671	10.0	1	01/30/2022 03:30	WG1810232
Benzene	U		0.0941	1.00	1	01/30/2022 03:30	WG1810232
Bromobenzene	U		0.118	1.00	1	01/30/2022 03:30	WG1810232
Bromodichloromethane	U		0.136	1.00	1	01/30/2022 03:30	WG1810232
Bromoform	U		0.129	1.00	1	01/30/2022 03:30	WG1810232
Bromomethane	U	J4	0.605	5.00	1	01/30/2022 03:30	WG1810232
n-Butylbenzene	U		0.157	1.00	1	01/30/2022 03:30	WG1810232
sec-Butylbenzene	U		0.125	1.00	1	01/30/2022 03:30	WG1810232
tert-Butylbenzene	U		0.127	1.00	1	01/30/2022 03:30	WG1810232
Carbon tetrachloride	U		0.128	1.00	1	01/30/2022 03:30	WG1810232
Chlorobenzene	U		0.116	1.00	1	01/30/2022 03:30	WG1810232
Chlorodibromomethane	U		0.140	1.00	1	01/30/2022 03:30	WG1810232
Chloroethane	U		0.192	5.00	1	01/30/2022 03:30	WG1810232
Chloroform	U		0.111	5.00	1	01/30/2022 03:30	WG1810232
Chloromethane	U		0.960	2.50	1	01/30/2022 03:30	WG1810232
2-Chlorotoluene	U		0.106	1.00	1	01/30/2022 03:30	WG1810232
4-Chlorotoluene	U		0.114	1.00	1	01/30/2022 03:30	WG1810232
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/30/2022 03:30	WG1810232
1,2-Dibromoethane	U		0.126	1.00	1	01/30/2022 03:30	WG1810232
Dibromomethane	U		0.122	1.00	1	01/30/2022 03:30	WG1810232
1,2-Dichlorobenzene	U		0.107	1.00	1	01/30/2022 03:30	WG1810232
1,3-Dichlorobenzene	U		0.110	1.00	1	01/30/2022 03:30	WG1810232
1,4-Dichlorobenzene	U		0.120	1.00	1	01/30/2022 03:30	WG1810232
Dichlorodifluoromethane	U		0.374	5.00	1	01/30/2022 03:30	WG1810232
1,1-Dichloroethane	U		0.100	1.00	1	01/30/2022 03:30	WG1810232
1,2-Dichloroethane	U		0.0819	1.00	1	01/30/2022 03:30	WG1810232
1,1-Dichloroethene	U		0.188	1.00	1	01/30/2022 03:30	WG1810232
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/30/2022 03:30	WG1810232
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/30/2022 03:30	WG1810232
1,2-Dichloropropane	U		0.149	1.00	1	01/30/2022 03:30	WG1810232
1,1-Dichloropropene	U		0.142	1.00	1	01/30/2022 03:30	WG1810232
1,3-Dichloropropane	U		0.110	1.00	1	01/30/2022 03:30	WG1810232
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/30/2022 03:30	WG1810232
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/30/2022 03:30	WG1810232
2,2-Dichloropropane	U		0.161	1.00	1	01/30/2022 03:30	WG1810232
Di-isopropyl ether	U		0.105	1.00	1	01/30/2022 03:30	WG1810232
Ethylbenzene	U		0.137	1.00	1	01/30/2022 03:30	WG1810232
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/30/2022 03:30	WG1810232
Isopropylbenzene	U		0.105	1.00	1	01/30/2022 03:30	WG1810232
p-Isopropyltoluene	U		0.120	1.00	1	01/30/2022 03:30	WG1810232
2-Butanone (MEK)	U		1.19	10.0	1	01/30/2022 03:30	WG1810232
Methylene Chloride	U		0.430	5.00	1	01/30/2022 03:30	WG1810232
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/30/2022 03:30	WG1810232
Methyl tert-butyl ether	U		0.101	1.00	1	01/30/2022 03:30	WG1810232
Naphthalene	U		1.00	5.00	1	01/30/2022 03:30	WG1810232
n-Propylbenzene	U		0.0993	1.00	1	01/30/2022 03:30	WG1810232
Styrene	U		0.118	1.00	1	01/30/2022 03:30	WG1810232
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/30/2022 03:30	WG1810232
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/30/2022 03:30	WG1810232
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/30/2022 03:30	WG1810232
Tetrachloroethene	U		0.300	1.00	1	01/30/2022 03:30	WG1810232
Toluene	U		0.278	1.00	1	01/30/2022 03:30	WG1810232
1,2,3-Trichlorobenzene	U	J4	0.230	1.00	1	01/30/2022 03:30	WG1810232
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/30/2022 03:30	WG1810232

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.149	1.00	1	01/30/2022 03:30	WG1810232
1,1,2-Trichloroethane	U		0.158	1.00	1	01/30/2022 03:30	WG1810232
Trichloroethene	U		0.190	1.00	1	01/30/2022 03:30	WG1810232
Trichlorofluoromethane	U		0.160	5.00	1	01/30/2022 03:30	WG1810232
1,2,3-Trichloropropane	U		0.237	2.50	1	01/30/2022 03:30	WG1810232
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/30/2022 03:30	WG1810232
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:30	WG1810232
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:30	WG1810232
Vinyl chloride	U		0.234	1.00	1	01/30/2022 03:30	WG1810232
Xylenes, Total	U		0.174	3.00	1	01/30/2022 03:30	WG1810232
(S) Toluene-d8	*94.3*			*80.0-120*		*01/30/2022 03:30*	WG1810232
(S) 4-Bromofluorobenzene	*97.8*			*77.0-126*		*01/30/2022 03:30*	WG1810232
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*		*01/30/2022 03:30*	WG1810232

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0886	1.00	1	02/02/2022 01:59	WG1810840
Acenaphthylene	U		0.0921	1.00	1	02/02/2022 01:59	WG1810840
Anthracene	U		0.0804	1.00	1	02/02/2022 01:59	WG1810840
Benzidine	U		3.74	10.0	1	02/02/2022 01:59	WG1810840
Benzo(a)anthracene	U		0.199	1.00	1	02/02/2022 01:59	WG1810840
Benzo(b)fluoranthene	U		0.130	1.00	1	02/02/2022 01:59	WG1810840
Benzo(k)fluoranthene	U		0.120	1.00	1	02/02/2022 01:59	WG1810840
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/02/2022 01:59	WG1810840
Benzo(a)pyrene	U		0.0381	1.00	1	02/02/2022 01:59	WG1810840
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/02/2022 01:59	WG1810840
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/02/2022 01:59	WG1810840
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/02/2022 01:59	WG1810840
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/02/2022 01:59	WG1810840
2-Chloronaphthalene	U		0.0648	1.00	1	02/02/2022 01:59	WG1810840
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/02/2022 01:59	WG1810840
Chrysene	U		0.130	1.00	1	02/02/2022 01:59	WG1810840
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/02/2022 01:59	WG1810840
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/02/2022 01:59	WG1810840
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/02/2022 01:59	WG1810840
2,6-Dinitrotoluene	U		0.250	10.0	1	02/02/2022 01:59	WG1810840
Fluoranthene	U		0.102	1.00	1	02/02/2022 01:59	WG1810840
Fluorene	U		0.0844	1.00	1	02/02/2022 01:59	WG1810840
Hexachlorobenzene	U		0.0755	1.00	1	02/02/2022 01:59	WG1810840
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/02/2022 01:59	WG1810840
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/02/2022 01:59	WG1810840
Hexachloroethane	U		0.127	10.0	1	02/02/2022 01:59	WG1810840
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/02/2022 01:59	WG1810840
Isophorone	U		0.143	10.0	1	02/02/2022 01:59	WG1810840
Naphthalene	U		0.159	1.00	1	02/02/2022 01:59	WG1810840
Nitrobenzene	U		0.297	10.0	1	02/02/2022 01:59	WG1810840
n-Nitrosodimethylamine	U		0.998	10.0	1	02/02/2022 01:59	WG1810840
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/02/2022 01:59	WG1810840
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/02/2022 01:59	WG1810840
Phenanthrene	U		0.112	1.00	1	02/02/2022 01:59	WG1810840
Benzylbutyl phthalate	U		0.765	3.00	1	02/02/2022 01:59	WG1810840
Bis(2-ethylhexyl)phthalate	1.37	J	0.895	3.00	1	02/02/2022 01:59	WG1810840
Di-n-butyl phthalate	2.16	J	0.453	3.00	1	02/02/2022 01:59	WG1810840
Diethyl phthalate	0.896	J	0.287	3.00	1	02/02/2022 01:59	WG1810840
Dimethyl phthalate	U		0.260	3.00	1	02/02/2022 01:59	WG1810840

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-n-octyl phthalate	U		0.932	3.00	1	02/02/2022 01:59	WG1810840
Pyrene	U		0.107	1.00	1	02/02/2022 01:59	WG1810840
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/02/2022 01:59	WG1810840
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/02/2022 01:59	WG1810840
2-Chlorophenol	U		0.133	10.0	1	02/02/2022 01:59	WG1810840
2,4-Dichlorophenol	U		0.102	10.0	1	02/02/2022 01:59	WG1810840
2,4-Dimethylphenol	U		0.0636	10.0	1	02/02/2022 01:59	WG1810840
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/02/2022 01:59	WG1810840
2,4-Dinitrophenol	U		5.93	10.0	1	02/02/2022 01:59	WG1810840
2-Nitrophenol	U		0.117	10.0	1	02/02/2022 01:59	WG1810840
4-Nitrophenol	U		0.143	10.0	1	02/02/2022 01:59	WG1810840
Pentachlorophenol	U		0.313	10.0	1	02/02/2022 01:59	WG1810840
Phenol	U		4.33	10.0	1	02/02/2022 01:59	WG1810840
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/02/2022 01:59	WG1810840
(S) 2-Fluorophenol	*44.1*			*10.0-120*		*02/02/2022 01:59*	WG1810840
(S) Phenol-d5	*27.5*			*10.0-120*		*02/02/2022 01:59*	WG1810840
(S) Nitrobenzene-d5	*71.1*			*10.0-127*		*02/02/2022 01:59*	WG1810840
(S) 2-Fluorobiphenyl	*76.8*			*10.0-130*		*02/02/2022 01:59*	WG1810840
(S) 2,4,6-Tribromophenol	*66.5*			*10.0-155*		*02/02/2022 01:59*	WG1810840
(S) p-Terphenyl-d14	*85.8*			*10.0-128*		*02/02/2022 01:59*	WG1810840

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	01/30/2022 03:51	WG1810232
Acrolein	U		2.54	50.0	1	01/30/2022 03:51	WG1810232
Acrylonitrile	U		0.671	10.0	1	01/30/2022 03:51	WG1810232
Benzene	U		0.0941	1.00	1	01/30/2022 03:51	WG1810232
Bromobenzene	U		0.118	1.00	1	01/30/2022 03:51	WG1810232
Bromodichloromethane	U		0.136	1.00	1	01/30/2022 03:51	WG1810232
Bromoform	U		0.129	1.00	1	01/30/2022 03:51	WG1810232
Bromomethane	U	J4	0.605	5.00	1	01/30/2022 03:51	WG1810232
n-Butylbenzene	U		0.157	1.00	1	01/30/2022 03:51	WG1810232
sec-Butylbenzene	U		0.125	1.00	1	01/30/2022 03:51	WG1810232
tert-Butylbenzene	U		0.127	1.00	1	01/30/2022 03:51	WG1810232
Carbon tetrachloride	U		0.128	1.00	1	01/30/2022 03:51	WG1810232
Chlorobenzene	U		0.116	1.00	1	01/30/2022 03:51	WG1810232
Chlorodibromomethane	U		0.140	1.00	1	01/30/2022 03:51	WG1810232
Chloroethane	U		0.192	5.00	1	01/30/2022 03:51	WG1810232
Chloroform	U		0.111	5.00	1	01/30/2022 03:51	WG1810232
Chloromethane	U		0.960	2.50	1	01/30/2022 03:51	WG1810232
2-Chlorotoluene	U		0.106	1.00	1	01/30/2022 03:51	WG1810232
4-Chlorotoluene	U		0.114	1.00	1	01/30/2022 03:51	WG1810232
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/30/2022 03:51	WG1810232
1,2-Dibromoethane	U		0.126	1.00	1	01/30/2022 03:51	WG1810232
Dibromomethane	U		0.122	1.00	1	01/30/2022 03:51	WG1810232
1,2-Dichlorobenzene	U		0.107	1.00	1	01/30/2022 03:51	WG1810232
1,3-Dichlorobenzene	U		0.110	1.00	1	01/30/2022 03:51	WG1810232
1,4-Dichlorobenzene	U		0.120	1.00	1	01/30/2022 03:51	WG1810232
Dichlorodifluoromethane	U		0.374	5.00	1	01/30/2022 03:51	WG1810232
1,1-Dichloroethane	U		0.100	1.00	1	01/30/2022 03:51	WG1810232
1,2-Dichloroethane	U		0.0819	1.00	1	01/30/2022 03:51	WG1810232
1,1-Dichloroethene	U		0.188	1.00	1	01/30/2022 03:51	WG1810232
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/30/2022 03:51	WG1810232
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/30/2022 03:51	WG1810232
1,2-Dichloropropane	U		0.149	1.00	1	01/30/2022 03:51	WG1810232
1,1-Dichloropropene	U		0.142	1.00	1	01/30/2022 03:51	WG1810232
1,3-Dichloropropane	U		0.110	1.00	1	01/30/2022 03:51	WG1810232
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/30/2022 03:51	WG1810232
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/30/2022 03:51	WG1810232
2,2-Dichloropropane	U		0.161	1.00	1	01/30/2022 03:51	WG1810232
Di-isopropyl ether	U		0.105	1.00	1	01/30/2022 03:51	WG1810232
Ethylbenzene	U		0.137	1.00	1	01/30/2022 03:51	WG1810232
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/30/2022 03:51	WG1810232
Isopropylbenzene	U		0.105	1.00	1	01/30/2022 03:51	WG1810232
p-Isopropyltoluene	U		0.120	1.00	1	01/30/2022 03:51	WG1810232
2-Butanone (MEK)	U		1.19	10.0	1	01/30/2022 03:51	WG1810232
Methylene Chloride	U		0.430	5.00	1	01/30/2022 03:51	WG1810232
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/30/2022 03:51	WG1810232
Methyl tert-butyl ether	U		0.101	1.00	1	01/30/2022 03:51	WG1810232
Naphthalene	U		1.00	5.00	1	01/30/2022 03:51	WG1810232
n-Propylbenzene	U		0.0993	1.00	1	01/30/2022 03:51	WG1810232
Styrene	U		0.118	1.00	1	01/30/2022 03:51	WG1810232
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/30/2022 03:51	WG1810232
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/30/2022 03:51	WG1810232
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/30/2022 03:51	WG1810232
Tetrachloroethene	U		0.300	1.00	1	01/30/2022 03:51	WG1810232
Toluene	U		0.278	1.00	1	01/30/2022 03:51	WG1810232
1,2,3-Trichlorobenzene	U	J4	0.230	1.00	1	01/30/2022 03:51	WG1810232
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/30/2022 03:51	WG1810232

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.149	1.00	1	01/30/2022 03:51	WG1810232
1,1,2-Trichloroethane	U		0.158	1.00	1	01/30/2022 03:51	WG1810232
Trichloroethene	U		0.190	1.00	1	01/30/2022 03:51	WG1810232
Trichlorofluoromethane	U		0.160	5.00	1	01/30/2022 03:51	WG1810232
1,2,3-Trichloropropane	U		0.237	2.50	1	01/30/2022 03:51	WG1810232
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/30/2022 03:51	WG1810232
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:51	WG1810232
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 03:51	WG1810232
Vinyl chloride	U		0.234	1.00	1	01/30/2022 03:51	WG1810232
Xylenes, Total	U		0.174	3.00	1	01/30/2022 03:51	WG1810232
(S) Toluene-d8	*92.7*			*80.0-120*		*01/30/2022 03:51*	WG1810232
(S) 4-Bromofluorobenzene	*98.1*			*77.0-126*		*01/30/2022 03:51*	WG1810232
(S) 1,2-Dichloroethane-d4	*98.0*			*70.0-130*		*01/30/2022 03:51*	WG1810232

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0886	1.00	1	02/02/2022 18:04	WG1810840
Acenaphthylene	U		0.0921	1.00	1	02/02/2022 18:04	WG1810840
Anthracene	U		0.0804	1.00	1	02/02/2022 18:04	WG1810840
Benzidine	U		3.74	10.0	1	02/02/2022 18:04	WG1810840
Benzo(a)anthracene	U		0.199	1.00	1	02/02/2022 18:04	WG1810840
Benzo(b)fluoranthene	U		0.130	1.00	1	02/02/2022 18:04	WG1810840
Benzo(k)fluoranthene	U		0.120	1.00	1	02/02/2022 18:04	WG1810840
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/02/2022 18:04	WG1810840
Benzo(a)pyrene	U		0.0381	1.00	1	02/02/2022 18:04	WG1810840
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/02/2022 18:04	WG1810840
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/02/2022 18:04	WG1810840
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/02/2022 18:04	WG1810840
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/02/2022 18:04	WG1810840
2-Chloronaphthalene	U		0.0648	1.00	1	02/02/2022 18:04	WG1810840
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/02/2022 18:04	WG1810840
Chrysene	U		0.130	1.00	1	02/02/2022 18:04	WG1810840
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/02/2022 18:04	WG1810840
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/02/2022 18:04	WG1810840
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/02/2022 18:04	WG1810840
2,6-Dinitrotoluene	U		0.250	10.0	1	02/02/2022 18:04	WG1810840
Fluoranthene	U		0.102	1.00	1	02/02/2022 18:04	WG1810840
Fluorene	U		0.0844	1.00	1	02/02/2022 18:04	WG1810840
Hexachlorobenzene	U		0.0755	1.00	1	02/02/2022 18:04	WG1810840
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/02/2022 18:04	WG1810840
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/02/2022 18:04	WG1810840
Hexachloroethane	U		0.127	10.0	1	02/02/2022 18:04	WG1810840
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/02/2022 18:04	WG1810840
Isophorone	U		0.143	10.0	1	02/02/2022 18:04	WG1810840
Naphthalene	U		0.159	1.00	1	02/02/2022 18:04	WG1810840
Nitrobenzene	U		0.297	10.0	1	02/02/2022 18:04	WG1810840
n-Nitrosodimethylamine	U		0.998	10.0	1	02/02/2022 18:04	WG1810840
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/02/2022 18:04	WG1810840
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/02/2022 18:04	WG1810840
Phenanthrene	U		0.112	1.00	1	02/02/2022 18:04	WG1810840
Benzylbutyl phthalate	U		0.765	3.00	1	02/02/2022 18:04	WG1810840
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/02/2022 18:04	WG1810840
Di-n-butyl phthalate	1.29	J	0.453	3.00	1	02/02/2022 18:04	WG1810840
Diethyl phthalate	1.01	J	0.287	3.00	1	02/02/2022 18:04	WG1810840
Dimethyl phthalate	U		0.260	3.00	1	02/02/2022 18:04	WG1810840

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-n-octyl phthalate	U		0.932	3.00	1	02/02/2022 18:04	WG1810840
Pyrene	U		0.107	1.00	1	02/02/2022 18:04	WG1810840
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/02/2022 18:04	WG1810840
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/02/2022 18:04	WG1810840
2-Chlorophenol	U		0.133	10.0	1	02/02/2022 18:04	WG1810840
2,4-Dichlorophenol	U		0.102	10.0	1	02/02/2022 18:04	WG1810840
2,4-Dimethylphenol	U		0.0636	10.0	1	02/02/2022 18:04	WG1810840
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/02/2022 18:04	WG1810840
2,4-Dinitrophenol	U		5.93	10.0	1	02/02/2022 18:04	WG1810840
2-Nitrophenol	U		0.117	10.0	1	02/02/2022 18:04	WG1810840
4-Nitrophenol	U		0.143	10.0	1	02/02/2022 18:04	WG1810840
Pentachlorophenol	U		0.313	10.0	1	02/02/2022 18:04	WG1810840
Phenol	U		4.33	10.0	1	02/02/2022 18:04	WG1810840
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/02/2022 18:04	WG1810840
(S) 2-Fluorophenol	*40.6*			*10.0-120*		*02/02/2022 18:04*	WG1810840
(S) Phenol-d5	*25.9*			*10.0-120*		*02/02/2022 18:04*	WG1810840
(S) Nitrobenzene-d5	*62.4*			*10.0-127*		*02/02/2022 18:04*	WG1810840
(S) 2-Fluorobiphenyl	*73.9*			*10.0-130*		*02/02/2022 18:04*	WG1810840
(S) 2,4,6-Tribromophenol	*82.0*			*10.0-155*		*02/02/2022 18:04*	WG1810840
(S) p-Terphenyl-d14	*78.1*			*10.0-128*		*02/02/2022 18:04*	WG1810840

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/30/2022 04:13	WG1810232
Acrolein	U		2.54	50.0	1	01/30/2022 04:13	WG1810232
Acrylonitrile	U		0.671	10.0	1	01/30/2022 04:13	WG1810232
Benzene	U		0.0941	1.00	1	01/30/2022 04:13	WG1810232
Bromobenzene	U		0.118	1.00	1	01/30/2022 04:13	WG1810232
Bromodichloromethane	U		0.136	1.00	1	01/30/2022 04:13	WG1810232
Bromoform	U		0.129	1.00	1	01/30/2022 04:13	WG1810232
Bromomethane	U	J4	0.605	5.00	1	01/30/2022 04:13	WG1810232
n-Butylbenzene	U		0.157	1.00	1	01/30/2022 04:13	WG1810232
sec-Butylbenzene	U		0.125	1.00	1	01/30/2022 04:13	WG1810232
tert-Butylbenzene	U		0.127	1.00	1	01/30/2022 04:13	WG1810232
Carbon tetrachloride	U		0.128	1.00	1	01/30/2022 04:13	WG1810232
Chlorobenzene	U		0.116	1.00	1	01/30/2022 04:13	WG1810232
Chlorodibromomethane	U		0.140	1.00	1	01/30/2022 04:13	WG1810232
Chloroethane	U		0.192	5.00	1	01/30/2022 04:13	WG1810232
Chloroform	U		0.111	5.00	1	01/30/2022 04:13	WG1810232
Chloromethane	U		0.960	2.50	1	01/30/2022 04:13	WG1810232
2-Chlorotoluene	U		0.106	1.00	1	01/30/2022 04:13	WG1810232
4-Chlorotoluene	U		0.114	1.00	1	01/30/2022 04:13	WG1810232
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/30/2022 04:13	WG1810232
1,2-Dibromoethane	U		0.126	1.00	1	01/30/2022 04:13	WG1810232
Dibromomethane	U		0.122	1.00	1	01/30/2022 04:13	WG1810232
1,2-Dichlorobenzene	U		0.107	1.00	1	01/30/2022 04:13	WG1810232
1,3-Dichlorobenzene	U		0.110	1.00	1	01/30/2022 04:13	WG1810232
1,4-Dichlorobenzene	U		0.120	1.00	1	01/30/2022 04:13	WG1810232
Dichlorodifluoromethane	U		0.374	5.00	1	01/30/2022 04:13	WG1810232
1,1-Dichloroethane	U		0.100	1.00	1	01/30/2022 04:13	WG1810232
1,2-Dichloroethane	U		0.0819	1.00	1	01/30/2022 04:13	WG1810232
1,1-Dichloroethene	U		0.188	1.00	1	01/30/2022 04:13	WG1810232
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/30/2022 04:13	WG1810232
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/30/2022 04:13	WG1810232
1,2-Dichloropropane	U		0.149	1.00	1	01/30/2022 04:13	WG1810232
1,1-Dichloropropene	U		0.142	1.00	1	01/30/2022 04:13	WG1810232
1,3-Dichloropropane	U		0.110	1.00	1	01/30/2022 04:13	WG1810232
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/30/2022 04:13	WG1810232
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/30/2022 04:13	WG1810232
2,2-Dichloropropane	U		0.161	1.00	1	01/30/2022 04:13	WG1810232
Di-isopropyl ether	U		0.105	1.00	1	01/30/2022 04:13	WG1810232
Ethylbenzene	U		0.137	1.00	1	01/30/2022 04:13	WG1810232
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/30/2022 04:13	WG1810232
Isopropylbenzene	U		0.105	1.00	1	01/30/2022 04:13	WG1810232
p-Isopropyltoluene	U		0.120	1.00	1	01/30/2022 04:13	WG1810232
2-Butanone (MEK)	U		1.19	10.0	1	01/30/2022 04:13	WG1810232
Methylene Chloride	U		0.430	5.00	1	01/30/2022 04:13	WG1810232
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/30/2022 04:13	WG1810232
Methyl tert-butyl ether	U		0.101	1.00	1	01/30/2022 04:13	WG1810232
Naphthalene	U		1.00	5.00	1	01/30/2022 04:13	WG1810232
n-Propylbenzene	U		0.0993	1.00	1	01/30/2022 04:13	WG1810232
Styrene	U		0.118	1.00	1	01/30/2022 04:13	WG1810232
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/30/2022 04:13	WG1810232
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/30/2022 04:13	WG1810232
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/30/2022 04:13	WG1810232
Tetrachloroethene	U		0.300	1.00	1	01/30/2022 04:13	WG1810232
Toluene	U		0.278	1.00	1	01/30/2022 04:13	WG1810232
1,2,3-Trichlorobenzene	U	J4	0.230	1.00	1	01/30/2022 04:13	WG1810232
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/30/2022 04:13	WG1810232

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.149	1.00	1	01/30/2022 04:13	WG1810232
1,1,2-Trichloroethane	U		0.158	1.00	1	01/30/2022 04:13	WG1810232
Trichloroethene	U		0.190	1.00	1	01/30/2022 04:13	WG1810232
Trichlorofluoromethane	U		0.160	5.00	1	01/30/2022 04:13	WG1810232
1,2,3-Trichloropropane	U		0.237	2.50	1	01/30/2022 04:13	WG1810232
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/30/2022 04:13	WG1810232
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 04:13	WG1810232
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/30/2022 04:13	WG1810232
Vinyl chloride	U		0.234	1.00	1	01/30/2022 04:13	WG1810232
Xylenes, Total	U		0.174	3.00	1	01/30/2022 04:13	WG1810232
(S) Toluene-d8	*89.4*			*80.0-120*		*01/30/2022 04:13*	WG1810232
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*01/30/2022 04:13*	WG1810232
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*01/30/2022 04:13*	WG1810232

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0886	1.00	1	02/02/2022 17:42	WG1810840
Acenaphthylene	U		0.0921	1.00	1	02/02/2022 17:42	WG1810840
Anthracene	U		0.0804	1.00	1	02/02/2022 17:42	WG1810840
Benzidine	U		3.74	10.0	1	02/02/2022 17:42	WG1810840
Benzo(a)anthracene	U		0.199	1.00	1	02/02/2022 17:42	WG1810840
Benzo(b)fluoranthene	U		0.130	1.00	1	02/02/2022 17:42	WG1810840
Benzo(k)fluoranthene	U		0.120	1.00	1	02/02/2022 17:42	WG1810840
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/02/2022 17:42	WG1810840
Benzo(a)pyrene	U		0.0381	1.00	1	02/02/2022 17:42	WG1810840
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/02/2022 17:42	WG1810840
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/02/2022 17:42	WG1810840
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/02/2022 17:42	WG1810840
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/02/2022 17:42	WG1810840
2-Chloronaphthalene	U		0.0648	1.00	1	02/02/2022 17:42	WG1810840
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/02/2022 17:42	WG1810840
Chrysene	U		0.130	1.00	1	02/02/2022 17:42	WG1810840
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/02/2022 17:42	WG1810840
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/02/2022 17:42	WG1810840
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/02/2022 17:42	WG1810840
2,6-Dinitrotoluene	U		0.250	10.0	1	02/02/2022 17:42	WG1810840
Fluoranthene	U		0.102	1.00	1	02/02/2022 17:42	WG1810840
Fluorene	U		0.0844	1.00	1	02/02/2022 17:42	WG1810840
Hexachlorobenzene	U		0.0755	1.00	1	02/02/2022 17:42	WG1810840
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/02/2022 17:42	WG1810840
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/02/2022 17:42	WG1810840
Hexachloroethane	U		0.127	10.0	1	02/02/2022 17:42	WG1810840
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/02/2022 17:42	WG1810840
Isophorone	U		0.143	10.0	1	02/02/2022 17:42	WG1810840
Naphthalene	U		0.159	1.00	1	02/02/2022 17:42	WG1810840
Nitrobenzene	U		0.297	10.0	1	02/02/2022 17:42	WG1810840
n-Nitrosodimethylamine	U		0.998	10.0	1	02/02/2022 17:42	WG1810840
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/02/2022 17:42	WG1810840
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/02/2022 17:42	WG1810840
Phenanthrene	U		0.112	1.00	1	02/02/2022 17:42	WG1810840
Benzylbutyl phthalate	U		0.765	3.00	1	02/02/2022 17:42	WG1810840
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/02/2022 17:42	WG1810840
Di-n-butyl phthalate	0.555	J	0.453	3.00	1	02/02/2022 17:42	WG1810840
Diethyl phthalate	U		0.287	3.00	1	02/02/2022 17:42	WG1810840
Dimethyl phthalate	U		0.260	3.00	1	02/02/2022 17:42	WG1810840

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-n-octyl phthalate	U		0.932	3.00	1	02/02/2022 17:42	WG1810840
Pyrene	U		0.107	1.00	1	02/02/2022 17:42	WG1810840
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/02/2022 17:42	WG1810840
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/02/2022 17:42	WG1810840
2-Chlorophenol	U		0.133	10.0	1	02/02/2022 17:42	WG1810840
2,4-Dichlorophenol	U		0.102	10.0	1	02/02/2022 17:42	WG1810840
2,4-Dimethylphenol	U		0.0636	10.0	1	02/02/2022 17:42	WG1810840
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/02/2022 17:42	WG1810840
2,4-Dinitrophenol	U		5.93	10.0	1	02/02/2022 17:42	WG1810840
2-Nitrophenol	U		0.117	10.0	1	02/02/2022 17:42	WG1810840
4-Nitrophenol	U		0.143	10.0	1	02/02/2022 17:42	WG1810840
Pentachlorophenol	U		0.313	10.0	1	02/02/2022 17:42	WG1810840
Phenol	U		4.33	10.0	1	02/02/2022 17:42	WG1810840
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/02/2022 17:42	WG1810840
(S) 2-Fluorophenol	*41.6*			*10.0-120*		*02/02/2022 17:42*	WG1810840
(S) Phenol-d5	*25.8*			*10.0-120*		*02/02/2022 17:42*	WG1810840
(S) Nitrobenzene-d5	*60.6*			*10.0-127*		*02/02/2022 17:42*	WG1810840
(S) 2-Fluorobiphenyl	*72.1*			*10.0-130*		*02/02/2022 17:42*	WG1810840
(S) 2,4,6-Tribromophenol	*78.0*			*10.0-155*		*02/02/2022 17:42*	WG1810840
(S) p-Terphenyl-d14	*77.0*			*10.0-128*		*02/02/2022 17:42*	WG1810840

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	02/01/2022 10:30	WG1810550

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0393	0.0538	1	01/31/2022 04:20	WG1810477
Acrylonitrile	U		0.00388	0.0134	1	01/31/2022 04:20	WG1810477
Benzene	U		0.000502	0.00108	1	01/31/2022 04:20	WG1810477
Bromobenzene	U		0.000968	0.0134	1	01/31/2022 04:20	WG1810477
Bromodichloromethane	U		0.000780	0.00269	1	01/31/2022 04:20	WG1810477
Bromoform	U		0.00126	0.0269	1	01/31/2022 04:20	WG1810477
Bromomethane	U		0.00212	0.0134	1	01/31/2022 04:20	WG1810477
n-Butylbenzene	U		0.00565	0.0134	1	01/31/2022 04:20	WG1810477
sec-Butylbenzene	U		0.00310	0.0134	1	02/01/2022 02:49	WG1810820
tert-Butylbenzene	U		0.00210	0.00538	1	01/31/2022 04:20	WG1810477
Carbon tetrachloride	U		0.000966	0.00538	1	01/31/2022 04:20	WG1810477
Chlorobenzene	0.000375	J	0.000226	0.00269	1	02/01/2022 02:49	WG1810820
Chlorodibromomethane	U		0.000658	0.00269	1	01/31/2022 04:20	WG1810477
Chloroethane	U		0.00183	0.00538	1	01/31/2022 04:20	WG1810477
Chloroform	U		0.00111	0.00269	1	01/31/2022 04:20	WG1810477
Chloromethane	U		0.00468	0.0134	1	01/31/2022 04:20	WG1810477
2-Chlorotoluene	U		0.000931	0.00269	1	01/31/2022 04:20	WG1810477
4-Chlorotoluene	U		0.000484	0.00538	1	01/31/2022 04:20	WG1810477
1,2-Dibromo-3-Chloropropane	U		0.00420	0.0269	1	01/31/2022 04:20	WG1810477
1,2-Dibromoethane	U		0.000697	0.00269	1	01/31/2022 04:20	WG1810477
Dibromomethane	U		0.000807	0.00538	1	01/31/2022 04:20	WG1810477
1,2-Dichlorobenzene	U		0.000457	0.00538	1	01/31/2022 04:20	WG1810477
1,3-Dichlorobenzene	U		0.000645	0.00538	1	01/31/2022 04:20	WG1810477
1,4-Dichlorobenzene	U		0.000753	0.00538	1	01/31/2022 04:20	WG1810477
Dichlorodifluoromethane	U		0.00173	0.00269	1	01/31/2022 04:20	WG1810477
1,1-Dichloroethane	U		0.000528	0.00269	1	01/31/2022 04:20	WG1810477
1,2-Dichloroethane	U		0.000698	0.00269	1	01/31/2022 04:20	WG1810477
1,1-Dichloroethene	U		0.000652	0.00269	1	01/31/2022 04:20	WG1810477
cis-1,2-Dichloroethene	U		0.000790	0.00269	1	01/31/2022 04:20	WG1810477
trans-1,2-Dichloroethene	U		0.00112	0.00538	1	01/31/2022 04:20	WG1810477
1,2-Dichloropropane	U		0.00153	0.00538	1	01/31/2022 04:20	WG1810477
1,1-Dichloropropene	U		0.000870	0.00269	1	01/31/2022 04:20	WG1810477
1,3-Dichloropropane	U		0.000539	0.00538	1	01/31/2022 04:20	WG1810477
cis-1,3-Dichloropropene	U		0.000814	0.00269	1	01/31/2022 04:20	WG1810477
trans-1,3-Dichloropropene	U		0.00123	0.00538	1	01/31/2022 04:20	WG1810477
2,2-Dichloropropane	U		0.00148	0.00269	1	01/31/2022 04:20	WG1810477
Di-isopropyl ether	U		0.000441	0.00108	1	01/31/2022 04:20	WG1810477
Ethylbenzene	U		0.000793	0.00269	1	01/31/2022 04:20	WG1810477
Hexachloro-1,3-butadiene	U		0.00645	0.0269	1	01/31/2022 04:20	WG1810477
Isopropylbenzene	U		0.000457	0.00269	1	01/31/2022 04:20	WG1810477
p-Isopropyltoluene	U		0.00274	0.00538	1	01/31/2022 04:20	WG1810477
2-Butanone (MEK)	U		0.0683	0.108	1	01/31/2022 04:20	WG1810477
Methylene Chloride	U		0.00714	0.0269	1	01/31/2022 04:20	WG1810477
4-Methyl-2-pentanone (MIBK)	U		0.00245	0.0269	1	01/31/2022 04:20	WG1810477
Methyl tert-butyl ether	U		0.000377	0.00108	1	01/31/2022 04:20	WG1810477
Naphthalene	U		0.00525	0.0134	1	02/01/2022 02:49	WG1810820
n-Propylbenzene	U		0.00102	0.00538	1	01/31/2022 04:20	WG1810477
Styrene	U		0.000246	0.0134	1	01/31/2022 04:20	WG1810477
1,1,1,2-Tetrachloroethane	U		0.00102	0.00269	1	01/31/2022 04:20	WG1810477
1,1,2,2-Tetrachloroethane	U		0.000748	0.00269	1	01/31/2022 04:20	WG1810477

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U	C3 J3	0.000811	0.00269	1	01/31/2022 04:20	WG1810477
Tetrachloroethene	U		0.000964	0.00269	1	01/31/2022 04:20	WG1810477
Toluene	U		0.00140	0.00538	1	01/31/2022 04:20	WG1810477
1,2,3-Trichlorobenzene	U		0.00789	0.0134	1	01/31/2022 04:20	WG1810477
1,2,4-Trichlorobenzene	U		0.00473	0.0134	1	01/31/2022 04:20	WG1810477
1,1,1-Trichloroethane	U		0.000993	0.00269	1	01/31/2022 04:20	WG1810477
1,1,2-Trichloroethane	U		0.000642	0.00269	1	01/31/2022 04:20	WG1810477
Trichloroethene	U		0.000628	0.00108	1	01/31/2022 04:20	WG1810477
Trichlorofluoromethane	U		0.000890	0.00269	1	01/31/2022 04:20	WG1810477
1,2,3-Trichloropropane	U		0.00174	0.0134	1	01/31/2022 04:20	WG1810477
1,2,4-Trimethylbenzene	U		0.00170	0.00538	1	01/31/2022 04:20	WG1810477
1,2,3-Trimethylbenzene	U		0.00170	0.00538	1	01/31/2022 04:20	WG1810477
1,3,5-Trimethylbenzene	U		0.00215	0.00538	1	01/31/2022 04:20	WG1810477
Vinyl chloride	U		0.00125	0.00269	1	01/31/2022 04:20	WG1810477
Xylenes, Total	U		0.000947	0.00699	1	01/31/2022 04:20	WG1810477
(S) Toluene-d8	*97.6*			*75.0-131*		*01/31/2022 04:20*	WG1810477
(S) Toluene-d8	*97.7*			*75.0-131*		*02/01/2022 02:49*	WG1810820
(S) 4-Bromofluorobenzene	*98.9*			*67.0-138*		*01/31/2022 04:20*	WG1810477
(S) 4-Bromofluorobenzene	*99.8*			*67.0-138*		*02/01/2022 02:49*	WG1810820
(S) 1,2-Dichloroethane-d4	*91.5*			*70.0-130*		*01/31/2022 04:20*	WG1810477
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*02/01/2022 02:49*	WG1810820

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00559	0.0345	1	02/03/2022 01:35	WG1812020
Acenaphthylene	U		0.00486	0.0345	1	02/03/2022 01:35	WG1812020
Anthracene	U		0.00615	0.0345	1	02/03/2022 01:35	WG1812020
Benzidine	U		0.0649	1.73	1	02/03/2022 01:35	WG1812020
Benzo(a)anthracene	U		0.00608	0.0345	1	02/03/2022 01:35	WG1812020
Benzo(b)fluoranthene	U		0.00644	0.0345	1	02/03/2022 01:35	WG1812020
Benzo(k)fluoranthene	U		0.00614	0.0345	1	02/03/2022 01:35	WG1812020
Benzo(g,h,i)perylene	U		0.00631	0.0345	1	02/03/2022 01:35	WG1812020
Benzo(a)pyrene	U		0.00642	0.0345	1	02/03/2022 01:35	WG1812020
Bis(2-chlorethoxy)methane	U		0.0104	0.345	1	02/03/2022 01:35	WG1812020
Bis(2-chloroethyl)ether	U		0.0114	0.345	1	02/03/2022 01:35	WG1812020
2,2-Oxybis(1-Chloropropane)	U		0.0149	0.345	1	02/03/2022 01:35	WG1812020
4-Bromophenyl-phenylether	U		0.0121	0.345	1	02/03/2022 01:35	WG1812020
2-Chloronaphthalene	U		0.00606	0.0345	1	02/03/2022 01:35	WG1812020
4-Chlorophenyl-phenylether	U		0.0120	0.345	1	02/03/2022 01:35	WG1812020
Chrysene	U		0.00686	0.0345	1	02/03/2022 01:35	WG1812020
Dibenz(a,h)anthracene	U		0.00957	0.0345	1	02/03/2022 01:35	WG1812020
3,3-Dichlorobenzidine	U		0.0127	0.345	1	02/03/2022 01:35	WG1812020
2,4-Dinitrotoluene	U		0.00990	0.345	1	02/03/2022 01:35	WG1812020
2,6-Dinitrotoluene	U		0.0113	0.345	1	02/03/2022 01:35	WG1812020
Fluoranthene	U		0.00623	0.0345	1	02/03/2022 01:35	WG1812020
Fluorene	U		0.00562	0.0345	1	02/03/2022 01:35	WG1812020
Hexachlorobenzene	U		0.0122	0.345	1	02/03/2022 01:35	WG1812020
Hexachloro-1,3-butadiene	U		0.0116	0.345	1	02/03/2022 01:35	WG1812020
Hexachlorocyclopentadiene	U		0.0181	0.345	1	02/03/2022 01:35	WG1812020
Hexachloroethane	U		0.0136	0.345	1	02/03/2022 01:35	WG1812020
Indeno(1,2,3-cd)pyrene	U		0.00975	0.0345	1	02/03/2022 01:35	WG1812020
Isophorone	U		0.0106	0.345	1	02/03/2022 01:35	WG1812020
Naphthalene	U		0.00866	0.0345	1	02/03/2022 01:35	WG1812020
Nitrobenzene	U		0.0120	0.345	1	02/03/2022 01:35	WG1812020
n-Nitrosodimethylamine	U		0.0512	0.345	1	02/03/2022 01:35	WG1812020

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
n-Nitrosodiphenylamine	U		0.0261	0.345	1	02/03/2022 01:35	WG1812020
n-Nitrosodi-n-propylamine	U		0.0115	0.345	1	02/03/2022 01:35	WG1812020
Phenanthrene	U		0.00685	0.0345	1	02/03/2022 01:35	WG1812020
Benzylbutyl phthalate	U		0.0108	0.345	1	02/03/2022 01:35	WG1812020
Bis(2-ethylhexyl)phthalate	U		0.0437	0.345	1	02/03/2022 01:35	WG1812020
Di-n-butyl phthalate	U		0.0118	0.345	1	02/03/2022 01:35	WG1812020
Diethyl phthalate	U		0.0114	0.345	1	02/03/2022 01:35	WG1812020
Dimethyl phthalate	U		0.0732	0.345	1	02/03/2022 01:35	WG1812020
Di-n-octyl phthalate	U		0.0233	0.345	1	02/03/2022 01:35	WG1812020
Pyrene	U		0.00672	0.0345	1	02/03/2022 01:35	WG1812020
1,2,4-Trichlorobenzene	U		0.0108	0.345	1	02/03/2022 01:35	WG1812020
4-Chloro-3-methylphenol	U		0.0112	0.345	1	02/03/2022 01:35	WG1812020
2-Chlorophenol	U		0.0114	0.345	1	02/03/2022 01:35	WG1812020
2,4-Dichlorophenol	U		0.0101	0.345	1	02/03/2022 01:35	WG1812020
2,4-Dimethylphenol	U		0.00902	0.345	1	02/03/2022 01:35	WG1812020
4,6-Dinitro-2-methylphenol	U		0.0783	0.345	1	02/03/2022 01:35	WG1812020
2,4-Dinitrophenol	U		0.0807	0.345	1	02/03/2022 01:35	WG1812020
2-Nitrophenol	U		0.0123	0.345	1	02/03/2022 01:35	WG1812020
4-Nitrophenol	U		0.0108	0.345	1	02/03/2022 01:35	WG1812020
Pentachlorophenol	U		0.00929	0.345	1	02/03/2022 01:35	WG1812020
Phenol	U		0.0139	0.345	1	02/03/2022 01:35	WG1812020
2,4,6-Trichlorophenol	U		0.0111	0.345	1	02/03/2022 01:35	WG1812020
(S) 2-Fluorophenol	*74.7*			*12.0-120*		*02/03/2022 01:35*	WG1812020
(S) Phenol-d5	*70.4*			*10.0-120*		*02/03/2022 01:35*	WG1812020
(S) Nitrobenzene-d5	*62.9*			*10.0-122*		*02/03/2022 01:35*	WG1812020
(S) 2-Fluorobiphenyl	*68.9*			*15.0-120*		*02/03/2022 01:35*	WG1812020
(S) 2,4,6-Tribromophenol	*67.6*			*10.0-127*		*02/03/2022 01:35*	WG1812020
(S) p-Terphenyl-d14	*78.6*			*10.0-120*		*02/03/2022 01:35*	WG1812020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.2		1	02/01/2022 10:30	WG1810550

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0437	0.0598	1	02/01/2022 03:10	WG1810820
Acrylonitrile	U		0.00432	0.0150	1	02/01/2022 03:10	WG1810820
Benzene	U		0.000559	0.00120	1	02/01/2022 03:10	WG1810820
Bromobenzene	U		0.00108	0.0150	1	02/01/2022 03:10	WG1810820
Bromodichloromethane	U		0.000868	0.00299	1	02/01/2022 03:10	WG1810820
Bromoform	U		0.00140	0.0299	1	02/01/2022 03:10	WG1810820
Bromomethane	U		0.00236	0.0150	1	02/01/2022 03:10	WG1810820
n-Butylbenzene	U		0.00628	0.0150	1	02/01/2022 03:10	WG1810820
sec-Butylbenzene	U		0.00345	0.0150	1	02/01/2022 03:10	WG1810820
tert-Butylbenzene	U		0.00233	0.00598	1	02/01/2022 03:10	WG1810820
Carbon tetrachloride	U		0.00107	0.00598	1	02/01/2022 03:10	WG1810820
Chlorobenzene	U		0.000251	0.00299	1	02/01/2022 03:10	WG1810820
Chlorodibromomethane	U		0.000732	0.00299	1	02/01/2022 03:10	WG1810820
Chloroethane	U		0.00203	0.00598	1	02/01/2022 03:10	WG1810820
Chloroform	U		0.00123	0.00299	1	02/01/2022 03:10	WG1810820
Chloromethane	U		0.00521	0.0150	1	02/01/2022 03:10	WG1810820
2-Chlorotoluene	U		0.00104	0.00299	1	02/01/2022 03:10	WG1810820
4-Chlorotoluene	U		0.000538	0.00598	1	02/01/2022 03:10	WG1810820
1,2-Dibromo-3-Chloropropane	U		0.00467	0.0299	1	02/01/2022 03:10	WG1810820
1,2-Dibromoethane	U		0.000775	0.00299	1	02/01/2022 03:10	WG1810820
Dibromomethane	U		0.000897	0.00598	1	02/01/2022 03:10	WG1810820
1,2-Dichlorobenzene	U		0.000509	0.00598	1	02/01/2022 03:10	WG1810820
1,3-Dichlorobenzene	U		0.000718	0.00598	1	02/01/2022 03:10	WG1810820
1,4-Dichlorobenzene	U		0.000838	0.00598	1	02/01/2022 03:10	WG1810820
Dichlorodifluoromethane	U		0.00193	0.00299	1	02/01/2022 03:10	WG1810820
1,1-Dichloroethane	U		0.000588	0.00299	1	02/01/2022 03:10	WG1810820
1,2-Dichloroethane	U		0.000777	0.00299	1	02/01/2022 03:10	WG1810820
1,1-Dichloroethene	U		0.000725	0.00299	1	02/01/2022 03:10	WG1810820
cis-1,2-Dichloroethene	U		0.000878	0.00299	1	02/01/2022 03:10	WG1810820
trans-1,2-Dichloroethene	U		0.00124	0.00598	1	02/01/2022 03:10	WG1810820
1,2-Dichloropropane	U		0.00170	0.00598	1	02/01/2022 03:10	WG1810820
1,1-Dichloropropene	U		0.000968	0.00299	1	02/01/2022 03:10	WG1810820
1,3-Dichloropropane	U		0.000600	0.00598	1	02/01/2022 03:10	WG1810820
cis-1,3-Dichloropropene	U		0.000906	0.00299	1	02/01/2022 03:10	WG1810820
trans-1,3-Dichloropropene	U		0.00136	0.00598	1	02/01/2022 03:10	WG1810820
2,2-Dichloropropane	U		0.00165	0.00299	1	02/01/2022 03:10	WG1810820
Di-isopropyl ether	U		0.000491	0.00120	1	02/01/2022 03:10	WG1810820
Ethylbenzene	U		0.000882	0.00299	1	02/01/2022 03:10	WG1810820
Hexachloro-1,3-butadiene	U		0.00718	0.0299	1	02/01/2022 03:10	WG1810820
Isopropylbenzene	U		0.000509	0.00299	1	02/01/2022 03:10	WG1810820
p-Isopropyltoluene	U		0.00305	0.00598	1	02/01/2022 03:10	WG1810820
2-Butanone (MEK)	U		0.0760	0.120	1	02/01/2022 03:10	WG1810820
Methylene Chloride	U		0.00795	0.0299	1	02/01/2022 03:10	WG1810820
4-Methyl-2-pentanone (MIBK)	U		0.00273	0.0299	1	02/01/2022 03:10	WG1810820
Methyl tert-butyl ether	U		0.000419	0.00120	1	02/01/2022 03:10	WG1810820
Naphthalene	U		0.00584	0.0150	1	02/01/2022 03:10	WG1810820
n-Propylbenzene	U		0.00114	0.00598	1	02/01/2022 03:10	WG1810820
Styrene	U		0.000274	0.0150	1	02/01/2022 03:10	WG1810820
1,1,1,2-Tetrachloroethane	U		0.00113	0.00299	1	02/01/2022 03:10	WG1810820
1,1,2,2-Tetrachloroethane	U		0.000832	0.00299	1	02/01/2022 03:10	WG1810820

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000902	0.00299	1	02/01/2022 03:10	WG1810820
Tetrachloroethene	U		0.00107	0.00299	1	02/01/2022 03:10	WG1810820
Toluene	U		0.00156	0.00598	1	02/01/2022 03:10	WG1810820
1,2,3-Trichlorobenzene	U		0.00877	0.0150	1	02/01/2022 03:10	WG1810820
1,2,4-Trichlorobenzene	U		0.00527	0.0150	1	02/01/2022 03:10	WG1810820
1,1,1-Trichloroethane	U		0.00110	0.00299	1	02/01/2022 03:10	WG1810820
1,1,2-Trichloroethane	U		0.000714	0.00299	1	02/01/2022 03:10	WG1810820
Trichloroethene	U		0.000699	0.00120	1	02/01/2022 03:10	WG1810820
Trichlorofluoromethane	U		0.000990	0.00299	1	02/01/2022 03:10	WG1810820
1,2,3-Trichloropropane	U		0.00194	0.0150	1	02/01/2022 03:10	WG1810820
1,2,4-Trimethylbenzene	U		0.00189	0.00598	1	02/01/2022 03:10	WG1810820
1,2,3-Trimethylbenzene	U	J4	0.00189	0.00598	1	02/01/2022 03:10	WG1810820
1,3,5-Trimethylbenzene	U		0.00239	0.00598	1	02/01/2022 03:10	WG1810820
Vinyl chloride	U		0.00139	0.00299	1	02/01/2022 03:10	WG1810820
Xylenes, Total	U		0.00105	0.00778	1	02/01/2022 03:10	WG1810820
(S) Toluene-d8	*101*			*75.0-131*		*02/01/2022 03:10*	WG1810820
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*02/01/2022 03:10*	WG1810820
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*02/01/2022 03:10*	WG1810820

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00591	0.0365	1	02/03/2022 02:57	WG1812020
Acenaphthylene	U		0.00514	0.0365	1	02/03/2022 02:57	WG1812020
Anthracene	U		0.00650	0.0365	1	02/03/2022 02:57	WG1812020
Benzidine	U		0.0686	1.83	1	02/03/2022 02:57	WG1812020
Benzo(a)anthracene	U		0.00644	0.0365	1	02/03/2022 02:57	WG1812020
Benzo(b)fluoranthene	U		0.00681	0.0365	1	02/03/2022 02:57	WG1812020
Benzo(k)fluoranthene	U		0.00649	0.0365	1	02/03/2022 02:57	WG1812020
Benzo(g,h,i)perylene	U		0.00668	0.0365	1	02/03/2022 02:57	WG1812020
Benzo(a)pyrene	U		0.00679	0.0365	1	02/03/2022 02:57	WG1812020
Bis(2-chlorethoxy)methane	U		0.0110	0.365	1	02/03/2022 02:57	WG1812020
Bis(2-chloroethyl)ether	U		0.0121	0.365	1	02/03/2022 02:57	WG1812020
2,2-Oxybis(1-Chloropropane)	U		0.0158	0.365	1	02/03/2022 02:57	WG1812020
4-Bromophenyl-phenylether	U		0.0128	0.365	1	02/03/2022 02:57	WG1812020
2-Chloronaphthalene	U		0.00641	0.0365	1	02/03/2022 02:57	WG1812020
4-Chlorophenyl-phenylether	U		0.0127	0.365	1	02/03/2022 02:57	WG1812020
Chrysene	U		0.00726	0.0365	1	02/03/2022 02:57	WG1812020
Dibenz(a,h)anthracene	U		0.0101	0.0365	1	02/03/2022 02:57	WG1812020
3,3-Dichlorobenzidine	U		0.0135	0.365	1	02/03/2022 02:57	WG1812020
2,4-Dinitrotoluene	U		0.0105	0.365	1	02/03/2022 02:57	WG1812020
2,6-Dinitrotoluene	U		0.0120	0.365	1	02/03/2022 02:57	WG1812020
Fluoranthene	U		0.00659	0.0365	1	02/03/2022 02:57	WG1812020
Fluorene	U		0.00594	0.0365	1	02/03/2022 02:57	WG1812020
Hexachlorobenzene	U		0.0129	0.365	1	02/03/2022 02:57	WG1812020
Hexachloro-1,3-butadiene	U		0.0123	0.365	1	02/03/2022 02:57	WG1812020
Hexachlorocyclopentadiene	U		0.0192	0.365	1	02/03/2022 02:57	WG1812020
Hexachloroethane	U		0.0144	0.365	1	02/03/2022 02:57	WG1812020
Indeno(1,2,3-cd)pyrene	U		0.0103	0.0365	1	02/03/2022 02:57	WG1812020
Isophorone	U		0.0112	0.365	1	02/03/2022 02:57	WG1812020
Naphthalene	U		0.00917	0.0365	1	02/03/2022 02:57	WG1812020
Nitrobenzene	U		0.0127	0.365	1	02/03/2022 02:57	WG1812020
n-Nitrosodimethylamine	U		0.0542	0.365	1	02/03/2022 02:57	WG1812020
n-Nitrosodiphenylamine	U		0.0276	0.365	1	02/03/2022 02:57	WG1812020
n-Nitrosodi-n-propylamine	U		0.0122	0.365	1	02/03/2022 02:57	WG1812020
Phenanthrene	U		0.00725	0.0365	1	02/03/2022 02:57	WG1812020

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzylbutyl phthalate	U		0.0114	0.365	1	02/03/2022 02:57	WG1812020
Bis(2-ethylhexyl)phthalate	U		0.0463	0.365	1	02/03/2022 02:57	WG1812020
Di-n-butyl phthalate	U		0.0125	0.365	1	02/03/2022 02:57	WG1812020
Diethyl phthalate	U		0.0121	0.365	1	02/03/2022 02:57	WG1812020
Dimethyl phthalate	U		0.0774	0.365	1	02/03/2022 02:57	WG1812020
Di-n-octyl phthalate	U		0.0247	0.365	1	02/03/2022 02:57	WG1812020
Pyrene	U		0.00711	0.0365	1	02/03/2022 02:57	WG1812020
1,2,4-Trichlorobenzene	U		0.0114	0.365	1	02/03/2022 02:57	WG1812020
4-Chloro-3-methylphenol	U		0.0118	0.365	1	02/03/2022 02:57	WG1812020
2-Chlorophenol	U		0.0121	0.365	1	02/03/2022 02:57	WG1812020
2,4-Dichlorophenol	U		0.0106	0.365	1	02/03/2022 02:57	WG1812020
2,4-Dimethylphenol	U		0.00954	0.365	1	02/03/2022 02:57	WG1812020
4,6-Dinitro-2-methylphenol	U		0.0828	0.365	1	02/03/2022 02:57	WG1812020
2,4-Dinitrophenol	U		0.0854	0.365	1	02/03/2022 02:57	WG1812020
2-Nitrophenol	U		0.0130	0.365	1	02/03/2022 02:57	WG1812020
4-Nitrophenol	U		0.0114	0.365	1	02/03/2022 02:57	WG1812020
Pentachlorophenol	U		0.00982	0.365	1	02/03/2022 02:57	WG1812020
Phenol	U		0.0147	0.365	1	02/03/2022 02:57	WG1812020
2,4,6-Trichlorophenol	U		0.0117	0.365	1	02/03/2022 02:57	WG1812020
(S) 2-Fluorophenol	*68.9*			*12.0-120*		*02/03/2022 02:57*	WG1812020
(S) Phenol-d5	*64.5*			*10.0-120*		*02/03/2022 02:57*	WG1812020
(S) Nitrobenzene-d5	*55.8*			*10.0-122*		*02/03/2022 02:57*	WG1812020
(S) 2-Fluorobiphenyl	*62.2*			*15.0-120*		*02/03/2022 02:57*	WG1812020
(S) 2,4,6-Tribromophenol	*69.2*			*10.0-127*		*02/03/2022 02:57*	WG1812020
(S) p-Terphenyl-d14	*71.6*			*10.0-120*		*02/03/2022 02:57*	WG1812020

Method Blank (MB)

(MB) R3756017-1 02/01/22 10:30

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1456126-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1456126-01 02/01/22 10:30 • (DUP) R3756017-3 02/01/22 10:30

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	77.6	78.2	1	0.774		10

Laboratory Control Sample (LCS)

(LCS) R3756017-2 02/01/22 10:30

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3756488-2 01/29/22 21:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

Method Blank (MB)

(MB) R3756488-2 01/29/22 21:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*94.8*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.1*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3756488-1 01/29/22 21:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	32.6	130	19.0-160	
Acrolein	25.0	30.7	123	10.0-160	
Acrylonitrile	25.0	27.8	111	55.0-149	
Benzene	5.00	5.12	102	70.0-123	

Laboratory Control Sample (LCS)

(LCS) R3756488-1 01/29/22 21:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	5.00	4.72	94.4	73.0-121	
Bromodichloromethane	5.00	5.44	109	75.0-120	
Bromoform	5.00	4.53	90.6	68.0-132	
Bromomethane	5.00	8.35	167	10.0-160	J4
n-Butylbenzene	5.00	4.36	87.2	73.0-125	
sec-Butylbenzene	5.00	4.22	84.4	75.0-125	
tert-Butylbenzene	5.00	4.49	89.8	76.0-124	
Carbon tetrachloride	5.00	4.93	98.6	68.0-126	
Chlorobenzene	5.00	4.83	96.6	80.0-121	
Chlorodibromomethane	5.00	5.08	102	77.0-125	
Chloroethane	5.00	4.90	98.0	47.0-150	
Chloroform	5.00	5.92	118	73.0-120	
Chloromethane	5.00	4.17	83.4	41.0-142	
2-Chlorotoluene	5.00	4.53	90.6	76.0-123	
4-Chlorotoluene	5.00	4.71	94.2	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	5.05	101	58.0-134	
1,2-Dibromoethane	5.00	5.00	100	80.0-122	
Dibromomethane	5.00	5.61	112	80.0-120	
1,2-Dichlorobenzene	5.00	4.50	90.0	79.0-121	
1,3-Dichlorobenzene	5.00	4.69	93.8	79.0-120	
1,4-Dichlorobenzene	5.00	4.61	92.2	79.0-120	
Dichlorodifluoromethane	5.00	4.92	98.4	51.0-149	
1,1-Dichloroethane	5.00	4.70	94.0	70.0-126	
1,2-Dichloroethane	5.00	5.33	107	70.0-128	
1,1-Dichloroethene	5.00	5.81	116	71.0-124	
cis-1,2-Dichloroethene	5.00	5.32	106	73.0-120	
trans-1,2-Dichloroethene	5.00	5.87	117	73.0-120	
1,2-Dichloropropane	5.00	4.87	97.4	77.0-125	
1,1-Dichloropropene	5.00	5.25	105	74.0-126	
1,3-Dichloropropane	5.00	5.16	103	80.0-120	
cis-1,3-Dichloropropene	5.00	5.97	119	80.0-123	
trans-1,3-Dichloropropene	5.00	4.90	98.0	78.0-124	
2,2-Dichloropropane	5.00	5.36	107	58.0-130	
Di-isopropyl ether	5.00	5.13	103	58.0-138	
Ethylbenzene	5.00	4.45	89.0	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.04	80.8	54.0-138	
Isopropylbenzene	5.00	4.40	88.0	76.0-127	
p-Isopropyltoluene	5.00	4.53	90.6	76.0-125	
2-Butanone (MEK)	25.0	30.0	120	44.0-160	
Methylene Chloride	5.00	5.52	110	67.0-120	

Laboratory Control Sample (LCS)

(LCS) R3756488-1 01/29/22 21:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	25.0	28.7	115	68.0-142	
Methyl tert-butyl ether	5.00	5.98	120	68.0-125	
Naphthalene	5.00	6.23	125	54.0-135	
n-Propylbenzene	5.00	4.46	89.2	77.0-124	
Styrene	5.00	4.07	81.4	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	4.87	97.4	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.05	101	65.0-130	
Tetrachloroethene	5.00	4.73	94.6	72.0-132	
Toluene	5.00	4.90	98.0	79.0-120	
1,1,2-Trichlorotrifluoroethane	5.00	4.88	97.6	69.0-132	
1,2,3-Trichlorobenzene	5.00	7.20	144	50.0-138	J4
1,2,4-Trichlorobenzene	5.00	5.58	112	57.0-137	
1,1,1-Trichloroethane	5.00	5.26	105	73.0-124	
1,1,2-Trichloroethane	5.00	4.76	95.2	80.0-120	
Trichloroethene	5.00	5.48	110	78.0-124	
Trichlorofluoromethane	5.00	4.75	95.0	59.0-147	
1,2,3-Trichloropropane	5.00	5.20	104	73.0-130	
1,2,3-Trimethylbenzene	5.00	5.55	111	77.0-120	
1,2,4-Trimethylbenzene	5.00	4.50	90.0	76.0-121	
1,3,5-Trimethylbenzene	5.00	4.32	86.4	76.0-122	
Vinyl chloride	5.00	4.39	87.8	67.0-131	
Xylenes, Total	15.0	13.5	90.0	79.0-123	
(S) Toluene-d8			*90.7*	*80.0-120*	
(S) 4-Bromofluorobenzene			*99.2*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*98.0*	*70.0-130*	

Method Blank (MB)

(MB) R3755268-3 01/30/22 19:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100

Method Blank (MB)

(MB) R3755268-3 01/30/22 19:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*100*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*89.0*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3755268-1 01/30/22 17:47 • (LCSD) R3755268-2 01/30/22 18:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.927	0.755	148	121	10.0-160			20.5	31
Acrylonitrile	0.625	0.601	0.530	96.2	84.8	45.0-153			12.6	22
Benzene	0.125	0.127	0.124	102	99.2	70.0-123			2.39	20
Bromobenzene	0.125	0.133	0.128	106	102	73.0-121			3.83	20
Bromodichloromethane	0.125	0.127	0.126	102	101	73.0-121			0.791	20
Bromoform	0.125	0.122	0.126	97.6	101	64.0-132			3.23	20
Bromomethane	0.125	0.117	0.121	93.6	96.8	56.0-147			3.36	20
n-Butylbenzene	0.125	0.135	0.131	108	105	68.0-135			3.01	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3755268-1 01/30/22 17:47 • (LCSD) R3755268-2 01/30/22 18:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
tert-Butylbenzene	0.125	0.132	0.128	106	102	75.0-127			3.08	20
Carbon tetrachloride	0.125	0.129	0.130	103	104	66.0-128			0.772	20
Chlorodibromomethane	0.125	0.127	0.131	102	105	74.0-127			3.10	20
Chloroethane	0.125	0.124	0.122	99.2	97.6	61.0-134			1.63	20
Chloroform	0.125	0.124	0.124	99.2	99.2	72.0-123			0.000	20
Chloromethane	0.125	0.111	0.117	88.8	93.6	51.0-138			5.26	20
2-Chlorotoluene	0.125	0.138	0.132	110	106	75.0-124			4.44	20
4-Chlorotoluene	0.125	0.142	0.136	114	109	75.0-124			4.32	20
1,2-Dibromo-3-Chloropropane	0.125	0.111	0.105	88.8	84.0	59.0-130			5.56	20
1,2-Dibromoethane	0.125	0.129	0.130	103	104	74.0-128			0.772	20
Dibromomethane	0.125	0.130	0.127	104	102	75.0-122			2.33	20
1,2-Dichlorobenzene	0.125	0.128	0.125	102	100	76.0-124			2.37	20
1,3-Dichlorobenzene	0.125	0.139	0.129	111	103	76.0-125			7.46	20
1,4-Dichlorobenzene	0.125	0.131	0.130	105	104	77.0-121			0.766	20
Dichlorodifluoromethane	0.125	0.121	0.115	96.8	92.0	43.0-156			5.08	20
1,1-Dichloroethane	0.125	0.130	0.128	104	102	70.0-127			1.55	20
1,2-Dichloroethane	0.125	0.129	0.125	103	100	65.0-131			3.15	20
1,1-Dichloroethene	0.125	0.118	0.127	94.4	102	65.0-131			7.35	20
cis-1,2-Dichloroethene	0.125	0.137	0.136	110	109	73.0-125			0.733	20
trans-1,2-Dichloroethene	0.125	0.136	0.136	109	109	71.0-125			0.000	20
1,2-Dichloropropane	0.125	0.135	0.132	108	106	74.0-125			2.25	20
1,1-Dichloropropene	0.125	0.132	0.133	106	106	73.0-125			0.755	20
1,3-Dichloropropane	0.125	0.131	0.131	105	105	80.0-125			0.000	20
cis-1,3-Dichloropropene	0.125	0.137	0.137	110	110	76.0-127			0.000	20
trans-1,3-Dichloropropene	0.125	0.140	0.143	112	114	73.0-127			2.12	20
2,2-Dichloropropane	0.125	0.121	0.132	96.8	106	59.0-135			8.70	20
Di-isopropyl ether	0.125	0.122	0.125	97.6	100	60.0-136			2.43	20
Ethylbenzene	0.125	0.141	0.139	113	111	74.0-126			1.43	20
Hexachloro-1,3-butadiene	0.125	0.131	0.130	105	104	57.0-150			0.766	20
Isopropylbenzene	0.125	0.136	0.138	109	110	72.0-127			1.46	20
p-Isopropyltoluene	0.125	0.138	0.136	110	109	72.0-133			1.46	20
2-Butanone (MEK)	0.625	0.645	0.563	103	90.1	30.0-160			13.6	24
Methylene Chloride	0.125	0.126	0.125	101	100	68.0-123			0.797	20
4-Methyl-2-pentanone (MIBK)	0.625	0.710	0.684	114	109	56.0-143			3.73	20
Methyl tert-butyl ether	0.125	0.117	0.117	93.6	93.6	66.0-132			0.000	20
n-Propylbenzene	0.125	0.139	0.132	111	106	74.0-126			5.17	20
Styrene	0.125	0.135	0.137	108	110	72.0-127			1.47	20
1,1,1,2-Tetrachloroethane	0.125	0.129	0.132	103	106	74.0-129			2.30	20
1,1,2,2-Tetrachloroethane	0.125	0.123	0.116	98.4	92.8	68.0-128			5.86	20
Tetrachloroethene	0.125	0.126	0.127	101	102	70.0-136			0.791	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3755268-1 01/30/22 17:47 • (LCSD) R3755268-2 01/30/22 18:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	0.125	0.127	0.125	102	100	75.0-121			1.59	20
1,1,2-Trichlorotrifluoroethane	0.125	0.0907	0.128	72.6	102	61.0-139		J3	34.1	20
1,2,3-Trichlorobenzene	0.125	0.121	0.127	96.8	102	59.0-139			4.84	20
1,2,4-Trichlorobenzene	0.125	0.134	0.132	107	106	62.0-137			1.50	20
1,1,1-Trichloroethane	0.125	0.118	0.122	94.4	97.6	69.0-126			3.33	20
1,1,2-Trichloroethane	0.125	0.129	0.131	103	105	78.0-123			1.54	20
Trichloroethene	0.125	0.135	0.131	108	105	76.0-126			3.01	20
Trichlorofluoromethane	0.125	0.106	0.121	84.8	96.8	61.0-142			13.2	20
1,2,3-Trichloropropane	0.125	0.129	0.127	103	102	67.0-129			1.56	20
1,2,3-Trimethylbenzene	0.125	0.133	0.128	106	102	74.0-124			3.83	20
1,2,4-Trimethylbenzene	0.125	0.142	0.137	114	110	70.0-126			3.58	20
1,3,5-Trimethylbenzene	0.125	0.134	0.130	107	104	73.0-127			3.03	20
Vinyl chloride	0.125	0.122	0.117	97.6	93.6	63.0-134			4.18	20
Xylenes, Total	0.375	0.408	0.407	109	109	72.0-127			0.245	20
(S) Toluene-d8				*99.3*	*98.9*	*75.0-131*				
(S) 4-Bromofluorobenzene				*97.2*	*98.1*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*97.2*	*96.3*	*70.0-130*				

L1455958-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455958-03 01/31/22 04:39 • (MS) R3755268-4 01/31/22 05:36 • (MSD) R3755268-5 01/31/22 05:56

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.657	U	0.733	0.517	112	78.7	1.05	10.0-160			34.6	40
Acetone	0.657	U	1.19	0.514	181	78.2	1.05	10.0-160	J5	J3	79.3	40
Bromobenzene	0.131	U	0.135	0.157	103	120	1.05	10.0-156			15.1	38
Benzene	0.131	U	0.132	0.139	101	106	1.05	10.0-149			5.17	37
Bromodichloromethane	0.131	U	0.139	0.140	106	107	1.05	10.0-143			0.717	37
Bromoform	0.131	U	0.132	0.137	101	105	1.05	10.0-146			3.72	36
Bromomethane	0.131	U	0.0743	0.0980	56.7	74.8	1.05	10.0-149			27.5	38
n-Butylbenzene	0.131	U	0.144	0.147	110	112	1.05	10.0-160			2.06	40
tert-Butylbenzene	0.131	U	0.133	0.163	102	124	1.05	10.0-156			20.3	39
Carbon tetrachloride	0.131	U	0.126	0.132	96.2	101	1.05	10.0-145			4.65	37
Chlorodibromomethane	0.131	U	0.135	0.140	103	107	1.05	10.0-146			3.64	37
Chloroethane	0.131	U	0.0302	0.0528	23.1	40.3	1.05	10.0-146		J3	54.5	40
2-Chlorotoluene	0.131	U	0.141	0.161	108	123	1.05	10.0-159			13.2	38
Chloroform	0.131	U	0.134	0.143	102	109	1.05	10.0-146			6.50	37
4-Chlorotoluene	0.131	U	0.138	0.154	105	118	1.05	10.0-155			11.0	39
Chloromethane	0.131	U	0.109	0.105	83.2	80.2	1.05	10.0-159			3.74	37

L1455958-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455958-03 01/31/22 04:39 • (MS) R3755268-4 01/31/22 05:36 • (MSD) R3755268-5 01/31/22 05:56

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2-Dibromo-3-Chloropropane	0.131	U	0.111	0.115	84.7	87.8	1.05	10.0-151			3.54	39
Dibromomethane	0.131	U	0.142	0.136	108	104	1.05	10.0-147			4.32	35
1,2-Dibromoethane	0.131	U	0.135	0.143	103	109	1.05	10.0-148			5.76	34
1,2-Dichlorobenzene	0.131	U	0.140	0.144	107	110	1.05	10.0-155			2.82	37
1,3-Dichlorobenzene	0.131	U	0.146	0.154	111	118	1.05	10.0-153			5.33	38
1,4-Dichlorobenzene	0.131	U	0.143	0.0521	109	39.8	1.05	10.0-151		J3	93.2	38
Dichlorodifluoromethane	0.131	U	0.131	0.134	100	102	1.05	10.0-160			2.26	35
1,1-Dichloroethane	0.131	U	0.133	0.139	102	106	1.05	10.0-147			4.41	37
1,2-Dichloroethane	0.131	U	0.135	0.141	103	108	1.05	10.0-148			4.35	35
1,1-Dichloroethene	0.131	U	0.116	0.121	88.5	92.4	1.05	10.0-155			4.22	37
cis-1,2-Dichloroethene	0.131	U	0.145	0.154	111	118	1.05	10.0-149			6.02	37
1,1-Dichloropropene	0.131	U	0.137	0.139	105	106	1.05	10.0-153			1.45	35
trans-1,2-Dichloroethene	0.131	U	0.121	0.135	92.4	103	1.05	10.0-150			10.9	37
1,2-Dichloropropane	0.131	U	0.138	0.150	105	115	1.05	10.0-148			8.33	37
1,3-Dichloropropane	0.131	U	0.138	0.152	105	116	1.05	10.0-154			9.66	35
2,2-Dichloropropane	0.131	U	0.103	0.111	78.6	84.7	1.05	10.0-138			7.48	36
cis-1,3-Dichloropropene	0.131	U	0.145	0.152	111	116	1.05	10.0-151			4.71	37
trans-1,3-Dichloropropene	0.131	U	0.146	0.158	111	121	1.05	10.0-148			7.89	37
Di-isopropyl ether	0.131	U	0.135	0.137	103	105	1.05	10.0-147			1.47	36
Ethylbenzene	0.131	U	0.144	0.155	110	118	1.05	10.0-160			7.36	38
Hexachloro-1,3-butadiene	0.131	U	0.149	0.148	114	113	1.05	10.0-160			0.673	40
Isopropylbenzene	0.131	U	0.141	0.155	108	118	1.05	10.0-155			9.46	38
p-Isopropyltoluene	0.131	U	0.140	0.164	107	125	1.05	10.0-160			15.8	40
2-Butanone (MEK)	0.657	U	0.788	0.568	120	86.5	1.05	10.0-160			32.4	40
Methylene Chloride	0.131	U	0.132	0.142	101	108	1.05	10.0-141			7.30	37
4-Methyl-2-pentanone (MIBK)	0.657	U	0.739	0.688	112	105	1.05	10.0-160			7.15	35
Methyl tert-butyl ether	0.131	U	0.126	0.127	96.2	96.9	1.05	11.0-147			0.791	35
n-Propylbenzene	0.131	U	0.139	0.156	106	119	1.05	10.0-158			11.5	38
1,1,1,2-Tetrachloroethane	0.131	U	0.132	0.146	101	111	1.05	10.0-149			10.1	39
Styrene	0.131	U	0.150	0.157	115	120	1.05	10.0-160			4.56	40
1,1,2,2-Tetrachloroethane	0.131	U	0.112	0.133	85.5	102	1.05	10.0-160			17.1	35
Tetrachloroethene	0.131	U	0.131	0.137	100	105	1.05	10.0-156			4.48	39
Toluene	0.131	U	0.129	0.140	98.5	107	1.05	10.0-156			8.18	38
1,1,2-Trichlorotrifluoroethane	0.131	U	0.0552	0.0632	42.1	48.2	1.05	10.0-160			13.5	36
1,2,3-Trichlorobenzene	0.131	U	0.141	0.156	108	119	1.05	10.0-160			10.1	40
1,2,4-Trichlorobenzene	0.131	U	0.164	0.160	125	122	1.05	10.0-160			2.47	40
1,1,1-Trichloroethane	0.131	U	0.123	0.128	93.9	97.7	1.05	10.0-144			3.98	35
1,1,2-Trichloroethane	0.131	U	0.140	0.148	107	113	1.05	10.0-160			5.56	35
1,2,3-Trichloropropane	0.131	U	0.137	0.151	105	115	1.05	10.0-156			9.72	35
Trichloroethene	0.131	U	0.146	0.150	111	115	1.05	10.0-156			2.70	38

L1455958-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455958-03 01/31/22 04:39 • (MS) R3755268-4 01/31/22 05:36 • (MSD) R3755268-5 01/31/22 05:56

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2,3-Trimethylbenzene	0.131	U	0.130	0.154	99.2	118	1.05	10.0-160			16.9	36
Trichlorofluoromethane	0.131	U	0.0316	0.0759	24.1	57.9	1.05	10.0-160		J3	82.4	40
1,2,4-Trimethylbenzene	0.131	U	0.142	0.158	108	121	1.05	10.0-160			10.7	36
1,3,5-Trimethylbenzene	0.131	U	0.132	0.162	101	124	1.05	10.0-160			20.4	38
Vinyl chloride	0.131	U	0.129	0.129	98.5	98.5	1.05	10.0-160			0.000	37
Xylenes, Total	0.394	U	0.434	0.458	110	116	1.05	10.0-160			5.38	38
(S) Toluene-d8					*97.2*	*99.1*		*75.0-131*				
(S) 4-Bromofluorobenzene					*102*	*98.2*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*95.9*	*92.3*		*70.0-130*				

Method Blank (MB)

(MB) R3756276-2 02/01/22 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3756276-2 02/01/22 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3756276-1 01/31/22 22:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.803	128	10.0-160	
Acrylonitrile	0.625	0.614	98.2	45.0-153	
Benzene	0.125	0.116	92.8	70.0-123	
Bromobenzene	0.125	0.119	95.2	73.0-121	
Bromodichloromethane	0.125	0.126	101	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3756276-1 01/31/22 22:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.115	92.0	64.0-132	
Bromomethane	0.125	0.117	93.6	56.0-147	
n-Butylbenzene	0.125	0.125	100	68.0-135	
sec-Butylbenzene	0.125	0.133	106	74.0-130	
tert-Butylbenzene	0.125	0.126	101	75.0-127	
Carbon tetrachloride	0.125	0.156	125	66.0-128	
Chlorobenzene	0.125	0.115	92.0	76.0-128	
Chlorodibromomethane	0.125	0.120	96.0	74.0-127	
Chloroethane	0.125	0.124	99.2	61.0-134	
Chloroform	0.125	0.128	102	72.0-123	
Chloromethane	0.125	0.128	102	51.0-138	
2-Chlorotoluene	0.125	0.124	99.2	75.0-124	
4-Chlorotoluene	0.125	0.117	93.6	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.104	83.2	59.0-130	
1,2-Dibromoethane	0.125	0.120	96.0	74.0-128	
Dibromomethane	0.125	0.118	94.4	75.0-122	
1,2-Dichlorobenzene	0.125	0.115	92.0	76.0-124	
1,3-Dichlorobenzene	0.125	0.121	96.8	76.0-125	
1,4-Dichlorobenzene	0.125	0.122	97.6	77.0-121	
Dichlorodifluoromethane	0.125	0.144	115	43.0-156	
1,1-Dichloroethane	0.125	0.120	96.0	70.0-127	
1,2-Dichloroethane	0.125	0.123	98.4	65.0-131	
1,1-Dichloroethene	0.125	0.148	118	65.0-131	
cis-1,2-Dichloroethene	0.125	0.117	93.6	73.0-125	
trans-1,2-Dichloroethene	0.125	0.127	102	71.0-125	
1,2-Dichloropropane	0.125	0.126	101	74.0-125	
1,1-Dichloropropene	0.125	0.140	112	73.0-125	
1,3-Dichloropropane	0.125	0.116	92.8	80.0-125	
cis-1,3-Dichloropropene	0.125	0.122	97.6	76.0-127	
trans-1,3-Dichloropropene	0.125	0.129	103	73.0-127	
2,2-Dichloropropane	0.125	0.157	126	59.0-135	
Di-isopropyl ether	0.125	0.130	104	60.0-136	
Ethylbenzene	0.125	0.115	92.0	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.127	102	57.0-150	
Isopropylbenzene	0.125	0.134	107	72.0-127	
p-Isopropyltoluene	0.125	0.136	109	72.0-133	
2-Butanone (MEK)	0.625	0.693	111	30.0-160	
Methylene Chloride	0.125	0.114	91.2	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.613	98.1	56.0-143	
Methyl tert-butyl ether	0.125	0.130	104	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3756276-1 01/31/22 22:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.118	94.4	59.0-130	
n-Propylbenzene	0.125	0.117	93.6	74.0-126	
Styrene	0.125	0.115	92.0	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.114	91.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.108	86.4	68.0-128	
Tetrachloroethene	0.125	0.130	104	70.0-136	
Toluene	0.125	0.113	90.4	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.125	100	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.110	88.0	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.126	101	62.0-137	
1,1,1-Trichloroethane	0.125	0.141	113	69.0-126	
1,1,2-Trichloroethane	0.125	0.117	93.6	78.0-123	
Trichloroethene	0.125	0.132	106	76.0-126	
Trichlorofluoromethane	0.125	0.130	104	61.0-142	
1,2,3-Trichloropropane	0.125	0.123	98.4	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.160	128	74.0-124	J4
1,2,4-Trimethylbenzene	0.125	0.125	100	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.129	103	73.0-127	
Vinyl chloride	0.125	0.125	100	63.0-134	
Xylenes, Total	0.375	0.382	102	72.0-127	
(S) Toluene-d8			*98.4*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

Method Blank (MB)

(MB) R3756044-2 02/02/22 00:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.0886	1.00
Acenaphthylene	U		0.0921	1.00
Anthracene	U		0.0804	1.00
Benzidine	U		3.74	10.0
Benzo(a)anthracene	U		0.199	1.00
Benzo(b)fluoranthene	U		0.130	1.00
Benzo(k)fluoranthene	U		0.120	1.00
Benzo(g,h,i)perylene	U		0.121	1.00
Benzo(a)pyrene	U		0.0381	1.00
Bis(2-chlorethoxy)methane	U		0.116	10.0
Bis(2-chloroethyl)ether	U		0.137	10.0
2,2-oxybis(1-chloropropane)	U		0.210	10.0
4-Bromophenyl-phenylether	U		0.0877	10.0
2-Chloronaphthalene	U		0.0648	1.00
4-Chlorophenyl-phenylether	U		0.0926	10.0
Chrysene	U		0.130	1.00
Dibenz(a,h)anthracene	U		0.0644	1.00
3,3-Dichlorobenzidine	U		0.212	10.0
2,4-Dinitrotoluene	U		0.0983	10.0
2,6-Dinitrotoluene	U		0.250	10.0
Fluoranthene	U		0.102	1.00
Fluorene	U		0.0844	1.00
Hexachlorobenzene	U		0.0755	1.00
Hexachloro-1,3-butadiene	U		0.0968	10.0
Hexachlorocyclopentadiene	U		0.0598	10.0
Hexachloroethane	U		0.127	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.143	10.0
Naphthalene	U		0.159	1.00
Nitrobenzene	U		0.297	10.0
n-Nitrosodimethylamine	U		0.998	10.0
n-Nitrosodiphenylamine	U		2.37	10.0
n-Nitrosodi-n-propylamine	U		0.261	10.0
Phenanthrene	U		0.112	1.00
Benzylbutyl phthalate	U		0.765	3.00
Bis(2-ethylhexyl)phthalate	U		0.895	3.00
Di-n-butyl phthalate	U		0.453	3.00
Diethyl phthalate	U		0.287	3.00
Dimethyl phthalate	U		0.260	3.00
Di-n-octyl phthalate	U		0.932	3.00

Method Blank (MB)

(MB) R3756044-2 02/02/22 00:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pyrene	U		0.107	1.00
1,2,4-Trichlorobenzene	U		0.0698	10.0
4-Chloro-3-methylphenol	U		0.131	10.0
2-Chlorophenol	U		0.133	10.0
2-Nitrophenol	U		0.117	10.0
4-Nitrophenol	U		0.143	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		4.33	10.0
2,4,6-Trichlorophenol	U		0.100	10.0
2,4-Dichlorophenol	U		0.102	10.0
2,4-Dimethylphenol	U		0.0636	10.0
4,6-Dinitro-2-methylphenol	U		1.12	10.0
2,4-Dinitrophenol	U		5.93	10.0
(S) Nitrobenzene-d5	*72.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*76.8*			*10.0-130*
(S) p-Terphenyl-d14	*81.0*			*10.0-128*
(S) Phenol-d5	*28.9*			*10.0-120*
(S) 2-Fluorophenol	*47.4*			*10.0-120*
(S) 2,4,6-Tribromophenol	*62.0*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3756044-1 02/02/22 00:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	50.0	41.2	82.4	41.0-120	
Acenaphthylene	50.0	41.9	83.8	43.0-120	
Anthracene	50.0	42.7	85.4	45.0-120	
Benzidine	100	16.0	16.0	10.0-120	
Benzo(a)anthracene	50.0	41.0	82.0	47.0-120	
Benzo(b)fluoranthene	50.0	40.5	81.0	46.0-120	
Benzo(k)fluoranthene	50.0	41.4	82.8	46.0-120	
Benzo(g,h,i)perylene	50.0	41.8	83.6	48.0-121	
Benzo(a)pyrene	50.0	41.4	82.8	47.0-120	
Bis(2-chlorethoxy)methane	50.0	38.4	76.8	33.0-120	
Bis(2-chloroethyl)ether	50.0	41.8	83.6	23.0-120	
2,2-oxybis(1-chloropropane)	50.0	39.2	78.4	28.0-120	
4-Bromophenyl-phenylether	50.0	39.6	79.2	45.0-120	
2-Chloronaphthalene	50.0	39.7	79.4	37.0-120	

Laboratory Control Sample (LCS)

(LCS) R3756044-1 02/02/22 00:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Chlorophenyl-phenylether	50.0	39.0	78.0	44.0-120	
Chrysene	50.0	43.2	86.4	48.0-120	
Dibenz(a,h)anthracene	50.0	42.5	85.0	47.0-120	
3,3-Dichlorobenzidine	100	87.7	87.7	44.0-120	
2,4-Dinitrotoluene	50.0	44.9	89.8	49.0-124	
2,6-Dinitrotoluene	50.0	41.9	83.8	46.0-120	
Fluoranthene	50.0	41.9	83.8	51.0-120	
Fluorene	50.0	41.8	83.6	47.0-120	
Hexachlorobenzene	50.0	37.4	74.8	44.0-120	
Hexachloro-1,3-butadiene	50.0	31.3	62.6	19.0-120	
Hexachlorocyclopentadiene	50.0	29.2	58.4	15.0-120	
Hexachloroethane	50.0	37.2	74.4	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	44.4	88.8	49.0-122	
Isophorone	50.0	37.6	75.2	36.0-120	
Naphthalene	50.0	33.9	67.8	27.0-120	
Nitrobenzene	50.0	36.2	72.4	27.0-120	
n-Nitrosodimethylamine	50.0	25.7	51.4	10.0-120	
n-Nitrosodiphenylamine	50.0	41.9	83.8	47.0-120	
n-Nitrosodi-n-propylamine	50.0	41.7	83.4	31.0-120	
Phenanthrene	50.0	41.5	83.0	46.0-120	
Benzylbutyl phthalate	50.0	41.3	82.6	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	40.6	81.2	43.0-122	
Di-n-butyl phthalate	50.0	45.8	91.6	49.0-121	
Diethyl phthalate	50.0	43.3	86.6	48.0-122	
Dimethyl phthalate	50.0	41.2	82.4	48.0-120	
Di-n-octyl phthalate	50.0	40.1	80.2	42.0-125	
Pyrene	50.0	42.9	85.8	47.0-120	
1,2,4-Trichlorobenzene	50.0	33.2	66.4	24.0-120	
4-Chloro-3-methylphenol	50.0	36.6	73.2	40.0-120	
2-Chlorophenol	50.0	36.9	73.8	25.0-120	
2,4-Dichlorophenol	50.0	35.3	70.6	36.0-120	
2,4-Dimethylphenol	50.0	35.5	71.0	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	43.9	87.8	38.0-138	
2,4-Dinitrophenol	50.0	40.6	81.2	10.0-120	
2-Nitrophenol	50.0	37.5	75.0	31.0-120	
4-Nitrophenol	50.0	18.7	37.4	10.0-120	
Pentachlorophenol	50.0	37.2	74.4	23.0-120	
Phenol	50.0	16.4	32.8	10.0-120	
2,4,6-Trichlorophenol	50.0	38.5	77.0	42.0-120	
(S) Nitrobenzene-d5			*61.1*	*10.0-127*	

Laboratory Control Sample (LCS)

(LCS) R3756044-1 02/02/22 00:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) 2-Fluorobiphenyl			*79.5*	*10.0-130*	
(S) p-Terphenyl-d14			*82.0*	*10.0-128*	
(S) Phenol-d5			*31.1*	*10.0-120*	
(S) 2-Fluorophenol			*46.8*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*73.5*	*10.0-155*	

L1455956-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455956-03 02/02/22 18:25 • (MS) R3756591-1 02/02/22 18:47 • (MSD) R3756591-2 02/02/22 19:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	36.2	37.1	72.4	74.2	1	28.0-120			2.46	25
Acenaphthylene	50.0	U	38.4	39.9	76.8	79.8	1	31.0-121			3.83	25
Anthracene	50.0	U	39.4	37.7	78.8	75.4	1	36.0-120			4.41	23
Benzidine	100	U	12.7	14.9	12.7	14.9	1	10.0-120			15.9	37
Benzo(a)anthracene	50.0	U	45.1	43.3	90.2	86.6	1	39.0-120			4.07	23
Benzo(b)fluoranthene	50.0	U	42.4	40.8	84.8	81.6	1	37.0-120			3.85	23
Benzo(k)fluoranthene	50.0	U	42.4	41.0	84.8	82.0	1	37.0-120			3.36	26
Benzo(g,h,i)perylene	50.0	U	39.5	38.3	79.0	76.6	1	37.0-123			3.08	25
Benzo(a)pyrene	50.0	U	43.0	41.6	86.0	83.2	1	37.0-120			3.31	24
Bis(2-chlorethoxy)methane	50.0	U	31.7	32.1	63.4	64.2	1	17.0-120			1.25	31
Bis(2-chloroethyl)ether	50.0	U	35.3	34.8	70.6	69.6	1	14.0-120			1.43	33
2,2-oxybis(1-chloropropane)	50.0	U	33.5	33.5	67.0	67.0	1	18.0-120			0.000	34
4-Bromophenyl-phenylether	50.0	U	42.0	41.3	84.0	82.6	1	37.0-120			1.68	24
2-Chloronaphthalene	50.0	U	35.7	37.2	71.4	74.4	1	29.0-120			4.12	28
4-Chlorophenyl-phenylether	50.0	U	39.7	41.1	79.4	82.2	1	36.0-120			3.47	23
Chrysene	50.0	U	39.3	36.9	78.6	73.8	1	38.0-120			6.30	23
Dibenz(a,h)anthracene	50.0	U	39.4	38.3	78.8	76.6	1	36.0-121			2.83	24
3,3-Dichlorobenzidine	100	U	82.3	78.8	82.3	78.8	1	10.0-134			4.35	30
2,4-Dinitrotoluene	50.0	U	43.3	43.5	86.6	87.0	1	39.0-125			0.461	25
2,6-Dinitrotoluene	50.0	U	40.8	41.4	81.6	82.8	1	36.0-120			1.46	27
Fluoranthene	50.0	U	41.5	38.8	83.0	77.6	1	41.0-121			6.72	22
Fluorene	50.0	U	38.1	39.5	76.2	79.0	1	37.0-120			3.61	24
Hexachlorobenzene	50.0	U	42.6	41.7	85.2	83.4	1	35.0-122			2.14	24
Hexachloro-1,3-butadiene	50.0	U	36.0	35.8	72.0	71.6	1	12.0-120			0.557	34
Hexachlorocyclopentadiene	50.0	U	29.6	29.9	59.2	59.8	1	10.0-120			1.01	33
Hexachloroethane	50.0	U	35.3	35.4	70.6	70.8	1	10.0-120			0.283	40
Indeno(1,2,3-cd)pyrene	50.0	U	39.8	38.0	79.6	76.0	1	38.0-125			4.63	24
Isophorone	50.0	U	32.7	33.0	65.4	66.0	1	21.0-120			0.913	27

L1455956-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455956-03 02/02/22 18:25 • (MS) R3756591-1 02/02/22 18:47 • (MSD) R3756591-2 02/02/22 19:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	50.0	U	30.9	30.7	61.8	61.4	1	10.0-120			0.649	31
Nitrobenzene	50.0	U	32.4	31.9	64.8	63.8	1	12.0-120			1.56	30
n-Nitrosodimethylamine	50.0	U	24.2	25.3	48.4	50.6	1	10.0-120			4.44	40
n-Nitrosodiphenylamine	50.0	U	38.5	37.4	77.0	74.8	1	37.0-120			2.90	24
n-Nitrosodi-n-propylamine	50.0	U	36.5	36.3	73.0	72.6	1	16.0-120			0.549	30
Phenanthrene	50.0	U	38.0	35.8	76.0	71.6	1	33.0-120			5.96	22
Benzylbutyl phthalate	50.0	U	42.5	40.9	85.0	81.8	1	34.0-126			3.84	24
Bis(2-ethylhexyl)phthalate	50.0	U	36.9	35.5	73.8	71.0	1	33.0-126			3.87	25
Di-n-butyl phthalate	50.0	U	43.1	40.2	86.2	80.4	1	35.0-128			6.96	23
Diethyl phthalate	50.0	U	39.2	39.5	78.4	79.0	1	39.0-125			0.762	24
Dimethyl phthalate	50.0	U	38.4	39.2	76.8	78.4	1	37.0-120			2.06	24
Di-n-octyl phthalate	50.0	U	36.3	34.4	72.6	68.8	1	25.0-135			5.37	26
Pyrene	50.0	U	40.1	38.6	80.2	77.2	1	39.0-120			3.81	22
1,2,4-Trichlorobenzene	50.0	U	34.3	34.3	68.6	68.6	1	15.0-120			0.000	31
4-Chloro-3-methylphenol	50.0	U	30.6	31.9	61.2	63.8	1	26.0-120			4.16	27
2-Chlorophenol	50.0	U	31.5	32.9	63.0	65.8	1	18.0-120			4.35	34
2,4-Dichlorophenol	50.0	U	33.4	34.6	66.8	69.2	1	19.0-120			3.53	27
2,4-Dimethylphenol	50.0	U	23.3	30.1	46.6	60.2	1	15.0-120			25.5	28
4,6-Dinitro-2-methylphenol	50.0	U	48.1	46.4	96.2	92.8	1	10.0-144			3.60	39
2,4-Dinitrophenol	50.0	U	42.5	44.1	85.0	88.2	1	10.0-120			3.70	40
2-Nitrophenol	50.0	U	34.6	35.2	69.2	70.4	1	20.0-120			1.72	30
4-Nitrophenol	50.0	U	14.4	15.4	28.8	30.8	1	10.0-120			6.71	40
Pentachlorophenol	50.0	U	42.1	39.9	84.2	79.8	1	10.0-128			5.37	37
Phenol	50.0	U	12.4	13.4	24.8	26.8	1	10.0-120			7.75	40
2,4,6-Trichlorophenol	50.0	U	39.9	41.5	79.8	83.0	1	26.0-120			3.93	31
(S) Nitrobenzene-d5					*59.3*	*60.4*		*10.0-127*				
(S) 2-Fluorobiphenyl					*75.6*	*77.9*		*10.0-130*				
(S) p-Terphenyl-d14					*82.9*	*79.5*		*10.0-128*				
(S) Phenol-d5					*24.6*	*26.3*		*10.0-120*				
(S) 2-Fluorophenol					*38.3*	*39.8*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*91.0*	*88.0*		*10.0-155*				

Method Blank (MB)

(MB) R3756555-2 02/03/22 00:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzidine	U		0.0626	1.67
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
Naphthalene	U		0.00836	0.0333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333

Method Blank (MB)

(MB) R3756555-2 02/03/22 00:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.00648	0.0333
1,2,4-Trichlorobenzene	U		0.0104	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	*68.8*			*10.0-122*
(S) 2-Fluorobiphenyl	*72.4*			*15.0-120*
(S) p-Terphenyl-d14	*82.6*			*10.0-120*
(S) Phenol-d5	*75.5*			*10.0-120*
(S) 2-Fluorophenol	*79.3*			*12.0-120*
(S) 2,4,6-Tribromophenol	*69.2*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3756555-1 02/02/22 23:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.473	71.0	38.0-120	
Acenaphthylene	0.666	0.485	72.8	40.0-120	
Anthracene	0.666	0.498	74.8	42.0-120	
Benzidine	1.33	0.456	34.3	10.0-120	
Benzo(a)anthracene	0.666	0.534	80.2	44.0-120	
Benzo(b)fluoranthene	0.666	0.514	77.2	43.0-120	
Benzo(k)fluoranthene	0.666	0.511	76.7	44.0-120	
Benzo(g,h,i)perylene	0.666	0.516	77.5	43.0-120	
Benzo(a)pyrene	0.666	0.528	79.3	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.422	63.4	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.427	64.1	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.483	72.5	23.0-120	
4-Bromophenyl-phenylether	0.666	0.459	68.9	40.0-120	
2-Chloronaphthalene	0.666	0.471	70.7	35.0-120	

Laboratory Control Sample (LCS)

(LCS) R3756555-1 02/02/22 23:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Chlorophenyl-phenylether	0.666	0.464	69.7	40.0-120	
Chrysene	0.666	0.519	77.9	43.0-120	
Dibenz(a,h)anthracene	0.666	0.528	79.3	44.0-120	
3,3-Dichlorobenzidine	1.33	0.950	71.4	28.0-120	
2,4-Dinitrotoluene	0.666	0.564	84.7	45.0-120	
2,6-Dinitrotoluene	0.666	0.548	82.3	42.0-120	
Fluoranthene	0.666	0.495	74.3	44.0-120	
Fluorene	0.666	0.475	71.3	41.0-120	
Hexachlorobenzene	0.666	0.449	67.4	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.380	57.1	15.0-120	
Hexachlorocyclopentadiene	0.666	0.404	60.7	15.0-120	
Hexachloroethane	0.666	0.469	70.4	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.555	83.3	45.0-120	
Isophorone	0.666	0.418	62.8	23.0-120	
Naphthalene	0.666	0.388	58.3	18.0-120	
Nitrobenzene	0.666	0.413	62.0	17.0-120	
n-Nitrosodimethylamine	0.666	0.400	60.1	10.0-125	
n-Nitrosodiphenylamine	0.666	0.490	73.6	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.503	75.5	26.0-120	
Phenanthrene	0.666	0.490	73.6	42.0-120	
Benzylbutyl phthalate	0.666	0.605	90.8	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.609	91.4	41.0-120	
Di-n-butyl phthalate	0.666	0.536	80.5	43.0-120	
Diethyl phthalate	0.666	0.498	74.8	43.0-120	
Dimethyl phthalate	0.666	0.501	75.2	43.0-120	
Di-n-octyl phthalate	0.666	0.616	92.5	40.0-120	
Pyrene	0.666	0.515	77.3	41.0-120	
1,2,4-Trichlorobenzene	0.666	0.394	59.2	17.0-120	
4-Chloro-3-methylphenol	0.666	0.416	62.5	28.0-120	
2-Chlorophenol	0.666	0.494	74.2	28.0-120	
2,4-Dichlorophenol	0.666	0.402	60.4	25.0-120	
2,4-Dimethylphenol	0.666	0.408	61.3	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.509	76.4	16.0-120	
2,4-Dinitrophenol	0.666	0.300	45.0	10.0-120	
2-Nitrophenol	0.666	0.440	66.1	20.0-120	
4-Nitrophenol	0.666	0.581	87.2	27.0-120	
Pentachlorophenol	0.666	0.505	75.8	29.0-120	
Phenol	0.666	0.504	75.7	28.0-120	
2,4,6-Trichlorophenol	0.666	0.472	70.9	37.0-120	
(S) Nitrobenzene-d5			*56.2*	*10.0-122*	

Laboratory Control Sample (LCS)

(LCS) R3756555-1 02/02/22 23:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) 2-Fluorobiphenyl			*71.5*	*15.0-120*	
(S) p-Terphenyl-d14			*80.8*	*10.0-120*	
(S) Phenol-d5			*76.4*	*10.0-120*	
(S) 2-Fluorophenol			*81.5*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*73.4*	*10.0-127*	

L1454959-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454959-01 02/03/22 04:38 • (MS) R3756555-3 02/03/22 04:58 • (MSD) R3756555-4 02/03/22 05:18

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.664	U	0.528	0.466	69.4	61.3	1	18.0-120			12.4	32
Acenaphthylene	0.664	U	0.537	0.465	70.6	61.1	1	25.0-120			14.4	32
Anthracene	0.664	U	0.555	0.487	73.0	64.0	1	22.0-120			13.2	29
Benzidine	1.33	U	0.252	0.290	16.5	19.0	1	10.0-120			14.0	40
Benzo(a)anthracene	0.664	0.00901	0.587	0.516	76.1	66.7	1	25.0-120			12.9	29
Benzo(b)fluoranthene	0.664	0.0180	0.569	0.503	72.5	63.8	1	19.0-122			12.4	31
Benzo(k)fluoranthene	0.664	U	0.545	0.495	71.7	65.1	1	23.0-120			9.69	30
Benzo(g,h,i)perylene	0.664	U	0.537	0.481	70.6	63.3	1	10.0-120			11.0	33
Benzo(a)pyrene	0.664	U	0.575	0.507	75.6	66.7	1	24.0-120			12.5	30
Bis(2-chlorethoxy)methane	0.664	U	0.460	0.411	60.5	54.1	1	10.0-120			11.3	34
Bis(2-chloroethyl)ether	0.664	U	0.443	0.393	58.3	51.7	1	10.0-120			12.1	40
2,2-Oxybis(1-Chloropropane)	0.664	U	0.498	0.451	65.5	59.3	1	10.0-120			9.89	40
4-Bromophenyl-phenylether	0.664	U	0.518	0.451	68.1	59.3	1	27.0-120			13.7	30
2-Chloronaphthalene	0.664	U	0.513	0.453	67.5	59.6	1	20.0-120			12.3	32
4-Chlorophenyl-phenylether	0.664	U	0.512	0.458	67.3	60.2	1	24.0-120			11.1	29
Chrysene	0.664	0.0177	0.591	0.523	75.4	66.5	1	21.0-120			12.1	29
Dibenz(a,h)anthracene	0.664	U	0.566	0.503	74.4	66.1	1	10.0-120			11.8	32
3,3-Dichlorobenzidine	1.33	U	0.908	0.865	59.6	56.8	1	10.0-120			4.91	34
2,4-Dinitrotoluene	0.664	U	0.610	0.535	80.3	70.3	1	30.0-120			13.2	31
2,6-Dinitrotoluene	0.664	U	0.578	0.515	76.1	67.8	1	25.0-120			11.5	31
Fluoranthene	0.664	0.0543	0.610	0.550	73.1	65.2	1	18.0-126			10.5	32
Fluorene	0.664	0.00885	0.544	0.481	70.4	62.1	1	25.0-120			12.3	30
Hexachlorobenzene	0.664	U	0.488	0.435	64.2	57.2	1	27.0-120			11.4	28
Hexachloro-1,3-butadiene	0.664	U	0.407	0.363	53.5	47.7	1	10.0-120			11.3	38
Hexachlorocyclopentadiene	0.664	U	0.248	0.213	32.7	28.0	1	10.0-120			15.4	40
Hexachloroethane	0.664	U	0.487	0.443	64.0	58.3	1	10.0-120			9.36	40
Indeno(1,2,3-cd)pyrene	0.664	U	0.598	0.535	78.6	70.3	1	10.0-120			11.1	32
Isophorone	0.664	U	0.459	0.416	60.4	54.7	1	13.0-120			9.95	34

L1454959-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454959-01 02/03/22 04:38 • (MS) R3756555-3 02/03/22 04:58 • (MSD) R3756555-4 02/03/22 05:18

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.664	0.0186	0.432	0.396	54.3	49.7	1	10.0-120			8.58	35
Nitrobenzene	0.664	U	0.460	0.418	60.5	55.0	1	10.0-120			9.65	36
n-Nitrosodimethylamine	0.664	U	0.341	0.298	44.9	39.2	1	10.0-127			13.6	40
n-Nitrosodiphenylamine	0.664	U	0.532	0.482	70.0	63.4	1	17.0-120			9.93	29
n-Nitrosodi-n-propylamine	0.664	U	0.555	0.512	73.0	67.3	1	10.0-120			8.15	37
Phenanthrene	0.664	0.0611	0.593	0.545	70.0	63.6	1	17.0-120			8.45	31
Benzylbutyl phthalate	0.664	U	0.686	0.615	90.2	80.9	1	23.0-120			10.9	30
Bis(2-ethylhexyl)phthalate	0.664	U	0.677	0.603	89.0	79.4	1	17.0-126			11.4	30
Di-n-butyl phthalate	0.664	U	0.597	0.542	78.5	71.2	1	30.0-120			9.66	29
Diethyl phthalate	0.664	U	0.560	0.490	73.6	64.5	1	26.0-120			13.3	28
Dimethyl phthalate	0.664	U	0.526	0.460	69.1	60.5	1	25.0-120			13.2	29
Di-n-octyl phthalate	0.664	U	0.713	0.640	93.8	84.2	1	21.0-123			10.8	29
Pyrene	0.664	0.0341	0.600	0.531	74.4	65.4	1	16.0-121			12.1	32
1,2,4-Trichlorobenzene	0.664	U	0.420	0.378	55.3	49.7	1	12.0-120			10.6	37
4-Chloro-3-methylphenol	0.664	U	0.482	0.426	63.4	56.0	1	15.0-120			12.4	30
2-Chlorophenol	0.664	U	0.519	0.469	68.2	61.7	1	15.0-120			9.97	37
2,4-Dichlorophenol	0.664	U	0.442	0.401	58.1	52.7	1	20.0-120			9.78	31
2,4-Dimethylphenol	0.664	U	0.465	0.418	61.1	55.0	1	10.0-120			10.6	33
4,6-Dinitro-2-methylphenol	0.664	U	0.473	0.368	62.2	48.3	1	10.0-120			25.1	39
2,4-Dinitrophenol	0.664	U	0.334	0.218	44.0	28.6	1	10.0-121		J3	42.3	40
2-Nitrophenol	0.664	U	0.484	0.432	63.7	56.8	1	12.0-120			11.5	39
4-Nitrophenol	0.664	U	0.638	0.577	83.9	75.9	1	10.0-137			9.99	32
Pentachlorophenol	0.664	U	0.499	0.407	65.7	53.5	1	10.0-160			20.5	31
Phenol	0.664	U	0.523	0.460	68.8	60.5	1	12.0-120			12.8	38
2,4,6-Trichlorophenol	0.664	U	0.497	0.440	65.4	57.8	1	19.0-120			12.2	32
(S) Nitrobenzene-d5					*55.7*	*49.1*		*10.0-122*				
(S) 2-Fluorobiphenyl					*67.5*	*58.4*		*15.0-120*				
(S) p-Terphenyl-d14					*78.3*	*69.0*		*10.0-120*				
(S) Phenol-d5					*68.8*	*60.8*		*10.0-120*				
(S) 2-Fluorophenol					*72.7*	*65.7*		*12.0-120*				
(S) 2,4,6-Tribromophenol					*70.8*	*63.6*		*10.0-127*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Raleigh, NC

2401 Brentwood Rd
Ste 107
Raleigh, NC 27604

Billing Information:
Accounts Payable
2401 Brentwood Rd
Ste 107
Raleigh, NC 27604

Pres Chk

Report to:
Adam Lee

Email To: **adam.lee@terracon.com**

Project Description:
Stairway

City/State Collected: Wilmington, NC

Please Circle: PT MT CT ET

Phone: **919-873-2211**

Client Project #
70217841

Lab Project #
TERRRNC-LEE

Collected by (print):
MP

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270D 100ml Amb NoPres	SV8270D, TS 4ozClr-NoPres	V8260 40mlAmb-HCl	V8260 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
SB-01	Grab	GW		01/26/2022	1525	5	X		X			-01
SB-02		GW			1555							-02
SB-03		GW			1605							-03
SB-04		GW			1620							-04
SB-05		GW			1630							-05
SB-01 (0-2)		~~SSGW~~	0-2		1540	2		X		X		-06
SB-06 (6-7)		~~SSGW~~	6-7		1520							-07
		GW										
		SS										
		SS										

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1455950

E103

Acctnum: **TERRRNC**
Template: **T200858**
Prelogin: **P893700**
PM: **873 - Heather J Wagner**
PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 548940110927

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	01/27/22	1430		Ø	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.4+0.0=0.4°C Bottles Received: 29	
	1-27-22	15:4			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 01/28/22 Time: 0945	Hold: Condition: NCF / OK

Limited Asbestos and Lead Paint Inspection (Terracon)

2401 Brentwood Road, Suite 107
Raleigh, North Carolina 27604
P (919) 873-2211
Terracon.com

March 16, 2022

Kimley-Horn and Associates, Inc.
421 Fayetteville Street
Suite 600
Raleigh, North Carolina 27601

Attn: **Jason Hartshorn**
E: jason.hartshorn@kimley-horn.com
M: (919) 417-1781

Re: **Limited Asbestos and Lead Paint Inspection**
Proposed Starway Village Site
2346, 2370, 2370B and 2374 Carolina Beach Road
Wilmington, North Carolina
Terracon Project No. 70217834

Dear Mr. Hartshorn:

Terracon Consultants, Inc. (Terracon) is pleased to submit this limited asbestos and lead paint inspection report for the above-referenced properties in Wilmington, North Carolina to Kimley-Horn and Associates, Inc. (Client). The properties include commercial buildings, single-family residences and their ancillary structures located at 2346, 2370, 2370B and 2374 Carolina Beach Road. The inspection was performed in accordance with Terracon Proposal No. P70217834, dated December 8, 2021. We understand that the inspection was requested due to planned demolition of the properties.

Asbestos was not detected **in samples collected from the structures. However, several structures were inaccessible and** asbestos-containing materials may be present**.** Lead was detected in paints **above laboratory reporting limits. Please refer to the attached report for details.**

Terracon appreciates the opportunity to provide this service to Kimley-Horn and Associates, Inc. If you have questions regarding this report, please contact the undersigned at (919) 873-2211.

Sincerely,
Terracon Consultants, Inc.

Anthony J. Scialdone
Senior Scientist

Russell Harrings, CIH
Authorized Project Reviewer

Limited Asbestos and Lead Paint Inspection Report

Proposed Starway Village Site
2346, 2370, 2370B and 2374 Carolina Beach Road
Wilmington, North Carolina





March 16, 2022
Terracon Project No. 70217834

Prepared for:
Kimley-Horn and Associates, Inc.
421 Fayetteville Street
Suite 600
Raleigh, North Carolina 27601

Prepared by:
Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, North Carolina 27604

Explore with us

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LIMITED ASBESTOS AND LEAD PAINT INSPECTION REPORT
PROPOSED STARWAY VILLAGE SITE
2346, 2370, 2370B AND 2374 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA

Terracon Project No. 70217834
March 15, 2022

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has conducted a limited asbestos and lead paint inspection at the proposed Starway Village site located on adjacent parcels on Carolina Beach Road in Wilmington, North Carolina. The inspection was performed on February 23, 2022 by Terracon representative Anthony Scialdone (North Carolina Accredited Inspector No. 12284) in general accordance with Terracon Proposal No. P70217834, dated December 8, 2021.

Building components were visually assessed and homogeneous areas of suspect asbestos-containing materials (ACM) and suspect lead paint coatings were identified and documented. The inspection was limited to safely accessible areas of the structures. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in Environmental Protection Agency (EPA) regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Suspect ACM samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM). Paint chip samples were collected and delivered to an accredited laboratory to perform Flame Atomic Absorption Spectrophotometry (Flame AAS) analysis.

We understand the inspections were requested due to the planned demolition of the structures. The purpose of the inspections is to identify and quantify ACM and lead-containing paint present prior to demolition activities. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated ACM be identified, classified and quantified prior to planned disturbances, renovation or demolition activities.

The Occupational Health and Safety Administration (OSHA) has promulgated a worker protection standard for the disturbance of lead-containing paints during construction projects, which includes renovations and demolitions. The limited lead paint inspection was performed to meet informational needs to comply with the OSHA Lead in Construction Standard (29 CRF 1926.62). Currently, proposed renovation or demolition activities which may impact lead paint is subject to OSHA regulation 29 CFR 1926.62 – Lead Exposure in Construction for worker protection. If paint is removed from the substrate, it may be subject to disposal requirements.

2.0 BUILDING DESCRIPTIONS

According to the Client and information obtained from the New Hanover County GIS website, the site contains the following structures:

- **2346 Carolina Beach Road – contains two commercial buildings. One is a single-story dilapidated brick commercial building, constructed in 1950 and reportedly contains 1,500 square feet. The second is a metal warehouse storage building, constructed in 1991 and contains 18,000 square feet. There is also a metal storage shed associated with the property. Please note that when Terracon performed the inspection, two additional ancillary structures were observed that were**

not in the proposed scope of work. They appeared to be similar to guard shack or ticket booth structures.

- **2370 Carolina Beach Road – contains a single-story single-family residential structure, constructed in 1937 and reportedly contains 1,240 square feet.**

- **2370-B Carolina Beach Road – contains a single-story commercial outbuilding with wood siding and a shingled roof, constructed in 1999 and reportedly contains 250 square feet.**

- **2374 Carolina Beach Road – contains a single-story single-family residential structure, constructed in 1948 and reportedly contains 1,176 square feet. There is also a wooden storage shed associated with the property.**

3.0 FIELD ACTIVITIES

3.1 Asbestos

The asbestos inspection was conducted by state of North Carolina Accredited Asbestos Building Inspector Anthony Scialdone (NC Accredited Asbestos Inspector Number 12284). The sampling was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763 (AHERA). A summary of sampling activities is provided below.

Field activities began with visual observations of the structures to identify materials suspected to contain asbestos. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application. Building materials identified as concrete, glass, wood, masonry, metal, or rubber were not considered suspect ACM.

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect ACM.

Based on results of our visual observations, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect ACM were collected in each homogeneous area. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker. Terracon collected 58 samples from 19 homogeneous areas.

Bulk samples were submitted under chain of custody to Eurofins/CEI (CEI) of Cary, North Carolina for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA methodology (40 CFR 763, Subpart F). The percentage of asbestos, where applicable, was determined by microscopic visual estimation. CEI is accredited under the National Voluntary Laboratory Accreditation Program NVLAP (Accreditation Number 101768-0).

Please note that the interiors of the both commercial buildings located at 2346 Carolina Beach Road, both additional ancillary structures observed at 2346 Carolina Beach Road, and the commercial building located at 2370-B Carolina Beach Road were not accessible. Terracon was able to only make limited observations of the interiors of these buildings. If suspect ACM is located within the structures then they should be assumed to be ACM.

No suspect ACM was observed at the metal storage shed at 2346 Carolina Beach Road.

3.2 Lead Paint

The lead paint sampling was conducted by Anthony Scialdone of Terracon. Paint chip samples were collected from the substrate from homogenous painted surfaces identified to determine its lead content, measured by percent by weight. Suspect lead paint samples were collected in general accordance with the EPA's work practice standards for conducting lead paint activities (40 CFR 745.227). Currently, proposed renovation and demolition activities that could potentially disturb lead paint are subject to the OSHA regulations (29 CFR 1926.62 – Lead).

The lead paint sampling began with Terracon observing the interior and exterior painted surfaces of the structures and selecting sample locations. After the sampling strategy was determined, Terracon collected at least one paint chip sample from homogeneous surfaces.

It should be noted that our services are not intended for compliance with Housing and Urban Development (HUD) requirements for child occupied facilities. It is Terracon's understanding that the structures will be demolished and, therefore, not subject to the HUD requirements.

Paint chip samples were submitted under a chain of custody to Scientific Analytical Institute, Inc. (SAI) of Greensboro, North Carolina. Paint chip samples were analyzed by Flame Atomic Absorption method SW846-3050B / 6010C / 7000B. SAI is an American Industrial Hygiene Association (AIHA) accredited laboratory (ELPAT, Lab Code 173190), to perform Flame Atomic Absorption analysis.

Please note that the interiors of the both commercial buildings located at 2346 Carolina Beach Road, both additional ancillary structures observed at 2346 Carolina Beach Road, and the commercial building located at 2370-B Carolina Beach Road were not accessible. Terracon was able to only make limited observations of the interiors of these buildings. The paint associated with surfaces located within the structures should be assumed to contain lead.

4.0 REGULATORY OVERVIEW

4.1 Asbestos

The following sections provide a general overview to the applicable asbestos regulations. Please refer to the complete current regulation in order to verify compliance before any actions are initiated on an ACM.

4.1.1 NESHAP

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activities. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM that is in poor condition and has become friable, or will be subjected to drilling, sanding, grinding, cutting or abrading, and could be crushed or pulverized during anticipated renovation or demolition activities, are considered regulated ACM (RACM).

4.1.2 North Carolina State Regulations

In the state of North Carolina, asbestos activities are regulated by the North Carolina Department of Health and Human Services, Health Hazards Control Unit (HHCU) under 10A NCAC 41C Section .0600 – Asbestos Hazard Management Program (AHMP). The AHMP requires that any asbestos-related activity conducted in a public building be performed by personnel accredited by the HHCU.

Asbestos abatement must be conducted under the direct supervision of a North Carolina accredited supervisor, except that permitted removals of roofing products may be conducted under the direct supervision of a North Carolina accredited roofing supervisor. An asbestos abatement design must be prepared by a North Carolina accredited abatement designer for each individually permitted removal of more than 3,000 square feet (281 square meters), 1,500 linear feet (462 meters) or 656 cubic feet (18 cubic meters), of regulated asbestos containing materials conducted in public areas. Third-party air monitoring must be conducted during the abatement activities in accordance with AHMP requirements.

AHMP requires that no person remove more than 35 cubic feet (1 cubic meter), 160 square feet (15 square meters), or 260 linear feet (80 linear meters) of regulated asbestos containing material, without a permit issued by the HHCU. Applications must be postmarked or received by the HHCU at least 10 working days prior to the scheduled removal start date.

4.1.3 OSHA

OSHA's general industry asbestos standard (29 CFR 1910.1001) requires employers to exercise due diligence in complying with the requirements to inform their employees and affected contractors working in the facility about the presence and location of both ACM and materials assumed to contain asbestos.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos during construction and maintenance activities. The standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. States which administer their own federally-approved state OSHA programs may require additional precautions.

A full copy of the OSHA asbestos standard for general and construction industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

4.2 Lead Paint

Lead is regulated by the EPA and OSHA. The EPA regulates lead use, removal, and disposal, and OSHA regulates lead exposure to workers. For the purpose of the OSHA lead standard, lead includes any detectable concentrations of metallic lead, all inorganic lead compounds, and organic lead soaps. A synopsis of the OSHA regulations (29 CFR 1926.62) and the applicability are as follows:

The OSHA Lead Standard for Construction **(29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The** Lead In Construction Standard **applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in**

unacceptable employee exposures depending upon on the method of removal and other workplace conditions.

Under this standard, construction includes, but is not limited to, the following:

- **Demolition or salvage of structures where lead or materials containing lead are present**
- **Removal or encapsulation of materials containing lead**
- **New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead**
- **Installation of products containing lead**
- **Lead contamination/emergency clean-up**
- **Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed**
- **Maintenance operations associated with construction activities described above**

5.0 FINDINGS AND RECOMMENDATIONS

5.1 Asbestos

Asbestos was not identified **at concentrations greater than 1% in the materials sampled from the structures. As stated in Section 3.1, the interiors of both commercial buildings located at 2346 Carolina Beach Road, the two additional ancillary structures observed at 2346 Carolina Beach Road, and the commercial building located at 2370-B Carolina Beach Road were not accessible.** If suspect ACM is located within these structures then they should be assumed to be ACM.

A summary of materials containing asbestos is provided in Appendix A and a summary of suspect ACM sampled is provided in Appendix B. The laboratory analytical report is provided in Appendix C. Photographs of select materials are provided in Appendix F.

5.1.1 Asbestos Recommendations

If additional suspect ACM are found during demolition activities, they should be assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. Based on the findings above, Terracon recommends that assumed ACM be removed and disposed of by a State of North Carolina licensed asbestos abatement contractor prior to demolition activities.

5.2 Lead Paint

Lead was detected **above laboratory reporting limits in the following sampled paints:**

1. **2346 Carolina Beach Road (brick building)**
    - **White paint on wood door and window casings (exterior)**
    - **Red paint on wood window covers (exterior)**
    - **White paint on wood soffit (exterior)**
    - **Silver paint on metal door (exterior)**

2. **2370 Carolina Beach Road**
    - **Pink paint on wood siding (exterior)**
    - **White paint on wood porch soffit (exterior)**
    - **White paint on wood window sash (exterior)**
    - **White paint on drywall ceilings**

- **Tan paint on drywall walls**
- **Blue paint on drywall walls**
- **Blue paint on wood walls**
- **Green paint on drywall walls**
- **Tan paint on wood ceiling/walls (back porch)**
- **White paint on wood window sash**
- **White paint on wood door and casing**
- **White paint on wood baseboard**

3. **2374 Carolina Beach Road**
    - **Beige paint on plaster**
    - **Beige paint on drywall**
    - **Green paint on plaster**
    - **White paint on drywall**
    - **Green paint on drywall**
    - **White textured paint on drywall ceilings**
    - **White paint on wood casing**
    - **White paint on wood window components (exterior)**
    - **Gray paint on porch floor (exterior)**

Please note that lead was not detected in paint chip samples collected from the structure at 2370-B Carolina Beach Road.

A summary of the paint chip samples collected during the inspection and general sample locations is presented in Appendix D. The lead paint laboratory analytical reports are provided in Appendix E. Paints of the same color and applied to similar substrates should be considered homogeneous to the sampled paints. Paints not sampled should be considered to be lead-containing.

Contractors should be made aware of the presence of the identified lead coatings, so that they may maintain compliance with worker protection regulations, employ lead-safe work practices, and/or conduct a negative exposure assessment per OSHA (29 CFR 1926.62 – Lead Exposure in Construction). Removed paint waste may be subject to additional regulations for disposal.

6.0 GENERAL COMMENTS

This limited asbestos and lead paint inspection was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our inspection of the buildings.

This report has been prepared on behalf of and exclusively for use by Kimley-Horn and Associated, Inc. for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, expressed or implied, is made.

APPENDIX A

MATERIALS CONTAINING ASBESTOS SUMMARY

Appendix A

MATERIALS CONTAINING ASBESTOS SUMMARY
PROPOSED STARWAY VILLAGE SITE
2346, 2370, 2370B AND 2374 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA
Terracon Project No. 70217834

MATERIALS CONTAINING GREATER THAN 1% ASBESTOS								
Building	Sample No.	HA	Description	Material Location	NESHAP Classification	Percent/Type Asbestos	Condition	Estimated Quantity*
2346 Carolina Beach Road (Brick Building)	**Assumed**	**N/A**	**Interior Building Materials**	**Interior**	**Unknown**	**Assumed**	**Unknown**	**Unable to quantify**
2346 Carolina Beach Road (Metal Building)	**Assumed**	**N/A**	**Interior Building Materials**	**Interior**	**Unknown**	**Assumed**	**Unknown**	**Unable to quantify**
2346 Carolina Beach Road (Ancillary Structures)	**Assumed**	**N/A**	**Interior Building Materials**	**Interior**	**Unknown**	**Assumed**	**Unknown**	**Unable to quantify**
2370-B Carolina Beach Road	**Assumed**	**N/A**	**Interior Building Materials**	**Interior**	**Unknown**	**Assumed**	**Unknown**	**Unable to quantify**

*Note: All quantities should be verified by the asbestos abatement contractor.

APPENDIX B

LIMITED ASBESTOS INSPECTION SAMPLE SUMMARY

Appendix B

LIMITED ASBESTOS INSPECTION SAMPLE SUMMARY
PROPOSED STARWAY VILLAGE SITE
2346, 2370, 2370B AND 2374 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA
Terracon Project No. 70217834

Sample No.	HA	Description	Building	Sample Location	Lab Results
2374-1	1	Gray Sink Coating	2374 Carolina Beach Road	Kitchen	None Detected
2374-2	1	Gray Sink Coating	2374 Carolina Beach Road	Kitchen	None Detected
2374-3	2	12"x12" Gray Floor Tile/Mastic	2374 Carolina Beach Road	Kitchen	Tile, Mastic - None Detected
2374-4	2	12"x12" Gray Floor Tile/Mastic	2374 Carolina Beach Road	Hall	Tile, Mastic - None Detected
2374-5	2	12"x12" Gray Floor Tile/Mastic	2374 Carolina Beach Road	Bath 1	Tile, Mastic - None Detected
2374-6	3	Ceiling Texture	2374 Carolina Beach Road	Bedroom 2	None Detected
2374-7	3	Ceiling Texture	2374 Carolina Beach Road	Bedroom 2	None Detected
2374-8	3	Ceiling Texture	2374 Carolina Beach Road	Bedroom 1	None Detected
2374-9	3	Ceiling Texture	2374 Carolina Beach Road	Bedroom 1	None Detected
2374-10	3	Ceiling Texture	2374 Carolina Beach Road	Bedroom 3	None Detected
2374-11	4	Drywall/Joint Compound	2374 Carolina Beach Road	Hall	None Detected
2374-12	4	Drywall/Joint Compound	2374 Carolina Beach Road	Bath 1	None Detected
2374-13	4	Drywall/Joint Compound	2374 Carolina Beach Road	Kitchen	None Detected
2374-14	5	Plaster	2374 Carolina Beach Road	Living Room	Skim Coat, Base Coat - None Detected
2374-15	5	Plaster	2374 Carolina Beach Road	Living Room	Skim Coat, Base Coat - None Detected
2374-16	5	Plaster	2374 Carolina Beach Road	Bedroom 3	Skim Coat, Base Coat - None Detected
2374-17	5	Plaster	2374 Carolina Beach Road	Bedroom 3	Skim Coat, Base Coat - None Detected
2374-18	5	Plaster	2374 Carolina Beach Road	Bedroom 2	Skim Coat, Base Coat - None Detected
2374-19	6	Gray Vinyl Flooring/Glue	2374 Carolina Beach Road	Bath 2	Flooring, Glue - None Detected
2374-20	6	Gray Vinyl Flooring/Glue	2374 Carolina Beach Road	Bath 2	Flooring, Glue - None Detected
2374-21	7	Asphalt Roof Shingle/Tar Paper	2374 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2374-22	7	Asphalt Roof Shingle/Tar Paper	2374 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2374-23	7	Asphalt Roof Shingle/Tar Paper	2374 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2374-24	8	Window Glazing	2374 Carolina Beach Road	Exterior	None Detected
2374-25	8	Window Glazing	2374 Carolina Beach Road	Exterior	None Detected
2374-26	8	Window Glazing	2374 Carolina Beach Road	Exterior	None Detected
2346-1	9	Roof Tar Paper/Mastic	2346 Carolina Beach Road (Brick Building)	Exterior	Paper, Mastic - None Detected
2346-2	9	Roof Tar Paper/Mastic	2346 Carolina Beach Road (Brick Building)	Exterior	Paper, Mastic - None Detected
2346-3	9	Roof Tar Paper/Mastic	2346 Carolina Beach Road (Brick Building)	Exterior	Paper, Mastic - None Detected
2370B-1	10	Asphalt Roof Shingle/Tar Paper	2370-B Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370B-2	10	Asphalt Roof Shingle/Tar Paper	2370-B Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370B-3	10	Asphalt Roof Shingle/Tar Paper	2370-B Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370-1	11	Asphalt Roof Shingle/Tar Paper	2370 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370-2	11	Asphalt Roof Shingle/Tar Paper	2370 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370-3	11	Asphalt Roof Shingle/Tar Paper	2370 Carolina Beach Road	Exterior	Shingle, Paper - None Detected
2370-4	12	Chimney Mastic	2370 Carolina Beach Road	Exterior	None Detected
2370-5	12	Chimney Mastic	2370 Carolina Beach Road	Exterior	None Detected
2370-6	12	Chimney Mastic	2370 Carolina Beach Road	Exterior	None Detected
2370-7	13	Window Glazing	2370 Carolina Beach Road	Exterior	None Detected
2370-8	13	Window Glazing	2370 Carolina Beach Road	Exterior	None Detected
2370-9	13	Window Glazing	2370 Carolina Beach Road	Exterior	None Detected
2370-10	14	Drywall/Joint Compound	2370 Carolina Beach Road	Living Room	None Detected
2370-11	14	Drywall/Joint Compound	2370 Carolina Beach Road	Bedroom 1	None Detected
2370-12	14	Drywall/Joint Compound	2370 Carolina Beach Road	Bedroom 3	None Detected
2370-13	15	Black and White Ceramic Floor Tile Grout/Mortar	2370 Carolina Beach Road	Bath 1	Grout, Mortar - None Detected
2370-14	15	Black and White Ceramic Floor Tile Grout/Mortar	2370 Carolina Beach Road	Bath 1	Grout, Mortar - None Detected
2370-15	15	Black and White Ceramic Floor Tile Grout/Mortar	2370 Carolina Beach Road	Bath 1	Grout, Mortar - None Detected
2370-16	16	Gray Ceramic Floor Tile Grout/Mortar	2370 Carolina Beach Road	Bedroom 2	Grout, Mortar - None Detected
2370-17	16	Gray Ceramic Floor Tile Grout/Mortar	2370 Carolina Beach Road	Bedroom 2	Grout, Mortar - None Detected
2370-18	17	1'x1' Tan Speck Vinyl Flooring/Glue	2370 Carolina Beach Road	Bedroom 3	Flooring, Glue - None Detected
2370-19	17	1'x1' Tan Speck Vinyl Flooring/Glue	2370 Carolina Beach Road	Bedroom 3	Flooring, Glue - None Detected
2370-20	17	1'x1' Tan Speck Vinyl Flooring/Glue	2370 Carolina Beach Road	Bedroom 3	Flooring, Glue - None Detected

Appendix B

LIMITED ASBESTOS INSPECTION SAMPLE SUMMARY
PROPOSED STARWAY VILLAGE SITE
2346, 2370, 2370B AND 2374 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA
Terracon Project No. 70217834

Sample No.	HA	Description	Building	Sample Location	Lab Results
2370-21	**18**	**Ceiling Texture**	**2370 Carolina Beach Road**	**Bedroom 2**	**None Detected**
2370-22	**18**	**Ceiling Texture**	**2370 Carolina Beach Road**	**Bedroom 2**	**None Detected**
2370-23	**18**	**Ceiling Texture**	**2370 Carolina Beach Road**	**Bedroom 2**	**None Detected**
2370-24	**19**	**Stucco Ceiling**	**2370 Carolina Beach Road**	**Bath 1**	**None Detected**
2370-25	**19**	**Stucco Ceiling**	**2370 Carolina Beach Road**	**Bedroom 3**	**None Detected**
2370-26	**19**	**Stucco Ceiling**	**2370 Carolina Beach Road**	**Kitchen**	**None Detected**

***Highlighted and bolded samples indicate materials with >1% asbestos.**
***Highlighted samples indicate materials with <1% asbestos.**

APPENDIX C

ASBESTOS LABORATORY ANALYICAL REPORTS

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March 3, 2022

Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

CLIENT PROJECT: Starway Village
CEI LAB CODE: B224636

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on February 28, 2022. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP® TESTING
NVLAP LAB CODE 101768-0

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ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

Terracon Consultants, Inc.

CLIENT PROJECT: Starway Village

LAB CODE: B224636

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 03/03/22

TOTAL SAMPLES ANALYZED: 58

SAMPLES >1% ASBESTOS:

730 SE Maynard Road • Cary, NC 27511 • 919.481.1413

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Starway Village

LAB CODE: B224636

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
2374-1		B40062	Gray	Sink Undercoating	None Detected
2374-2		B40063	Gray	Sink Undercoating	None Detected
2374-3		B40064A	Gray	Floor Tile	None Detected
2374-3		B40064B	Yellow,Brown	Mastic	None Detected
2374-4		B40065A	Gray	Floor Tile	None Detected
2374-4		B40065B	Yellow,Brown	Mastic	None Detected
2374-5		B40066A	Gray	Floor Tile	None Detected
2374-5		B40066B	Yellow,Brown	Mastic	None Detected
2374-6		B40067	White,Tan	Textured Ceiling	None Detected
2374-7		B40068	White,Tan	Textured Ceiling	None Detected
2374-8		B40069	White,Tan	Textured Ceiling	None Detected
2374-9		B40070	White,Tan	Textured Ceiling	None Detected
2374-10		B40071	White,Tan	Textured Ceiling	None Detected
2374-11		B40072	White,Brown	Drywall/ Joint Compound Composite	None Detected
2374-12		B40073	White,Brown	Drywall/ Joint Compound Composite	None Detected
2374-13		B40074	White,Brown	Drywall/ Joint Compound Composite	None Detected
2374-14	Layer 1	B40075	White	Plaster Skim Coat	None Detected
2374-14	Layer 2	B40075	Gray	Plaster Base Coat	None Detected
2374-15	Layer 1	B40076	White	Plaster Skim Coat	None Detected
2374-15	Layer 2	B40076	Gray	Plaster Base Coat	None Detected
2374-16	Layer 1	B40077	White	Plaster Skim Coat	None Detected
2374-16	Layer 2	B40077	Gray	Plaster Base Coat	None Detected
2374-17	Layer 1	B40078	White	Plaster Skim Coat	None Detected
2374-17	Layer 2	B40078	Gray	Plaster Base Coat	None Detected
2374-18	Layer 1	B40079	White	Plaster Skim Coat	None Detected
2374-18	Layer 2	B40079	Gray	Plaster Base Coat	None Detected
2374-19		B40080A	Gray	Vinyl Flooring	None Detected
2374-19		B40080B	Tan	Glue	None Detected
2374-20		B40081A	Gray	Vinyl Flooring	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Starway Village

LAB CODE: B224636

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
2374-20		B40081B	Tan	Glue	None Detected
2374-21	Layer 1	B40082	Black,Gray	Asphalt Shingle	None Detected
2374-21	Layer 2	B40082	Black	Tarpaper	None Detected
2374-22	Layer 1	B40083	Black,Gray	Asphalt Shingle	None Detected
2374-22	Layer 2	B40083	Black	Tarpaper	None Detected
2374-23	Layer 1	B40084	Black,Gray	Asphalt Shingle	None Detected
2374-23	Layer 2	B40084	Black	Tarpaper	None Detected
2374-24		B40085	White,Tan	Window Glazing	None Detected
2374-25		B40086	White,Tan	Window Glazing	None Detected
2374-26		B40087	White,Tan	Window Glazing	None Detected
2346-1	Layer 1	B40088	Black	Tarpaper	None Detected
2346-1	Layer 2	B40088	Black	Mastic	None Detected
2346-2	Layer 1	B40089	Black	Tarpaper	None Detected
2346-2	Layer 2	B40089	Black	Mastic	None Detected
2346-3	Layer 1	B40090	Black	Tarpaper	None Detected
2346-3	Layer 2	B40090	Black	Mastic	None Detected
2370B-1	Layer 1	B40091	Black,Gray	Asphalt Shingle	None Detected
2370B-1	Layer 2	B40091	Black	Tarpaper	None Detected
2370B-2	Layer 1	B40092	Black,Gray	Asphalt Shingle	None Detected
2370B-2	Layer 2	B40092	Black	Tarpaper	None Detected
2370B-3	Layer 1	B40093	Black,Gray	Asphalt Shingle	None Detected
2370B-3	Layer 2	B40093	Black	Tarpaper	None Detected
2370-1	Layer 1	B40094	Black	Asphalt Shingle	None Detected
2370-1	Layer 2	B40094	Black	Tarpaper	None Detected
2370-2	Layer 1	B40095	Black	Asphalt Shingle	None Detected
2370-2	Layer 2	B40095	Black	Tarpaper	None Detected
2370-3	Layer 1	B40096	Black,Blue	Asphalt Shingle	None Detected
2370-3	Layer 2	B40096	Black	Tarpaper	None Detected
2370-4		B40097	Black	Mastic	None Detected
2370-5		B40098	Black	Mastic	None Detected
2370-6		B40099	Black	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Starway Village

LAB CODE: B224636

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
2370-7		B40100	White,Tan	Window Glazing	None Detected
2370-8		B40101	White,Tan	Window Glazing	None Detected
2370-9		B40102	White,Tan	Window Glazing	None Detected
2370-10		B40103	White,Brown	Drywall/ Joint Compound Composite	None Detected
2370-11		B40104	White,Brown	Drywall/ Joint Compound Composite	None Detected
2370-12		B40105	White,Brown	Drywall/ Joint Compound Composite	None Detected
2370-13	Layer 1	B40106	Gray	Grout	None Detected
2370-13	Layer 2	B40106	Black	Mortar	None Detected
2370-14	Layer 1	B40107	Gray	Grout	None Detected
2370-14	Layer 2	B40107	Black	Mortar	None Detected
2370-15	Layer 1	B40108	Gray	Grout	None Detected
2370-15	Layer 2	B40108	Black	Mortar	None Detected
2370-16	Layer 1	B40109	Gray	Grout	None Detected
2370-16	Layer 2	B40109	White	Mortar	None Detected
2370-17	Layer 1	B40110	Gray	Grout	None Detected
2370-17	Layer 2	B40110	White	Mortar	None Detected
2370-18		B40111A	Tan	Vinyl Flooring	None Detected
2370-18		B40111B	Yellow	Mastic	None Detected
2370-19		B40112A	Tan	Vinyl Flooring	None Detected
2370-19		B40112B	Yellow	Mastic	None Detected
2370-20		B40113A	Tan	Vinyl Flooring	None Detected
2370-20		B40113B	Yellow	Mastic	None Detected
2370-21		B40114	White	Textured Ceiling	None Detected
2370-22		B40115	White	Textured Ceiling	None Detected
2370-23		B40116	White	Textured Ceiling	None Detected
2370-24		B40117	White	Stucco Ceiling	None Detected
2370-25		B40118	White	Stucco Ceiling	None Detected
2370-26		B40119	White	Stucco Ceiling	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2374-1 B40062	Sink Undercoating	Homogeneous Gray Non-fibrous Bound	3%	Cellulose	97%	Binder	None Detected
2374-2 B40063	Sink Undercoating	Homogeneous Gray Non-fibrous Bound	3%	Cellulose	97%	Binder	None Detected
2374-3 B40064A	Floor Tile	Homogeneous Gray Non-fibrous Tightly Bound			100%	Vinyl	None Detected
2374-3 B40064B	Mastic	Homogeneous Yellow,Brown Non-fibrous Bound			100%	Mastic	None Detected
2374-4 B40065A	Floor Tile	Homogeneous Gray Non-fibrous Tightly Bound			100%	Vinyl	None Detected
2374-4 B40065B	Mastic	Homogeneous Yellow,Brown Non-fibrous Bound			100%	Mastic	None Detected
2374-5 B40066A	Floor Tile	Homogeneous Gray Non-fibrous Tightly Bound			100%	Vinyl	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
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Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		NON-ASBESTOS COMPONENTS Non-Fibrous		ASBESTOS %
2374-5 B40066B	Mastic	Homogeneous Yellow,Brown Non-fibrous Bound			100%	Mastic	None Detected
2374-6 B40067	Textured Ceiling	Heterogeneous White,Tan Non-fibrous Bound			70% 25% 5%	Binder Foam Paint	None Detected
2374-7 B40068	Textured Ceiling	Heterogeneous White,Tan Non-fibrous Bound			70% 25% 5%	Binder Foam Paint	None Detected
2374-8 B40069	Textured Ceiling	Heterogeneous White,Tan Non-fibrous Bound			70% 25% 5%	Binder Foam Paint	None Detected
2374-9 B40070	Textured Ceiling	Heterogeneous White,Tan Non-fibrous Bound			70% 25% 5%	Binder Foam Paint	None Detected
2374-10 B40071	Textured Ceiling	Heterogeneous White,Tan Non-fibrous Bound			70% 25% 5%	Binder Foam Paint	None Detected
2374-11 B40072	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2374-12 B40073	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected
2374-13 B40074	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected
2374-14 Layer 1 B40075	Plaster Skim Coat	Heterogeneous White Non-fibrous Bound			90% 5% 5%	Binder Silicates Paint	None Detected
2374-14 Layer 2 B40075	Plaster Base Coat	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2374-15 Layer 1 B40076	Plaster Skim Coat	Heterogeneous White Non-fibrous Bound			90% 5% 5%	Binder Silicates Paint	None Detected
2374-15 Layer 2 B40076	Plaster Base Coat	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2374-16 Layer 1 B40077	Plaster Skim Coat	Heterogeneous White Non-fibrous Bound			90% 5% 5%	Binder Silicates Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
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Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2374-16 Layer 2 B40077	Plaster Base Coat	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2374-17 Layer 1 B40078	Plaster Skim Coat	Heterogeneous White Non-fibrous Bound			90% 5% 5%	Binder Silicates Paint	None Detected
2374-17 Layer 2 B40078	Plaster Base Coat	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2374-18 Layer 1 B40079	Plaster Skim Coat	Heterogeneous White Non-fibrous Bound			90% 5% 5%	Binder Silicates Paint	None Detected
2374-18 Layer 2 B40079	Plaster Base Coat	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2374-19 B40080A	Vinyl Flooring	Heterogeneous Gray Non-fibrous Bound			50% 50%	Vinyl Foam	None Detected
2374-19 B40080B	Glue	Homogeneous Tan Non-fibrous Bound	3%	Cellulose	97%	Mastic	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
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Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2374-20 B40081A	Vinyl Flooring	Heterogeneous Gray Non-fibrous Bound			50% 50%	Vinyl Foam	None Detected
2374-20 B40081B	Glue	Homogeneous Tan Non-fibrous Bound	3%	Cellulose	97%	Mastic	None Detected
2374-21 Layer 1 B40082	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2374-21 Layer 2 B40082	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2374-22 Layer 1 B40083	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2374-22 Layer 2 B40083	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2374-23 Layer 1 B40084	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2374-23 Layer 2 B40084	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2374-24 B40085	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected
2374-25 B40086	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected
2374-26 B40087	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected
2346-1 Layer 1 B40088	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2346-1 Layer 2 B40088	Mastic	Homogeneous Black Non-fibrous Bound			100%	Tar	None Detected
2346-2 Layer 1 B40089	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2346-2 Layer 2 B40089	Mastic	Homogeneous Black Non-fibrous Bound			100%	Tar	None Detected
2346-3 Layer 1 B40090	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2346-3 Layer 2 B40090	Mastic	Homogeneous Black Non-fibrous Bound			100%	Tar	None Detected
2370B-1 Layer 1 B40091	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2370B-1 Layer 2 B40091	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2370B-2 Layer 1 B40092	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2370B-2 Layer 2 B40092	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370B-3 Layer 1 B40093	Asphalt Shingle	Heterogeneous Black,Gray Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2370B-3 Layer 2 B40093	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2370-1 Layer 1 B40094	Asphalt Shingle	Heterogeneous Black Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2370-1 Layer 2 B40094	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2370-2 Layer 1 B40095	Asphalt Shingle	Heterogeneous Black Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected
2370-2 Layer 2 B40095	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2370-3 Layer 1 B40096	Asphalt Shingle	Heterogeneous Black,Blue Fibrous Bound	45%	Fiberglass	50% 5%	Tar Gravel	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370-3 Layer 2 B40096	Tarpaper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected
2370-4 B40097	Mastic	Homogeneous Black Fibrous Bound	10%	Cellulose	90%	Tar	None Detected
2370-5 B40098	Mastic	Homogeneous Black Fibrous Bound	10%	Cellulose	90%	Tar	None Detected
2370-6 B40099	Mastic	Homogeneous Black Fibrous Bound	10%	Cellulose	90%	Tar	None Detected
2370-7 B40100	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected
2370-8 B40101	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected
2370-9 B40102	Window Glazing	Heterogeneous White,Tan Non-fibrous Bound			95% 5%	Binder Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370-10 B40103	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected
2370-11 B40104	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected
2370-12 B40105	Drywall/ Joint Compound Composite	Heterogeneous White,Brown Fibrous Bound	20%	Cellulose	75% 5% <1%	Gypsum Calc Carb Paint	None Detected
2370-13 Layer 1 B40106	Grout	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-13 Layer 2 B40106	Mortar	Homogeneous Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-14 Layer 1 B40107	Grout	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-14 Layer 2 B40107	Mortar	Homogeneous Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370-15 Layer 1 B40108	Grout	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-15 Layer 2 B40108	Mortar	Homogeneous Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-16 Layer 1 B40109	Grout	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-16 Layer 2 B40109	Mortar	Homogeneous White Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-17 Layer 1 B40110	Grout	Homogeneous Gray Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-17 Layer 2 B40110	Mortar	Homogeneous White Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
2370-18 B40111A	Vinyl Flooring	Homogeneous Tan Non-fibrous Tightly Bound			100%	Vinyl	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370-18 B40111B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
2370-19 B40112A	Vinyl Flooring	Homogeneous Tan Non-fibrous Tightly Bound			100%	Vinyl	None Detected
2370-19 B40112B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
2370-20 B40113A	Vinyl Flooring	Homogeneous Tan Non-fibrous Tightly Bound			100%	Vinyl	None Detected
2370-20 B40113B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
2370-21 B40114	Textured Ceiling	Heterogeneous White Non-fibrous Bound	2%	Cellulose	68% 25% 5%	Binder Calc Carb Paint	None Detected
2370-22 B40115	Textured Ceiling	Heterogeneous White Non-fibrous Bound	2%	Cellulose	68% 25% 5%	Binder Calc Carb Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Terracon Consultants, Inc.
2401 Brentwood Road, Suite 107
Raleigh, NC 27604

Lab Code: B224636
Date Received: 02-28-22
Date Analyzed: 03-02-22
Date Reported: 03-03-22

Project: Starway Village

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
2370-23 B40116	Textured Ceiling	Heterogeneous White Non-fibrous Bound	2%	Cellulose	68% 25% 5%	Binder Calc Carb Paint	None Detected
2370-24 B40117	Stucco Ceiling	Heterogeneous White Non-fibrous Bound			55% 40% 5%	Binder Calc Carb Paint	None Detected
2370-25 B40118	Stucco Ceiling	Heterogeneous White Non-fibrous Bound			55% 40% 5%	Binder Calc Carb Paint	None Detected
2370-26 B40119	Stucco Ceiling	Heterogeneous White Non-fibrous Bound			55% 40% 5%	Binder Calc Carb Paint	None Detected

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LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Information provided by customer includes customer sample ID and sample description.

ANALYST: Kathryn Wescott
Kathryn Wescott

APPROVED BY:
Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP TESTING
NVLAP LAB CODE 101768-0

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CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:	
ECEI Lab Code:	B221636
ECEI Lab I.D. Range:	B410062 - B410119

58

COMPANY INFORMATION	PROJECT INFORMATION
ECEI CLIENT #: 24578	Job Contact: Anthony Scialdone
Company: Terracon Consultants	Email / Tel: anthony.scialdone@terracon.com
Address:2401 Brentwood Road, Suite 107	Project Name: Starway Village
Raleigh NC, 27604	
Email:	PO #: 7021783Y
Office: 919-873-2211 Cell: 919-332-0785	STATE SAMPLES COLLECTED IN: NC

ECEI standard terms are Net 30 days

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	☐	☐	☐	☐	☒	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐

REPORTING INSTRUCTIONS	*Check boxes if analyst should follow reporting instructions
Separate Drywall / Joint Compound Layers	☐
Positive Stop	☒

REMARKS / SPECIAL INSTRUCTIONS:	☒ JB Accept Samples ☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/24/22	ME	02/28 ~~9:20~~ 9:30

By submitting samples, you are agreeing to ECEI's Terms and Conditions.
Samples will be disposed of 30 days after analysis

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: Terracon Consultants	Job Contact:
Project Name:	
Project ID #:	Tel:

SAMPLE ID#	HA #	DESCRIPTION	LOCATION
2374-1,2	1	Gray Sink Coating	
↓-3,4,5	2	12" Gray Floor Tile / Mastic	
↓-6,7,8,9,10	3	Textured Ceiling	
↓-11,12,13	4	Drywall / Joint Compound	
↓-14,15,16,17,18	5	Plaster	
↓-19,20	6	Gray Vinyl Flooring / Glue	
↓-21,22,23	7	Asphalt Roof Shingle / Tar Paper	
↓-24,25,26	8	Window Glazing	
2376-1,2,3	9	Roof Tar Paper / Mastic	
2376B-1,2,3	10	Asphalt Roof Shingle / Tar Paper	
2370-1,2,3	11	Asphalt Roof Shingle / Tar Paper	
-4,5,6	12	Chimney Mastic	
-7,8,9	13	Window Glazing	
-10,11,12	14	Drywall / Joint Compound	
-13,14,15	15	B&W Ceramic Tile Grout / Mortar	
-16,17	16	Gray Ceramic Tile Grout / Mortar	
-18,19,20	17	12" Tan Speck Vinyl Flooring / Glue	
-21,22,23	18	Textured Ceiling	
↓-24,25,26	19	Stucco Ceiling	

APPENDIX D

LEAD PAINT INSPECTION SAMPLE SUMMARY

Appendix D

LEAD PAINT INSPECTION SAMPLE SUMMARY
PROPOSED STARWAY VILLAGE SITE
2346, 2370, 2370B AND 2374 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA
Terracon Project No. 70217834

Sample #	Building	Material Description	Sample Location	Lead Concentration (% Weight)
2374-L1	2374 Carolina Beach Road	Beige plaster wall	Bedroom 3	0.0094%
2374-L2	2374 Carolina Beach Road	Beige drywall wall	Hall	0.0065%
2374-L3	2374 Carolina Beach Road	Green plaster wall	Bath 2	0.062%
2374-L4	2374 Carolina Beach Road	White drywall ceiling	Hall	0.0040%
2374-L5	2374 Carolina Beach Road	Green drywall wall	Kitchen	0.0065%
2374-L6	2374 Carolina Beach Road	White ceiling texture	Bedroom 2	0.016%
2374-L7	2374 Carolina Beach Road	White wood door casing	Bedroom 3	0.022%
2374-L8	**2374 Carolina Beach Road**	**Yellow drywall wall**	**Bath 1**	**<0.0048%**
2374-L9	2374 Carolina Beach Road	White wood window sill	Bedroom 3	0.023%
2374-L10	**2374 Carolina Beach Road**	**White wood door**	**Shed**	**<0.0056%**
2374-L11	2374 Carolina Beach Road	White wood sash	Exterior	4.2%
2374-L12	2374 Carolina Beach Road	White wood window casing	Exterior	2.9%
2374-L13	2374 Carolina Beach Road	Gray wood porch floor	Exterior	0.015%
2346-L1	2346 Carolina Beach Road (Brick building)	White wood door/window casing	Exterior	1.4%
2346-L2	2346 Carolina Beach Road (Brick building)	Red wood window cover	Exterior	0.048%
2346-L3	2346 Carolina Beach Road (Brick building)	White wood soffit	Exterior	3.4%
2346-L4	2346 Carolina Beach Road (Brick building)	Silver metal door	Exterior	0.016%
2370B-L1	**2370-B Carolina Beach Road**	**White wood siding**	**Exterior**	**<0.0076%**
2370B-L2	**2370-B Carolina Beach Road**	**White wood porch floor**	**Exterior**	**<0.0041%**
2370-L1	2370 Carolina Beach Road	Pink wood siding	Exterior	8.0%
2370-L2	2370 Carolina Beach Road	White wood porch soffit	Exterior	7.0%
2370-L3	2370 Carolina Beach Road	White wood window sash	Exterior	5.3%
2370-L4	2370 Carolina Beach Road	White drywall ceiling	Living Room	0.0055%
2370-L5	2370 Carolina Beach Road	Tan drywall wall	Dining Room	0.080%
2370-L6	2370 Carolina Beach Road	Blue drywall wall	Kitchen	0.0064%
2370-L7	2370 Carolina Beach Road	Blue wood wall	Back Porch	0.0056%
2370-L8	2370 Carolina Beach Road	Green drywall wall	Bath 1	0.013%
2370-L9	2370 Carolina Beach Road	Tan wood ceiling/wall	Back Porch	3.9%
2370-L10	2370 Carolina Beach Road	White wood window sash	Kitchen	0.21%
2370-L11	2370 Carolina Beach Road	White wood door/casing	Bedroom 2	0.036%
2370-L12	2370 Carolina Beach Road	White wood baseboard	Bedroom 1	1.2%
2370-L13	**2370 Carolina Beach Road**	**White texture ceiling**	**Bedroom 2**	**<0.0062%**
2370-L14	**2370 Carolina Beach Road**	**White stucco ceiling**	**Bath 1**	**<0.0075%**

***Bolded samples indicate samples with OSHA-regulated paints with lead concentrations above the respective detection limits.**

APPENDIX E

LEAD PAINT LABORATORY ANALYTICAL REPORT

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Terracon
2401 Brentwood Rd, Suite 107
Raleigh, NC 27604

Attn: Anthony Scialdone

Project: Starway Village

Lab Order ID: 71986540
Analysis ID: 71986540_PBP
Date Received: 2/28/2022
Date Reported: 3/2/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
2374-L1 71986540PBP_1	Beige plaster wall-bed 3	0.0564	94	**0.0094%**
2374-L2 71986540PBP_2	Beige drywall wall-hall	0.0612	65	**0.0065%**
2374-L3 71986540PBP_3	Green plaster wall-bath 2	0.0821	620	**0.062%**
2374-L4 71986540PBP_4	White drywall ceiling-hall	0.1070	40.	**0.0040%**
2374-L5 71986540PBP_5	Green drywall wall- kitchen	0.0780	65	**0.0065%**
2374-L6 71986540PBP_6	White ceiling texture-bed 2	0.0681	160	**0.016%**
2374-L7 71986540PBP_7	Wwhite wood door casing-bed 3	0.0549	220	**0.022%**
2374-L8 71986540PBP_8	Yellow drywall wall - bath 1	0.0841	< 48	**< 0.0048%**
2374-L9 71986540PBP_9	White wood sill- bed 3	0.0777	230	**0.023%**
2374-L10 71986540PBP_10	White wood door - shed	0.0717	< 56	**< 0.0056%**

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb). Unless indicated, areas and volumes were provided by the customer.

Matthew Caffey (33)

Analyst

Laboratory Director

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Terracon
2401 Brentwood Rd, Suite 107
Raleigh, NC 27604

Attn: Anthony Scialdone

Project: Starway Village

Lab Order ID: 71986540
Analysis ID: 71986540_PBP
Date Received: 2/28/2022
Date Reported: 3/2/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
2374-L11 71986540PBP_11	White wood window sash-ext	0.1256	42000	**4.2%**
2374-L12 71986540PBP_12	White wood window casing- ect	0.0928	29000	**2.9%**
2374-L13 71986540PBP_13	Gray wood floor- porch	0.0700	150	**0.015%**
2346-L1 71986540PBP_14	Whithe wood door/window casing- ext	0.0812	14000	**1.4%**
2346-L2 71986540PBP_15	Red wood window cover- ext	0.0916	480	**0.048%**
2346-L3 71986540PBP_16	White wood soffit-ext	0.1108	34000	**3.4%**
2346-L4 71986540PBP_17	Silver metal door- ext	0.0569	160	**0.016%**
2370B-L1 71986540PBP_18	White wood siding- ext	0.0523	< 76	**< 0.0076%**
2370B-L2 71986540PBP_19	White wood floor- porch	0.0987	< 41	**< 0.0041%**
2370-L1 71986540PBP_20	Pink wood siding- ext	0.0917	80000	**8.0%**

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Matthew Caffey (33)

Analyst

Laboratory Director

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Terracon
2401 Brentwood Rd, Suite 107
Raleigh, NC 27604

Attn: Anthony Scialdone

Project: Starway Village

Lab Order ID: 71986540
Analysis ID: 71986540_PBP
Date Received: 2/28/2022
Date Reported: 3/2/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
2370-L2 71986540PBP_21	White wood soffit- ext porch	0.0688	70000	**7.0%**
2370-L3 71986540PBP_22	White wood sash-ext	0.0783	53000	**5.3%**
2370-L4 71986540PBP_23	White drywall ceiling- living room	0.0767	55	**0.0055%**
2370-L5 71986540PBP_24	Tan drywall wall-dining room	0.0912	800	**0.080%**
2370-L6 71986540PBP_25	Blue drywall wall- kitchen	0.0813	64	**0.0064%**
2370-L7 71986540PBP_26	Blue wood wall- porch 1	0.0733	56	**0.0056%**
2370-L8 71986540PBP_27	green drywall wall- bath 1	0.0688	130	**0.013%**
2370-L9 71986540PBP_28	Tan drywall wall - dining room	0.0526	39000	**3.9%**
2370-L10 71986540PBP_29	White wood sash- kitchen	0.0707	2100	**0.21%**
2370-L11 71986540PBP_30	White wood door/casing-bed 2	0.0665	360	**0.036%**

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Matthew Caffey (33)

Analyst

Laboratory Director

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Terracon
2401 Brentwood Rd, Suite 107
Raleigh, NC 27604

Attn: Anthony Scialdone

Project: Starway Village

Lab Order ID: 71986540
Analysis ID: 71986540_PBP
Date Received: 2/28/2022
Date Reported: 3/2/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
2370-L12 71986540PBP_31	White wood baseboard-bed 1	0.1116	12000	**1.2%**
2370-L13 71986540PBP_32	White texture ceiling-bed 2	0.0643	< 62	**< 0.0062%**
2370-L14 71986540PBP_33	White stucco ceiling-bath 1	0.0536	< 75	**< 0.0075%**

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Matthew Caffey (33)

Analyst

Laboratory Director

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com | lab@sailab.com

Lab Use Only
Lab Order ID: 719865
Client Code: _____

Contact Information

Company Name:	Terracon
Address:	2401 Brentwood Road, Suite 107
	Raleigh, NC 27604
Contact:	Anthony Scialdone
Phone ☐:	(919) 332-0785
Fax ☐:	
Email ☐:	anthony.scialdone@terracon.com
PO Number:	70217834
Project Name/Number:	Starway Village

Billing/Invoice Information

Company:	Same
Address:	
Contact:	
Phone ☐:	
Fax ☐:	
Email ☐:	

Lead Test Types

Paint Chips by Flame AA (PBP) ☒	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	

Turn Around Times

3 Hours	☐	72 Hours	☒
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Sample ID #	Description/Location	Volume/Area	Comments
2374-L1	Beige Plaster Wall - Bed 3		
2374-L2	Beige Drywall Wall - Hall		
2374-L3	Green Plaster Wall - Bath 2		
2374-L4	White Drywall Ceiling - Hall		
2374-L5	Green Drywall Wall - Kitchen		
2374-L6	White Ceiling Texture - Bed 2		
2374-L7	White Wood Door Casing - Bed 3		
2374-L8	Yellow Drywall Wall - Bath 1	Accepted ☐	
2374-L9	White Wood Sill - Bed 3	Rejected ☐	
2374-L10	White Wood Door - Shed		
2374-L11	White Wood Window Sash - Ext		
2374-L12	White Wood Window Casing - Ext		
2374-L13	Gray Wood Floor - Porch		
2346-L1	White Wood Door/Window Casing - Ext		
2346-L2	Red Wood Window Cover - Ext		
2346-L3	White Wood Soffit - Ext		
2346-L4	Silver Metal Door - Ext		
2370B-L1	White Wood Siding - Ext		
2370B-L2	White Wood Floor - Porch		
2370-L1	Pink Wood Siding - Ext		

Total Number of Samples 33

Relinquished by	Date/Time	Received by	Date/Time
	~~2/24/2022 1600~~ 2/24/22		2/25 10:20

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Sample ID #	Description/Location	Volume/Area	Comments
2370-L2	White Wood Soffit - Ext Porch		
2370-L3	White Wood Sash - Ext		
2370-L4	White Drywall Ceiling - Living Room		
2370-L5	Tan Drywall Wall - Dining Room		
2370-L6	Blue Drywall Wall - Kitchen		
2370-L7	Blue Wood Wall - Porch 1		
2370-L8	Green Drywall Wall - Bath 1		
2370-L9	Tan Wood Ceiling/Wall - Porch 2		
2370-L10	White Wood Sash - Kitchen		
2370-L11	White Wood Door/Casing - Bed 2		
2370-L12	White Wood Baseboard - Bed 1		
2370-L13	White Texture Ceiling - Bed 2		
2370-L14	White Stucco Ceiling - Bath 1		

APPENDIX F

PHOTOGRAPHS



Photo #1 Non-asbestos gray sink coating (HA #1) in 2374 Carolina Beach Road



Photo #2 Non-asbestos 12"x12" Gray Floor Tile/Mastic (HA #2) in 2374 Carolina Beach Road



Photo #3 Non-asbestos Ceiling Texture (HA #3) in 2374 Carolina Beach Road



Photo #4 Non-asbestos Drywall/Joint Compound (HA #4) in 2374 Carolina Beach Road



Photo #5 Non-asbestos plaster (HA #5) in 2374 Carolina Beach Road



Photo #6 Non-asbestos Gray Vinyl Flooring/Glue (HA #6) in 2374 Carolina Beach Road



Photo #7 Non-asbestos Asphalt Roof Shingle/Tar Paper (HA #7) at 2374 Carolina Beach Road



Photo #8 Non-asbestos Window Glazing (HA #8) at 2374 Carolina Beach Road



Photo #9 Non-asbestos Roof Tar Paper/Mastic (HA #9) at 2346 Carolina Beach Road (Brick Building)



Photo #10 Non-asbestos Asphalt Roof Shingle/Tar Paper (HA #10) at 2370-B Carolina Beach Road



Photo #11 Non-asbestos Asphalt Roof Shingle/Tar Paper (HA #11) at 2370 Carolina Beach Road



Photo #12 Non-asbestos Chimney Mastic (HA #12) at 2370 Carolina Beach Road



Photo #13 Non-asbestos Window Glazing (HA #13) at 2370 Carolina Beach Road



Photo #14 Non-asbestos Drywall/Joint Compound (HA #14) at 2370 Carolina Beach Road



Photo #15 Non-asbestos Black and White Ceramic Floor Tile Grout/Mortar (HA #15) at 2370 Carolina Beach Road

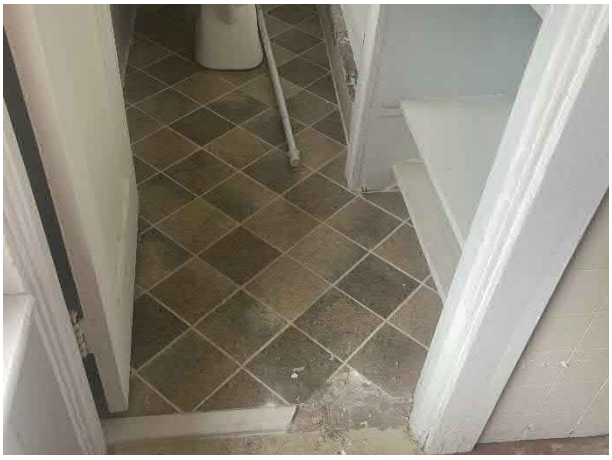


Photo #16 Non-asbestos Gray Ceramic Floor Tile Grout/Mortar (HA #16) at 2370 Carolina Beach Road



Photo #17 Non-asbestos 1'x1' Tan Speck Vinyl Flooring/Glue (HA #17) in 2370 Carolina Beach Road



Photo #18 Non-asbestos Ceiling Texture (HA #18) in 2370 Carolina Beach Road



Photo #19 Non-asbestos Stucco Ceiling (HA #19) in 2370 Carolina Beach Road



Photo #20 Inaccessible metal building at 2346 Carolina Beach Road



Photo #21 Assumed asbestos-containing interior building materials at 2346 Carolina Beach Road (metal building)



Photo #22 Assumed asbestos-containing interior building materials at 2346 Carolina Beach Road (brick building)



Photo #23 Ancillary building at 2346 Carolina Beach Road



Photo #24 Ancillary building at 2346 Carolina Beach Road

APPENDIX G

ACCREDITATION



Anthony J Scialdone
111 Tower Dr
Angier, NC 27501

133246

North Carolina
Asbestos Accreditation

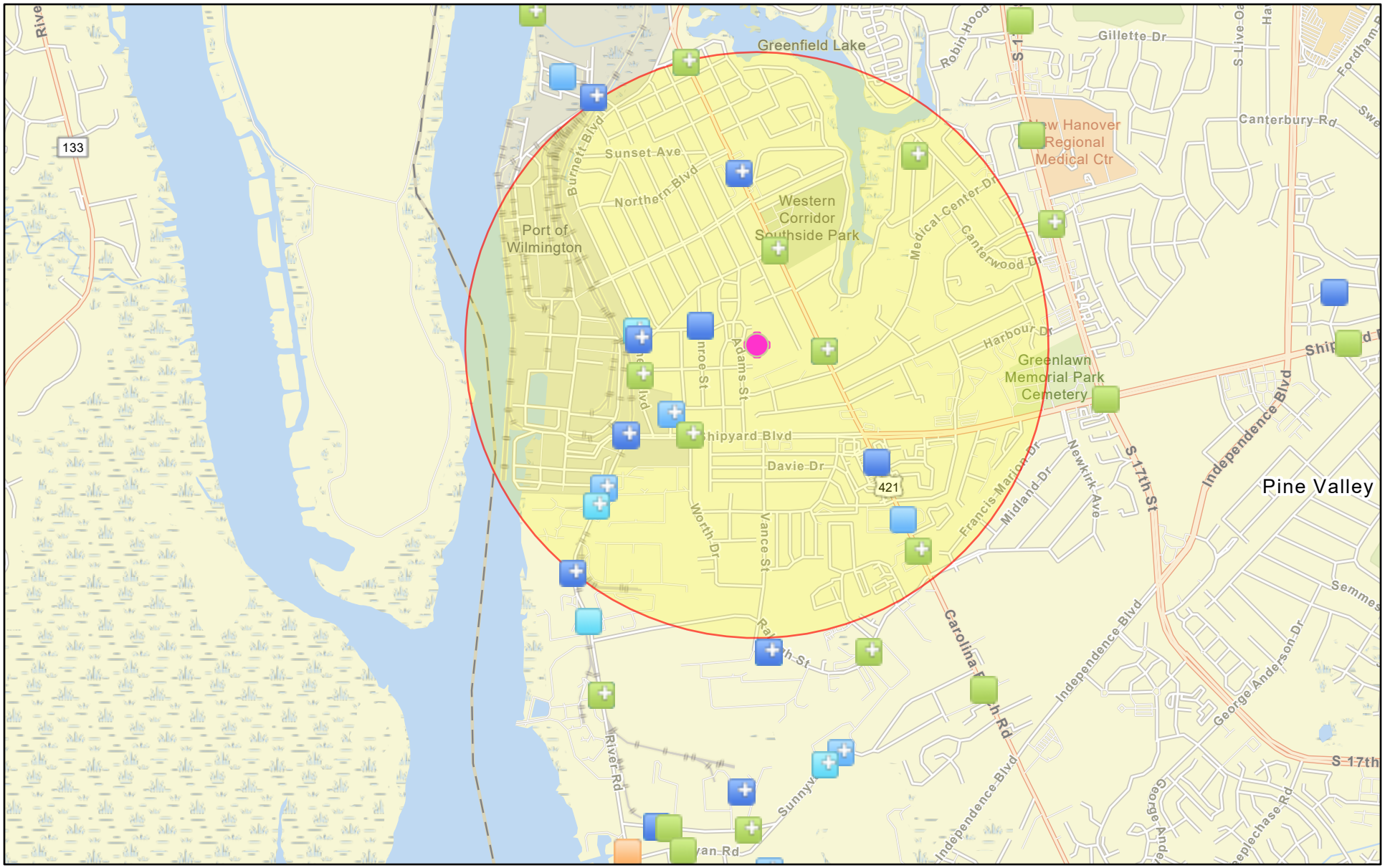
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06-30-2022			
DOB	**SEX**	**HT**	**WT**
11-06-1971	M	5'11"	230

CLASS	#	EXP
AIR MONITOR	80759	06-22
DESIGNER	40426	06-22
INSPECTOR	12284	06-22
MGMT PLANNER	20962	06-22

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EPA NEPAssist and Enviromapper Data

NEPAssist - Starway



November 1, 2022

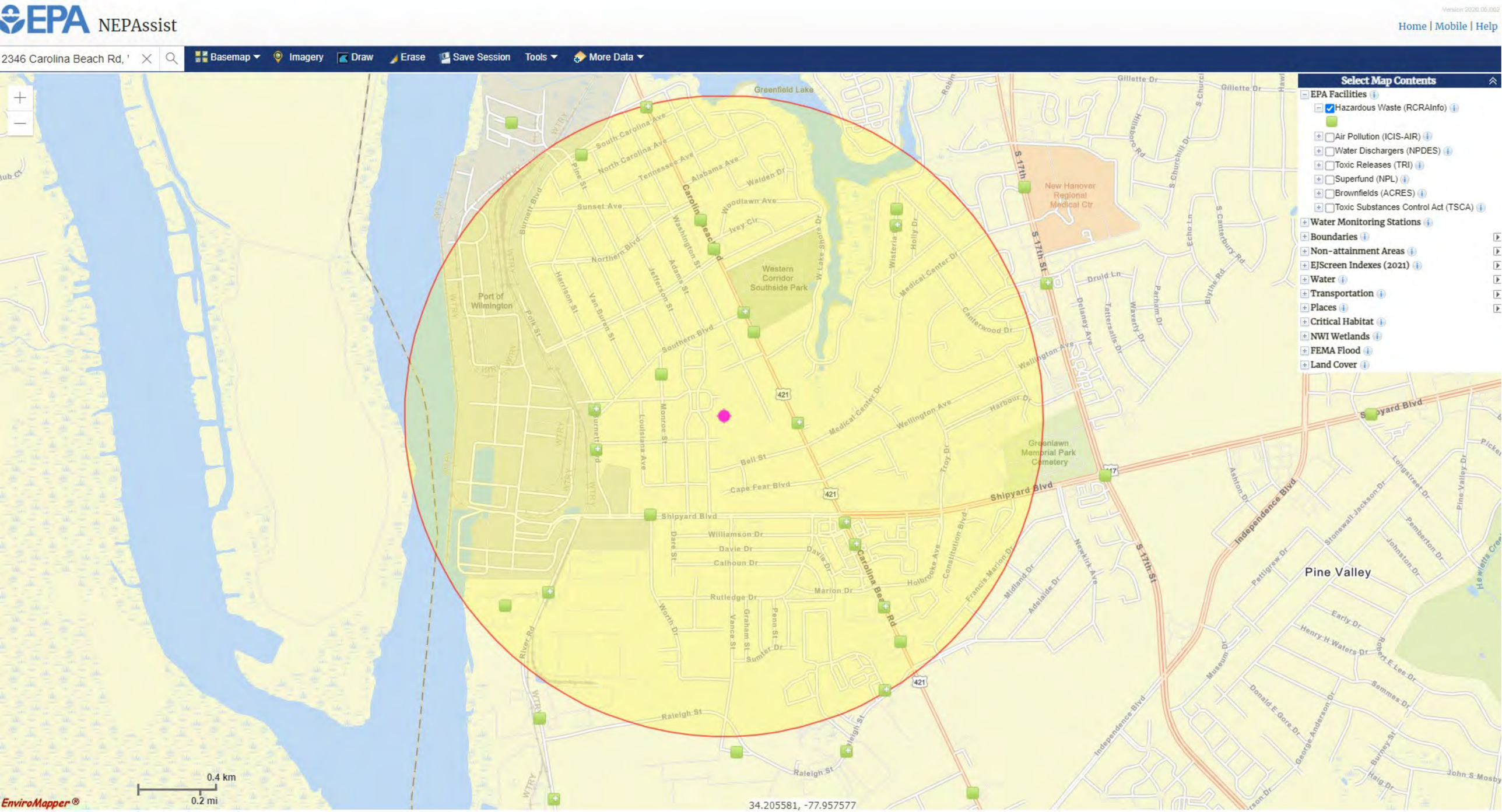
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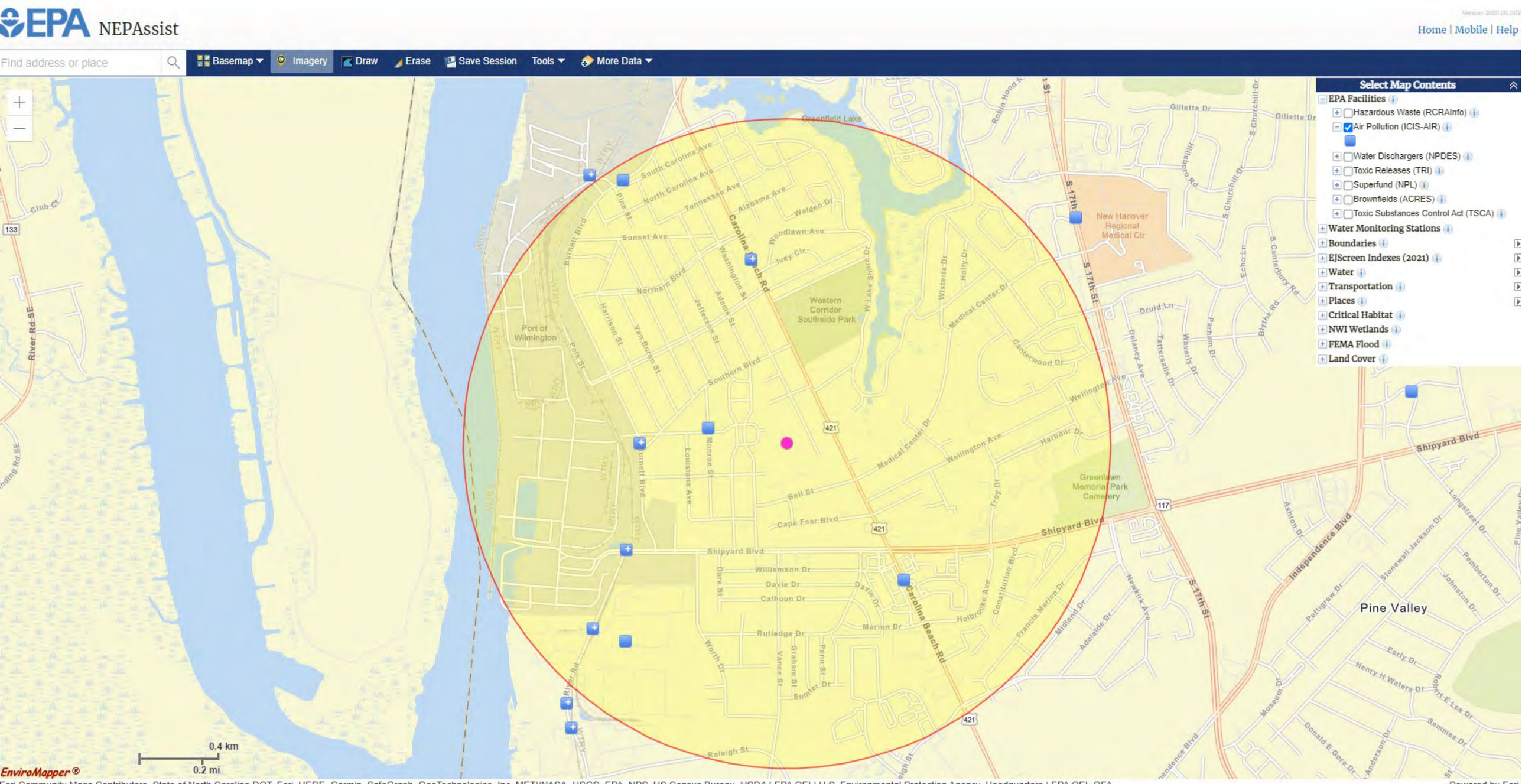
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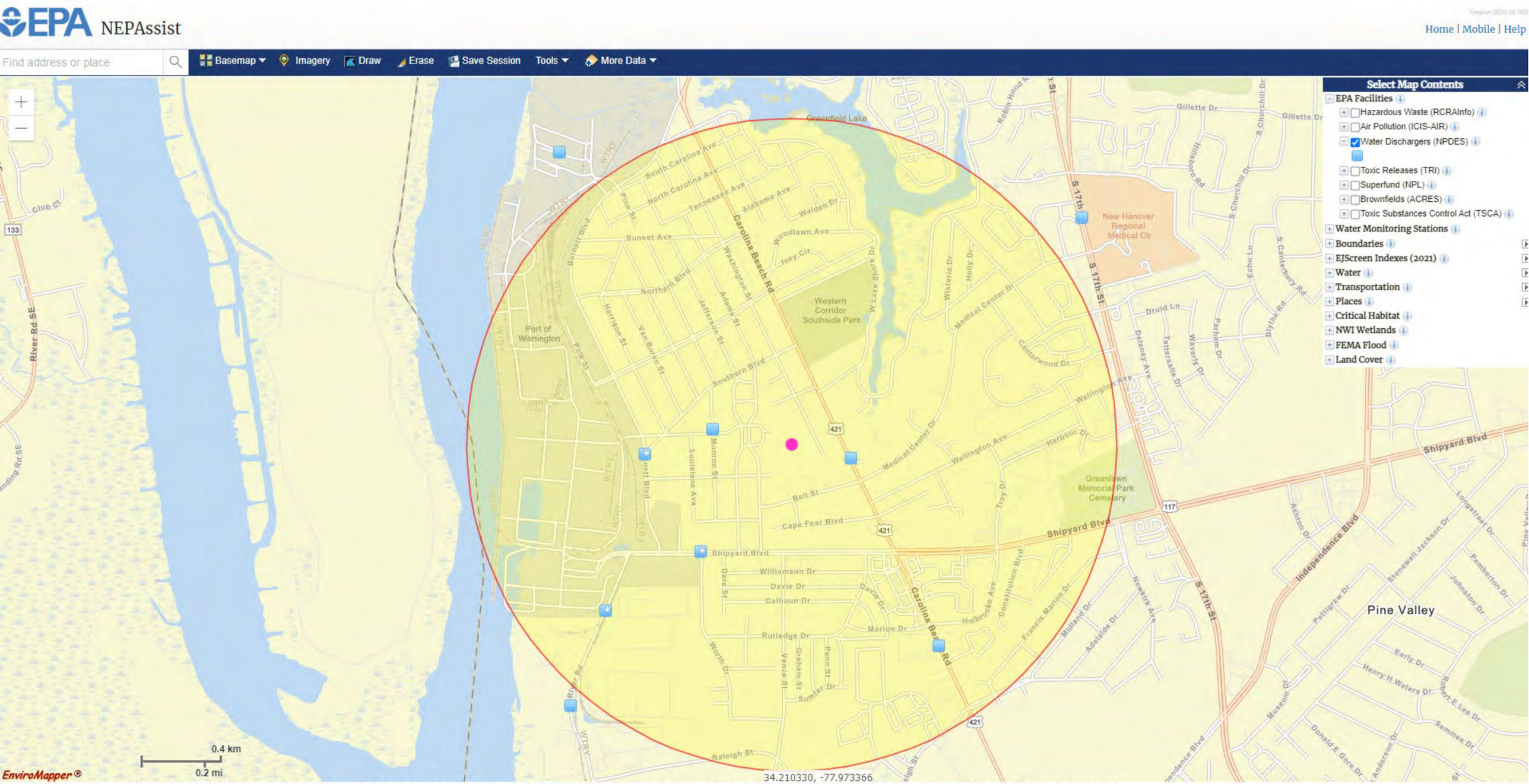
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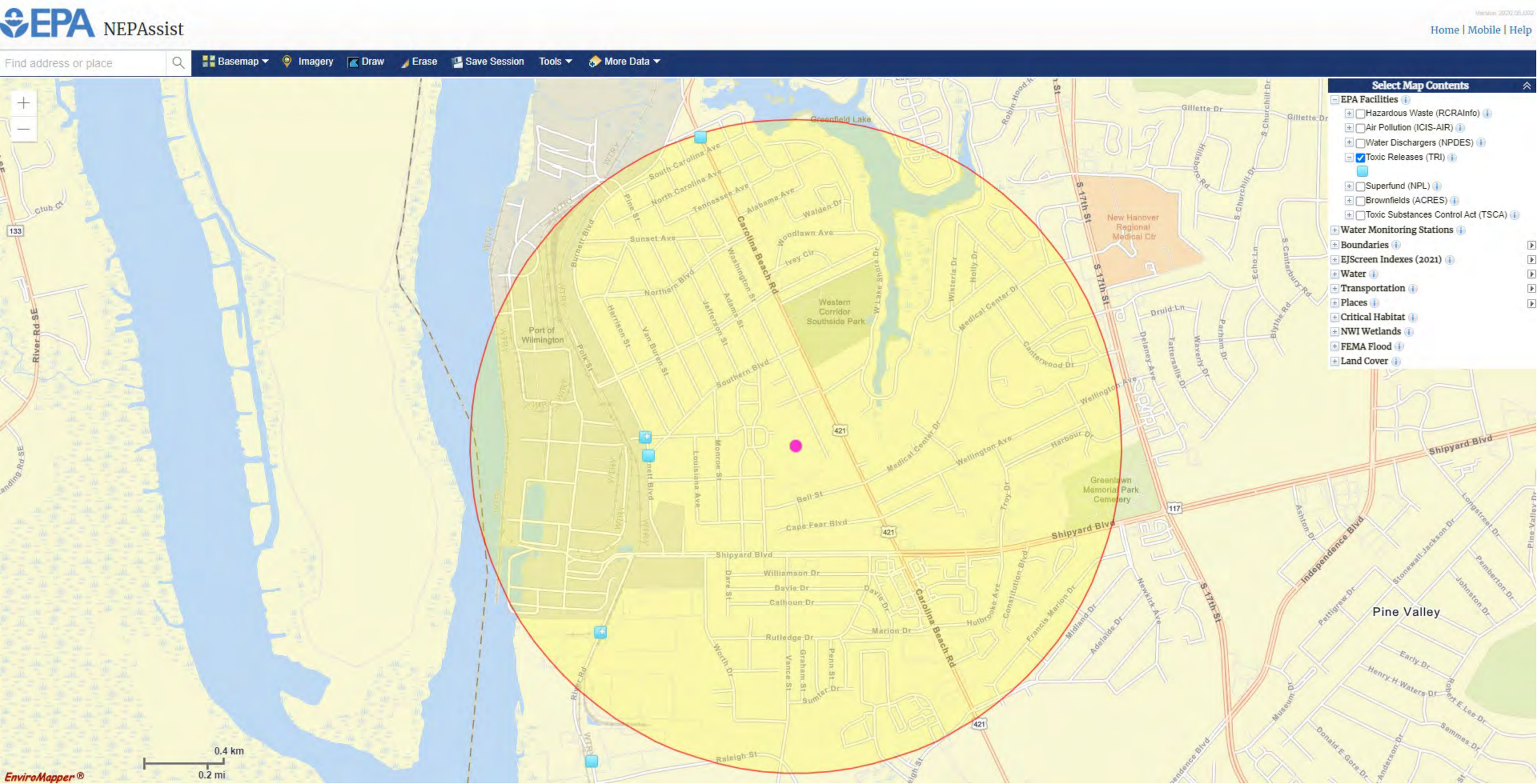
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- Hazardous Waste (RCRAInfo)
- Hazardous Waste (RCRAInfo)
- Air Pollution (ICIS-AIR)
- Air Pollution (ICIS-AIR)
- Toxic Releases (TRI)
- Toxic Releases (TRI)
- Water Dischargers (NPDES)
- Water Dischargers (NPDES)
- Project Buffer
- Starway - RCRA Sites
- Search Result (point)

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,


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Toxic Releases (TRI)
Superfund (NPL)
Brownfields (ACRES)
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Port of Wilmington
New Hanover Regional Medical Ctr
Greenlawn Memorial Park Cemetery
Pine Valley
Shipyard Blvd
Cape Fear Blvd
Bell St
Wellington Ave
Medical Center Dr
Independence Blvd
S 17th St
Raleigh St
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0.2 mi
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34.205581, -77.957577

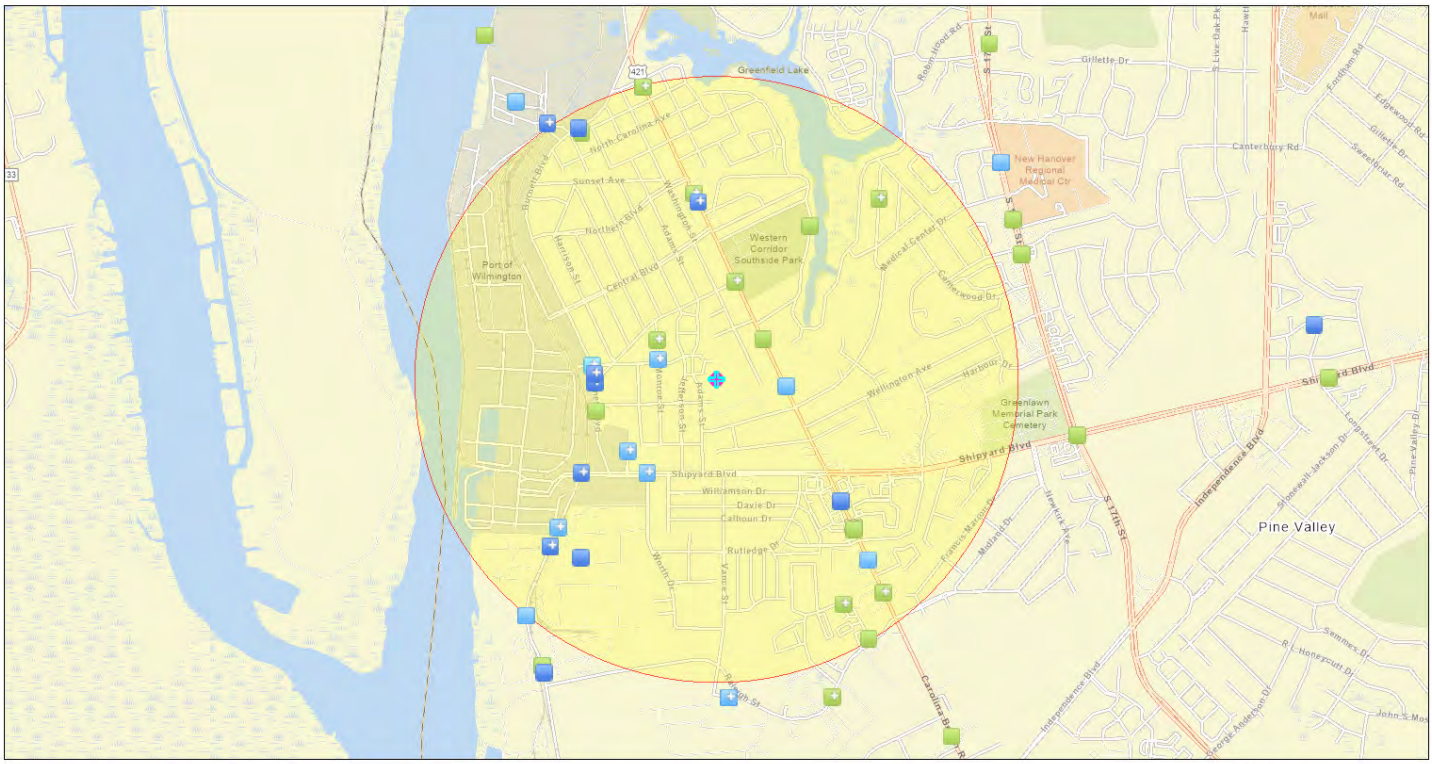

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Greenlawn Memorial Park Cemetery
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Carolina Beach Rd
Shipyard Blvd
Independence Blvd
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Medical Center Dr
Wellington Ave
Cape Fear Blvd
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Calhoun Dr
Rutledge Dr
Marion Dr
Raleigh St
Burnett Blvd
Southern Blvd
Northern Blvd
Sunset Ave
Woodlawn Ave
Ivey Cir
Walden Dr
Alabama Ave
Tennessee Ave
North Carolina Ave
South Carolina Ave
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Graham St
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Sumter Dr
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Holbrooke Ave
Constitution Blvd
Francis Marion Dr
Midland Dr
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Troy Dr
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Waverly Dr
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Gillette Dr
S Churchill Dr
Hillsboro Rd
Robin Hood Rd
Wisteria Dr
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Centerwood Dr
Ashton Dr
Longstreet Dr
Stonewall Jackson Dr
Pemberton Dr
Johnston Dr
Pettigrew Dr
Early Dr
Henry H Waters Dr
Robert E Lee Dr
Semmes Dr
Donald E Gore Dr
Anderson Dr
Museum Dr
Club Ct
River Rd SE
WTRY
421
117
133
0.4 km
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Northern Blvd
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Woodlawn Ave
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Williamson Dr
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Harrison St
Polk St
Monroe St
Louisiana Ave
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Vance St
Graham St
Penn St
Sumter Dr
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River Rd SE
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Ashton Dr
Pemberton Dr
Johnston Dr
Early Dr
Henry H Waters Dr
Robert E Lee Dr
Semmes Dr
Museum Dr
Donald E Gore Dr
Anderson Dr
Pine Valley Dr
River Rd SE
Club Ct
Landing Rd SE
133
421
117
0.4 km
0.2 mi
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NEPAssist Report

Starway - RCRA Sites



November 1, 2022

Water Dischargers (NPDES)
Water Dischargers (NPDES)
Air Pollution (ICIS-AIR)
Air Pollution (ICIS-AIR)
Hazardous Waste (RCRAInfo)
Hazardous Waste (RCRAInfo)
Toxic Releases (TRI)
Toxic Releases (TRI)
Project Buffer
Starway - RCRA Sites
Search Result (point)

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0 0.38 0.75 1.5 km

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Project Location	34.196034,-77.940754
Within 1 mile of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Federal Land?	no
Within 1 mile of an impaired stream?	yes
Within 1 mile of an impaired waterbody?	yes
Within 1 mile of a waterbody?	yes
Within 1 mile of a stream?	yes
Within 1 mile of an NWI wetland?	Available Online
Within 1 mile of a Brownfields site?	no
Within 1 mile of a Superfund site?	no
Within 1 mile of a Toxic Release Inventory (TRI) site?	yes
Within 1 mile of a water discharger (NPDES)?	yes
Within 1 mile of a hazardous waste (RCRA) facility?	yes
Within 1 mile of an air emission facility?	yes

Within 1 mile of a school?	yes
Within 1 mile of an airport?	no
Within 1 mile of a hospital?	no
Within 1 mile of a designated sole source aquifer?	no
Within 1 mile of a historic property on the National Register of Historic Places?	no
Within 1 mile of a Toxic Substances Control Act (TSCA) site?	no
Within 1 mile of a Land Cession Boundary?	no
Within 1 mile of a tribal area (lower 48 states)?	no
Within 1 mile of the service area of a mitigation or conservation bank?	yes
Within 1 mile of the service area of an In-Lieu-Fee Program?	yes
Within 1 mile of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 1 mile of a Munitions Response Site?	no
Within 1 mile of an Essential Fish Habitat (EFH)?	no
Within 1 mile of a Habitat Area of Particular Concern (HAPC)?	yes
Within 1 mile of an EFH Area Protected from Fishing (EFHA)?	yes
Within 1 mile of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 1 mile of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 1 mile of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 11/1/2022 3:25:42 PM

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34.202037, -77.953677

Clear

Select EPA program system(s) to map:

- [x] Air Pollution (ICIS-AIR)(14)
- [ ] Superfund Sites (NPL)(0)
- [x] Toxic Releases (TRI)(4)
- [x] Hazardous Waste (RCRAInfo)(25)
- [x] Water Dischargers (NPDES)(10)
- [ ] Brownfields (ACRES)(0)
- [ ] Biennial Reporting (BR)(3)
- [ ] Toxic Substances Control Act (TSCA)(0)

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(•) All ( ) 20 per page

Single facility

Clustered facilities

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Madison St
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Jefferson St
Adams St
Monroe St
Jackson St
Central Blvd
Carolina Beach Rd
Ivey Cir
Morningside Dr
Stadium Dr
Western Corridor Southside Park
W Lake Shore
E Lake Shore Dr
Wisteria Dr
Holly Dr
Yaupon Dr
Cypress Dr
Medical Center Dr
Village Dr
Cameron Ct
Canterwood Dr
Glen M
Burnett Blvd
Harrison St
Van Buren St
Polk St
Port of Wilmington
Washington St
Southern Blvd
Bordeaux Ave
Hart St
Physicians Dr
Wellington Ave
Flint Dr
Food Lion
Silver Stream Ln
Buckingham Ave
Harbour Dr
Virginia Ave
Cross St
Maryland Ave
Louisiana Ave
Florida Ave
Delaware Ave
Bell St
Wonder Way
Greenla Memorial Cemete
Cape Fear Blvd
Shipyard Blvd
Cape Fear River
Williamson Dr
Dare St
Davie Dr
Calhoun Dr
Harbor Freight Tools
Troy Dr
Constitution Blvd
Holbrooke Ave
Monitor Dr
N Southwood Rd
Southwood Rd
Francis Marion Dr
Street No
WTRY
421
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43 ft
67 ft
51 ft
25 ft

0 300 600ft

New Hanover County, State of North Carolina DOT, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS,...

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Detailed Facility Report

Facility Summary

APEX OIL COMPANY

3314 RIVER ROAD, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110001480317
EPA Region: 04
Latitude: 34.187436
Longitude: -77.952706
Locational Data Source: FRS
Industries: Merchant Wholesalers, Nondurable Goods
Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
Compliance Monitoring Activities (5 years)	15
Date of Last Compliance Monitoring Activity	09/01/2022
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--
Statute	**CWA**
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	1
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	11/20/2009
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): Operating Synthetic Minor (NC0000003706500147)
Clean Water Act (CWA): Minor, Permit Effective (NC0089753)
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCD091566562)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): 9275911
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): 28412PXLCX3314R
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110001480317					N	34.187436	-77.952706
ICIS-Air	CAA	NC0000003706500147	Synthetic Minor Emissions	Operating	CAAGACTM, CAAMACT, CAANSPS, CAANSPSM, CAASIP		N	34.18763	-77.95058
EIS	CAA	9275911					N	34.187098	-77.952463
ICIS-NPDES	CWA	NC0089753	Minor: NPDES Individual Permit	Effective		04/30/2023	N	34.1878	-77.9508
TRI	EP313	28412PXLCX3314R	Toxics Release Inventory	Last Reported for 2013			N	34.18763	-77.95058
RCRAInfo	RCRA	NCD091566562	VSQG	Active (H)			N	34.100942	-77.921695

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110001480317	APEX OIL COMPANY	3314 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS-Air	CAA	NC0000003706500147	APEX OIL COMPANY, INC.	3314 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
EIS	CAA	9275911	APEX OIL COMPANY, INC.	3314 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS-NPDES	CWA	NC0089753	WILMINGTON TERMINAL	3314 RIVER RD, WILMINGTON, NC 28412	New Hanover County
TRI	EP313	28412PXLCX3314R	APEX OIL CO WILMINGTON	3314 RIVER RD, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCD091566562	APEX OIL COMPANY	3314 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
TRI	28412PXLCX3314R	5171	Petroleum Bulk Stations & Terminals
ICIS-Air	NC0000003706500147	4226	Special Warehousing And Storage

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	28412PXLCX3314R	424710	Petroleum Bulk Stations and Terminals
EIS	9275911	49311	General Warehousing and Storage
ICIS-Air	NC0000003706500147	493110	General Warehousing and Storage
RCRAInfo	NCD091566562	493190	Other Warehousing and Storage

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description
NC0089753	401	General provisions

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	09/01/2022	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	07/27/2022	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	02/23/2022	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	02/01/2022	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	08/09/2021	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	06/24/2021	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	03/08/2021	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	02/01/2021	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	08/05/2020	

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	07/27/2020	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	03/02/2020	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	01/30/2020	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	09/10/2019	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	08/05/2019	
CAA	NC0000003706500147	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	08/30/2018	

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CAA	NC0000003706500147	No	10/29/2022	0	10/28/2022
CWA	NC0089753	No	06/30/2022	0	10/28/2022
RCRA	NCD091566562	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
CAA (Source ID: NC0000003706500147)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violatic Identified
	HPV History												
	Violation Type / Agency / Programs / Pollutants												

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 1
CWA (Source ID: NC0089753)		07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-10/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	Undeterm
	Quarterly Noncompliance Report History													

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD091566562)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
CWA	ICIS-NPDES	NC0089753	Base Program - Notice of Violation	State	10/12/2018

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
030300050503	Brunswick River-Cape Fear River	CAPE FEAR RIVER	No	No	--	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
NC	2022	NC18-(71)a3	CAPE FEAR RIVER	Impaired - 303(d) Listed - With Restoration Plan	METALS (OTHER THAN MERCURY) | ORGANIC ENRICHMENT/OXYGEN DEPLETION	--	Not Supporting	--	Fully Supporting	--
NC	2022	NC18-74-(61)	Northeast Cape Fear River	Good - With Restoration Plan	--	--	Insufficient Information	--	Fully Supporting	Insufficient Information

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

Air Pollutant Report TRI Pollution Prevention Report

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
28412PXLCX3314R	2013	3,055	0	0	--	--	3,055	--
28412PXLCX3314R	2012	3,049	0	0	--	--	3,049	--

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
1,2,4-Trimethylbenzene	–	–	--	–	–	–	--	–	–	--
Benzene	–	–	--	–	–	–	--	–	755	755
Cyclohexane	–	–	--	–	–	–	--	–	–	--
Ethylbenzene	–	–	--	–	–	–	--	–	255	255
Methyl tert-butyl ether	–	–	--	–	–	–	--	–	–	--
Mixture	–	–	--	–	–	–	--	–	–	--
Naphthalene	–	–	--	–	–	–	--	–	–	--
Toluene	–	–	--	–	–	–	--	–	755	755
Xylene (mixed isomers)	–	–	--	–	–	–	--	–	255	255
n-Hexane	–	–	--	–	–	–	--	–	1,035	1,029

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	2,642
Population Density	1,160/sq.mi.
Housing Units in Area	1,093

General Statistics (ACS (American Community Survey))	
Total Persons	2,709
Percent People of Color	48%
Households in Area	1,054
Households on Public Assistance	17
Persons With Low Income	1,535
Percent With Low Income	57%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.187436
Center Longitude	-77.952706
Land Area	75%
Water Area	25%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	198 (18.79%)
$15,000 - $25,000	189 (17.93%)
$25,000 - $50,000	261 (24.76%)
$50,000 - $75,000	176 (16.7%)
Greater than $75,000	230 (21.82%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	238 (9%)
Minors 17 years and younger	652 (25%)
Adults 18 years and older	1,990 (75%)
Seniors 65 years and older	217 (8%)

Race Breakdown (U.S. Census) - Persons (%)	
White	1,530 (58%)
African-American	579 (22%)
Hispanic-Origin	619 (23%)
Asian/Pacific Islander	14 (1%)
American Indian	33 (1%)
Other/Multiracial	486 (18%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	117 (6.67%)
9th through 12th Grade	171 (9.75%)
High School Diploma	421 (24%)
Some College/2-year	417 (23.77%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	447 (25.48%)

LAST UPDATED ON SEPTEMBER 15, 2022

Detailed Facility Report

Facility Summary

INVISTA SARL WILMINGTON TERMINAL

3325 RIVER ROAD, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110040900665
EPA Region: 04
Latitude: 34.18805
Longitude: -77.95037
Locational Data Source: TRIS
Industries: Merchant Wholesalers, Nondurable Goods
Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
Compliance Monitoring Activities (5 years)	11
Date of Last Compliance Monitoring Activity	05/04/2022
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--
Statute	**CWA**
Compliance Monitoring Activities (5 years)	1
Date of Last Compliance Monitoring Activity	08/11/2021
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	07/17/2014
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): Operating Synthetic Minor (NC0000003706500377), Permanently Closed (NC0000003706500252), Permanently Closed (NC0000003706500342)

Clean Water Act (CWA): Minor, Permit Effective (NC0076732)

Resource Conservation and Recovery Act (RCRA): Active SQG, (NCD000772046), Inactive Other, (NCD980845200)

Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): 8421911, 10617111

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): 28412KCHPT3325R

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110040900665					N	34.18805	-77.95037
ICIS		6386848					N	34.173954	-77.94913
ICIS-Air	CAA	NC0000003706500377	Synthetic Minor Emissions	Operating	CAANSPSM, CAASIP		N	34.18805	-77.95037
ICIS-Air	CAA	NC0000003706500252		Permanently Closed			N	34.18805	-77.95037
ICIS-Air	CAA	NC0000003706500342		Permanently Closed			N	34.18805	-77.95037
EIS	CAA	8421911					N	34.187966	-77.952133
EIS	CAA	10617111					N	34.183483	-77.95267
ICIS-NPDES	CWA	NC0076732	Minor: NPDES Individual Permit	Effective		12/31/2026	N	34.1883	-77.9514
TRI	EP313	28412KCHPT3325R	Toxics Release Inventory	Last Reported for 2013			N	34.18805	-77.95037
RCRAInfo	RCRA	NCD000772046	SQG	Active (H)			N	34.169584	-77.947827
RCRAInfo	RCRA	NCD980845200	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110040900665	INVISTA SARL WILMINGTON TERMINAL	3325 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS		6386848	FLINT HILLS RESOURCES LP	3334 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS-Air	CAA	NC0000003706500377	CHEMSERVE TERMINAL OF WILMINGTON, LLC	3325 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS-Air	CAA	NC0000003706500252	FLINT HILLS RESOURCES, LP	3308 RIVER ROAD, WILMINGTON, NC 284126242	New Hanover County
ICIS-Air	CAA	NC0000003706500342	INVISTA S.A.R.L. ** INACTIVE **	3325 RIVER ROAD, WILMINGTON, NC 284126242	New Hanover County
EIS	CAA	8421911	FLINT HILLS RESOURCES, LP	3308 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
EIS	CAA	10617111	INVISTA S.A.R.L.	3325 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
ICIS-NPDES	CWA	NC0076732	NEW HANOVER TERMINAL	3308 RIVER RD, WILMINGTON, NC 28401	New Hanover County
TRI	EP313	28412KCHPT3325R	INVISTA SARL WILMINGTON TERMINAL	3325 RIVER RD, WILMINGTON, NC 284126243	New Hanover County
RCRAInfo	RCRA	NCD000772046	CHEMSERVE TERMINAL OF WILMINGTON, LLC	3325 RIVER ROAD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD980845200	INVISTA S.A.R.L , WILMINGTON SOUTH TERMINAL	3334 RIVER RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
TRI	28412KCHPT3325R	5169	Chemicals & Allied Products
TRI	28412KCHPT3325R	5171	Petroleum Bulk Stations & Terminals
ICIS-Air	NC0000003706500252	5169	Chemicals & Allied Products
ICIS-Air	NC0000003706500342	5171	Petroleum Bulk Stations & Terminals
ICIS-Air	NC0000003706500377	4226	Special Warehousing And Storage
ICIS-Air	NC0000003706500377	5169	Chemicals & Allied Products
ICIS-NPDES	NC0076732	5171	Petroleum Bulk Stations & Terminals

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
EIS	10617111	42471	Petroleum Bulk Stations and Terminals
TRI	28412KCHPT3325R	424690	Other Chemical and Allied Products Merchant Wholesalers
TRI	28412KCHPT3325R	424710	Petroleum Bulk Stations and Terminals
EIS	8421911	42512	Wholesale Trade Agents and Brokers
ICIS-Air	NC0000003706500252	425120	Wholesale Trade Agents and Brokers
ICIS-Air	NC0000003706500342	424710	Petroleum Bulk Stations and Terminals
ICIS-Air	NC0000003706500377	424690	Other Chemical and Allied Products Merchant Wholesalers
ICIS-Air	NC0000003706500377	493190	Other Warehousing and Storage
RCRAInfo	NCD000772046	424690	Other Chemical and Allied Products Merchant Wholesalers
RCRAInfo	NCD980845200	424690	Other Chemical and Allied Products Merchant Wholesalers

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description
NC0076732	401	General provisions

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
CAA	NC0000003706500252	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	05/04/2022	
CAA	NC0000003706500252	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	09/01/2020	
CAA	NC0000003706500252	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	06/25/2019	
CAA	NC0000003706500252	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	09/05/2018	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	01/26/2022	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	01/26/2022	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	10/28/2021	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	02/01/2021	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	PCE Off-Site	State	02/01/2021	
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	PCE Stack Test	State	12/15/2020	Findings: Pending
CAA	NC0000003706500377	ICIS-Air	Inspection/Evaluation	FCE On-Site	State	12/15/2020	
CWA	NC0076732	ICIS-NPDES	Inspection/Evaluation	Base Program - Evaluation	State	08/11/2021	

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CAA	NC0000003706500377	No	10/29/2022	0	10/28/2022
CAA	NC0000003706500252	No	10/29/2022	0	10/28/2022
CAA	NC0000003706500342	No	10/29/2022	0	10/28/2022
CWA	NC0076732	No	06/30/2022	0	10/28/2022
RCRA	NCD000772046	No	10/29/2022	0	10/28/2022
RCRA	NCD980845200	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
CAA (Source ID: NC0000003706500252)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violatio Identified
	HPV History												
	Violation Type / Agency / Programs / Pollutants												
CAA (Source ID: NC0000003706500342)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violatio Identified
	HPV History												
	Violation Type / Agency / Programs / Pollutants												
CAA (Source ID: NC0000003706500377)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violatio Identified
	HPV History												
	Violation Type / Agency / Programs / Pollutants												

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 1
CWA (Source ID: NC0076732)		07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-10/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	Undeterm
	Quarterly Noncompliance Report History													

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD000772046)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												
RCRA (Source ID: NCD980845200)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Formal Enforcement Actions Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
030300050503	Brunswick River-Cape Fear River	CAPE FEAR RIVER	No	No	--	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
NC	2022	NC18-(71)a3	CAPE FEAR RIVER	Impaired - 303(d) Listed - With Restoration Plan	METALS (OTHER THAN MERCURY) | ORGANIC ENRICHMENT/OXYGEN DEPLETION	--	Not Supporting	--	Fully Supporting	--
NC	2022	NC18-74-(61)	Northeast Cape Fear River	Good - With Restoration Plan	--	--	Insufficient Information	--	Fully Supporting	Insufficient Information

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

Air Pollutant Report TRI Pollution Prevention Report

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
28412KCHPT3325R	2013	4,200	0	0	--	--	4,200	--
28412KCHPT3325R	2012	3,863	0	0	--	--	3,863	250

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--
Cumene	--	--	--	--	--	--	--	--	--	--
Cyclohexane	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--
Polycyclic aromatic compounds	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--
Xylene (mixed isomers)	--	--	--	--	--	--	--	--	--	--
n-Hexane	--	--	--	--	--	--	--	--	--	--
p-Xylene	--	--	--	--	--	--	--	--	4,200	4,113

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	3,184
Population Density	1,242/sq.mi.
Housing Units in Area	1,321

General Statistics (ACS (American Community Survey))	
Total Persons	3,076
Percent People of Color	50%
Households in Area	1,196
Households on Public Assistance	22
Persons With Low Income	1,780
Percent With Low Income	58%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18805
Center Longitude	-77.95037
Land Area	80%
Water Area	20%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	233 (19.48%)
$15,000 - $25,000	214 (17.89%)
$25,000 - $50,000	312 (26.09%)
$50,000 - $75,000	198 (16.56%)
Greater than $75,000	239 (19.98%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	290 (9%)
Minors 17 years and younger	793 (25%)
Adults 18 years and older	2,391 (75%)
Seniors 65 years and older	281 (9%)

Race Breakdown (U.S. Census) - Persons (%)	
White	1,852 (58%)
African-American	689 (22%)
Hispanic-Origin	758 (24%)
Asian/Pacific Islander	19 (1%)
American Indian	39 (1%)
Other/Multiracial	585 (18%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	133 (6.71%)
9th through 12th Grade	196 (9.89%)
High School Diploma	487 (24.58%)
Some College/2-year	483 (24.38%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	478 (24.13%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA REFRESH INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

FLINT HILL RESOURCES LP- W W TP

3308 RIVER ROAD, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110031353229
EPA Region: 04
Latitude: 34.18825
Longitude: -77.95027
Locational Data Source: FRS
Industries: Waste Management and Remediation Services
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	12/08/2009
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCR000140764)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110031353229					N	34.18825	-77.95027
RCRAInfo	RCRA	NCR000140764	VSQG	Active (IT)			N	34.300942	-77.921695

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110031353229	FLINT HILL RESOURCES LP- W W TP	3308 RIVER ROAD, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCR000140764	FLINT HILLS RESOURCES LP WATER TREATMENT PLT	3308 RIVER RD, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCR000140764	56299	All Other Waste Management Services

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000140764	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000140764)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EPA's Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	99.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	3,256
Population Density	1,256/sq.mi.
Housing Units in Area	1,353

General Statistics (ACS (American Community Survey))	
Total Persons	3,115
Percent People of Color	49%
Households in Area	1,213
Households on Public Assistance	23
Persons With Low Income	1,798
Percent With Low Income	58%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18825
Center Longitude	-77.95027
Land Area	80%
Water Area	20%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	236 (19.47%)
$15,000 - $25,000	217 (17.9%)
$25,000 - $50,000	316 (26.07%)
$50,000 - $75,000	201 (16.58%)
Greater than $75,000	242 (19.97%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	293 (9%)
Minors 17 years and younger	805 (25%)
Adults 18 years and older	2,451 (75%)
Seniors 65 years and older	294 (9%)

Race Breakdown (U.S. Census) - Persons (%)	
White	1,909 (59%)
African-American	709 (22%)
Hispanic-Origin	762 (23%)
Asian/Pacific Islander	20 (1%)
American Indian	40 (1%)
Other/Multiracial	588 (18%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	134 (6.67%)
9th through 12th Grade	199 (9.91%)
High School Diploma	494 (24.6%)
Some College/2-year	490 (24.4%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	484 (24.1%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

PHOENIX INT'L FREIGHT SERVICES LTD

1 SHIPYARD BLVD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110045416670
EPA Region: 04
Latitude: 34.19156
Longitude: -77.94857
Locational Data Source: FRS
Industries: Support Activities for Transportation
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCP031412010)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110045416670					N	34.19156	-77.94857
RCRAInfo	RCRA	NCP031412010	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110045416670	PHOENIX INT'L FREIGHT SERVICES LTD	1 SHIPYARD BLVD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCP031412010	PHOENIX INT'L FREIGHT SERVICES LTD	1 SHIPYARD BLVD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCP031412010	48851	Freight Transportation Arrangement

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCP031412010	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCP031412010)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	99.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	4,013
Population Density	1,491/sq.mi.
Housing Units in Area	1,724

General Statistics (ACS (American Community Survey))	
Total Persons	3,803
Percent People of Color	45%
Households in Area	1,531
Households on Public Assistance	32
Persons With Low Income	2,030
Percent With Low Income	54%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19156
Center Longitude	-77.94857
Land Area	87%
Water Area	13%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	285 (18.62%)
$15,000 - $25,000	249 (16.26%)
$25,000 - $50,000	441 (28.8%)
$50,000 - $75,000	264 (17.24%)
Greater than $75,000	292 (19.07%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	330 (8%)
Minors 17 years and younger	905 (23%)
Adults 18 years and older	3,107 (77%)
Seniors 65 years and older	457 (11%)

Race Breakdown (U.S. Census) - Persons (%)	
White	2,572 (64%)
African-American	767 (19%)
Hispanic-Origin	777 (19%)
Asian/Pacific Islander	30 (1%)
American Indian	43 (1%)
Other/Multiracial	603 (15%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	133 (5.26%)
9th through 12th Grade	239 (9.45%)
High School Diploma	643 (25.42%)
Some College/2-year	628 (24.82%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	630 (24.9%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

SPRINGER EUBANKS OIL CO

123 W SHIPYARD BLVD., WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110006720398
EPA Region: 04
Latitude: 34.19157
Longitude: -77.94476
Locational Data Source: FRS
Industries: Nonstore Retailers
Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	–
Date of Last Compliance Monitoring Activity	–
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	–
Formal Enforcement Actions (5 years)	–
Penalties from Formal Enforcement Actions (5 years)	–
EPA Cases (5 years)	–
Penalties from EPA Cases (5 years)	–

Statute	RCRA
Compliance Monitoring Activities (5 years)	–
Date of Last Compliance Monitoring Activity	–
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	–
Formal Enforcement Actions (5 years)	–
Penalties from Formal Enforcement Actions (5 years)	–
EPA Cases (5 years)	–
Penalties from EPA Cases (5 years)	–

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): Minor, Permit Effective (NCG080161)
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCP011514002)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110006720398					N	34.19157	-77.94476

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
ICIS		5413629					N	34.191562	-77.945666
ICIS-NPDES	CWA	NCG080161	Minor, General Permit Covered Facility	Effecti-e		06/30/2026	N	34.1922	-77.9447
RCRAInfo	RCRA	NCP011514002	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110006720398	SPRINGER EUBANKS OIL CO	123 W SHIPYARD BLVD., WILMINGTON, NC 28412	New Hanover County
ICIS		5413629	SPRINGER EUBANK CO, INC.	123 W SHIPYARD BLVD., WILMINGTON, NC 28403	New Hanover County
ICIS-NPDES	CWA	NCG080161	SPRINGER EUBANK CO - SHIPYARD BLVD	123 SHIPYARD BLVD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCP011514002	SPRINGER EUBANKS OIL CO	123 SHIPYARD BLVD, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-NPDES	NCG080161	5171	Petroleum Bulk Stations & Terminals

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCP011514002	454310	Fuel Dealers

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description
NCG080161	401	General provisions

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	NCG080161	No	06/30/2022	0	10/28/2022
RCRA	NCP011514002	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 1
CWA (Source ID: NCG080161)		07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-10/
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	Undeterm
	Quarterly Noncompliance Report History													

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCP011514002)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (HAD Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (HAD Hydrologic Unit Code)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	4,926
Population Density	1,776/sq.mi.
Housing Units in Area	2,127

General Statistics (ACS (American Community Survey))	
Total Persons	4,821
Percent People of Color	47%
Households in Area	1,948
Households on Public Assistance	51
Persons With Low Income	2,623
Percent With Low Income	56%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19157
Center Longitude	-77.94476
Land Area	90%
Water Area	10%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	379 (19.45%)
$15,000 - $25,000	316 (16.21%)
$25,000 - $50,000	598 (30.68%)
$50,000 - $75,000	323 (16.57%)
Greater than $75,000	333 (17.09%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	397 (8%)
Minors 17 years and younger	1,090 (22%)
Adults 18 years and older	3,838 (78%)
Seniors 65 years and older	590 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,077 (63%)
African-American	1,070 (22%)
Hispanic-Origin	890 (18%)
Asian/Pacific Islander	32 (1%)
American Indian	48 (1%)
Other/Multiracial	699 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	159 (4.95%)
9th through 12th Grade	296 (9.22%)
High School Diploma	847 (26.37%)
Some College/2-year	828 (25.78%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	769 (23.94%)

LAST INSPECTION: SEPTEMBER 15, 2022
DATA REFRESH INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

SAYBOLT LP

2321 BURNETTE BLVD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110031302711
EPA Region: 04
Latitude: 34.19452
Longitude: -77.94773
Locational Data Source: FRS
Industries: Professional, Scientific, and Technical Services
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	11/25/2009
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active SQG, (NCR000140772)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110031302711					N	34.19452	-77.94773
RCRAInfo	RCRA	NCR000140772	SQG	Active (H)			N	34.204365	-77.951737

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110031302711	SAYBOLT LP	2321 BURNETTE BLVD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCR000140772	SAYBOLT LP	2321 BURNETTE BLVD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCR000140772	54138	Testing Laboratories and Services

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000140772	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
RCRA (Source ID: NCR000140772)		01/01,03/31/20	04/01,06/30/20	07/01,09/30/20	10/01,12/31/20	01/01,03/31/21	04/01,06/30/21	07/01,09/30/21	10/01,12/31/21	01/01,03/31/22	04/01,06/30/22	07/01,09/30/22	10/01,12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EJSCREEN Publication Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	49.2
Ozone	44.5
Diesel Particulate Matter	31
Air Toxics Cancer Risk	38.1
Air Toxics Respiratory Hazard Index	26.1
Traffic Proximity	16.4
Lead Paint	9.1
Risk Management Plan (RMP) Facility Proximity	10.3
Hazardous Waste Proximity	9.7
Superfund Proximity	21.1
Underground Storage Tanks (UST)	17.4
Wastewater Discharge	13.2

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	4,674
Population Density	1,734/sq.mi.
Housing Units in Area	2,045

General Statistics (ACS (American Community Survey))	
Total Persons	4,204
Percent People of Color	41%
Households in Area	1,751
Households on Public Assistance	38
Persons With Low Income	2,062
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19452
Center Longitude	-77.94773
Land Area	87%
Water Area	13%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	304 (17.37%)
$15,000 - $25,000	265 (15.14%)
$25,000 - $50,000	526 (30.06%)
$50,000 - $75,000	314 (17.94%)
Greater than $75,000	341 (19.49%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	355 (8%)
Minors 17 years and younger	980 (21%)
Adults 18 years and older	3,694 (79%)
Seniors 65 years and older	568 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,102 (66%)
African-American	871 (19%)
Hispanic-Origin	800 (17%)
Asian/Pacific Islander	39 (1%)
American Indian	45 (1%)
Other/Multiracial	617 (13%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	123 (4.28%)
9th through 12th Grade	269 (9.35%)
High School Diploma	730 (25.37%)
Some College/2-year	709 (24.64%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	759 (26.38%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

S&W READY MIX CONCRETE

2209 MONROE ST., WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110070121580
EPA Region: 04
Latitude: 34.19792
Longitude: -77.94419
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	08/18/2016
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCS000002352)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110070121580					N	34.19792	-77.94419
RCRAInfo	RCRA	NCS000002352	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110070121580	S&W READY MIX CONCRETE	2209 MONROE ST., WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCS000002352	S&W READY MIX CONCRETE	2209 MONROE ST., WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCS000002352	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCS000002352)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	5,638
Population Density	2,068/sq.mi.
Housing Units in Area	2,542

General Statistics (ACS (American Community Survey))	
Total Persons	5,495
Percent People of Color	39%
Households in Area	2,372
Households on Public Assistance	61
Persons With Low Income	2,570
Percent With Low Income	48%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19792
Center Longitude	-77.94419
Land Area	87%
Water Area	13%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	418 (17.61%)
$15,000 - $25,000	348 (14.66%)
$25,000 - $50,000	754 (31.76%)
$50,000 - $75,000	420 (17.69%)
Greater than $75,000	434 (18.28%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	392 (7%)
Minors 17 years and younger	1,109 (20%)
Adults 18 years and older	4,529 (80%)
Seniors 65 years and older	673 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,768 (67%)
African-American	1,118 (20%)
Hispanic-Origin	836 (15%)
Asian/Pacific Islander	50 (1%)
American Indian	50 (1%)
Other/Multiracial	653 (12%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	129 (3.34%)
9th through 12th Grade	368 (9.53%)
High School Diploma	1,039 (26.9%)
Some College/2-year	952 (24.65%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	991 (25.66%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA REFRESH INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

A G INSTRUMAG

2292 BURNETTE BLVD, WILMINGTON, NC 28402

FRS (Facility Registry Service) ID: 110004038247
EPA Region: 04
Latitude: 34.195908
Longitude: -77.947791
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD986166148)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004038247					N	34.195908	-77.947791
RCRAInfo	RCRA	NCD986166148	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004038247	A G INSTRUMAG	2292 BURNETTE BLVD, WILMINGTON, NC 28402	New Hanover County
RCRAInfo	RCRA	NCD986166148	A G INSTRUMAG	2292 BURNETTE BLVD, WILMINGTON, NC 28402	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986166148	No	10/29/2022	0	10/29/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986166148)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	49.2
Ozone	44.5
Diesel Particulate Matter	31
Air Toxics Cancer Risk	38.1
Air Toxics Respiratory Hazard Index	26.1
Traffic Proximity	16.4
Lead Paint	9.1
Risk Management Plan (RMP) Facility Proximity	10.3
Hazardous Waste Proximity	9.7
Superfund Proximity	21.1
Underground Storage Tanks (UST)	17.4
Wastewater Discharge	13.2

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	4,849
Population Density	1,807/sq.mi.
Housing Units in Area	2,144

General Statistics (ACS (American Community Survey))	
Total Persons	4,279
Percent People of Color	39%
Households in Area	1,808
Households on Public Assistance	36
Persons With Low Income	2,009
Percent With Low Income	48%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.195909
Center Longitude	-77.94779
Land Area	87%
Water Area	13%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	306 (16.93%)
$15,000 - $25,000	264 (14.59%)
$25,000 - $50,000	547 (30.22%)
$50,000 - $75,000	333 (18.4%)
Greater than $75,000	360 (19.89%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	356 (7%)
Minors 17 years and younger	992 (20%)
Adults 18 years and older	3,856 (80%)
Seniors 65 years and older	568 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,253 (67%)
African-American	900 (19%)
Hispanic-Origin	798 (16%)
Asian/Pacific Islander	42 (1%)
American Indian	45 (1%)
Other/Multiracial	689 (13%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	111 (3.84%)
9th through 12th Grade	276 (9.5%)
High School Diploma	746 (25.21%)
Some College/2-year	724 (24.4%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	803 (27.06%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

JADE TANK LINES INC

212 SOUTH CAROLINA AVE, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004059802
EPA Region: 04
Latitude: 34.20785
Longitude: -77.94857
Locational Data Source: FRS
Industries: Truck Transportation
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	03/11/2015
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active Transporter, (NCR000011957)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004059802					N	34.20785	-77.94857
RCRAInfo	RCRA	NCR000011957	Transporter	Active (I1)			N	34.208828	-77.945831

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004059802	JADE TANK LINES INC	212 SOUTH CAROLINA AVE, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCR000011957	JADE TANK LINES INC	212 SOUTH CAROLINA AVE, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCR000011957	484230	Specialized Freight (except Used Goods) Trucking, Long-Distance

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000011957	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000011957)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	49.2
Ozone	44.5
Diesel Particulate Matter	31
Air Toxics Cancer Risk	38.1
Air Toxics Respiratory Hazard Index	26.1
Traffic Proximity	16.4
Lead Paint	9.1
Risk Management Plan (RMP) Facility Proximity	10.3
Hazardous Waste Proximity	9.7
Superfund Proximity	21.1
Underground Storage Tanks (UST)	17.4
Wastewater Discharge	13.2

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	4,463
Population Density	1,828/sq.mi.
Housing Units in Area	2,381

General Statistics (ACS (American Community Survey))	
Total Persons	5,085
Percent People of Color	30%
Households in Area	2,525
Households on Public Assistance	97
Persons With Low Income	2,211
Percent With Low Income	44%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20785
Center Longitude	-77.94857
Land Area	78%
Water Area	22%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	546 (21.62%)
$15,000 - $25,000	391 (15.49%)
$25,000 - $50,000	636 (25.19%)
$50,000 - $75,000	444 (17.58%)
Greater than $75,000	508 (20.12%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	256 (6%)
Minors 17 years and younger	809 (18%)
Adults 18 years and older	3,655 (82%)
Seniors 65 years and older	594 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,284 (74%)
African-American	848 (19%)
Hispanic-Origin	360 (8%)
Asian/Pacific Islander	31 (1%)
American Indian	35 (1%)
Other/Multiracial	265 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	56 (1.45%)
9th through 12th Grade	422 (10.91%)
High School Diploma	1,093 (28.26%)
Some College/2-year	903 (23.35%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	986 (25.49%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

COOMBS PROPERTY

519 SOUTH CAROLINA AVE, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110070491947
EPA Region: 04
Latitude: 34.20971
Longitude: -77.94383
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCS000002532)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110070491947					N	34.20971	-77.94383
RCRAInfo	RCRA	NCS000002532	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110070491947	COOMBS PROPERTY	519 SOUTH CAROLINA AVE, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCS000002532	COOMBS PROPERTY	519 SOUTH CAROLINA AVE, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
RCRA	*NCS000002532*	*RCRAInfo*		*FOCUSED COMPLIANCE INSPECTION*	*State*	*03/15/2018*	*No Violations Or Compliance Issues Were Found*

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCS000002532	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCS000002532)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (HUC8 (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (HUC8 (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	50.1
Ozone	45.7
Diesel Particulate Matter	32.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	6,873
Population Density	2,768/sq.mi.
Housing Units in Area	3,631

General Statistics (ACS (American Community Survey))	
Total Persons	6,848
Percent People of Color	39%
Households in Area	3,309
Households on Public Assistance	171
Persons With Low Income	3,346
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20971
Center Longitude	-77.94383
Land Area	81%
Water Area	19%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	849 (75.69%)
$15,000 - $25,000	497 (15.04%)
$25,000 - $50,000	858 (25.96%)
$50,000 - $75,000	542 (16.4%)
Greater than $75,000	559 (16.91%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	475 (7%)
Minors 17 years and younger	1,446 (21%)
Adults 18 years and older	5,457 (79%)
Seniors 65 years and older	965 (14%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,935 (57%)
African-American	2,465 (36%)
Hispanic-Origin	451 (7%)
Asian/Pacific Islander	44 (1%)
American Indian	44 (1%)
Other/Multiracial	385 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	97 (1.95%)
9th through 12th Grade	621 (12.53%)
High School Diploma	1,519 (30.15%)
Some College/2-year	1,179 (23.4%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,098 (21.79%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

PORT CITY TAXI

2027 CAROLINA BEACH RD, WILMINGTON, NC 28402

FRS (Facility Registry Service) ID: 110018873539
EPA Region: 04
Latitude: 34.20493
Longitude: -77.94205
Locational Data Source: FRS
Industries: Transit and Ground Passenger Transportation
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCS000000357)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110018873539					N	34.20493	-77.94205
RCRAInfo	RCRA	NCS000000357	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110018873539	PORT CITY TAXI	2027 CAROLINA BEACH RD, WILMINGTON, NC 28402	New Hanover County
RCRAInfo	RCRA	NCS000000357	PORT CITY TAXI	2027 CAROLINA BEACH RD, WILMINGTON, NC 28402	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCS000000357	48531	Taxi and Ridesharing Services

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCS000000357	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCS000000357)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code) Address Database(s)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database(s))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	50.1
Ozone	45.7
Diesel Particulate Matter	52.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	6,407
Population Density	2,361/sq.mi.
Housing Units in Area	3,425

General Statistics (ACS (American Community Survey))	
Total Persons	6,868
Percent People of Color	36%
Households in Area	3,219
Households on Public Assistance	132
Persons With Low Income	3,237
Percent With Low Income	49%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20493
Center Longitude	-77.94205
Land Area	87%
Water Area	13%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	686 (21.31%)
$15,000 - $25,000	508 (15.78%)
$25,000 - $50,000	956 (29.7%)
$50,000 - $75,000	526 (16.34%)
Greater than $75,000	543 (16.87%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	389 (6%)
Minors 17 years and younger	1,127 (18%)
Adults 18 years and older	5,280 (82%)
Seniors 65 years and older	1,045 (16%)

Race Breakdown (U.S. Census) - Persons (%)	
White	4,454 (70%)
African-American	1,455 (23%)
Hispanic-Origin	528 (8%)
Asian/Pacific Islander	60 (1%)
American Indian	41 (1%)
Other/Multiracial	397 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	113 (2.25%)
9th through 12th Grade	569 (11.31%)
High School Diploma	1,534 (30.5%)
Some College/2-year	1,174 (23.34%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,317 (22.21%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

NC-723 (ZM-032)

2069 CAROLINA BEACH ROAD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110018746801
EPA Region: 04
Latitude: 34.2036
Longitude: -77.9413
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD986175461)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110018746801					N	34.2036	-77.9413
RCRAInfo	RCRA	NCD986175461	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110018746801	NC-723 (ZM-032)	2069 CAROLINA BEACH ROAD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD986175461	FAST FARE NC 723	2069 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986175461	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986175461)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	90.1
Ozone	45.7
Diesel Particulate Matter	52.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	7,026
Population Density	2,524/sq.mi.
Housing Units in Area	3,713

General Statistics (ACS (American Community Survey))	
Total Persons	6,972
Percent People of Color	36%
Households in Area	3,219
Households on Public Assistance	174
Persons With Low Income	3,305
Percent With Low Income	49%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.2036
Center Longitude	-77.9413
Land Area	89%
Water Area	11%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	658 (20.43%)
$15,000 - $25,000	515 (15.99%)
$25,000 - $50,000	988 (30.68%)
$50,000 - $75,000	522 (16.21%)
Greater than $75,000	537 (16.68%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	433 (6%)
Minors 17 years and younger	1,231 (18%)
Adults 18 years and older	5,795 (82%)
Seniors 65 years and older	1,129 (16%)

Race Breakdown (U.S. Census) - Persons (%)	
White	4,850 (69%)
African-American	1,565 (22%)
Hispanic-Origin	631 (9%)
Asian/Pacific Islander	65 (1%)
American Indian	51 (1%)
Other/Multiracial	495 (7%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	121 (2.38%)
9th through 12th Grade	557 (10.98%)
High School Diploma	1,550 (30.54%)
Some College/2-year	1,195 (23.55%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,127 (22.21%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

STURDY CORP

1822 CAROLINA BEACH RD., WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110015583778
EPA Region: 04
Latitude: 34.21003
Longitude: -77.94499
Locational Data Source: TRIS
Industries: Transportation Equipment Manufacturing
Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	--
Qtrs in Noncompliance (of 12)	--
Qtrs with Significant Violation	--
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--
Statute	**RCRA**
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	01/06/2015
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCD982168981)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): 8422411
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): 28401STRDY1822C
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

Air Pollutant Report TRI Pollution Prevention Report

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
28401STRDY1822C	2021	--	--	0	--	--	0	109
28401STRDY1822C	2020	--	--	0	--	--	0	95
28401STRDY1822C	2019	--	--	0	--	--	0	232
28401STRDY1822C	2018	--	--	0	--	--	0	110
28401STRDY1822C	2017	--	--	0	--	--	0	198
28401STRDY1822C	2016	--	--	0	--	--	0	106
28401STRDY1822C	2015	--	--	0	--	--	0	211
28401STRDY1822C	2014	0	--	0	--	--	0	122
28401STRDY1822C	2013	0	--	0	--	--	0	1,017
28401STRDY1822C	2012	0	--	0	--	--	0	734

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Lead	109	95	232	110	198	106	211	122	1,017	734

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note: that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	49.2
Ozone	44.5
Diesel Particulate Matter	31
Air Toxics Cancer Risk	38.1
Air Toxics Respiratory Hazard Index	26.1
Traffic Proximity	16.4
Lead Paint	9.1
Risk Management Plan (RMP) Facility Proximity	10.3
Hazardous Waste Proximity	9.7
Superfund Proximity	21.1
Underground Storage Tanks (UST)	17.4
Wastewater Discharge	13.2

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	6,285
Population Density	2,509/sq.mi.
Housing Units in Area	3,337

General Statistics (ACS (American Community Survey))	
Total Persons	6,496
Percent People of Color	38%
Households in Area	3,173
Households on Public Assistance	156
Persons With Low Income	3,117
Percent With Low Income	49%

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	419 (7%)
Minors 17 years and younger	1,278 (20%)
Adults 18 years and older	5,007 (80%)
Seniors 65 years and older	848 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,665 (58%)
African-American	2,194 (35%)
Hispanic-Origin	396 (6%)
Asian/Pacific Islander	42 (1%)
American Indian	42 (1%)
Other/Multiracial	342 (5%)

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110015583778					N	34.21003	-77.94499
EIS	CAA	8422411					N	34.33638	-77.97583
TRI	EPA13	28401STRDY1822C	Toxics Release Inventory	Last Reported for 2021			N	34.21003	-77.94499
RCRAInfo	RCRA	NCD982168981	VSQG	Active (H)			N	34.201653	-77.9401 74

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110015583778	STURDY CORP	1822 CAROLINA BEACH RD., WILMINGTON, NC 28401	New Hanover County
EIS	CAA	8422411	STURDY CORP	1822 CAROLINA BEACH RD., WILMINGTON, NC 28401	New Hanover County
TRI	EPA13	28401STRDY1822C	STURDY CORP	1822 CAROLINA BEACH RD., WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD982168981	STURDY CORPORATION	1822 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
TRI	28401STRDY1822C	3694	Engine Electrical Equipment

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	28401STRDY1822C	336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
TRI	28401STRDY1822C	336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing
EIS	8422411	336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
RCRAInfo	NCD982168981	336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/RPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD982168981	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
RCRA (Source ID: NCD982168981)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (HUC8 (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (HUC10 (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.21003
Center Longitude	-77.94499
Land Area	80%
Water Area	20%

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	87 (1.8%)
9th through 12th Grade	500 (12.23%)
High School Diploma	1,439 (29.83%)
Some College/2-year	1,127 (23.36%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,076 (22.31%)

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	800 (25.24%)
$15,000 - $25,000	481 (15.17%)
$25,000 - $50,000	807 (25.46%)
$50,000 - $75,000	529 (16.69%)
Greater than $75,000	553 (17.44%)

LAST UPDATED ON SEPTEMBER 15, 2022
ABOUT THIS INFORMATION

Detailed Facility Report

Facility Summary

CARQUEST OF CAROLINA BEACH RD

2234 CAROLINA BEACH RD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004046933
EPA Region: 04
Latitude: 34.19983
Longitude: -77.93913
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	07/27/1998
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD986204386)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004046933					N	34.19983	-77.93913
RCRAInfo	RCRA	NCD986204386	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004046933	CARQUEST OF CAROLINA BEACH RD	2234 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD986204386	CARQUEST OF CAROLINA BEACH RD	2234 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986204386	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986204386)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	50.1
Ozone	45.7
Diesel Particulate Matter	32.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,103
Population Density	2,756/sq.mi.
Housing Units in Area	4,094

General Statistics (ACS (American Community Survey))	
Total Persons	7,152
Percent People of Color	46%
Households in Area	3,140
Households on Public Assistance	103
Persons With Low Income	3,472
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19983
Center Longitude	-77.93913
Land Area	93%
Water Area	7%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	599 (19.06%)
$15,000 - $25,000	499 (15.88%)
$25,000 - $50,000	1,023 (32.55%)
$50,000 - $75,000	510 (16.23%)
Greater than $75,000	512 (16.29%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	550 (7%)
Minors 17 years and younger	1,505 (19%)
Adults 18 years and older	6,598 (81%)
Seniors 65 years and older	1,128 (14%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,276 (65%)
African-American	1,880 (23%)
Hispanic-Origin	1,004 (12%)
Asian/Pacific Islander	70 (1%)
American Indian	69 (1%)
Other/Multiracial	809 (10%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	154 (3.03%)
9th through 12th Grade	505 (9.94%)
High School Diploma	1,493 (29.39%)
Some College/2-year	1,255 (24.7%)
B.S./B.A./Bachelor of Science/Bachelor of Arts or More	1,176 (23.15%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

SIGMA RECYCLING

2200 NORTH NORTH CAROLINA HIGHWAY 421, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110006828148
EPA Region: 04
Latitude: 34.200716
Longitude: -77.939669
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCR000136192)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110006828148					N	34.200716	-77.939669
ICIS		12111					N	34.200716	-77.939669
RCRAInfo	RCRA	NCR000136192	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110006828148	SIGMA RECYCLING	2200 NORTH NORTH CAROLINA HIGHWAY 421, WILMINGTON, NC 28401	New Hanover County
ICIS		12111	SIGMA RECYCLING	2200 NORTH NORTH CAROLINA HIGHWAY 421, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCR000136192	SIGMA RECYCLING	2200 N. NC HWY 421, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000136192	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000136192)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Network Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (USGS Network Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	93.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	7,708
Population Density	2,646/sq.mi.
Housing Units in Area	3,927

General Statistics (ACS (American Community Survey))	
Total Persons	7,121
Percent People of Color	39%
Households in Area	3,168
Households on Public Assistance	106
Persons With Low Income	3,426
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.200716
Center Longitude	-77.939669
Land Area	93%
Water Area	7%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	608 (19.18%)
$15,000 - $25,000	506 (15.96%)
$25,000 - $50,000	1,020 (32.18%)
$50,000 - $75,000	516 (16.28%)
Greater than $75,000	520 (16.4%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	503 (7%)
Minors 17 years and younger	1,394 (18%)
Adults 18 years and older	6,314 (82%)
Seniors 65 years and older	1,122 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,134 (67%)
African-American	1,717 (22%)
Hispanic-Origin	904 (12%)
Asian/Pacific Islander	70 (1%)
American Indian	63 (1%)
Other/Multiracial	725 (9%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	145 (2.85%)
9th through 12th Grade	522 (10.24%)
High School Diploma	1,517 (29.77%)
Some College/2-year	1,241 (24.35%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,162 (22.8%)

LAST UPDATED ON SEPTEMBER 15, 2022
DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

FAST FARE NC 730

2158 CAROLINA BEACH RD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004040715
EPA Region: 04
Latitude: 34.20106
Longitude: -77.93984
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCD986175552)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004040715					N	34.20106	-77.93984
RCRAInfo	RCRA	NCD986175552	VSQG	Active (F)			N	34.201653	-77.940174

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004040715	FAST FARE NC 730	2158 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD986175552	FAST FARE NC 730	2158 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986175552	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986175552)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	50.1
Ozone	45.7
Diesel Particulate Matter	32.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	7,669
Population Density	2,607/sq.mi.
Housing Units in Area	3,882

General Statistics (ACS (American Community Survey))	
Total Persons	7,113
Percent People of Color	38%
Households in Area	3,180
Households on Public Assistance	107
Persons With Low Income	3,412
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20106
Center Longitude	-77.93984
Land Area	93%
Water Area	7%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	612 (19.24%)
$15,000 - $25,000	509 (16%)
$25,000 - $50,000	1,021 (32.1%)
$50,000 - $75,000	518 (16.28%)
Greater than $75,000	521 (16.38%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	492 (6%)
Minors 17 years and younger	1,366 (18%)
Adults 18 years and older	6,244 (82%)
Seniors 65 years and older	1,119 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,098 (67%)
African-American	1,679 (22%)
Hispanic-Origin	874 (11%)
Asian/Pacific Islander	70 (1%)
American Indian	61 (1%)
Other/Multiracial	202 (9%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	142 (2.78%)
9th through 12th Grade	527 (10.32%)
High School Diploma	1,527 (29.91%)
Some College/2-year	1,237 (24.23%)
B.S./B.A./Bachelor of Science/Bachelor of Arts or More	1,159 (22.7%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

ARMY RESERVE XVIII AIRBORNE CORPS

2144 LAKESHORE DR, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004014744
EPA Region: 04
Latitude: 34.20338
Longitude: -77.93535
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NC0210021929)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004014744					N	34.20338	-77.93535
SEMS	CERCLA	NC0210021929					N	34.22	-77.946667
RCRAInfo	RCRA	NC0210021929	VSQG	Active (01)			N	34.209127	-77.931677

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004014744	ARMY RESERVE XVIII AIRBORNE CORPS	2144 LAKESHORE DR, WILMINGTON, NC 28401	New Hanover County
SEMS	CERCLA	NC0210021929	USA RESERVE XVIII AIRBORNE CORPS	2144 LAKESHORE DRIVE, WILMINGTON, NC 28401	
RCRAInfo	RCRA	NC0210021929	ARMY RESERVE XVIII AIRBORNE CORPS	2144 LAKESHORE DR, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NC0210021929	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NC0210021929)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (WBD Hydrologic Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (WBD Hydrologic Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	50.1
Ozone	45.7
Diesel Particulate Matter	32.5
Air Toxics Cancer Risk	39.7
Air Toxics Respiratory Hazard Index	28.1
Traffic Proximity	13.1
Lead Paint	17.2
Risk Management Plan (RMP) Facility Proximity	12.5
Hazardous Waste Proximity	9.9
Superfund Proximity	22.7
Underground Storage Tanks (UST)	18.1
Wastewater Discharge	15.4

Number of EJ Indexes Above 80th Percentile
0

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,466
Population Density	2,846/sq.mi.
Housing Units in Area	4,518

General Statistics (ACS (American Community Survey))	
Total Persons	7,940
Percent People of Color	38%
Households in Area	3,573
Households on Public Assistance	158
Persons With Low Income	3,864
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20338
Center Longitude	-77.93535
Land Area	94%
Water Area	6%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	742 (20.76%)
$15,000 - $25,000	587 (16.42%)
$25,000 - $50,000	1,082 (30.27%)
$50,000 - $75,000	546 (15.33%)
Greater than $75,000	616 (17.21%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	566 (7%)
Minors 17 years and younger	1,574 (19%)
Adults 18 years and older	6,893 (81%)
Seniors 65 years and older	1,305 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,621 (66%)
African-American	2,122 (25%)
Hispanic-Origin	737 (9%)
Asian/Pacific Islander	77 (1%)
American Indian	61 (1%)
Other/Multiracial	586 (7%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	145 (2.54%)
9th through 12th Grade	576 (10.11%)
High School Diploma	1,726 (30.28%)
Some College/2-year	1,388 (24.35%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,315 (23.07%)

LAST UPDATED ON SEPTEMBER 15, 2022
DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

PENNINGTON RESIDENCE

2120 WISTERIA DR, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110040140530
EPA Region: 04
Latitude: 34.20468
Longitude: -77.93136
Locational Data Source: FRS
Industries: Private Households
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCS000001511)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110040140530					N	34.20468	-77.93136
RCRAInfo	RCRA	NCS000001511	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110040140530	PENNINGTON RESIDENCE	2120 WISTERIA DR, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCS000001511	PENNINGTON RESIDENCE	2120 WISTERIA DR, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCS000001511	81411	Private Households

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCS000001511	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCS000001511)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	73.4
Ozone	79
Diesel Particulate Matter	78.1
Air Toxics Cancer Risk	89.5
Air Toxics Respiratory Hazard Index	81.1
Traffic Proximity	90.8
Lead Paint	70
Risk Management Plan (RMP) Facility Proximity	86.7
Hazardous Waste Proximity	93.6
Superfund Proximity	86.3
Underground Storage Tanks (UST)	90.8
Wastewater Discharge	86.5

Number of EJ Indexes Above 80th Percentile
8

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,567
Population Density	2,924/sq.mi.
Housing Units in Area	4,524

General Statistics (ACS (American Community Survey))	
Total Persons	8,210
Percent People of Color	38%
Households in Area	3,691
Households on Public Assistance	194
Persons With Low Income	3,969
Percent With Low Income	50%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.20468
Center Longitude	-77.93136
Land Area	94%
Water Area	6%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	807 (21.72%)
$15,000 - $25,000	598 (16.2%)
$25,000 - $50,000	1,048 (28.39%)
$50,000 - $75,000	546 (14.79%)
Greater than $75,000	696 (18.91%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	599 (7%)
Minors 17 years and younger	1,699 (20%)
Adults 18 years and older	6,868 (80%)
Seniors 65 years and older	1,385 (16%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,558 (65%)
African-American	2,379 (28%)
Hispanic-Origin	635 (7%)
Asian/Pacific Islander	77 (1%)
American Indian	54 (1%)
Other/Multiracial	498 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	137 (2.34%)
9th through 12th Grade	561 (9.58%)
High School Diploma	1,725 (29.44%)
Some College/2-year	1,426 (24.34%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,478 (25.23%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

COSTELLO HOME COMPLAINT

2112 WISTERIA LANE, WILMINGTON, NC 28405

FRS (Facility Registry Service) ID: 110039582742
EPA Region: 04
Latitude: 34.2054
Longitude: -77.9313
Locational Data Source: FRS
Industries: Private Households
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCS000001468)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110039582742					N	34.2054	-77.9313
RCRAInfo	RCRA	NCS000001468	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110039582742	COSTELLO HOME COMPLAINT	2112 WISTERIA LANE, WILMINGTON, NC 28405	New Hanover County
RCRAInfo	RCRA	NCS000001468	COSTELLO HOME COMPLAINT	2112 WISTERIA LANE, WILMINGTON, NC 28405	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCS000001468	81411	Private Households

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCS000001468	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCS000001468)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	73.4
Ozone	79
Diesel Particulate Matter	78.1
Air Toxics Cancer Risk	89.5
Air Toxics Respiratory Hazard Index	81.1
Traffic Proximity	90.8
Lead Paint	70
Risk Management Plan (RMP) Facility Proximity	86.7
Hazardous Waste Proximity	93.6
Superfund Proximity	86.3
Underground Storage Tanks (UST)	90.8
Wastewater Discharge	86.5

Number of EJ Indexes Above 80th Percentile
8

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,454
Population Density	2,842/sq.mi.
Housing Units in Area	4,414

General Statistics (ACS (American Community Survey))	
Total Persons	8,230
Percent People of Color	38%
Households in Area	3,707
Households on Public Assistance	214
Persons With Low Income	4,021
Percent With Low Income	51%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.2054
Center Longitude	-77.9313
Land Area	94%
Water Area	6%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	836 (22.57%)
$15,000 - $25,000	596 (16.09%)
$25,000 - $50,000	1,027 (27.73%)
$50,000 - $75,000	544 (14.69%)
Greater than $75,000	701 (18.93%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	574 (7%)
Minors 17 years and younger	1,657 (20%)
Adults 18 years and older	6,796 (80%)
Seniors 65 years and older	1,396 (17%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,525 (65%)
African-American	2,322 (27%)
Hispanic-Origin	601 (7%)
Asian/Pacific Islander	77 (1%)
American Indian	54 (1%)
Other/Multiracial	476 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	133 (2.21%)
9th through 12th Grade	569 (9.72%)
High School Diploma	1,733 (29.59%)
Some College/2-year	1,426 (24.35%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,466 (25.03%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

CAROLINA PAINT & BODY INC

2326 CAROLINA BEACH ROAD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004056182
EPA Region: 04
Latitude: 34.19796
Longitude: -77.93806
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	07/08/1998
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCR000006635)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004056182					N	34.19796	-77.93806
RCRAInfo	RCRA	NCR000006635	VSQG	Active (H)			N	34.201653	-77.940174

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004056182	CAROLINA PAINT & BODY INC	2326 CAROLINA BEACH ROAD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCR000006635	CAROLINA PAINT & BODY INC	2326 CAROLINA BEACH ROAD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000006635	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000006635)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USEPA/Reach Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (EPA/Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	99.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,170
Population Density	2,728/sq.mi.
Housing Units in Area	4,034

General Statistics (ACS (American Community Survey))	
Total Persons	7,185
Percent People of Color	42%
Households in Area	3,078
Households on Public Assistance	101
Persons With Low Income	3,565
Percent With Low Income	52%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19796
Center Longitude	-77.93806
Land Area	95%
Water Area	5%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	588 (19.08%)
$15,000 - $25,000	478 (15.51%)
$25,000 - $50,000	1,017 (33.01%)
$50,000 - $75,000	499 (16.2%)
Greater than $75,000	499 (16.2%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	578 (7%)
Minors 17 years and younger	1,577 (19%)
Adults 18 years and older	6,593 (81%)
Seniors 65 years and older	1,069 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,228 (64%)
African-American	1,937 (24%)
Hispanic-Origin	1,088 (13%)
Asian/Pacific Islander	68 (1%)
American Indian	69 (1%)
Other/Multiracial	868 (11%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	167 (3.33%)
9th through 12th Grade	473 (9.42%)
High School Diploma	1,434 (28.55%)
Some College/2-year	1,275 (25.39%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,199 (23.87%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Detailed Facility Report

Facility Summary

WILMINGTON TERMINAL - CAROLINA BEACH RD

2402 CAROLINA BEACH RD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004019954
EPA Region: 04
Latitude: 34.195721
Longitude: -77.93671
Locational Data Source: RCRAINFO
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	Terminated Permit
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	03/03/1999
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): Minor, Permit Terminated; Compliance Tracking Off (NCG080466)
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCD067196816)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004019954					N	34.195721	-77.93671
ICIS-NPDES	CWA	NCG080466	Minor, General Permit Covered Facility	Terminated; Compliance Tracking Off		10/31/2017	N	34.195	-77.9369
RCRAInfo	RCRA	NCD067196816	VSQG	Active (H)			N	34.201653	-77.940174

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004019954	WILMINGTON TERMINAL - CAROLINA BEACH RD	2402 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County
ICIS-NPDES	CWA	NCG080466	WILMINGTON TERMINAL - CAROLINA BEACH RD	2402 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD067196816	A C WIDENHOUSE	2402 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-NPDES	NCG080466	4213	Trucking, Except Local

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description
NCG080466	401	General provisions

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	NCG080466	No	06/30/2022	0	10/28/2022
RCRA	NCD067196816	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 1
CWA (Source ID: NCG080466)		07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-10
	Facility-Level Status	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Terminated Permit	Termin Perm
	Quarterly Noncompliance Report History													

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD067196816)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (BAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (BAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-Listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	73.4
Ozone	79
Diesel Particulate Matter	78.1
Air Toxics Cancer Risk	80.5
Air Toxics Respiratory Hazard Index	81.1
Traffic Proximity	90.8
Lead Paint	70
Risk Management Plan (RMP) Facility Proximity	86.7
Hazardous Waste Proximity	93.6
Superfund Proximity	86.3
Underground Storage Tanks (UST)	90.8
Wastewater Discharge	86.5

Number of EJ Indexes Above 80th Percentile
8

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	7,976
Population Density	2,620/sq.mi.
Housing Units in Area	3,880

General Statistics (ACS (American Community Survey))	
Total Persons	7,169
Percent People of Color	44%
Households in Area	3,030
Households on Public Assistance	94
Persons With Low Income	3,657
Percent With Low Income	53%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.195721
Center Longitude	-77.93671
Land Area	97%
Water Area	3%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	583 (19.27%)
$15,000 - $25,000	464 (15.33%)
$25,000 - $50,000	1,010 (33.38%)
$50,000 - $75,000	487 (15.93%)
Greater than $75,000	487 (16.09%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	576 (7%)
Minors 17 years and younger	1,563 (20%)
Adults 18 years and older	6,394 (80%)
Seniors 65 years and older	1,006 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	5,038 (63%)
African-American	1,920 (24%)
Hispanic-Origin	1,106 (14%)
Asian/Pacific Islander	63 (1%)
American Indian	72 (1%)
Other/Multiracial	883 (11%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	182 (3.67%)
9th through 12th Grade	438 (8.84%)
High School Diploma	1,373 (27.71%)
Some College/2-year	1,279 (25.82%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,226 (24.75%)

LAST UPDATED ON SEPTEMBER 15, 2022
DATA REFRESH INFORMATION

Detailed Facility Report

Facility Summary

NCDSCA DC650004 (COASTAL DRY CLEANERS)

2629 CAROLINA BEACH RD., WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110001497906
EPA Region: 04
Latitude: 34.19022
Longitude: -77.93357
Locational Data Source: FRS
Industries: Personal and Laundry Services
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCD981031495), Active SQG, (NCR000141028)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110001497906					N	34.19022	-77.93357
RCRAInfo	RCRA	NCD981031495	VSQG	Active (IT)			N	34.201653	-77.940174
RCRAInfo	RCRA	NCR000141028	SQG	Active (IT)			N	34.132982	-77.895328

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110001497906	NCDSCA DC650004 (COASTAL DRY CLEANERS)	2629 CAROLINA BEACH RD., WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCD981031495	GLAM-O-RAMA CLEANERS	2629 CAROLINA BEACH RD, WILMINGTON, NC 28403	New Hanover County
RCRAInfo	RCRA	NCR000141028	NCDSCA DC650004 (COASTAL DRY CLEANERS)	2629 CAROLINA BEACH RD, WILMINGTON, NC 28402-1807	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCD981031495	81232	Drycleaning and Laundry Services (except Coin-Operated)
RCRAInfo	NCR000141028	81232	Drycleaning and Laundry Services (except Coin-Operated)

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD981031495	No	10/29/2022	0	10/29/2022
RCRA	NCR000141028	No	10/29/2022	0	10/29/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD981031495)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												
RCRA (Source ID: NCR000141028)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (BAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (BAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	76
Ozone	82.4
Diesel Particulate Matter	80.6
Air Toxics Cancer Risk	83.9
Air Toxics Respiratory Hazard Index	84.6
Traffic Proximity	86.6
Lead Paint	82.8
Risk Management Plan (RMP) Facility Proximity	93.4
Hazardous Waste Proximity	92.3
Superfund Proximity	86.7
Underground Storage Tanks (UST)	95.8
Wastewater Discharge	87.3

Number of EJ Indexes Above 80th Percentile
11

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	6,526
Population Density	2,176/sq.mi.
Housing Units in Area	3,192

General Statistics (ACS (American Community Survey))	
Total Persons	6,864
Percent People of Color	46%
Households in Area	2,916
Households on Public Assistance	84
Persons With Low Income	3,715
Percent With Low Income	56%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.19022
Center Longitude	-77.93357
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	563 (19.31%)
$15,000 - $25,000	453 (15.53%)
$25,000 - $50,000	978 (33.54%)
$50,000 - $75,000	443 (15.19%)
Greater than $75,000	479 (16.43%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	512 (8%)
Minors 17 years and younger	1,402 (21%)
Adults 18 years and older	5,125 (79%)
Seniors 65 years and older	816 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,917 (60%)
African-American	1,601 (25%)
Hispanic-Origin	1,116 (17%)
Asian/Pacific Islander	54 (1%)
American Indian	66 (1%)
Other/Multiracial	889 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	203 (4.31%)
9th through 12th Grade	373 (7.92%)
High School Diploma	1,219 (25.89%)
Some College/2-year	1,206 (25.61%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,296 (27.52%)

LAST UPDATED ON SEPTEMBER 15, 2022
DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

HMF MANUFACTURING

2710 CAROLINA BEACH ROAD, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110004042027
EPA Region: 04
Latitude: 34.188856
Longitude: -77.932797
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	11/15/1994
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD986185445)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004042027					N	34.188856	-77.932797
RCRAInfo	RCRA	NCD986185445	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004042027	HMF MANUFACTURING	2710 CAROLINA BEACH ROAD, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCD986185445	HMF MANUFACTURING	2710 CAROLINA BEACH ROAD, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986185445	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986185445)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Hydrologic Unit Code)	WBD (Watershed Boundary Dataset) Subwatershed Name (EAD Reach Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	76
Ozone	82.4
Diesel Particulate Matter	80.6
Air Toxics Cancer Risk	83.9
Air Toxics Respiratory Hazard Index	84.6
Traffic Proximity	86.6
Lead Paint	82.8
Risk Management Plan (RMP) Facility Proximity	93.4
Hazardous Waste Proximity	92.3
Superfund Proximity	86.7
Underground Storage Tanks (UST)	95.8
Wastewater Discharge	87.3

Number of EJ Indexes Above 80th Percentile
11

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	6,283
Population Density	2,040/sq.mi.
Housing Units in Area	3,059

General Statistics (ACS (American Community Survey))	
Total Persons	6,733
Percent People of Color	46%
Households in Area	2,875
Households on Public Assistance	82
Persons With Low Income	3,678
Percent With Low Income	56%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.188856
Center Longitude	-77.932797
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	552 (19.2%)
$15,000 - $25,000	451 (15.69%)
$25,000 - $50,000	958 (33.32%)
$50,000 - $75,000	432 (15.03%)
Greater than $75,000	482 (16.77%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	501 (8%)
Minors 17 years and younger	1,378 (22%)
Adults 18 years and older	4,905 (78%)
Seniors 65 years and older	775 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,740 (60%)
African-American	1,556 (25%)
Hispanic-Origin	1,099 (17%)
Asian/Pacific Islander	48 (1%)
American Indian	63 (1%)
Other/Multiracial	877 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	201 (4.34%)
9th through 12th Grade	356 (7.69%)
High School Diploma	1,174 (25.37%)
Some College/2-year	1,173 (25.35%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,315 (28.42%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

TRAVELERS OIL CO TERM

2841 CAROLINA BEACH RD, WILMINGTON, NC 28401

FRS (Facility Registry Service) ID: 110004017910
EPA Region: 04
Latitude: 34.18583
Longitude: -77.93109
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD024871659)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004017910					N	34.18583	-77.93109
RCRAInfo	RCRA	NCD024871659	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004017910	TRAVELERS OIL CO TERM	2841 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County
RCRAInfo	RCRA	NCD024871659	TRAVELERS OIL CO TERM	2841 CAROLINA BEACH RD, WILMINGTON, NC 28401	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD024871659	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD024871659)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (USGS Reach Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD Reach Address Database)	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	76
Ozone	82.4
Diesel Particulate Matter	80.6
Air Toxics Cancer Risk	83.9
Air Toxics Respiratory Hazard Index	84.6
Traffic Proximity	86.6
Lead Paint	82.8
Risk Management Plan (RMP) Facility Proximity	93.4
Hazardous Waste Proximity	92.3
Superfund Proximity	86.7
Underground Storage Tanks (UST)	95.8
Wastewater Discharge	87.3

Number of EJ Indexes Above 80th Percentile
11

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	5,890
Population Density	1,911/sq.mi.
Housing Units in Area	2,907

General Statistics (ACS (American Community Survey))	
Total Persons	6,487
Percent People of Color	44%
Households in Area	2,826
Households on Public Assistance	76
Persons With Low Income	3,517
Percent With Low Income	56%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18583
Center Longitude	-77.93109
Land Area	98%
Water Area	2%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	514 (18.18%)
$15,000 - $25,000	447 (15.81%)
$25,000 - $50,000	927 (32.79%)
$50,000 - $75,000	428 (15.14%)
Greater than $75,000	511 (18.08%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	461 (8%)
Minors 17 years and younger	1,275 (22%)
Adults 18 years and older	4,615 (78%)
Seniors 65 years and older	754 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,544 (60%)
African-American	1,410 (24%)
Hispanic-Origin	1,038 (18%)
Asian/Pacific Islander	48 (1%)
American Indian	44 (1%)
Other/Multiracial	845 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	189 (4.19%)
9th through 12th Grade	320 (7.09%)
High School Diploma	1,083 (24%)
Some College/2-year	1,122 (24.87%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,408 (31.21%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

REPUBLIC INDUSTRIES INC

432 LANDMARK DR, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110004045694
EPA Region: 04
Latitude: 34.18363
Longitude: -77.93195
Locational Data Source: FRS
Industries: --
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	01/06/2000
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCD986194322)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004045694					N	34.18363	-77.93195
ICIS		20624					N	34.185274	-77.933383
RCRAInfo	RCRA	NCD986194322	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110004045694	REPUBLIC INDUSTRIES INC	432 LANDMARK DR, WILMINGTON, NC 28412	New Hanover County
ICIS		20624	REPUBLIC INDUSTRIES INC	432 LANDMARK DR, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCD986194322	REPUBLIC INDUSTRIES INC	432 LANDMARK DR, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCD986194322	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCD986194322)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (WBD Hydrologic Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (WBD Hydrologic Address Database)	State Water Body Name (ICIS Impaired Waters Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	93.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	90.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DER Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	5,638
Population Density	1,819/sq.mi.
Housing Units in Area	2,848

General Statistics (ACS (American Community Survey))	
Total Persons	6,091
Percent People of Color	43%
Households in Area	2,689
Households on Public Assistance	71
Persons With Low Income	3,352
Percent With Low Income	56%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18363
Center Longitude	-77.93195
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	483 (17.97%)
$15,000 - $25,000	437 (16.26%)
$25,000 - $50,000	871 (32.4%)
$50,000 - $75,000	412 (15.33%)
Greater than $75,000	485 (18.04%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	437 (8%)
Minors 17 years and younger	1,192 (21%)
Adults 18 years and older	4,446 (79%)
Seniors 65 years and older	722 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,446 (61%)
African-American	1,311 (23%)
Hispanic-Origin	954 (17%)
Asian/Pacific Islander	49 (1%)
American Indian	42 (1%)
Other/Multiracial	791 (14%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	180 (4.22%)
9th through 12th Grade	297 (6.97%)
High School Diploma	999 (23.43%)
Some College/2-year	1,073 (25.17%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,342 (31.48%)

LAST UPDATED ON SEPTEMBER 15, 2022
DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

HD SUPPLY WATERWORKS LTD (WW2140)

407 LANDMARK DR, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110024834072
EPA Region: 04
Latitude: 34.18244
Longitude: -77.9352
Locational Data Source: FRS
Industries: Merchant Wholesalers, Durable Goods
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NC0991302878)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110024834072					N	34.18244	-77.9352
RCRAInfo	RCRA	NC0991302878	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110024834072	HD SUPPLY WATERWORKS LTD (WW2140)	407 LANDMARK DR, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NC0991302878	HD SUPPLY WATERWORKS LTD (WW2140)	407 LANDMARK DR, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NC0991302878	42372	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NC0991302878	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NC0991302878)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (BAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (BAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Reach Closures Within Last Year	Reach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	99.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	5,032
Population Density	1,623/sq.mi.
Housing Units in Area	2,460

General Statistics (ACS (American Community Survey))	
Total Persons	5,474
Percent People of Color	46%
Households in Area	2,362
Households on Public Assistance	62
Persons With Low Income	3,140
Percent With Low Income	58%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18244
Center Longitude	-77.9352
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	442 (18.72%)
$15,000 - $25,000	409 (17.32%)
$25,000 - $50,000	739 (31.3%)
$50,000 - $75,000	358 (15.16%)
Greater than $75,000	413 (17.49%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	402 (8%)
Minors 17 years and younger	1,088 (22%)
Adults 18 years and older	3,944 (78%)
Seniors 65 years and older	627 (12%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,095 (61%)
African-American	1,108 (22%)
Hispanic-Origin	909 (18%)
Asian/Pacific Islander	40 (1%)
American Indian	38 (1%)
Other/Multiracial	753 (15%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	180 (4.79%)
9th through 12th Grade	286 (7.61%)
High School Diploma	895 (23.8%)
Some College/2-year	968 (25.74%)
B.S./B.A./Bachelor of Science/Bachelor of Arts) or More	1,100 (29.26%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

ROADONE INTERMODALOGISTICS

451 LANDMARK DRIVE, WILMINGTON, NC 28412

FRS (Facility Registry Service) ID: 110071193186
EPA Region: 04
Latitude: 34.18528
Longitude: -77.93341
Locational Data Source: FRS
Industries: Truck Transportation
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	1
Date of Last Compliance Monitoring Activity	01/14/2022
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Inactive Other, (NCR000179788)
Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110071193186					N	34.18528	-77.93341
RCRAInfo	RCRA	NCR000179788	Other	Inactive ( )			N	34.185739	-77.933409

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110071193186	ROADONE INTERMODALOGISTICS	451 LANDMARK DRIVE, WILMINGTON, NC 28412	New Hanover County
RCRAInfo	RCRA	NCR000179788	ROADONE INTERMODALOGISTICS	451 LANDMARK DRIVE, WILMINGTON, NC 28412	New Hanover County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCR000179788	484110	General Freight Trucking, Local

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
RCRA	NCR000179788	RCRAInfo		COMPLIANCE EVALUATION INSPECTION ON-SITE	State	01/14/2022	No Violations Or Compliance Issues Were Found

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000179788	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000179788)		01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (HUC8) (Reach Address Database)	WBD (Watershed Boundary Dataset) Subwatershed Name (HUC) (Reach Address Database)	State Water Body Name (ICIS Integrated Compliance Information System)	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned						

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use
No data records returned										

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	84.7
Ozone	91.5
Diesel Particulate Matter	87.2
Air Toxics Cancer Risk	92.6
Air Toxics Respiratory Hazard Index	95.6
Traffic Proximity	90.9
Lead Paint	97.2
Risk Management Plan (RMP) Facility Proximity	97.7
Hazardous Waste Proximity	94.9
Superfund Proximity	92.1
Underground Storage Tanks (UST)	93.4
Wastewater Discharge	99.7

Number of EJ Indexes Above 80th Percentile
12

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	5,871
Population Density	1,887/sq.mi.
Housing Units in Area	2,863

General Statistics (ACS (American Community Survey))	
Total Persons	6,182
Percent People of Color	46%
Households in Area	2,672
Households on Public Assistance	74
Persons With Low Income	3,498
Percent With Low Income	58%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	34.18528
Center Longitude	-77.93341
Land Area	99%
Water Area	1%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	507 (18.97%)
$15,000 - $25,000	442 (16.54%)
$25,000 - $50,000	881 (32.96%)
$50,000 - $75,000	398 (14.89%)
Greater than $75,000	445 (16.65%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	465 (8%)
Minors 17 years and younger	1,277 (22%)
Adults 18 years and older	4,594 (78%)
Seniors 65 years and older	739 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,517 (60%)
African-American	1,408 (24%)
Hispanic-Origin	1,054 (18%)
Asian/Pacific Islander	48 (1%)
American Indian	45 (1%)
Other/Multiracial	853 (15%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	196 (4.6%)
9th through 12th Grade	320 (7.51%)
High School Diploma	1,047 (24.56%)
Some College/2-year	1,089 (25.55%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,240 (29.09%)

LAST UPDATED ON SEPTEMBER 15, 2022

DATA SOURCE INFORMATION

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

WILMINGTON TERMINAL - CAROLINA BEACH RD

EPA Registry Id: 110004019954
2402 CAROLINA BEACH RD
WILMINGTON, NC 28401

Legend

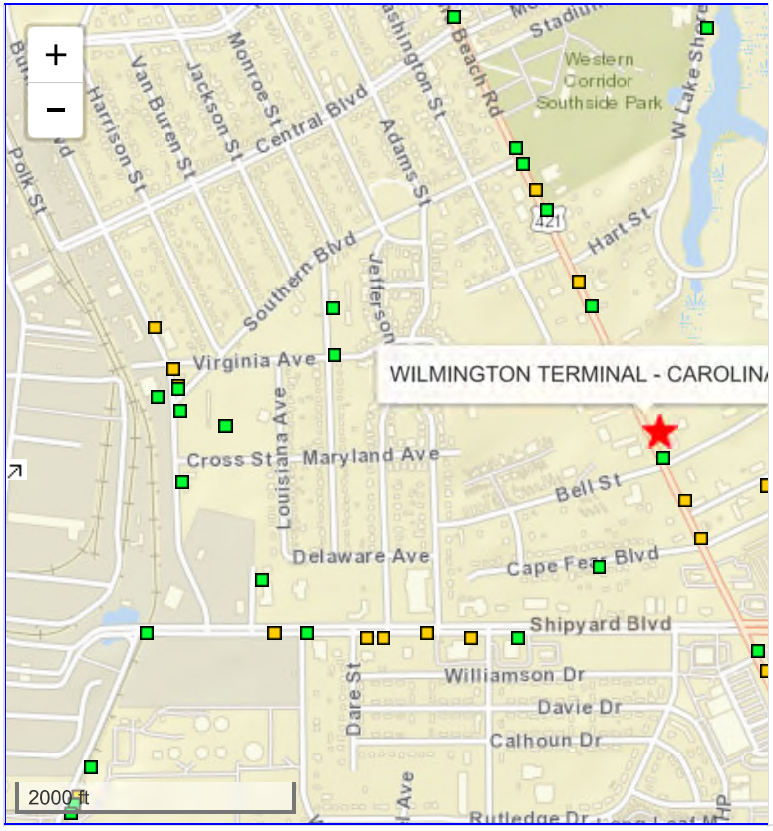
- ★ Selected Facility
- ■ EPA Facility of Interest
- ■ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
NORTH CAROLINA - FACILITY IDENTIFICATION TEMPLATE FOR STATES	A C WIDENHOUSE INCORPORATED	13996	STATE MASTER	NC-FITS		-115DA4YG00M29W84AX3X006DQ WASTEWATER TREATMENT FACILITY -0-000024 UNDERGROUND STORAGE TANK PROGRAM
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	WILMINGTON TERMINAL - CAROLINA BEACH RD	NCG080466	ICIS-NPDES NON-MAJOR	ICIS		**ICIS-** ENFORCEMENT/COMPLIANCE ACTIVITY
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	A C WIDENHOUSE	NCD067196816	VSQG (Y)	RCRAINFO		

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
NPDES	4213	TRUCKING, EXCEPT LOCAL	
NC-FITS	9999	NONCLASSIFIABLE ESTABLISHMENTS	
NC-FITS	4213	TRUCKING, EXCEPT LOCAL	

Facility Codes and Flags

EPA Region:	04
Duns Number:	
Congressional District Number:	03
Legislative District Number:	
HUC Code/Watershed:	03030005 / LOWER CAPE FEAR
US Mexico Border Indicator:	
Federal Facility:	NO
Tribal Land:	NO

Alternative Names

Alternative Name	Source of Data
A C WIDENHOUSE INCORPORATED	NC-FITS

Organizations

No Organizations returned.

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	2402 CAROLINA BEACH RD	WILMINGTON	NC	28401	RCRAINFO
OWNER	PO BOX 10	CONCORD	NC	28025	RCRAINFO

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	JIM WILKERSON	910-762-2528	RCRAINFO	

Query executed on: NOV-01-2022

Last updated on September 24, 2015

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

CAROLINA PAINT & BODY INC

EPA Registry Id: 110004056182
2326 CAROLINA BEACH ROAD
WILMINGTON, NC 28401

Legend

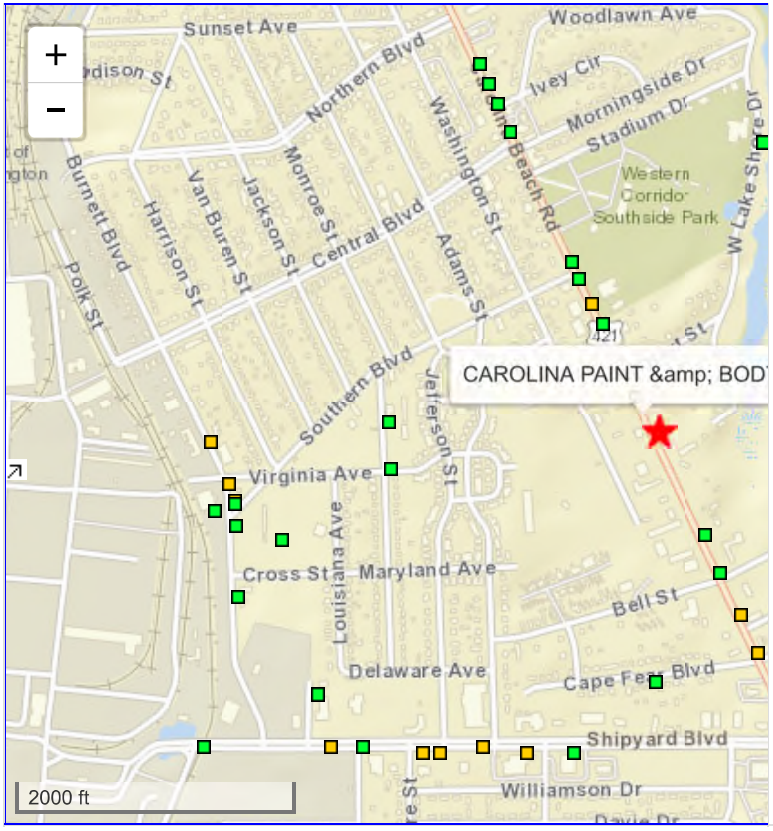
- ★ Selected Facility
- EPA Facility of Interest
- State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	CAROLINA PAINT & BODY INC	NCR000006635	VSQG (Y)	RCRAINFO		

Additional EPA Reports:	MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	04
Duns Number:	
Congressional District Number:	03
Legislative District Number:	
HUC Code/Watershed:	03030005 / LOWER CAPE FEAR
US Mexico Border Indicator:	
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
OWNER	2326 CAROLINA BEACH ROAD	WILMINGTON	NC	28401	RCRAINFO
REGULATORY CONTACT	2326 CAROLINA BEACH ROAD	WILMINGTON	NC	28401	RCRAINFO
FACILITY MAILING ADDRESS	2326 CAROLINA BEACH ROAD	WILMINGTON	NC	28401	RCRAINFO

Alternative Names

No Alternative Names returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	WILLIAM LANIER	910-341-3055	RCRAINFO	View
REGULATORY CONTACT	WILLIAM LANIER	910-341-3055	RCRAINFO	

Organizations

No Organizations returned.

Query executed on: NOV-01-2022

Last updated on September 24, 2015

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DEQ-DWM Data

Screening Report - Starway Village

Area of Interest (AOI) Information

Area : 107,298,303.19 ft²

Nov 1 2022 11:24:22 Eastern Daylight Time

Hazardous Waste Sites

#	HANDLER_ID	SITE_NAME	Count
1	NCD982141335	NEW HANOVER REGIONAL MEDICAL CENTER	1
2	NCR000009571	NHCS BUS TRANSPORTATION	1
3	NCR000140764	FLINT HILL RESOURCES LP WATER TREATMENT PLT	1
4	NCR000140772	SAYBOULT LP	1
5	NCR000141028	NCDSCA 065-0004 (COASTAL DRY CLEANERS)	1
6	NCR000154633	CVS PHARMACY #3594	1
7	NCR000155333	CVS PHARMACY #3836	1

Brownfields Program Sites

#	BF_ID	BF_Name	Count
1	802404065	North Terminal	1
2	903005065	South Terminal	1
3	2303319065	Travelers Oil Co	1

Inactive Hazardous Sites

#	EPAID	SITENAME	Count
1	NONCD0001723	FLINT HILLS RESOURCES-CMT SITE	1
2	NONCD0002194	NCSPA BLDG C-1	1
3	NONCD0002426	ROYSTER TRANSPORT CO., INC.	1
4	NONCD0002561	SUNOCO BULK TERMINAL	1
5	NONCD0002750	WK HOBBS BP SITE	1
6	NONCD0002781	ADAMS PAINTING SERVICE	1
7	NONCD0002797	KOCH NORTH PARAXYLENE	1

Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NONCD0000758	Wisteria Dr. LF	1

DryCleaning Compliance

#	Facility_ID	Facility_Name	Count
1	650004C	Modern Cleaners	1

DryCleaning Remediation Program

#	Site_ID	Site_Name	Count
1	DC650004	Coastal Dry Cleaners	1

DryCleaning Historical Boiler Inspections

#	Drycleaner	InspDate	Count
1	BLACKLEDGE & JIGGS CLEANERS	4/29/1974	1
2	COASTAL CLEANERS	5/2/1996	1
3	COASTAL DRY CLEANERS	8/19/1992	1
4	MODERN LAUNDRY & CLEANERS	12/9/1973	1

DryCleaning City Directories

#	Drycleaner	Address	Count
1	Modern Sunset Cleaners	1921 Carolina Beach Road, Wilmington,NC	1
2	A L Cleaners	2109 Carolina Beach Road, Wilmington,NC	1
3	Sunset Launderette	216 Southern Boulevard, Wilmington,NC	1
4	Econ-O-Wash	2202 Carolina Beach Road, Wilmington,NC	1
5	Pleasant's Washerette	2210 Carolina Beach Road, Wilmington,NC	1
6	Modern Laundry & Dry Cleaners Inc	2219 Carolina Beach Road, Wilmington,NC	1
7	Futura Inc	2242 Carolina Beach Road, Wilmington,NC	1
8	Stan's Washerette	2242 Carolina Beach Road, Wilmington,NC	1
9	Glen Meade Cleaners	2247 South 17th Street, Wilmington,NC	1
10	Sunset Launderette	225 Southern Boulevard, Wilmington,NC	1
11	Laundry Center The	2323 South 17th Street, Wilmington,NC	1
12	Glam-O-Rama	2629 Carolina Beach Road, Wilmington,NC	1
13	Speedway Laundry	2709 Carolina Beach Road, Wilmington,NC	1
14	Sam's Washerette	2802 Carolina Beach Road, Wilmington,NC	1
15	Glam-O-Rama	3311 Carolina Beach Road, Wilmington,NC	1
16	Long Leaf Washerette	2746 Vance Street, Wilmington,NC	2

UST Incidents

#	IncidentNumber	IncidentName	Count
1	226	CONOCO # 33052	1
2	4002	HINSON OIL CO.	1
3	6679	FAST FARE 723	1
4	6950	A. C. WIDENHOUSE, INC.	1
5	7034	BLACKWELDERS AUTO REPAIR	1
6	7090	USMC RESERVE CENTER	1
7	7482	A. C. WIDENHOUSE, INC.-DIESEL UST	1
8	10154	EXXON # 4-6476	1
9	10332	NCSPCA-WILMINGTON TERMINAL FACILITY	1
10	11527	WHEELING CORRUGATION CO.	1
11	12166	NCSPA-STEVEDORE SHOP UST	1
12	14603	FAST FARE # 730	1
13	15294	US ARMY RESERVE CENTER-WILMINGTON	1
14	15716	GAS WORLD #4	1
15	18304	SIEMENS ENERGY & AUTOMATION FACILITY	1
16	20371	NC STATE PORTS AUTHORITY-UREA WAREHOUSE	1
17	20623	NC ARMY NATIONAL GUARD-WILMINGTON ARMORY	1
18	20702	SCOTCHMAN # 145	1
19	20865	ROYSTER TRANSPORT COMPANY	1
20	24270	METZ RESIDENCE	1
21	32007	STEPHENS RESIDENCE, MARY (ESTATE)	1
22	32178	WAYNE'S EXXON	1
23	32234	SPRINGER-EUBANKS HEATING OIL TANK	1
24	32312	HARRY'S AMOCO	1
25	32338	SCHONAUER PROPERTY (JEFF)	1
26	32408	GAS CENTER #6	1
27	32511	FORMER KELLY LLOYD GARAGE	1
28	32588	RACHEL HEWITT RESIDENCE	1
29	32592	WILMINGTON HEALTH AND REHAB	1
30	32701	NORTHERN BLVD-38	1
31	32734	PANTRY # 464	1
32	32758	JACKSON STREET 2137	1
33	32777	39 NORTHERN BLVD	1
34	32830	HINSON PROPERTY HEATING OIL	1
35	32845	central boulevard - 121	1
36	32953	SPRINGER EUBANK BULK - WASTE OIL AND HYDRAULI	1
37	32972	HARRISON ST-2175	1

38	32993	JACKSON STREET-1929	1
39	43054	Troy Drive-2520	1
40	43081	Tommy's Gas & Snaks 2	1
41	48208	Parkway Blvd. - 608	1
42	48250	GPM Scotchman #3145	1
43	*No Data*	FORMER JIFFY LUBE	1
44	*No Data*	NORTHERN BLVD-128	1
45	*No Data*	NEW HANOVER COUNTY SCHOOLS	1
46	*No Data*	OVERNITE TRANSPORTATION CO.	1

Non-UST Incidents

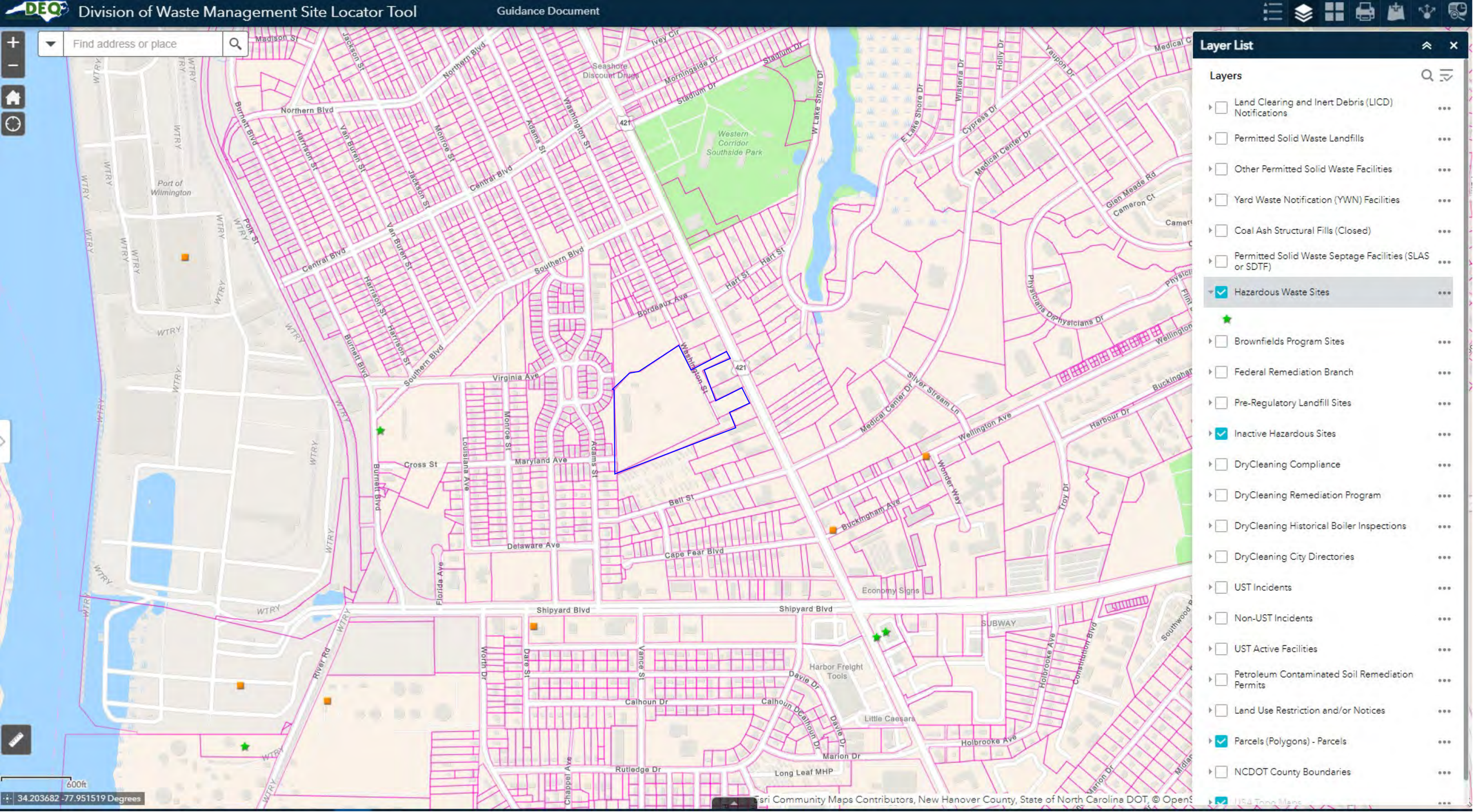
#	IncidentNumber	IncidentName	Count
1	3262	Koch, TANKS 1 & 4	1
2	3264	KOCH FUELS CO. NORTH WASTEWATER RELE; Invista	1
3	3279	EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M	1
4	5572	AMOCO ASPHALT TERMINAL (FORMER)	1
5	5760	CITGO (FORMER AMOCO ASPHALT TERMINAL)	1
6	5800	CP&L - WILMINGTON OIL	1
7	13830	STONE HEAVY VEHICLE SPECIALISTS	1
8	14300	NCSPA - DIESEL AGST SPILL	1
9	14858	WK HOBBS BP SITE	1
10	16971	KOCH FUELS REFINING CO. LR Area	1
11	18900	ROYSTER TRANSPORT CO., INC.	1
12	85399	APEX OIL CO.	1
13	85426	ATLANTIC DIVING AND MARINE	1
14	86296	STG TRUCKING, INC.	1
15	87137	Springer-Eubanks	1
16	87437	APEX Oil Company	1
17	87642	Bolden, Astor Property	1
18	94064	S&G Prestress	1
19	94213	Monroe Street - 2121	1
20	94338	former marine corps reserve training center	1
21	94359	North Carolina Avenue - 151	1
22	*No Data*	ULSD Tank 150-8 Leak	1
23	*No Data*	Monroe St-2401	1

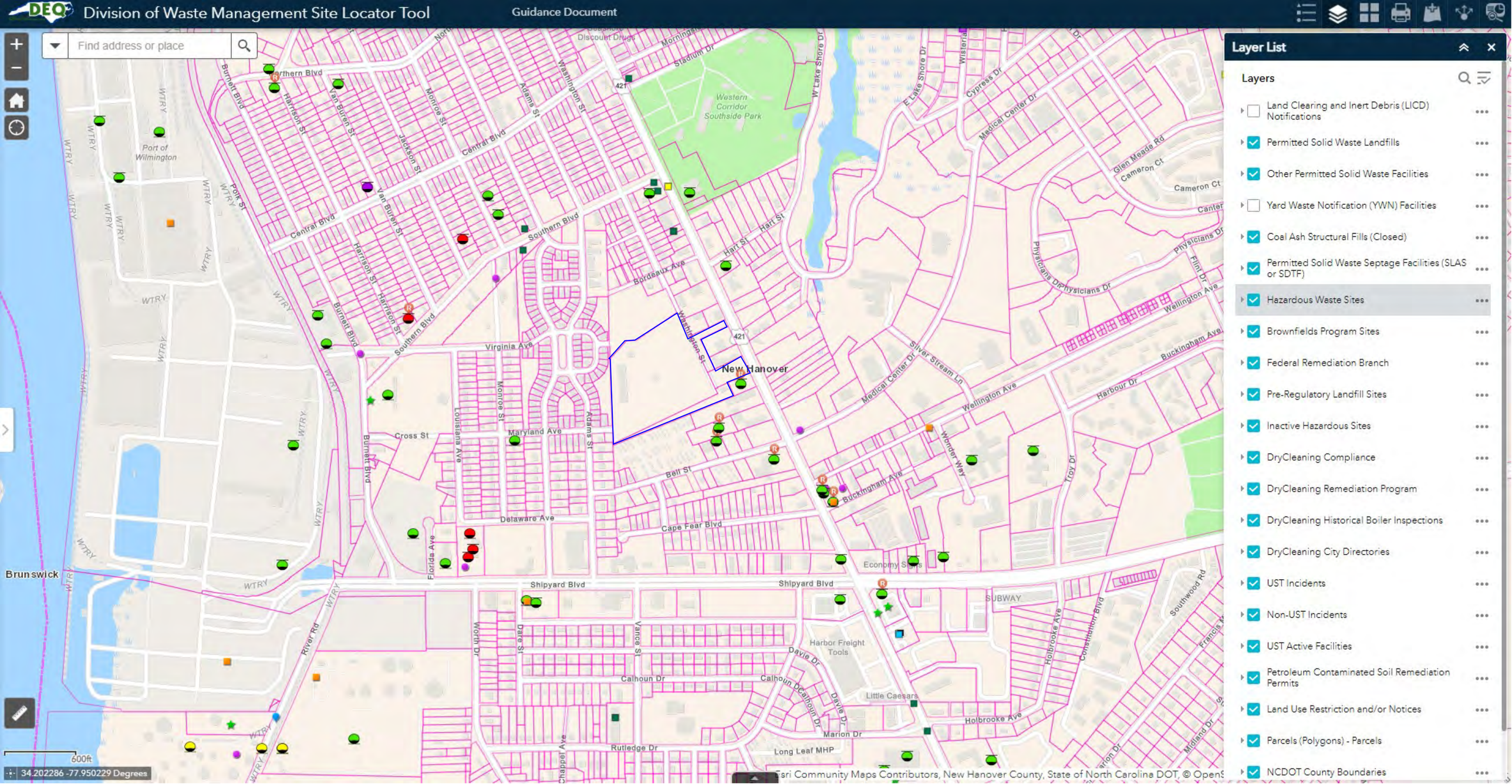
UST Active Facilities

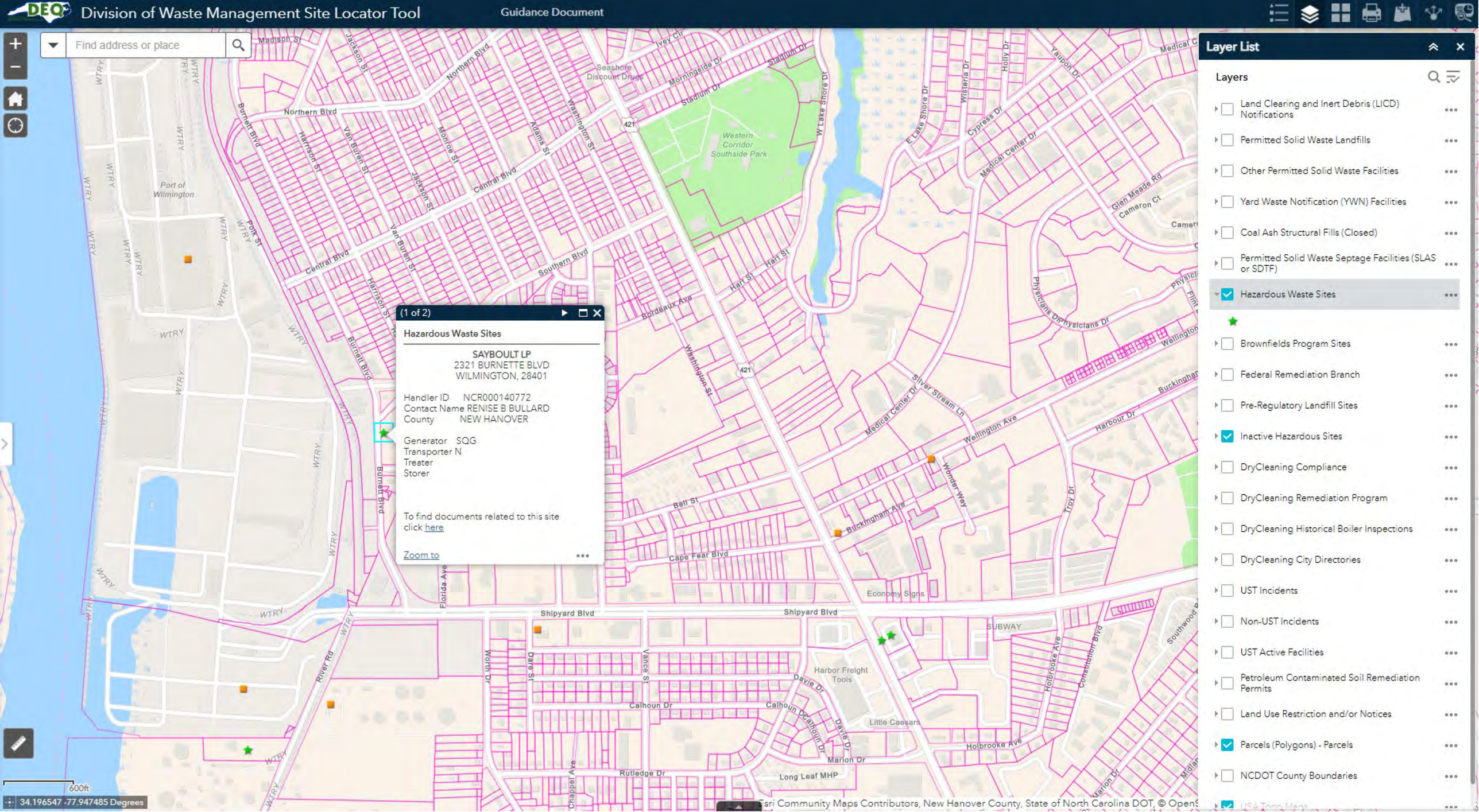
#	FACILID	FACILNAME	Count
1	00-0-0000020207	TFORCE FREIGHT- WILMINGTON	1
2	00-0-0000020576	SPRINGER - EUBANKS CO INC	1
3	00-0-0000022235	PETROLEUM FUEL & TERMINAL CO	1
4	00-0-0000022559	LAVINO SHIPPING COMPANY	1
5	00-0-0000022583	CIRCLE K 2720464	1
6	00-0-0000022601	TOMMY'S GAS & SNAKS 2	1
7	00-0-0000023038	S & G CONCRETE COMPANY	1
8	00-0-0000026394	SCOTCHMAN 3145	1
9	00-0-0000027191	SUNSET PARK ELEMENTARY SCHOOL	1
10	00-0-0000037112	SPEEDWAY #8191	1
11	00-0-0000040829	PHOENIX MART 780	1
12	00-2-0000010788	NHCS TRANSPORTATION DEPARTMENT	1
13	00-2-0000022601	CAROLINA BEACH CARDLOCK	1

Land Use Restriction and/or Notices

#	Prj_Number	Prj_Name	Count
1	WI-1348	GAS WORLD #4	1
2	WI-14858	WK HOBBS BP SITE	1
3	WI-727	CONOCO # 33052	1
4	WI-7605	NORTHERN BLVD-38	1
5	WI-786	HINSON OIL CO.	1
6	WI-7921	HARRISON ST-2175	1
7	WI-7947	JACKSON STREET-1929	1
8	WI-930	A. C. WIDENHOUSE, INC.	1
9	WI-941	BLACKWELDERS AUTO REPAIR	1
10	WI-976	A. C. WIDENHOUSE, INC.-DIESEL UST	1


Division of Waste Management Site Locator Tool
Guidance Document
Find address or place
Layer List
Layers
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
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Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
Western Corridor Southside Park
Port of Wilmington
Seashore Discount Drugs
Economy Signs
SUBWAY
Harbor Freight Tools
Little Caesars
Northern Blvd
Central Blvd
Southern Blvd
Virginia Ave
Maryland Ave
Delaware Ave
Cape Fear Blvd
Shipyard Blvd
Bell St
Hart St
Bordeaux Ave
Cross St
Calhoun Dr
Rutledge Dr
Long Leaf MHP
Marion Dr
Holbrooke Ave
Wellington Ave
Medical Center Dr
Harbour Dr
Buckingham Ave
Wonder Way
Troy Dr
Silver Stream Ln
Physicians Dr
Glen Meade Rd
Cameron Ct
Stadium Dr
Morningside Dr
Ivey Cir
Madison St
Jackson St
Burnett Blvd
Harrison St
Van Buren St
Monroe St
Adams St
Washington St
Louisiana Ave
Florida Ave
Worth Dr
Dare St
Vance St
Davie Dr
Calhoun Dr
Chapel Ave
River Rd
Polk St
W Lake Shore Dr
E Lake Shore Dr
Wisteria Dr
Holly Dr
Cypress Dr
Yaupon Dr
Medical Center Dr
421
WTRY
600ft
34.203682 -77.951519 Degrees
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Guidance Document
Find address or place
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Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
New Hanover
Brunswick
Western Corridor Southside Park
Port of Wilmington
Central Blvd
Southern Blvd
Virginia Ave
Cross St
Maryland Ave
Delaware Ave
Bell St
Cape Fear Blvd
Shipyard Blvd
Calhoun Dr
Rutledge Dr
Marion Dr
Holbrooke Ave
Bordeaux Ave
Hart St
Medical Center Dr
Wellington Ave
Buckingham Ave
Harbour Dr
Harbor Freight Tools
Little Caesars
SUBWAY
Economy Stores
Long Leaf MHP
600ft
34.202286 -77.950229 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS


Division of Waste Management Site Locator Tool
Guidance Document
Find address or place
Layer List
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Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
(1 of 2)
Hazardous Waste Sites
SAYBOULT LP
2321 BURNETTE BLVD
WILMINGTON, 28401
Handler ID NCR000140772
Contact Name RENISE B BULLARD
County NEW HANOVER
Generator SQG
Transporter N
Treater
Storer
To find documents related to this site click here
Zoom to
Northern Blvd
Central Blvd
Southern Blvd
Shipyard Blvd
Cape Fear Blvd
Bell St
Wellington Ave
Harbour Dr
Medical Center Dr
Stadium Dr
Western Corridor Southside Park
Port of Wilmington
Seashore Discount Drugs
Economy Signs
SUBWAY
Harbor Freight Tools
Little Caesars
Calhoun Dr
Davie Dr
Holbrooke Ave
Marion Dr
Rutledge Dr
Long Leaf MHP
River Rd
Burnett Blvd
Florida Ave
Worth Dr
Dare St
Vance St
Chapel Ave
Hart St
Bordeaux Ave
Washington St
Adams St
Monroe St
Jackson St
Van Buren St
Harrison St
Polk St
Madison St
Ivey Cir
Morningside Dr
W Lake Shore Dr
E Lake Shore Dr
Wisteria Dr
Holly Dr
Cypress Dr
Yaupon Dr
Glen Meade Rd
Cameron Ct
Physicians Dr
Silver Stream Ln
Wonder Way
Troy Dr
Buckingham Ave
Holbrooke Ave
Constitution Blvd
Southwood Dr
421
WTRY
600ft
34.196547 -77.947485 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS

Hazardous Waste Compliance Data Entry Form

12-2

T

ENTEI

DEC 07

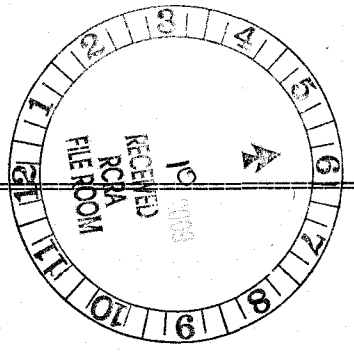
EPA ID Number: NCR 000 140 772

Facility Name: Sayboult

Street: 2321 Burnett Blvd.

City: Wilmington **ZIP:** 28401 **County:** New Hanover

Contact Name: Wayne Sloan **Phone#:** (910) 763-8444



EVALUATION DATA New: __X__ Change: ____ Delete: ____

Date: 11/25/2009 Evaluation Type: CEI

Date: ___/___/ Evaluation Type:

Inspector ID #: 036

Evaluation Comments:

Never Inspected ~~LQG~~ SQG

Date Determined:

Branch: 07 Person: 036

Return to Compliance: ___ ___/___ ___/___ ___
Scheduled Actual

Regulation Description:

Comment:

REVISED 11/30/2009

North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

State Of North Carolina
Department of Environment and Natural Resources
Hazardous Waste Section

SMALL QUANTITY GENERATOR INSPECTION FORM

Facility Name: Saybolt

Inspection Date: 25 November 2009
Last Inspected: None

EPA ID#: NCR 000 140 772

County: New Hanover

Address: 2321 Burnett Blvd.
Wilmington, NC 28401

Contact/Phone #: Wayne Sloan
(910) 763-7738

Present at Inspection: Wayne Sloan & Bruce Bullard

Owner: Core Laboratories

Type of business: Analytical laboratory

Processes: Saybolt analyzes cargo samples from marine shipments. The analysis generates no waste but hazardous waste when the samples are disposed.

Waste generated: Waste Flammable Liquid (Acetone, MEK) D001, F003, F005
Caustic Soda D002

Transporters: Ashland Chemical
OHD 042 311 209

TSD's: Ashland Chemical
NCD 061 263 315

Manifests/signed copies within 60 days? Yes, the 2009 manifests were reviewed.

Inspection records? No, example records will be issued.

Emergency information /#'s posted by phone?(name & # of emergency coordinator, fire dept., location of fire extinguisher, fire alarm, spill control): Yes

Emergency coordinator (must be onsite or on call): Wayne Sloan

Spill kit/fire extinguishers? Yes, located in the storage building.

Personnel familiar w/waste handling & emergency procedures? Yes

Local authorities contacted? No, example letters will be issued.

Satellite areas/description (closed, clean, labeled, <55 gallons?): There were three, 5 gallon safety cans in the lab area. All of these containers were closed but not labeled.

Storage areas/description: (Closed, clean, labeled, dated <180 days, good condition, <6000 kg?): The 180 day storage area is located behind the main building in a truck container. In this area there were three properly labeled and dated drums. No problems were noted.

Deficiencies/Comments:

- The facility should label all accumulation containers with the words "Hazardous Waste" or other words which identify the contents of the container.
- Arrangements with the local authorities should be made as soon as possible. Example letters will be issued.
- Immediately begin weekly inspections of the 180 day storage area. Document inspections.

Bobby Nelms
Environmental Senior Specialist Date: 1 December 2009

Emailed to Wayne Sloan Date: 1 December 2009

North Carolina Department of Environment and Natural Resource
Division of Waste
Management
Michael F. Easley, Governor
William G Ross, Jr., Secretary
Dexter R. Matthews, Director

7/3/2006

SAYBOLT LP
2321 BURNETT BLVD.
WILMINGTON NC 28401

Attention: Facility Contact

RE: EPA ID #: NCR000140772
SAYBOLT LP

Dear Sir or Madam:

Thank you for notifying the North Carolina Hazardous Waste Section of your activities as a Not a Generator of hazardous waste. The EPA ID Number that we have assigned to your site is shown above. If any information about your site changes, such as the facility name, facility contact, a location change or if your facility plans to close, please notify us at the address shown below:

The NC Hazardous Waste Section
ATTN:Larry Wilson
1646 Mail Service Center
Raleigh, NC 27699-1646

We encourage you to become familiar with the North Carolina Hazardous Waste Management Rules that have been codified in the North Carolina Administrative Code at 15A NCAC 13A. You may obtain a printed copy of the rules for $32.00 by contacting Lillie Hinnant at 919-508-8543. You may also access and print the rules from our Internet site at http://www.wastenot.nc.org/HWHOME/WEBRules/NCDWRULE.html. We specifically draw your attention to Rules .0101, .0102, .0106 and .0107. These provisions address the requirements potentially applicable to generators to hazardous waste. (We have also enclosed a copy of an EPA publication that explains these requirements).

If you are considered a Large Quantity Generaotor, a Small Quantity Generator, a Transporter, or a Treater, Storer or Disposer (TSD) facility, you are required to pay an annual fee in North Carolina. The invoice is attached with this letter. Conditionally Exempt Small Quantity Generators are not required to pay the annual fees that large and small generators, transporters, and TSD facilities are required to pay in North Carolina. These fees are used to support the State's programs to ensure the safe management of hazardous waste. If your regulatory status changes, an EPA Form 8700-12 must be completed and submitted to the North Carolina Hazardous Waste Section at the above address.

If you have any questions, please contact Larry Wilson at 919-508-8573

Sincerely,

Elizabeth W. Cannon

Elizabeth W.Cannon, Chief
Hazardous Waste Section
Enclosure



Cc:Central Files (General)

NCR000140772 SAYBOLT LP

County: NEW HANOVER **Source Type:** N **Seq. Number:** 10.00 **Receive Date:** 16-Jun-2006

Location Address: 2321 BURNETT BLVD. WILMINGTON, NC 28401	**Mailing Address:** 2321 BURNETT BLVD. WILMINGTON, NC 28401

Contact Person For Source Information: RENISE BULLARD, (910) 763-8444, 2321 BURNETT BLVD., WILMINGTON, NC 28401, US

Owner (current)
TOMMY CAVENAUGH — 214 CHIMNEY, WILMINGTON, NC 28409 — Type: P
From: 06/29/2006 To: Phone:

Operator (current)
SAYBOLT LP — Type: P
From: 04/01/1992 To: Phone:

Land Type: P | Non Notifier:E | Commercial Availability: | Tsd Date:
Accessibility: | No. Employees: | State District:

Regulated Waste Activities

Hazardous Waste Generator Status - Federal: Small Quantity Generator; State: Small Quantity Generator

Transfer Facility:

Other Hazardous Waste Generator Activities
- Importer Activity: No
- Mixed Waste Generator: No

Transporter Activity: No
TSD Activity: No
Recycler Activity: No

Exempt Boiler and/or Industrial Furnace
- Small Quantity Onsite Burner Exemption: No
- Smelting, melting, Refining Furnace Exemption: No

Used Oil Activities

Used Oil Transport Activity
- Transporter: No
- Transfer Facility: No

Used Oil Processor and/or Re-refiner Activity
- Processor: No
- Refiner No

Off-Specification Used Oil Burner: No

Used Oil Fuel Marketer Activity
- Marketer who direct shipment off-specification used oil to off-specification used oil burner: No
- Marketer who first claims the used oil meets the specifications: No

Underground Injection Control: No

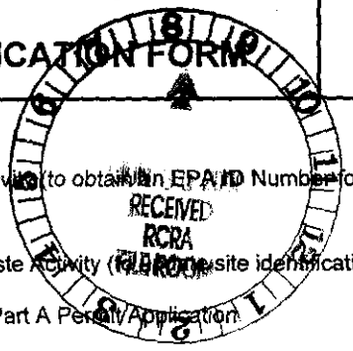
Destination Facility for Universal Waste: No

OMB#: 2050-0028 Expires 1/31/2006

SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.

United States Environmental Protection Agency

RCRA SUBTITLE C SITE IDENTIFICATION FORM

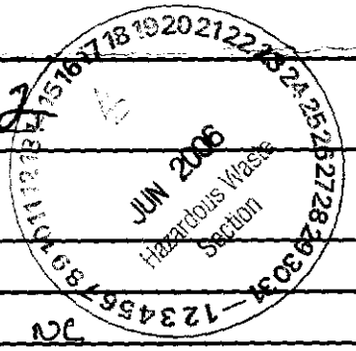


1. Reason for Submittal (See instructions on page 13.)

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- [X] To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities)
- [ ] To provide Subsequent Notification of Regulated Waste Activity (to revise site identification information)
- [ ] As a component of a First RCRA Hazardous Waste Part A Permit Application
- [ ] As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)
- [ ] As a component of the Hazardous Waste Report



2. Site EPA ID Number (page 14)

EPA ID Number: NCR000140777

3. Site Name (page 14)

Name: Saybolt LP

4. Site Location Information (page 14)

Street Address: 2321 Burnett Blvd.

City, Town, or Village: Wilmington | State: NC

County Name: New Hanover | Zip Code: 28401

5. Site Land Type (page 14)

Site Land Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

6. North American Industry Classification System (NAICS) Code(s) for the Site (page 14)

A. 541380 | B.

C. | D.

7. Site Mailing Address (page 15)

Street or P. O. Box: Saybolt LP 2321 Burnett Blvd

City, Town, or Village: Wilmington

State: NC

Country: USA | Zip Code: 28401

8. Site Contact Person (page 15)

First Name: Renise | MI: B | Last Name: Bullard

Phone Number: 910 763 8444 | Extension: | Email address: Bruce.Bullard@Corelab.Com

9. Operator and Legal Owner of the Site (pages 15 and 16)

A. Name of Site's Operator: Saybolt LP | Date Became Operator (mm/dd/yyyy): 04/01/92

Operator Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

B. Name of Site's Legal Owner: Tommy Cavenaugh | Date Became Owner (mm/dd/yyyy): 03/01/99

Owner Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

EPA ID NO: |__|__|__|__|__|__|__|__|__|__|__|__| OMB#: 2050-0028 Expires 1/31/2006

9. Legal Owner (Continued) Address	Street or P. O. Box: Tommy Cavenaugh 214 Chimney lane
	City, Town, or Village: Wilmington
	State: NC
	Country: USA Zip Code: 28409

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 17 to 20.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ☒ N ☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

- ☐ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- ☒ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous Waste

Y ☐ N ☒ e. Mixed Waste (hazardous and radioactive) Generator

Y ☐ N ☒ **2. Transporter of Hazardous Waste**

Y ☐ N ☒ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ☐ N ☒ **4. Recycler of Hazardous Waste (at your site)**

Y ☐ N ☒ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☒ **6. Underground Injection Control**

B. Universal Waste Activities

Y ☐ N ☒ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	☐	☐
b. Pesticides	☐	☐
c. Thermostats	☐	☐
d. Lamps	☐	☐
e. Other (specify) _____	☐	☐
f. Other (specify) _____	☐	☐
g. Other (specify) _____	☐	☐

Y ☐ N ☒ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ☐ N ☒ **1. Used Oil Transporter**
If "Yes", mark each that applies.
- ☐ a. Transporter
- ☐ b. Transfer Facility

Y ☐ N ☒ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☒ **3. Off-Specification Used Oil Burner**

Y ☐ N ☒ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

EPA ID NO: |__|__|__|__|__|__|__|__|__|__|__|__| OMB#: 2050-0028 Expires 1/31/2006

11. Description of Hazardous Wastes (See instructions on page 21.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	F003	F005				

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

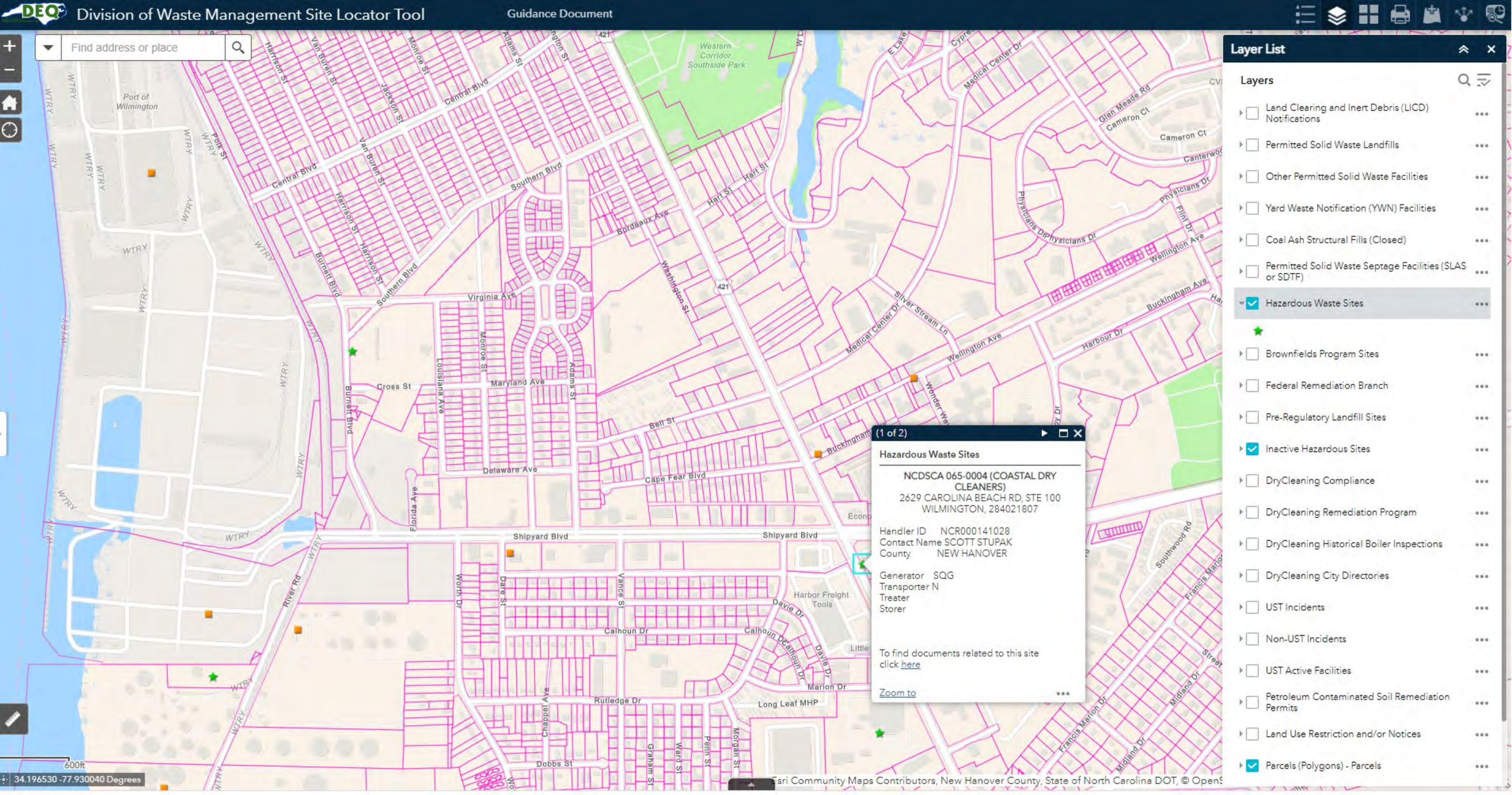
12. Comments (See instructions on page 21.)

Status change from CESQG TO SQG
Saybolt LP Company speciqlize in petroleum Quality + Quantity
and is owned by Core Laboratories LP
6316 Windfern
Houston, TX 77040 U.S.A.

Core Laboratories is a public held Company

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11).
(See instructions on page 21.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
Lynn B Bell	Manager	06/09/06


Division of Waste Management Site Locator Tool
Guidance Document
Find address or place
Layer List
Layers
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
DryCleaning Historical Boiler Inspections
DryCleaning City Directories
UST Incidents
Non-UST Incidents
UST Active Facilities
Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
(1 of 2)
Hazardous Waste Sites
NCDSCA 065-0004 (COASTAL DRY CLEANERS)
2629 CAROLINA BEACH RD, STE 100
WILMINGTON, 284021807
Handler ID NCR000141028
Contact Name SCOTT STUPAK
County NEW HANOVER
Generator SQG
Transporter N
Treater
Storer
To find documents related to this site click here
Zoom to
Western Corridor Southside Park
Port of Wilmington
Shipyard Blvd
Cape Fear Blvd
Delaware Ave
Maryland Ave
Virginia Ave
Cross St
Bell St
Central Blvd
Southern Blvd
Medical Center Dr
Wellington Ave
Harbour Dr
Buckingham Ave
Harbor Freight Tools
Long Leaf MHP
34.196530 -77.930040 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS

North Carolina Department of Environment and Natural Resource
Division of Waste
Management
Michael F. Easley, Governor
William G Ross, Jr., Secretary
Dexter R. Matthews, Director

7/21/2006

NCDSCA 65-0004 (COASTAL DRY CLEANER)
401 OBERLIN RD.
SUITE 150, ATTN: DSCA PROGRAM
RALEIGH NC 276051350

Attention: Facility Contact

RE: EPA ID #: NCR000141028
NCDSCA 65-0004 (COASTAL DRY CLEANER)

Dear Sir or Madam:

Thank you for notifying the North Carolina Hazardous Waste Section of your activities as a Small Quantity Generator of hazardous waste. The EPA ID Number that we have assigned to your site is shown above. If any information about your site changes, such as the facility name, facility contact, a location change or if your facility plans to close, please notify us at the address shown below:

The NC Hazardous Waste Section
ATTN:Larry Wilson
1646 Mail Service Center
Raleigh, NC 27699-1646

We encourage you to become familiar with the North Carolina Hazardous Waste Management Rules that have been codified in the North Carolina Administrative Code at 15A NCAC 13A. You may obtain a printed copy of the rules for $32.00 by contacting Lillie Hinnant at 919-508-8543. You may also access and print the rules from our Internet site at http://www.wastenot.nc.org/HWHOME/WEBRules/NCDWRULE.html. We specifically draw your attention to Rules .0101, .0102, .0106 and .0107. These provisions address the requirements potentially applicable to generators to hazardous waste. (We have also enclosed a copy of an EPA publication that explains these requirements).

If you are considered a Large Quantity Generaotor, a Small Quantity Generator, a Transporter, or a Treater, Storer or Disposer (TSD) facility, you are required to pay an annual fee in North Carolina. The invoice is attached with this letter. Conditionally Exempt Small Quantity Generators are not required to pay the annual fees that large and small generators, transporters, and TSD facilities are required to pay in North Carolina. These fees are used to support the State's programs to ensure the safe management of hazardous waste. If your regulatory status changes, an EPA Form 8700-12 must be completed and submitted to the North Carolina Hazardous Waste Section at the above address.

If you have any questions, please contact Larry Wilson at 919-508-8573

Sincerely,

Elizabeth W. Cannon

Elizabeth W.Cannon, Chief
Hazardous Waste Section
Enclosure

Cc:Central Files (General)

NCR000141028 NCDSCA 65-0004 (COASTAL DRY CLEANER)

County: NEW HANOVER **Source Type:** N **Seq. Number:** 1.00 **Receive Date:** 07-Jun-2006

Location Address: 2629 A CAROLINA BEACH ROAD, SUITE 100
WILMINGTON, NC 28402

Mailing Address: 401 OBERLIN RD.
RALEIGH, NC 276051350

Contact Person For Source Information: NIKI FOUNTAIN
(919) 508-8400
401 OBERLIN RD.
SUITE 150, ATTN: DSCA PROGRAM
RALEIGH, NC 276051350
US

Owner (current)
ZIMMER COMMERCIAL PROPERTIES, LLC
P.O. BOX 2628
WILMINGTON, NC 28402
Type: P
From: 12/01/1996 To:
Phone:

Operator (current)
PETITIONERS FOR DSCA SITE ID 65-0004
Type: S
From: 12/01/1996 To:
Phone:

Land Type: P | Non Notifier:E | Commercial Availability: | Tsd Date:
Accessibility: | No. Employees: | State District:

Regulated Waste Activities

Hazardous Waste Generator Status - Federal: Small Quantity Generator; State: Small Quantity Generator

Transfer Facility:

Other Hazardous Waste Generator Activities
- Importer Activity: No
- Mixed Waste Generator: No

Transporter Activity: No
TSD Activity: No
Recycler Activity: No

Exempt Boiler and/or Industrial Furnace
- Small Quantity Onsite Burner Exemption: No
- Smelting, melting, Refining Furnace Exemption: No

Used Oil Activities

Used Oil Transport Activity
- Transporter: No
- Transfer Facility: No

Used Oil Processor and/or Re-refiner Activity
- Processor: No
- Refiner No

Off-Specification Used Oil Burner: No

Used Oil Fuel Marketer Activity
- Marketer who direct shipment off-specification used oil to off-specification used oil burner: No
- Marketer who first claims the used oil meets the specifications: No

Underground Injection Control: No

Destination Facility for Universal Waste: No

United States Environmental Protection Agency

RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal

Reason for Submittal:

☑ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities)

☐ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information)

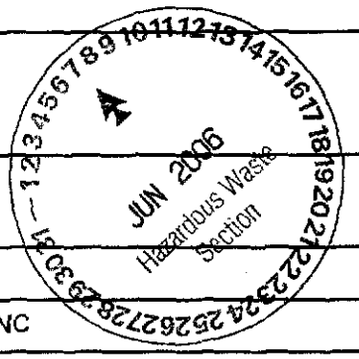
☐ As a component of a First RCRA Hazardous Waste Part A Permit Application

☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)

☐ As a component of the Hazardous Waste Report

2. Site EPA ID

EPA ID Number NCR000141028



3. Site Name

Name: NC DSCA 65-0004 (Coastal Dry Cleaner- Carolina Beach)

4. Site Location Information

Street Address: 2629 Carolina Beach Road

City, Town, or Village: Wilmington **State:** NC

County Name: New Hanover **Zip Code:** 28402

5. Site Land Type

Site Land Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

6.

A. 81232

B.

C.

D.

7. Site Mailing Address

Street or P. O. Box: 401 Oberlin Rd., Suite 150 Attn: DSCA Program

City, Town, or Village: Raleigh

State: NC

Country: USA **Zip Code:** 27605-1350

8. Site Contact Person

First Name: Niki **MI:** **Last Name:** Fountain

Phone Number: 919-508-8400 **Extension:** **Email address:** niki.fountain@ncmail.net

9. Operator and Legal Owner of the Site

A. Name of Site's Operator: Petitioners for DSCA Site ID 65-0004 **Date Became Operator (mm/dd/yyyy):** 12/01/1996

Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

B. Name of Site's Legal Owner: Zimmer Commercial Propoerties, LLC **Date Became Owner (mm/dd/yyyy):** 12/01/1996

Owner Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

EPA ID NO: | | | | | | | | | | | | |

9. Legal Owner *(Continued)* Address	**Street or P. O. Box:** PO Box 2628, 111 Princess Street	
	City, Town, or Village: Wilmington	
	State: NC	
	Country: USA	**Zip Code:** 28402

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 26 to 30.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

- ☐ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- ☑ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☑ d. United States Importer of Hazardous Waste

Y ☐ N ☑ e. Mixed Waste (hazardous and radioactive) Generator

Y ☐ N ☑ **2. Transporter of Hazardous Waste**

Y ☐ N ☑ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ☐ N ☑ **4. Recycler of Hazardous Waste (at your site)**

Y ☐ N ☑ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☑ **6. Underground Injection Control**

B. *Universal Waste Activities*

Y ☐ N ☑ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. *Indicate types of universal waste generated and/or accumulated at your site.* If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	☐	☐
b. Pesticides	☐	☐
c. Thermostats	☐	☐
d. Lamps	☐	☐
e. Other (specify) _____	☐	☐
f. Other (specify) _____	☐	☐
g. Other (specify) _____	☐	☐

Y ☐ N ☑ **2. *Destination Facility for Universal Waste***
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes", mark each that applies.
- ☐ a. Transporter
- ☐ b. Transfer Facility

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to *Off-Specification Used Oil Burner*
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

EPA ID NO: [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ]

11. Description of Hazardous Wastes

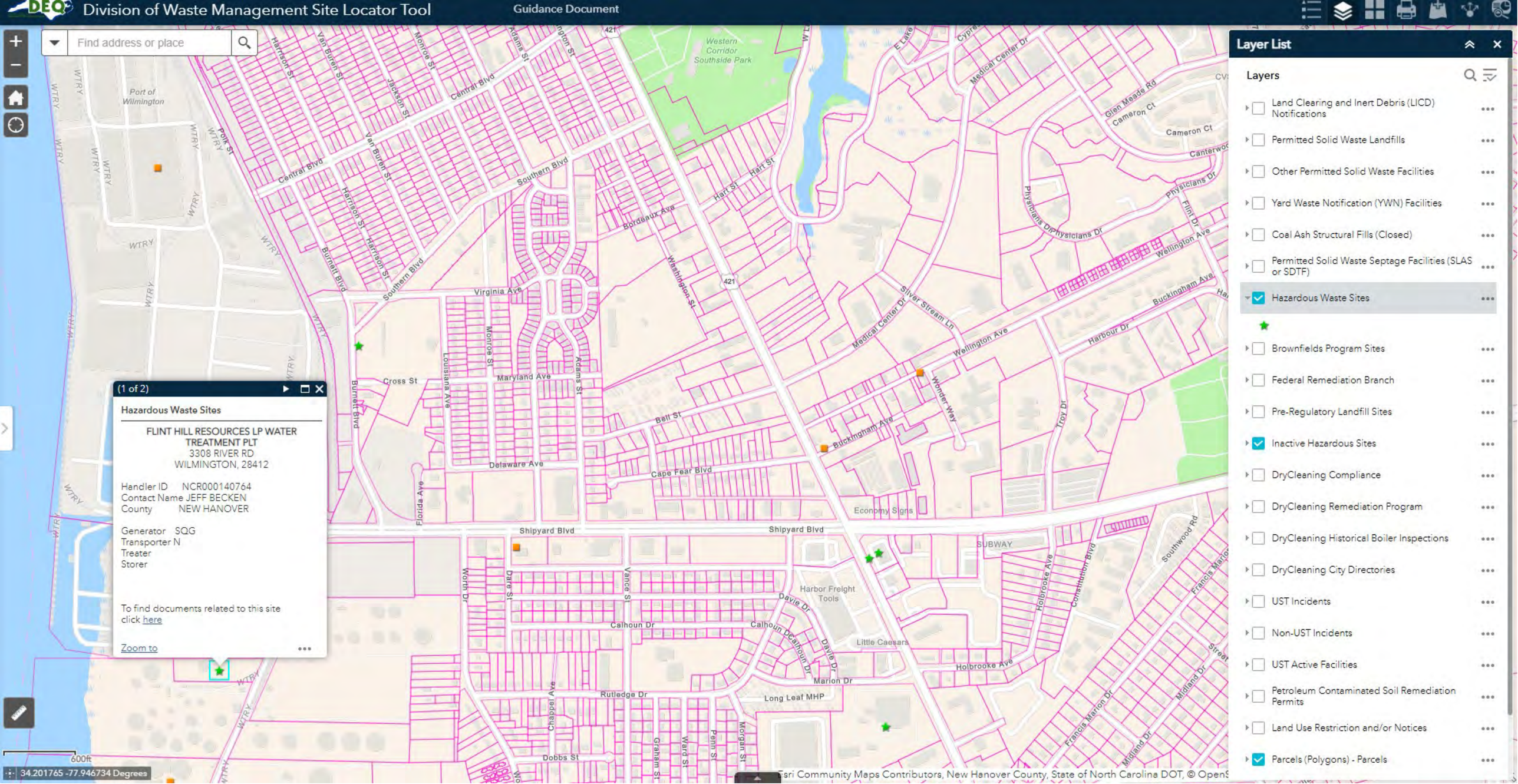
A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

F002						

12. Comments

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
Niki Fountain	Niki Fountain on behalf of Petitioners for DSCA Site 65-0004	6/7/06


Division of Waste Management Site Locator Tool
Guidance Document
Find address or place
Layer List
Layers
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
DryCleaning Historical Boiler Inspections
DryCleaning City Directories
UST Incidents
Non-UST Incidents
UST Active Facilities
Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
(1 of 2)
Hazardous Waste Sites
FLINT HILL RESOURCES LP WATER TREATMENT PLT
3308 RIVER RD
WILMINGTON, 28412
Handler ID NCR000140764
Contact Name JEFF BECKEN
County NEW HANOVER
Generator SQG
Transporter N
Treater
Storer
To find documents related to this site click here
Zoom to
Western Corridor Southside Park
Port of Wilmington
Shipyard Blvd
Cape Fear Blvd
Delaware Ave
Maryland Ave
Virginia Ave
Bell St
Cross St
Calhoun Dr
Rutledge Dr
Long Leaf MHP
Dobbs St
Marion Dr
Davie Dr
Harbor Freight Tools
Little Caesars
SUBWAY
Economy Signs
Medical Center Dr
Wellington Ave
Buckingham Ave
Harbour Dr
Holbrooke Ave
Southwood Rd
Central Blvd
Southern Blvd
Bordeaux Ave
Hart St
Physicians Dr
Glen Meade Rd
Cameron Ct
Silver Stream Ln
Wonder Way
Troy Dr
Flint Dr
Midland Dr
Francis Marion Dr
Constitution Blvd
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Monroe St
Adams St
Washington St
Louisiana Ave
Florida Ave
Worth Dr
Dare St
Jones St
Chapel Ave
Graham St
Ward St
Penn St
Morgan St
421
WTRY
600ft
34.201765 -77.946734 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS

Hazardous Waste Compliance Data Entry Form

1

EPA ID Number: NCR 000 140 764

Facility Name: Flint Hills Resources

ENTERED DEC 16 2009

Street: 3308 River Road

City: Wilmington **ZIP:** 28405 **County:** New Hanover

Contact Name: Jeff Becken **Phone#:** (910) 452-5861

EVALUATION DATA New: __X__ Change: ____ Delete: ____

Date: 12/08/2009 Evaluation Type: CEI

Date: ___/___/ Evaluation Type:

Inspector ID #: 036

Evaluation Comments:

** Never Inspected SQG **

Date Determined:

Branch: 07 Person: 036

Return to Compliance: ___ ___/___ ___/___ ___
Scheduled Actual

Regulation Description:

Comment:

North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

State Of North Carolina
Department of Environment and Natural Resources
Hazardous Waste Section

SMALL QUANTITY GENERATOR INSPECTION FORM

Facility Name: Flint Hills Resources

EPA ID#: NCR 000 140 764

Address: 3308 River Road
Wilmington, NC 28405

Present at Inspection: Jeff Becken & Larry Wessell

Inspection Date: 12/08/09
Last Inspected: None
County: New Hanover

Contact/Phone #: Jeff Becken

Owner: Flint Hills Resources

Type of business: Pump and treat system

Processes: Pumping and treating contaminated groundwater.

Waste generated: Waste Flammable Liquid (xylene) D001, U239

Transporters:

TSD's:

Manifests/signed copies within 60 days? Manifests were present for inspection. No Violations.

Inspection records? Weekly inspections are being conducted on the accumulation container. Though inspections are not required, the records reviewed were compliant.

Emergency information /#'s posted by phone?(name & # of emergency coordinator, fire dept., location of fire extinguisher, fire alarm, spill control): The facility maintains a LQG type contingency plan. It is recommended that the required emergency numbers be posted next to the telephone.

Emergency coordinator (must be onsite or on call): Yes, Jeff Becken.

Spill kit/fire extinguishers? Yes

Personnel familiar w/waste handling & emergency procedures? Yes

Local authorities contacted? Yes, emergency authorities were contacted via mail in December 2006.

Satellite areas/description (closed, clean, labeled, <55 gallons?): There was one 55 gallon drum located next to the treatment unit. The drum was properly labeled and closed.

Storage areas/description: (Closed, clean, labeled, dated <180 days, good condition, <6000 kg?): There was no waste in storage.

Universal Waste: N/A

Used oil: N/A

Deficiencies/Comments: This facility is listed as a SQG and has never been previously inspected. Very little waste is generated and the facility could notify as a CESQG if it chooses to.

There were no violations observed.

Bobby Nelms
Environmental Senior Specialist

Date: 14 December 2009

Emailed to Jeffery Becken
Facility contact

Date: 14 December 2009

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone: 919-508-8400 \ FAX: 919-715-4061 \ Internet: www.wastenotnc.org

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One NorthCarolina Naturally

FLINT HILLS
RESOURCES®

G

Received
AUG 2009
Hazardous
Waste Section

August 20, 2009

North Carolina Hazardous Waste Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605

VIA CERTIFIED MAIL
7008-2810-0001-2045-1175

Re: 2009 North Carolina Hazardous Waste Minimization
Questionnaire for Small Quantity Generators
EPA ID Number NCR000140764
Flint Hills Resources, LP Wilmington Facility

chg contact

To Whom It May Concern:

Enclosed please find the 2009 Hazardous Waste Minimization Questionnaire for Small Quantity Generators for the Flint Hills Resources, LP's Wilmington site.

Please note that Nicole Cory is the Facility Contact as reflected on the Questionnaire. However, she is on temporary leave until the end of October 2009. In the interim please contact Michele Pugh at (316) 828-8412 if you have any questions or need additional information.

Sincerely,

James Jacobson
Director, Operations
Flint Hills Resources, LP

Enclosure

cc: Nicole Cory

– 4111 East 37th Street North – Wichita, Kansas 67220 – P.O. Box 2917 – Wichita, Kansas 67201-2917 –

OMB#: 2050-0028 Expires 06/30/2009

SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.

United States Environmental Protection Agency

RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal (See instructions on page 13.)

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- ☐ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities)
- ☑ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)
- ☐ As a component of the Hazardous Waste Report

2. Site EPA ID Number (page 14)

EPA ID Number NCR000140764

3. Site Name (page 14)

Name: Flint Hills Resources, LP Water Treatment Plant

4. Site Location Information (page 14)

Street Address: 3308 River Road

City, Town, or Village: Wilmington **State:** NC

County Name: New Hanover **Zip Code:** 28412

5. Site Land Type (page 14)

Site Land Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

6. North American Industry Classification System (NAICS) Code(s) for the Site (page 14)

A. 56299 **B.**

C. **D.**

7. Site Mailing Address (page 15)

Street or P. O. Box: 3308 River Road

City, Town, or Village: Wilmington

State: NC

Country: United States **Zip Code:** 28412

8. Site Contact Person (page 15)

First Name: Jeff **MI:** **Last Name:** Becken

Phone Number: 910-452-5861 **Extension:** **Email address:** jeff.becken@catlinusa.com

9. Operator and Legal Owner of the Site (pages 15 and 16)

A. Name of Site's Operator: Catlin Engineers and Scientists **Date Became Operator (mm/dd/yyyy):** 05/15/2007

Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

B. Name of Site's Legal Owner: Flint Hills Resources, LP **Date Became Owner (mm/dd/yyyy):** 11/12/1981

Owner Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

9. Legal Owner (Continued) Address	**Street or P. O. Box:** P.O. Box 2917	
	City, Town, or Village: Wichita	
	State: KS	
	Country: United States	**Zip Code:** 67201

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 17 to 20.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y☑ N☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

- ☐ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- ☑ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y☐ N☑ d. United States Importer of Hazardous Waste

Y☐ N☑ e. Mixed Waste (hazardous and radioactive) Generator

Y☐ N☑ **2. Transporter of Hazardous Waste**

Y☐ N☑ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y☐ N☑ **4. Recycler of Hazardous Waste (at your site)**

Y☐ N☑ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining

Y☐ N☑ **6. Underground Injection Control**

B. Universal Waste Activities

Y☐ N☑ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal mark all boxes that apply:**

	Manage
a. Batteries	☐
b. Pesticides	☐
c. Mercury containing equipment	☐
d. Lamps	☐
e. Other (specify)	☐
f. Other (specify) _____	☐
g. Other (specify) _____	☐

Y☐ N☑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y☐ N☑ **1. Used Oil Transporter**
If "Yes", mark each that applies.
- ☐ a. Transporter
- ☐ b. Transfer Facility

Y☐ N☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
- ☐ a. Processor
- ☐ b. Re-refiner

Y☐ N☑ **3. Off-Specification Used Oil Burner**

Y☐ N☑ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

EPA ID NO: | N | C | R | 0 | 0 | 0 | 1 | 4 | 0 | 7 | 6 | 4 |

OMB#: 2050-0028 Expires 06/30/2009

11. Description of Hazardous Wastes (See instructions on page 21.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D018	U239				

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 21.)

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11).
(See instructions on page 21.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	James E. Jacobson Director, Operations	12/14/2007

FLINT HILLS
RESOURCES®

VIA CERTIFIED MAIL. RETURN RECEIPT REQUESTED

February 26, 2008

Mr. Jim Edwards
NC Hazardous Waste Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Subject: Flint Hills Resources, LP 2007 Hazardous Waste Report
Water Treatment Plant EPA ID# NCR000140764

Dear Mr. Edwards,

Flint Hills Resources, LP (FHR) received the attached notice from the Division of Waste Management ("Division") regarding the requirements for the 2007 Hazardous Waste Report ("Report"). This notice requires Hazardous Waste Report Filers that have determined that their facility is not required to file a Report to submit a letter of explanation to the Division. FHR is not required to submit a Report for the above referenced facility because the waste generated at this facility is under the reporting limit. Accordingly, FHR hereby informs you that it will not file a report for the FHR Water Treatment Plant, EPA ID# NCR000140764.

The attached notice also requires Hazardous Waste Report Filers that have determined that their facility is not required to file a Report to submit a revised Site Identification Form. FHR submitted a revised Site Identification Form on December 13, 2007 to reflect its new status as a Small Quantity Generator. A copy of this form is also enclosed.

Please contact me at 316-828-7249 or via e-mail at nicole.cory@fhr.com with any questions.

Sincerely,
Flint Hills Resources, LP

Nicole Cory
Environmental Engineer

Enclosure

– 4111 East 37th Street North – Wichita, Kansas 67220 – P.O. Box 2917 – Wichita, Kansas 67201-2917 –

NCDENR
North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director | **Division of Waste Management** | Michael F. Easley, Governor
William G. Ross Jr., Secretary

January 30, 2008

Dear Hazardous Waste Report Filer:

Re: 2007 Hazardous Waste Report

Your facility is (was) listed in the North Carolina Hazardous Waste database as a Large Quantity Generator (LQG) and/or a Treatment, Storage, or Disposal Facility (TSDF) during the calendar year 2007. Because of this designation you may be required to complete a 2007 Hazardous Waste Report (enclosed).

To determine if your facility is required to file a 2007 Hazardous Waste Report, please read the instructions on Page iii of the 2007 hazardous Waste Report booklet. North Carolina has no additional state-specific requirements or exemptions that would change your facility's status. Please note that if you are a TSDF you are required to submit a 2007 Hazardous Waste Report regardless of your generator status. Also remember that you may be considered a TSDF based on disposal activity at your facility (post-closure permit or post-closure care).

If you determine that your facility is not required to submit a 2007 Hazardous Waste Report you must submit a letter of explanation to the address listed below on or before March 1, 2008. You are also required to submit a revised Site Identification Form (beginning on page 57of the booklet) with this letter.

If your facility is required to submit a 2007 Hazardous Waste Report please read all the instructions carefully. There were no changes in reporting requirements and forms for the 2007 Hazardous Waste Report.

The 2007 Hazardous Waste Report must be submitted March 15, 2008 if you are not filing electronically. The 2007 Hazardous Waste Report must be submitted by April 1, 2008 if you are filing electronically. The submittal should be mailed to the following address:

Jim Edwards
NC Hazardous Waste Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Any questions should be directed to Jim Edwards at 919 508-8539 (Jim.Edwards@ncmail.net), Larry Wilson at 919 508-8573 Larry.Wilson@ncmail.net), or Helen Cotton at 919 508-8537 (Helen.Cotton@ncmail.net).

Sincerely,

Elizabeth W. Cannon

Elizabeth W. Cannon, Chief
Hazardous Section

FLINT HILLS
RESOURCES

VIA CERTIFIED MAIL. RETURN RECEIPT REQUESTED

December 13, 2007

Larry Wilson
NC Hazardous Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Generator status update
Flint Hills Resources, LP Wilmington Water Treatment Plant

Dear Mr. Wilson:

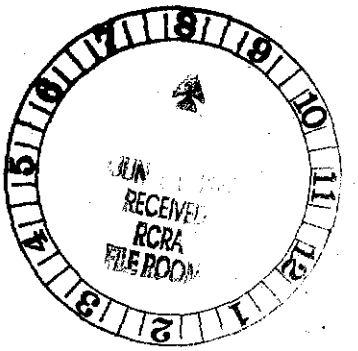
Enclosed please find a signed EPA Form 8700-12 to provide subsequent notification of regulated waste activity. Flint Hills Resources, LP is requesting that the generator status of its water treatment plant located at 3308 River Road, Wilmington, NC 28412 be changed from Large Quantity to Small Quantity.
Please contact me at (316)828-7249 if you have any questions.

Sincerely,
Flint Hills Resources, LP

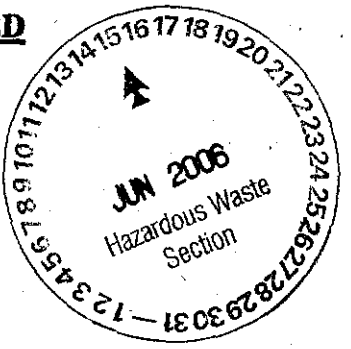
Nicole L. Cory
Environmental Engineer

- 4111 East 37th Street North - Wichita, Kansas 67220 - P.O. Box 2917 - Wichita, Kansas 67201-2917 -

FLINT HILLS
RESOURCES®



VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED



June 8, 2006

Larry Wilson
NC Hazardous Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Request for EPA ID number
Flint Hills Resources, LP Wilmington Waste Water Treatment Plant

Dear Mr. Wilson:

Enclosed please find a signed EPA Form 8700-12 for the initial Notification of Regulated Waste Activity. Flint Hills Resources, LP is requesting the assignment of an EPA ID number for its' waste water treatment plant located at 3308 River Road, Wilmington, NC 28412.
Please call me at (316)828-7249 if you have any questions or desire additional information.

Sincerely,
Flint Hills Resources, LP

Nicole L. Cory
Environmental Technician

Enclosures

– 4111 East 37th Street North – Wichita, Kansas 67220 – P.O. Box 2917 – Wichita, Kansas 67201-2917 –

OMB#: 2050-0028 Expires 1/31/2006

SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.	United States Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION FORM**	

1. Reason for Submittal (See instructions on page 13.)

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- [X] *To provide Initial Notification of* Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or *used oil activities*)
- [ ] To provide Subsequent Notification of Regulated Waste Activity (to update site identification information)
- [ ] As a component of a First RCRA Hazardous Waste Part A Permit Application
- [ ] *As a component of a* Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)
- [ ] As a component of the Hazardous Waste Report

2. Site EPA ID Number (page 14)

EPA ID Number: NCR000014764

3. Site Name (page 14)

Name: Flint Hills Resources, LP Waste Water Treatment Plant

4. Site Location Information (page 14)

Street Address: 3308 River Road

City, Town, or Village: Wilmington | State: NC

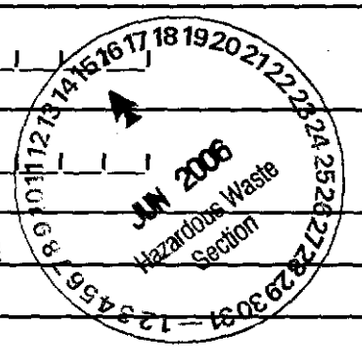
County Name: New Hanover | Zip Code: 28412

5. Site Land Type (page 14)

Site Land Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

6. North American Industry Classification System (NAICS) Code(s) for the Site (page 14)

A. 562919 | B. | C. | D.



7. Site Mailing Address (page 15)

Street or P. O. Box: 3308 River Road

City, Town, or Village: Wilmington

State: NC

Country: United States | Zip Code: 28412

8. Site Contact Person (page 15)

First Name: Jeff | MI: | Last Name: Becken

Phone Number: 910-452-5861 | Extension: | Email address: JEFF.BECKEN@CATLINUSA.COM

9. Operator and Legal Owner of the Site (pages 15 and 16)

A. Name of Site's Operator: Flint Hills Resources, LP | Date Became Operator (mm/dd/yyyy): 01/01/2002

Operator Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

B. Name of Site's Legal Owner: Flint Hills Resources, LP | Date Became Owner (mm/dd/yyyy): 11/12/1981

Owner Type: [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other

EPA ID NO: | | |

11. Description of Hazardous Wastes (See instructions on page 21.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D018	U239				

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 21.)

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11).
(See Instructions on page 21.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	James E. Jacobson Vice President Operations	06/07/2006

.

DEQ-DWM Data for USTs

Legend

UST Incidents (All Risk)



- High Risk
- Intermediate Risk
- Low Risk
- Unknown Risk
- Blank Risk

Find address or place

(4 of 5)

UST Incident: BLACKWELDERS AUTO REPAIR

Site ID: UST Incident #7034
Site Name: Blackwelders Auto Repair
Address: 2357 Carolina Bch Rd
City: Wilmington
County: New Hanover
Contact: Wilmington Regional Office

Documents: Link

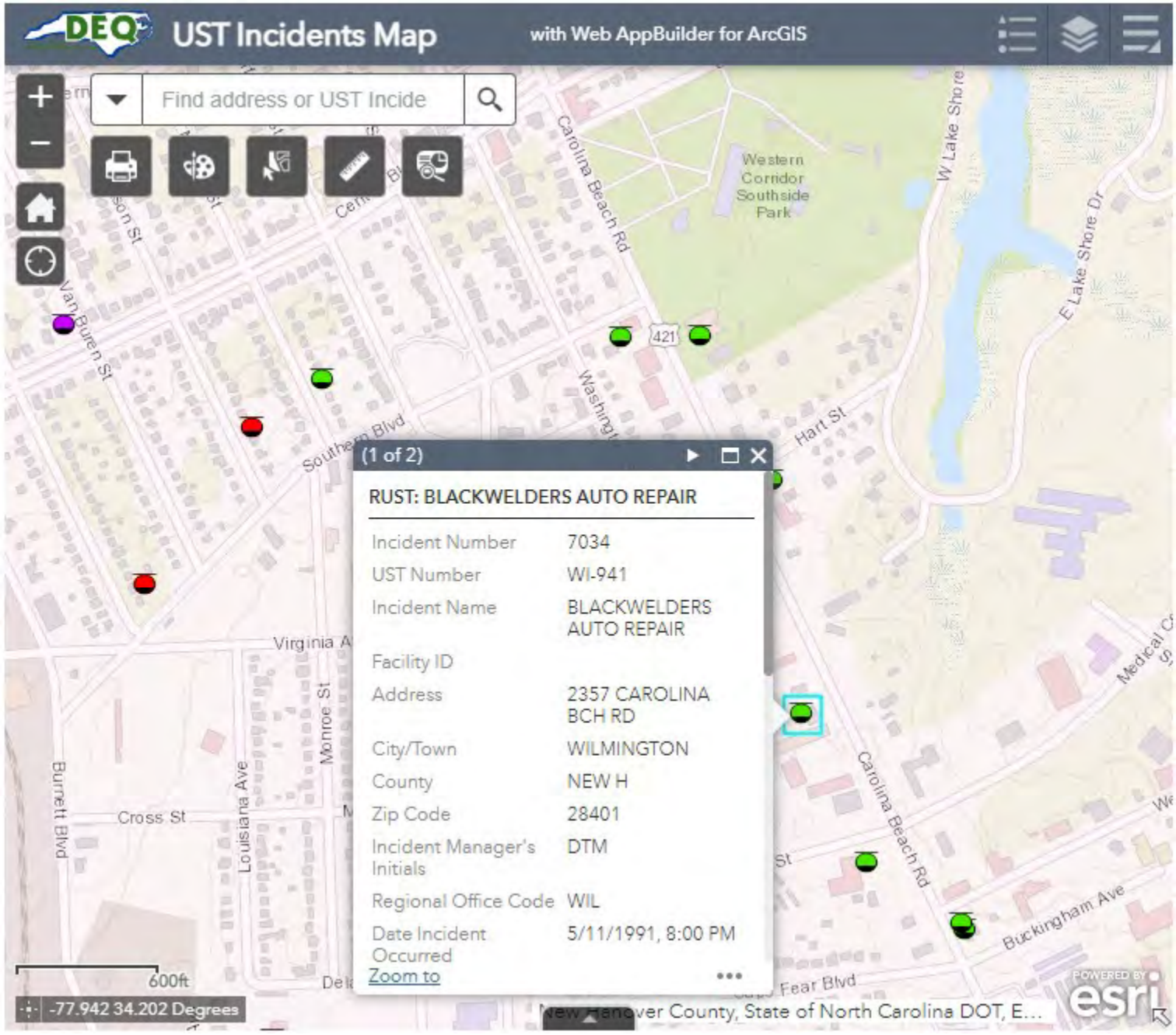
Zoom to

Southern Blvd
Monroe St
Adams St
Bland St
Bordeaux Ave
Hart St
W Lake S
E Lake Shore D
Washington St
421
Harrison St
Virginia Ave
Jefferson St
Louisiana Ave
Maryland Ave
Cross St
Delaware Ave
Bell St
Crossover St
Cape Fear Blvd
Wellington Ave
Buckingham Ave
Wonder Way
Medical Center Dr
Silver Stream Ln

300ft

34.200254 -77.944892 Degrees

Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Western Corridor Southside Park
Carolina Beach Rd
W Lake Shore
E Lake Shore Dr
421
Van Buren St
Southern Blvd
Hart St
Virginia A
Monroe St
Louisiana Ave
Burnett Blvd
Cross St
Carolina Beach Rd
Buckingham Ave
Fear Blvd
(1 of 2)
RUST: BLACKWELDERS AUTO REPAIR
Incident Number 7034
UST Number WI-941
Incident Name BLACKWELDERS AUTO REPAIR
Facility ID
Address 2357 CAROLINA BCH RD
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials DTM
Regional Office Code WIL
Date Incident Occurred 5/11/1991, 8:00 PM
Zoom to
600ft
-77.942 34.202 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

RUST: BLACKWELDERS AUTO REPAIR

Incident Number	7034
UST Number	WI-941
Incident Name	BLACKWELDERS AUTO REPAIR
Facility ID	
Address	2357 CAROLINA BCH RD
City/Town	WILMINGTON
County	NEW H
Zip Code	28401
Incident Manager's Initials	DTM
Regional Office Code	WIL
Date Incident Occurred	5/11/1991, 8:00 PM
Date Incident Reported	7/12/1991, 8:00 PM
date Incident Closed	12/7/2007, 7:00 PM
Commercial, Non-Commercial, or Both	C
Regulated, Non-Regulated, or Both	R
Confirmed Risk	L
Risk Rank	0
Risk Abatement Code	
Risk Assessment Date	
Land Use	RES
Notice of Residual Petroleum (NRP) Filed	12/6/2007, 7:00 PM
Media Restricted Per NRP	G

Zoom to

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JAN 14 2008

THE CLARK GROUP

Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7007 0710 0001 7292 1723
RETURN RECEIPT REQUESTED

December 31, 2007

New Hanover County Health Department
Attn: Mr. David E. Rice, Director
2029 South 17th Street
Wilmington, NC 28401

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

Dear Mr. Rice:

On behalf of our client, Gulfstream Foods of North Carolina, Inc., attached please find a *Notice of No Further Action*, dated December 7, 2007, from the North Carolina Department of Environment and Natural Resources, Division of Waste Management (NCDWM), for the referenced property. As per 15A NCAC 2L .0409(b), it is required that public notice be made to the County Health Director, County Manager and all adjacent or affected property owners.

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Should you have any questions regarding this public notification, please contact the Wilmington Regional Office of NCDWM, as per the attached *Notice*.

Sincerely,

Nancy L. Clark

Nancy L. Clark
Senior Technician

Enclosure

Cc:
Mr. Jon T. Vincent, President, Gulfstream Foods of North Carolina, Inc. w/enclosures
Mr. Deborah Mayo, Hydrogeologist II, NCDWM w/enclosure

05181/norpnfa/nfa adjacents/file(a)

THE CLARK GROUP

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Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7007 0710 0001 7292 5585
RETURN RECEIPT REQUESTED

December 31, 2007

New Hanover County
Attn: Mr. Bruce Shell, County Manager
230 Government Center Drive, Suite 195
Wilmington, NC 28403

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

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Senior Technician

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05181/norpnfa/nfa adjacents/file(a)

Corporate: 5000 Blue Clay Road Castle Hayne, NC 28429 - Post Office Box 10136 Wilmington, NC 28404
(910) 602-3900 Office - (910) 602-3975 Facsimile
www.clarkgroup.us

THE CLARK GROUP

Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7006 2150 0005 0707 9067
RETURN RECEIPT REQUESTED

December 31, 2007

Jewell-Strickland Auto Parts
2351 Carolina Beach Road
Wilmington, NC 28401

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

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Wilmington, NC 28402

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Clark Project No. 05181

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05181/norpnfa/nfa adjacents/file(a)

THE CLARK GROUP

Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7006 2150 0005 0707 9043
RETURN RECEIPT REQUESTED

December 31, 2007

Devin Health Group, Inc.
2305 Silver Stream Lane
Wilmington, NC 28401

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

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05181/norpnfa/nfa adjacents/file(a)

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Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7007 0710 0001 7292 5585
RETURN RECEIPT REQUESTED

December 31, 2007

Mr. Kenneth Lovitt
2363 Carolina Beach Road
Wilmington, NC 28409

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

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05181/norpnfa/nfa adjacents/file(a)

NCDENR
North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Division of Waste Management
Underground Storage Tank Section

Dexter R. Matthews, Director

December 7, 2007

Mr. Jon T. Vincent
Gulfstream Foods of NC
1508 Military Cutoff Road, Suite 302
Wilmington, NC 28403

Re: Notice of No Further Action
15A NCAC 2L .0407(d)
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks

Blackwelders Auto Repair
2357 Carolina Beach Road
Wilmington, New Hanover County
Incident Number: 7034
Risk Classification: Low

Dear Mr. Vincent:

The Soil Cleanup Report received by the Underground Storage Tank (UST) Section, Wilmington Regional Office on November 21, 2007 and the Notice of Residual Petroleum received on December 6, 2007 have been reviewed. Soil contamination does not exceed the soil-to-groundwater or residential maximum contaminant concentrations.

The UST Section determines that no further action is warranted for this incident. This determination shall apply unless the UST Section later finds that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment. Pursuant to Title 15A NCAC 2L .0407(a) you have a continuing obligation to notify the Department of any changes that might affect the risk or land use classifications that have been assigned.

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, groundwater within the area of contamination or within the area where groundwater contamination is expected to migrate is not suitable for use as a water supply, pursuant to NCGS 143B-279.9 and 143B-279.11, you must file the approved Notice of Residual Petroleum with the Register of Deeds in the county in which the release is located and submit a certified copy to the UST Section within 30 days of receipt of this letter. This No Further Action determination will not become valid until the UST Section receives a certified copy of the Notice of Residual Petroleum which is filed with the Register of Deeds.

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, public notice in accordance with 15A NCAC 2L .0409(b) also is required. Thus, within 30 days of receipt of this letter, a copy of the letter must be provided by certified mail, or by posting in a prominent place, if certified mail is impractical, to the local health director, the chief administrative officer of each political jurisdiction in which the contamination occurs, all property owners and occupants within or contiguous to the area containing contamination, and all property owners and occupants within or contiguous to the area where the contamination is expected to migrate. Within 60 days of receiving this no further action letter, this office must be provided with proof of receipt of the copy of the letter or of refusal by the addressee to accept delivery of the copy of the letter or with a description of the manner in which the letter was posted. This No Further Action determination will not become valid until public notice requirements are completed. Interested parties may examine the Soil Cleanup Report/ Site Closure Request by contacting this regional office and may submit comments on the site to the regional office at the address or telephone number listed below.

This No Further Action determination applies only to the subject incident; for any other incidents at the subject site, the responsible party must continue to address contamination as required.

If you have any questions regarding this notice, please contact me at the address or telephone number listed below.

Sincerely,

Deborah Mayo

Deborah Mayo
Hydrogeologist II
Wilmington Regional Office

cc: New Hanover County Health Department
The Clark Group
WiRO

UST Regional Offices

Asheville (ARO) – 2090 US Highway 70, Swannanoa, NC 28778 **(828) 296-4500**

Fayetteville (FAY) – 225 Green Street, Suite 714, Systel Building, Fayetteville, NC 28301 **(910) 433-3300**

Mooresville (MOR) – 610 East Center Avenue, Suite 301, Mooresville, NC 28115 **(704) 663-1699**

Raleigh (RRO) – 1628 Mail Service Center, Raleigh, NC 27699 **(919) 791-4200**

Washington (WAS) – 943 Washington Square Mall, Washington, NC 27889 **(252) 946-6481**

Wilmington (WIL) – 127 Cardinal Drive Extension, Wilmington, NC 28405 **(910) 796-7215**

Winston-Salem (WS) – 585 Waughtown Street, Winston-Salem, NC 27107 **(336) 771-5000**

Guilford County Environmental Health, 1203 Maple Street, Greensboro, NC 27405, **(336) 641-3771**
FTP: NFA low-NRP NOR0907.dot

RECEIVED
JAN 14 2008

THE CLARK GROUP

Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

VIA CERTIFIED MAIL – 7007 0710 0001 7292 1723
RETURN RECEIPT REQUESTED

December 31, 2007

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Attn: Mr. David E. Rice, Director
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Wilmington, NC 28401

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2357 Carolina Beach Road
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Clark Project No. 05181

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Senior Technician

Enclosure

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Mr. Deborah Mayo, Hydrogeologist II, NCDWM w/enclosure

05181/norpnfa/nfa adjacents/file(a)

THE CLARK GROUP

Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

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December 31, 2007

New Hanover County
Attn: Mr. Bruce Shell, County Manager
230 Government Center Drive, Suite 195
Wilmington, NC 28403

Re: Former Blackwelder's Auto Service
2357 Carolina Beach Road
Wilmington, New Hanover County, NC
Clark Project No. 05181

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Geo-Environmental Services
Land/Hydrographic Surveys
Forestry Services

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2351 Carolina Beach Road
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Clark Project No. 05181

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Underground Storage Tank Section

Dexter R. Matthews, Director

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Gulfstream Foods of NC
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15A NCAC 2L .0407(d)
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for Petroleum Underground Storage Tanks

Blackwelders Auto Repair
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Incident Number: 7034
Risk Classification: Low

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Hydrogeologist II
Wilmington Regional Office

cc: New Hanover County Health Department
The Clark Group
WiRO

UST Regional Offices

Asheville (ARO) – 2090 US Highway 70, Swannanoa, NC 28778 **(828) 296-4500**

Fayetteville (FAY) – 225 Green Street, Suite 714, Systel Building, Fayetteville, NC 28301 **(910) 433-3300**

Mooresville (MOR) – 610 East Center Avenue, Suite 301, Mooresville, NC 28115 **(704) 663-1699**

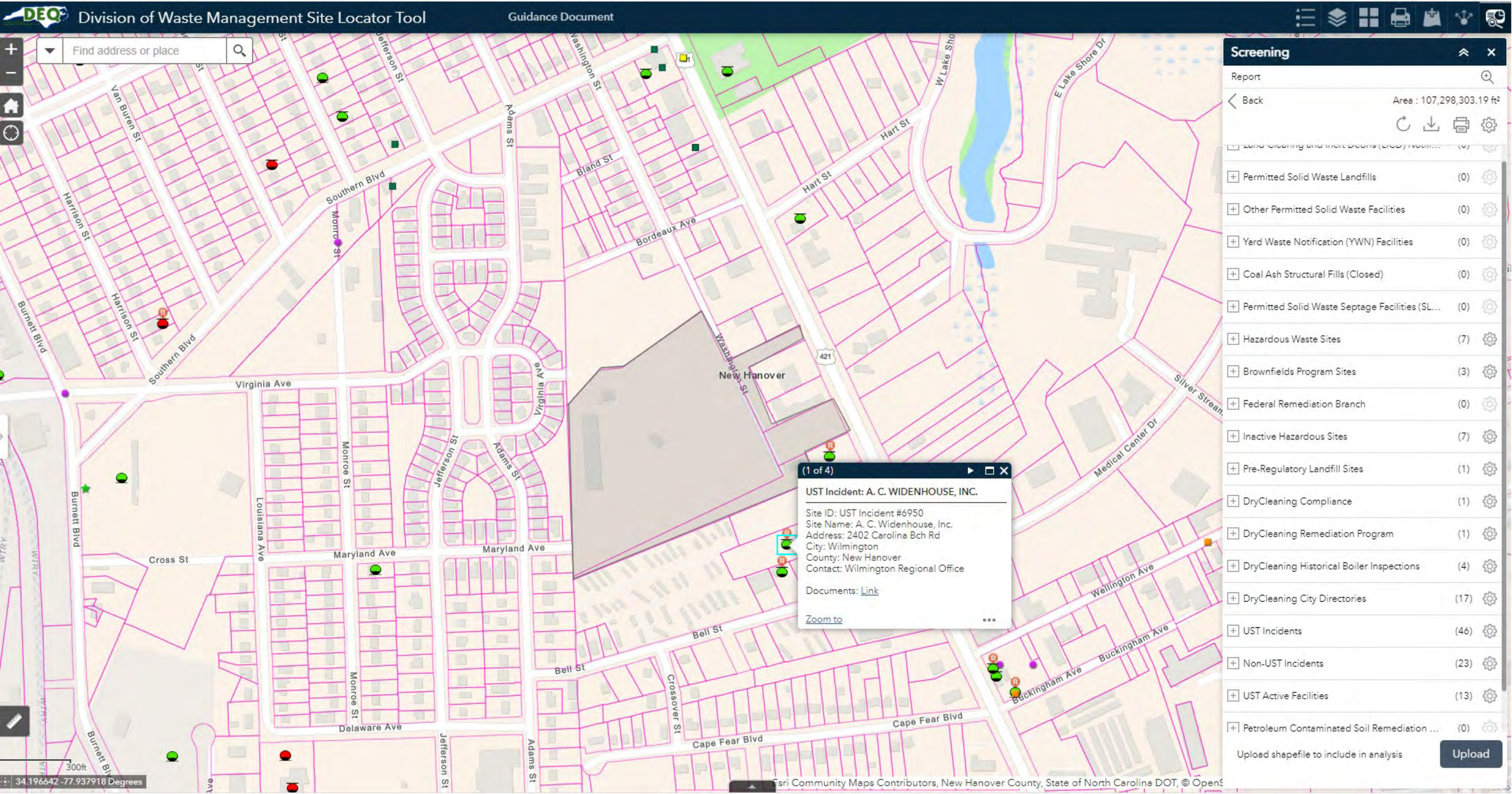
Raleigh (RRO) – 1628 Mail Service Center, Raleigh, NC 27699 **(919) 791-4200**

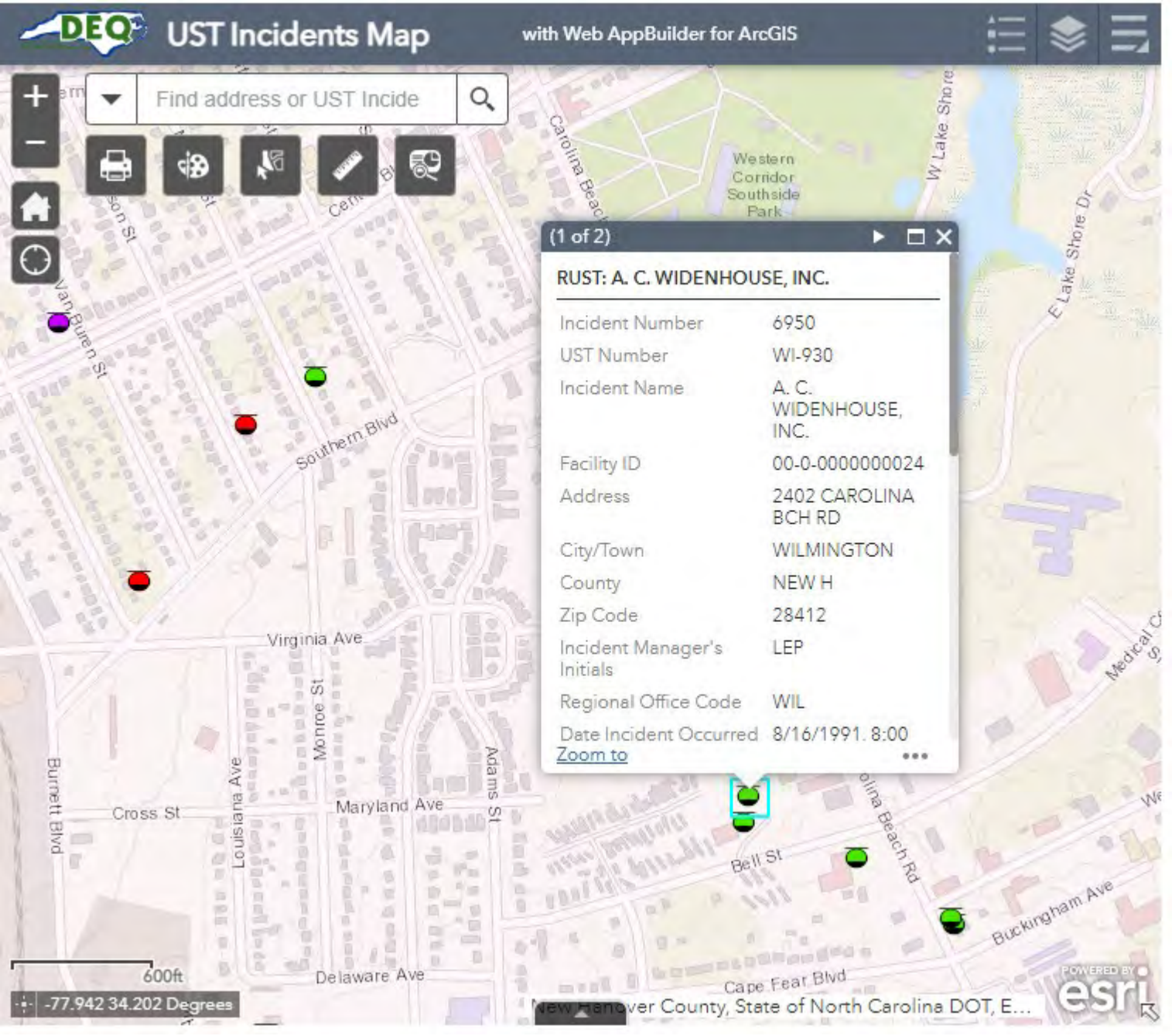
Washington (WAS) – 943 Washington Square Mall, Washington, NC 27889 **(252) 946-6481**

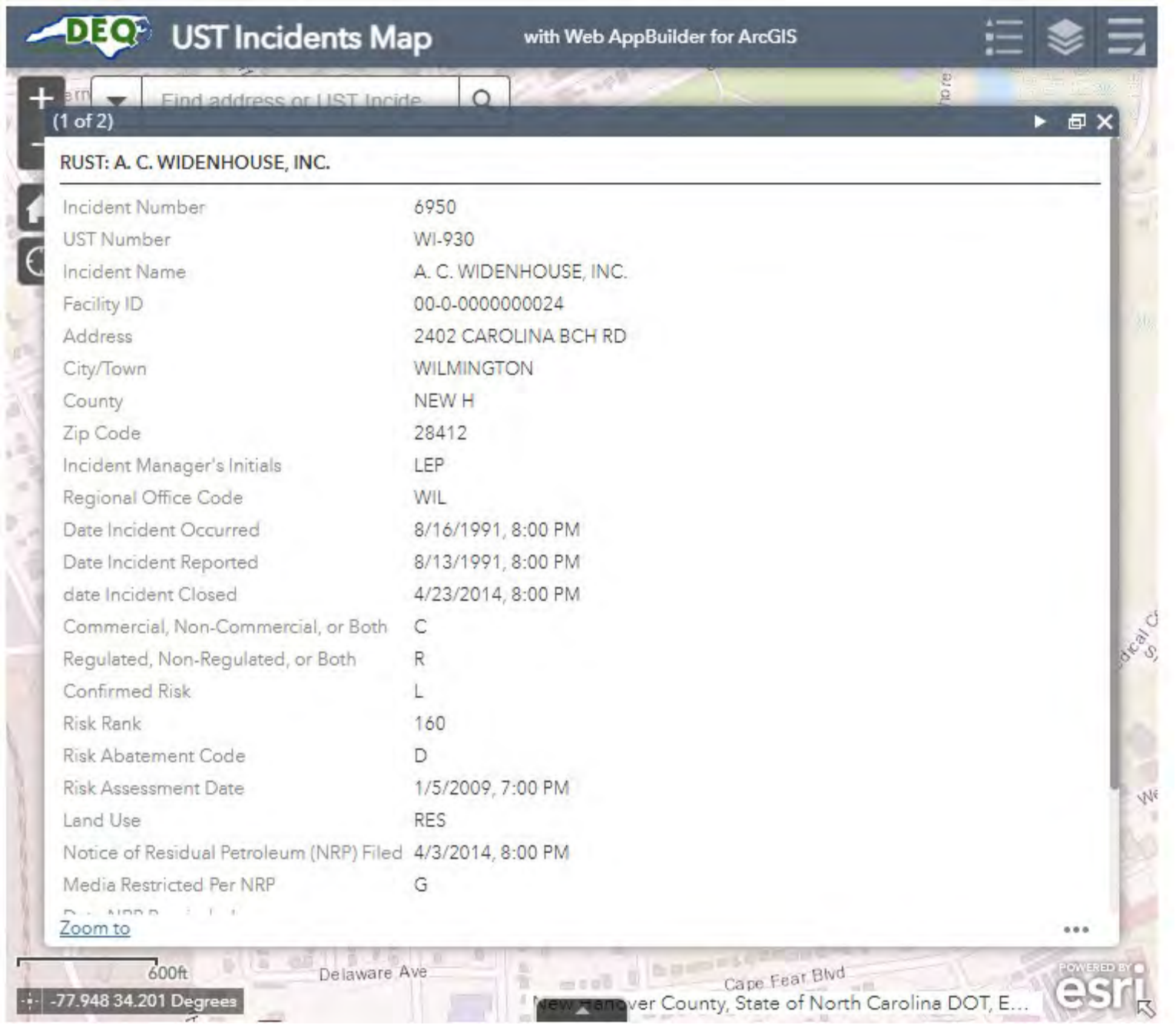
Wilmington (WIL) – 127 Cardinal Drive Extension, Wilmington, NC 28405 **(910) 796-7215**

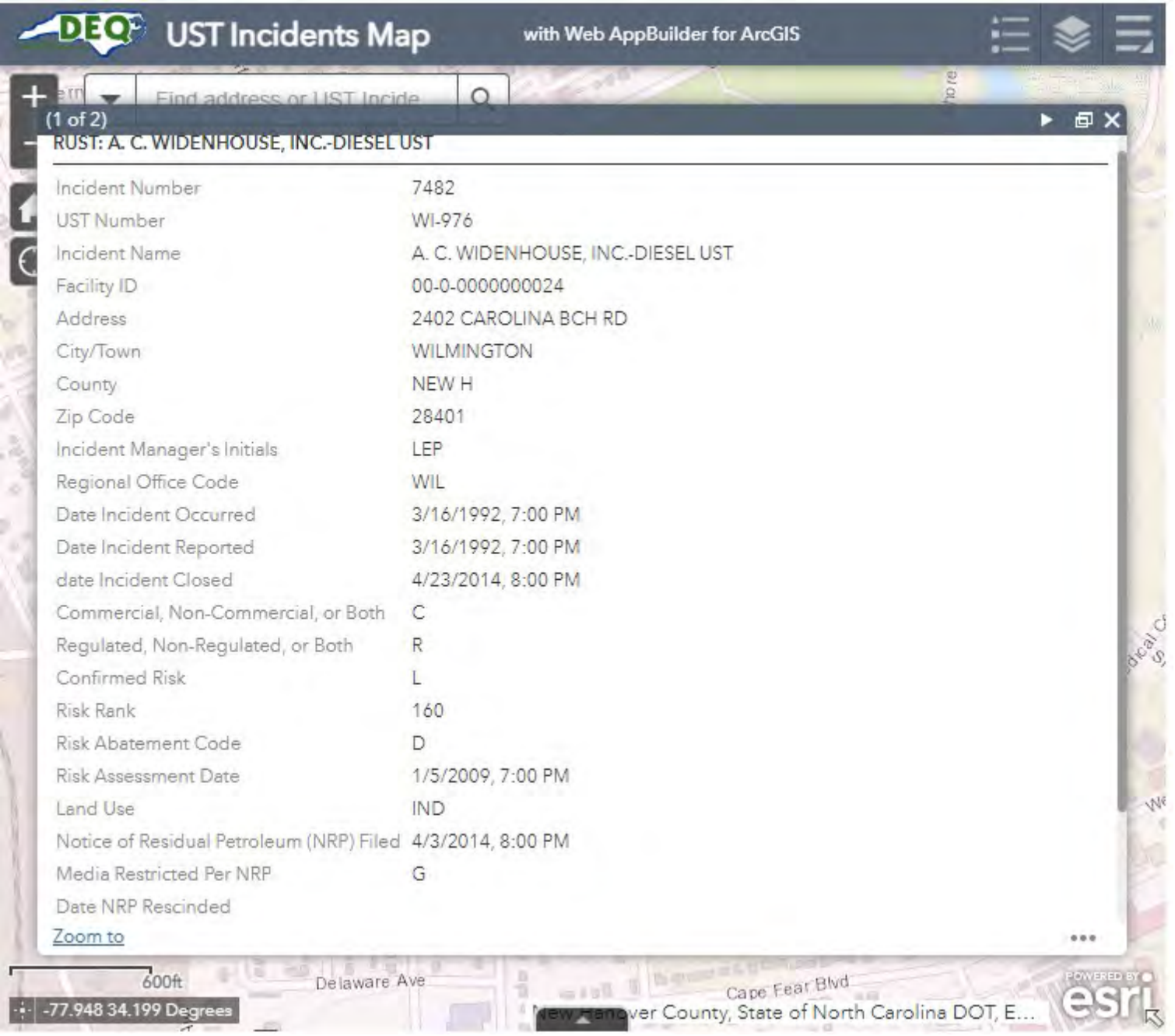
Winston-Salem (WS) – 585 Waughtown Street, Winston-Salem, NC 27107 **(336) 771-5000**

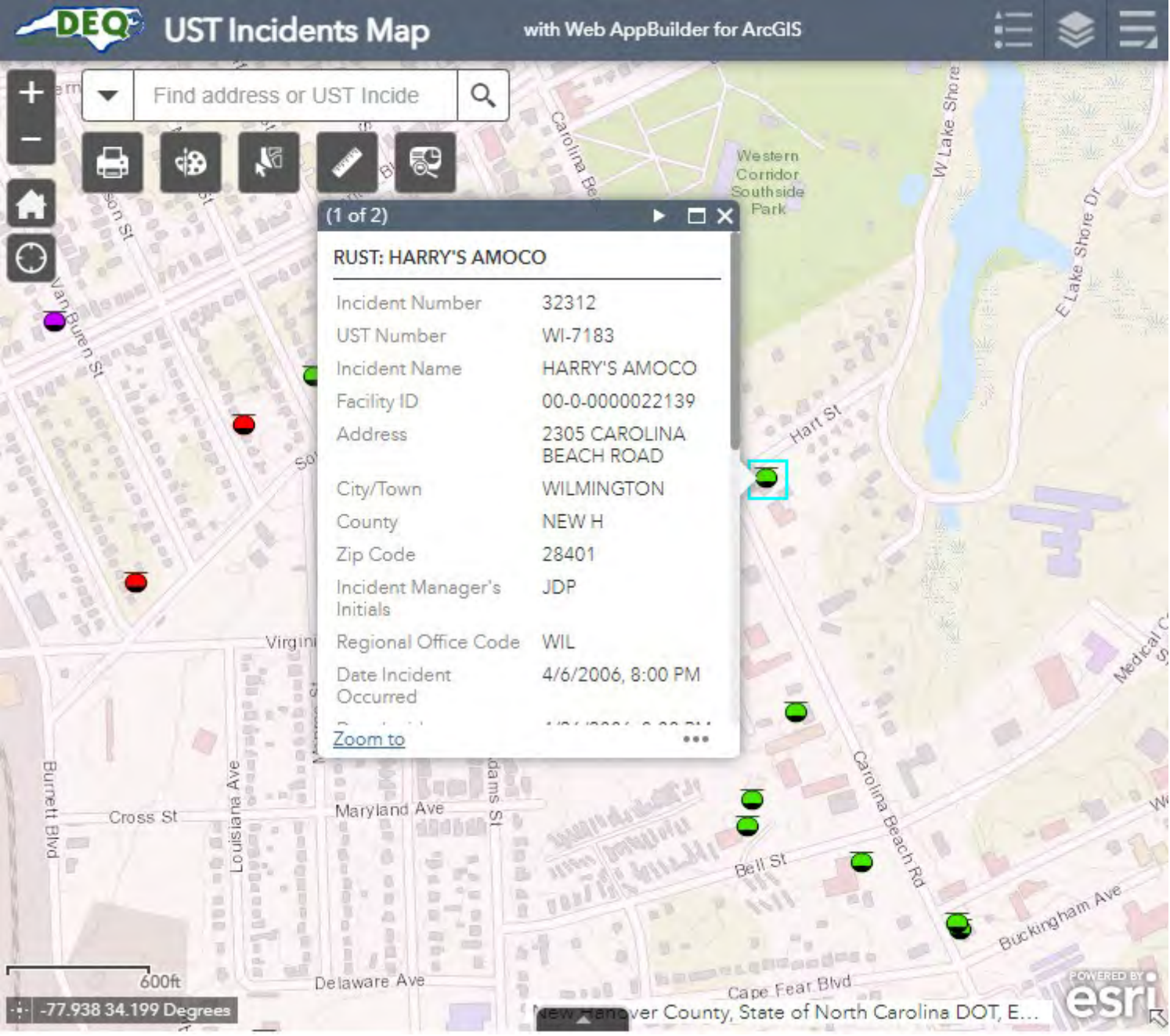
Guilford County Environmental Health, 1203 Maple Street, Greensboro, NC 27405, **(336) 641-3771**
FTP: NFA low-NRP NOR0907.dot


Division of Waste Management Site Locator Tool
Guidance Document
Find address or place
Screening
Report
Back
Area : 107,298,303.19 ft²
Permitted Solid Waste Landfills (0)
Other Permitted Solid Waste Facilities (0)
Yard Waste Notification (YWN) Facilities (0)
Coal Ash Structural Fills (Closed) (0)
Permitted Solid Waste Septage Facilities (SL... (0)
Hazardous Waste Sites (7)
Brownfields Program Sites (3)
Federal Remediation Branch (0)
Inactive Hazardous Sites (7)
Pre-Regulatory Landfill Sites (1)
DryCleaning Compliance (1)
DryCleaning Remediation Program (1)
DryCleaning Historical Boiler Inspections (4)
DryCleaning City Directories (17)
UST Incidents (46)
Non-UST Incidents (23)
UST Active Facilities (13)
Petroleum Contaminated Soil Remediation ... (0)
Upload shapefile to include in analysis
Upload
(1 of 4)
UST Incident: A. C. WIDENHOUSE, INC.
Site ID: UST Incident #6950
Site Name: A. C. Widenhouse, Inc.
Address: 2402 Carolina Bch Rd
City: Wilmington
County: New Hanover
Contact: Wilmington Regional Office
Documents: Link
Zoom to
New Hanover
Virginia Ave
Southern Blvd
Burnett Blvd
Harrison St
Van Buren St
Monroe St
Adams St
Jefferson St
Louisiana Ave
Maryland Ave
Cross St
Delaware Ave
Bell St
Bland St
Bordeaux Ave
Hart St
Wellington Ave
Buckingham Ave
Cape Fear Blvd
Crossover St
Medical Center Dr
421
300ft
34.196642 -77.937918 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: A. C. WIDENHOUSE, INC.
Incident Number 6950
UST Number WI-930
Incident Name A. C. WIDENHOUSE, INC.
Facility ID 00-0-0000000024
Address 2402 CAROLINA BCH RD
City/Town WILMINGTON
County NEW H
Zip Code 28412
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident Occurred 8/16/1991. 8:00
Zoom to
Western Corridor Southside Park
W Lake Shore
E Lake Shore Dr
Carolina Beach
Van Buren St
Southern Blvd
Virginia Ave
Monroe St
Louisiana Ave
Burnett Blvd
Cross St
Maryland Ave
Adams St
Bell St
Carolina Beach Rd
Buckingham Ave
Cape Fear Blvd
Delaware Ave
Medical C
600ft
-77.942 34.202 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: A. C. WIDENHOUSE, INC.
Incident Number 6950
UST Number WI-930
Incident Name A. C. WIDENHOUSE, INC.
Facility ID 00-0-0000000024
Address 2402 CAROLINA BCH RD
City/Town WILMINGTON
County NEW H
Zip Code 28412
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident Occurred 8/16/1991, 8:00 PM
Date Incident Reported 8/13/1991, 8:00 PM
date Incident Closed 4/23/2014, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 160
Risk Abatement Code D
Risk Assessment Date 1/5/2009, 7:00 PM
Land Use RES
Notice of Residual Petroleum (NRP) Filed 4/3/2014, 8:00 PM
Media Restricted Per NRP G
Zoom to
600ft
Delaware Ave
Cape Fear Blvd
-77.948 34.201 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

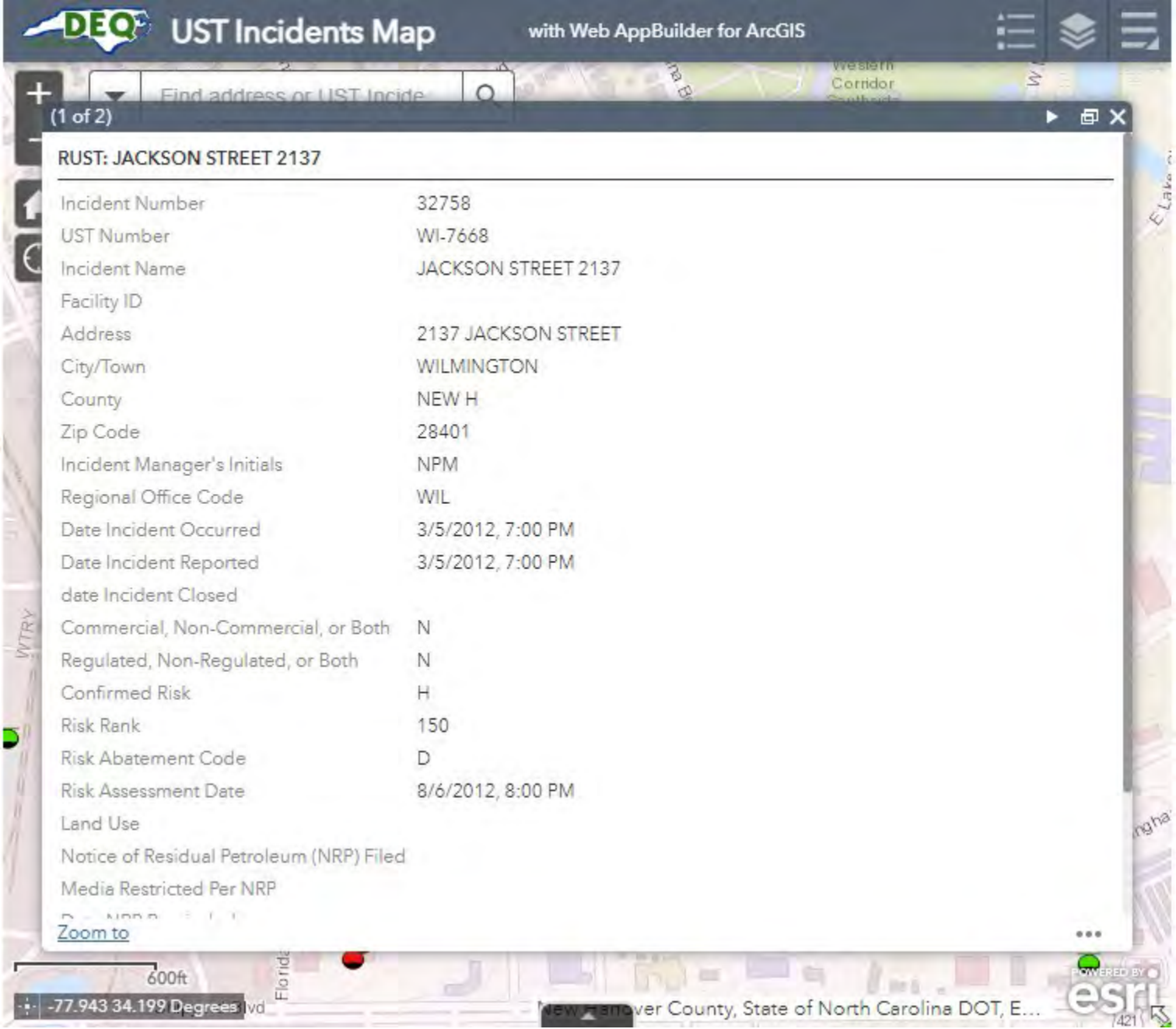

UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: A. C. WIDENHOUSE, INC.-DIESEL UST
Incident Number 7482
UST Number WI-976
Incident Name A. C. WIDENHOUSE, INC.-DIESEL UST
Facility ID 00-0-0000000024
Address 2402 CAROLINA BCH RD
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident Occurred 3/16/1992, 7:00 PM
Date Incident Reported 3/16/1992, 7:00 PM
date Incident Closed 4/23/2014, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 160
Risk Abatement Code D
Risk Assessment Date 1/5/2009, 7:00 PM
Land Use IND
Notice of Residual Petroleum (NRP) Filed 4/3/2014, 8:00 PM
Media Restricted Per NRP G
Date NRP Rescinded
Zoom to
600ft
Delaware Ave
Cape Fear Blvd
-77.948 34.199 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

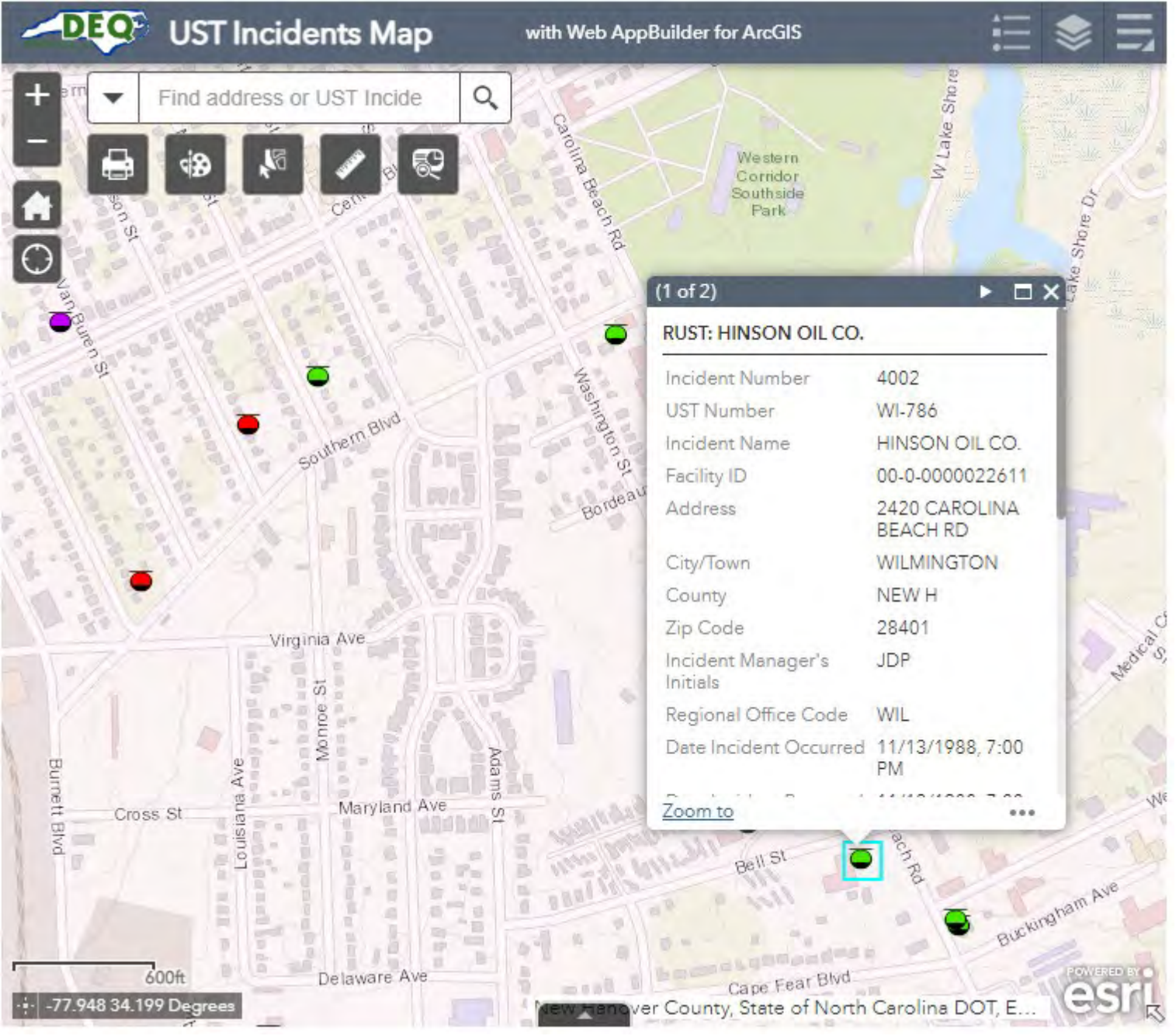

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: HARRY'S AMOCO
Incident Number 32312
UST Number WI-7183
Incident Name HARRY'S AMOCO
Facility ID 00-0-0000022139
Address 2305 CAROLINA BEACH ROAD
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials JDP
Regional Office Code WIL
Date Incident Occurred 4/6/2006, 8:00 PM
Zoom to
Western Corridor Southside Park
W Lake Shore
E Lake Shore Dr
Hart St
Carolina Beach Rd
Bell St
Buckingham Ave
Cape Fear Blvd
Maryland Ave
Cross St
Delaware Ave
Louisiana Ave
Burnett Blvd
Adams St
600ft
-77.938 34.199 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

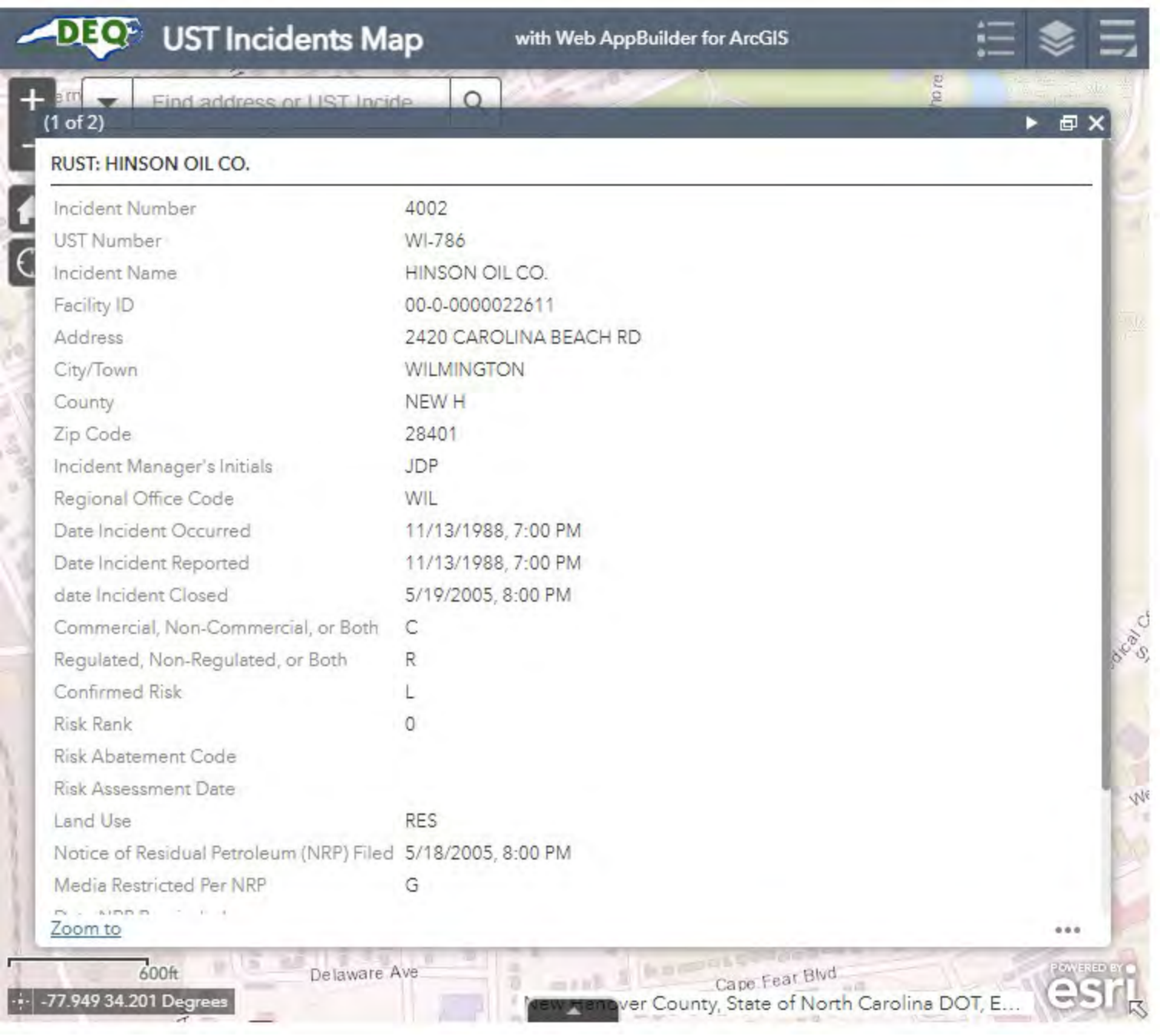
RUST: HARRY'S AMOCO

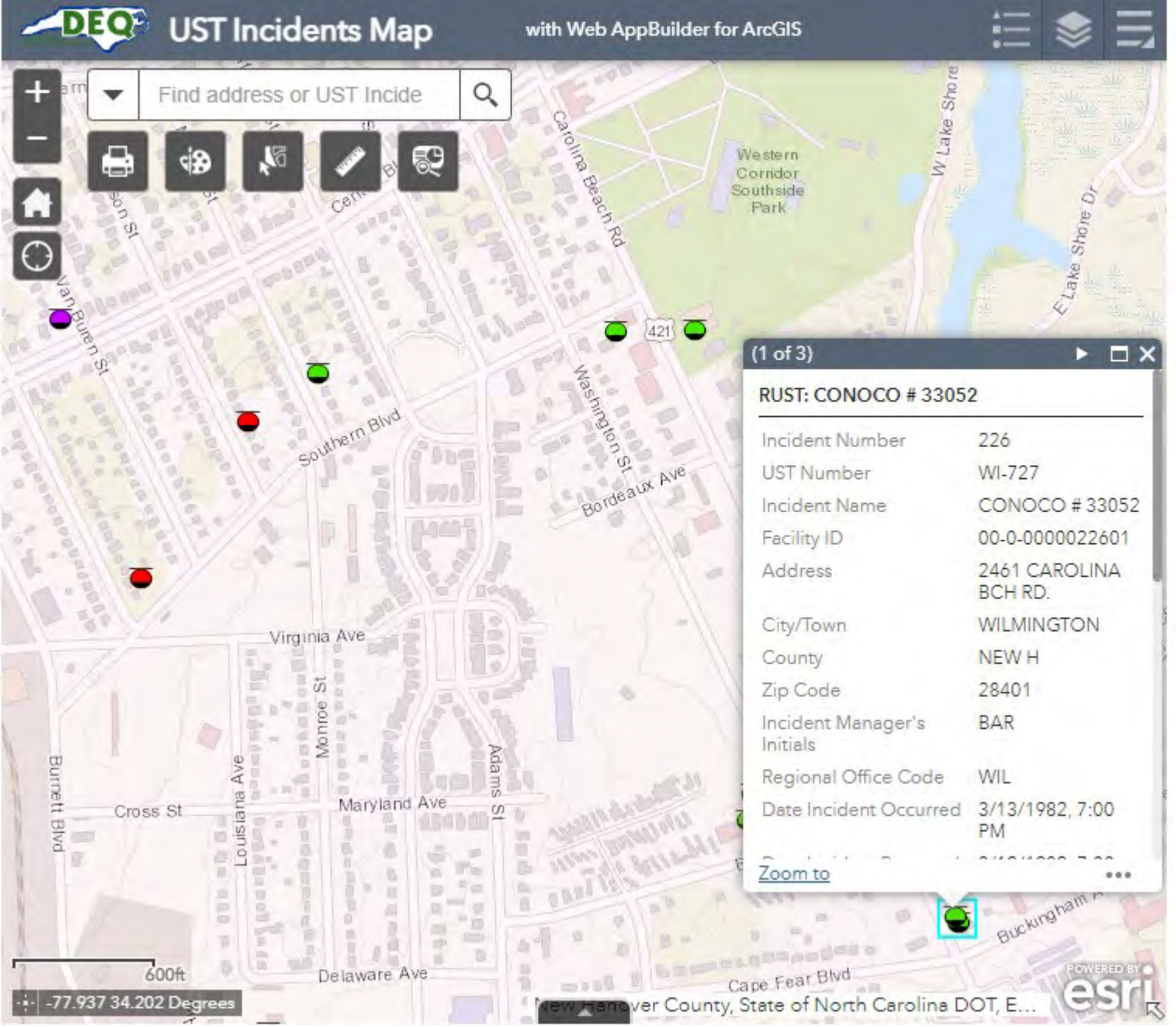
Incident Number	32312
UST Number	WI-7183
Incident Name	HARRY'S AMOCO
Facility ID	00-0-0000022139
Address	2305 CAROLINA BEACH ROAD
City/Town	WILMINGTON
County	NEW H
Zip Code	28401
Incident Manager's Initials	JDP
Regional Office Code	WIL
Date Incident Occurred	4/6/2006, 8:00 PM
Date Incident Reported	4/26/2006, 8:00 PM
date Incident Closed	5/8/2006, 8:00 PM
Commercial, Non-Commercial, or Both	C
Regulated, Non-Regulated, or Both	R
Confirmed Risk	L
Risk Rank	0
Risk Abatement Code	
Risk Assessment Date	
Land Use	RES
Notice of Residual Petroleum (NRP) Filed	
Media Restricted Per NRP	
Date NRP Rescinded	

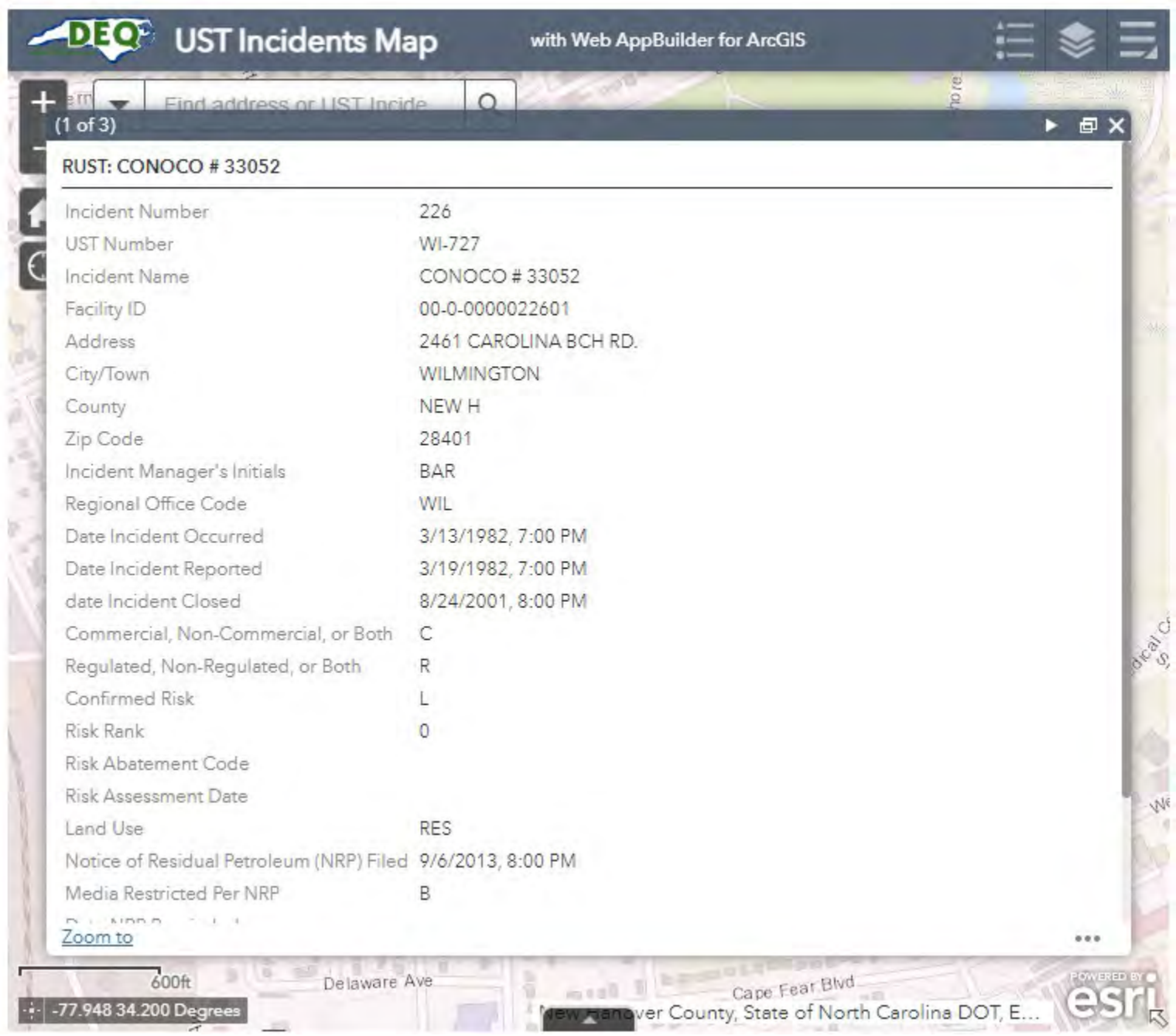
Zoom to

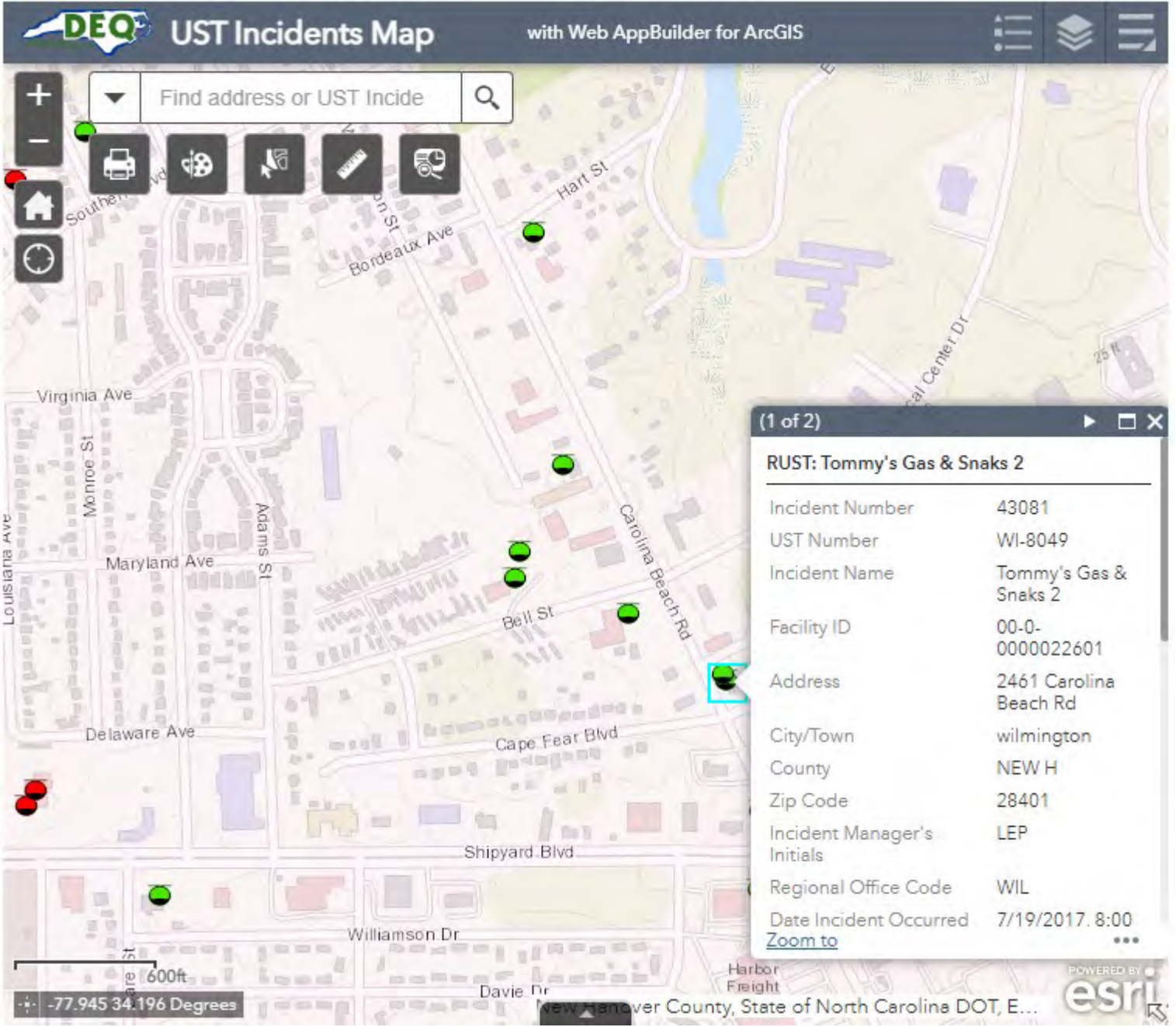

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: JACKSON STREET 2137
Incident Number 32758
UST Number WI-7668
Incident Name JACKSON STREET 2137
Facility ID
Address 2137 JACKSON STREET
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials NPM
Regional Office Code WIL
Date Incident Occurred 3/5/2012, 7:00 PM
Date Incident Reported 3/5/2012, 7:00 PM
date Incident Closed
Commercial, Non-Commercial, or Both N
Regulated, Non-Regulated, or Both N
Confirmed Risk H
Risk Rank 150
Risk Abatement Code D
Risk Assessment Date 8/6/2012, 8:00 PM
Land Use
Notice of Residual Petroleum (NRP) Filed
Media Restricted Per NRP
Zoom to
600ft
-77.943 34.199 Degrees
Western Corridor
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Western Corridor Southside Park
Carolina Beach Rd
W Lake Shore
Lake Shore Dr
Van Buren St
Southern Blvd
Washington St
Virginia Ave
Monroe St
Adams St
Louisiana Ave
Burnett Blvd
Cross St
Maryland Ave
Bell St
Buckingham Ave
Delaware Ave
Cape Fear Blvd
(1 of 2)
RUST: HINSON OIL CO.
Incident Number 4002
UST Number WI-786
Incident Name HINSON OIL CO.
Facility ID 00-0-0000022611
Address 2420 CAROLINA BEACH RD
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials JDP
Regional Office Code WIL
Date Incident Occurred 11/13/1988, 7:00 PM
Zoom to
600ft
-77.948 34.199 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

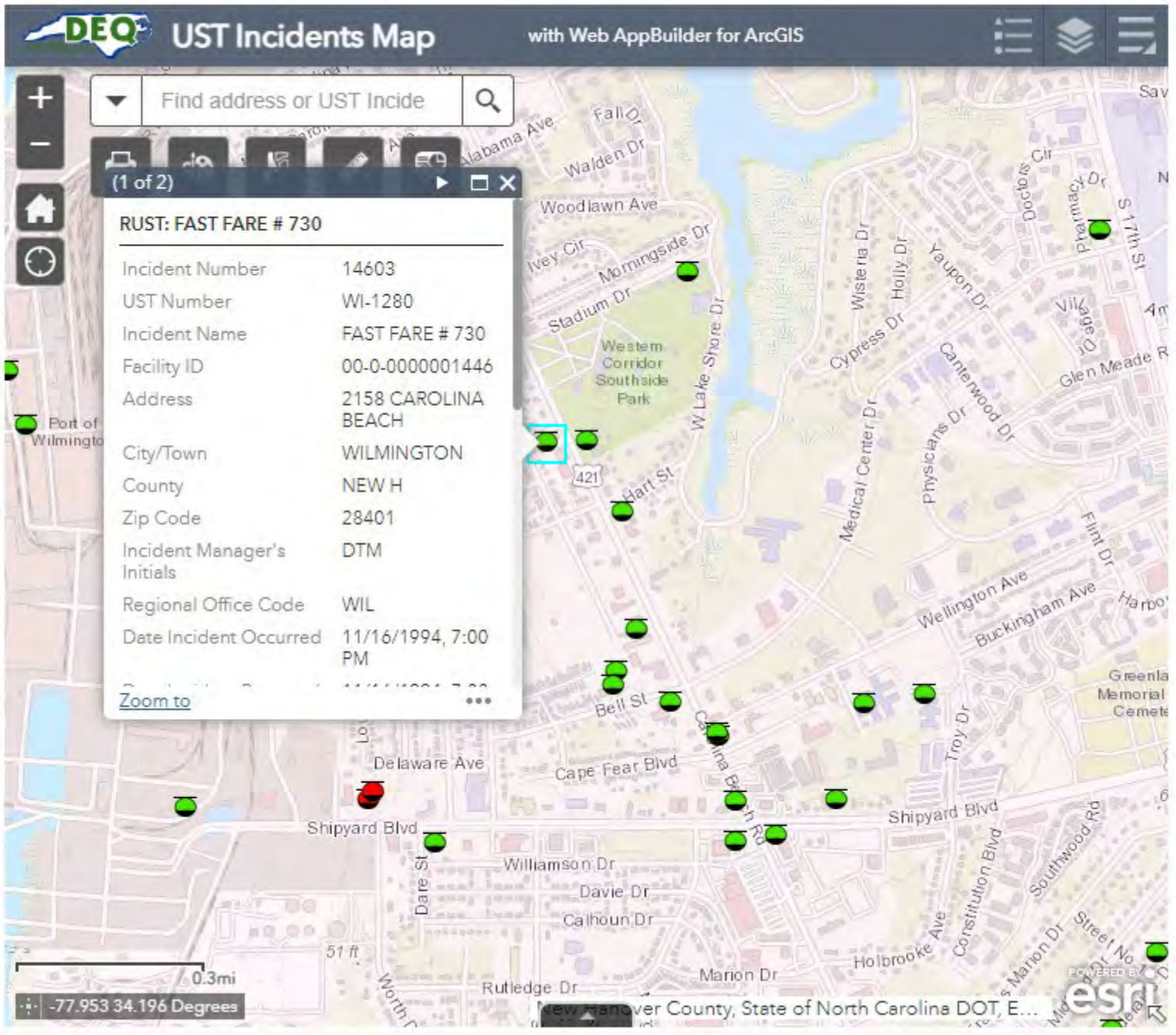

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: HINSON OIL CO.
Incident Number 4002
UST Number WI-786
Incident Name HINSON OIL CO.
Facility ID 00-0-0000022611
Address 2420 CAROLINA BEACH RD
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials JDP
Regional Office Code WIL
Date Incident Occurred 11/13/1988, 7:00 PM
Date Incident Reported 11/13/1988, 7:00 PM
date Incident Closed 5/19/2005, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 0
Risk Abatement Code
Risk Assessment Date
Land Use RES
Notice of Residual Petroleum (NRP) Filed 5/18/2005, 8:00 PM
Media Restricted Per NRP G
Zoom to
600ft
Delaware Ave
Cape Fear Blvd
-77.949 34.201 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Western Corridor Southside Park
W Lake Shore
E Lake Shore Dr
Carolina Beach Rd
421
Van Buren St
Southern Blvd
Washington St
Bordeaux Ave
Virginia Ave
Monroe St
Adams St
Louisiana Ave
Burnett Blvd
Cross St
Maryland Ave
Delaware Ave
Cape Fear Blvd
Buckingham
(1 of 3)
RUST: CONOCO # 33052
Incident Number 226
UST Number WI-727
Incident Name CONOCO # 33052
Facility ID 00-0-0000022601
Address 2461 CAROLINA BCH RD.
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials BAR
Regional Office Code WIL
Date Incident Occurred 3/13/1982, 7:00 PM
Zoom to
600ft
-77.937 34.202 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

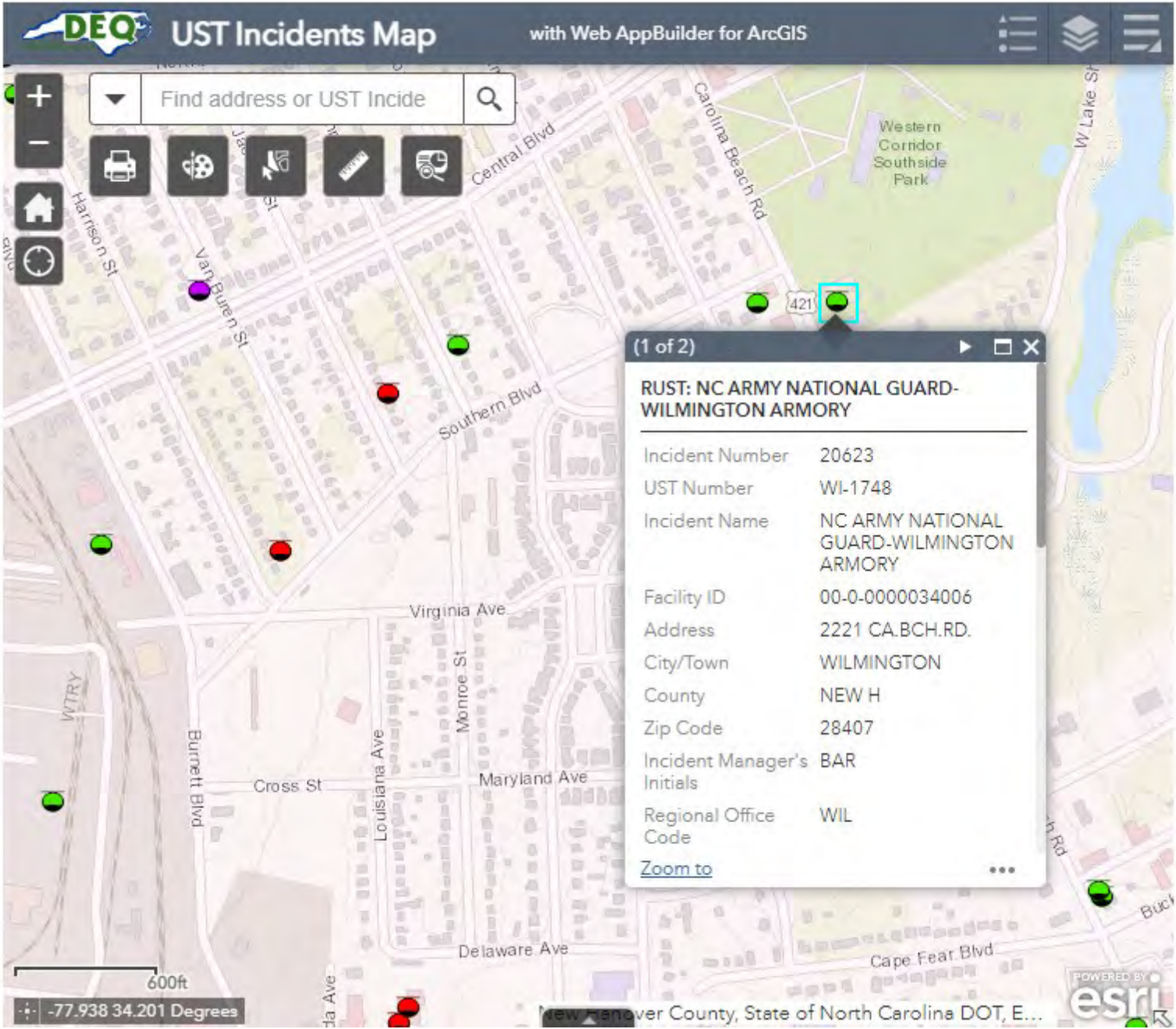

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 3)
RUST: CONOCO # 33052
Incident Number 226
UST Number WI-727
Incident Name CONOCO # 33052
Facility ID 00-0-0000022601
Address 2461 CAROLINA BCH RD.
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials BAR
Regional Office Code WIL
Date Incident Occurred 3/13/1982, 7:00 PM
Date Incident Reported 3/19/1982, 7:00 PM
date Incident Closed 8/24/2001, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 0
Risk Abatement Code
Risk Assessment Date
Land Use RES
Notice of Residual Petroleum (NRP) Filed 9/6/2013, 8:00 PM
Media Restricted Per NRP B
Zoom to
600ft
Delaware Ave
Cape Fear Blvd
-77.948 34.200 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Hart St
Bordeaux Ave
Virginia Ave
Monroe St
Adams St
Maryland Ave
Louisiana Ave
Carolina Beach Rd
Bell St
Delaware Ave
Cape Fear Blvd
Shipyard Blvd
Williamson Dr
Davie Dr
Harbor Freight
600ft
-77.945 34.196 Degrees
(1 of 2)
RUST: Tommy's Gas & Snaks 2
Incident Number 43081
UST Number WI-8049
Incident Name Tommy's Gas & Snaks 2
Facility ID 00-0-0000022601
Address 2461 Carolina Beach Rd
City/Town wilmington
County NEW H
Zip Code 28401
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident Occurred 7/19/2017 8:00
Zoom to
POWERED BY esri

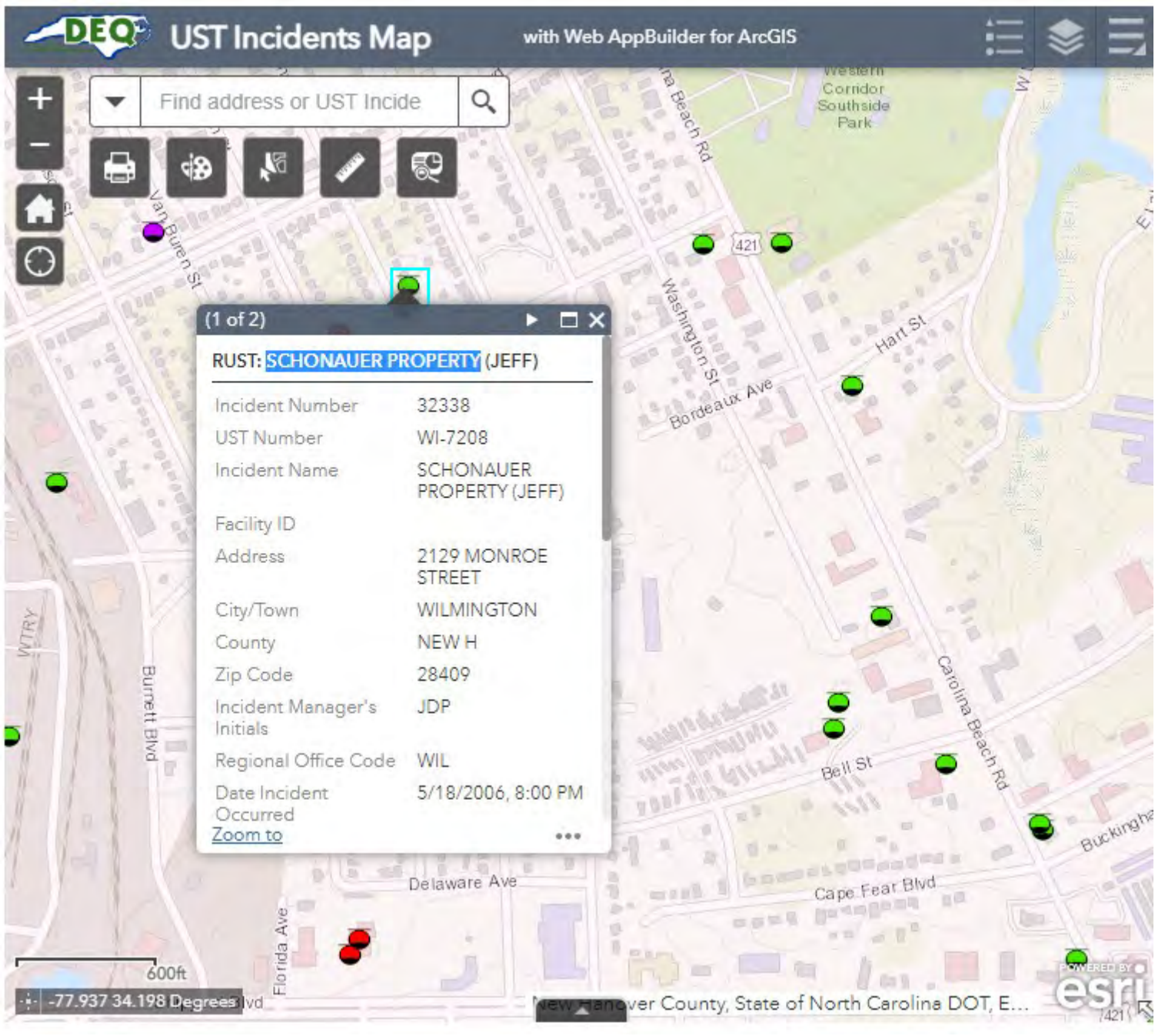

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: Tommy's Gas & Snaks 2
Incident Number 43081
UST Number WI-8049
Incident Name Tommy's Gas & Snaks 2
Facility ID 00-0-0000022601
Address 2461 Carolina Beach Rd
City/Town wilmington
County NEW H
Zip Code 28401
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident Occurred 7/19/2017, 8:00 PM
Date Incident Reported 7/19/2017, 8:00 PM
date Incident Closed 1/7/2021, 7:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 279
Risk Abatement Code D
Risk Assessment Date 11/10/2020, 7:00 PM
Land Use
Notice of Residual Petroleum (NRP) Filed 9/6/2013, 8:00 PM
Media Restricted Per NRP B
Zoom to
600ft
-77.945 34.198 Degrees
Louisiana Ave
Davie Dr
Harbor Freight
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

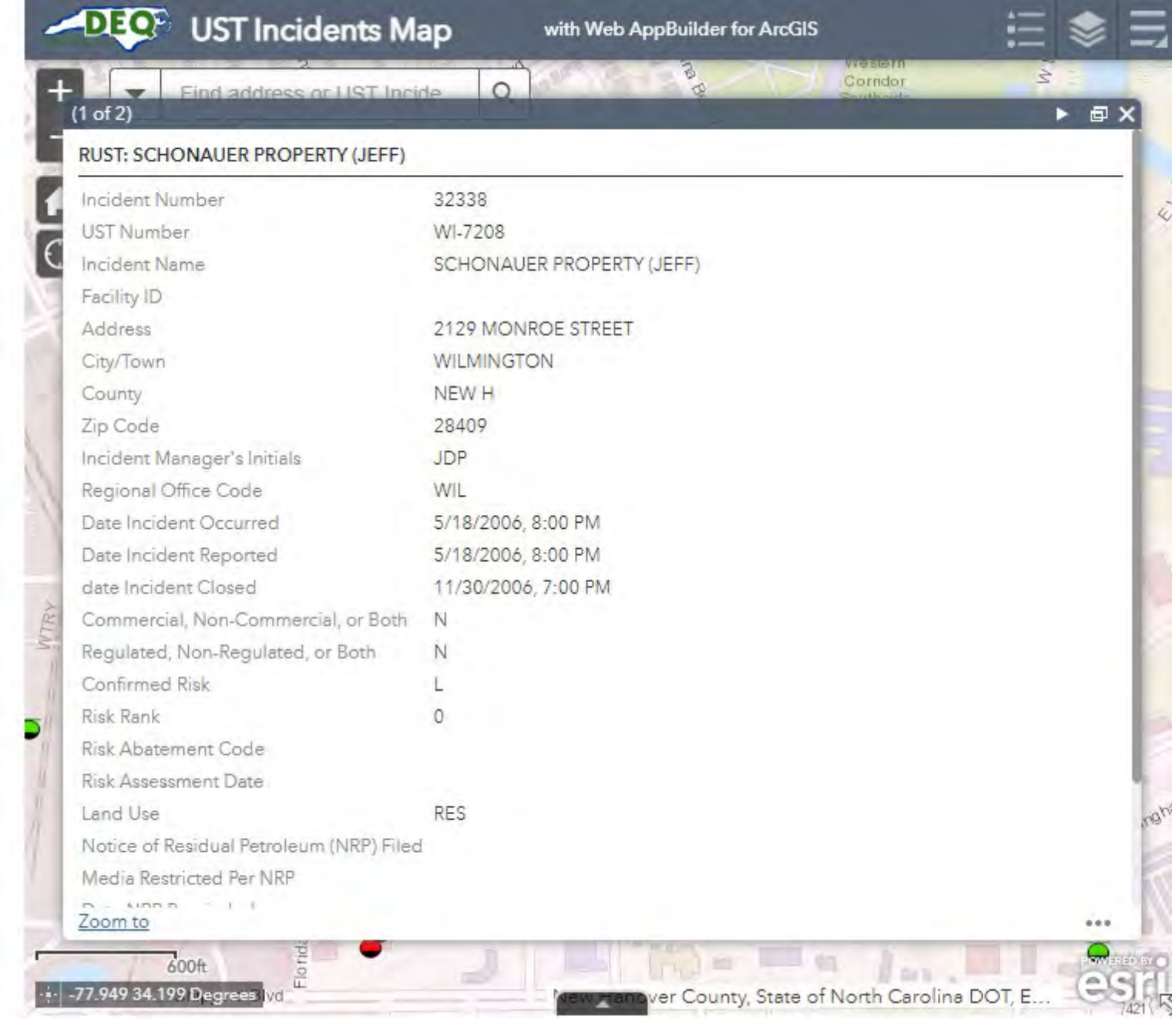

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: FAST FARE # 730
Incident Number 14603
UST Number WI-1280
Incident Name FAST FARE # 730
Facility ID 00-0-0000001446
Address 2158 CAROLINA BEACH
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials DTM
Regional Office Code WIL
Date Incident Occurred 11/16/1994, 7:00 PM
Zoom to
Western Corridor Southside Park
Port of Wilmingto
Delaware Ave
Cape Fear Blvd
Shipyard Blvd
Williamson Dr
Davie Dr
Calhoun Dr
Marion Dr
Rutledge Dr
Bell St
Hart St
Wellington Ave
Buckingham Ave
Woodlawn Ave
Walden Dr
Morningside Dr
Stadium Dr
Ivey Cir
W Lake Shore Dr
Medical Center Dr
Physicians Dr
Canterwood Dr
Cypress Dr
Holly Dr
Wisteria Dr
Yaupon Dr
Docks Cir
Pharmacy Dr
S 17th St
Glen Meade R
Flint Dr
Troy Dr
Dare St
Holbrooke Ave
Constitution Blvd
Southwood Rd
Greenla Memorial Cemete
421
0.3mi
51 ft
-77.953 34.196 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

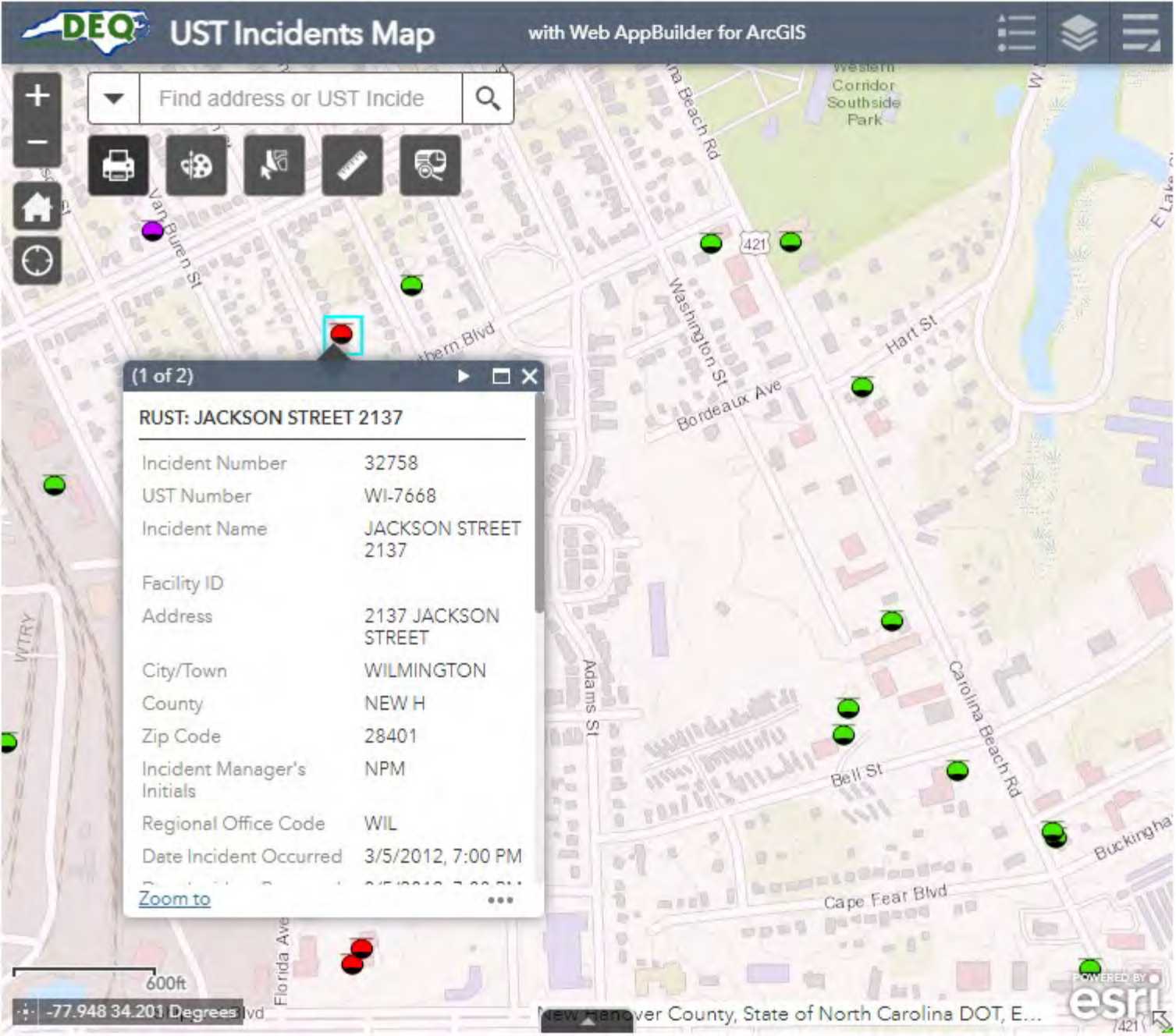

DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: FAST FARE # 730
Incident Number 14603
UST Number WI-1280
Incident Name FAST FARE # 730
Facility ID 00-0-0000001446
Address 2158 CAROLINA BEACH
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials DTM
Regional Office Code WIL
Date Incident Occurred 11/16/1994, 7:00 PM
Date Incident Reported 11/16/1994, 7:00 PM
date Incident Closed 5/28/2003, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both R
Confirmed Risk L
Risk Rank 0
Risk Abatement Code
Risk Assessment Date
Land Use RES
Notice of Residual Petroleum (NRP) Filed
Media Restricted Per NRP
Zoom to
0.3mi
-77.953 34.209 Degrees
Rutledge Dr
Marion Dr
esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Western Corridor Southside Park
Carolina Beach Rd
Central Blvd
Harrison St
Van Buren St
Southern Blvd
421
(1 of 2)
RUST: NC ARMY NATIONAL GUARD-WILMINGTON ARMORY
Incident Number 20623
UST Number WI-1748
Incident Name NC ARMY NATIONAL GUARD-WILMINGTON ARMORY
Facility ID 00-0-0000034006
Address 2221 CA.BCH.RD.
City/Town WILMINGTON
County NEW H
Zip Code 28407
Incident Manager's Initials BAR
Regional Office Code WIL
Zoom to
Virginia Ave
Monroe St
Louisiana Ave
Burnett Blvd
Cross St
Maryland Ave
Delaware Ave
Cape Fear Blvd
600ft
-77.938 34.201 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: NC ARMY NATIONAL GUARD-WILMINGTON ARMORY
Incident Number 20623
UST Number WI-1748
Incident Name NC ARMY NATIONAL GUARD-WILMINGTON ARMORY
Facility ID 00-0-0000034006
Address 2221 CA.BCH.RD.
City/Town WILMINGTON
County NEW H
Zip Code 28407
Incident Manager's Initials BAR
Regional Office Code WIL
Date Incident Occurred 8/21/1995, 8:00 PM
Date Incident Reported 11/17/1995, 7:00 PM
date Incident Closed 7/27/2000, 8:00 PM
Commercial, Non-Commercial, or Both C
Regulated, Non-Regulated, or Both N
Confirmed Risk L
Risk Rank 0
Risk Abatement Code
Risk Assessment Date
Land Use RES
Notice of Residual Petroleum (NRP) Filed
Media Restricted Per NRP
Zoom to
600ft
-77.941 34.203 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
(1 of 2)
RUST: SCHONAUER PROPERTY (JEFF)
Incident Number 32338
UST Number WI-7208
Incident Name SCHONAUER PROPERTY (JEFF)
Facility ID
Address 2129 MONROE STREET
City/Town WILMINGTON
County NEW H
Zip Code 28409
Incident Manager's Initials JDP
Regional Office Code WIL
Date Incident Occurred 5/18/2006, 8:00 PM
Zoom to
Western Corridor Southside Park
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UST Incidents Map
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(1 of 2)
RUST: SCHONAUER PROPERTY (JEFF)
Incident Number 32338
UST Number WI-7208
Incident Name SCHONAUER PROPERTY (JEFF)
Facility ID
Address 2129 MONROE STREET
City/Town WILMINGTON
County NEW H
Zip Code 28409
Incident Manager's Initials JDP
Regional Office Code WIL
Date Incident Occurred 5/18/2006, 8:00 PM
Date Incident Reported 5/18/2006, 8:00 PM
date Incident Closed 11/30/2006, 7:00 PM
Commercial, Non-Commercial, or Both N
Regulated, Non-Regulated, or Both N
Confirmed Risk L
Risk Rank 0
Risk Abatement Code
Risk Assessment Date
Land Use RES
Notice of Residual Petroleum (NRP) Filed
Media Restricted Per NRP
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421
(1 of 2)
RUST: JACKSON STREET 2137
Incident Number 32758
UST Number WI-7668
Incident Name JACKSON STREET 2137
Facility ID
Address 2137 JACKSON STREET
City/Town WILMINGTON
County NEW H
Zip Code 28401
Incident Manager's Initials NPM
Regional Office Code WIL
Date Incident Occurred 3/5/2012, 7:00 PM
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Michele Groat

Limited Site Assessment Report

32758

REC'D AUG 0 1 2012

Site Location:
2137 Jackson Street
Wilmington, NC
New Hanover County

Prepared for:
Ms. Diedrienne Fauser
606 Hughes Road
Hampstead, NC 28443

Prepared by: **Practical Environmental Solutions, P.C.**
P.O. Box 12590
Wilmington, NC 28405
(910) 790-8265

July 31, 2012

Kirk W. McDonald, P.G.
License #1000
President and Project Manager

NORTH CAROLINA LICENSED SEAL 1000 GEOLOGIST KIRK W. McDONALD

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Appendix #6 – Laboratory Analytical Data and Chain of Custody Sheets
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A. Site Identification

1. Site Identification:

Report Date: July 31, 2012
Facility ID #: NA UST Incident #: 32758 Site Name: Jackson Street 2137
Site Location: 2137 Jackson Street
Nearest Town: Wilmington County: New Hanover

Description of Geographical Location: residential map (see Figure #5)
Location Method: general street map and topographical map
Latitude: 34.199258 Longitude: 77.945077

2. Information about Contacts Associated with the Leaking UST System:

UST Owner: Ms. Diedrienne Fauser (statutory tank owner)

UST Operator: Unknown

Property Owner: Ms. Diedrienne Fauser

Property Occupant: Nathan Fauser

Consultant: **Practical Environmental Solutions, P.C.** – Kirk W. McDonald, P.G.
P.O. Box 12590, Wilmington, NC 28405 (910) 790-8265

Analytical Laboratory: Environmental Chemists, Inc.
6602 Windmill Way, Wilmington NC 28405 (910) 392-0223

3. Information about the Release:

Date Discovered: February 20, 2012 Estimated Quantity of Release: unknown
Cause of Release: Leak from underground oil tank Source of Release: Underground oil tank
Size and contents of UST system(s) from which the release occurred:
270-gallon underground heating oil tank (steel)
On September 7, 2011, 0.5 gallons of liquid was measured in the tank.
Complete and include as Attachments the items B through L in the order listed.

I, **Kirk W. McDonald** a Licensed Geologist for Practical Environmental Solutions, P.C., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

Kirk W. McDonald, P.G.
License #1000

NORTH CAROLINA LICENSED SEAL GEOLOGIST KIRK W. McDONALD

seal

B. Risk Assessment
Limited Site Assessment Risk Classification and Land Use Form

Part I – Groundwater / Surface Water / Vapor Impacts

High Risk:

1. Has the release contaminated any water supply well including any well used for non-drinking purposes?

   No

2. Is a water supply well used for drinking water located within 1000 feet of the source area of the release?

   The area surrounding this incident is within the Wilmington City limits. This area has been served by a public water system for many years. Connection to this system is mandatory. Except for nineteen properties, water meter boxes were observed at all properties within 500' of the incident site.

   Water meter boxes are not usually kept clear either by the home owner or by the city. Often it is very difficult to find a water meter box because it has been grown over or it is covered by debris. PES did not want to be too intrusive in searching for these water meter boxes without each property owner's direct permission.

3. Is a water supply well not used for drinking water (e.g., irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release?

   Yes. A water supply well was identified during our receptor survey investigation. See Section C. Receptor Information # 8, Figure #4 and Table #8.

4. Does groundwater within 500 feet of the source area of the release have potential for future use (there is no other source of water supply other than groundwater)?

   No

5. Do vapors from the release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any serious threat to public health, public safety, or the environment?

   No

   If yes, please describe.

6. Are there any other factors that would cause the release to pose an imminent danger to public health, public safety or the environment?

   No.

Intermediate Risk:

7. Is a surface water body located within 500 feet of the source area of the release?

   No.

   If yes, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B .0200 by a factor of 10?

   "NA"

8. Is the source of the release within an approved or planned wellhead protection area as defined in 42 USC 300h-7(e)?

   No.

   If yes, describe.

9. Is the release located in the Coastal Plain physiographic region as designated on a map entitled "Geology of North Carolina" published by the Department in 1985?

   Yes

   If yes, is the source area of the release in an area in which there is recharge to an unconfined or semi-confined deeper aquifer that is being used or may be used as a source of drinking water?

   No

   If yes, describe.

10. Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels (see Tables #6 and #7) established by the Department?

    No. Also, please note that the "top ten constituents" that were identified in EPA Method 625 (Top Ten Peaks) do not have an established groundwater standard and are only technically a violation.

Part II – Land Use

Property containing the Source Area of the Release:
The questions below pertain to the property containing the source area of the release.

1. Does the property contain one or more primary or secondary residences (permanent or temporary)?

   Yes.

   Describe.

   This property is a residence.

2. Does the property contain a school, day care center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?

   No

3. Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, an inactive commercial or industrial enterprise, or is the land undeveloped?

   No.

   Describe.

   This property is a residence.

4. Do children visit the property?

   Yes.

   Explain.

   This property is a residence in a residential neighborhood. It is safe to assume that children will visit this property. .

   Is access to the property reliably restricted consistent with its use (e.g., fences, security personnel, or both)?

   Yes.

Explain.

The former tank area is located in the back yard. The former tank area is fenced.

5. Does pavement, buildings, or other structures cap the contaminated soil?

   See below.

   Describe.

   The heating oil tank was located near the house. 12.66 tons of contaminated soil was removed from this property during the tank removal (see the "20 Day Report" for this site). Soil contamination was excavated to a depth of approximately 9.5 feet bls. Soil sample results show that contaminated soil remains at this site. Some of this contaminated soil may exist under the house foundation, but some contaminated soil is not capped. See Table #2, #3, and #4.

   If yes, what mechanisms are in place or can be in place to ensure that the contaminated soil will remain capped in the future?

   A "buffer" of clean soil may be present at the site until you reach a depth of approximately 8 feet below land surface. Under normal conditions the homeowner and visitors to the property will probably be isolated from any remaining contaminated soil.

6. What is the zoning status of the property?

   This is a well-established neighborhood of single-family dwellings. It seems highly unlikely that this zoning would change significantly.

7. Is the use of the property likely to change in the next 20 years?

   No.

Property Surrounding the Source Area of the Release

The Questions below pertain to the area within 1500 feet of the source area of the release (excludes the property containing the source area of the release):

1. What is the distance from the source area of the release to the nearest primary or secondary residence (permanent or temporary)?

   Approximately 20'

2. What is the distance from the source area of the release to the nearest school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?

   The Prayer and Bible Church of God is located approximately 1100 feet northeast of this site. See Figure #1.

3. What is the zoning status of properties in the surrounding areas?

   See answer to question 4 below.

4. Briefly characterize the use and activities of the land in the surrounding area.

   This is a well-established neighborhood of single-family dwellings.

C. Receptor Information

1. Water Supply Wells

The area surrounding this incident is within the Wilmington City limits. This area has been served by a public water system for many years. Connection to this system is mandatory. Except for nineteen properties, water meter boxes were observed at all properties within 500' of the incident site.

Water meter boxes are not usually kept clear either by the home owner or by the city. Often it is very difficult to find a water meter box because it has been grown over or it is covered by debris. PES did not want to be too intrusive in searching for these water meter boxes without the property owner's direct permission.

All of the "1500 foot distance area" of this incident is in the Wilmington City limits and is served by a public water supply system. All properties within the Wilmington City limits are required to connect to the public water supply system.

Receptor Survey Well Forms: (Survey within 500 feet of the former tank location)

On July 6, 2012, PES hand delivered surveys to all properties within the 500 foot radius of the former tank location. For more data see Section # 8 in Receptor Information and see Figure #4 and Appendix 5.

2. Public Water Supplies

Are public water supplies available within 1500 feet of the source area of the release?

Yes.

If yes, where is the location of the nearest public water lines and the source(s) of the public water supply? (Indicated on map) Describe.

All of the area within 1500 feet of this incident site is in the Wilmington City limits and is served by a public water supply system. All properties within the Wilmington City Limits are required to connect to the public water supply system. The water source for this system is the Cape Fear River.

Public water lines run along all neighborhood roads. The closest public supply water line runs along Jackson Street, approximately 80 feet from the tank source area.

3. Surface Water

An area of Greenfield Lake is located approximately 2800 feet east of the former tank location. See Figure #1 for a map showing all surface water bodies within 1500 feet of the source area of the release (USGS Topographic map).

4. Wellhead Protection Areas

Approved Wellhead Protection Areas:

The Public Water Supply Branch's web site (ArcIMS Viewer) was checked on July 31, 2012. There were no approved wellhead protection areas with in 1500' of the release source.

Planned Wellhead protection areas:

On January 25, 2012, John Malone the Water Treatment Supervisor with Cape Fear Public Utility Authority (CFPUA) communicated with PES that the 2009 data of the intended areas for wellhead protection plans within New Hanover County; confirms no wellhead protection areas are intended in this area.

5. Deep Aquifers (Coastal Plain Physiographic Region):

Coastal Plain Geology in the New Hanover County Area

New Hanover County lies within the Coastal Plain Physiographic Region. It is the coastal county that is located between the lowermost portion of the Cape Fear River and the Atlantic Ocean.

The Coastal Plain of North Carolina is comprised of mostly unconsolidated sedimentary "rock" units that range in age from Early Cretaceous to Holocene. These sediments rest unconformably on much older metamorphic and crystalline rocks. Collectively, the Coastal Plain sequence of sedimentary deposits is eastward dipping and eastward thickening.

Because the coastal plain sediments were deposited in non-marine (fluvial) and marginal marine environments, the resulting sand aquifers are imperfectly connected sand bodies that locally may act as a single aquifer unit or may more closely resemble semi-confined aquifers. With the exception of the Castle Hayne Limestone Aquifer, these irregular and discontinuous sand layers are the dominate aquifer type in the New Hanover County area.

Despite the discontinuous nature of individual lithologic layers, collectively the sedimentary sequence can be segregated into distinct groupings that are recognized over considerable horizontal distance within the Coastal Plain.

The most significant aquifer units in the New Hanover County area are:

The **Surficial Aquifer** is characterized by sand, silt and clay layers and extends from the surface elevation to a depth of about 20 feet below sea level. The most common use of this aquifer is for irrigation water. The water in this aquifer is usually very high in iron.

In the New Hanover County area, an aquitard (clay layer) may or may not exist separating the Surficial Aquifer sequence and the underlying Castle Hayne Limestone.

The **Castle Hayne Limestone** is a marine sequence of limestone layers and some sand and clay layers. This aquifer extends from a depth of about 30 feet below sea level to about 140 feet

below sea level. This is a widely used and high yielding aquifer for many Coastal Plain counties. This limestone is dewatered in some areas so that it can be quarried for building stone.

Typically, the Castle Hayne Limestone and the underlying Pee Dee formation are separated by a relatively thick confining bed (50 feet thick). However, this confining bed may not always be present in the New Hanover County area.

The top of the **Pee Dee Aquifer** begins at a depth of about 200 feet below sea level and is subdivided into an upper, middle and much thicker lower aquifer. Generally, this stratigraphic sequence is approximately 70 percent sand but is characterized by more clay in the New Hanover County area (less than 60 percent sand). This aquifer extends to a depth of approximately 520 feet below sea level and is a significant water resource in the coastal plain.

Reference:

Winner, M.D., Jr. and R.W. Coble, 1989. *Hydrogeologic Framework of the North Carolina Coastal Plain Aquifer System.* USGS Open File Report 87-690.

6. Subsurface Structures

The only significant subsurface structures on and around the incident site are water lines, sanitary sewers, and storm sewers. The closest underground utilities run along Jackson Street.

7. Property Owners and Occupants

Please see Table #8: Adjacent Property Owners.

8. Receptor Discussion:

PES received one survey back. The one property owner reported having a well used for irrigation. Several sprinkler systems were noted during the delivery of the receptor survey. A follow up was completed with the property owners. The follow up confirmed four additional wells. One property owner could not be reached because no contact information could be obtained.

A total of four wells were found to be in within 250 foot radius of the former tank location. One of the five wells is located outside the 250 foot radius. Sample results show that the groundwater at this site has been impacted above the 2L standard. See Table # 6, Table #7 and Figure #4.

9. Map of exposure routes:

Exposure routes could be: direct contact with soil, effects from impacted water and sewer lines, and contact with contaminated surface waters.

As has already been mentioned, sample results show that contaminated soil remains at this site. During normal activity, the homeowner is not likely to come into contact with the remaining contaminated soil.

Sample results show that the groundwater has been impacted at this site.

D. Site History (update since 20-Day Report)

A monitoring well was installed on 5/18/12.

E. Site Geology and Hydrogeology

The subsurface is characterized by the following profile:

Depth in feet	Description
0-9.5	White to yellowish brown medium sand
9.5-12.0	White poorly sorted sand
12.0-13.5	Brown fine sand
13.5-20.0	Dark brown fine sand

This information is based on one soil boring, the tank pit excavation, and the installation of the monitoring well.

Given the fine grained nature of the soils underlying this site, groundwater is expected to move slowly over time. There is a horizontal hydraulic gradient at this site. The general topography slopes away from this property. This factor may increase the movement of groundwater at this site.

These soils should yield a relatively low amount of water and should have a fairly low transmissivity.

F. Sampling Results: Phase I Investigation

1. Soil Samples:

See Appendix #3 for hand auger decontamination and soil sampling procedures.

Tank Closure Sample

Depth of soil sample below land surface: approximately 5.5 feet below land surface.

Soil Sample Identification: JS-Closure

Soil Sample Analyses: Methods TPH-GRO and TPH-DRO

Soil Sample Results:

Method TPH-GRO: 169 ppm TPH
Method TPH-DRO: 13,500 ppm TPH

ppm = parts per million TPH = Total Petroleum Hydrocarbons

Sidewall Samples

A sidewall sample was collected from each side of the excavation (see Figure #3). For details see Table #2, #3, and #4.

Excavation Bottom Sample

The Center soil sample shows contamination levels higher than "Soil to Water" Standard.
For details see Table #2, #3, and #4.

Required Monitoring Well Soil Sample(s)

No additional soil samples were taken when the monitoring well was installed in the source area.

Groundwater was encountered during drilling at approximately 13 feet below land surface.

Justification for the Limit of Excavation

After considering the all of the site factors, PES determined that a reasonable and safe excavation dimensions are those presented on Figure #3. The total depth for this excavation at the deepest point was 9.5 feet below land surface to ensure a safe sidewall slope for the house foundation.

(Inital Abatement Report Section #2)

*Determining an Appropriate Excavation Depth:

The deeper an excavation the more unstable and the more the dangerous the excavation is to workers and other items located at the land surface including a house foundation. The total depth of a safe excavation is dependent on many factors including but not limited to: the soil and over burden weight, soil grain size, moisture content, etc.

Soil at this site consisted of a very low cohesion, relatively dry sand that was more unstable than that usually encountered in the Wilmington area. Small cave-ins did occur during the excavation causing increased concern as the excavation went deeper and closer to the house foundation.)

2. Groundwater Samples:

A groundwater sample was collected from MW1 on June 1, 2012. At the time of sampling, the groundwater level was 13.46 feet below land surface and no free product was measured in this well. PES determines groundwater levels with an interface probe.

The well was developed / purged and a groundwater sample was collected using virgin polyethylene drop tube and a peristaltic pump. (See Appendix #3 for detailed sampling procedures.) Three times the well water volume was purged from the well before the well was sampled: This well had 3.13 gallons of water purged before sampling.

The sample collected from this monitoring well was analyzed by EPA methods 602 and 625 and MADEP - VPH and EPH. For the summary analytical results of this water sample, see Tables #6 and #7.

The groundwater sample analytical results indicated the petroleum constituent **Bis(2-ethylhexyl)phthalate** was measured at levels above the 2L Groundwater Standards.

The constituents identified in EPA Method 625 (top ten peaks) do not have a groundwater standard and so are only technically groundwater standard violations. See Table #6 and #7.

3. Monitoring Well Construction:

This monitoring well is standard 2 inch PVC monitoring well. It was constructed with 10 feet of casing and 10 feet of slotted screen. (See Figure #5 and well construction record in Appendix #4 for more details.)

G. Free Product

At the time of sampling (6/7/12), the groundwater level was measured in monitoring well MW1 at 13.46 feet below land surface and no free product was measured in this well.

However, there were other indications that free product may be present at this site. These included: a petroleum odor in the purge water and an oil sheen on purge water.

PES uses an interface probe to determine the possible existence of free product and its level.

H. Conclusions and Recommendations

The underground heating oil tank has been properly removed and disposed of.

Soil Samples collected during soil excavation show:

A sidewall sample was collected from each side of the excavation (see Figure #3). For details see Table #2, #3, and #4.

Justification for the Limit of the Excavation:

Contaminated soil remains at the bottom of the excavation.

After considering the all of the site factors, PES determined that a reasonable and safe excavation dimensions are those presented on Figure #3. The total depth for this excavation at the deepest point was 9.5 feet below land surface to ensure a safe sidewall slope for the house foundation which is described in the Initial Abatement Report, *Section 2. Excavation Process -Determining an Appropriate Excavation Depth.

Groundwater Sample:

The groundwater sample analytical results indicated the petroleum constituent **Bis(2-ethylhexyl)phthalate** was measured at levels above the 2L Groundwater Standards.

The constituents identified in EPA Method 625 (top ten peaks) do not have a groundwater standard and so are only technically groundwater standard violations. See Table #6 and #7.

I. Investigation and Report Limitations

Our interpretations, conclusions, and recommendations made in this report are based on a limited number of hand borings, soil samples, and groundwater samples. Although our best professional judgment was used to determine the locations of borings, wells, and samples, the analytical results from these collected samples may not completely represent all of the subsurface conditions at this property. Furthermore, the results of soil and groundwater samples only represent the physical conditions at the date and time that the samples were collected.

This investigation was conducted and reported in accordance with generally accepted standards of geological and hydrogeological practices within the State of North Carolina.

The conclusions are based on available information and our professional judgment. This report presents our best interpretation of the data according to our experience and education in this field of study. No attempt has been made to misrepresent the conditions at this site.

J. Tables

Table #1 – Excavation Soil Sample Results: Total Petroleum Hydrocarbons

Table #2 – Excavation Soil Sample Results: EPA Method 8260

Table #3 – Excavation Soil Sample Results: EPA Method 8270

Table #4 – Excavation Soil Sample Results: MADEP – VPH and EPH

Table #5– Water Level Data

Table #6 – Groundwater Samples – Volatile and Semi-Volatile Analytical Results (EPA 602 and 625)

Table #7 – Groundwater Samples – MADEP – VPH and EPH

Table #8 – Adjacent Property Owners

Table #1 Soil Sample Results: Total Petroleum Hydrocarbon

2137 Jackson Street
Wilmington, NC

Concentrations in parts per million (ppm) (mg/kg)

Analytical Method	North Carolina Standard (Action Level)	**Closure Sample: Tank** **Sample ID:** JS-Closure **Sample Date:** 2/20/12 **Depth in feet:** 5.5 (below land surface)	**Closure Sample: Line** **Sample ID:** JS-Line **Sample Date:** 3/12/12 **Depth in feet:** 1.5 (below land surface)	**Composite Disposal Sample** **Sample ID:** JS-Composite **Sample Date:** 3/12/12
EPA Method TPH-GRO	10	**169**	**BQL**	**BQL**
EPA Method TPH-DRO	10	**13,500**	**BQL**	**10.1**

Shaded areas represent concentrations above the standard
BQL = Below Quantitation Limit

Table #2 Excavation Soil Samples: Volatile and Semi-Volatile Analytical Results EPA Method 8260

2137 Jackson Street
Wilmington, NC

Concentrations in parts per billion (ug/Kg or ppb)

Sample ID:	JS-SW1	JS-SW2	JS-SW3	JS-SW4	JS-Center	Residential Soil Cleanup Levels	Soil-to-Water Maximum Contaminant Concentrations
Sample Date:	3/12/12	3/12/12	3/12/12	3/12/12	3/12/12		
Depth in feet: (below land surface)	9.0	9.5	9.5	9.5	9.5		
Compound ↓							
EPA Method 8260							
Acetone	BQL	BQL	BQL	BQL	BQL	14,000,000	2400
Benzene	BQL	BQL	BQL	BQL	BQL	18,000	5.6
n-Butylbenzene	BQL	BQL	BQL	BQL	BQL	626,000	4300
sec-Butylbenzene	BQL	BQL	BQL	BQL	BQL	626,000	3300
tert-Butylbenzene	BQL	BQL	BQL	BQL	BQL	626,000	3400
Carbon disulfide	BQL	BQL	BQL	BQL	BQL	1,564,000	4300
Ethylbenzene	BQL	BQL	BQL	BQL	BQL	1,560,000	4900
Isopropylbenzene	BQL	BQL	BQL	BQL	BQL	1,564,000	1700
4 - Isopropyltoluene	BQL	BQL	BQL	BQL	BQL	NS	NS
p-Isopropyltoluene	BQL	BQL	BQL	BQL	BQL	NS	NS
Methylene Chloride	BQL	BQL	BQL	BQL	BQL	85,000	20
Naphthalene	BQL	BQL	BQL	BQL	BQL	313,000	160
n-Propylbenzene	BQL	BQL	BQL	BQL	BQL	626,000	1700
Toluene	BQL	BQL	BQL	BQL	BQL	1,200,000	4,300
1,2,4 - Trimethylbenzene	BQL	BQL	BQL	BQL	BQL	782,000	8500
1,3,5 - Trimethylbenzene	BQL	BQL	BQL	BQL	BQL	782,000	8300
m, p-Xylene	BQL	BQL	BQL	BQL	BQL	3,129,000[1]	46,000[1]
o - Xylene	BQL	BQL	BQL	BQL	BQL	3,129,000[1]	46,000[1]

1 = Xylenes (mixed)
Shaded areas = concentrations above the Soil-to-Water standard.
* = Value is above the Residential Soil Cleanup Level
All results not included in this table were BQL
2012

NS = No Standard
NA = Not Applicable

BQL = Below Quantitation Limit

Table #3 Excavation Soil Samples: Volatile and Semi-Volatile Analytical Results EPA Method 8270

2137 Jackson Street
Wilmington, NC

Concentrations in parts per billion (ug/Kg or ppb)

Sample ID:	JS-SW1	JS-SW2	JS-SW3	JS-SW4	JS-Center	Residential Soil Cleanup Levels	Soil-to-Water Maximum Contaminant Concentrations
Sample Date:	3/12/12	3/12/12	3/12/12	3/12/12	3/12/12		
Depth in feet: (below land surface)	9.0	9.5	9.5	9.5	9.5		
Compound ↓							
EPA Method 8270							
Acenaphthene	BQL	BQL	BQL	BQL	BQL	940,000	8200
Acenaphthylene	BQL	BQL	BQL	BQL	BQL	469,000	11,000
Anthracene	BQL	BQL	BQL	BQL	BQL	4,600,000	940,000
Benzoic Acid	BQL	BQL	BQL	BQL	BQL	62,571,000	120,000
Benzo[a]anthracene	BQL	BQL	BQL	BQL	BQL	880	350
Benzo[a]pyrene	BQL	BQL	BQL	BQL	BQL	88	96
Benzo[b]fluoranthene	BQL	BQL	BQL	BQL	BQL	880	1200
Benzo[g,h,i]perylene	BQL	BQL	BQL	BQL	BQL	469,000	6,400,000
Benzo[k]fluoranthene	BQL	BQL	BQL	BQL	BQL	9,000	12,000
Chrysene	BQL	BQL	BQL	BQL	BQL	88,000	39,000
Dibenzofuran	BQL	BQL	BQL	BQL	BQL	62,000	4700
Fluoranthene	BQL	BQL	BQL	BQL	BQL	620,000	290,000
Fluorene	BQL	BQL	BQL	BQL	BQL	620,000	47,000
Indeno(1,2,3-c,d)pyrene	BQL	BQL	BQL	BQL	BQL	880	3400
2 - Methylnaphthalene	BQL	BQL	BQL	BQL	BQL	63,000	3600
Naphthalene	BQL	BQL	BQL	BQL	BQL	313,000	160
Phenanthrene	BQL	BQL	BQL	BQL	BQL	469,000	5600
Pyrene	BQL	BQL	BQL	BQL	BQL	469,000	270,000

* = Value is above the Residential Soil Cleanup Level

NS = No Standard
NA = Not Applicable
BQL = Below Quantitation Limit

Shaded areas represent concentrations above the Soil-to-Water standard.
All results not included in this table were BQL.
2012

Table #4 Excavation Soil Samples: MADEP – VPH and EPH Analytical Results

2137 Jackson Street
Wilmington, NC

Concentrations in parts per billion (ug/Kg or ppb)

Sample ID:	JS-SW1	JS-SW2	JS-SW3	JS-SW4	JS -Center	Residential Soil Cleanup Levels	Soil-to-Water Maximum Contaminant Concentrations
Sample Date:	3/12/12	3/12/12	3/12/12	3/12/12	3/12/12		
Depth in feet: (below land surface)	9.0	9.5	9.5	9.5	9.5		
Compound ↓							
VPH Results							
C_5-C_8 Aliphatics	<230	<241	<252	<238	<254		
C_9-C_{12} Aliphatics	<154	<161	<168	<158	<169		
C_9-C_{10} Aromatics	<76.8	<80.3	<84.0	<79.2	<84.6		
EPH Results							
C_9-C_{18} Aliphatics	<2920	7310	6070	<2290	432,000		
C_{19}-C_{36} Aliphatics	<3900	4340	6000	<3060	44,200		
C_{11}-C_{22} Aromatics	<4140	3860	<3570	<3250	119,000		
Totals for Standard Comparison							
C_5-C_8 Aliphatics	**<230**	**<241**	**<252**	**<238**	**<254**	**939,000**	**68,000**
VPH C_9-C_{12}	<154	<161	<168	<158	<169		
EPH C_9-C_{18}	<2920	7310	6070	<2290	432,000		
C_9-C_{18} Aliphatics	**<3074**	**>7310but <7471**	**>6070 but <6238**	**<2448**	**>432,000 but <432,169**	**1,500,000**	**540,000**
C_{19}-C_{36} Aliphatics	**<3900**	**4340**	**6000**	**<3060**	**44,200**	**31,000,000**	**See note[1]**
VPH C_9-C_{10}	<76.8	<80.3	<84.0	<79.2	<84.6		
EPH C_{11}-C_{22}	<4140	3860	<3570	<3250	119,000		
C_9-C_{22} Aromatics	**<4216.8**	**>3860 but <3940.3**	**<7594.3**	**<3329.2**	**>119,000 but <119,084.6**	**469,000**	**31,000**

1 = Considered Immoble
NS = No Standard
Shaded areas represent concentrations above the Soil -to-Water standard.
NA = Not Applicable
* = Value is above the Residential Soil Cleanup Level For more details on MADEP -- VPH and EPH analytical methods, see the labs sheets in Section L, Appendix 6. 2012

Table #5 Water Level Data

2137 Jackson Street
Wilmington, NC

Well #	Date Measured	Depth to Liquid (feet)	Depth to Water (feet)	Product Thickness (feet)	Depth of Screened Interval (feet below land surface)
MW1	6/7/12	13.46	13.46	0	10 to 20

* Depth to liquid and depth to water are measured as a depth from land surface. PES uses an interface probe to determine the possible existence of free product and its level.

Table #6 Groundwater Samples:
Volatile and Semi-Volatile Analytical Results
EPA Method 602 and 625

2137 Jackson Street, Wilmington, NC

Concentrations in parts per billion (ug/L)

Compound	**Well ID:** JS-MW1 **Sample Date:** 6/7/12	**NC Groundwater Standard**	**Groundwater Gross Contamination Level**
EPA Method 602			
Benzene	BQL	1	5,000
Ethylbenzene	BQL	600	84,500
MTBE	BQL	20	20,000
Toluene	BQL	600	260,000
m – p – Xylene	BQL	500	85,500[1]
o – Xylene	BQL	500	85,500[1]
EPA Method 625			
Bis(2-ethylhexyl)phthalate	**9.72**	3	170
Diethylphthalate	BQL	NS	NS
Fluorene	BQL	300	990
Naphthalene	BQL	6	6000
Phenanthrene	BQL	200	410
Top 10 peaks			
1. 1,1,2,2-Tetrachloroethane	**1.47***	NS	NA
2. cis-3-Methyl-4-octanolide	**1.49***	NS	NA
3. Benzophenone	**1.0***	NS	NA
4. Unknown Organic Acid	**7.84***	NS	NA
5. 1-Heptadecanol	**2.42***	NS	NA
6. Unknown Phthalic acid ester	**2.67***	NS	NA
7. 17-Pentatricontene	**7.42***	NS	NA
8. Di(2-ethylhexyl)adipate	**31.8***	NS	NA
9. Benzothiazole,2-(o-aminophenyl)-4-methyl-	**15.9***	NS	NA
10. ----------	----------	NS	NA

1 = Xylenes (mixed)

Shaded areas represent concentrations above the standard

NS = No Standard

BQL = Below Quantitation Limit

NA = Not Applicable

2012

Table #7 Groundwater Samples:
MADEP – VPH and EPH Analytical Results
Concentrations in parts per billion (ug/L)

2137 Jackson Street
Wilmington, NC

Compound	Well ID: JS-MW1 Sample Date: 6/17/12	NC Groundwater Standard	Groundwater Gross Contamination Level
VPH Results			
C_5-C_8 Aliphatics	<3		
C_9-C_{12} Aliphatics	<2		
C_9-C_{10} Aromatics	<1		
EPH Results			
C_9-C_{18} Aliphatics	<24		
C_{19}-C_{36} Aliphatics	<32		
C_{11}-C_{22} Aromatics	<34		
Totals for Standard Comparison			
C_5-C_8 Aliphatics	**<3**	**420**	**420,000**
VPH C_9-C_{12}	<2		
EPH C_9-C_{18}	<24		
C_9-C_{18} Aliphatics	**<26**	**4200**	**4,200,000**
C_{19}-C_{36} Aliphatics	**<32**	**42,000**	**42,000,000**
VPH C_9-C_{10}	<1		
EPH C_{11}-C_{22}	<34		
C_9-C_{22} Aromatics	**<35**	**210**	**210,000**

Shaded areas represent concentrations above the standard
BQL= Below Quantitation Limit

NS = No Standard
NA = Not Applicable

For more details on MADEP – VPH and EPH analytical methods, see the labs sheets in Section L, Appendix 6.

Table #8 Adjacent Property Owners

2137 Jackson Street
Wilmington, NC

*Owner/Occupant *Name/Address	Location to Incident Property	Receptors
FAUSER DIEDRIENNE F 2137 JACKSON ST	Incident Site	Irrigation Well-not in service
SWENSON CAROL A 2133 JACKSON ST	North	Irrigation Well-not in service
LAWTON LINDA H JOHN D 2136 MONROE ST	East	No data
JENKINS CAROLYN L 2141 JACKSON ST	South	Irrigation well
MILLER ANNE FOUNTAIN 2140 JACKSON ST	West	No data

*Information is based on New Hanover County tax data.

K. Figures

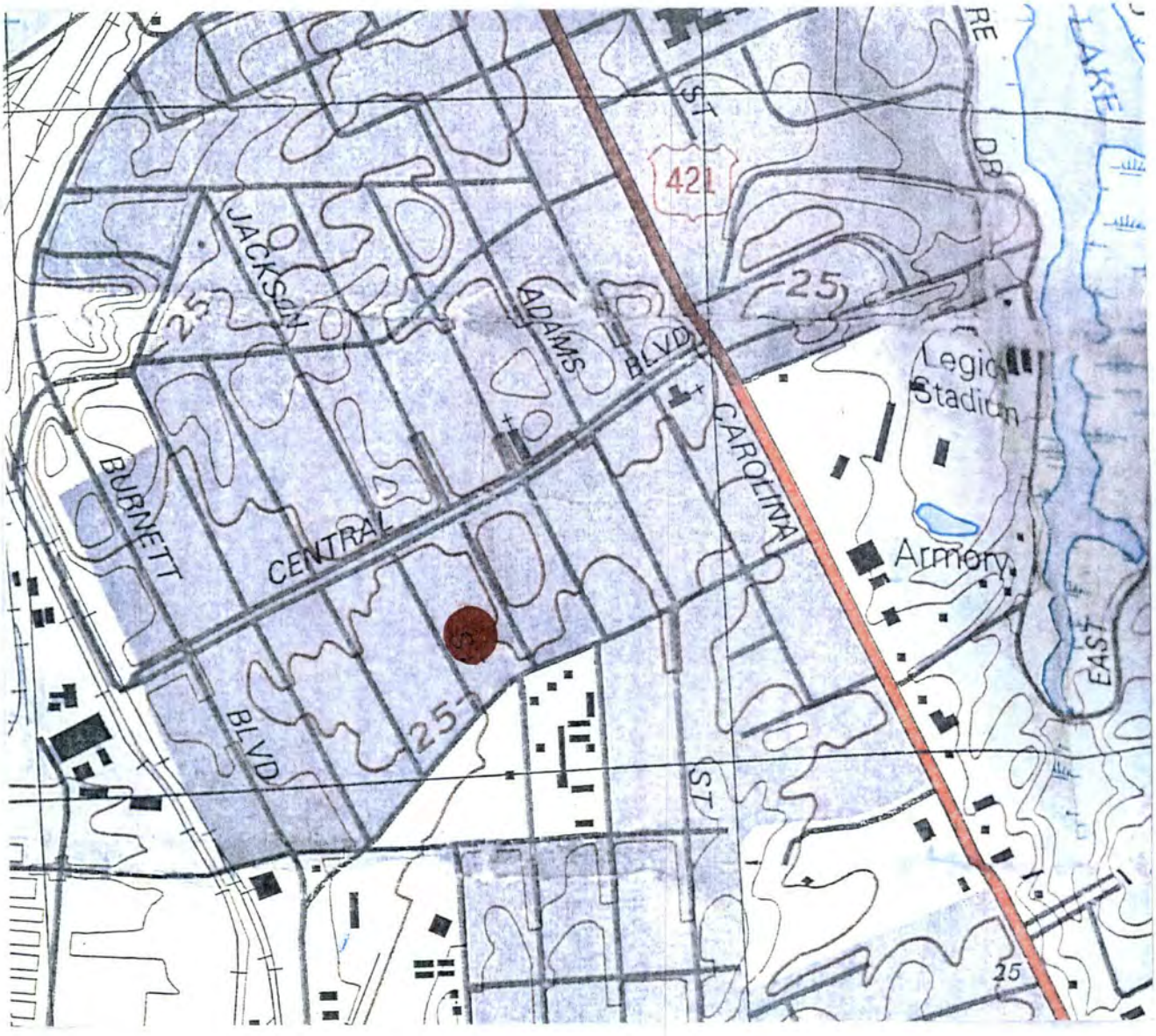
Figure #1 – Area Topographic Map (with surface water bodies in blue)

Figure #2 – Site Map

Figure #3 – Contaminated Soil Excavation Map

Figure #4 – 1500 Foot Tax Map / Well Location Map

Figure #5 – Well Construction Diagram



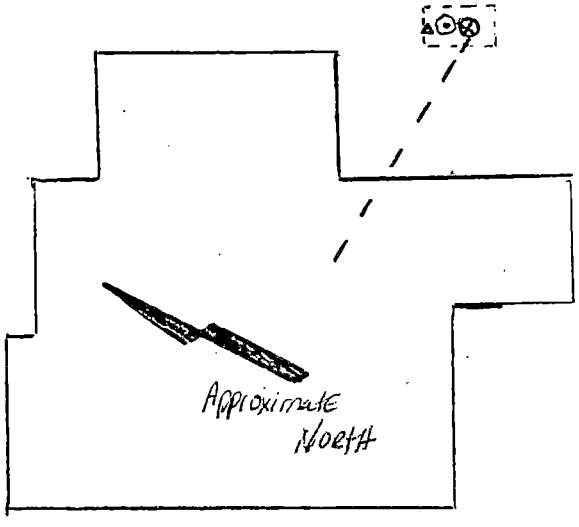
North

Contour Interval = 5 ft

0 500 1000 ft

Figure #1 Topographic Map

Practical Environmental Solutions, P.C.	**Location: 2137 Jackson Street, Wilmington, NC** **Site Location =**	**Created by:** SGS **Date:** Mar. 2012 **Scale:** 1" = 1000ft



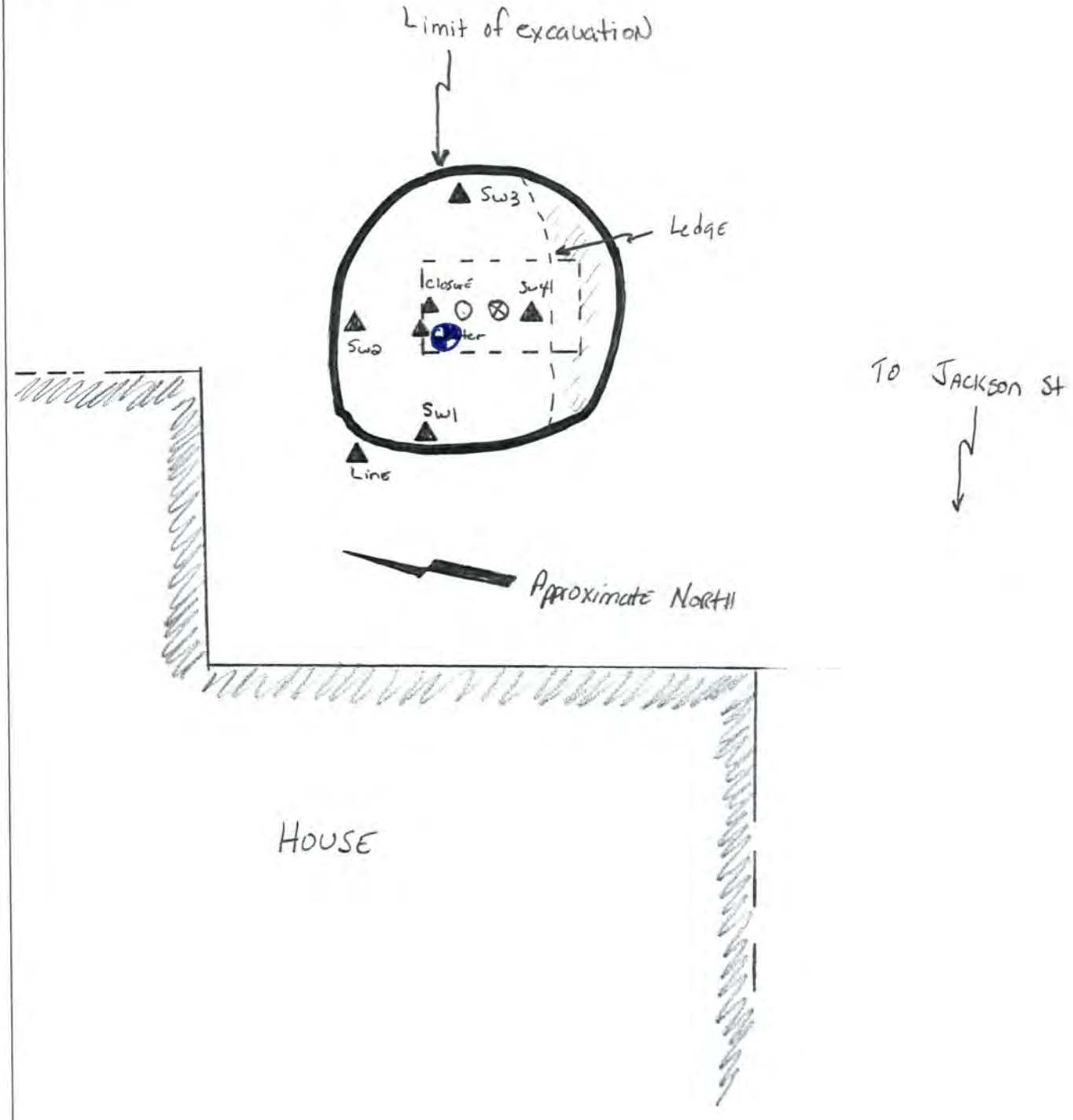
To Jackson St.

Note: House measurements obtained from New Hanover County Tax Records.

Key: UST; AST; Fill Pipe; Vent Pipe; Product Line; Vent Line; Sample Location; JS-Closure

Figure #2 Site Map

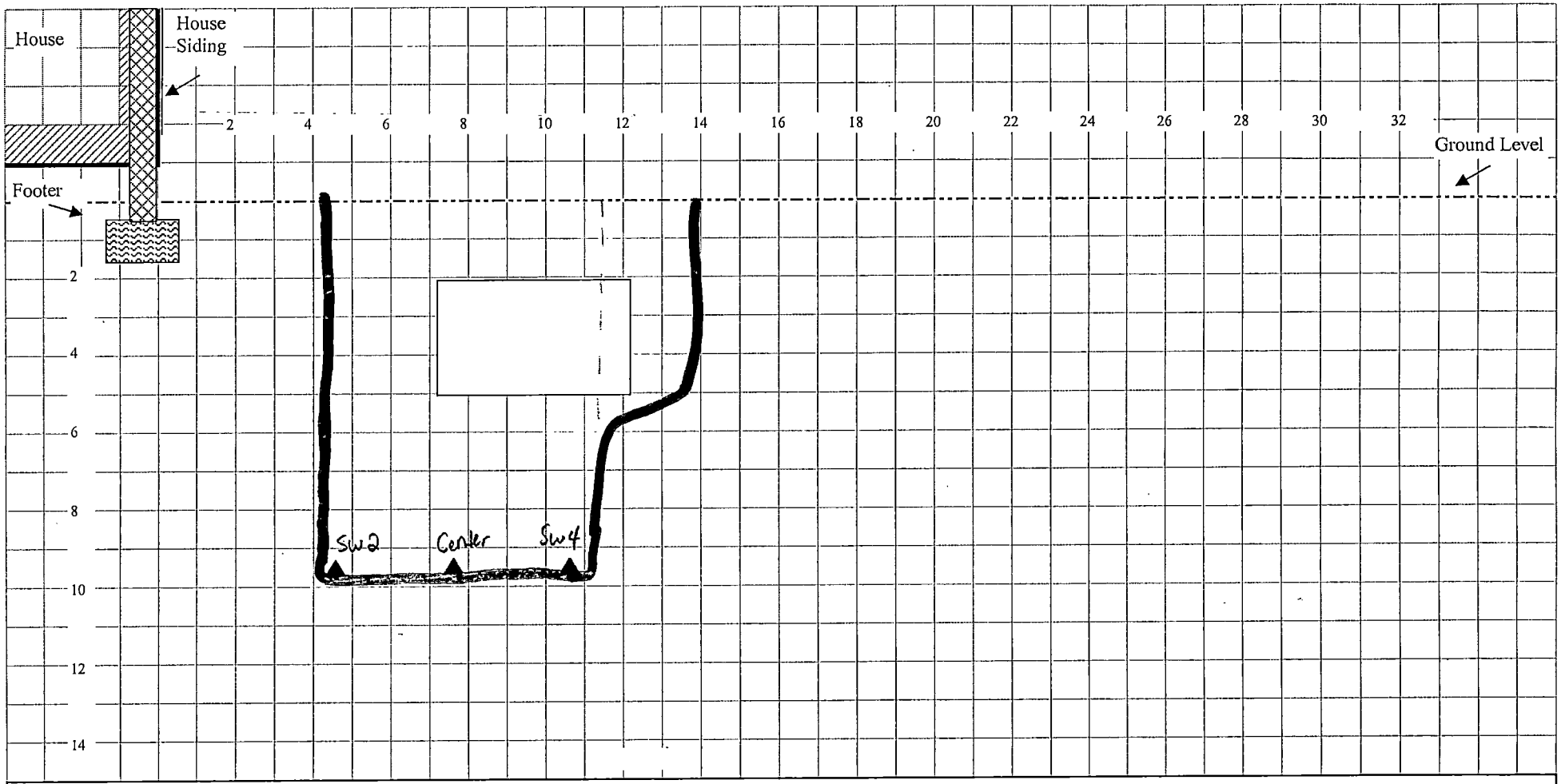
Practical Environmental Solutions, P.C.	**Location: 2137 Jackson Street, Wilmington, NC**	**Created by:** SGS **Date:** Mar. 2012 **Scale:** 1" = 15'



Key: UST, AST, Fill Pipe, Vent Pipe, Hand Boring, Monitoring Well, Sample Location

Figure #3 Excavation and Sample Location Map

Practical Environmental Solutions, P.C.	**Location: 2137 Jackson Street, Wilmington, NC**	**Created by:** SGS **Date:** Mar. 2012 **Scale:** 1 inch = 5ft



Key:

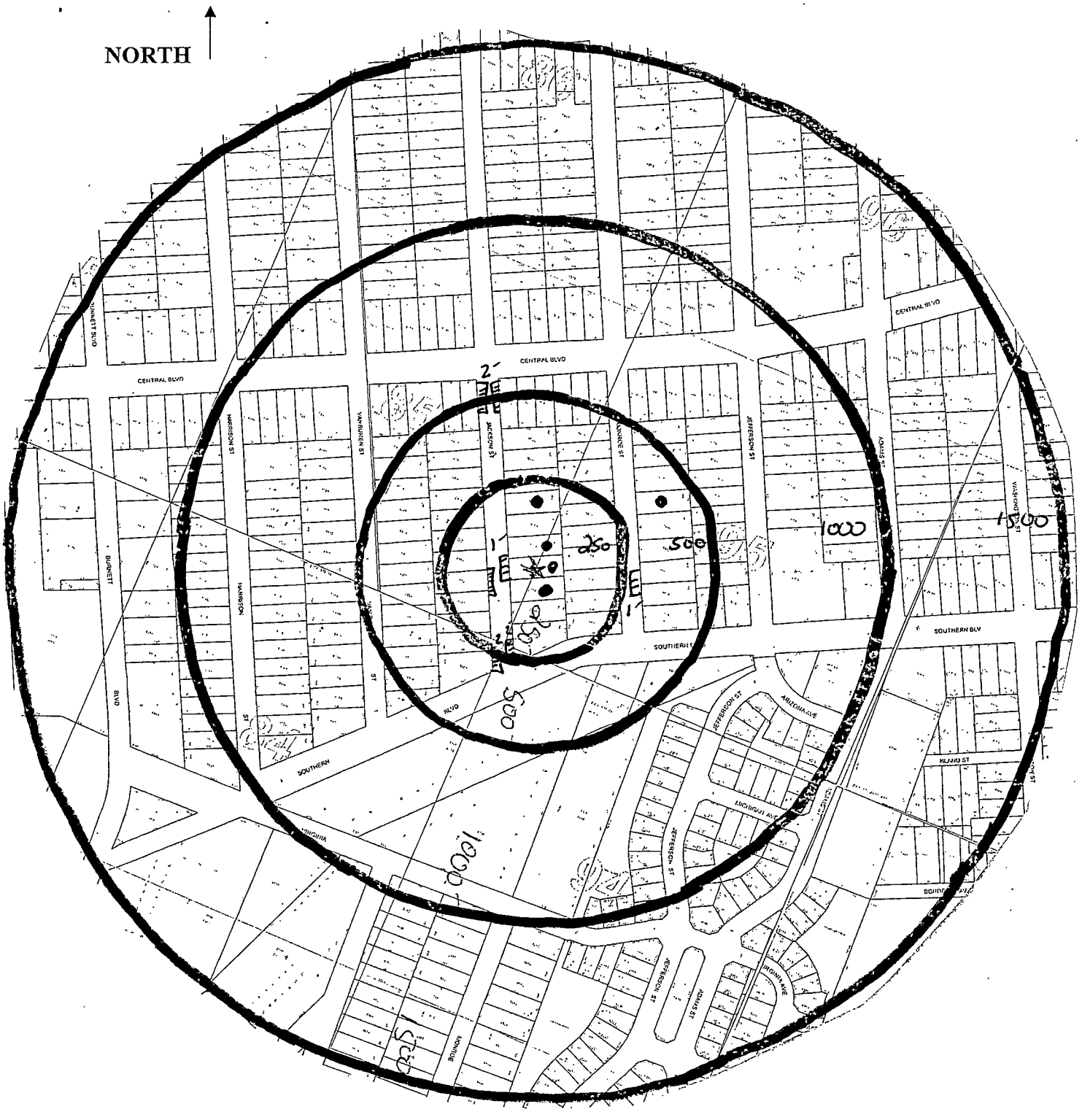
Former UST

Soil Sample Location

Water table

Figure #4 Cross Section of Excavation

Practical Environmental Solutions, P.C.	**Location:** 2137 Jackson Street, Wilmington, NC	**Created by:** KWM **Date:** 2-2012 **Scale: 1" = 4'**



Key: ★ Incident Site ● Irrigation Well ✖ Drinking Water Well ▥ Storm drain drop inlet (depth in feet)

↑ Direction of water flow

Symbols indicate their presence on the marked property. Symbols do not indicate the exact location of that item.

Figure #4 1500 Foot Tax Map / Well Location Map		
Practical Environmental Solutions, P.C.	**Location:** 2137 Jackson Street, Wilmington, NC	**Created by:** SGS **Date:** July 2012 **Scale:** 1" = 400'

Well Construction Diagram

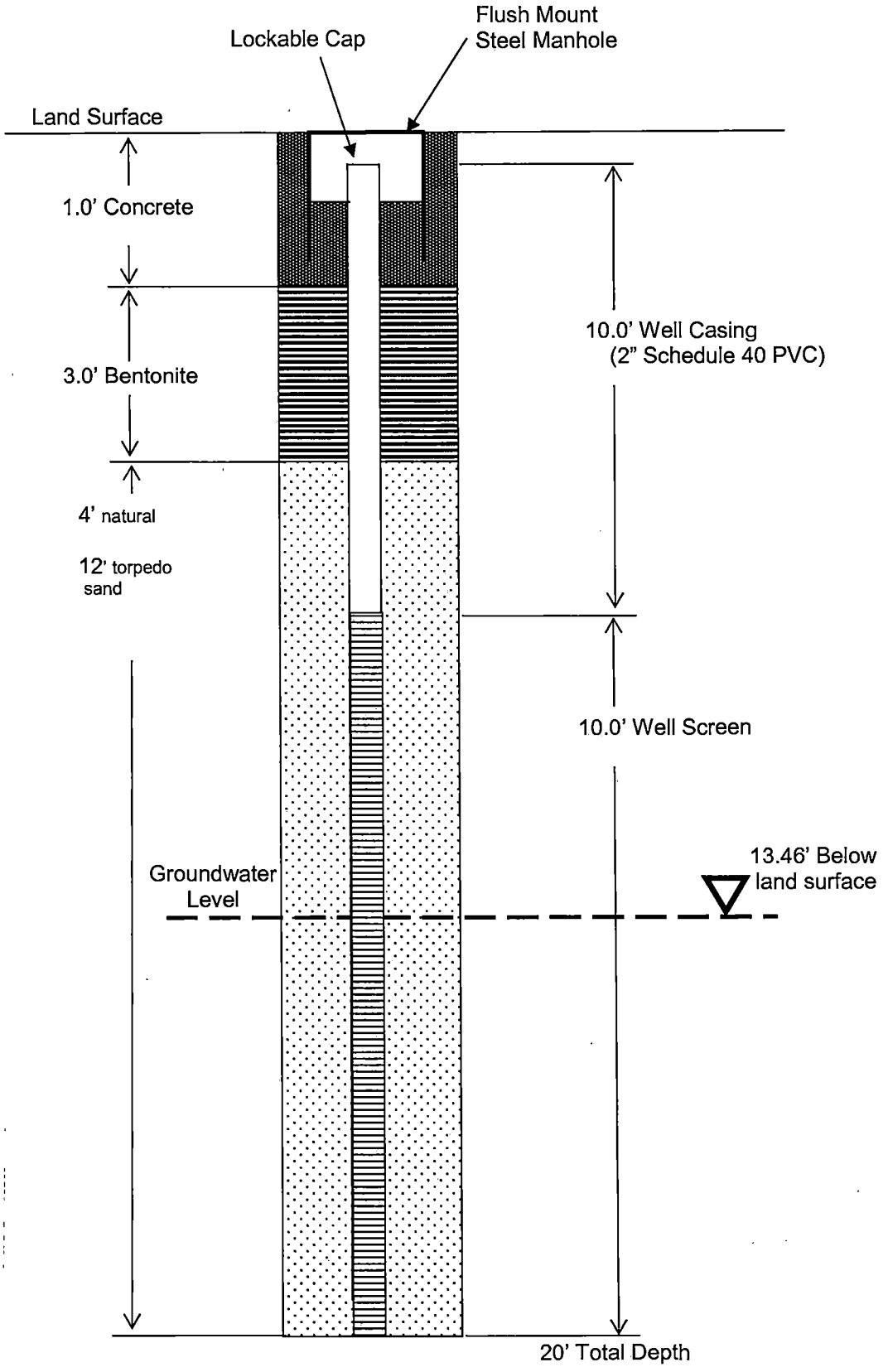


Figure #5 MW-1 Well Construction

Practical Environmental Solutions, P.C.	**Location:** 2137 Jackson Street, Wilmington NC	**Created by:** SGS **Date:** 6/7/12 **Scale:** Not to scale

L. Other Information

Appendix #1 – Tank Disposal Manifest

Appendix #2 – Contaminated Soil Disposal Manifests and Weigh Tickets

Appendix #3 – Standard Procedures for Sampling and for Field Equipment Decontamination

Appendix #4 – Monitoring Well Log

Appendix #5 – Receptor Survey: Returned Survey Forms

Receptor Survey Follow-up Sheet

Appendix #6 – UST Section Correspondence

Appendix #7 – Laboratory Analytical Data and Chain of Custody Sheets
Monitoring Well Water Sample Analytical Results

Tank Disposal Manifest

1) **Property of Origin:** 2137 Jackson Street, Wilmington, NC

2) **Tank size:** 270 gallon

3) **Property Owner:** Diedrienne Fauser
2137 Jackson Street, Wilmington, NC 28401
(phone) (910) 251-4978

4) **Removed by:** Practical Environmental Solutions, P.C. date 2-20-12
Print name: Kirk McDonald Signature

5) **Transported by:** Practical Environmental Solutions, P.C. date 2-21-12
Print name: Scott Stilwell Signature

6) **Received for proper disposal:**

Southern Metals date 2-21-12
Print name: Paul Mershon Signature

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
			800-310-6757	22015

GENERATOR

5. Generator's Name and Mailing Address

2137 Jackson Street
Wilmington, NC

Generator's Phone: 910-790-8765

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name — U.S. EPA ID Number

SOUTHEAST RESPONSE & REMEDIATION, INC — NC0000926618

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

SOUTHEAST RESPONSE & REMEDIATION, NC.
4920 US HWY 421 NORTH
WILMINGTON,NC 28401

Facility's Phone: 800-310-6757

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON-REGULATED WATER & PETROLEUM	1	TRUCK	69	GALS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
Residential UST

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Kirk McDonald — Signature: [signature] — Month 2 Day 20 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Sean Millinor — Signature: [signature] — Month 2 Day 20 Year 12

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Richard Miles — Signature: [signature] — Month 2 Day 20 Year 12

CERTIFICATE OF ACCEPTANCE

FROM: SOIL RECOVERY, INC
P.O. BOX 395
CASTLE HAYNE, NC 28429

RE: 2137 JACKSON STREET, WILMINGTON, NC

TO: PRACTICAL ENVIRONMENTAL SOLUTIONS
P.O. BOX 12590
WILMINGTON, NC 28405

ATTN: KIRK MCDONALD

SOIL RECOVERY, INC. HAS TAKEN FULL OWNERSHIP OF 12.66 TONS OF CONTAMINATED SOIL RECEIVED FROM THE PROPERTY OF DIEDRIENNE FAUSER, LOCATED AT 2137 JACKSON STREET, WILMINGTON, NC. ALL LIABILITY ASSOCIATED WITH TREATMENT AND DISPOSAL OF THE CONTAMINATED SOIL WILL REMAIN WITH SOIL RECOVERY, INC... PRACTICAL ENVIRONMENTAL SOLUTIONS AND DIEDRIENNE FAUSER ARE EXEMPT FROM ANY FURTHER LIABILITY AND/OR RESPONSIBILITY FOR THE 12.66 TONS OF CONTAMINATED SOIL.

SAMUEL E. LONG, JR., PRESIDENT

4-12-12
DATE

WITNESS

4-12-12
DATE

Soil Sampling: Hand Auger

Field Equipment Decontamination:

A stainless steel auger bit is used to collect soil samples.

The hand auger bit is usually cleaned at the office before mobilization to the incident site. On occasion the auger is cleaned at the site according to the same procedure mentioned below.

The auger bit is decontaminated by the following process:

Scrub the auger with a scrub brush in tap water. This scrub brush is dedicated for this phase of auger decontamination. (Remove dirt and debris)

Rinse auger and wash bucket with tap water.

Scrub the auger with a scrub brush using Alconox "Detergent 8" and tap water. This scrub brush is dedicated for this phase of auger decontamination.

Rinse with tap water.

Rinse with Isopropyl Alcohol.

Rinse with tap water

Completely wrap in aluminum foil for transport into the field.

When multiple samples are collected in the field, the auger is decontaminated on site using the same decontamination method described above.

Sampling Procedure:

The "connecting portion" of the auger bit is carefully unwrapped and connected to the auger extension shaft. All of the foil is then removed from the auger bit. The auger is not allowed to touch any object or any ground area other than the location to be augered. The auger is then used to bore to the appropriate depth to collect the soil sample. A full auger bit of soil sample is retrieved from the boring and laid on clean, unused sheet plastic.

The sample is removed from the auger bit with an unused tongue depressor (wooden) or "terra core sampler" and is placed directly into the laboratory sealed sample bottle.

The sample bottle is placed on ice in a cooler and is kept on ice until it is delivered to the laboratory.

Soil Sampling: Geoprobe

Field Equipment Decontamination:

All push rods are steam cleaned before mobilizing to the site.

Soil cores are collected in an unused plastic "micro-core sampler" tube. As the hollow push rod is pushed or hammered through the soil profile, a portion of the soil is allowed to enter the micro-core sampler. After the rod is retrieved from the boring, the micro-core sample tube is removed from the push rod and cut open for observation and sample collection. The micro core sampler is properly disposed of after use. A different micro-core sampler is used for each 5 foot section of soil core that is collected.

Sampling Procedure:

The cut micro-core tube is opened and the sample is removed using an unused tongue depressor (wooden) or a "terra core sampler." The soil sample is placed directly into the laboratory sealed sample bottle. The sample bottle is placed on ice in a cooler and is kept on ice until it is delivered to the laboratory.

Groundwater Sampling:

Monitoring Well Sampling Procedure:

A peristaltic pump is used for sampling monitoring wells. This pump pushes water through the sampling tube in a similar manner to milking a cow.

The benefit to sampling by this method is two fold. Firstly, because a virgin piece of polyethylene is used as a drop tube in the well, no decontamination of sampling equipment is necessary. The pump has no direct contact with the water being pumped out of the well, so pump decontamination is also not necessary. The second benefit to this method of well sampling is that it reduces the potential for a bailer and the bailer string to come in contact with the ground or other object that might compromise the integrity of the sample.

A virgin piece of polyethylene tubing is carefully pulled out of its storage box (wearing latex gloves) and immediately placed down the monitoring well. The bottom of the tubing is placed at the appropriate depth below land surface.

Sampling Procedure:

After pumping the appropriate amount of purge water, sample jars are filled directly from the tubing. All of the tubing is used one time and then properly disposed.

All water sample jars are labeled and immediately placed on ice in a cooler. The samples are kept on ice until delivered to the local laboratory.

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2869-A

1. WELL CONTRACTOR:
Bobbie Fowler
Well Contractor (Individual) Name
Mid-Atlantic Drilling Inc.
Well Contractor Company Name
PO Box 315
Street Address
Carolina Beach NC 28428
City or Town State Zip Code
(910) 458-5020
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) MW-1

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use) _____
DATE DRILLED 5-18-12

4. WELL LOCATION:
2137 Jackson St.
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Wilmington COUNTY N.H.C
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑Slope ☐Valley ☐Flat ☐Ridge ☐Other_____
K[illegible]IST CD 34 [illegible] CL R OR 3[illegible] CC
KNMFIST CD 77 [illegible] CL R OR 7[illegible] CC
Latitude/longitude source: ☐GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Diedrienne Fauser N/A
Facility Name Facility ID# (if applicable)
2137 Jackson Street.
Street Address
Wilmington NC 28401
City or Town State Zip Code
Diedrienne Fauser
Contact Name
606 Hughs Rd.
Mailing Address
Hampstead NC 28443
City or Town State Zip Code
(910) 686-3319
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 20
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
c. WATER LEVEL Below Top of Casing: 13 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0.25 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118
e. YIELD (gpm): _____ METHOD OF TEST_____
f. DISINFECTION: Type_____ Amount _____
g. WATER ZONES (depth):
Top_____ Bottom_____ Top_____ Bottom_____
Top_____ Bottom_____ Top_____ Bottom_____
Top_____ Bottom_____ Top_____ Bottom_____

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0 Bottom 10	Ft.	2"		
Top Bottom	Ft.			
Top Bottom	Ft.			

8. GROUT:

Depth		Material	Method
Top 0 Bottom 1	Ft.	Cement	
Top 1 Bottom 4	Ft.	Bentonite	
Top Bottom	Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 10 Bottom 20	Ft.	2 in.	in.	
Top Bottom	Ft.	in.	in.	
Top Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 4 Bottom 8	Ft.		Natural
Top 8 Bottom 20	Ft.		Sand
Top Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	9.5	Backfill Material
9.5	12.0	White Poorly Sorted Sand
12.0	13.5	Brown Fine Sand
13.5	20.0	Dark Brown Fine Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Bobbie Fowler 5-18-12
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Bobbie Fowler
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 1/08

Figure 18

"Neighboring" Water Supply Well Information Survey

(This line to be completed by Responsible Party or their representative)

Incident Number: 32758 **Incident Name & Address: 2137 Jackson Street, Wilmington, NC**

Please Provide the Following Information (to the best of your knowledge)

Name and telephone number of person completing the survey: Carolyn L. Parker

Required — **Address of property receiving survey:** 2141 Jackson St. — Required

City Wilmington County New Hanover 28405

What is the source of your drinking water? **Public Water / Water Supply Well / Stream Intake / Other (please explain below)**

Is there a water supply well on this property? **(Yes) / No** If "No" disregard remaining questions and return survey

Name and address of owner(s) of property with water supply well

Carolyn L. Parker Phone: 910-763-3954

2801 Wilmot St. Wilmington, N.C. 28405

How many water supply wells are on your property? 1

What is the well(s) used for? (check all that apply) **Drinking ____, Irrigation** ✓ **, Swimming Pool ____, Water Livestock ____, Other (specify) ____, You do not use the Well ____.**

How many residences are connected to the well (list addresses below)?

2141 Jackson St.

How deep is the well(s)? ? Date well was installed? Before 2005

What is the casing depth of the well(s)? ?

What is the screen interval of the well(s)? ?

Additional water supply well information:

The well is for watering the lawn only.

(This line to be completed by Responsible Party or their representative)

Please return completed survey to Practical Environmental Solutions **by 7/19/12** using one of the following methods:

1. Fax to 1-866-411-8265
2. Mail to P.O. Box 12590 Wilmington, NC 28405
3. Telephone 910-790-8265
4. E-mail to PES@oil-tank.com

If you have any questions, please contact the consultant indicated above or the UST Section Wilmington Office at (910) 796-7215

Figure 18

"Neighboring" Water Supply Well Information Survey

(This line to be completed by Responsible Party or their representative)

Incident Number: 32758 Incident Name & Address: 2137 Jackson Street, Wilmington, NC

Please Provide the Following Information (to the best of your knowledge)

Name and telephone number of person completing the survey: SCOTT STILWELL-PES

Required

Address of property receiving survey: 2137 Jackson St. Required

City Wilmington County New Hanover

What is the source of your drinking water? **Public Water / Water Supply Well / Stream Intake / Other (please explain below)**

Is there a water supply well on this property? **Yes / No** If "No" disregard remaining questions and return survey

Name and address of owner(s) of property with water supply well

How many water supply wells are on your property?

What is the well(s) used for? (check all that apply) **Drinking _____, Irrigation _____, Swimming Pool _____, Water Livestock _____, Other (specify) _____, You do not use the Well _____.**

How many residences are connected to the well (list addresses below)?

How deep is the well(s)? Date well was installed?

What is the casing depth of the well(s)?

What is the screen interval of the well(s)?

Additional water supply well information:

Scott Stilwell spoke to Nathan Fauser (occupant) of the incident property on 7/25/12. He confirmed there is a well at the property. He does not use it and thinks it is not in service.

(This line to be completed by Responsible Party or their representative)

Please return completed survey to Practical Environmental Solutions **by 7/19/12** using one of the following methods:

1. Fax to 1-866-411-8265
2. Mail to P.O. Box 12590 Wilmington, NC 28405
3. Telephone 910-790-8265
4. E-mail to PES@oil-tank.com

If you have any questions, please contact the consultant indicated above or the UST Section Wilmington Office at (910) 796-7215

Figure 18

"Neighboring" Water Supply Well Information Survey

(This line to be completed by Responsible Party or their representative)

Incident Number: 32758 **Incident Name & Address: 2137 Jackson Street, Wilmington, NC**

Please Provide the Following Information (to the best of your knowledge)

Name and telephone number of person completing the survey: SCOTT STILWELL-PES

Required

Address of property receiving survey: 2125 Jackson St. Required

City Wilmington County New Hanover

What is the source of your drinking water? **Public Water / Water Supply Well / Stream Intake / Other (please explain below)**

Is there a water supply well on this property? **Yes / No** If "No" disregard remaining questions and return survey

Name and address of owner(s) of property with water supply well

How many water supply wells are on your property?

What is the well(s) used for? (check all that apply) **Drinking _____, Irrigation _____, Swimming Pool _____, Water Livestock _____, Other (specify) _____, You do not use the Well _____.**

How many residences are connected to the well (list addresses below)?

How deep is the well(s)? Date well was installed?

What is the casing depth of the well(s)?

What is the screen interval of the well(s)?

Additional water supply well information:

A sprinkler was observed during the delivery of the receptor survey. Scott Stilwell spoke to a Ms. Rowan on. 7/25/12. The property owner, Ms. Rowan confirmed there is a well at the property which is used for watering the lawn only. Ms. Rowan's property is located within 250 ft, of the tank location.

(This line to be completed by Responsible Party or their representative)

Please return completed survey to Practical Environmental Solutions **by 7/19/12** using one of the following methods:

1. Fax to 1-866-411-8265
2. Mail to P.O. Box 12590 Wilmington, NC 28405
3. Telephone 910-790-8265
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If you have any questions, please contact the consultant indicated above or the UST Section Wilmington Office at (910) 796-7215

Figure 18

"Neighboring" Water Supply Well Information Survey

(This line to be completed by Responsible Party or their representative)

Incident Number: 32758 Incident Name & Address: 2137 Jackson Street, Wilmington, NC

Please Provide the Following Information (to the best of your knowledge)

Name and telephone number of person completing the survey: SCOTT STILWELL-PES

Required

Address of property receiving survey: 2133 Jackson St.

Required

City Wilmington County New Hanover

What is the source of your drinking water? **Public Water / Water Supply Well / Stream Intake / Other (please explain below)**

Is there a water supply well on this property? **Yes / No** If "No" disregard remaining questions and return survey

Name and address of owner(s) of property with water supply well

How many water supply wells are on your property?

What is the well(s) used for? (check all that apply) **Drinking _____, Irrigation _____, Swimming Pool _____, Water Livestock _____, Other (specify) _____, You do not use the Well _____.**

How many residences are connected to the well (list addresses below)?

How deep is the well(s)? Date well was installed?

What is the casing depth of the well(s)?

What is the screen interval of the well(s)?

Additional water supply well information:

Scott Stilwell spoke to the occupant at the property of 2133 Jackson street on 7/6/12. The renter stated there is a well at the property. However, the well is closed and cannot be used. The occupant stated they would like to use it but cannot. This property is adjacent to the incident site.

(This line to be completed by Responsible Party or their representative)

Please return completed survey to Practical Environmental Solutions **by 7/19/12** using one of the following methods:

1. Fax to 1-866-411-8265
2. Mail to P.O. Box 12590 Wilmington, NC 28405
3. Telephone 910-790-8265
4. E-mail to PES@oil-tank.com

If you have any questions, please contact the consultant indicated above or the UST Section Wilmington Office at (910) 796-7215

Figure 18

"Neighboring" Water Supply Well Information Survey

(This line to be completed by Responsible Party or their representative)

Incident Number: 32758 Incident Name & Address: 2137 Jackson Street, Wilmington, NC

Please Provide the Following Information (to the best of your knowledge)

Name and telephone number of person completing the survey: SCOTT STILWELL-PES

Required

Address of property receiving survey: 2121Monroe St. Required

City Wilmington County New Hanover

What is the source of your drinking water? **Public Water / Water Supply Well / Stream Intake / Other (please explain below)**

Is there a water supply well on this property? **Yes / No** If "No" disregard remaining questions and return survey

Name and address of owner(s) of property with water supply well

How many water supply wells are on your property?

What is the well(s) used for? (check all that apply) **Drinking _____, Irrigation _____, Swimming Pool _____, Water Livestock _____, Other (specify) _____, You do not use the Well _____.**

How many residences are connected to the well (list addresses below)?

How deep is the well(s)? Date well was installed?

What is the casing depth of the well(s)?

What is the screen interval of the well(s)?

Additional water supply well information:

Mrs. Prince called into our office in July after receiving the receptor survey. She confirmed there is a well at her property at 2121 Monroe Street. This property is located outside the 250ft. radius of the former tank location.

(This line to be completed by Responsible Party or their representative)

Please return completed survey to Practical Environmental Solutions **by 7/19/12** using one of the following methods:

1. Fax to 1-866-411-8265
2. Mail to P.O. Box 12590 Wilmington, NC 28405
3. Telephone 910-790-8265
4. E-mail to PES@oil-tank.com

If you have any questions, please contact the consultant indicated above or the UST Section Wilmington Office at (910) 796-7215

Practical Environmental Solutions, P.C.

Specializing in Residential Heating Oil Tank Removal, Contamination Assessment, Cleanup, and Trust Fund Reimbursement

FAX Cover Sheet: **Date: 3/5/12** **Number of Pages: 4 5**

To: **UST Section - Wilmington**
Michele Croot

FAX #: **350-2004**

From: Kirk McDonald
Practical Environmental Solutions, P.C.
(910) 790-8265 ext. 101

Subject: **Jackson Street - 2137, Wilmington NC**

Comments:

Please see the attached 24 Hour Reporting Form for the subject property.

PES has a Health and Safety Plan in place for this project and will submit a copy to you shortly.

Thank you.

This FAX is only intended for the recipient named above. If this FAX is received by error, please call Practical Environmental Solutions, P.C. at (910) 790-8265.

P.O. Box 12590, Wilmington, NC 28405
FAX: 1-866-411-8265 (toll free) Office: (910) 790-8265
email: pes@oil-tank.com web site: www.oil-tank.com

UST-61 | 24-Hour Release and UST Leak Reporting Form

For Releases in NC

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release

(DWM USE ONLY)
Incident # _____ Risk (H,I,L,U)_____
Received On _____ Received By _____
Reported by (*circle one*): Phone, Fax or Report
Region _____

Suspected Contamination? (Y/N) _____
Confirmed GW Contamination? (Y/N) _____
Confirmed Soil Contamination ?(Y/N) yes
Samples Taken?(Y/N) yes
Free Product? (Y/N) _____ If Yes, State Greatest Thickness _____

Facility ID Number na
Date Leak Discovered 3-5-12
Comm/(Non-Commercial)? _____
Reg/(Non-regulated)? _____

INCIDENT DESCRIPTION

Incident Name: Jackson Street - 2137

Address: 2137 Jackson Street | County: New Hanover

City/Town: Wilmington NC | Zip Code: 28401 | Regional Office (*circle one*): Asheville, Mooresville, Fayetteville, Raleigh, Washington, (Wilmington), Winston-Salem

Latitude (decimal degrees): | Longitude (decimal degrees) :

Obtained by:
- ☐ GPS
- ☐ Topographic map
- ☐ GIS Address matching
- ☑ Other
- ☐ Unknown

Describe location: Residential Property

Briefly describe suspected or confirmed release: *(including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)*

A soil sample was taken during tank removal. Results from that sample show that contamination levels are above the State's action level of 10 parts per million. We will return to the site to conduct the required soil clean up.

HOW RELEASE WAS DISCOVERED (Release Code)

(Check one)

- ☐ Release Detection Equipment or Methods
- ☑ During UST Closure/Removal
- ☐ Property Transfer
- ☐ Visual/Odor
- ☐ Water in Tank
- ☐ Water Supply Well Contamination
- ☐ Groundwater Contamination
- ☐ Surface Water Contamination
- ☐ Other (specify) _____

SOURCE OF CONTAMINATION

Source of Release *(Check one to indicate primary source)*
- ☑ Tank
- ☐ Piping
- ☐ Dispenser
- ☐ Submersible Turbine Pump
- ☐ Delivery Problem
- ☐ Other
- ☐ Unknown

Definitions presented on reverse

Cause of Release *(Check one to indicate primary cause)*
- ☐ Spill
- ☐ Overfill
- ☐ Corrosion
- ☐ Physical or Mechanical Damage
- ☐ Install Problem
- ☐ Other
- ☐ Unknown

Definitions presented on reverse

Type of Release *(Check one)*
- ☑ Petroleum
- ☐ Non-Petroleum
- ☐ Both

Location *(Check one)*
- ☐ Facility
- ☑ Residence
- ☐ Other

Product Type Released *(Check one to indicate primary product type released)*
- ☐ Gasoline/ Diesel/ Kerosene
- ☑ Heating Oil
- ☐ Other Petroleum Products
- ☐ Metals
- ☐ Other Inorganics
- ☐ Other Organics
- ☐ Diesel/Veg. Oil Blend
- ☐ Vegetable Oil 100%
- ☐ E10 – E20
- ☐ E21 – E84
- ☐ E85 – E99
- ☐ Ethanol 100%
- ☐ E01 – E09

Ownership
1. Municipal 2. Military 3. Unknown 4. (Private) 5. Federal 6. County 7. State

Operation Type
1. Public Service 2. Agricultural 3. (Residential) 4. Education/Relig. 5. Industrial 6. Commercial 7. Mining

IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected? 1. Yes 2. No 3. Unknown

Number of Water Supply Wells Affected _____

Water Supply Wells Contaminated: (*Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary*)

1.
2.
3.

UST SYSTEM OWNER

UST Owner/Company			
Diedienne Fauser			
Point of Contact		Address	
		606 Hughes Road	
City	State	Zip Code	Telephone Number
Hampstead	NC	28443	910-686-3319

UST SYSTEM OPERATOR

UST Operator/Company		Address	
unknown			
City	State	Zip Code	Telephone Number

LANDOWNER AT LOCATION OF UST INCIDENT

Landowner		Address	
Diedienne Fauser		as above	
City	State	Zip Code	Telephone Number

Draw Sketch of Area (showing two major road intersections) or Attach Map

See Attached

2

Person Reporting Incident	Company	Telephone Number
Kirk McDonald	Practical Environmental Solutions	910-790-8265
Title	**Address**	**Date**
Project Manager	P.O. Box 12590 Wilmington NC 28405	3-5-12

Definitions of Sources

Tank: means the tank that stores the product and is part of the underground storage tank system

Piping: means the piping and connectors running from the tank or submersible turbine pump to the dispenser or other end-use equipment (Vent, vapor recovery, or fill lines are excluded.)

Dispenser: includes the dispenser and the equipment used to connect the dispenser to the piping (e.g., a release from a suction pump or from components located above the shear valve)

Submersible Turbine Pump (STP) Area includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the tank

Delivery Problem: identifies releases that occurred during product delivery to the tank. (Typical causes associated with this source are spills and overfills.)

Other: serves as the option to use when the release source is known but does not fit into one of the preceding categories (e.g., for releases from vent lines, vapor recovery lines, and fill lines)

Unknown: identifies releases for which the source has not been determined

Definitions of Causes

Spill: use this cause when a spill occurs (e.g., when the delivery hose is disconnected from the tank fill pipe or when the nozzle is removed from the dispenser)

Overfill: use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)

Physical or Mechanical Damage: use for all types of physical or mechanical damage, except corrosion (e.g., puncture of tank or piping, loose fittings, broken components, and components that have changed dimension)

Corrosion: use when a metal tank, piping, or other component has a release due to corrosion (e.g., for steel, corrosion takes the form of rust)

Installation Problem: use when the problem is determined to have occurred specifically because the UST system was not installed properly

Other: use this option when the cause is known but does not fit into one of the preceding categories (e.g., putting regulated substances into monitoring wells)

Unknown: use when the cause has not been determined

Google Maps Latitude, Longitude Popup

Simply click on the map on a location and it will provide you with the latitude and longitude in the callout window.



Address lookup has been removed because it violated the ToS of Google Maps.

*** Coordinates:**

* Lat: 34.199258

* Lon: -77.945077

Set

*** Flickr tags:**

```
geotagged geo:lat=34.199258
geo:lon=-77.945077
```

*** RoboGEO tags:**

```
34.199258;-77.945077
```

* Show location on Multimap

* Permanent Link

GPS Fleet Tracking
Reduce Fleet Costs, Increase Profit See It Work Now - Free Live Demo!
www.FleetMatics.com/Fleet-Tracking
AdChoices

Based on code taken from this website and this website.
All other errors are caused by code written by Pierre Gorissen.

Environmental Chemists, Inc.

6602 Windmill Way • Wilmington, NC 28405
(910) 392-0223 (Lab) • (910) 392-4424 (Fax)
710 Bowsertown Road • Manteo, NC 27954
(252) 473-5702

ANALYTICAL & CONSULTING CHEMISTS

NCDENR: DWQ CERTIFICATE #94. DLS CERTIFICATE #37729

Practical Environmental Solutions, Inc.
Post Office Box 12590
Wilmington NC 28405
Attention: Kirk McDonald

Date of Report: Feb 28, 2012
Customer PO #:
Report #: 2012-01773
Report to: Kirk McDonald
Project ID: Jackson Street - 2137

Lab ID	Sample ID: JS-Closure	Collect Date/Time	Matrix	Sampled by
12-04395	Site:	2/20/2012 10:50 AM	Solid/Sludge	Client

Test	Method	Results	Date Analyzed
Total Solids (%)	SM 2540 B	89.2 %	02/20/2012
DRO	SW846 Method 8015C	13500 mg/kg	02/21/2012
GRO	SW846 Method 8015C	169 E mg/kg	02/22/2012

Quantitation estimated due to matrix interference. Chromatogram not consistent with gasoline, more consistent with higher weight fuel.

Comment: Results reported on a dry weight basis.

Reviewed by: Mariola Olejarz / Amy Hunt

* * * Communication Result Report (Mar. 5. 2012 5:23PM) * * *

1)
2)

Date/Time: Mar. 5. 2012 5:21PM

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
2618	Memory TX	3502004	P. 5	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection
E. 5) Exceeded max. E-mail size

Practical Environmental Solutions, P.C.

Specializing in Residential Heating Oil Tank Removal, Contamination Assessment, Cleanup, and Trust Fund Reimbursement

FAX Cover Sheet: Date: 3/5/12 Number of Pages: 4 S

To: UST Section - Wilmington
Michele Croot

FAX #: 350-2004

From: Kirk McDonald
Practical Environmental Solutions, P.C.
(910) 790-8265 ext. 101

Subject: Jackson Street - 2137, Wilmington NC

Comments:

Please see the attached 24 Hour Reporting Form for the subject property.

PES has a Health and Safety Plan in place for this project and will submit a copy to you shortly.

Thank you.

This FAX is only intended for the recipient named above. If this FAX is received by error, please call Practical Environmental Solutions, P.C. at (910) 790-8265.

P.O. Box 12590, Wilmington, NC 28405
FAX: 1-866-411-8265 (toll free) Office: (910) 790-8265
email: pes@oil-tank.com web site: www.oil-tank.com

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Division of Waste Management
UST Section

Dee Freeman, Secretary
Dexter R. Matthews, Director

April 23, 2012

Diedrienne Fauser
606 Hughes Road
Hampstead, NC 28443

Re: Notice of Regulatory Requirements
15A NCAC 2L .0405
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks

2137 Jackson St, Wilmington
New Hanover County
Incident number:32758
Risk Classification: Pending
Ranking: Pending

Dear Ms. Fauser:

The Initial Abatement Action Report received by the UST Section, Wilmington Regional Office on April 20, 2012 has been reviewed. The report indicates that soil contamination exceeds the soil-to-groundwater maximum soil contaminant concentrations (MSCCs) established in Title 15A NCAC 2L.0411. Therefore, the UST Section hereby confirms that you must comply with assessment and reporting requirements of Title 15A NCAC 2L .0405, within the timeframes specified in the attached rule.

The requirements of Title 15A NCAC 2L .0405 include the preparation and submittal of a Limited Site Assessment (LSA) Report, in accordance with the rule and the most recent version of the *Guidelines for Assessment and Corrective Action for UST Releases*, within 120 days of discovery of the release.

Because a release or discharge has been confirmed, a Licensed Geologist or a Professional Engineer, certified by the State of North Carolina, is required to prepare and certify all reports submitted to the Department in accordance with Title 15A NCAC 2L .0103(e) and 2L .0111(b).

Please note that before you sell, transfer, or request a "No Further Action" determination for a property that has not been remediated to below "unrestricted use" standards, you must file a Notice of Residual Petroleum ("Notice") with the Register of Deeds in the county where the property is located (NCGS 143B-279.9 and 143B-279.11).

Failure to comply with the State's rules in the manner and time specified may result in the assessment of civil penalties and/or the use of other enforcement mechanisms.

If you have any questions regarding trust fund eligibility or reimbursement from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds, please contact the

envirochem
ANALYTICAL & CONSULTING CHEMISTS

Environmental Chemists, Inc.

6602 Windmill Way • Wilmington, NC 28405
(910) 392-0223 (Lab) • (910) 392-4424 (Fax)
710 Bowsertown Road • Manteo, NC 27954
(252) 473-5702
NCDENR: DWQ CERTIFICATE #94. DLS CERTIFICATE #37729

Practical Environmental Solutions, Inc.
Post Office Box 12590
Wilmington NC 28405
Attention: Kirk McDonald

Date of Report: Jun 27, 2012
Customer PO #:
Report #: 2012-06073
Report to: Kirk McDonald
Project ID: Jackson Street - 2137

Lab ID	Sample ID: JS-Water	Collect Date/Time	Matrix	Sampled by
12-14810	Site:	6/7/2012 12:20 PM	Water	Scott Stilwell

Test	Method	Results	Date Analyzed
1,2-Dichlorobenzene	EPA 602	<0.5 µg/L	06/13/2012
1,3-Dichlorobenzene	EPA 602	<0.5 µg/L	06/13/2012
1,4-Dichlorobenzene	EPA 602	<0.5 µg/L	06/13/2012
Benzene	EPA 602	<0.5 µg/L	06/13/2012
Chlorobenzene	EPA 602	<0.5 µg/L	06/13/2012
Ethylbenzene	EPA 602	<0.5 µg/L	06/13/2012
Toluene	EPA 602	<0.5 µg/L	06/13/2012
2,4,6-Trichlorophenol	EPA 625	<5 µg/L	06/11/2012
2,4-Dichlorophenol	EPA 625	<5 µg/L	06/11/2012
2,4-Dimethylphenol	EPA 625	<5 µg/L	06/11/2012
2,4-Dinitrophenol	EPA 625	<25 µg/L	06/11/2012
2-Chlorophenol	EPA 625	<5 µg/L	06/11/2012
2-Methyl-4,6-dinitrophenol	EPA 625	<25 µg/L	06/11/2012
2-Nitrophenol	EPA 625	<25 µg/L	06/11/2012
4-Chloro-3-methylphenol	EPA 625	<5 µg/L	06/11/2012
4-Nitrophenol	EPA 625	<25 µg/L	06/11/2012
Pentachlorophenol	EPA 625	<25 µg/L	06/11/2012
Phenol	EPA 625	<5 µg/L	06/11/2012
1,2 Diphenylhydrazine	EPA 625	<5 µg/L	06/11/2012
1,2,4-Trichlorobenzene	EPA 625	<5 µg/L	06/11/2012
1,2-Dichlorobenzene	EPA 625	<5 µg/L	06/11/2012
1,3-Dichlorobenzene	EPA 625	<5 µg/L	06/11/2012
1,4-Dichlorobenzene	EPA 625	<5 µg/L	06/11/2012
1-Methylnaphthalene	EPA 625	<5 µg/L	06/11/2012
2,4-Dinitrotoluene	EPA 625	<5 µg/L	06/11/2012
2,6-Dinitrotoluene	EPA 625	<5 µg/L	06/11/2012

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Practical Environmental Solutions, Inc.
Post Office Box 12590
Wilmington NC 28405
Attention: Kirk McDonald

Date of Report: Jun 27, 2012
Customer PO #:
Report #: 2012-06073
Report to: Kirk McDonald
Project ID: Jackson Street - 2137

2-Chloronaphthalene	EPA 625	<5 µg/L	06/11/2012
2-Methylnaphthalene	EPA 625	<5 µg/L	06/11/2012
3,3'-Dichlorobenzidine	EPA 625	<10 µg/L	06/11/2012
4-Bromophenyl phenyl ether	EPA 625	<5 µg/L	06/11/2012
4-Chlorophenyl phenyl ether	EPA 625	<5 µg/L	06/11/2012
Acenaphthene	EPA 625	<5 µg/L	06/11/2012
Acenaphthylene	EPA 625	<5 µg/L	06/11/2012
Anthracene	EPA 625	<5 µg/L	06/11/2012
Benzidine	EPA 625	<10 µg/L	06/11/2012
Benzo [a]pyrene	EPA 625	<5 µg/L	06/11/2012
Benzo(a)anthracene	EPA 625	<5 µg/L	06/11/2012
Benzo(b)fluoroanthene	EPA 625	<5 µg/L	06/11/2012
Benzo(g,h,i)perylene	EPA 625	<5 µg/L	06/11/2012
Benzo(k)fluoranthene	EPA 625	<5 µg/L	06/11/2012
Bis (chloromethyl) ether	EPA 625	<5 µg/L	06/11/2012
Bis(2-Chloroethoxy)methane	EPA 625	<5 µg/L	06/11/2012
Bis(2-Chloroethyl)ether	EPA 625	<5 µg/L	06/11/2012
Bis(2-Chloroisopropyl)ether	EPA 625	<5 µg/L	06/11/2012
Bis(2-ethylhexyl)phthalate	EPA 625	9.72 µg/L	06/11/2012
Butylbenzylphthalate	EPA 625	<5 µg/L	06/11/2012
Chrysene	EPA 625	<5 µg/L	06/11/2012
Dibenzo(a,h)anthracene	EPA 625	<5 µg/L	06/11/2012
Diethylphthalate	EPA 625	<5 µg/L	06/11/2012
Dimethylphthalate	EPA 625	<5 µg/L	06/11/2012
Di-n-Butylphthalate	EPA 625	<5 µg/L	06/11/2012
Di-n-Octylphthalate	EPA 625	<5 µg/L	06/11/2012
Fluoranthene	EPA 625	<5 µg/L	06/11/2012
Fluorene	EPA 625	<5 µg/L	06/11/2012
Hexachlorobenzene	EPA 625	<5 µg/L	06/11/2012
Hexachlorobutadiene	EPA 625	<5 µg/L	06/11/2012

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NCDENR: DWQ CERTIFICATE #94. DLS CERTIFICATE #37729

Practical Environmental Solutions, Inc.
Post Office Box 12590
Wilmington NC 28405
Attention: Kirk McDonald

Date of Report: Jun 27, 2012
Customer PO #:
Report #: 2012-06073
Report to: Kirk McDonald
Project ID: Jackson Street - 2137

Hexachlorocyclopentadiene	EPA 625	<25 µg/L	06/11/2012
Hexachloroethane	EPA 625	<5 µg/L	06/11/2012
Indeno(1,2,3-cd)pyrene	EPA 625	<5 µg/L	06/11/2012
Isophorone	EPA 625	<5 µg/L	06/11/2012
Naphthalene	EPA 625	<5 µg/L	06/11/2012
Nitrobenzene	EPA 625	<5 µg/L	06/11/2012
N-nitroso-dimethylamine(NDMA)	EPA 625	<5 µg/L	06/11/2012
N-Nitroso-di-n-propylamine	EPA 625	<5 µg/L	06/11/2012
N-Nitroso-diphenylamine	EPA 625	<5 µg/L	06/11/2012
Phenanthrene	EPA 625	<5 µg/L	06/11/2012
Pyrene	EPA 625	<5 µg/L	06/11/2012

Comment:
Reviewed by: Jim Price / [signature]

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name _ Practical Environmental Solutions, INC.
Project Name _ Jackson Street - 2137
Site Location _____

Laboratory Name _____ Environmental Chemists, Inc.
NC Certification # (Lab) _____ 94
Sample Matrix _____ Water
Report # 2012-06073

Sample Information and Analytical Results

Method for Ranges: MADEP VPH		**Sample Identification**						
					# 12-14810			
		Collection Option (for soil)*			N/A			
VPH Surrogate Standards		**Date Collected**			6/7/2012			
Aliphatic: 2,5-Dibromotoluene		**Date Received**			6/7/2012			
Aromatic: 2,5-Dibromotoluene		**Date Extracted**			N/A			
		Date Analyzed			6/18/2012			
		% Dry Solids			N/A			
		Dilution Factor			1			
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C5 - C8 Aliphatics**	**µg/L**	0.351	3	<3	<3			
C9 - C12 Aliphatics**	**µg/L**	0.201	2	<2	<2			
C9 - C10 Aromatics**	**µg/L**	0.231	1	<1	<1			
Sample Surrogate Acceptance Range				**70-130%**	**70-130%**			
Aliphatic Surrogate % Recovery - FID				112	119			
Aromatic Surrogate % Recovery - PID				110	125			

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil

** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit Blank = ***Laboratory Method Blank*** or Trip Blank whichever is higher (indicate type)

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? YES / NO — **No - Details Attached**

Were any significant modifications to the VPH method made? YES / NO — **Yes - Details Attached**

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name _ Practical Environmental Solutions, Inc.
Project Name _ Jackson Street - 2137
Site Location _____

Laboratory Name _____ Environmental Chemists, Inc.
NC Certification # (Lab) ____ 94
Sample Matrix _____ Water
Report No. 12-06073

Sample Information and Analytical Results

						JS-Water				
Method for Ranges: MADEP EPH			**Sample Identification**			12-14810				
EPH Surrogate Standards			**Date Collected**			6/7/2012				
0	Chlorooctadecane		**Date Received**			6/7/2012				
Aromatic:	ortho-Terephenyl		**Date Extracted**			6/13/2012				
EPH Fractionation Surrogates			**Date Analyzed**			6/15/2012				
#1:	2-Fluorobiphenyl		**% Dry Solids**			n/a				
#2:	2-Bromonapthalene		**Dilution Factor**			1				
Hydrocarbon Ranges	**Units of Measure**		**MDL**	**RL**	**Blank**					
C9 - C18 Aliphatics*	µg/L		3.62	12	<24	<24				
C19 - C36 Aliphatics*	µg/L		1.23	16	<32	<32				
C11 - C22 Aromatics*	µg/L		1.37	34	<34	<34				
Sample Surrogate Acceptance Range					**40-140%**	**40-140 %**				
Aliphatic Surrogate % Recovery					77	52				
Aromatic Surrogate % Recovery					105	66				
Fractionation Surrogate Acceptance Range					**40-140%**	**40-140%**				
Fractionation Surrogate #1 % Recovery 2FBP					87	94				
Fractionation Surrogate #2 % Recovery 2BN					102	110				
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.										
MDL = Method Detection Limit	RL = Reporting Limit		Blank = Laboratory Method Blank							

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **YES** / No - Details Attached

Was blank correction applied as a significant modification of the method ? YES / **NO**

Were any significant modifications to the EPH method made? **NO** / Yes - Details Attached

LIBRARY SEARCH REPORT

SAMPLE ID : 12-14810

Report #: 12-06073

ANALYSIS DATE: 6/12/2012 MATRIX: AQUEOUS

NUMBER	RT	CAS NUMBER	COMPOUND NAME	RESULTS (ug/L)	PURITY FIT
1	4.81	79-34-5	1,1,2,2-Tetrachloroethane	1.47	920
2	5.51	39638-67-0	cis-3-Methyl-4-octanolide	1.49	811
3	10.25	119-61-9	Benzophenone	1.0	922
4	10.79	none	Unknown Organic Acid	7.84	943
5	11.51	1454-85-9	1-Heptadecanol	2.42	833
6	11.89	none	Unknown Phthalic acid ester	2.67	839
7	12.51	6971-40-0	17-Pentatriacontene	7.42	833
8	13.80	103-23-1	Di(2-ethylhexyl)adipate	31.8	865
9	14.40	20600-49-1	Benzothiazole, 2-(o-aminophenyl)-4-methyl-	15.9	853

ISTD Conc. (ug/L)	20
dilution factor	1
init. Volume (L)	1

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatograph. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of the nearest internal standard. Quantitation provided is an estimate.

envirochem
Analytical & Consulting Chemists

ENVIRONMENTAL CHEMISTS, INC

NCDENR: DWQ Certification # 94 NCDHHS: DLS Certification # 37729
Sample Collection and Chain of Custody

6602 Windmill Way
Wilmington, NC 28405
(910) 392-0223
(910) 392-4424

CLIENT: Practical Environmental Solutions ^Trust Fund* Project: Jackson Streeet 2137

COLLECTED BY:Scott Stilwell REPORT NO: MD1108 12-06073

SAMPLE TYPE: I = Influent, E = Effluent, W = Well, ST = Stream, SO = Soil, SL = Sludge, Other:

Sample Identification	Collection			Sample Type	Composite or Grab	Container (P or G)	Chlorine mg/L	LAB ID NUMBER	PRESERVATION							ANALYSIS REQUESTED
	Date	Time	Temp						NONE	HCL	H2SO4	HNO3	NAOH	THIO	OTHER	
JS-water	6-7			W	Grab	G		14810		✓						602
"		12:20		W	Grab	G				✓						VPH
"				W	Grab	G				✓						EPH
"				W	Grab	G										625 + 10 Peaks

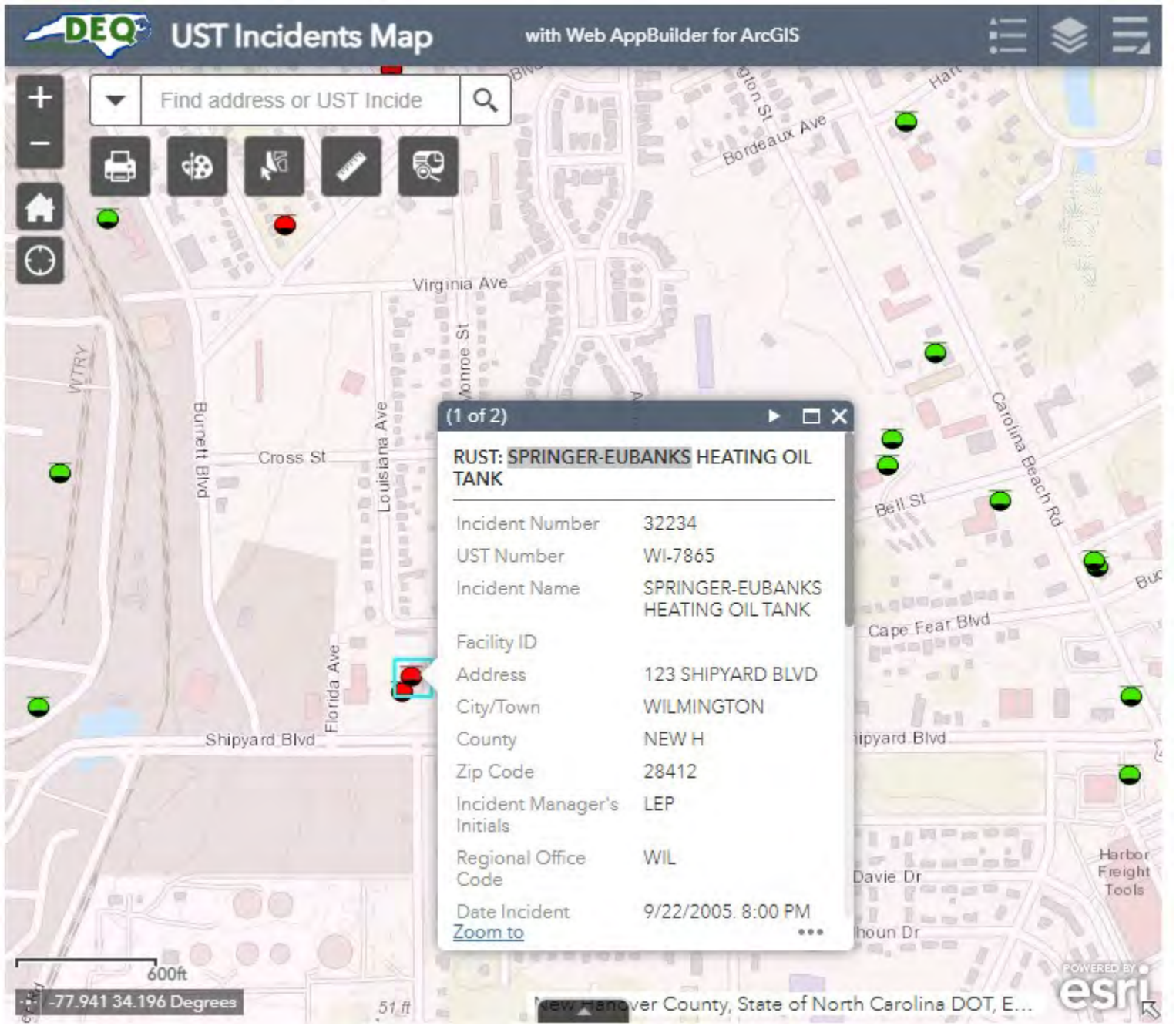
NOTICE - DECHLORINATION: Samples for Ammonia, TKN, Cyanide, Phenol and Bacteria must be dechlorinated (0.2 ppm or less) in the field at the time of collection. See reverse for instructions

Transfer	Relinquished By:	Date/Time	Received By:	Date/Time
1. Scott Stilwell	Scott Stilwell/Kirk McDonald	6-7 1455		
2.				

Temperature when Received: _____ Accepted: _____ Rejected: _____ Resample Requested: _____

Delivered By: _____ Received By: _____ Date: 6/7/12 Time: 210

Comments: _____


DEQ
UST Incidents Map
with Web AppBuilder for ArcGIS
Find address or UST Incide
Virginia Ave
Monroe St
Louisiana Ave
Burnett Blvd
Cross St
Florida Ave
Shipyard Blvd
Bordeaux Ave
Carolina Beach Rd
Bell St
Cape Fear Blvd
Davie Dr
Harbor Freight Tools
(1 of 2)
RUST: SPRINGER-EUBANKS HEATING OIL TANK
Incident Number 32234
UST Number WI-7865
Incident Name SPRINGER-EUBANKS HEATING OIL TANK
Facility ID
Address 123 SHIPYARD BLVD
City/Town WILMINGTON
County NEW H
Zip Code 28412
Incident Manager's Initials LEP
Regional Office Code WIL
Date Incident 9/22/2005. 8:00 PM
Zoom to
600ft
-77.941 34.196 Degrees
New Hanover County, State of North Carolina DOT, E...
POWERED BY esri

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

October 21, 2021

ATC Associates of North Carolina, P.C.

609A Piner Road
Suite 115
Wilmington, NC 28409
USA

Phone: +1 919 871 0999
Fax: +1 737 207 8261

www.atcgs.com

Mrs. Liz Price
North Carolina Department of Environmental Quality
Division of Waste Management - UST Section
Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, North Carolina 28405-3845

Subject: Groundwater Monitoring Report
Springer Eubank Bulk Plant
123 Shipyard Boulevard
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No. 32234

Dear Mrs. Price:

ATC Associates of North Carolina, P.C. (ATC), on behalf of Springer Eubank Company, Inc., is submitting this Monitoring Report to document free product recovery activities and the recent groundwater sampling event and summary of laboratory analytical.

If you have any questions or require additional information, please contact our office at (919) 871-0999

Sincerely,

Maureen Jackson, P.G.
Senior Project Manager

Groundwater Monitoring Report

Springer Eubank Bulk Plant
123 Shipyard Boulevard
Wilmington, New Hanover County, North Carolina
October 21, 2021

Site Identification

A. Site Information

1. Site Identification

Date of Report: 10/21/2021
Facility I.D.: 0-020576 **UST Incident Number (if known):** 32234
Site Name: Springer Eubank Bulk Plant
Site Street Address: 123 Shipyard Boulevard
City/Town: Wilmington **Zip Code:** 28412 **County:** New Hanover
Description of Geographical Data Point: Building
Location Method: Aerial Map
Latitude (decimal degrees): 34°11'33" N **Longitude (decimal degrees):** 77°56'39" W

2. Information about Contacts Associated with the Leaking UST System

UST Owner: Springer Eubank Company, Inc.
Address: 123 Shipyard Boulevard, Wilmington, North Carolina 28412 **Tel.:** (910) 343-1991
UST Operator: Springer Eubank Company, Inc.
Address: 123 Shipyard Boulevard, Wilmington, North Carolina 28412 **Tel.:** (910) 343-1991
Property Owner: Springer Eubank Company, Inc.
Address: 123 Shipyard Boulevard, Wilmington, North Carolina 28412 **Tel.:** (910) 343-1991
Property Owner: Springer Eubank Company, Inc.
Address: 123 Shipyard Boulevard, Wilmington, North Carolina 28412 **Tel.:** (910) 343-1991
Consultant/Contractor: ATC Associates of North Carolina, P.C.
Address: 609A Piner Road Suite 115 Wilmington, NC 28409 **Tel.:** (919) 871-0999
Analytical Laboratory: SGS North America, Inc. **State Certification No.** 487
Address: 500 Ambassador Caffery Scott, Louisiana 70583 **Tel:** 337-237-4775

3. Information about Release

Date Discovered: September 2004
Estimated Quantity of Release: Unknown
Cause of Release: Unknown
Source of Release (Dispenser/Piping/UST): Unknown
Sizes and contents of UST system(s) from which the release occurred:
One 1,000-gallon heating oil UST

4. Certification

I, Maureen A. Jackson, a Professional Engineer/Licensed Geologist *(circle one)* for (firm or company of employment), do certify that the information contained in this report is correct and accurate to the best of my knowledge.
(Please Affix Seal and Signature)

NORTH CAROLINA LICENSED GEOLOGIST 2312 10/21/2021 MAUREEN A. JACKSON

ATC Associates of North Carolina, P.C. is licensed to practice geology/engineering *(circle one or both)* in North Carolina. The certification number of the company or corporation is C1598.

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Figure 4 Dissolved Contaminants of Concern

APPENDICES

Appendix A Laboratory Analytical Results

1.0 INTRODUCTION

ATC Associates of North Carolina, P.C. (ATC), on behalf of Springer Eubank Company, Inc. (Springer), is submitting this sampling report for the Springer Eubank Bulk Plant located at 123 Shipyard Boulevard, Wilmington, North Carolina (Incident # 32234). The site is operating as a bulk storage plant for diesel and gasoline products. A site topographic map is presented as ***Figure 1*** and site map is presented as ***Figure 2***. This report includes the laboratory analytical results for the groundwater sampling event performed on September 9, 2021 and the free product recovery events performed since October 2020.

2.0 SITE BACKGROUND

In 2004, PGP Services, LLC conducted Phase I and Phase II Environmental Site Assessment activities at the subject site due to a property transfer. During the assessment activities nine soil borings (SB-1 through SB-9) and three temporary wells (TW-1 through TW-3) were advanced and sampled. Soil samples SB-8 and SB-9, which were located near the diesel dispensers, indicated an exceedence of diesel range and gasoline range total petroleum hydrocarbons (TPH). Four monitoring wells (MW-1 through MW-4) were installed within the immediate vicinity of the diesel dispensers. Contaminants of concern were detected above standards in monitoring wells MW 1 and MW-4. Free product was detected in MW-2 and MW-3.

In 2005 Applied Resource Management, P.C. (APM) conducted site assessment activities which included the advancement of seven soil borings (S-1, S-2, and B-1 through B-5) and the installation of 24 monitoring wells (MW-5 through MW-27 and T-1). Soil and groundwater contamination was detected above the corresponding standards and measureable light non-aqueous phase liquid (LNAPL) was identified in certain monitoring wells. Also identified in MW-16 was a red dye associated with the onsite heating oil underground storage tank (UST) which was located adjacent to MW-16.

APM conducted an Aggressive Fluid Vapor Recovery (AFVR) event and a Mobile Multi-Phase Extraction Event (MMPE) in January 2005 and April 2005, respectively. A Free Product Recovery Report was submitted on May 31, 2005 and a Comprehensive Site Assessment was submitted on July 29, 2005.

On September 22, 2005, the heating oil UST was abandoned in place by Environmental Services & Solutions, PLLC (ESS). An Underground Storage Tank Closure Report was submitted on October 3, 2005

ESS submitted at Limited Site Assessment (LSA) on October 7, 2005. During LSA activities soil sample SB-1 and a groundwater sample from MW-17 were collected. Measurable LNAPL was detected in wells MW-13, MW-16, and MW-19. Laboratory results indicated contaminants exceeding residential Maximum Soil Contaminant Concentrations (MSCCs) in SB-1. ESS also identified nine water supply wells within 1,000 feet of the site.

A Corrective Action Place (CAP) recommending soil excavation activities was submitted on November 9, 2006, and was approved by the North Carolina Department of Environmental Quality (NCDEQ) Division of Water Quality (DWQ) on December 5, 2006. Soil excavation activities took place on April 2 through April 20, 2007, within the vicinity of the diesel dispenser island, diesel product lines, oil/water separator, and closed in-place heating oil UST. Approximately 6,306 tons of petroleum impacted soils were excavated from the site. During the excavation LNAPL was discharging into the excavation pit. Consequently, 65,178 gallons of impacted groundwater and LNAPL were recovered from the excavation. Monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, MW-8, MW-13, MW-16, MW-18, MW-21, MW-22, and MW-23 were destroyed during excavation activities.

Between 2007 and 2010 ESS installed and operated a LNAPL skimming system, performed AFVR events, groundwater sampling events, and submitted groundwater sampling reports. On June 4, 2010, ESS submitted a Groundwater Monitoring Report.

In August 2010, Springer Eubank awarded an environmental services contract to ATC for continuing environmental services at the site.

On October 26, 2010, the NCDEQ Wilmington Regional Office issued a letter requesting the evaluation of the skimmer system in RW-1, LNAPL recovery and continued semiannual sampling. ATC submitted a Groundwater Monitoring Report to NCDEQ during January 2011 documenting the November 2010 groundwater sampling event and the LNAPL recovery activities of December 2010. On February 15, 2011, the NCDEQ issued a letter requesting LNAPL recovery via AFVR events and semi-annual sampling.

This report documents LNAPL recovery events performed since October 2020 and the September 2021 annual groundwater sampling event.

3.0 GROUNDWATER MONITORING

3.1 Groundwater Elevations

On September 9, 2021, ATC collected static water level measurements from monitoring wells MW-6, MW-12, MW-14, MW-17, MW-25, MW-27, MW-31, MW-32, MW-33, MW-A, MW-B, MW-C, MW-D, MW-E, T-1, T-2, and recovery wells RW-1, RW-2, and RW-3. LNAPL was not detected in any of the wells measured. Depths to water measurements were collected using an electronic oil/water interface probe. The groundwater depths were converted to relative elevations using an assumed datum of 100 feet relative to an arbitrary on-site benchmark. Monitoring well construction information and depth to water measurements are included in ***Table 1***. A groundwater elevation contour map based on the September 2021 static water level data is included as ***Figure 3***. Based on the recent groundwater level measurements, groundwater flows west to northwest across the site**.** Historical groundwater elevation data are included in ***Table 2*****.**

3.2 Groundwater Analytical Results

On September 9, 2021, groundwater samples were collected from monitoring wells MW-6, MW-12, MW-14, MW-17, MW-25, MW-27, MW-31, MW-32, MW-33, T-1, T-2, and recovery wells RW-1, RW-2, and RW-3. Groundwater samples were collected into laboratory-approved containers, packed in ice and delivered under chain-of-custody to SGS North America (SGS) in Scott, Louisiana, for analyses. Groundwater samples were analyzed via EPA Method 625. A summary of the recent groundwater analytical data is presented in ***Table 3*** and a historical summary of groundwater analytical data is presented in ***Table 4***.

The laboratory analytical results from the September 2021 sampling event indicate several dissolved target compound concentrations exceed respective 2L Standards in the groundwater samples collected from wells MW-6, MW-12, MW-14, MW-17, MW-31, RW-2, and RW-3. It should be noted several dissolved target compound concentrations were detected above established GCLs in the groundwater samples collected from wells MW-12, MW-14, and RW-3.

A dissolved contaminant of concern concentration map is provided as ***Figure 4***. A copy of the laboratory analytical report is included as ***Appendix A***.

3.3 Supply Well Analytical Results

On September 9, 2021, one supply well sample was collected from the Gresham water supply well. The water sample was collected into laboratory-approved containers, packed in ice and delivered under chain-of-custody to SGS in Scott, Louisiana for analyses. The water sample was analyzed via EPA Method 625. The analytical results indicated target compound concentrations were not detected above laboratory method detection limits. The supply well analytical results are included as ***Table 4***. A copy of the laboratory analytical report is included as ***Appendix A***.

4.0 FREE PRODUCT RECOVERY ACTIVITIES

On February 3, 2021, ATC was onsite to assess the condition of the absorbent socks in select wells and to measure LNAPL in select wells. LNAPL was not measured in wells MW-12, MW-14, MW-A, MW-B, MW-C, MW-D, MW-D, or RW-3 on this date. The absorbent socks in wells MW-12, MW-14, and RW-3 were noted to be 100% saturated and were changed.

On June 3, 2021, ATC was onsite to assess the condition of the absorbent socks in select wells and to measure LNAPL in select wells. LNAPL was not measured in wells MW-12, MW-14, or RW-3 on this date. The absorbent socks in wells MW-12, MW-14, and RW-3 were noted to be 100% saturated and were changed.

On September 9, 2021, ATC was onsite to conduct groundwater sampling activities and to assess the condition of the absorbent socks in select wells. LNAPL was not measured in monitoring well MW-12, MW-14, MW-A, MW-B, MW-C, MW-D, MW-E, or RW-3 on this date. The

absorbent socks in wells MW-12, MW-14, and RW-3 were noted to be in good condition and were not changed.

Cumulative free product recovery results are presented in ***Table 5***.

5.0 CONCLUSIONS

ATC has performed a groundwater sampling event and LNAPL recovery at the Springer Eubank Bulk Plant in Wilmington, North Carolina. Based on field activities, observations, and groundwater analytical results, ATC concludes the following:

- Depth to groundwater measurements ranged from 7.29 feet to 9.73 feet bgs in MW-27 and MW-6, respectively. The inferred shallow groundwater flow direction across the site is to the west to northwest;
- LNAPL was not detected in any of the wells measured during the September 2021 groundwater sampling event;
- The laboratory analytical results from the September 2021 sampling event indicate several dissolved target compound concentrations exceed respective 2L Standards in the groundwater samples collected from wells MW-6, MW-12, MW-14, MW-17, MW-31, RW-2, and RW-3;
- Dissolved target compound concentrations were detected above established GCLs in the groundwater samples collected from wells MW-12, MW-14, and RW-3; and,
- Laboratory analytical results of the groundwater sample collected from the Gresham water supply well did not detect dissolved target compound concentrations above laboratory MDLs.

Based on the groundwater analytical results ATC recommends continued groundwater sampling on an annual basis (utilizing EPA Method 625) and quarterly LNAPL recovery activities, if necessary. ATC also recommends the installation of biosocks in wells MW-6, MW-12, MW-14, MW-17, MW-31, RW-2, and RW-3 to assist with natural attenuation activities.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Monitoring Well ID	Date Installed	Well Casing Diameter (Inches)	Screened Interval (feet)	Depth of Well (feet)	Top of Casing (feet)	Date Measured: 9/9/2021			
						Depth of Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)
MW-6	9/23/2004	2	4.5-14.5	14.50	100.45	9.73	--	--	90.72
MW-9	9/24/2004	2	4.5-14.5	14.50	101.95	Well Not Scheduled to be Measured			
MW-10	11/1/2004	2	5-15	15.00	99.88	Well Not Scheduled to be Measured			
MW-11	11/1/2004	2	7-17	17.00	101.98	Well Not Scheduled to be Measured			
MW-12	11/2/2004	2	5-15	15.00	99.11	8.80	--	--	90.31
MW-14	12/22/2004	2	5-15	15.00	97.68	7.78	--	--	89.90
MW-15	12/22/2004	2	5-15	15.00	99.26	Well Not Scheduled to be Measured			
MW-17	12/22/2004	2	5-15	15.00	98.97	9.15	--	--	89.82
MW-19	12/23/2004	2	5-15	15.00	98.66	Well Not Scheduled to be Measured			
MW-20	11/2/2004	2	5-15	15.00	99.87	Well Not Scheduled to be Measured			
MW-24	2/23/2005	2	8-18	18.00	97.35	Well Not Scheduled to be Measured			
MW-25	2/23/2005	2	3-18	18.00	97.14	7.33	--	--	89.81
MW-26	6/20/2005	2	5-15	15.00	99.28	Well Not Scheduled to be Measured			
MW-27	6/20/2005	2	5-15	15.00	95.28	7.29	--	--	87.99
MW-28R	11/20/2009	2	4-14	14.00	NS	Well Not Scheduled to be Measured			
MW-29	Unknown	2	Unknown	20.00	102.14	Well Not Scheduled to be Measured			
MW-30	Unknown	2	10-20	20.00	102.97	Well Not Scheduled to be Measured			
MW-31	Unknown	2	5-20	20.00	98.46	8.37	--	--	90.09
MW-32	11/20/2009	2	5-15	15.00	NS	8.22	--	--	NM
MW-33	5/11/2015	2	5-20	20.00	98.63	8.71	--	--	89.92
T-1	11/2/2004	2	42-47	47.00	98.50	10.99	--	--	87.51
T-2	Unknown	2	45-50	50.00	101.85	13.81	--	--	88.04
RW-1	Unknown	4	5-20	20.00	98.88	8.76	--	--	90.12
RW-2	Unknown	4	5-20	20.00	97.80	7.79	--	--	90.01
RW-3	1/19/2011	4	5-15	15.00	NS	7.69	--	--	NM
MW-A	9/17/2014	2	5-15	15.00	97.66	8.16	--	--	NM
MW-B	9/17/2014	2	5-15	15.00	98.06	8.25	--	--	NM
MW-C	9/17/2014	2	5-15	15.00	98.76	8.17	--	--	NM
MW-D	9/17/2014	2	5-15	15.00	99.06	8.38	--	--	NM
MW-E	10/30/2014	2	5-15	15.00	99.00	8.41	--	--	NM
MW-F	Well Properly Abandoned								

Notes:

1. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
2. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
3. NS denotes Not Surveyed
4. NM denotes Not Measured
5. Total well depths measured from top of casing.
6. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-6	3/17/2010	100.45	10.92	--	--	89.53
	11/10/2010		9.50	--	--	90.95
	5/16/2011		11.73	--	--	88.72
	11/16/2011		11.92	--	--	88.53
	3/6/2012		13.10	--	--	87.35
	11/28/2012		12.31	--	--	88.14
	4/16/2013		12.09	--	--	88.36
	12/3/2013		12.02	--	--	88.43
	6/10/2014		11.68	--	--	88.77
	12/8/2014		10.72	--	--	89.73
	6/9/2015		10.51	--	--	89.94
	12/8/2015		7.90	--	--	92.55
	6/30/2016		9.93	--	--	90.52
	9/25/2017		8.97	--	--	91.48
	10/3/2018		5.38	--	--	95.07
	9/24/2019		10.30	--	--	90.15
	9/21/2020		9.65	--	--	90.80
	9/9/2021		9.73	--	--	90.72
MW-9	3/17/2010	101.95	12.34	--	--	89.61
	11/10/2010		Well Not Measured			
	5/16/2011		13.19	--	--	88.76
	11/16/2011		13.35	--	--	88.60
	3/6/2012		Well Dry			
	11/28/2012		13.75	--	--	88.20
	4/16/2013		13.52	--	--	88.43
	12/4/2013		13.48	--	--	88.47
	6/10/2014		13.18	--	--	88.77
	12/8/2014		12.11	--	--	89.84
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. LNAPL denotes light non-aqueous phase liquid.
5. Information regarding wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, and MW-8 are on file at DEQ in previous reports.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-10	3/17/2010	99.88	10.79	--	--	89.09
	11/10/2010		Well Not Located			
	5/16/2011		11.62	--	--	88.26
	11/16/2011		Well Not Located			
	3/6/2012		Well Not Located			
	11/28/2012		Well Not Located			
	4/16/2013		Well Not Located			
	12/3/2013		Well Not Located			
	6/9/2015		Well Not Located			
	12/8/2015		Well Not Located			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-11	3/17/2010	101.98	12.35	--	--	89.63
	11/10/2010		11.00	--	--	90.98
	5/16/2011		13.26	--	--	88.72
	11/16/2011		13.40	--	--	88.58
	3/6/2012		14.57	--	--	87.41
	11/28/2012		13.75	--	--	88.23
	4/16/2013		13.52	--	--	88.46
	12/3/2013		13.47	--	--	88.51
	6/10/2014		13.19	--	--	88.79
	12/8/2014		12.17	--	--	89.81
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-12	3/17/2010	99.11	9.31	9.24	0.07	89.85*
	11/10/2010		8.32	8.30	0.02	90.81*
	5/16/2011		9.77	9.74	0.03	89.36*
	11/16/2011		9.97	10.10	0.13	89.24*
	3/6/2012		11.55	--	--	87.56
	11/28/2012		10.05	--	--	89.06
	4/16/2013		12.98	12.85	0.13	86.93*
	12/4/2013		9.63	--	--	89.48
	6/10/2014		9.62	--	--	89.49
	12/8/2014		9.71	Trace	--	89.40
	6/9/2015		9.55	--	--	89.56
	12/8/2015		7.02	6.84	0.18	92.23*
	6/30/2016		8.96	8.86	0.10	90.23*
	12/8/2016		9.01	--	--	90.10
	2/2/2017		9.69	9.65	0.04	89.45*
	8/3/2017		9.45	--	--	89.66
	9/25/2017		8.17	8.15	0.02	90.96*
	10/3/2018		5.65	5.57	0.08	93.52*
	11/13/2018		6.48	6.35	0.13	92.73*
	12/17/2018		6.00	5.99	0.01	93.11*
	1/10/2019		6.48	6.28	0.20	92.79*
	4/12/2019		8.62	8.50	0.12	90.58*
	5/27/2019		8.98	8.95	0.03	90.15*
	8/26/2019		10.50	10.16	0.34	88.88*
	9/24/2019		9.45	--	--	89.66
	9/21/2020		8.79	--	--	90.32
	9/9/2021		8.80	--	--	90.31

Notes:
1. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
2. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
3. Data prior to 2010 on file at DEQ in previous reports.
4. Information regarding well MW-13 is on file at DEQ in previous reports.
5. Total well depths measured from top of casing.
6. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-14	3/17/2010	97.68	9.62	8.28	1.34	89.10*
	11/10/2010		9.85	7.20	2.65	89.90*
	5/16/2011		10.35	9.55	0.80	87.95*
	11/16/2011		10.50	9.63	0.87	87.86*
	3/6/2012		10.72	10.70	0.02	86.98*
	11/28/2012		10.12	--	--	87.56
	4/16/2013		10.98	9.66	1.32	87.73*
	12/3/2013		10.69	9.75	0.97	87.73
	6/10/2014		9.64	9.62	0.02	88.06*
	12/8/2014		8.67	8.65	0.02	89.02*
	6/9/2015		8.51	8.45	0.06	89.22*
	12/8/2015		5.95	5.93	0.02	91.75*
	6/30/2016		8.17	8.14	0.03	91.75*
	12/8/2016		7.42	--	--	90.26
	2/2/2017		7.89	--	--	89.79
	8/3/2017		8.05	8.03	0.02	89.64*
	9/25/2017		6.99	--	--	90.69
	10/3/2018		3.42	--	--	94.26
	11/13/2018		5.28	--	--	92.40
	12/17/2018		5.06	5.04	0.02	92.63*
	1/10/2019		5.68	--	--	92.00
	4/12/2019		7.20	7.17	0.03	90.50*
	5/27/2019		8.80	--	--	88.88
	9/24/2019		8.30	--	--	89.38
	9/21/2020		7.53	--	--	90.15
	9/9/2021		7.78	--	--	89.90

Notes:
1. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
2. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
3. Data prior to 2010 on file at DEQ in previous reports.
4. Total well depths measured from top of casing.
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-15	3/17/2010	99.26	10.17	--	--	89.09
	11/10/2010		8.68	--	--	90.58
	5/16/2011		11.05	--	--	88.21
	11/16/2011		11.12	--	--	88.14
	3/6/2012		12.21	--	--	87.05
	11/28/2012		11.40	--	--	87.86
	4/16/2013		11.32	--	--	87.94
	12/4/2013		11.30	--	--	87.96
	6/10/2014		10.98	--	--	88.28
	12/9/2014		10.03	--	--	89.23
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-17	3/17/2010	98.97	10.18	--	--	88.79
	11/10/2010		8.99	--	--	89.98
	5/16/2011		11.05	--	--	87.92
	11/16/2011		11.15	--	--	87.82
	3/6/2012		12.02	--	--	86.95
	11/28/2012		11.30	--	--	87.67
	4/16/2013		11.13	--	--	87.84
	12/4/2013		11.29	--	--	87.68
	6/10/2014		11.01	--	--	87.96
	12/9/2014		9.68	--	--	89.29
	6/9/2015		9.59	--	--	89.38
	12/8/2015		7.50	--	--	91.47
	6/30/2016		9.52	--	--	89.45
	9/25/2017		8.66	--	--	90.31
	10/3/2018		5.31	--	--	93.66
	9/24/2019		9.67	--	--	89.30
	9/21/2020		8.90	--	--	90.07
	9/9/2021		9.15	--	--	89.82

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Information regarding wells MW-16 and MW-18 are on file at DEQ in previous reports.
4. Total well depths measured from top of casing.
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-19	3/17/010	98.66	10.20	--	--	88.46
	11/10/2010		8.94	--	--	89.72
	5/16/2011		11.09	--	--	87.57
	11/16/2011		11.15	--	--	87.51
	3/6/2012		12.04	--	--	86.62
	11/28/2012		11.14	--	--	87.52
	4/16/2013		11.11	--	--	87.55
	12/4/2013		11.27	--	--	87.39
	6/10/2014		11.02	--	--	87.64
	12/9/2014		10.20	--	--	88.46
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-20	3/17/2010	99.87	10.65	--	--	89.22
	11/10/2010		9.12	--	--	90.75
	5/16/2011		11.50	--	--	88.37
	11/16/2011		11.62	--	--	88.25
	3/6/2012		12.75	--	--	87.12
	11/28/2012		11.96	--	--	87.91
	4/16/2013		11.82	--	--	88.05
	12/4/2013		11.73	--	--	88.14
	6/10/2014		11.48	--	--	88.39
	12/9/2014		10.50	--	--	89.37
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-24	11/10/2010	97.35	7.31	--	--	90.04
	5/16/2011		9.40	--	--	87.95
	11/16/2011		9.50	--	--	87.85
	3/6/2012		10.50	--	--	86.85
	11/28/2012		9.72	--	--	87.63
	4/16/2013		9.53	--	--	87.82
	12/3/2013		9.57	--	--	87.78
	6/10/2014		9.34	--	--	88.01
	12/9/2014		8.47	--	--	88.88
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-25	3/17/2010	97.14	8.41	8.37	0.04	88.76*
	11/10/2010		7.15	--	--	89.99
	5/16/2011		9.24	--	--	87.90
	11/16/2011		9.36	--	--	87.78
	3/6/2012		10.34	--	--	86.80
	11/28/2012		9.55	--	--	87.59
	4/16/2013		9.38	--	--	87.76
	12/3/2013		9.39	--	--	87.75
	6/10/2014		9.22	--	--	87.92
	12/8/2014		8.26	--	--	88.88
	6/9/2015		8.07	--	--	89.07
	12/8/2015		5.65	--	--	91.49
	6/30/2016		7.64	--	--	89.50
	9/25/2017		6.83	--	--	90.31
	10/3/2018		3.44	--	--	93.70
	9/24/2019		7.98	--	--	89.16
	9/21/2020		7.16	--	--	89.98
	9/9/2021		7.33	--	--	89.81

Notes:
1. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
2. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
3. Data prior to 2010 on file at DEQ in previous reports.
4. LNAPL denotes light non-aqueous phase liquid.
5. Information regarding wells MW-21, MW-22, and MW-23 are on file at DEQ in previous reports
6. Total well depths measured from top of casing.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
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Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-26	3/17/2010	99.28	10.11	--	--	89.17
	11/10/2010		Well Not Measured			
	5/16/2011		Well Not Measured			
	11/16/2011		Could Not Locate			
	3/6/2012		Could Not Locate			
	11/28/2012		Could Not Locate			
	4/16/2013		Could Not Locate			
	12/3/2013		Could Not Locate			
	6/9/2015		Could Not Locate			
	12/8/2015		Could Not Locate			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-27	3/17/2010	95.28	7.89	--	--	87.39
	11/10/2010		7.19	--	--	88.09
	5/16/2011		8.79	--	--	86.49
	11/16/2011		8.85	--	--	86.43
	3/6/2012		9.28	--	--	86.00
	11/28/2012		8.55	--	--	86.73
	4/16/2013		8.55	--	--	86.73
	12/3/2013		8.72	--	--	86.56
	6/10/2014		8.81	--	--	86.47
	12/8/2014		8.06	--	--	87.22
	6/9/2015		8.07	--	--	87.21
	12/8/2015		5.79	--	--	89.49
	6/30/2016		7.80	--	--	87.48
	9/25/2017		6.86	--	--	88.42
	10/3/2018		3.91	--	--	91.37
	9/24/2019		7.73	--	--	87.55
	9/21/2020		6.85	--	--	88.43
	9/9/2021		7.29	--	--	87.99

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Information regarding well MW-28 is on file at DEQ in previous reports.
4. Total well depths measured from top of casing.
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
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Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-28R	3/17/2010	NS	8.42	--	--	NA
	11/10/2010		7.55	--	--	NA
	5/16/2011		9.45	--	--	NA
	11/16/2011		9.57	--	--	NA
	3/6/2012		10.20	--	--	NA
	11/28/2012		Could Not Locate - Parking Lot Appears to have been graded			
	4/16/2013		9.02	--	--	NA
	12/4/2013		9.57	--	--	NA
	6/10/2014		9.44	--	--	NA
	12/8/2014		8.53	--	--	
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-29	6/3/2008	102.14	15.14	--	--	87.00
	9/26/2008		15.67	--	--	86.47
	7/22/2009		14.79	--	--	87.35
	3/2/2009		15.13	--	--	87.01
	10/1/2009		14.90	--	--	87.24
	3/17/2010		12.53	--	--	89.61
	11/10/2010		11.22	--	--	90.92
	5/16/2011		13.44	--	--	88.70
	11/16/2011		13.60	--	--	88.54
	3/6/2012		14.79	--	--	87.35
	11/28/2012		13.93	--	--	88.21
	4/16/2013		13.72	--	--	88.42
	12/3/2013		13.68	--	--	88.46
	6/10/2014		13.38	--	--	88.76
	12/8/2014		12.33	--	--	89.81
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			

Notes:
1. NS denotes not surveyed and NA denotes not applicable.
2. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
3. Data prior to 2010 on file at DEQ in previous reports.
4. Total well depths measured from top of casing.
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
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Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-30	3/17/2010	102.97	13.27	--	--	89.70
	11/10/2010		11.75	--	--	91.22
	5/16/2011		14.10	--	--	88.87
	11/16/2011		14.37	--	--	88.60
	3/6/2012		15.53	--	--	87.44
	11/28/2012		Could Not Sample - Car Parked Over Well			
	4/16/2013		14.53	--	--	88.44
	12/4/2013		14.37	--	--	88.60
	6/10/2014		14.02	--	--	88.95
	12/9/2014		13.02	--	--	
	6/9/2015		Well Not Measured			
	12/8/2015		Well Not Measured			
	6/30/2016		Well Not Measured			
	9/25/2017		Well Not Measured			
	10/3/2018		Well Not Measured			
	9/24/2019		Well Not Measured			
	9/21/2020		Well Not Measured			
	9/9/2021		Well Not Measured			
MW-31	3/17/2010	98.46	9.62	--	0.19	88.98*
	11/10/2010		8.34	8.30	0.04	90.15*
	5/16/2011		10.54	10.30	0.24	88.10*
	11/16/2011		10.45	--	--	88.01
	3/6/2012		11.52	--	--	86.94
	11/28/2012		10.75	--	--	87.71
	4/16/2013		10.52	--	--	87.94
	12/4/2013		10.56	--	--	87.90
	6/10/2014		10.25	--	--	88.21
	12/9/2014		9.33	--	--	89.13
	6/9/2015		9.09	--	--	89.37
	12/8/2015		6.53	--	--	91.93
	6/30/2016		8.56	--	--	89.90
	9/25/2017		7.63	--	--	90.83
	10/3/2018		4.03	--	--	94.43
	8/26/2019		8.73	8.71	0.02	89.75*
	9/24/2019		8.88	--	--	89.58
	9/21/2020		8.17	--	--	90.29
	9/9/2021		8.37	--	--	90.09

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-32	3/17/2010	NS	9.03	--	--	NA
	11/10/2010		8.11	--	--	NA
	5/16/2011		9.94	--	--	NA
	11/16/2011		9.98	--	--	NA
	3/6/2012		10.32	--	--	NA
	11/28/2012		9.85	--	--	NA
	4/16/2013		9.83	--	--	NA
	12/3/2013		10.07	--	--	NA
	6/10/2014		9.92	--	--	NA
	12/8/2014		9.15	--	--	NA
	6/9/2015		8.97	--	--	NA
	12/8/2015		6.62	--	--	NA
	6/30/2016		8.60	--	--	NA
	9/25/2017		7.74	--	--	NA
	10/3/2018		4.46	--	--	NA
	9/24/2019		8.70	--	--	NA
	9/21/2020		7.89	--	--	NA
	9/9/2021		8.22	--	--	NA
MW-33	6/9/2015	98.63	9.47	--	--	89.16
	12/8/2015		6.78	--	--	91.85
	6/30/2016		8.73	--	--	89.90
	9/25/2017		7.97	--	--	90.66
	10/3/2018		4.39	--	--	94.24
	9/24/2019		9.22	--	--	89.41
	9/21/2020		8.46	--	--	90.17
	9/9/2021		8.71	--	--	89.92

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. NS denotes not surveyed and NA denotes not applicable.
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
T-1	3/17/2010	98.50	12.24	--	--	86.26
	11/10/2010		13.41	--	--	85.09
	5/16/2011		13.32	--	--	85.18
	11/16/2011		13.27	--	--	85.23
	3/6/2012		14.05	--	--	84.45
	11/28/2012		13.52	--	--	84.98
	4/16/2013		13.32	--	--	85.18
	12/3/2013		13.27	--	--	85.23
	6/10/2014		13.17	--	--	85.33
	12/8/2014		12.05	--	--	86.45
	6/9/2015		11.94	--	--	86.56
	12/8/2015		Well Not Accessible - Truck Parked Over Well			
	6/30/2016		Well Not Accessible - Truck Parked Over Well			
	9/25/2017		10.42	--	--	88.08
	10/3/2018		7.27	--	--	91.23
	9/24/2019		Well Not Accessible - Truck Parked Over Well			
	9/21/2020		Well Could Not Be Located			
	9/9/2021		10.99	--	--	87.51
T-2	3/17/2010	101.85	15.10	--	--	86.75
	11/10/2010		13.73	--	--	88.12
	5/16/2011		16.04	--	--	85.81
	11/16/2011		16.60	--	--	85.25
	3/6/2012		17.93	--	--	83.92
	11/28/2012		19.84	--	--	82.01
	4/16/2013		16.18	--	--	85.67
	12/3/2013		16.12	--	--	85.73
	6/10/2014		15.99	--	--	85.86
	12/8/2014		14.94	--	--	86.91
	6/9/2015		14.82	--	--	87.03
	12/8/2015		12.27	--	--	89.58
	6/30/2016		14.40	--	--	87.45
	9/25/2017		13.20	--	--	88.65
	10/3/2018		10.37	--	--	91.48
	9/24/2019		14.57	--	--	87.28
	9/21/2020		13.58	--	--	88.27
	9/9/2021		13.81	--	--	88.04

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
RW-1	3/17/2010	98.88	11.11	9.72	1.39	88.85*
	11/10/2010		8.57	8.55	0.02	90.33*
	5/16/2011		10.78	10.74	0.04	88.13*
	11/16/2011		10.90	--	--	87.98
	3/6/2012		11.94	--	--	86.94
	11/28/2012		11.12	--	--	87.76
	4/16/2013		10.95	--	--	87.93
	12/4/2013		10.97	--	--	87.91
	6/10/2014		10.66	--	--	88.22
	12/9/2014		9.79	--	--	89.09
	6/9/2015		9.60	--	--	89.28
	12/8/2015		7.01	--	--	91.87
	6/30/2016		9.02	--	--	89.86
	9/25/2017		8.10	--	--	90.78
	10/3/2018		3.72	--	--	95.16
	12/17/2018		5.16	5.14	0.02	93.73*
	8/26/2019		8.05	7.40	0.65	91.34*
	9/24/2019		9.32	--	--	89.56
	9/21/2020		8.56	--	--	90.32
	9/9/2021		8.76	--	--	90.12
RW-2	3/17/2010	97.80	8.86	--	--	88.94
	11/10/2010		Well Not Measured			
	5/16/2011		Well Obstructed approx. 8 feet bgs.			
	11/16/2011		9.82	--	--	87.98
	3/6/2012		10.85	--	--	86.95
	11/28/2012		10.07	--	--	87.73
	4/16/2013		9.90	--	--	87.90
	12/4/2013		9.92	--	--	87.88
	6/10/2014		9.72	--	--	88.08
	12/9/2014		8.78	--	--	89.02
	6/9/2015		8.58	--	--	89.22
	12/8/2015		6.01	--	--	91.79
	6/30/2016		8.08	--	--	89.72
	9/25/2017		7.13	--	--	90.67
	10/3/2018		3.62	--	--	94.18
	9/24/2019		8.36	--	--	89.44
	9/21/2020		7.60	--	--	90.20
	9/9/2021		7.79	--	--	90.01

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
5. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
RW-3	5/16/2011	NS	10.25	9.74	0.51	NA
	11/16/2011		10.55	9.21	1.34	NA
	3/6/2012		11.02	11.01	0.01	NA
	11/28/2012		9.70	--	--	NA
	4/16/2013		9.36	--	--	NA
	12/3/2013		10.09	--	--	NA
	6/10/2014		8.55	8.39	0.16	NA
	12/8/2014		8.22	8.21	0.01	NA
	6/9/2015		8.03	--	--	NA
	12/8/2015		6.12	6.07	0.05	NA
	6/30/2016		7.86	7.83	0.03	NA
	12/8/2016		7.58	--	--	NA
	2/2/2017		7.91	--	--	NA
	8/3/2017		7.91	7.88	0.03	NA
	9/25/2017		7.04	--	--	NA
	10/3/2018		4.29	--	--	NA
	11/13/2018		5.82	5.64	0.18	NA
	1/10/2019		5.50	--	--	NA
	4/12/2019		7.32	7.21	0.11	NA
	5/27/2019		9.01	9.00	0.01	NA
	9/24/2019		7.91	--	--	NA
	9/21/2020		7.80	--	--	NA
	9/9/2021		7.69	--	--	NA

Notes:

1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Data prior to 2010 on file at DEQ in previous reports.
3. Total well depths measured from top of casing.
4. NS denotes not surveyed and NA denotes not applicable.
5. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
6. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-A	12/8/2014	97.66	8.70	--	--	88.96
	6/9/2015		Well Not Measured			
	7/8/2015		8.75	--	--	88.91
	11/3/2015		6.75	--	--	90.91
	12/8/2015		Well Not Measured			
	6/30/2016		8.35	--	--	89.31
	12/8/2016		7.78	--	--	89.88
	2/2/2017		7.93	--	--	89.73
	8/3/2017		8.13	--	--	89.53
	10/3/2018		Well Not Measured			
	11/13/2018		5.35	--	--	92.31
	12/17/2018		5.01	--	--	3.69
	1/10/2019		5.46	--	--	3.24
	4/12/2019		7.37	--	--	90.29
	5/27/2019		8.93	--	--	88.73
	8/26/2019		8.61	--	--	89.05
	9/24/2019		8.39	--	--	89.27
	9/21/2020		8.29	--	--	89.37
	9/9/2021		8.16	--	--	89.50
MW-B	12/8/2014	98.06	8.69	--	--	89.37
	6/9/2015		Well Not Measured			
	7/8/2015		8.53	--	--	89.53
	11/3/2015		6.58	--	--	91.48
	12/8/2015		Well Not Measured			
	6/30/2016		8.33	--	--	89.73
	12/8/2016		7.63	--	--	90.43
	2/2/2017		8.09	--	--	89.97
	8/3/2017		8.18	--	--	89.88
	10/3/2018		Well Not Measured			
	11/13/2018		5.55	--	--	92.51
	12/17/2018		6.25	--	--	91.81
	1/10/2019		5.77	--	--	92.29
	4/12/2019		7.44	--	--	90.62
	5/27/2019		8.90	--	--	89.16
	8/26/2019		8.65	--	--	89.41
	9/24/2019		8.44	--	--	89.62
	9/21/2020		8.34	--	--	89.72
	9/9/2021		8.25	--	--	89.81

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Total well depths measured from top of casing.
3. Corrected Groundwater Elevation = (Groundwater Elevation + (Product Thickness *0.76))
4. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-C	12/8/2014	98.76	9.66	--	--	89.10
	6/9/2015		Well Not Measured			
	7/8/2015		9.42	--	--	89.34
	11/3/2015		7.42	--	--	91.34
	12/8/2015		Well Not Measured			
	6/30/2016		9.34	--	--	89.42
	12/8/2016		8.61	--	--	90.15
	2/2/2017		8.45	--	--	90.31
	8/3/2017		8.54	--	--	90.22
	10/3/2018		Well Not Measured			
	11/13/2018		5.98	--	--	92.78
	12/17/2018		5.65	--	--	93.11
	1/10/2019		5.98	--	--	92.78
	4/12/2019		7.85	--	--	90.91
	5/27/2019		9.00	--	--	89.76
	8/26/2019		8.96	--	--	89.80
	9/24/2019		8.75	--	--	90.01
	9/21/2020		8.05	--	--	90.71
	9/9/2021		8.17	--	--	90.59
MW-D	12/8/2014	99.06	9.52	--	--	89.54
	6/9/2015		Well Not Measured			
	7/8/2015		9.52	--	--	89.54
	11/3/2015		7.53	--	--	91.53
	12/8/2015		Well Not Measured			
	6/30/2016		9.28	--	--	89.78
	12/8/2016		8.53	--	--	90.53
	2/2/2017		8.61	--	--	90.45
	8/3/2017		8.73	--	--	90.33
	10/3/2018		Well Not Measured			
	11/13/2018		6.16	--	--	92.90
	12/17/2018		5.82	--	--	93.24
	1/10/2019		6.19	--	--	92.87
	4/12/2019		8.05	--	--	91.01
	5/27/2019		8.91	--	--	90.15
	8/26/2019		9.37	--	--	89.69
	9/24/2019		9.15	--	--	89.91
	9/21/2020		8.63	--	--	90.43
	9/9/2021		8.38	--	--	90.68

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Total well depths measured from top of casing.
3. LNAPL denotes light non-aqueous phase liquid.

TABLE 2
HISTORICAL GROUNDWATER ELEVATION DATA

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Well No.	Date	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)
MW-E	12/8/2014	99.00	9.65	Trace	--	89.35
	6/9/2015		Well Not Measured			
	7/8/2015		9.25	--	--	89.75
	11/3/2015		7.24	--	--	91.76
	12/8/2015		Well Not Measured			
	6/30/2016		9.29	--	--	89.71
	12/8/2016		8.56	--	--	90.44
	2/2/2017		9.08	--	--	89.92
	8/3/2017		9.18	--	--	89.82
	10/3/2018		Well Not Measured			
	11/13/2018		6.20	--	--	92.80
	12/17/2018		5.84	--	--	93.16
	1/10/2019		6.22	--	--	92.78
	4/12/2019		8.09	--	--	90.91
	5/27/2019		8.76	--	--	90.24
	8/26/2019		9.18	--	--	89.82
	9/24/2019		8.97	--	--	90.03
	9/21/2020		8.21	--	--	90.79
	9/9/2021		8.41	--	--	90.59
MW-F	12/8/2014	98.83	9.41	--	--	89.42
	6/9/2015		Well Not Measured			
	7/8/2015		9.81	--	--	89.02
	11/3/2015		7.82	--	--	91.01
	12/8/2015		Well Not Measured			
	6/30/2016		9.07	--	--	89.76
	12/8/2016		8.93	--	--	89.90
	2/2/2017		8.63	--	--	90.20
	8/3/2017		8.81	--	--	90.02
	2018	Well Properly Abandoned				

Notes:
1. Elevations are referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Total well depths measured from top of casing.
3. LNAPL denotes light non-aqueous phase liquid.

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Analytical Method				EPA Method 625 plus TICs																	
Contaminant of Concern		1-Methylnaphthalene	2-Methylnaphthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene	Anthracene	Dibenzofuran	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	1,2-Diphenylhydrazine	Di-n-octyl Phthalate	Acenaphthene	Acenaphthylene	Indeno(1,2,3-cd)pyrene	bis(2-Ethylhexyl)phthalate
Well ID	Date Collected																					
MW-6	9/9/2021	**46.1**	**50.8**	3.6	<0.19	2.8	3.8	0.24	0.31	2.2[J]	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.7	<4.7	2.1	0.39	<0.19	<4.7
MW-12	9/9/2021	***5,150***	**8,790**	***1,170***	120	**1,790**	***2,250***	***455***	428	<240	***17.1***	***14.9***	***23.8***	17.6	***6.3[J]***	**31.0**	<240	<240	**625**	125	***12.8***	<240
MW-14	9/9/2021	**91.3**	**99.5**	16.5	5.1	**46.1**	23.3	6.1	4.7	6.0[J]	**2.7**	***1.8[J]***	***3.3***	2.0	***0.93[J]***	2.0	<47	<47	8	1.8[J]	***1.6[J]***	**14.4[J]**
MW-17	9/9/2021	**8.9**	2.5	2.1	<0.20	2.2	0.45	<0.20	<0.20	0.84[J]	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<5.0	1.5	<0.20	<0.20	<5.0
MW-25	9/9/2021	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<4.9	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<4.9	<4.9	<0.20	<0.20	<0.20	<4.9
MW-27	9/9/2021	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<4.9	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<4.9	<4.9	<0.20	<0.20	<0.20	1.1[J]
MW-31	9/9/2021	**635**	2.2	1.4	<0.20	1.10	0.49	<0.20	<0.20	0.44[J]	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<4.9	<4.9	0.84	<0.20	<0.20	<4.9
MW-32	9/9/2021	<0.19	<0.19	0.22	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<4.8	0.40	<0.19	<0.19	<4.8
MW-33	9/9/2021	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<4.8	<0.19	<0.19	<0.19	<4.8
T-1	9/9/2021	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.7	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.7	<4.7	<0.19	<0.19	<0.19	1.1[J]
T-2	9/9/2021	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.7	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.7	<4.7	<0.19	<0.19	<0.19	<4.7
RW-1	9/9/2021	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<4.8	<0.19	<0.19	<0.19	<4.8
RW-2	9/9/2021	**7.0**	3.0	4.5	<0.19	1.0	<0.19	<0.19	<0.19	0.95[J]	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	5.8	<4.8	2.3	0.40	<0.19	<4.8
RW-3	9/9/2021	**325**	**378**	97.4	5.7	**113**	134	17.0	<0.19	<4.7	<0.19	**0.20**	**0.32**	0.19	0.097[J]	<0.19	<4.7	3.2[J]	<0.19	<0.19	***0.17[J]***	**43.5**
Gresham WSW	9/9/2021	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<4.8	<4.8	<0.19	<0.19	<0.19	<4.8
2L Standard (µg/l)		**1**	**30**	**300**	**300**	**6**	**200**	**200**	**2,000**	**28**	**0.05**	**0.005**	**0.05**	**200**	**0.5**	**5**	**NE**	**NE**	**80**	**200**	**0.05**	**3**
GCL (µg/l)		**1,000**	**12,000**	**845**	**300**	**6,000**	**550**	**200**	**2,000**	**1,550**	**4.7**	**0.8**	**0.75**	**200**	**0.5**	**5**	**NE**	**NE**	**1,950**	**8,000**	**0.095**	**135**

Notes:

1. "<" or ND = Not detected at or above the laboratory detection limit.
2. Concentrations are reported in micrograms per liter (µg/l) = parts per billion.
3. Concentrations in bold print equal or exceed the NCDEQ 2L Standard (2L).
4. Concentrations in bold and italic print equal or exceed the NCDEQ GCL.
5. NCDEQ = North Carolina Department of Environmental Quality.
6. GCL = Gross Contaminantion Level.
7. Gross Contamination Levels for Groundwater are referenced in the Guidelines for Assessment and Corrective Action, November 2008.
8. Tenatively identified compounds are listed in the respective laboratory report and are not listed in this table as they are too extensive.

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

SRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Contaminant of Concern		EPA Method 602					EPA Method 625 (PAHs)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-6	6/21/2005	**LNAPL**					--	--	--	--	--	--	--
	3/17/2010	<1	<1	6.68	38.8	**29.7**	--	--	--	--	--	--	--
	11/10/2010	<1	<1	2.8	13.9	**31**	--	--	--	--	--	--	--
	5/16/2011	<1	<1	7.3	19.8	**49**	--	--	--	--	--	--	--
	11/16/2011	<1	<1	6.6	16.8	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	**160**	**220**	<50	<50	<50	<50	<50
	11/28/2012	--	--	--	--	--	**20**	23	5.8	<5	<5	8.1	<5
	4/16/2013	--	--	--	--	--	<250	<250	<250	<250	<250	<250	<250
	12/3/2013	<1	<1	3.2	6.6	**49**	--	--	--	--	--	--	--
	6/10/2014	<20.0	<20.0	<20.0	<60.0	<40.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	4.9[J]	ND	5.0[J]	6.5	1.1[J]
	6/9/2015	--	--	--	--	--	ND	ND	8.2	<0.21	**10.6**	9.3	1.8[J]
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	1.7J
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	29	<9.4	<9.4	<9.4	<9.4	<9.4
	10/3/2018	--	--	--	--	--	ND	17	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	**33.1**	**34.2**	3.7	<0.21	<0.21	2.9	<0.21
	9/21/2020	--	--	--	--	--	**51.2**	**55.3**	6.2	<0.19	2.3	5.4	0.42
	9/9/2021	--	--	--	--	--	**46.1**	**50.8**	3.6	<0.19	2.8	3.8	0.24
MW-9	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	NS/Dry	NS/Dry	NS/Dry	NS/Dry	NS/Dry	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	Well Dry						
	11/28/2012	--	--	--	--	--	Could Not Get Enough Water for Analysis						
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

1. "<" or ND = Not detected at or above the laboratory reporting limit.
2. Concentrations are reported in micrograms per liter (ug/l) = parts per billion.
3. Concentrations in bold print equal or exceed the NCDEQ 2L Standard (2L).
4. NCDEQ = North Carolina Department of Environmental Quality.
5. GCL = Gross Contaminantion Level.
6. Gross Contamination Levels for Groundwater are referenced in the "Guidelines for Assessment and Corrective Action for UST Releases", July 2008, updated January 2010.
7. J values denotes estimated concentration by the laboratory.

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

SRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-10	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	Could Not Locate											
	3/6/2012	Could Not Locate											
	11/28/2012	Could Not Locate											
	4/16/2013	Could Not Locate											
	12/3/2013	Could Not Locate											
	6/9/2015	Could Not Locate											
	12/8/2015	Could Not Locate											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
MW-11	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

1. "<" or ND = Not detected at or above the laboratory reporting limit.
2. Concentrations are reported in micrograms per liter (ug/l) = parts per billion.
3. Concentrations in bold print equal or exceed the NCDEQ 2L Standard (2L).
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123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-12	6/21/2005	**LNAPL**					--	--	--	--	--	--	--
	3/17/2010	**LNAPL**					--	--	--	--	--	--	--
	11/10/2010	**LNAPL**					--	--	--	--	--	--	--
	5/16/2011	**LNAPL**					--	--	--	--	--	--	--
	11/16/2011	**LNAPL**					--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	***2,000***	**2,900**	<620	***3,100***	<620	***1,800***	***2,000***
	11/28/2012	--	--	--	--	--	***3,800***	**4,400**	**880**	***310***	**640**	***1,700***	***580***
	4/16/2013	**0.13 feet LNAPL**											
	12/4/2013	**1.5**	1.8	<1	25.3	**55**	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	2.6	6.2	**18.2**	--	--	--	--	--	--	--
	12/8/2014	**Trace LNAPL**											
	6/9/2015	--	--	--	--	--	ND	ND	**3,120**	**384**[J]	**4,710**	**5,860**	**1,070**
	12/8/2015	**0.18 feet LNAPL**											
	6/30/2016	**0.10 feet LNAPL**											
	9/25/2017	**0.02 feet LNAPL**											
	10/3/2018	**0.08 feet LNAPL**											
	9/24/2019	--	--	--	--	--	***1,250***	**1,880**	**303**	135	**407**	***634***	189
	9/21/2020	--	--	--	--	--	***9,070***	***13,300***	***2,240***	***303***	**2,890**	***4,170***	***814***
	9/9/2021	--	--	--	--	--	***5,150***	**8,790**	***1,170***	120	**1,790**	***2,250***	***455***
MW-14	6/21/2005	**LNAPL**					--	--	--	--	--	--	--
	3/17/2010	**LNAPL**					--	--	--	--	--	--	--
	11/10/2010	**LNAPL**					--	--	--	--	--	--	--
	5/16/2011	**LNAPL**					--	--	--	--	--	--	--
	11/16/2011	**LNAPL**					--	--	--	--	--	--	--
	3/6/2012	--						--					
	11/28/2012	--	--	--	--	--	**940**	**1,400**	<250	<250	**340**	**360**	<250
	4/16/2013	--											
	12/3/2013	**0.97 feet LNAPL**											
	6/10/2014	**0.02 feet LNAPL**											
	12/8/2014	**0.02 feet LNAPL**											
	6/9/2015	**0.06 feet LNAPL**											
	12/8/2015	**0.02 feet LNAPL**											
	6/30/2016	**0.03 feet LNAPL**											
	9/25/2017	--	--	--	--	--	ND	**770**	150	22	**210**	**250**	54
	10/3/2018	--	--	--	--	--	ND	**320**	54	ND	**67**	85	16[J]
	9/24/2019	--	--	--	--	--	**371**	**325**	179	25.1	**27.1**	406	68.5
	9/21/2020	--	--	--	--	--	**107**	**129**	15.4	7.0	**66.6**	20.4	7.9
	9/9/2021	--	--	--	--	--	**91.3**	**99.5**	16.5	5.1	**46.1**	23.3	6.1
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

1. "<" or ND = Not detected at or above the laboratory reporting limit.
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Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-15	6/21/2005	<1	<1	<1	<4	<10							
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
MW-17	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	**15**	<5	8.4	<3	**6**	--	--	--	--	--	--	--
	3/28/2007	**5**	<<5	3.7	<3	**7.1**	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	1.05	--	--	--	--	--	--	--
	11/10/2010	**15**	17	41	90	**91**	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	1.4	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	**2.3**	<1.0	7.1	22.1	**19.1**	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	**8.7**	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	3.0[J]	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	2.0[J]	<0.21	10.7	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	**43**	6.0	<5.0	**42**	<5.0	<5.0
	10/3/2018	--	--	--	--	--	ND	10	2.1[J]	ND	**10**	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	9/21/2020	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	9/9/2021	--	--	--	--	--	**8.9**	2.5	2.1	<0.20	2.2	0.45	<0.20
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

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TABLE 4
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SRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-19	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-20	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	Well Not Accessible/Covered by Backfill					--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<1	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
MW-24	6/21/2005	**1.43**	<1	1.13	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	2.17	--	--	--	--	--	--	--
	3/14/2010	<1	<1	<1	<4	3.47	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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123 SHIPYARD BLVD
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NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-25	6/21/2005	<1	<1	1.14	3.75	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/17/2010	**LNAPL**					--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	**13**	16	7	<5	<5	<5	5.7
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<10.5	ND	<17.0	<11.0	<9.5
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	10/3/2018	--	--	--	--	--	ND	<4.8	<4.8	ND	<4.8	<4.8	<4.8
	9/24/2019	--	--	--	--	--	<0.20	<0.20	<0.20	0.33	<0.20	<0.20	<0.20
	9/21/2020	--	--	--	--	--	0.32	0.25	0.34	<0.19	0.70	<0.19	<0.19
	9/9/2021	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-26	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	Cannot Locate											
	5/16/2011	Cannot Locate											
	11/16/2011	Cannot Locate											
	3/6/2012	Cannot Locate											
	11/28/2012	Cannot Locate											
	4/16/2013	Cannot Locate											
	12/3/2013	Cannot Locate											
	6/9/2015	Cannot Locate											
	12/8/2015	Cannot Locate											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-27	V-27+23236	<1	<1	<1	4.14	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	**87**	<50	13	68	<50	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	0.783[J]	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	1.3[J]	<0.21	<0.34	0.59[J]	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.20	<0.20	0.45	<0.20	<0.20	<0.20	<0.20
	9/21/2020	--	--	--	--	--	0.98	0.74	1.6	<0.20	0.81	0.74	<0.20
	9/9/2021	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-28R	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	Could Not Locate - Parking Lot Appears to Have Been Graded						
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-29	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
MW-30	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	Could Not Sample - Car Parked Over Well						
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	Well Not Sampled											
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	Well Not Sampled											
	10/3/2018	Well Not Sampled											
	9/24/2019	Well Not Sampled											
	9/21/2020	Well Not Sampled											
	9/9/2021	Well Not Sampled											
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

1. "<" or ND = Not detected at or above the laboratory reporting limit.
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SRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-31	3/17/2010	**LNAPL**					--	--	--	--	--	--	--
	11/10/2010	**LNAPL**					--	--	--	--	--	--	--
	5/16/2011	**LNAPL**					--	--	--	--	--	--	--
	11/16/2011	<1	<1	6.3	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	**50**	**46**	7.4	<5	**11**	9.5	<5
	11/28/2012	--	--	--	--	--	**19**	16	7.6	<5	<5	8.5	<5
	4/16/2013	--	--	--	--	--	**28**	9.5	11	<5	5.2	12	<5
	12/4/2013	<1	<1	<1	<1	**27**	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	2.5[J]	<0.21	<0.34	<0.22	3.5[J]
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	2.6[J]
	6/30/2016	--	--	--	--	--	ND	ND	<10	11	<10	<10	17
	9/25/2017	--	--	--	--	--	ND	<4.9	<4.9	<4.9	<4.9	<4.9	3.0[J]
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.39	<0.39	<0.39	8.0	<0.39	1.2	7.8
	9/21/2020	--	--	--	--	--	**11.8**	7.1	1.8	2.9	<0.95	<0.95	3.7
	9/9/2021	--	--	--	--	--	**635**	2.2	1.4	<0.20	1.10	0.49	<0.20
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
MW-32	3/17/2010	<1	<1	<1	<4	**13**	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	5.6	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	10/3/2018	--	--	--	--	--	ND	<4.8	<4.8	ND	<4.8	<4.8	<4.8
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	9/21/2020	--	--	--	--	--	0.68	0.59	2.1	<0.20	1.3	<0.20	<0.20
	9/9/2021	--	--	--	--	--	<0.19	<0.19	0.22	<0.19	<0.19	<0.19	<0.19
MW-33	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	9/21/2020	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
	9/9/2021	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
T-1	6/21/2005	<1	<1	<1	<4	<10	--	--	--	--	--	--	--
	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	Well Not Accessible/Truck Parked Over Well											
	6/30/2016	Well Not Accessible/Truck Parked Over Well											
	9/25/2017	--	--	--	--	--	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	10/3/2018	--	--	--	--	--	ND	<4.8	<4.8	ND	<4.8	<4.8	<4.8
	9/24/2019	Well Not Accessible/Truck Parked Over Well											
	9/21/2020	Well Could Not Be Located											
	9/9/2021	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

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123 SHIPYARD BLVD
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NCDEQ INCIDENT NO. 32234

Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1-Methylnaphthalene	2-Methylnapthalene	Fluorene	Fluoranthene	Naphthalene	Phenanthrene	Pyrene
Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
T-2	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/3/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	9/21/2020	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	9/9/2021	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
RW-1	3/17/2010	**LNAPL**					--	--	--	--	--	--	--
	11/10/2010	**LNAPL**					--	--	--	--	--	--	--
	5/16/2011	**LNAPL**					--	--	--	--	--	--	--
	11/16/2011	<1	<1	1.7	4.6	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	**39**	**46**	<5	<5	**6.9**	23	<5
	11/28/2012	--	--	--	--	--	**5.4**	<5	<5	<5	<5	5.8	<5
	4/16/2013	--	--	--	--	--	**5.3**	<5	9.6	<5	<5	8.1	<5
	12/4/2013	<1	<1	<1	<1	**11**	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	3.5[J]	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<5	<5	<5	<5	<5
	9/25/2017	--	--	--	--	--	ND	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
	10/3/2018	--	--	--	--	--	ND	**65**	5.0[J]	ND	**37**	4.6[J]	<10
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	9/21/2020	--	--	--	--	--	0.82	0.57	0.46	<0.20	0.82	<0.20	<0.20
	9/9/2021	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
RW-2	9/2/2009	**1.02**	<1	<1	<4	4.03	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	3.11	--	--	--	--	--	--	--
	11/10/2010	NS/Well Obstructed					--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	**8**	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/9/2014	--	--	--	--	--	ND	ND	1.6[J]	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	1.1[J]	<0.21	<0.34	<0.22	<0.19
	12/8/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	6/30/2016	--	--	--	--	--	ND	ND	<10	<10	<10	<10	<10
	9/25/2017	--	--	--	--	--	ND	2.3[J]	<4.9	<4.9	<4.9	<4.9	<4.9
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	0.42	<0.21	<0.21	0.32
	9/21/2020	--	--	--	--	--	**3.6**	0.82	2.6	<0.20	1.0	<0.20	<0.20
	9/9/2021	--	--	--	--	--	**7.0**	3.0	4.5	<0.19	1.0	<0.19	<0.19
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

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Well ID	**Sample Date**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
RW-3	5/16/2011	**LNAPL**					--	--	--	--	--	--	--
	11/16/2011	**LNAPL**					--	--	--	--	--	--	--
	3/6/2012	**0.01 feet LNAPL**											
	11/28/2012	--	--	--	--	--	**LNAPL**						
	4/16/2013	**0.23 feet LNAPL**											
	12/3/2013	**LNAPL**					--	--	--	--	--	--	--
	6/10/2014	**0.16 feet LNAPL**											
	12/8/2014	--	--	--	--	--	**LNAPL**						
	6/9/2015	--	--	--	--	--	ND	ND	25.3	<0.21	**85.0**	43.7	5.8
	12/8/2015	**0.05 feet LNAPL**											
	6/30/2016	**0.03 feet LNAPL**											
	9/25/2017	--	--	--	--	--	ND	**310**	47	<10	**120**	76	12
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	ND	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	**264**	**267**	<0.98	<0.98	**97.3**	116	<0.98
	9/21/2020	--	--	--	--	--	**150**	**61.3**	42.7	7.7	**32.4**	67.0	15.1
	9/9/2021	--	--	--	--	--	**325**	**378**	97.4	5.7	**113**	134	17.0
Gresham SW	12/14/2006	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	3/28/2007	<1	<5	<1	<3	<5	--	--	--	--	--	--	--
	9/2/2009	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	3/17/2010	<1	<1	<1	<4	<1	--	--	--	--	--	--	--
	11/10/2010	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	5/16/2011	<1	7.3	2.3	7.7	<10	--	--	--	--	--	--	--
	6/15/2011	<1	<1	<1	<3	<10	--	--	--	--	--	--	--
	11/16/2011	<1	<1	<1	<1	NA	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	11/28/2012	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	4/16/2013	--	--	--	--	--	<5	<5	<5	<5	<5	<5	<5
	12/4/2013	<1	<1	<1	<1	<10	--	--	--	--	--	--	--
	6/10/2014	<1.0	<1.0	<1.0	<3.0	<2.0	--	--	--	--	--	--	--
	12/8/2014	--	--	--	--	--	ND	ND	<0.21	ND	<0.34	<0.22	<0.19
	6/9/2015	--	--	--	--	--	ND	ND	<0.21	<0.21	<0.34	<0.22	<0.19
	12/8/2015	Well Not Sampled											
	6/30/2016	Well Not Sampled											
	9/25/2017	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND
	10/3/2018	--	--	--	--	--	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	9/24/2019	--	--	--	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	9/21/2020	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	9/9/2021	--	--	--	--	--	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
2L Standard (µg/l)		**1**	**600**	**600**	**500**	**6**	**1**	**30**	**300**	**300**	**6**	**200**	**200**
GCL (µg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**6,000**	**1,000**	**12,500**	**990**	**300**	**6,000**	**410**	**200**

Notes:

1. "<" or ND = Not detected at or above the laboratory reporting limit.
2. Concentrations are reported in micrograms per liter (ug/l) = parts per billion.
3. Concentrations in bold print equal or exceed the NCDEQ 2L Standard (2L).
4. NCDEQ = North Carolina Department of Environmental Quality.
5. GCL = Gross Contaminantion Level.
6. Gross Contamination Levels for Groundwater are referenced in the "Guidelines for Assessment and Corrective Action for UST Releases", July 2008, updated January 2010.
7. J values denotes estimated concentration by the laboratory.

TABLE 5
SUMMARY OF PRODUCT RECOVERY RESULTS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Date	Well ID	LNAPL Recovered (gallons)	Water Recovered (gallons)	Recovery Method	Comments
11/14/2006	MW-13, MW-16, MW-22 MW-3, MW-14, MW-21	423	3,482	AFVR	--
1/23/2007	MW-13, MW-16, MW-22 MW-3, MW-14, MW-21	293	4,247	AFVR	--
7/22/2009	RW-1	1.02	0.25	Hand bailed	Installed 2 socks
	MW-25	0.22	0.75	Hand bailed	Installed sock
	MW-12	0.10	0.10	Hand bailed	Installed sock
7/30/2009	RW-2	30	1,733	AFVR	--
7/30/2009	RW-2	0.133	--	Removed 100% saturated sock	Socks not reinstalled
	MW-12	0.133	--	Removed 100% saturated sock	Socks not reinstalled
	MW-14	0.133	--	Removed 100% saturated sock	Socks not reinstalled
	MW-25	0.133	--	Removed 100% saturated sock	Socks not reinstalled
10/1/2009	MW-12, MW-14, MW-25, MW-31, RW-1	1.125	3	Hand bailed	--
11/9/2009	RW-1	0.266	0	Hand bailed and installed product recovery system	--
11/18/2009	RW-1	2	0	Product skimming system	--
4/7/2010	MW-14 and MW-31	18	979	AFVR	--
12/21/2010	MW-14	120	1,462	AFVR	--
12/22/2010	MW-14 and RW-1	301	1,462	AFVR	
1/21/2011	MW-14 and RW-3	60	2,751	AFVR	--
3/8/2011	MW-14 and RW-3	32	2,388	AFVR	--
4/25/2011	MW-14, RW-1, and RW-3	35	2,209	AFVR	--

TABLE 5
SUMMARY OF PRODUCT RECOVERY RESULTS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Date	Well ID	LNAPL Recovered (gallons)	Water Recovered (gallons)	Recovery Method	Comments
5/17/2011	Sock placed in RW-1	--	--	Absorbent sock	Socks in wells MW-12 and MW-31 not 100%
6/1/2011	MW-14 and RW-3	242	1,702	AFVR	Estimated cost per gallon for recovery using AFVR technology=$20.06
7/11/2011	MW-14 and RW-3	239	2,005	AFVR	Estimated cost per gallon for recovery using AFVR technology during report period = $39.80
8/10/2011	MW-14 and RW-3	Sheen	1,702	AFVR	
10/12/2011	MW-14 and RW-3	20	1,160	AFVR	
12/7/2011	MW-14 and RW-3	Heavy Sheen	1,020	AFVR	
2/1/2012	MW-14 and RW-3	--	810	AFVR	Estimated cost per gallon for recovery using AFVR technology since Dec. 2010 = $29.54
3/6/2012	RW-1, MW-12, MW-14, and RW-3	0.532	--	Absorbent sock	
4/17/2012	MW-14	0.532	--	Absorbent sock	
4/17/2012	MW-14 and RW-3	--	1,289	AFVR	
5/31/2012	MW-14 and RW-3	--	1,344	AFVR	--
	RW-3	0.266	--	Removed two 100% saturated socks	--
	MW-14	0.0665	--	Removed one 50% saturated sock	--
6/13/2012	MW-14	0.133	--	Removed one 100% saturated sock	--
	MW-14 and RW-3	--	1,180	AFVR	--
7/18/2012	MW-14	0.133	--	Removed one 100% saturated sock	--
	MW-14 and RW-3	--	1,235	AFVR	--
8/29/2012	MW-14	0.133	--	Removed one 100% saturated sock	--
	MW-14 and RW-3	--	967	AFVR	--

TABLE 5
SUMMARY OF PRODUCT RECOVERY RESULTS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Date	Well ID	LNAPL Recovered (gallons)	Water Recovered (gallons)	Recovery Method	Comments
9/26/2012	MW-14	0.133	--	Removed one 100% saturated sock	--
	RW-3	0.266	--	Removed two 100% saturated socks	--
	MW-14 and RW-3	--	1,003	AFVR	--
10/17/2012	MW-14 and RW-3	--	1,256	AFVR	--
1/29/2013	MW-14 and RW-3	--	823	AFVR	--
3/18/2013	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
3/19/2013	MW-14 and RW-3	--	981	AFVR	--
5/15/2013	MW-14 and RW-3	--	1,734	AFVR	--
6/25/2013	MW-14 and RW-3	--	1,455	AFVR	--
	MW-12, MW-14, and RW-3	0.532	--	Removed three 100% saturated socks	--
7/23/2013	MW-14 and RW-3	--	1,380	AFVR	--
	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
7/24/2013	MW-14 and RW-3	--	2,090	AFVR	--
8/21/2013	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
8/26-27/13	MW-14 and RW-3	--	2,345	AFVR.	--
9/10/2013	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
12/3/2013	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
1/13/2014	MW-14 and RW-3	0.133	1,127	AFVR	--
1/14/2014	MW-14 and RW-3	--	1,850	AFVR	--
3/20/2014	MW-14 and RW-3	0.399	--	Removed two 100% saturated socks	--
4/24/2014	MW-14 and RW-3	0.133	2,228	AFVR	--
5/22/2014	MW-14 and RW-3	0.266	1,734	AFVR/two 100% saturated socks	--
7/24/2014	MW-14 and RW-3	0.266	2,007	AFVR/two 100% saturated socks	--
9/5/2014	MW-12	0.133	--	Removed one 100% saturated sock	--

TABLE 5
SUMMARY OF PRODUCT RECOVERY RESULTS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Date	Well ID	LNAPL Recovered (gallons)	Water Recovered (gallons)	Recovery Method	Comments
10/8/2014	MW-C, MW-12, MW-14, RW-3	--	964	AFVR	--
12/8/2014	MW-14, RW-3, and MW-3	0.399	--	Removed three 100% saturated socks	--
12/23/2014	MW-14 and RW-3	--	1,227	AFVR	--
1/21/2015	MW-14 and RW-3	--	1,317	AFVR	--
3/4/2015	MW-14 and RW-3	0.266	1,981	AFVR/two 100% saturated socks	--
4/14/2015	MW-14 and RW-3	0.266	--	Removed two 100% saturated socks	--
5/12/2015	MW-12, MW-14, MW-C, MW-E	0.532	--	Removed four 100% saturated socks	--
5/21/2015	MW-14 and RW-3	--	1,287	AFVR	--
7/8/2015	MW-14	0.133	--	Removed one 100% saturated sock	--
8/25/2015	MW-14 and RW-3	--	2,203	AFVR	--
11/10/2015	MW-14 and RW-3	--	2,510	AFVR	--
3/23/2016	MW-14 and RW-4	0.266	3,177	AFVR	--
4/13/2016	MW-14 and RW-3	--	1,825	AFVR	--
10/27/2016	MW-12, MW-14, and RW-3	0.266	2,256	AFVR	--
12/8/2016	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
2/2/2017	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
8/3/2017	MW-14 and RW-3	0.266	--	Removed two 100% saturated socks	--
9/25/2017	MW-12	0.133	--	Removed one 100% saturated sock	--
1/10/2018	MW-12 and RW-3	--	1,565	AFVR	--
2/13/2018	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
8/1/2018	MW-12 and RW-3	0.266	--	Removed two 100% saturated socks	--
11/13/2018	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
1/10/2019	MW-12	0.133	--	Removed one 100% saturated sock	--
4/12/2019	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--

TABLE 5
SUMMARY OF PRODUCT RECOVERY RESULTS

SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NEW HANOVER COUNTY, NC
NCDEQ INCIDENT NO. 32234

Date	Well ID	LNAPL Recovered (gallons)	Water Recovered (gallons)	Recovery Method	Comments
8/26/2019	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
1/21/2020	MW-12 and RW-3	0.266	--	Removed two 100% saturated socks	--
4/23/2020	MW-12, MW-14, and RW-3	--	--	Absorbent socks not changed	--
7/2/2020	MW-12, MW-14, and RW-3	0.399	--	Removed three 100% saturated socks	--
9/21/2020	MW-12, MW-14, and RW-3	--	--	Absorbent socks not changed	--
2/3/2021	MW-12, MW-14, MW-A, MW-B, MW-C, MW-D, MW-E	0.399	--	Removed seven absorbent socks - 4 deteriorated, 3 saturated; no FP measured	--
6/3/2021	MW-12, MW-14, and RW-1	0.399	--	Removed three 100% saturated socks; no FP measured	--
9/9/2021	MW-12, MW-14, MW-A, MW-B, MW-C, MW-D, MW-E	--	--	Absorbent socks not changed; no LNAPL measured	--
Cumulative Total to Date:		1,831.10	77,456.10		

Note:

1. A 1"-1.5" diameter absorbent sock can hold 0.133 gallons of product.

FIGURES



SOURCE: TERRASERVER-USA.COM. 11-2010

m 200 400 600
yds 200 400 600

ATC ASSOCIATES INC.
2725 E. Millbrook Road, Suite 121
Raleigh, NC 27604
(919) 871-0999

PROJECT NO: SPRING007

REVIEWED BY: MJ | SCALE: Above | DATE: 06/2015

FIGURE 1
SITE TOPOGRAPHIC MAP
SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BLVD
WILMINGTON, NORTH CAROLINA

NOTES:

N

0 50 100
APPROXIMATE SCALE IN FEET

LEGEND
- = TYPE II MONITORING WELL
- = TYPE III MONITORING WELL
- (W) = WATER SUPPLY WELL
- X = CHAIN-LINK FENCE

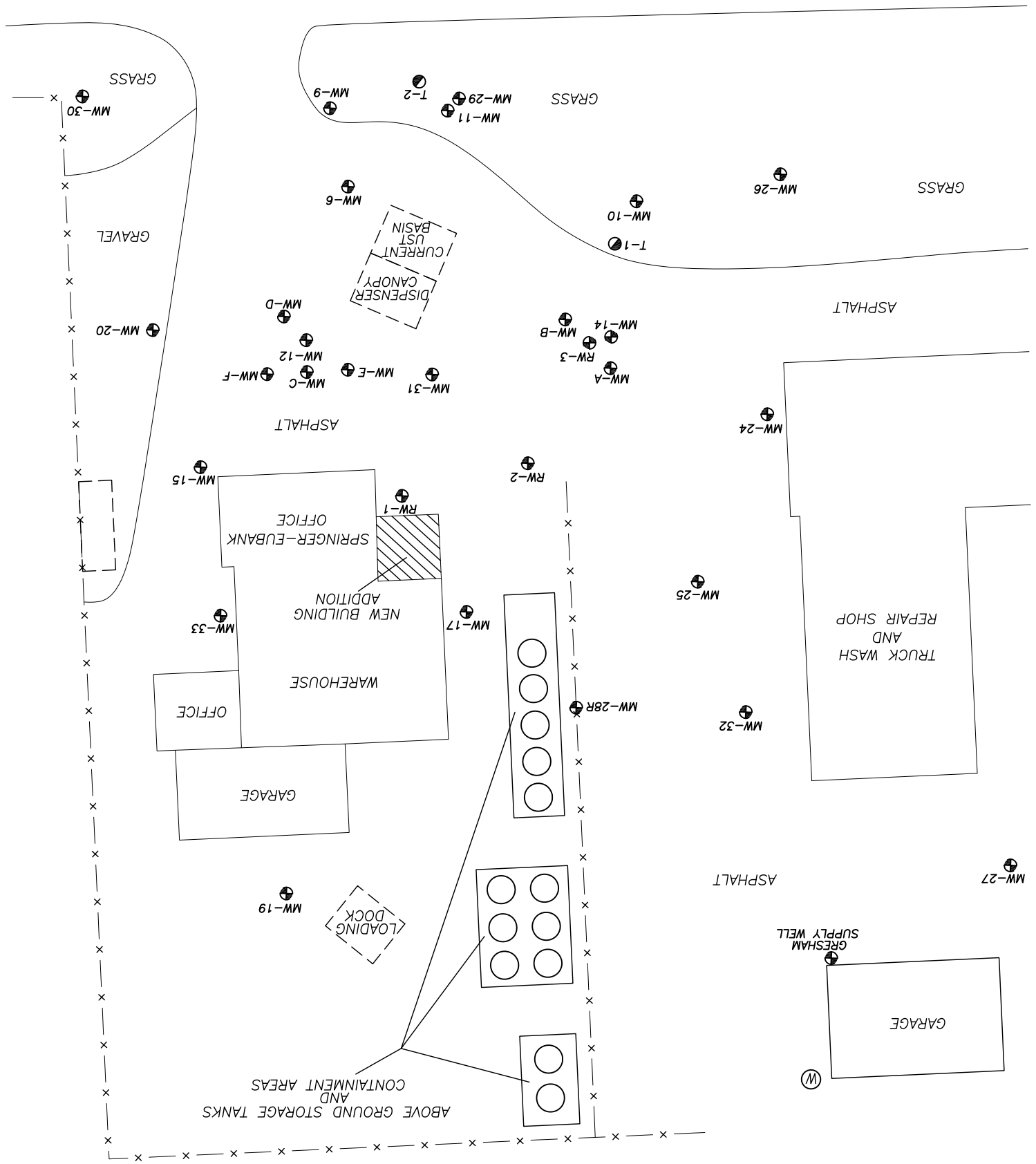
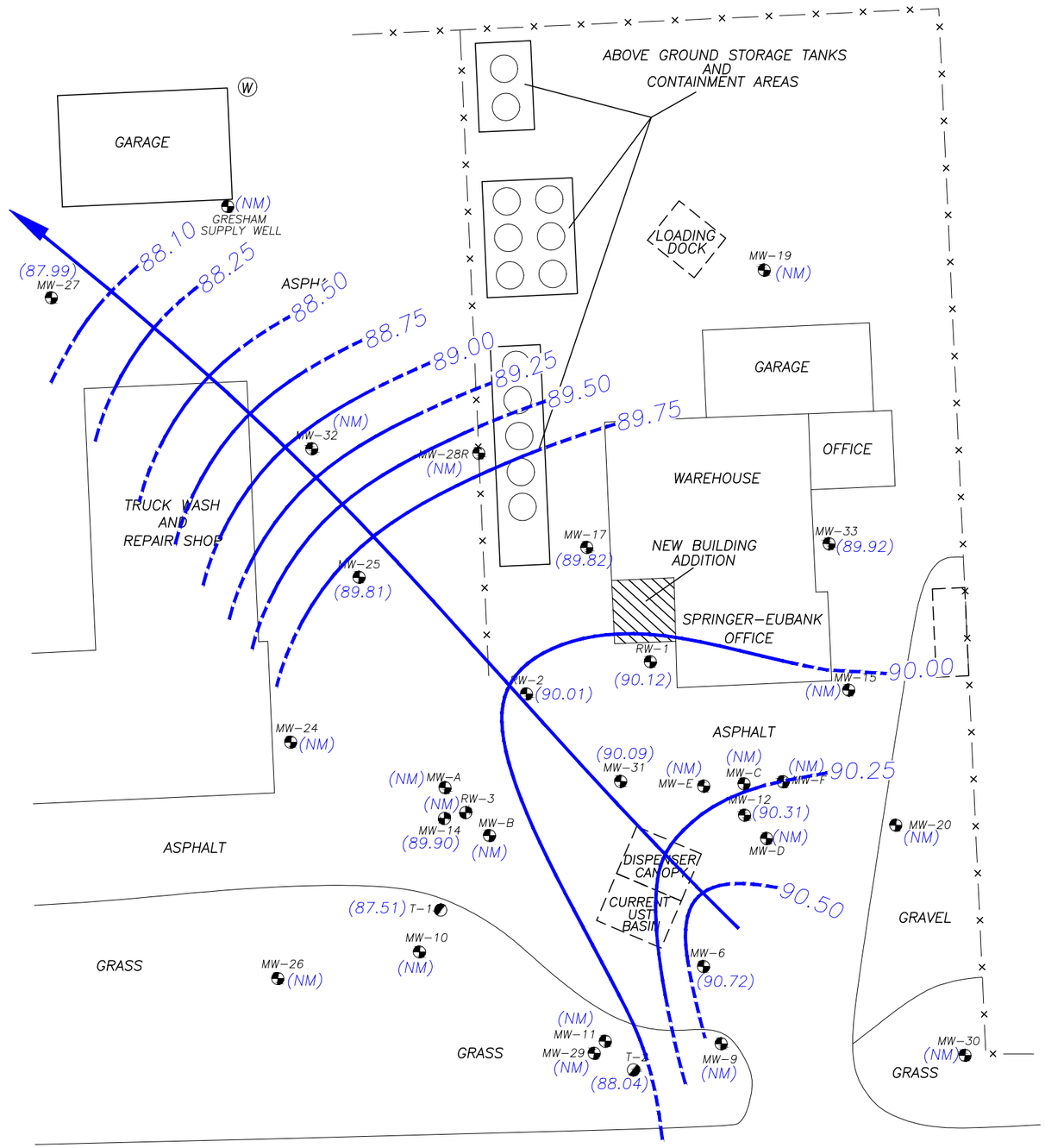


FIGURE 2
SITE MAP
SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA

ATC ASSOCIATES INC.

Project Number: SPRING007			Drn. By: LB
Drawing File:			Ckd. By:
Date: 06/26/15	Scale: AS SHOWN		App'd By: MJ
			Figure 2



LEGEND

- ● = TYPE II MONITORING WELL
- ◒ = TYPE III MONITORING WELL
- Ⓦ = WATER SUPPLY WELL
- = GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE APPROXIMATE)
- (90.92) = GROUNDWATER ELEVATION IN FEET
- = GROUNDWATER FLOW DIRECTION
- (NM) = NOT MEASURED
- —X— = CHAIN-LINK FENCE

0 50 100

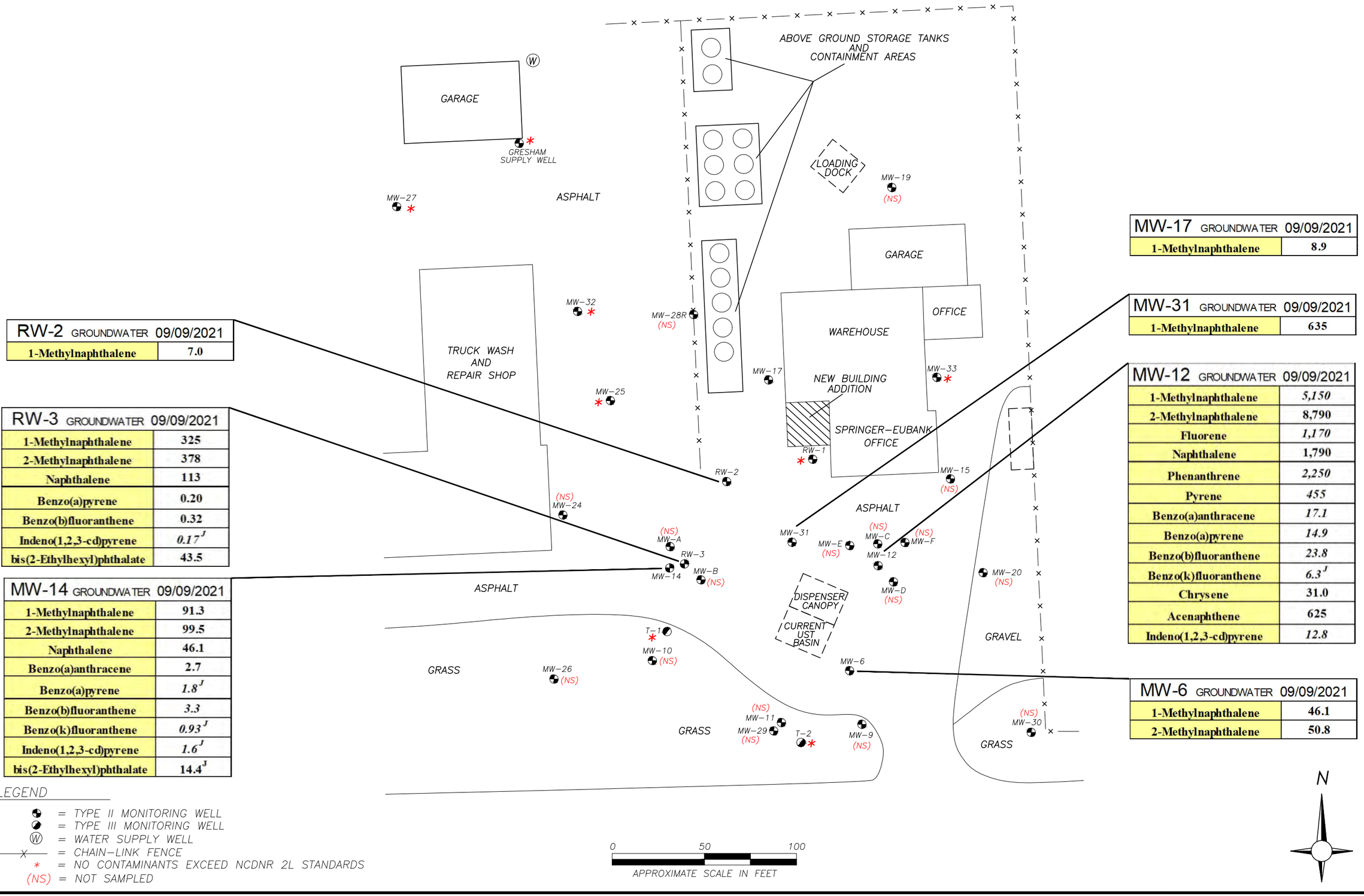
APPROXIMATE SCALE IN FEET

N

NOTES:
1. GROUNDWATER ELEVATIONS MEASURED 09/09/2021

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA

Drn. By: LB	Chkd. By:	App'd By: MJ	Figure 3
Project Number: SPRING027		Scale: AS SHOWN	
Drawing File:		Date: 10/20/2021	ATC



RW-2 GROUNDWATER 09/09/2021

1-Methylnaphthalene	7.0

RW-3 GROUNDWATER 09/09/2021

1-Methylnaphthalene	325
2-Methylnaphthalene	378
Naphthalene	113
Benzo(a)pyrene	0.20
Benzo(b)fluoranthene	0.32
Indeno(1,2,3-cd)pyrene	0.17 J
bis(2-Ethylhexyl)phthalate	43.5

MW-14 GROUNDWATER 09/09/2021

1-Methylnaphthalene	91.3
2-Methylnaphthalene	99.5
Naphthalene	46.1
Benzo(a)anthracene	2.7
Benzo(a)pyrene	1.8 J
Benzo(b)fluoranthene	3.3
Benzo(k)fluoranthene	0.93 J
Indeno(1,2,3-cd)pyrene	1.6 J
bis(2-Ethylhexyl)phthalate	14.4 J

MW-17 GROUNDWATER 09/09/2021

1-Methylnaphthalene	8.9

MW-31 GROUNDWATER 09/09/2021

1-Methylnaphthalene	635

MW-12 GROUNDWATER 09/09/2021

1-Methylnaphthalene	5,150
2-Methylnaphthalene	8,790
Fluorene	1,170
Naphthalene	1,790
Phenanthrene	2,250
Pyrene	455
Benzo(a)anthracene	17.1
Benzo(a)pyrene	14.9
Benzo(b)fluoranthene	23.8
Benzo(k)fluoranthene	6.3 J
Chrysene	31.0
Acenaphthene	625
Indeno(1,2,3-cd)pyrene	12.8

MW-6 GROUNDWATER 09/09/2021

1-Methylnaphthalene	46.1
2-Methylnaphthalene	50.8

LEGEND

- ● = TYPE II MONITORING WELL
- ◪ = TYPE III MONITORING WELL
- Ⓦ = WATER SUPPLY WELL
- —X— = CHAIN-LINK FENCE
- * = NO CONTAMINANTS EXCEED NCDNR 2L STANDARDS
- (NS) = NOT SAMPLED

NOTES:
1. GROUNDWATER SAMPLES TAKEN 09/09/2021
2. ONLY CONTAMINANTS EXCEEDING 2L STANDARD ARE SHOWN

FIGURE 4
DISSOLVED CONTAMINANTS OF CONCERN
SPRINGER-EUBANK BULK FACILITY
123 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA

Drn. By: LB | Chkd. By: | App'd By: MJ | Figure 4
Project Number: SPRING027 | Drawing File: | Scale: AS SHOWN | Date: 10/20/2021
ATC

APPENDIX A
LABORATORY ANALYTICAL RESULTS

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Atlas

Springer Bulk Plant-Wilmington, NC

Spring027

SGS Job Number: LA73738

Sampling Date: 09/09/21

Report to:

ATC Group Services LLC.
2725 East Millbrook Road Suite 121
Raleigh, NC 27604
maureen.jackson@oneatlas.com

ATTN: Maureen Jackson

Total number of pages in report: 67

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Amy Jackson 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Atlas

Job No: LA73738

Springer Bulk Plant-Wilmington, NC
Project No: Spring027

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
LA73738-1	09/09/21	11:20	FB	09/10/21	AQ	Ground Water	MW-6
LA73738-2	09/09/21	12:00	FB	09/10/21	AQ	Ground Water	MW-12
LA73738-3	09/09/21	14:30	FB	09/10/21	AQ	Ground Water	MW-14
LA73738-4	09/09/21	10:00	FB	09/10/21	AQ	Ground Water	MW-17
LA73738-5	09/09/21	17:15	FB	09/10/21	AQ	Ground Water	MW-25
LA73738-6	09/09/21	16:05	FB	09/10/21	AQ	Ground Water	MW-27
LA73738-7	09/09/21	15:05	FB	09/10/21	AQ	Ground Water	MW-31
LA73738-8	09/09/21	16:35	FB	09/10/21	AQ	Ground Water	MW-32
LA73738-9	09/09/21	09:15	FB	09/10/21	AQ	Ground Water	MW-33
LA73738-10	09/09/21	18:00	FB	09/10/21	AQ	Ground Water	T-1
LA73738-11	09/09/21	10:45	FB	09/10/21	AQ	Ground Water	T-2
LA73738-12	09/09/21	12:40	FB	09/10/21	AQ	Ground Water	RW-1

Sample Summary
(continued)

Atlas

Job No: LA73738

Springer Bulk Plant-Wilmington, NC
Project No: Spring027

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA73738-13	09/09/21	13:15	FB	09/10/21	AQ	Ground Water	RW-2
LA73738-14	09/09/21	13:55	FB	09/10/21	AQ	Ground Water	RW-3
LA73738-15	09/09/21	15:35	FB	09/10/21	AQ	Ground Water	GRESHAM WSW

Summary of Hits

Job Number: LA73738
Account: Atlas
Project: Springer Bulk Plant-Wilmington, NC
Collected: 09/09/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA73738-1	**MW-6**					
Acenaphthene		2.1	0.19	0.074	ug/l	EPA 625.1
Acenaphthylene		0.39	0.19	0.061	ug/l	EPA 625.1
Anthracene		0.31	0.19	0.082	ug/l	EPA 625.1
Dibenzofuran		2.2 J	4.7	0.13	ug/l	EPA 625.1
Fluorene		3.6	0.19	0.070	ug/l	EPA 625.1
1-Methylnaphthalene		46.1	0.19	0.16	ug/l	EPA 625.1
2-Methylnaphthalene		50.8	0.19	0.050	ug/l	EPA 625.1
Naphthalene		2.8	0.19	0.066	ug/l	EPA 625.1
Phenanthrene		3.8	0.19	0.17	ug/l	EPA 625.1
Pyrene		0.24	0.19	0.16	ug/l	EPA 625.1
Total TIC, Semi-Volatile		164 J			ug/l	
LA73738-2	**MW-12**					
Acenaphthene		625	9.5	3.7	ug/l	EPA 625.1
Acenaphthylene		125	9.5	3.1	ug/l	EPA 625.1
Anthracene		428	9.5	4.1	ug/l	EPA 625.1
Benzo(a)anthracene		17.1	9.5	2.6	ug/l	EPA 625.1
Benzo(a)pyrene		14.9	9.5	2.6	ug/l	EPA 625.1
Benzo(b)fluoranthene		23.8	9.5	2.4	ug/l	EPA 625.1
Benzo(g,h,i)perylene		17.6	9.5	2.6	ug/l	EPA 625.1
Benzo(k)fluoranthene		6.3 J	9.5	2.3	ug/l	EPA 625.1
Chrysene		31.0	9.5	3.1	ug/l	EPA 625.1
Fluoranthene		120	47	39	ug/l	EPA 625.1
Fluorene		1170	9.5	3.5	ug/l	EPA 625.1
Indeno(1,2,3-cd)pyrene		12.8	9.5	2.6	ug/l	EPA 625.1
1-Methylnaphthalene		5150	9.5	7.9	ug/l	EPA 625.1
2-Methylnaphthalene		8790	47	12	ug/l	EPA 625.1
Naphthalene		1790	9.5	3.3	ug/l	EPA 625.1
Phenanthrene		2250	9.5	8.7	ug/l	EPA 625.1
Pyrene		455	47	40	ug/l	EPA 625.1
Total TIC, Semi-Volatile		93900 J			ug/l	
LA73738-3	**MW-14**					
Acenaphthene		8.0	1.9	0.75	ug/l	EPA 625.1
Acenaphthylene		1.8 J	1.9	0.62	ug/l	EPA 625.1
Anthracene		4.7	1.9	0.82	ug/l	EPA 625.1
Benzo(a)anthracene		2.7	1.9	0.53	ug/l	EPA 625.1
Benzo(a)pyrene		1.8 J	1.9	0.52	ug/l	EPA 625.1
Benzo(b)fluoranthene		3.3	1.9	0.48	ug/l	EPA 625.1
Benzo(g,h,i)perylene		2.0	1.9	0.53	ug/l	EPA 625.1
Benzo(k)fluoranthene		0.93 J	1.9	0.46	ug/l	EPA 625.1

Summary of Hits

Job Number: LA73738
Account: Atlas
Project: Springer Bulk Plant-Wilmington, NC
Collected: 09/09/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chrysene		2.0	1.9	0.62	ug/l	EPA 625.1
Dibenzofuran		6.0 J	47	1.3	ug/l	EPA 625.1
bis(2-Ethylhexyl)phthalate		14.4 J	47	1.6	ug/l	EPA 625.1
Fluoranthene		5.1	1.9	1.6	ug/l	EPA 625.1
Fluorene		16.5	1.9	0.70	ug/l	EPA 625.1
Indeno(1,2,3-cd)pyrene		1.6 J	1.9	0.52	ug/l	EPA 625.1
1-Methylnaphthalene		91.3	1.9	1.6	ug/l	EPA 625.1
2-Methylnaphthalene		99.5	1.9	0.50	ug/l	EPA 625.1
Naphthalene		46.1	1.9	0.67	ug/l	EPA 625.1
Phenanthrene		23.3	1.9	1.7	ug/l	EPA 625.1
Pyrene		6.1	1.9	1.6	ug/l	EPA 625.1
Total TIC, Semi-Volatile		2560 J			ug/l	
LA73738-4	**MW-17**					
Acenaphthene		1.5	0.20	0.079	ug/l	EPA 625.1
Dibenzofuran		0.84 J	5.0	0.13	ug/l	EPA 625.1
Fluorene		2.1	0.20	0.074	ug/l	EPA 625.1
1-Methylnaphthalene		8.9	0.20	0.17	ug/l	EPA 625.1
2-Methylnaphthalene		2.5	0.20	0.052	ug/l	EPA 625.1
Naphthalene		2.2	0.20	0.070	ug/l	EPA 625.1
Phenanthrene		0.45	0.20	0.18	ug/l	EPA 625.1
Total TIC, Semi-Volatile		188.6 J			ug/l	
LA73738-5	**MW-25**					
Total TIC, Semi-Volatile		23.2 J			ug/l	
LA73738-6	**MW-27**					
bis(2-Ethylhexyl)phthalate		1.1 J	4.9	0.17	ug/l	EPA 625.1
Total TIC, Semi-Volatile		15.9 J			ug/l	
LA73738-7	**MW-31**					
Acenaphthene		0.84	0.20	0.077	ug/l	EPA 625.1
Dibenzofuran		0.44 J	4.9	0.13	ug/l	EPA 625.1
Fluorene		1.4	0.20	0.073	ug/l	EPA 625.1
1-Methylnaphthalene		3.2	0.20	0.16	ug/l	EPA 625.1
2-Methylnaphthalene		2.2	0.20	0.051	ug/l	EPA 625.1
Naphthalene		1.1	0.20	0.069	ug/l	EPA 625.1
Phenanthrene		0.49	0.20	0.18	ug/l	EPA 625.1
Total TIC, Semi-Volatile		85.1 J			ug/l	

Summary of Hits

Job Number: LA73738
Account: Atlas
Project: Springer Bulk Plant-Wilmington, NC
Collected: 09/09/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA73738-8	**MW-32**					
Acenaphthene		0.40	0.19	0.076	ug/l	EPA 625.1
Fluorene		0.22	0.19	0.071	ug/l	EPA 625.1
Total TIC, Semi-Volatile		26.7 J			ug/l	
LA73738-9	**MW-33**					
Total TIC, Semi-Volatile		46 J			ug/l	
LA73738-10	**T-1**					
bis(2-Ethylhexyl)phthalate		1.1 J	4.7	0.16	ug/l	EPA 625.1
Total TIC, Semi-Volatile		14.4 J			ug/l	
LA73738-11	**T-2**					
Total TIC, Semi-Volatile		41.4 J			ug/l	
LA73738-12	**RW-1**					
Total TIC, Semi-Volatile		250 J			ug/l	
LA73738-13	**RW-2**					
Acenaphthene		2.3	0.19	0.076	ug/l	EPA 625.1
Acenaphthylene		0.40	0.19	0.062	ug/l	EPA 625.1
Dibenzofuran		0.95 J	4.8	0.13	ug/l	EPA 625.1
1,2-Diphenylhydrazine		5.8	4.8	0.16	ug/l	EPA 625.1
Fluorene		4.5	0.19	0.071	ug/l	EPA 625.1
1-Methylnaphthalene		7.0	0.19	0.16	ug/l	EPA 625.1
2-Methylnaphthalene		3.0	0.19	0.050	ug/l	EPA 625.1
Naphthalene		1.0	0.19	0.067	ug/l	EPA 625.1
Total TIC, Semi-Volatile		132.6 J			ug/l	
LA73738-14	**RW-3**					
Benzo(a)pyrene		0.20	0.19	0.052	ug/l	EPA 625.1
Benzo(b)fluoranthene		0.32	0.19	0.048	ug/l	EPA 625.1
Benzo(g,h,i)perylene		0.19	0.19	0.053	ug/l	EPA 625.1
Benzo(k)fluoranthene		0.097 J	0.19	0.046	ug/l	EPA 625.1
Di-n-octyl Phthalate		3.2 J	4.7	0.12	ug/l	EPA 625.1
bis(2-Ethylhexyl)phthalate		43.5	4.7	0.16	ug/l	EPA 625.1
Fluoranthene		5.7	1.9	1.6	ug/l	EPA 625.1
Fluorene		97.4	0.19	0.071	ug/l	EPA 625.1

Summary of Hits

Job Number: LA73738
Account: Atlas
Project: Springer Bulk Plant-Wilmington, NC
Collected: 09/09/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Indeno(1,2,3-cd)pyrene		0.17 J	0.19	0.052	ug/l	EPA 625.1
1-Methylnaphthalene		325	1.9	1.6	ug/l	EPA 625.1
2-Methylnaphthalene		378	1.9	0.50	ug/l	EPA 625.1
Naphthalene		113	0.19	0.067	ug/l	EPA 625.1
Phenanthrene		134	1.9	1.7	ug/l	EPA 625.1
Pyrene		17.0	1.9	1.6	ug/l	EPA 625.1
Total TIC, Semi-Volatile		736 J			ug/l	
LA73738-15	**GRESHAM WSW**					
Total TIC, Semi-Volatile		43.4 J			ug/l	

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	LA73738-1	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076785.D	1	09/14/21 14:14	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.7	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.7	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.7	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.7	0.77	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.71	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.4	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.7	0.25	ug/l	
	3&4-Methylphenol	ND	4.7	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.7	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.4	0.22	ug/l	
108-95-2	Phenol	ND	4.7	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.22	ug/l	
83-32-9	Acenaphthene	2.1	0.19	0.074	ug/l	
208-96-8	Acenaphthylene	0.39	0.19	0.061	ug/l	
120-12-7	Anthracene	0.31	0.19	0.082	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.052	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.052	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.052	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.046	ug/l	
100-51-6	Benzyl Alcohol	ND	9.4	0.16	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.7	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.7	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.7	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.7	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.062	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	LA73738-1	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	2.2	4.7	0.13	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.4	0.46	ug/l	
84-66-2	Diethyl Phthalate	ND	4.7	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.7	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.7	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.7	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.7	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.7	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	3.6	0.19	0.070	ug/l	
118-74-1	Hexachlorobenzene	ND	4.7	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.7	0.065	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.4	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.7	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.7	0.13	ug/l	
90-12-0	1-Methylnaphthalene	46.1	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	50.8	0.19	0.050	ug/l	
91-20-3	Naphthalene	2.8	0.19	0.066	ug/l	
98-95-3	Nitrobenzene	ND	4.7	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.7	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.7	0.64	ug/l	
85-01-8	Phenanthrene	3.8	0.19	0.17	ug/l	
129-00-0	Pyrene	0.24	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		20-75%
4165-62-2	Phenol-d5	27%		10-60%
118-79-6	2,4,6-Tribromophenol	88%		38-138%
4165-60-0	Nitrobenzene-d5	73%		44-132%
321-60-8	2-Fluorobiphenyl	66%		40-119%
1718-51-0	Terphenyl-d14	82%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	LA73738-1	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
611-14-3	Benzene, 1-ethyl-2-methyl-	4.70	18	ug/l	JN
99-87-6	Benzene, 1-methyl-4-(1-methylethyl	5.09	15	ug/l	JN
933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	5.19	12	ug/l	JN
99-87-6	Benzene, 1-methyl-4-(1-methylethyl	5.57	26	ug/l	JN
581-42-0	Naphthalene, 2,6-dimethyl-	6.72	23	ug/l	JN
575-41-7	Naphthalene, 1,3-dimethyl-	6.86	19	ug/l	JN
2131-42-2	Naphthalene, 1,4,6-trimethyl-	7.25	11	ug/l	JN
829-26-5	Naphthalene, 2,3,6-trimethyl-	7.31	13	ug/l	JN
55045-11-9	Tridecane, 5-propyl-	7.66	16	ug/l	JN
630-02-4	Octacosane	8.26	11	ug/l	JN
	Total TIC, Semi-Volatile		164	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	LA73738-2	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076786.D	10	09/14/21 14:36	AA	09/14/21 07:30	OP19260	EF2660
Run #2	F0076821.D	50	09/15/21 11:24	BH	09/14/21 07:30	OP19260	EF2661

	Initial Volume	Final Volume
Run #1	1060 ml	5.0 ml
Run #2	1060 ml	5.0 ml

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	96	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	240	5.9	ug/l	
95-57-8	2-Chlorophenol	ND	240	7.1	ug/l	
120-83-2	2,4-Dichlorophenol	ND	240	7.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	240	39	ug/l	
51-28-5	2,4-Dinitrophenol	ND	950	36	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	470	6.8	ug/l	
95-48-7	2-Methylphenol	ND	240	13	ug/l	
	3&4-Methylphenol	ND	240	8.6	ug/l	
88-75-5	2-Nitrophenol	ND	240	11	ug/l	
100-02-7	4-Nitrophenol	ND	1200	7.0	ug/l	
87-86-5	Pentachlorophenol	ND	470	11	ug/l	
108-95-2	Phenol	ND	240	6.8	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	240	11	ug/l	
83-32-9	Acenaphthene	625	9.5	3.7	ug/l	
208-96-8	Acenaphthylene	125	9.5	3.1	ug/l	
120-12-7	Anthracene	428	9.5	4.1	ug/l	
56-55-3	Benzo(a)anthracene	17.1	9.5	2.6	ug/l	
50-32-8	Benzo(a)pyrene	14.9	9.5	2.6	ug/l	
205-99-2	Benzo(b)fluoranthene	23.8	9.5	2.4	ug/l	
191-24-2	Benzo(g,h,i)perylene	17.6	9.5	2.6	ug/l	
207-08-9	Benzo(k)fluoranthene	6.3	9.5	2.3	ug/l	J
100-51-6	Benzyl Alcohol	ND	470	8.3	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	240	6.0	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	240	6.0	ug/l	
106-47-8	4-Chloroaniline	ND	240	32	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	7.2	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	240	8.4	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	240	18	ug/l	
91-58-7	2-Chloronaphthalene	ND	240	6.7	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	240	5.9	ug/l	
218-01-9	Chrysene	31.0	9.5	3.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	LA73738-2	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	9.5	3.2	ug/l	
132-64-9	Dibenzofuran	ND	240	6.4	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	240	7.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	240	11	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	240	8.7	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	470	23	ug/l	
84-66-2	Diethyl Phthalate	ND	240	7.9	ug/l	
131-11-3	Dimethyl Phthalate	ND	240	5.3	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	240	6.2	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	240	6.2	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	240	8.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	8.0	ug/l	
206-44-0	Fluoranthene	120 [a]	47	39	ug/l	
86-73-7	Fluorene	1170	9.5	3.5	ug/l	
118-74-1	Hexachlorobenzene	ND	240	8.6	ug/l	
87-68-3	Hexachlorobutadiene	ND	240	3.3	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	470	9.6	ug/l	
67-72-1	Hexachloroethane	ND	240	11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	12.8	9.5	2.6	ug/l	
78-59-1	Isophorone	ND	240	6.5	ug/l	
90-12-0	1-Methylnaphthalene	5150	9.5	7.9	ug/l	
91-57-6	2-Methylnaphthalene	8790 [a]	47	12	ug/l	
91-20-3	Naphthalene	1790	9.5	3.3	ug/l	
98-95-3	Nitrobenzene	ND	240	6.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	6.6	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	240	32	ug/l	
85-01-8	Phenanthrene	2250	9.5	8.7	ug/l	
129-00-0	Pyrene	455 [a]	47	40	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	240	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%	56%	20-75%
4165-62-2	Phenol-d5	65% [b]	85% [b]	10-60%
118-79-6	2,4,6-Tribromophenol	99%	106%	38-138%
4165-60-0	Nitrobenzene-d5	587% [b]	674% [b]	44-132%
321-60-8	2-Fluorobiphenyl	94%	142% [b]	40-119%
1718-51-0	Terphenyl-d14	99%	118%	40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	LA73738-2	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	5.48	6000	ug/l	J
767-58-8	Indan, 1-methyl-	5.58	8200	ug/l	JN
3877-19-8	Naphthalene, 1,2,3,4-tetrahydro-2-	5.90	11000	ug/l	JN
	unknown	5.96	5600	ug/l	J
17301-23-4	Undecane, 2,6-dimethyl-	6.06	10000	ug/l	JN
1680-51-9	Naphthalene, 1,2,3,4-tetrahydro-6-	6.13	8100	ug/l	JN
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl	7.70	7600	ug/l	JN
544-76-3	Hexadecane	8.32	23000	ug/l	JN
3674-66-6	Phenanthrene, 2,5-dimethyl-	9.04	8800	ug/l	JN
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	9.83	5600	ug/l	JN
	Total TIC, Semi-Volatile		93900	ug/l	J

(a) Result is from Run# 2
(b) Outside control limits due to dilution.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	LA73738-3	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076787.D	10	09/14/21 14:57	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	190	19	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	47	1.2	ug/l	
95-57-8	2-Chlorophenol	ND	47	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	47	1.5	ug/l	
105-67-9	2,4-Dimethylphenol	ND	47	7.7	ug/l	
51-28-5	2,4-Dinitrophenol	ND	190	7.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	94	1.4	ug/l	
95-48-7	2-Methylphenol	ND	47	2.5	ug/l	
	3&4-Methylphenol	ND	47	1.7	ug/l	
88-75-5	2-Nitrophenol	ND	47	2.1	ug/l	
100-02-7	4-Nitrophenol	ND	240	1.4	ug/l	
87-86-5	Pentachlorophenol	ND	94	2.2	ug/l	
108-95-2	Phenol	ND	47	1.4	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	47	2.2	ug/l	
83-32-9	Acenaphthene	8.0	1.9	0.75	ug/l	
208-96-8	Acenaphthylene	1.8	1.9	0.62	ug/l	J
120-12-7	Anthracene	4.7	1.9	0.82	ug/l	
56-55-3	Benzo(a)anthracene	2.7	1.9	0.53	ug/l	
50-32-8	Benzo(a)pyrene	1.8	1.9	0.52	ug/l	J
205-99-2	Benzo(b)fluoranthene	3.3	1.9	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	2.0	1.9	0.53	ug/l	
207-08-9	Benzo(k)fluoranthene	0.93	1.9	0.46	ug/l	J
100-51-6	Benzyl Alcohol	ND	94	1.6	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	47	1.2	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	47	1.2	ug/l	
106-47-8	4-Chloroaniline	ND	47	6.3	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	47	1.4	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	47	1.7	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	47	3.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	47	1.3	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	47	1.2	ug/l	
218-01-9	Chrysene	2.0	1.9	0.62	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	LA73738-3	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	1.9	0.64	ug/l	
132-64-9	Dibenzofuran	6.0	47	1.3	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	47	1.4	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	47	2.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	47	1.7	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	94	4.6	ug/l	
84-66-2	Diethyl Phthalate	ND	47	1.6	ug/l	
131-11-3	Dimethyl Phthalate	ND	47	1.1	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	47	1.2	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	47	1.2	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	47	1.6	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	14.4	47	1.6	ug/l	J
206-44-0	Fluoranthene	5.1	1.9	1.6	ug/l	
86-73-7	Fluorene	16.5	1.9	0.70	ug/l	
118-74-1	Hexachlorobenzene	ND	47	1.7	ug/l	
87-68-3	Hexachlorobutadiene	ND	47	0.65	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	94	1.9	ug/l	
67-72-1	Hexachloroethane	ND	47	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	1.6	1.9	0.52	ug/l	J
78-59-1	Isophorone	ND	47	1.3	ug/l	
90-12-0	1-Methylnaphthalene	91.3	1.9	1.6	ug/l	
91-57-6	2-Methylnaphthalene	99.5	1.9	0.50	ug/l	
91-20-3	Naphthalene	46.1	1.9	0.67	ug/l	
98-95-3	Nitrobenzene	ND	47	1.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	47	1.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	47	6.5	ug/l	
85-01-8	Phenanthrene	23.3	1.9	1.7	ug/l	
129-00-0	Pyrene	6.1	1.9	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	47	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		20-75%
4165-62-2	Phenol-d5	28%		10-60%
118-79-6	2,4,6-Tribromophenol	92%		38-138%
4165-60-0	Nitrobenzene-d5	92%		44-132%
321-60-8	2-Fluorobiphenyl	81%		40-119%
1718-51-0	Terphenyl-d14	87%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	LA73738-3	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
575-37-1	Naphthalene, 1,7-dimethyl-	6.72	180	ug/l	JN
	unknown	6.79	240	ug/l	J
571-58-4	Naphthalene, 1,4-dimethyl-	6.86	170	ug/l	JN
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl	7.66	260	ug/l	JN
	unknown	7.84	180	ug/l	J
	unknown	7.90	260	ug/l	J
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	8.00	280	ug/l	JN
55045-10-8	Tridecane, 6-propyl-	8.26	220	ug/l	JN
	unknown	8.38	290	ug/l	J
613-12-7	Anthracene, 2-methyl-	8.59	480	ug/l	JN
	Total TIC, Semi-Volatile		2560	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17		
Lab Sample ID:	LA73738-4	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076788.D	1	09/14/21 15:19	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	2.0	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	5.0	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.15	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.16	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.81	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.75	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.14	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.27	ug/l	
	3&4-Methylphenol	ND	5.0	0.18	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.22	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.15	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.23	ug/l	
108-95-2	Phenol	ND	5.0	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.23	ug/l	
83-32-9	Acenaphthene	1.5	0.20	0.079	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.065	ug/l	
120-12-7	Anthracene	ND	0.20	0.086	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.055	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.055	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.051	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.055	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.048	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	5.0	0.13	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	0.13	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.15	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.18	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	0.38	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.14	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	5.0	0.12	ug/l	
218-01-9	Chrysene	ND	0.20	0.065	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17		
Lab Sample ID:	LA73738-4	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.067	ug/l	
132-64-9	Dibenzofuran	0.84	5.0	0.13	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	0.48	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	0.17	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	5.0	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	0.13	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.17	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	0.17	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.16	ug/l	
86-73-7	Fluorene	2.1	0.20	0.074	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.068	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.20	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.055	ug/l	
78-59-1	Isophorone	ND	5.0	0.14	ug/l	
90-12-0	1-Methylnaphthalene	8.9	0.20	0.17	ug/l	
91-57-6	2-Methylnaphthalene	2.5	0.20	0.052	ug/l	
91-20-3	Naphthalene	2.2	0.20	0.070	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.14	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.68	ug/l	
85-01-8	Phenanthrene	0.45	0.20	0.18	ug/l	
129-00-0	Pyrene	ND	0.20	0.17	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		20-75%
4165-62-2	Phenol-d5	30%		10-60%
118-79-6	2,4,6-Tribromophenol	92%		38-138%
4165-60-0	Nitrobenzene-d5	81%		44-132%
321-60-8	2-Fluorobiphenyl	70%		40-119%
1718-51-0	Terphenyl-d14	82%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17		
Lab Sample ID:	LA73738-4	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.50	8.6	ug/l	J
496-11-7	Indane	5.02	22	ug/l	JN
2039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	5.57	13	ug/l	JN
1559-81-5	Naphthalene, 1,2,3,4-tetrahydro-1-	5.93	10	ug/l	JN
	unknown	6.42	20	ug/l	J
	unknown	6.72	13	ug/l	J
14944-23-1	1(2H)-Naphthalenone, 3,4-dihydro-3	6.78	22	ug/l	JN
	unknown	6.85	16	ug/l	J
	unknown	7.25	46	ug/l	J
	unknown	7.35	18	ug/l	J
	Total TIC, Semi-Volatile		188.6	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-25		
Lab Sample ID:	LA73738-5	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076789.D	1	09/14/21 15:40	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	2.0	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.9	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.15	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.9	0.16	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.80	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.75	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.9	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.9	0.26	ug/l	
	3&4-Methylphenol	ND	4.9	0.18	ug/l	
88-75-5	2-Nitrophenol	ND	4.9	0.22	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.9	0.23	ug/l	
108-95-2	Phenol	ND	4.9	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.9	0.23	ug/l	
83-32-9	Acenaphthene	ND	0.20	0.078	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.064	ug/l	
120-12-7	Anthracene	ND	0.20	0.086	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.055	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.054	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.055	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.048	ug/l	
100-51-6	Benzyl Alcohol	ND	9.9	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.9	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.9	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.15	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.9	0.37	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.9	0.14	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
218-01-9	Chrysene	ND	0.20	0.065	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-25		
Lab Sample ID:	LA73738-5	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.067	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.9	0.18	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.9	0.48	ug/l	
84-66-2	Diethyl Phthalate	ND	4.9	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.9	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.9	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.9	0.13	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.9	0.17	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	0.17	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.16	ug/l	
86-73-7	Fluorene	ND	0.20	0.073	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.068	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.9	0.20	ug/l	
67-72-1	Hexachloroethane	ND	4.9	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.054	ug/l	
78-59-1	Isophorone	ND	4.9	0.14	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.052	ug/l	
91-20-3	Naphthalene	ND	0.20	0.069	ug/l	
98-95-3	Nitrobenzene	ND	4.9	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.9	0.14	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.9	0.67	ug/l	
85-01-8	Phenanthrene	ND	0.20	0.18	ug/l	
129-00-0	Pyrene	ND	0.20	0.17	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		20-75%
4165-62-2	Phenol-d5	32%		10-60%
118-79-6	2,4,6-Tribromophenol	94%		38-138%
4165-60-0	Nitrobenzene-d5	83%		44-132%
321-60-8	2-Fluorobiphenyl	75%		40-119%
1718-51-0	Terphenyl-d14	86%		40-127%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-25		
Lab Sample ID:	LA73738-5	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.36	7.9	ug/l	J
	unknown	4.50	6.7	ug/l	J
	unknown	14.39	8.6	ug/l	J
	Total TIC, Semi-Volatile		23.2	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-27		
Lab Sample ID:	LA73738-6	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076790.D	1	09/14/21 16:02	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	2.0	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.9	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.15	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.9	0.16	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.80	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.75	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.9	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.9	0.26	ug/l	
	3&4-Methylphenol	ND	4.9	0.18	ug/l	
88-75-5	2-Nitrophenol	ND	4.9	0.22	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.9	0.23	ug/l	
108-95-2	Phenol	ND	4.9	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.9	0.23	ug/l	
83-32-9	Acenaphthene	ND	0.20	0.078	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.064	ug/l	
120-12-7	Anthracene	ND	0.20	0.086	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.055	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.054	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.055	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.048	ug/l	
100-51-6	Benzyl Alcohol	ND	9.9	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.9	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.9	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.15	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.9	0.37	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.9	0.14	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
218-01-9	Chrysene	ND	0.20	0.065	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-27		
Lab Sample ID:	LA73738-6	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.067	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.9	0.18	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.9	0.48	ug/l	
84-66-2	Diethyl Phthalate	ND	4.9	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.9	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.9	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.9	0.13	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.9	0.17	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	4.9	0.17	ug/l	J
206-44-0	Fluoranthene	ND	0.20	0.16	ug/l	
86-73-7	Fluorene	ND	0.20	0.073	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.068	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.9	0.20	ug/l	
67-72-1	Hexachloroethane	ND	4.9	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.054	ug/l	
78-59-1	Isophorone	ND	4.9	0.14	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.052	ug/l	
91-20-3	Naphthalene	ND	0.20	0.069	ug/l	
98-95-3	Nitrobenzene	ND	4.9	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.9	0.14	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.9	0.67	ug/l	
85-01-8	Phenanthrene	ND	0.20	0.18	ug/l	
129-00-0	Pyrene	ND	0.20	0.17	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		20-75%
4165-62-2	Phenol-d5	31%		10-60%
118-79-6	2,4,6-Tribromophenol	90%		38-138%
4165-60-0	Nitrobenzene-d5	80%		44-132%
321-60-8	2-Fluorobiphenyl	72%		40-119%
1718-51-0	Terphenyl-d14	85%		40-127%

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-27		
Lab Sample ID:	LA73738-6	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.35	7	ug/l	J
	unknown	4.50	8.9	ug/l	J
	Total TIC, Semi-Volatile		15.9	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-31		
Lab Sample ID:	LA73738-7	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076791.D	1	09/14/21 16:24	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	2.0	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.9	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.15	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.9	0.16	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.79	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.74	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.9	0.26	ug/l	
	3&4-Methylphenol	ND	4.9	0.18	ug/l	
88-75-5	2-Nitrophenol	ND	4.9	0.22	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.8	0.22	ug/l	
108-95-2	Phenol	ND	4.9	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.9	0.22	ug/l	
83-32-9	Acenaphthene	0.84	0.20	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.064	ug/l	
120-12-7	Anthracene	ND	0.20	0.085	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.054	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.054	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.048	ug/l	
100-51-6	Benzyl Alcohol	ND	9.8	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.9	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.9	0.65	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.15	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.9	0.37	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.9	0.14	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.9	0.12	ug/l	
218-01-9	Chrysene	ND	0.20	0.064	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-31		
Lab Sample ID:	LA73738-7	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.066	ug/l	
132-64-9	Dibenzofuran	0.44	4.9	0.13	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.9	0.18	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.8	0.48	ug/l	
84-66-2	Diethyl Phthalate	ND	4.9	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.9	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.9	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.9	0.13	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.9	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.16	ug/l	
86-73-7	Fluorene	1.4	0.20	0.073	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.067	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.8	0.20	ug/l	
67-72-1	Hexachloroethane	ND	4.9	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.054	ug/l	
78-59-1	Isophorone	ND	4.9	0.13	ug/l	
90-12-0	1-Methylnaphthalene	3.2	0.20	0.16	ug/l	
91-57-6	2-Methylnaphthalene	2.2	0.20	0.051	ug/l	
91-20-3	Naphthalene	1.1	0.20	0.069	ug/l	
98-95-3	Nitrobenzene	ND	4.9	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.9	0.14	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.9	0.67	ug/l	
85-01-8	Phenanthrene	0.49	0.20	0.18	ug/l	
129-00-0	Pyrene	ND	0.20	0.17	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		20-75%
4165-62-2	Phenol-d5	34%		10-60%
118-79-6	2,4,6-Tribromophenol	99%		38-138%
4165-60-0	Nitrobenzene-d5	83%		44-132%
321-60-8	2-Fluorobiphenyl	76%		40-119%
1718-51-0	Terphenyl-d14	89%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-31		
Lab Sample ID:	LA73738-7	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.36	7.5	ug/l	J
13151-05-8	1-Heptene, 4-methyl-	4.50	6.4	ug/l	JN
14944-23-1	1(2H)-Naphthalenone, 3,4-dihydro-3	6.78	17	ug/l	JN
475-03-6	Naphthalene, 1,2,3,4-tetrahydro-1,	7.25	8.1	ug/l	JN
	unknown	7.28	6.5	ug/l	J
	unknown	7.73	6.5	ug/l	J
	unknown	7.84	6.9	ug/l	J
548-39-0	1H-Phenalen-1-one	8.56	11	ug/l	JN
	unknown	13.82	5.2	ug/l	J
	unknown	15.43	10	ug/l	J
	Total TIC, Semi-Volatile		85.1	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-32		
Lab Sample ID:	LA73738-8	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076792.D	1	09/14/21 16:45	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.8	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.78	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.26	ug/l	
	3&4-Methylphenol	ND	4.8	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.6	0.22	ug/l	
108-95-2	Phenol	ND	4.8	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.22	ug/l	
83-32-9	Acenaphthene	0.40	0.19	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.053	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.047	ug/l	
100-51-6	Benzyl Alcohol	ND	9.6	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.8	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.8	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.063	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-32		
Lab Sample ID:	LA73738-8	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.065	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.47	ug/l	
84-66-2	Diethyl Phthalate	ND	4.8	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.8	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.8	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.8	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	0.22	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.066	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.053	ug/l	
78-59-1	Isophorone	ND	4.8	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.66	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.18	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		20-75%
4165-62-2	Phenol-d5	29%		10-60%
118-79-6	2,4,6-Tribromophenol	89%		38-138%
4165-60-0	Nitrobenzene-d5	80%		44-132%
321-60-8	2-Fluorobiphenyl	71%		40-119%
1718-51-0	Terphenyl-d14	80%		40-127%

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-32		
Lab Sample ID:	LA73738-8	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	3.93	5	ug/l	J
	unknown	4.35	7.1	ug/l	J
	unknown	4.50	8.9	ug/l	J
	unknown	14.64	5.7	ug/l	J
	Total TIC, Semi-Volatile		26.7	ug/l	J

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-33		
Lab Sample ID:	LA73738-9	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076793.D	1	09/14/21 17:07	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.8	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.78	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.26	ug/l	
	3&4-Methylphenol	ND	4.8	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.6	0.22	ug/l	
108-95-2	Phenol	ND	4.8	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.053	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.047	ug/l	
100-51-6	Benzyl Alcohol	ND	9.6	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.8	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.8	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.063	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-33		
Lab Sample ID:	LA73738-9	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.47	ug/l	
84-66-2	Diethyl Phthalate	ND	4.8	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.8	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.8	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.8	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	ND	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.066	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.8	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.65	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.18	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		20-75%
4165-62-2	Phenol-d5	32%		10-60%
118-79-6	2,4,6-Tribromophenol	91%		38-138%
4165-60-0	Nitrobenzene-d5	82%		44-132%
321-60-8	2-Fluorobiphenyl	75%		40-119%
1718-51-0	Terphenyl-d14	86%		40-127%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-33		
Lab Sample ID:	LA73738-9	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
1576-87-0	2-Pentenal, (E)-	4.35	7.7	ug/l	JN
	unknown	4.50	9.6	ug/l	J
	unknown	14.20	5.7	ug/l	J
	unknown	15.72	23	ug/l	J
	Total TIC, Semi-Volatile		46	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T-1		
Lab Sample ID:	LA73738-10	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076794.D	1	09/14/21 17:28	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.7	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.7	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.7	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.7	0.77	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.71	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.4	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.7	0.25	ug/l	
	3&4-Methylphenol	ND	4.7	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.7	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.4	0.22	ug/l	
108-95-2	Phenol	ND	4.7	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.061	ug/l	
120-12-7	Anthracene	ND	0.19	0.082	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.052	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.052	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.052	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.046	ug/l	
100-51-6	Benzyl Alcohol	ND	9.4	0.16	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.7	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.7	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.7	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.7	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.062	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T-1		
Lab Sample ID:	LA73738-10	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.7	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.4	0.46	ug/l	
84-66-2	Diethyl Phthalate	ND	4.7	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.7	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.7	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.7	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.7	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	4.7	0.16	ug/l	J
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	ND	0.19	0.070	ug/l	
118-74-1	Hexachlorobenzene	ND	4.7	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.7	0.065	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.4	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.7	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.7	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.066	ug/l	
98-95-3	Nitrobenzene	ND	4.7	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.7	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.7	0.64	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.17	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		20-75%
4165-62-2	Phenol-d5	28%		10-60%
118-79-6	2,4,6-Tribromophenol	90%		38-138%
4165-60-0	Nitrobenzene-d5	77%		44-132%
321-60-8	2-Fluorobiphenyl	73%		40-119%
1718-51-0	Terphenyl-d14	86%		40-127%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
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Report of Analysis

Client Sample ID:	T-1		
Lab Sample ID:	LA73738-10	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.35	6.4	ug/l	J
13151-05-8	1-Heptene, 4-methyl-	4.50	8	ug/l	JN
	Total TIC, Semi-Volatile		14.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T-2		
Lab Sample ID:	LA73738-11	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076795.D	1	09/14/21 17:50	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.7	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.7	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.7	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.7	0.77	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.71	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.4	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.7	0.25	ug/l	
	3&4-Methylphenol	ND	4.7	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.7	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.4	0.22	ug/l	
108-95-2	Phenol	ND	4.7	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.082	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.052	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.046	ug/l	
100-51-6	Benzyl Alcohol	ND	9.4	0.16	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.7	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.7	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.7	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.7	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.062	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T-2		
Lab Sample ID:	LA73738-11	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.7	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.4	0.46	ug/l	
84-66-2	Diethyl Phthalate	ND	4.7	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.7	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.7	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.7	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.7	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.7	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	ND	0.19	0.070	ug/l	
118-74-1	Hexachlorobenzene	ND	4.7	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.7	0.065	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.4	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.7	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.7	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.7	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.7	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.7	0.65	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.17	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		20-75%
4165-62-2	Phenol-d5	30%		10-60%
118-79-6	2,4,6-Tribromophenol	82%		38-138%
4165-60-0	Nitrobenzene-d5	79%		44-132%
321-60-8	2-Fluorobiphenyl	74%		40-119%
1718-51-0	Terphenyl-d14	79%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T-2		
Lab Sample ID:	LA73738-11	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.35	5.9	ug/l	J
2050-01-3	Propanoic acid, 2-methyl-, 3-methy	4.51	7.5	ug/l	JN
25103-09-7	Isooctyl mercaptoacetate	6.71	13	ug/l	JN
	unknown	14.46	6	ug/l	J
	unknown	14.69	9	ug/l	J
	Total TIC, Semi-Volatile		41.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-1		
Lab Sample ID:	LA73738-12	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076796.D	1	09/14/21 18:12	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.8	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.78	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.26	ug/l	
	3&4-Methylphenol	ND	4.8	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.6	0.22	ug/l	
108-95-2	Phenol	ND	4.8	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.053	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.047	ug/l	
100-51-6	Benzyl Alcohol	ND	9.6	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.8	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.8	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.063	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-1		
Lab Sample ID:	LA73738-12	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.47	ug/l	
84-66-2	Diethyl Phthalate	ND	4.8	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.8	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.8	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.8	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	ND	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.066	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.8	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.65	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.18	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		20-75%
4165-62-2	Phenol-d5	30%		10-60%
118-79-6	2,4,6-Tribromophenol	92%		38-138%
4165-60-0	Nitrobenzene-d5	78%		44-132%
321-60-8	2-Fluorobiphenyl	72%		40-119%
1718-51-0	Terphenyl-d14	83%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-1		
Lab Sample ID:	LA73738-12	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.27	20	ug/l	J
	unknown	7.34	22	ug/l	J
	unknown	7.44	27	ug/l	J
	unknown	7.87	20	ug/l	J
	unknown	8.06	22	ug/l	J
	unknown	8.21	25	ug/l	J
1000129-24-1	2-Naphthylpropionic acid	8.41	20	ug/l	JN
57-10-3	n-Hexadecanoic acid	8.50	47	ug/l	JN
	unknown	8.79	19	ug/l	J
	unknown	8.93	28	ug/l	J
	Total TIC, Semi-Volatile		250	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-2		
Lab Sample ID:	LA73738-13	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076797.D	1	09/14/21 18:33	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.8	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.78	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.26	ug/l	
	3&4-Methylphenol	ND	4.8	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.6	0.22	ug/l	
108-95-2	Phenol	ND	4.8	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.22	ug/l	
83-32-9	Acenaphthene	2.3	0.19	0.076	ug/l	
208-96-8	Acenaphthylene	0.40	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.053	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.047	ug/l	
100-51-6	Benzyl Alcohol	ND	9.6	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.8	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.8	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.063	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-2		
Lab Sample ID:	LA73738-13	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.065	ug/l	
132-64-9	Dibenzofuran	0.95	4.8	0.13	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.47	ug/l	
84-66-2	Diethyl Phthalate	ND	4.8	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.8	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.8	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.8	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	5.8	4.8	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	4.5	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.066	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.8	0.13	ug/l	
90-12-0	1-Methylnaphthalene	7.0	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	3.0	0.19	0.050	ug/l	
91-20-3	Naphthalene	1.0	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.65	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.18	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		20-75%
4165-62-2	Phenol-d5	32%		10-60%
118-79-6	2,4,6-Tribromophenol	92%		38-138%
4165-60-0	Nitrobenzene-d5	83%		44-132%
321-60-8	2-Fluorobiphenyl	72%		40-119%
1718-51-0	Terphenyl-d14	82%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-2		
Lab Sample ID:	LA73738-13	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.50	10	ug/l	J
2039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	5.57	12	ug/l	JN
2613-76-5	1H-Indene, 2,3-dihydro-1,1,3-trime	6.63	15	ug/l	JN
4175-54-6	Naphthalene, 1,2,3,4-tetrahydro-1,	6.78	27	ug/l	JN
571-58-4	Naphthalene, 1,4-dimethyl-	6.86	12	ug/l	JN
2245-38-7	Naphthalene, 1,6,7-trimethyl-	7.25	10	ug/l	JN
37920-74-4	Quinazoline, 4-ethyl-, 3-oxide	7.29	10	ug/l	JN
	unknown	7.84	8.6	ug/l	J
57-10-3	n-Hexadecanoic acid	8.51	12	ug/l	JN
6344-63-4	1-Aminofluorene	8.74	16	ug/l	JN
	Total TIC, Semi-Volatile		132.6	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-3		
Lab Sample ID:	LA73738-14	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076798.D	1	09/14/21 18:55	AA	09/14/21 07:30	OP19260	EF2660
Run #2	F0076822.D	10	09/15/21 11:46	BH	09/14/21 07:30	OP19260	EF2661

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2	1050 ml	1.0 ml

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.7	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.7	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.7	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.7	0.77	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.7	0.26	ug/l	
	3&4-Methylphenol	ND	4.7	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.7	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.5	0.22	ug/l	
108-95-2	Phenol	ND	4.7	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	0.20	0.19	0.052	ug/l	
205-99-2	Benzo(b)fluoranthene	0.32	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.19	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	0.097	0.19	0.046	ug/l	J
100-51-6	Benzyl Alcohol	ND	9.5	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.7	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.7	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.7	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.7	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.7	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.062	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-3		
Lab Sample ID:	LA73738-14	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.7	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	0.46	ug/l	
84-66-2	Diethyl Phthalate	ND	4.7	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.7	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.7	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	3.2	4.7	0.12	ug/l	J
122-66-7	1,2-Diphenylhydrazine	ND	4.7	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	43.5	4.7	0.16	ug/l	
206-44-0	Fluoranthene	5.7 [a]	1.9	1.6	ug/l	
86-73-7	Fluorene	97.4	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.7	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.7	0.065	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.7	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.17	0.19	0.052	ug/l	J
78-59-1	Isophorone	ND	4.7	0.13	ug/l	
90-12-0	1-Methylnaphthalene	325 [a]	1.9	1.6	ug/l	
91-57-6	2-Methylnaphthalene	378 [a]	1.9	0.50	ug/l	
91-20-3	Naphthalene	113	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.7	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.7	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.7	0.65	ug/l	
85-01-8	Phenanthrene	134 [a]	1.9	1.7	ug/l	
129-00-0	Pyrene	17.0 [a]	1.9	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%	40%	20-75%
4165-62-2	Phenol-d5	30%	29%	10-60%
118-79-6	2,4,6-Tribromophenol	110%	103%	38-138%
4165-60-0	Nitrobenzene-d5	120%	123%	44-132%
321-60-8	2-Fluorobiphenyl	76%	90%	40-119%
1718-51-0	Terphenyl-d14	91%	90%	40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-3		
Lab Sample ID:	LA73738-14	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.33	53	ug/l	J
2051-30-1	Octane, 2,6-dimethyl-	4.42	130	ug/l	JN
	unknown	4.46	100	ug/l	J
	unknown	4.73	150	ug/l	J
1678-93-9	Cyclohexane, butyl-	4.99	74	ug/l	JN
105-05-5	Benzene, 1,4-diethyl-	5.09	56	ug/l	JN
	unknown	5.14	37	ug/l	J
493-02-7	Naphthalene, decahydro-, trans-	5.16	62	ug/l	JN
3877-19-8	Naphthalene, 1,2,3,4-tetrahydro-2-	5.92	36	ug/l	JN
544-76-3	Hexadecane	6.88	38	ug/l	JN
	Total TIC, Semi-Volatile		736	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GRESHAM WSW		
Lab Sample ID:	LA73738-15	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0076799.D	1	09/14/21 19:16	AA	09/14/21 07:30	OP19260	EF2660
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	1.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	4.8	0.12	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.14	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.15	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.78	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	0.14	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.26	ug/l	
	3&4-Methylphenol	ND	4.8	0.17	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.21	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.14	ug/l	
87-86-5	Pentachlorophenol	ND	9.5	0.22	ug/l	
108-95-2	Phenol	ND	4.8	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.22	ug/l	
83-32-9	Acenaphthene	ND	0.19	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.062	ug/l	
120-12-7	Anthracene	ND	0.19	0.083	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.19	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.053	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.053	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.046	ug/l	
100-51-6	Benzyl Alcohol	ND	9.5	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	4.8	0.12	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.14	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.17	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	4.8	0.36	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.13	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	4.8	0.12	ug/l	
218-01-9	Chrysene	ND	0.19	0.063	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GRESHAM WSW		
Lab Sample ID:	LA73738-15	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.064	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.21	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.17	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	0.46	ug/l	
84-66-2	Diethyl Phthalate	ND	4.8	0.16	ug/l	
131-11-3	Dimethyl Phthalate	ND	4.8	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	4.8	0.12	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	4.8	0.12	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	0.16	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.16	ug/l	
86-73-7	Fluorene	ND	0.19	0.071	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.17	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.066	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	0.19	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.21	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.052	ug/l	
78-59-1	Isophorone	ND	4.8	0.13	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.19	0.16	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.19	0.050	ug/l	
91-20-3	Naphthalene	ND	0.19	0.067	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.13	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.65	ug/l	
85-01-8	Phenanthrene	ND	0.19	0.17	ug/l	
129-00-0	Pyrene	ND	0.19	0.16	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		20-75%
4165-62-2	Phenol-d5	35%		10-60%
118-79-6	2,4,6-Tribromophenol	96%		38-138%
4165-60-0	Nitrobenzene-d5	83%		44-132%
321-60-8	2-Fluorobiphenyl	76%		40-119%
1718-51-0	Terphenyl-d14	88%		40-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GRESHAM WSW		
Lab Sample ID:	LA73738-15	**Date Sampled:**	09/09/21
Matrix:	AQ - Ground Water	**Date Received:**	09/10/21
Method:	EPA 625.1 EPA 625.1	**Percent Solids:**	n/a
Project:	Springer Bulk Plant-Wilmington, NC		

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.35	7.8	ug/l	J
	unknown	4.50	9.5	ug/l	J
	unknown	14.30	6.1	ug/l	J
	unknown	14.77	20	ug/l	J
	Total TIC, Semi-Volatile		43.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX: 337.237.7838
www.sgs.com/ehsusa

PAGE 1 OF 2

FED-EX Tracking # | Bottle Order Control # | SGS Quote # | SGS Job # LA73738

Client / Reporting Information

Company Name: ATC Group Services
Street Address: 2725 E. Millbrook
City: Ral State: NC Zip: 27604
Project Contact: Maureen Jackson E-mail:
Phone #: 919-871-0999
Sampler(s) Name(s): Frank Beecher Phone #:

Project Information

Project Name: Springer Bulk Plat
Street: 123 Shipyard Blvd
City: Wilm State: NC
Project #: Spring 027
Client Purchase Order #:
Project Manager: Maureen Jackson

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

EPA method 625 + 10 Non Target PAHs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Collection: Comp/Grab	Date	Time	Sampled By	Matrix	# Of bottles	Number of preserved Bottles: HCl	NaOH	ZA/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	LAB USE ONLY
1	MW-6	G	9-9-21	1120	FB	GW	2												2
2	MW-12			1200															2
3	MW-14			1430															2
4	MW-17			1000															2
5	MW-25			1715															2
6	MW-27			1605															2
7	MW-31			1505															2
8	MW-32			1635															2
9	MW-33			0915															2
10	T-1			1800															2
11	T-2			1045															2

Turnaround Time (Business days)

- [X] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+$)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample inventory is verified upon receipt in the Laboratory

TF Rates Raleigh, NC
1A2 Service Center

PREM

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	Frank Beecher	9-9-21 1810	1 Fed Ex	2 Fed Ex	9-10-21 9:00	2
3		9-10-21 9:40	3 Stephanie Babeneaux	4		4
5	Relinquished by:	Date / Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable / Absent

On Ice ☑ Cooler Temp 1.7/2.0/1.2/1.9 Therm ID: DV462

Copy of EHSA-QAC-0026-00-FORM-Scott - Standard COC-FINAL

http://www.sgs.com/en/terms-and-conditions.

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX: 337.237.7838
www.sgs.com/ehsusa

PAGE 2 OF 2

RREM

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: LA73738

Client / Reporting Information

Company Name: FFFC Group Services
Street Address: 2725 E. Millbrook
City: Rol State: NC Zip: 27609
Project Contact: Maureen Jackson E-mail:
Phone #: 919-871-0999
Sampler(s) Name(s): Frank Beech Phone #:

Project Information

Project Name: Sprinjer Bulk Plant
Street: 133 Shipyard Blvd
City: Wilm State: NC
Project #: Spring 027
Client Purchase Order #:
Project Manager: maureen Jackson

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

EPA Method 625 + 10 PAHs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Collection: Comp/Grab	Date	Time	Sampled By	Matrix	# Of bottles	Number of preserved Bottles: HCl	NaOH	ZnAc/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	LAB USE ONLY
12	RW-1	G	9-9-21	1240	FB	GW	2												2
13	RW-2			1315															2
14	RW-3			1355															2
15	Gresham WELL			1535															2

Turnaround Time (Business days)

- [X] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+$)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only.
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample inventory is verified upon receipt in the laboratory
Raleigh, NC
TF Rates RREM
Service Center
1A2

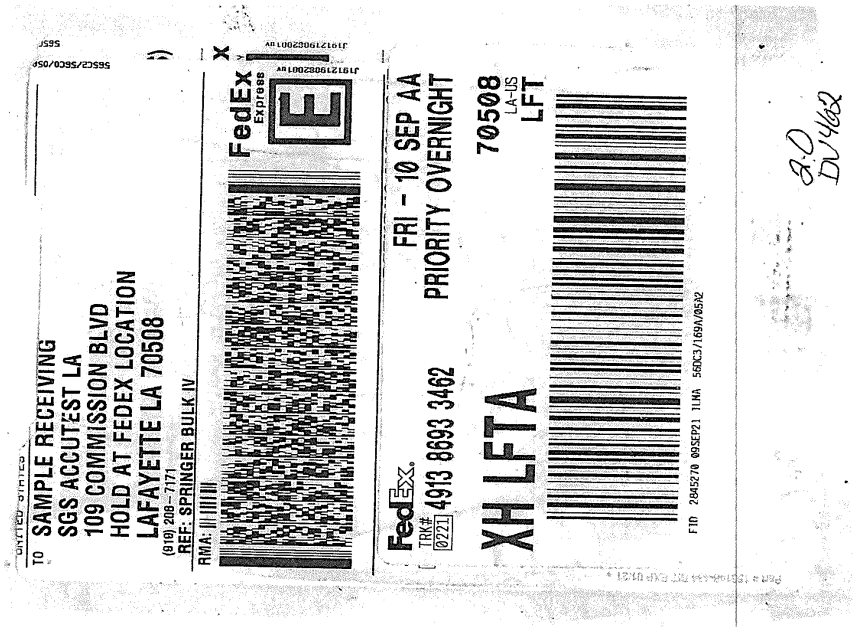
Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date / Time	Received By	Relinquished By	Date / Time	Received By
1	Frank Beech	9-9-21 1810	Fed Ex	Fed Ex	9/10/21 9:00	
2						
3	Relinquished by Sampler:	Date / Time: 9-10-21 9:40	Received By: Stephanie Babineaux	Relinquished By:	Date / Time:	Received By:
4						
5	Relinquished by:	Date / Time:	Received By:	Custody Seals: CSIOC	[ ] Intact [ ] Not intact	Preserved where applicable [ ] Absent

On Ice [ ] Cooler Temp: 1.7/2.0/1.2/1.9
Therm ID: DV462

Copy of EHSA-QAC-0026-00-FORM-Scott - Standard COC-FINAL

http://www.sgs.com/en/terms-and-conditions.



2 = 1000ml N/P IA2

15
2
4

1.7
DV462

LA73738: Chain of Custody
Page 4 of 6


FRANK D:RZZA (910) 398-0489
ATC ILCHER
SHIP DATE: 31AUG21
ACTWGT: 50.00 LB MAN
CAD: 0324210/CAFE3313
TO SAMPLE RECEIVING
SGS ACCUTEST LA
109 COMMISSION BLVD
HOLD AT FEDEX LOCATION
LAFAYETTE LA 70508
(919) 208-7171
REF: SPRINGER BULK II
RMA:
FedEx Express
RETURNS MON-SAT
FedEx
TRK# 0221 4913 8693 3440
FRI - 10 SEP AA
PRIORITY OVERNIGHT
XH LFTA
70508
LA-US
LFT
FID 2845270 09SEP21 ILMA 56DC3/169A/05A2
1.9
DV462


TO SAMPLE RECEIVING
SGS ACCUTEST LA
109 COMMISSION BLVD
HOLD AT FEDEX LOCATION
LAFAYETTE LA 70508
(919) 208-7171
REF: SPRINGER BULK
RMA:
FedEx Express
RETURNS MON-SAT
FedEx
TRK# 0221 4913 8693 3430
FRI - 10 SEP AA
PRIORITY OVERNIGHT
XH LFTA
70508
LA-US
LFT
FID 2845270 09SEP21 ILMA 56DC3/169A/05A2
1.2
DV462

SGS Sample Receipt Summary

Job Number: LA73738 **Client:** ATC **Project:** SPRINGER BULK PLANT

Date / Time Received: 9/10/2021 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:** 4913 8693 3462/4913 8693 3451/4913 8693 34

Cooler Temps: #1: (1.7/1.7); #2: (2/2); #3: (1.2/1.2); #4: (1.9/1.9); DV462

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	4		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments 1

Responded to by: Amy Jackson Response Date: 9/11/2021

LA73738: Chain of Custody
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MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA73738
Account: ATCNCR Atlas
Project: Springer Bulk Plant-Wilmington, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19260-MB	F0076779.D	1	09/14/21	AA	09/14/21	OP19260	EF2660

The QC reported here applies to the following samples: **Method:** EPA 625.1

LA73738-1, LA73738-2, LA73738-3, LA73738-4, LA73738-5, LA73738-6, LA73738-7, LA73738-8, LA73738-9, LA73738-10, LA73738-11, LA73738-12, LA73738-13, LA73738-14, LA73738-15

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	2.0	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	5.0	0.13	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.15	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.16	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.81	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.76	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.14	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.27	ug/l	
	3&4-Methylphenol	ND	5.0	0.18	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.22	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.15	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.23	ug/l	
108-95-2	Phenol	ND	5.0	0.14	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.23	ug/l	
83-32-9	Acenaphthene	ND	0.20	0.079	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.065	ug/l	
120-12-7	Anthracene	ND	0.20	0.087	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.055	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.051	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.056	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.049	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.17	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	5.0	0.13	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	0.13	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.67	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.15	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.18	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	0.38	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.14	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	5.0	0.12	ug/l	
218-01-9	Chrysene	ND	0.20	0.066	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.068	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.13	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: LA73738
Account: ATCNCR Atlas
Project: Springer Bulk Plant-Wilmington, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19260-MB	F0076779.D	1	09/14/21	AA	09/14/21	OP19260	EF2660

The QC reported here applies to the following samples: **Method:** EPA 625.1

LA73738-1, LA73738-2, LA73738-3, LA73738-4, LA73738-5, LA73738-6, LA73738-7, LA73738-8, LA73738-9, LA73738-10, LA73738-11, LA73738-12, LA73738-13, LA73738-14, LA73738-15

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	0.49	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	0.17	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	0.11	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	5.0	0.13	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	0.13	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.17	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	0.17	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.17	ug/l	
86-73-7	Fluorene	ND	0.20	0.075	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.069	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.20	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.055	ug/l	
78-59-1	Isophorone	ND	5.0	0.14	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.17	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.053	ug/l	
91-20-3	Naphthalene	ND	0.20	0.071	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.13	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.14	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.68	ug/l	
85-01-8	Phenanthrene	ND	0.20	0.18	ug/l	
129-00-0	Pyrene	ND	0.20	0.17	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.15	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	20-75%
4165-62-2	Phenol-d5	28%	10-60%
118-79-6	2,4,6-Tribromophenol	82%	38-138%
4165-60-0	Nitrobenzene-d5	75%	44-132%
321-60-8	2-Fluorobiphenyl	72%	40-119%
1718-51-0	Terphenyl-d14	86%	40-127%

Method Blank Summary

Job Number: LA73738
Account: ATCNCR Atlas
Project: Springer Bulk Plant-Wilmington, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19260-MB	F0076779.D	1	09/14/21	AA	09/14/21	OP19260	EF2660

The QC reported here applies to the following samples: **Method:**

LA73738-1, LA73738-2, LA73738-3, LA73738-4, LA73738-5, LA73738-6, LA73738-7, LA73738-8, LA73738-9, LA73738-10, LA73738-11, LA73738-12, LA73738-13, LA73738-14, LA73738-15

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	4.35	8.5	ug/l	J
13151-05-8	1-Heptene, 4-methyl-	4.50	7.2	ug/l	JN
	unknown	15.79	46	ug/l	J
	Total TIC, Semi-Volatile		61.7	ug/l	J

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA73738
Account: ATCNCR Atlas
Project: Springer Bulk Plant-Wilmington, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19260-BS	F0076780.D	1	09/14/21	AA	09/14/21	OP19260	EF2660
OP19260-BSD	F0076781.D	1	09/14/21	AA	09/14/21	OP19260	EF2660

The QC reported here applies to the following samples: **Method:** EPA 625.1

LA73738-1, LA73738-2, LA73738-3, LA73738-4, LA73738-5, LA73738-6, LA73738-7, LA73738-8, LA73738-9, LA73738-10, LA73738-11, LA73738-12, LA73738-13, LA73738-14, LA73738-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	100	21.7	22	20.0	20	8	12-61/34
59-50-7	4-Chloro-3-methyl Phenol	50	42.9	86	41.6	83	3	66-103/19
95-57-8	2-Chlorophenol	50	39.6	79	37.4	75	6	63-93/17
120-83-2	2,4-Dichlorophenol	50	44.0	88	42.2	84	4	70-104/18
105-67-9	2,4-Dimethylphenol	50	41.8	84	39.8	80	5	64-98/20
51-28-5	2,4-Dinitrophenol	50	49.9	100	49.9	100	0	40-138/24
534-52-1	4,6-Dinitro-o-cresol	50	51.4	103	50.9	102	1	57-131/21
95-48-7	2-Methylphenol	50	35.4	71	33.7	67	5	53-83/18
	3&4-Methylphenol	50	32.1	64	30.7	61	4	51-77/18
88-75-5	2-Nitrophenol	50	47.4	95	45.9	92	3	67-114/18
100-02-7	4-Nitrophenol	50	16.9	34	17.2	34	2	23-62/28
87-86-5	Pentachlorophenol	50	45.9	92	45.3	91	1	56-113/22
108-95-2	Phenol	50	16.6	33	16.0	32	4	24-50/24
88-06-2	2,4,6-Trichlorophenol	50	47.7	95	46.5	93	3	65-116/19
83-32-9	Acenaphthene	50	45.1	90	43.3	87	4	69-107/18
208-96-8	Acenaphthylene	50	49.3	99	47.3	95	4	67-114/20
120-12-7	Anthracene	50	48.5	97	47.5	95	2	73-109/19
56-55-3	Benzo(a)anthracene	50	46.3	93	45.2	90	2	71-109/19
50-32-8	Benzo(a)pyrene	50	49.7	99	47.9	96	4	73-116/19
205-99-2	Benzo(b)fluoranthene	50	48.9	98	46.9	94	4	73-114/21
191-24-2	Benzo(g,h,i)perylene	50	50.3	101	48.6	97	3	75-113/19
207-08-9	Benzo(k)fluoranthene	50	49.4	99	47.8	96	3	71-118/19
100-51-6	Benzyl Alcohol	50	35.5	71	34.6	69	3	57-90/17
101-55-3	4-Bromophenyl Phenyl Ether	50	50.4	101	48.0	96	5	70-112/20
85-68-7	Butyl Benzyl Phthalate	50	46.8	94	45.0	90	4	72-118/20
106-47-8	4-Chloroaniline	50	41.6	83	41.0	82	1	60-105/17
111-91-1	bis(2-Chloroethoxy)methane	50	48.0	96	46.2	92	4	68-107/19
111-44-4	bis(2-Chloroethyl)ether	50	44.9	90	41.9	84	7	60-109/18
108-60-1	2,2'-Oxybis(1-chloropropane)	50	42.7	85	39.5	79	8	48-119/18
91-58-7	2-Chloronaphthalene	50	44.3	89	42.0	84	5	67-106/19
7005-72-3	4-Chlorophenyl Phenyl Ether	50	47.3	95	45.7	91	3	67-115/19
218-01-9	Chrysene	50	48.6	97	46.9	94	4	74-108/19
53-70-3	Dibenzo(a,h)anthracene	50	50.6	101	49.1	98	3	75-115/19
132-64-9	Dibenzofuran	50	46.8	94	45.0	90	4	69-110/19
95-50-1	1,2-Dichlorobenzene	50	38.2	76	34.7	69	10	56-95/19
541-73-1	1,3-Dichlorobenzene	50	36.8	74	33.4	67	10	53-93/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA73738
Account: ATCNCR Atlas
Project: Springer Bulk Plant-Wilmington, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19260-BS	F0076780.D	1	09/14/21	AA	09/14/21	OP19260	EF2660
OP19260-BSD	F0076781.D	1	09/14/21	AA	09/14/21	OP19260	EF2660

The QC reported here applies to the following samples: **Method:** EPA 625.1

LA73738-1, LA73738-2, LA73738-3, LA73738-4, LA73738-5, LA73738-6, LA73738-7, LA73738-8, LA73738-9, LA73738-10, LA73738-11, LA73738-12, LA73738-13, LA73738-14, LA73738-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	50	37.7	75	33.9	68	11	54-93/19
91-94-1	3,3'-Dichlorobenzidine	50	45.9	92	44.6	89	3	67-114/19
84-66-2	Diethyl Phthalate	50	46.4	93	45.0	90	3	72-115/19
131-11-3	Dimethyl Phthalate	50	46.0	92	45.1	90	2	71-114/19
84-74-2	Di-n-butyl Phthalate	50	48.8	98	48.2	96	1	74-113/20
117-84-0	Di-n-octyl Phthalate	50	46.9	94	45.6	91	3	69-118/20
122-66-7	1,2-Diphenylhydrazine	50	49.5	99	48.2	96	3	70-114/19
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.6	97	47.1	94	3	69-118/20
206-44-0	Fluoranthene	50	49.6	99	48.4	97	2	73-113/20
86-73-7	Fluorene	50	47.5	95	45.4	91	5	70-112/19
118-74-1	Hexachlorobenzene	50	48.3	97	47.6	95	1	71-111/20
87-68-3	Hexachlorobutadiene	50	35.0	70	32.0	64	9	45-101/21
77-47-4	Hexachlorocyclopentadiene	50	35.3	71	33.3	67	6	36-109/25
67-72-1	Hexachloroethane	50	34.8	70	31.2	62	11	47-94/20
193-39-5	Indeno(1,2,3-cd)pyrene	50	50.5	101	49.3	99	2	75-114/19
78-59-1	Isophorone	50	49.4	99	47.3	95	4	67-111/18
90-12-0	1-Methylnaphthalene	50	43.7	87	41.2	82	6	67-102/19
91-57-6	2-Methylnaphthalene	50	42.4	85	40.0	80	6	67-102/18
91-20-3	Naphthalene	50	41.6	83	39.2	78	6	66-100/18
98-95-3	Nitrobenzene	50	47.6	95	44.9	90	6	69-109/18
621-64-7	N-Nitroso-di-n-propylamine	50	46.3	93	44.2	88	5	62-113/18
86-30-6	N-Nitrosodiphenylamine	50	49.2	98	48.0	96	2	69-110/20
85-01-8	Phenanthrene	50	47.2	94	45.9	92	3	73-106/20
129-00-0	Pyrene	50	48.8	98	47.5	95	3	74-111/18
120-82-1	1,2,4-Trichlorobenzene	50	38.3	77	35.4	71	8	57-99/19

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	44%	45%	20-75%
4165-62-2	Phenol-d5	30%	31%	10-60%
118-79-6	2,4,6-Tribromophenol	91%	94%	38-138%
4165-60-0	Nitrobenzene-d5	83%	83%	44-132%
321-60-8	2-Fluorobiphenyl	78%	77%	40-119%
1718-51-0	Terphenyl-d14	86%	87%	40-127%

* = Outside of Control Limits.

.

DWM Superfund and Brownfield SEPA/NEPA Review Report with State Environmental Clearinghouse NC DEQ Comments

Contamination and Toxic Substances Supplement

DWM Superfund and Brownfield SEPA/NEPA Review Report

According to the NC DEQ Division of Waste Management (DWM) in the SCH comments, there are seven Inactive Hazardous Sites were identified by NC DWM located within one-mile of the proposed project site. These include:

1) Flint Hills Resources-CMT Site – located at 3300 River Road approximately 4,815 ft./0.91-mile SW of the subject site; Per regulatory files and the USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

2) NCSPA Bldg. C-1 located at 2202 Burnett Blvd. approximately 3,800 ft./0.72-mile NW of the subject site; Per regulatory files and the USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

3) Royster Transport – located at 206 Shipyard Blvd. approximately 1,500 ft./0.28-mile SW of the subject site; Former asphalt/oil spill site. Localized oil spill only. Per USGS topographic map, groundwater appears to flow northwest away from subject site.

4) Sunoco Bulk Terminal – located west of River Road approximately 3,700 ft./0.70-mile SW of the subject site; Per regulatory files and the USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

5) WK Hobbs BP Site – located at 2461 Carolina Beach Rd. approximately 1,200 ft./0.23-mile SE of the subject site; Former UST site. Per regulatory files, groundwater flow is north away from subject site.

6) Adams Painting Services – located at 722 Wellington Ave. approximately 1,550 ft./0.29-mile SE of the subject site; Former UST site. It is scored as 0 with each site ranked on a 0.01 to 100-point scale according to the ranking system described in 15A NCAC 13C .0200. Higher scores indicate higher risk to human health and the environment. Per USGS topographic mapping, groundwater flow is north away from subject site.

7) Koch North Paraxylene – located at 3225 River Road approximately 3,155 ft./0.60-mile SW of the subject site; Per regulatory files and the USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

According to the NC DEQ DWM in the SCH comments, there is one DSCA Site and one Pre-Regulatory Landfill Site identified by NC DWM located within one-mile of the proposed project site. The DSCA Site includes Coastal Dry Cleaners located at 2629 Carolina Beach Road approximately 1,130 ft./0.40-mile SE of the subject site. Per USGS topographic mapping, groundwater flow is north away from subject site. The Pre-Regulatory Landfill Site includes Wisteria Drive LF located at 2169 Wisteria Drive approximately 3,065 ft./0.58-mile NE of the subject site. No evidence was discovered to indicate past landfill activities following records search, site reconnaissance, and interviews with regulatory officials. Per USGS topographic mapping, groundwater flow is northwest away from subject site.

According to the NC DEQ DWM in the SCH comments, there are three Brownfield Program Sites identified by NC DWM located within one-mile of the proposed project site. These include:

1) Travelers Oil Co, located at 2841/2845 Carolina Beach Road approximately 4,160 ft./0.79-mile SE of the subject site. Previous truck and boat storage with petroleum contamination in soils. Per regulatory files and the USGS topographic map, groundwater appears to flow east away from subject site.

2) North Terminal, located at 3225 River Road approximately 3,600 ft./0.68-mile SW of the subject site. Site is listed as No Further Interest; Per USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

3) South Terminal, located at 3335 River Road approximately 4,675 ft./0.89-mile SW of the subject site. Site is listed as No Further Interest; Per USGS topographic map, groundwater appears to flow west toward the Cape Fear River away from subject site.

Due to the regulatory status, distance, and direction of groundwater flow, these site (7 Inactive Hazardous Sites), one DSCA Site, one Pre-Regulatory Landfill Site, and 3 Brownfields Sites) have been determined to not pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the subject property.

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

Date: November 1, 2022

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Robert J Kelley
Inactive Hazardous Sites Branch

Subject: NEPA Project # 23-0064 Starway Village Apartments/HUD CDBG-DR, New Hanover County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the Starway Village Apartments/HUD CDBG-DR Project. Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

Twelve (12) sites were identified within one mile of the project as shown on the attached report. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

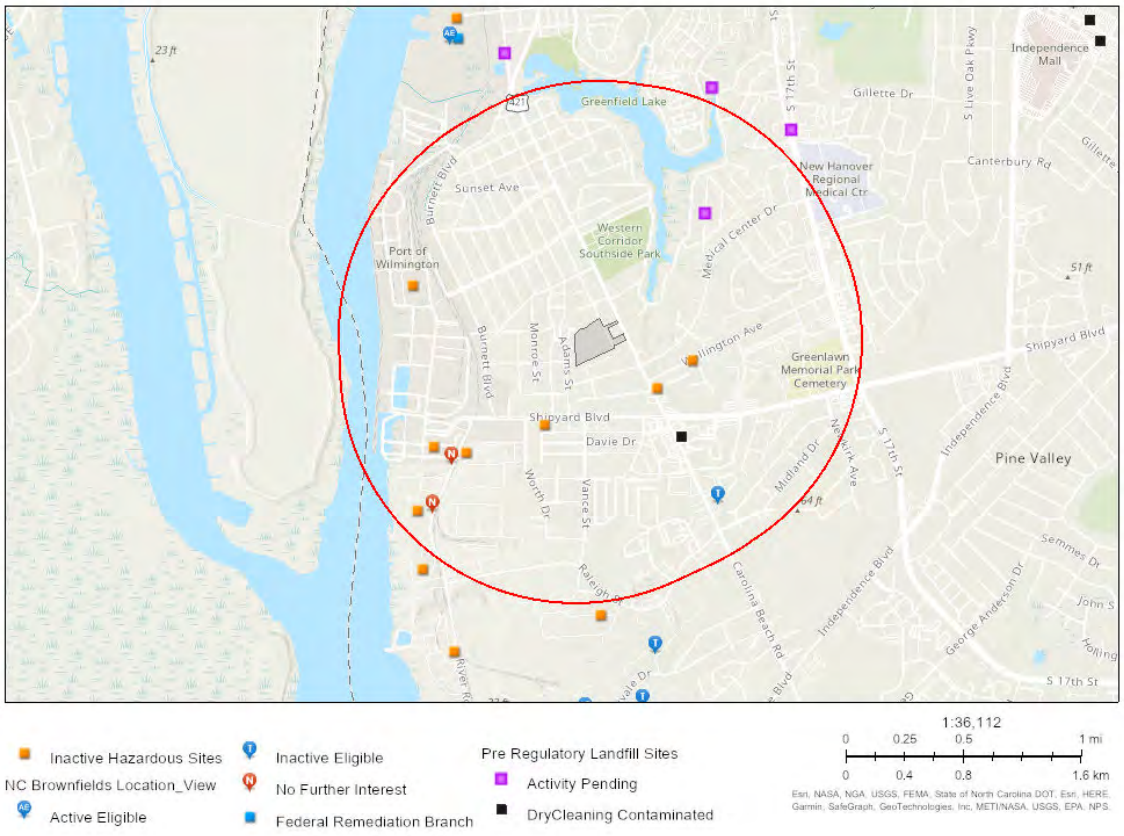
Superfund & Brownfield Sites SEPA/NEPA Review Report

Area of Interest (AOI) Information

New Hanover NEPA Project #20-0064

Area : 2,452.09 acres

Nov 1 2022 8:16:46 Eastern Daylight Time



Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

Summary

Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	1	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	7	N/A	N/A
Pre-Regulatory Landfill Sites	1	N/A	N/A
Brownfields Program Sites	3	N/A	N/A

Certified DSCA Sites

#	Site_ID	Site_Name	Count
1	DC650004	Coastal Dry Cleaners	1

Inactive Hazardous Sites

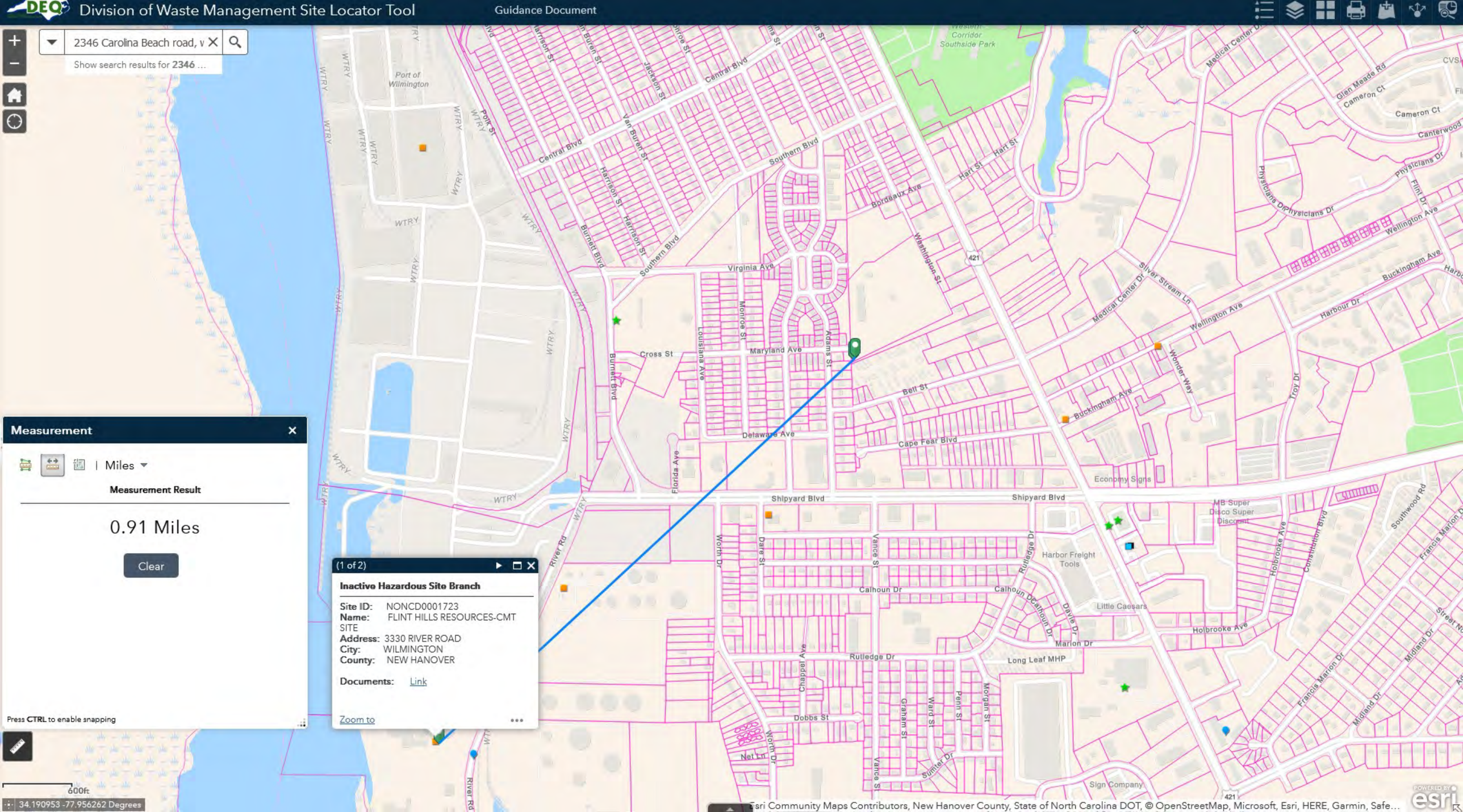
#	EPAID	SITENAME	Count
1	NONCD0001723	FLINT HILLS RESOURCES-CMT SITE	1
2	NONCD0002194	NCSPA BLDG C-1	1
3	NONCD0002426	ROYSTER TRANSPORT CO., INC.	1
4	NONCD0002561	SUNOCO BULK TERMINAL	1
5	NONCD0002750	WK HOBBS BP SITE	1
6	NONCD0002781	ADAMS PAINTING SERVICE	1
7	NONCD0002797	KOCH NORTH PARAXYLENE	1

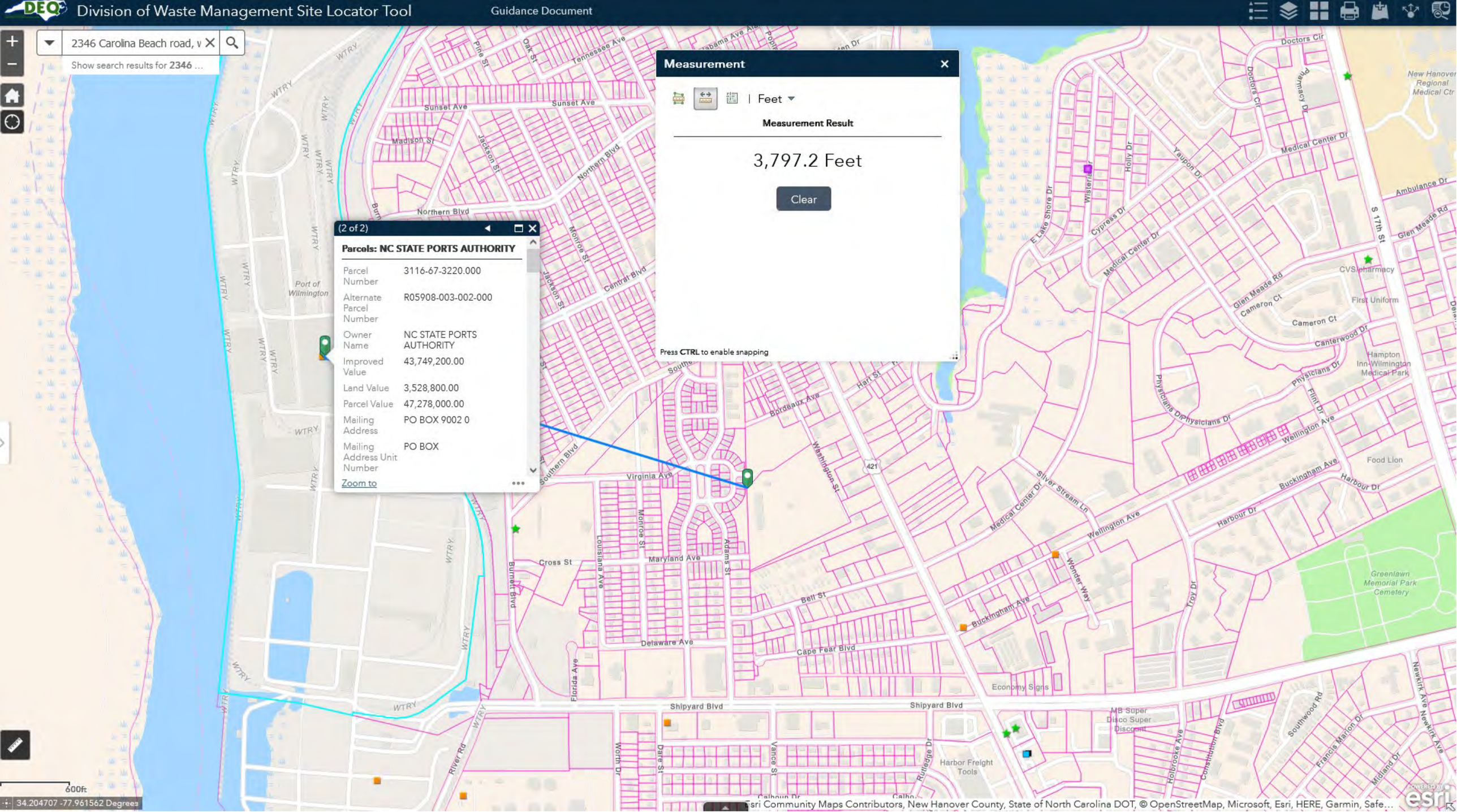
Pre-Regulatory Landfill Sites

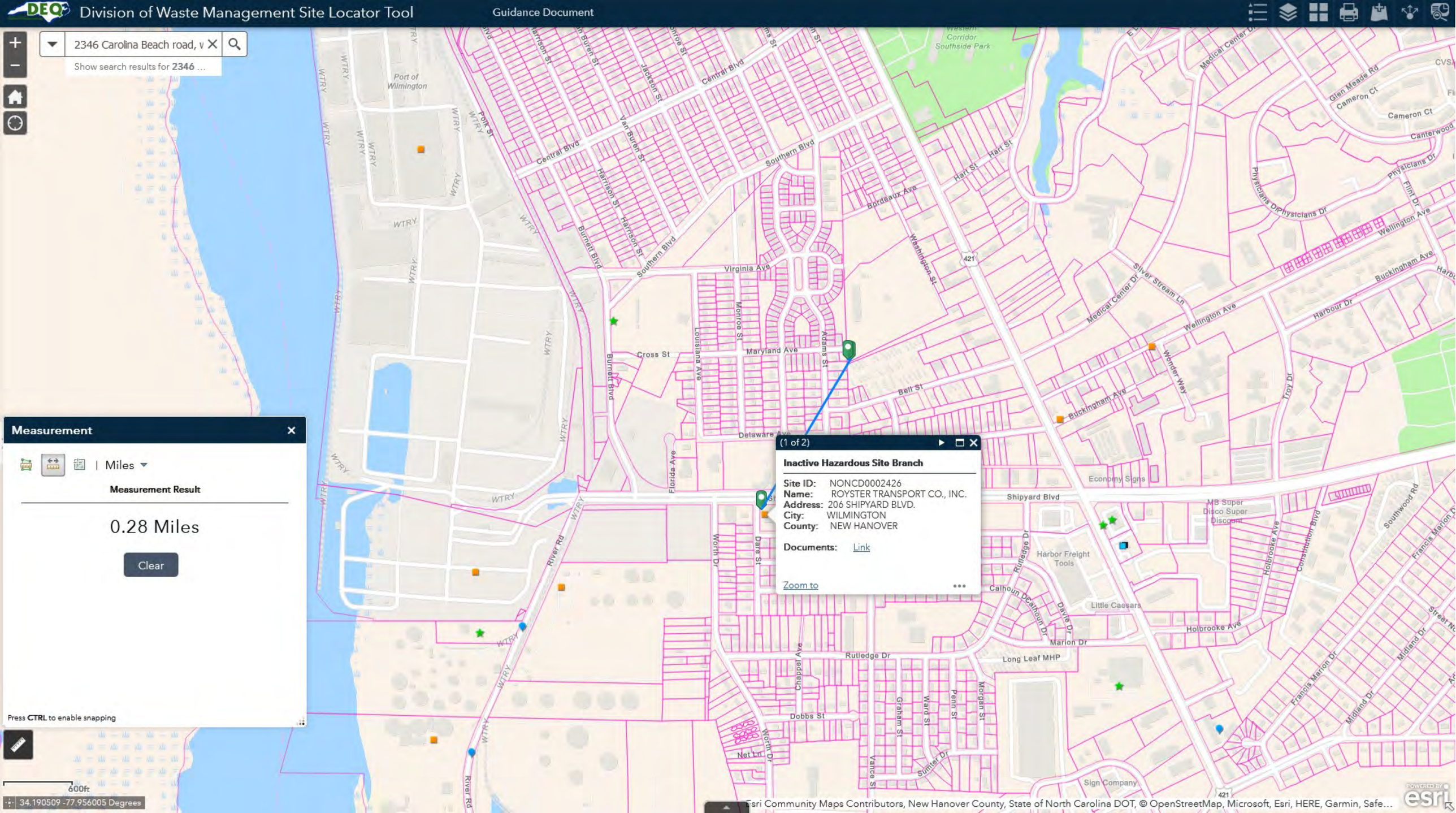
#	EPAID	SITENAME	Count
1	NONCD0000758	Wisteria Dr. LF	1

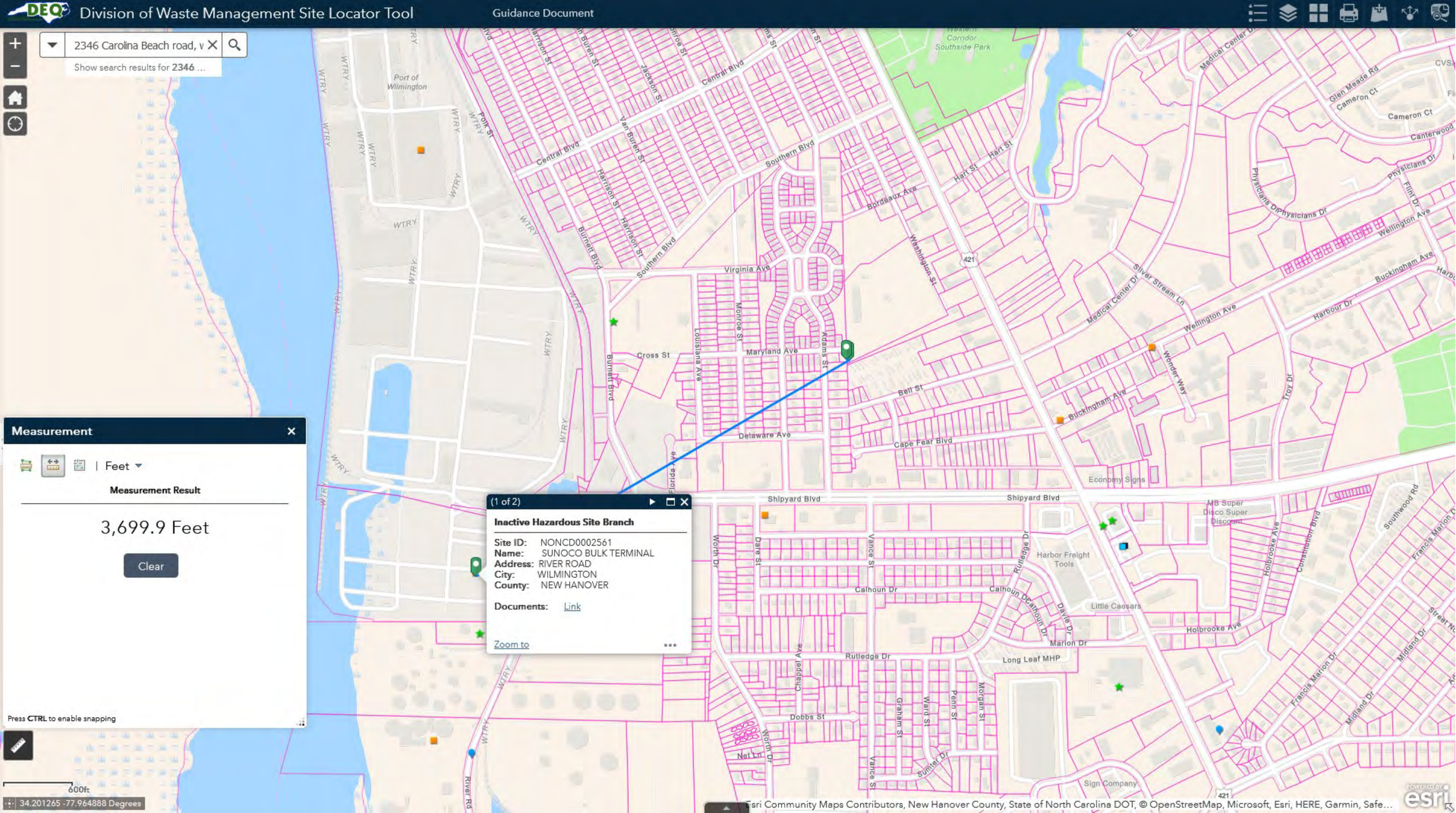
Brownfields Program Sites

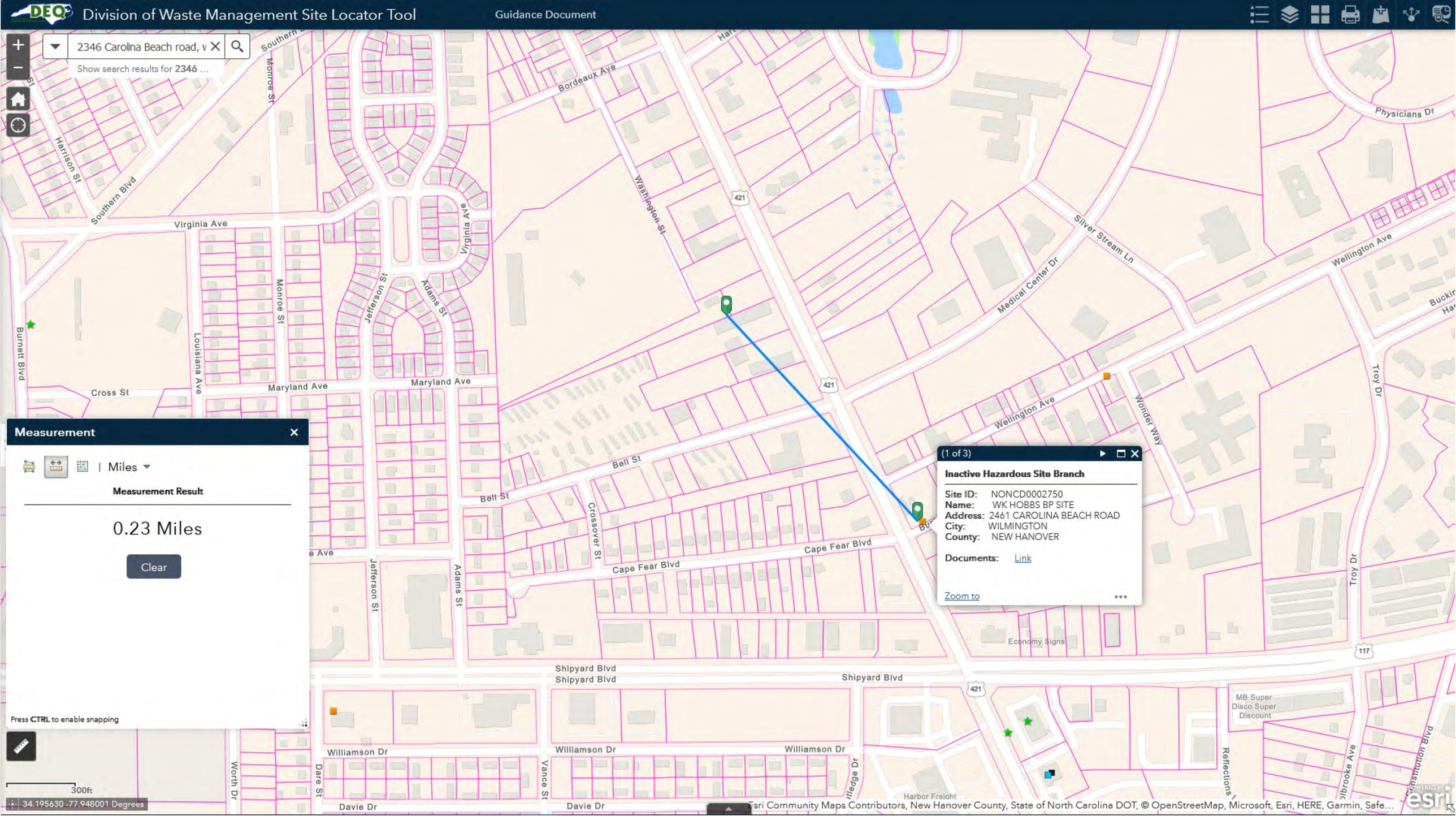
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1	802404065	North Terminal	1
2	2303319065	Travelers Oil Co	1
3	903005065	South Terminal	1

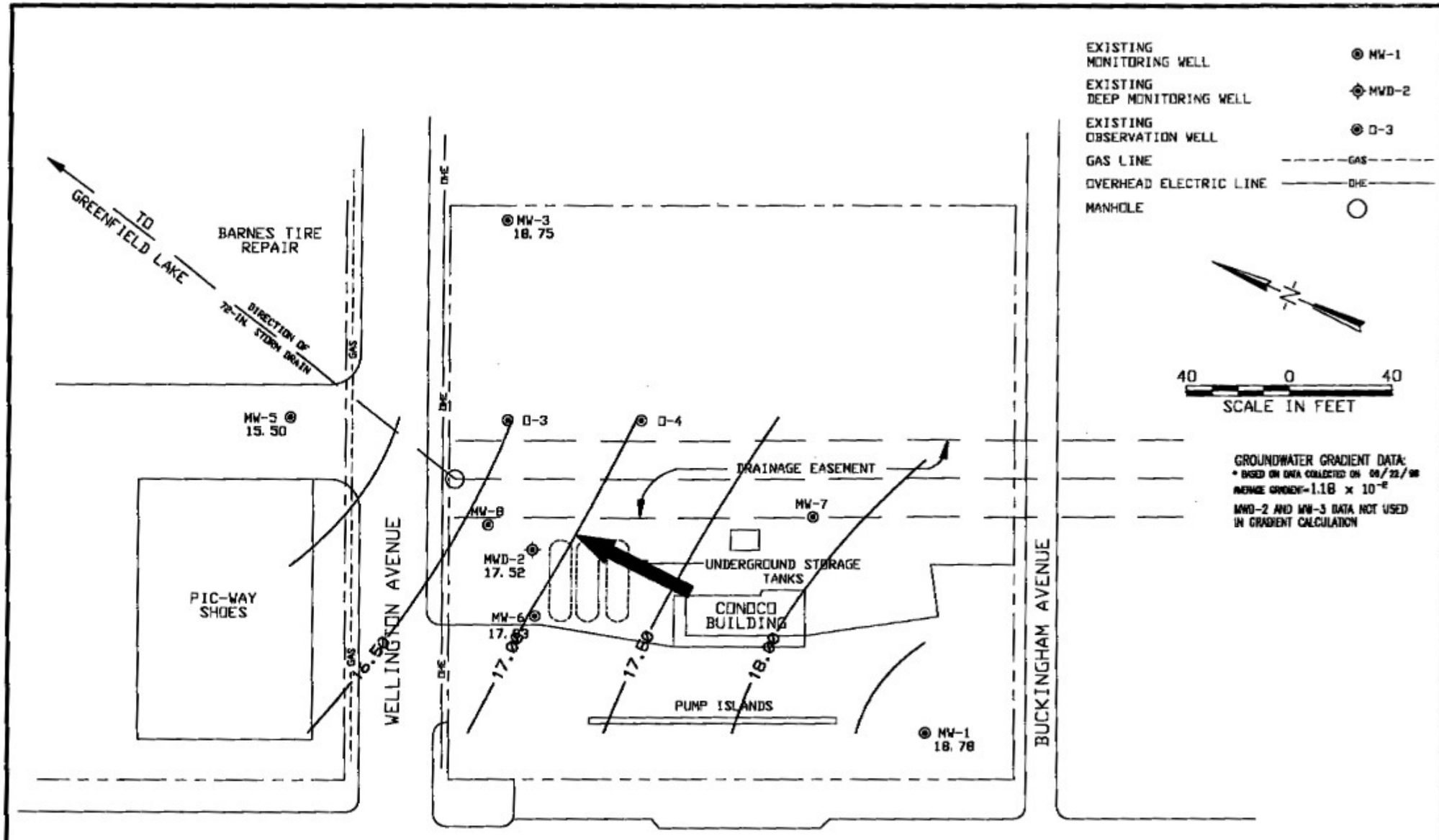

Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Miles
Measurement Result
0.91 Miles
Clear
Press CTRL to enable snapping
(1 of 2)
Inactive Hazardous Site Branch
Site ID: NONCD0001723
Name: FLINT HILLS RESOURCES-CMT SITE
Address: 3330 RIVER ROAD
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
600ft
34.190953 -77.956262 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, Safe...
Port of Wilmington
Western Corridor Southside Park
Central Blvd
Southern Blvd
Virginia Ave
Maryland Ave
Delaware Ave
Cross St
Bell St
Cape Fear Blvd
Shipyard Blvd
Calhoun Dr
Rutledge Dr
Dobbs St
Holbrooke Ave
Wellington Ave
Buckingham Ave
Harbour Dr
Medical Center Dr
Hart St
Bordeaux Ave
Washington St
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Monroe St
Louisiana Ave
Adams St
Florida Ave
Dare St
Vance St
Worth Dr
Chappel Ave
Graham St
Ward St
Penn St
Morgan St
Sumter Dr
Net Ln
River Rd
Harbor Freight Tools
Little Caesars
Economy Signs
MB Super Disco Super Discount
Long Leaf MHP
Sign Company
Wonder Way
Troy Dr
Silver Stream Ln
Physicians Dr
Glen Meade Rd
Cameron Ct
Canterwood
Flint Dr
Southwood Rd
Francis Marion Dr
Midland Dr
Street Rd
421
WTRY


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Feet
Measurement Result
3,797.2 Feet
Clear
Press CTRL to enable snapping
(2 of 2)
Parcels: NC STATE PORTS AUTHORITY
Parcel Number 3116-67-3220.000
Alternate Parcel Number R05908-003-002-000
Owner Name NC STATE PORTS AUTHORITY
Improved Value 43,749,200.00
Land Value 3,528,800.00
Parcel Value 47,278,000.00
Mailing Address PO BOX 9002 0
Mailing Address Unit Number PO BOX
Zoom to
Sunset Ave
Northern Blvd
Madison St
Jackson St
Monroe St
Central Blvd
Port of Wilmington
Bordeaux Ave
Harr St
Virginia Ave
Southern Blvd
Cross St
Maryland Ave
Louisiana Ave
Burnett Blvd
Adams St
Bell St
Delaware Ave
Florida Ave
Cape Fear Blvd
Shipyard Blvd
River Rd
Worth Dr
Dare St
Vance St
Rutledge Dr
Harbor Freight Tools
Economy Signs
MB Super Disco Super Discount
Holbrooke Ave
Constitution Blvd
Southwood Rd
Francis Marion Dr
Midland Dr
Newkirk Ave
Doctors Cir
Pharmacy Dr
Medical Center Dr
New Hanover Regional Medical Ctr
Ambulance Dr
S 17th St
Glen Meade Rd
CVS/pharmacy
First Uniform
Cameron Ct
Canterwood Dr
Hampton Inn Wilmington Medical Park
Physicians Dr
Flint Dr
Wellington Ave
Food Lion
Buckingham Ave
Harbour Dr
Silver Stream Ln
Wonder Way
Troy Dr
Greenlawn Memorial Park Cemetery
E Lake Shore Dr
Cypress Dr
Holly Dr
Yaupon Dr
Wisteria Dr
421
600ft
34.204707 -77.961562 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, Safe...
esri


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Miles
Measurement Result
0.28 Miles
Clear
Press CTRL to enable snapping
(1 of 2)
Inactive Hazardous Site Branch
Site ID: NONCD0002426
Name: ROYSTER TRANSPORT CO., INC.
Address: 206 SHIPYARD BLVD.
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
Shipyard Blvd
Southern Blvd
Central Blvd
Virginia Ave
Maryland Ave
Cross St
Bell St
Delaware Ave
Rutledge Dr
Dobbs St
Holbrooke Ave
Wellington Ave
Buckingham Ave
Harbour Dr
Medical Center Dr
Harbor Freight Tools
Little Caesars
Economy Signs
Sign Company
Long Leaf MHP
Port of Wilmington
Western Corridor Southside Park
River Rd
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Monroe St
Louisiana Ave
Adams St
Florida Ave
Worth Dr
Dare St
Chapel Ave
Ward St
Penn St
Morgan St
Granam St
Vance St
Sumter Dr
Net Ln
Bordeaux Ave
Hart St
Washington St
Physicians Dr
Cameron Ct
Glen Meade Rd
Canterwood
Flint Dr
Silver Stream Ln
Wonder Way
Troy Dr
Southwood Rd
Constitution Blvd
Francis Marion Dr
Midland Dr
Marion Dr
Davie Dr
Calhoun Dr
MB Super Disco Super Discount
WTRY
600ft
34.190509 -77.956005 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, Safe...
esri


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Feet
Measurement Result
3,699.9 Feet
Clear
Press CTRL to enable snapping
(1 of 2)
Inactive Hazardous Site Branch
Site ID: NONCD0002561
Name: SUNOCO BULK TERMINAL
Address: RIVER ROAD
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
Port of Wilmington
Western Corridor Southside Park
Central Blvd
Southern Blvd
Virginia Ave
Maryland Ave
Delaware Ave
Cross St
Bell St
Cape Fear Blvd
Shipyard Blvd
Calhoun Dr
Rutledge Dr
Dobbs St
Holbrooke Ave
Wellington Ave
Buckingham Ave
Harbour Dr
Medical Center Dr
Hart St
Bordeaux Ave
Washington St
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Monroe St
Louisiana Ave
Adams St
Florida Ave
Worth Dr
Vance St
Chapel Ave
Granam St
Ward St
Penn St
Morgan St
Sumter Dr
Midland Dr
Francis Marion Dr
Constitution Blvd
Southwood Rd
Harbor Freight Tools
Little Caesars
Long Leaf MHP
Economy Signs
Sign Company
MB Super Disco Super Discount
Wonder Way
Silver Stream Ln
Physicians Dr
Cameron Ct
Glen Meade Rd
Canterwood
Flint Dr
Troy Dr
WTRY
421
600ft
34.201265 -77.964888 Degrees
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esri


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Miles
Measurement Result
0.23 Miles
Clear
Press CTRL to enable snapping
300ft
34.195630 -77.948001 Degrees
(1 of 3)
Inactive Hazardous Site Branch
Site ID: NONCD0002750
Name: WK HOBBS BP SITE
Address: 2461 CAROLINA BEACH ROAD
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
Bordeaux Ave
Washington St
Physicians Dr
Silver Stream Ln
Medical Center Dr
Wellington Ave
Virginia Ave
Monroe St
Jefferson St
Adams St
Harrison St
Southern Blvd
Burnett Blvd
Louisiana Ave
Cross St
Maryland Ave
Bell St
Crossover St
Cape Fear Blvd
Wonder Way
Troy Dr
Economy Signs
Shipyard Blvd
Williamson Dr
Dare St
Vance St
Worth Dr
Davie Dr
Harbor Freight
MB Super Disco Super Discount
Reflections
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SOURCE:
BASE MAP TAKEN FROM DRAWING PROVIDED BY LAW ENVIRONMENTAL.

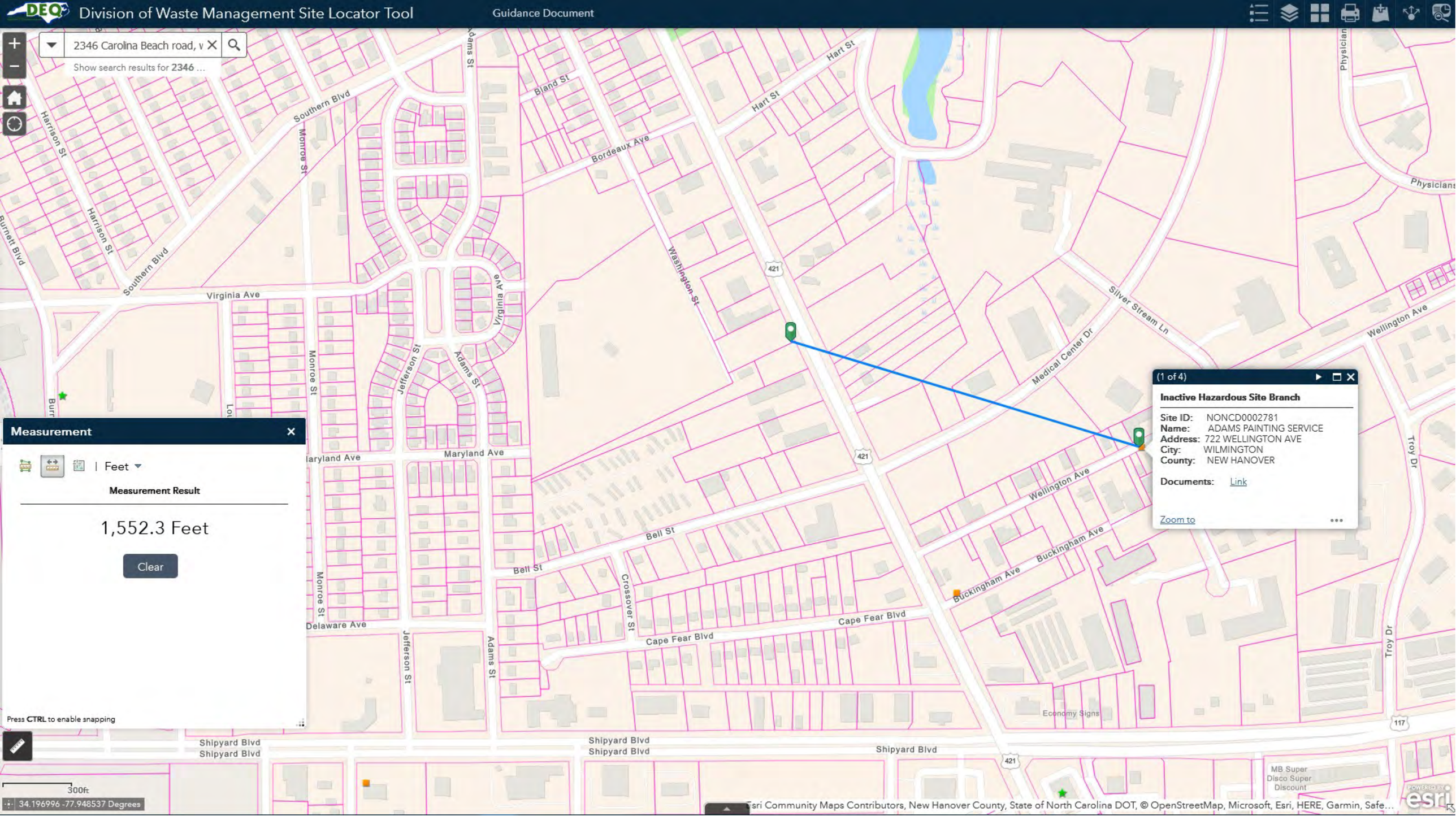
DAHL & Associates, Inc.
Environmental Consultants, Contractors & Engineers
Offices: Lino Lakes, MN - Baltimore, MD - Ann Arbor, MI - Fort Worth, TX - Charlotte, NC

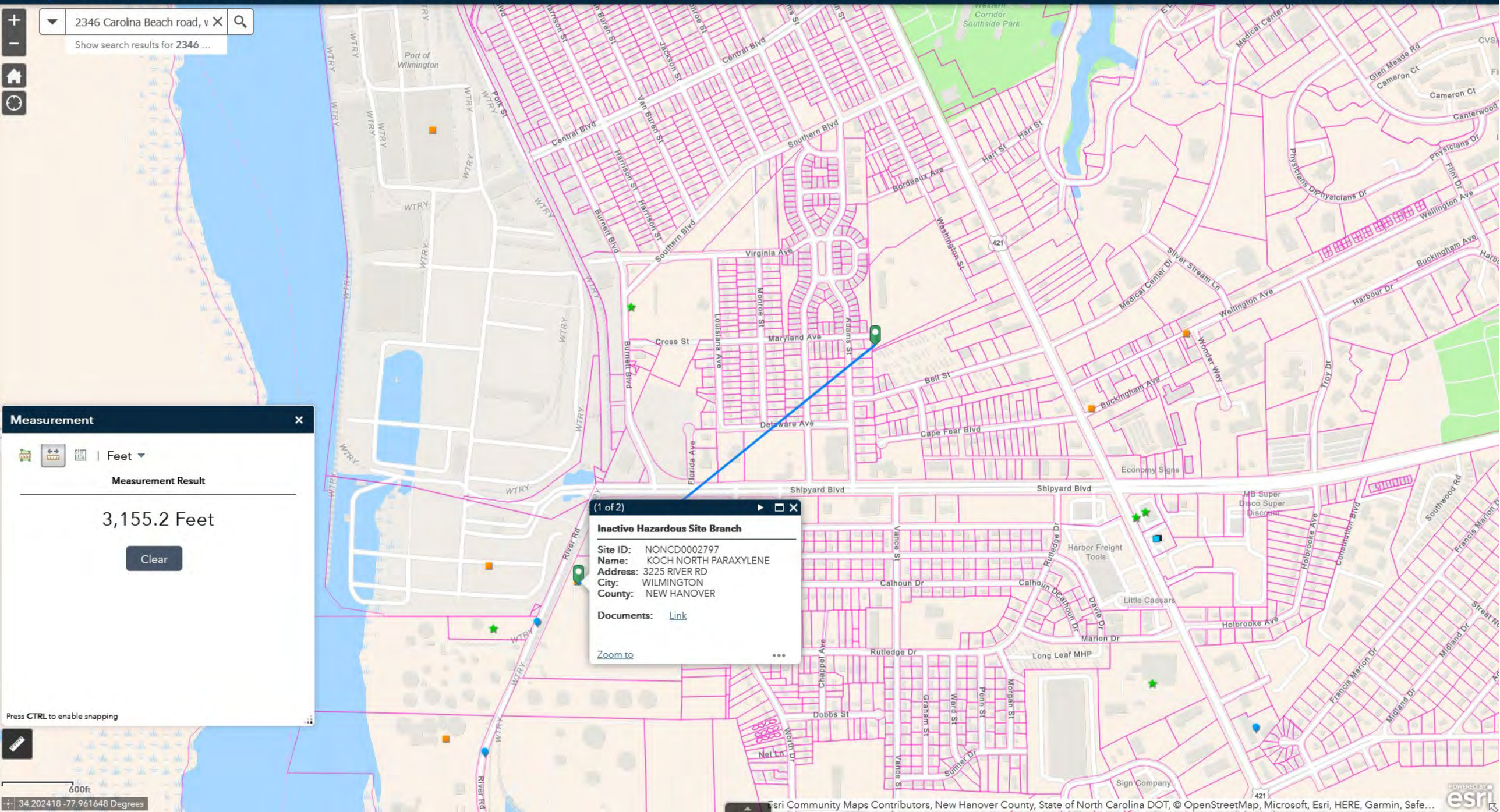
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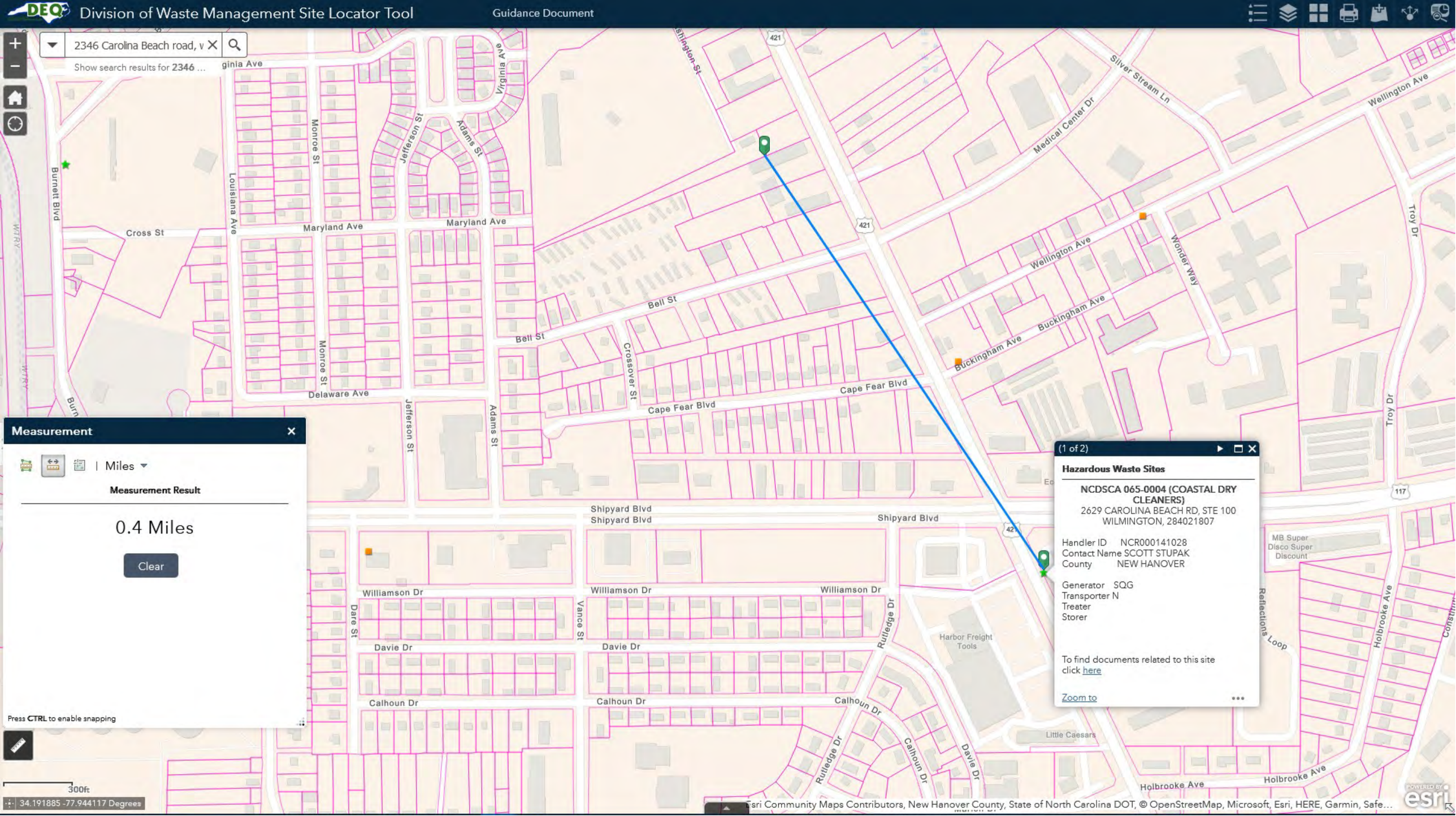
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FORMER CONOCO STORE # 33052
2461 CAROLINA BEACH ROAD
WILMINGTON, NORTH CAROLINA

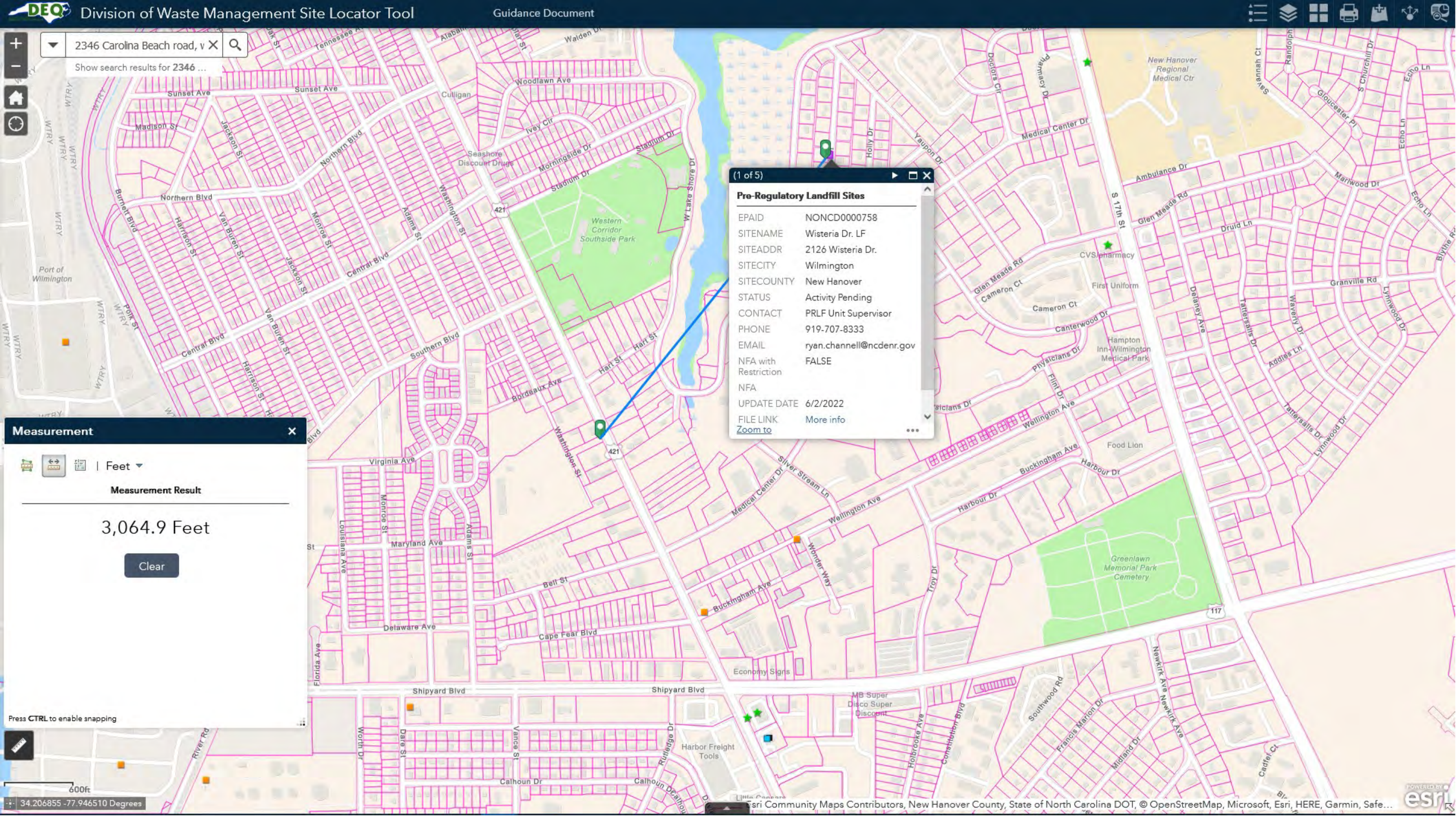
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AutoCAD FILE NAME 6226-15A
PLOT DATE 09/20/99

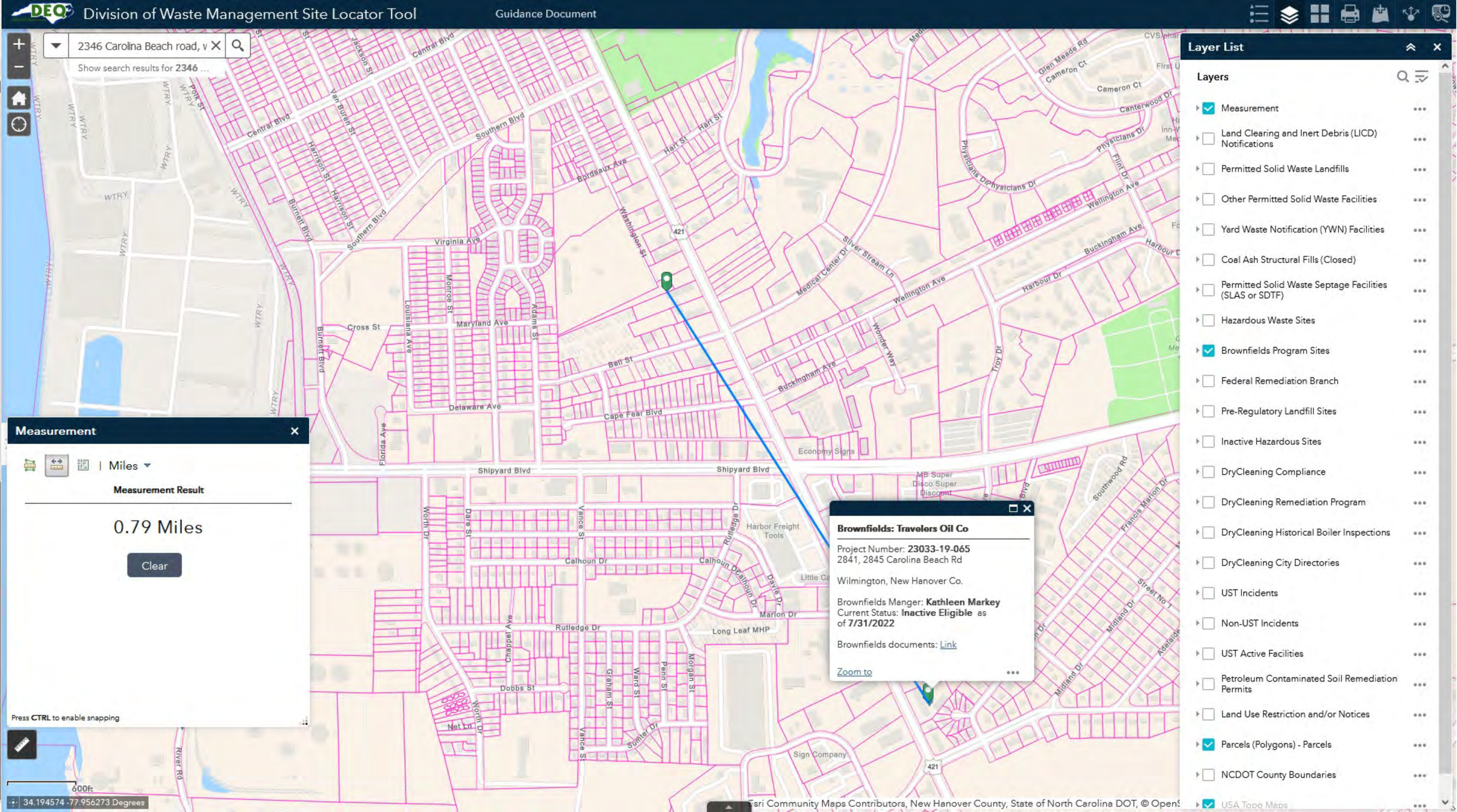
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DRAWN BY	D. Reader
APPROVED BY	
DRAWING NUMBER	B- 15-A
PROJECT NUMBER	34996226
FIGURE NUMBER	3

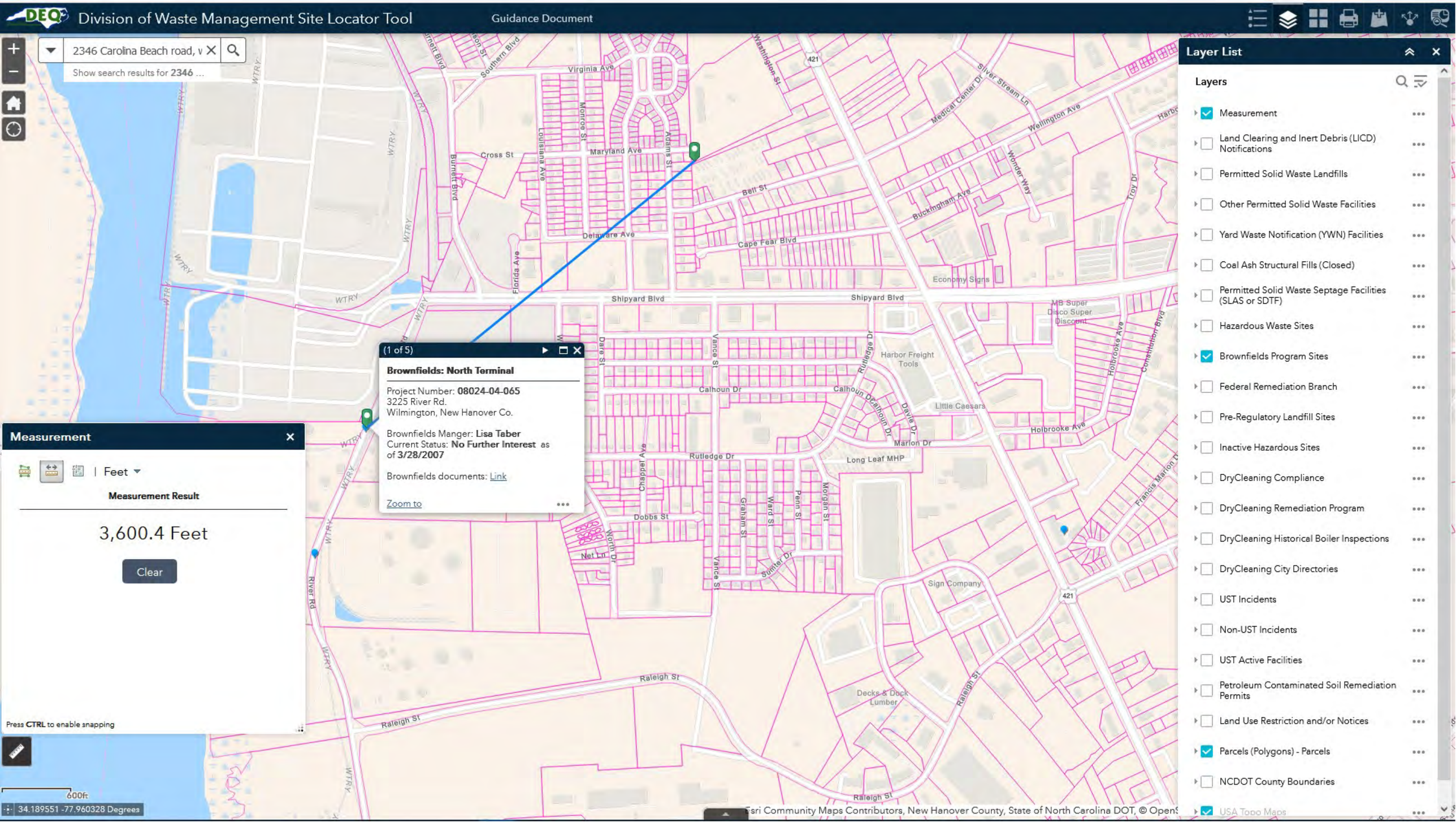

Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Feet
Measurement Result
1,552.3 Feet
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Press CTRL to enable snapping
(1 of 4)
Inactive Hazardous Site Branch
Site ID: NONCD0002781
Name: ADAMS PAINTING SERVICE
Address: 722 WELLINGTON AVE
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
Southern Blvd
Harrison St
Monroe St
Bland St
Bordeaux Ave
Hart St
Physicians
Virginia Ave
Virginia Ave
Jefferson St
Adams St
Washington St
421
Silver Stream Ln
Medical Center Dr
Wellington Ave
Maryland Ave
Bell St
Crossover St
Buckingham Ave
Cape Fear Blvd
Delaware Ave
Troy Dr
Economy Signs
Shipyard Blvd
117
MB Super Disco Super Discount
300ft
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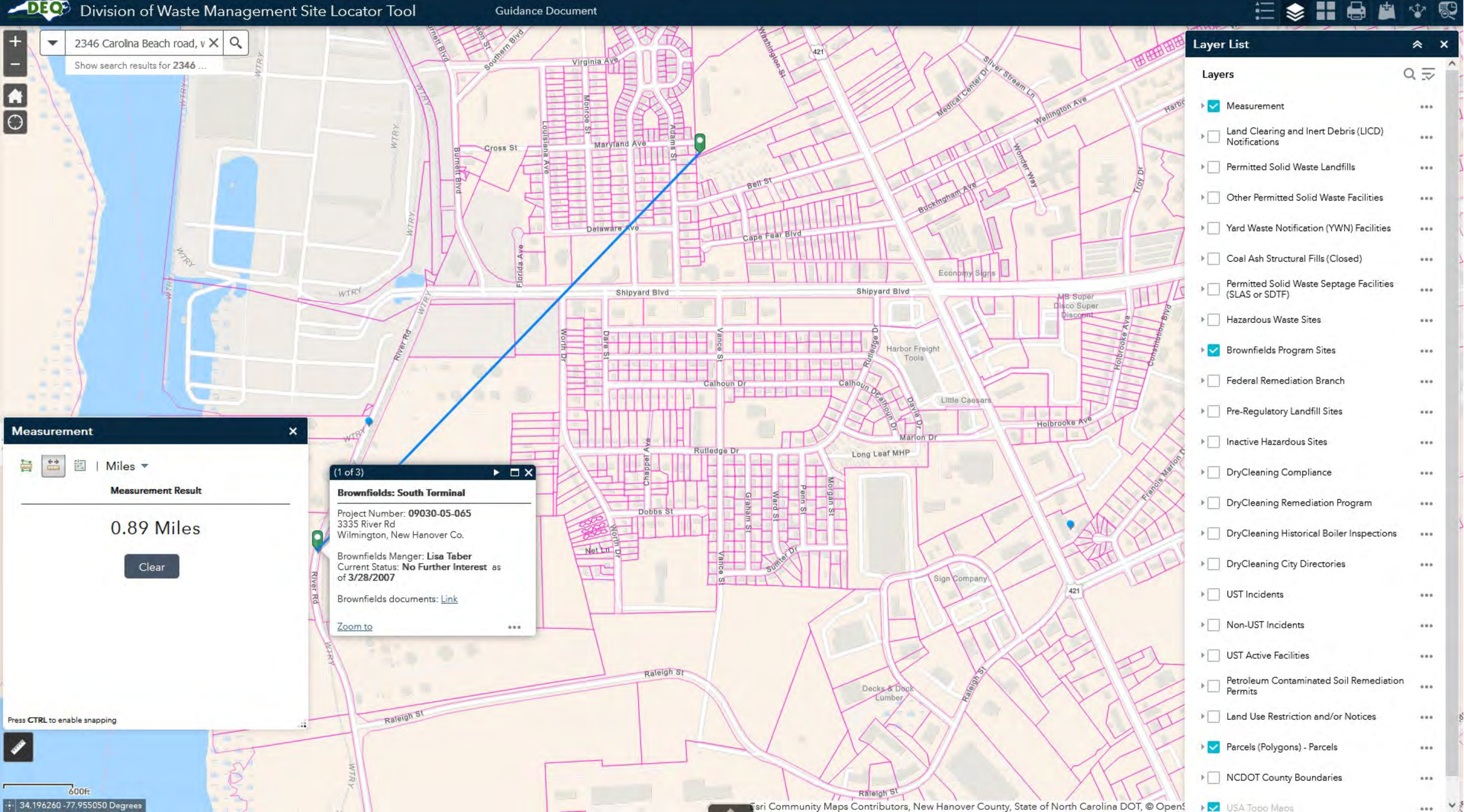

2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Feet
Measurement Result
3,155.2 Feet
Clear
Press CTRL to enable snapping
(1 of 2)
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Site ID: NONCD0002797
Name: KOCH NORTH PARAXYLENE
Address: 3225 RIVER RD
City: WILMINGTON
County: NEW HANOVER
Documents: Link
Zoom to
Port of Wilmington
Western Corridor Southside Park
Central Blvd
Southern Blvd
Virginia Ave
Maryland Ave
Delaware Ave
Cross St
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Monroe St
Louisiana Ave
Florida Ave
Adams St
Bordeaux Ave
Hart St
Washington St
421
Medical Center Dr
Physicians Dr
Wellington Ave
Buckingham Ave
Harbour Dr
Troy Dr
Wonder Way
Silver Stream Ln
Glen Meade Rd
Cameron Ct
Canterwood
Bell St
Cape Fear Blvd
Economy Signs
Shipyard Blvd
River Rd
Vance St
Calhoun Dr
Rutledge Dr
Harbor Freight Tools
MB Super Disco Super Discount
Holbrooke Ave
Constitution Blvd
Southwood Rd
Francis Marion Dr
Little Caesars
Marion Dr
Long Leaf MHP
Chapel Ave
Graham St
Ward St
Penn St
Morgan St
Dobbs St
Worth Dr
Net Ln
Sumter Dr
Midland Dr
Sign Company
WTRY
600ft
34.202418 -77.961648 Degrees
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Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Miles
Measurement Result
0.4 Miles
Clear
Press CTRL to enable snapping
(1 of 2)
Hazardous Waste Sites
NCDSCA 065-0004 (COASTAL DRY CLEANERS)
2629 CAROLINA BEACH RD, STE 100
WILMINGTON, 284021807
Handler ID NCR000141028
Contact Name SCOTT STUPAK
County NEW HANOVER
Generator SQG
Transporter N
Treater
Storer
To find documents related to this site click here
Zoom to
Shipyard Blvd
Williamson Dr
Davie Dr
Calhoun Dr
Cape Fear Blvd
Delaware Ave
Maryland Ave
Bell St
Buckingham Ave
Wellington Ave
Holbrooke Ave
Harbor Freight Tools
Little Caesars
MB Super Disco Super Discount
300ft
34.191885 -77.944117 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, Safe...


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
(1 of 5)
Pre-Regulatory Landfill Sites
EPAID NONCD0000758
SITENAME Wisteria Dr. LF
SITEADDR 2126 Wisteria Dr.
SITECITY Wilmington
SITECOUNTY New Hanover
STATUS Activity Pending
CONTACT PRLF Unit Supervisor
PHONE 919-707-8333
EMAIL ryan.channell@ncdenr.gov
NFA with Restriction FALSE
NFA
UPDATE DATE 6/2/2022
FILE LINK More info
Zoom to
Measurement
Feet
Measurement Result
3,064.9 Feet
Clear
Press CTRL to enable snapping
600ft
34.206855 -77.946510 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, Safe...


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Measurement
Miles
Measurement Result
0.79 Miles
Clear
Press CTRL to enable snapping
Layer List
Layers
Measurement
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
DryCleaning Historical Boiler Inspections
DryCleaning City Directories
UST Incidents
Non-UST Incidents
UST Active Facilities
Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
Brownfields: Travelers Oil Co
Project Number: 23033-19-065
2841, 2845 Carolina Beach Rd
Wilmington, New Hanover Co.
Brownfields Manger: Kathleen Markey
Current Status: Inactive Eligible as of 7/31/2022
Brownfields documents: Link
Zoom to
Shipyard Blvd
Cape Fear Blvd
Delaware Ave
Maryland Ave
Virginia Ave
Cross St
Bell St
Buckingham Ave
Wellington Ave
Harbour Dr
Rutledge Dr
Calhoun Dr
Long Leaf MHP
Dobbs St
Marlon Dr
Harbor Freight Tools
Economy Signs
Sign Company
Central Blvd
Southern Blvd
Bordeaux Ave
Hart St
Physicians Dr
Medical Center Dr
Silver Stream Ln
Wonder Way
Troy Dr
Flint Dr
Canterwood Dr
Cameron Ct
Glen Meade Rd
Burnett Blvd
Harrison St
Van Buren St
Jackson St
Pink St
Washington St
Florida Ave
Louisiana Ave
Monroe St
Adams St
Dare St
Vance St
Worth Dr
Chappel Ave
Graham St
Ward St
Penn St
Morgan St
Davis Dr
Net Ln
Sumner Dr
River Rd
Southwood Rd
Francis Marion Dr
Midland Dr
Adelaide
Street No 1
421
WTRY
600ft
34.194574 -77.956273 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Layer List
Layers
Measurement
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
DryCleaning Historical Boiler Inspections
DryCleaning City Directories
UST Incidents
Non-UST Incidents
UST Active Facilities
Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
USA Topo Maps
(1 of 5)
Brownfields: North Terminal
Project Number: 08024-04-065
3225 River Rd.
Wilmington, New Hanover Co.
Brownfields Manger: Lisa Taber
Current Status: No Further Interest as of 3/28/2007
Brownfields documents: Link
Zoom to
Measurement
Feet
Measurement Result
3,600.4 Feet
Clear
Press CTRL to enable snapping
600ft
34.189551 -77.960328 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS
Shipyard Blvd
Calhoun Dr
Rutledge Dr
Raleigh St
Dobbs St
Cape Fear Blvd
Bell St
Maryland Ave
Virginia Ave
Cross St
Delaware Ave
Harbor Freight Tools
Little Caesars
Long Leaf MHP
Sign Company
Economy Signs
Decks & Dock Lumber
MB Super Disco Super Discount
River Rd
421


Division of Waste Management Site Locator Tool
Guidance Document
2346 Carolina Beach road, v
Show search results for 2346 ...
Layer List
Layers
Measurement
Land Clearing and Inert Debris (LICD) Notifications
Permitted Solid Waste Landfills
Other Permitted Solid Waste Facilities
Yard Waste Notification (YWN) Facilities
Coal Ash Structural Fills (Closed)
Permitted Solid Waste Septage Facilities (SLAS or SDTF)
Hazardous Waste Sites
Brownfields Program Sites
Federal Remediation Branch
Pre-Regulatory Landfill Sites
Inactive Hazardous Sites
DryCleaning Compliance
DryCleaning Remediation Program
DryCleaning Historical Boiler Inspections
DryCleaning City Directories
UST Incidents
Non-UST Incidents
UST Active Facilities
Petroleum Contaminated Soil Remediation Permits
Land Use Restriction and/or Notices
Parcels (Polygons) - Parcels
NCDOT County Boundaries
USA Topo Maps
Measurement
Miles
Measurement Result
0.89 Miles
Clear
Press CTRL to enable snapping
(1 of 3)
Brownfields: South Terminal
Project Number: 09030-05-065
3335 River Rd
Wilmington, New Hanover Co.
Brownfields Manger: Lisa Taber
Current Status: No Further Interest as of 3/28/2007
Brownfields documents: Link
Zoom to
Shipyard Blvd
Cape Fear Blvd
Bell St
Delaware Ave
Maryland Ave
Cross St
Virginia Ave
Calhoun Dr
Rutledge Dr
Dobbs St
Raleigh St
River Rd
Marion Dr
Long Leaf MHP
Holbrooke Ave
Harbor Freight Tools
Little Caesars
Economy Signs
Sign Company
Decks & Dock Lumber
MB Super Disco Super Discount
421
600ft
34.196260 -77.955050 Degrees
Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenS

ATTACHMENT 8

Endangered Species

Gievers, Andrea

From: Gievers, Andrea
Sent: Monday, October 17, 2022 11:21 AM
To: 'Raleigh@fws.gov'
Cc: 'leigh_mann@fws.gov'
Subject: Online Project Review Certification & NLEB 4(d) - NCORR HUD CDBG-DR - Starway Village Apts
Attachments: NCORR USFWS Starway Village Apartments Pkg 10.17.22 rdcd.pdf

Hello:

Please accept for review the attached Self-certification Letter, 10-step Project Review Package, and signed NLEB 4(d) Rule Streamlined Consultation Form for the proposed project in accordance with all instructions provided, using the best available information to reach our conclusions. **Starway Village Apartments** located at **2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401** is requesting that the North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) consider funding the proposed project in part by the North Carolina Affordable Housing Development Fund Program for Hurricane Florence storm recovery activities in North Carolina.

If you have any questions or require additional information regarding this request, please feel free to contact me at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

October 17, 2022

Mr. John Ellis
U.S. Fish and Wildlife Service
Raleigh ES Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Sent Via Email: Raleigh@fws.gov
Leigh_Mann@fws.gov

RE: Section 7 Project Review - Effect Determination
NCORR - HUD CDBG-DR Program
Proposed Starway Village Apartments
2346 Carolina Beach Road
Wilmington, New Hanover County, NC 28401

Dear Mr. Ellis:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed affordable housing project, **Starway Village Apartments** located at located at 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401. The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families. Therefore, funding for the proposed project will be provided in part by the HUD CDBG-DR North Carolina Affordable Housing Development Fund Program for Hurricane Florence storm recovery activities in North Carolina.

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – Raleigh ES Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as well as the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–712) and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We have reviewed the proposed project using the USFWS Raleigh Ecological Services' online 10-step project review process and made "**no effect**" determinations for proposed/listed species and/or proposed/designated critical habitat, ***except for the Northern Long-eared Bat (NLEB)***, and a "**no Eagle Act permit required**" determination for eagles. Please find attached the Self-certification Letter and 10-step Project Review Package prepared by S&ME, Inc. for the proposed project in accordance with all instructions provided, using the best available information to reach our conclusions. The proposed project is consistent with activities analyzed in the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions (PBO). The proposed project "**may affect"** the NLEB; however, any incidental take that may occur as a result of the proposed action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). NCORR contacted the NC Natural Heritage Program (NCNHP) to review the project area for NLEB. NCNHP responded that "[t]here are no documented Northern Long-eared Bat maternity roost trees within 150 feet of this project boundary" and "no Northern Long-eared Bat hibernacula within 0.25 mile of this project boundary." Thus, NCORR has determined that the proposed action **may affect NLEB** and, in accordance with the January 5, 2016 PBO, that no activities associated with the proposed project will: (1) disturb hibernating NLEBs in a known hibernaculum; (2) alter the entrance or interior environment of a known hibernaculum; (3) remove any trees within 0.25 miles of a known hibernaculum at any time of year; or (4) cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree, during the pup season (June 1 through July 31). Please find attached the Self-certification Letter, 10-step Project Review Package, and signed NLEB 4(d) Rule Streamlined Consultation Form (if needed) for the proposed project in accordance with all instructions provided, using the best available information to reach our conclusions.

Proposed Project Location:

The project site is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina (see attached vicinity map). The project site is comprised of four contiguous parcels, R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.) that encompass approximately 15.67 acres (see attached New Hanover County GIS Map). The parcels have been zoned MD-17, High-density multiple-dwelling residential (see attached City of Wilmington Zoning Map). The project will be located on a site with street frontage on Carolina Beach Road, adjacent to commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences (see attached Aerial Map Map).

The site is relatively flat and consists primarily of open land (approximately 11 acres) associated with the former Starway Flea Market. Grassed lawns associated with two residences, developed areas (buildings, residences, paved/gravel drives), and pine-mixed hardwood wooded areas (approximately 3 acres) are also located on the site. A depressional, basin wetland (0.24 acre)

surrounded by uplands was observed on the northern portion of the site. A man-made ditch was also observed on the southern and eastern portions of the site. See attached photos, which illustrates the existing conditions.

Proposed Project Activities:

The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques, for stormwater management. The conceptual plan proposes to utilize two stormwater detention ponds, which will treat collected runoff, from the added built upon area, before it discharges offsite and eventually into downstream receiving waters. It is important to note, that the Cape Fear Public Utility Authority have sewer and water lines in place, along Carolina Beach Road, thus there is no need to perform work outside the proposed project location. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases.

Approximately 15 acres of the project site will be disturbed, with approximately 15 acres being converted to built-upon area. Due to the proposed land disturbance exceeding 1 acre, a NC Division of Energy, Minerals and Land Resources NPDES NCG010000 permit is required and will ensure best management practices, such as installing silt fence, temporary sediment basins/traps and construction entrance, are installed prior undertaking land disturbance activities. The measures will be inspected at least every seven days and/or after a rain event that produces more than one inch of rain within a 24-hour period. Non-potable water will be used to contain dust, during the construction process.

NCORR is submitting the above information as notification of its determination and requests *acknowledgement* that they have received this determination for species under USFWS jurisdiction and *determination* whether the proposed action may affect, but is not likely to adversely affect the NLEB.

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Attachments:

- Self-certification Letter
- 10-step Project Review Package

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Date: 9-8-2022

Self-Certification Letter

Project Name Starway Village Apartments

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Raleigh Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. Based on your analysis, mark all the determinations that apply:

- [x] "no effect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- [ ] "may affect, not likely to adversely affect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- [x] "may affect, likely to adversely affect" determination for the Northern long-eared bat (Myotis septentrionalis) and relying on the findings of the January 5, 2016, Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat;
- [x] "no Eagle Act permit required" determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" or "not likely to adversely affect" determinations for proposed and listed species and proposed and designated critical habitat; the "may affect" determination for Northern long-eared bat; and/or the "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed. Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species. Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year. Information about the online project review process including instructions, species information, and other information regarding project reviews within North Carolina is available at our website http://www.fws.gov. If you have any questions, you can write to us at Raleigh@fws.gov or please contact Leigh Mann of this office at 919-856-4520, ext. 10.

Sincerely,

/s/Pete Benjamin

Pete Benjamin
Field Supervisor
Raleigh Ecological Services

Enclosures - project review package

Species Conclusions Table

Project Name: Starway Village in Wilmington, New Hanover County, NC

Date: September 8, 2022

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Bald Eagle	No suitable habitat present	No Eagle Act Permit Required	No nests on or within 660 feet of site
Northern Long-eared Bat	Suitable habitat present	May affect	Relying upon the findings of the 1/5/2016 Programmatic Biological Opinion for Final 4(d) Rule on the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill the project-specific section 7 responsibilities.
Eastern Black Rail	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Piping Plover	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Red Knot	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Red-cockaded Woodpecker	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Four (4) Sea Turtles	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
American Alligator	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Magnificent Ramshorn	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Cooley's Meadowrue	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Rough-leaved Loosestrife	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Seabeach Amaranth	No suitable habitat present	No effect	Habitat assessment indicated no suitable habitat present
Monarch Butterfly (candidate)	No suitable habitat present	N/A	Habitat assessment indicated no suitable habitat present

Acknowledgement: I agree that the above information about my proposed project is true. I used all of the provided resources to make an informed decision about impacts in the immediate and surrounding areas.



Chris Daves, P.W.S./Senior Scientist

Signature /Title

September 1, 2022

Date

Protected Species Assessment
Starway Village Apartments
Wilmington, New Hanover Co., NC
S&ME Project No. 21610025

PREPARED FOR:

Starway Village I & II, LLC
709 North Main Street, Suite 200
Aynor, SC 29511

PREPARED BY:

S&ME, Inc.
134 Suber Road
Columbia, SC 29210

September 8, 2022

September 8, 2022

Starway Village I &II, LLC
709 North Main Street, Suite 200
Aynor, South Carolina 29511

Attention: Mr. Brad Queener
brad@bradleydevelopers.com

Reference: **Protected Species Assessment**
Starway Village
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Mr. Queener:

S&ME, Inc. (S&ME) is pleased to submit our Protected Species Assessment for the above-referenced project located in New Hanover County, North Carolina. This work was performed in general accordance with S&ME Proposal No. 21610025, dated August 8, 2022 and our Agreement for Services Form (AS-071).

S&ME appreciates the opportunity to be of service to you by performing this Protected Species Assessment for this project. Please contact us at (803) 561-9024 with questions regarding this report or if you require additional information.

Sincerely,

S&ME

Chris Handley
Biologist
chandley@smeinc.com

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

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Appendix II – County Species Lists from USFWS and NCNHP

Appendix III – NCNHP/USFWS Correspondence

Appendix IV – USACE Jurisdictional Determination Letter

1.0 Project Background

This Protected Species Assessment has been conducted to assess the potential for the presence of protected species on the site in preparation for a planned apartment development in Wilmington, New Hanover County, North Carolina. The project will be funded by federal Community Development Block Grant – Disaster Recovery Program (CDBG-DR) monies administered by the U.S. Department of Housing and Urban Development (HUD). S&ME is requesting the technical assistance (in the form of a written Response Letter) of the U.S. Fish and Wildlife Service (USFWS) as to whether site activities would likely result in "take" as defined under Section 9 of the Endangered Species Act (ESA).

The 15.67-acre site (Action Area) is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The site is represented by four New Hanover County tax parcel numbers. The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also proposed. The development will be conducted in two phases. The location of the site is shown on the **Exhibits** in **Appendix I**.

2.0 Site and Habitat Descriptions

The site is located in west-central New Hanover County within the Middle Atlantic Coastal Plain/Carolina Flatwoods ecoregion of North Carolina. The properties adjacent to site consist of commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences. Please refer to the **Exhibits** and the site photographs in **Appendix I** for depictions of the habitat types.

2.1 Open Land

A majority of the site consists of open land (approximately 11 acres) associated with the former Starway Flea Market (Photographs 1-3). Grassed lawns associated with two residences (southeastern portion) and parking areas were also observed. Dominant species observed included bahia grass (*Paspalum notatum*) as well as lesser species such as English plantain (*Plantago lanceolata*), ragweed (*Ambrosia artemisiifolia*), and bitterweed (*Helenium amarum*).

2.2 Developed Land

Developed land (approximately one acre) consisting of several commercial buildings, two residences, and paved or graveled driveways were observed scattered throughout the site (Photographs 4-5).

2.3 Pine-Mixed Hardwood Wooded Areas

The southern portion of the site and edges of the property boundaries consisted of pine-mixed hardwood wooded areas (approximately three acres) (Photographs 6-8). Typical overstory species observed in these areas included longleaf pine (*Pinus palustris*), loblolly pine (*P. taeda*), live oak (*Quercus virginiana*), and water oak (*Q.*

nigra). The understory consisted of those of the canopy dominants, black gum (*Nyssa sylvatica*), Carolina laurel cherry (*Prunus caroliniana*), Chinese privet (*Ligustrum sinense*), wax myrtle *(Morella cerifera*), winged sumac (*Rhus copallinum*), smooth sumac (*R. glabra*), and southern magnolia (*Magnolia grandiflora*)

Woody vine and groundcover species observed included poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), muscadine (*Vitis rotundifolia*), roundleaf greenbrier (*Smilax rotundifolia*), catbrier (*S. bona-nox*), Japanese honeysuckle (*Lonicera japonica*), English ivy (*Hedera helix),* goldenrod (*Solidago* spp.), bracken fern (*Pteridium aquilinum*), and blackberry (*Rubus* spp.).

2.4 Aquatic Features

A depressional, basin wetland (0.24 acre) surrounded by uplands was observed on the northern portion of the site (Photographs 9-10). The wetland was primarily an emergent wetland with a thin strip of scrub-shrub habitat along its northern edge. The wetland was determined to be an isolated, non-jurisdictional feature per the U.S. Army Corps of Engineers (USACE) Jurisdictional Determination letter data August 4, 2021 (**Appendix IV**).

The emergent portion of the wetland appears to be maintained (mowed) on a regular basis. Species observed in the emergent portion of the wetland included sporadic buttonweed (*Diodia virginiana*), creeping primrose (*Ludwigia palustris*), and bulrush (*Scirpus cyperinus*). The thin scrub-shrub portion of the wetland included Chinese tallow (*Triadica sebifera*), black willow *(Salix nigra*), common reed (*Phragmites australis*), and trumpet creeper (*Campsis radicans*).

A man-made ditch (Photograph 11) was also observed on the southern and eastern portions of the site. The ditch was surround by similar canopy, sapling, and shrub species previously described in the pine-mixed hardwood wooded areas.

3.0 Methodology

S&ME personnel reviewed the USFWS and the North Carolina Natural Heritage Program (NCNHP) websites to determine those species currently listed as federally protected (threatened, endangered), candidate, or proposed in New Hanover County. S&ME also consulted with the USFWS Information for Planning and Consultation (IPaC) website to request an Official Species List for the site. The results of this search, including identified species and preferred habitat, served as the basis of the field review, and are presented in **Table 4-1**.

The NCNHP maintains a database of elements of occurrence for protected species in the state of North Carolina. S&ME contacted the NCNHP to conduct a search of their database regarding the known presence of protected species on or near the site. Refer to **Appendix III** for details of this consultation with NCNHP.

S&ME also reviewed the USFWS's Environmental Conservation Online System (ECOS) Threatened and Endangered Species Active Critical Habitat Report. No critical habitat was noted within one mile of the site.

Supporting information was researched for the purpose of identifying soil types, vegetative communities, and possible drainage features on the site. The supporting information reviewed included aerial photography,

topographic quadrangle maps, soil survey sheets, land use information, and data from the National Wetlands Inventory (NWI).

S&ME Biologist, Chris Daves, P.W.S., performed a field review on September 1, 2022. The information obtained from supporting documentation was integrated with the field review to identify potential areas of preferred habitat of protected species. Portions of the site that matched descriptions of preferred habitat for protected species listed in **Table 4-1** were considered to be potential habitat for the respective protected species. These areas were subsequently field reviewed to confirm the presence/absence of the respective species. Please note that formal turtle, mussel, or bat (mist netting or acoustic) surveys were not conducted for listed species.

4.0 Federally Listed Species

Descriptions of the species and their respective federal status are identified in **Table 4-1** and in **Appendix II**. The USFWS and NCNHP websites identified the following federally listed species for New Hanover County:

Table 4-1 Federally Listed Flora and Fauna Summary

Species	Listing	Habitat	Habitat Present/ Determination
Bald Eagle *Haliaeetus leucocephalus*	BGEPA	Coastlines, rivers, large lakes which provide adequate feeding grounds.	No/No Effect
Northern Long-eared Bat *Myotis septentrionalis*	T	Caves and abandoned mines (winter hibernacula). In summer, in cavities or crevices of trees with loose or exfoliating bark, with diameter at breast height (DBH) greater than 3 inches. Historical listing for county.	**Yes/MANLAA**
Eastern Black Rail *Laterallus jamaicensis* ssp. *jamaicensis*	T	Brackish marshes, rarely freshwater marshes (breeding evidence only).	No/No Effect
Piping Plover *Charadrius melodus*	T	Coast; Expansive sand or mudflats (foraging) in close proximity to a beach (roosting).	No/No Effect
Red Knot *Calidris canutus rufa*	T	Intertidal, marine habitats, especially near coastal inlets, estuaries, and bays.	No/No Effect
Red-cockaded Woodpecker *Dryobates borealis*	E	Open pine stands with minimum age of 60 years; nests in live pines with red-heart disease.	No/No Effect
Kemp's Ridley Sea Turtle *Lepidochelys kempii*	E	Inshore waters; Nests on beaches.	No/No Effect
Leatherback Sea Turtle *Dermochelys coriacea*	E	Inshore waters; Nests on beaches.	No/No Effect

Species	Listing	Habitat	Habitat Present/ Determination
Loggerhead Sea Turtle *Caretta caretta*	T	Inshore waters; Nests on beaches.	No/No Effect
Green Sea Turtle *Chelonia mydas*	T	Inshore waters; Nests on beaches.	No/No Effect
American Alligator *Alligator mississippiensis*	T	Fresh to slightly brackish lakes, ponds, rivers, and marshes.	No/No Effect
Magnificent Ramshorn *Planorbella magnifica*	PE	Orton Pond and pond on Sand Hill Creek; formerly Greenfield Lake. Historical listing for county. Egg laying on spatterdock and lily pads.	No/No Effect
Cooley's Meadowrue *Thalictrum cooleyi*	E	Circumneutral soils in grass-sedge bogs, wet pine savannahs, and savannah-like areas.	No/No Effect
Rough-leaved Loosestrife *Lysimachia asperulaefolia*	E	Sandy moist peat of pine flatwoods, savannas, seep bogs in Sandhills, and pocosins.	No/No Effect
Seabeach Amaranth *Amaranthus pumilus*	T	Sands in front of foredunes on coastal barrier islands.	No/No Effect
Monarch Butterfly *Danaus plexippus*	C	Open areas such as field and roadsides. Milkweed host plants.	No/No Effect

E = Endangered *T = Threatened* *BGEPA = Bald and Golden Eagle Protection Act*
PE = Proposed Endangered *C = Candidate* *MANLAA = May Affect, Not Likely to Adversely Affect*

4.1 Bald Eagle

BIOLOGICAL DETERMINATION: NO EFFECT

This large raptor has characteristic adult plumage consisting of a white head and tail with a dark brown body. Juvenile eagles are completely dark brown and do not fully develop the majestic white head and tail until the fifth or sixth year. Adults average about three feet from head to tail, weigh approximately 10 to 12 pounds and have a wingspread that can reach seven feet. Generally, female bald eagles are larger than the males. The typical nest is constructed of large sticks and is lined with soft materials such as pine needles and grasses. The nests are very large, measuring up to six feet across and weighing hundreds of pounds. Nesting and feeding sites are generally in the vicinity of large bodies of open water (coastlines, rivers, large lakes).

The site does not contain suitable nesting habitat for the bald eagle. There are no coastlines, rivers, or large lakes on or immediately adjacent to the site considered suitable habitat for the bald eagle. No nests were observed on the site on within 660 feet of the site. Accordingly, future development of the site is not expected to impact this species.

4.2 Northern Long-eared Bat

BIOLOGICAL DETERMINATION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

The northern long-eared bat (NLEB) is a medium-sized bat approximately three to 3.7 inches, with a wingspan of nine to 10 inches. Fur color ranges from medium to dark brown on the back and tawny to pale brown on the underside. It is distinguished by its long ears in relation to other bats in the genus *Myotis*, which means mouse-eared. The NLEB uses caves and abandoned mines as winter hibernacula. It is found from Maine to North Carolina on the Atlantic Coast, westward to eastern Oklahoma, and north through the Dakotas. In summer, this bat will roost in small colonies or alone underneath bark or in cavities or crevices of both live trees and dead trees. The USFWS considers any live or dead tree with loose or exfoliating bark with a DBH greater than three inches to be potential summer roosting habitat.

S&ME submitted a scoping request to the North Carolina Department of Natural and Cultural Resources, Natural Heritage Program (NHP) in regard to NLEB occurrences on or in the vicinity of the site. The NHP response letter (**Appendix III**), dated September 1, 2022, indicated the was a county-wide listing for the NLEB, there are no known federally threatened or endangered species including the northern long-eared bat within a mile of the site. Specifically, no known locations of the bat are within one-quarter mile from known hibernacula, winter roosts, or within 150 feet from known maternity roost trees.

The site consisted of pine and hardwood stands containing trees with a DBH larger than three inches, and also exhibited loose, creviced, or exfoliating bark. Several snags were also observed scattered throughout the site (Photograph 12). These trees could potentially provide summer roosting habitat for this species. However, correspondence with NCNHP indicated that known winter hibernacula or summer roosting trees were not present in the vicinity of the site.

Using the USFWS Information for Planning and Consultation (IPaC) website, a verification letter was obtained regarding the potential impact to NLEB in the event tree clearing was part of site development. The project may affect the threatened northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) was required. However, this project may rely on the USFWS January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill its Section 7(a)(2) consultation obligation. Accordingly, future development of the site "*may affect, but is not likely to adversely affect*" this species.

4.3 Eastern Black Rail

BIOLOGICAL DETERMINATION: NO EFFECT

An adult eastern black rail is gray-black with white speckled upperparts, and has a grayish crown, a chestnut-colored nape of the neck, and a short tail. The bird has red eyes, black bills, and dusty pink or wine-colored legs. Adults have an average length of four to six inches and a wingspan of 8.7 to 11 inches.

Eastern black rail habitat is higher elevations in estuarine and palustrine persistent emergent wetlands and where these wetlands meet upland edges. Its habitat needs are the higher elevations of salt, brackish, or freshwater marsh (impounded and unimpounded), dense herbaceous vegetative cover that allows movement underneath the

canopy (plant structure is considered more important than plant species composition) elevated refugia to escape high water events, and moist to saturated substrates interspersed with or adjacent to very shallow water.

Although a wetland was observed on the site, this wetland is not considered habitat for eastern black rail due to its small size (0.24 acre), lack of a permanent standing water, lack of a food source, and maintenance mowing schedule. Accordingly, future development of the site is not expected to impact this species.

4.4 Marine Flora and Fauna

Multiple marine or beach species were listed for New Hanover County. These included seabeach amaranth (*Amaranthus pumilus*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), and loggerhead sea turtle (*Caretta caretta*). Due to the lack of a marine or beach environment, the proposed project would have no effect on these species.

4.5 Red-cockaded Woodpecker

BIOLOGICAL DETERMINATION: NO EFFECT

This black and white bird measures approximately seven inches long and has black and white horizontal stripes on its back. The cheeks and underparts are white, and the sides are streaked in black. The cap and stripe on the throat and neck of the bird are black. Male individuals of the species have a small red spot on each side of the black cap and display a red crown patch after the first post-fledgling molt.

The red-cockaded woodpecker's range is closely linked to the distribution of southern pines. Loblolly and longleaf pines that are 60-plus years old are generally selected for nesting sites. However, other species of southern pines are occasionally used for nesting. The woodpecker usually excavates nest cavities in trees infected with a fungus that produces red-heart disease. Preferred nesting sites generally include relatively open, mature pine stands with an undeveloped or low understory layer. Foraging habitat is frequently limited to pine or pine-hardwood stands that are 30 years or older, with a preference for pine trees with a diameter of 10 inches or larger. The USFWS indicates that the maximum foraging range for the red-cockaded woodpecker is approximately one-half mile.

The site did not contain suitable nesting or foraging habitat for the red-cockaded woodpecker. Although pines were observed on the site, there were no true stands able to support red-cockaded woodpecker. No start cavities or nests were observed on the on-site pines. Based on recent aerial photography, the surrounding properties are heavily developed and do not contain suitable habitat for red-cockaded woodpecker. Accordingly, future development of the site is not expected to impact this species.

4.6 American Alligator

BIOLOGICAL DETERMINATION: NO EFFECT

American alligators are large crocodilians found only in the United States. They can grow to be more than 12 feet in length and weigh as much as 1,000 pounds, with males being slightly larger than females on average. The animal's dark skin is armored with small, bony scales (scutes). American alligators can be found in the coastal

wetlands of the U.S. Southeast, including North Carolina. These reptiles are usually found in slow-moving freshwater rivers, but also inhabit swamps, marshes, and lakes.

Although a wetland was observed on the site, this wetland is not considered habitat for American alligator due to its small size (0.24 acre) and lack of connectivity to other larger wetland systems. Accordingly, future development of the site is not expected to impact this species.

4.7 Magnificent Ramshorn

BIOLOGICAL DETERMINATION: NO EFFECT

Magnificent ramshorn is an aquatic air-breathing gastropod mollusk with a coiled shell in the shape of a ram's horn. Its brown shell grows to the size just under 1.5 inches and less than one inch in height. The magnificent ramshorn is believed to be found only in southeastern North Carolina. The species was historically known from only four sites in the lower Cape Fear River Basin in North Carolina and the snail appears to be extinct at all four locations. It appears to have been pushed out of its natural habitat and since 1993 remains in existence only in captivity. Three captive populations exist in propagation facilities in McDowell, Pender, and Wake Counties. If enough habitat is secured in suitable ponds and sustained into the future, magnificent ramshorn snails could be released to repopulate their historical habitat. The habitat for magnificent ramshorn is still or slow-flowing aquatic habitats with egg laying on spatterdock and lily pads. Salinity and pH appear to have been major factors limiting the distribution of the magnificent ramshorn, as the snail prefers freshwater bodies with pH within the range of 6.8–7.5.

Although a wetland was observed on the site, this wetland is not considered habitat for magnificent ramshorn due its historical listing and lack of egg-laying habitat vegetation. Accordingly, future development of the site is not expected to impact this species.

4.8 Cooley's Meadowrue

BIOLOGICAL DETERMINATION: NO EFFECT

Cooley's meadowrue is a perennial herb which grows from a rhizome. The typically erect stems are usually 3.3 feet in height, but sometimes grow as high as 6.6 feet on recently burned sites. The green leaves are compound and divided into three parts. Leaflets are lance-shaped and less than one inch long. All parts of the plant are glabrous, having virtually no hairs or glands. The flowers have no petals. The sepals on the male plants are pale yellow to white. There are numerous stamens, and the filaments are pale lavender. Female plants have green sepals, and their short-stalked, ribbed carpels develop into narrowly ellipsoidal achenes. Cooley's meadowrue flowers in mid-June to early July. The fruits are spindle-shaped carpels, maturing in August or September, and remaining on the plant into October. The habitat for Cooley's meadowrue occurs on circumneutral soils in grass-sedge bogs, wet pine savannahs, and savannah-like areas. It may also grow along fire plow lines, in roadside ditches, woodland clearings, and powerline rights-of-way, and needs some type of disturbance such as fire or mowing to maintain its open habitat. Plants often found growing with Cooley's meadowrue include tulip poplar growing with bald cypress and/or Atlantic white cedar.

Although a wetland was observed on the site, this wetland is not considered habitat for Cooley's meadowrue. The on-site wetland is not a true grass-sedge bog, wet pine savannah, or savannah-like. Associated species (tulip poplar, bald cypress, and Atlantic white cedar) typically found with Cooley's meadowrue were not observed. Although the site visit was conducted outside the optimal survey window (mid-June through early July), fruiting material of this species was not observed. Accordingly, future development of the site is not expected to impact this species.

4.9 Rough-leaved Loosestrife

BIOLOGICAL DETERMINATION: NO EFFECT

Rough-leaved loosestrife is a perennial, colonial herb growing to heights of one to two feet. Leaf formations are in whorls of three to four leaves. Its large, showy, yellow flowers are found on the terminal end of the stems. This plant flowers from May to June and fruits from August to October. Habitat includes the grass-shrub transition areas between longleaf pine and pond pine pocosin wetlands. It prefers moist or saturated sands and shallow organic soils. Other habitats include savannas, seep bogs, and pocosins in the Sand Hills. This plant fares well where periodic fires are prevalent. Abundant sunlight and low vegetation are important to its survival.

The site does not contain suitable habitat for the rough-leaved loosestrife. No longleaf pine stands, savannas, seep bogs, or pond pine pocosin wetlands were observed on the site. The site visit was conducted during the ideal survey window (mid-May-through September) and the species was not observed. Accordingly, future development of the site is not expected to impact this species.

4.10 Monarch Butterfly

BIOLOGICAL DETERMINATION: NO EFFECT

The monarch butterfly is under consideration for official listing for which there is sufficient information to support listing (candidate listing). There are generally no Section 7 requirements for candidate species. Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The habitat of the monarch butterfly includes open areas such as field and roadsides. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.) the larvae feed on milkweed.

The site does not contain suitable habitat for the monarch butterfly. Although there are open areas on the site, no species of milkweed was observed during the site visit. Accordingly, future development of the site is not expected to impact this species.

5.0 Summary and Conclusions

Based on the literature review, habitat assessment, and pedestrian field review of the site, the following conclusions are given regarding federally listed species in New Hanover County:

- The site does not provide suitable habitat for a majority of the listed protected (threatened or endangered), candidate, or proposed species. Our opinion is that proposed project will have "no effect" on these species.
- Potential summer roosting habitat for the northern long-eared bat was observed within the forested areas of the site. These trees had loose, exfoliating, or creviced bark over three inches DBH which could provide summer roosting habitat for the northern long-eared bat. Multiple snags were also observed scattered throughout the site. Per NCNHP consultation, there are no known winter hibernacula or summer roosting trees located within one-quarter mile radius of the site and no maternity roost trees within 150 feet. This project may rely on the USFWS's January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill its Section 7(a)(2) consultation obligation. Accordingly, future development of the site "*may affect, but is not likely to adversely affect*" this species.

In summary, based on the results of this Protected Species Assessment, the proposed project is eligible to use a Self-Certification Letter that will be forwarded to the USFWS (Raleigh@fws.gov) for their records. The USFWS will review and comment on the Self-Certification Letter and Protected Species Assessment as needed and will provide confirmation of receipt.

6.0 Qualifications

The field survey was conducted by Mr. Chris Daves of S&ME. Mr. Daves is a Senior Scientist with over 21 years of experience in environmental consulting. Mr. Daves is proficient in conducting wetland delineations, environmental permitting activities, and habitat assessments, including protected species surveys. He is a Professional Wetland Scientist (P.W.S.) and holds a B.S. degree in Biology from Wofford College and a Master's degree in Earth and Environmental Resources Management from the University of South Carolina.

7.0 References Consulted

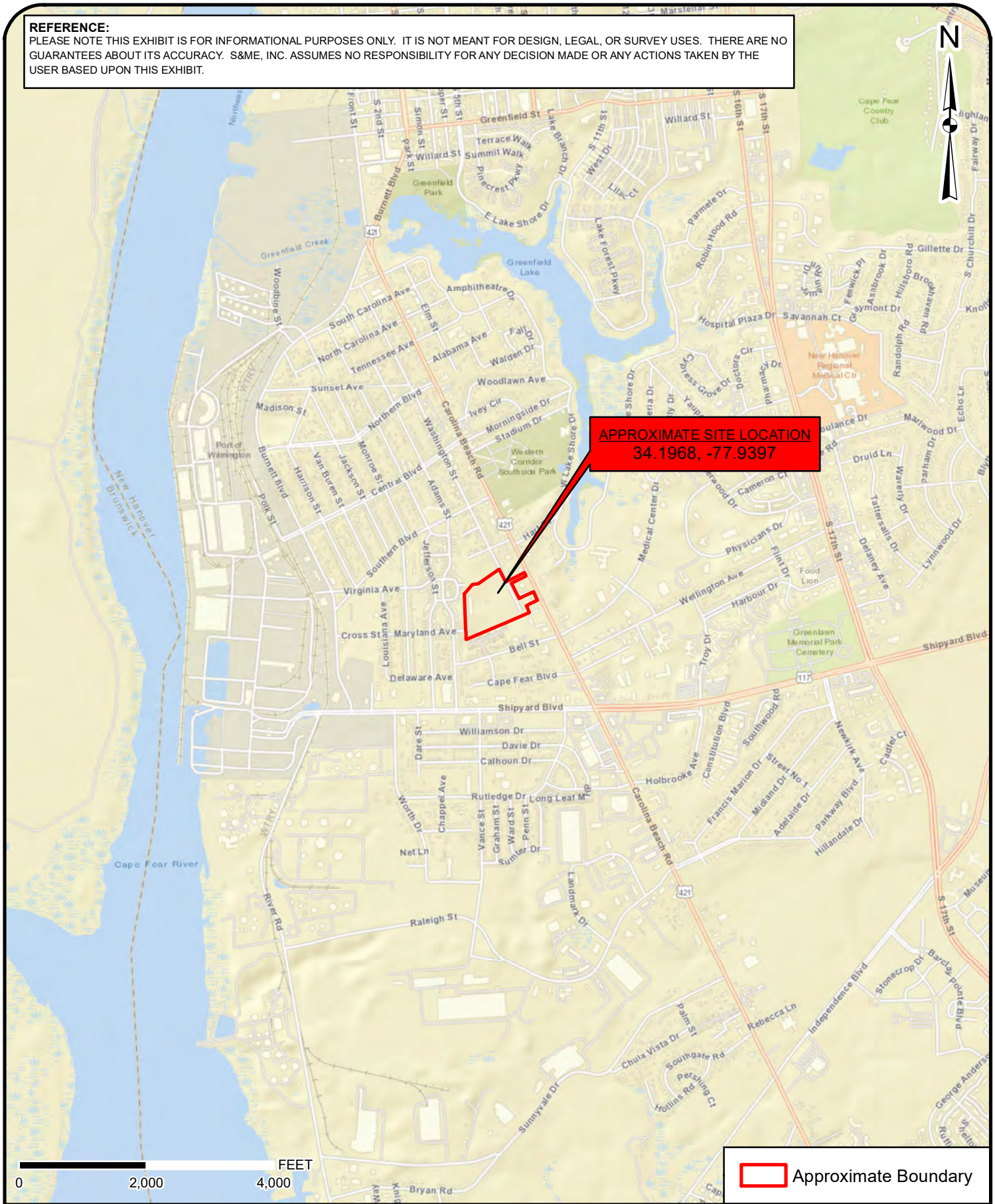
The following sources were referenced during the course of this assessment:

- North Carolina Natural Heritage Program Online Data Search. 2022. Department of Environment and Natural Resources, Office of Land and Water Stewardship, Raleigh, NC. www.ncnhp.org; Accessed September 1, 2022.
- North Carolina Wildlife Resources Commission. http://www.ncwildlife.org/Learning/Species; Accessed September 1, 2022.
- USFWS ECOS. Critical Habitat for Threatened and Endangered Species. https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77; Accessed September 1, 2022.
- USFWS Eastern North Carolina Ecological Services. 2022. https://www.fws.gov/office/eastern-north-carolina and https://www.fws.gov/office/eastern-north-carolina/project-planning-and-consultation; Accessed September 1, 2022.
- USFWS. 2022. IPaC. https://ecos.fws.gov/ipac/; Accessed August 28, 2022.
- U.S. Department of Agriculture. Soil Conservation Service. Soil Survey of New Hanover County, 1977.
- USDA. National Resources Conservation Service. Web Soil Survey, 2022. http://websoilsurvey.nrcs.usda.gov/app/; Accessed September 1, 2022.
- USACE. JD Letter – Action ID SAW-2021-01647, dated August 4, 2021.

Appendices

Appendix I – Exhibits and Site Photographs

REFERENCE:
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Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

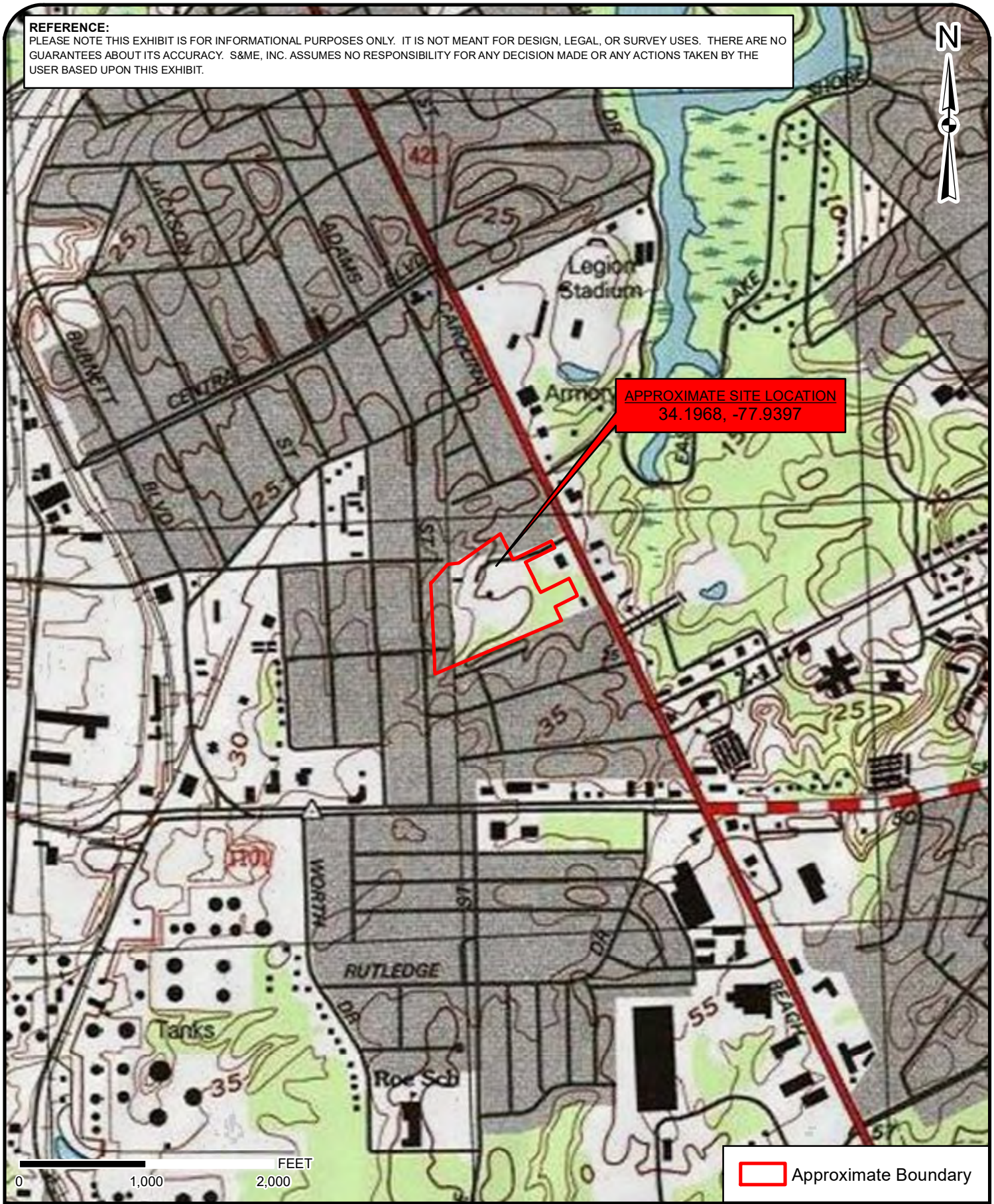
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
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Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
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Aerial Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020

SCALE:	EXHIBIT NO.
1 " = 300 '	3
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022



PRELIMINARY SITE LAYOUT

SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 August 25, 2021 02:54:48pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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Adams St
Virginia Ave
Adams St
Washington St
Carolina Beach Rd
U.S. 421 – CAROLINA BEACH ROAD
(80' PUBLIC RIGHT-OF-WAY)
Botanical
MARYLAND AVE.
60' PUBLIC RIGHT-OF-WAY
MAP BOOK 45, PAGE 380
Adams St
Ave

Pond
Pool
Club-House
3
4-Story/
48 Units
2
4-Story/
48 Units
1
4-Story/
32 Units
Pond
PROPOSED PHASE 1
9.89 AC
4-Story/
48 Units
7
Playground
PROPOSED PHASE 2
5.65 AC
4
3-Story/
22 Units
6
4-Story/
48 Units
5
4-Story/
32 Units
MAIL
MAIL
Dumpster Pad & Enclosure
Dumpster Pad & Enclosure

N 55°15'41" E 408.07'
N 84°37'41" E 87.86'
N 41°30'39" E 182.54'
N 63°54'08" E 159.75'
N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI-TENANT PARKING SUMMARY

PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI-TENANT PARKING SUMMARY

NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0-1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'
BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE

2346 CAROLINA BEACH RD

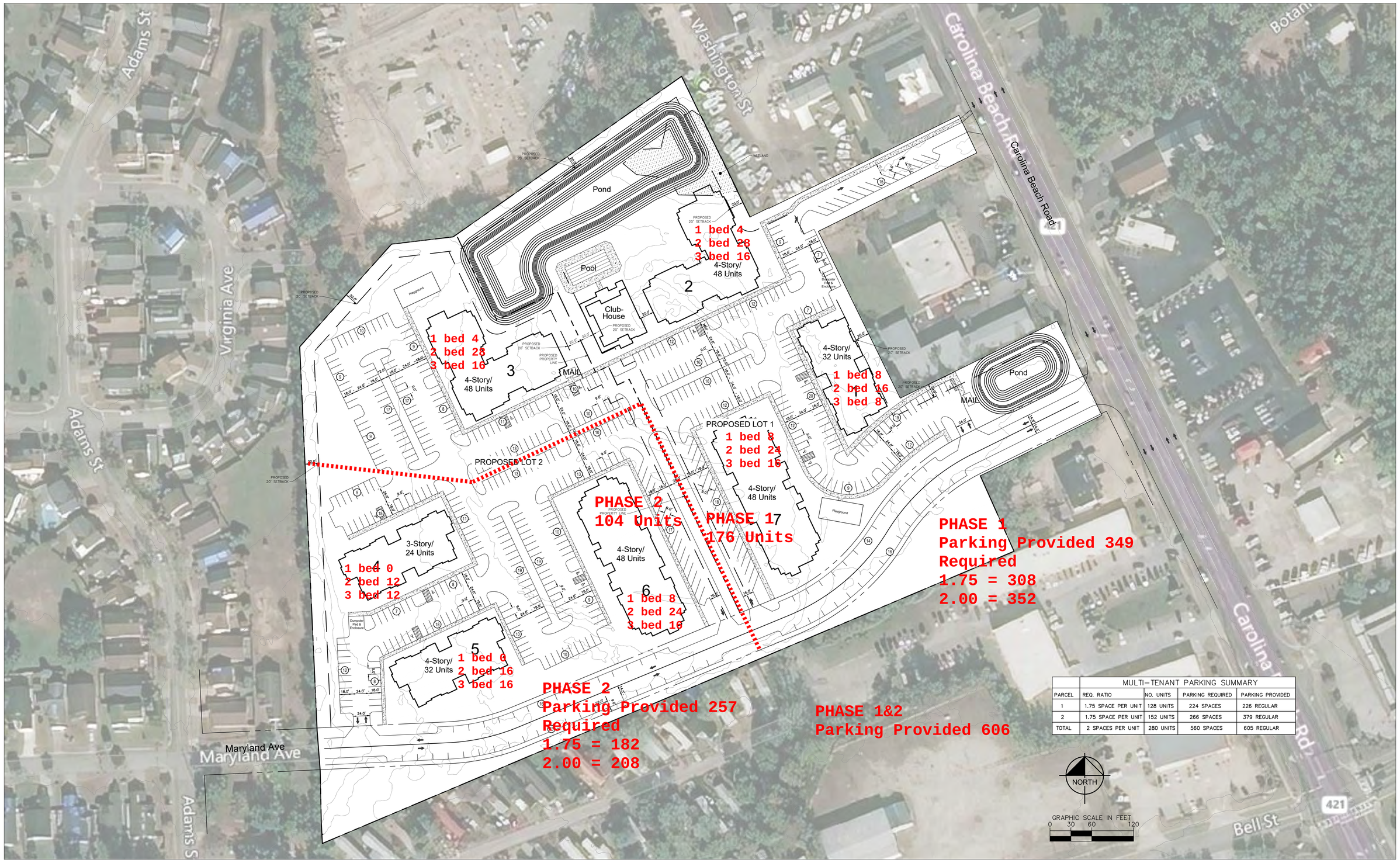
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1



MULTI-TENANT PARKING SUMMARY				
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	128 UNITS	224 SPACES	226 REGULAR
2	1.75 SPACE PER UNIT	152 UNITS	266 SPACES	379 REGULAR
TOTAL	2 SPACES PER UNIT	280 UNITS	560 SPACES	605 REGULAR

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	07/29/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE
2346 CAROLINA BEACH RD
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT
PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Plotted By: Kolb, Katie Sheet Set: Holly Springs Retail Layout: Layout1 July 29, 2021 12:25:45pm \\kimley-horn.com\SE_RAL\RAL_JOBS\013856002 — Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-07-29 Wilmington MF PSD.dwg

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1	Open ruderal area on central portion of the site.



2	Open ruderal area on central portion of the site.



3	Grassed area on southwestern portion of site. Maryland Avenue will be expended through this area from the west to connect with Carolina Beach Road.



4	Developed area (commercial building) on western portion of site

	Site Photographs **Starway Village Apartments** **Wilmington, New Hanover County, North Carolina**	S&ME Project No. 21610025	
		Taken by: CD	Date: August 31, 2022



5 Developed area (residence) on eastern portion of site



6 Pine-mixed hardwoods on southern portion of site.



7 Pine-mixed hardwoods on southern portion of site.



8 Pine-mixed hardwoods on southwestern portion of site.

S&ME	**Site Photographs** **Starway Village Apartments** **Wilmington, New Hanover County, North Carolina**	S&ME Project No. 21610025	
		Taken by: CD	Date: August 31, 2022



9 Wetland area on northern portion of the site facing east.



10 Wetland area on northern portion of the site facing west.



11 Man-made ditch on eastern portion of site.



12 Pine snag located on the southeastern portion of site.

	Site Photographs **Starway Village Apartments** **Wilmington, New Hanover County, North Carolina**	S&ME Project No. 21610025	
		Taken by: CD	Date: August 31, 2022

Appendix II – County Species Lists from USFWS and NCNHP

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Phone: (919) 856-4520 Fax: (919) 856-4556

In Reply Refer To:
Project Code: 2022-0079598
Project Name: Starway Village

August 28, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). If your project area contains suitable habitat for any of the federally-listed species on this species list, the proposed action has the potential to adversely affect those species. If suitable habitat is present, surveys should be conducted to determine the species' presence or absence within the project area. The use of this species list and/or North Carolina Natural Heritage program data should not be substituted for actual field surveys.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
(919) 856-4520

Project Summary

Project Code: 2022-0079598
Project Name: Starway Village
Project Type: Federal Grant / Loan Related
Project Description: Located west of US 421 in WIlmington, NC. Project area is approximately 16 acres. Development consists of 278 unit is seven apartment buildings, two playgrounds, a clubhouse, a pool, parking, and two detention ponds.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.196145349999995,-77.93932279377024,14z



Counties: New Hanover County, North Carolina

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

Reptiles

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Kemp's Ridley Sea Turtle *Lepidochelys kempii* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5523	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Snails

NAME	STATUS
Magnificent Ramshorn *Planorbella magnifica* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6216	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Cooley's Meadowrue *Thalictrum cooleyi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3281	Endangered
Rough-leaved Loosestrife *Lysimachia asperulaefolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2747	Endangered
Seabeach Amaranth *Amaranthus pumilus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8549	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel *Falco sparverius paulus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Brown-headed Nuthatch *Sitta pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

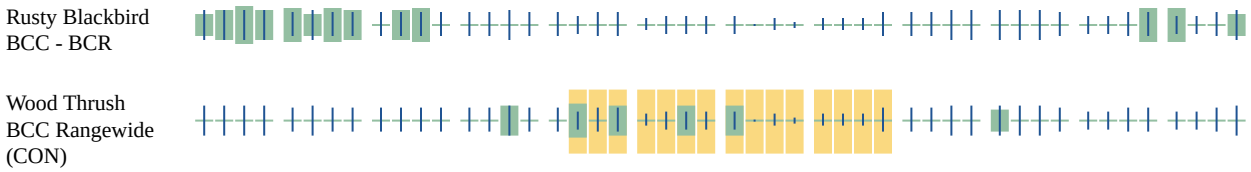
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPaC User Contact Information

Agency: S&ME, Inc.
Name: Chris Daves
Address: 134 Suber Road
City: Columbia
State: SC
Zip: 29210
Email cdaves@smeinc.com
Phone: 8035619024

Taxonomic Group	Scientific Name	Common Name	NC Status	Federal Status	County	County Status	itat Comment
Freshwater Fish	Acipenser brevirostrum	Shortnose Sturgeon	E	E	New Hanover	Current	brackish water of large rivers and estuaries; spawns in freshwater areas
Freshwater Fish	Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	E	E	New Hanover	Current	coastal waters, estuaries, large rivers
Reptile	Alligator mississippiensis	American Alligator	T	T(S/A)	New Hanover	Current	fresh to slightly brackish lakes, ponds, rivers, and marshes
Vascular Plant	Amaranthus pumilus	Seabeach Amaranth	T	T	New Hanover	Current	ocean beaches and island-end flats
Bird	Calidris canutus rufa	Red Knot - rufa subspecies	T	T	New Hanover	Current	beaches and sand flats [wintering sites]
Reptile	Caretta caretta	Loggerhead Seaturtle	T	T	New Hanover	Current	nests on beaches; forages in ocean and sounds [breeding evidence only]
Bird	Charadrius melodus melodus	Piping Plover - Atlantic Coast subspecies	T	T	New Hanover	Current	ocean beaches and island-end flats [breeding evidence only]
Reptile	Chelonia mydas	Green Seaturtle	T	T	New Hanover	Current	nests on beaches; forages in ocean and sounds [breeding evidence only]
Reptile	Dermochelys coriacea	Leatherback Seaturtle	E	E	New Hanover	Current	nests on beaches; forages in oceans, rarely in sounds [breeding evidence only]
Bird	Dryobates borealis	Red-cockaded Woodpecker	E	E	New Hanover	Current	mature open pine forests, mainly in longleaf pine [breeding evidence only]
Bird	Haliaeetus leucocephalus	Bald Eagle	T	BGPA	New Hanover	Current	mature forests near large bodies of water (nesting); rivers, lakes, and sounds (foraging) [breeding evidence only]
Bird	Laterallus jamaicensis	Black Rail	SC	T	New Hanover	Current	brackish marshes, rarely fresh marshes [breeding evidence only]
Reptile	Lepidochelys kempii	Kemp's Ridley Seaturtle	E	E	New Hanover	Current	nests on beaches, forages in ocean and sounds [breeding evidence only]
Vascular Plant	Lysimachia asperulifolia	Rough-leaf Loosestrife	E	E	New Hanover	Current	pocosin/savanna ecotones, pocosins
Mammal	Myotis septentrionalis	Northern Long-eared Bat	T	PE	New Hanover	Historical	roosts in hollow trees and buildings (warmer months), in caves and mines (winter); mainly in the mountains
Freshwater or Terrestrial Gastropod	Planorbella magnifica	Magnificent Rams-horn	E	C	New Hanover	Historical	Orton Pond and pond on Sand Hill Creek; formerly Greenfield Lake (endemic to North Carolina)
Vascular Plant	Thalictrum cooleyi	Cooley's Meadowrue	E	E	New Hanover	Current	wet savannas
Mammal	Trichechus manatus	West Indian Manatee	T	T	New Hanover	Current	warm waters of estuaries and river mouths

Home Critical Habitat for Threatened & Endangered Species [USFWS]

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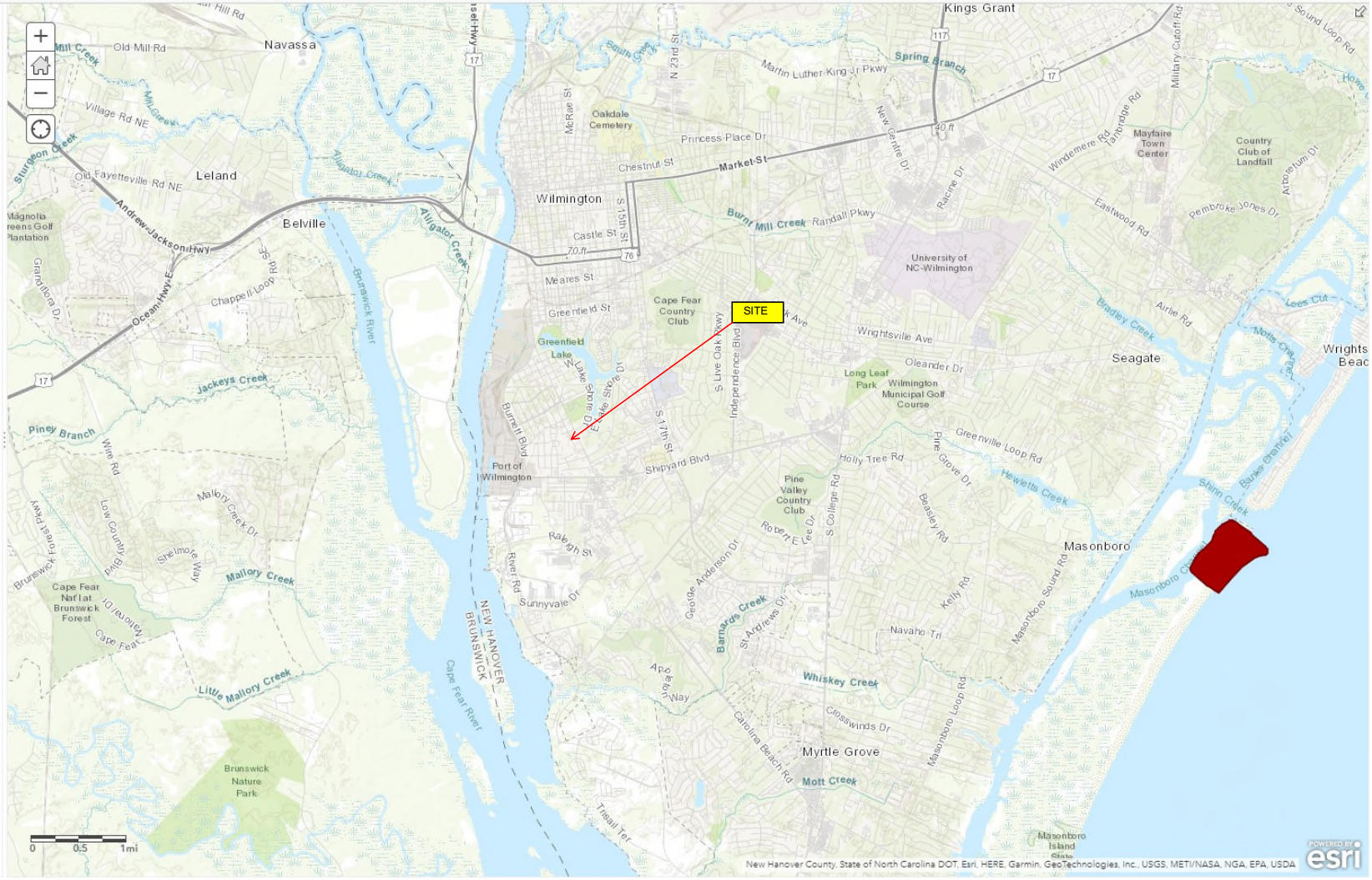
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Final Linear Features

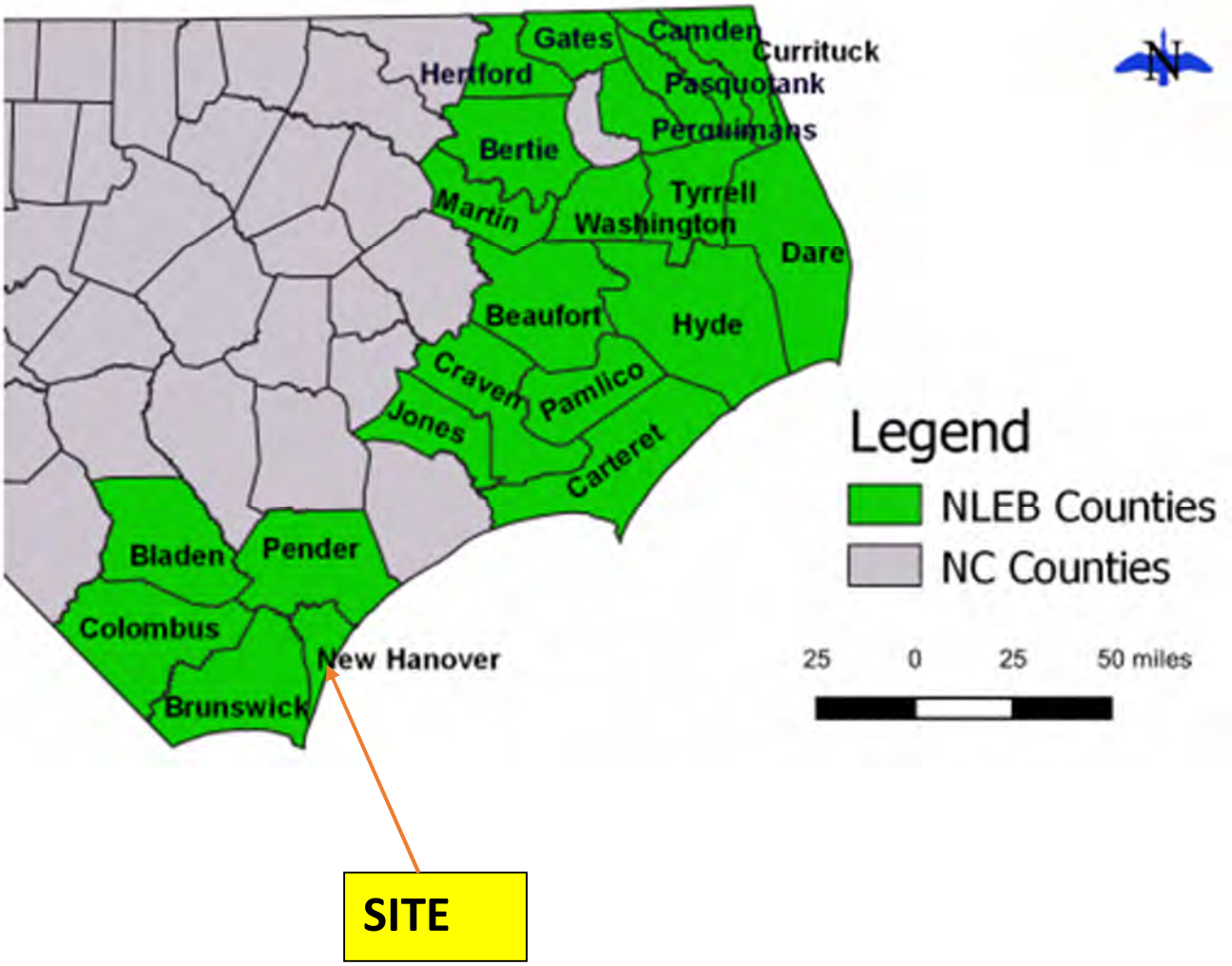
Final Polygon Features

Proposed Linear Features

Proposed Polygon Features



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Appendix III – NCNHP/USFWS Correspondence

NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
Deputy Director, Natural Heritage Program

NCNHDE-19223

September 1, 2022

Chris Daves
S&ME, Inc.
134 Suber Road
Columbia, SC 27616
RE: Starway Village

Dear Chris Daves:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Starway Village
September 1, 2022
NCNHDE-19223

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Bird	16864	Himantopus mexicanus	Black-necked Stilt	1987	H	4-Low	---	Significantly Rare	G5	S1B
Dragonfly or Damselfly	24979	Phanogomphus australis	Clearlake Clubtail	1960-04-24	H	3-Medium	---	Significantly Rare	G4	S2
Dragonfly or Damselfly	33738	Somatochlora georgiana	Coppery Emerald	2004-Pre	H?	5-Very Low	---	Significantly Rare	G3G4	S1?
Freshwater Bivalve	328	Anodonta couperiana	Barrel Floater	1990s	X?	3-Medium	---	Endangered	G4	S1
Freshwater Fish	12176	Acipenser brevirostrum	Shortnose Sturgeon	2016-04-07	E	5-Very Low	Endangered	Endangered	G3	S1
Freshwater Fish	38937	Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	2018-09	E	4-Low	Endangered	Endangered	G3T3	S2
Freshwater Fish	11031	Heterandria formosa	Least Killifish	1975-04-04	H	3-Medium	---	Special Concern	G5	S2
Freshwater or Terrestrial Gastropod	13292	Helisoma eucosmium	Greenfield Rams-horn	1908	X	3-Medium	---	Endangered	G1Q	S1
Freshwater or Terrestrial Gastropod	10316	Planorbella magnifica	Magnificent Rams-horn	1908	X	3-Medium	Candidate	Endangered	G1	S1
Mammal	24390	Corynorhinus rafinesquii macrotis	Eastern Big-eared Bat	2006-Pre	E	5-Very Low	---	Special Concern	G3G4T3	S3
Mammal	20385	Lasiurus intermedius floridanus	Florida Yellow Bat	2004-08-14	E	3-Medium	---	Special Concern	G5T4	S1
Mammal	32126	Myotis septentrionalis	Northern Long-eared Bat	1994-Post	H?	5-Very Low	Proposed Endangered	Threatened	G2G3	S2
Mammal	17664	Trichechus manatus	West Indian Manatee	2019-11-14	E	5-Very Low	Threatened	Threatened	G2G3	S1N
Reptile	3970	Alligator mississippiensis	American Alligator	2018-02-26	E	4-Low	Threatened Similar Appearance	Threatened	G5	S3

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Reptile	37561	Sistrurus miliarius miliarius	Carolina Pigmy Rattlesnake	1968-09	H	4-Low	---	Special Concern	G5T4T5	S2
Vascular Plant	30852	Baccharis glomeruliflora	Silverling	1904-Pre	H	5-Very Low	---	Endangered	G4	S1
Vascular Plant	5040	Carex decomposita	Cypress Knee Sedge	1938-06-29	H	4-Low	---	Significantly Rare Other	G3G4	S2
Vascular Plant	1462	Crocanthemum carolinianum	Carolina Sunrose	1958-04-20	H	4-Low	---	Endangered	G4	S1
Vascular Plant	22454	Dichanthelium cryptanthum	Hidden-flowered Witchgrass	1906-05-04	H	5-Very Low	---	Significantly Rare Throughout	G3G4Q	S2
Vascular Plant	14082	Lilaeopsis carolinensis	Carolina Grasswort	2002-04-17	C	3-Medium	---	Significantly Rare Other	G3G5	S2
Vascular Plant	3947	Sagittaria weatherbiana	Grassleaf Arrowhead	2002-04-24	D	3-Medium	---	Endangered	G5T3T4	S2

Natural Areas Documented Within a One-mile Radius of the Project Area

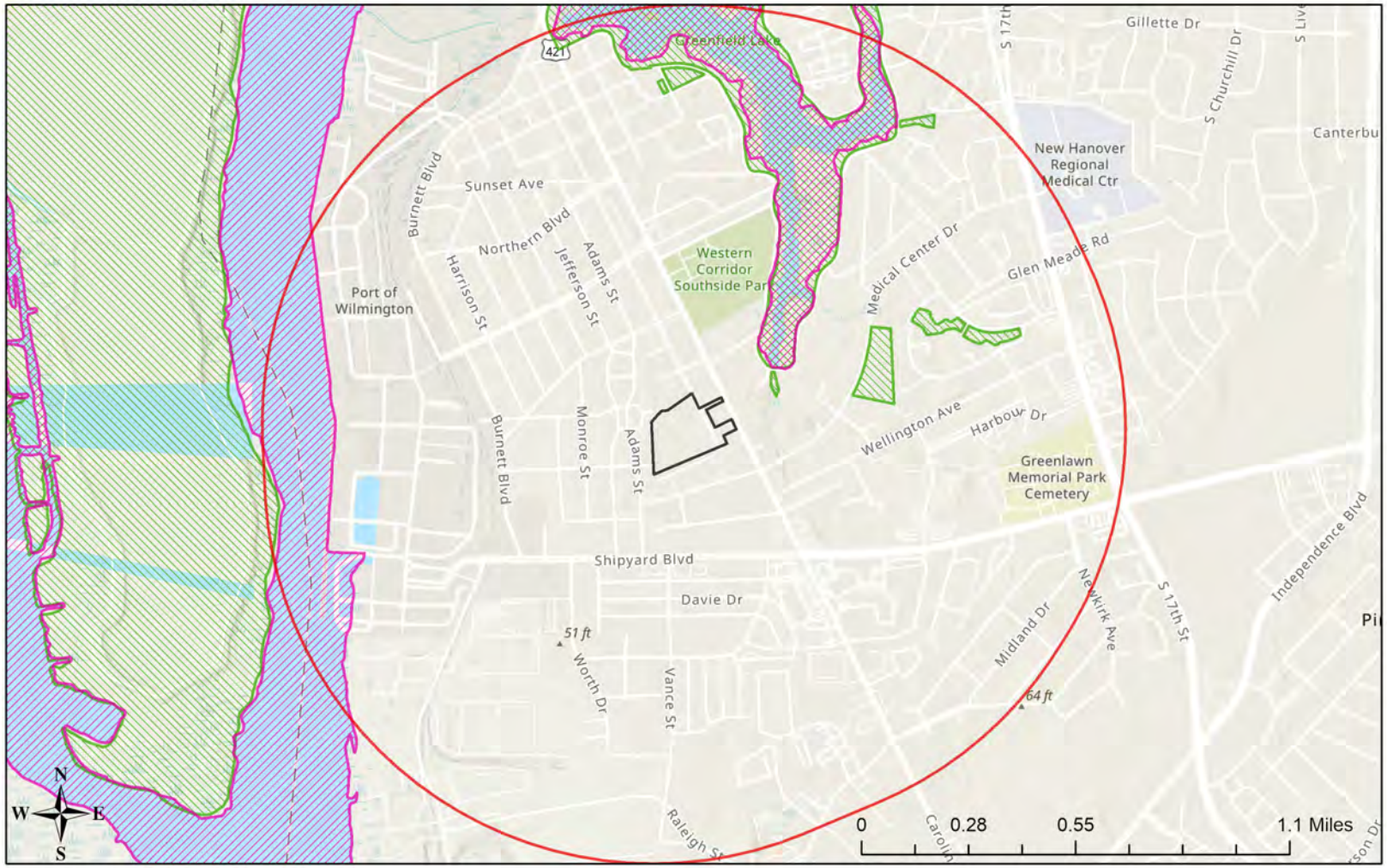
Site Name	Representational Rating	Collective Rating
Greenfield Lake	R2 (Very High)	C5 (General)
CPF/Lower Cape Fear River Aquatic Habitat	R2 (Very High)	C4 (Moderate)

Managed Areas Documented Within a One-mile Radius of the Project Area

Managed Area Name	Owner	Owner Type
City of Wilmington Open Space	City of Wilmington	Local Government
City of Wilmington Open Space	City of Wilmington	Local Government
Eagles Island Dredge Disposal Area	US Army Corps of Engineers	Federal
New Hanover County Open Space	New Hanover County	Local Government

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on September 1, 2022; source: NCNHP, Q2, July 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

NCNHDE-19223: Starway Village



September 1, 2022

- Managed Area (MAREA)
- NHP Natural Area (NHNA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Chris Daves

From: natural.heritage@ncdcr.gov on behalf of North Carolina Natural Heritage Data Explorer <natural.heritage@ncdcr.gov>
Sent: Thursday, September 1, 2022 2:31 PM
To: Chris Daves
Subject: Starway Village Review Complete

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Dear Ashley Bentz,

This email is in response to the project you submitted via the North Carolina Natural Heritage Data Explorer, entitled "Starway Village." An automated query of the North Carolina Natural Heritage Program database has been conducted based on the project boundary submitted, and the resulting report can be found at https://ncnhde.natureserve.org/content/starway-village. The report can be saved and/or printed for your files.

NOTE: You must be logged in to your account in order to review the report.

If you have questions about the contents of the report or need further assistance, please see the contact information contained within the report.

PLEASE DO NOT REPLY to this email, as it has been generated automatically and you will not receive a response.

Sincerely,

North Carolina Natural Heritage Program

https://ncnhde.natureserve.org/

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Phone: (919) 856-4520 Fax: (919) 856-4556

In Reply Refer To:
Project code: 2022-0079598
Project Name: Starway Village

September 09, 2022

Subject: Verification letter for the 'Starway Village' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Chris Daves:

The U.S. Fish and Wildlife Service (Service) received on September 09, 2022 your effects determination for the 'Starway Village' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- American Alligator *Alligator mississippiensis* Similarity of Appearance (Threatened)
- Cooley's Meadowrue *Thalictrum cooleyi* Endangered
- Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* Threatened
- Green Sea Turtle *Chelonia mydas* Threatened
- Kemp's Ridley Sea Turtle *Lepidochelys kempii* Endangered
- Leatherback Sea Turtle *Dermochelys coriacea* Endangered
- Loggerhead Sea Turtle *Caretta caretta* Threatened
- Magnificent Ramshorn *Planorbella magnifica* Proposed Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Piping Plover *Charadrius melodus* Threatened
- Red Knot *Calidris canutus rufa* Threatened
- Red-cockaded Woodpecker *Picoides borealis* Endangered
- Rough-leaved Loosestrife *Lysimachia asperulaefolia* Endangered
- Seabeach Amaranth *Amaranthus pumilus* Threatened

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Starway Village

2. Description

The following description was provided for the project 'Starway Village':

> Located west of US 421 in WIlmington, NC. Project area is approximately 16 acres. Development consists of 278 unit is seven apartment buildings, two playgrounds, a clubhouse, a pool, parking, and two detention ponds.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.196145349999995,-77.93932279377024,14z



Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require

ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

   No

3. Will your activity purposefully **Take** northern long-eared bats?

   No

4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

7. Will the action involve Tree Removal?

   Yes

8. Will the action only remove hazardous trees for the protection of human life or property?

   No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

   No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

    No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

3

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Department of Housing and Urban Development
Name: Chris Daves
Address: 134 Suber Road
City: Columbia
State: SC
Zip: 29210
Email cdaves@smeinc.com
Phone: 8035619024

Lead Agency Contact Information

Lead Agency: Department of Housing and Urban Development

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.): HUD through NCORR, Andrea Gievers, Andrea.L.Gievers@Rebuild.NC.Gov, (845) 682-1700

Project Name: Starway Village Apartments

Project Location: 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401

Basic Project Description: The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques, for stormwater management. Two stormwater detention ponds, which will treat collected runoff.

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☒	☐
Estimated total acres of forest conversion	3	
If known, estimated acres[5] of forest conversion from April 1 to October 31	unknown	
If known, estimated acres of forest conversion from June 1 to July 31[6]	unknown	
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☒
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Andrea Sievers Date Submitted: 10/17/22

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreage in April to October.

Gievers, Andrea

From: Ratcliffe, Judith
Sent: Friday, October 14, 2022 2:18 PM
To: Gievers, Andrea
Cc: Butler, Rodney A
Subject: RE: NCORR NLEB Review - Starway Village Apartments

Hello Andrea,
Thank you for the opportunity to review Starway Village Apartments, 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401. There are no documented Northern Long-eared Bat maternity roost trees within 150 feet of this project boundary.
There are no documented Northern Long-eared Bat hibernacula within 0.25 mile of this project boundary.
Sincerely,
Judith Ratcliffe

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, October 14, 2022 1:54 PM
To: Ratcliffe, Judith <judith.ratcliffe@ncdcr.gov>
Cc: Butler, Rodney A <Rodney.Butler@ncdcr.gov>
Subject: NCORR NLEB Review - Starway Village Apartments

Hello Judy:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed *affordable housing* project, **Starway Village Apartments, 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401.** I have attached the proposed project maps, site plans, and shapefiles from the consultant to assist in your NLEB 4(d) Rule review. Please feel free to contact me if you have any questions. Thank you so much for your time and assistance.

Please feel free to contact me if you have any questions or need anything at all. Thank you so much for your time and assistance!

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Appendix IV – USACE Jurisdictional Determination Letter

SAW-2021-01647

Electronically Transmitted

U.S. ARMY CORPS OF ENGINEERS

WILMINGTON DISTRICT

Action Id. **SAW-2021-01647** County: **New Hanover** U.S.G.S. Quad: **NC-Wilmington**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Bradley Housing Developers, LLC**
Brad Queener
Address: **P.O. Box 526**
Aynor, SC 29511
E-mail: **brad@bradleydevelopers.com**

Size (acres) **16**
Nearest Waterway **Cape Fear River**
USGS HUC **03030005**
Nearest Town **Wilmington**
River Basin **Cape Fear**
Coordinates Latitude: **34.196388**
Longitude: **-77.939694**

Location description: **The project area is located at 2346 Carolina Beach Road in Wilmington.**

Indicate Which of the Following Apply:

A. Preliminary Determination

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The **waters, including wetlands** have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. The approximate boundaries of these waters are shown on the enclosed delineation map dated **DATE**. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the **waters, including wetlands** have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the **waters, including wetlands** at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

B. Approved Determination

☐ There are Navigable Waters of the United States within the above described project area/property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are **waters, including wetlands**on the above described project area/property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐We recommend you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

☐The **waters, including wetlands** on your project area/property have been delineated and the delineation has been verified by the Corps. The approximate boundaries of these waters are shown on the enclosed delineation map dated. We strongly suggest

you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

☐ The **waters, including wetlands** have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on **DATE**. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☒ There are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in **Morehead City, NC, at (252) 808-2808** to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Brad Shaver at 910-251-4611 or brad.e.shaver@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the approved jurisdictional determination form dated 08/04/2021.

D. Remarks: *Desktop determination.*

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information **(This information applies only to approved jurisdictional determinations as indicated in B. above)**

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
AND
PHILIP.A.SHANNIN@USACE.ARMY.MIL

SAW-2021-01647

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **10/03/2021**.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Brad E Shaver Digitally signed by Brad Shaver Date: 2021.08.04 15:15:23 -04'00'

Date of JD: **08/04/2021** Expiration Date of JD: **08/03/2026**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy Furnished(electronic):

Kimley-Horn attn: Mackenzie Richards



Kimley»Horn

Figure 3: Delineated Features Map
Starway Village
Wilmington, New Hanover County, NC
June 2021

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 08/04/2021
ORM Number: SAW-2021-01647
Associated JDs: N/A
Review Area Location[1]: State/Territory: NC City: Wilmington County/Parish/Borough: New Hanover
Center Coordinates of Review Area: Latitude 34.196388 Longitude -77.939694

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1	0.24	acre(s)	(b)(1) Non-adjacent wetland.	Wetland W1 is a low lying, concave depression located in the northeast corner of the project site adjacent to a gravel roadway. Hydrology within wetland W1 was at the surface, with standing/ponded water present throughout the area. No potentially jurisdictional connections were observed flowing from the wetland feature nor was there any signatures on available lidar. Wetland W1 is not adjacent to an (a)(1), (2), or (3) water.
Ditch 1	733	Linear Feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	Ditch 1 is a manmade, constructed ditch within uplands. Ditch 1 is not a tributary under (a)(2), was not a tributary under (a)(2) when it was constructed, was not constructed in an adjacent wetland, and does not contribute surface flow to an (a)(1) water in a typical year. According to soils data the ditch was constructed in non-hydric soils, Lynchburg.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Title(s) and date(s)
  This information is sufficient for purposes of this AJD.
  Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).
- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- ☐ Photographs: Select. Title(s) and/or date(s).
- ☐ Corps site visit(s) conducted on: Date(s).
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
- ☒ USDA NRCS Soil Survey: NHC 1977

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

☐ USFWS NWI maps: Title(s) and/or date(s).
☒ USGS topographic maps: Wilmington

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	Lidar QL2

B. Typical year assessment(s): The results of the Antecedent Precipitation Tool (APT) indicate that prior to the day of our detail delineation (June 19, 2021), the project study area and its vicinity were experiencing normal conditions.

C. Additional comments to support AJD: N/A

ATTACHMENT 9

Explosive and Flammable Hazards Exhibits and Documentation

Appendix I - Mapping

Appendix II – Thermal and Explosive Hazards Checklist

Appendix III – Interview Correspondence and Supporting Documentation

Appendix IV – Supporting Documentation (ASD Sheets and Google Earth Distances)

EXPLOSIVE & FLAMMABLE OPERATIONS SUMMARY

Site Reconnaissance

No ASTs or explosive storage facilities were observed within the project site area or in the immediate vicinity during site reconnaissance. *See attached Thermal and Explosive Hazards datasheets.*

Agency Consultation and Other Interviews

In November 2022, S&ME reviewed the NCDENR AST database for potential ASTs located in the vicinity of the site. S&ME also interviewed NCDENR staff (877-623-6748) regarding the status of their database. According to NCDENR, the web version is the most up-to-date AST data. NCDNR stated ASTs are not regulated in the state of North Carolina and registration is not required unless the facility qualifies as an Oil Terminal Facility. The Department of Environmental Quality (DEQ) does not regulate the installation, construction, permitting, or monitoring of ASTs. The data within the Regional Aboveground Storage Tank (RAST) dataset contains all incidents or locations where there has been a discharge of petroleum to the soil and/or groundwater, from a source other than an Underground Storage Tank (UST) system (i.e., AST systems, spills, dumping, etc.). In addition, the following agencies were contacted to determine if there are plans to construct potentially explosive tanks in the vicinity of the project site area:

- City of Wilmington Fire Department (Fire Chief Jon "Steve" Mason: 910-343-3906) – (https://www.wilmingtonnc.gov/departments/fire-department)
- City of Wilmington Planning and Development (Linda Painter – Director: 910-341-7806) (Linda.painter@wilmingtonnc.gov) – (https://www.wilmingtonnc.gov/departments/planning-development-and-transportation)
- North Carolina Ports Authority (Stephanie Ayers - Planner: 910-763-1621) (stephanie.ayers@ncports.com) – (https://ncports.com/)
- Freedom of Information Request (FOI) Form submitted to the City of Wilmington Clerk's Office (Penny Spicer: 910-341-7816) (penny.spicer-sidbury@wilmingtonnc.gov) – (https://www.wilmingtonnc.gov/departments/city-clerk)
- City of Wilmington Deputy City Clerk – Heather Padgett (910-341-7938) (heather.padgett@wilmingtonnc.gov).

The City of Wilmington Fire Department and Planning and Development were aware of the oil and gasoline storage facilities located west of the project area within the Port of Wilmington. The Wilmington Fire Department provided S&ME with a list of facilities and associated information related to the Wilmington Port storage facilities. The information provided included name, location, type of content, and overall facility capacity amounts. The Planning and Development Department was not aware of plans to construct new potentially explosive tanks in the vicinity of the project area. The NC Ports Authority provided S&ME with names of and contact information for several listed facilities. S&ME also contacted several of the terminals directly via contact information provided by NC Ports Authority.

Seventeen (17) AST sites were identified on the NCDENR AST database within a one-mile radius of the site. Several of the identified tank locations are owned or operated by the same entity and/or have the same listed address. These sites were consolidated into one listing. The largest tanks, in the center of each tank cluster, at each facility were reviewed using the ASD Assessment Tool provided by the EPA.

Table 1 – ASTs within One-Mile Radius

ID	Site	Address	Distance from Site	Tanks/Capacity (gal.)	Comments
1	Apex Oil	3314 River Rd.	3,496 ft. SW	Tank Farm (150,000-gal. fuel)	ASTs are in containment basin.
2	Koch Fuels (Chemserve Terminal)	3325 River Rd. 3308 River Rd.	2,460 ft. SW	Tank Farm (150,000-gal. fuel)	ASTs are in containment basin.
3	East Coast Oil Transport/Atlantic Diving and Marine	3330 River Rd.	4,283 ft. SW	1-75,000-gal. fuel tank	Aggregate storage tanks (domed storage) for gravel, sand, asphalt. One fuel AST present. Tank not diked.
4	Former Amoco Asphalt Terminal/Citgo	3345 River Rd.	4,702 ft. SW	Tank Farm (150,000-gal. fuel)	ASTs are in containment basin.
5	CP&L-Wilmington Oil (same site as East Coast Oil)	3333 River Rd.	4,283 ft. SW	1-75,000-gal. fuel tank	Aggregate storage tanks (domed storage) for gravel, sand, asphalt. One fuel AST present. Tank not diked.
6	Stone Heavy Vehicle Specialists	109 Shipyard Blvd.	1,427 ft. SW	1-1,000-gal. fuel tank	Tank is diked.
7	NCSPA-Diesel AGST Spill	2202 Burnett Blvd.	3,696 ft. SW	1-20,000 gal. fuel tank	Tank is not diked.
8	WK Hobbs BP Site	2461 Carolina Beach Rd.	1,119 ft. SE	1-500-gallon Kerosine tank	Tank is diked.
9	Royster Transport Co.	206 Shipyard Blvd.	1,534 ft. SW	1-500-gal. fuel	Tank is diked.
10	STG Trucking, Inc.	2501 Florida Ave.	1,427 ft. SW	1-1,000-gal. fuel tank	Tank is diked. Same tank as the Stone Heavy Vehicle Specialists facility.
11	Springer-Eubanks	123 Shipyard Rd.	1,429 ft. SW	7-20,000-gal. oil tanks	Tanks are diked.
12	Monroe Street 2401	2401 Monroe St.	---	---	Tank not evident during field review.
13	Bolden, Astor Property	2841 Carolina Beach Rd.	---	---	Tanks no longer located on site.
14	S&G Prestress	2295 Burnett Blvd.	---	---	Tanks no longer located on site. Business permanently closed.
15	Monroe Street 2121	2121 Monroe St.	---	---	Tank not evident during field review.
16	Former Marine Corps Reserved Training Center	2150 Burnett Blvd.	---	---	Demolished. Tanks no longer located on site.
17	North Carolina Avenue 151	151 North Carolina Ave.	---	---	Tank not evident during field review.

Records Review

S&ME viewed the following sources to determine if ASTs were located on the project area or within a mile of the project area:

- USGS 7.5-Minute Topographic Quadrangle Map – Wilmington, NC –1993 (*See attached 1-Mile Radius Exhibit)*
- 2020 World Imagery Aerial Photograph – *(See attached 1-Mile Radius Exhibit)*
- 1994-2021 Google Earth Aerial Photographs – Google Earth Mapping Software
- New Hanover County GIS Aerial Photographs – (https://nhcgov.maps.arcgis.com/home/index.html)
- NCDENR AST Database – (https://data-ncdenr.opendata.arcgis.com/datasets/rast)
- NCDEQ Aboveground Storage Tanks - https://deq.nc.gov/about/divisions/waste-management/ust/ast-program

Multiple large AST tank farms were evident on aerial photography or topographic maps within a one-mile radius of the project area, specifically within the Port of Wilmington.

Conclusions

Multiple ASTs were identified during regulatory agency and resource mapping review. Based on the ASD Assessment Tool provided by EPA (https://www.hudexchange.info/environmental-review/asd-calculator/), the Acceptable Separation Distances (ASDs) for the listed facilities are as follows:

Table 2 – Current ASTs and ASDs

ID	Site	Address	Distance from Site	ASD[1] (ft) Thermal Radiation People	ASD (ft) Thermal Radiation Buildings
1	Apex Oil	3314 River Rd.	3,496 ft. SW	1,299.08	278.58
2	Koch Fuels (Chemserve Terminal)	3325/3308 River Rd.	2,460 ft. SW	899.11	185.53
3	East Coast Oil Transport/Atlantic Diving and Marine	3330 River Rd.	4,283 ft. SW	1,670.90	370.03
4	Former Amoco Asphalt Terminal/Citgo	3345 River Rd.	4,702 ft. SW	1,144.45	242.19
5	CP&L-Wilmington Oil (same site as East Coast Oil)	3333 River Rd.	4,283 ft. SW	1,670.90	370.03
6	Stone Heavy Vehicle Specialists	109 Shipyard Blvd.	1,427 ft. SW	110.80	18.37
7	NCSPA-Diesel AGST Spill	2202 Burnett Blvd.	3,696 ft. SW	963.41	200.85
8	WK Hobbs BP Site	2461 Carolina Beach Rd.	1,119 ft. SE	40.29	6.01

ID	Site	Address	Distance from Site	ASD[1] (ft) Thermal Radiation People	ASD (ft) Thermal Radiation Buildings
9	Royster Transport Co.	206 Shipyard Blvd.	1,534 ft. SW	26.74	3.82
10	STG Trucking, Inc.	2501 Florida Ave.	1,427 ft. SW	110.80	18.37
11	Springer-Eubanks	123 Shipyard Rd.	1,429 ft. SW	206.70	36.58

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

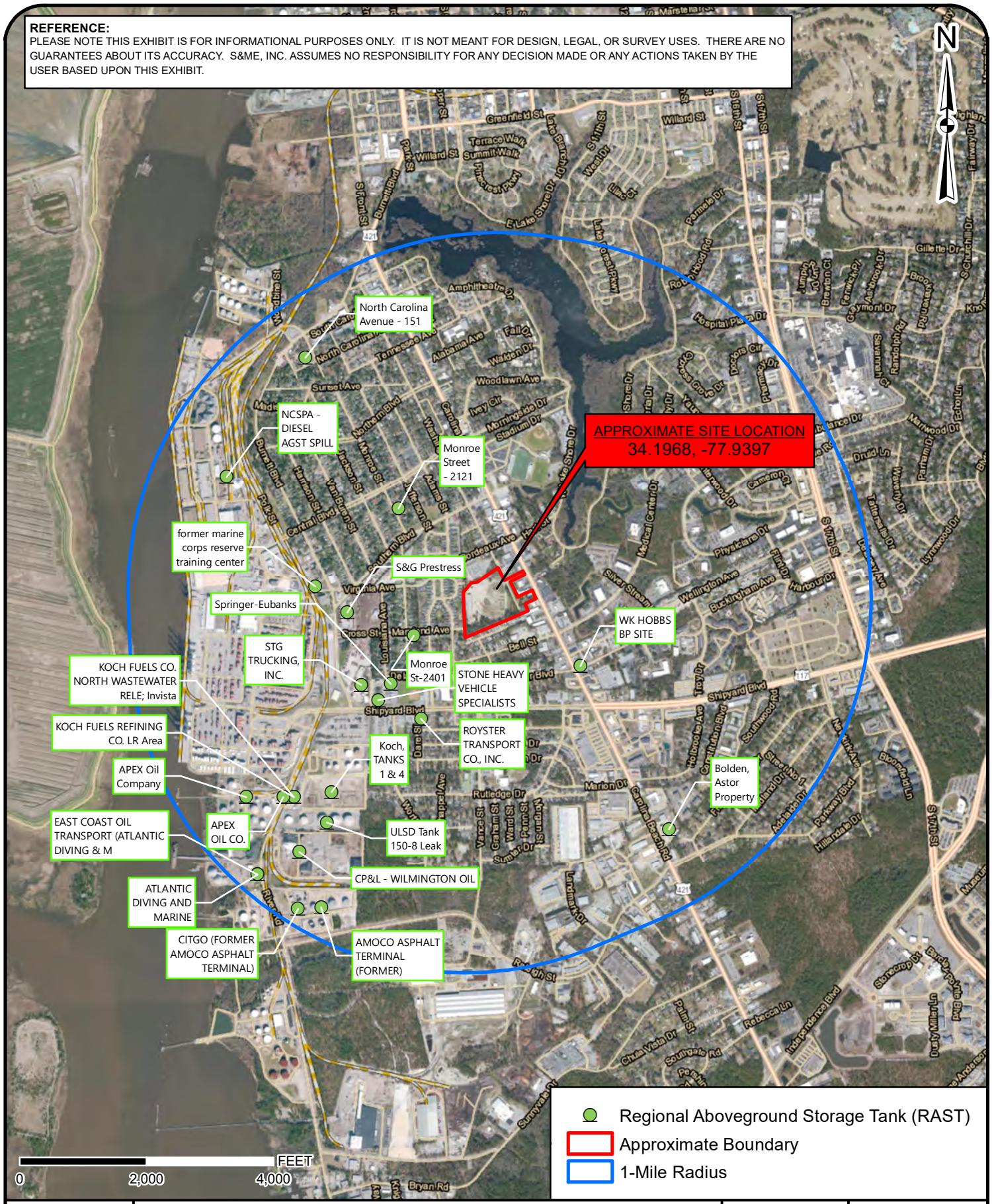
The ASTs Tanks are outside of the calculated ASD areas. No mitigation appears necessary.

Attachments:

Appendix I - Mapping
Appendix II - Thermal and Explosives Hazards Checklist
Appendix III - Interview Correspondence
Appendix IV – Supporting Documentation (ASD Sheets and Google Earth Distances)

Appendix I - Mapping

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



1-Mile Radius Aerial Exhibit

Starway Village Apartments +/- 15.67 Acres

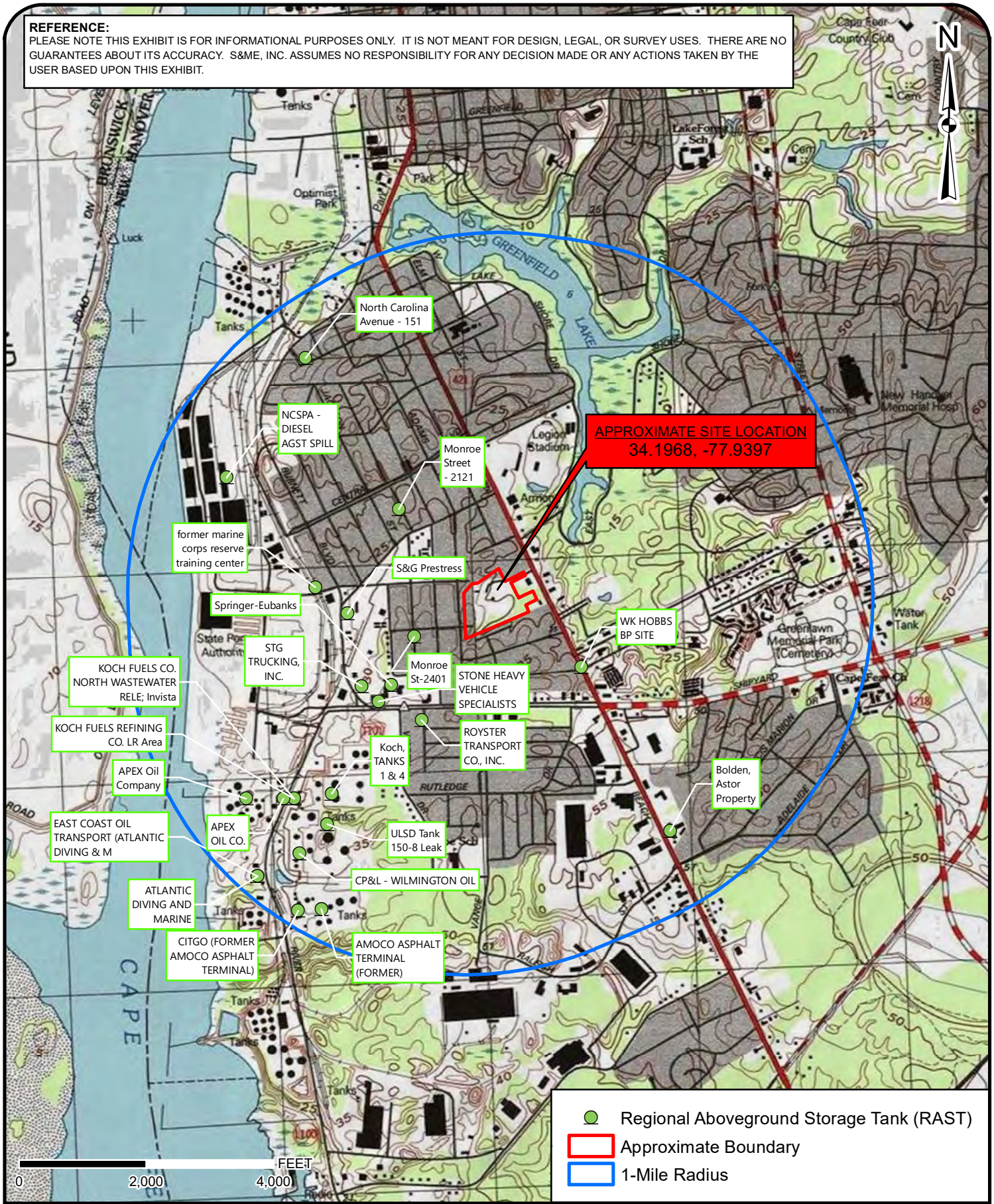
Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020 & RAST Data (NC DEQ)

SCALE:	EXHIBIT NO.
1 " = 2,000 '	
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments 1-Mile Radius Aerial Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



1-Mile Radius Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993 & RAST Data (NC DEQ)

SCALE:	EXHIBIT NO.
1 " = 2,000 '	
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments 1-Mile Radius Topo Exhibit.mxd plotted by chandley 08-29-2022

Appendix II – Thermal and Explosive Hazards Checklist

Thermal and Explosive Hazards

Project Name	Investigator(s)	Site Visit Date
Starway Village	C. Daves	8/31/22

Part I –Above Ground Storage Tanks – Site Review

Are any above ground storage tanks visible from the site?

☐ Yes ☒ No

If yes, are these tanks 100-gallons or larger?

☐ Yes ☐ No

List visible tanks of 100-gallons or more						
Tank Identifier	Tank Distance (ft)	Tank Size/Contents	Flammable? (Yes or No)	Pressurized? (Yes or No)	ASD[1] (ft) Thermal Radiation	ASD (ft) Blast Pressure

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank visible from the site?

Yes ☐ No ☒

If yes, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation
None

Part II –Above Ground Storage Tanks – Agency Consultation

Has consultation with the Local Public Safety or Fire Department indicated the presence of thermal/explosive hazards that may affect the site (Attach record of consultation)?

☒ Yes ☐ No

If yes, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation)
NCDENR AST Database consultation. Consult with City of Wilmington Fire Department, City of Wilmington Planning Department, City of Wilmington Clerk's Office (FOI), and North Carolina Ports Authority.
Multiple ASTs were noted. No mitigation appears necessary.

Part III – Above Ground Storage Tanks – Record Review

Are above ground storage tanks, which are visible on aerial photographs and USGS topographic maps, located within 1-mile of the site (Attach copies of documents reviewed)?

☒ Yes ☐ No

If yes, are these tanks 100-gallons or larger?

☐ Yes ☐ No

List tanks of 100-gallons or more.						
Tank Identifier	Tank Distance (ft)	Tank Size/Contents	Flammable? (Yes or No)	Pressurized? (Yes or No)	ASD[1] (ft) Thermal Radiation People	ASD (ft) Thermal Radiation Buildings
1	3,496 ft. SW	Tank Farm (150,000-gal. fuel)	Yes	No	1,299.08	278.58
2	2,460 ft. SW	Tank Farm (150,000-gal. fuel)	Yes	No	899.11	185.53
3	4,283 ft. SW	1-75,000-gal. fuel tank	Yes	No	1,670.90	370.03
4	4,702 ft. SW	Tank Farm (150,000-gal. fuel)	Yes	No	1,144.45	242.19
5	4,283 ft. SW	1-75,000-gal. fuel tank	Yes	No	1,670.90	370.03
6	1,427 ft. SW	1-1,000-gal. fuel tank	Yes	No	110.80	18.37
7	3,696 ft. SW	1-20,000 gal. fuel tank	Yes	No	963.41	200.85
8	1,119 ft. SE	1-500-gal. fuel	Yes	No	40.29	6.01
9	1,534 ft. SW	1-500-gal. fuel	Yes	No	26.74	3.82
10	1,427 ft. SW	1-1,000-gal. fuel tank	Yes	No	110.80	18.37
11	1,429 ft. SW	7-20,000-gal. oil tanks	Yes	No	206.70	36.58

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank?

☐ Yes ☒ No

If yes are there acceptable barriers (natural or manmade) between the site and the tank?

☐ Yes ☐ No

Identify Acceptable Barriers[2]

[2]Acceptable barriers must meet the conditions of 24 CFR § 51.205

If no, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation
No mitigation necessary.

Additional Comments or Recommendations	



11/3/22

Lead Investigator's Signature Date

Appendix III – Interview Correspondence and Supporting Documentation

City of Wilmington, NC
City Clerk's Office
Phone: (910) 341-7816
Fax: (910) 341-5823
Email: penny.spicer-sidbury@wilmingtonnc.gov

PUBLIC RECORDS REQUEST FORM

Pursuant to N.C.G.S. Chapter 132, the City of Wilmington makes available to the public all records in its custody and control that are defined as "public records" under N.C.G.S. §132-1. Persons making the request must personally provide the following information and the City Clerk will assist in gathering, providing for inspection, or copying the information requested. Please provide the City with sufficient information to describe those public records being requested.

☐ Inspection ☑ Electronic Copy ☐ Copying

Records will be available for inspection or pick-up in a reasonable amount of time.
The City requires payment in accordance with the adopted Fee Schedule and the signature of the requester prior to releasing any documents. Requests requiring legal review may require additional time.

NAME OF PERSON MAKING REQUEST: Chris Handley, S&ME, Inc.

ADDRESS: 134 Suber Road Columbia, SC 29210

PHONE NUMBER: 803-465-6321
FAX NUMBER:
EMAIL: chandley@smeinc.com
DATE OF REQUEST: 11-1-22

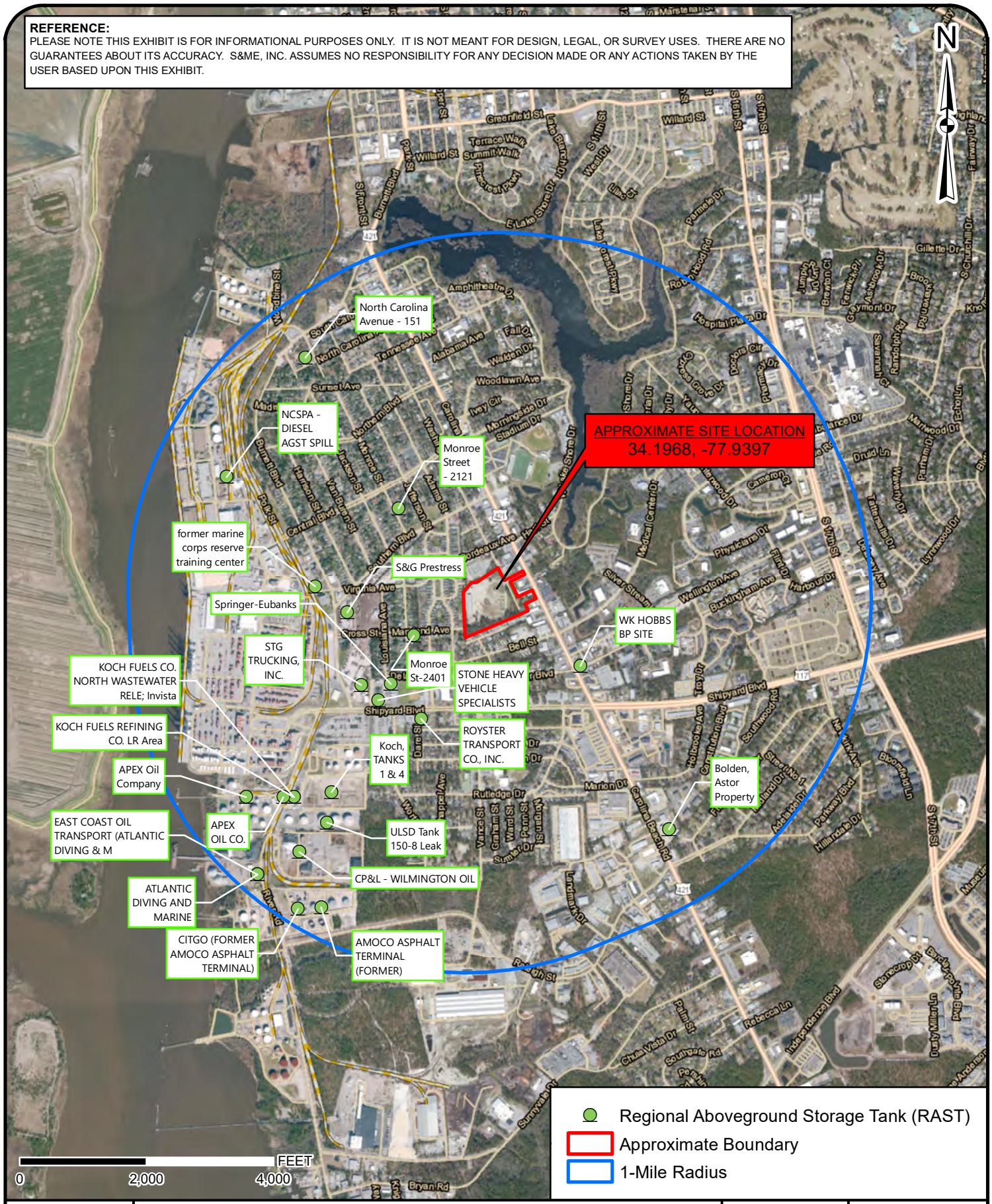
PUBLIC RECORDS BEING REQUESTED:
Conducting HUD EA document for Starway Village Project at 2346 Carolina Beach Road in Wilmington. Seeking records related to the attached list of ASTs associated with nearby fuel storage terminals. Seeking information regarding tank location, tank contents size, diked, etc. so that we can run Acceptable Separation Distances (ASD) as part of the HUD EA regulations. 1-Mile search radius required per HUD. See attached mapping and list of facilities.
Only need information for sites listed on page 2 (spreadsheet list).

Signature of Person making request: 11/1/22

CITY CLERK OFFICE USE ONLY			
TOTAL COPIES PROVIDED:		Amount Due: $	
Payment Received (method):	Check ☐	Cash ☐	Money Order ☐
City Staff Handling Request:		Date Completed:	

OBJECTID	USTNum	IncidentName	Address
1	WI-88602	ULSD Tank 150-8 Leak	3314 River Road
2	WI-3262	Koch, TANKS 1 & 4	3325 RIVER ROAD
3	WI-3264	KOCH FUELS CO. NORTH WASTEWATER RELE; Invista	3308 RIVER ROAD
4	WI-3279	EAST COAST OIL TRANSPORT (ATLANTIC DIVING & M	3330 RIVER ROAD
5	WI-5572	AMOCO ASPHALT TERMINAL (FORMER)	3345 RIVER RD
6	WI-5760	CITGO (FORMER AMOCO ASPHALT TERMINAL)	3345 RIVER RD.
7	WI-5800	CP&L - WILMINGTON OIL	3333 RIVER RD.
8	WI-13830	STONE HEAVY VEHICLE SPECIALISTS	109 SHIPYARD BLVD
9	WI-14300	NCSPA - DIESEL AGST SPILL	2202 BURNETT BLVD.
10	WI-14858	WK HOBBS BP SITE	2461 CAROLINA BEACH ROAD
11	WI-16971	KOCH FUELS REFINING CO. LR Area	3325 RIVER ROAD
12	WI-18900	ROYSTER TRANSPORT CO., INC.	206 SHIPYARD BLVD.
13	WI-85399	APEX OIL CO.	3314 RIVER ROAD
14	WI-85426	ATLANTIC DIVING AND MARINE	3330 RIVER RD.
15	WI-86296	STG TRUCKING, INC.	2501 FLORIDA AVENUE
16	WI-87137	Springer-Eubanks	123 Shipyard Boulevard
17	WI-87437	APEX Oil Company	3314 River Road

REFERENCE:
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1-Mile Radius Aerial Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020 & RAST Data (NC DEQ)

SCALE:	EXHIBIT NO.
1 " = 2,000 '	
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments 1-Mile Radius Aerial Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
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Aerial Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Imagery 2020

SCALE:	EXHIBIT NO.
1 " = 300 '	3
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022

Christopher Handley

From: Heather Padgett <Heather.Padgett@wilmingtonnc.gov>
Sent: Wednesday, November 9, 2022 11:28 AM
To: Christopher Handley
Cc: Penny Spicer-Sidbury
Subject: Public Records Request, Response
Attachments: FOIA- HANDLEY- 2346 CAROLINA BEACH ROAD.xlsx

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Good morning:

In response to your records request, Wilmington Fire Department Staff provided the attached spreadsheet. Staff advised they do not have records of tank information for two addresses on the list: 3308 RIVER ROAD and 3333 RIVER ROAD.

****

Heather Padgett
Deputy City Clerk
City of Wilmington
P.O. Box 1810
Wilmington, NC 28402
Phone: (910) 341-7938
Fax: (910) 341-5823

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Christopher Handley

From: Heather Padgett <Heather.Padgett@wilmingtonnc.gov>
Sent: Monday, November 14, 2022 4:57 PM
To: Chris Daves; Christopher Handley
Cc: Penny Spicer-Sidbury
Subject: RE: Public Records Request, Response
Attachments: Storage Tank Content List.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Good afternoon:

Please see the attachment provided by Wilmington Fire Department Staff.

****

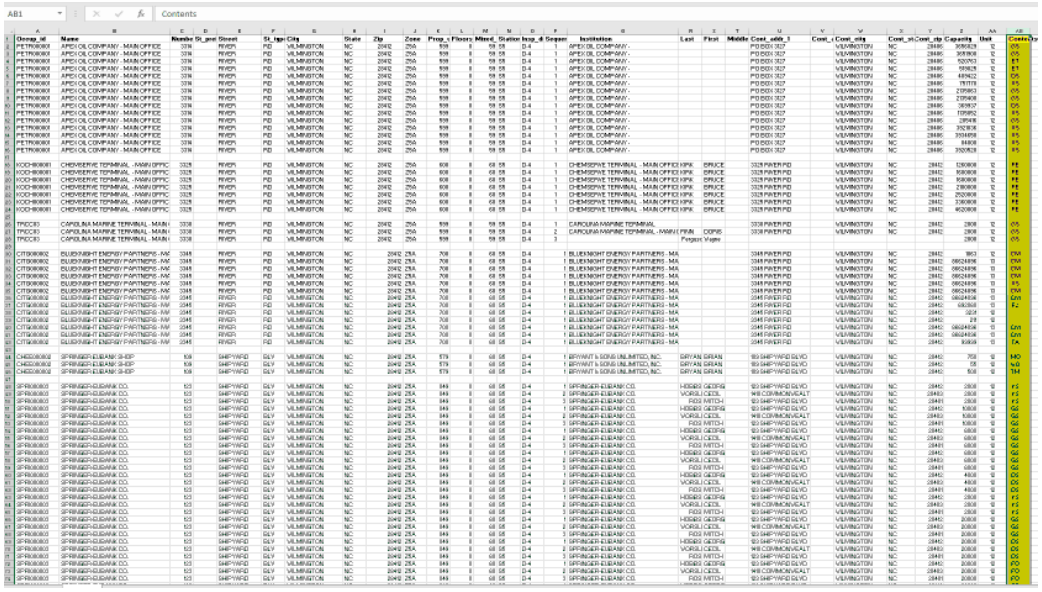
Heather Padgett
Deputy City Clerk
City of Wilmington
P.O. Box 1810
Wilmington, NC 28402
Phone: (910) 341-7938
Fax: (910) 341-5823

From: Chris Daves <CDaves@smeinc.com>
Sent: Wednesday, November 09, 2022 12:13 PM
To: Christopher Handley <chandley@smeinc.com>; Heather Padgett <Heather.Padgett@wilmingtonnc.gov>
Cc: Penny Spicer-Sidbury <Penny.Spicer-Sidbury@wilmingtonnc.gov>
Subject: RE: Public Records Request, Response
Importance: High

Good afternoon,
Thank you for providing.
On the CONTENTS column in the spreadsheet, it is possible to get the acronym labels defined in Column AB?

GS
ET
DS
AS
FE
CM
F2
TA

TM
MO
WO
KS
FO
LO



Thanks!

Chris Daves, P.W.S.
Biologist/Senior Scientist
M: 803.446.2980
cdaves@smeinc.com

From: Christopher Handley <chandley@smeinc.com>
Sent: Wednesday, November 9, 2022 11:55 AM
To: Chris Daves <CDaves@smeinc.com>
Subject: Fwd: Public Records Request, Response

Sent from my Verizon, Samsung Galaxy smartphone
Get Outlook for Android

From: Heather Padgett <Heather.Padgett@wilmingtonnc.gov>
Sent: Wednesday, November 9, 2022 11:27:50 AM
To: Christopher Handley <chandley@smeinc.com>
Cc: Penny Spicer-Sidbury <Penny.Spicer-Sidbury@wilmingtonnc.gov>
Subject: Public Records Request, Response

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Good morning:

In response to your records request, Wilmington Fire Department Staff provided the attached spreadsheet. Staff advised they do not have records of tank information for two addresses on the list: 3308 RIVER ROAD and 3333 RIVER ROAD.

****

Heather Padgett
Deputy City Clerk
City of Wilmington
P.O. Box 1810
Wilmington, NC 28402
Phone: (910) 341-7938
Fax: (910) 341-5823

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E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

Christopher Handley

From: Christopher Handley
Sent: Friday, November 4, 2022 12:06 PM
To: Adam.Balderson@metports.com
Cc: Chris Daves
Subject: AST Information-HUD EA Project City of Wilmington
Attachments: 3. Starway Village Apartments Aerial Exhibit.pdf; Starway Village Apartments 1-Mile Radius Aerial Exhibit.pdf

Adam,

Hope you are doing well. Got your information from Ms. Stephanie Ayers with NC Ports Authority.

We are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road in Wilmington, NC.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to conduct research to determine any aboveground storage tanks (ASTs), such as large propane tank or oil/fuel facilities located near or within 1-mile of the proposed project site. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

According to the RAST Dataset, site visit, and aerial photography several ASTs are located throughout the NC Ports Property. Stephanie stated that Met Ports operates a large AST with a UAN. Could you provide us with any information regarding the location, type, and size of this tank?

Greatly appreciate any information you could provide. Feel free to call me to discuss.

Thanks…Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Christopher Handley
Sent: Friday, November 4, 2022 12:15 PM
To: bruce.kirk@chemserveterminal.com
Cc: Chris Daves
Subject: AST Information-HUD EA Project City of Wilmington
Attachments: 3. Starway Village Apartments Aerial Exhibit.pdf; Starway Village Apartments 1-Mile Radius Aerial Exhibit.pdf

Bruce,

Hope you are doing well. Got your information from Ms. Stephanie Ayers with the NC Ports Authority.

We are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road in Wilmington, NC.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to conduct research to determine any aboveground storage tanks (ASTs), such as large propane tank or oil/fuel facilities located near or within 1-mile of the proposed project site. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

According to the RAST Dataset, site visit, and aerial photography several ASTs are located throughout Properties operated by Koch Fuels (Chemserve Terminal). Could you provide us with any information regarding the location, type, and size of ASTs?

Greatly appreciate any information you could provide. Feel free to call me to discuss.

Thank you…Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Christopher Handley
Sent: Friday, November 4, 2022 12:24 PM
To: MWatkins@bkep.com
Cc: Chris Daves
Subject: AST Information-HUD EA Project City of Wilmington
Attachments: 3. Starway Village Apartments Aerial Exhibit.pdf; Starway Village Apartments 1-Mile Radius Aerial Exhibit.pdf

Mike,

Hope you are doing well. Got your information from Ms. Stephanie Ayers with the NC Ports Authority.

We are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road in Wilmington, NC.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to conduct research to determine any aboveground storage tanks (ASTs), such as large propane tank or oil/fuel facilities located near or within 1-mile of the proposed project site. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

According to the RAST Dataset, site visit, and aerial photography several ASTs are located throughout BKEP Materials Properties (listed as Citco and Amoco Asphalt). I understand you sold off the property last year, but wanted to see if you could shed some light on type of ASTs at the facilities? Could you provide us with any information regarding the location, type, and size of ASTs? Were they used for fuel or oil storage?

Greatly appreciate any information you could provide. Feel free to call me to discuss.

Thank you…Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Christopher Handley
Sent: Friday, November 4, 2022 12:27 PM
To: 'jmealy@apexoil.com'
Cc: Chris Daves
Subject: AST Information-HUD EA Project City of Wilmington
Attachments: 3. Starway Village Apartments Aerial Exhibit.pdf; Starway Village Apartments 1-Mile Radius Aerial Exhibit.pdf

Jamie,

Hope you are doing well. Got your information from Ms. Stephanie Ayers with the NC Ports Authority.

We are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road in Wilmington, NC.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to conduct research to determine any aboveground storage tanks (ASTs), such as large propane tank or oil/fuel facilities located near or within 1-mile of the proposed project site. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

According to the RAST Dataset, site visit, and aerial photography several ASTs are located throughout Properties operated by Apex Oil. Could you provide us with any information regarding the location, type, and size of ASTs?

Greatly appreciate any information you could provide. Feel free to call me to discuss.

Thank you…Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Ayers, Stephanie <Stephanie.Ayers@ncports.com>
Sent: Friday, November 4, 2022 8:43 AM
To: Christopher Handley
Cc: Chris Daves
Subject: RE: [External] HUD Project AST Information
Attachments: POW Fuel Tank Locations.tif; POW Fuel Tank Table.xls

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Chris,

Attached are the tanks on our terminal that are included in our GIS.

We do have one customer inside your circle that has a large above ground tank with an industrial bulk commodity (UAN), you should contact Metro Ports (Adam.Balderson@metports.com) for more information.

I hope this is helpful.

Stephanie

Stephanie Ayers
NORTH CAROLINA PORTS
Director, Real Estate & Planning
910-746-6371 Direct
910-233-4190 Cell

ncports.com

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From: Christopher Handley <chandley@smeinc.com>
Sent: Tuesday, November 1, 2022 12:40 PM
To: Ayers, Stephanie <Stephanie.Ayers@ncports.com>
Cc: Chris Daves <CDaves@smeinc.com>
Subject: [External] HUD Project AST Information

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Stephanie,

It was a pleasure speaking with you on the phone. Thank you for your time.

As I mentioned we are seeking information related to aboveground storage tanks (ASTs) for a **HUD Environmental Assessment**. We are seeking information related to the types of tanks, size, and material so that we can run Acceptable Separation Distance Calculations (ASDs) as part of the HUD EA documentation.

I have attached an Aerial Exhibit showing the site location. 2346 Carolina Beach Road and a 1-Mile Radius Aerial Exhibit with the NCDEQ RAST dataset showing location of ASTs which have had a release in the past. Issue we are having is tracking down information related to size and content types of each tank.

If you could let us know where the NC Ports Authority Tanks are located that would be helpful. I know you stated many of the other terminals are private and we would need to contact the companies separately.

Do you have a list of all terminals, business names within the 1-mile radius shown on the attached exhibit so that we can narrow down our contact list of these private entities? The RAST Data Set

Thank you for any assistance or information you can provide.

Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Ayers, Stephanie <Stephanie.Ayers@ncports.com>
Sent: Thursday, November 3, 2022 4:59 PM
To: Christopher Handley
Cc: Chris Daves
Subject: RE: [External] HUD Project AST Information

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STG Trucking, former marine reserve, and NCSPA Diesel all belong to me. I have a few others too. I'll try to get you something in the next week or so.

S&G Prestress is now Veteran's Express (910) 763-5830.
Springer Eubanks is still same. (910) 343-1991
Stone Heavy Vehicle is rented by Spring Eubanks, number above

Stephanie Ayers
NORTH CAROLINA PORTS
Director, Real Estate & Planning
910-746-6371 Direct
910-233-4190 Cell

ncports.com

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From: Ayers, Stephanie
Sent: Thursday, November 3, 2022 4:36 PM
To: Christopher Handley <chandley@smeinc.com>
Cc: Chris Daves <CDaves@smeinc.com>
Subject: RE: [External] HUD Project AST Information

I'm still working on my tanks, but in the meantime, you might find this helpful:

Your map	NHC Tax Records	Previous Per NHC Tax	My contact:
Amoco Asphalt	BKEP Materials LLC	Nustar	My contact for this property was Mike W
Citco	BKEP Materials LLC	Nustar	My contact for this property was Mike W

Atlantic Diving	Carolina Marine	Altamar	Mike Watkins and partner sold this prop year
East Coast Oil	Carolina Marine	Altamar	Mike Watkins and partner sold this prop year
Apex	Petroleum Fuel Terminal	Shell Oil	Apex: jmealy@apexoil.com
Koch Fuels	Chemserv		ChemServe: bruce.kirk@chemserveterm
Koch Tanks	Chemserv	Invista	ChemServe: bruce.kirk@chemserveterm
ULSD	Petroleum Feul Terminal		
CP&L	Rock Concert Real Property	Walmack	

Stephanie Ayers
NORTH CAROLINA PORTS
Director, Real Estate & Planning
910-746-6371 Direct
910-233-4190 Cell

ncports.com

Email to and from this address is public record and may be disclosed to authorized third parties.

From: Christopher Handley <chandley@smeinc.com>
Sent: Tuesday, November 1, 2022 12:40 PM
To: Ayers, Stephanie <Stephanie.Ayers@ncports.com>
Cc: Chris Daves <CDaves@smeinc.com>
Subject: [External] HUD Project AST Information

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Stephanie,

It was a pleasure speaking with you on the phone. Thank you for your time.

As I mentioned we are seeking information related to aboveground storage tanks (ASTs) for a **HUD Environmental Assessment**. We are seeking information related to the types of tanks, size, and material so that we can run Acceptable Separation Distance Calculations (ASDs) as part of the HUD EA documentation.

I have attached an Aerial Exhibit showing the site location. 2346 Carolina Beach Road and a 1-Mile Radius Aerial Exhibit with the NCDEQ RAST dataset showing location of ASTs which have had a release in the past. Issue we are having is tracking down information related to size and content types of each tank.

If you could let us know where the NC Ports Authority Tanks are located that would be helpful. I know you stated many of the other terminals are private and we would need to contact the companies separately.

Do you have a list of all terminals, business names within the 1-mile radius shown on the attached exhibit so that we can narrow down our contact list of these private entities? The RAST Data Set

Thank you for any assistance or information you can provide.

Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Linda Painter <Linda.Painter@wilmingtonnc.gov>
Sent: Tuesday, November 1, 2022 2:27 PM
To: Christopher Handley
Cc: Chris Daves; Penny Spicer-Sidbury; Heather Padgett; Brian Chambers; Kathryn Thurston; Suzanne Rogers; Chris Walker; Jon Mason
Subject: RE: AST Information HUD Environmental Assessment (EA)

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Hi Chris-After reviewing the information you provided, I think the best approach is to file a public records request with the City Clerk's office: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.wilmingtonnc.gov/home/showpublisheddocument/2691/636047091322170000. Your request can then be circulated to any departments that may have information you are seeking.

(In case the above link doesn't work, you can access the form from the following webpage: https://www.wilmingtonnc.gov/departments/city-clerk).

Linda

Linda Painter, AICP
Director
City of Wilmington, Department of Planning and Development
305 Chestnut Street, 4th Floor - PO Box 1810
Wilmington, NC 28402
Ph: 910-341-7806 Fx: 910-341-7801
linda.painter@wilmingtonnc.gov
www.wilmingtonnc.gov

From: Christopher Handley <chandley@smeinc.com>
Sent: Tuesday, November 1, 2022 1:30 PM
To: Linda Painter <Linda.Painter@wilmingtonnc.gov>
Cc: Chris Daves <CDaves@smeinc.com>
Subject: AST Information HUD Environmental Assessment (EA)

Linda,

I greatly appreciate your time on the phone this afternoon. As I mentioned we are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to interview local planning and fire departments to determine if they are aware of any aboveground storage tanks (ASTs), such as large propane tank or oil facilities located near or within 1-mile of the proposed project site. Or if the planning department is aware of large AST facilities that will

be constructed near the project area in the near future. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

Does the Fire Department or City Planning Department keep records of each storage tank and facility in the 1-mile radius surrounding the project area?

We have also reached out to Ms. Stephanie Ayers, Ports Authority of NC Planner to see if the Ports Authority had information regarding the tanks.

Any information you could provide would be very helpful.

I greatly appreciate your time and support with this project.
-Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

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Christopher Handley

From: Mike Watkins <MWatkins@bkep.com>
Sent: Monday, November 7, 2022 9:26 AM
To: Christopher Handley
Cc: Chris Daves
Subject: RE: AST Information-HUD EA Project City of Wilmington

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Hello Chris-
I am waiting approval from my legal department to provide information to you. I had to run it by them first. I will get back to you as soon as I hear from them.

Thank you

Mike Watkins
Blueknight Energy Partners
Plant Manager
Materials
(910) 799-0483 Work
(910) 512-6410 Mobile
MWatkins@bkep.com
3345 River Road
Wilmington, NC 28412

From: Christopher Handley <chandley@smeinc.com>
Sent: Friday, November 4, 2022 12:24 PM
To: Mike Watkins <MWatkins@bkep.com>
Cc: Chris Daves <CDaves@smeinc.com>
Subject: AST Information-HUD EA Project City of Wilmington

Mike,

Hope you are doing well. Got your information from Ms. Stephanie Ayers with the NC Ports Authority.

We are currently working on a Housing and Urban Development (HUD) EA for a project site located at 2346 Carolina Beach Road in Wilmington, NC.
GIS Pin R06013-021-001-000. See attached mapping showing site location.

As part of the HUD-EA and federal guidelines we are required to conduct research to determine any aboveground storage tanks (ASTs), such as large propane tank or oil/fuel facilities located near or within 1-mile of the proposed project site. We have performed a field visit to the site and a review of NCDEQ-RAST (Regional Aboveground Storage Tank) data files, which revealed multiple ASTs within the 1-mile radius of the proposed project area.

We are required under HUD project guidelines to run Acceptable Separation Distance (ASD) calculations for the ASTs within a 1-Mile Radius of the project area. We are seeking information related to the tanks located throughout the terminals in the port in terms of contents of each tank, size of tank, is the tank under pressure, is the tank diked, etc. so that we can run the ASDs to determine if the project area meets required separation distances for safety requirements.

According to the RAST Dataset, site visit, and aerial photography several ASTs are located throughout BKEP Materials Properties (listed as Citco and Amoco Asphalt). I understand you sold off the property last year, but wanted to see if you could shed some light on type of ASTs at the facilities? Could you provide us with any information regarding the location, type, and size of ASTs? Were they used for fuel or oil storage?

Greatly appreciate any information you could provide. Feel free to call me to discuss.

Thank you…Chris

Chris Handley
Project Manager/GIS Specialist/Biologist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: your.mobile.number
www.smeinc.com
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RECORD OF TELEPHONE CALL		Project #: 21610025	
DATE: 11/4/2022	**PHONE NO:** 314-889-9654	**START:** 2 PM	**FINISH:**
CALL TO: Matt Trotier			**CALL FROM:** C. Handley
FIRM: Apex Oil			**FIRM:** S&ME, Inc.

CONVERSATION

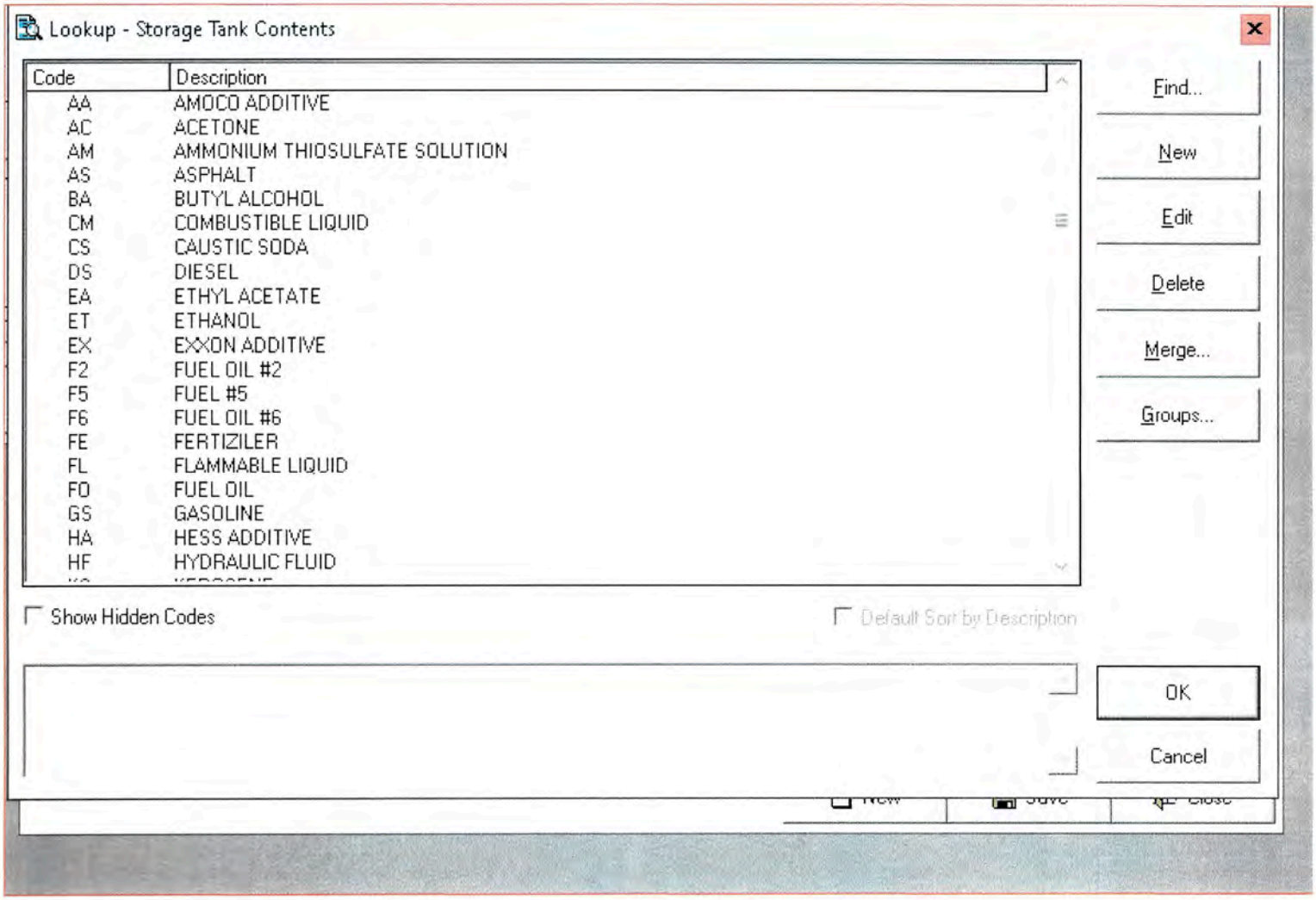
S&ME, Inc.	Other Party
Requested information related to Apex Oil ASTs on Property owned by Apex Oil.	Apex Oil stated they needed to ask Legal Department if it was permissible to disclose information related to on-site ASTs. No return call or information was provided.

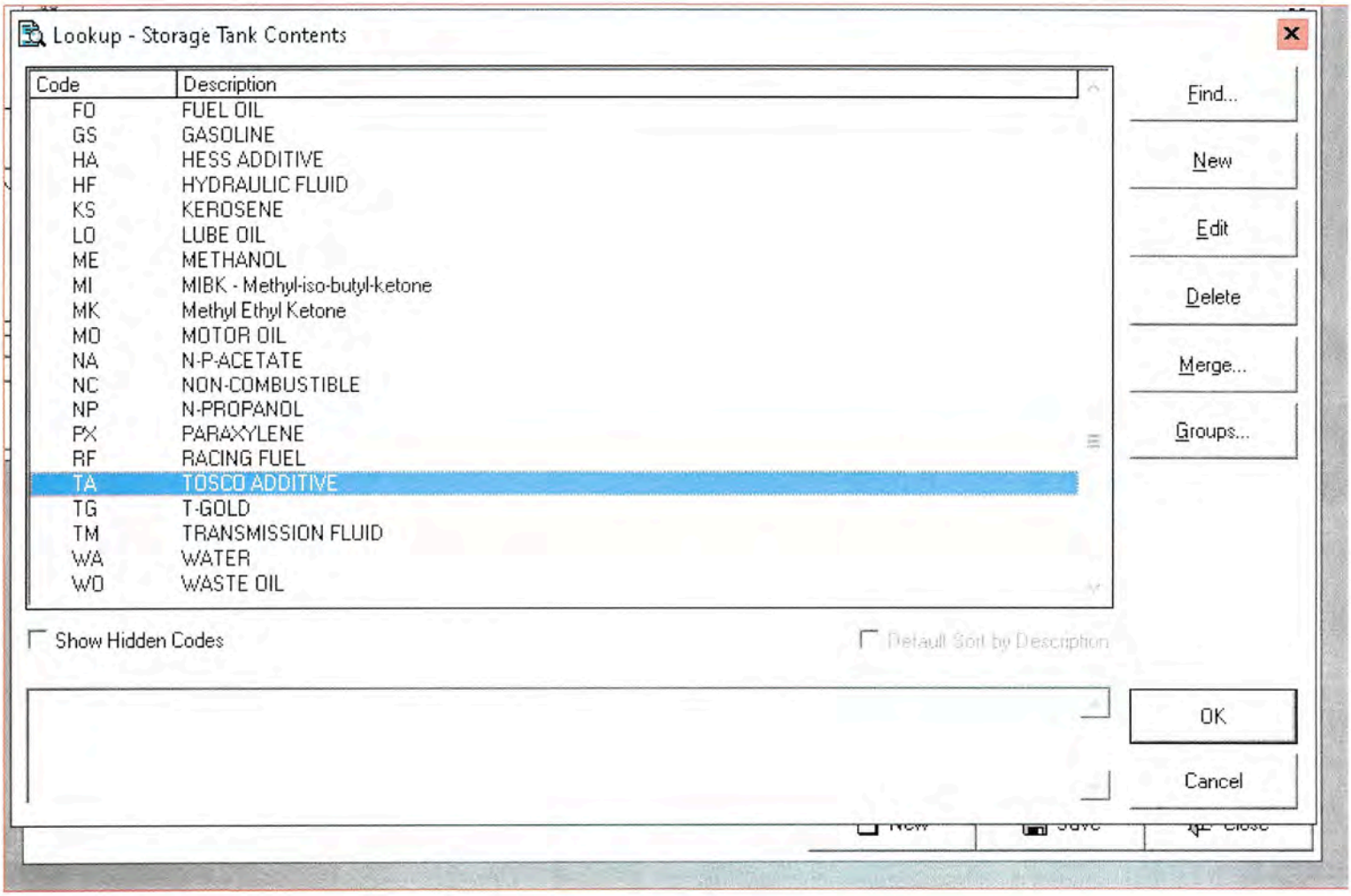
RECORD OF TELEPHONE CALL		Project #: 21610025	
DATE: 11/4/2022	**PHONE NO:** 910-343-1991	**START:** 2:30 PM	**FINISH:**
CALL TO: Gretta Stanley			**CALL FROM:** C. Handley
FIRM: Springer Eubanks			**FIRM:** S&ME, Inc.

CONVERSATION

S&ME, Inc.	Other Party
Requested information related to Springer Eubanks ASTs on Property owned by Springer Eubanks.	Ms. Stanley did not respond to S&ME's request for information.

Occup_id	Name	Number	St_prefix	Street	St_type	City	State	Zip	Zone	Prop_use	Floors_bel	Mixed_use	Station	Insp_dist	Sequence	Institution	Last	First	Middle	Cont_addr_1	Cont_addr	Cont_city	Cont_state	Cont_zip	Capacity	Unit	Contents
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	3656029	12	GS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	3651908	12	GS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	520763	12	ET
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	519825	12	ET
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	409422	12	DS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	757170	12	AS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	2135063	12	GS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	2135400	12	GS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	369937	12	DS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	1135852	12	AS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	205416	12	GS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	3921836	12	AS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	3934658	12	AS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	84000	12	AS
PETR000001	APEX OIL COMPANY - MAIN OFFICE	3314		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	APEX OIL COMPANY -				PO BOX 3127		WILMINGTON	NC	28406	3920520	12	AS
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	1260000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	1680000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	1680000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	2100000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	2520000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	3360000	12	FE
KOCH000001	CHEMSERVE TERMINAL - MAIN OFFICE	3325		RIVER	RD	WILMINGTON	NC	28412	Z5A	600	0	60	S5	D-4	1	CHEMSERVE TERMINAL - MAIN OFFICE	KIRK	BRUCE		3325 RIVER RD		WILMINGTON	NC	28412	4620000	12	FE
TRCC03	CAROLINA MARINE TERMINAL - MAIN OFFICE	3330		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	1	CAROLINA MARINE TERMINAL				3330 RIVER RD		WILMINGTON	NC	28412	2000	12	GS
TRCC03	CAROLINA MARINE TERMINAL - MAIN OFFICE	3330		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	2	CAROLINA MARINE TERMINAL - MAIN OFFICE	FINN	DORIS		3330 RIVER RD		WILMINGTON	NC	28412	2000	12	GS
TRCC03	CAROLINA MARINE TERMINAL - MAIN OFFICE	3330		RIVER	RD	WILMINGTON	NC	28412	Z5A	599	0	59	S5	D-4	3		Ferguson	Wayne							2000	12	GS
CITG000002	BLUEKNIGHT ENERGY PARTNERS - MAIN OFFICE	3345		RIVER	RD	WILMINGTON	NC	28412	Z5A	700	0	60	S5	D-4	1	BLUEKNIGHT ENERGY PARTNERS - MAIN OFFICE				3345 RIVER RD		WILMINGTON	NC	28412	1863	12	CM
CITG000002	BLUEKNIGHT ENERGY PARTNERS - MAIN OFFICE	3345		RIVER	RD	WILMINGTON	NC	28412	Z5A	700	0	60	S5	D-4	1	BLUEKNIGHT ENERGY PARTNERS - MAIN OFFICE				3345 RIVER RD		WILMINGTON	NC	28412	86624896	13


Lookup - Storage Tank Contents
Code
Description
AA AMOCO ADDITIVE
AC ACETONE
AM AMMONIUM THIOSULFATE SOLUTION
AS ASPHALT
BA BUTYL ALCOHOL
CM COMBUSTIBLE LIQUID
CS CAUSTIC SODA
DS DIESEL
EA ETHYL ACETATE
ET ETHANOL
EX EXXON ADDITIVE
F2 FUEL OIL #2
F5 FUEL #5
F6 FUEL OIL #6
FE FERTIZILER
FL FLAMMABLE LIQUID
FO FUEL OIL
GS GASOLINE
HA HESS ADDITIVE
HF HYDRAULIC FLUID
Find...
New
Edit
Delete
Merge...
Groups...
Show Hidden Codes
Default Sort by Description
OK
Cancel


Lookup - Storage Tank Contents
Code
Description
FO FUEL OIL
GS GASOLINE
HA HESS ADDITIVE
HF HYDRAULIC FLUID
KS KEROSENE
LO LUBE OIL
ME METHANOL
MI MIBK - Methyl-iso-butyl-ketone
MK Methyl Ethyl Ketone
MO MOTOR OIL
NA N-P-ACETATE
NC NON-COMBUSTIBLE
NP N-PROPANOL
PX PARAXYLENE
RF RACING FUEL
TA TOSCO ADDITIVE
TG T-GOLD
TM TRANSMISSION FLUID
WA WATER
WO WASTE OIL
Find...
New
Edit
Delete
Merge...
Groups...
Show Hidden Codes
Default Sort by Description
OK
Cancel

MW-25 – Ethylbenzene and naphthalene exceed their respective 2L groundwater standards. A similar fluctuating pattern is noted for each compound.

MW-36 – None of the hydrocarbons of concern exceeded their 2L groundwater standards this period. Concentrations decreased during the recent sampling event, but the general trend has been stable. A similar fluctuating pattern is noted for each compound.

MW-40 – The concentrations of ethylbenzene, xylenes, and naphthalene generally fluctuate over time, but the trend is generally stable. None of the compounds exceeded their 2L groundwater standards this sampling event.

5.0 HYDROGRAPHS

Hydrographs have been developed for the sampled monitoring wells to give an indication of whether the hydrocarbon concentrations appear to be influenced by water elevation changes. The hydrographs have been developed using the concentrations of ethylbenzene, xylenes, and naphthalene from each sampling event, as well as the thickness of separate phase hydrocarbons, if present. The hydrographs are included in Appendix C. The three observable patterns noted on the graphs are 1) the water table generally is within the screen intervals of the wells, except in MW-13 and MW-16 which have occasionally had the screen intervals submerged. MW-13 has never contained separate phase hydrocarbons even when the water table was well within the screened interval. Free product occurred in MW-16 in December 2001 when the water table was within the screen interval, but not in June 2002 when the water table remained in the screened interval. The screen interval in MW-16 was submerged during the December 2003 and June 2004 sampling event. 2) The dissolved hydrocarbon concentrations are not significantly different in MW-16 just prior to and just following the presence of separate phase hydrocarbons in December 2001. The concentration of ethylbenene, xylenes, and naphthalene are overall fairly stable; a discernable slow decreasing trend in MW-13 may be observable on the hydrograph. The concentration of ethylbenzene and xylenes increased in MW-23 following the presence of the separate phase hydrocarbons in December 2001, similar to the occurrence of product in 1996 in this well. Previous concentrations of ethylbenzene, xylenes, and naphthalene decreased for four straight events and the water elevation increased. The most recent event indicates increasing concentrations in ethylbenzene, xylenes, and naphthalene in MW-23 and

the water level decreased. MW-25 tends to show an increasing trend for the third straight event and the water elevations have held stable. MW-36 shows a decrease in all concentrations along with a slight decrease in water elevation. The concentration of naphthalene in MW-40 fluctuates while ethylbenzene and xylene concentrations continue to be below detectable limits. Lower water elevations in MW-40 may correlate to higher dissolved hydrocarbon concentrations. The water elevation for MW-40 has been consistent for the previous three events. 3) There does not appear to be a site-wide correlation between dissolved hydrocarbon concentrations and groundwater elevation.

6.0 CLOSURE

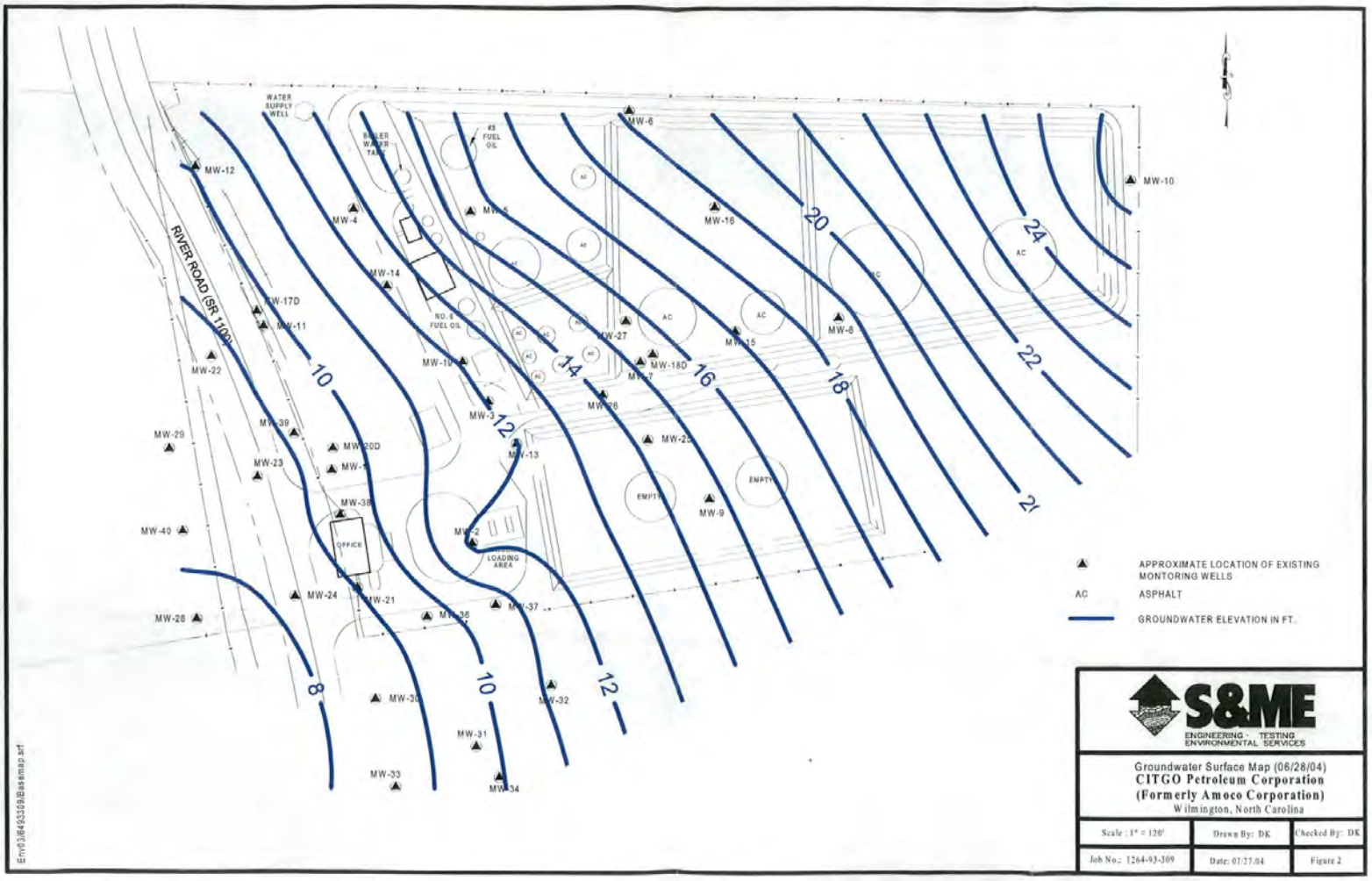
Of the regularly sampled wells, the contaminants exceeding the North Carolina 2L groundwater standards (ethylbenzene, xylenes, and naphthalene) are consistent with past sampling events. The next scheduled sampling event is scheduled for December 2004.



SOURCE: ORTHOPHOTO MAP OF WILMINGTON, NORTH CAROLINA QUADRANGLE, 7.5 MINUTE SERIES, USGS

NORTH

SCALE 1"=2000'	S&ME ENGINEERING · TESTING ENVIRONMENTAL SERVICES	SITE LOCATION MAP CITGO Petroleum Corporation RIVER ROAD WILMINGTON, NORTH CAROLINA 1264-93-309	FIGURE NO. 1
CHECK BY:			
Drawn By :Khemn			
Date :7/18/2000			

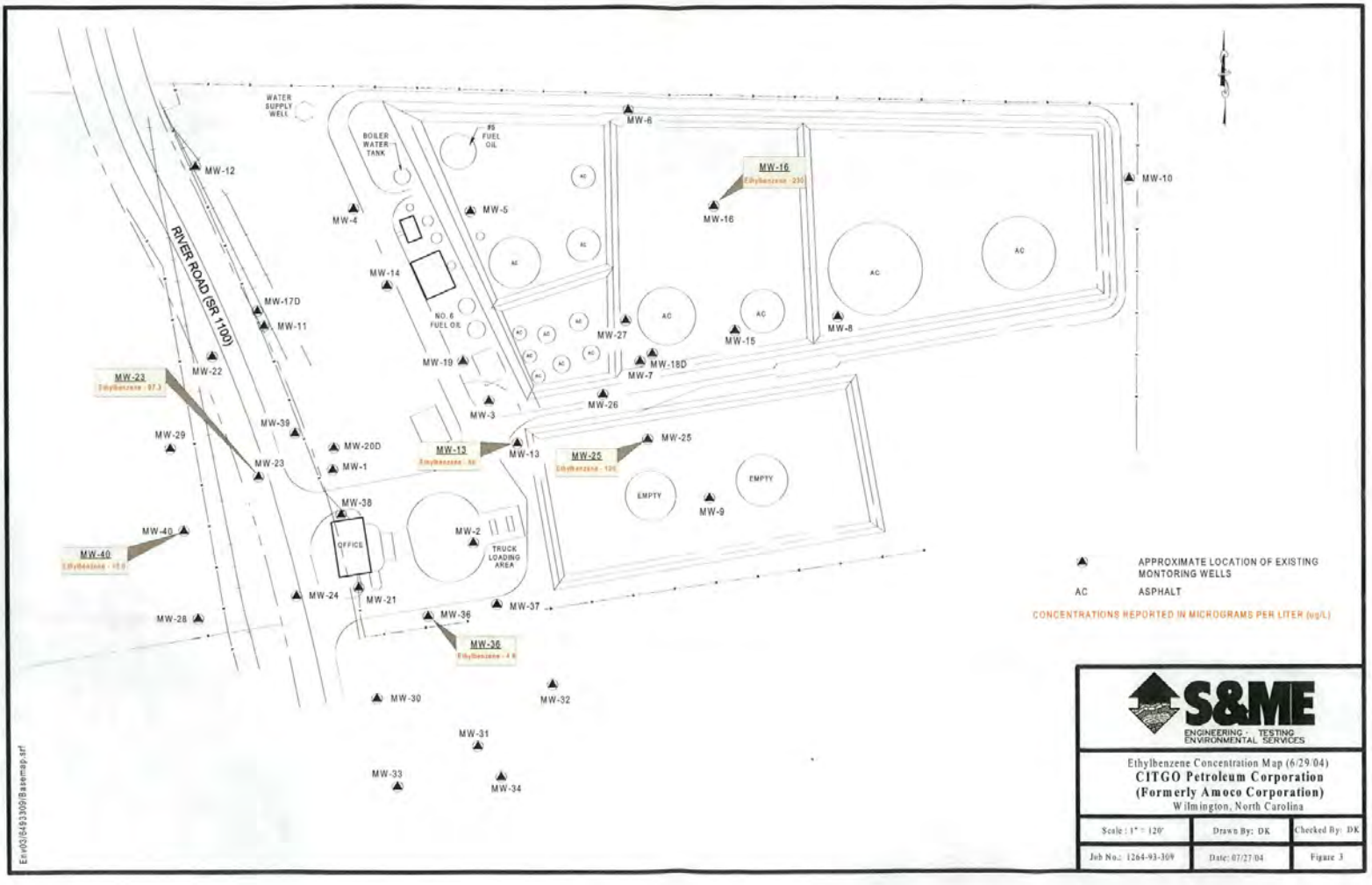


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Groundwater Surface Map (06/28/04)
CITGO Petroleum Corporation
(Formerly Amoco Corporation)
Wilmington, North Carolina

Scale : 1" = 120'	Drawn By: DK	Checked By: DK
Job No.: 1264-93-309	Date: 07/27/04	Figure 2

Env\03\6493309\Basemap.srf

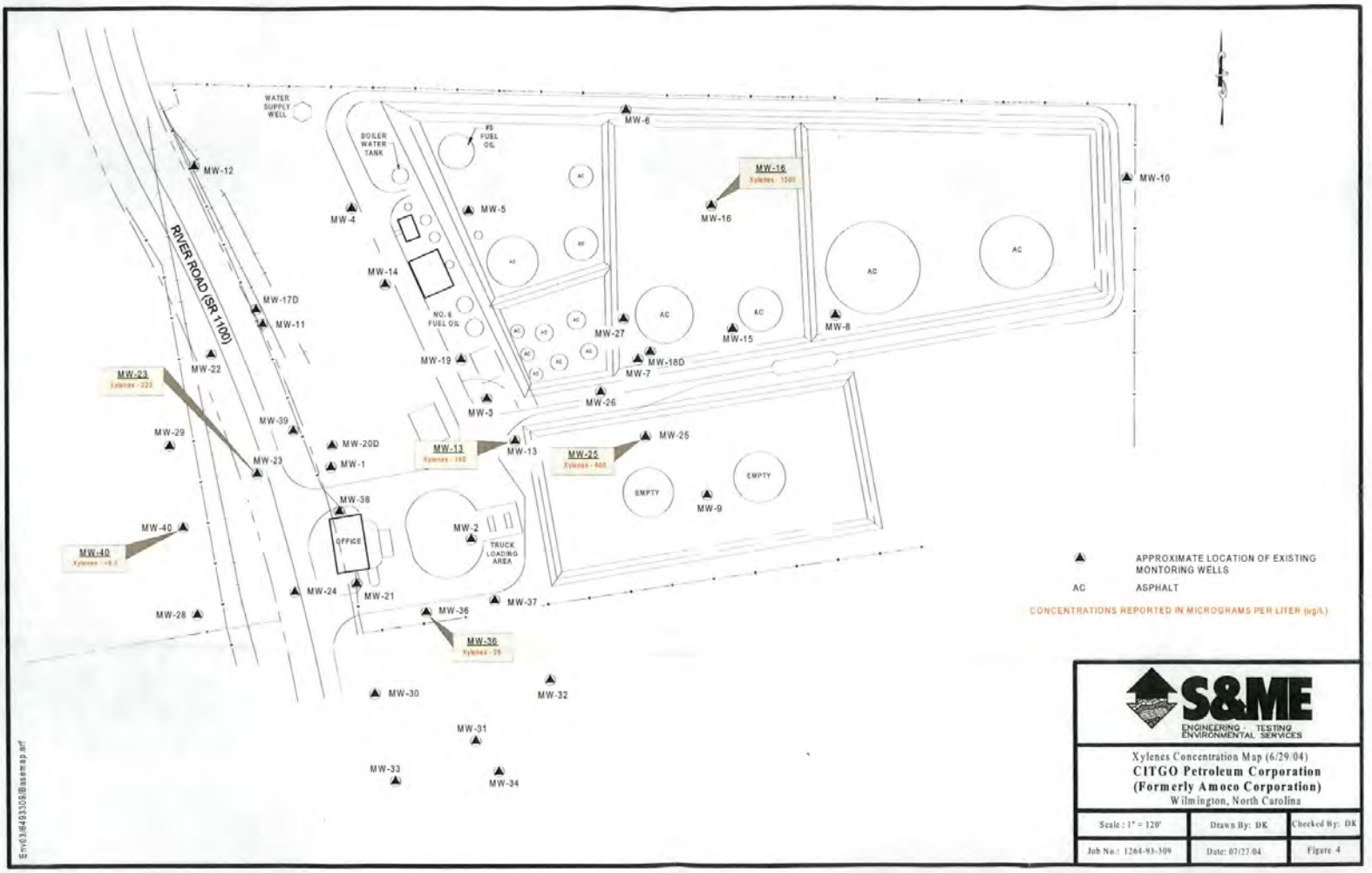


S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES

Ethylbenzene Concentration Map (6/29/04)
CITGO Petroleum Corporation
(Formerly Amoco Corporation)
Wilmington, North Carolina

Scale : 1" = 120'	Drawn By: DK	Checked By: DK
Job No.: 1264-93-309	Date: 07/27/04	Figure 3

Env\03\6493309\Basemap.srf


WATER SUPPLY WELL
BOILER WATER TANK
#5 FUEL OIL
NO. 6 FUEL OIL
RIVER ROAD (SR 1100)
OFFICE
TRUCK LOADING AREA
EMPTY
EMPTY
AC
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17D
MW-18D
MW-19
MW-20D
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
MW-27
MW-28
MW-29
MW-30
MW-31
MW-32
MW-33
MW-34
MW-36
MW-37
MW-38
MW-39
MW-40
MW-16 Xylenes - 1500
MW-23 Xylenes - 223
MW-13 Xylenes - 160
MW-25 Xylenes - 460
MW-40 Xylenes - <5.0
MW-36 Xylenes - 25
APPROXIMATE LOCATION OF EXISTING MONTORING WELLS
ASPHALT
CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L)
S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES
Xylenes Concentration Map (6/29/04)
CITGO Petroleum Corporation
(Formerly Amoco Corporation)
Wilmington, North Carolina
Scale : 1" = 120'
Drawn By: DK
Checked By: DK
Job No.: 1264-93-309
Date: 07/27/04
Figure 4
Env03\84931309\Basemap.srf

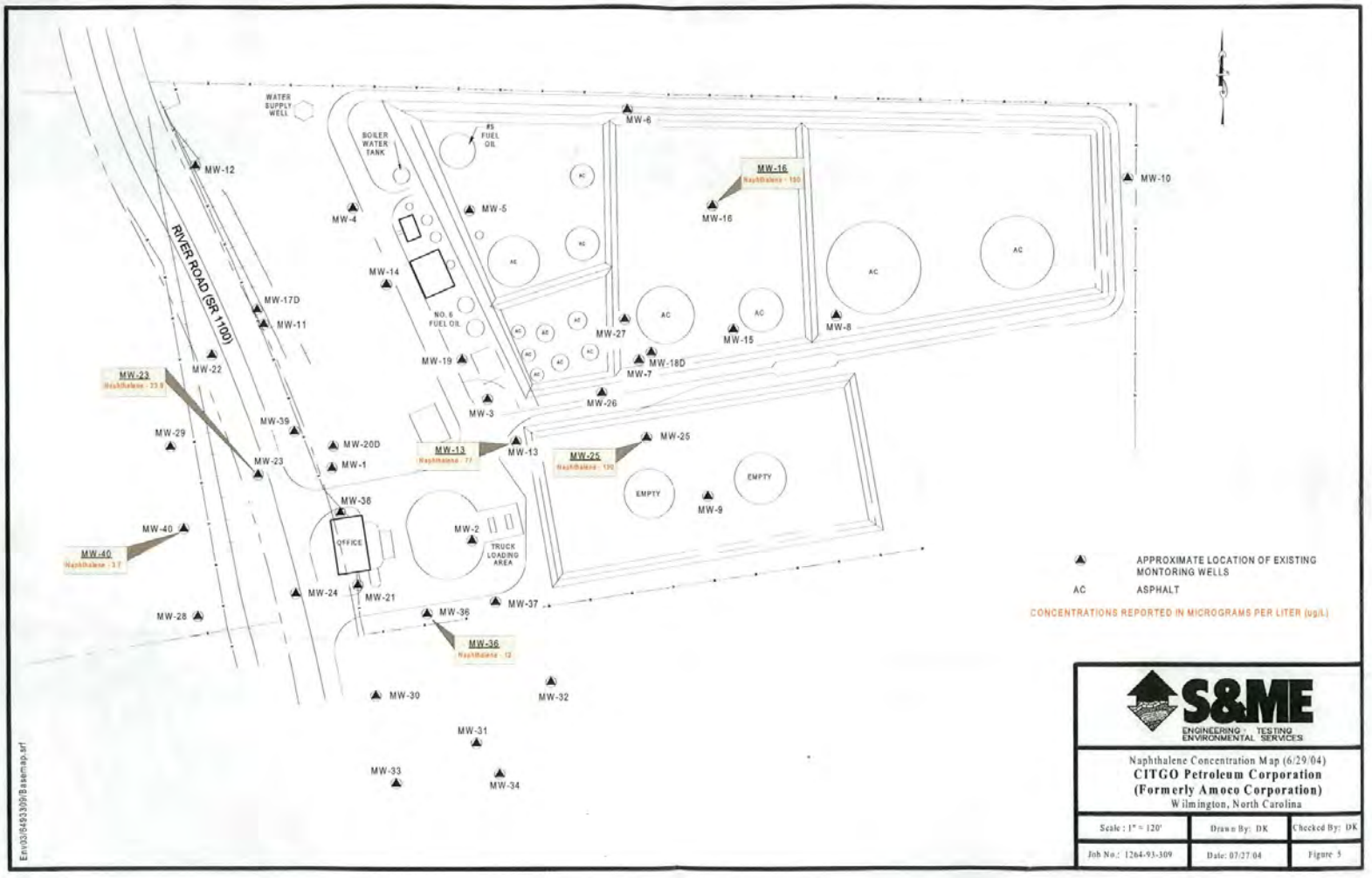

WATER SUPPLY WELL
BOILER WATER TANK
#5 FUEL OIL
NO. 6 FUEL OIL
RIVER ROAD (SR 1100)
OFFICE
TRUCK LOADING AREA
EMPTY
EMPTY
AC
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17D
MW-18D
MW-19
MW-20D
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
MW-27
MW-28
MW-29
MW-30
MW-31
MW-32
MW-33
MW-34
MW-36
MW-37
MW-38
MW-39
MW-40
MW-16 Naphthalene - 150
MW-23 Naphthalene - 23.9
MW-13 Naphthalene - 77
MW-25 Naphthalene - 130
MW-40 Naphthalene - 3.7
MW-36 Naphthalene - 12
APPROXIMATE LOCATION OF EXISTING MONTORING WELLS
ASPHALT
CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L)
S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES
Naphthalene Concentration Map (6/29/04)
CITGO Petroleum Corporation
(Formerly Amoco Corporation)
Wilmington, North Carolina
Scale : 1" = 120'
Drawn By: DK
Checked By: DK
Job No.: 1264-93-309
Date: 07/27/04
Figure 5
Env03\84931309\Basemap.srf

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION DATA
CITGO PETROLEUM TERMINAL
WILMINGTON, NORTH CAROLINA
S&ME PROJECT 1264-93-309

WELL	DATE	TOC ELEV (MSL)	LIQUID DEPTH (ft-rel)	WATER DEPTH (ft-rel)	WATER ELEV (MSL)
MW-1	06/28/04	25.11	15.78	15.78	9.33
MW-2	06/28/04	29.84	17.64	17.64	12.20
MW-4	06/28/04	29.47	16.80	16.80	12.67
MW-5	06/28/04	32.11	16.46	16.46	15.65
MW-6	06/28/04	37.26	18.11	18.11	19.15
MW-8	06/28/04	37.76	19.20	19.20	18.56
MW-9	06/28/04	32.73	18.03	18.03	14.70
MW-10	06/28/04	42.92	16.35	16.35	26.57
MW-11	06/28/04	24.68	15.00	15.00	9.68
MW-12	06/28/04	22.36	12.32	12.32	10.04
MW-13	06/28/04	29.85	17.91	17.91	11.94
MW-14	06/28/04	28.91	16.81	16.81	12.10
MW-15	06/28/04	32.94	14.95	14.95	17.99
MW-16	06/28/04	33.64	14.84	14.84	18.80
MW-17D	06/28/04	24.22	14.73	14.73	9.49
MW-18D	06/28/04	33.50	17.60	17.60	15.90
MW-19	06/28/04	29.88	17.85	17.85	12.03
MW-20D	06/28/04	25.70	16.16	16.16	9.54
MW-21	06/28/04	28.18	19.18	19.18	9.00
MW-22	06/28/04	20.68	12.03	12.03	8.65
MW-23	06/28/04	24.44	15.89	15.89	8.55
MW-24	06/28/04	26.20	NM	NM	NM
MW-25	06/28/04	33.55	19.33	19.33	14.22
MW-26	06/28/04	31.28	17.08	17.08	14.20
MW-27	06/28/04	33.47	17.21	17.22	16.26
MW-28	06/28/04	27.12	19.91	19.91	7.21
MW-29	06/28/04	22.28	NM	NM	NM
MW-30	06/28/04	31.13	22.51	22.51	8.62
MW-31	06/28/04	34.46	24.85	24.85	9.61
MW-32	06/28/04	33.70	22.55	22.55	11.15
MW-33	06/28/04	32.81	24.28	24.28	8.53
MW-34	06/28/04	30.03	NM	NM	NM
MW-36	06/28/04	28.52	19.04	19.04	9.48
MW-37	06/28/04	28.23	17.71	17.71	10.52
MW-38	06/28/04	26.71	17.24	17.24	9.47
MW-39	06/28/04	24.28	NM	NM	NM
MW-40	06/28/04	28.06	20.21	20.21	7.85

TOC - top of casing
NM - no measurement was taken
MSL - mean sea level
ft-rel - feet relative to TOC

TABLE 2
SUMMARY OF GROUNDWATER QUALITY DATA
JUNE/JULY, 2004
CITGO PETROLEUM CORPORATION
WILMINGTON, NORTH CAROLINA
S&ME PROJECT 1264-93-309

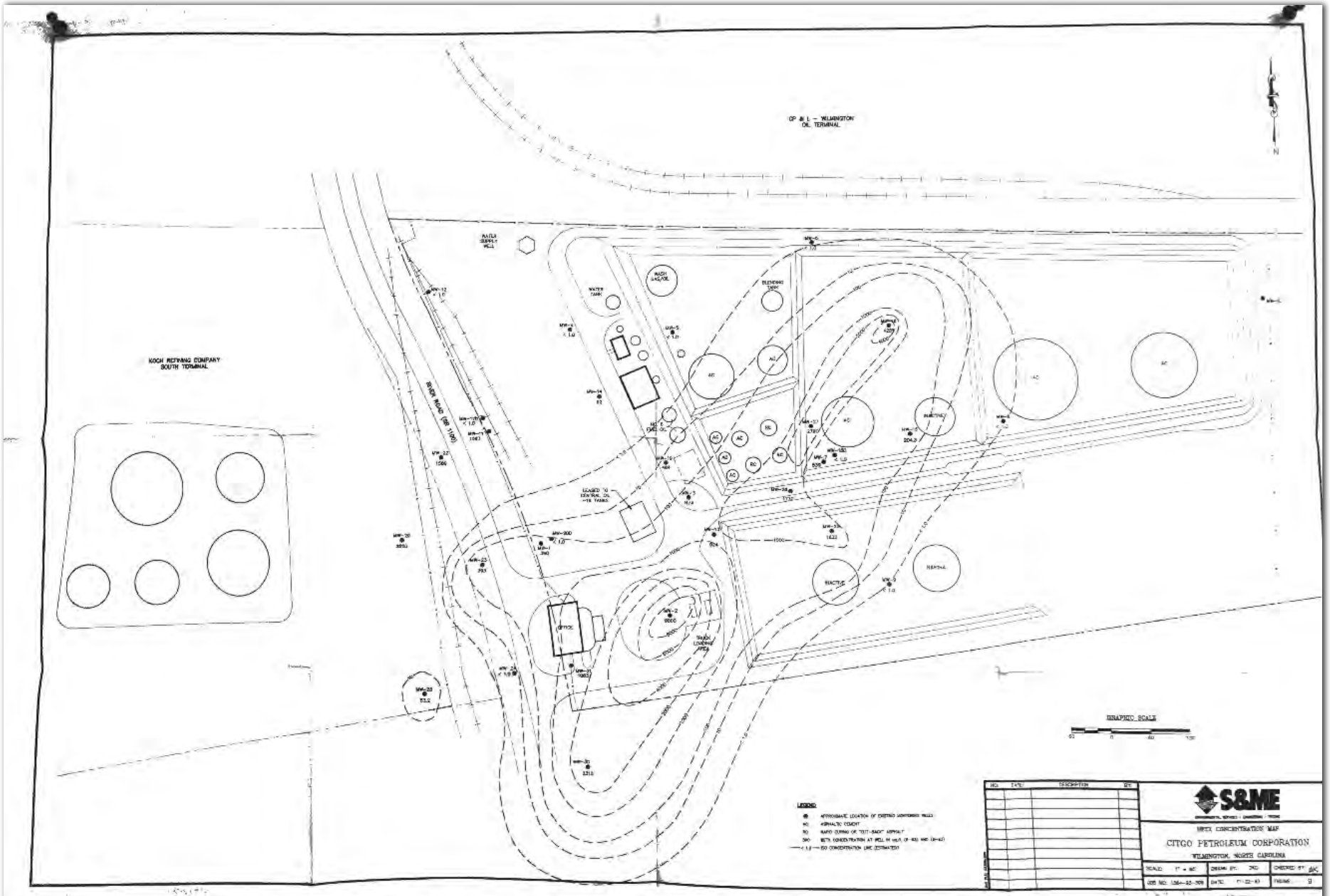
WELL	DATE	B µg/L	T µg/L	E µg/L	X µg/L	NAPH µg/L
NC 2L Standard		**1**	**700**	**29**	**530**	**21**
MW-13	06/29/04	<1.0	<5.0	**80**	180	**77**
MW-16	06/29/04	<1.0	14	**230**	**1500**	**150**
MW-23	07/09/04	<1.0	1.5	**97.3**	223	**23.9**
MW-25	06/29/04	<1.0	30	**120**	460	**100**
MW-36	06/29/04	<1.0	<5.0	4.9	26	12
MW-40	07/09/04	<1.0	<2.0	<2.0	<6.0	3.7

B - Benzene
E - Ethylbenzene
T - Toluene
X - Xylenes
Naph - Naphthalene

All units reported in micrograms per liter (µg/L)
Bolded Values Exceed The NC 2L Groundwater Standard

TABLE 3
SUMMARY OF GROUNDWATER QUALITY DATA
CITGO PETROLEUM CORPORATION
WILMINGTON, NORTH CAROLINA
S&ME PROJECT 1261-93-303

WELL	DATE	B µg/L	T µg/L	E µg/L	X µg/L	NAPH µg/L
NC 2L Standard		**1**	**700**	**29**	**530**	**21**
MW-1	08/23/90	**6**	70	**132**	110	6.2
	09/04/91	<1.0	<1.0	<1.0	<1.0	<0.5
	06/16/93	**1.5**	20	**89**	280	
	02/26/95	<1.0	6.8	**60**	220	
	08/24/95	<0.500	<0.500	0.62	3.73	
	11/15/95	<0.500	<0.500	<0.500	2.45	
	02/26/96	<0.500	<0.500	<0.500	0.945	
	05/28/96	<0.500	<0.500	0.63	1.7	
	08/29/96	<0.500	2.66	21.1	123	
	11/07/96	<0.500	<0.500	<0.500	<0.500	
	02/26/97	<0.500	<0.500	2.04	11.9	
	05/12/97	<0.200	0.751	3.43	14.8	
	08/12/97	<0.200	<0.500	1.10	2.5	
	11/19/97	<0.200	<0.500	<0.500	<0.500	
	02/25/98	<0.200	<0.500	<0.500	<0.500	
	05/29/98	<0.200	<0.500	<0.500	<0.500	
	08/21/98	<0.200	<0.500	<0.500	<0.500	
	11/20/98	<0.200	<0.500	<0.500	<0.500	
	02/19/99	<1.0	1.5	16.8	91.5	
	05/28/99	<1.0	<1.0	<1.0	<1.0	
	08/31/99	<1.0	<1.0	<1.0	<2.0	
	11/16/99	<1.0	<1.0	<1.0	<2.0	<2.0
MW-2	08/23/90	**32**	**2250**	**783**	**1400**	**16.4**
	09/04/91	<10	3530	**600**	**3400**	14.1
	06/16/93	<5	**2900**	**800**	**n100**	
	02/26/95	<1.0	**980**	**410**	**3500**	
	08/24/95	<0.500	357	**246**	**2240**	
	11/15/95	<0.500	190	**169**	**2101**	
	02/26/96	<0.500	9.41	<0.500	162	
	05/28/96	<0.500	3.75	1.42	185	
	08/29/96	<0.500	**11.9**	**289**	**1970**	
	11/07/96	<0.500	9.12	17.1	321	
	02/26/97	0.502	1.53	19.6	**331**	
	05/12/97	<0.200	1.80	6.92	**74.8**	
	08/12/97	<0.200	<0.500	<0.500	11.4	
	11/19/97	<0.200	0.546	<0.500	30.5	
	02/25/98	<0.200	<0.500	<0.500	0.6	
	05/29/98	<0.200	<0.500	1.09	99.1	
	08/21/98	<0.200	4.41	9.45	255	
	11/20/98	<0.200	<0.500	1.09	61.9	
	02/19/99	**10.5**	91.5	**29.6**	199	
	05/28/99	<1.0	6.1	71.2	292	
	08/07/99	<1.0	0.1	<1.0	**42.0**	
	11/16/99	<1.0	<1.0	1.5	7	<2.0
MW-3	08/23/90	ND	135	**913**	**3410**	**69.6**
	09/04/91	<10	77.9	**801**	**2060**	**94.8**
MW-4	08/23/90	ND	ND	ND	ND	<0.5
	09/04/91	<1.0	<1.0	<1.0	<1.0	<0.5
	06/16/93	<1.0	<1.0	<1.0	<1.0	


OP & L – WILMINGTON
OIL TERMINAL
KOCH REFINING COMPANY
SOUTH TERMINAL
RIVER ROAD (SR 1100)
WATER SUPPLY WELL
WATER TANK
BLENDING TANK
OFFICE
SMOKE LOADING AREA
INACTIVE
GRAPHIC SCALE
LEGEND
S&ME
MTBE CONCENTRATION MAP
CITGO PETROLEUM CORPORATION
WILMINGTON, NORTH CAROLINA



CITGO PETROLEUM CORPORATION
PLAQUEMINE TERMINAL
PLAQUEMINE PARISH, LOUISIANA
S&ME
ROCK ROAD (SR 1050)
NORTH MISSISSIPPI DRAINAGE
SOUTH FORK
GRAPHIC SCALE
1" = 40'
N

KOCH REFINING COMPANY
SOUTH TERMINAL
RIVER ROAD (SR 1140)
CITGO PETROLEUM CORPORATION
WILMINGTON, NORTH CAROLINA
PROPOSED AIR STRIPPER TRAIL LOCATIONS
S&ME

UST-62 — 24-Hour Notification of Discharge Form

For Non-UST Releases of Petroleum in NC

This form should be completed and submitted to the UST Section's regional office following a known or suspected release of petroleum from a source other than an underground storage tank. This form is required to be submitted within 24 hours of discovery of a known or suspected petroleum release

(DWM USE ONLY)
Incident # _____ Priority Rank (H,I,L,U) _____
Received (time/date) _____
Received by _____ Region _____
Reported by (*circle one*): Phone, Fax or Report

Suspected Contamination? (Y/N) N
Confirmed GW Contamination? (Y/N) N
Confirmed Soil Contamination ?(Y/N) N
Samples taken?(Y/N) N Free product? (Y/N) Y
If Yes(free product), state greatest thickness: .25 feet

Release discovered (time/date): 0820 1/2/19

INCIDENT DESCRIPTION

Incident Name: ULSD LEAK TANK 150-18

Address (street number/name): 3314 RIVER ROAD

County: NEW HANOVER

City/Town: WILMINGTON

Zip Code: 28412

Regional Office (*circle one*): Asheville, Mooresville, Fayetteville, Raleigh, Washington, Wilmington, Winston-Salem

Latitude (decimal degrees): 34° 11' 15" N

Longitude (decimal degrees): 77° 57' 14" W

Obtained by:
- ☐ GPS
- ☐ Electronic topographic map
- ☐ GIS Address matching
- ☑ Other
- ☐ Unknown

Describe suspected or confirmed release (*nature of release, time/date of release, quantity of release, amount of free product*): AT 0820 ON 1/2/19 A ULSD LEAK WAS FOUND FROM LEAK DETECTION PORTS ON TANK 150-18. LEAK OCCURED INSIDE LINED DIKE AREA. VISUAL ESTIMATION OF 200-300 GALLONS

Describe initial response/abatement (*time/date release stopped, cleanup begun/completed, quantity of product soil removed, confirmation sampling*): BLOCKED LEAK DETECTION PORTS, OSRD VAC TRUCK ON SCENE TRANSFER PRODUCT TO DIFFERENT TANK QUANTITY UNKNOWN AT THIS TIME

Describe impacted receptors: NO IMPACTED RECEPTORS IDENTIFIED AT THIS TIME

Describe location: FACILITY RESPONSE PLAN

HOW RELEASE WAS DISCOVERED (Release Code)

(Check one)

- ☐ Observation of Release at Occurrence
- ☑ Visual or Olfactory Evidence
- ☐ Soil Contamination
- ☐ Groundwater Contamination
- ☐ Water Supply Well Contamination
- ☐ Surface Water Contamination
- ☐ Other (specify) _____

SOURCE OF CONTAMINATION

Source of Release *(Check one to indicate primary source)*
- ☑ AST (tank)
- ☐ AST Piping/ Dispenser
- ☐ AST Delivery Problem
- ☐ OTR Vehicle Tank
- ☐ OTR Bulk Transport Tank
- ☐ RR Bulk Transport Tank
- ☐ Transformer
- ☐ Unknown
- ☐ Other _____

Definitions presented on reverse

Cause of Release *(Check one to indicate primary cause)*
- ☐ Spill (Accidental)
- ☐ Spill (Intentional)
- ☐ Corrosion
- ☐ Physical or Mechanical Damage
- ☐ Equipment Failure
- ☐ AST Overfill
- ☐ AST Installation Problem
- ☑ Unknown
- ☐ Other _____

Definitions presented on reverse

Type of Release *(Check one)*
- ☑ Petroleum
- ☐ Both Petroleum & Non-Petroleum

Location *(Check one)*
- ☑ Facility
- ☐ Residence
- ☐ Highway/Road
- ☐ Railway
- ☐ Other

Product Type Released *(Check one to indicate primary petroleum product type released)*
- ☑ Gasoline/ Diesel/ Kerosene
- ☐ E11 – E20
- ☐ E21 – E84
- ☐ E85 – E99
- ☐ Ethanol 100%
- ☐ Diesel/Veg. Oil Blend
- ☐ Vegetable Oil 100%
- ☐ Heating Oil
- ☐ Waste Oil
- ☐ Mineral Oil-*no PCBs*
- ☐ Mineral Oil-*PCBs*
- ☐ Other Petroleum Products _____

Ownership
1. Municipal 2. Military 3. Unknown (4. Private) 5. Federal 6. County 7. State

Operation Type
1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. (5. Industrial) 6. Commercial 7. Mining

Guidance presented on reverse

IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected? 1. Yes 2. (No) 3. Unknown Number of Water Supply Wells Affected _____

List of Water Supply Wells Contaminated: (*Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary*)
1.
2.
3.

PARTY RESPONSIBLE FOR RELEASE

(if the source of the release is not an AST system or if it is an AST system and there is a responsible party other than the AST system owner/ operator)

Name of Person/Company		Address	
City	State	Zip Code	Telephone Number

AST SYSTEM OWNER *(if the source of the release is an AST system)*

AST Owner/Company		Address	
PETROLEUM FUEL AND TANK CO.		8235 FORSYTH BLVD SUITE 400	
City CLAYTON	State MO	Zip Code 63105	Telephone Number 910-279-2930

AST SYSTEM OPERATOR *(if the source of the release is an AST system)*

UST Operator/Company		Address	
APEX OIL CO		8235 FORSYTH BLVD SUITE 400	
City CLAYTON	State MO	Zip Code 63105	Telephone Number 910-279-2930

LANDOWNER AT LOCATION OF INCIDENT

Landowner		Address	
PETROLEUM FUEL AND TANK CO.		8235 FORSYTH BLVD. SUITE 400	
City CLAYTON	State MO	Zip Code 63105	Telephone Number 910-279-2930

Draw Sketch of Area or Provide Map *(showing incident site, location of release, two major road intersections, potential receptors)*

Attach sketch or map to form.

Give Directions to Incident Site *Attach directions to form if necessary.*

WEST ON SHIPYARD BLVD, LEFT ON RIVER ROAD, 1/8 MILE TERMINAL ON RIGHT

Person Reporting Incident	Company	Telephone Number
JAMIE MEALY	APEX OIL CO	910-799-0080
Title TERMINAL MANAGER	Address 9314 RIVER ROAD WILM, NC 28412	Date 1/2/19

Definitions of Sources

AST (Tank): means the tank is used to store product
AST Piping: means the piping and connectors running from the tank to the dispenser or other end-use equipment
AST Dispenser: includes the dispenser and the equipment used to connect the dispenser to the piping
AST Delivery Problem: identifies releases that occurred during product delivery to the tank.
OTR Vehicle Tank: means the tank is used to store product to fuel an over the road vehicle
OTR Bulk Transport Tank: means a tank that is used to transport product in bulk over the road (by truck)
RR :bulk Transport Tank: means a tank that is used to transport product in bulk by train
Transformer: means electrical transformer
Other: serves as the option to use when the release source is known but does not fit into one of the preceding categories
Unknown: identifies releases for which the source has not been determined

Definitions of Causes

Spill (Accidental): use this cause when a spill occurs accidentally(e.g., when the delivery hose is disconnected from a fill pipe)
Spill (Intentional): use this cause when a spill occurs intentionally (e.g., intentional dumping or breakage)
Corrosion: use when a metal tank, piping, or other component has a release due to corrosion
Physical or Mechanical Damage: use for all types of physical or mechanical damage, except corrosion
Equipment failure: use when a release occurs due to equipment failure other than corrosion or physical or mechanical damage
AST Overfill: use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)
AST Installation Problem: use when the problem is determined to have occurred specifically because the AST system was not installed properly
Other: use this option when the cause is known but does not fit into one of the preceding categories
Unknown: use when the cause has not been determined

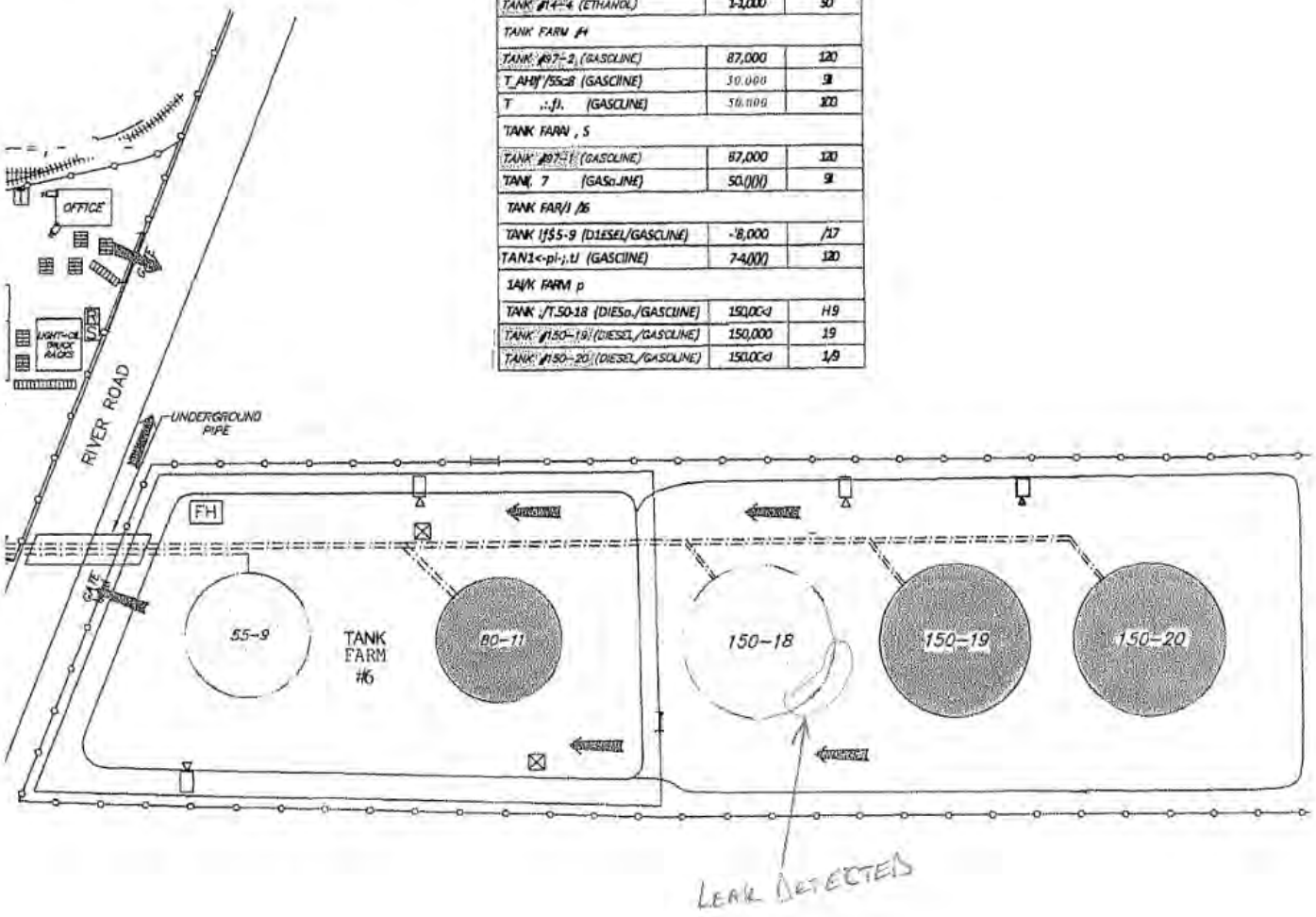
Guidance: Ownership and Operator Type

Ownership select the category which describes owner of the AST system, bulk transport tank, or other release source
Operator Type select the category which describes the operation in which owner uses the AST system, bulk transport tank, or other release source

LEGEND

- PIPELINE
- APPROXIMATE DIKE CENTER LINE
- STORM DRAIN
- FENCE
- DRAINAGE GATES
- 6 DRAINAGE VAL\.ES
- ig) STORMWA TER PUMP
- !>0 SECURITY CAMERA
- EVACUA noN ROUTE

STORAGE TANK ID. (&, of CL)	SHELL CAPACITY (BA[f[f[l.S)	TANK (XA1JETTR (f'EE7)
TANK FAII/I f I		
TANK #30-12 (ASPHALT)	28,000	73
TANK #100-17 (ASPHALT)	93,000	122
TANK FA/J/J ,/2		
TANK f11-5 (p DIESEL fVEL)	9,&XI	
TANK #20-6 (ASPHALT)	/8,000	60
TANK f10-10 (2)1ESEL PJE/.)	8,&XI	
TANK #100-14 (ASPHALT)	9.1,000	122
TANK #100-15 (ASPHALT)	93,000	122
TANK #150-16 (ASPHALT)	139/)(X)	1/1
TANK FAR/J p		
f;/T]"1.-(E71fANOL)	14,000	50
TANK #14-4 (ETHANOL)	1-1,000	50
TANK FARN /4		
TANK #97-2 (GASOLINE)	87,000	120
T_AHJ("55c8 (GASCIINE)	50,000	9
T .:.f). (GASCLINE)	50,000	120
TANK FARN , S		
TANK #97-1 (GASOLINE)	87,000	120
TANK 7 (GASoJINE)	50,)()(I	9
TANK FAR/I /6		
TANK !f55-9 (D1ESEL/GASCLINE)	-'8,000	/17
TAN1<-pi-;.tJ (GASCIINE)	7-4,00()	120
1A/K FARM p		
TANK ,/T.50-18 (DIESo./GASCLINE)	150,00<J	H9
TANK #150-19 (DIESEL/GASCLINE)	150,000	19
TANK #150-20 (DIESEL/GASCLINE)	150,00<J	1,9



SITE EVACUATION PLAN

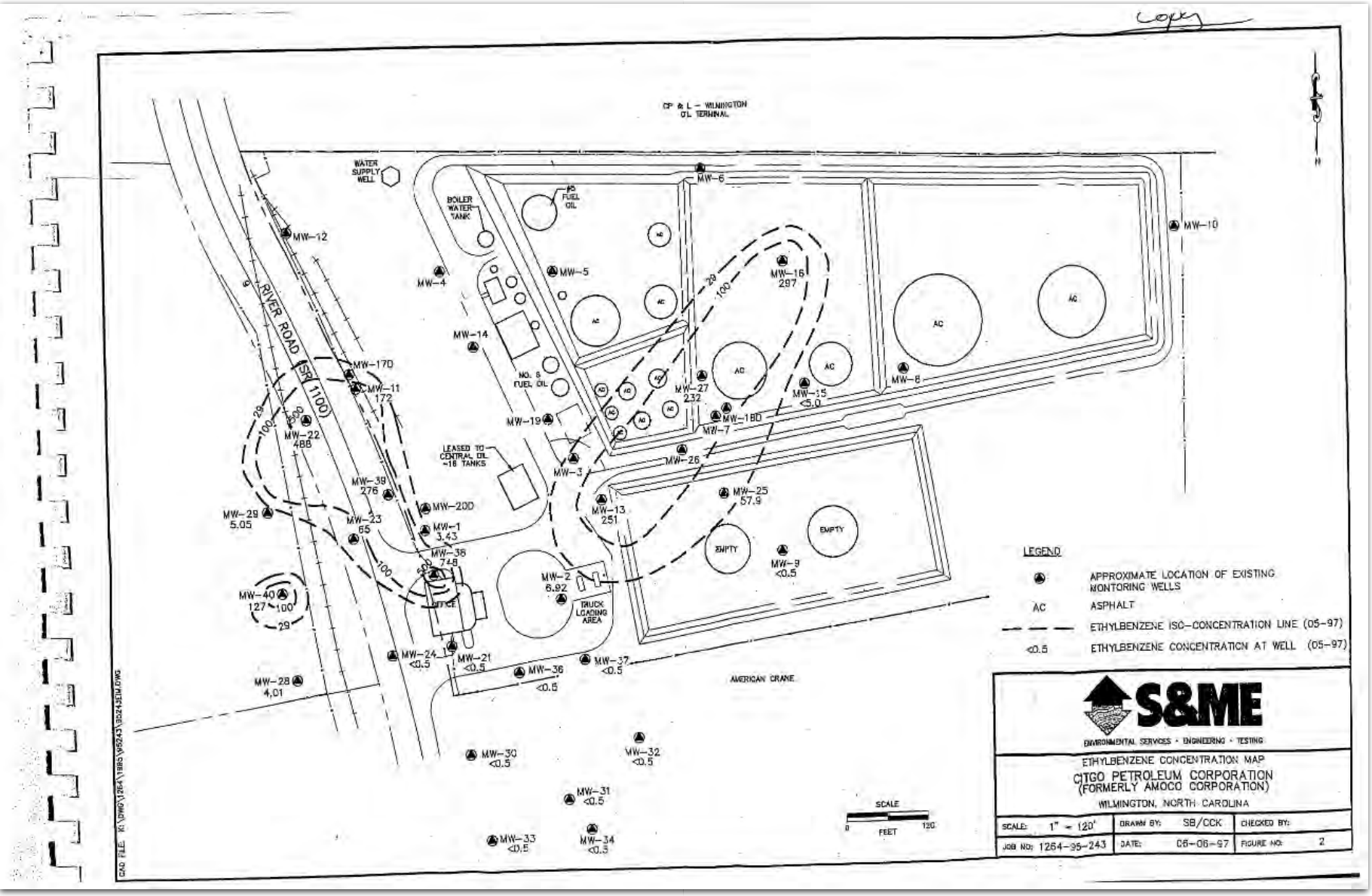
PETROLEUM FUEL & TERMINAL COMPAI
APEX OIL COMPANY - WILMINGTON TERM

? 19°

Scale in Feet

MILMINGTON, JOgJH CAEWLIt-il

Copy



LEGEND

- ▲ APPROXIMATE LOCATION OF EXISTING MONTORING WELLS
- AC ASPHALT
- ETHYLBENZENE ISO-CONCENTRATION LINE (05-97)
- <0.5 ETHYLBENZENE CONCENTRATION AT WELL (05-97)

S&ME

ENVIRONMENTAL SERVICES · ENGINEERING · TESTING

ETHYLBENZENE CONCENTRATION MAP

CITGO PETROLEUM CORPORATION
(FORMERLY AMOCO CORPORATION)

WILMINGTON, NORTH CAROLINA

SCALE: 1" = 120'	DRAWN BY: SB/CCK	CHECKED BY:	
JOB NO: 1264-95-243	DATE: 06-06-97	FIGURE NO:	2

CP & L – WILMINGTON
OIL TERMINAL

WATER SUPPLY WELL

BOILER WATER TANK

LEASED TO CENTRAL OIL ~16 TANKS

RIVER ROAD (SR 1100)

OFFICE

TRUCK LOADING AREA

WATER SUPPLY WELL

MW-1
MW-2
MW-3 (Destroyed)
MW-4 (Destroyed)
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17D
MW-18D
MW-19
MW-20D
MW-21
MW-22
MW-23 (Destroyed)
MW-25
MW-26
MW-27
MW-28
MW-29
MW-36
MW-37
MW-38
MW-39
MW-40

N

0 100 200
Approximate Scale in Feet

Legend:

- **MW-1** ⊕ Monitoring Well (Approximate)
- **MW-17D** ⊕ Deep Monitoring Well (Approximate)
- *MW-4* ⊕ Destoyed Monitoring Well (Approximate)

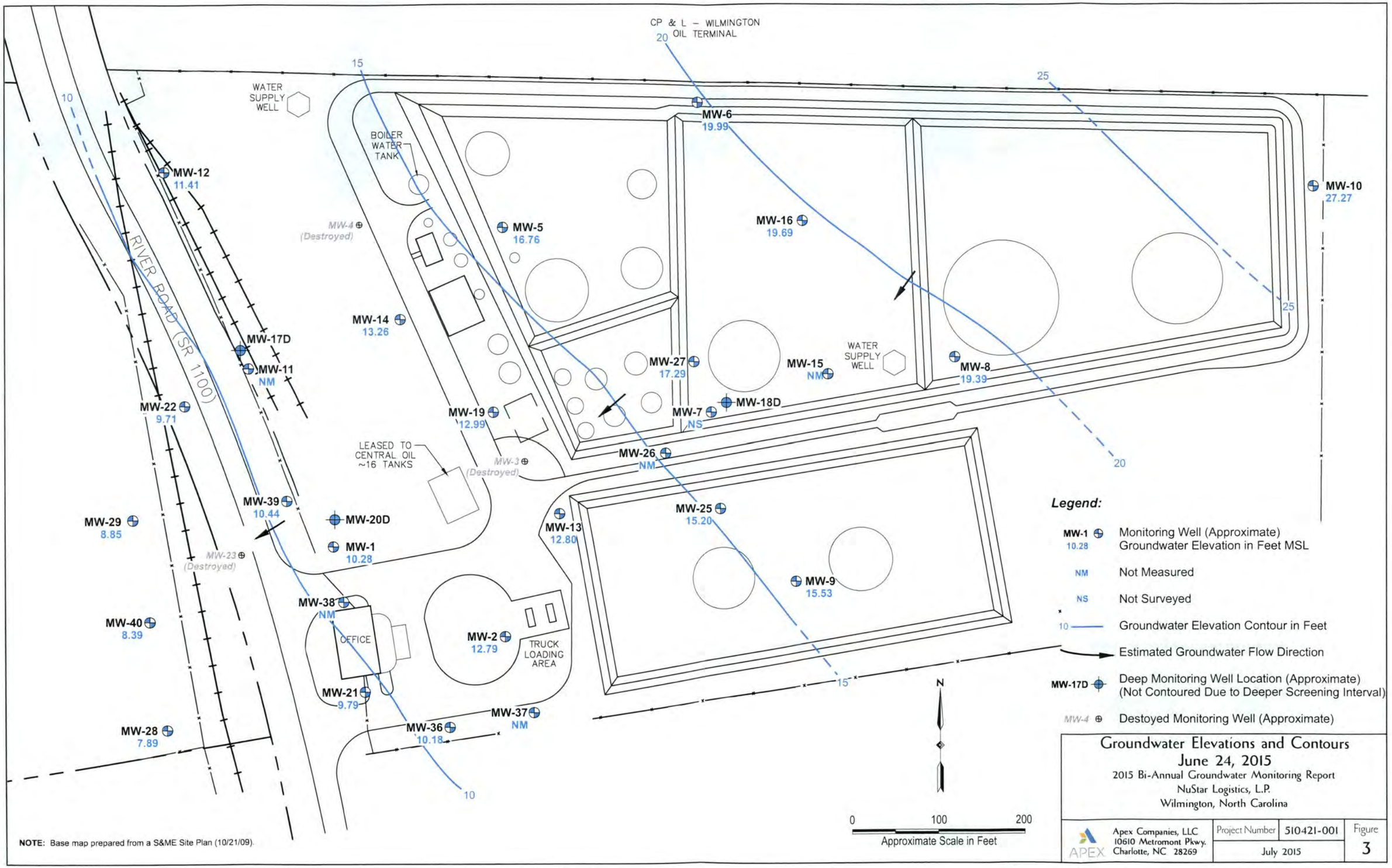
NOTE: Base map prepared from a S&ME Site Plan (10/21/09).

Site Plan

2015 Bi-Annual Groundwater Monitoring Report
NuStar Logistics, L.P.
Wilmington, North Carolina

Apex Companies, LLC
10610 Metromont Pkwy.
Charlotte, NC 28269

Project Number	510421-001	Figure
July 2015		2



NOTE: Base map prepared from a S&ME Site Plan (10/21/09).

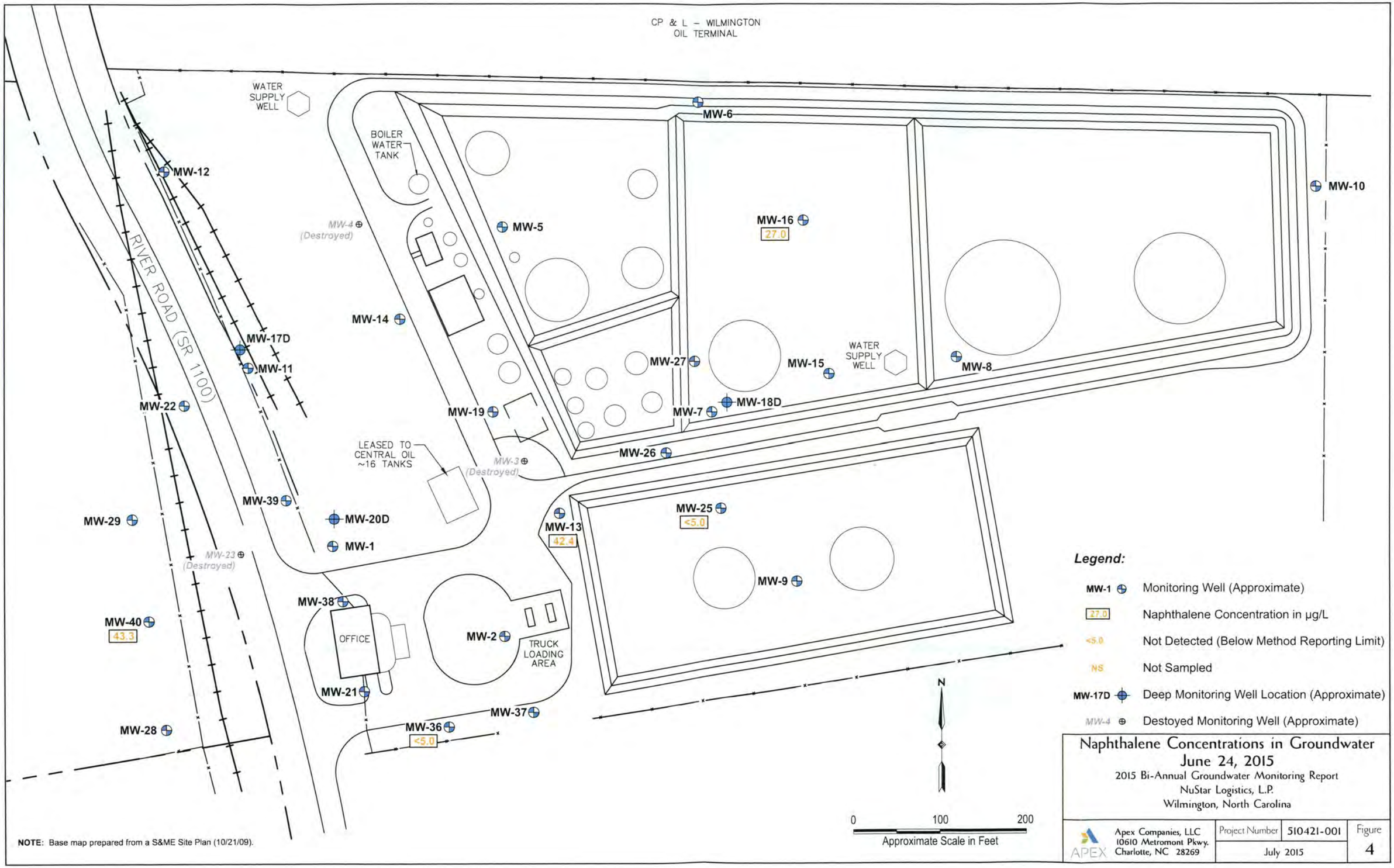
Legend:

MW-1 10.28	Monitoring Well (Approximate) Groundwater Elevation in Feet MSL
NM	Not Measured
NS	Not Surveyed
10	Groundwater Elevation Contour in Feet
	Estimated Groundwater Flow Direction
MW-17D	Deep Monitoring Well Location (Approximate) (Not Contoured Due to Deeper Screening Interval)
MW-4	Destoyed Monitoring Well (Approximate)

Groundwater Elevations and Contours
June 24, 2015
2015 Bi-Annual Groundwater Monitoring Report
NuStar Logistics, L.P.
Wilmington, North Carolina

Apex Companies, LLC
10610 Metromont Pkwy.
Charlotte, NC 28269

Project Number	510421-001	Figure
July 2015		3



NOTE: Base map prepared from a S&ME Site Plan (10/21/09).

Naphthalene Concentrations in Groundwater
June 24, 2015

2015 Bi-Annual Groundwater Monitoring Report
NuStar Logistics, L.P.
Wilmington, North Carolina

Apex Companies, LLC 10610 Metromont Pkwy. Charlotte, NC 28269	Project Number	510421-001	Figure 4
		July 2015	

Appendix IV – Supporting Documentation (ASD Sheets and Google Earth Distances)

1. Apex Oil - 3314 River Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	650
What is the Diked Area Width (ft)?	250
Calculate Acceptable Separation Distance	
Diked Area (sqft)	162500
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	1299.08
ASD for Thermal Radiation for Buildings (ASDBNPD)	278.58

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

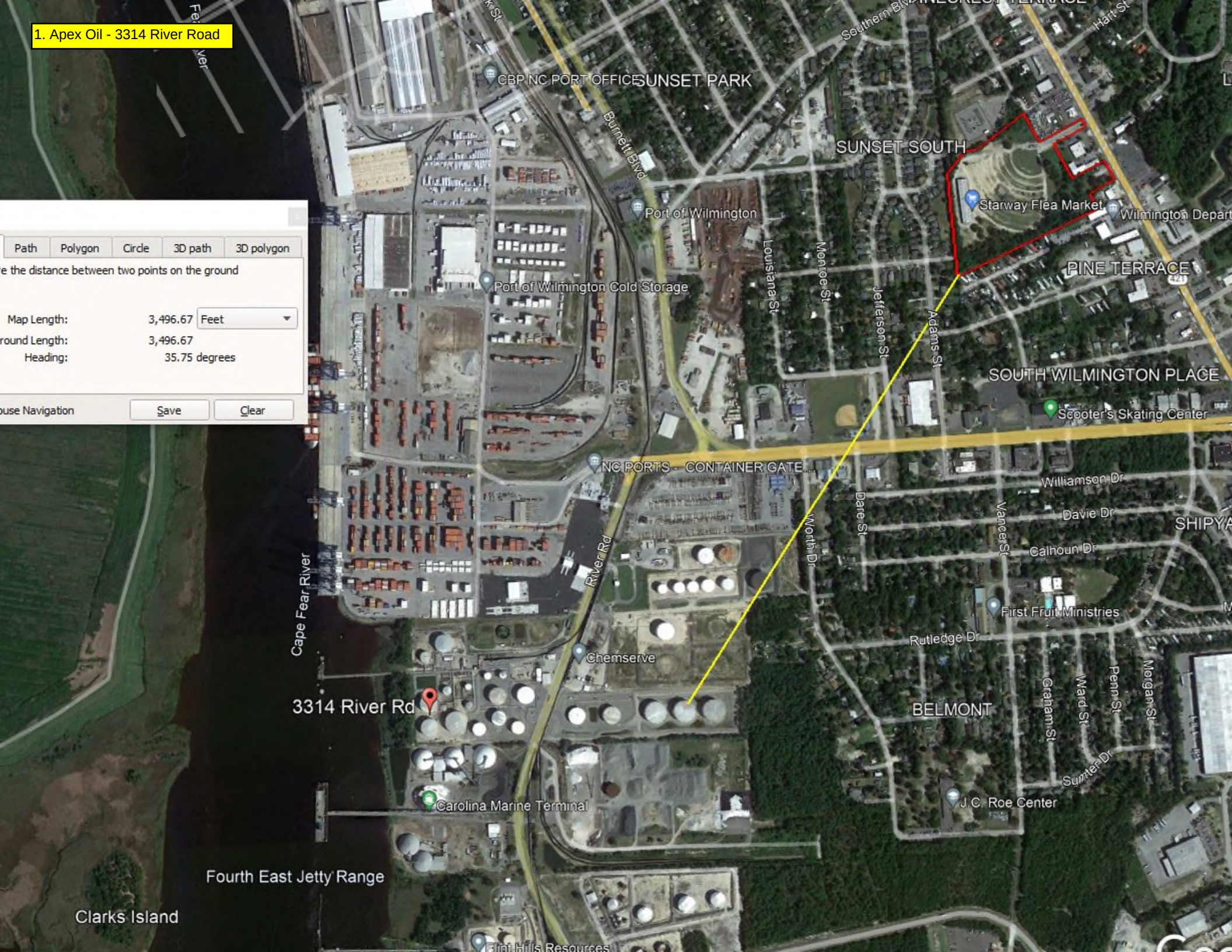
Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


1. Apex Oil - 3314 River Road
Path
Polygon
Circle
3D path
3D polygon
e the distance between two points on the ground
Map Length:
3,496.67
Feet
round Length:
3,496.67
Heading:
35.75 degrees
ouse Navigation
Save
Clear
CBP NC PORT OFFICE
SUNSET PARK
Burnett Blvd
SUNSET SOUTH
Starway Flea Market
Wilmington Depart
Port of Wilmington
Port of Wilmington Cold Storage
Louisiana St
Monroe St
Jefferson St
Adams St
PINE TERRACE
SOUTH WILMINGTON PLACE
Scooter's Skating Center
NC PORTS - CONTAINER GATE
Williamson Dr
Davie Dr
Calhoun Dr
Dare St
Vance St
Worth Dr
River Rd
Cape Fear River
First Fruit Ministries
Rutledge Dr
Chemserve
3314 River Rd
BELMONT
Graham St
Ward St
Penn St
Morgan St
Sumter Dr
Carolina Marine Terminal
J.C. Roe Center
Fourth East Jetty Range
Clarks Island

2. Koch Fuels- 3325 and 3308 River Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

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Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	385
What is the Diked Area Width (ft)?	175
Calculate Acceptable Separation Distance	
Diked Area (sqft)	67375
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	899.11
ASD for Thermal Radiation for Buildings (ASDBNPD)	185.53

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


BP NC PORT OFFICE
SUNSET PARK
2. Koch Fuels (Chemserve Terminal) - 3325 and 3308 River Road
Burnett Blvd
Southern Blvd
Monroe St
S & W Ready Mix Concrete
Virginia Ave
Merritt's Burger House
NC Inspection Center
Wilmington Department of Motor Vehicles
Adams St
Maryland Ave
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 2,460.34 Feet
Ground Length: 2,460.34
Heading: 35.99 degrees
Mouse Navigation
Save
Clear
Bell St
Jefferson St
Delaware Ave
Cape Fear Blvd
North Carolina State Ports Authority (NC...
Springer-Eubank Oil
Container Technology
Scooter's Skating Center
Long Leaf Baptist Church
Shipyard Blvd
NC PORTS - CONTAINER GATE...
WECT
Southeastern Machine & Welding
Metro Ports
Williamson Dr
Worth Dr
Dale St
Vance St
Davie Dr
Calhoun Dr
River Rd
Rutledge Dr
First Fruit Ministries
Marion Dr
421
117

3. East Coast Oil Transport/Atlantic Diving and Marine - 3330 River Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☐ No: ☑
What is the volume (gal) of the container?	75000
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	

Calculate Acceptable Separation Distance

Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	1670.90
ASD for Thermal Radiation for Buildings (ASDBPU)	370.03
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

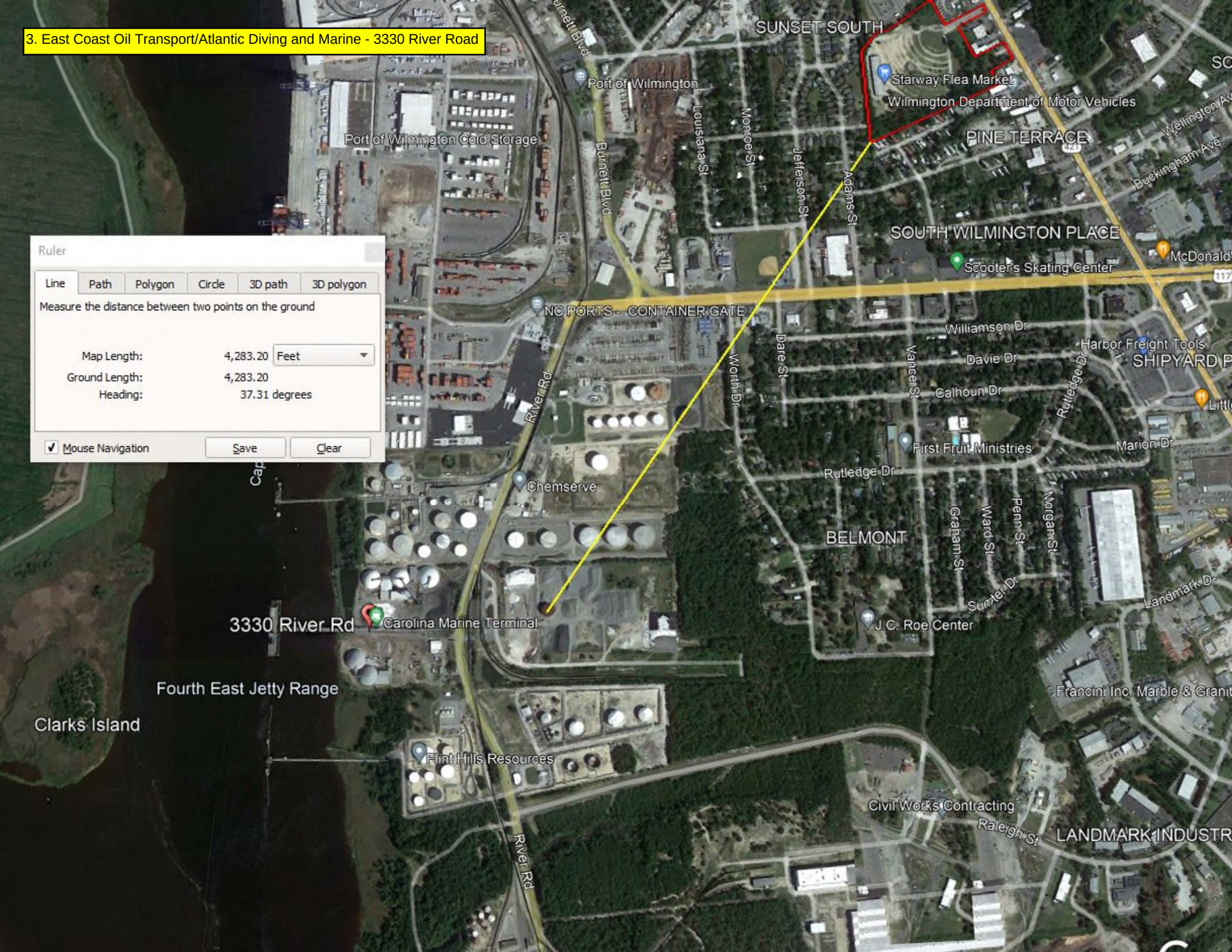
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Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)

3. East Coast Oil Transport/Atlantic Diving and Marine - 3330 River Road



4. Former Amoco Asphalt Terminal/Citgo - 3345 River Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	400
What is the Diked Area Width (ft)?	300
Calculate Acceptable Separation Distance	
Diked Area (sqft)	120000
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	1144.45
ASD for Thermal Radiation for Buildings (ASDBNPD)	242.19

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

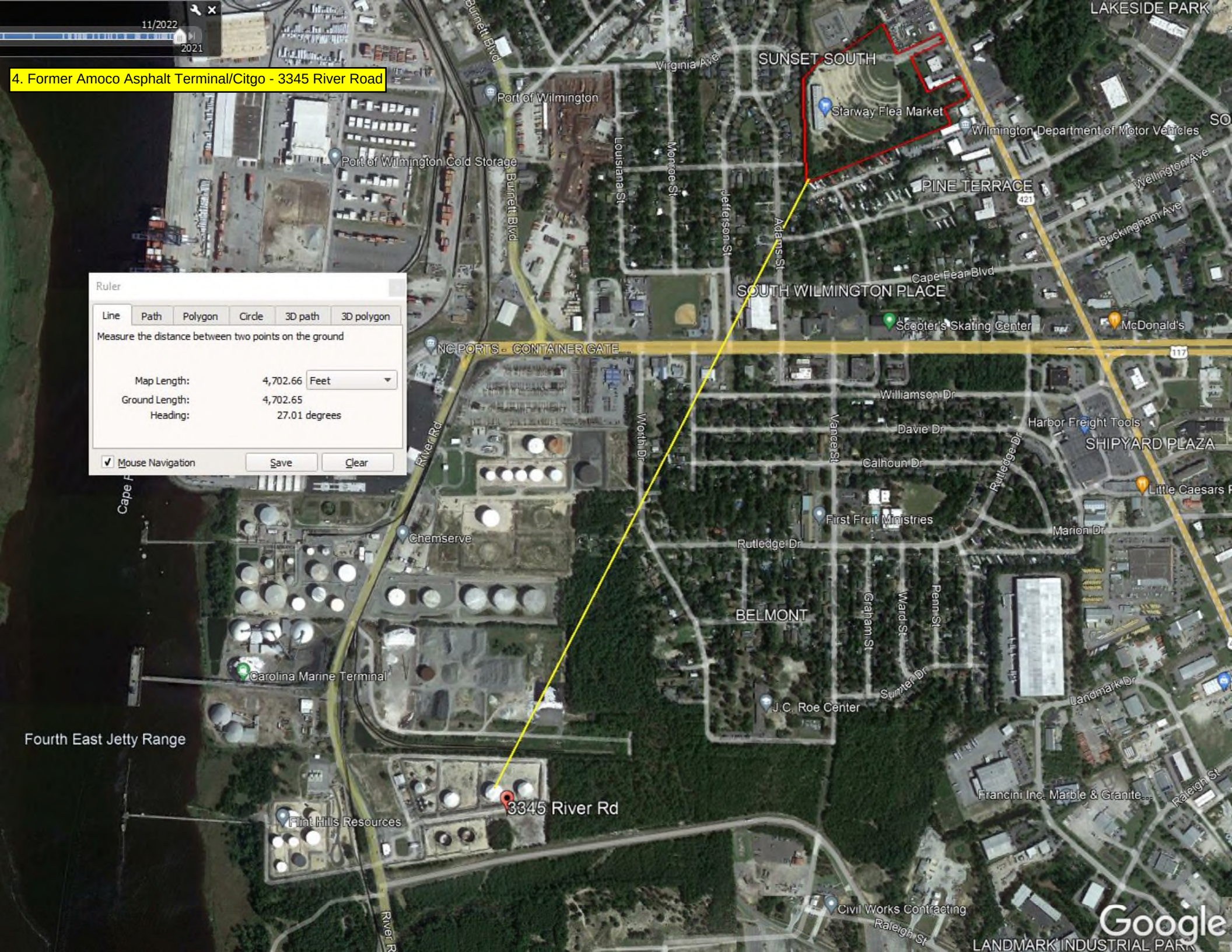
Providing Feedback & Corrections

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Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


11/2022
2021
4. Former Amoco Asphalt Terminal/Citgo - 3345 River Road
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 4,702.66 Feet
Ground Length: 4,702.65
Heading: 27.01 degrees
Mouse Navigation
Save
Clear
LAKESIDE PARK
SUNSET SOUTH
Virginia Ave
Port of Wilmington
Starway Flea Market
Wilmington Department of Motor Vehicles
Port of Wilmington Cold Storage
Burnett Blvd
Louisiana St
Monroe St
Jefferson St
Adams St
PINE TERRACE
Wellington Ave
Buckingham Ave
421
Cape Fear Blvd
SOUTH WILMINGTON PLACE
Scooter's Skating Center
McDonald's
NC PORTS - CONTAINER GATE...
117
Williamson Dr
Davie Dr
Harbor Freight Tools
SHIPYARD PLAZA
Calhoun Dr
Vance St
Worth Dr
River Rd
Rutledge Dr
Little Caesars
First Fruit Ministries
Marion Dr
Chemserve
Rutledge Dr
BELMONT
Graham St
Ward St
Penn St
Carolina Marine Terminal
Sumter Dr
J.C. Roe Center
Landmark Dr
Fourth East Jetty Range
3345 River Rd
Francini Inc. Marble & Granite...
Raleigh St
Flint Hills Resources
Civil Works Contracting
Raleigh St
Google
LANDMARK INDUSTRIAL PARK

5. CP &L Wilmington Oil - 3333 River Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☐ No: ☑
What is the volume (gal) of the container?	75000
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	
Calculate Acceptable Separation Distance	
Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	1670.90
ASD for Thermal Radiation for Buildings (ASDBPU)	370.03
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

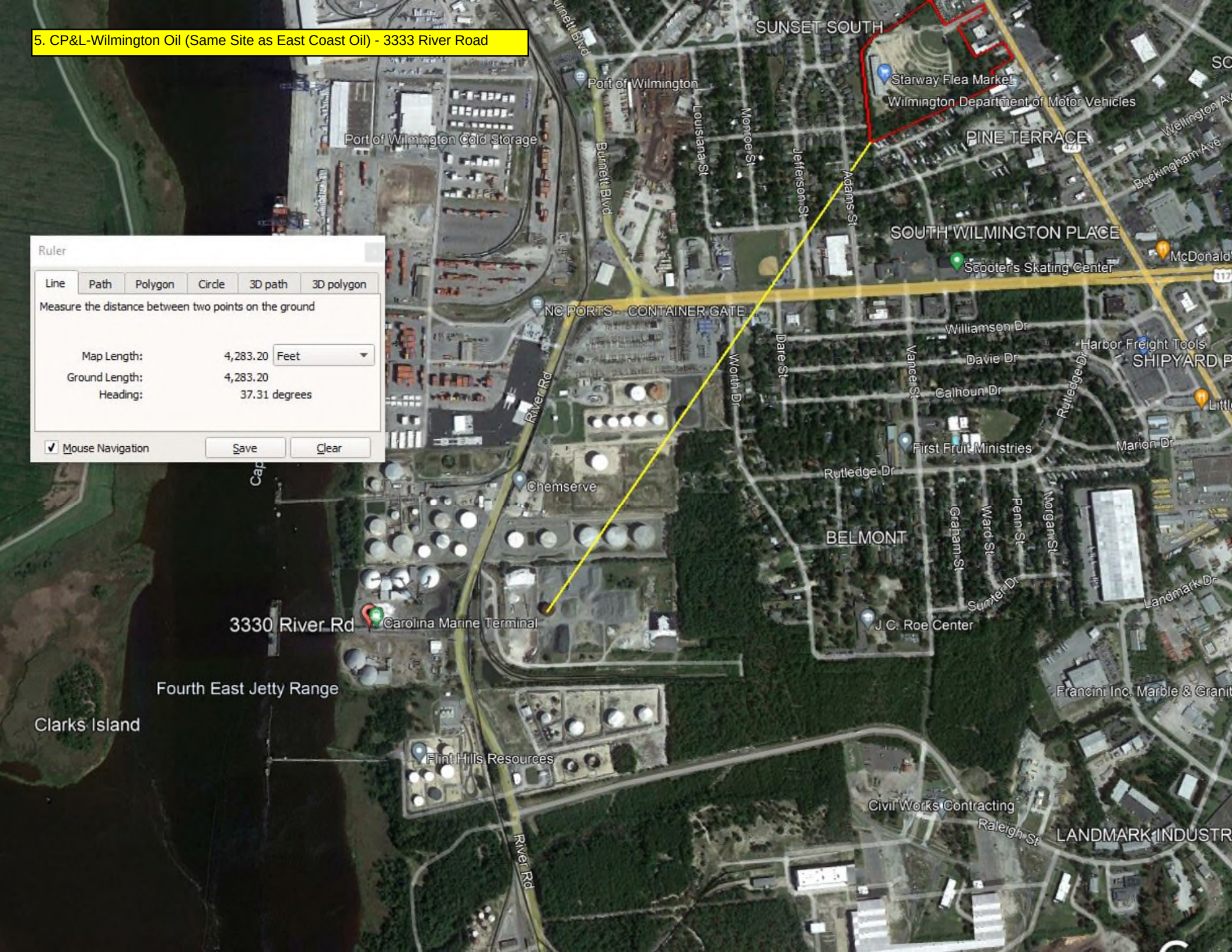
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Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)

5. CP&L-Wilmington Oil (Same Site as East Coast Oil) - 3333 River Road



Ruler

Line | Path | Polygon | Circle | 3D path | 3D polygon

Measure the distance between two points on the ground

Map Length:	4,283.20	Feet
Ground Length:	4,283.20	
Heading:	37.31 degrees	

☑ Mouse Navigation Save Clear

6. Stone Heavy Vehicle Specialist-109 Shipyard Blvd.

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	30
What is the Diked Area Width (ft)?	15
Calculate Acceptable Separation Distance	
Diked Area (sqft)	450
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	110.80
ASD for Thermal Radiation for Buildings (ASDBNPD)	18.37

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


11/2022
2021
6. Stone Heavy Vehicle Specialists - 109 Shipyard Road
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length:
1,427.29
Feet
Ground Length:
1,427.30
Heading:
62.67 degrees
Mouse Navigation
Save
Clear
109 Shipyard Blvd
Merritt's Burger House
NC Inspection Center
Wilmington Department of Motor
Speedway
Bojangles
Waffle House
Port of Wilmington
Veterans Express
of Wilmington Cold Storage
Virginia Ave
Maryland Ave
Bell St
Delaware Ave
Cape Fear Blvd
Louisiana St
Adams St
Jefferson St
Springer-Eubank Oil
Container Technology
Long Leaf Baptist Church
NC PORTS - CONTAINER GATE...
Shipyard Blvd
Southeastern Machine & Welding
WECT
Metro Ports
Williamson Dr
Dare St
Vance St
Davie Dr
Calhoun Dr
Rutledge Dr
River Rd
Chemserve
Brigade Boys & Girls Club
First Fruit Ministries

7. NCSPA Diesel AGST Spill-2202 Burnett Blvd.

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☐ No: ☑
What is the volume (gal) of the container?	20000
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	

Calculate Acceptable Separation Distance

Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	963.41
ASD for Thermal Radiation for Buildings (ASDBPU)	200.85
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

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Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


11/2022
7. NCSPA-Diesel AGST Spill - 2202 Burnett Blvd.
Cape Fear River
Polk St
Van Buren St
Nippy's Soul Food
Carolina Beach Rd
Southern Blvd
Hart St
PINECRE
CBP NC PORT OFFICE
SUNSET PARK
Burnett Blvd
SUNSET SOUTH
Virginia Ave
Port of Wilmington
Starway Flea Market
Louisiana St
Monroe St
Jefferson St
Adams St
PINE T
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 3,696.17 Feet
Ground Length: 3,696.28
Heading: 73.38 degrees
Mouse Navigation
Save
Clear
Cape Fea
SOUTH WILMING
Scooter's Skati
NC PORTS - CONTAINER GATE...
Williamson Dr
Dare St
Davie Dr
Worth Dr
Vance St
Calhoun Dr
River Rd
Cape Fear River
First Fruit Ministries
Rutledge Dr
Chemserve
Google

8. WK Hobbs BP Site - 2461 Carolina Beach Rd.

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	8
What is the Diked Area Width (ft)?	5
Calculate Acceptable Separation Distance	
Diked Area (sqft)	40
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	40.29
ASD for Thermal Radiation for Buildings (ASDBNPD)	6.01

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

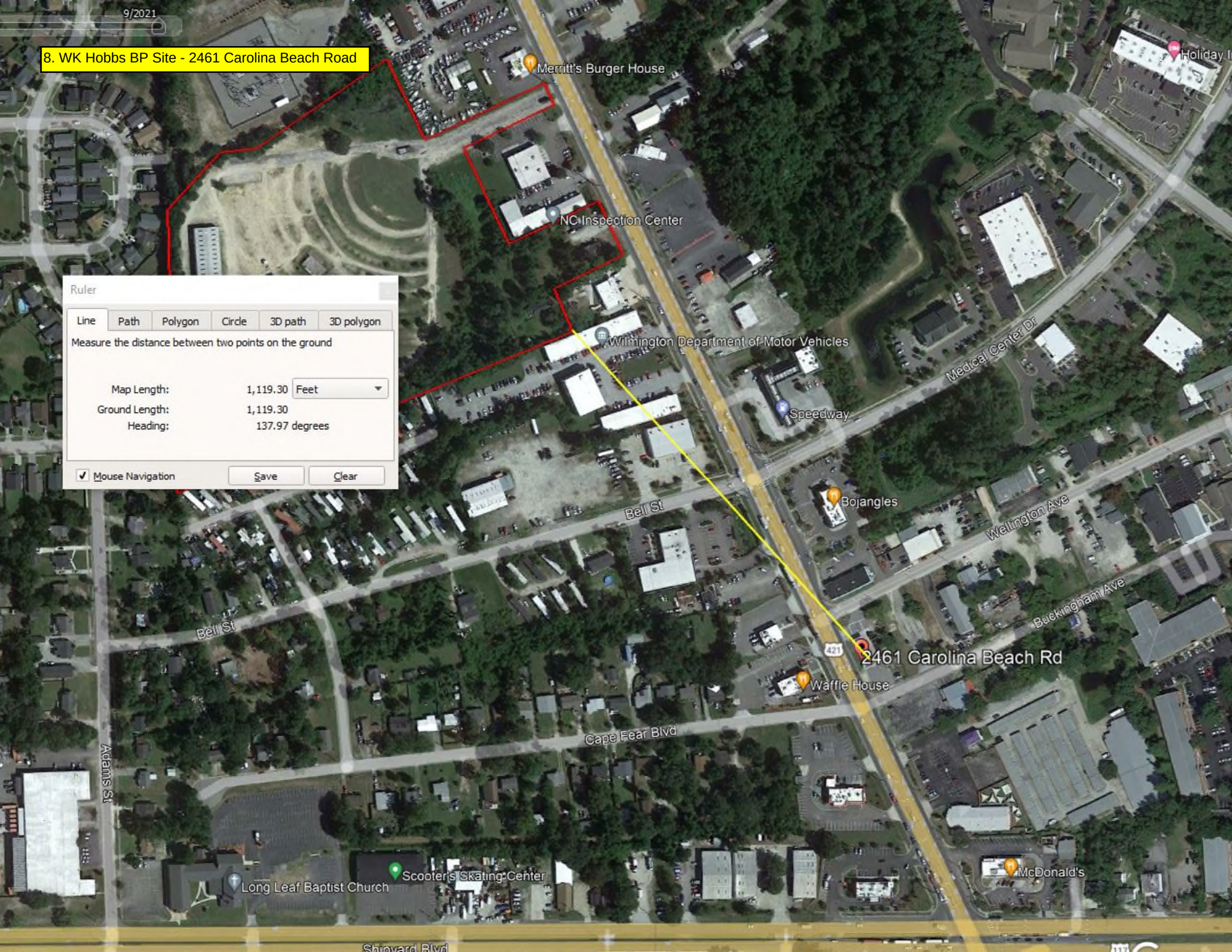
Providing Feedback & Corrections

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Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


9/2021
8. WK Hobbs BP Site - 2461 Carolina Beach Road
Merritt's Burger House
NC Inspection Center
Wilmington Department of Motor Vehicles
Speedway
Medical Center Dr
Bojangles
Wellington Ave
Buckingham Ave
Bell St
Bell St
2461 Carolina Beach Rd
421
Waffle House
Cape Fear Blvd
Adams St
Scooter's Skating Center
Long Leaf Baptist Church
McDonald's
Shipyard Blvd
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 1,119.30 Feet
Ground Length: 1,119.30
Heading: 137.97 degrees
Mouse Navigation
Save
Clear

9. Royster Transport Co. - 206 Shipyard Road

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	5
What is the Diked Area Width (ft)?	3
Calculate Acceptable Separation Distance	
Diked Area (sqft)	15
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	26.74
ASD for Thermal Radiation for Buildings (ASDBNPD)	3.82

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

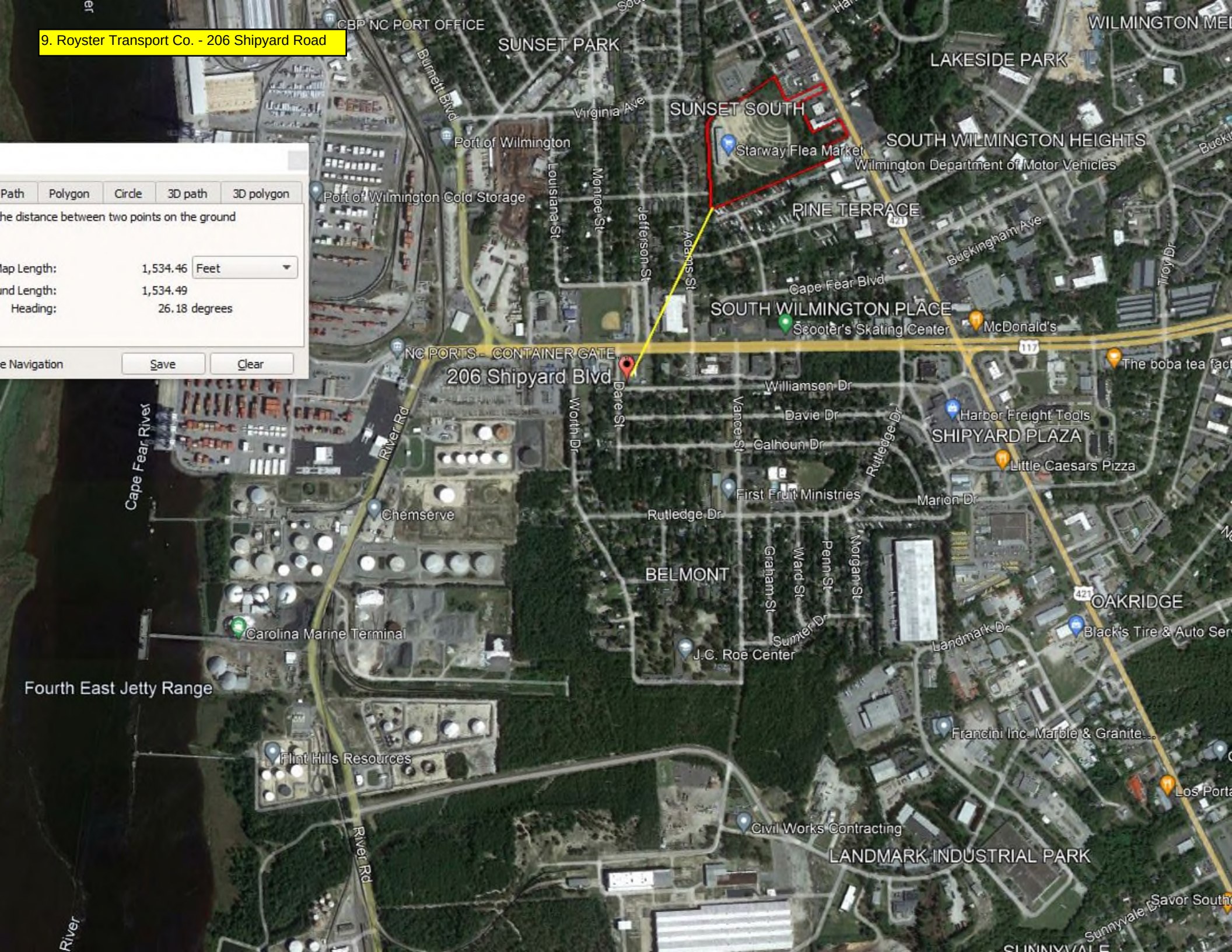
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Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)

9. Royster Transport Co. - 206 Shipyard Road



Path | Polygon | Circle | 3D path | 3D polygon

he distance between two points on the ground

lap Length: 1,534.46 Feet

nd Length: 1,534.49

Heading: 26.18 degrees

e Navigation | Save | Clear

10. STG Trucking-2501 Florida Ave.

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	30
What is the Diked Area Width (ft)?	15
Calculate Acceptable Separation Distance	
Diked Area (sqft)	450
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	110.80
ASD for Thermal Radiation for Buildings (ASDBNPD)	18.37

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


10. STG Trucking Inc. - 2501 Florida Ave.
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 1,426.80 Feet
Ground Length: 1,426.81
Heading: 61.21 degrees
Mouse Navigation
Save
Clear
S & W Ready Mix Concrete
Merritt's Burger House
NC Inspection Center
Wilmington Departme
Virginia Ave
Maryland Ave
Delaware Ave
Bell St
Cape Fear Blvd
Shipyard Blvd
Burnett Blvd
Louisiana St
Monroe St
Adams St
Jefferson St
Dale St
Vance St
Worth Dr
River Rd
Williamson Dr
Davie Dr
Saybolt LP
2501 Florida Ave
North Carolina State Ports Authority (NC...
Springer-Eubank Oil
Container Technology
NC PORTS - CONTAINER GATE
Scooter's Skating Center
Long Leaf Baptist Church
WECT
Southeastern Machine & Welding
Metro Ports
117

11. Springer Eubanks - 123 Shipyard Blvd.

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☑ No: ☐
Is the container under pressure?	Yes: ☐ No: ☑
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☐
Is the container diked?	Yes: ☑ No: ☐
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	50
What is the Diked Area Width (ft)?	40
Calculate Acceptable Separation Distance	
Diked Area (sqft)	2000
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	206.70
ASD for Thermal Radiation for Buildings (ASDBNPD)	36.58

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the Contact Us (https://www.hudexchange.info/contact-us/) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)


11. Springer Eubanks - 123 Shipyard Road
Path
Polygon
Circle
3D path
3D polygon
e the distance between two points on the ground
Map Length:
1,429.02
Feet
round Length:
1,429.03
Heading:
57.91 degrees
ouse Navigation
Save
Clear
S & W Ready Mix Concrete
Merritt's Burger Hous
Virginia Ave
Maryland Ave
Delaware Ave
Bell St
Saybolt LP
North Carolina State Ports Authority (NC...
Springer-Eubank Oil
123 Shipyard Blvd
Container Technology
Scooter's Skating Center
Long Leaf Baptist Church
Shipyard Blvd
WECT
Southeastern Machine & Welding
Metro Ports
Williamson Dr
Burnett Blvd
Southern Blvd
Monroe St
Louisiana St
Adams St
Jefferson St
Dare St
Worth Dr
Vance St
117

ATTACHMENT 10

Farmlands Protection

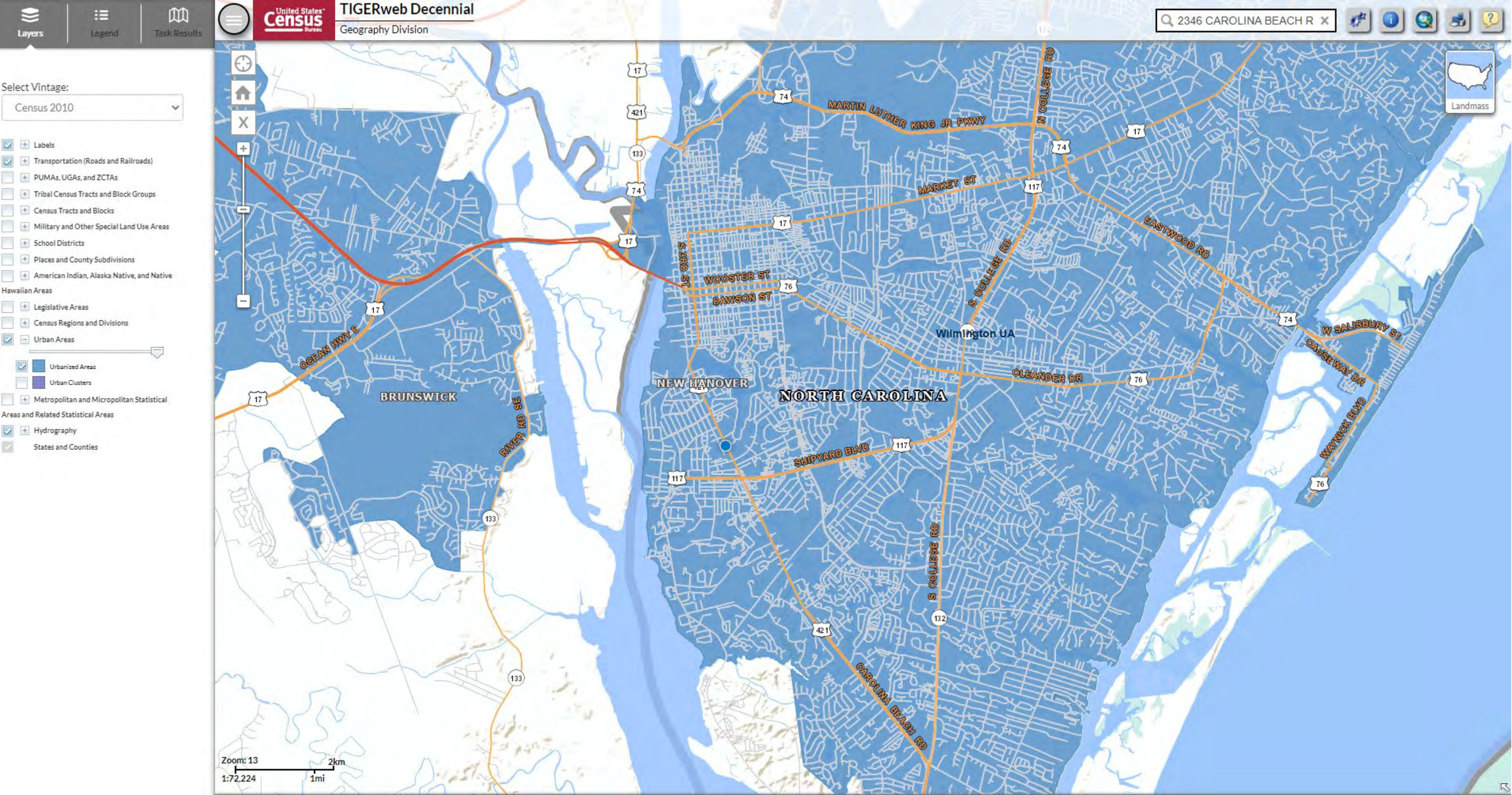
2346 Carolina Beach Rd, '

Basemap | Imagery | Draw | Erase | Save Session | Tools | More Data



Select Map Contents

- EPA Facilities
- Water Monitoring Stations
- Boundaries
  - ZIP Codes
  - Congressional Districts
  - City Boundary
  - Urbanized Areas
  - Federal Lands
  - Townships Boundary
  - Counties
  - States
  - EPA Regions
- Non-attainment Areas
- EJScreen Indexes (2021)
- Water
- Transportation
- Places
- Critical Habitat
- NWI Wetlands
- FEMA Flood
- Land Cover


Layers
Legend
Task Results
United States Census Bureau
TIGERweb Decennial
Geography Division
2346 CAROLINA BEACH R
Select Vintage:
Census 2010
Labels
Transportation (Roads and Railroads)
PUMAs, UGAs, and ZCTAs
Tribal Census Tracts and Block Groups
Census Tracts and Blocks
Military and Other Special Land Use Areas
School Districts
Places and County Subdivisions
American Indian, Alaska Native, and Native Hawaiian Areas
Legislative Areas
Census Regions and Divisions
Urban Areas
Urbanized Areas
Urban Clusters
Metropolitan and Micropolitan Statistical Areas and Related Statistical Areas
Hydrography
States and Counties
Landmass
MARTIN LUTHER KING JR PKWY
N COLLEGE RD
MARKET ST
EASTWOOD RD
S 3RD ST
WOOSTER ST
DAWSON ST
S COLLEGE RD
Wilmington UA
W SALISBURY ST
CAUSEWAY DR
WAYNICK BLVD
OLEANDER DR
OCEAN HWY E
BRUNSWICK
NEW HANOVER
NORTH CAROLINA
RIVER RD SE
SHIPYARD BLVD
CAROLINA BEACH RD
Zoom: 13
1:72,224
2km
1mi

United States Department of Agriculture

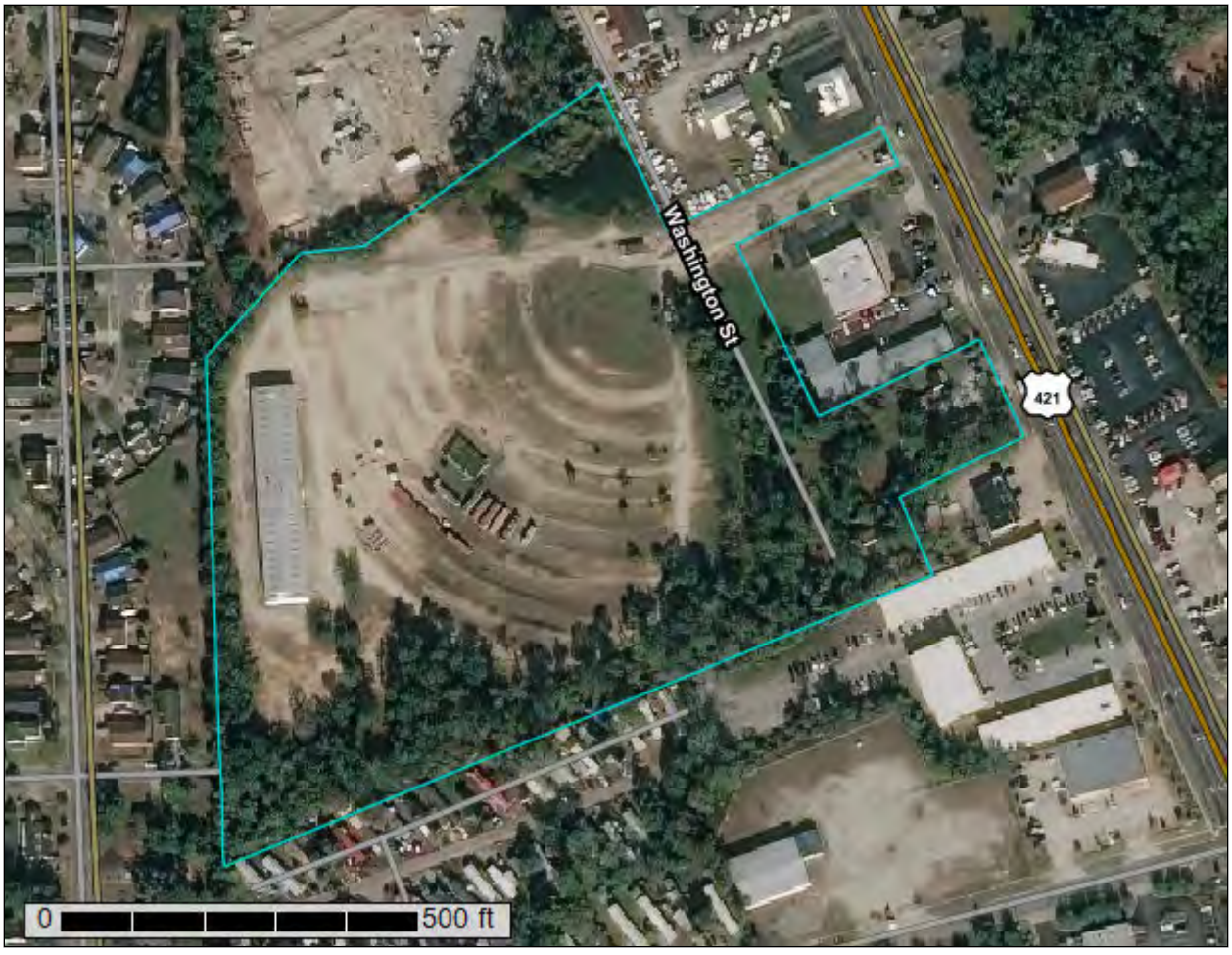
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for New Hanover County, North Carolina

Starway Village



October 22, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Le—Leon sand.....14
Ly—Lynn Haven fine sand.....15
Ur—Urban land.....16
References.....17

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: New Hanover County, North Carolina
Survey Area Data: Version 22, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2018—Nov 28, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ku	Kureb-Urban land complex, 1 to 8 percent slopes	1.1	6.6%
Le	Leon sand	1.8	11.0%
Ly	Lynn Haven fine sand	0.9	5.9%
Ur	Urban land	12.3	76.6%
Totals for Area of Interest		**16.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

New Hanover County, North Carolina

Ku—Kureb-Urban land complex, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3wr8
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Kureb and similar soils: 46 percent
Urban land: 44 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kureb

Setting

Landform: Rims on carolina bays, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian sands and/or sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 26 inches: sand
C/Bh - 26 to 89 inches: sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Le—Leon sand

Map Unit Setting

National map unit symbol: 3wrb
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Leon and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon

Setting

Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile

A - 0 to 3 inches: sand
E - 3 to 15 inches: sand
Bh - 15 to 30 inches: fine sand
BE - 30 to 33 inches: fine sand
E' - 33 to 66 inches: fine sand
B'h - 66 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Ly—Lynn Haven fine sand

Map Unit Setting
National map unit symbol: 3wrf
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Lynn haven, undrained, and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lynn Haven, Undrained

Setting
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile
A - 0 to 9 inches: sand
E - 9 to 12 inches: fine sand
Bh - 12 to 80 inches: sand

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Ur—Urban land

Map Unit Composition

Urban land: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

References

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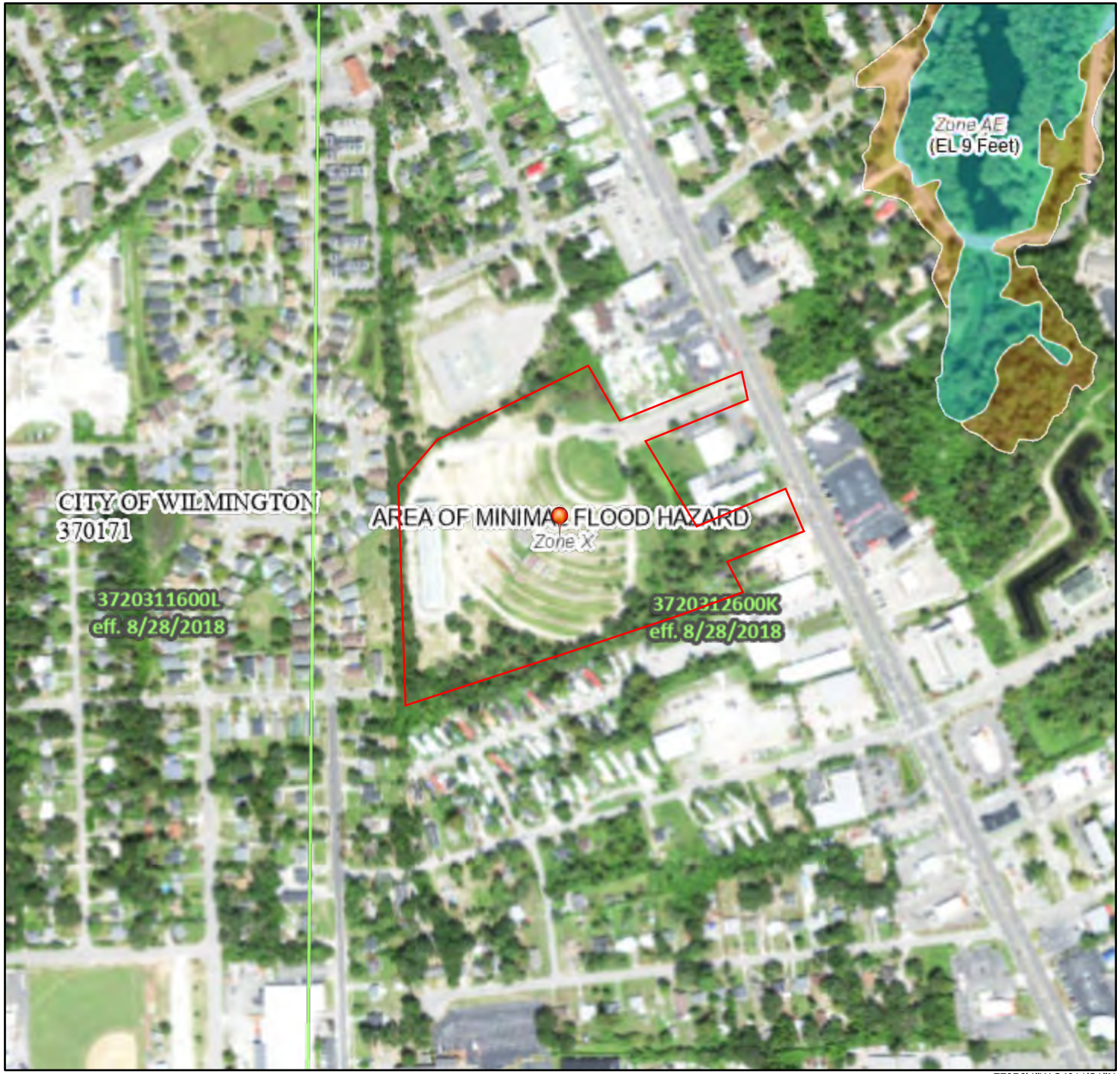
ATTACHMENT 11

Floodplain Management

National Flood Hazard Layer FIRMette

FEMA

77°56'41"W 34°12'1"N



77°56'4"W 34°11'31"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/31/2022 at 6:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


Flood Zones 2018
An Interactive Web Map of New Hanover County, NC
maryland ave
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
-9999 BFE
X
-9999 BFE
MARYLAND AVE
VIRGINIA AVE
DELAWARE AVE
SHIPYARD BLV
NORTHERN BLV
CENTRAL BLV
SOUTHERN BLV
CAROLINA BEACH RD
BURNETT BLV
POLK ST
WILLIAMSON DR
REFLECTIONS LP
RUTLEDGE DR
MARION DR
SILVER STREAM LN
BUCKINGHAM AVE
WELLINGTON AVE
PHYSICIANS DR
PRIVATE
600ft
2,314,278.958 166,488.587 Feet
New Hanover County, NC | New Hanover County, NC

ATTACHMENT 12

Historic Preservation

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

November 14, 2022

MEMORANDUM

TO: Andrea Geivers andrea.l.gievers@rebuild.nc.gov
North Carolina Office of Recovery and Resiliency
Department of Public Safety

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer RMB for Ramona M. Bartos

SUBJECT: Construct Starway Village Apartments, 2346 Carolina Beach Road, Wilmington, New Hanover County, SCH 23-E-4600-0064, ER 22-2557

Thank you for your submission concerning the above referenced project. We have reviewed the materials provided to us by the State Clearinghouse on October 17, 2022, and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above-referenced tracking number.

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

October 14, 2022

Ms. Renee Gledhill-Earley
Environmental Review Coordinator
NC State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Via email: Environmental.Review@ncdcr.gov
renee.gledhill-earley@ncdcr.gov

RE: State Historic Preservation Office Request for Concurrence
Section 106 Review - HUD CDBG-DR Program
Proposed Starway Village Apartments
2346 Carolina Beach Road
Wilmington, New Hanover County, NC 28401

Dear Ms. Gledhill-Earley:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800, we are providing information for your review and concurrence regarding the above-referenced project. The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and request for consultation.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families.

Proposed Project Location: The proposed project site (Subject Property) is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The Subject Property is comprised of four contiguous parcels, R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.) that encompass approximately 15.67 acres (see attached New Hanover County GIS Map). The proposed project location maps are included in **Attachment 1** for your review. Surrounding properties include commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences. Effects to surrounding properties will be negligible as the surrounding area has been predominantly developed. Multiple structures are located on the current site and will be demolished prior to construction of the Starway Village. These structures include:

Address	Site Use/Size (square feet)	Constructed
2370-A Carolina Beach Rd.	Single-family residence (1,240 sf)	1937
2370-B Carolina Beach Rd.	Used car commercial business: County Line Auto Sales (240 sf)	1999
2374 Carolina Beach Rd.	Single-family residence (1,176)	1948
2346 Carolina Beach Rd.	Former Starway Flea Market (18,000 sf) Commercial Building (1,500 sf)	1991 1950

Area of Potential Effects (APE) under §800.16(d): Based on the current site use, proposed project plans, site use of the adjacent properties, general urban setting, and topography, the APE for this Environmental Assessment includes a 0.25-mile radius surrounding the Subject Property. The APE for archeological sites is limited to the boundaries of the Subject Property.

Proposed Project Description: The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques for stormwater management. The conceptual plan proposes to utilize two stormwater detention ponds, which will treat collected runoff, from the added built upon area, before it discharges offsite and eventually into downstream receiving waters. It is important to note, that the Cape Fear Public Utility Authority have sewer and water lines in place, along Carolina Beach Road, thus there is no need to perform work outside the Subject Property. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the Subject Property is also indicated on the site plan. The development will be conducted in two phases. The proposed project site plans are included in **Attachment 2**.

We have made a Finding of *"No Historic Properties Affected"* pursuant to 36 CFR 800.4(d)(1) based on the following:

> A review of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's HPOWEB, and site review performed by S&ME, identified no properties listed, eligible, or potentially eligible for the National Register of

Historic Places (NRHP) were located on or immediately adjacent to the Subject Property. Two historic sites located within a 0.25-mile APE radius of the Subject Property. Sunset Park Historic District listed on the NRHP located 1,150 feet north of the Subject Property and Wilmington National Guard Armory eligible for listing on the NRHP located 1,050 feet northeast of the Subject Property.

The historical aerial photographs indicated that the majority of the Subject Property was forested with internal forestry roads visible in 1938. Between 1938 and 1956, the Subject Property was cleared and graded to accommodate circular parking lanes, a central structure, and a large linear structure in the northeast corner of the cleared area. The footprint and layout of the development within the Subject Property appears to indicate use as a drive-in movie theater, which is further confirmed by City Directory listings for the Subject Property. Various residential and commercial buildings are present in the southeastern corner of the Subject Property along Carolina Beach Road in the 1956 and 1958 aerial photographs. Between 1983 and 1993, the current Starway Flea Market commercial building was constructed in the western portion of the Subject Property. A portion of the forested areas along the boundary of the Subject Property was cleared between 1993 and 1998.

Currently, the Subject Property primarily consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors currently operated as the Starway Flea Market. The smaller parcels of the Subject Property with road frontage along Carolina Beach Road consist of two single-family residential lots and a commercial car retail outbuilding. The Subject Property is situated in an area of dense residential, commercial, and industrial development. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

Attached for your review are copies of relevant documents supporting our finding, along with photographs and a map showing the location of the Subject Property. This documentation satisfies requirements set forth at §800.11(d).

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. A consultation request for the proposed project described herein will also be sent to the Catawba Indian Nation. In accordance with Section 101(d)(6)(B) of the NHPA of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action.

NCORR respectfully requests your review of the proposed project described herein. In accordance with §800.4(d)(1)(i), your office has *thirty days* to object to this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding. If you concur, please sign on the line below and return a copy of this letter by email to Andrea Gievers at Andrea.L.Gievers@Rebuild.NC.gov.

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov.

Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Proposed Starway Village Apartments Enclosures:
Attachment 1: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 2: Proposed Project Site Plans
Attachment 3: Subject Property Current and Historic Photographs

Concurrence:

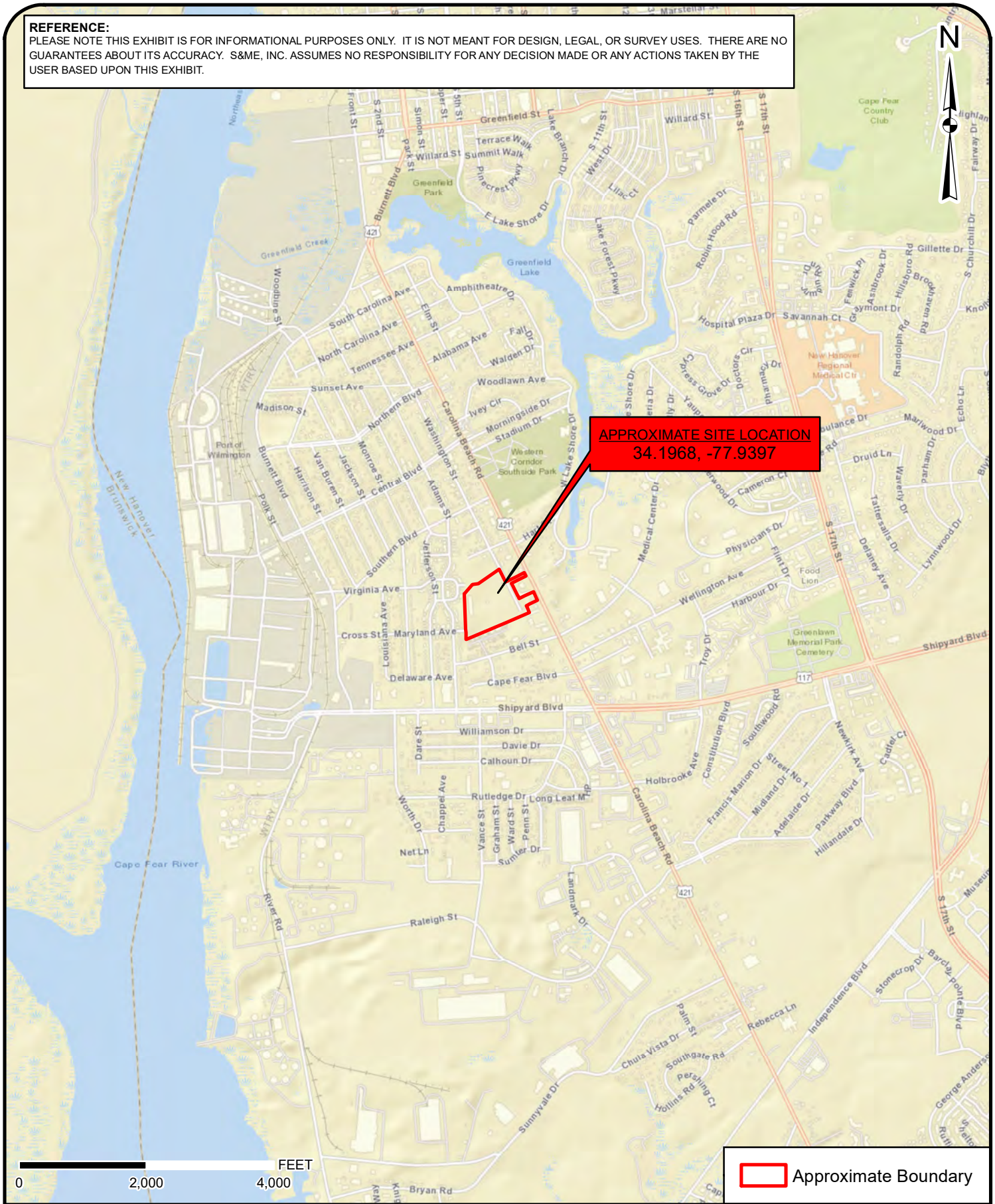
_____

State Historic Preservation Officer Date

NC SHPO ATTACHMENT 1:

Proposed Project Location,
NRHP and NC HPOWEB Maps

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

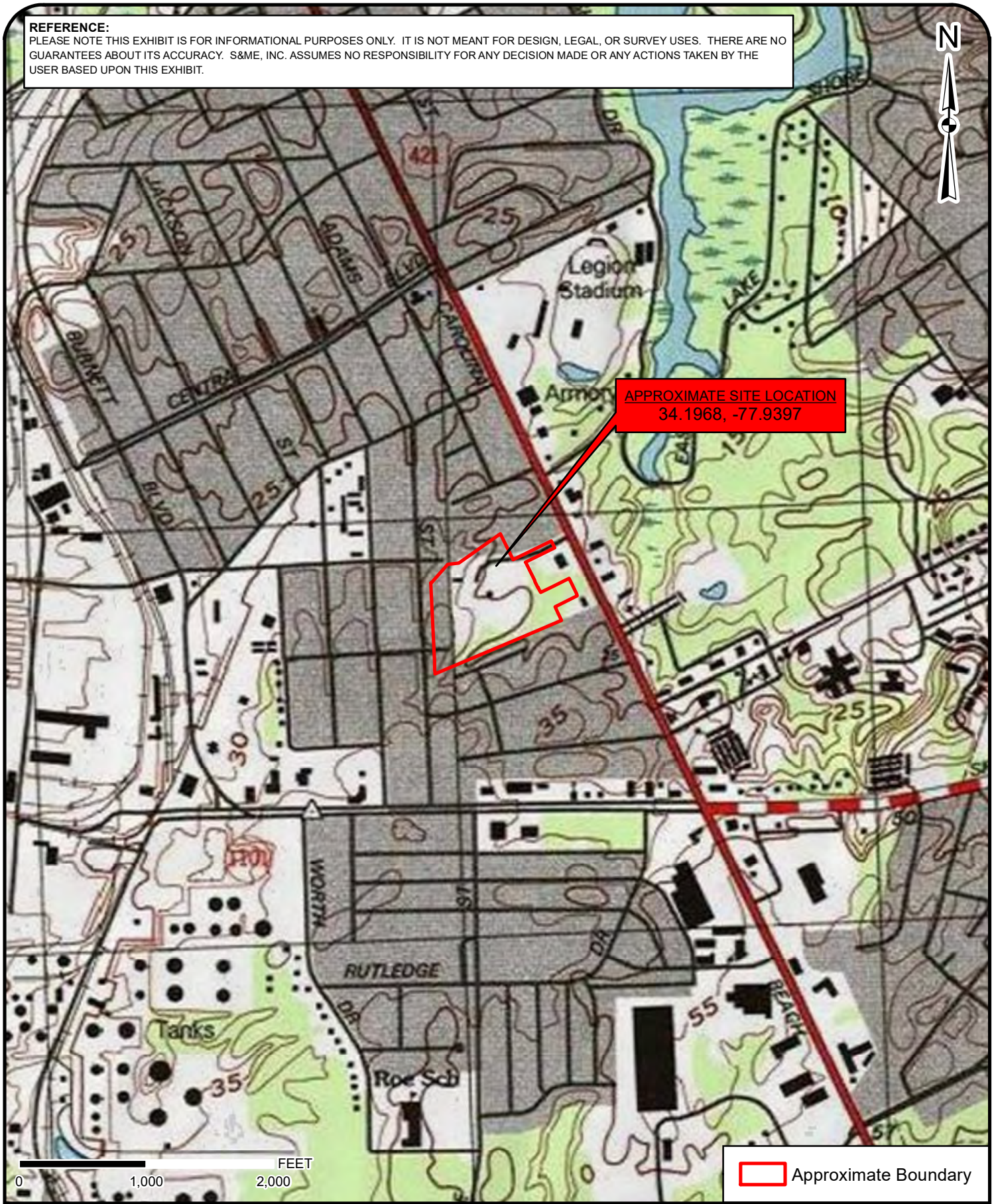
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
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Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Aerial Exhibit

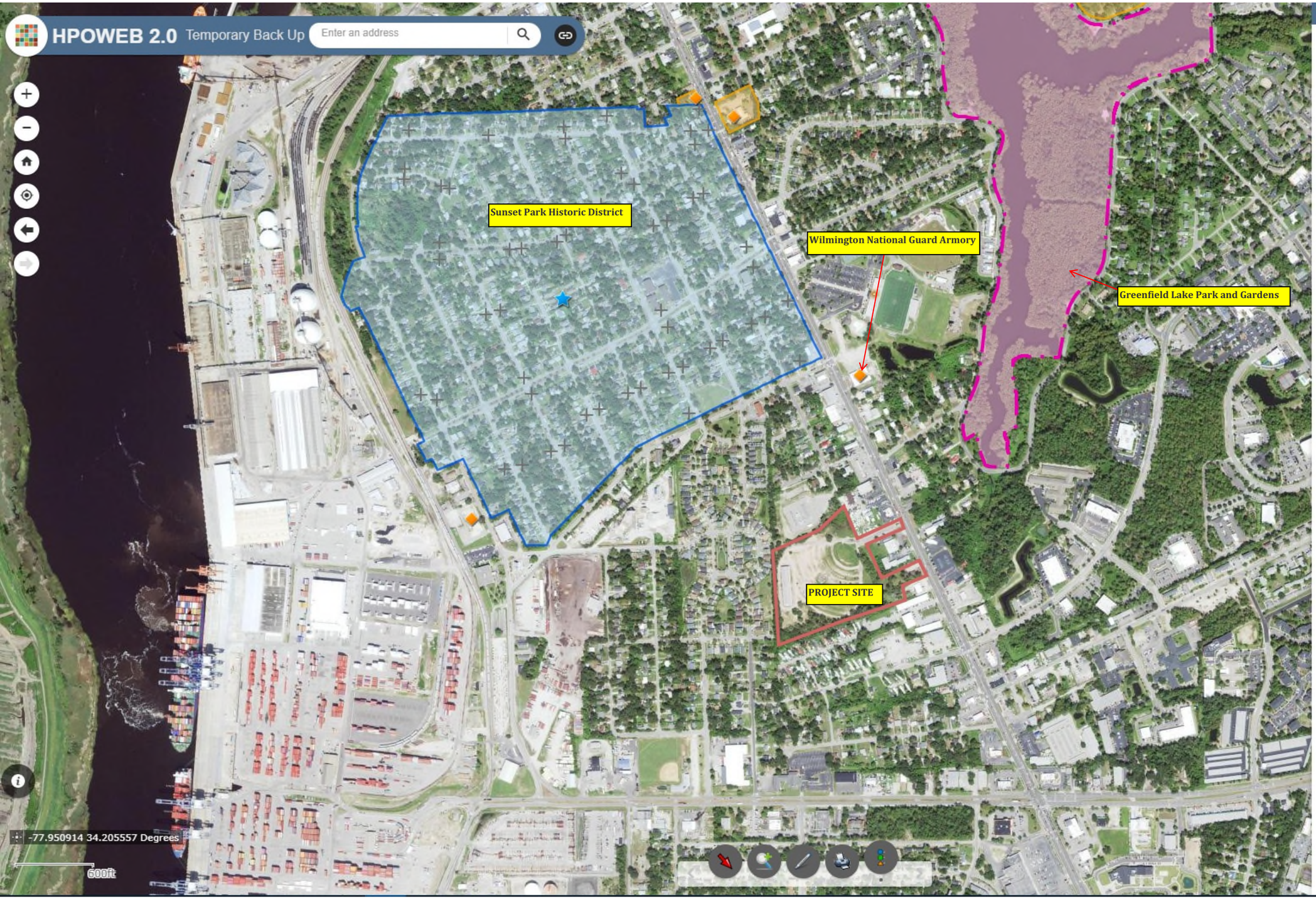
Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

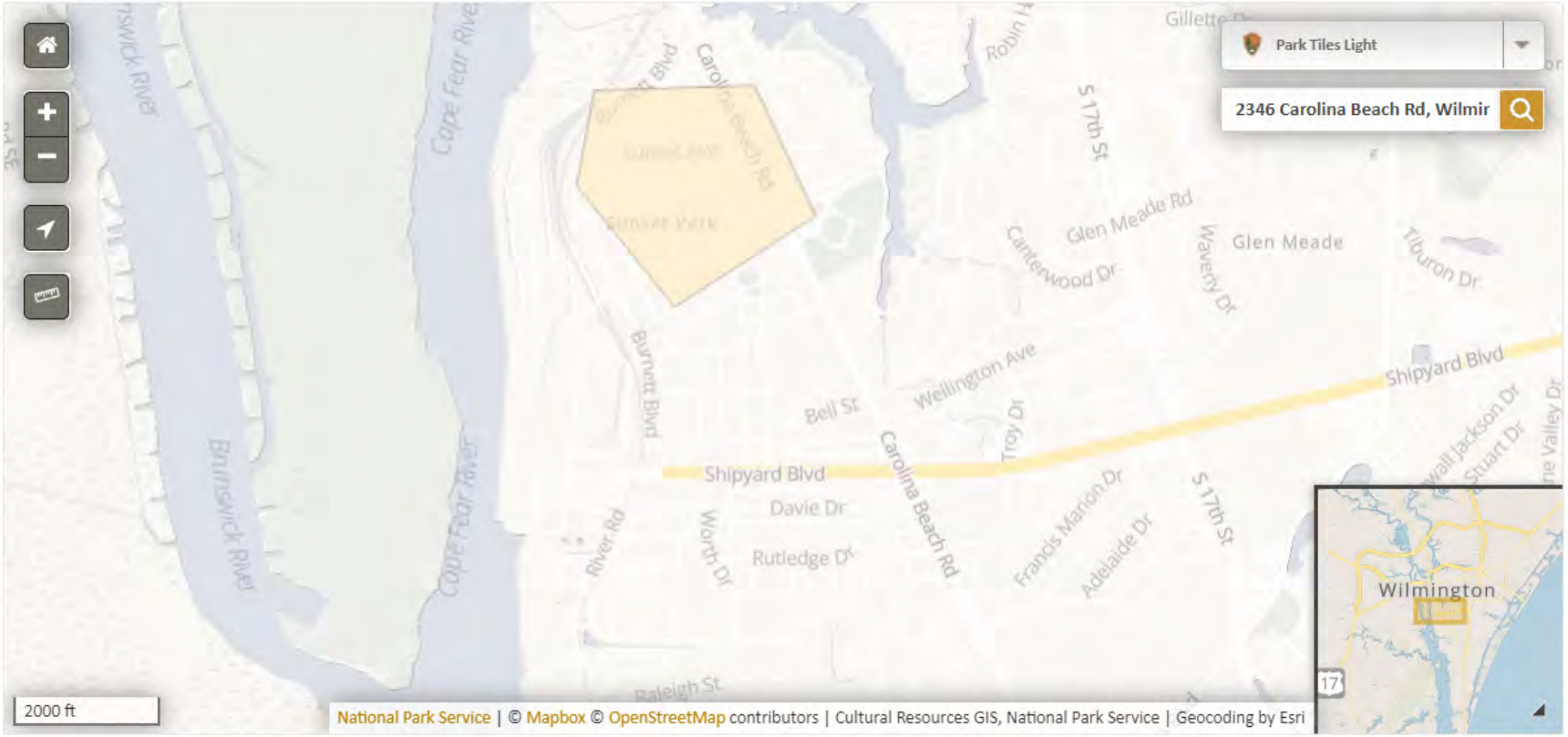
Source: World Imagery 2020

SCALE:	EXHIBIT NO.
1 " = 300 '	3
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022


HPOWEB 2.0 Temporary Back Up
Enter an address
Sunset Park Historic District
Wilmington National Guard Armory
Greenfield Lake Park and Gardens
PROJECT SITE
-77.950914 34.205557 Degrees
600ft
Legend
National Register
NR
NRHD
NRD
Study List
SL
SLD
SLDOE
SLHD
SLDOEHD
SLDOED
Determined Eligible
DOE
DOED
DOEHD
Locally landmarked
LL
LHD
LLD
Surveyed only resources
BF
SO
SD
SA
NR, SL, SLDOE & DOE Districts
NR
SL
DOE
SLDOE
NRD
DOED
Local Historic Districts

National Register of Historic Places



PUBLIC, NON-RESTRICTED DATA DEPICTING NATIONAL REGISTER SPATIAL DATA PROCESSED BY THE CULTURAL RESOURCES GIS FACILITY. LAST MINOR UPDATE, SEPTEMBER 2020.

NC SHPO ATTACHMENT 2:

Proposed Project Site Plans



PRELIMINARY SITE LAYOUT

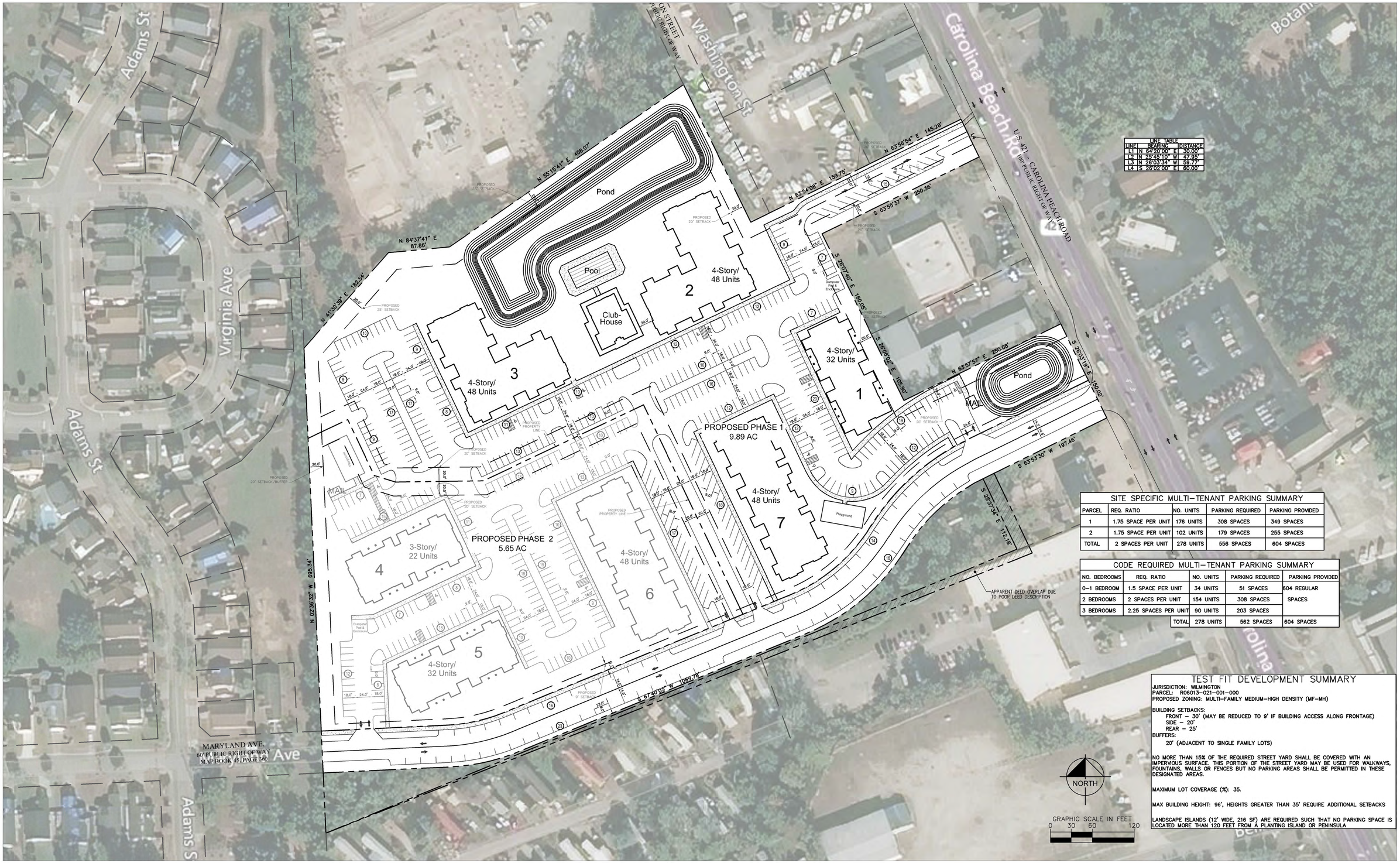
SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 (2) August 25, 2021 02:54:54pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI–TENANT PARKING SUMMARY				
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI–TENANT PARKING SUMMARY				
NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0–1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013–021–001–000
PROPOSED ZONING: MULTI–FAMILY MEDIUM–HIGH DENSITY (MF–MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'

BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919–677–2000
WWW.KIMLEY–HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE - PHASE 1

2346 CAROLINA BEACH RD

WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 August 25, 2021 02:54:48pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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Adams St
Virginia Ave
Adams St
Washington St
Carolina Beach Rd
U.S. 421 – CAROLINA BEACH ROAD
(80' PUBLIC RIGHT-OF-WAY)
Botanical
MARYLAND AVE.
60' PUBLIC RIGHT-OF-WAY
MAP BOOK 45, PAGE 380
Adams St
Ave

Pond
Pool
Club-House
3
4-Story/
48 Units
2
4-Story/
48 Units
1
4-Story/
32 Units
Pond
PROPOSED PHASE 1
9.89 AC
4-Story/
48 Units
7
Playground
PROPOSED PHASE 2
5.65 AC
4
3-Story/
22 Units
6
4-Story/
48 Units
5
4-Story/
32 Units
MAIL
MAIL
Dumpster Pad & Enclosure
Dumpster Pad & Enclosure

N 55°15'41" E 408.07'
N 84°37'41" E 87.86'
N 41°30'39" E 182.54'
N 63°54'08" E 159.75'
N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI-TENANT PARKING SUMMARY

PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI-TENANT PARKING SUMMARY

NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0-1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'
BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE

2346 CAROLINA BEACH RD

WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

NC SHPO ATTACHMENT 3:

Subject Property Current and Historical Photographs

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

1	**Location / Orientation**	Entrance road and small entrance hut on NE portion of site.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

2	**Location / Orientation**	Open land associated with the Starway Flea Market on central portion of site.
	Remarks	Photo taken facing southwest.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

3	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

4	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing east.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

5	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

6	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing north.



Date: August 31, 2022

Photographer: CD

7	**Location / Orientation**	Onsite business (County Line Car Sales) located at 2370-B) on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

8	**Location / Orientation**	Flea Market structures on western and central portions of the site. Structures will be demolished.
	Remarks	Photo taken facing south.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

9	**Location / Orientation**	Dilapidated commercial building on central portion of site. Structure to be demolished as part of proposed development.
	Remarks	Photo taken within interior.



Date: August 31, 2022

Photographer: CD

10	**Location / Orientation**	Wetland area on northern portion of site. Proposed apartment building and SW detention pond will be constructed in this location.
	Remarks	Photo taken facing east.

Starway Village

2346 Carolina Beach Road

Wilmington, NC 28401

Inquiry Number: 6717430.8

October 25, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

10/25/21

Site Name:

Starway Village
2346 Carolina Beach Road
Wilmington, NC 28401
EDR Inquiry # 6717430.8

Client Name:

Kimley-Horn & Associates, Inc.
421 Fayetteville, 6th Floor
RALEIGH, NC 27601
Contact: Mackenzie Richards

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1998	1"=500'	Acquisition Date: January 01, 1998	USGS/DOQQ
1993	1"=500'	Acquisition Date: February 03, 1993	USGS/DOQQ
1983	1"=500'	Flight Date: March 13, 1983	NHAP
1970	1"=500'	Flight Date: September 29, 1970	USGS
1969	1"=500'	Flight Date: April 08, 1969	USGS
1964	1"=500'	Flight Date: April 01, 1964	USGS
1958	1"=500'	Flight Date: November 21, 1958	USGS
1956	1"=500'	Flight Date: March 23, 1956	USDA
1938	1"=500'	Flight Date: April 04, 1938	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

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INQUIRY #: 6717430.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 2006
= 500'
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EDR


INQUIRY #: 6717430.8
YEAR: 1998
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6717430.8

YEAR: 1993

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.


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YEAR: 1983
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1964
= 500'
N
EDR

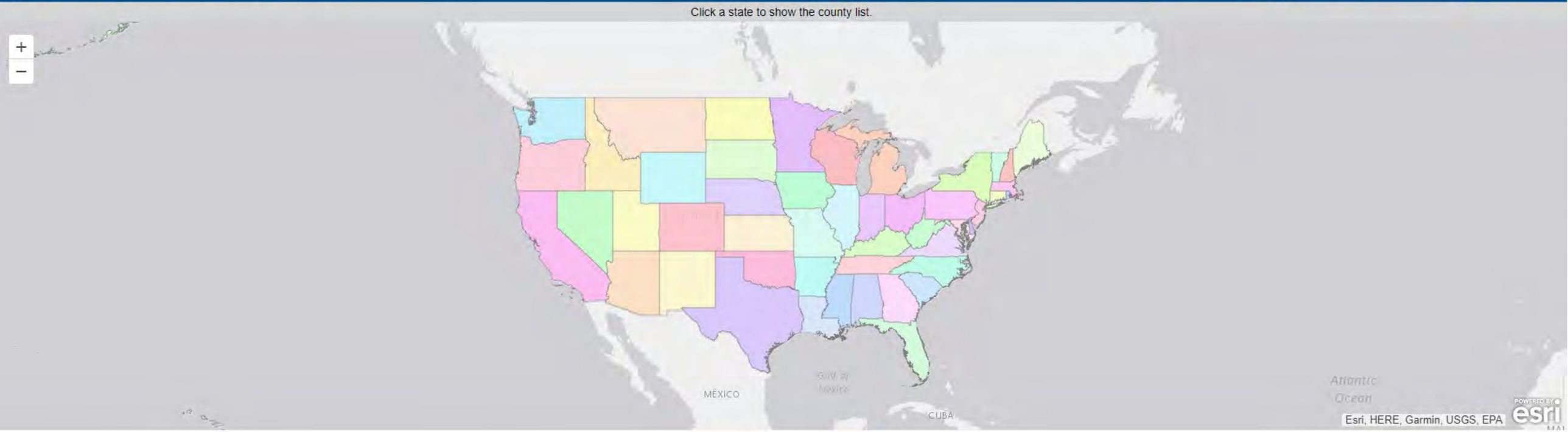

INQUIRY #: 6717430.8
YEAR: 1958
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1956
= 500'
N
EDR


INQUIRY #: 6717430.8
YEAR: 1938
= 500'
N
EDR

THPO DOCUMENTS

Click a state to show the county list.



Export To Excel | Print the Current Page

Contact Information for Tribes with Interests in New Hanover County, North Carolina

	Tribal Name	County Name
−	Catawba Indian Nation	New Hanover

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Cell Phone	Email Address	URL
Dr. Wenonah G. Haire	THPO and Catawba Cultural Center Executive Director	1536 Tom Steven Road Rock Hill, SC 29730	(803) 328-2427 ext. 224	(803) 328-5791		wenonah.haire@catawba.com	http://www.catawbaindian.net/
Bill Harris	Chief	996 Avenue of the Nations Rock Hill, SC 29730	(803) 366-4792	(803) 327-4853		bill.harris@catawbaindian.net	http://www.catawbaindian.net/

1 - 1 of 1 results

« ‹ 1 › » 10

Export To Excel | Print the Current Page

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427

November 10, 2022

Attention: Andrea Gievers
NCORR – Environmental
P.O. Box 110465
Durham, NC 27709

Re. THPO #	TCNS #	Project Description
2023-1119-1		Proposed Starway Village Apartments – 2346 Carolina Beach Road, Wilmington, NC

Dear Ms. Gievers,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

October 14, 2022

Dr. Wenonah George Haire, THPO
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Proposed Starway Village Apartments
2346 Carolina Beach Road
Wilmington, New Hanover County, NC 28401

Dear Dr. Wenonah George Haire:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families.

Mailing Address:
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

Phone: (984) 833-5350
www.ncdps.gov
www.rebuild.nc.gov

An Equal Opportunity Employer

Proposed Project Location: The proposed project site (Subject Property) is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The Subject Property is comprised of four contiguous parcels, R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.) that encompass approximately 15.67 acres (see attached New Hanover County GIS Map). The proposed project location maps are included in **Attachment 1** for your review. Surrounding properties include commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences. Effects to surrounding properties will be negligible as the surrounding area has been predominantly developed. Multiple structures are located on the current site and will be demolished prior to construction of the Starway Village. These structures include:

Address	Site Use/Size (square feet)	Constructed
2370-A Carolina Beach Rd.	Single-family residence (1,240 sf)	1937
2370-B Carolina Beach Rd.	Used car commercial business: County Line Auto Sales (240 sf)	1999
2374 Carolina Beach Rd.	Single-family residence (1,176)	1948
2346 Carolina Beach Rd.	Former Starway Flea Market (18,000 sf) Commercial Building (1,500 sf)	1991 1950

Area of Potential Effects (APE) under §800.16(d): Based on the current site use, proposed project plans, site use of the adjacent properties, general urban setting, and topography, the APE for this Environmental Assessment includes a 0.25-mile radius surrounding the Subject Property. The APE for archeological sites is limited to the boundaries of the Subject Property.

Proposed Project Description: The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques for stormwater management. The conceptual plan proposes to utilize two stormwater detention ponds, which will treat collected runoff, from the added built upon area, before it discharges offsite and eventually into downstream receiving waters. It is important to note, that the Cape Fear Public Utility Authority have sewer and water lines in place, along Carolina Beach Road, thus there is no need to perform work outside the Subject Property. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the Subject Property is also indicated on the site plan. The development will be conducted in two phases. The proposed project site plans are included in **Attachment 2**.

Historical Review: We have completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review performed by S&ME, identified no properties listed, eligible, or potentially eligible for the National Register of Historic Places (NRHP) were located on or immediately adjacent to the Subject Property. Two historic sites located within a 0.25-mile APE radius of the Subject Property. Sunset Park Historic District listed

on the NRHP located 1,150 feet north of the Subject Property and Wilmington National Guard Armory eligible for listing on the NRHP located 1,050 feet northeast of the Subject Property.

The historical aerial photographs indicated that the majority of the Subject Property was forested with internal forestry roads visible in 1938. Between 1938 and 1956, the Subject Property was cleared and graded to accommodate circular parking lanes, a central structure, and a large linear structure in the northeast corner of the cleared area. The footprint and layout of the development within the Subject Property appears to indicate use as a drive-in movie theater, which is further confirmed by City Directory listings for the Subject Property. Various residential and commercial buildings are present in the southeastern corner of the Subject Property along Carolina Beach Road in the 1956 and 1958 aerial photographs. Between 1983 and 1993, the current Starway Flea Market commercial building was constructed in the western portion of the Subject Property. A portion of the forested areas along the boundary of the Subject Property was cleared between 1993 and 1998.

Currently, the Subject Property primarily consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors currently operated as the Starway Flea Market. The smaller parcels of the Subject Property with road frontage along Carolina Beach Road consist of two single-family residential lots and a commercial car retail outbuilding. The Subject Property is situated in an area of dense residential, commercial, and industrial development. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

The proposed project information has been sent to the NC SHPO in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

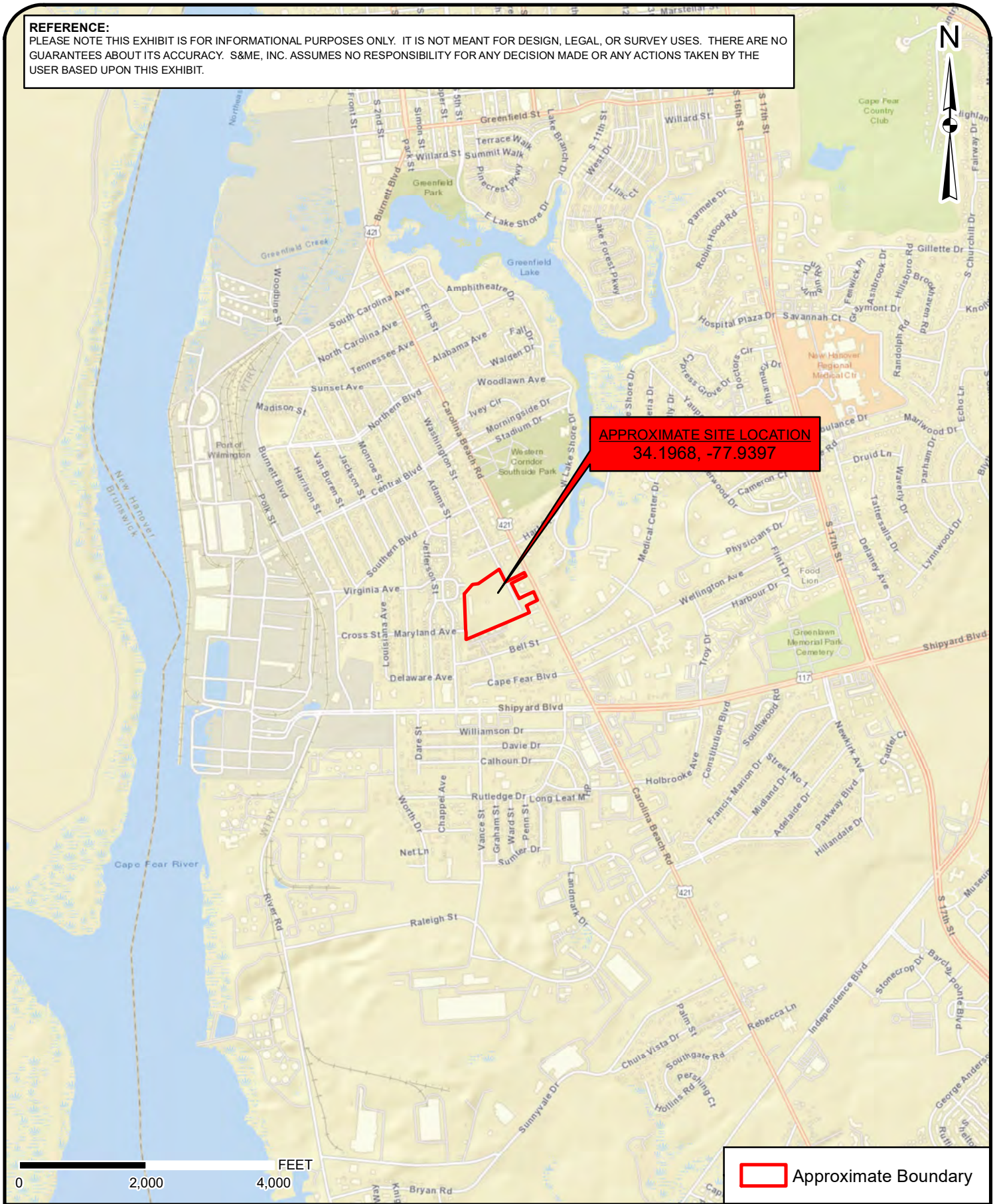
Proposed Starway Village Apartments Enclosures:
Attachment 1: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 2: Proposed Project Site Plans
Attachment 3: Subject Property Current Photographs

cc: Chief Bill Harris, Catawba Indian Nation, 996 Avenue of the Nations, Rock Hill, SC 29730

Section 106 ATTACHMENT 1:

Proposed Project Location,
NRHP and NC HPOWEB Maps

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

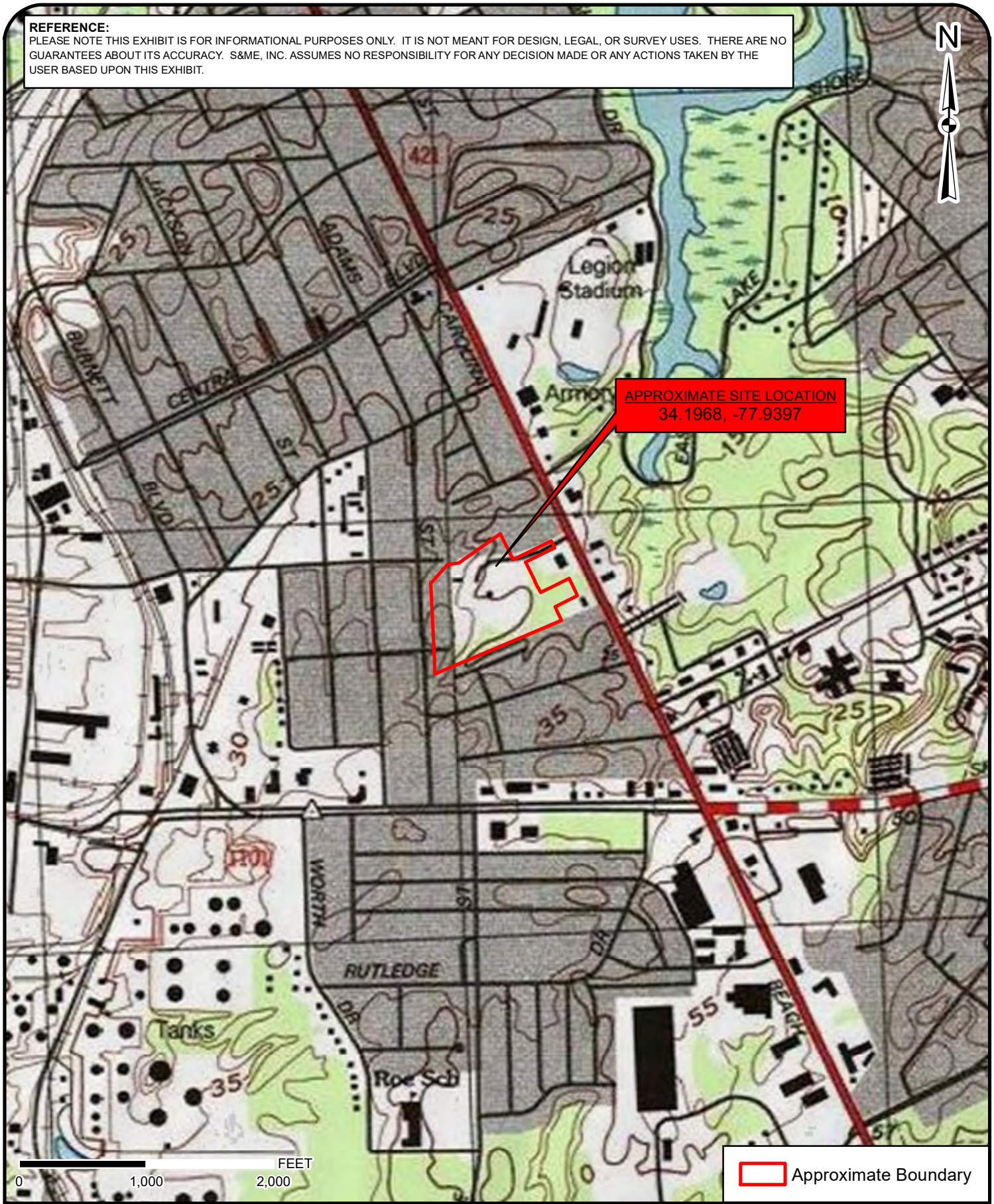
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Aerial Exhibit

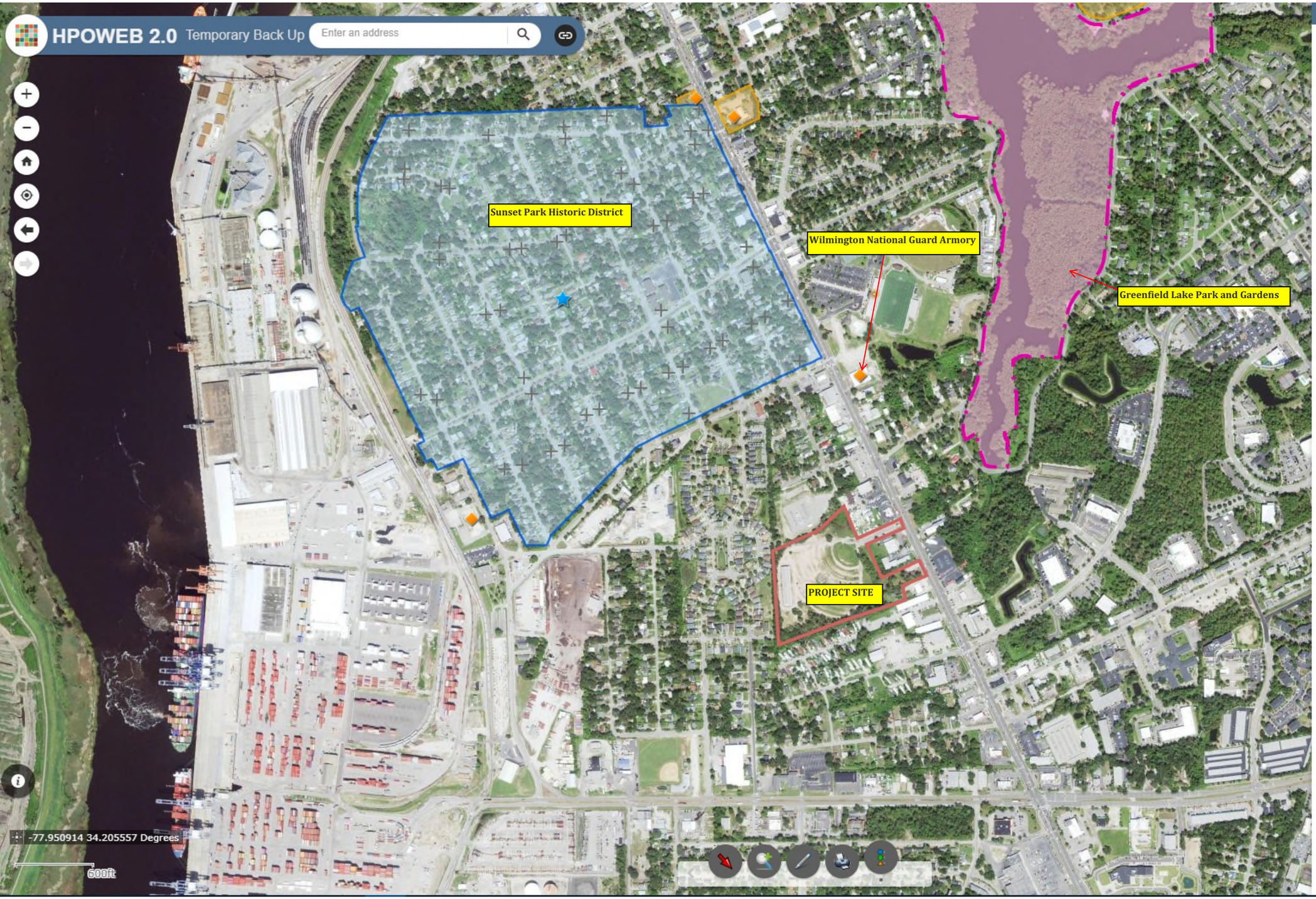
Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

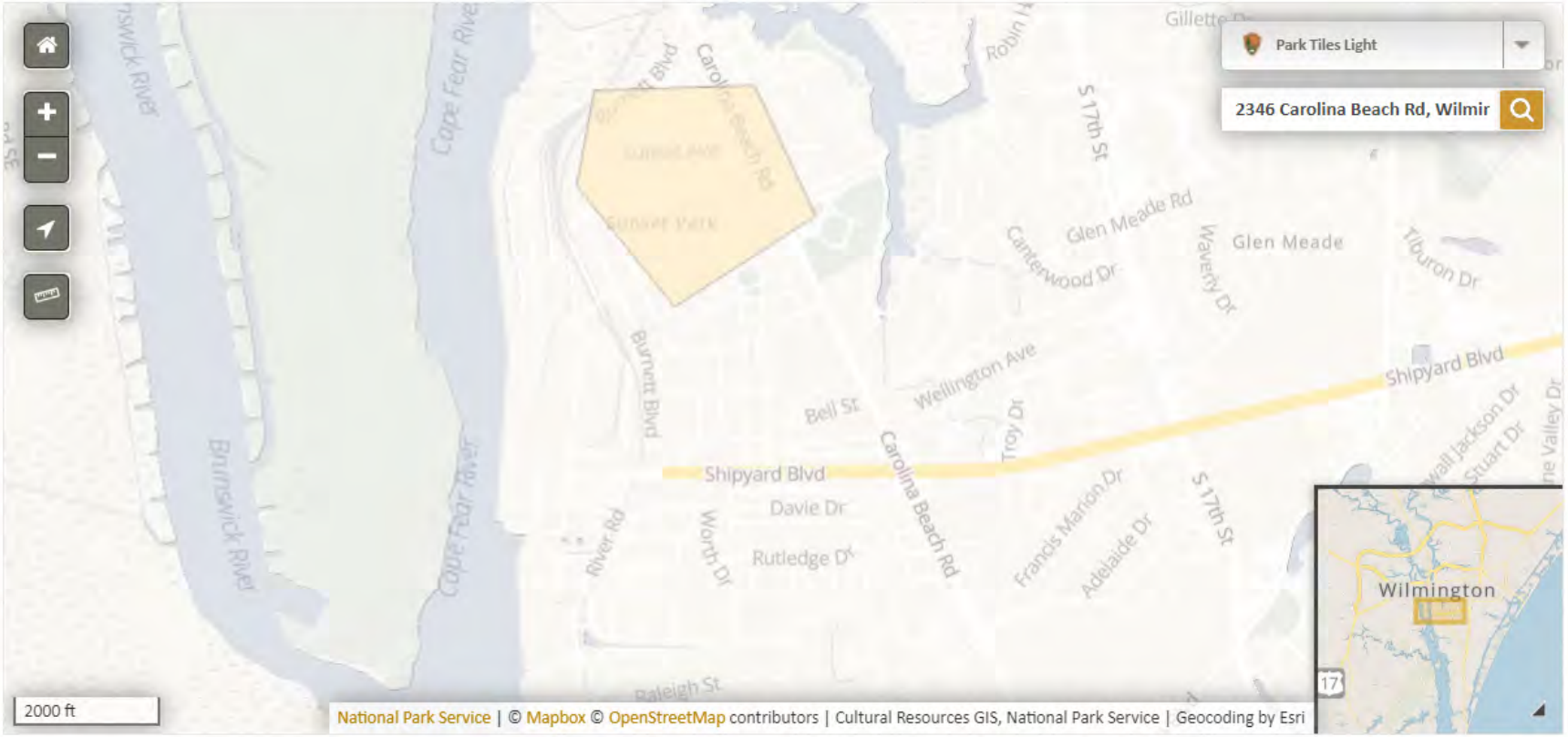
Source: World Imagery 2020

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DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Aerial Exhibit.mxd plotted by chandley 08-29-2022


HPOWEB 2.0 Temporary Back Up
Enter an address
Sunset Park Historic District
Wilmington National Guard Armory
Greenfield Lake Park and Gardens
PROJECT SITE
-77.950914 34.205557 Degrees
600ft
Legend
National Register
NR
NRHD
NRD
Study List
SL
SLD
SLDOE
SLHD
SLDOEHD
SLDOED
Determined Eligible
DOE
DOED
DOEHD
Locally landmarked
LL
LHD
LLD
Surveyed only resources
BF
SO
SD
SA
NR, SL, SLDOE & DOE Districts
NR
SL
DOE
SLDOE
NRD
DOED
Local Historic Districts

National Register of Historic Places



PUBLIC, NON-RESTRICTED DATA DEPICTING NATIONAL REGISTER SPATIAL DATA PROCESSED BY THE CULTURAL RESOURCES GIS FACILITY. LAST MINOR UPDATE, SEPTEMBER 2020.

Section 106 ATTACHMENT 2:

Proposed Project Site Plans



PRELIMINARY SITE LAYOUT

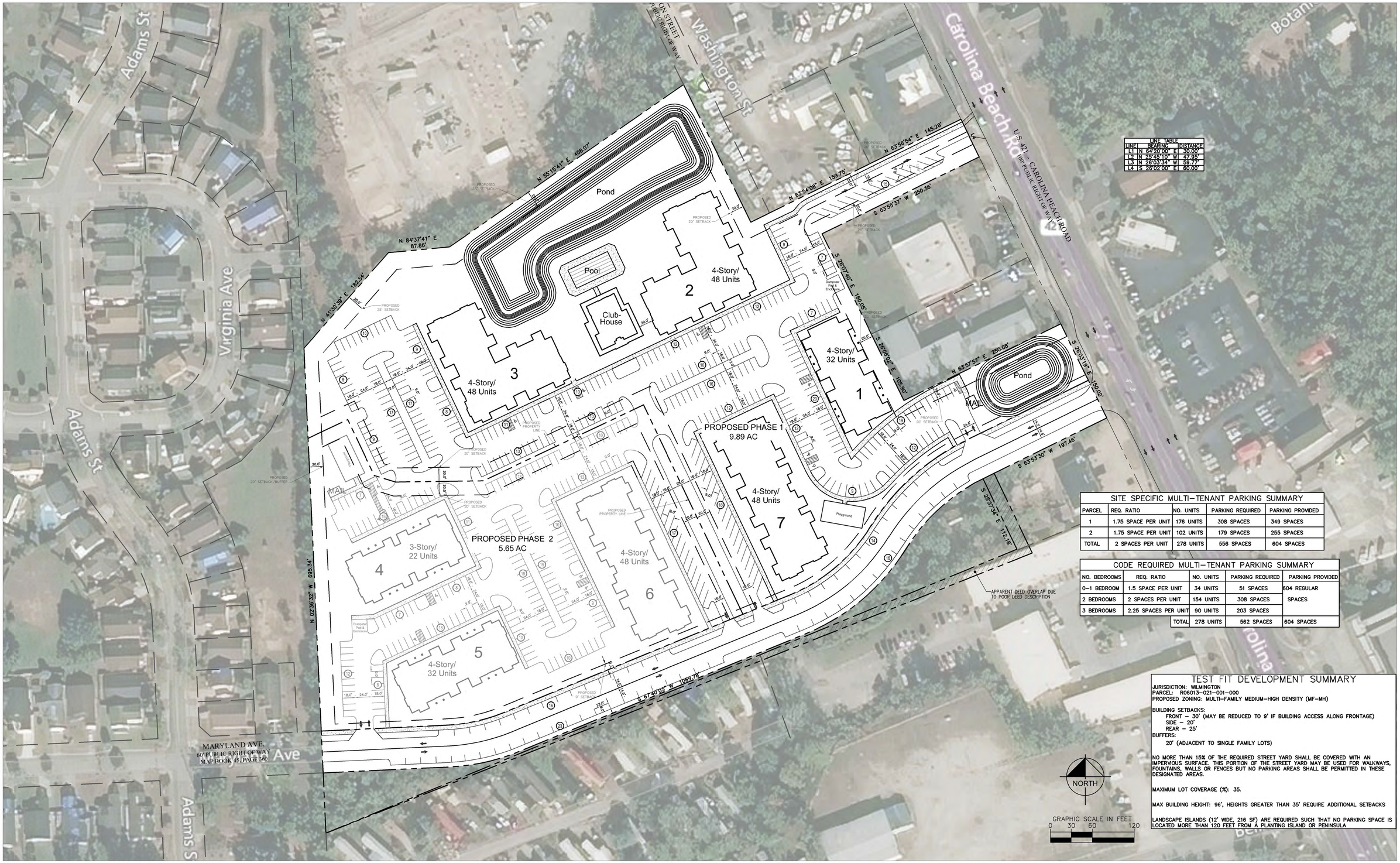
SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 (2) August 25, 2021 02:54:54pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI–TENANT PARKING SUMMARY				
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI–TENANT PARKING SUMMARY				
NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0–1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013–021–001–000
PROPOSED ZONING: MULTI–FAMILY MEDIUM–HIGH DENSITY (MF–MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'

BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919–677–2000
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KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE - PHASE 1

2346 CAROLINA BEACH RD

WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Plotted By: Schaad, Zachary Sheet Set: Holly Springs Retail Layout: Layout1 August 25, 2021 02:54:48pm K:\RAL_LDEV\013856002 – Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-08-25 Wilmington MF PSD.dwg
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Adams St
Virginia Ave
Adams St
Washington St
Carolina Beach Rd
U.S. 421 – CAROLINA BEACH ROAD
(80' PUBLIC RIGHT-OF-WAY)
Botanical
MARYLAND AVE.
60' PUBLIC RIGHT-OF-WAY
MAP BOOK 45, PAGE 380
Adams St
Ave

Pond
Pool
Club-House
3
4-Story/
48 Units
2
4-Story/
48 Units
1
4-Story/
32 Units
Pond
PROPOSED PHASE 1
9.89 AC
4-Story/
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7
Playground
PROPOSED PHASE 2
5.65 AC
4
3-Story/
22 Units
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4-Story/
48 Units
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MAIL
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Dumpster Pad & Enclosure
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N 55°15'41" E 408.07'
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N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
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JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

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REAR – 25'
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Section 106 ATTACHMENT 3:

Subject Property Current Photographs

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

1	**Location / Orientation**	Entrance road and small entrance hut on NE portion of site.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

2	**Location / Orientation**	Open land associated with the Starway Flea Market on central portion of site.
	Remarks	Photo taken facing southwest.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

3	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

4	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing east.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

5	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

6	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing north.



Date: August 31, 2022

Photographer: CD

7	**Location / Orientation**	Onsite business (County Line Car Sales) located at 2370-B) on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

8	**Location / Orientation**	Flea Market structures on western and central portions of the site. Structures will be demolished.
	Remarks	Photo taken facing south.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

9	**Location / Orientation**	Dilapidated commercial building on central portion of site. Structure to be demolished as part of proposed development.
	Remarks	Photo taken within interior.



Date: August 31, 2022

Photographer: CD

10	**Location / Orientation**	Wetland area on northern portion of site. Proposed apartment building and SW detention pond will be constructed in this location.
	Remarks	Photo taken facing east.

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

October 14, 2022

Chief Bill Harris
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Proposed Starway Village Apartments
2346 Carolina Beach Road
Wilmington, New Hanover County, NC 28401

Dear Chief Bill Harris:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families.

Mailing Address:
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

Phone: (984) 833-5350
www.ncdps.gov
www.rebuild.nc.gov

An Equal Opportunity Employer

Proposed Project Location: The proposed project site (Subject Property) is located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The Subject Property is comprised of four contiguous parcels, R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.) that encompass approximately 15.67 acres (see attached New Hanover County GIS Map). The proposed project location maps are included in **Attachment 1** for your review. Surrounding properties include commercial businesses (automotive and boat repair/sales, restaurant, strip mall), an electrical substation, a mobile home park, and single-family residences. Effects to surrounding properties will be negligible as the surrounding area has been predominantly developed. Multiple structures are located on the current site and will be demolished prior to construction of the Starway Village. These structures include:

Address	Site Use/Size (square feet)	Constructed
2370-A Carolina Beach Rd.	Single-family residence (1,240 sf)	1937
2370-B Carolina Beach Rd.	Used car commercial business: County Line Auto Sales (240 sf)	1999
2374 Carolina Beach Rd.	Single-family residence (1,176)	1948
2346 Carolina Beach Rd.	Former Starway Flea Market (18,000 sf) Commercial Building (1,500 sf)	1991 1950

Area of Potential Effects (APE) under §800.16(d): Based on the current site use, proposed project plans, site use of the adjacent properties, general urban setting, and topography, the APE for this Environmental Assessment includes a 0.25-mile radius surrounding the Subject Property. The APE for archeological sites is limited to the boundaries of the Subject Property.

Proposed Project Description: The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. The buildings and parking lot will be nestled into the existing site fabric, by preserving as much vegetation as possible, provide buffers to adjacent properties, and employing low-impact design techniques for stormwater management. The conceptual plan proposes to utilize two stormwater detention ponds, which will treat collected runoff, from the added built upon area, before it discharges offsite and eventually into downstream receiving waters. It is important to note, that the Cape Fear Public Utility Authority have sewer and water lines in place, along Carolina Beach Road, thus there is no need to perform work outside the Subject Property. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the Subject Property is also indicated on the site plan. The development will be conducted in two phases. The proposed project site plans are included in **Attachment 2**.

Historical Review: We have completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review performed by S&ME, identified no properties listed, eligible, or potentially eligible for the National Register of Historic Places (NRHP) were located on or immediately adjacent to the Subject Property. Two historic sites located within a 0.25-mile APE radius of the Subject Property. Sunset Park Historic District listed

on the NRHP located 1,150 feet north of the Subject Property and Wilmington National Guard Armory eligible for listing on the NRHP located 1,050 feet northeast of the Subject Property.

The historical aerial photographs indicated that the majority of the Subject Property was forested with internal forestry roads visible in 1938. Between 1938 and 1956, the Subject Property was cleared and graded to accommodate circular parking lanes, a central structure, and a large linear structure in the northeast corner of the cleared area. The footprint and layout of the development within the Subject Property appears to indicate use as a drive-in movie theater, which is further confirmed by City Directory listings for the Subject Property. Various residential and commercial buildings are present in the southeastern corner of the Subject Property along Carolina Beach Road in the 1956 and 1958 aerial photographs. Between 1983 and 1993, the current Starway Flea Market commercial building was constructed in the western portion of the Subject Property. A portion of the forested areas along the boundary of the Subject Property was cleared between 1993 and 1998.

Currently, the Subject Property primarily consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors currently operated as the Starway Flea Market. The smaller parcels of the Subject Property with road frontage along Carolina Beach Road consist of two single-family residential lots and a commercial car retail outbuilding. The Subject Property is situated in an area of dense residential, commercial, and industrial development. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

The proposed project information has been sent to the NC SHPO in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

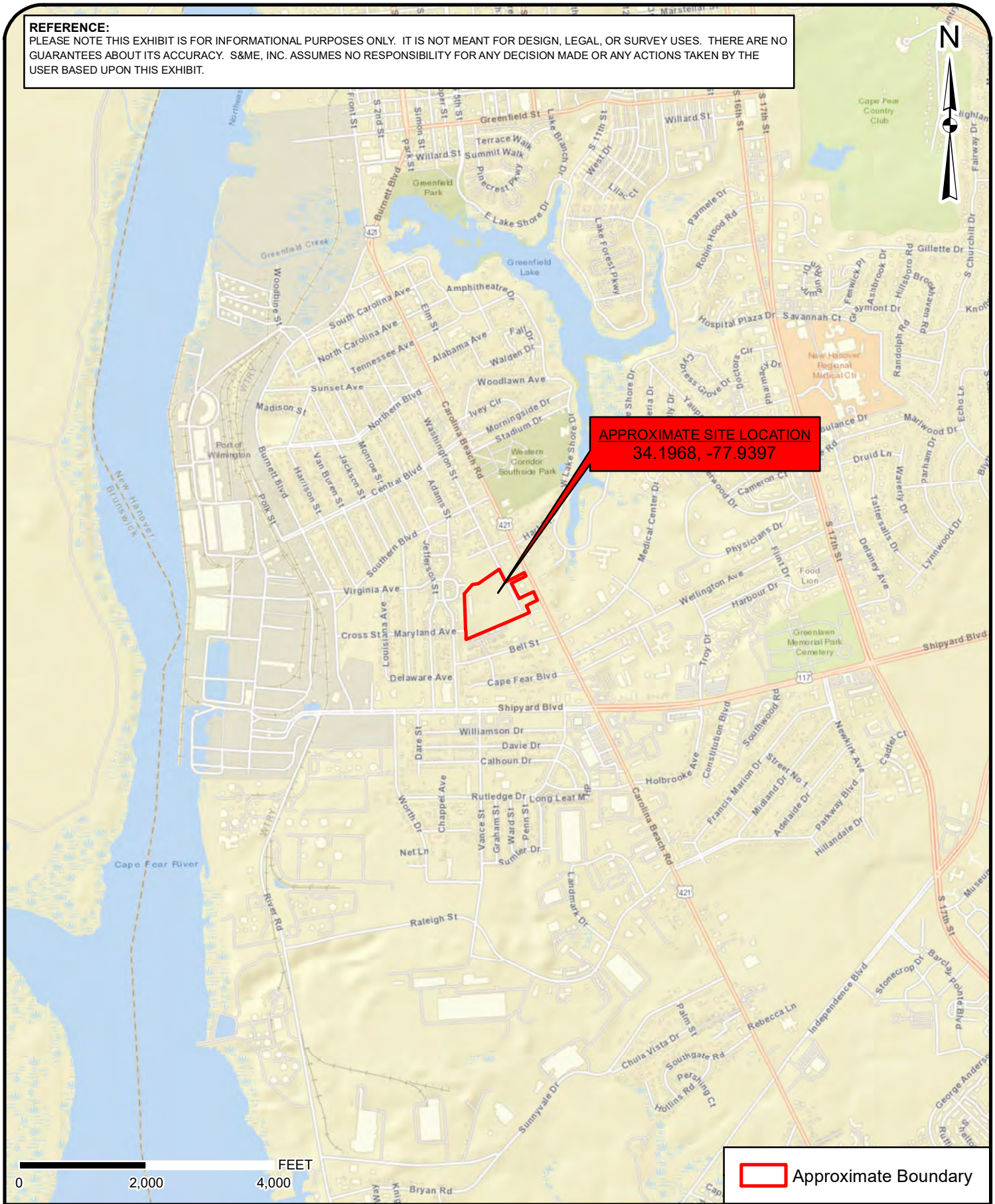
Proposed Starway Village Apartments Enclosures:
Attachment 1: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 2: Proposed Project Site Plans
Attachment 3: Subject Property Current Photographs

cc: Dr. Wenonah George Haire, THPO, Catawba Indian Nation, 1536 Tom Steven Road, Rock Hill, SC 29730

Section 106 ATTACHMENT 1:

Proposed Project Location,
NRHP and NC HPOWEB Maps

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

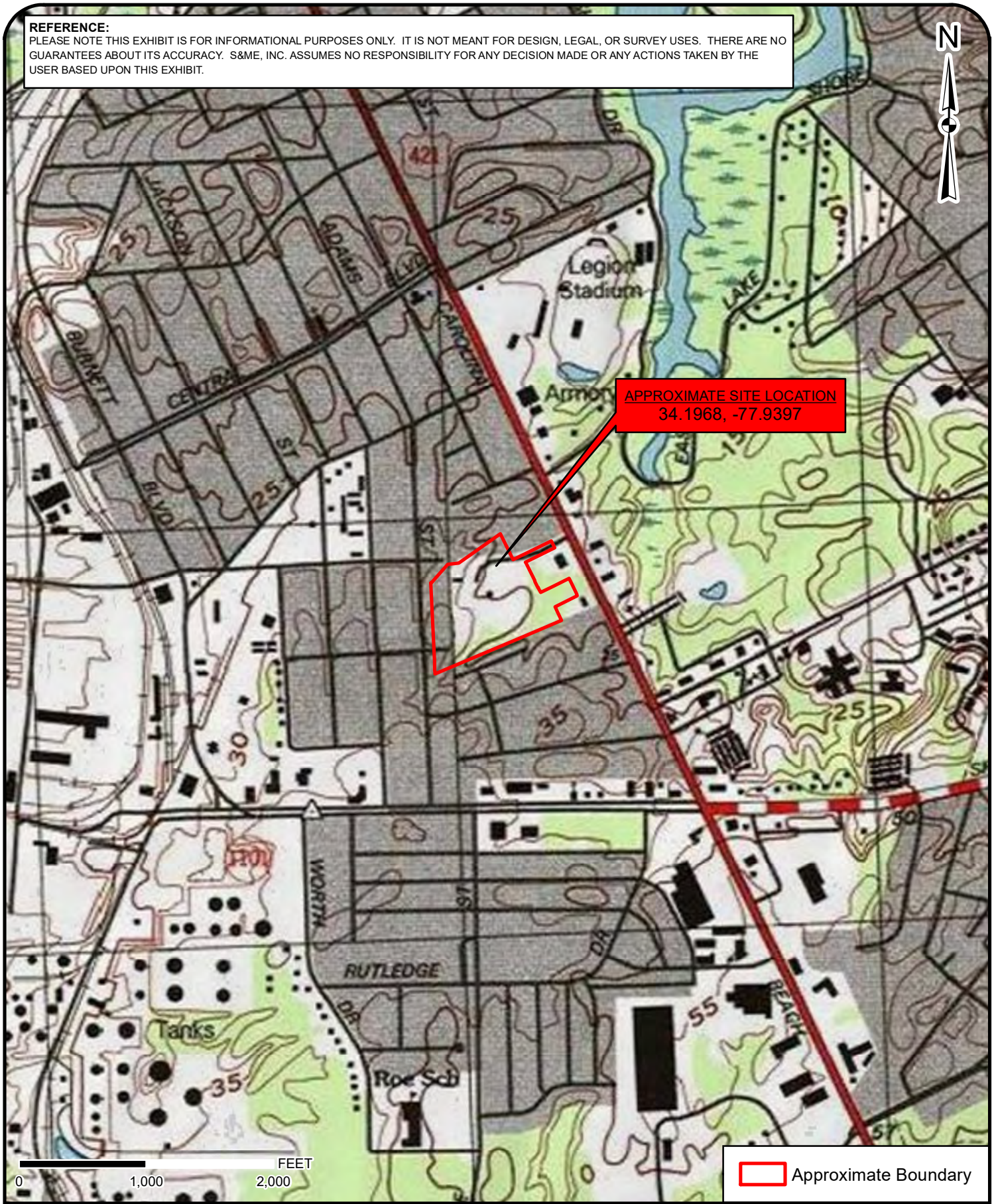
Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022

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Topographic Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: USGS 7.5-Minute Topo Quad Wilmington, NC 1993

SCALE:	EXHIBIT NO.
1 " = 1,000 '	2
DATE: 8-29-22	
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Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Topo Exhibit.mxd plotted by chandley 08-29-2022

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Aerial Exhibit

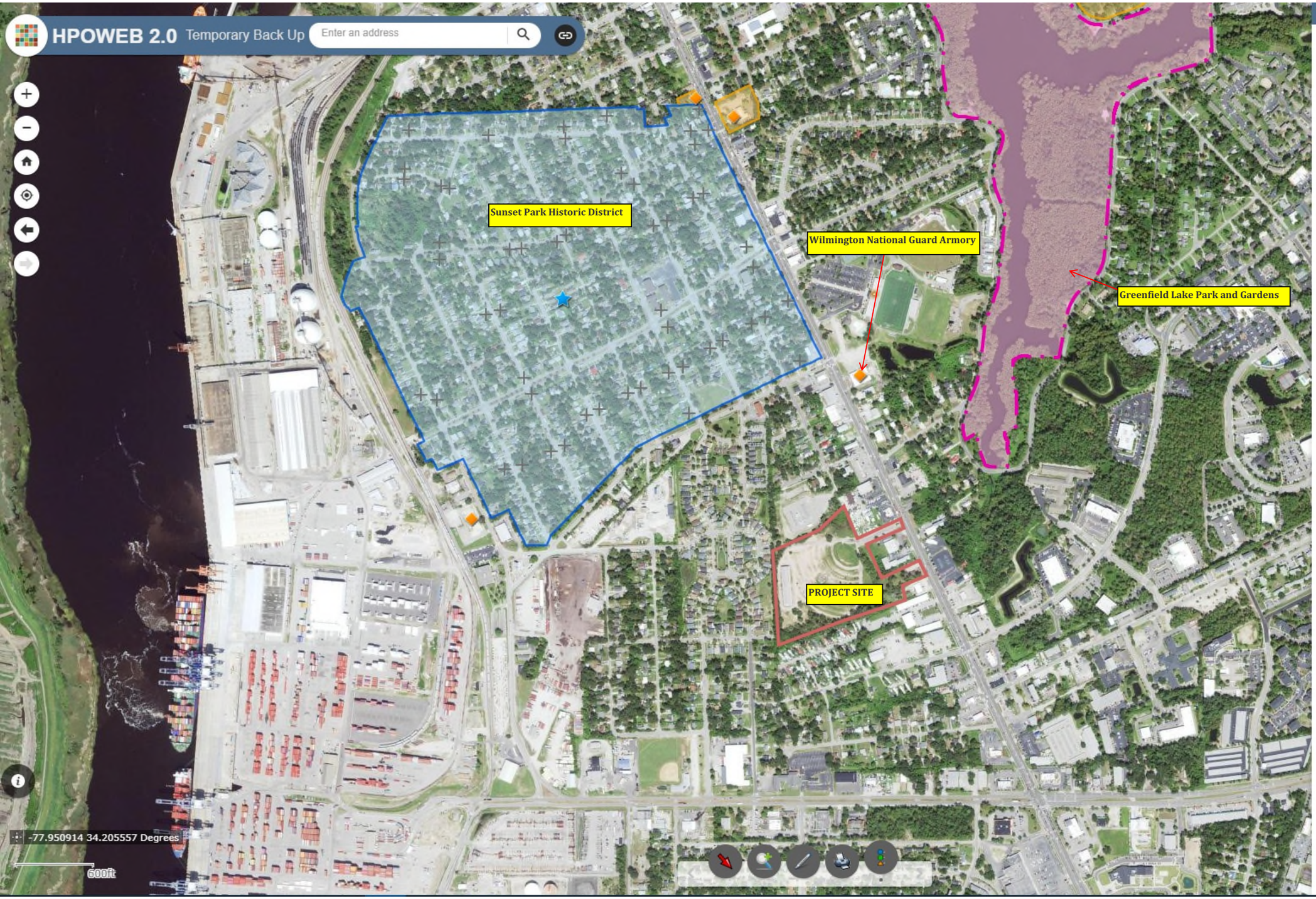
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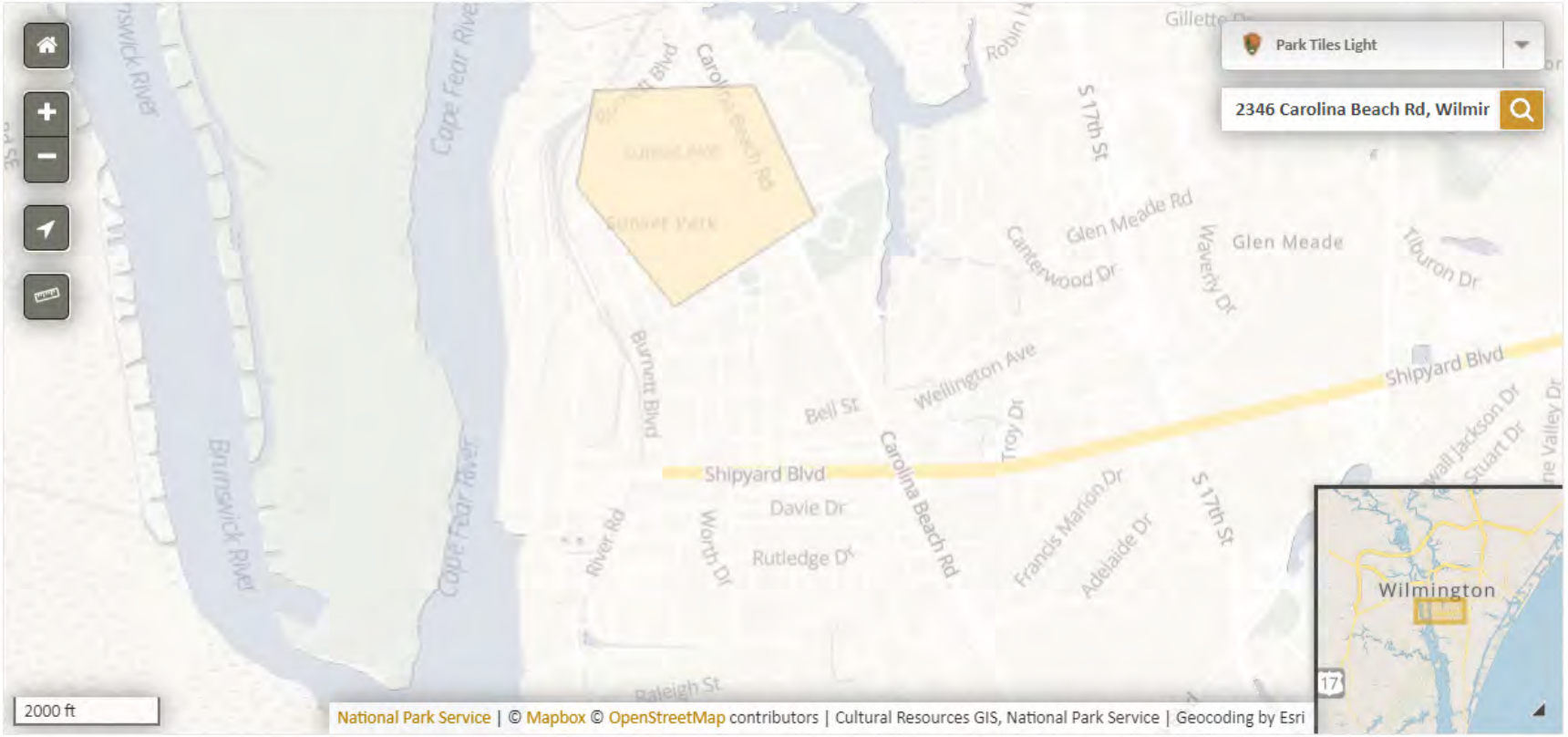
Source: World Imagery 2020

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HPOWEB 2.0 Temporary Back Up
Enter an address
Sunset Park Historic District
Wilmington National Guard Armory
Greenfield Lake Park and Gardens
PROJECT SITE
-77.950914 34.205557 Degrees
600ft
Legend
National Register
NR
NRHD
NRD
Study List
SL
SLD
SLDOE
SLHD
SLDOEHD
SLDOED
Determined Eligible
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LL
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BF
SO
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SA
NR, SL, SLDOE & DOE Districts
NR
SL
DOE
SLDOE
NRD
DOED
Local Historic Districts

National Register of Historic Places



PUBLIC, NON-RESTRICTED DATA DEPICTING NATIONAL REGISTER SPATIAL DATA PROCESSED BY THE CULTURAL RESOURCES GIS FACILITY. LAST MINOR UPDATE, SEPTEMBER 2020.

Section 106 ATTACHMENT 2:

Proposed Project Site Plans



PRELIMINARY SITE LAYOUT

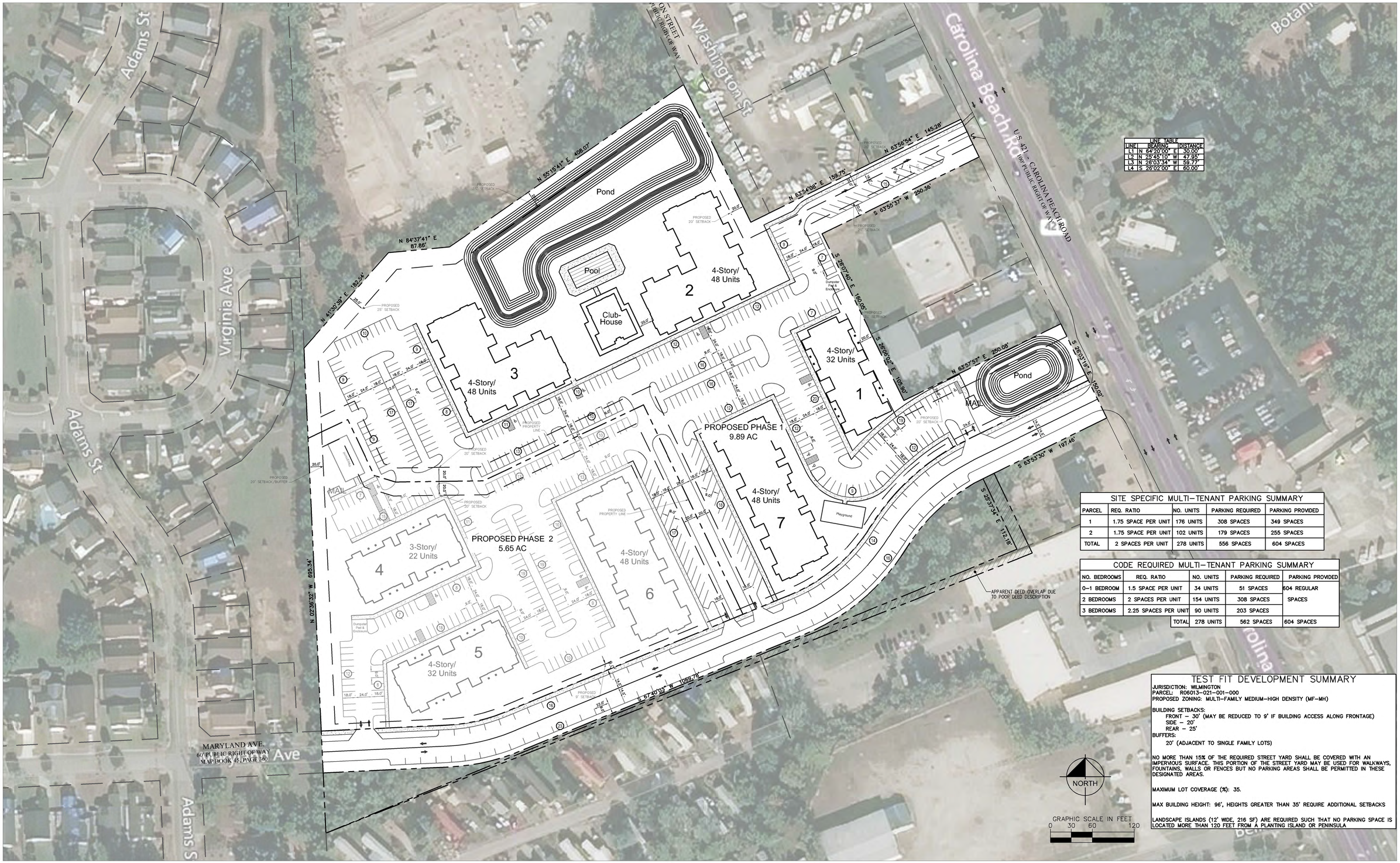
SEPTEMBER 21, 2021

STARWAY VILLAGE

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N 63°54'08" E 159.75'
N 63°56'54" E 145.28'
S 63°55'37" W 250.36'
S 26°07'40" E 160.05'
S 25°38'02" E 105.80'
N 63°57'57" E 250.08'
S 26°01'19" E 150.02'
S 63°53'30" W 197.46'
S 25°37'34" E 112.18'
N 02°36'32" W 695.34'
S 67°40'03" W 1069.78'

APPARENT DEED OVERLAP DUE TO POOR DEED DESCRIPTION

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 64°20'00" E	30.00'
L2	N 25°45'10" W	47.95'
L3	N 26°03'34" W	58.77'
L4	S 26°02'00" E	60.00'

SITE SPECIFIC MULTI-TENANT PARKING SUMMARY

PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	176 UNITS	308 SPACES	349 SPACES
2	1.75 SPACE PER UNIT	102 UNITS	179 SPACES	255 SPACES
TOTAL	2 SPACES PER UNIT	278 UNITS	556 SPACES	604 SPACES

CODE REQUIRED MULTI-TENANT PARKING SUMMARY

NO. BEDROOMS	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
0-1 BEDROOM	1.5 SPACE PER UNIT	34 UNITS	51 SPACES	604 REGULAR SPACES
2 BEDROOMS	2 SPACES PER UNIT	154 UNITS	308 SPACES	
3 BEDROOMS	2.25 SPACES PER UNIT	90 UNITS	203 SPACES	
	TOTAL	278 UNITS	562 SPACES	604 SPACES

TEST FIT DEVELOPMENT SUMMARY

JURISDICTION: WILMINGTON
PARCEL: R06013-021-001-000
PROPOSED ZONING: MULTI-FAMILY MEDIUM-HIGH DENSITY (MF-MH)

BUILDING SETBACKS:
FRONT – 30' (MAY BE REDUCED TO 9' IF BUILDING ACCESS ALONG FRONTAGE)
SIDE – 20'
REAR – 25'
BUFFERS:
20' (ADJACENT TO SINGLE FAMILY LOTS)

NO MORE THAN 15% OF THE REQUIRED STREET YARD SHALL BE COVERED WITH AN IMPERVIOUS SURFACE. THIS PORTION OF THE STREET YARD MAY BE USED FOR WALKWAYS, FOUNTAINS, WALLS OR FENCES BUT NO PARKING AREAS SHALL BE PERMITTED IN THESE DESIGNATED AREAS.

MAXIMUM LOT COVERAGE (%): 35.

MAX BUILDING HEIGHT: 96', HEIGHTS GREATER THAN 35' REQUIRE ADDITIONAL SETBACKS

LANDSCAPE ISLANDS (12' WIDE, 216 SF) ARE REQUIRED SUCH THAT NO PARKING SPACE IS LOCATED MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	08/25/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE

2346 CAROLINA BEACH RD

WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT

PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Section 106 ATTACHMENT 3:

Subject Property Current Photographs

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

1	**Location / Orientation**	Entrance road and small entrance hut on NE portion of site.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

2	**Location / Orientation**	Open land associated with the Starway Flea Market on central portion of site.
	Remarks	Photo taken facing southwest.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

3	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

4	**Location / Orientation**	Onsite residence located at 2370 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing east.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

5	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing northeast.



Date: August 31, 2022

Photographer: CD

6	**Location / Orientation**	Onsite residence located at 2374 Carolina Beach Road on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing north.



Date: August 31, 2022

Photographer: CD

7	**Location / Orientation**	Onsite business (County Line Car Sales) located at 2370-B) on eastern portion of site. Structure will be demolished as part of proposed development.
	Remarks	Photo taken facing west.



Date: August 31, 2022

Photographer: CD

8	**Location / Orientation**	Flea Market structures on western and central portions of the site. Structures will be demolished.
	Remarks	Photo taken facing south.

Representative Photographs
Starway Village Apartments
Project #: 21610025



Date: August 31, 2022

Photographer: CD

9	**Location / Orientation**	Dilapidated commercial building on central portion of site. Structure to be demolished as part of proposed development.
	Remarks	Photo taken within interior.



Date: August 31, 2022

Photographer: CD

10	**Location / Orientation**	Wetland area on northern portion of site. Proposed apartment building and SW detention pond will be constructed in this location.
	Remarks	Photo taken facing east.

ATTACHMENT 13

Noise Abatement and Control

NOISE ASSESSMENT

Starway Village Apartments

Wilmington, New Hanover Co., NC

S&ME Project No. 21610025

PREPARED FOR:

Starway Village I/II, LLC
709 North Main Street, Suite 200
Aynor, SC 29511

PREPARED BY:

S&ME, Inc.
134 Suber Road
Columbia, SC 29210

October 31, 2022

October 31, 2022

Starway Village I/II, LLC
709 North Main Street, Suite 200
Aynor, South Carolina 29511

Attention: Mr. Brad Queener

Reference: **Noise Assessment**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Mr. Queener:

S&ME, Inc. (S&ME) is pleased to submit our Noise Assessment for the above-referenced project located in New Hanover County, North Carolina. This work was performed in general accordance with S&ME Proposal Number 21610025, dated August 8, 2022.

S&ME appreciates the opportunity to be of service to you by performing this Noise Assessment for this project. Please contact me at (803) 561-9024 with questions regarding this report or if you require additional information.

Sincerely,

S&ME, Inc.

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

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Appendix II – HUD Noise Assessment Worksheets

Appendix III – Airport/NCDOT/Train Data

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1.0 Introduction

The proposed project consists of an approximate 15.67-acre site located 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina. The project consists of construction of 278 apartment units in seven buildings including two playgrounds, a clubhouse, and a pool. Multiple Noise Assessment Locations (NAL) were selected for the site. Please refer to the **Exhibits** in **Appendix I** for the applicable noise sources and locations of the NALs.

The project site is located within 15 miles of a commercial airport, within 1,000 feet of a major roadway, and within 3,000 feet of a railroad. These potential noise sources necessitated the completion of a noise assessment according to the requirements of 24 Code of Federal Regulations (CFR) Part 51 Subpart B. The following noise assessment was conducted consistent with the guidance provided in The Noise Guidebook, a reference document for implementing the U.S. Department of Housing and Urban Development's (HUD) Noise Policy and prepared by the Environmental Planning Division Office of Environment and Energy.

2.0 Aircraft Noise

A search for military and commercial airports within 15 miles of the site was conducted. No military airports were located within 15 miles of the site. One commercial airport was located within 15 miles of the site:

- Wilmington International Airport (4.6 miles northeast)

Please refer to **Exhibit 1 (Airports Exhibit**) for the location of the area airports. A noise contour map was available for this airport (**Exhibit 2**). No additional sources of aircraft noise were evaluated for this assessment.

3.0 Roadway Noise

A search for major roadways (Interstates, U.S. Highways, N.C. Routes, and four-lane, curb-and-gutter roads) within 1,000 feet was conducted. S&ME reviewed Average Annual Daily Traffic (AADT) volumes for nearby roadways by viewing the North Carolina Department of Transportation's (NCDOT) website (https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx) and by contacting the NCDOT directly.

The closest major roadway is U.S. Highway 421 (Carolina Beach Road) (**Exhibit 3**) located east of the site. Traffic data from NCDOT including AADT volumes in vehicles per day (vpd) (2020 data) is attached for reference. Specific data for nighttime traffic or traffic mixes was not provided. Future traffic data was requested from NCDOT. Mr. Keith Dixon, State Traffic Forecast Engineer with NCDOT, provided a copy of Final No-Build Traffic Forecast for STIP Project U-4738. This document provided an estimated future traffic calculation of 46,000 vpd for the year 2045. A copy of this study is included in **Appendix III**.

S&ME also viewed NCDOT's Division Office document regarding future roadway improvements (https://connect.ncdot.gov/projects/planning/Pages/default.aspx). This source indicated roadway improvements (TIP U-5729REG; U.S. Highway 421 Roadway Upgrade for 2029) in the vicinity of the site that could allude to larger traffic volumes to the roadways. No additional sources of roadway noise were evaluated for this assessment.

The speed limit, nighttime traffic, and traffic mixes for the roadways per NCDOT and/or the Noise Guidebook were as follows:

Table 3-1 – NCDOT Data

Route	Speed Limit	% Nighttime Traffic*	% Auto	% Heavy Truck	% Medium Truck
U.S. Highway 421 (Carolina Beach Road)	40	15	92	4	4

**The nighttime traffic traveling between 10 p.m. and 7 a.m. is assumed to be approximately 15% of traffic volume, per The Noise Guidebook Chapter 5 (Noise Assessment Guidelines, pg. 6) unless data was available from NCDOT.*

4.0 Railway Noise

A search for railroads within 3,000 feet of the site was conducted. The closest railroad, the Wilmington Terminal Railroad (**Exhibit 3**), is located approximately 2,200 feet west of the western property boundary of the site.

Data was obtained from the railroad company (https://www.gwrr.com/wtry/) and/or the Federal Railroad Administration (http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx) for the latest information regarding average number of trains, nighttime operations, diesel locomotives, cars per train, average speed, track type, and whistle/horn use. Also, if specific information was not provided for these parameters, HUD-suggested estimates for trains were used according to the Noise Guidebook. There were no grade crossings/whistle stops within 0.25-mile of the site. The closest grade crossing/whistle stop was 0.48-mile southwest of the site at Shipyard Boulevard/U.S. Highway 117). No additional sources of railway noise were evaluated for this assessment.

5.0 Combined Noise

The combined noise level environment at the NALs on the site will fall under one of the three categories:

Table 5-1 – Noise Level Categories

Category	Noise Range	Description
Acceptable	DNL not exceeding 65 dB	Noise exposure may be of some concern, but common building construction will make the indoor environment acceptable and outdoor environment reasonably pleasant for recreation and play.
Normally Unacceptable	DNL above 65 dB but not exceeding 75 dB	Barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building constructions may be necessary to ensure people indoors are sufficiently protected from outdoor noise.
Unacceptable	DNL above 75 dB	Noise exposure at the site is so severe that the construction cost to make the indoor noise environment acceptable may be cost prohibitive and the outdoor environment would still be unacceptable.

DNL = Day/Night Sound Level dB = Decibels

The following noise levels were calculated at the various NALs as shown on **Exhibit 4**.

Table 5-2 – Noise Levels

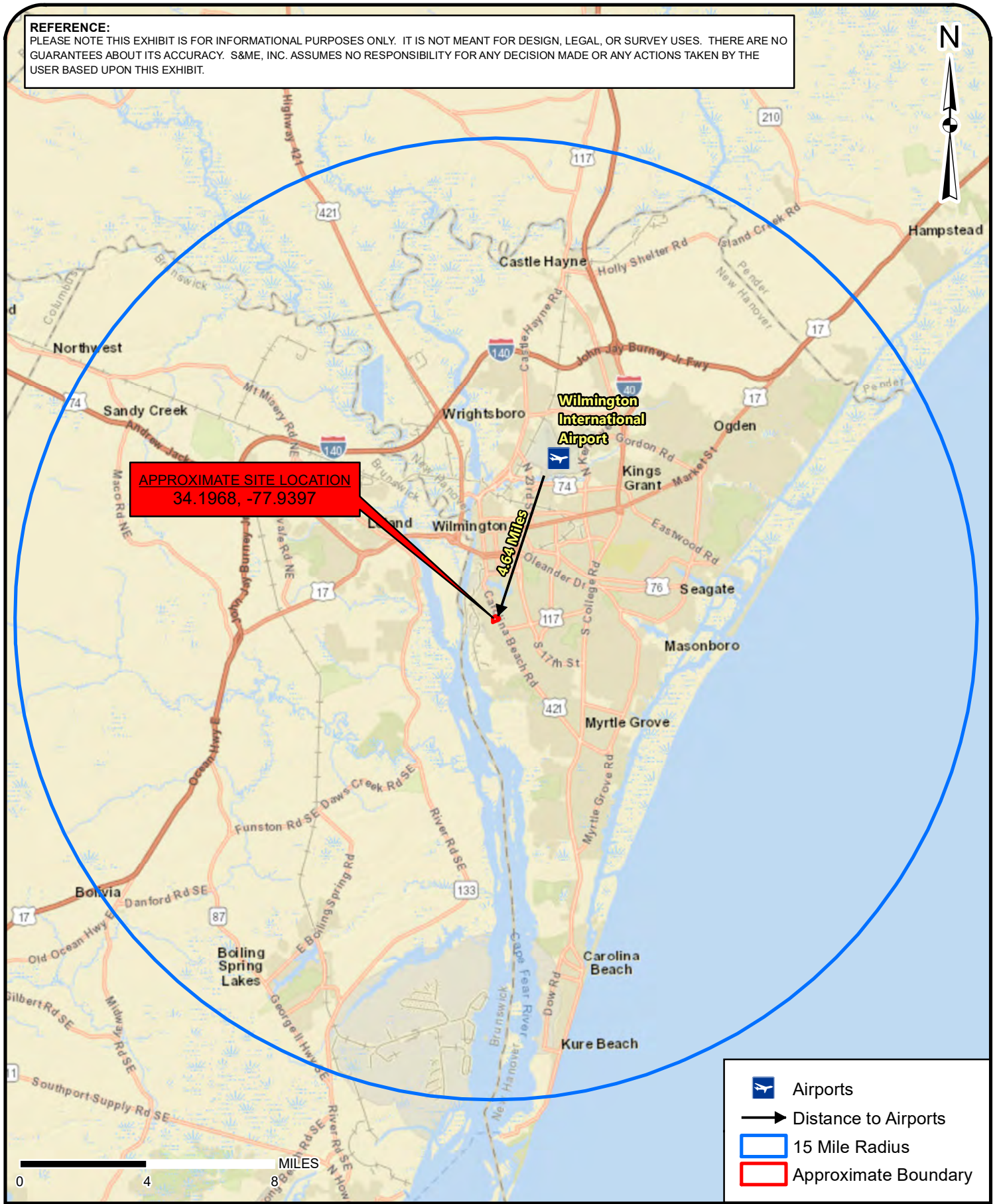
NAL No.	Noise Level (current)*	Noise Level (future)**	Noise Category
1	63 dB	64 dB	Acceptable
2	64 dB	65 dB	Acceptable
3	62 dB	64 dB	Acceptable
4	45 dB	45 dB	Acceptable
5	58 dB	60 dB	Acceptable

**2020 Data (NCDOT) **Using Future 2045 Data (NCDOT)*

As shown on the attached Site Evaluations in **Appendix II**, the levels of noise exposure do not exceed the 65-dB level for current (2020) traffic levels or future (2045) traffic levels and are therefore in the "Acceptable" range as categorized by the Noise Assessment Guidelines. Mitigation is not necessary.

Appendices

Appendix I – Exhibits



Airport Locations Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map and NEPAssist

SCALE:	EXHIBIT NO.
1 " = 4 miles	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Airport Locations Exhibit.mxd plotted by chandley 08-29-2022

AIRPORT PROPERTY LINE

NOISE ANALYSIS
EXISTING 2020 – 65 DNL

65 TO 70 DNL
70 TO 75 DNL
75 TO 80 DNL
80 TO 85 DNL
85 TO 90 DNL

1250 625 0 1250

SCALE IN FEET
1"= 1,250'

EXHIBIT 2

Wilmington International Airport
Wilmington, NC
New Hanover County

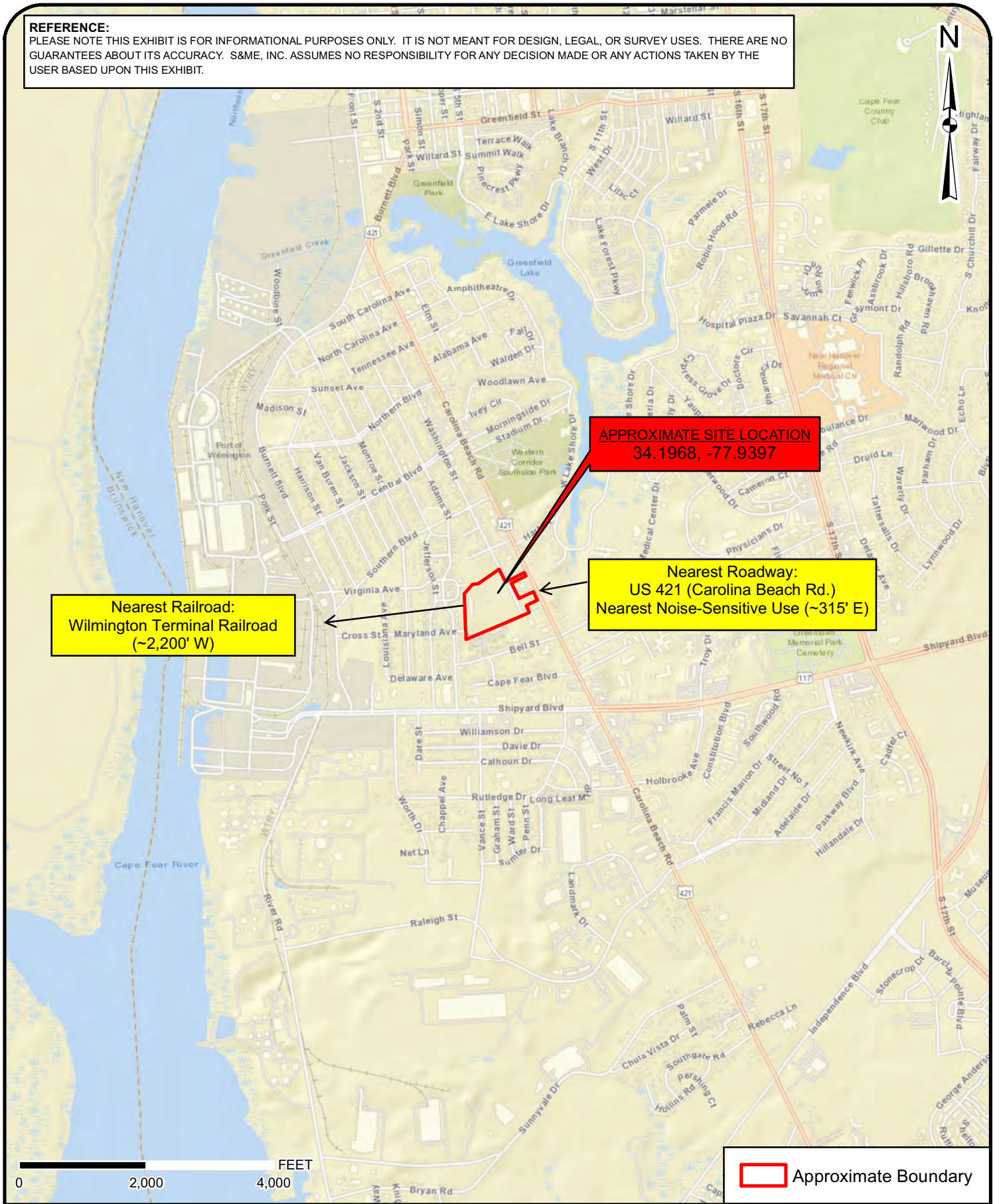
Terminal Expansion-Short Form Environmental Assessment

NOISE ANALYSIS - 2020

December, 2015

TALBERT & BRIGHT AVIATION CONSULTANTS

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Noise Sources

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	3
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022


Exhibit 4 - NAL Locations
Legend
NAL
NAL 1 (63/64 dB)
NAL 2 (64/65 dB)
NAL 3 (62/64 dB)
NAL 4 (58/60 dB)
NAL 5 (45/45 dB)
Carolina Beach Rd
Virginia Ave
Maryland Ave
Jefferson St
Adams St
Bell St
PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021
Kimley»Horn
Google Earth
800 ft
N

Appendix II – HUD Noise Assessment Worksheets

Noise Data

	Overall AADT	Cars (92%)	Medium Trucks (4%)	Heavy Trucks (4%)
2020	32000	29440	1280	1280
2045	46000	42320	1840	1840

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 1 - Building 2020 (current AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	385	385	385
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	29440	1280	1280
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	56	53	61
Calculate Road #1 DNL	63	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2900
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	44
Calculate Rail #1 DNL	44	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**63**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

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- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 2 - Building 2020 (Current AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	315	315	315
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	29440	1280	1280
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	58	54	62
Calculate Road #1 DNL	64	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		3050
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	43
Calculate Rail #1 DNL	43	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**

Combined DNL for all Road and Rail sources	**64**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

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- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 3 - Playground 2020 (current AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	405	405	405
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	29440	1280	1280
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	56	52	60
Calculate Road #1 DNL	62	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2990
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	43
Calculate Rail #1 DNL	43	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**62**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

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- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 4 - Building 2020 (current AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	745	745	745
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	29440	1280	1280
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	52	48	56
Calculate Road #1 DNL	58	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2625
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	44
Calculate Rail #1 DNL	44	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**58**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 5 - Building 2020 (current AADT)
Record Date	10/31/2022
User's Name	CD

Railroad #1 Track	**Wilmington Terminal RR**

Identifier:	Wilmington Terminal RR	
Rail # 1		
Train Type	**Electric** ☐	**Diesel** ☑
Effective Distance		2250
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3
Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	45
Calculate Rail #1 DNL	45	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**45**
Combined DNL including Airport	N/A

	N/A
Site DNL with Loud Impulse Sound	

Calculate Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

FUTURE

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 1 - Building 2045 (Future AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	385	385	385
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	42320	1840	1840
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	58	54	62
Calculate Road #1 DNL	64	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2900
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	44
Calculate Rail #1 DNL	44	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**64**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 2 - Building 2045 (Future AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	315	315	315
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	42320	1840	1840
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	59	56	63
Calculate Road #1 DNL	65	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		3050
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	43
Calculate Rail #1 DNL	43	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**65**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 3 - Playground 2045 (Future AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	405	405	405
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	42320	1840	1840
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	58	54	62
Calculate Road #1 DNL	64	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2990
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	43
Calculate Rail #1 DNL	43	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**

Combined DNL for all Road and Rail sources	**64**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

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- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
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DNL Calculator

Site ID	NAL 4 - Building 2045 (Future AADT)
Record Date	10/31/2022
User's Name	CD

Road # 1 Name:	**US 421**

Road # 1 Name:	US 421

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	745	745	745
Distance to Stop Sign			
Average Speed	40	40	40
Average Daily Trips (ADT)	42320	1840	1840
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	54	50	58
Calculate Road #1 DNL	60	Reset	

Railroad #1 Track Identifier:	Wilmington Terminal RR

Rail # 1

Train Type	Electric ☐	Diesel ☑
Effective Distance		2625
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3

Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	44
Calculate Rail #1 DNL	44	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**

Combined DNL for all Road and Rail sources	**60**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

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- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	NAL 5 Building 2045 Future AADT
Record Date	10/31/2022
User's Name	CD

Railroad #1 Track	**Wilmington Terminal RR**

Identifier:	Wilmington Terminal RR	
Rail # 1		
Train Type	**Electric** ☐	**Diesel** ☑
Effective Distance		2250
Average Train Speed		10
Engines per Train		2
Railway cars per Train		15
Average Train Operations (ATO)		3
Night Fraction of ATO		33
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL	0	45
Calculate Rail #1 DNL	45	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○ **Yes** ◉ **No**
Combined DNL for all Road and Rail sources	**45**
Combined DNL including Airport	N/A

	N/A
Site DNL with Loud Impulse Sound	

Calculate Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

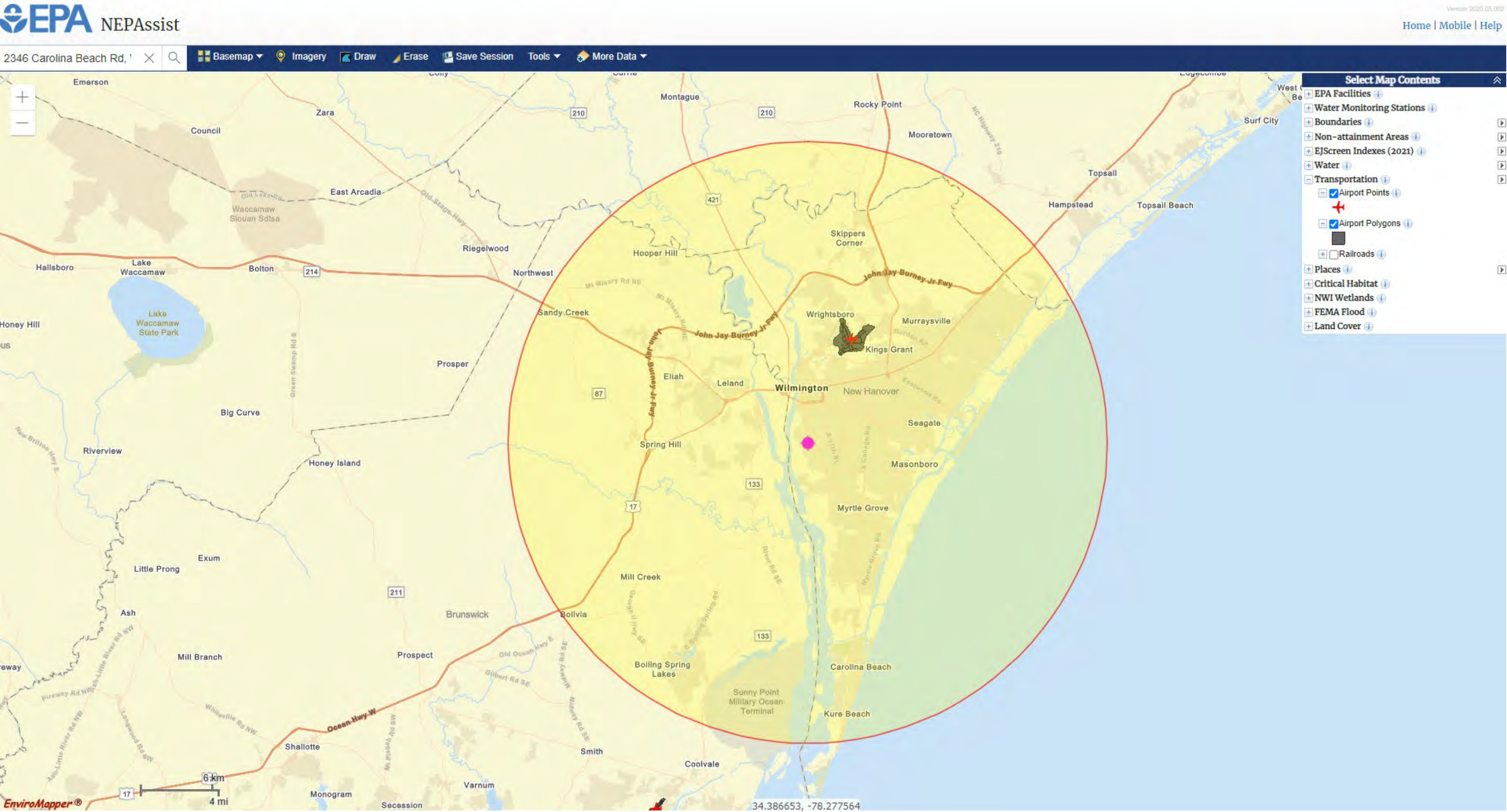
- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

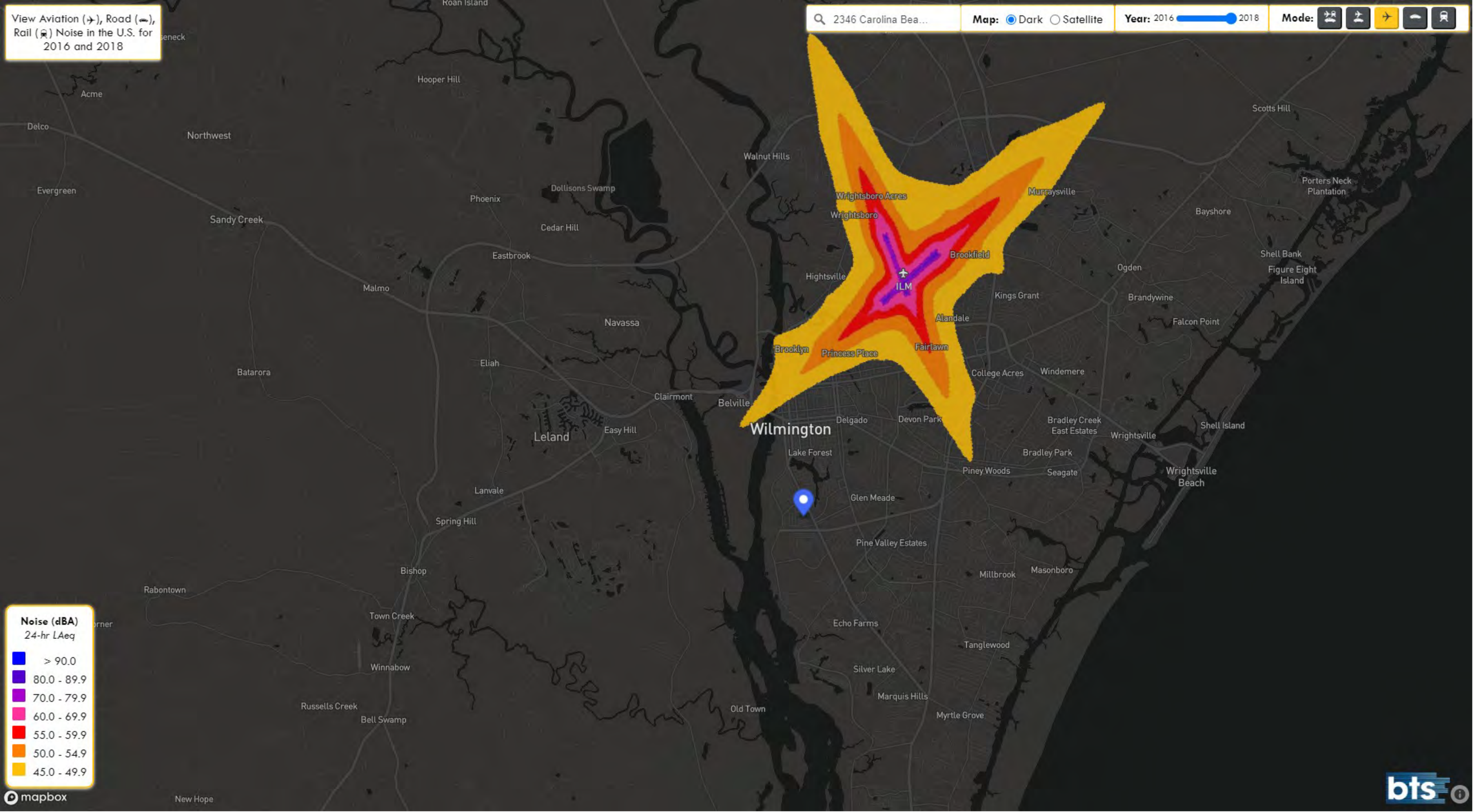
Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Appendix III – Airport/NCDOT/Train Data


EPA NEPAssist
Home | Mobile | Help
2346 Carolina Beach Rd, '
Basemap
Imagery
Draw
Erase
Save Session
Tools
More Data
Select Map Contents
EPA Facilities
Water Monitoring Stations
Boundaries
Non-attainment Areas
EJScreen Indexes (2021)
Water
Transportation
Airport Points
Airport Polygons
Railroads
Places
Critical Habitat
NWI Wetlands
FEMA Flood
Land Cover
Emerson
Council
Zara
Montague
Rocky Point
Mooretown
Surf City
Topsail
Hampstead
Topsail Beach
East Arcadia
Waccamaw Siouan Sdtsa
Riegelwood
Hooper Hill
Skippers Corner
Hallsboro
Lake Waccamaw
Bolton
Northwest
Lake Waccamaw State Park
Sandy Creek
John Jay Burney Jr Fwy
Wrightsboro
Murraysville
Kings Grant
Honey Hill
Prosper
Eliah
Leland
Wilmington
New Hanover
Seagate
Big Curve
Riverview
Spring Hill
Honey Island
Masonboro
Myrtle Grove
Exum
Little Prong
Mill Creek
Ash
Brunswick
Bolivia
Mill Branch
Prospect
Boiling Spring Lakes
Carolina Beach
Sunny Point Military Ocean Terminal
Kure Beach
Shallotte
Smith
Coolvale
Varnum
Monogram
Secession
Ocean Hwy W
6 km
4 mi
EnviroMapper®
34.386653, -78.277564


View Aviation (✈), Road (🚗), Rail (🚆) Noise in the U.S. for 2016 and 2018
2346 Carolina Bea...
Map: Dark Satellite
Year: 2016 2018
Mode:
Noise (dBA)
24-hr LAeq
> 90.0
80.0 - 89.9
70.0 - 79.9
60.0 - 69.9
55.0 - 59.9
50.0 - 54.9
45.0 - 49.9
Roan Island
Hooper Hill
Acme
Delco
Northwest
Evergreen
Sandy Creek
Phoenix
Dollisons Swamp
Cedar Hill
Eastbrook
Malmo
Navassa
Batarora
Eliah
Clairmont
Belville
Leland
Easy Hill
Lanvale
Spring Hill
Bishop
Rabontown
Town Creek
Winnabow
Russells Creek
Bell Swamp
New Hope
Walnut Hills
Wrightsboro Acres
Wrightsboro
Murraysville
Brookfield
Hightsville
ILM
Alandale
Brooklyn
Princess Place
Fairlawn
Wilmington
Delgado
Devon Park
Lake Forest
Glen Meade
Pine Valley Estates
Echo Farms
Old Town
Marquis Hills
Myrtle Grove
Silver Lake
Tanglewood
Millbrook
Masonboro
Piney Woods
Seagate
Bradley Park
Bradley Creek East Estates
Wrightsville
College Acres
Windemere
Kings Grant
Ogden
Brandywine
Falcon Point
Scotts Hill
Porters Neck Plantation
Bayshore
Shell Bank
Figure Eight Island
Shell Island
Wrightsville Beach
mapbox
bts

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/31/2022
AFD EFF 10/06/2022
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: WILMINGTON | 4 STATE: NC | LOC ID: ILM | FAA SITE NR: 17211.*A
> 2 AIRPORT NAME: WILMINGTON INTL | 5 COUNTY: NEW HANOVER NC
3 CBD TO AIRPORT (NM): 03 NE | 6 REGION/ADO: ASO/MEM | 7 SECT AERO CHT: CHARLOTTE

GENERAL

10 OWNERSHIP: PUBLIC
> 11 OWNER: NEW HANOVER COUNTY
> 12 ADDRESS: 1740 AIRPORT BLVD
WILMINGTON, NC 28405
> 13 PHONE NR: 910-341-4333
> 14 MANAGER: JEFFREY BOURK, A.A.E.
> 15 ADDRESS: 1740 AIRPORT BLVD
WILMINGTON, NC 28405
> 16 PHONE NR: 910-341-4333
> 17 ATTENDANCE SCHEDULE:

ALL	ALL	ALL

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 34-16-16.1000N ESTIMATED
20 ARPT LONG: 077-54-10.4000W
21 ARPT ELEV: 31.7 SURVEYED
22 ACREAGE: 1,800
> 23 RIGHT TRAFFIC: NO
> 24 NON-COMM LANDING: NO

25 NPIAS/FED AGREEMENTS: NGPRY3
> 26 FAR 139 INDEX: I B S 05/1973

SERVICES

> 70 FUEL: 100LL A A+
> 71 AIRFRAME RPRS: MAJOR
> 72 PWR PLANT RPRS: MAJOR
> 73 BOTTLE OXYGEN: HIGH/LOW
> 74 BULK OXYGEN: HIGH/LOW
75 TSNT STORAGE: HGR, TIE
76 OTHER SERVICES:
AFRT, CARGO, CHTR, INSTR, RNTL, SALES

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED : SEE RMK
BCN LGT SKED: SS-SR
> 82 UNICOM: 122.950
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE:
85 CONTROL TWR: YES
86 FSS: RALEIGH
87 FSS ON ARPT: NO
88 FSS PHONE NR:
89 TOLL FREE NR: 1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	67
91 MULTI ENG:	11
92 JET:	21
93 HELICOPTERS:	8
TOTAL:	107
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	10,829
102 AIR TAXI:	10,984
103 G A LOCAL:	13,513
104 G A ITNRNT:	29,595
105 MILITARY:	13,316
TOTAL:	78,237
OPERATIONS FOR 12 MONTHS ENDING:	01/31/2022

RUNWAY DATA

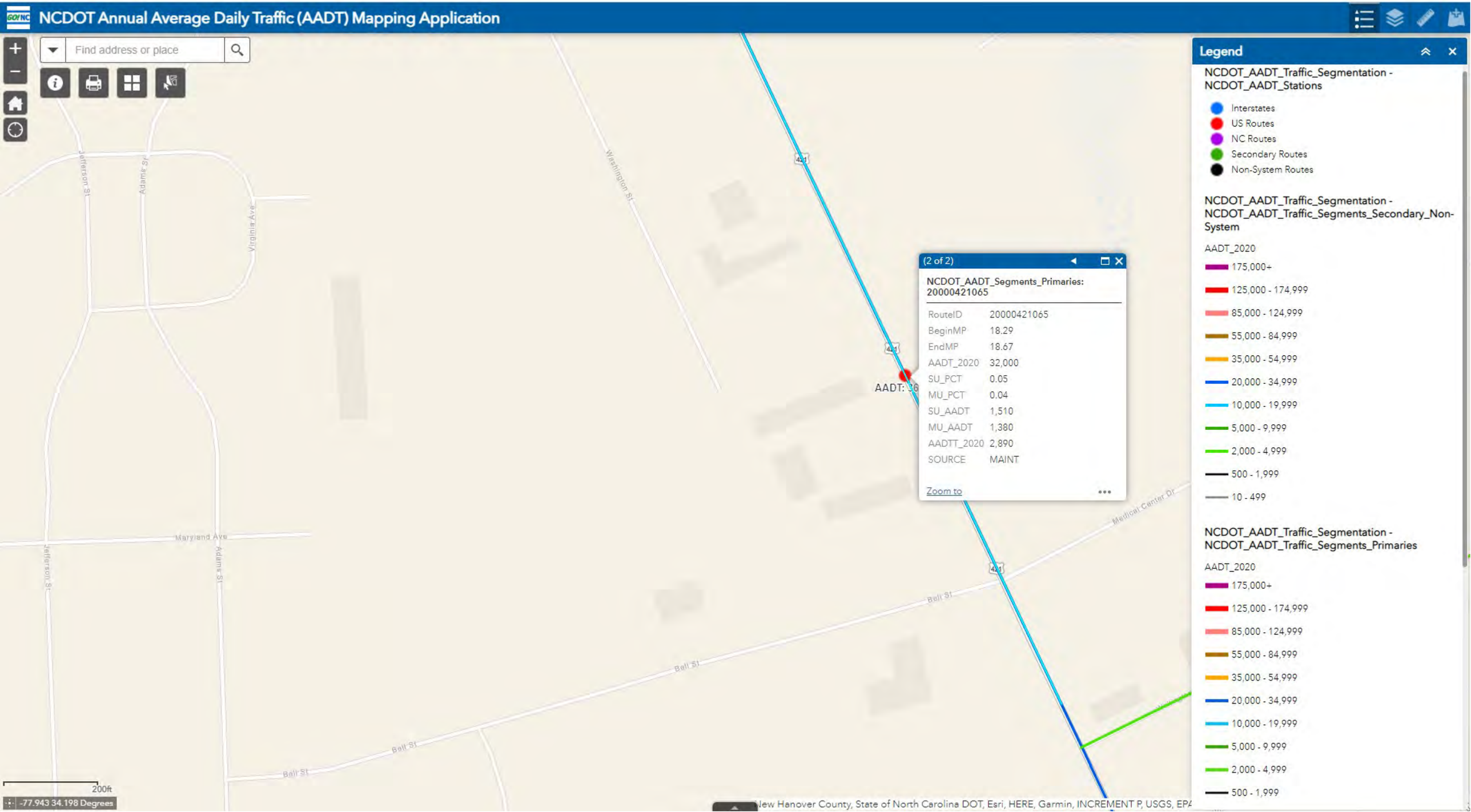
	06/24	17/35		
> 30 RUNWAY INDENT:	8,016	7,754		
> 31 LENGTH:	150	150		
> 32 WIDTH:	ASPH-G	ASPH-G		
> 33 SURF TYPE-COND:	GRVD	GRVD		
> 34 SURF TREATMENT:	75.0	60.0		
35 GROSS WT: S	160.0	185.0		
36 (IN THSDS) D	275.0	300.0		
37 2D				
38 2D/2D2				
> 39 PCN:	78 /F/B/W/T	61 /F/B/W/T		
LIGHTING/APCH AIDS				
> 40 EDGE INTENSITY:	HIGH	HIGH		
> 42 RWY MARK TYPE-COND:	PIR - G / PIR - G	PIR - G / PIR - G	- / -	- / -
> 43 VGSI:	P4R / P4L	P4L / P4L	/	/
44 THR COSSING HGT.:	57 / 48	50 / 36	/	/
45 VISUAL GLIDE ANGLE:	3.00 / 3.00	3.00 / 3.00	/	/
> 46 CNTRLN-TDZ:	- N / - N	- / -	- / -	- / -
> 47 RVR-RVV:	TR - / TR -	R - / T - N	- / -	- / -
> 48 REIL:	Y / N	Y /	/	/
> 49 APCH LIGHTS:	/ MALSR	/ MALSR	/	/
OBSTRUCTION DATA				
50 FAR 77 CATEGORY	PIR / PIR	C / PIR	/	/
> 51 DISPLACED THR:	/	350 / 400	/	/
> 52 CTLG OBSTN:	/	/	/	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/
> 56 CNTRLN OFFSET:	/	/	/	/
57 OBSTN CLNC SLOPE:	50:1 / 50:1	50:1 / 50:1	/	/
58 CLOSE-IN OBSTN:	N / N	N / N	/	/
DECLARED DISTANCES				
> 60 TAKE OFF RUN AVBL (TORA):	8,016 / 8,016	7,754 / 7,754	/	/
> 61 TAKE OFF DIST AVBL (TODA):	8,016 / 8,016	7,754 / 7,754	/	/
> 62 ACLT STOP DIST AVBL (ASDA):	8,016 / 8,016	6,954 / 7,604	/	/
> 63 LNDG DIST AVBL (LDA):	8,016 / 8,016	6,604 / 7,204	/	/

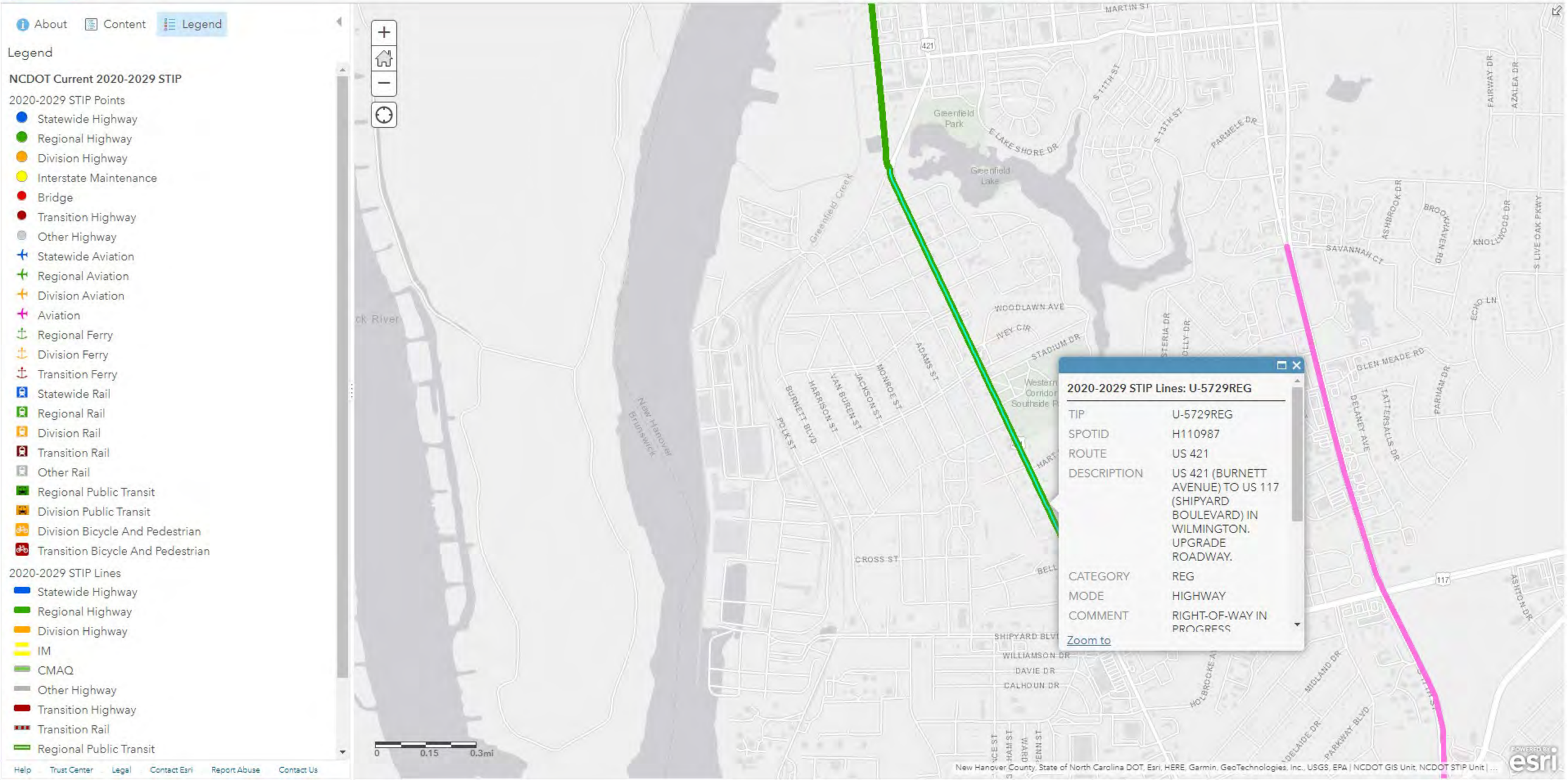
(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

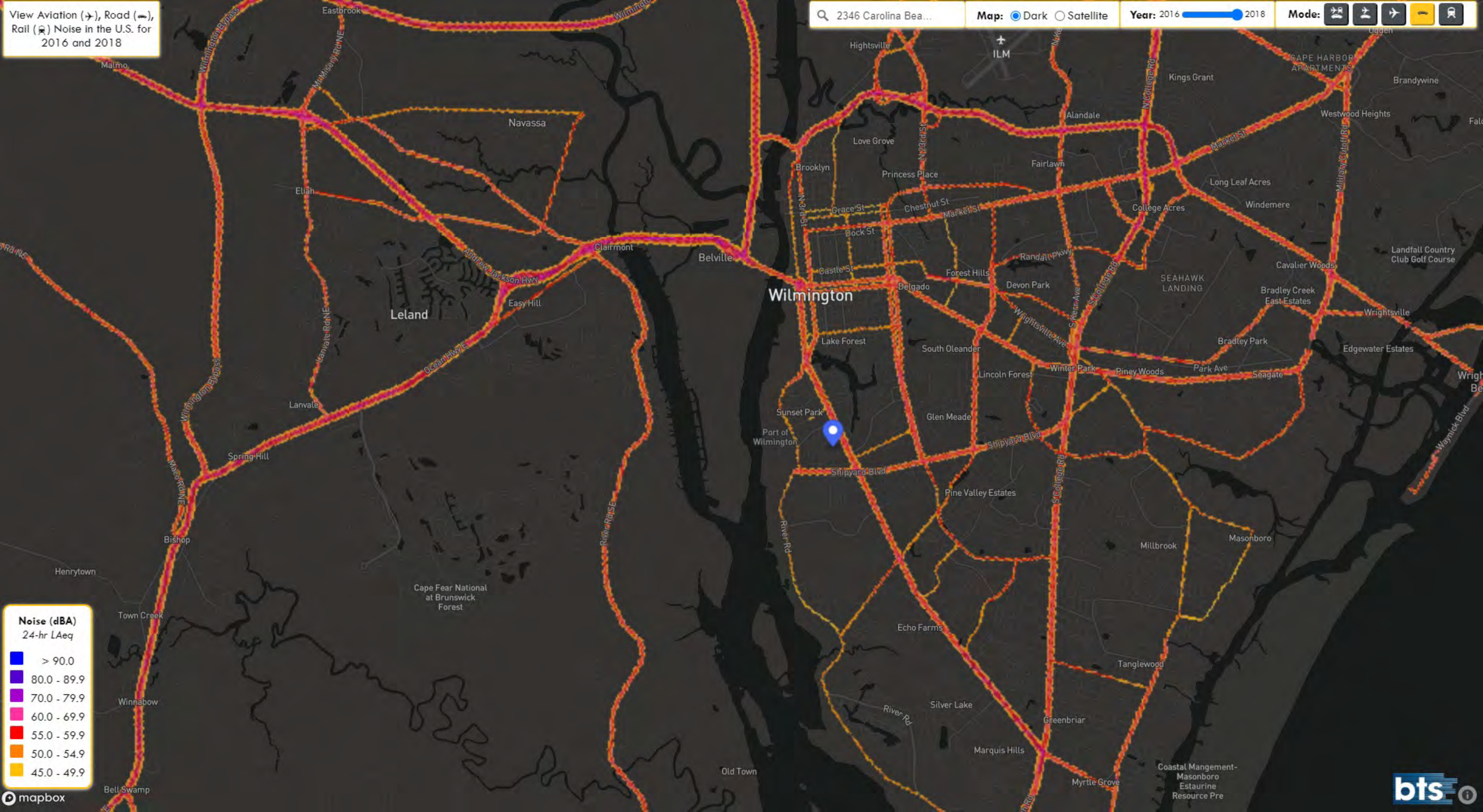
> 110 REMARKS

A 016 EXT 1001.
A 081 ACTVT MALSR RWY 24 & 35; REIL RWY 06 & 17; PAPI RWY 06, 17, 24; HIRL RWY 06/24 & 17/35; AND ALL TWY LGTS - CTAF.
A 086 FSS-RALEIGH RDU-NOTAM ILM
A 110-001 FUEL: AIR WILMINGTON, INC, 910-763-4691
A 110-004 BEARING STRENGTH RWY 06-24: ST175
A 110-005 BEARING STRENGTH RWY 17-35: ST175
A 110-006 FOR CD IF UNA TO CTC ON FSS FREQ, CTC WASHINGTON ARTCC AT 703-771-3587.

111 INSPECTOR: (F) 112 LAST INSP: 03/09/2022 113 LAST INFO REQ:


NCDOT Annual Average Daily Traffic (AADT) Mapping Application
Find address or place
Legend
NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Stations
Interstates
US Routes
NC Routes
Secondary Routes
Non-System Routes
NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Traffic_Segments_Secondary_Non-System
AADT_2020
175,000+
125,000 - 174,999
85,000 - 124,999
55,000 - 84,999
35,000 - 54,999
20,000 - 34,999
10,000 - 19,999
5,000 - 9,999
2,000 - 4,999
500 - 1,999
10 - 499
NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Traffic_Segments_Primaries
AADT_2020
175,000+
125,000 - 174,999
85,000 - 124,999
55,000 - 84,999
35,000 - 54,999
20,000 - 34,999
10,000 - 19,999
5,000 - 9,999
2,000 - 4,999
500 - 1,999
(2 of 2)
NCDOT_AADT_Segments_Primaries: 20000421065
RouteID 20000421065
BeginMP 18.29
EndMP 18.67
AADT_2020 32,000
SU_PCT 0.05
MU_PCT 0.04
SU_AADT 1,510
MU_AADT 1,380
AADTT_2020 2,890
SOURCE MAINT
Zoom to
AADT: 36
Washington St
Jefferson St
Adams St
Virginia Ave
Maryland Ave
Bell St
Medical Center Dr
421
200ft
-77.943 34.198 Degrees
New Hanover County, State of North Carolina DOT, Esri, HERE, Garmin, INCREMENT P, USGS, EPA


About Content Legend
Legend
NCDOT Current 2020-2029 STIP
2020-2029 STIP Points
Statewide Highway
Regional Highway
Division Highway
Interstate Maintenance
Bridge
Transition Highway
Other Highway
Statewide Aviation
Regional Aviation
Division Aviation
Aviation
Regional Ferry
Division Ferry
Transition Ferry
Statewide Rail
Regional Rail
Division Rail
Transition Rail
Other Rail
Regional Public Transit
Division Public Transit
Division Bicycle And Pedestrian
Transition Bicycle And Pedestrian
2020-2029 STIP Lines
Statewide Highway
Regional Highway
Division Highway
IM
CMAQ
Other Highway
Transition Highway
Transition Rail
Regional Public Transit
2020-2029 STIP Lines: U-5729REG
TIP U-5729REG
SPOTID H110987
ROUTE US 421
DESCRIPTION US 421 (BURNETT AVENUE) TO US 117 (SHIPYARD BOULEVARD) IN WILMINGTON. UPGRADE ROADWAY.
CATEGORY REG
MODE HIGHWAY
COMMENT RIGHT-OF-WAY IN PROGRESS
Zoom to
MARTIN ST
421
S 11TH ST
S 13TH ST
Greenfield Park
E LAKE SHORE DR
Greenfield Lake
PARMELE DR
FAIRWAY DR
AZALEA DR
Greenfield Creek
ASHBROOK DR
BROOKHAVEN RD
KNOLLWOOD DR
S LIVE OAK PKWY
SAVANNAH CT
WOODLAWN AVE
IVEY CIR
STADIUM DR
ECHO LN
GLEN MEADE RD
DELANEY AVE
TATTERSALLS DR
PARHAM DR
ADAMS ST
MONROE ST
JACKSON ST
VAN BUREN ST
HARRISON ST
BURNETT BLVD
POLK ST
New Hanover
Brunswick
CROSS ST
117
SHIPYARD BLVD
WILLIAMSON DR
DAVIE DR
CALHOUN DR
MIDLAND DR
DELAIDE DR
PARKWAY BLVD
0 0.15 0.3mi
New Hanover County, State of North Carolina DOT, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA | NCDOT GIS Unit, NCDOT STIP Unit | ...
Help Trust Center Legal Contact Esri Report Abuse Contact Us


View Aviation (✈), Road (🚗), Rail (🚆) Noise in the U.S. for 2016 and 2018
2346 Carolina Bea...
Map: Dark Satellite
Year: 2016 2018
Mode:
Noise (dBA)
24-hr LAeq
> 90.0
80.0 - 89.9
70.0 - 79.9
60.0 - 69.9
55.0 - 59.9
50.0 - 54.9
45.0 - 49.9
Wilmington
Leland
Navassa
Belville
Clairmont
Eastbrook
Malmo
Elijah
Lanvale
Spring Hill
Bishop
Henrytown
Town Creek
Winnabow
Bell Swamp
Old Town
Cape Fear National at Brunswick Forest
Hightsville
ILM
Kings Grant
Brandywine
Alandale
Westwood Heights
Love Grove
Brooklyn
Princess Place
Fairlawn
Long Leaf Acres
College Acres
Windemere
Landfall Country Club Golf Course
Cavalier Woods
SEAHAWK LANDING
Bradley Creek East Estates
Wrightsville
Bradley Park
Edgewater Estates
Lake Forest
South Oleander
Delgado
Forest Hills
Devon Park
Sunset Park
Port of Wilmington
Glen Meade
Lincoln Forest
Winter Park
Piney Woods
Park Ave
Seagate
Pine Valley Estates
Millbrook
Masonboro
Echo Farms
Tanglewood
Silver Lake
Greenbriar
Marquis Hills
Myrtle Grove
Coastal Mangement-Masonboro Estaurine Resource Pre
Shipyard Blvd
Market St
Grace St
Chestnut St
Dock St
Castle St
Randall Pkwy
Wrightsville Ave
S College Rd
N College Rd
N 3rd St
Military Cutoff Rd
Andrew Jackson Hwy
Old Fayetteville Rd
Ocean Hwy E
Lanvale Rd NE
Wilmington Bypass
Macedonia Rd NE
River Rd SE
River Rd
Waynick Blvd
mapbox
bts

Chris Daves

From: Dixon, Keith G <kgdixon@ncdot.gov>
Sent: Monday, October 24, 2022 10:46 AM
To: Chris Daves
Subject: RE: [External] Futures Data Request - Carolina Beach Rd. in Wilmington, New Hanover Co.

Follow Up Flag: Follow up
Flag Status: Flagged

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Chris,

Here's a link to a forecast produced in 2019 for that location.

You should be able to interpolate a reasonable estimate for 2033 from this.

https://connect.ncdot.gov/projects/planning/Traffic%20Forecasts/U-4738%20Brunswick%20New%20Hanover%20TF/U-4738%20Brunswick%20New%20Hanover%202019%20TF.pdf

Keith G. Dixon
State Traffic Forecast Engineer
Transportation Planning Division
North Carolina Department of Transportation

919 707 0984 office
919 593 5270 mobile
kgdixon@ncdot.gov

1 South Wilmington St
1554 Mail Service Center
Raleigh, NC 27699-1554

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Chris Daves <CDaves@smeinc.com>
Sent: Sunday, September 11, 2022 6:44 PM
To: Dixon, Keith G <kgdixon@ncdot.gov>
Subject: [External] Futures Data Request - Carolina Beach Rd. in Wilmington, New Hanover Co.

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Good afternoon, sir.
I hope all is well.
We are conducting a HUD Noise study and have retrieved the current AADT numbers (36,000) from the NCDOT website. If possible, I am trying to get the best estimate of the AADTs for the year 2033 or beyond (whatever is available).

The road is Carolina Beach Road (Location ID 0650000467).

I have attached an exhibit for reference.

Please let me know if you need anything else and if there are any fees for this type of research.

Thanks again for your assistance.

Chris

Chris Daves, P.W.S.
Biologist/Senior Scientist
M: 803.446.2980
cdaves@smeinc.com

From: Dixon, Keith G <kgdixon@ncdot.gov>
Sent: Wednesday, November 17, 2021 1:55 PM
To: Chris Daves <CDaves@smeinc.com>
Subject: RE: [External] RE: Your Data Request - TDR21-RP029

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Chris,

Here's the most current info I could find for those links:

Link	2015	2040	CAGR
Raleigh St W of US 64	9800	12700	1.0%
Meadowbrook Rd S of Raleigh St	5100	6400	0.9%

2015 Traffic Forecast for FS-1504A produced by the NCDOT TPD.

I reviewed the 2019 published AADT as well. This model is a little dated but the volumes still seem reasonable.

Keith G. Dixon
State Traffic Forecast Engineer
Transportation Planning Division
North Carolina Department of Transportation

September 24, 2019

MEMORANDUM TO: Tracy Roberts
Project Manager
North Carolina Turnpike Authority

FROM: John Burris, PTP
HNTB North Carolina, PC

SUBJECT: Final No-Build Traffic Forecast for STIP Project U-4738
Constructing a New Four-lane Freeway Facility and Bridge over The Cape Fear River
Brunswick and New Hanover Counties

The NCDOT Transportation Planning Division (TPD) has reviewed and approved this No-Build traffic forecast for U-4738 for delivery as of September 23, 2019.

Please find attached the 2019 / 2045 No-Build Project-Level Draft Traffic Forecast for State Transportation Improvement Program (STIP) U-4738. STIP Project U-4738 includes the construction of an approximate 11.2 mile new-location, four-lane freeway facility and bridge over the Cape Fear River that would help improve traffic flow and enhance freight movements from I-140 to US 421 (Carolina Beach Road) in Brunswick and New Hanover Counties, NC. The traffic forecast for this project was requested by Tracy Roberts representing the North Carolina Turnpike Authority in April 2019 as part of the Traffic Forecasting Limited Services Agreement (7000019118) to be performed by HNTB North Carolina, P.C.

STIP Project U-4738 is currently programmed for planning and environmental studies only in the 2018 – 2027 STIP, approved by the NCDOT Board of Transportation on August 3, 2017 and most recently revised in August 2019. The Draft 2020 – 2029 STIP was released on August 7, 2019 and currently proposes programming for U-4738 right-of-way and utility work to begin in fiscal year 2028 with construction work currently unfunded.

The traffic forecast study area for U-4738 includes a total of 7 existing interchanges, and 37 intersections (at non-interchange locations). The following scenarios are included in this forecast:

- 2019 Base Year No-Build (BYNB)
- 2045 Future Year No-Build (FYNB)

NCDOT has decided to halt efforts on this project after the updated draft 2020-2029 State Transportation Improvement Plan (STIP) was released in August 2019. Therefore, this forecast only includes No-Build scenarios. The build scenarios will be developed in the future as necessary.

Previously completed project-level traffic forecasts that are nearby the U-4738 traffic forecast study area and considered relevant include the nearby forecasts for U-4434 (Independence Boulevard Extension), U-5734 / U-5729 (South Front Street Widening and Carolina Beach Road Corridor Upgrade), U-5731 (US 74 at US 17 / US 421 Intersection Improvement), R-4462 (US 74 / US 76 at NC 87 (Maco Road) Interchange Upgrade), and U-5702 / FS-1503A (US 117 / NC 132 (College Road) Widening). Additionally, the R-2633 traffic forecast and previously completed traffic forecast for U-4738 are considered relevant but have not been referenced in this traffic forecast.

Travel Demand Model

The 2015 WMPO Travel Demand Model (adopted in December 2016) was used in the development of this traffic forecast. The model has a Base Year of 2015 and a Future Year of 2040. Although the

2045 Metropolitan Transportation Plan (MTP) has not been adopted, it is proposed that 2040 MTP (officially adopted on November 18, 2015) and 2045 Socioeconomic Data be used with the 2040 WMPO Travel Demand Model at the request of the WMPO.

Fiscal Constraint

Within a Metropolitan Planning Organization (MPO), future year traffic forecasts assume construction of projects listed within an MPO's Metropolitan Transportation Plan (MTP). This traffic forecast is consistent with the current Wilmington Metropolitan Planning Organization (WMPO) 2040 MTP, which was officially adopted on November 18, 2015.

Development Activity

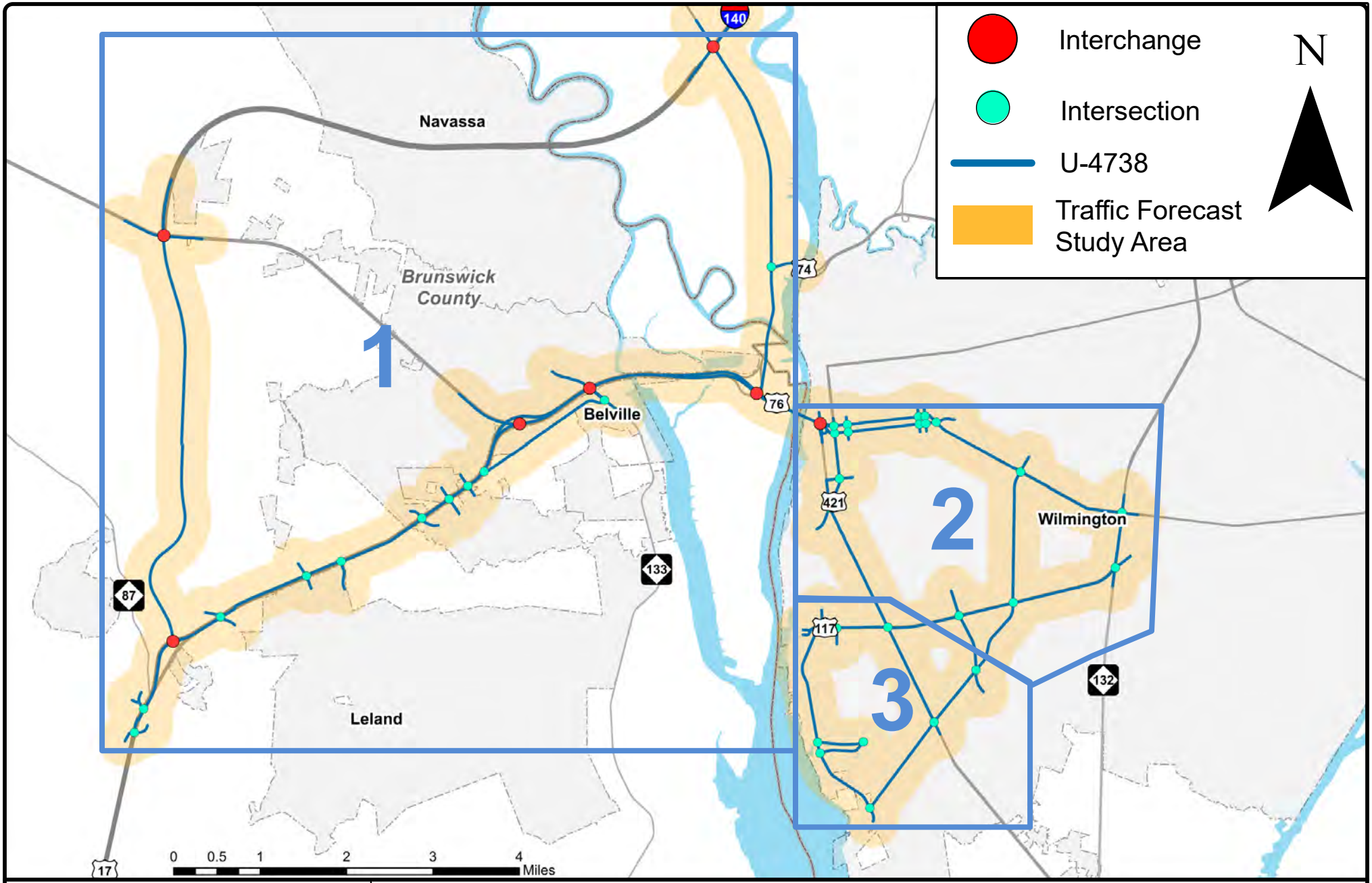
All recent and planned developments are assumed to be included in the official Base Year and Future Year WMPO TDM socioeconomic data sets.

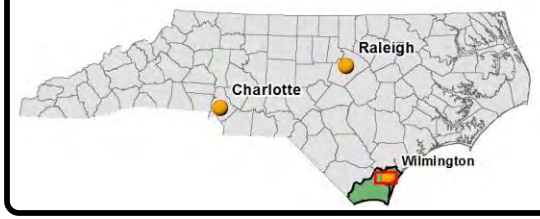
Forecast Methodology

The 2019 BYNB traffic estimate volumes and design factors were developed by considering recent historic AADT, the projection of historic AADT to 2019, project specific count data, and applying engineering judgement. The 2045 FYNB traffic forecast volumes were developed using historic AADT growth rates, extrapolations of historical AADT volumes, and growth percentages calculated from the WMPO TDM.

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated projections. If you have any questions or I can be of further assistance, please do not hesitate to call me at (919) 424-0483 or e-mail me at jburris@hntb.com.

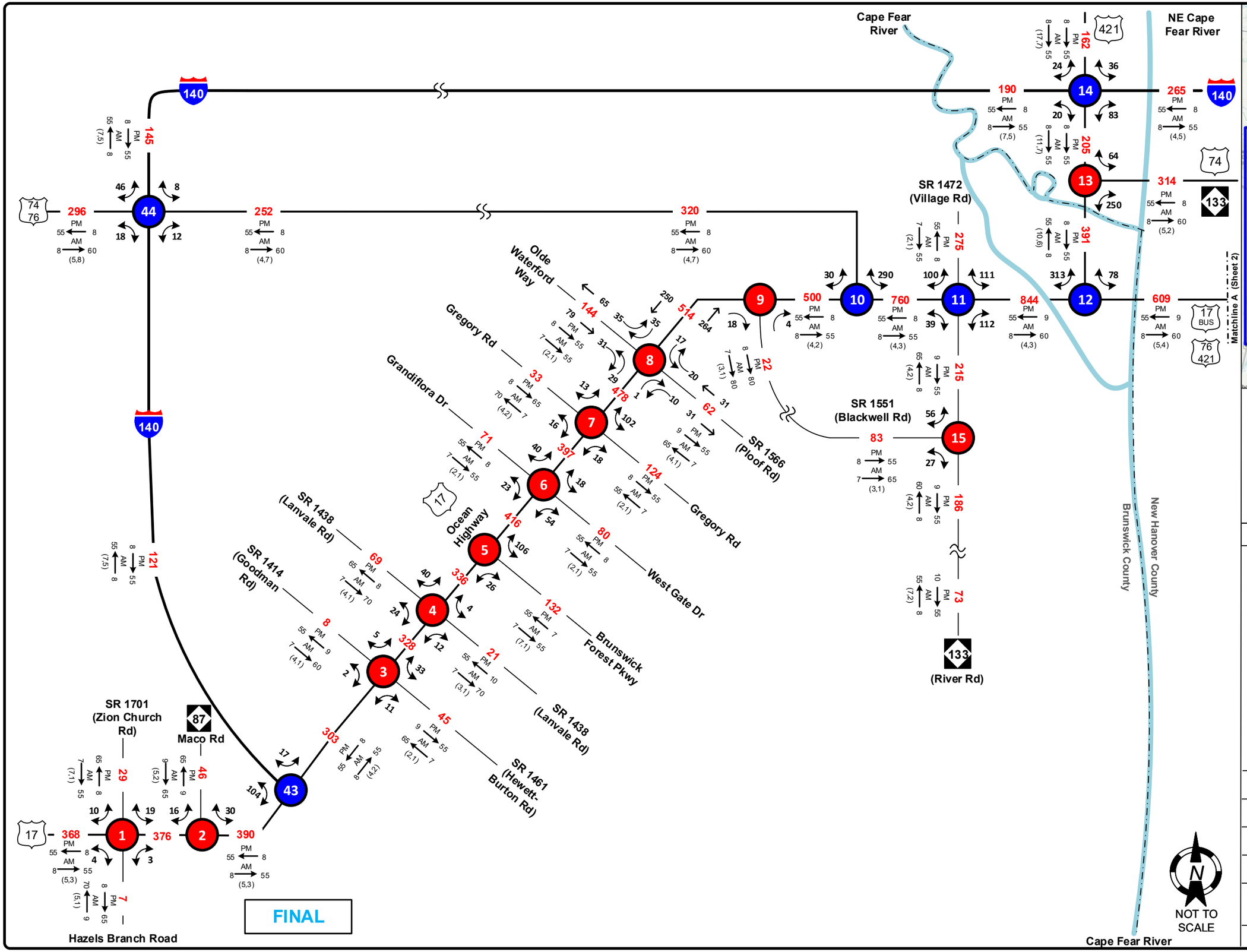
cc:
Keith Dixon, NCDOT Transportation Planning Division
Behshad Norowzi, NCDOT Transportation Planning Division
Caitlin Marks, NCDOT Division 3
Jim Dunlop, PE, NCDOT Congestion Management Section
Brenda Moore, PE, CPM, NCDOT Roadway Design Unit
Clark Morrison, PhD, PE, NCDOT Pavement Management Unit
Mike Kozlosky, WMPO
Allen Serkin, Cape Fear RPO
NCDOT Traffic Forecasting GIS Support

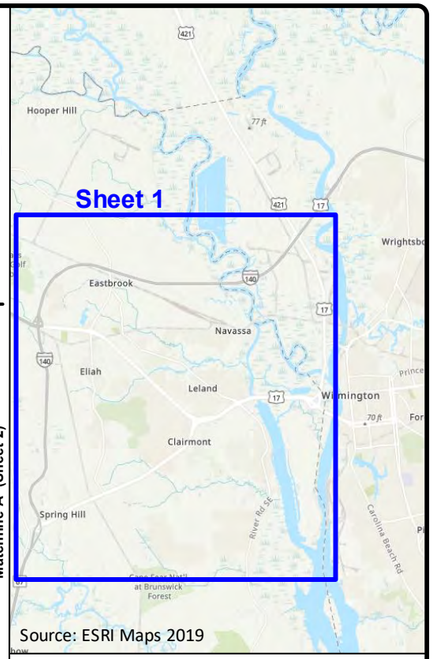




TRAFFIC FORECAST FIGURES SHEET KEY

TIP: U-4738	WBS: 40114.1.2	**PROJECT:** Cape Fear Crossing
COUNTY: Brunswick, New Hanover	DIVISION: 3	LOCATION: City of Wilmington, Town of Leland, Town of Belville, Town of Navassa
PREPARED BY: HNTB HNTB North Carolina, P.C. 343 E. Six Forks Rd., Suite 200 Raleigh, North Carolina 27609	**DATE:** September 2019	FIGURE 1





2019

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 1 OF 3

LEGEND

K AM/PM D (d,t)

← XX – Direction Volume

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
X	Restricted Movement
K	Design Hour Factor (%)
PM	PM Peak Period
AM	AM Peak Period
→	Peak Hour Directional Split (%)
D	Indicates Direction of D
(d,t)	Duals, TT-STs (%)
#	= Study Area Intersection ID
#	= Study Area Interchange ID
→	= One-way Streets

TIP: U-4738 | WBS: 40114.1.2

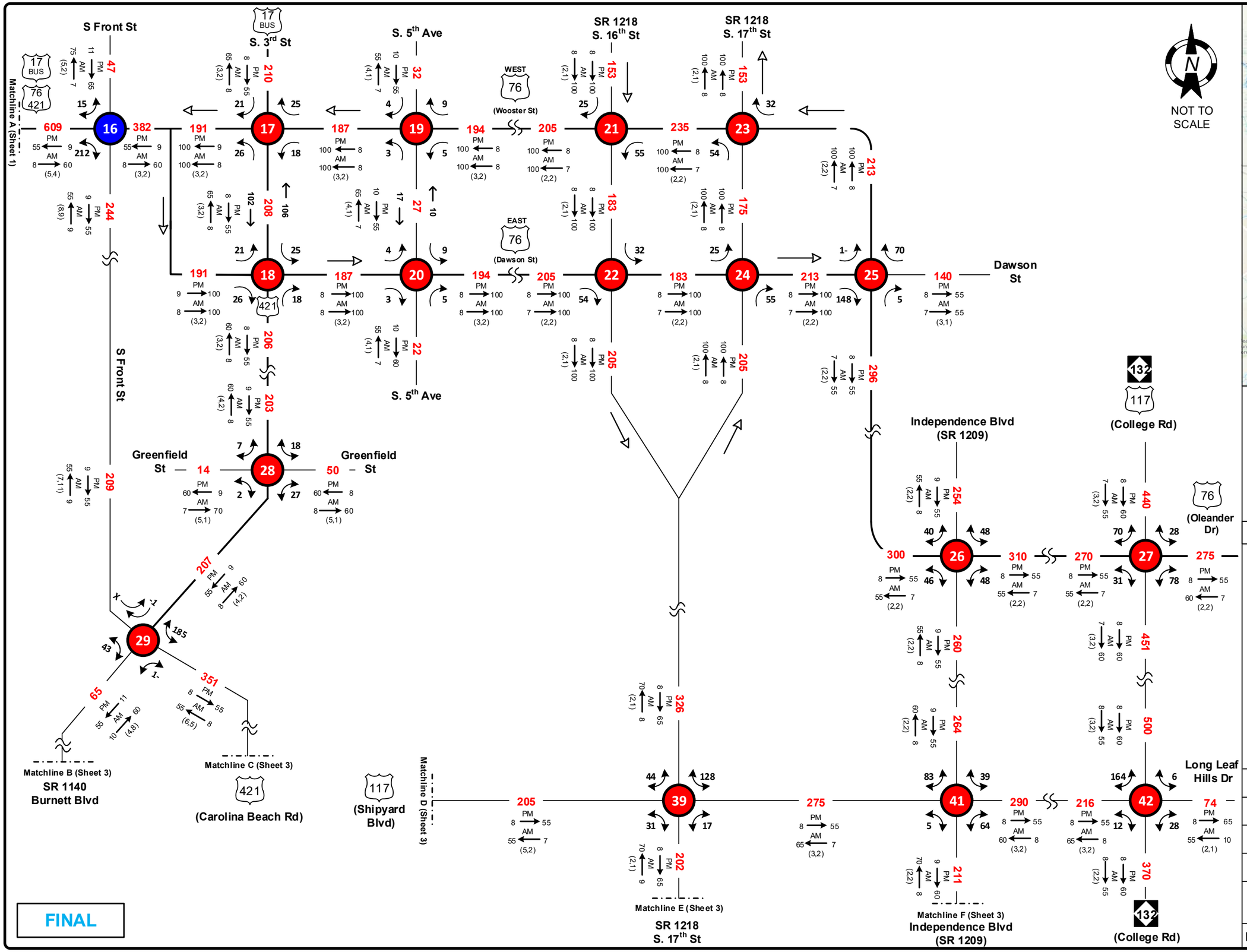
COUNTY: Brunswick, New Hanover | DIVISION: 3

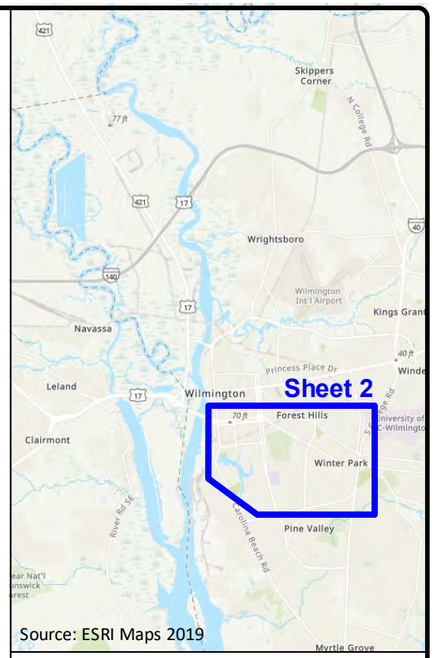
PROJECT: Cape Fear Crossing

PREPARED BY: HNTB
HNTB North Carolina, P.C.
343 E. Six Forks Rd., Suite 200
Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 2





2019

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 2 OF 3

LEGEND

← XX – Direction Volume	K AM/PM → D (d,t)
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TIP: U-4738 | WBS: 40114.1.2

COUNTY: Brunswick, New Hanover | DIVISION: 3

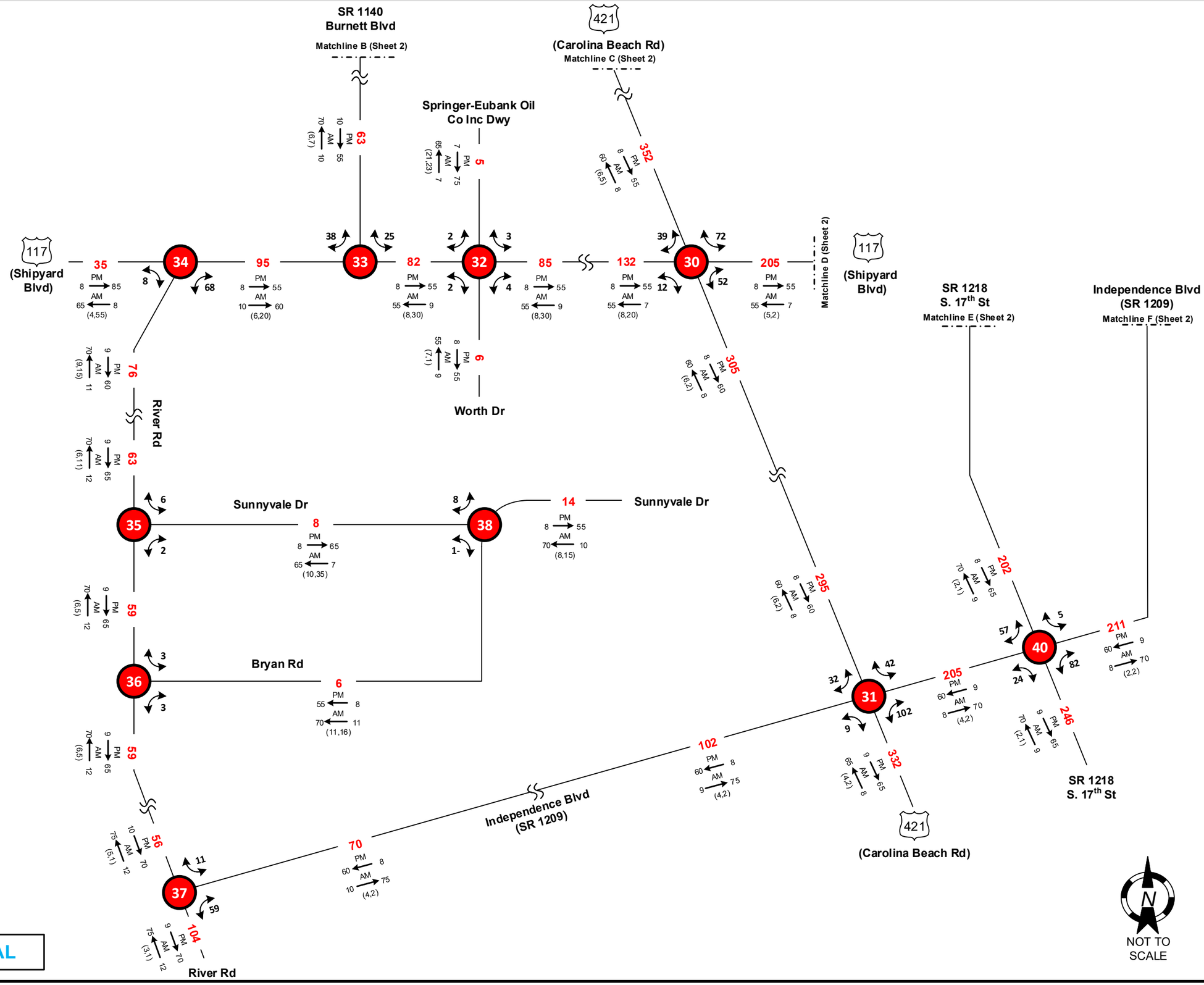
PROJECT: Cape Fear Crossing

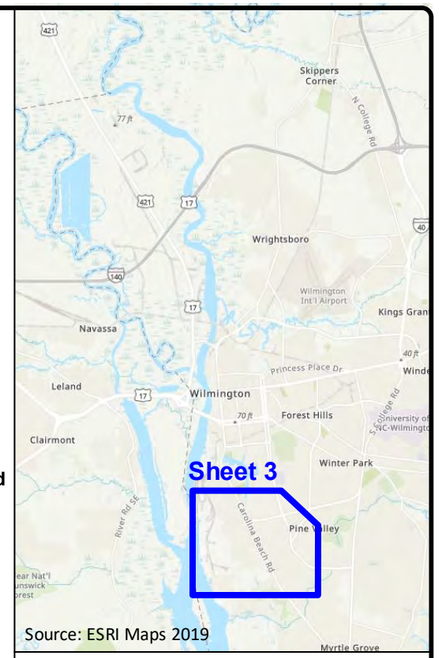
PREPARED BY: HNTB — HNTB North Carolina, P.C. 343 E. Six Forks Rd., Suite 200 Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 2

FINAL





2019

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 3 OF 3

LEGEND

← XX – Direction Volume

K AM / PM → D
(d , t)

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TIP: U-4738 | WBS: 40114.1.2

COUNTY: Brunswick, New Hanover | DIVISION: 3

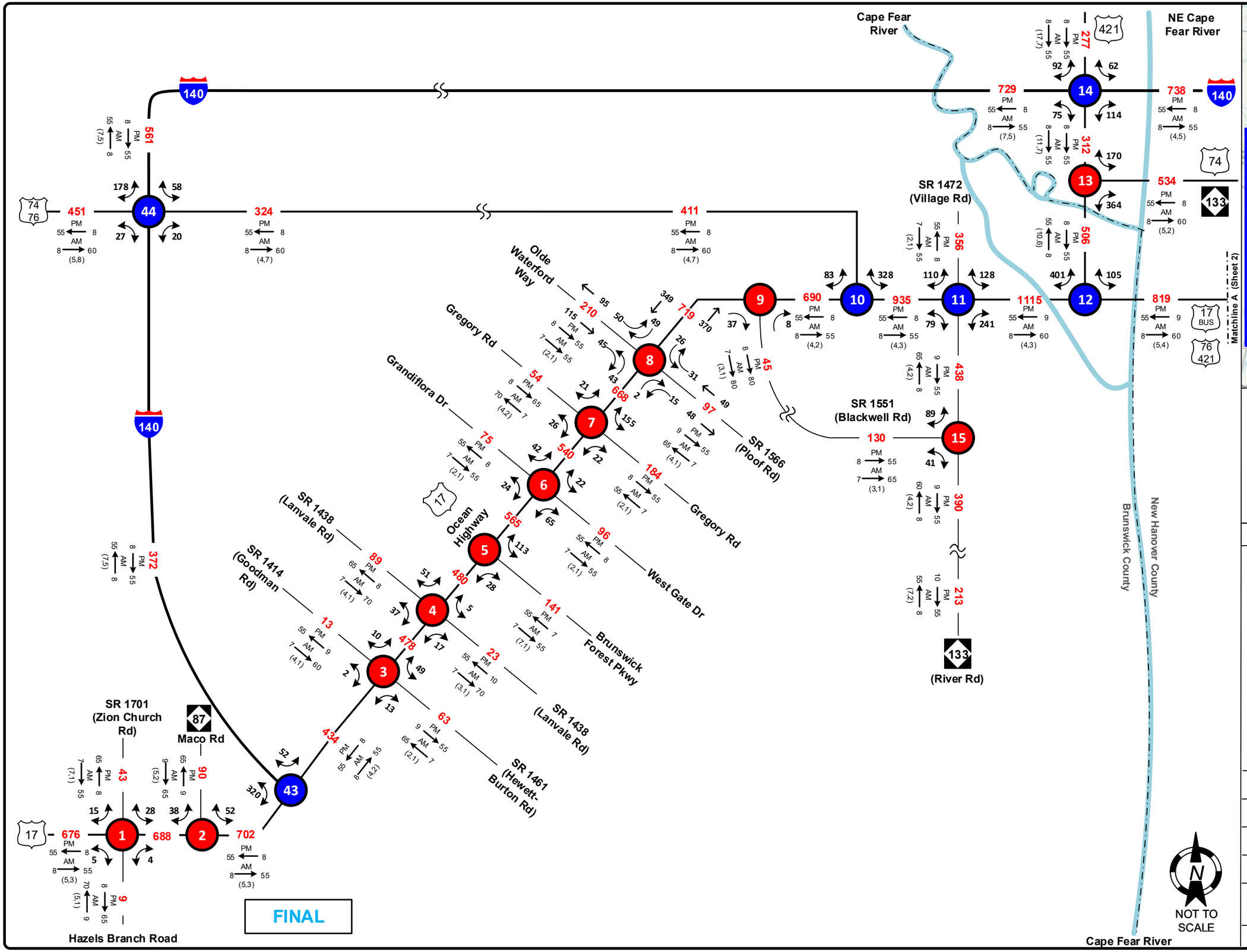
PROJECT: Cape Fear Crossing

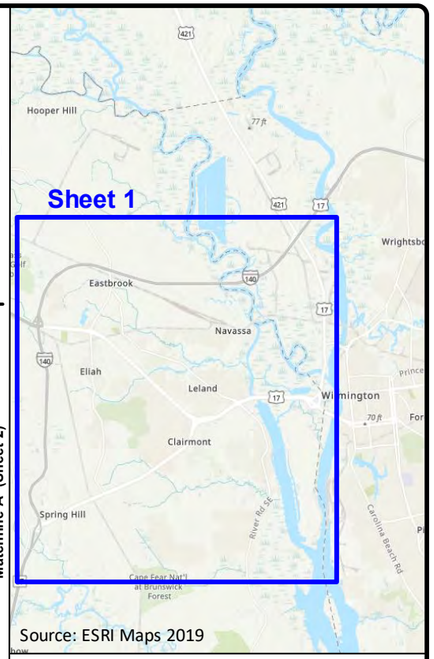
PREPARED BY: HNTB

HNTB North Carolina, P.C.
343 E. Six Forks Rd., Suite 200
Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 2





2045

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 1 OF 3

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TIP: U-4738 | WBS: 40114.1.2

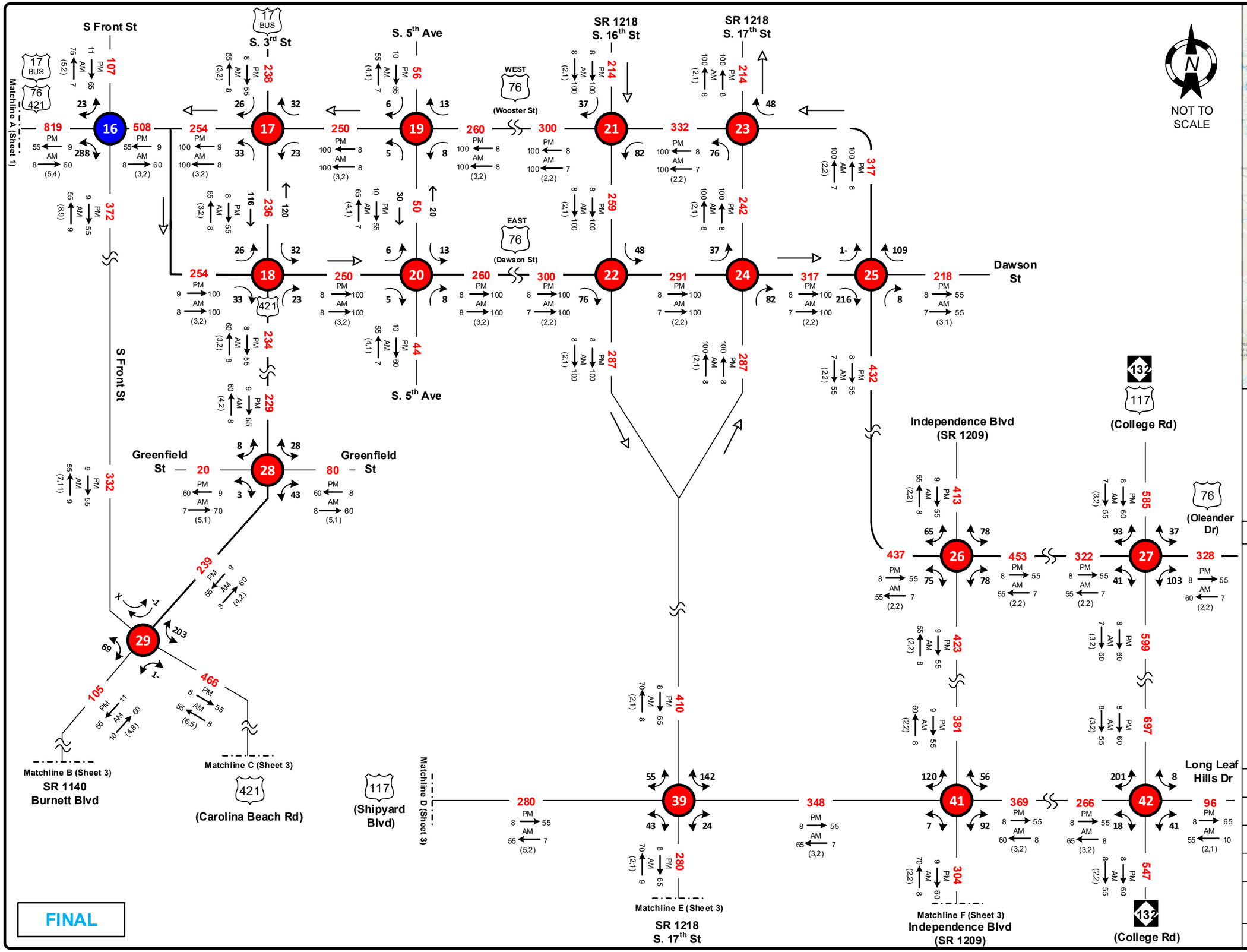
COUNTY: Brunswick, New Hanover | DIVISION: 3

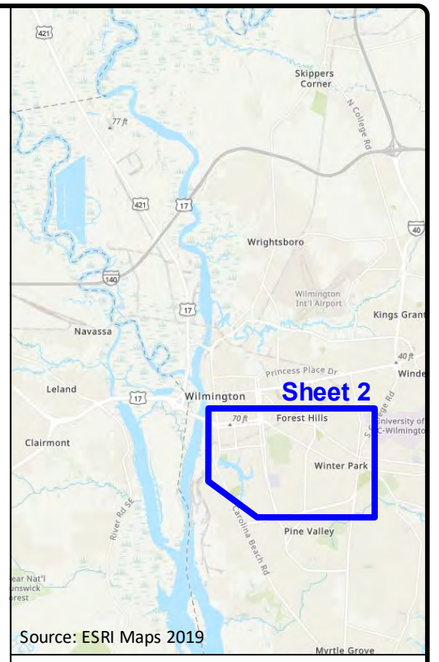
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PREPARED BY: HNTB
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343 E. Six Forks Rd., Suite 200
Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 3





2045

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 2 OF 3

LEGEND

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COUNTY: Brunswick, New Hanover | DIVISION: 3

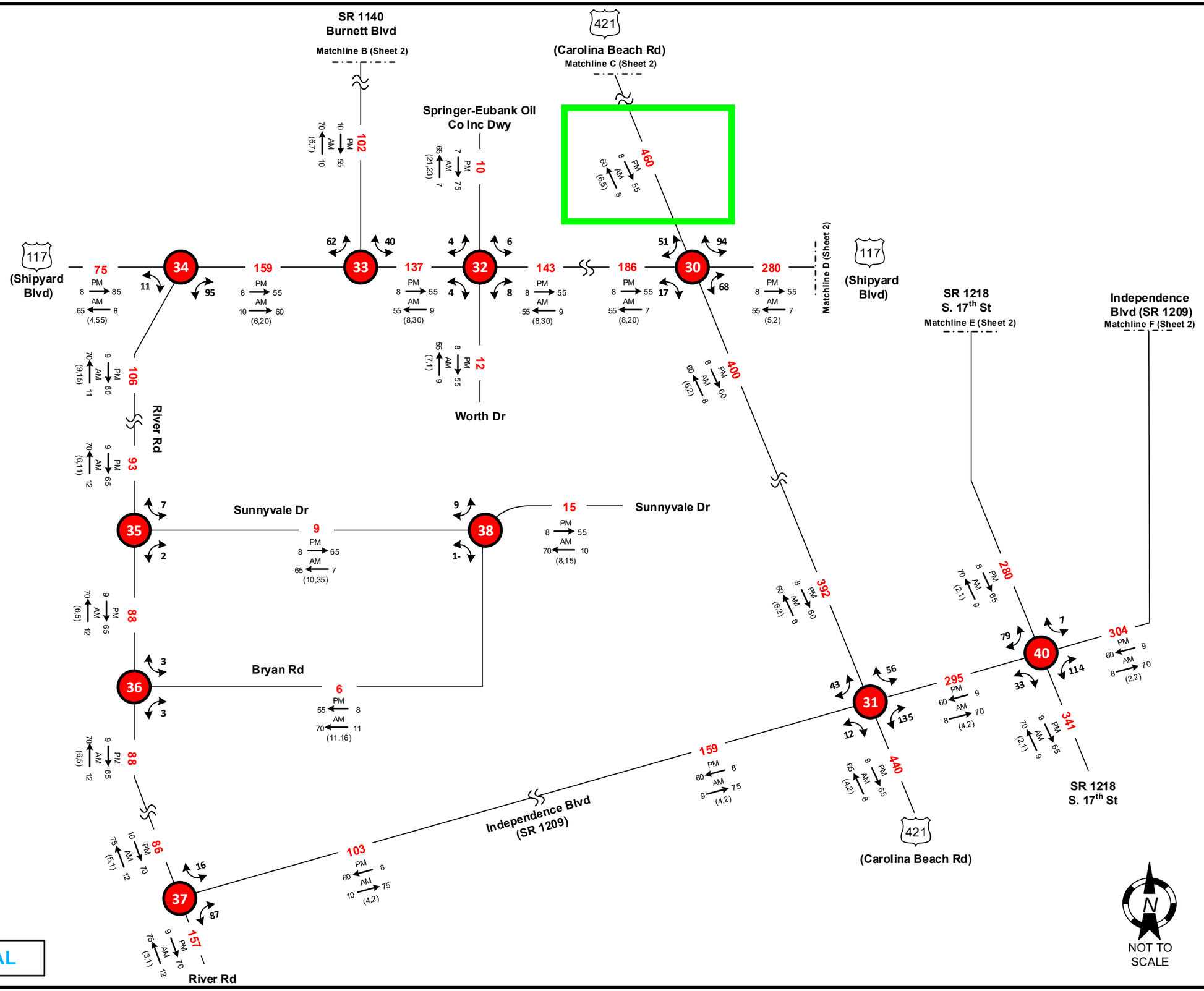
PROJECT: Cape Fear Crossing

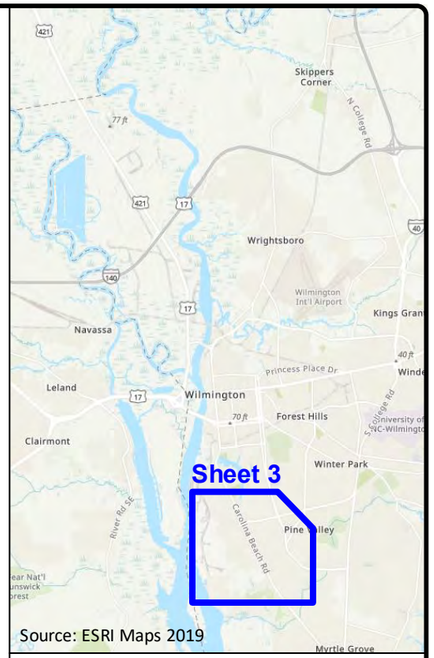
PREPARED BY: HNTB — HNTB North Carolina, P.C. 343 E. Six Forks Rd., Suite 200 Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 3

FINAL





Source: ESRI Maps 2019

2045

ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

SHEET 3 OF 3

LEGEND

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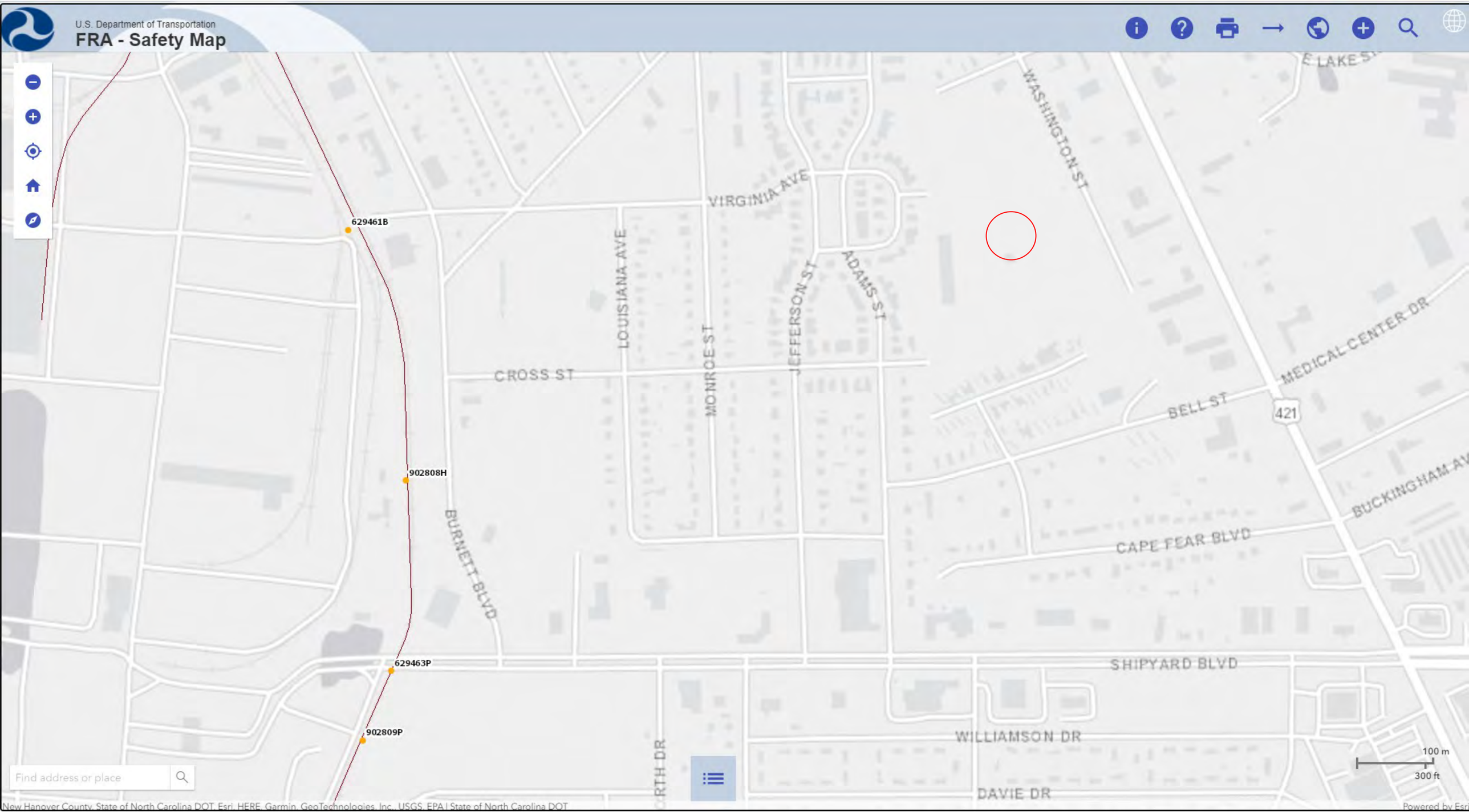
COUNTY: Brunswick, New Hanover | DIVISION: 3

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343 E. Six Forks Rd., Suite 200
Raleigh, North Carolina 27609

LOCATION: I-140 to US 421 and Shipyard Boulevard Intersection

DATE: September 2019 | FIGURE 3


U.S. Department of Transportation
FRA - Safety Map
629461B
902808H
629463P
902809P
VIRGINIA AVE
LOUISIANA AVE
MONROE ST
JEFFERSON ST
ADAMS ST
WASHINGTON ST
CROSS ST
BELL ST
MEDICAL CENTER DR
421
BUCKINGHAM AV
CAPE FEAR BLVD
BURNETT BLVD
SHIPYARD BLVD
WILLIAMSON DR
DAVIE DR
100 m
300 ft
Find address or place
New Hanover County, State of North Carolina DOT, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA | State of North Carolina DOT
Powered by Esri

About Content Legend

Legend

NCDOT - Railroad Crossings

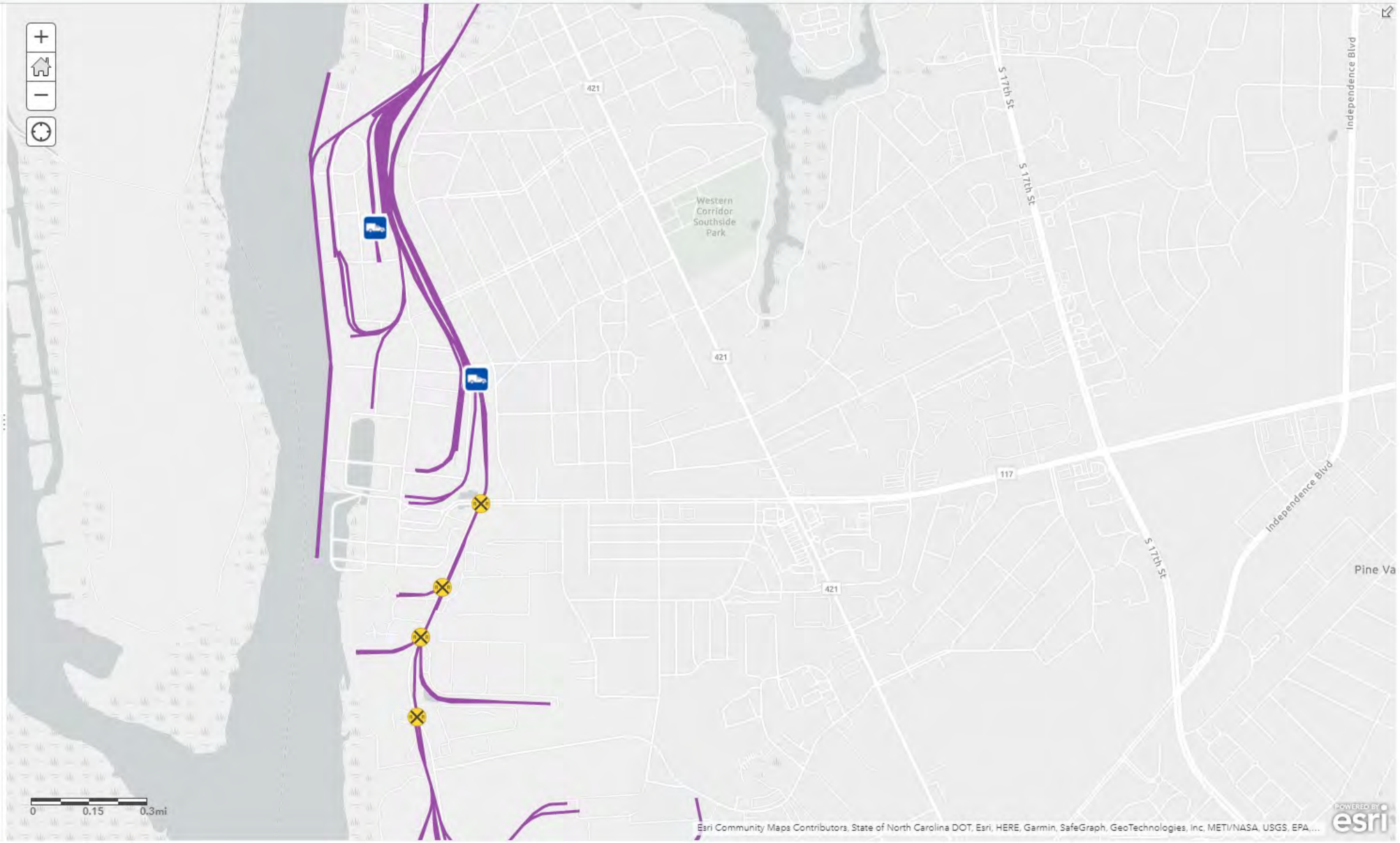
NCDOT - Rail Facilities

- Major Rail Yard
- Intermodal; Transload
- Station
- Station - Amtrak Bus

NCDOT - Railroads

Operator and Status

- CSX Active
- CSX Inactive
- NS Active
- NS Inactive
- Shortline Active
- Shortline Inactive
- NCDOT-Owned, No Operator



Chris Daves

From: Su Son <sson@gwrr.com>
Sent: Monday, September 12, 2022 11:29 PM
To: Chris Daves
Subject: RE: Train Request Data - Shipyard Blvd. in Wilmington - Crossing ID (629463P)

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Chris,

I was forwarded your inquiries below from Jason Wood. Please review the following:

Crossing 1: At Shipyard Blvd. (Crossing ID 629463P)
If available, I am seeking the following data for the crossing:

1) Number of trains in 24 hrs. (diesel & electric): 3 Trains in 24 hours/Diesel Locomotives.
2) Fraction of train operations at night (10pm-7am): 1 of 3 between the hours of 22:00 to 07:00.
3) Number of diesel locomotives per train: 2 Locomotive consist.
4) Average Number of cars per train (diesel & electric): Between 10 to 20 cars per train.
5) Average train speed: 10 MPH
6) Is the track welded or bolted? Jointed
7) Are whistles or horns required for grade crossings? Bell and Whistle are required approaching and occupying of all crossings.

Thanks.

Su Son
General Manager
Southern Region Railroads*
2128 Burnett Blvd
Wilmington, NC 28401
Office: 910-343-0461
Fax: 910-343-0461
Cell: 252-301-0508
Email: sson@gwrr.com

*__Southern Region Railroads__: **CA** Chesapeake & Albemarle Railroad Co., Inc.; **CWRY** Commonwealth Railway, Inc.; **GIMY** CSXI Savannah Intermodal Yard; **GITM** Golden Isle Terminal Railroad, Inc.; **NCVA** North Carolina & Virginia Railroad Co., LLC; **SAPT** Savannah Port Terminal Railroad, Inc.; **WTRY** Wilmington Terminal Railroad, LP

From: Jason Woods <jwoods@gwrr.com>
Sent: Monday, September 12, 2022 8:12 AM
To: Su Son <sson@gwrr.com>; Cary Hiles <cary.hiles@gwrr.com>
Subject: Fwd: Train Request Data - Shipyard Blvd. in Wilmington - Crossing ID (629463P)

Jason Woods
AVP Safety Compliance & Training, Southern Region Railroads*
Genesee & Wyoming Railroad Services, Inc.
a Genesee & Wyoming Company
13901 Sutton Park Drive South

Jacksonville, FL 32224
C: 252-301-1440

*Southern Region Railroads: Alabama & Gulf Coast Railway L.L.C. (AGR), Arkansas Midland Railroad Company, Inc. (AKMD), Arkansas Louisiana & Mississippi Railroad Company (ALM), AN Railway, L.L.C. (AN), Atlantic and Western Railway, Limited Partnership (ATW), The Bay Line Railroad, L.L.C. (BAYL), Bauxite & Northern Railway Company (BXN), Chesapeake & Albemarle Railroad (CA), Columbus and Greenville Railway Company (CAGY), Columbus & Chattahoochee Railroad, Inc. (CCH), Chattooga & Chickamauga Railway Co. (CCKY), Corpus Christi Terminal Railroad, Inc. (CCPN), Chattahoochee Industrial Railroad (CIRR), Conecuh Valley Railway, L.L.C. (COEH), Carolina Piedmont Railroad (CPDR), Commonwealth Railway, Incorporated (CWRY), Dallas, Garland & Northeastern Railroad, Inc. (DGNO), Eastern Alabama Railway, L.L.C. (EARY), East Tennessee Railway, L.P. (ETRY), First Coast Railroad Inc. (FCRD), Fordyce and Princeton R.R. Co. (FP), Georgia Central Railway, L.P. (GC), Golden Isles Terminal Railroad, Inc. (GITM), Georgia Southwestern Railroad, Inc. (GSWR), Galveston Railroad, L.P. (GVSR), Hilton & Albany Railroad, Inc. (HAL), Heart of Georgia Railroad, Inc. (HOG), Kiamichi Railroad Company L.L.C. (KRR), KWT Railway, Inc. (KWT), Louisiana & Delta Railroad, Inc. (LDRR), Little Rock & Western Railway, L.P. (LRWN), Luxapalila Valley Railroad, Inc. (LXVR), Missouri & Northern Arkansas Railroad Company, Inc. (MNA), Meridian & Bigbee Railroad, L.L.C. (MNBR), North Carolina & Virginia Railroad Company, L.L.C. (NCVA), Point Comfort & Northern Railway Company (PCN), The Prescott and Northwestern Railroad Company (PNW), Rail Link, Inc. (industrial switching) (RL), Riceboro Southern Railway, L.L.C. (RSOR), Rail Transportation Solutions Inc. (RTSI), Savannah Port Terminal Railroad, Inc. (SAPT), South Carolina Central Railroad Company, L.L.C. (SCRF), Texas Northeastern Railroad (TNER), Three Notch Railway, L.L.C. (TNHR), Valdosta Railway, L.P. (VR), Wiregrass Central Railway, L.L.C. (WGCR), Warren & Saline River Railroad Company (WSR), Wilmington Terminal Railroad, Limited Partnership (WTRY)

From: Chris Daves <CDaves@smeinc.com>
Sent: Sunday, September 11, 2022 6:10:13 PM
To: Jason Woods <jwoods@gwrr.com>
Subject: Train Request Data - Shipyard Blvd. in Wilmington - Crossing ID (629463P)

Good afternoon, Mr. Woods,

I am currently conducting a HUD noise assessment and seeking railroad data for one of your rail crossings in Wilmington, NC.

Crossing 1: At Shipyard Blvd. (Crossing ID 629463P)

If available, I am seeking the following data for the crossing:

1) Number of trains in 24 hrs. (diesel & electric)
2) Fraction of train operations at night (10pm-7am)
3) Number of diesel locomotives per train
4) Average Number of cars per train (diesel & electric)
5) Average train speed
6) Is the track welded or bolted?
7) Are whistles or horns required for grade crossings?

Thank you for your assistance. Please let me know if you require further information to assist you with your search.

Thank you.

Chris

Chris Daves, P.W.S.
Biologist/Senior Scientist

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY)	B. Reporting Agency	C. Reason for Update (Select only one)	D. DOT Crossing Inventory Number
08 / 03 / 2022	☐ Railroad ☐ Transit ☒ State ☐ Other	☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction	629463P

Part I: Location and Classification Information

1. Primary Operating Railroad	2. State	3. County
WILMINGTON TERMINAL RAILROAD, INC. [WTRY]	NORTH CAROLINA	NEW HANOVER

4. City / Municipality	5. Street/Road Name & Block Number	6. Highway Type & No.
☒ In ☐ Near WILMINGTON	SHIPYARD BOULEVARD (Street/Road Name) | 100 (* Block Number)	US 117

7. Do Other Railroads Operate a Separate Track at Crossing?	8. Do Other Railroads Operate Over Your Track at Crossing?
☐ Yes ☒ No If Yes, Specify RR	☒ Yes ☐ No If Yes, Specify RR CSX

9. Railroad Division or Region	10. Railroad Subdivision or District	11. Branch or Line Name	12. RR Milepost
☐ None COASTAL	☐ None WILMINGTON	☒ None	(prefix) | 0251.95 (nnnn.nnn) | (suffix)

13. Line Segment *	14. Nearest RR Timetable Station *	15. Parent RR (if applicable)	16. Crossing Owner (if applicable)
	WILMINGTON	☒ N/A	☐ N/A WTRY

17. Crossing Type	18. Crossing Purpose	19. Crossing Position	20. Public Access (if Private Crossing)	21. Type of Train	22. Average Passenger Train Count Per Day
☒ Public ☐ Private	☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.	☒ At Grade ☐ RR Under ☐ RR Over	☐ Yes ☐ No	☒ Freight ☐ Intercity Passenger ☐ Commuter ☐ Transit ☐ Shared Use Transit ☐ Tourist/Other	☐ Less Than One Per Day ☐ Number Per Day 0

23. Type of Land Use
☐ Open Space ☐ Farm ☐ Residential ☐ Commercial ☒ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number?	25. Quiet Zone (FRA provided)
☐ Yes ☒ No If Yes, Provide Crossing Number	☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established

26. HSR Corridor ID	27. Latitude in decimal degrees	28. Longitude in decimal degrees	29. Lat/Long Source
☒ N/A	(WGS84 std: nn.nnnnnnn) 34.191441	(WGS84 std: -nnn.nnnnnnn) -77.948482	☒ Actual ☐ Estimated

30.A. Railroad Use *	31.A. State Use *
30.B. Railroad Use *	31.B. State Use *
30.C. Railroad Use *	31.C. State Use *
30.D. Railroad Use *	31.D. State Use *
32.A. Narrative (Railroad Use) *	32.B. Narrative (State Use) *

33. Emergency Notification Telephone No. (posted)	34. Railroad Contact (Telephone No.)	35. State Contact (Telephone No.)
800-800-3490	910-343-0461	919-707-4100

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains (6 AM to 6 PM)	1.B. Total Night Thru Trains (6 PM to 6 AM)	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week?
4	2	4	0	

2. Year of Train Count Data (YYYY)	3. Speed of Train at Crossing
2019	3.A. Maximum Timetable Speed (mph) 10 3.B. Typical Speed Range Over Crossing (mph) From 5 to 10

4. Type and Count of Tracks
Main 1 Siding 0 Yard 0 Transit 0 Industry 0

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐AFO ☐ PTC ☐ DC ☐ Other ☒ None

6. Is Track Signaled?	7.A. Event Recorder	7.B. Remote Health Monitoring
☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)*	PAGE 2	D. Crossing Inventory Number *(7 char.)*
08/03/2022		629463P

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)*	2.B. STOP Signs *(R1-1) (count)*	2.C. YIELD Signs *(R1-2) (count)*	2.D. Advance Warning Signs *(Check all that apply; include count)* ☐ None
0	0	0	☒ W10-1 2 ☒ W10-3 0 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0

2.E. Low Ground Clearance Sign *(W10-5)*	2.F. Pavement Markings	2.G. Channelization Devices/Medians	2.H. EXEMPT Sign *(R15-3)*	2.I. ENS Sign *(I-13)* Displayed
☐ Yes *(count* 0 *)* ☒ No	☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None	☒ All Approaches ☐ Median ☐ One Approach ☐ None	☐ Yes ☒ No	☒ Yes ☐ No

2.J. Other MUTCD Signs ☒ Yes ☐ No	2.K. Private Crossing Signs *(if private)*	2.L. LED Enhanced Signs *(List types)*
Specify Type R8-8 Count 1 Specify Type _____ Count 0 Specify Type _____ Count 0	☐ Yes ☐ No	

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)*	3.B. Gate Configuration	3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)*	3.D. Mast Mounted Flashing Lights *(count of masts)* 2	3.E. Total Count of Flashing Light Pairs
Roadway 3 Pedestrian 0	☒ 2 Quad ☐ Full *(Barrier)* Resistance ☐ 3 Quad ☐ 4 Quad ☐ Median Gates	Over Traffic Lane 1 ☐ Incandescent ☒ LED Not Over Traffic Lane 0	☐ Incandescent ☒ LED ☐ Back Lights Included ☐ Side Lights Included	6

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)*	3.G. Wayside Horn	3.H. Highway Traffic Signals Controlling Crossing	3.I. Bells *(count)*
_____/_____ ☐ Not Required	☐ Yes Installed on *(MM/YYYY)* _____/_____ ☒ No	☐ Yes ☒ No	2

3.J. Non-Train Active Warning
☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None

3.K. Other Flashing Lights or Warning Devices
Count 0 Specify type _____

4.A. Does nearby Hwy Intersection have Traffic Signals?	4.B. Hwy Traffic Signal Interconnection	4.C. Hwy Traffic Signal Preemption	5. Highway Traffic Pre-Signals	6. Highway Monitoring Devices *(Check all that apply)*
☐ Yes ☒ No	☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs	☐ Simultaneous ☐ Advance	☐ Yes ☒ No Storage Distance * 0 Stop Line Distance * 0	☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad	2. Is Roadway/Pathway Paved?	3. Does Track Run Down a Street?	4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)*
☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 4	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* _____/_____ Width * _____ Length * 140
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☒ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* _____

6. Intersecting Roadway within 500 feet?	7. Smallest Crossing Angle	8. Is Commercial Power Available? *
☒ Yes ☐ No If Yes, Approximate Distance *(feet)* 75	☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90°	☒ Yes ☐ No

Part V: Public Highway Information

1. Highway System	2. Functional Classification of Road at Crossing	3. Is Crossing on State Highway System?	4. Highway Speed Limit
☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☒ (03) Federal AID, Not NHS ☐ (08) Non-Federal Aid	☐ (0) Rural ☒ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☒ (4) Minor Arterial ☐ (7) Local	☒ Yes ☐ No	45 MPH ☒ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)*	8. Estimated Percent Trucks	9. Regularly Used by School Buses?	10. Emergency Services Route
Year 2016 AADT 6489	16 %	☐ Yes ☒ No Average Number per Day 0	☐ Yes ☒ No

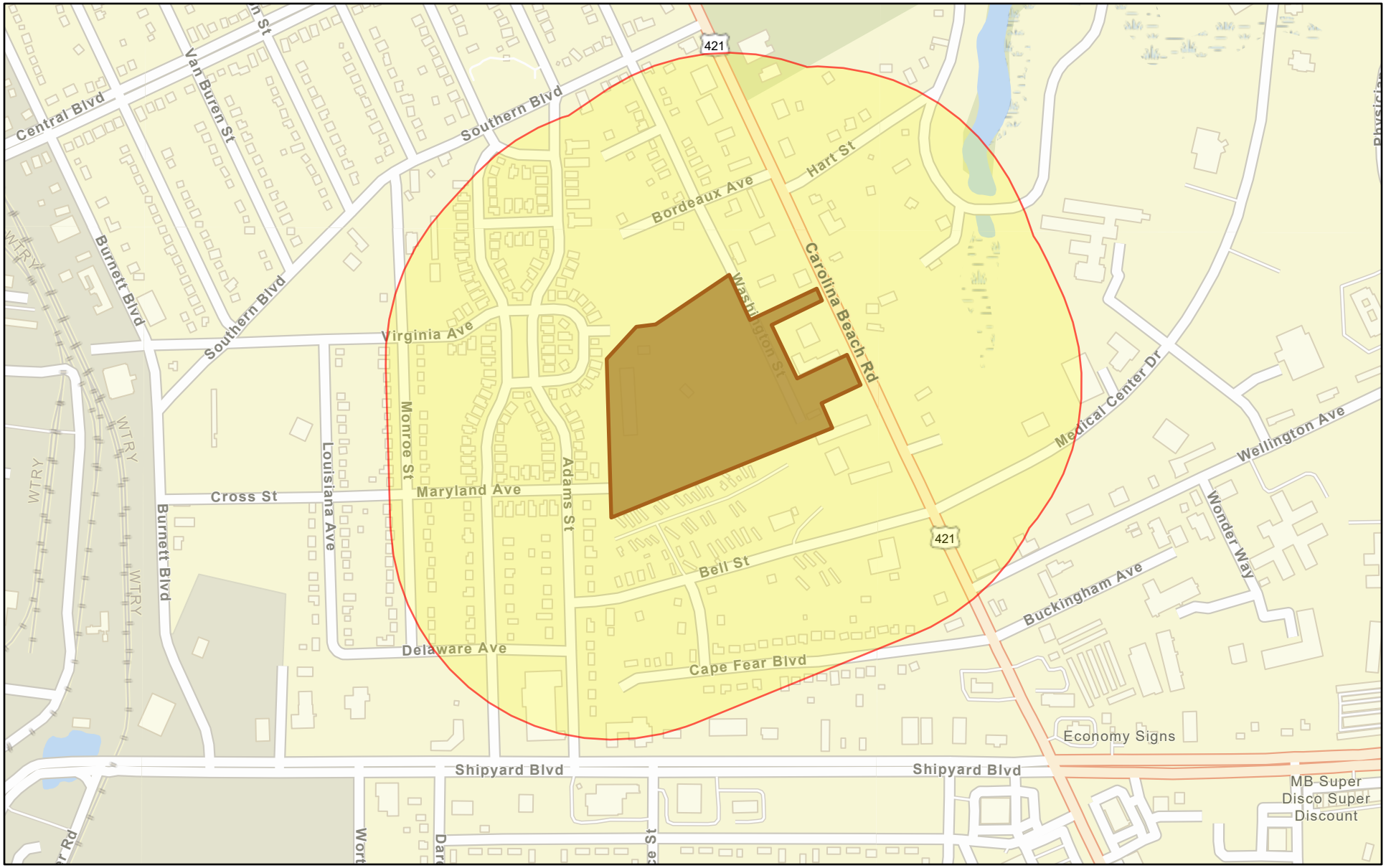
Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by _____ Organization _____ Phone _____ Date _____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

Appendix IV – Roads within 1,000 feet with Available AADT Data

Starway Village Apts - Roads 1,000-ft Buffer



November 15, 2022

Starway Village Apts

Buffer graphics

17 starway village shape files

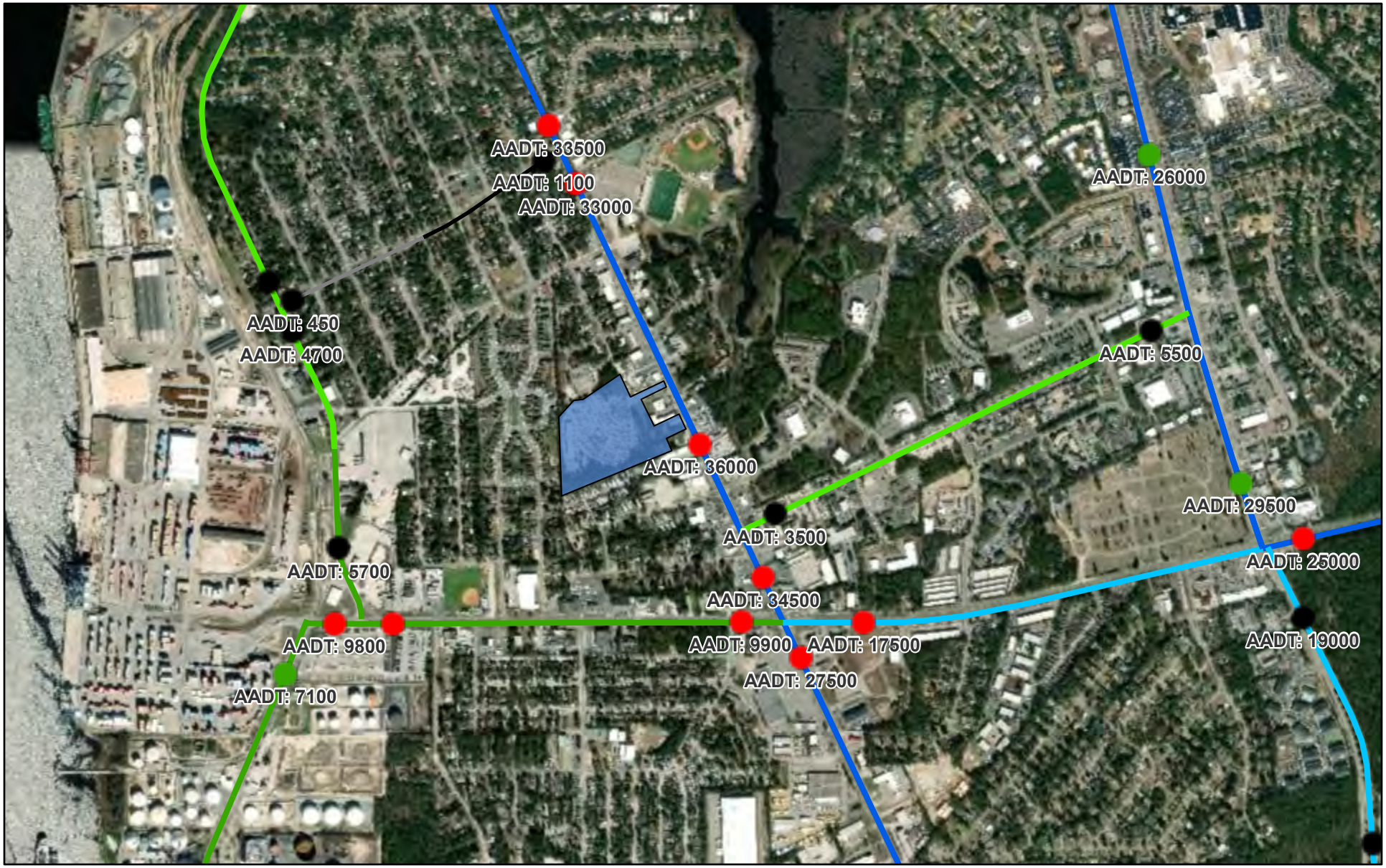
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin,

NCDOT AADT Map - Starway Village Apts



11/15/2022, 1:31:30 PM

17 Starway Village shape files - Approximate Boundary

NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Stations

US Routes

Secondary Routes

Non-System Routes

1:18,056

0 500 1,000 2,000 ft

0 210 420 840 m

Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,

NCDOT Traffic Survey Group staff collected, analyzed, processed and reported this data for calendar year 2020. | Prepared by the Traffic Survey Group, Transportation Planning Division, NCDOT | Esri Community Maps Contributors, State of North Carolina DOT, Esri,

Appendix V – Sources

Noise Sources – Starway Village Apartments

- Bureau of Transportation Statistics: https://www.bts.gov/geospatial/national-transportation-noise-map.
- The Noise Guidebook: (https://www.hudexchange.info/resource/313/hud-noise-guidebook/.
- Day/Night Noise Level Electronic Assessment Tool: https://www.hudexchange.info/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/.
- NC Department of Transportation (NCDOT) - Average Annual Daily Traffic (AADT): https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx.
- NC Department of Transportation (NCDOT) truck routes: https://connect.ncdot.gov/resources/State-Mapping/Documents/NCDOT_2020_Traffic_Segments_Shapefile_Description.pdf.
- NC Department of Transportation (NCDOT) - Division Office for Future Projects: https://connect.ncdot.gov/projects/planning/Pages/default.aspx.
- Division Boundaries and Contacts: https://www.ncdot.gov/divisions/highways/Pages/contact.aspx.
- 10-Year Forecasting: https://connect.ncdot.gov/projects/planning/Pages/ProjectLevelTrafficForecasting.aspx.
- Norfolk Southern: ATLNOCSID@nscorp.com.
- CSX Railways: https://www.csx.com/index.cfm/about-us/contact-us/contact-us-hud-forms/.
- Federal Railroad Administration – Office of Safety Analysis: http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx.
- Safety Map: https://fragis.fra.dot.gov/GISFRASafety/.
- Airport IQ 5010: https://www.airportiq5010.com/5010Web.
- Wilmington Terminal Railroad: https://www.gwrr.com/wtry/.
- Davenport – Transportation Impact Analysis for Starway Redevelopment (October 2021).
- HNTB – Final No-Build Traffic Forecast for STIP Project U-4738 (September 24, 2019): https://connect.ncdot.gov/projects/planning/Traffic%20Forecasts/U-4738%20Brunswick%20New%20Hanover%20TF/U-4738%20Brunswick%20New%20Hanover%202019%20TF.pdf.

ATTACHMENT 14

Sole Source Aquifers

North Carolina Sole Source Aquifer Map



6/7/2022, 1:53:09 PM

Sole_Source_Aquifers

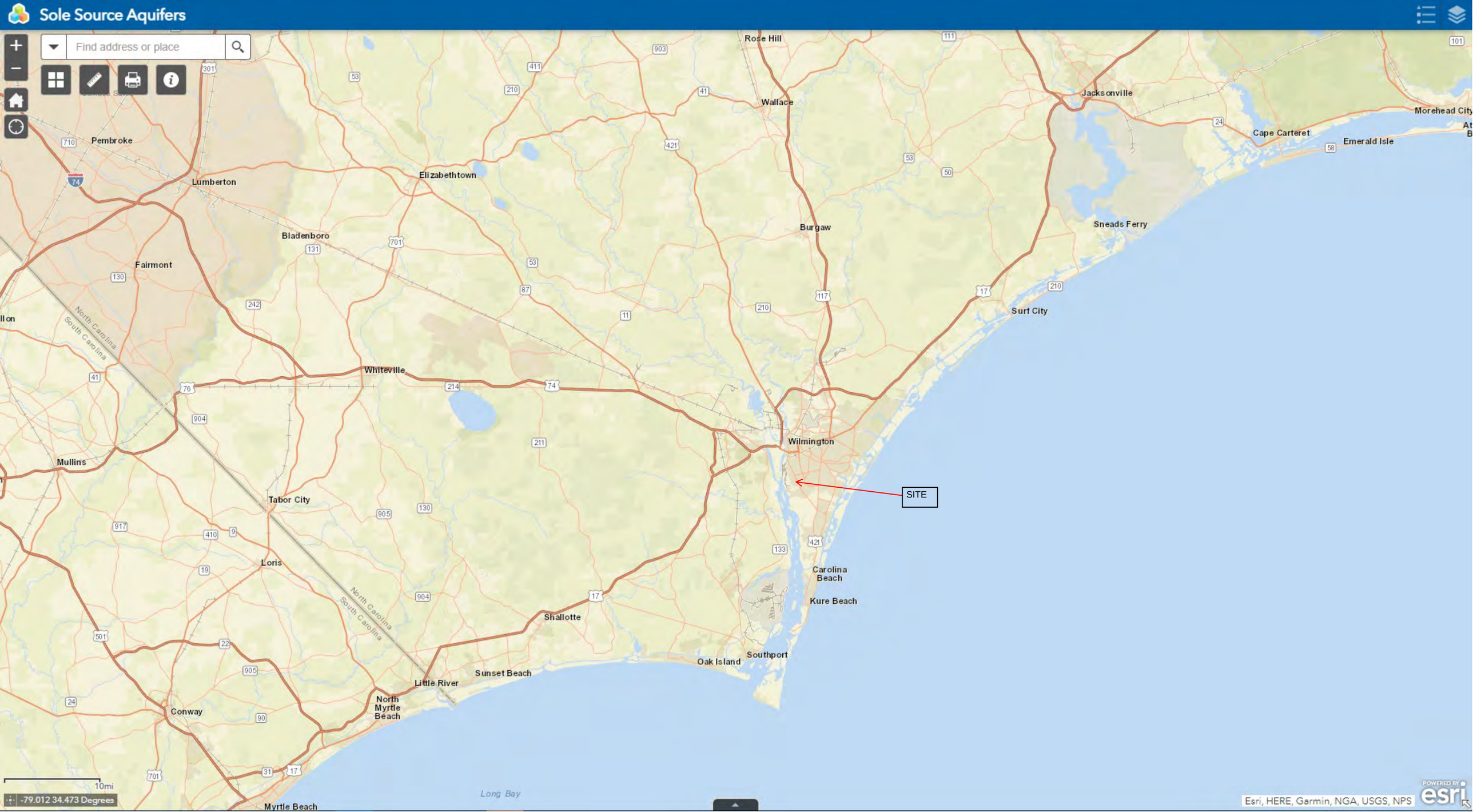
1:9,244,649

0 65 130 260 mi

0 105 210 420 km

Esri, HERE, Garmin, NGA, USGS, NPS

U.S. Environmental Protection Agency


Sole Source Aquifers
Find address or place
Rose Hill
Wallace
Jacksonville
Morehead City
Cape Carteret
Emerald Isle
Pembroke
Lumberton
Elizabethtown
Burgaw
Sneads Ferry
Bladenboro
Fairmont
Surf City
Whiteville
Wilmington
SITE
Mullins
Tabor City
Loris
Carolina Beach
Kure Beach
Shallotte
Oak Island
Southport
Sunset Beach
Little River
North Myrtle Beach
Conway
Myrtle Beach
Long Bay
North Carolina
South Carolina
10mi
-79.012 34.473 Degrees
Esri, HERE, Garmin, NGA, USGS, NPS

ATTACHMENT 15

Wetlands Protection

Attachment 15

Protection of Wetlands (EO 11990) Determination

Starway Village Apartments Project

EO 11990 Protection of Wetlands Determination

Affordable Housing Development Fund Program

November 17, 2022

Introduction & Overview

The purpose of EO 11990 Protection of Wetlands is "to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." This determination contains the analysis prescribed by 24 CFR Part 55.

This project involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program – Disaster Recovery (CDBG-DR) funding for construction of new affordable, multifamily housing consisting of seven buildings containing 278 apartment units for low- and moderate-income families. The analysis that follows focuses on wetland impacts, as there are direct wetland impacts associated with this project. Based on the type of land use and facility and other case characteristics described herein, it is concluded that there is a reasonable basis to proceed with funding for this proposed action within a wetland. The CDBG-DR funding is administered through the North Carolina Office of Recovery and Resiliency (NCORR) Affordable Housing Development Fund Program which is developing safer and more resilient communities while increasing the availability of affordable housing for low- and moderate-income families. Thus, alternatives preventing or impeding the development of safer and more resilient communities along with increasing affordable housing options are not considered reasonable alternatives.

Description of Proposed Action & Land Use

The proposed action consists of an affordable housing multifamily development located on an approximate 15.67-acre tract located at 2346 Carolina Beach Road in Wilmington, New Hanover County, North Carolina 28401. The four parcels that comprise the project site include R06013-021-001-000, R06018-002-006-001, R06014-001-001-000, and R06014-001-004-000. The proposed action entails construction of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also proposed. The development will be conducted in two phases.

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel Number 3720312600K (eff. 8/28/18), the proposed action site is wholly located in Zone X (Areas of Minimal Flood Hazard), outside of the Special Flood Hazard Area (SFHA) and 100-year floodplain. The proposed action site does not include any areas of regulatory floodway. There are no Preliminary FIRMs available at the FEMA Flood Map Service Center for the proposed action site. A manmade ditch located on the southern and eastern portions of the proposed action site is not considered a HUD wetland or open water and, thus, is excluded from this EO 11990 Determination.

This proposed action will assist the City of Wilmington and New Hanover County in providing affordable housing for the local community. The City is seeking to address the shortage in affordable housing inventory exacerbated by the effects of Hurricane Florence. The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage.

Applicable Regulatory Procedure Per EO 11990

The proposed action corresponds with a noncritical action not excluded under 24 CFR §55.12. Funding is permissible for new construction in the wetland if the proposed action is processed under §55.20 and the findings of the determination are affirmative to suggest that the project may proceed. Based on information from the U.S. Army Corps of Engineers (USACE) Jurisdictional Determination (JD) (see **Appendix 1**), there will be new construction within an isolated, freshwater, emergent/scrub-shrub wetland (0.24-acre) on the northern portion of the proposed action site. Due to the use of HUD funds, compliance with EO 11990 through completion of the 8-step process under 24 CFR 55.20 is required for projects with wetland impacts regardless of whether the USACE has authorized or requires a general or regional Clean Water Act (CWA) Section 404 permit. Thus, in accordance with the decision-making process set forth in 24 CFR Part 55, this analysis focuses on wetlands.

Step 1. **Determine Whether the Proposed Action Results in New Construction in Wetland.**

Based on the USACE Jurisdictional Determination, the proposed action is located in non-federal (isolated/non-jurisdictional), freshwater wetland, as shown in **Appendix 1**. The HUD definition of wetlands under 24 CFR 55.2(b)(11) includes non-jurisdictional, isolated wetlands. The proposed action is considered new construction in wetlands as the development will involve fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings (Building 2).

According to the USACE, the proposed action will not require a CWA Section 404 Permit. However, the proposed impact to the wetland qualifies to use the North Carolina Department of Environmental Quality (DEQ), Division of Water Resources (DWR) State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000) issued on July 15, 2022. This General Permit is issued in conformity with the requirements of North Carolina Regulations in 15A NCAC 02H .1300, as amended by Session Law 2015-286, for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina. Per the North Carolina Wetland Assessment Method (NCWAM) manual, the onsite wetland has been classified as a Basin Wetland (see **Appendix 1**). The proposed action's activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies.

Step 2. **Initiate Public Notice for Early Review of Proposal.**

Because the proposed action involves new construction in wetlands, NCORR published an early notice that allowed for public and agency input on the decision to provide funding for construction and development activities. The early public notice and 15-day comment period is complete. No public comments were received.

The early notice and corresponding 15-day public comment period started on October 21, 2022 with the "Early Notice and Public Review of a Proposed Activity in a Wetland" being published in the Wilmington Star-News newspaper, with the 15-day period expiring on November 7, 2022. The notice targeted local residents within the community. The notice was also posted at https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews and sent via Federal Express and email to the following federal and state agencies on October 21, 2022: HUD NC Field Office; Federal Emergency Management Agency (FEMA); U.S. Environmental Protection Agency (EPA); U.S Fish and Wildlife Service (USFWS); USACE; NC State Environmental Clearinghouse; and NC Housing Finance Agency. The notice was also sent to New Hanover County and the City of Wilmington. (See **Appendix 2** for the early notice distributed to these agencies, the newspaper publication affidavit, and distribution documentation).

Step 3. **Identify and Evaluate Practicable Alternatives to Locating the Proposed Action in a Wetland.**

The North Carolina Affordable Housing Development Fund Program empowers the State's most impacted communities with the technical expertise needed to develop thorough and implementable reconstruction plans to build physically, socially, and economically resilient and sustainable communities.

Multiple alternatives were considered for the current proposed action. The four sites that were considered include:

- Site 1: 1149 N. Kerr Avenue, Wilmington NC 28405: Site 1 was unfeasible for three reasons: (1) NCDOT is improving the Kerr/MLK intersection and the contemplated future southbound turn lane on Kerr Avenue will block access to the site; (2) the site location required building an expensive bridge over an environmentally sensitive creek; and (3) the site location sits at the back end of the Wilmington International Airport and there was concern about noise pollution adversely impacting future tenants.

- Site 2: 316 Marlboro St., Wilmington NC 28403: Site 2 was unfeasible because the seller was unwilling to sell at a price that allowed the applicant to build a 100% affordable apartment development.

- Site 3: 5529 Park Avenue, Wilmington NC 28403: Site 3 was unfeasible because the seller was unwilling to sell at a price that allowed the applicant to build a 100% affordable apartment development.

- Site 4: 2346 Carolina Beach Road, Wilmington, NC 28401 (Preferred Alternative): Site 4 was considered the preferred alternative as it was ideal for the development due to the close proximity and availability of existing utility services to the site. The proposed action will be a multifamily, affordable housing complex that will provide new, safe housing that is needed in the area for low- and middle-income households. The proposed action will assist the City of Wilmington and New Hanover County to provide affordable housing for the local community. The site is zoned MD-17 (High-density multiple-dwelling residential) that allows for an increase in housing diversity and allows those residents to utilize existing goods and services within one mile of the site according to the Staff Summary Report. This site was found to be a suitable site with minimal adverse environmental impacts for affordable, multifamily housing in an area that needs it.

In summary, alternative Sites 1-3 were evaluated, but were determined not feasible for the reasons listed above. In addition, these sites were not as competitive using the State's scoring criteria for LIHTC awards. Site 4 was chosen because it met most of the NCHFA 2021 QAP scoring criteria. There are very few sites in the southern Wilmington area that fall within the 1.5-mile driving distances from grocery stores, pharmacies, etc., that make up the most consequential portion of the scoring criteria. Ultimately, Site 4 was chosen as the most suitable location for the proposed action.

Another alternative for the current proposed action is the "No Action" Alternative. With the No Action Alternative, affordable housing would not be provided for low-income families in the local community. The City would need to find other options to address the shortage in affordable housing inventory exacerbated by the effects of hurricanes that recently damaged and destroyed homes. Thus, the "No Action" Alternative is not feasible in relation to the desired objective of creating affordable housing options in the City.

The above-identified alternatives will be re-evaluated in response to public comments received.

Step 4. **Identify & Evaluate Potential Direct & Indirect Impacts Associated with Occupancy or Modification of the Wetland and Potential Direct & Indirect Support of Wetland Development that Could Result from Proposed Action.**

The proposed direct impacts include new construction within a freshwater, emergent/scrub-shrub wetland (0.24-acre) on the northern portion of the proposed action site that involve fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings (Building 2).

Wetland Evaluation

The purpose of wetland evaluation is to consider factors relevant to a proposed action's effect on the survival and quality of any wetlands to be disturbed. These factors should include public health (including water supply and water quality), maintenance of natural systems, cost increases attributed to construction in wetland, and other uses of wetland in the public interest. The USACE Jurisdictional Determination and wetland delineation map indicate one wetland area located on the proposed action site. The proposed action will result in permanent impacts to approximately 0.24 acre of isolated wetland. These impacts will consist of fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings (Building 2). Further, mitigation measures are incorporated into the design plans, and permit requirements and conditions will be complied with during construction.

Public health, safety, and welfare, including water supply, quality, recharge, and discharge; pollution; flood and storm hazards and hazard protection; and sediment and erosion.

The onsite, depressional basin wetland functions as collection point for stormwater from the Starway Flea Market and surrounding commercial properties. The natural and beneficial functions and values related to hydrology and water quality include slowing down stormwater runoff, providing surface and subsurface retention, and filtering out pollutants. The two stormwater management ponds for the proposed action will assist with reducing potential flooding on the site and in the immediate area. According to a University of Florida/IFAS article (https://edis.ifas.ufl.edu/publication/SS695), "Stormwater ponds' primary purpose is flood control, and they are designed to intercept stormwater runoff (precipitation that runs off our buildings, roads, parking lots, and sidewalks), but they also provide other services like a place for sediment to settle out of the water column, habitat for wildlife, recreational opportunities like birding, and pollutant removal. Overall, stormwater ponds help mitigate the impacts of urban stormwater runoff while protecting our natural waterways from nutrient loading, erosion, sedimentation, and algal blooms." Further, there are no 100-year or 500-year floodplains or regulatory floodway present on the site. Therefore, the proposed action should not increase impacts to *public health, safety, and welfare*.

Water supply wells were not identified at the proposed action site. The site will be provided with municipal water from the Cape Fear Public Utility Authority (CFPUA). The proposed action should not negatively affect the municipal water supply of the region. Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the NC DEQ DWR Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq. All public water supply systems must comply with state and federal drinking water monitoring requirements. If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the NC DEQ DWR Public Water Supply Section. The proposed action will not include the discharge of sewer to surfaces of the site or surrounding properties. The site will be provided with municipal waste water service.

The proposed project will have a state stormwater permit, Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County.

According to the USACE, the proposed project will not require a CWA Section 404 Permit. However, the NC DEQ, DWR State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000) issued on July 15, 2022 applies to this project. This General Permit is issued in conformity with the requirements of North Carolina regulations in 15A NCAC 02H .1300, as amended by Session Law 2015-286, for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina. Per the NCWAM manual, the onsite wetland has been classified as a Basin Wetland. According to the NC DEQ DWR-WQRS Section comments (Starway Village Apartments Project Environmental Assessment [EA] - Attachment 34), it is "recommended to schedule a site visit with 401 Water quality staff to discuss the proposal and to ensure compliance will be maintained per 401 surface Water requirements, surface water standards and buffer rules. If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization." The proposed action's activities will be completed in accordance with all applicable federal, state and local laws, regulations, and permit requirements and conditions. Permits required for this proposed action shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies.

Maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna; species and habitat diversity and stability; natural hydrologic function; wetland type; fish; wildlife; timber; and food and fiber resources.

Two stormwater ponds will be built for the proposed action and provide stormwater retention functions, thus, replacing the natural function of the onsite, isolated wetland to be impacted. These ponds can also provide wildlife habitat. Native plants will be utilized in the site's landscaping design. Thus, the proposed action has been designed and mitigation measures incorporated to have the minimal impacts on these features.

According to the Phase I ESA and Protected Species Assessment site visits, the proposed action site consists of cleared dirt and gravel parking areas and a large commercial building with large bay doors formerly operated as the Starway Flea Market. The smaller parcels along Carolina Beach Road consist of two single-family residential lots with grass lawns, a commercial car retail outbuilding, and associated parking areas. There are approximately 3 acres of pine-mixed hardwood wooded areas, a depressional, basin wetland (0.24 acre) surrounded by uplands on the northern portion of the site, and a manmade ditch on the southern and eastern portions of the proposed action site. The proposed action site is situated in an area of dense residential, commercial, and industrial development. During the 24 CFR 58 environmental review process, "no effect" determinations were made for federally-listed, protected (threatened or endangered), candidate and proposed species, except for the NLEB, and a "no Eagle Act permit required" determination. The proposed action's Self-certification Letter, 10-step project review package, and signed NLEB 4(d) Rule Streamlined Consultation Form were submitted to the USFWS on October 17, 2022 as notification of its determination and requested acknowledgement of receipt and determination that the proposed action "may affect, but is not likely to adversely affect the NLEB." Under the NLEB 4(d) Rule Streamlined Consultation

Form, "[i]f the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. USFWS has not contacted NCORR for additional information. A response has not been received from the USFWS, however, if a response is received then it will be included in the environmental review record. The Grant Recipient will update this determination annually for multi-year activities. The USFWS recommends to avoid tree clearing from April 1 to October 31 for the NLEB. It is also recommended to conduct vegetation and tree clearing from September 1-April 30 to avoid impacts to nesting migratory birds (nesting season is typically May-August).

The proposed action's activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed action shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. Thus, there will be minimal to no effect on living resources such as natural systems such as flora and fauna, timber, and food and fiber resources.

Cost increases attributed to wetland-required new construction and mitigation measures to minimize harm to wetlands that may result from such use.

The proposed scope of work involves native plants used in landscaping and two stormwater retention ponds built on the site, including one large pond in the location of the wetland. The stormwater retention ponds will require regular maintenance, as needed, but retention ponds are standard requirements for similar development sites in Wilmington. These additional costs are minimal along with additional work and reports required. These costs include Wetland Delineation (field work): $4,000, Permits (civil engineer's time to file/coordinate): $3,500, and Army Corps Jurisdictional Determination Application Fee: $500. The alternative sites that were evaluated and discussed in Step 3 had a significantly higher purchase price than those that can be attributed to these additional wetland-required costs. There are no anticipated cost increases attributed to additional mitigation measures to minimize harm to wetlands as these measures are built into existing plans. Since the impacts to wetlands are less than one acre, no compensatory mitigation is required.

Other uses of wetland in the public interest, including recreational, scientific, and cultural uses.

The wetland located on the northern portion of the proposed action site is surrounded by development on all sides. The wetland is proposed to be completely filled. There are no identifiable recreational, scientific, or cultural uses of the wetland that will be impacted by the proposed action.

As part of the 24 CFR 58 environmental review, the NC State Historic Preservation Office (SHPO) and Chief Bill Harris and the Tribal Historic Preservation Office (THPO) of the Catawba Indian Nation were consulted regarding any historic or tribal resources in the area that could be affected by the proposed action. On November 14, 2022, the NC SHPO responded that the project will have no effect on historic properties. On November 10, 2022, the Catawba Indian Nation's THPO responded that the "Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and/ or human remains are located during the ground disturbance phase of this project." The SHPO and Catawba Indian Nation consultation documentation is included in the Starway Village Apartments Project EA.

Step 5. **Where Practicable, Design or Modify the Proposed Action to Minimize the Potential Adverse Impacts to the Wetland and to Restore and Preserve its Natural and Beneficial Functions and Values.**

The onsite, depressional, basin wetland functions as collection point for stormwater from the Starway Flea Market and surrounding commercial properties. The natural and beneficial functions and values related to hydrology and water quality include slowing down stormwater runoff, providing surface and subsurface retention, and filtering out pollutants. The two stormwater management ponds for the proposed action will assist with reducing potential flooding on the site and in the immediate area. The proposed action was designed to minimize impacts from removal of the wetland by constructing a larger stormwater pond in the same location. It was not feasible to design the proposed action to avoid the wetland due to the size of the site, four-story building limit by local zoning, NCHFA design criteria, and the need for at least 278 units. As the impacts to wetlands are less than one acre, no compensatory mitigation is required.

The proposed project will have a state stormwater permit, SWPPP, and Erosion and Sedimentation Control Plan and Approval, which is being developed as required. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. BMPs for erosion and sedimentation control will be utilized during construction. Further, the proposed project will comply, if required, with 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control. According to NC DEQ, areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the State. The proposed project will conform to construction requirements of the State of North Carolina and New Hanover County. The short-term construction impacts will be mitigated by BMPs for debris, dust, and erosion control during construction activities. Native plants will be used in the site's landscaping design.

The two proposed stormwater ponds will also assist with erosion control and sedimentation. Stormwater ponds can provide services like a place for sediment to settle out of the water column, habitat for wildlife, recreational opportunities like birding, and pollutant removal. A University of Florida/IFAS article notes "[o]verall, stormwater ponds help mitigate the impacts of urban stormwater runoff while protecting our natural waterways from nutrient loading, erosion, sedimentation, and algal blooms." An Erosion and Sedimentation Control Plan and Approval will be required for the site. Further, the proposed action will comply with all federal, State and local permit conditions and requirements. These mitigation measures will help minimize flood water level for the area, intercept stormwater runoff, and filter out pollutants. The stormwater ponds will intercept runoff similar to the functions of the onsite wetland, with one large pond being constructed in the area of the wetland.

Step 6. **Reevaluate the Alternatives and Proposed Action.**

Sites 1-3 were not feasible due to anticipated traffic issues, bridge expenses over an environmentally sensitive creek, airport noise issues, economic viability of the proposed action related to seller's high purchase price, and non-competitive scores within the State's scoring criteria for LIHTC awards.

Site 4 at 2346 Carolina Beach Road (Preferred Alternative) was determined to be a suitable site using the NCHFA scoring system and its close proximity and availability of existing utility services and surrounding existing development. No other suitable alternative sites were identified and reviewed. As such, this option was deemed most feasible. The proposed action was designed to minimize impacts from removal of the wetland by constructing a larger stormwater pond in the same location.

The "No Action" Alternative would not address the purpose and need of the proposed action. The City would need to find other options to address the shortage in affordable housing inventory exacerbated by the effects of hurricanes that recently damaged and destroyed homes. Therefore, the "No Action" Alternative examined is not considered desirable, and the proposed action is still practicable in light of potential adverse

impacts on the wetland and the potential to disrupt the natural and beneficial functions and values of this isolated wetland.

Implementation of the proposed action will abide by all applicable federal, State and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. The impacts of these alternatives will be re-evaluated in response to any public comments received.

Step 7. **Issue Findings and Public Explanation.**
It is the finding of this report that there is no better alternative than to provide funding for the Starway Village Apartments Project. The City would need to find other suitable options to address the shortage in affordable housing inventory exacerbated by the effects of the recent hurricanes.

A final notice, formally known as "Final Notice and Public Explanation of a Proposed Activity in a Wetland" was being published in accordance with 24 CFR 55. However, this notice was combined with the Notice of Finding of No Significant Impact (FONSI) and Notice of Intent to Request Release of Funds (NOI-RROF) for a 15-day comment period. The 15-day comment period started with the combined notice publishing in the Wilmington Star-News newspaper on November 18, 2022 and expires on December 5, 2022. The notice was also posted at https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews and sent via Federal Express and email to the following state and federal agencies on November 18, 2022: HUD NC Field Office; FEMA; EPA; USFWS; USACE; NC State Environmental Clearinghouse; and NC Housing Finance Agency. The notice was also sent to New Hanover County and the City of Wilmington. (See **Appendix 3** for the final notice distributed to these agencies). Any comments received will be addressed, if significant, and added to the EA.

Step 8. **Continuing Responsibility of Responsible Entity & Recipient.**
NCORR is the responsible entity and will provide educational materials, when available. It is acknowledged there is a continuing responsibility by the responsible entity to ensure, to the extent feasible and necessary, compliance with the Steps herein.

Appendix 1

USACE Jurisdictional Determination

USFWS NWI Map

Site Plans

NCDEQ-DWR State General Permit for Impacts to Isolated Wetlands and Isolated Waters (Permit Number: IWGP100000)

Dichotomous Key to General North Carolina Wetland Types

NCWAM Wetland Rating Sheet/Assessment Form

Site Photographs

SAW-2021-01647

Electronically Transmitted

U.S. ARMY CORPS OF ENGINEERS

WILMINGTON DISTRICT

Action Id. **SAW-2021-01647** County: **New Hanover** U.S.G.S. Quad: **NC-Wilmington**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Bradley Housing Developers, LLC**
Brad Queener
Address: **P.O. Box 526**
Aynor, SC 29511
E-mail: **brad@bradleydevelopers.com**

Size (acres) **16**
Nearest Waterway **Cape Fear River**
USGS HUC **03030005**
Nearest Town **Wilmington**
River Basin **Cape Fear**
Coordinates Latitude: **34.196388**
Longitude: **-77.939694**

Location description: **The project area is located at 2346 Carolina Beach Road in Wilmington.**

Indicate Which of the Following Apply:

A. Preliminary Determination

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The **waters, including wetlands** have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. The approximate boundaries of these waters are shown on the enclosed delineation map dated **DATE**. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the **waters, including wetlands** have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the **waters, including wetlands** at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

B. Approved Determination

☐ There are Navigable Waters of the United States within the above described project area/property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are **waters, including wetlands**on the above described project area/property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐We recommend you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

☐The **waters, including wetlands** on your project area/property have been delineated and the delineation has been verified by the Corps. The approximate boundaries of these waters are shown on the enclosed delineation map dated. We strongly suggest

you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

☐ The **waters, including wetlands** have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on **DATE**. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☒ There are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in **Morehead City, NC, at (252) 808-2808** to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Brad Shaver at 910-251-4611 or brad.e.shaver@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the approved jurisdictional determination form dated 08/04/2021.

D. Remarks: *Desktop determination.*

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information **(This information applies only to approved jurisdictional determinations as indicated in B. above)**

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
AND
PHILIP.A.SHANNIN@USACE.ARMY.MIL

SAW-2021-01647

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **10/03/2021**.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Brad E Shaver Digitally signed by Brad Shaver Date: 2021.08.04 15:15:23 -04'00'

Date of JD: **08/04/2021** Expiration Date of JD: **08/03/2026**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy Furnished(electronic):

Kimley-Horn attn: Mackenzie Richards



Kimley»Horn

Figure 3: Delineated Features Map
Starway Village
Wilmington, New Hanover County, NC
June 2021

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 08/04/2021
ORM Number: SAW-2021-01647
Associated JDs: N/A
Review Area Location[1]: State/Territory: NC City: Wilmington County/Parish/Borough: New Hanover
Center Coordinates of Review Area: Latitude 34.196388 Longitude -77.939694

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1	0.24	acre(s)	(b)(1) Non-adjacent wetland.	Wetland W1 is a low lying, concave depression located in the northeast corner of the project site adjacent to a gravel roadway. Hydrology within wetland W1 was at the surface, with standing/ponded water present throughout the area. No potentially jurisdictional connections were observed flowing from the wetland feature nor was there any signatures on available lidar. Wetland W1 is not adjacent to an (a)(1), (2), or (3) water.
Ditch 1	733	Linear Feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	Ditch 1 is a manmade, constructed ditch within uplands. Ditch 1 is not a tributary under (a)(2), was not a tributary under (a)(2) when it was constructed, was not constructed in an adjacent wetland, and does not contribute surface flow to an (a)(1) water in a typical year. According to soils data the ditch was constructed in non-hydric soils, Lynchburg.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Title(s) and date(s)
  This information is sufficient for purposes of this AJD.
  Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).
- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- ☐ Photographs: Select. Title(s) and/or date(s).
- ☐ Corps site visit(s) conducted on: Date(s).
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
- ☒ USDA NRCS Soil Survey: NHC 1977

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

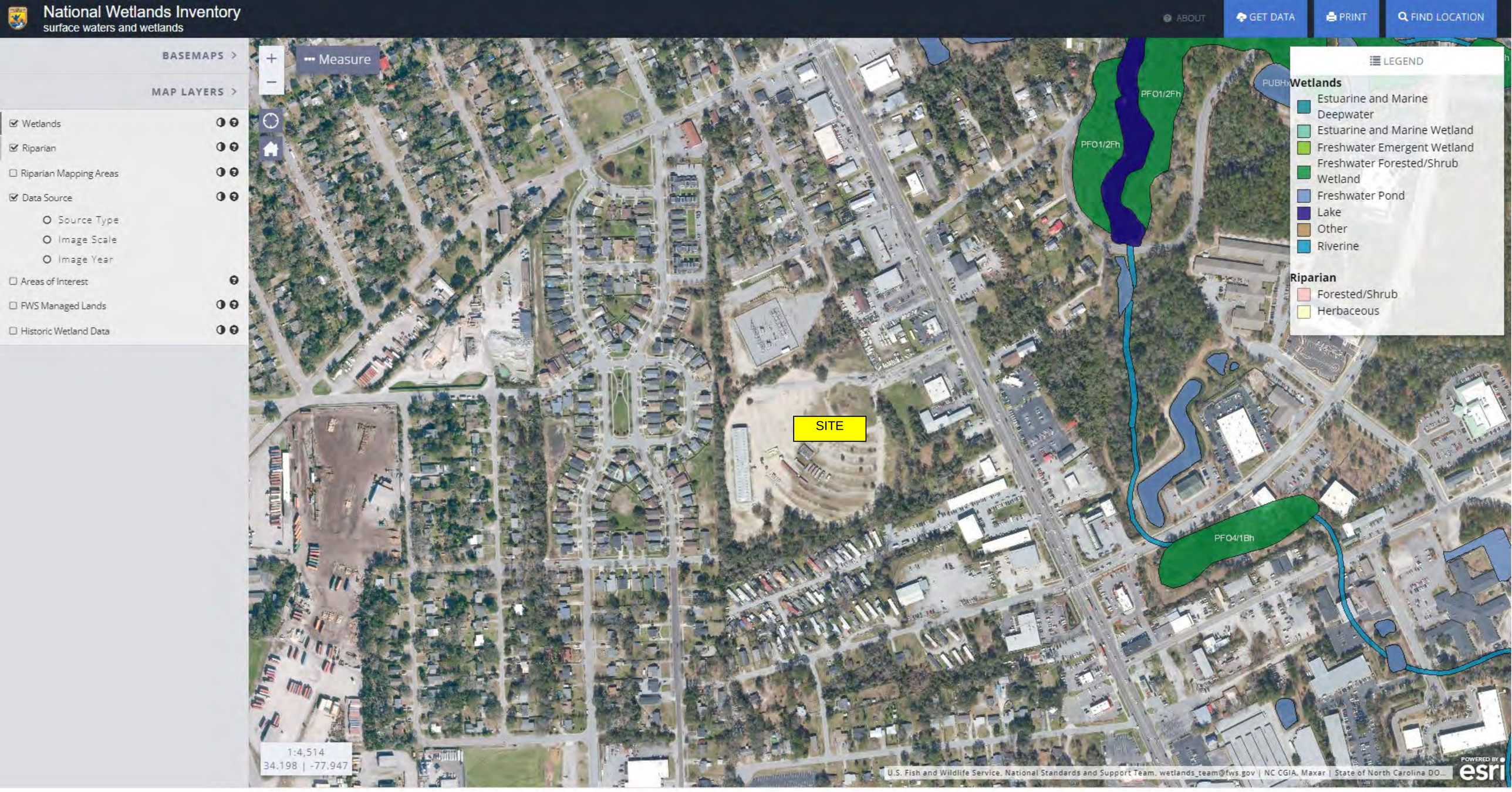
☐ USFWS NWI maps: Title(s) and/or date(s).
☒ USGS topographic maps: Wilmington

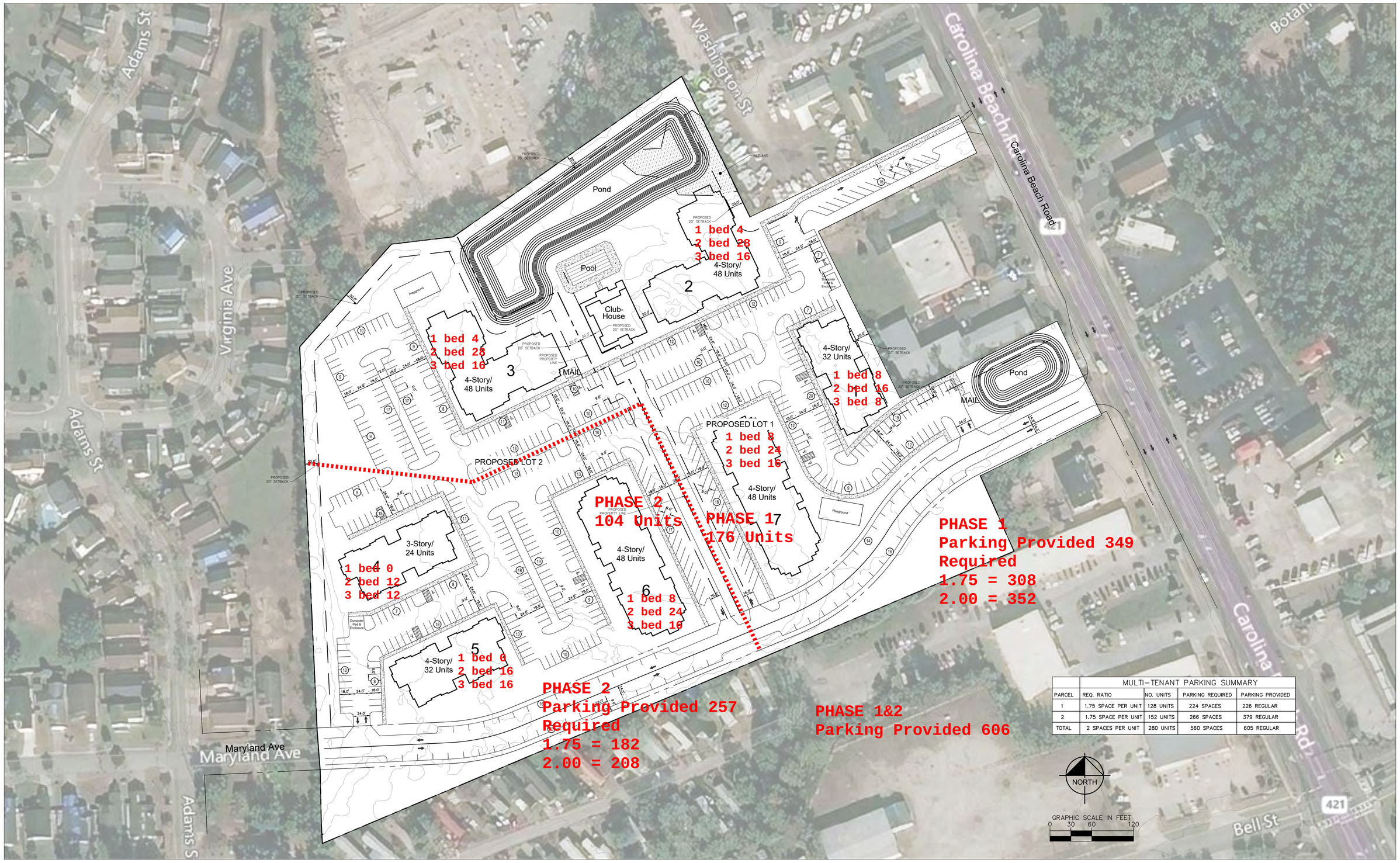
Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	Lidar QL2

B. Typical year assessment(s): The results of the Antecedent Precipitation Tool (APT) indicate that prior to the day of our detail delineation (June 19, 2021), the project study area and its vicinity were experiencing normal conditions.

C. Additional comments to support AJD: N/A


National Wetlands Inventory
surface waters and wetlands
ABOUT
GET DATA
PRINT
FIND LOCATION
BASEMAPS
MAP LAYERS
Wetlands
Riparian
Riparian Mapping Areas
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Managed Lands
Historic Wetland Data
Measure
LEGEND
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Riparian
Forested/Shrub
Herbaceous
PFO1/2Fh
PFO1/2Fh
PUBHx
PFO4/1Bh
SITE
1:4,514
34.198 | -77.947
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov | NC CGIA, Maxar | State of North Carolina DO...
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	MULTI-TENANT PARKING SUMMARY			
PARCEL	REQ. RATIO	NO. UNITS	PARKING REQUIRED	PARKING PROVIDED
1	1.75 SPACE PER UNIT	128 UNITS	224 SPACES	226 REGULAR
2	1.75 SPACE PER UNIT	152 UNITS	266 SPACES	379 REGULAR
TOTAL	2 SPACES PER UNIT	280 UNITS	560 SPACES	605 REGULAR

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM

KHA PROJECT	013856002
DATE	07/29/2021
SCALE	AS SHOWN
DESIGNED BY	KEJ
DRAWN BY	KEJ
CHECKED BY	COB

STARWAY VILLAGE
2346 CAROLINA BEACH RD
WILMINGTON NEW HAVEN COUNTY NORTH CAROLINA

PRELIMINARY
NOT FOR CONSTRUCTION

PRELIMINARY SITE LAYOUT
PREPARED FOR
KELLEY PROPERTIES

SHEET NUMBER
PSL-1

Plotted By: Kolb, Katie Sheet Set: Holly Springs Retail Layout: Layout1 July 29, 2021 12:25:45pm \\kimley-horn.com\SE_RAL\RAL_JOBS\013856002 — Kelley Wilmington\Planning Phase\P15_CAD Files\Exhibits\2021-07-12 Preliminary Site Layout\2021-07-29 Wilmington MF PSD.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



PRELIMINARY SITE LAYOUT

SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

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STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

STATE GENERAL PERMIT FOR IMPACTS TO ISOLATED WETLANDS AND ISOLATED WATERS
PERMIT NUMBER: IWGP100000

FOR PROJECTS IMPACTING LESS THAN OR EQUAL TO ONE (1) ACRE OF ISOLATED WETLANDS OR ISOLATED OPEN WATERS AND/OR LESS THAN OR EQUAL TO THREE HUNDRED (300) FEET OF ISOLATED STREAMS

In accordance with the provision of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other lawful standards and regulations, including 15A NCAC 02H .1300, as amended by Session Law 2015-286, and 15A NCAC 02B .0200, promulgated and adopted by the North Carolina Environmental Management Commission, permission is hereby granted to all owners or operators of activities which impact isolated wetlands and isolated surface waters in accordance with the conditions set forth in this General Permit.

This General Permit is issued in conformity with the requirements of North Carolina Regulations in 15A NCAC 02H .1300 as amended by Session Law 2015-286 for the discharge of fill material to isolated wetlands and isolated surface waters of the State of North Carolina.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

This General Permit shall become effective on July 15, 2022.

This General Permit shall expire on July 15, 2027 or unless otherwise rescinded after public notice or until deemed appropriate by the Director of the NC Division of Water Resources.

Signed this day: July 15, 2022

By

DocuSigned by:
Michael Pjetraj
D7CE45A225784E9...

for Richard E. Rogers, Jr.
Director

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Pursuant to Session Law 2015-286, this Permit shall apply only to isolated wetlands as defined in 15A NCAC 02H .1301 that are Basin Wetlands and Bogs and no other wetland types as described in the North Carolina Wetland Assessment User Manual prepared by the North Carolina Wetland Functional Assessment Team, version 4.1 October 2010.

Pursuant to 15A NCAC 02H .1305 as amended by Session Law 2015-286 impacts less than or equal to one (1) acre of isolated wetlands for the entire project in the coastal region, less than or equal to one-half (1/2) acre of isolated wetlands for the entire project in the piedmont region, or less than or equal to one-third (1/3) acre of isolated in the mountain region for the entire project are deemed to be permitted as long as they comply with 15A NCAC 02H .1305. The Coastal, Piedmont and Mountain Regions are depicted in Attachment A.

For streams that are isolated surface waters as defined in 15A NCAC 02H .1301, this Permit shall only apply to intermittent and perennial streams as determined by the most current version of the DWR Surface Water Identification Manual.

Activities meeting any one (1) of the following thresholds or circumstances require *written approval* from the Division of Water Resources (DWR):

a) If any of the conditions of this Permit (listed below) cannot be met; or
b) Any impacts to isolated streams from excavation or dredging other than excavation or dredging that is conducted as preparation for installing temporary or permanent fill or structures; or
c) Any isolated stream relocation or stream restoration other than stream relocations that are conducted for the purpose of proper culvert installation, alignment, protection, repair or maintenance where the relocation length is equal to or less than 50 feet in length and the relocated stream is designed and installed based on current natural channel techniques; or
d) Total temporary and permanent impacts to isolated streams for the entire project greater than 150 linear feet; or
e) Total temporary and permanent impacts to isolated wetlands or isolated open waters equal to or greater than one (1) acre for the entire project in the Coastal Region;
f) Total temporary and permanent impacts to isolated wetlands or isolated open waters equal to or greater than one-half (1/2) acre for the entire project in the Piedmont Region; or
g) Total temporary and permanent impacts to isolated wetlands or isolated open waters equal to or greater than one-third (1/3) acre for the entire project in the Mountain Region; or
h) Any high-density project, as defined in 15A NCAC 02H .1003(2)(a) and by the density thresholds specified in 15A NCAC 02H .1017, which;
    i. Disturbs one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); and
    ii. Has permanent isolated wetland, isolated stream or isolated open water impacts; and
    iii. Is proposing new built-upon area; and

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iv. Does not have a stormwater management plan reviewed and approved under a state stormwater program[1] or a state-approved local government stormwater program[2].

Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs and projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs require written approval;

i) Any impacts to isolated subject water bodies and/or state regulated riparian buffers along isolated subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless:*

i. The activities are listed as "EXEMPT" or "DEEMED ALLOWABLE" from these rules; or

ii. A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or

iii. A Buffer Authorization Certificate, Certificate with Exception, or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

Activities included in this General Permit that do not meet one of the thresholds listed above do *not* require written approval from the DWR.

In accordance with 15A NCAC 02H .1303(f), the Director of the North Carolina Division of Water Resources may require submission of a formal application for an Individual Permit for any project if it is deemed in the public's best interest or determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or will degrade the waters so that existing uses of the waters or downstream waters are precluded.

GENERAL CONDITIONS:

1. In accordance with 15A NCAC 02H .1305(c) & (d) as amended by Session Law 2015-286 and in accordance with Session Law 2017-10, compensatory mitigation may be required for losses greater than 300 linear feet of isolated perennial streams and/or greater than one (1) acre of isolated wetland impacts in the Coastal Region, one-half (1/2) acre of isolated impacts in the Piedmont Region, and one-third (1/3) acre of isolated wetland impacts in the Mountain Region. Impacts associated with the removal of a dam shall not require mitigation when the removal complies with the requirements of Part 3 of Article 21 in Chapter 143 of the North Carolina General Statutes. Impacts to isolated wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact

[1] e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

[2] e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

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thresholds trigger a mitigation requirement. Pursuant to Session Law 2015-286, mitigation requirements for impacts to isolated wetlands shall only apply to the amount of impact that exceeds the thresholds set out in this Condition. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 300 linear feet per perennial stream. Citation: 15A NCAC 02H .1305(c)(6)

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

2. The plans and specifications for the project are incorporated into the Certificate of Coverage by reference and are an enforceable part of the Permit. Any modifications to the project requires notification to DWR and may require submittal of an application for a modification to DWR with the appropriate fee. Citation: 15A NCAC 02H .1301; 15A NCAC 02H .1302

3. If this General Permit is used to access residential, commercial or industrial building sites, then all parcels owned by the permittee that are part of the single and complete project authorized by this General Permit must be buildable without additional impacts to streams or wetlands. Citation: 15A NCAC 02H .1302(a); 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

4. For road construction purposes, this General Permit shall only be utilized from natural high ground to natural high ground. Citation: 15A NCAC 02H .1302(a); 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

5. Deed notifications or similar mechanisms shall be placed on all lots/parcels with retained wetlands, waters, and state regulated riparian buffers within the project boundaries in order to assure compliance with NC Water Quality Certification Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), Federally Non-Jurisdictional Wetland Rules (15A NCAC 02H .1400) and/or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200). These mechanisms shall be put in place at the time of recording of the property or individual parcels, whichever is appropriate. Citation: 15A NCAC 02H .1302(a); 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

6. For all dam removal projects meeting the definition under G.S. 143-215.25 and requirements under G.S. 143-215.27 of a professionally supervised dam removal, the applicant shall provide documentation that any sediment that may be released has similar or lower level of contamination than sediment sampled from downstream of the dam in accordance with Session Law 2017-145. Citation: 15A NCAC 02H .1302; 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; S.L. 2017-145;

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7. If this General Permit is used for utility related impacts, then the following Conditions shall apply to those impacts.

   a. All sewer lines shall be designed, constructed and maintained in accordance with Title 15A NCAC Chapter 02T, applicable Minimum Design Criteria (MDC), and/or Alternative Design Criteria. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

   b. Any utility construction corridor that is parallel to a stream or open water shall not be closer than 10 feet to the top of bank or ordinary high-water mark. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

   c. Where there are temporary or permanent impacts from stream crossings, utility lines shall cross the stream channel at a perpendicular angle (i.e., intersect the surface water at an angle between 75 degrees and 105 degrees). Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

   d. Construction corridors in wetlands and/or across stream channels shall be minimized to the maximum extent practicable and shall not exceed 50 feet wide for oil and gas utility lines and 40 feet wide for all other utility lines.

      For construction corridors in wetlands and across stream channels, stumps shall be grubbed only as needed to install the utility and remaining stumps shall be cut off at grade level. The general stripping of topsoil within wetlands along the construction corridor is prohibited. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

   e. Permanent maintained access corridors in wetlands and across stream channels shall be restricted to the minimum width practicable and shall not exceed 30 feet wide except at manhole locations. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

   f. For all utility lines constructed within wetlands, an anti-seep collar shall be placed at the downstream (utility line gradient) wetland boundary and every 150 feet up the gradient until the utility exits the wetland. Anti-seep collars may be constructed with class B concrete, compacted clay, PVC pipe, or metal collars. Wetland crossings that are directionally drilled, and perpendicular wetland crossings that are open cut and less than 150 feet long do not require anti-seep collars. The compacted clay shall have a specific infiltration of 1×10^{-5} cm/sec or less. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

      The following specifications shall apply to class B concrete:
      i. Minimum cement content, sacks per cubic yard with rounded coarse aggregate 5.0
      ii. Minimum cement content, sacks per cubic yard with angular coarse aggregate 5.5
      iii. Maximum water-cement ratio gallons per sack 6.8
      iv. Slump range 2" to 4"
      v. Minimum strength - 28-day psi 2,500

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g. The permittee shall have a specific plan for restoring wetland contours to pre-construction conditions. Any excess material shall be removed to a high ground disposal area.

   The mixing of topsoil and subsoils within the wetlands along utility corridors shall be minimized to the greatest extent practical. During excavation, the soils shall be placed on fabric to minimize impacts whenever possible. Topsoil excavated from utility trenches must be piled separately from subsoils and shall be backfilled into the trench only after the subsoils have been placed and compacted. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

8. The permittee shall report to the appropriate DWR Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

9. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) established in a Certificate of Coverage for use of this General Permit. Citation: 15A NCAC 02H .1305; 15A NCAC 02H .1304(c)

10. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

11. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

    Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the North Carolina Sediment and Erosion Control Manual, or for linear transportation projects, the North Caroline Department of Transportation Sediment and Erosion Control Manual.

    All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

    For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

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If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, Design Standards in Sensitive Watersheds. Citation: 15A NCAC 02H .1305(b)(2); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

12. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

13. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

14. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their Individual NPDES Stormwater Permit Number NCS000250. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

15. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC Department of Transportation Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200

16. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities.

    All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium.

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Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers,) or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 04B .0125

17. In-stream structures installed to mimic natural channel geomorphology such as cross-vanes, sills, step-pool structures, etc. shall be designed and installed in such a manner that allow for continued aquatic life movement. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

18. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

    Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow for low flow passage of water and aquatic life. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

    For structures less than 72” in diameter/width and in area where topographic constraints dictate culvert slopes will be greater than 2.5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross-vanes, sills, baffles etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 30 calendar days prior to the installation of the culvert.

    When bedrock is present in culvert locations, culvert burial is not required, provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 30 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

    Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or

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wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

19. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

20. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. Citation: 15A 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0231; 15A NCAC 02B .0211

21. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. Citation: 15A 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200

22. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

23. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the North Carolina Sediment and Erosion Control Planning and Design Manual or the North Carolina Surface Mining Manual or the North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities so as not to restrict stream flow or cause dis-equilibrium. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

24. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

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25. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0201

26. Rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Groins in Estuarine and Public Trust Waters and Ocean Hazard Areas) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405. Citation: 15A NCAC 02H .1304(c); 15A NCAC 07H .1400 et seq.

27. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200

28. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0231

29. In accordance with G. S. 143-215.85(b), the permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours. Citation: 15A NCAC 02H .1304(c); N.C.G.S 143-215.85(b)

30. The permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

31. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this General Permit. A copy of this General Permit shall be available at the project site during the construction and maintenance of this project. Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)

32. This General Permit grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. Citation: G.S. 143-215.3(a)(2)

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History Note: This Isolated Wetlands General Permit (IWGP100000) issued July 15, 2022 replaces IWGP100000 issued December 1, 2017; March 3, 2017; March 2, 2016; March 12, 2012; October 31, 2008; and October 3, 2003.

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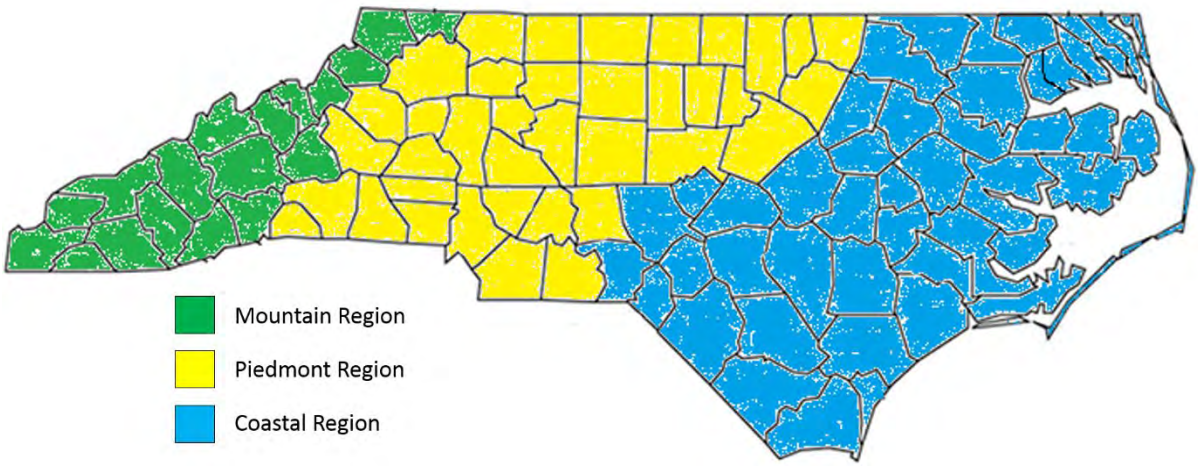
Attachment A

The Coastal Region, Piedmont Region and Mountain Region shall be as follows:

- "Coastal Region" includes Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lee, Lenoir, Martin, Moore, Nash, New Hanover, Northampton, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Richmond, Robeson, Sampson, Scotland, Tyrrell, Washington, Wayne, and Wilson Counties.

- "Piedmont Region" includes Alamance, Alexander, Anson, Burke, Cabarrus, Caldwell, Caswell, Catawba, Chatham, Cleveland, Davidson, Davie, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Iredell, Lincoln, Mecklenburg, Montgomery, Orange, Person, Polk, Randolph, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Vance, Wake, Warren, Wilkes, and Yadkin Counties.

- "Mountain Region" includes Alleghany, Ashe, Avery, Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Swain, Transylvania, Watauga and Yancey Counties.



When a landowner believes their property is not in the correct region for purposes of regulating impacts to isolated wetlands under Title 15A NCAC 02H .1305(d)(2), they may have a soil scientist conduct a site-specific evaluation to determine the soil series. The soil scientist shall be an individual who is currently licensed or authorized to practice soil science under G.S. 89F by the North Carolina Board for Licensing of Soil Scientists. The landowner shall submit the soil report to the Division of Water Resources. Soil series that occur in North Carolina have been categorized by the Natural Resources Conservation Service of the US Department of Agriculture as follows:

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Attachment A

Mountains						
Alarka	Chandler	Cullowhee	Hayesville	Maymead	Saluda	Thurmont
Anakeesta	Cheoah	Dellwood	Heintooga	Micaville	Santeetlah	Toccoa
Arkaqua	Chester	Dillard	Hemphill	Nantahala	Saunook	Toecane
Ashe	Chestnut	Dillsboro	Hiwassee	Nikwasi	Sauratown	Toxaway
Balsam	Chestoa	Ditney	Horsetrough	Northcove	Shinbone	Transylvania
Bandana	Chiltoskie	Edneytown	Huntdale	Nowhere	Skyuka	Trimont
Biltmore	Cleveland	Edneyville	Iotla	Oconaluftee	Smokemont	Tsali
Braddock	Cliffield	Ela	Jeffrey	Ostin	Snowbird	Tuckasegee
Bradson	Clifford	Ellijay	Junaluska	Oteen	Soco	Tusquitee
Brasstown	Clifton	Elsinboro	Kanuga	Peaks	Spivey	Unaka
Breakneck	Clingman	Evard	Keener	Pigeonroost	Statler	Unicoi
Brevard	Codorus	Fannin	Kinkora	Pineola	Stecoah	Unison
Brownwood	Colvard	Farner	Lauada	Pinnacle	Suches	Walnut
Buladean	Comus	Fontaflora	Leatherwood	Plott	Swannanoa	Watauga
Burton	Cowee	French	Longhope	Porters	Sylco	Wayah
Cades	Craggey	Greenlee	Lonon	Pullback	Sylva	Wesser
Calvin	Crossnore	Guyot	Lostcove	Rabun	Tanasee	Whiteoak
Cashiers	Cruso	Harmiller	Luftee	Reddies	Tate	Whiteside
Cataloochee	Cullasaja	Hatboro	Mars Hill	Rosman	Thunder	Zillicoa
Cataska						

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Attachment A

Piedmont						
Alamance	Cecil	Exway	Leaksville	Nathalie	Riverview	Turbeville
Altavista	Chewacla	Fairview	Lignum	Oak Level	Ronda	Tussahaw
Appling	Cid	Georgeville	Lloyd	Oakboro	Rowan	Uwharrie
Appomattox	Claycreek	Goldston	Louisa	Orange	Saw	Vance
Armenia	Cliffside	Granville	Louisburg	Ostin	Secrest	Wadesboro
Ashlar	Clover	Green Level	Madison	Pacolet	Sedgefield	Wake
Augusta	Colfax	Grover	Mandale	Pactolus	Siloam	Warne
Ayersville	Congaree	Gwinnett	Masada	Peakin	Skyuka	Wate
Badin	Coronaca	Halifax	Mattaponi	Peawick	Spartanburg	Wateree
Banister	Creedmoor	Hallison	Mayodan	Penhook	Spray	Wedowee
Bannertown	Cullen	Haw River	McQueen	Pfafftown	Spriggs	Wehadkee
Belews Lake	Dan River	Helena	Meadowfield	Picture	Starr	Westfield
Bentley	Danripple	Herndon	Mecklenburg	Pilot Mountain	Stoneville	White Store
Bethera	Davidson	Hibriten	Merry Oaks	Pinkston	Stott Knob	Wickham
Bethlehem	Davie	Hiwassee	Misenheimer	Pinoka	Tarrus	Wilkes
Biscoe	Delila	Hornsboro	Mocksville	Pittsboro	Tatum	Winnsboro
Brickhaven	Devotion	Hulett	Monacan	Poindexter	Tillery	Woolwine
Buncombe	Dorian	Iredell	Moncure	Polkton	Toast	Worsham
Callison	Durham	Jackland	Montonia	Poplar Forest	Toccoa	Wynott
Carbonton	Elbert	Kinkora	Mooshaunee	Rasalo	Tomlin	Yadkin
Cartecay	Enon	Kirksey	Nanford	Rhodhiss	Totier	Zion
Casville	Enott	Lackstown	Nason	Rion		

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Attachment A

Coastal						
Acredale	Butters	Dogue	Hydeland	McColl	Paxville	Tarboro
Ailey	Byars	Dorovan	Icaria	Meggett	Peakin	Tetotum
Alaga	Cainhoy	Dothan	Invershiel	Mooshaunee	Pelion	Thursa
Alpin	Candor	Dragston	Johns	Muckalee	Pender	Toisnot
Arapahoe	Cape Fear	Duckston	Johnston	Munden	Perquimans	Tomahawk
Argent	Cape Lookout	Dunbar	Kalmia	Murville	Pettigrew	Tomotley
Augusta	Caroline	Duplin	Kenansville	Myatt	Plummer	Torhunta
Autryville	Carteret	Echaw	Kinston	Nahunta	Pocalla	Troup
Aycock	Centenary	Emporia	Kureb	Nakina	Polawana	Uchee
Backbay	Chapanoke	Engelhard	Lakeland	Nankin	Ponzer	Valhalla
Ballahack	Charleston	Exum	Leaf	Nawney	Portsmouth	Varina
Barclay	Chastain	Faceville	Lenoir	Neeses	Pungo	Vaucluse
Bayboro	Chenneby	Foreston	Leon	Newhan	Rains	Wagram
Baymeade	Chesapeake	Fork	Liddell	Newholland	Rimini	Wahee
Belhaven	Chipley	Fortescue	Lillington	Nimmo	Roanoke	Wakulla
Bertie	Chowan	Fripp	Longshoal	Nixonton	Roper	Wando
Bethera	Conaby	Fuquay	Lucy	Noboco	Rumford	Wasda
Bibb	Conetoe	Gertie	Lumbee	Norfolk	Rutlege	Weeksville
Bladen	Corolla	Gilead	Lynchburg	Ocilla	Scuppernong	Wilbanks
Blaney	Cowarts	Goldsboro	Lynn Haven	Onslow	Seabrook	Winton
Blanton	Coxville	Grantham	Mandarin	Orangeburg	Seagate	Woodington
Bohicket	Craven	Grifton	Mantachie	Osier	Shellbluff	Wrightsboro
Bojac	Croatan	Gritney	Marlboro	Ousley	Stallings	Wysocking
Bolling	Currituck	Gullrock	Marvyn	Pactolus	State	Yaupon
Bonneau	Dare	Hobonny	Masontown	Pamlico	Stockade	Yeopim
Bragg	Deloss	Hobucken	Maxton	Pantego	Suffolk	Yonges
Brookman	Delway	Hyde	Mayodan	Pasquotank		

Dichotomous Key to General North Carolina Wetland Types

Accompanies NC WAM User Manual Version 5

Before using this key, the assessor should read and become familiar with descriptions of the general wetland types. The assessor should use best professional judgment to verify that the wetland type determined with the use of this key matches the written description (see User Manual page number following wetland type name).

The following rule should be used to assist in the selection of the most appropriate general wetland type. Narrative descriptions are also available to assist in this choice (see User Manual Section 3.1).

> Wetlands with alterations (man-made or natural) should generally be classified as the original, naturally occurring type if this determination can be made. However, if the full range of stable, existing, wetland parameters (vegetation, hydrology, and soils) better resembles another wetland type because of long-established, permanent alterations, the wetland should be classified as this current, more appropriate type.

If there is evidence suggesting the wetland is a type other than the keyed type, the wetland may be classified as the evidenced type. Also, if the wetland does not appear to conform to any of the following general types, the site should be evaluated based on what the assessor believes is the closest wetland type. If the wetland is "intensively managed" or "intensively disturbed," the assessor should note this fact on the field assessment form and then select the most appropriate general wetland type based on the guidance provided above.

I. Wetland affected by lunar or wind tide, may include woody areas contiguous with tidal marsh
   A. Wetland affected, at least occasionally, by brackish or salt water
      i. Dominated by herbaceous vegetation – **Salt/Brackish Marsh** (p. 12)
      ii. Dominated by woody vegetation – **Estuarine Woody Wetland** (p. 15)
   B. Wetland primarily affected by freshwater
      i. Dominated by herbaceous vegetation – **Tidal Freshwater Marsh** (p. 17)
      ii. Dominated by woody vegetation – **Riverine Swamp Forest** (p. 19)

II. Wetland not affected by tides
   A. Not in a geomorphic floodplain or a natural topographic crenulation and not contiguous with an open water 20 acres or larger
      i. On a side slope – **Seep** (p. 24)
      ii. On interstream divides or on a coastal island
         1. Flats on interstream divides in Coastal Plain ecoregions
            a. Dominated by deciduous trees
               i. Seasonally saturated to seasonally inundated (typically dominated by sweetgum and oaks) – **Hardwood Flat** (p. 26)
               ii. Seasonally to semi-permanently inundated (typically dominated by cypress and black gum) – **Non-Riverine Swamp Forest** (p. 28)
            b. Dominated by evergreens
               i. Dominated by dense, waxy shrub species (typically include gallberries, fetterbushes, honeycup, greenbriar); canopy may include pond pine, Atlantic white cedar, and bays – **Pocosin** (p. 30)
               ii. Not dominated by dense, waxy shrub species
                  1. Dominated by long-leaf or pond pine and wire grass – **Pine Savanna** (p. 32)
                  2. Dominated by loblolly or slash pines – **Pine Flat** (p. 33)
         2. In depressions surrounded by uplands anywhere in the state (mafic depressions, lime sinks, Carolina bays) or contiguous with an open water

Dichotomous Key to General NC Wetland Types, Continued

2. In depressions surrounded by uplands anywhere in the state (mafic depressions, lime sinks, Carolina bays) or contiguous with an open water (repeated from the previous page)
    a. Dominated by dense, waxy shrub species (typically include gallberries, fetterbushes, honeycup, greenbriar); canopy may include pond pine, Atlantic white cedar, and bays and not characterized by clay-based soils– **Pocosin** (p. 30)
    b. Not dominated by dense, waxy shrub species and not characterized by a peat-filled bay – **Basin Wetland** (p. 35)

B. In a geomorphic floodplain or a natural topographic crenulation or contiguous with an open water 20 acres or larger
    i. Northern Inner Piedmont or Blue Ridge Mountains ecoregions and dense herbaceous or mixed shrub/herbaceous vegetation with characteristic bog species (see wetland type description), with or without tree canopy; at least semi-permanent saturation; typically on organic or mucky soils; sphagnum moss commonly present – **Bog** (p. 37)
    ii. Anywhere in the state and not Bog
        1. Dominated by herbaceous vegetation. At least semi-permanently inundated or saturated. Includes lacustrine and riparian fringe and beaver ponds with dense herbaceous vegetation; sphagnum moss scarce or absent – **Non-Tidal Freshwater Marsh** (p. 40)
        2. Dominated by woody vegetation. Trees may be present on edges or hummocks.
            a. Localized depression and semi-permanently inundated – **Floodplain Pool** (p. 43)
            b. Not "a"
                i. Less than second-order stream or in a topographic crenulation without a stream. Diffuse surface flow and groundwater more important than overbank flooding.
                    1. Seasonally to semi-permanently saturated and/or only intermittently inundated – **Headwater Forest** (p. 45)
                    2. Seasonally to semi-permanently inundated – **Riverine Swamp Forest** (p. 19)
                ii. Second-order or greater stream or contiguous with an open water 20 acres or larger
                    1. Intermittently to seasonally inundated (may be dominated by sweetgum, ash, sycamore, and oaks) – **Bottomland Hardwood Forest** (p. 49)
                    2. Seasonally to semi-permanently inundated (may be dominated by cypress and blackgums in Coastal Plain and ash, overcup oak, and elms in Piedmont and Mountains) – **Riverine Swamp Forest** (p. 19)

[1]See stream order schematic diagrams in User Manual Appendix F.

3.1.11 Basin Wetland

Basin Wetlands occur throughout the state in depressions surrounded by uplands (usually on interstream flats or in localized depressions). This wetland type may also occur on the fringe of small open waters (less than 20 acres in size). Wetlands fringing larger water bodies are subject to hydrology more closely matching riparian conditions and are therefore considered Riverine Swamp Forest or Non-Tidal Freshwater Marsh. The size threshold used to determine small versus large open waters was taken from Cowardin et al. (1979). Basin Wetlands are seasonally to semi-permanently inundated but may lose surface hydrology during later portions of the growing season. Sources of water are perched groundwater, groundwater discharge, overland runoff, and precipitation. Seasonal waterlines are often apparent on the vegetation. Basin Wetlands generally occur on mineral soils. Basin Wetlands may be characterized by a variety of mineral soil types ranging in particle size and type from sandy soils associated with Coastal Plain lime sinks and inter-dune swales to clay-based soils underlying mafic depressions. Vegetation structure within this wetland type may vary widely from forest in mafic depressions and ephemeral pools, to primarily herbaceous or emergent in lime sinks, man-excavated depressions, and along the shorelines of small open waters.

Reference wetlands (see Section 3.2) are available for some forms of this wetland type, but since this wetland type is so heterogeneous, an assessor must recognize that an appropriate reference must be considered on a case-by-case basis. Sub-types of Basin Wetland that are considered to have reference wetlands include mafic depressions and Carolina bays. Non-reference Basin Wetlands most frequently include the wetland edges of excavated farm ponds. Basin Wetlands vary in size based on the variable landscape positions that they may occupy. This wetland type is generally surrounded by uplands, but may occasionally transition to Pine Savanna, Pocosin, or Pine Flat.

Basin Wetland comprises NCNHP types Vernal Pool, Cypress Savanna, Upland Depression Swamp Forest, Small Depression Pond, Inner Dune Pond, and Upland Pool. This wetland type is not separately identified in the NCDCM methodology, but would likely be included in the Swamp Forest (non-riverine) and Freshwater Marsh in some cases. Basin Wetland corresponds to the HGM classes Depression (sub-classes Isolated Groundwater, Isolated Precipitation, and Human Impounded or Excavated) and Estuarine (sub-class Impounded). Appendix D provides a cross-reference of wetland types across three classification systems.

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 5.0

Wetland Site Name	Wetland A (0.24 ac)	Date	8/31/2022
Wetland Type	Basin Wetland	Assessor Name/Organization	C. Daves (S&ME)

Notes on Field Assessment Form (Y/N)	YES
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	
Assessment area is substantially altered by beaver (Y/N)	NO
Assessment area experiences overbank flooding during normal rainfall conditions (Y/N)	NO
Assessment area is on a coastal island (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	NA
	Sub-Surface Storage and Retention	Condition	NA
Water Quality	Pathogen Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
	Particulate Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
	Soluble Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
	Physical Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
	Pollution Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
Habitat	Physical Structure	Condition	**MEDIUM**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**HIGH**
Water Quality	Condition	**HIGH**
	Condition/Opportunity	**HIGH**
	Opportunity Presence? (Y/N)	**NO**
Habitat	Condition	**LOW**

Overall Wetland Rating **HIGH**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 5

USACE AID#: SAW-2021-01647 NCDWR #:

Project Name	Starway Village Apts.	Date of Evaluation	8/31/2022
Applicant/Owner Name	Starway Village Apts. I/II LLC	Wetland Site Name	Wetland A (0.24 ac)
Wetland Type	Basin Wetland	Assessor Name/Organization	C. Daves (S&ME)
Level III Ecoregion	Middle Atlantic Coastal Plain	Nearest Named Water Body	Greenfield Lake
River Basin	Cape Fear	USGS 8-Digit Catalogue Unit	03030005 (Cape Fear)
County	New Hanover	NCDWR Region	Wilmington
(●) Yes ( ) No	Precipitation within 48 hrs?	Latitude/Longitude (deci-degrees)	34.1973°N/-77.9393°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note on last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? (●) Yes ( ) No

Regulatory Considerations - Were regulatory considerations evaluated? ( ) Yes (●) No If Yes, check all that apply to the assessment area.

- [ ] Anadromous fish
- [ ] Federally protected species or State endangered or threatened species
- [ ] NCDWR riparian buffer rule in effect
- [ ] Abuts a Primary Nursery Area (PNA)
- [ ] Publicly owned property
- [ ] N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
- [ ] Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
- [ ] Designated NCNHP reference community
- [ ] Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (check all that apply)

- ( ) Blackwater
- ( ) Brownwater
- [ ] Tidal (if tidal, check one of the following boxes) ( ) Lunar ( ) Wind ( ) Both

Is the assessment area on a coastal island? ( ) Yes (●) No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ( ) Yes (●) No

Does the assessment area experience overbank flooding during normal rainfall conditions? ( ) Yes (●) No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
(●) A	( ) A	Not severely altered
( ) B	(●) B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
(●) A	(●) A	Water storage capacity and duration are not altered.
( ) B	( ) B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
( ) C	( ) C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric (skip for all marshes)
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

	AA	WT	
3a.	( ) A	( ) A	Majority of wetland with depressions able to pond water > 1 foot deep
	(●) B	(●) B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
	( ) C	( ) C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
	( ) D	( ) D	Depressions able to pond water < 3 inches deep

3b.	( ) A	Evidence that maximum depth of inundation is greater than 2 feet
	( ) B	Evidence that maximum depth of inundation is between 1 and 2 feet
	(●) C	Evidence that maximum depth of inundation is less than 1 foot

4. **Soil Texture/Structure – assessment area condition metric (skip for all marshes)**
Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

4a.
- (•) A Sandy soil
- ( ) B Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
- ( ) C Loamy or clayey soils not exhibiting redoximorphic features
- ( ) D Loamy or clayey gleyed soil
- ( ) E Histosol or histic epipedon

4b.
- (•) A Soil ribbon < 1 inch
- ( ) B Soil ribbon ≥ 1 inch

4c.
- (•) A No peat or muck presence
- ( ) B A peat or muck presence

5. **Discharge into Wetland – opportunity metric**
Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
(•) A	(•) A	Little or no evidence of pollutants or discharges entering the assessment area
( ) B	( ) B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
( ) C	( ) C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. **Land Use – opportunity metric (skip for non-riparian wetlands)**
Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☐ B	☐ B	☐ B	Confined animal operations (or other local, concentrated source of pollutants)
☐ C	☐ C	☐ C	≥ 20% coverage of pasture
☐ D	☐ D	☐ D	≥ 20% coverage of agricultural land (regularly plowed land)
☐ E	☐ E	☐ E	≥ 20% coverage of maintained grass/herb
☐ F	☐ F	☐ F	≥ 20% coverage of clear-cut land
☐ G	☐ G	☐ G	Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent dainage and/or overbank flow from affectio the assessment area.

7. **Wetland Acting as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)**

7a. Is assessment area within 50 feet of a tributary or other open water?
( ) Yes ( ) No If Yes, continue to 7b. If No, skip to Metric 8.

7b. How much of the first 50 feet from the bank is weltand? (Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
- ( ) A ≥ 50 feet
- ( ) B From 30 to < 50 feet
- ( ) C From 15 to < 30 feet
- ( ) D From 5 to < 15 feet
- ( ) E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
( ) ≤ 15-feet wide ( ) > 15-feet wide ( ) Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?
( ) Yes ( ) No

7e. Is tributary or other open water sheltered or exposed?
- ( ) Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ( ) Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. **Wetland Width at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and Estuarine Woody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest only)**
Check a box in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at the assessment area (WC). See User Manual for WT and WC boundaries.

WT	WC	
( ) A	( ) A	≥ 100 feet
( ) B	( ) B	From 80 to < 100 feet
( ) C	( ) C	From 50 to < 80 feet
( ) D	( ) D	From 40 to < 50 feet
( ) E	( ) E	From 30 to < 40 feet
( ) F	( ) F	From 15 to < 30 feet
( ) G	( ) G	From 5 to < 15 feet
( ) H	( ) H	< 5 feet

9. Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)

Answer for assessment area dominant landform.

- ○ A Evidence of short-duration inundation (< 7 consecutive days)
- ○ B Evidence of saturation, without evidence of inundation
- ○ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)

Consider recent deposition only (no plant growth since deposition).

- ○ A Sediment deposition is not excessive, but at approximately natural levels.
- ○ B Sediment deposition is excessive, but not overwhelming the wetland.
- ○ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
○ A	○ A	○ A	≥ 500 acres
○ B	○ B	○ B	From 100 to < 500 acres
○ C	○ C	○ C	From 50 to < 100 acres
○ D	○ D	○ D	From 25 to < 50 acres
○ E	○ E	○ E	From 10 to < 25 acres
○ F	○ F	○ F	From 5 to < 10 acres
○ G	○ G	○ G	From 1 to < 5 acres
○ H	○ H	○ H	From 0.5 to < 1 acre
◉ I	◉ I	○ I	From 0.1 to < 0.5 acre
○ J	○ J	○ J	From 0.01 to < 0.1 acre
○ K	○ K	◉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ○ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ○ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous metric naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
○ A	○ A	≥ 500 acres
○ B	○ B	From 100 to < 500 acres
○ C	○ C	From 50 to < 100 acres
○ D	○ D	From 10 to < 50 acres
○ E	○ E	< 10 acres
◉ F	◉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

○ Yes ○ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directiions? If the assessment area is clear-cut, select option "C."

- ○ A 0
- ○ B 1 to 4
- ◉ C 5 to 8

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ○ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ○ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ◉ C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ○ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ○ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ○ C Vegetation is dominated by exotic species (>50% cover of exotics).

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

(•) Yes ( ) No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of assessment area vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

( ) A ≥ 25% coverage of vegetation
( ) B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

	AA	WT	
Canopy	( ) A	( ) A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
	( ) B	( ) B	Canopy present, but opened more than natural gaps
	(•) C	(•) C	Canopy sparse or absent
Mid-Story	( ) A	( ) A	Dense mid-story/sapling layer
	( ) B	( ) B	Moderate density mid-story/sapling layer
	(•) C	(•) C	Mid-story/sapling layer sparse or absent
Shrub	( ) A	( ) A	Dense shrub layer
	(•) B	(•) B	Moderate density shrub layer
	( ) C	( ) C	Shrub layer sparse or absent
Herb	( ) A	( ) A	Dense herb layer
	( ) B	( ) B	Moderate density herb layer
	(•) C	(•) C	Herb layer sparse or absent

18. Snags – wetland type condition metric (skip for all marshes)

( ) A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
(•) B Not A

19. Diameter Class Distribution – wetland type condition metric (skip for all marshes)

( ) A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
( ) B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
(•) C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric (skip for all marshes)

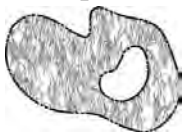
Include both natural debris and man-placed natural debris.

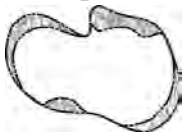
( ) A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
(•) B Not A

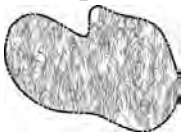
21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

( ) A 

( ) B 

( ) C 

( ) D 

22. Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)

Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D.

( ) A Overbank and overland flow are not severely altered in the assessment area.
( ) B Overbank flow is severely altered in the assessment area.
( ) C Overland flow is severely altered in the assessment area.
( ) D Both overbank and overland flow are severely altered in the assessment area.

Notes

Wetland is routinely mowed and maintained. Invasives such as Chinese tallow (Triadica sebifera) and common reed (Phragmites australis) observed in non-mowed area. Depressional, basin-like wetland that appears to collect stormwater runoff from surrounding Starway Flea Market property and commercial business directly to the east and northeast.



1	Wetland area (Basin) on northern portion of the site facing east.



2	Wetland area (Basin) on northern portion of the site facing west.



3	Wetland area (Basin) on northern portion of the site facing north along the eastern edge.



4	Typical sandy soils observed along wetland margins.

	Site Photographs **Starway Village Apartments** **Wilmington, New Hanover County, North Carolina**	S&ME Project No. 21610025
		Taken by: CD / Date: August 31, 2022

Appendix 2

Early Notice and Public Review of a Proposed Activity in a Wetland
in Wilmington Star-News newspaper (October 21, 2022),
Newspaper Publication Affidavit, and
Distribution Documentation

EARLY NOTICE AND PUBLIC REVIEW OF A PROPOSED ACTIVITY IN A WETLAND

STARWAY VILLAGE APARTMENTS
2346 CAROLINA BEACH ROAD, WILMINGTON,
NEW HANOVER COUNTY, NORTH CAROLINA 28401

October 21, 2022

To: All interested Agencies, Groups and Individuals

This is to give notice that the NC Office of Recovery and Resiliency (NCORR) has received an application from Starway Village I/II, LLC to use Community Development Block Grant – Disaster Recovery (CDBG-DR) funding from the Affordable Housing Development Fund Program to construct the Starway Village Apartments (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11990 in accordance with U.S. Department of Housing and Urban Development (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express concerns and share information about the Proposed Activity, including alternative locations outside of the wetland. Second, adequate public notice is an important public education tool. The dissemination of information about wetlands facilitates and enhances governmental efforts to reduce the risks and impacts associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in wetland, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD CDBG-DR program for Hurricane Florence storm recovery activities in North Carolina.

The Proposed Activity is needed to address an affordable housing inventory shortage, which was exacerbated by the impacts of Hurricanes Matthew (Oct. 8, 2016) and Florence (Sept. 14, 2018), when hundreds of homes were damaged or destroyed. Starway Village Apartments will provide a multifamily residential development for low- and middle-income households. The Proposed Activity will assist the City of Wilmington and New Hanover County to provide affordable housing options for the local community. The Proposed Activity entails construction of a new multifamily, affordable housing project consisting of seven apartment buildings containing 278 units in seven apartment buildings (3 and 4 stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaped areas. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also proposed. The development will be conducted in two phases. The proposed development will occur on an approximate 15.67-acre tract located at 2346 Carolina Beach Road, Wilmington, New Hanover

County, NC.

The Proposed Activity will result in only permanent impacts to an approximately 0.24 acre isolated wetland. This depressional, basin wetland functions as collection point for stormwater from the Starway Flea Market and surrounding commercial properties. The natural and beneficial functions and values related to hydrology and water quality include slowing down stormwater runoff, providing surface and subsurface retention, and filtering out pollutants. Proposed Activity impacts will consist of fill and grading for a proposed stormwater management pond and fill for a stable foundation for one of the apartment buildings (Building 2).

Wetland maps based on the U.S. Army Corps of Engineers Jurisdictional Determination and the NC Division of Water Resources General Permit and Wetland Assessment Form with further information on functions and values are available for review at https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews. A full description of the Proposed Activity and maps may also be viewed in person by appointment only at: NCORR, 200 Park Offices Drive, Durham, NC 27713. Call (984) 833-5350 to make an appointment.

Written comments must be received by NCORR at the following address on or before November 7, 2022: Laura Hogshead, Director, NCORR, ATTN: Starway Village Apartments, P.O. Box 110465, Durham, NC 27709. Comments may also be submitted by email to publiccomments@rebuild.nc.gov with "ATTN: Starway Village Apartments Comments" in the subject line.

Date: October 21, 2022

LOCALiQ
StarNews | The Dispatch
Times-News
PO Box 631245 Cincinnati, OH 45263-1245

PROOF OF PUBLICATION

Ted Heilbron
Kelley Development Company
912 Village Crossing DR
Chapel Hill NC 27517-7567

STATE OF NORTH CAROLINA, COUNTY OF NEW HANOVER

The Wilmington Star-News, a newspaper printed and published in the city of Wilmington, and of general circulation in the County of New Hanover, State of North Carolina, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue dated:

10/21/2022

and that the fees charged are legal.
Sworn to and subscribed before on 10/21/2022

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Wetland maps based on the U.S. Army Corps of Engineers Jurisdictional Determination and the NC Division of Water Resources General Permit and Wetland Assessment Form with further information on functions and values are available for review at https://www.rebuild.nc.gov/about/plans-policies- reports/environmental-reviews. A full description of the Proposed Activity and maps may also be viewed in person by appointment only at: NCORR, 200 Park Offices Drive, Durham, NC 27713. Call (984) 833- 5350 to make an appointment.
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Date: October 21, 2022
Oct 21, 2022 (adv) 7940893

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Govt Public Notices

Planning Board – Wrightsville Beach
The public shall take notice that In accordance with NCGS 160D-601, the Wrightsville Beach Planning Board will meet at 5:30 p.m. on November 1, 2022, or as soon thereafter in the Town Hall Council Chambers, 321 Causeway Drive, Wrightsville Beach, NC, to consider the following:
Discuss and review a text amendment to the Unified Development ordinance:
• Amend Exhibit A, Definitions "Mixed Use Commercial-Residential"
• Amend Section 155.9.1.5 Required Off-Street Parking
• Amend Section 155.6.5.5 Minimum Side and Rear Yard Setbacks for Special Uses
• Amend Section 155.7.26 by Adding Subsection K Screening for Mechanical Equipment on Flat Roof Structures in the C-3 district
• Amend Section 155.7.6 (C) Procedures Subsection (1) Application Submittal Requirements
Oct 21, 2022 (adv) 7924558

Govt Public Notices

Planning Board – Wrightsville Beach
The public shall take notice that In accordance with chapter 155.4.1.3 of the town's Unified Development Ordinance, the Wrightsville Beach Planning Board will meet at 5:30 p.m. on November 1, 2022, or as soon thereafter in the Town Hall Council Chambers, 321 Causeway Drive, Wrightsville Beach, NC, to consider the following:

Discuss and review a text amendment to the Unified Development ordinance:

• Section 155.2.10 (B) (15) Elevators and lifts are allowed in the setbacks and may encroach 4 feet into the side-yard or rear-yard setback area.

Notice To Creditors

EXECUTOR NOTICE
STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER
The undersigned, having qualified as Executor of the Estate of Thomas Christopher Meyers, deceased on 8/28/2022, of New Hanover County, North Carolina, do hereby notify all persons, firms and corporations having claims against the estate to exhibit them to the undersigned on or before the 29th day of December, 2022, or this notice will be pleaded in bar of their recovery. All persons, firms and corporations indebted to said estate will please make immediate payment to the undersigned.
This 30th day of September, 2022.
Amy Lauren Meyers
3211 Kellerton Place
Wilmington, NC 28409
Executrix of the Estate of
Thomas Christopher Meyers

NOTICE TO CREDITORS
EXECUTOR NOTICE
STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER
FILE #2022-E-1344
The undersigned having qualified as Executor of the **Estate of Barbara Fay Dormon**, deceased, late of New Hanover County, this is to notify all persons having claims against said Estate to exhibit them to the undersigned on or before the 7th day of January, 2023, or this notice will be pleaded in bar of their recovery. All persons indebted to said estate will please make immediate payment to the undersigned.

This, the 7th day of October, 2022.
James Malcolm Monroe Dorman
(Executor)
10/7,10/14,10/21,10/28/22

EXECUTOR NOTICE
STATE OF
NORTH CAROLINA
COUNTY OF
NEW HANOVER
The undersigned having qualified as Executor of the Estate of **Gail D. Lane**, deceased, late of New Hanover County, this is to notify all persons having claims against said Estate to exhibit them to the undersigned on or before the **7th day of January, 2023**, or this notice will be pleaded in bar of their recovery.
All persons indebted to said estate will please make immediate payment to the undersigned.
This the **7th day of October, 2022.**
Karen Ligotino
1111 Silky Dogwood Trail
Apex NC 27502
Executrix of the Estate of
Gail D. Lane
(adv) #7879056
10/7, 10/14, 10/21, 10/28/2022

NOTICE TO CREDITORS
NORTH CAROLINA,
NEW HANOVER COUNTY
All persons, firms and corporations having claims against the Estate of Will Forden, File No: 2022E1427, deceased, of New Hanover County, NC, are notified to present the same to the personal representative listed below on or before January 13, 2023, or this notice will be pleaded in bar of recovery. All debtors of the said estate are asked to make immediate payment. This 13th day of October, 2022.
Theresa Forden,
Administrator of the Estate
1880 Lafayette Ave., #20G
Bronx, NY 10473

EXECUTOR NOTICE
STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER
The undersigned having qualified as Executor of the Estate of Emma Wells, deceased, late of New Hanover County, this is to notify all persons having claims against said Estate to exhibit them to the undersigned on or before the 30th day of December, 2022, or this notice will be pleaded in bar of their recovery.
All persons indebted to said estate will please make immediate payment to the undersigned.
This the 30th day of September, 2022.
Fonteler W. Johnson
725 Grathwol Drive
Wilmington, NC 28405
Executor of the Estate of
Emma Wells

Notice To Creditors

NOTICE

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

The undersigned, having qualified as Executor of the Estate of Jeanne Bloor Rose, deceased, of New Hanover County, North Carolina, do hereby notify all persons, firms and corporations having claims against the estate to exhibit them to the undersigned on or before the 30th day of December, 2022, or this notice will be pleaded in bar of their recovery. All persons, firms and corporations indebted to said estate will please make immediate payment to the undersigned.

This 30th day of September, 2022.

Samuel Rose III,
Executor of the Estate of
Jeanne Bloor Rose
8918 Bluff Court
Wilmington, NC 28411

MURCHISON, TAYLOR & GIBSON, PLLC
1979 Eastwood Road, Suite 101
Wilmington, NC 28403

EXECUTOR NOTICE
STATE OF
NORTH CAROLINA
COUNTY OF
NEW HANOVER
The undersigned having qualified as Executor of the Estate of Jonathan Todd Turner, deceased, late of New Hanover County, this is to notify all persons having claims against said Estate to exhibit them to the undersigned on or before the 21st day of January, 2023, or this notice will be pleaded in bar of their recovery.
All persons indebted to said estate will please make immediate payment to the undersigned.
This the 21st day of October, 2022.

EXECUTOR
Dr. Lynwood C. Turner
1914 Stanton Road
Kinston, NC 28504

Executor of the Estate of
Jonathan Todd Turner

EXECUTOR NOTICE
STATE OF
NORTH CAROLINA
COUNTY OF
NEW HANOVER
The undersigned having qualified as Executor of the Estate of **William Henry Young, Jr.**, deceased, late of New Hanover County, this is to notify all persons having claims against said Estate to exhibit them to the undersigned on or before the **21st day of January, 2023**, or this notice will be pleaded in bar of their recovery.
All persons indebted to said estate will please make immediate payment to the undersigned.
This the **21st day of October, 2022.**
Stephen Eric Young, Executor
1204 Buckhorn Court
Wilmington, NC 28411
Executor of the Estate of
William Henry Young, Jr.
10/21, 10/28, 11/4, 11/11/2022

Public Notices

TOWN OF BELVILLE
BELVILLE PLANNING BOARD
PUBLIC HEARING

DATE: TUES, NOV. 1, 2022
TIME: 6:30 p.m.
PLACE:
BELVILLE TOWN HALL
63 RIVER ROAD
BELVILLE, NC 28451

Notice is hereby given that a public hearing will be held by the Belville Planning Board for the purpose of reviewing and deciding upon a Preliminary Plat and Site Plan Application for the proposed River Road Apartments, as submitted by CSD Engineering, for property owned by Urban Smart Growth Belville LLC, located at 245 River Road (PIN 038KA005), in Belville, North Carolina.
A copy of the Site Plan Application is available for public inspection at the Town Hall in advance of the meeting date. Interested persons may appear at the public hearing and comment on the proposed development.
Posted: 10-21-22; 10-28-22
Sharon A. Niemann, Town Clerk

Find your new job HERE!



Public Notices

MEETING NOTICE
A meeting of the Wilmington Urban Area MPO Board will be held on Wednesday, October 26, 2022 at 3PM in the 6th Floor Conference Room at 320 Chestnut Street, Wilmington, NC. Members of the public can attend the meeting in person or virtually through the Zoom platform at www.zoom.us/join or by phone by dialing (301)715-8592 with meeting ID 839 6910 7282 and passcode 920663. The MPO Board, comprised of elected officials from local governments in the Wilmington area and the North Carolina Board of Transportation, sets priorities for regional transportation planning and State and Federal transportation infrastructure investments in the Wilmington area. A 15-minute public comment period will be held. Please contact the WMPO at 910-341-3258 in advance, if possible, if you plan to speak during the public comment period. Optionally, public comments may be submitted by emailing wmpo@wilmingtonnc.gov or by leaving a message at (910)341-3258 before 5PM on October 25th. Public comments received by email or by phone will be played or read aloud by staff during the meeting. Per the adopted Public Participation Plan, public comments shall be limited to 3 minutes per speaker.
Mike Kozlosky,
Executive Director,
Wilmington Urban Area
Metropolitan Planning
Organization

State of North Carolina, New Hanover County File No. 22-SP-464, Mary Freeman Ford, et al. vs Heirs of Robert Bruce Freeman, Jr. , Notice of Service of Process by Publication, To: Unknown Heirs of Robert Bruce Freeman, Jr. Take notice that a pleading seeking relief was filed in the above-entitled action on September 23, 2022. The nature of the relief being sought is as follows: Petitioners are seeking an Order declaring that they are the only true heirs of Robert Bruce Freeman, Jr.. You are required to appear and make your presence known to such pleading within 40 days from the date of the first publication of this Notice. Upon your failure to do so the party seeking service against you will apply to the court for the relief sought. This the 30th day of September, 2022. Thomas R. Harvey III c/o Shipman & Wright, LLP, 575 Military Cutoff Rd, Suite 106, Wilmington, NC 28405.

Public Notices

CITY OF WILMINGTON CITY COUNCIL will hold a public meeting Tuesday, November 1, 2022 at 6:30 P.M. in the City Hall, Council Chambers, 102 North 3rd Street, Wilmington, NC. Due to public health and safety concerns from COVID-19, public participation may be limited. Public comments can be submitted via the public comment form (https://www.wilmingtonnc.gov/departments/city-council/city-council-public-hearing-comment-form). The meeting will be streaming live at https://www.wilmingtonnc.gov/gtv8. A legislative hearing will be held for the following:
• General Rezoning: Property containing 0.13 acres +/- (Parcel ID: R05409-001-012-000) located at 107 Castle Street from CB, Community Business to HDR, Historic District - Residential. Patrick O'Mahony, Associate Planner (Z-5-1022)
• LDC Maintenance: To amend the Land Development Code for various amendments and clean-up items related to Permitted Uses, Use-Specific standards, Site Development Requirements, Administrative Provisions, and Measurements and Definitions. Nicole Smith, Senior Planner (LDC-2-1022)
• LDC Amendment: Amend 18-390 (A)(6) for the number of free-standing signs permitted in the MX district. Abie Bonevac, Associate Planner
• LDC Amendment: Amend Article 5. Division 5. Signs to correct errors and inconsistencies identified during implementation and to align with recent case law pertaining to commercial speech. Kathryn Thurston, Zoning Administrator (LDC-3-1022)
PLEASE TAKE NOTE: the City Council may change the existing zoning classification of the area covered by a petition, or any part or parts thereof, to the classification requested or to a higher classification or classifications without the necessity of withdrawal or modification of the petition. All interested partied are invited to comment or attend.

PHOTOS are worth a thousand words included in your ad.

EARLY NOTICE AND PUBLIC REVIEW OF A PROPOSED ACTIVITY IN A WETLAND
STARWAY VILLAGE APARTMENTS
2346 CAROLINA BEACH ROAD, WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA 28401
October 21, 2022
To: All interested Agencies, Groups and Individuals
This is to give notice that the NC Office of Recovery and Resiliency (NCORR) has received an application from Starway Village I/II, LLC to use Community Development Block Grant – Disaster Recovery (CDBG-DR) funding from the Affordable Housing Development Fund Program to construct the Starway Village Apartments (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11990 in accordance with U.S. Department of Housing and Urban Development (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express concerns and share information about the Proposed Activity, including alternative locations outside of the wetland. Second, adequate public notice is an important public education tool. The dissemination of information about wetlands facilitates and enhances governmental efforts to reduce the risks and impacts associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in wetland, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD CDBG-DR program for Hurricane Florence storm recovery activities in North Carolina.
The Proposed Activity is needed to address an affordable housing inventory shortage, which was exacerbated by the impacts of Hurricanes Matthew (Oct. 8, 2016) and Florence (Sept. 14, 2018), when hundreds of homes were damaged or destroyed. Starway Village Apartments will provide a multifamily residential development for low- and middle-income households, thus, assisting the City of Wilmington and New Hanover County to provide affordable housing options for the local community. The Proposed Activity entails new construction of a multifamily, affordable housing project consisting of 278 units in seven apartment buildings (3 and 4 stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaped areas. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also proposed. The development will be conducted in two phases. The proposed development will occur on an approximate 15.67-acre tract located at 2346 Carolina Beach Road, Wilmington, New Hanover County, NC 28401.
The Proposed Activity will result in only permanent impacts to an approximately 0.24-acre isolated wetland. This depressional, basin wetland functions as collection point for stormwater from the Starway Flea Market and surrounding commercial properties. The natural and beneficial functions and values related to hydrology and water quality include slowing down stormwater runoff, providing surface and subsurface retention, and filtering out pollutants. Proposed Activity impacts will consist of fill and grading for a proposed stormwater management pond and fill for a stable foundation for Apartment Building 2.
Wetland maps based on the U.S. Army Corps of Engineers Jurisdictional Determination and the NC Division of Water Resources General Permit and Wetland Assessment Form with further information on functions and values are available for review at https://www.rebuild.nc.gov/about/plans-policies- reports/environmental-reviews. A full description of the Proposed Activity and maps may also be viewed in person by appointment only at: NCORR, 200 Park Offices Drive, Durham, NC 27713. Call (984) 833- 5350 to make an appointment.
Written comments must be received by NCORR at the following address on or before November 7, 2022: Laura Hogshead, Director, NCORR, ATTN: Starway Village Apartments, P.O. Box 110465, Durham, NC 27709. Comments may also be submitted by email to publiccomments@rebuild.nc.gov with "ATTN: Starway Village Apartments Comments" in the subject line.
Date: October 21, 2022
Oct 21, 2022 (adv) 7940893

SELL YOUR CAR *ADOPT A PET*
GET A JOB *FIND A HOUSE*
BUY A BOAT
FIND A TREASURE
GET A MASSAGE
HIRE A HANDYMAN

Check out the classified section everyday.



EARLY NOTICE WETLAND DISTRIBUTION LIST

STARWAY VILLAGE APARTMENTS
2346 CAROLINA BEACH ROAD, WILMINGTON,
NEW HANOVER COUNTY, NORTH CAROLINA 28401

Publication 10/21/22, comments end 11/7/22

FEDERAL AGENCIES

Agency	Name & Address	Method
HUD NC	Mr. Lenwood E. Smith, II Environmental Protection Specialist Greensboro Field Office U.S. Dept. of Housing and Urban Development 1500 Pinecroft Road, Suite 401 Greensboro, NC 27407-3838	Lenwood.E.Smith@hud.gov
FEMA, Region IV	Ms. Gracia B. Szczech, Regional Administrator U.S. Dept. of Homeland Security FEMA, Region IV 3003 Chamblee Tucker Road Atlanta, GA 30341	FedEx
US EPA, Region 4	Mr. John Blevins, Acting Regional Administrator U.S. EPA, Region 4 Laboratory Services & Applied Science Div. 980 College Station Road Athens, GA 30605-2720	FedEx
US EPA, Region 4	Ms. Ntale Kajumba, NEPA Coordinator U.S. EPA, Region 4 Laboratory Services & Applied Science Div. 980 College Station Road Athens, GA 30605-2720	Kajumba.ntale@epa.gov cc: blevins.john@epa.gov
USFWS – Raleigh Field Office	USFWS – Raleigh Field Office ATTN: John Ellis P.O. Box 33726 Raleigh, NC 27636 ph.: 919-856-4520, ext. 26	john_ellis@fws.gov cc: leigh_mann@fws.gov
USACE – Wilmington District	Mr. Brad Shaver USACE – Wilmington District 69 Darlington Avenue Wilmington, NC 28403	Brad.E.Shaver@usace.army.mil

TRIBES, NATIONS AND COMMUNITIES (who asked to be notified)		
Catawba Indian Nation	Dr. Wenonah George Haire, THPO ATTN: THPO Archaeology Dept. Catawba Indian Nation 1536 Tom Steven Road Rock Hill, SC 29730	Does not want Notice
Catawba Indian Nation	Chief Bill Harris Catawba Indian Nation 996 Avenue of the Nations Rock Hill, SC 29730	Does not want Notice
NC STATE AGENCIES		
STATE CLEARING-HOUSE	Ms. Crystal Best North Carolina Department of Administration State Environmental Review Clearinghouse 1301 Mail Service Center Raleigh, North Carolina 27699-1301	State.Clearinghouse@doa.nc.gov crystal.best@doa.nc.gov
NCHFA	Ronda G. Moore Senior Attorney, Manager of Real Estate Transactions North Carolina Housing Finance Agency P.O. Box 28066 Raleigh, NC 27611-8066 Phone: 919-875-3621	rgmoore@nchfa.com
LOCAL AGENCIES		
NEW HANOVER COUNTY	Chris Coudriet, County Manager County Government Complex 230 Government Center Drive, Suite 195 Wilmington, NC 28403	ccoudriet@nhcgov.com
NEW HANOVER COUNTY	Rebekah Roth, CZO, AICP Planning Director 230 Government Center Dr, Suite 110 Wilmington, NC 28403 Phone 910-798-7165	rroth@nhcgov.com
CITY	Ms. Penelope Spicer-Sudbury City Clerk P.O. Box 1810 Wilmington, NC 28402 Phone: 910.341.7816	penny.spicer-sidbury@wilmingtonnc.gov (she will disburse/post)

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:28 AM
To: Smith, Lenwood E
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello Lenwood:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:32 AM
To: Kajumba.ntale@epa.gov
Cc: blevins.john@epa.gov
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. A hard copy is also being sent via Federal Express to Mr. Blevins. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:33 AM
To: john_ellis@fws.gov
Cc: leigh_mann@fws.gov
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:34 AM
To: Brad.E.Shaver@usace.army.mil
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:36 AM
To: State Clearinghouse
Cc: Best, Crystal
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. The last day of the comment period is November 7, 2022. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:37 AM
To: rgmoore@nchfa.com
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:38 AM
To: ccoudriet@nhcgov.com
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:39 AM
To: rroth@nhcgov.com
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 10:39 AM
To: penny.spicer-sidbury@wilmingtonnc.gov
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC
Attachments: NCORR Early Notice Starway Village Final 10.21.22.pdf

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

FedEx Express **NEW** Package US Airbill

FedEx Tracking Number 8022 3320 8752

Form ID No. 0200 — **Sender's Copy**

1 From *Please print and press hard.*

Date 10/21/22 Sender's FedEx Account Number 8950 9899 0

Sender's Name Andrea Gievers Phone (845) 682-1700

Company NCORR

Address 123 Kings Hill Road Dept./Floor/Suite/Room

City Walden State NY ZIP 12586

2 Your Internal Billing Reference First 24 characters will appear on invoice. Starway Village-EN

3 To

Recipient's Name Ms. Gracia Szczech Phone ( )

Company FEMA, Region 4

Address 3003 Chamblee Tucker Rd Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Atlanta State GA ZIP 30341

HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☒ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☐ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

☐ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages Total Weight Total Declared Value†

____ ____ lbs. $ ____ .00

†Our liability is limited to US$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

644

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Easy new Peel-and-Stick airbill. No pouch needed.
Apply airbill directly to your package. See directions on back.

FedEx Express **NEW** Package US Airbill

FedEx Tracking Number 8022 3320 8741

Form ID No. 0200 — **Sender's Copy**

1 From *Please print and press hard.*

Date 10/21/22 Sender's FedEx Account Number 8950 9899 0

Sender's Name Andrea Gievers Phone (845) 682-1700

Company NCORR

Address 123 Kings Hill Rd Dept./Floor/Suite/Room

City Walden State NY ZIP 12586

2 Your Internal Billing Reference First 24 characters will appear on invoice. Starway Village EN

3 To

Recipient's Name Mr. John Blevins Phone ( )

Company US EPA, Region 4

Address Lab Svcs & Applied Science Div Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address 980 College Station Rd

Use this line for the HOLD location address or for continuation of your shipping address.

City Athens State GA ZIP 30605-2720

HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☒ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☐ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

☐ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages Total Weight Total Declared Value†

____ ____ lbs. $ ____ .00

†Our liability is limited to US$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

644

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Easy new Peel-and-Stick airbill. No pouch needed.
Apply airbill directly to your package. See directions on back.

Gievers, Andrea

From: Gievers, Andrea
Sent: Friday, October 21, 2022 3:26 PM
To: State Clearinghouse
Subject: RE: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC

FYI, this is the Early Notice as a public notice under 24 CFR 55.20. Thanks! Have a great weekend!

Sincerely,

Andrea Gievers

From: State Clearinghouse
Sent: Friday, October 21, 2022 3:19 PM
To: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Subject: RE: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC

This project was previously submitted on October 17, 2022 and is currently circulating for review and comment. The comment period ends November 16, 2022. Comments will be forwarded to you once the project closes.

Thank you,

NC DOA Department of Administration

Crystal Best
Administrative Assistant

984-236-0023
State.Clearinghouse@doa.nc.gov
116 West Jones St., Raleigh, NC 27603
1301 Mail Service Center
ncadmin.nc.gov

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, October 21, 2022 10:36 AM
To: State Clearinghouse <State.Clearinghouse@doa.nc.gov>
Cc: Best, Crystal <crystal.best@doa.nc.gov>
Subject: Public Notice - Early Notice - Starway Village Apartments, Wilmington, New Hanover County, NC

Hello:

Please find attached the Public Notice for HUD 24 CFR §55.20(b) - *Early Notice and Public Review of a Proposed Activity in a Wetland* publishing October 21, 2022 for the NCORR Affordable Housing Development Fund Program's Starway Village Apartments proposed project in the City of Wilmington, New Hanover County, NC. The last day of the comment period is November 7, 2022. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Appendix 3

FONSI/ NOIRROF/ Final Notice and Public Explanation of a Proposed Activity in a Wetland in Wilmington Star-News newspaper (November 18, 2022), Newspaper Publication Affidavit (to be added), and Distribution Documentation (to be added in full)

PUBLIC NOTICE

COMBINED NOTICE OF FINDING OF NO SIGNIFICANT IMPACT (*FONSI*), NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS (*NOI-RROF*), AND FINAL NOTICE AND PUBLIC REVIEW OF A PROPOSED ACTIVITY IN A WETLAND

STARWAY VILLAGE APARTMENTS
2346 CAROLINA BEACH ROAD,
WILMINGTON, NEW HANOVER COUNTY, NC 28401

NOVEMBER 18, 2022

To: All interested Agencies, Groups and Individuals

Name of Responsible Entity and Recipient: North Carolina Office of Recovery and Resiliency (NCORR), P.O. Box 110465, Durham, NC 27709. Contact: Director Laura Hogshead (984) 833-5350.

Pursuant to 24 CFR Section 58.43, this combined Notice of Finding of No Significant Impact (FONSI), Notice of Intent to Request Release of Funds (NOI-RROF), and Final Notice and Public Review of a Proposed Activity in a Wetland satisfies three separate procedural requirements for project activities proposed to be undertaken by NCORR.

Project Description: NCORR is responsible for the direct administration of the United States Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program in North Carolina. NCORR proposes to provide CDBG-DR funding of $9,000,000.00 for the Starway Village Apartments ("Proposed Activity"), which is on an approximate 15.67-acre tract located at 2346 Carolina Beach Rd. (US Highway 421), Wilmington, New Hanover County, North Carolina 28401. The Proposed Activity is anticipated to have a total cost of $68,759,433.00. The Proposed Activity will involve the new construction of a multifamily, affordable housing project consisting of 278 units in seven apartment buildings (3 and 4 stories) including two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaped areas. An extension of Maryland Avenue east across the southern portion of the site to Carolina Beach Road is also proposed. The development will be conducted in two phases. The City is seeking to address the affordable housing inventory shortage exacerbated by

the effects of the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). Starway Village Apartments will provide a multifamily residential development for low- and middle-income households in the City of Wilmington. Funding for the Proposed Activity will be provided by the Affordable Housing Development Fund Program for Hurricane Florence storm recovery activities in North Carolina.

PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A WETLAND

NCORR has conducted an evaluation as required by Executive Order 11990, in accordance with HUD regulations at 24 CFR 55.20 Subpart C Procedures for Making Determinations on Wetlands Protection. The Proposed Activity will result in only permanent impacts to an approximately 0.24-acre isolated, freshwater, emergent/scrub-shrub wetland on the northern portion of the site. This depressional basin wetland functions as a collection point for stormwater from the Starway Flea Market and surrounding commercial properties. The natural and beneficial functions and values related to hydrology and water quality include slowing down stormwater runoff, providing surface and subsurface retention, and filtering out pollutants. Proposed Activity impacts will consist of fill and grading for a proposed stormwater management pond and fill for a stable foundation for one apartment building (Building 2).

NCORR has considered the alternatives and mitigation measures to be taken to minimize adverse impacts and to restore and preserve natural and beneficial values: this site is the most suitable, feasible location for this affordable housing project out of four sites considered; the other sites were not selected based on anticipated traffic issues, bridge expenses over an environmentally sensitive creek, airport noise issues, economic viability of the proposed action related to seller's high purchase price, and non-competitive scores within the State's scoring criteria for LIHTC awards; the "No Action" alternative would not address the City's affordable housing shortage; and mitigation measures include two proposed stormwater ponds, project design to minimize impacts from removal of the wetland by constructing a larger stormwater pond in the same location, and native plants in the site's landscaping design.

Since the action will include new construction in wetland, EO 11990 requires that the Proposed Activity not be supported if there are practicable alternatives to new construction in wetlands. NCORR has reevaluated the alternatives to building in wetland, and has determined that it has no practicable alternative. According to the US Army Corps of Engineers, a Clean Water Act Section 404 Permit is not required. The NC Department of Environmental Quality, Division of Water Resources' State General Permit for Impacts to Isolated Wetlands and Isolated Waters #IWGP100000 (July 15, 2022) applies to the Proposed Activity. Erosion and sedimentation control plan approval, stormwater (NPDES and State) permits, and other applicable permits from State and local jurisdictions will be obtained before commencing work. The Proposed Activity will be completed in accordance with all applicable federal, state and local laws, regulations, and permit requirements and conditions. Alternatives and the 8-step process have been further documented in the EO 11990 Protection of Wetlands Determination which is available for review.

There are three primary purposes for this notice. First, people who may be affected by activities in wetlands and those who have an interest in the protection of the natural environment have an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information and request

for public comment about wetlands can facilitate and enhance federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the federal government determines it will participate in actions taking place in wetlands, it must inform those who may be put at greater or continued risk.

FINDING OF NO SIGNIFICANT IMPACT

An Environmental Assessment (EA) for the Proposed Activity has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and HUD environmental review regulations at 24 CFR Part 58. The EA is incorporated by reference into this FONSI. Subject to public comments, no further review of the Proposed Activity is anticipated. NCORR has determined that the EA for the project identified herein complies with the requirements of HUD environmental review regulations at 24 CFR Part 58. NCORR has determined that the Proposed Activity will have no significant impact on the human environment and, therefore, does not require the preparation of an environmental impact statement under NEPA.

Public Review: Public viewing of the EA and EO 11990 Protection of Wetlands Determination is available online at https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews. Documents may also be viewed in person by appointment only at: NCORR, 200 Park Offices Drive, Durham, NC 27713. Call (984) 833-5350 to make an appointment.

Further information may be requested by writing to the above address, emailing publiccomments@rebuild.nc.gov or by calling (984) 833-5350. This combined notice is being sent to individuals and groups known to be interested in these activities, local news media, appropriate local, state and federal agencies, the regional office of the U.S. Environmental Protection Agency having jurisdiction, and the HUD Field Office, and is being published in a newspaper of general circulation in the affected community.

Public Comments on the Proposed Activity within Wetland, FONSI and/or NOIRROF: Any individual, group or agency may submit written comments on the Proposed Activity. The public is hereby advised to specify in their comments which "notice" their comments address. Comments should be submitted via email, in the proper format, on or before December 5, 2022 at publiccomments@rebuild.nc.gov. Written comments may also be submitted by mail, in the proper format, to be received on or before December 5, 2022, and addressed to: Laura Hogshead, Director, NCORR, ATTN: Starway Village Apartments, P.O. Box 110465, Durham, NC 27709. All comments must be received on or before December 5, 2022 or they will not be considered. If modifications result from public comment, these will be made prior to proceeding with the submission of a request for release of funds.

REQUEST FOR RELEASE OF FUNDS AND CERTIFICATION

On or after December 6, 2022, the NCORR certifying officer will submit a request and certification to HUD for the release of CDBG-DR funds as authorized by related laws and policies for the purpose of implementing this part of the North Carolina CDBG-DR program.

NCORR certifies to HUD that Laura Hogshead, in her capacity as Certifying Officer, consents to accept the jurisdiction of the U.S. federal courts if an action is brought to enforce responsibilities in relation to the environmental review process and that these responsibilities have been satisfied.

HUD's approval of the certification satisfies its responsibilities under NEPA and related laws and authorities, and allows NCORR to use CDBG-DR program funds.

Objection to Release of Funds: HUD will accept objections to its release of funds and NCORR's certification for a period of fifteen days following the anticipated submission date or its actual receipt of the request (whichever is later). Potential objectors may contact HUD or the NCORR Certifying Officer to verify the actual last day of the objection period.

The only permissible grounds for objections claiming a responsible entity's non-compliance with 24 CFR Part 58 are: (a) Certification was not executed by NCORR's Certifying Officer; (b) the responsible entity has omitted a step or failed to make a decision or finding required by HUD regulations at 24 CFR Part 58; (c) the responsible entity has committed funds or incurred costs not authorized by 24 CFR Part 58 before release of funds and approval of environmental certification; or (d) another federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality.

Objections must be prepared and submitted in accordance with the required procedures (24 CFR 58.76) and shall be addressed to Tennille Smith Parker, Director, Disaster Recovery and Special Issues Division, Office of Block Grant Assistance, U.S. Department of Housing & Urban Development, 451 7th Street SW, Washington, DC 20410, Phone: (202) 402-4649, or emailed to disaster_recovery@hud.gov.

Laura Hogshead
Certifying Officer
November 18, 2022

FONSI/ NOIRROF/ FINAL NOTICE WETLAND DISTRIBUTION LIST

STARWAY VILLAGE APARTMENTS
2346 CAROLINA BEACH ROAD, WILMINGTON,
NEW HANOVER COUNTY, NORTH CAROLINA 28401

Publication 11/18/22, comments end 12/5/22

FEDERAL AGENCIES

Agency	Name & Address	Method
HUD NC	Mr. Lenwood E. Smith, II Environmental Protection Specialist Greensboro Field Office U.S. Dept. of Housing and Urban Development 1500 Pinecroft Road, Suite 401 Greensboro, NC 27407-3838	Lenwood.E.Smith@hud.gov
FEMA, Region IV	Ms. Gracia B. Szczech, Regional Administrator U.S. Dept. of Homeland Security FEMA, Region IV 3003 Chamblee Tucker Road Atlanta, GA 30341	FedEx
US EPA, Region 4	Mr. John Blevins, Acting Regional Administrator U.S. EPA, Region 4 Laboratory Services & Applied Science Div. 980 College Station Road Athens, GA 30605-2720	FedEx
US EPA, Region 4	Ms. Ntale Kajumba, NEPA Coordinator U.S. EPA, Region 4 Laboratory Services & Applied Science Div. 980 College Station Road Athens, GA 30605-2720	Kajumba.ntale@epa.gov cc: blevins.john@epa.gov
USFWS – Raleigh Field Office	USFWS – Raleigh Field Office ATTN: John Ellis P.O. Box 33726 Raleigh, NC 27636 ph.: 919-856-4520, ext. 26	john_ellis@fws.gov cc: leigh_mann@fws.gov
USACE – Wilmington District	Mr. Brad Shaver USACE – Wilmington District 69 Darlington Avenue Wilmington, NC 28403	Brad.E.Shaver@usace.army.mil

TRIBES, NATIONS AND COMMUNITIES (who asked to be notified)		
Catawba Indian Nation	Dr. Wenonah George Haire, THPO ATTN: THPO Archaeology Dept. Catawba Indian Nation 1536 Tom Steven Road Rock Hill, SC 29730	Does not want Notice
Catawba Indian Nation	Chief Bill Harris Catawba Indian Nation 996 Avenue of the Nations Rock Hill, SC 29730	Does not want Notice
NC STATE AGENCIES		
STATE CLEARING-HOUSE	Ms. Crystal Best North Carolina Department of Administration State Environmental Review Clearinghouse 1301 Mail Service Center Raleigh, North Carolina 27699-1301	State.Clearinghouse@doa.nc.gov crystal.best@doa.nc.gov
NCHFA	Ronda G. Moore Senior Attorney, Manager of Real Estate Transactions North Carolina Housing Finance Agency P.O. Box 28066 Raleigh, NC 27611-8066 Phone: 919-875-3621	rgmoore@nchfa.com
LOCAL AGENCIES		
NEW HANOVER COUNTY	Chris Coudriet, County Manager County Government Complex 230 Government Center Drive, Suite 195 Wilmington, NC 28403	ccoudriet@nhcgov.com
NEW HANOVER COUNTY	Rebekah Roth, CZO, AICP Planning Director 230 Government Center Dr, Suite 110 Wilmington, NC 28403 Phone 910-798-7165	rroth@nhcgov.com
CITY	Ms. Penelope Spicer-Sudbury City Clerk P.O. Box 1810 Wilmington, NC 28402 Phone: 910.341.7816	penny.spicer-sidbury@wilmingtonnc.gov (she will disburse/post)

Request for Jurisdictional Determination

Jurisdictional Determination Request

US Army Corps of Engineers
Wilmington District

This form is intended for use by anyone requesting a jurisdictional determination (JD) from the U.S. Army Corps of Engineers, Wilmington District (Corps). Please include all supporting information, as described within each category, with your request. You may submit your request via mail, electronic mail, or facsimile. Requests should be sent to the appropriate project manager of the county in which the property is located. A current list of project managers by assigned counties can be found on-line at: http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram/Contact/CountyLocator.aspx, by calling 910-251-4633, or by contacting any of the field offices listed below. Once your request is received you will be contacted by a Corps project manager.

ASHEVILLE & CHARLOTTE REGULATORY FIELD OFFICES
US Army Corps of Engineers
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006
General Number: (828) 271-7980
Fax Number: (828) 281-8120

RALEIGH REGULATORY FIELD OFFICE
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
General Number: (919) 554-4884
Fax Number: (919) 562-0421

WASHINGTON REGULATORY FIELD OFFICE
US Army Corps of Engineers
2407 West Fifth Street
Washington, North Carolina 27889
General Number: (910) 251-4610
Fax Number: (252) 975-1399

WILMINGTON REGULATORY FIELD OFFICE
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403
General Number: 910-251-4633
Fax Number: (910) 251-4025

INSTRUCTIONS:

All requestors must complete Parts A, B, C, D, E, F and G.

NOTE TO CONSULTANTS AND AGENCIES: If you are requesting a JD on behalf of a paying client or your agency, please note the specific submittal requirements in **Part H**.

NOTE ON PART D – PROPERTY OWNER AUTHORIZATION: Please be aware that all JD requests must include the current property owner authorization for the Corps to proceed with the determination, which may include inspection of the property when necessary. This form must be signed by the current property owner(s) or the owner(s) authorized agent to be considered a complete request.

NOTE ON PART D - NCDOT REQUESTS: Property owner authorization/notification for JD requests associated with North Carolina Department of Transportation (NCDOT) projects will be conducted according to the current NCDOT/USACE protocols.

NOTE TO USDA PROGRAM PARTICIPANTS: A Corps approved or preliminary JD may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should also request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

A. PARCEL INFORMATION

Street Address: 2346 Carolina Beach Road

City, State: Wilmington, NC

County: New Hanover County

Parcel Index Number(s) (PIN): 3126-04-5192; 3126-14-0439; 3126-14-0157; 3126-14-1164; 3126-13-1923

B. REQUESTOR INFORMATION

Name: Kimley-Horn; ATTN: Mackenzie Richards

Mailing Address: 421 Fayetteville Street, Suite 600

Raleigh, NC 27601

Telephone Number: (919) 678-4154

Electronic Mail Address: Mackenzie.Richards@kimley-horn.com

Select one:

☐ I am the current property owner.

☑ I am an Authorized Agent or Environmental Consultant[1]

☐ Interested Buyer or Under Contract to Purchase

☐ Other, please explain. _____

_____

C. PROPERTY OWNER INFORMATION[2]

Name: Bradley Housing Developers,LLC; ATTN: Brad Queener

Mailing Address: P.O. Box 526

Aynor, SC 29511

Telephone Number: (840) 222-6483

Electronic Mail Address: brad@bradleydevelopers.com

[1] Must provide completed Agent Authorization Form/Letter.

[2] Documentation of ownership also needs to be provided with request (copy of Deed, County GIS/Parcel/Tax Record).

D. PROPERTY ACCESS CERTIFICATION[3,4]

By signing below, I authorize representatives of the Wilmington District, U.S. Army Corps of Engineers (Corps) to enter upon the property herein described for the purpose of conducting on-site investigations, if necessary, and issuing a jurisdictional determination pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. I, the undersigned, am either a duly authorized owner of record of the property identified herein, or acting as the duly authorized agent of the owner of record of the property.

Mackenzie Richards

Print Name

Capacity: ☐ Owner ☑ Authorized Agent[5]

7/29/2021

Date

M. Richards

Signature

E. REASON FOR JD REQUEST: (Check as many as applicable)

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.

☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.

☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.

☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.

☐ A Corps JD is required in order obtain my local/state authorization.

☑ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.

☐ I believe that the site may be comprised entirely of dry land.

☐ Other:_____

[3] For NCDOT requests following the current NCDOT/USACE protocols, skip to Part E.

[4] If there are multiple parcels owned by different parties, please provide the following for each additional parcel on a continuation sheet.

[5] Must provide agent authorization form/letter signed by owner(s).

F. JURISDICTIONAL DETERMINATION (JD) TYPE (Select One)

☐ I am requesting that the Corps provide a preliminary JD for the property identified herein.

A Preliminary Jurisdictional Determination (PJD) provides an indication that there may be "waters of the United States" or "navigable waters of the United States"on a property. PJDs are sufficient as the basis for permit decisions. For the purposes of permitting, all waters and wetlands on the property will be treated as if they are jurisdictional "waters of the United States". PJDs cannot be appealed (33 C.F.R. 331.2); however, a PJD is "preliminary" in the sense that an approved JD can be requested at any time. PJDs do not expire.

☑ I am requesting that the Corps provide an approved JD for the property identified herein.

An Approved Jurisdictional Determination (AJD) is a determination that jurisdictional "waters of the United States" or "navigable waters of the United States" are either present or absent on a site. An approved JD identifies the limits of waters on a site determined to be jurisdictional under the Clean Water Act and/or Rivers and Harbors Act. Approved JDs are sufficient as the basis for permit decisions. AJDs are appealable (33 C.F.R. 331.2). The results of the AJD will be posted on the Corps website. A landowner, permit applicant, or other "affected party" (33 C.F.R. 331.2) who receives an AJD may rely upon the AJD for five years (subject to certain limited exceptions explained in Regulatory Guidance Letter 05-02).

☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

G. ALL REQUESTS

☑ Map of Property or Project Area. This Map must clearly depict the boundaries of the review area.

☑ Size of Property or Review Area 16 acres.

☐ The property boundary (or review area boundary) is clearly physically marked on the site.

H. REQUESTS FROM CONSULTANTS

☑ Project Coordinates (Decimal Degrees): Latitude: 34.196388
Longitude: -77.939694

☑ A legible delineation map depicting the aquatic resources and the property/review area. Delineation maps must be no larger than 11x17 and should contain the following: (Corps signature of submitted survey plats will occur after the submitted delineation map has been reviewed and approved).[6]

- North Arrow
- Graphical Scale
- Boundary of Review Area
- Date
- Location of data points for each Wetland Determination Data Form or tributary assessment reach.

For Approved Jurisdictional Determinations:

- Jurisdictional wetland features should be labeled as Wetland Waters of the US, 404 wetlands, etc. Please include the acreage of these features.
- Jurisdictional non-wetland features (i.e. tidal/navigable waters, tributaries, impoundments) should be labeled as Non-Wetland Waters of the US, stream, tributary, open water, relatively permanent water, pond, etc. Please include the acreage or linear length of each of these features as appropriate.
- Isolated waters, waters that lack a significant nexus to navigable waters, or non-jurisdictional upland features should be identified as Non-Jurisdictional. Please include a justification in the label regarding why the feature is non-jurisdictional (i.e. "Isolated", "No Significant Nexus", or "Upland Feature"). Please include the acreage or linear length of these features as appropriate.

For Preliminary Jurisdictional Determinations:

- Wetland and non-wetland features should not be identified as Jurisdictional, 404, Waters of the United States, or anything that implies jurisdiction. These features can be identified as Potential Waters of the United States, Potential Non-wetland Waters of the United States, wetland, stream, open water, etc. Please include the acreage and linear length of these features as appropriate.

☑ Completed Wetland Determination Data Forms for appropriate region
(at least one wetland and one upland form needs to be completed for each wetland type)

[6] Please refer to the guidance document titled "Survey Standards for Jurisdictional Determinations" to ensure that the supplied map meets the necessary mapping standards. http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Jurisdiction/

- [x] Completed appropriate Jurisdictional Determination form
  - **PJDs,** please complete a Preliminary Jurisdictional Determination Form[7] and include the Aquatic Resource Table
  - **AJDs**, please complete an Approved Jurisdictional Determination Form[8]
- [x] Vicinity Map
- [x] Aerial Photograph
- [x] USGS Topographic Map
- [x] Soil Survey Map
- [ ] Other Maps, as appropriate (e.g. National Wetland Inventory Map, Proposed Site Plan, previous delineation maps, LIDAR maps, FEMA floodplain maps)
- [ ] Landscape Photos (if taken)
- [ ] NCSAM and/or NCWAM Assessment Forms and Rating Sheets
- [ ] NC Division of Water Resources Stream Identification Forms
- [ ] Other Assessment Forms

[7] www.saw.usace.army.mil/Portals/59/docs/regulatory/regdocs/JD/RGL_08-02_App_A_Prelim_JD_Form_fillable.pdf
[8] Please see http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Jurisdiction/

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): Select.
ORM Number: N/A
Associated JDs: N/A
Review Area Location[1]: State/Territory: NC City: Wilmington County/Parish/Borough: New Hanover County
Center Coordinates of Review Area: Latitude 34.196388 Longitude -77.939694

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1	0.24	acre(s)	(b)(1) Non-adjacent wetland.	Wetland W1 is a low-lying, concave depression located in the northeast corner of the project site adjacent to a gravel roadway. Hydrology within wetland W1 was at the surface, with standing/ponded water present throughout the area. No potentially jurisdictional connections were observed flowing from the wetland feature. Wetland W1 is not adjacent to an (a)(1), (2), or (3) water.
Ditch 1	733	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	Ditch 1 is a manmade, constructed ditch within uplands. Ditch 1 is not a tributary under (a)(2), was not a tributary under (a)(2) when it was constructed, was not constructed in an adjacent wetland, and does not contribute surface flow to an (a)(1) water in a typical year.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Kimley-Horn
  This information is sufficient for purposes of this AJD.
  Rationale: N/A
- ☐ Data sheets prepared by the Corps: N/A
- ☒ Photographs: Aerial: NC Orthoimagery (2018)
- ☐ Corps site visit(s) conducted on: N/A
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): N/A
- ☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
- ☒ USDA NRCS Soil Survey: New Hanover County (1977)
- ☐ USFWS NWI maps: N/A
- ☒ USGS topographic maps: Wilmington (1:24,000)

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Data Source (select)	Name and/or date and other relevant information
USACE Sources	N/A.
LiDAR data/maps	North Carolina Spatial Data Download, accessed June 24, 2021.
FEMA/FIRM maps	N/A.

B. Typical year assessment(s): The results of the Antecedent Precipitation Tool (APT) indicate that prior to the day of our detail delineation (June 19, 2021), the project study area and its vicinity were experiencing normal conditions.

C. Additional comments to support AJD: N/A

AGENT AUTHORIZATION FORM

Name: Brad Jusgen / Bradley Housing Developers

Address: P.O. Box 524 Aynor SC 29511

Phone: 843-222-6483

Project Name/Description: **Starway Village**

Date: 6/25/2024

The Department of the Army
U.S. Army Corps of Engineers, Wilmington District

Attention: **Brad Shaver**
Field Office: **Wilmington Regulatory Field Office**

Re: Wetland Related Consulting and Permitting

To Whom It May Concern:

Bradley Housing Developers, LLC hereby designates and authorizes Kimley-Horn and Associates, Inc. to act in my/our behalf as my/our agent solely for the purpose of processing Jurisdictional Determinations, and to furnish upon request supplemental information in support of applications, etc. from this day forward until successful completion of the permitting process or revocation by the owner.

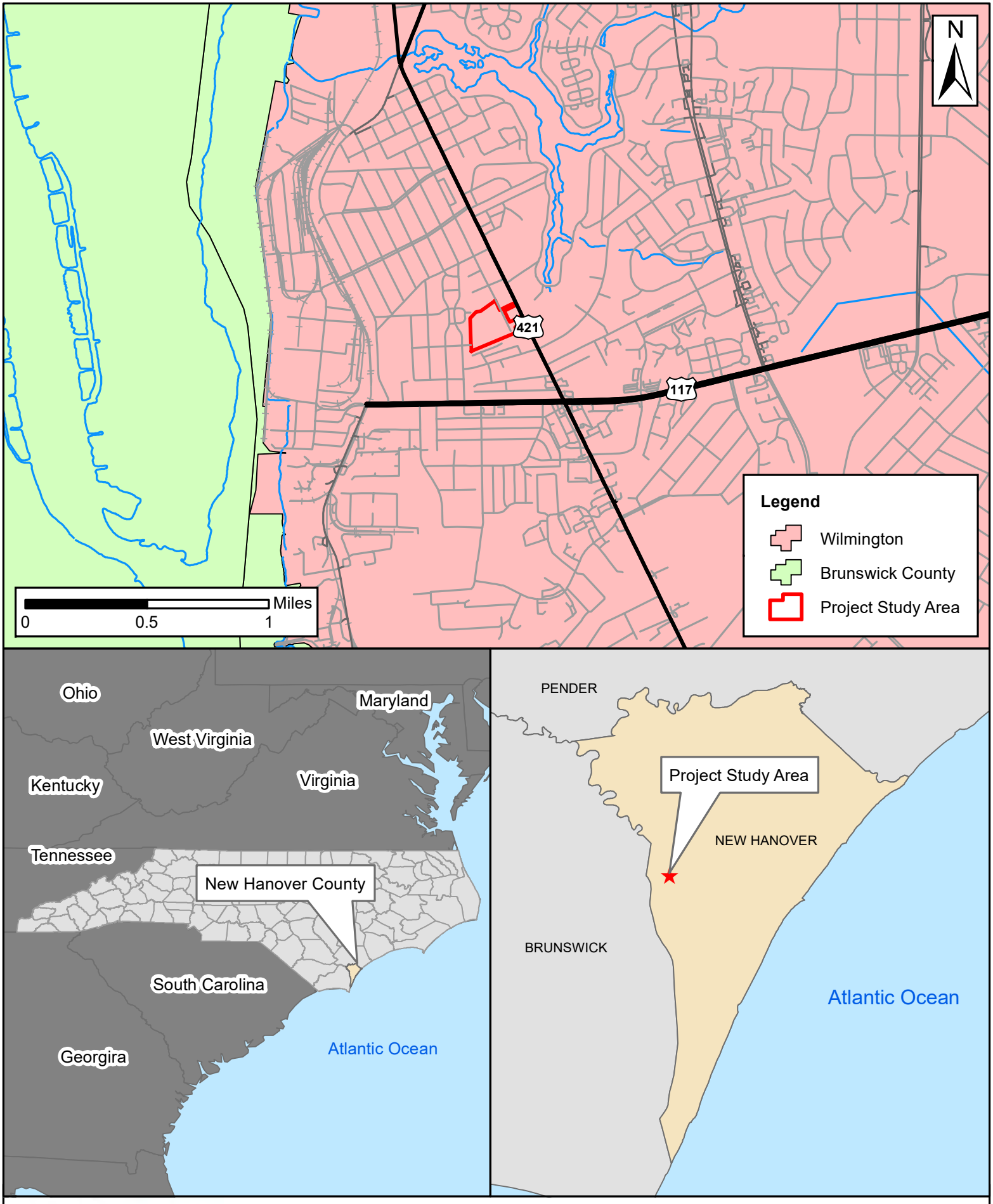
In addition, I, the undersigned, a duly authorized optionee of the property/properties identified herein, do authorize representatives of the Wilmington District, U.S. Army Corps of Engineers (Corps) to enter upon the property herein described for the purpose of conducting on-site investigations and issuing a determination associated with Waters of the U.S. subject to Federal jurisdiction under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899.

Authorized this the 25 day of June, 2024.

Brad Jusgen
Print Responsible Party's Name

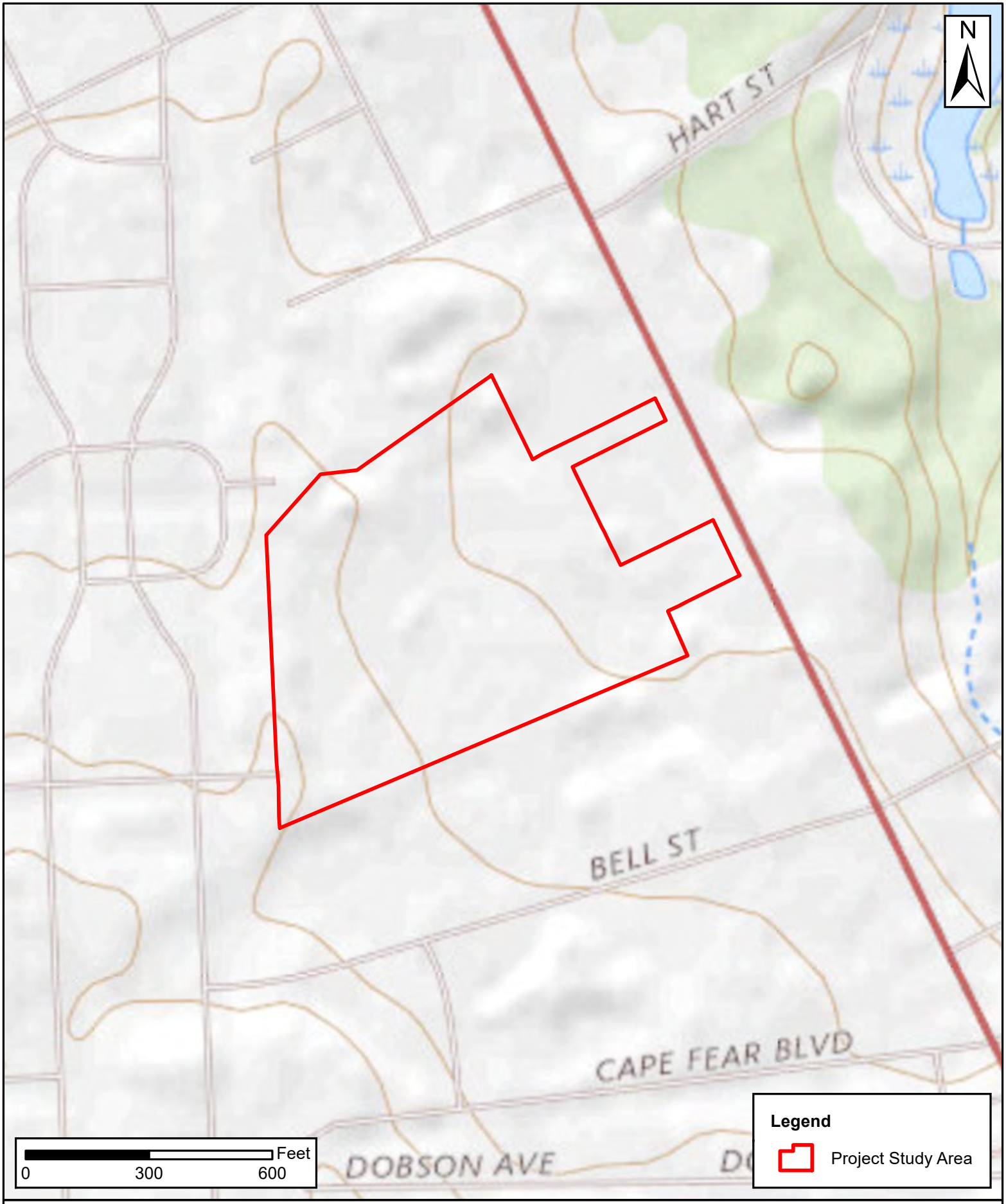
Responsible Party's Signature

Cc: Rick Trone
NC Division of Water Resources
401 & Buffer Permitting Unit
1650 Mail Service Center
Raleigh, NC 27699-1650



Kimley»Horn

Figure 1: Vicinity Map
Starway Village
Wilmington, New Hanover County, NC
June 2021



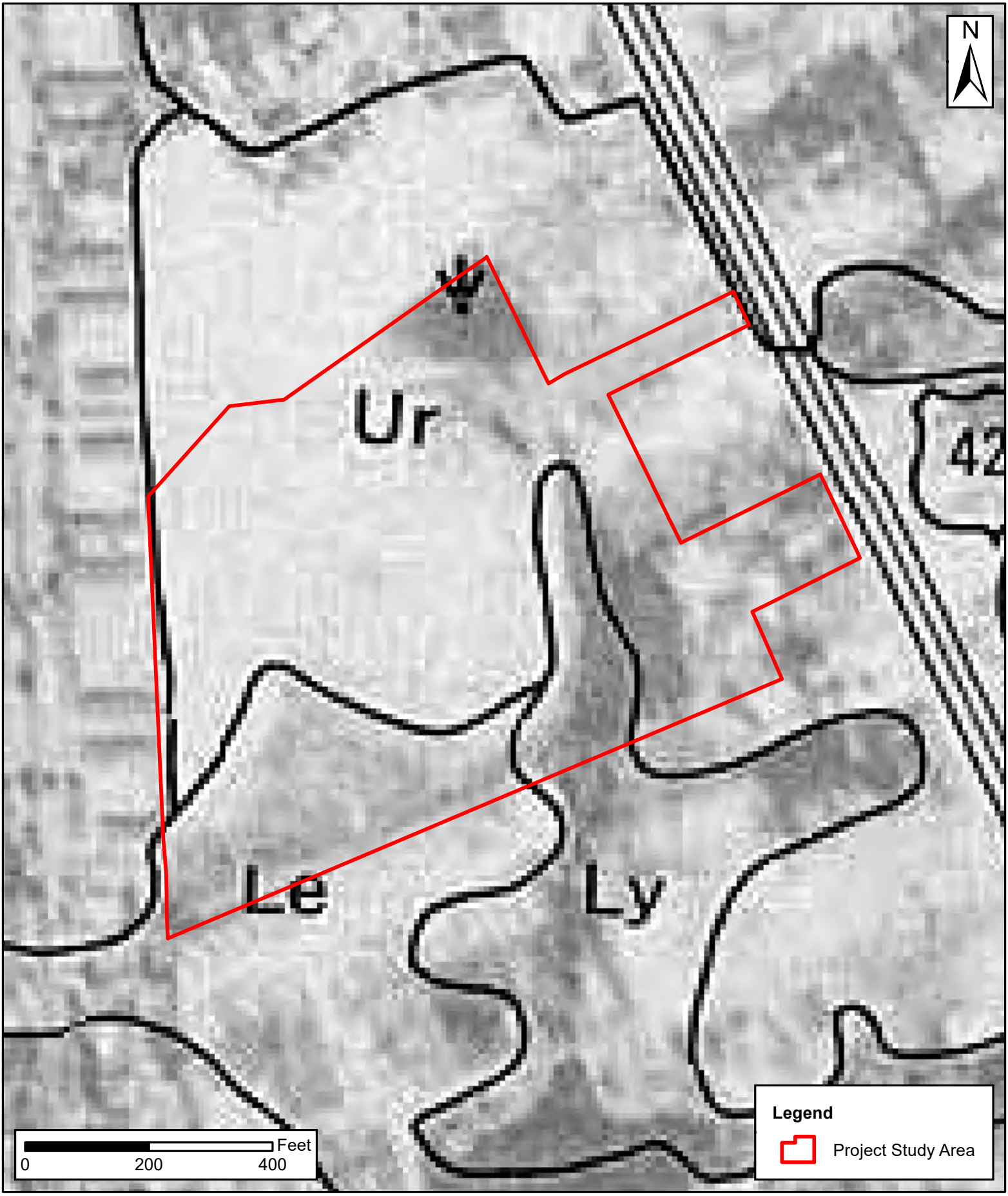
Kimley»Horn

Figure 2: USGS Topographic Map
Starway Village
Wilmington, New Hanover County, NC
June 2021



Kimley»Horn

Figure 3: Delineated Features Map
Starway Village
Wilmington, New Hanover County, NC
June 2021



Kimley»Horn

Figure 4: NRCS Soil Survey Map
Starway Village
Wilmington, New Hanover County, NC
June 2021

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Starway Village City/County: Wilmington/New Hanover Sampling Date: 6/19/21

Applicant/Owner: Bradley Housing Developers, LLC State: NC Sampling Point: W1-UP

Investigator(s): Mackenzie Richards (Kimley-Horn) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 1-2

Subregion (LRR or MLRA): LRR T, MLRA 153A Lat: 34.197110 Long: -77.939104 Datum: NAD83

Soil Map Unit Name: Ur - Urban land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The upland point W1-UP was taken approximately 15 feet from and 6 inches higher in elevation than the W1-WET data point. This data point was located on a slight hillslope adjacent to the gravel roadway on the site. No vegetation or hydrology was present at the time of collection. No apparent surface water or jurisdictional connection was identified flowing from Wetland W1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary or secondry hydrology indicators were present at the upland data form location.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W1-UP

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30)			
1. *Festuca spp.*	40	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 =Total Cover		
50% of total cover: 20	20% of total cover: 8		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	40 (A)		120 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

The area where the upland data point was collected was grassed, but had no other vegetation present to document.

SOIL

Sampling Point: W1-UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10YR 2/2	100					Sandy	>30% uncoated sand grains
4-16	2.5Y 5/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

The upper layer of sandy soils had over 30% of uncoated sand grains present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Starway Village City/County: Wilmington/New Hanover Sampling Date: 6/19/21

Applicant/Owner: Bradley Housing Developers, LLC State: NC Sampling Point: W1-WET

Investigator(s): Mackenzie Richards (Kimley-Horn) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR T, MLRA 153A Lat: 34.197293 Long: -77.939233 Datum: NAD83

Soil Map Unit Name: Ur - Urban land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Wetland 1 is a low-lying depression located in the northeast corner of the project site adjacent to a gravel roadway. The wetland area had standing water throughout with both saturation and the water table located at the surface. Wetland W1 is a non-adjacent, exlcuded wetland that has no jurisdictional connections to downstream waters.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15) **(LRR U)**
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ____ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 1

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Both saturation and a water table were present at the surface of the wetland, as standing/ponded water was present throughout the site.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: W1-WET

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 30)			
1. *Triadica sebifera*	15	Yes	FAC
2. *Salix caroliniana*	5	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	20 =Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30)			
1. *Persicaria amphibia*	20	Yes	OBL
2. *Phragmites australis*	40	Yes	FACW
3. *Chasmanthium latifolium*	10	No	FAC
4. *Carex spp.*	10	No	FAC
5. *Juncus effusus*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		
50% of total cover: 45	20% of total cover: 18		
Woody Vine Stratum (Plot size: 30)			
1. *Wisteria frutescens*	50	Yes	FACW
2.			
3.			
4.			
5.			
	50 =Total Cover		
50% of total cover: 25	20% of total cover: 10		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	90	x 2 =	180
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	160 (A)		320 (B)
Prevalence Index = B/A =			2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)
No canopy layer was observed at this point.

SOIL

Sampling Point: W1-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 4/2	95	7.5YR 4/6	5	C	M	Sandy	Prominent redox concentrations
8-16	5YR 2.5/1	100					Mucky Sand	Muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

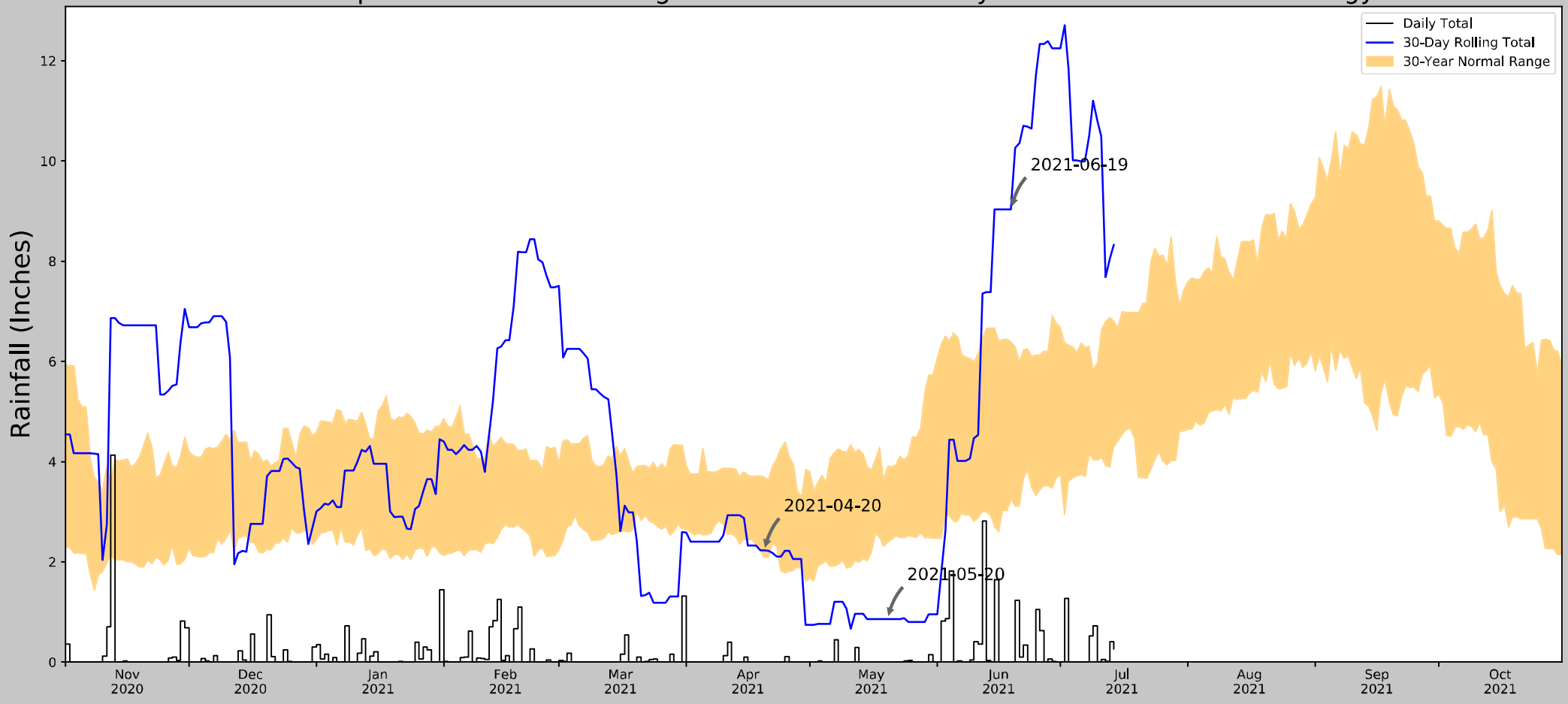
Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

A prescence of muck was found at a depth of 8 inches.

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.196388, -77.939694
Observation Date	2021-06-19
Elevation (ft)	25.07
Drought Index (PDSI)	Mild wetness

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-19	3.250394	6.391732	9.035433	Wet	3	3	9
2021-05-20	2.391339	3.912599	0.862205	Dry	1	2	2
2021-04-20	2.087402	3.685433	2.232284	Normal	2	1	2
Result							Normal Conditions - 13

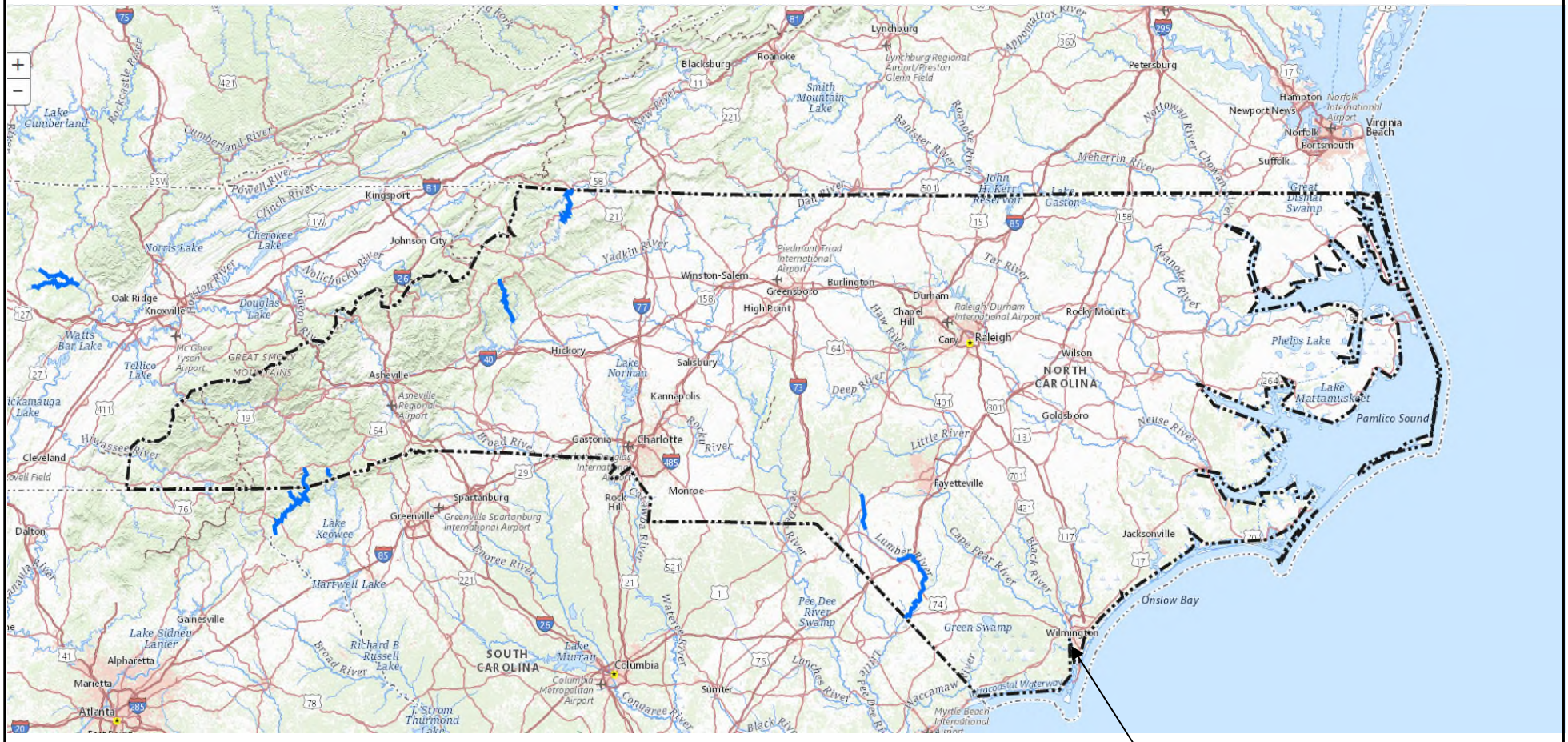
Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WILMINGTON INTL AP	34.2675, -77.8997	33.136	5.419	8.066	2.482	11353	90

ATTACHMENT 16

Wild and Scenic Rivers



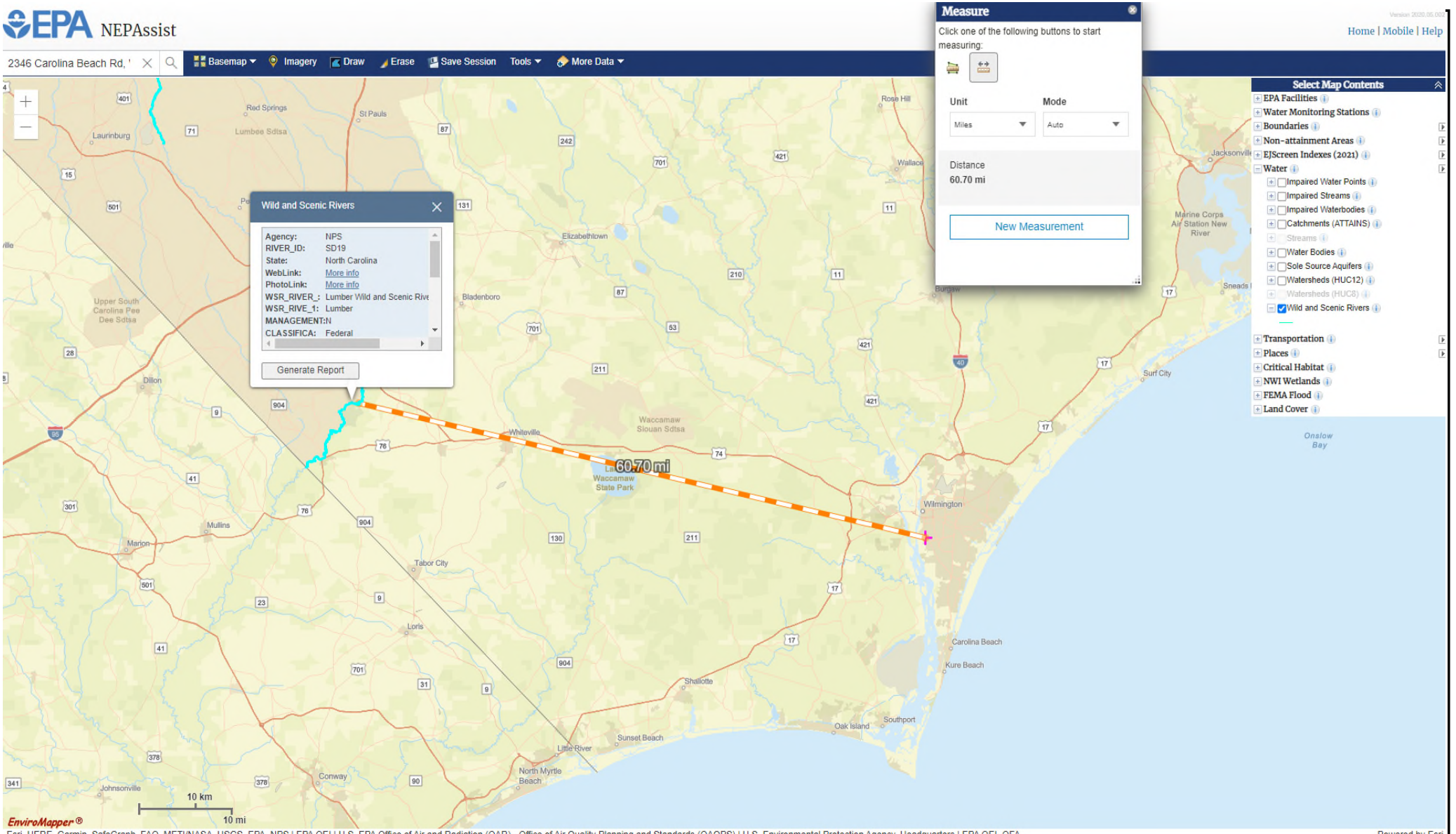
Source: https://www.rivers.gov/north-carolina.php

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	9-12-2022

NATIONAL WILD & SCENIC RIVERS
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



https://nepassisttool.epa.gov/nepassist/nepamap.aspx

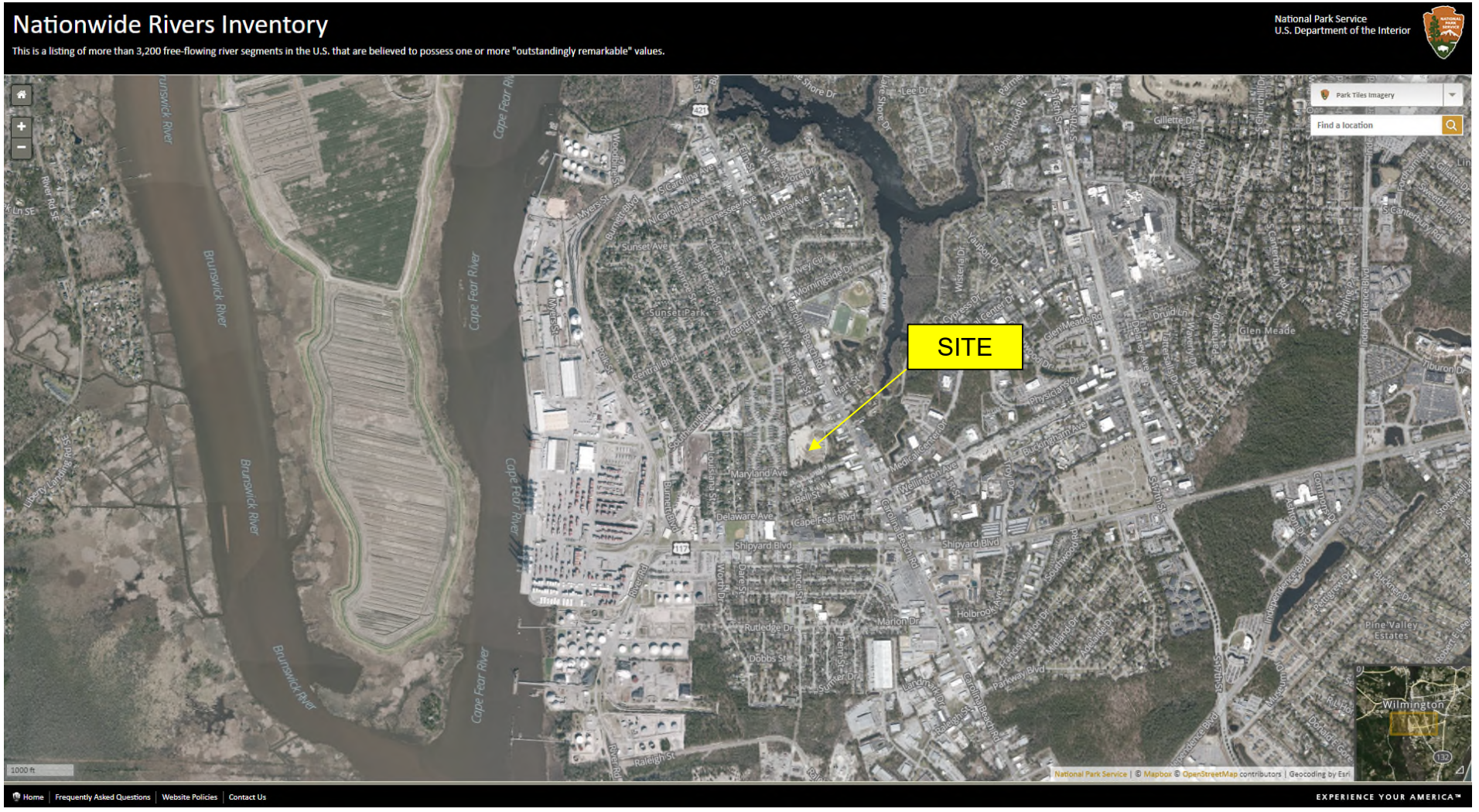
N

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	10-31-2022

DISTANCE TO WILD AND SCENIC RIVERS
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



SOURCE: NATIONWIDE RIVERS INVENTORY
https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	9-12-2022

NATIONWIDE RIVERS INVENTORY
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

Nationwide Rivers Inventory

This is a listing of more than 3,200 free-flowing river segments in the U.S. that are believed to possess one or more "outstandingly remarkable" values.

National Park Service
U.S. Department of the Interior



SOURCE: NATIONWIDE RIVERS INVENTORY
https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm

N

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	10-31-2022

DISTANCE TO NATIONWIDE RIVERS
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

ATTACHMENT 17

Environmental Justice

EJScreen Report (Version 2.1)

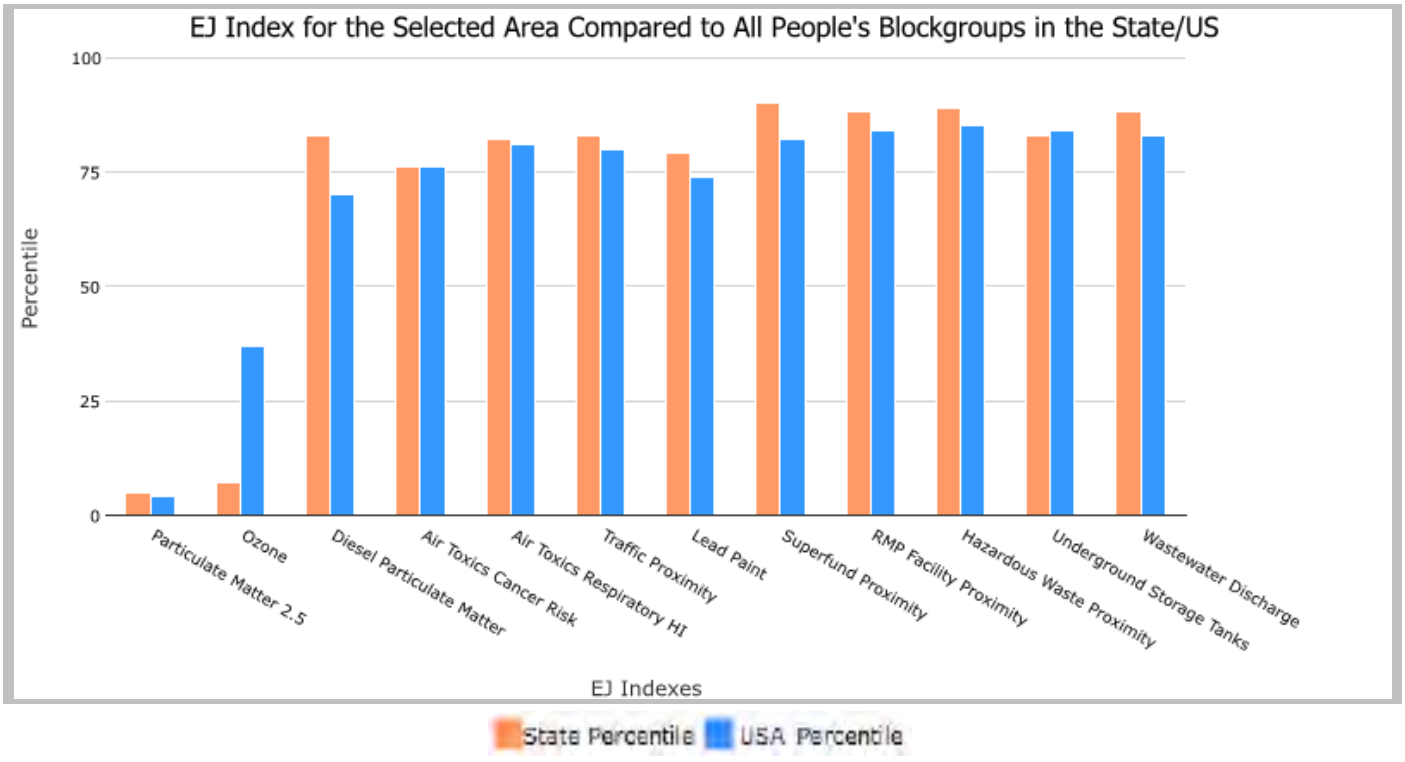
1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4

Approximate Population: 9,635

Input Area (sq. miles): 3.85

Starway Village Apartments

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	5	4
EJ Index for Ozone	7	37
EJ Index for Diesel Particulate Matter*	83	70
EJ Index for Air Toxics Cancer Risk*	76	76
EJ Index for Air Toxics Respiratory HI*	82	81
EJ Index for Traffic Proximity	83	80
EJ Index for Lead Paint	79	74
EJ Index for Superfund Proximity	90	82
EJ Index for RMP Facility Proximity	88	84
EJ Index for Hazardous Waste Proximity	89	85
EJ Index for Underground Storage Tanks	83	84
EJ Index for Wastewater Discharge	88	83



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

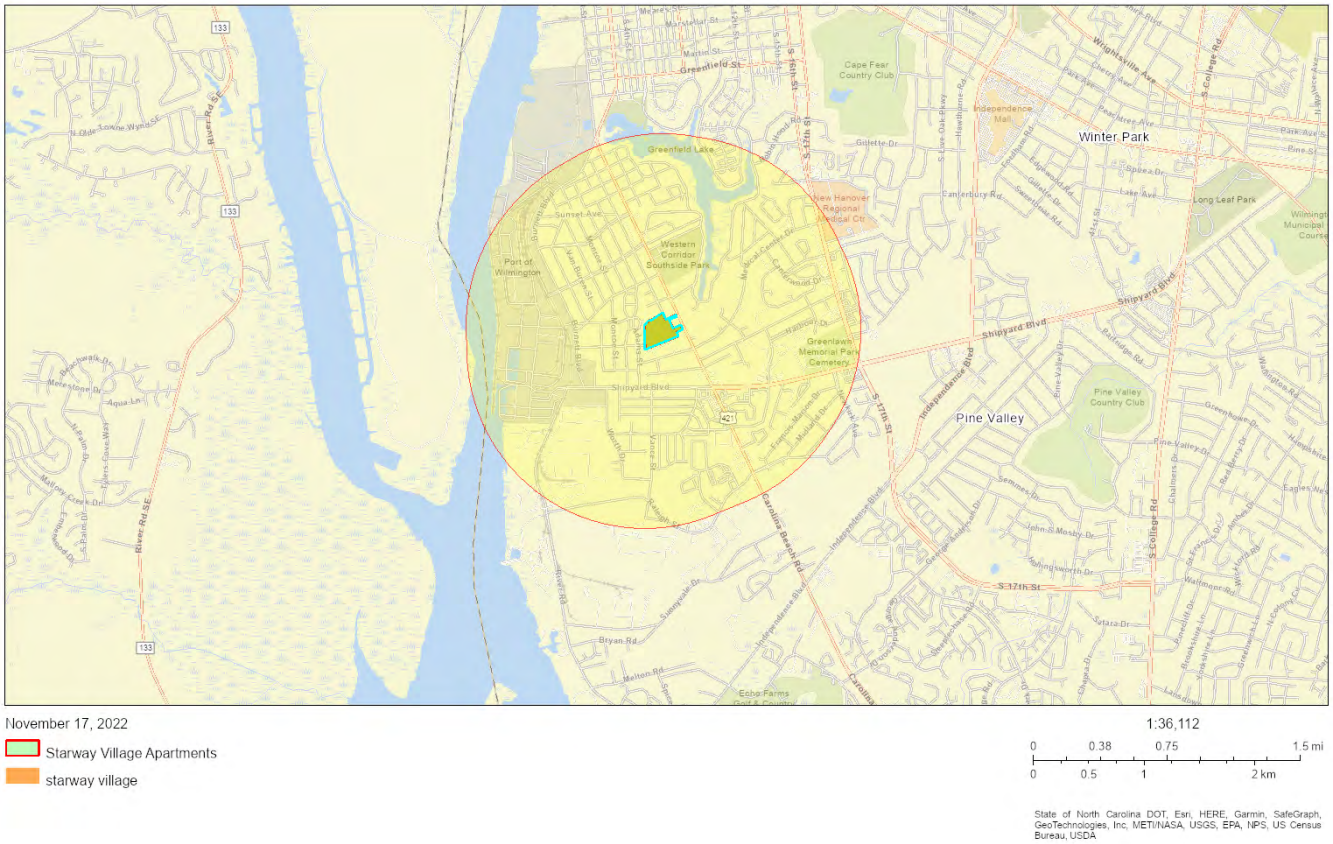
EJScreen Report (Version 2.1)

1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4

Approximate Population: 9,635

Input Area (sq. miles): 3.85

Starway Village Apartments



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	3

EJScreen Report (Version 2.1)

1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4

Approximate Population: 9,635

Input Area (sq. miles): 3.85

Starway Village Apartments

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 (µg/m^3)	5.14	7.67	2	8.67	1
Ozone (ppb)	36.7	41.5	3	42.5	16
Diesel Particulate Matter* (µg/m^3)	0.253	0.178	80	0.294	50-60th
Air Toxics Cancer Risk* (lifetime risk per million)	30	28	95	28	80-90th
Air Toxics Respiratory HI*	0.47	0.36	97	0.36	90-95th
Traffic Proximity (daily traffic count/distance to road)	910	400	88	760	79
Lead Paint (% Pre-1960 Housing)	0.36	0.15	84	0.27	62
Superfund Proximity (site count/km distance)	0.13	0.08	86	0.13	75
RMP Facility Proximity (facility count/km distance)	1.8	0.41	95	0.77	87
Hazardous Waste Proximity (facility count/km distance)	5.2	0.83	98	2.2	88
Underground Storage Tanks (count/km^2)	7.6	3.9	84	3.9	84
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.017	0.28	83	12	73
Socioeconomic Indicators					
Demographic Index	47%	35%	72	35%	72
People of Color	43%	37%	63	40%	62
Low Income	51%	33%	78	30%	81
Unemployment Rate	4%	5%	51	5%	52
Limited English Speaking Households	2%	2%	76	5%	65
Less Than High School Education	13%	11%	61	12%	66
Under Age 5	6%	6%	58	6%	56
Over Age 64	18%	16%	56	16%	59

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Starway Village Apartments

Summary of ACS Estimates	2016 - 2020
Population	9,635
Population Density (per sq. mile)	2,733
People of Color Population	4,155
% People of Color Population	43%
Households	4,158
Housing Units	4,540
Housing Units Built Before 1950	1,121
Per Capita Income	24,662
Land Area (sq. miles) (Source: SF1)	3.53
% Land Area	89%
Water Area (sq. miles) (Source: SF1)	0.44
% Water Area	11%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	9,635	100%	822
Population Reporting One Race	9,272	96%	1,943
White	5,894	61%	821
Black	2,671	28%	396
American Indian	47	0%	30
Asian	83	1%	104
Pacific Islander	0	0%	13
Some Other Race	577	6%	579
Population Reporting Two or More Races	363	4%	148
Total Hispanic Population	1,102	11%	596
Total Non-Hispanic Population	8,533		
White Alone	5,481	57%	844
Black Alone	2,558	27%	396
American Indian Alone	47	0%	30
Non-Hispanic Asian Alone	83	1%	104
Pacific Islander Alone	0	0%	13
Other Race Alone	0	0%	13
Two or More Races Alone	363	4%	148
Population by Sex			
Male	4,865	50%	427
Female	4,771	50%	422
Population by Age			
Age 0-4	544	6%	149
Age 0-17	1,852	19%	219
Age 18+	7,783	81%	539
Age 65+	1,696	18%	200

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020 .

EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Starway Village Apartments

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	6,474	100%	359
Less than 9th Grade	299	5%	122
9th - 12th Grade, No Diploma	554	9%	96
High School Graduate	1,934	30%	384
Some College, No Degree	1,489	23%	156
Associate Degree	659	10%	183
Bachelor's Degree or more	1,538	24%	177
Population Age 5+ Years by Ability to Speak English			
Total	9,091	100%	833
Speak only English	8,103	89%	835
Non-English at Home[1+2+3+4]	988	11%	378
[1]Speak English "very well"	657	7%	194
[2]Speak English "well"	127	1%	114
[3]Speak English "not well"	165	2%	88
[4]Speak English "not at all"	39	0%	190
[3+4]Speak English "less than well"	204	2%	190
[2+3+4]Speak English "less than very well"	331	4%	221
Linguistically Isolated Households*			
Total	99	100%	54
Speak Spanish	90	91%	52
Speak Other Indo-European Languages	0	0%	13
Speak Asian-Pacific Island Languages	9	9%	18
Speak Other Languages	0	0%	13
Households by Household Income			
Household Income Base	4,158	100%	233
< $15,000	803	19%	168
$15,000 - $25,000	545	13%	82
$25,000 - $50,000	1,148	28%	179
$50,000 - $75,000	1,093	26%	198
$75,000 +	568	14%	152
Occupied Housing Units by Tenure			
Total	4,158	100%	233
Owner Occupied	1,221	29%	136
Renter Occupied	2,938	71%	221
Employed Population Age 16+ Years			
Total	7,948	100%	834
In Labor Force	5,175	65%	845
Civilian Unemployed in Labor Force	207	3%	101
Not In Labor Force	2,773	35%	256

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Starway Village Apartments

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	10,072	100%	893
English	9,020	90%	894
Spanish	788	8%	288
French, Haitian, or Cajun	49	0%	52
German or other West Germanic	0	0%	13
Russian, Polish, or Other Slavic	0	0%	13
Other Indo-European	53	1%	52
Korean	0	0%	13
Chinese (including Mandarin, Cantonese)	62	1%	104
Vietnamese	0	0%	13
Tagalog (including Filipino)	0	0%	13
Other Asian and Pacific Island	12	0%	22
Arabic	34	0%	40
Other and Unspecified	54	1%	81
Total Non-English	1,052	10%	1,264

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

EJSCREEN Census 2010 Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Starway Village Apartments

Summary	Census 2010
Population	8,105
Population Density (per sq. mile)	2,333
People of Color Population	3,323
% People of Color Population	41%
Households	3,467
Housing Units	3,930
Land Area (sq. miles)	3.47
% Land Area	89%
Water Area (sq. miles)	0.43
% Water Area	11%

Population by Race	Number	Percent
Total	8,105	-------
Population Reporting One Race	7,867	97%
White	5,162	64%
Black	1,926	24%
American Indian	71	1%
Asian	61	1%
Pacific Islander	4	0%
Some Other Race	644	8%
Population Reporting Two or More Races	238	3%
Total Hispanic Population	1,115	14%
Total Non-Hispanic Population	6,990	86%
White Alone	4,782	59%
Black Alone	1,889	23%
American Indian Alone	39	0%
Non-Hispanic Asian Alone	61	1%
Pacific Islander Alone	4	0%
Other Race Alone	31	0%
Two or More Races Alone	186	2%

Population by Sex	Number	Percent
Male	3,970	49%
Female	4,135	51%

Population by Age	Number	Percent
Age 0-4	585	7%
Age 0-17	1,618	20%
Age 18+	6,487	80%
Age 65+	1,008	12%

Households by Tenure	Number	Percent
Total	3,467	
Owner Occupied	1,186	34%
Renter Occupied	2,281	66%

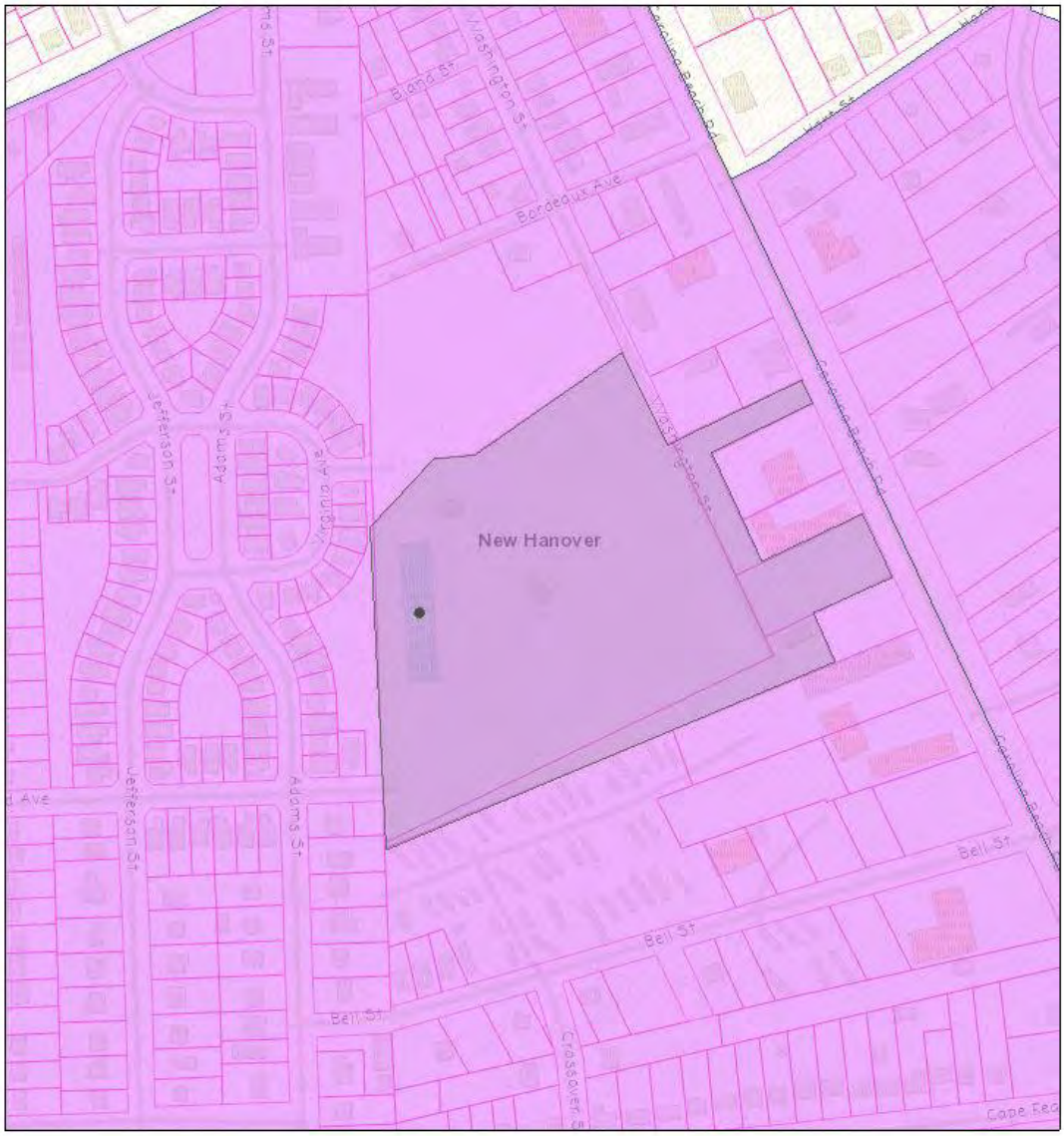
Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

NCDEQ Facility Screening Report - Starway Village (1-mile Buffer)

Area of Interest (AOI) Information

Area : 107,238,861.44 ft²

Nov 9 2022 10:20:18 Eastern Standard Time



NC DEQ's Potentially Underserved Block Groups 2019

- County and State
- census2017acs - by Block Group
- County Boundary
- Parcels

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

NCDOT GIS Unit, Esri Community Maps Contributors, New Hanover County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NC Center for Geographic Information and

Summary

Name	Count	Area(ft²)	Length(mi)

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New Hanover County, North Carolina†



POPULATION: 213,190

INCOME

Average Household Income

New Hanover County: $57,252

North Carolina: $57,388

Residents who live below the poverty line



13.0%

New Hanover County

13.6%

North Carolina

QUICK FACTS:

Out of 10 people living in this county

SEX



5 are male & 5 are female

AGE



About 2 are between the ages of 0 and 19 years

About 2 are between the ages of 20 and 34 years

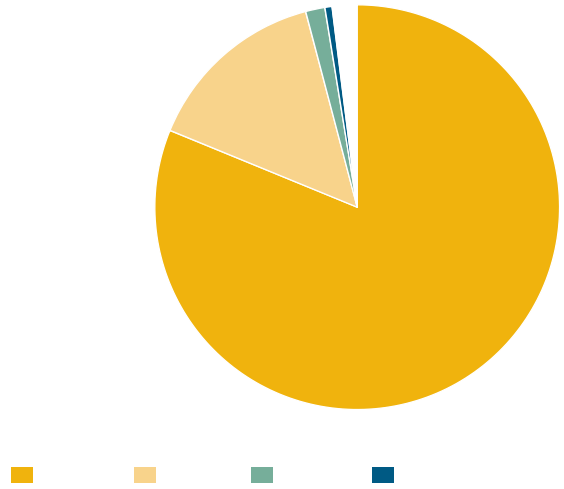
About 2 are between the ages of 35 and 49 years

About 3 are 50 years and older

ETHNICITY

1 are Hispanic and 9 are non-Hispanic

RACE



ıttps://twitter.com/share?

%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (../../DataExplorer?query=C7380B65-728D-4621-A122-47283CF8B444&G5=9999) | Learn more about this topic (../InfoByLocation/showPcMain.action)

† 2020 data from the National Environmental Public Health Tracking Network (../showHome.action)

Asthma†

Percent of **adults** who currently have asthma

8.3% 7.0%

North Carolina National

Asthma is a chronic disease that affects the airways that carry oxygen in and out of the lungs. Asthma can cause

- shortness of breath,
- wheezing,
- coughing, and
- tightness in the chest.

Asthma attacks have been linked to many factors, including exposure to environmental hazards like

- allergens,
- tobacco smoke, and
- indoor and outdoor air pollution.

Asthma can be controlled by taking medication and avoiding triggers that can cause an attack.

ıttps://twitter.com/share?

%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=1F12A3B5-E744-4857-9110-401524CC8D8E&fips=37&G5=9999) | Learn more about this topic (../showAsthma.action)

† 2019 data from the National Environmental Public Health Tracking Network (../showHome.action)

Air Quality: Ground-Level Ozone†



New Hanover County residents were exposed to unhealthy levels of ozone for **0 Days** in 2018.

Ozone occurs naturally in the sky and helps protect us from the sun's harmful rays. But ground-level ozone can be bad for your health and the environment. Ground-level ozone is one of the biggest parts of smog.

When ozone levels are above the national standard, everyone should try to limit their contact with it by reducing the amount of time spent outside.

New Hanover County residents were exposed to unhealthy levels of ozone for **0 Days** in 2018.

Check the EPA's Air Quality Index (AQI) at AirNow.gov (http://www.AirNow.gov) to see the current air quality conditions for your location. You can use the AQI to plan your daily activities to reduce exposure to ozone.

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%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=1C537D70-420B-4B25-ABBE-F1B6FAD2C30B&fips=37129&G5=9999) | Learn more about this topic (../showAirHealth.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Air Quality: Particulate Matter†

ANNUAL AMBIENT CONCENTRATION OF $PM_{2.5}$

3.5 µg/m^3*

New Hanover County, North Carolina

12.0 µg/m^3*

Annual National Standard

*Micrograms Per Cubic Meter (µg/m^3)

Air pollution is a leading environmental threat to human health. Particles in the air like dust, dirt, soot, and smoke are one kind of air pollution called particulate matter. Fine particulate matter, or $PM_{2.5}$, is so small that it cannot be seen in the air. Breathing in $PM_{2.5}$ may

- lead to breathing problems,
- make asthma symptoms or some heart conditions worse, and
- lead to low birth weight.

The national standard for annual $PM_{2.5}$ levels is **12.0µg/m^3**. When $PM_{2.5}$ levels are above 12, this means that air quality is more likely to affect your health.

In 2018, the annual level of $PM_{2.5}$ in **New Hanover County** was **3.5µg/m^3**. *

* Micrograms per cubic meter (../InfoByLocation/images/content/PM2-5_5.jpg) (µg/m^3)

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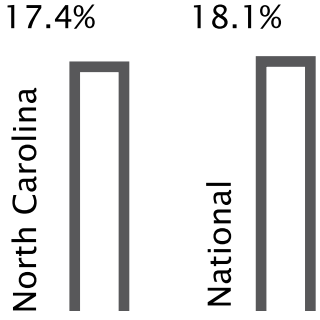
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out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=4E04F504-A4A2-405C-85AB-9BC6B3F7325D&fips=37129&G5=9999) | Learn more about this topic (../showAirLanding.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Smoking†







Tobacco use is the single most preventable cause of death and disease in the United States. Smoking harms nearly every organ of the body. It causes many diseases and reduces the health of smokers in general. The negative health effects from cigarette smoking account for an estimated 500,000 deaths, or nearly 1 of every 5 deaths, each year in the United States.

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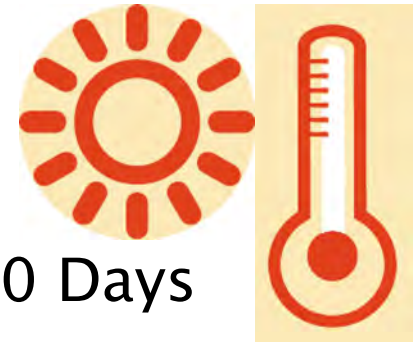
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out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=2B83BA8E-9849-47BF-92C2-2CA0D51CC90C&fips=37&G5=9999) | Learn more about this topic (../showHBSmokingPrevalence.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Extreme Heat†



0 Days

with temperatures above 90°F

Extreme summer heat is increasing in the United States, and climate projections indicate that extreme heat events will be more frequent and intense in coming decades. Extremely hot weather can cause illness or even death. Knowing how hot it gets in your area can help you prepare for extremely hot temperatures and prevent heat related illness (http://emergency.cdc.gov/disasters/extremeheat/heattips.asp).

New Hanover County had **0 Days** with maximum temperatures above 90°F during May-September 2021.

Heat-related death or illnesses are preventable if you follow a few simple steps.

- Stay cool.
- Stay hydrated.
- Stay informed.

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out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=51ED8370-BE00-4813-A4F8-AE641EF61672&fips=37129&G5=9999) | Learn more about this topic (../showClimateChangeExtremeHeat.action)

† 2021 data from the National Environmental Public Health Tracking Network (../showHome.action)

Heart Attacks†

46

deaths from heart attacks in New Hanover County



The environment is one of several factors (../showHeartExpRisk.action) that can lead to an increased risk for heart disease. High levels of air pollution and extreme hot and cold temperatures have been linked to increases in heart disease and deaths from heart attacks. A heart attack happens when a part of the heart muscle dies or gets damaged because of reduced blood supply.

In 2020, there were

- **46 deaths** from heart attacks in New Hanover County.
- **3,231 deaths** from heart attacks in North Carolina.

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out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=19D1C8B6-45AB-4216-A2CC-2DCC250FD1FE&fips=37129&G5=9999) | Learn more about this topic (../showHeartAttack.action)

† 2020 data from the National Environmental Public Health Tracking Network (../showHome.action)

Access To Parks†



Live within half a mile of a park in New Hanover County



Having access to places for physical activity, like parks, encourages people to get active and do so more often. The closer you live to a park, the more likely you are to walk or bike there. Walking and biking to parks can decrease air pollution and car crashes, which in turn, can reduce chronic disease rates and traffic-related injuries.

In 2015,

24% of people living in **New Hanover County** lived within half a mile of a park.

23% of people living in **North Carolina** lived within half a mile of a park.

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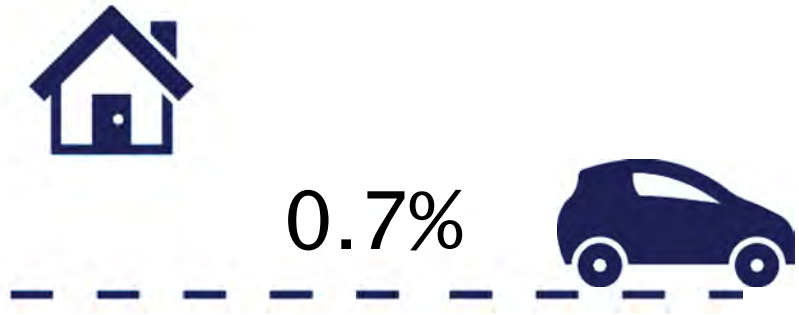
ɜA%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20#environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=16F809E7-BD81-4A24-8588-F6A3A62B866E&fips=37129&G5=9999) | Learn more about this topic (../showPcMain.action)

† 2015 data from the National Environmental Public Health Tracking Network (../showHome.action)

Proximity To Highways†



of New Hanover County population that live within 150m of a highway

Traffic-related air pollution is a major cause of unhealthy air quality, especially in urban areas. Many health problems have been linked to exposure to traffic-related air pollution. The closer your home or school is to a major highway, the more likely you and your family are to be exposed to traffic-related air pollution.

In 2011, **0.7%** of the population of New Hanover County lived within 150 meters* of a major highway.

In 2011, **0.0%** of New Hanover County public schools (preK-4th grade) were sited within 150 meters* of a major highway.

* 150 meters is about 2 blocks.

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%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

out%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=75C3D4C4-D2CC-4E1B-A26C-FA01EE02076C&fips=37129&G5=9999) | Learn more about this topic (../showProximityToHighways.action)

† 2011 data from the National Environmental Public Health Tracking Network (../showHome.action)

Visit the Tracking Network for more information about your health and the environment.

www.cdc.gov/ephtracking (http://www.cdc.gov/ephtracking/)

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Like us on Facebook
(http://www.facebook.com/CDCEPHTracking)
Join our List-serv
(mailto:EPHT@LISTSERV.CDC.GOV?
subject=Please%20add%20me%20to%20CDC's%20Environmen
serv.&body=Please%20fill%20in%20the%20information%20bel



ATTACHMENT 18

Land Development

Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design

Conformance with Plans & Zoning/Site Compatibility

Project Name	Investigator(s)	Site Visit Date
Starway Village Apartments	**C. Daves, S&ME**	**8-31-22**

ZONING

Is the project in compliance or conformance with local zoning?

☒ **Yes** ☐ **No (explain)**

Site has one zoning designation:

MD-17 – High Density-Multiple Dwelling Residential

☐ **Not applicable (explain) _____**

SITE COMPATIBILITY

Check all items that apply

Is the project incompatible with surrounding:			
	Land uses		Building type (low/high-rise)
	Building height, bulk, mass		Building density
Will the project be unduly influenced by:			
	Building deterioration		Transition of land uses
	Postponed maintenance		Incompatible land uses
	Obsolete public facilities		Inadequate off-street parking
Will the project be influenced by air pollution generators such as:			
	Heavy industry		Large parking facilities (1,000 or more cars)
	Incinerators		Heavily traveled highway (6 or more lanes)*
	Power generation plants		Oil refineries
	Cement plants		Other (specify)

Were there any compatibility issues identified?

☐ **Yes** ☒ **No**

If Yes, list mitigation strategies below:

Chris Daves

Lead Investigator's Signature

11/1/22

Date

Zoning

The current zoning and land use designation associated with the site includes:

MD-17: High Density Multiple Dwelling Residential

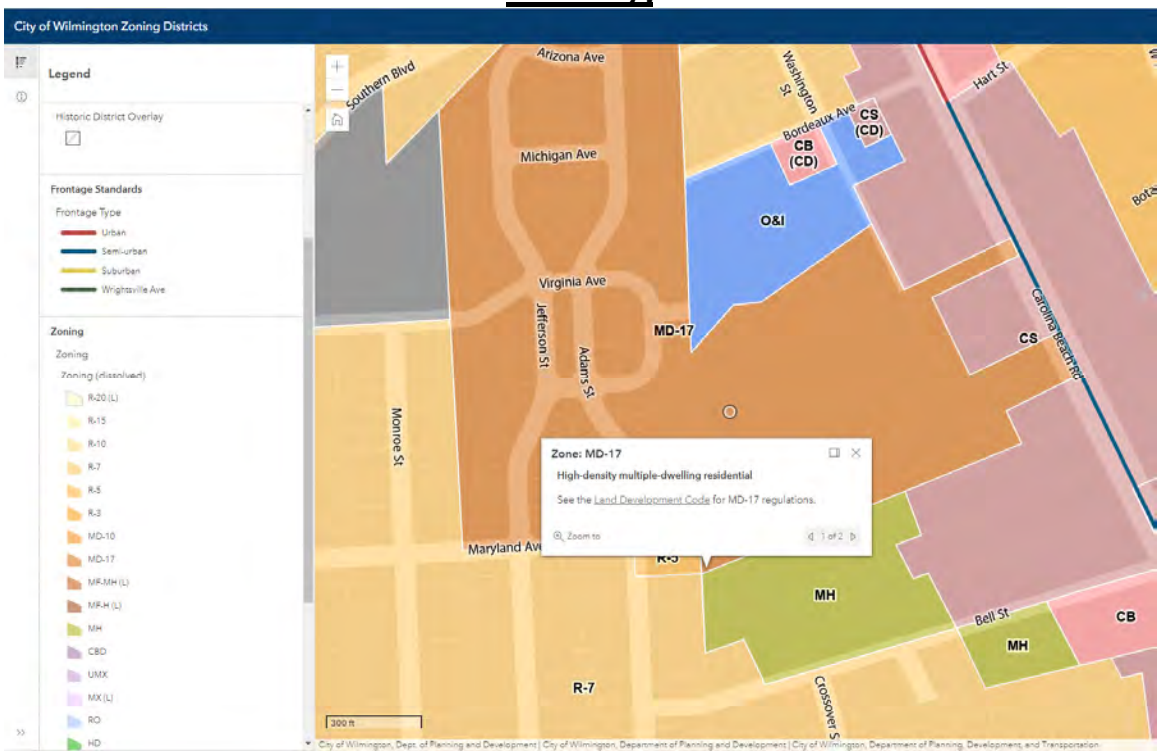
This designation is assigned by the City of Wilmington.
https://www.wilmingtonnc.gov/departments/planning-development-and-transportation

Zoning Designation	Project Compliance?
MD-17 – High Density Multiple Dwelling Residential	Yes

MD-17 – High Density Multiple Dwelling Residential

The MD-17 district is intended to be applied within the urban core of the city and other areas with a full range of amenities and commercial services. MD-17 zoning is intended to provide a mix of densities and housing forms in a compact urban environment through redevelopment, infill on relatively small sites, and within mixed-use areas. Higher development intensity at appropriate locations is encouraged to support transit use, minimize traffic congestion, and provide a range of housing types.

Zoning



https://wilmingtonnc.maps.arcgis.com/apps/instant/minimalist/index.html?appid=0f6a342924c04a1d83e1fc0b39b6c6ac

Correspondence

The zoning for the site was also confirmed by Miranda Garmenn, an official with the City of Wilmington Planning Division. She provided zoning verification letters for the two phases (Starway Village I/II), both dated December 22, 2021.

The maximum density is 17 units per acres by right. However, density may be increased to 36 units per acre if at least 10 percent of the total number of residential units are designated as workforce housing, as defined in this chapter, for a period of at least 15 years. Additionally, there is a minimum open space (percent of total lot area) of 20 percent.

For Starway Village I (Phase I) , the site is allowed to have up to approximately 168 units (per 9.9 acres). However, if the site includes workforce housing requirement, a total of 356 units are allowed. For Starway Village II (Phase 2) , the site is allowed to have up to approximately 93 units (per 5.5 acres). However, if the site includes workforce housing requirement, a total of 198 units are allowed.

Other plans researched included:

New Hanover County Office of Strategy – 2022 Strategic Plan:
https://strategy.nhcgov.com/strategic-plan-2/2018-2023-strategic-priorities/

Wilmington-New Hanover County 2006 CAMA Plan Update (2006):
https://www.wilmingtonnc.gov/home/showpublisheddocument/1604/635976990697400000

Create Wilmington Comprehensive Plan (2016):
https://www.wilmingtonnc.gov/departments/planning-development-and-transportation/comprehensive-plan

New Hanover County Comprehensive Plan (2016):
https://laserfiche.nhcgov.com/weblink/0/edoc/3270860/PlanNHC_LR.pdf

LAND DEVELOPMENT

CONFORMANCE with PLANS

1. Consider how the proposed project is consistent with the community's comprehensive plan.

   One of the goals of the New Hanover County Strategic Plan for 2018-2023 is to encourage the development of complete communities in the unincorporated county by increasing housing diversity and access to basic goods and services. While the project area is within the city limits, the proposed project meets this goal by infilling a site with existing community services nearby.

   One of the major purposes of the Wilmington- New Hanover County Joint Coastal Area Management Plan (2006) was to support and enhance affordable housing and minimum housing programs. A goal within the plan included safe, sanitary, and affordable housing to be available to its citizens. The proposed project fits with the purposes and goals of the plan.

   According to the Create Wilmington Comprehensive Plan (2016), envisioning suitable infill and redevelopment and optimizing existing development is critical to the community's wellbeing, not only downtown, but within neighborhoods across the city. Balancing the need for open space and a well-designed built environment will be key to future development. The proposed project site is identified as a Potential Redevelopment Land and an area of Suburban Commercial Retrofit. The proposed project meets this goal by infilling a site with existing community services nearby.

   One of the goals of the New Hanover County Comprehensive Plan (2016) was to provide a range of housing types, opportunities, and choices and to ensure individuals do not become overburdened with the costs or availability of housing. The proposed project fits with the purposes and goals of the plan.

2. Is the project located in a specific planning area? **Yes. The proposed project site is identified as a Potential Redevelopment Land and an area of Suburban Commercial Retrofit per the Create Wilmington Comprehensive Plan (2016).**

3. Will the project be unduly influenced by a planned transition of land uses? **No.**

4. Does the project conflict with any plan policies? **No.**

COMPATIBLE LAND USE and ZONING

1. What is the current zoning classification of the project location?
   High Density-Multiple Dwelling Residential (MD-17).

2. What is the existing land use at the project location? **The past use of the site was primarily associated with a commercial flea market (Starway Flea Market) with the infrastructure associated with the operation remaining vacant on the site. Two single-family residences (one occupied and one vacant) and County Line Car Sales are located on the southeastern portion of the site and will be demolished prior to site construction.**

3. How does the project relate to the existing land uses of the adjacent and surrounding properties? **Surrounding land uses consist residential and commercial uses. Immediately surrounding land uses consist of single-family residences (Sunset Park) to the west; the Pine Terrace Mobile Home Park to the south; a Duke/Progress Energy substation to the north; and commercial parcels located east, northeast, and southeast along Carolina Bach Road. Commercial parcels consist of**

numerous car and boat repair/parts businesses, a restaurant (Merritt's Burger House), an ABC store, and South Square Plaza. The project would appear to integrate with other surrounding land uses.

SCALE and URBAN DESIGN

1. How will the project alter the landform? Will the project demonstrably destroy or alter the natural or man-made environment? For example, will there be clearance of trees or buildings or alteration of the geomorphic form of the land?
   Project area primarily consists of previously disturbed land from the flea market, two residences, and used car sales. Small amounts of vegetated areas are present on the site, mainly at the perimeter of the site, and will be cleared. Land will be graded as required by building contractors to provide building pad for the proposed apartment buildings and infrastructure. The project site will be cleared of trees during land clearing/grading of site. Project site is located within a mixed-use area of Wilmington that includes residential and commercial areas. The proposed project will integrate well with existing surrounding land use and landforms.

2. How does the project "fit" or conforms within the surrounding and established built environment, in terms of overall scale, density, size, and mass?
   The project will integrate well within the established surrounding area. The proposed project involves the construction of an affordable multi-family apartment complex with 278 units (34 one-bedroom, 154 two-bedroom, and 90 three-bedroom) in seven buildings, two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds.The buildings will be three (2) and four (5) stories tall. The proposed development will be low-profile and blend into the surrounding landscape. The immediate surroundings are heavily developed with residential neighborhoods (Sunset Park to the west and Pine Terrace Mobile Home Park to the south) and commercial businesses to the north, south, and east.

3. Will there be intrusion of elements out of character or scale with the existing physical environment? **No.**

4. Does the proposed building represent a significant change in size, scale, placement, or height in relation to neighboring structures in an inappropriate manner? **No.**

5. Does the project affect building density in the community?
   Yes. The proposed project will increase the number of structures in the surrounding area by seven apartment buildings (278 units) and a clubhouse.

6. Are the changes resulting from any induced development regarded by the community as beneficial or negative?
   The development will be regarded as beneficial within the City of Wilmington. The proposed project will take an infill, primarily vacant site and add value and much needed affordable housing to the area. The proposed project fits with the purposes and goals of several current and past plans for the City of Wilmington and New Hanover County.

7. How does the project's design relate to the context of its surroundings?
   The proposed project will take a primarily vacant site, minus an active residence and used car sales business, and transforms it into a residential community. An extension of Maryland Avenue east across the southern portion of the site to Carolina Beach Road is also proposed and will connect the project to the easternly adjacent Sunset Park neighborhood.

8. Are levels of activity reduced or detrimentally increased? **No.** Does the project enhance street-level activity and community interaction? **No.**

9. Is signage and street furniture in character with existing architectural styles? Does it differ in materials, color, or style from its neighbors in an inappropriate manner? **Yes/No.**

10. Does the project conform to locally adopted design guidelines?
Yes. See Zoning Letters from City of Wilmington.

COMPATIBILITY with SURROUDING DEVELOPMENT, VISUAL QUALITY

1. What are the existing land uses adjacent to the proposed project and will the proposed project be compatible with the existing development?
Immediately surrounding land uses consist of single-family residences (Sunset Park) to the west; the Pine Terrace Mobile Home Park to the south; a Duke/Progress Energy substation to the north; and commercial parcels located east, northeast, and southeast along Carolina Bach Road. Commercial parcels consist of numerous car and boat repair/parts businesses, a restaurant (Merritt's Burger House), an ABC store, and South Square Plaza. The project would appear to integrate with other surrounding land uses.

2. Will the project introduce elements or induce development which is out of character or scale with existing physical environment? **No.**

3. Will the project location, appearance, construction or activities which it will generate, detract from the esthetic appeal of its natural or man-made surroundings? **No.**

4. Is the project protected from incompatible uses by proper zoning? **Yes.**

5. Are the approaches to the project convenient, adequate, safe, and attractive?
Yes. One entry from Carolina Beach Road on the northeast currently existing. An extension of Maryland Avenue east across the southern portion of the site to Carolina Beach Road is also proposed and will provide two additional entry points to the project site.

Planning and Development
Planning Division
305 Chestnut Street
PO Box 1810
Wilmington, NC 28402-1810

910 254-0900
910 341-3264 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

CITY OF WILMINGTON NORTH CAROLINA

ZONING VERIFICATION FORM

Date: December 22, 2021

Re: Starway Village I

To Whom It May Concern:

This letter is in verification that 2346 Carolina Beach Road is a parcel of property located in the City of Wilmington, New Hanover County, State of North Carolina. This property is zoned MD-17 residential district classification; parcel identification number R06013-021-001-000.

The City of Wilmington Land Development Code permits the following uses on the property as specified in Section 18-28 (B) of the Land Development Code, subject to site plan and zoning approval (see attached):

The maximum density is 17 units per acres by right. However, Density may be increased to 36 units per acre if at least 10 percent of the total number of residential units are designated as workforce housing, as defined in this chapter, for a period of at least 15 years. Additionally, there is a minimum open space (percent of total lot area) of 20 percent.

The subject property is approximately 9.9 acres and would be allowed by right up to approximately 168 units. If the subject property includes the workforce housing requirements, they would be allowed up to 356 units.

No known zoning violations are on this property as of this date of correspondence.

Please contact our office for any further questions at 910-254-0900.

Sincerely,

Miranda Garmenn

Miranda Garmenn
Planning Division

NOTE: THIS ZONING VERIFICATION IS GOOD ONLY FOR THE DATE ISSUED. ZONING VERIFICATION SHOULD BE RE-VERIFIED FOR ANY OTHER DATE.

Planning and Development
Planning Division
305 Chestnut Street
PO Box 1810
Wilmington, NC 28402-1810

910 254-0900
910 341-3264 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

ZONING VERIFICATION FORM

Date: December 22, 2021

Re: Starway Village II

To Whom It May Concern:

This letter is in verification that 2346 Carolina Beach Road is a parcel of property located in the City of Wilmington, New Hanover County, State of North Carolina. This property is zoned MD-17 residential district classification; parcel identification number R06013-021-001-000.

The City of Wilmington Land Development Code permits the following uses on the property as specified in Section 18-28 (B) of the Land Development Code, subject to site plan and zoning approval (see attached):

The maximum density is 17 units per acres by right. However, Density may be increased to 36 units per acre if at least 10 percent of the total number of residential units are designated as workforce housing, as defined in this chapter, for a period of at least 15 years. Additionally, there is a minimum open space (percent of total lot area) of 20 percent.

The subject property is approximately 5.5 acres and would be allowed by right up to approximately 93 units. If the subject property includes the workforce housing requirements, they would be allowed up to 198 units.

No known zoning violations are on this property as of this date of correspondence.

Please contact our office for any further questions at 910-254-0900.

Sincerely,

Miranda Garmenn

Miranda Garmenn
Planning Division

NOTE: THIS ZONING VERIFICATION IS GOOD ONLY FOR THE DATE ISSUED. ZONING VERIFICATION SHOULD BE RE-VERIFIED FOR ANY OTHER DATE.

City of Wilmington Zoning Districts

Legend

Historic District Overlay

Frontage Standards

Frontage Type

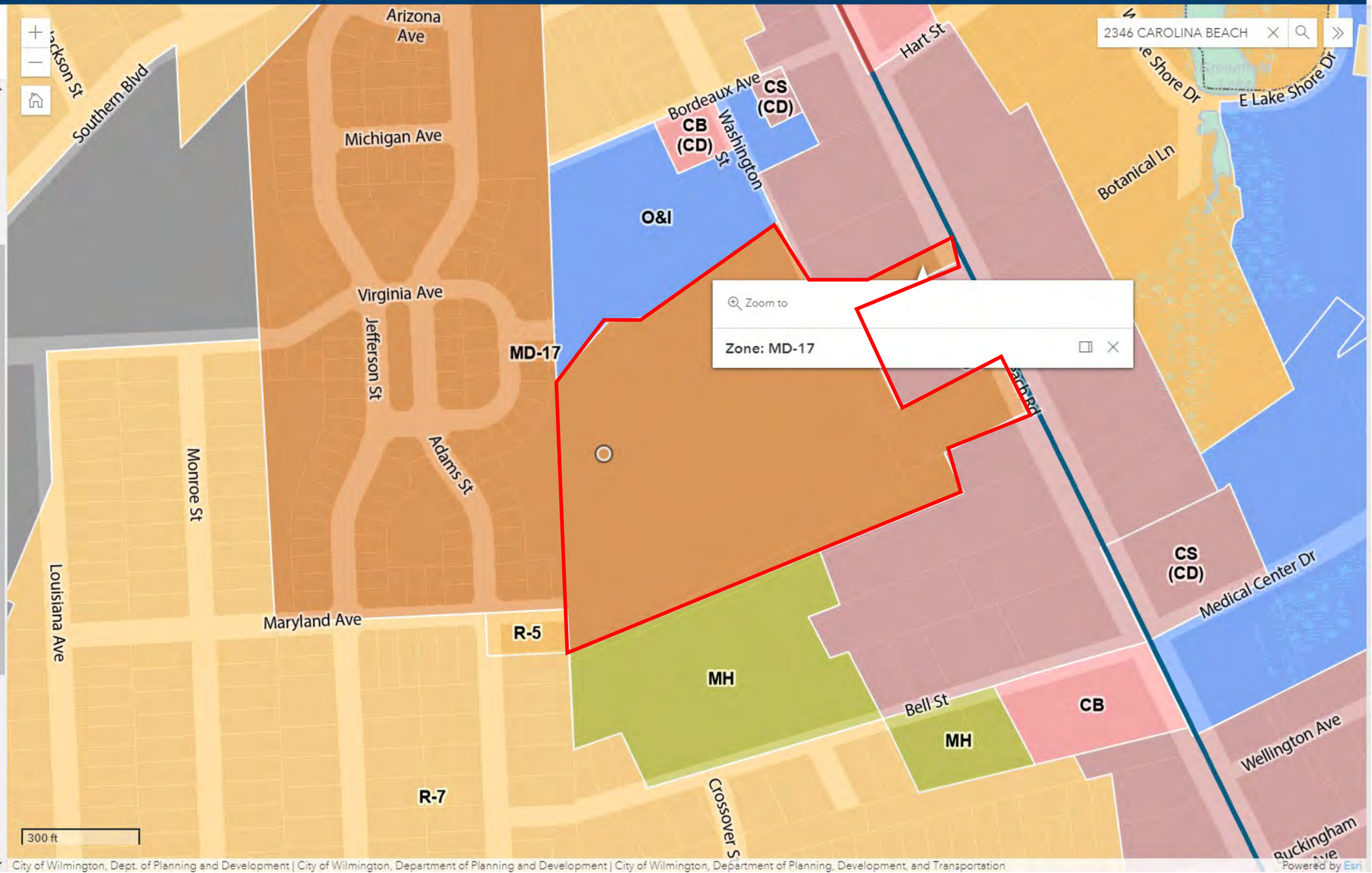
- Urban
- Semi-urban
- Suburban
- Wrightsville Ave

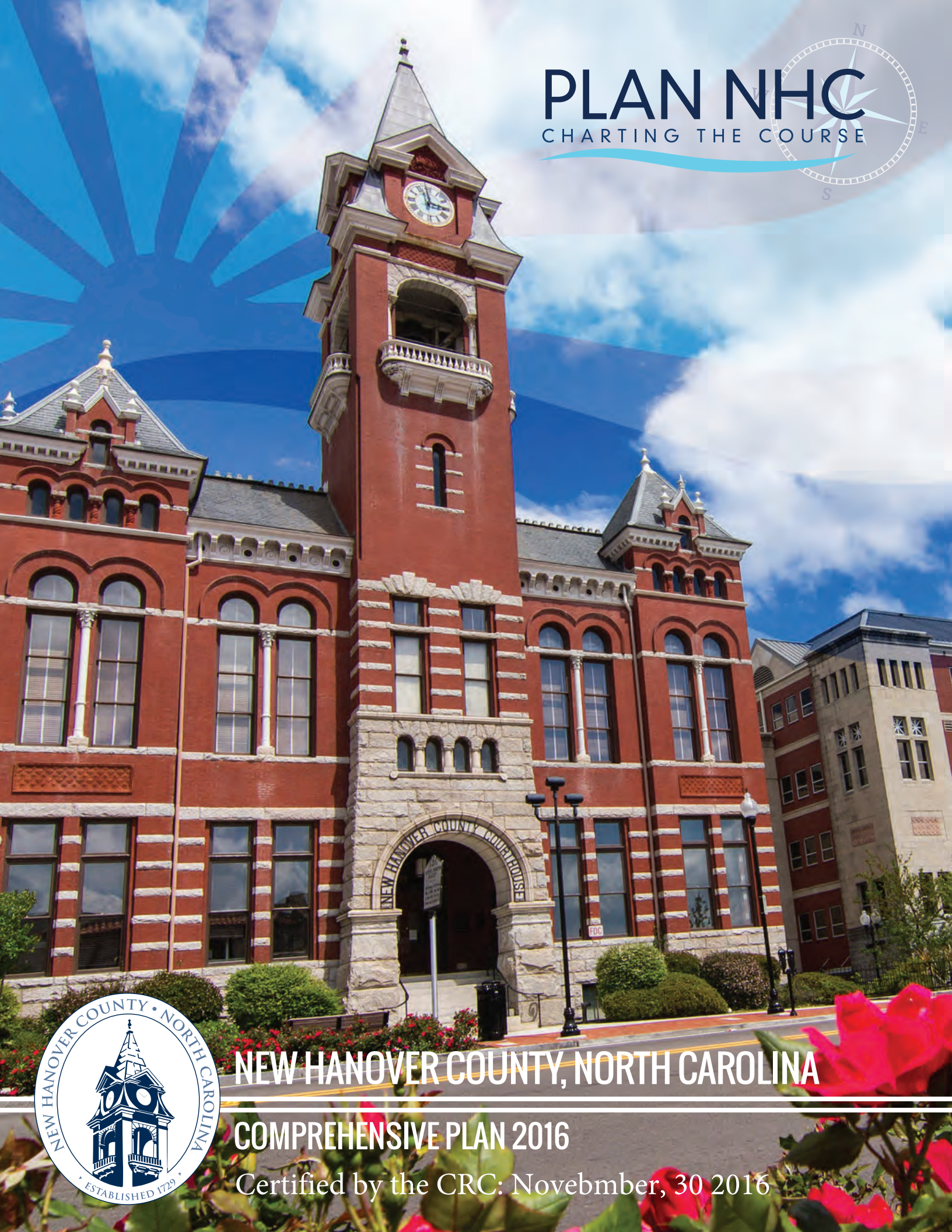
Zoning

Zoning

Zoning (dissolved)

- R-20 (L)
- R-15
- R-10
- R-7
- R-5
- R-3
- MD-10
- MD-17
- MF-MH (L)
- MF-H (L)
- MH
- CBD
- UMX
- MX (L)
- RO





NEW HANOVER COUNTY, NORTH CAROLINA

COMPREHENSIVE PLAN 2016

Certified by the CRC: Novebmber, 30 2016

PROLOGUE

INTRODUCTION

New Hanover County is a vibrant, prosperous, diverse coastal community, committed to building a sustainable future for generations to come. With this in mind, citizens, elected officials, appointed officials, stakeholder groups, and planning staff have developed the first Comprehensive Land Use Plan for New Hanover County, titled Plan NHC. This plan is more than a document that provides land use policy recommendations. It is a series of reports, including statistical and historical information that incorporates extensive community input and provides a detailed implementation plan that will help achieve the overall vision for the future of New Hanover County. Plan NHC will provide guidance to elected officials and staff on development and redevelopment proposals, zoning regulations, as well as policies, programs and initiatives that will sustain New Hanover County as a vibrant, prosperous, and diverse coastal community.

New Hanover County is expected to experience a high level of employment and population growth. Currently, New Hanover County's population is approximately 214,000. This figure includes the population of Wilmington, Wrightsville, Carolina and Kure beaches, as well as the unincorporated areas of New Hanover County. By 2040, population is projected to grow to 337,000. This represents an increase of 123,000 (57%) from current population levels. If thought about in a more tangible way, it would be the equivalent of adding another city the current size of Wilmington to New Hanover County. With growth comes the need for responsible development and redevelopment of land, as well as thoughtful consideration concerning the county's infrastructure and natural resources. These are important topics to study because how the county grows and develops will have a direct impact on the ability of future generations to thrive and enjoy the natural beauty of this area.

COMMUNITY INPUT

New Hanover County's Plan NHC was developed in large part from community input. Meeting participants came from all walks of life, including college and high school students, local retirees, young working families, as well as numerous stakeholder groups. Community members provided planning staff with feedback through several mediums, including community meetings and surveys, as well as designated theme committees. The theme committees represent principles created by the American Planning Association that comprehensive plans should include. These theme committees included: The Livable Built Environment, Harmony with Nature, Interwoven Equity, Resilient Economy, Healthy Community, and Responsible Regionalism. Discussions from the numerous theme committee meetings led to the creation of 21 goals that aided in the creation of the future land-use map in Chapter 4: Visualizing the Future, as well as the implementation portion in Chapter 5: Building the Future of the comprehensive plan. These goals, developed by a Citizen Advisory Committee, will guide the next generation of development and ensure New Hanover County becomes an even better place to live, work, and play.

WHAT THE PLAN WILL DO

Plan NHC will be vital in terms of fostering economic development. Employment Centers and Commerce Zones, outlined in Chapter 4, will enable targeted industries to locate and flourish in New Hanover County. Striking a balance between economic development and environmental stewardship, Plan NHC also seeks to inform developers, elected and appointed officials staff, and other stakeholders on how existing natural features and systems may influence development.

In addition, Plan NHC will act as a guide for the creation of a new zoning ordinance. The original ordinance, written in 1969 and amended over the years, is outdated and does not entirely reflect the vision of New Hanover County today. The vision of today reflects the need for a change in development patterns and includes switching from traditional sprawling development patterns to a denser, mixed-use style of land use. This will allow New Hanover County to achieve higher levels of density where appropriate, leaving room to preserve and protect the county's natural resources. Additionally, mixed-use development will create more opportunities for citizens in terms of housing, jobs and shopping choices, as well as foster a more active lifestyle.

Planning staff would like to thank the New Hanover County Board of Commissioners, the New Hanover County Planning Board, and the appointed Citizens Advisory Committee for their guidance and leadership in developing this plan. In addition, the following groups and individuals were integral in the development of Plan NHC through their active participation:

- Business Alliance for a Sound Economy (BASE)
- Business organizations
- Cape Fear Community College
- Cape Fear Public Utility Authority
- Financial services organizations
- Homeowner's associations
- Interested citizens
- New Hanover County Schools
- New Hanover Regional Medical Center
- Non-profit organizations
- North Carolina State Ports Authority
- The City of Wilmington
- Tourism groups
- University of North Carolina at Wilmingon
- Wilmington Cape Fear Home Builders Association
- Wilmington Chamber of Commerce
- Wilmington International Airport
- Wilmington Regional Association of Realtors®

PROMOTE ENVIRONMENTALLY RESPONSIBLE GROWTH

Explanation: Where and how growth occurs can have an impact on environmental resources. Responsible growth includes strategies to encourage the desired levels of new growth, while minimizing negative impacts on natural resources.

Implementation Strategies:

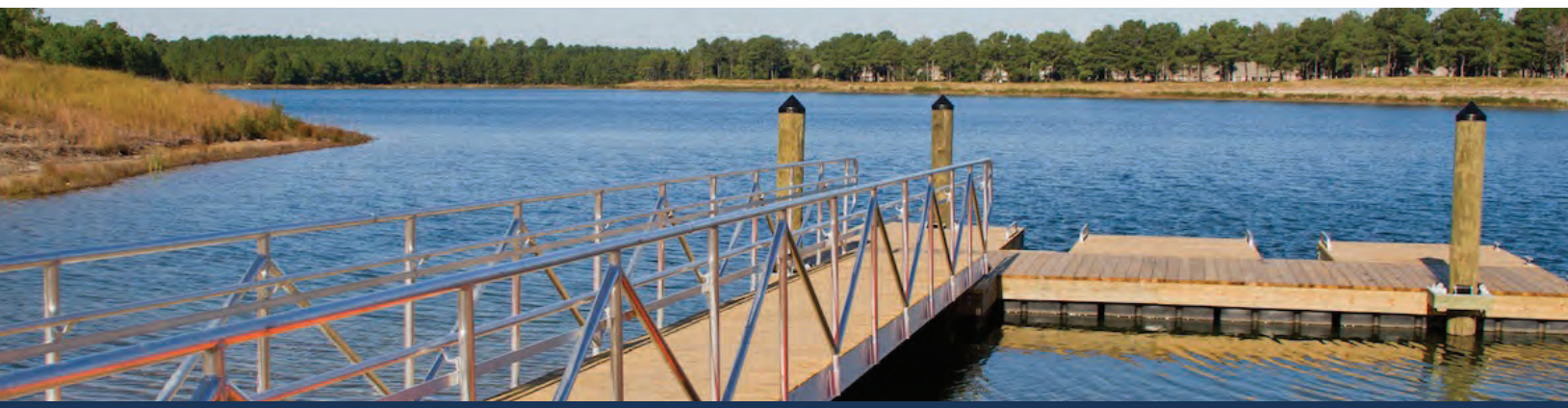
- Promote a mixture of uses, where appropriate, in an effort to cluster development and minimize impacts on natural resources.
- Adopt and implement a green infrastructure plan that identifies a network of natural lands and open spaces and provides ecosystem conservation as well as alternative transportation modes through trails and greenways.
- Partner with regional governmental agencies and nongovernmental organizations to acquire and protect environmentally sensitive land (establish a regional land bank).
- Strengthen and direct development toward existing communities through encouraging infill and redevelopment.

PROMOTE FISCALLY RESPONSIBLE GROWTH

Explanation: There is a cost to the tax payer to provide services and infrastructure for growth. Appropriate growth patterns can help to achieve efficient provisions of services and equitable distribution of costs between the public and private sectors.

Implementation Strategies:

- Coordinate infrastructure from a regional perspective, including water, sewer, and transportation.
- Regionally coordinate of educational facilities, such as community colleges and workforce training, as they support targeted industries.
- Encourage infill development on vacant or blighted pieces of existing communities by providing a variety of incentives such as grants, density bonuses, and/or a reduction of parking requirements and/or setbacks.
- Encourage the redevelopment of single-use into mixed-use developments, where appropriate.
- Encourage redevelopment of aging corridors to support and strengthen adjacent neighborhoods.
- Encourage development where existing infrastructure is available.



General Residential

This place type focuses on lower-density housing and associated civic and commercial services. Housing for the area is typically single-family or duplexes. Commercial uses should be limited to strategically located office and retail spaces, while recreation and school facilities are encouraged throughout. Access to areas outside these residential areas are provided by arterial roadways, but still allow for interconnection between other place types. Limiting cul-de-sacs is encouraged to promote better internal circulation and minimize high-volume traffic roads within the area. Types of uses include single-family residential, low-density multi-family residential, light commercial, civic, and recreational.

The areas applicable for this place type are Middle Sound, Myrtle Grove, Castle Hayne, Piner Road, Porter's Neck, Gordon Road, Wrightsboro, and Masonboro Loop. Pedestrian amenities should include sidewalks, street and shade trees, and open space.

Building height could range from one to three stories. The ideal density for multi- and single-family residential is low (ranging up to approximately eight units per acre). Density within the General Residential place type may be limited by flood plain, wetlands, or other natural or man-made features and generally should be consistent with nearby communities.

The following goals from Chapter 3: Framing the Policy will be promoted within the General Residential place type:

- Promote environmentally responsible growth.
- Promote fiscally responsible growth.
- Increase recycling and reduction of solid waste.
- Increase public safety by reducing crime through the built environment;
- Integrate multi-modal transportation into mixed land uses that encourage safe, walkable communities.
- Preserve and protect water quality and supply.
- Increase physical activity and promote healthy, active lifestyles.
- Ensure New Hanover County remains in attainment for air quality, in support of clean air and improved public health outcomes to support of continued growth.
- Increase access to affordable and convenient healthy foods.
- Provide for a range of housing types, opportunities and choices.
- Revitalize commercial corridors and blighted areas through infill and redevelopment.
- Conserve and enhance our unique sense of place to attract individuals, companies and organizations.
- Actively promote high quality educational and diverse cultural opportunities for New Hanover County residents and visitors.

Urban Mixed Use

This place type promotes development of a mix of residential, office, and retail uses at higher densities. Multi-family residential uses are preferred, though higher-density single family developments will not be prohibited. Mixed uses are encouraged in the same parcel, but they can also be adjacent, or separated by lower traffic local and collector roads. This place type can include big box retail that has appropriate urban design features. These areas place an emphasis on multimodal transportation through the requirement of sidewalks on all non-local streets, crosswalks at all intersections, dedicated bicycle lanes or wide outside lanes, and bus access. Types of uses include office, retail, mixed use, small recreation, commercial, institutional, single-family and multi-family residential.

The areas applicable for this place type include Ogden, Kirkland, Monkey Junction, North Kerr Avenue, Cape Fear Community College North Campus area, and North College Road. Pedestrian amenities should include sidewalks, street trees, street furniture, shade trees, bike racks, lighting, crosswalks, plazas, and pedestrian malls.

Building height could range from one to seven stories depending on the use.

The following goals from Chapter 3: Framing the Policy will be promoted within the Urban Mixed Use place type:

- Promote environmentally responsible growth.
- Promote fiscally responsible growth.
- Increase recycling and reduction of solid waste.
- Increase public safety by reducing crime through the built environment.
- Integrate multi-modal transportation into mixed land uses that encourage safe, walkable communities.
- Preserve and protect water quality and supply.
- Increase physical activity and promote healthy, active lifestyles.
- Ensure New Hanover County remains in attainment for air quality, in support of clean air and improved public health outcomes to support continued growth.
- Increase access to affordable and convenient healthy foods.
- Provide for a range of housing types, opportunities and choices.
- Revitalize commercial corridors and blighted areas through infill and redevelopment.
- Conserve and enhance our unique sense of place to attract individuals, companies and organizations.
- Support business success.
- Support health promotion and disease prevention while minimizing debilitating effects of mental and physical disabilities.
- Support workforce development and economic prosperity for all.
- Use public infrastructure improvements to leverage private investments.
- Actively promote high quality educational and diverse cultural opportunities for New Hanover County residents and visitors.

Community Mixed Use

This place type focuses on small-scale, compact, mixed use development patterns that serve all modes of travel and act as an attractor for county residents and visitors. These areas share several qualities with higher-intensity mixed use place types, including first-floor retail with office and housing above, wider sidewalks, and an emphasis on streetscaping. However, these centers are generally small and no more than a few square blocks. Civic uses, particularly recreation and meeting places, are encouraged here. Typically, large-scale, lower density commercial and industrial developments are incompatible. The centers are generally smaller and encourage more housing options. Types of uses include office, retail, mixed use, recreational, commercial, institutional, and multi-family and single-family residential.

The areas applicable for this place type include Castle Hayne, Sidbury Road, Carolina Beach Road, Ogden, and Northchase. Pedestrian amenities should include sidewalks, street and shade trees, street furniture, and bike racks.

Building height could range from one to three stories depending on the use. The ideal density for multi-family and single-family residential uses are moderate (ranging up to 15 units per acre). However, lower-density single-family residential development may be acceptable when limitations to mixed-use development exists. Density within the Community Mixed Use place type may be limited by flood plain, wetlands, and other natural or man-made features. Mixed use centers should be appropriately located where infrastructure can be available to serve the needs of a mixed use community. Areas disconnected to mixed use centers may not be appropriate for increased density.

The following goals from Chapter 3: Framing the Policy will be promoted within the Community Mixed Use place type:

- Promote environmentally responsible growth.
- Promote fiscally responsible growth.
- Increase recycling and reduction of solid waste.
- Increase public safety by reducing crime through the built environment.
- Integrate multi-modal transportation into mixed land uses that encourage safe, walkable communities.
- Promote place-based economic development in the region that is tied to our natural resources.
- Preserve and protect water quality and supply.
- Increase physical activity and promote healthy, active lifestyles.
- Ensure New Hanover County remains in attainment for air quality, in support of clean air and improved public health outcomes in support of continued growth.
- Increase access to affordable and convenient healthy foods.
- Provide for a range of housing types, opportunities and choices.
- Conserve and enhance our unique sense of place to attract individuals, companies and organizations.
- Revitalize commercial corridors and blighted areas through infill and redevelopment.
- Support business success.
- Support health promotion and disease prevention while minimizing debilitating effects of mental and physical disabilities.
- Support workforce development and economic prosperity for all.
- Use public infrastructure improvements to leverage private investments.
- Actively promote high quality educational and diverse cultural opportunities for New Hanover County residents and visitors.

2016 Plan NHC Action Plan

2016 Plan NHC Action Plan Strategies	Short Term Initiatives	Mid Term Initiatives	Long Term Initiatives	Ongoing Efforts
Intelligent Growth and Economic Development	• Update the Zoning Ordinance • Coordinate with CFPUA on Capital Improvement Plan and Infrastructure extensions. • Create an Housing Affordability task force. • Develop Public Private Partnerships to maximize public investment. • Parks & Gardens Master Plan	• Partnerships and funding for Land Bank (Environmentally Sensitive Areas) • Performance Criteria for connectivity. • Streamline permitting procedures for workforce housing.	• Improve freight and passenger rail service.	• Create small area plans. • Review all development proposals to assure consistency with the County's adopted plans and policies. • Support programs to encourage preservation through development.
Superior Education and Workforce	• Create a round table to support targeted industry work force. • Coordinate efforts on an incentive policy for target industries. • Partner with WRAR/ WBD/ RCA on a real estate portfolio of industrial, commercial, and office development sites.	• Develop a liaison program between the county and businesses considering investment.	• Provide free high-speed internet through NHC. • Work with Econ. Dev official to tour and familiarize site selectors with NHC. • Work with schools to align curricula with entrepreneurial skills.	• Identify partnerships, grant opportunities, and a coordinated strategy for attracting new companies and organizations.
Superior Public Health and Public Safety	• Parks and Gardens Master Plan • Develop a mobile household hazardous waste and electronics recycling program • Develop a construction debris recycling program • Add Sherriff's representative to the TRC Committee. • Explore groundwater protection and surface water issues for long term water supply planning.	• Neighborhood design incentives to create community spaces. • Identify watershed-specific indicators of water quality degradation and establish baseline measures.	• Work to ensure public water and sewer for all NHC residents. • Create an inventory and study of retrofit opportunities to reduce water quality impacts.	• Support Neighborhood watch programs. • Ensure adequate response times to emergencies. • Support programs to encourage bike/walk to school. • Partner with organizations that support healthy local foods. • Code Enforcement to emphasize housing quality and preservation. • Monitor the status of air quality to ensure attainment.

Strategic Plan Objective: Create and support a vibrant and culturally diverse community that encourages private investment

Goal III: Promote fiscally responsible growth.

Desired Outcome: Growth patterns that achieve efficient provisions of services and equitable distribution of costs between the public and private sector.

Implementation Strategies	Implementation Guidelines
A. Coordinate infrastructure from a regional perspective including water, sewer, and transportation.	***III.A.1*** *Encourage the expansion of water and sewer infrastructure to provide orderly and efficient development consistent with CFPUA's plans and policies.* ***III.A.2*** *Provide connectivity between transportation modes, in growth nodes outlined on the Future Land Use Map, and within new development where practical.* ***III.A.3*** *Ensure all traffic calming devices and gated areas accommodate emergency service delivery and interconnectivity.* ***III.A.4*** *Encourage street connections to adjoining undeveloped property and connect existing streets to improve accessibility and safety to development sites.*
B. Coordinate regional facilities such as community colleges and workforce training as they support targeted industries (as identified in County approved Economic Development strategies).	***III.B.1*** *Encourage the development of educational facilities and transportation infrastructure in Employment Centers and Commerce Zones as identified on the Future Land Use Map.*
C. Encourage infill development on vacant or blighted pieces of existing communities by providing incentives such as grants, but not limited to; density bonuses, and/or a reduction of parking requirements and/or setbacks.	***III.C.1*** *Encourage a mixture of uses that create opportunities for shared parking and setback requirements to serve the overall community.*
D. Encourage the redevelopment of single uses into mixed-use developments where appropriate.	***III.D.1*** *Encourage incremental transformation of single uses into compatible mixed use centers that are compatible with the surrounding neighborhoods.*
E. Encourage redevelopment of aging corridors to support and strengthen adjacent neighborhoods.	***III.E.1*** *Encourage revitalization and redevelopment of blighted infill sites into compatible mixed uses that enhance nearby residential areas through incentives such as density bonuses, shared parking, and/or innovative buffering.*
F. Encourage development where existing infrastructure is available.	***III.F.1*** *Encourage increased density in Urban Mixed Use areas within close proximity of City of Wilmington jurisdiction and Growth Nodes as identified on the Future Land Use Map (Porter's Neck/Kirkland, Monkey Junction, and I-40/I-140 Interchange) in an effort to create densities that can support future infrastructure.*

Goal IV: Use public infrastructure improvements to leverage private investments.	
Desired Outcome: Coordinated efforts of public and private investment to maximize improvements.	
Implementation Strategies	**Implementation Guidelines**
A. Work with CFPUA on a targeted long range plan for water and sewer infrastructure.	***Guidelines are not part of this strategy.***
B. Work with MPO on a targeted long range plan for transportation infrastructure.	***IV.B.1*** *Coordinate with NC DOT, WMPO, and property owners to complete a collector street network plan for unincorporated areas.* ***IV.B.2*** *Encourage driveway standards to promote better traffic flow in the county.* ***IV.B.3*** *Continue to require street connectivity and discourage cul-de-sacs and gated communities that impede connectivity and emergency response.*
C. Consider revising zoning ordinances to support mixed uses and holistic approach to development.	***IV.C.1*** *Encourage new development to consider allocation of space for new community services such as fire stations, schools, libraries, and museums.* ***IV.C.2*** *Encourage public investments to consider locating near existing communities.*
D. Consider strategies to encourage increased private sector investment in the provision of infrastructure.	***Guidelines are not part of this strategy.***

Goal V: Revitalize commercial corridors and blighted areas through infill and redevelopment.	
Desired Outcome: Strong existing neighborhoods and corridors where the highest and best uses are promoted in an effort to increase economic revitalization.	
Implementation Strategies	**Implementation Guidelines**
A. Implement a program to identify and dispose of vacant or abandoned buildings that cannot be redeveloped.	***Guidelines are not part of this strategy.***
B. Facilitate programs to encourage reuse, rehabilitation, and redevelopment of existing residential, commercial, industrial buildings and properties where appropriate.	***V.B.1*** *Incorporate reuse and rehabilitation of existing structures when feasible and cost effective in new developments.* ***V.B.2*** *Continue to maintain standards for landscaping and tree protection for parking lots, sidewalks, and in street rights-of-way for both public and private projects.*

STRATEGIC PLAN FOCUS AREA: SUPERIOR EDUCATION AND WORKFORCE

Strategic Plan Objective: Prepare all students to be successful in a 21st century world

Goal XIV: Actively promote high quality education and diverse cultural opportunities for New Hanover County residents and visitors.

Desired Outcome: High quality education and diverse opportunities that sustain the economic vitality of our community and enrich the lives of current and future residents.

Implementation Strategies	Implementation Guidelines
A. Work with New Hanover County Public Schools as well as community stakeholders and institutions to support high quality pre-K, primary, and secondary educational opportunities to meet current and future needs of County residents.	***XIV.A.1*** *Encourage schools to locate in areas where they provide the maximum benefit to adjoining neighborhoods.* ***XIV.A.2*** *Plan and locate schools to allow for future expansion and to ensure better and shared use of the facilities and campus.*
B. Form diverse partnerships to maximize utilization and improve access to recreational and cultural opportunities and assets for New Hanover County residents and visitors.	***XIV.B.1*** *Where development projects include protected cultural resources, encourage promotion of the resource as an asset to the development.*
C. Partner with New Hanover County Schools, UNCW, CFCC, and economic development stakeholders to develop and promote educational programs that support the full range of skill sets employers need and target specific economic development opportunities within New Hanover County.	***Guidelines are not part of this strategy.***

Strategic Plan Objective: Enhance the self-sufficiency of individuals and families

Goal XV: Provide for a range of housing types, opportunities, and choices.

Desired Outcome: Citizens are not overburdened with the costs or availability of housing, but have a diverse range of options that are affordable at different income levels.

Implementation Strategies	Implementation Guidelines
A. Enhance and update incentives to reduce development costs to private developers such as density bonuses when work force housing is included in development proposals.	***XV.A.1*** *Explore an ordinance allowing accessory dwelling units that are compatible with existing neighborhoods.* ***XV.A.2*** *Encourage a mixture of uses in an effort to provide diversity of housing choice.* ***XV.A.3*** *Review zoning regulations where appropriate to accommodate populations with special needs such as the elderly and disabled.* ***XV.A.4*** *Incentivize, through the development process, the inclusion of diverse housing choices and opportunities in urban and community mixed use areas so that safe and conveniently located communities are available regardless of age or income.*
B. Consider creating an affordable housing task force to define affordability and work with private sector to provide it.	***Guidelines are not part of this strategy.***
C. Strategically work with developers experienced in providing affordable and subsidized housing through federal and state programs and locate affordable housing developments in areas of highest need.	***XV.C.1*** *Encourage a mixture of housing types near employment centers.*

Interwoven Equity

Policy Recommendation #1:

Provide a range of housing types, opportunities and choices.

- Outcome: Encourage the development of a range of housing types and opportunities so that all county residents may afford to live

- Short term recommendations:
  - Educate the public on the need for and benefit of Affordable Housing and subsidized housing
  - Create a consolidated housing task force
  - Have the housing task force join city/county/nonprofits- WRAR, BASE, CFHC, Neighborhoods Association to create a marketing campaign for Affordable Housing that serves all citizens
  - Consider inclusionary zoning as a way to assist in addressing the need for affordable housing
  - Permit accessory dwelling units in single-family districts to promote affordable housing

- Long term recommendations:
  - Consolidate the City and County together
  - Partner with banks to acquire foreclosed homes and offer them as affordable housing

Policy Recommendation #2:

Upgrade housing development with infrastructure.

- Outcome: Encourage infrastructure improvements in areas of need in order to upgrade affordable housing developments

- Short term recommendations:
  - Coordinate permit fees with Affordable Housing projects and commercial development
  - Develop an inventory of homes built in the 1950's and 1960s.
    - The older homes are needed for affordable housing
  - Clearly define what infrastructure is to include schools, enforcement, safe streets, community resources, etc.
  - Support communities in need

Seek financial advisory support from banking institutions early in development process



Policy Recommendation #3:

Strengthen neighborhoods through redevelopment of blighted areas/environmental equity

- Outcome: Provide blighted areas with the opportunity to improve their circumstances, maintain environmental equity, and have a sense of pride about their community.

- Short term recommendations:
  - Educate public on minimum housing standards
  - Address buildings that are abandoned and dilapidated
    - NC Statues provide means for New Hanover County to demolish abandoned structures legally
    - NHC should adopt minimum housing code and code enforcement
  - Encourage neighborhood ownership/pride and sense of community
  - Address Flemington neighborhood, a blighted area near Sutton Lake, to provide environmental equity
  - The water in Sutton Lake is polluted with mercury and other toxic chemicals
  - No entity has taken responsibility to post warning signs
  - People in the neighborhood are fishing in the lake and eating toxic fish
  - Provide incentives for redevelopment near transportation hubs/empowerment zones (Detroit, MI case study) without reducing taxes but rather with incentives such as:
    - Offering express permitting for targeted businesses
    - Providing workforce recruiting services for new businesses
    - Offering workforce incentives-County/City/nonprofits train workforce and pay a portion of worker's salary

- Long term recommendations:
  - Create minimum housing standards
  - Discourage slum lords through code enforcement
  - Enact a county-wide voluntary program for landlords to rehab housing units using matching funds from CDBG, HUD, non-profits
  - Employ the following strategy: Landlords shall not raise rent for a specified number of years after rehab.

Policy Recommendation #4:

Create opportunities for health care and services to disperse through the community in an effort to reach all NHC citizens equitably

- Outcome: Increase access to health services for all citizens within the county, and promote health and wellness through prevention of disease rather than focusing on only treatment.

- Short term recommendations:
  - Prioritize health and well-being and make healthy decisions the default
  - Upgrade school technology
  - Provide additional access to health clinics through nonprofit/for-profit partnerships, mobile health clinics (e.g. dental care and breast examinations), and addition of health clinics where able
  - Integrate community schools
  - Address childhood obesity early on in child development by offering programs and education on health and wellness
  - Improve reading comprehension at the elementary level
  - Make NHC tobacco free by providing more tobacco free environments where necessary
  - Consolidate policies on tobacco free NHC within the city and county

- Long term recommendations:
  - Improve public transportation stops by making them more convenient, safe, and appealing through "Adopt-a-Stop" program where local businesses, organizations, institutions, etc. may adopt a stop and provide awning/coverage, benches, art, design, and so on.
  - Incentivize Wave Transit
    - Example strategies: Adopt-a-Stop, free wifi, coupons attached to bus ticket, etc.



Policy Recommendation #5:

Increase workforce housing and workforce development

- Outcome: Work to build wealth in the community

- Short term recommendation:
  - Create incentives to hire people to perform community projects
  - Utilize back to work and Hometown hires programs
  - Provide internships/apprenticeships for neighborhood projects to partner with technical schools
  - Start a "Ban the Box" campaign to remove the question that asks applicants whether they have been convicted of a crime on initial applications
    - Use the Habitat for Humanity policy in their process for evaluating those applicants with a criminal history
  - Provide density bonuses for affordable housing
  - Encourage public/private partnerships for workforce development
  - Provide tax incentives for Industry Created Workforce Housing
  - Recruit and grow businesses that provide higher wages with a focus in knowledge-based jobs
  - Target businesses and industries that match the technical programs and degrees that are provided by community colleges, and the University
  - Facilitate regional efforts to grow the Talent Pipeline (Garner Report)

- Long term recommendations:
  - Create a housing trust fund that sets aside money to develop workforce housing

PLAN NHC
CHARTING THE COURSE

Livable Built Environment

Policy Recommendation #1:
Preserve open space and agricultural land

- **Outcome:** Be a community that supports local growers, respects its historical agrarian culture, and preserves open space for recreation and environmental purposes

- **Short term recommendations**:
  - Make intentional effort to bring farmers to the table for discussion of agricultural lands and services
  - Survey existing farms and offer protections of these spaces from sprawling development patterns
  - Incentivize smaller farms in an effort to create jobs
  - Update zoning regulations for farms after Comprehensive Plan
  - Partner with CFPUA to determine areas of growth with extension of water services/ USB/focused growth around water and sewer
  - Partner with coastal land trust and major land owners
  - Encourage density and clustered development in appropriate areas
  - Promote mixed-use development
  - Promote community gardens
  - Establish a natural resources inventory for suitable soils
  - Explore efficacy conservation subdivisions for NHC
  - Promote permaculture
  - Promote Community Supported Agriculture (CSA)
  - Address limits to livestock

- **Long term recommendations**:
  - Educate consumers on local farms in NHC
  - Promote partnerships between parks, schools, farm to school programs, chefs, farmers, consumers, etc.

Policy Recommendation #2:
Integrate multi-modal transportation into mixed land uses that encourage safe, walkable communities

- **Outcome:** Reduce dependence on gasoline powered vehicles to encourage safe, walkable communities

- **Short term recommendations:**
  - Conduct a ridership study for Wave transit
  - Promote car- and van-pooling based on ridership study
  - Strengthen bus system by using larger buses for population centers and by purchasing smaller buses for county wide routes
    - Check economics of natural gas-fueled, electric, hydrogen-fueled, and any other alternative fuel source for transit vehicles
  - Conduct a rail system study to include passenger rail and light rail
  - Promote the use of electric powered cars through incentives for electric charging locations and partnerships with Duke Energy that support electric car infrastructure.
  - Construct multi-use lanes for walking, jogging, biking and golf carts.
  - Increase walker and bike safety through improved traffic signals, more visible crosswalks, better driver and biker education, police enforcement, and traffic safety classes.
  - Appropriate funds for transit service to provide bus signs and shelters
  - Adopt a Complete Street policy

- **Long term recommendations:**
  - Construct a high-speed rail system to connect with other cities
  - Integrate commercial developments into residential areas to promote mixed-use and decentralize commercial developments

Policy Recommendation #3:
Create a mix of housing types to promote diversity and strengthen existing residential areas

- **Outcome:** Preserve historic resources and sites to maintain the character of the community through common history and identity.

- Short term recommendations:
  - Promote preservation through a public awareness campaign
  - Update historic record by completing a comprehensive architectural survey
  - Get applicable existing structures into the National Register of Historic Places and incorporate them into local historic districts
  - Secure grant funding for preservation projects

- **Long term recommendations:**
  - Designate historic districts
  - Continue preservation projects and efforts
  - Create a joint city/county Board of Historical Structures
  - Outcome: Create policy that encourages mixed-use, mixed-income development with a variety of housing types.

- **Short term recommendations**:
  - Establish policies/regulations that provide for work force housing units
    - Example: Use a quota system (15% of new units must be designated low income, etc.) that increases over time
  - Encourage mixed-use development

- **Long term recommendations:**
  - Connect new developments to public transit
  - Research regulations and enforcement for accessory dwelling units

Policy Recommendation #4:
Encourage sustainable development

- **Outcome:** Promote infill development

- **Short term recommendations:**
  - Promote infill development by offering density bonuses for infill projects
  - Provide variances for road widths and other infrastructure as an encouragement for infill development
  - Fast track permitting and inspections for infill development projects
- Long term recommendations:
  - Address the disconnects/conflicts among governmental agencies in regard to infill development
    - Examples:
      - Address legal requirements for demolition of substandard structures
      - Address and improve the process for obtaining a clear title for abandoned buildings

- **Outcome:** Promote low Impact Development (LID Techniques)

- **Short term recommendations:**
  - Continue to incentivize LID within the county for developers
  - Clearly define and outline the meaning of "Sustainable Development":
    - Minimal impact on land (grading and filling)
    - Minimal storm water runoff (pre and post development the same)
      - Retention of trees
      - Provision of open space
      - Access to alternative transportation
  - Address disconnects and conflicts among governmental agencies with regard to LID
    - NCDENR soil and erosion control requirements of grading of individual lots
  - Coordinate the efforts of NCDOT, EMS, Trucking Industry, etc. to unify local street design
  - Partner with local organizations to work on development projects providing workshops and training for the public, engineers, architects, planners, developers, etc. in order to promote education and implementation of sustainable development in the County
    - "LID ACADEMY"
  - Require developers and contractors to complete workshop on LID practices before they are allowed to apply for and receive building permits (Mecklenburg County already does this)
  - Provide incentives to developers to include restrictive covenants/deed restrictions requiring tree save on individual lots, water capture for irrigation, and native species for all landscaping
  - Require street trees in all developments
  - Fast track applications, approvals, and inspections
  - Allow flexibility in design approved by staff rather than appointed/elected boards
  - Encourage permaculture in landscaping
  - Provide/Encourage community gardens

- **Long term recommendations:**
  - Promote native species for all landscaping
  - Develop a Low Impact Development Ordinance as the norm rather than the exception
  - Maintain LID best management practices by implementing a stormwater fee to assure proper maintenance
  - Develop an incentive point system promoting LID practices. The more a developer implements, the more incentives they get.
  - Protect trees on private property by broadening the county tree ordinance enforcement to include private property
  - County should develop a long-term plan to connect all public/semi-public open spaces

Policy Recommendation #5:
Invest in community infrastructure

- **Outcome:** Create a plan to improve existing infrastructure and develop future infrastructure

- **Short term recommendations:**
  - Identify priority areas, such as the 421 Corridor
  - Bring stakeholders together to determine a "vision" for our community
  - Examine existing CAMA land use regulations, wetlands, individual property rights, and other issues that will impact infrastructure development
  - Create a short-term plan for development that preserves natural beauty while supporting a vibrant economy

- **Long term recommendations:**
  - Coordinate with CFPUA and other utilities on specific master plans
  - Prioritize public spaces needed by the community, such as libraries, schools, fire stations, free public WiFi access
  - Explore feasibility of fiber optic installation for the county
  - Identify funding sources
  - Redevelop existing areas, with a focus on priority areas identified in short term

Policy Recommendation #6:
Revitalize commercial corridors

- **Outcome:** Identify desired commercial nodes (at appropriate scale) and coordinate with adequate infrastructure.

- **Short term recommendations:**
  - Remove minimum parking requirements and further study maximums to encourage shared parking and distribution.
  - Encourage the use of permeable surfaces for parking lots

- **Long term recommendations:**
  - Ensure that road networks support multi-modal transit (coinciding with intensifying land use)
  - Develop diversified road network to support connectivity

- **Outcome:** Improve business environment by providing certainty through clear development regulations and target investment areas.

- **Short term recommendations:**
  - Develop commercial standards
  - Promote LID into commercial development
  - Identify areas where commercial activity is not the most appropriate use (appropriate commercial clustering)
  - Establish Aesthetic Standards for Beautification of existing commercial corridors
  - Adopt a Sign Ordinance

- **Long term recommendations:**
  - Develop better land use strategies
  - Increase multi/mixed-use development
  - Improve safety and aesthetics

PLAN NHC
CHARTING THE COURSE

Provide for a range of housing types, opportunities and choices.

Explanation: Understanding New Hanover County is comprised of a diverse group of individuals with a diverse group of needs in housing helps to ensure individuals do not become overburdened with the costs or availability of housing.

Implementation Strategies:

- Enhance and update incentives to reduce development costs to private developers such as density bonuses when work force housing is included in development proposals.
- Consider creating an affordable housing task force (like the City of Wilmington) to define affordability and work with private sector to provide it.
- Strategically work with developers experienced in providing affordable and subsidized housing through federal and state programs and locate affordable housing developments in areas of highest need.

Revitalize commercial corridors and blighted areas through infill and redevelopment

Explanation: Areas of blight consist of underutilized properties within our community that likely have access to services such as water and sewer. Reducing regulatory barriers to redevelop underutilized property helps to provide for responsible growth strengthening existing neighborhoods and supporting economic revitalization.

Implementation Strategies:

- Implement a program to identify and dispose of vacant or abandoned buildings that cannot be redeveloped
- Facilitate programs to encourage reuse, rehabilitation, and redevelopment of existing residential, commercial, industrial buildings and properties where appropriate.

Link major natural habitats

Explanation: Linking natural habitats promotes biodiversity, provides continuity for wildlife corridors, access to open spaces and recreational opportunities.

Implementation Strategies:

- Identify and prioritize natural areas for acquisition, preservation, and conservation to promote linkage opportunities.
- Consider developing a conservation land acquisition strategy.
- Review and update incentives for development to dedicate land and or easements to achieve habitat linkages.

Matrix for Land Use Plan Elements – 15A NCAC 7B .0702		
	Plan Reference(s)	**Description/Reference Material/Notes**
Organization of the Plan		
• Matrix that shows the location of the required elements as set forth in this Rule	Appendix pg(s) **157-159**	
Community Concerns and Aspirations		
• Description of the dominant growth-related conditions that influence land use, development, water quality and other environmental concerns in the planning area	Ch 2	Chapter 2, the existing conditions report, describes the comprehensive view of New Hanover County and its associated growth factors.
Description of the land use and development topics most important to the future of the planning area, including:	Ch 2, Ch 3, Ch 4 & Ch 5	Chapter 2 under Land Development explains current land use. Chapter 3 covers overarching goals of the plan Chapter 4 explains future land use Chapter 5 explores implementation strategies and guidelines
• Public Access	Ch 2 pg(s) **47** & Ch 5	Map **2.17** & Chapter 5 implementation strategies and guidelines (see policy section of matrix)
• Land Use Compatibility	Ch 2 pg(s) **12-19**, **54 – 65**. Ch 4 & Ch5	Ch 2 maps **2.9**, & **2.25 -2.34**. Ch 4 includes Future Land Use Map and Natural Systems maps, and Chapter 5 includes implementation strategies and guidelines (see policy section of matrix)
• Infrastructure Carrying Capacity	Ch 2 pg(s) **23-50**, & Ch 5	Chapter 2 details county infrastructure while Chapter 5 explains implementation strategies and guidelines in reference to in protecting AECs and natural resources (see policy section of matrix)
• Natural Hazard Areas	Ch 2 pg(s) **59-61**. Ch 4 & Ch5	Ch 2 map **2.30**, and Ch 4: Natural Systems SFHA map, and Chapter 5 implementation strategies and guidelines
• Water Quality	Ch 2 pg(s) **54-58**. & Ch5	Ch 2 maps **2.25 - 2.29**, and Figure **2.74**. Ch 5 implementation strategies and guidelines (see policy section of matrix)
• A community vision that describes the general physical appearance and form that represents the local government's plan for the future. It shall include objectives to be achieved by the plan and identify changes that may be needed to achieve the planning vision.	Ch 1, Ch 3, Ch 4, & Ch 5	Chapters 1, 3, 4 and Chapter 5 explore the goals set by the citizens of New Hanover County, the vision of future land use, and implementation strategies and guidelines to achieve the county's overarching goals.
Existing and Emerging Conditions		
Population, Housing and Economy		The tri-county area is one the fastest growing regions in the country. The region as a whole is expected to grow nearly 90% by 2040, with New Hanover County capturing the majority of that growth at a rate of 66%. The projected population for 2040 for New Hanover County is 337,054.
Discussion of the following data and trends:		
• Permanent population growth trends using data from the two most decennial Censuses	Ch 2 pg(s) **2-11**	See figures in Population section of Chapter 2: Existing Conditions Report.
• Current permanent and seasonal population estimates	Ch 2 pg(s) **2-11**	Figure **2.5** **Note* Seasonal projections are not included in report*
• Key population characteristics including age and income	Ch 2 pg(s) **7 -11**	Figures **2.1 – 2.22** & Map **2.2**
• Thirty-year projections of permanent and seasonal population in five-year increments	Ch 2 pg(s) **3**	Figure **2.5** **Note* Seasonal and permanent projections in five-year increments are not included in report*
• Estimate of current housing stock, including permanent and seasonal units, tenure, and types of units (single-family, multifamily, and manufactured)	Ch 2 pg(s) **19-22**	There are currently 101,402 housing units in New Hanover County. See Figures in Land Development section beginning on page **19**
• Description of employment by major sectors and community economic activity	Ch 2 pg(s) **33-37**	Figures **2.51 – 2.59**
Natural Systems		
Description of natural features in the planning jurisdiction to include:		
• Areas of Environmental Concern (AECs) as set forth in Subchapter 15A NCAC 07H	Ch 2 pg(s) **54-62** & Ch 4 pg(s) **19-29**	Ch 2 Maps **2.25, 2.27, 3.30.** Ch 4 Natural System maps pg(s) **25-29**
• Soil characteristics, including limitations for septic tanks, erodibility, and other factors related to development	Ch 2 pg(s) **63**	Ch2 Map **2.31**
• Environmental Management Commission (EMC) water quality classifications and related use support designations	Appendix pg(s) **155**	See appendix for water quality classifications.
• Division of Marine Fisheries (DMF) shellfish growing areas and water quality conditions	Ch 2 pg(s) **55-57**	Ch 2 Figure **2.74** & Map **2.27**
• Flood and other natural hazard areas	Ch 2 pg(s) **59-60** & Ch 4 pg(s) **20 & 25**	Ch 2 Map **2.30** & Natural Systems section of chapter 4
• Storm surge areas	Ch 2 pg(s) **59-61**	
• Non-coastal wetlands, including forested wetlands, shrub-scrub wetlands and freshwater marshes	Ch 2 pg(s) **62** & Ch 4 pg(s) **24**	
• Water supply watersheds or wellhead protection areas	N/A	There are no water supply watersheds in New Hanover County. Wellhead protection areas are included in the Future Land Use map within the conservation place type. The Cape Fear Public Utility Authority also has established a wellhead protection plan.
• Primary nursery areas	Ch 2 pg(s) **58**	Ch 2 Map **2.29**
• Environmentally fragile areas, such as wetlands, natural heritage areas, areas containing endangered species, prime wildlife habitats, or maritime forests	Ch 2 pg(s) **57,58, 62, 64, 65** & Ch 4 pg(s) **20-29**	Maps **2.27, 2.28, 2.29, 2.32, 2.33, 2.34**.

• Additional natural features or conditions identified by the local government	Ch 2 pg(s) **64** & Ch 4 pg(s) **24**	Ch 2 Map **2.32** (Agricultural Lands) & Ch 4 (Aquifer Sensitivity Areas pg **24**)
Environmental Conditions	**Plan Reference(s)**	
Discussion of environmental conditions within the planning jurisdiction to include an assessment of the following conditions and features:		
• Status and changes of surface water quality; including:		
- Impaired streams from the most recent Division of Water Resources (DWR) Basin Planning Branch Reports	N/A	Cape Fear River Basin Report currently being updated by the Division of Water Resources.
- Clean Water Act 303 (d) List	Ch 2 pg(s) **57**	Ch2 Map **2.28**
- Other comparable data	Ch 2 pg(s) **55-56**	Ch2 Figure **2.74**
• Current situation and trends on permanent and temporary closures of shellfishing waters as determined by the Report of Sanitary Survey by the Shellfish Sanitation and Recreational Water Quality Section of the DMF	Ch 2 pg(s) **57**	Ch 2 Map **2.27**
• Areas experiencing chronic wastewater treatment malfunctions	N/A	
• Areas with water quality or public health problems related to non-point source pollution	Ch 2 pg(s) **55-57**	Ch2 Figure **2.74**
• Areas subject to recurrent flooding, storm surges and high winds	Ch 2 pg(s) **59-61**	
• Areas experiencing significant shoreline erosion as evidenced by the presence of threatened structures or public facilities	N/A	See the New Hanover County Hazard Mitigation Plan
• Environmentally fragile areas (as defined in Part (c)(2)(A)(ix) of this Rule) or areas where resources functions are impacted as a result of development	Ch 2 pg(s) **62** & Ch 4 pg(s) **24**	
• Natural resource areas that are being impacted or lost as a result of incompatible development. These may include, but are not limited to the following: coastal wetlands, protected open space, and agricultural land.	Ch 2 pg(s) **62, 64,65** & Ch 4 pg(s) **11**, **24**	
Existing Land Use and Development		
MAP of existing land use patterns		
• Description of the existing land use patterns	Ch 2 pg(s) **12-18**	Ch2 Maps **2.3, 2.4, 2.5, 2.6**
• Estimates of the land area allocated to each land use category	Ch 2 pg(s) **15**	Ch 2 Map **2.6** & Figure **2.23**
• Characteristics of each land use category	Ch 2 pg(s) **15**	Ch 2 Map **2.6** & Figure **2.23**
MAP of historic, cultural, and scenic areas designated by a state or federal agency or by the local government	Ch 2 pg(s) **50**	For a more complete list of historic structures see the New Hanover County Historical Structures Brochure
• Descriptions of the historic, cultural and scenic areas	Ch 2 pg(s) **50**	For a more complete list of historic structures see the New Hanover County Historical Structures Brochure
Community Facilities		
Evaluation of existing and planned capacity, location and adequacy of community facilities to include:		
• Description of existing public and private water supply systems to include:		
- Existing condition	Ch 2 pg(s) **41-42**	Ch2 Map **2.14**
- Existing capacity	Ch 2 pg(s) **41-42**	
- Documented overflows, bypasses or other problems that may degrade water quality or constitute a threat to public health as documented by the DWR	N/A	
- Future needs based on population projections	Ch 2 pg(s) **41-42**	For more information see CFPUAs updated long range plan.
- MAP of existing and planned service areas	Ch 2 pg(s) **42**	Ch2 Map **2.14**
• Description of existing public and private wastewater systems to include:		
- Existing condition	Ch 2 pg(s) **41-42**	
- Existing capacity	Ch 2 pg(s) **41-42**	
- Documented overflows, bypasses or other problems that may degrade water quality or constitute a threat to public health as documented by the DWR	N/A	
- Future needs based on population projections	Ch 2 pg(s) **41-42**	For more information see CFPUAs updated long range plan.
- MAP of existing and planned service areas	Ch 2 pg(s) **42**	Ch2 Map **2.15**
MAP of existing and planned multimodal transportation systems and port and airport facilities	Ch 2 pg(s) **25-32**	Ch2 Maps **2.12** & **2.13**
• Description of any highway segments deemed by the NC Department of Transportation (NCDOT) as having unacceptable service as documented in the most recent NCDOT Transportation and/or Thoroughfare Plan	N/A	For detailed information on transportation see the Wilmington Urban Area Metropolitan Planning Organizations long range plan: Cape Fear Transportation 2040.

Community Facilities, contd.	Plan Reference(s)	
• Description of highway facilities on the current thoroughfare plan or current transportation improvement plan	Market Street Corridor Plan & WMPO CFT 2040	See the Market Street Corridor Plan and the Wilmington Urban Area Metropolitan Planning Organizations long range plan: Cape Fear Transportation 2040.
• Description of the impact of existing transportation facilities on land use patterns	Ch 2 pg(s) **23-27**	
• Description of the existing public storm water management system	Ch 2 pg(s) **43**	
• Identification of existing drainage problems and water quality issues related to point-source discharges of storm water runoff	N/A	
	Goal	**Implementation Strategy and Guideline**
Future Land Use		
Policies		
• Policies that exceed the use standards and permitting requirements found in Subchapter 7H, State Guidelines for Areas of Environmental Concern	Goal(s) **IX** pg 10, **X** pg 11, **XII** pg 12	**IX.A**: IX.A.1; **IX.B**: IX.B.1; **IX.C**: IX.C.1, IX.C.2, IX.C.3; **X.A**: X.A.1, X.A.2, **X.B**: X.B1, X.B.2, X.B.3, X.B.4, X.B.5, X.B.6, X.B.7; **XII.A**: XII.A.1; **VII.B**, **XII.C**: XII.C.1
Policies that address the Coastal Resources Commission's (CRC's) management topics:		
Public Access Management Goal: *Maximize public access to the beaches and the public trust waters of the coastal region.*		
The planning objectives for public access are local government plan policies that:		
• Address access needs and opportunities	Goal(s) **VI** pg(s) **7**; **VII** pg(s) **8**	**VI.A**: VI.A.1, VI.A.2, VI.A.3, VI.A.4; **VII.1**: VII.A.1, VII.A.2, **VII.B**, **VII.C**, **VII.D**: VII.D.I, VII.D.2
• Identify strategies to develop public access	Goal(s) **VI** pg(s) **7**; & **VII** pg(s) **8**	**VI.A**: VI.A.1, VI.A.2, VI.A.3, VI.A.4; **VII.1**: VII.A.1, VII.A.2, **VII.B**, **VII.C**, **VII.D**: VII.D.I, VII.D.2
• Address provisions for all segments of the community, including persons with disabilities	Goal(s) XX pg(s) **17**	**XX.B**: XX.B.1
• For oceanfront communities, establish access policies for beach areas targeted for nourishment	N/A	
Land Use Compatibility Management Goal: *Ensure that development and use of resources or preservation of land balance protection of natural resources and fragile areas with economic development, and avoids risks to public health, safety, and welfare.*		
The planning objectives for land use compatibility are local government plan policies that:	Ch 4 & Ch 5	The Future Land Use map in Chapter 4 and the Implementation strategies and guidelines in Chapter 5 address land use compatibility
• Characterize future land use and development patterns	Ch 4 pg(s) **3-9, 11-18;** Goal(s) **I** pg 4, **III** pg 5, **VI** pg 7, **VII** pg 8, **VIII** pg 9, **IX** pg 10, **X** pg 11, **XI** pg 12, **XIII** pg 13-14**, XVIII** pg 17, **XXI** pg 18	Ch 4 outlines future development patterns and the future land use map. Ch 5 Goal (s) **I.C**: I.C.1; **III.A**: III.A.1; **VI.A:** VI.A.2, VI.A.3, VI.A.4; **VI.D**: VI.D.3; **VII.A**: V.A.1, V.A.2; **VII.D**: VII.D.2; **VIII.A**: VIII.A.1, VII.A.2; **VIII.C**: VII.C.1; **VIII.D**: VIII.D.1, VIII.D.2; **VIII.E**: VIII.E.1, VIII.E.2, VIII.E.3; **IX.A**: IX.A.2, **IX.D**: IX.D.1, IX.D.2; **X.A**: X.A.1; **X.B**: X.B.2; **XI.A:** XI.A.1, XI.A.2; **XIII.O**: XIII.O.1; XVIII.A: XVIII.A.1, XVIII.A.2; **XXI.A**: XXI.A.1; **XXI.B**: XXI.B.1
• Establish mitigation criteria and concepts to minimize conflicts	Goal(s) **I** pg 4, **VII** pg 8, **IX** pg 10, **X** pg 11, **XII** pg 12, **XIII** pg 13-14, **XXI** pg 18	**I.C**: I.C.1; **VI.A**: VII.A.1; **VII.D**: VII.D.1, VII.D.2; **IX.A**: IX.A.1, IX.A.2; **IX.B**: IX.B.1, IX.B.2, IX.B.3, **IX.C:** IX.C.1, IX.C.2, IX.C.3, IX.C.4; **X.A**: X.A.1, X.A.2; **X.B**: X.B1, X.B.2, X.B.3, X.B.4, X.B.5, X.B.6, X.B.7; **IIX.A**: XII.A.1; **VII.B**, **XII.C**: XII.C.1; **XIII.A**: XIII.A.1; **XIII.B**: XIII.B.1; **XIII.D; XIII.G**; **XII.H**: XIII.H.1; **XIII.I**; **XIII.M**; **XXI.A**: XXI.A.1
Infrastructure Carrying Capacity Management Goal: *Ensure that public infrastructure systems are sized, located, and managed so the quality and productivity of AECs and other fragile areas are protected or restored.*		
The planning objectives for infrastructure carrying capacity are local government plan policies that:		
• Establish service criteria	Goal(s) **III** pg 5, **IV** pg 6, **VII** pg 8, **X** pg 11	**III.A**: III.A.1; **III.F**: III.F.1; **IV.A**: IV.A; **IV.B**: IV.B.1; **VII.A**: VII.A.1, VII.A.2; **X.A**: X.A.1
• Ensure improvements minimize impacts to AECs and other fragile areas	Goal(s) **III** pg 5, **IV** pg 6, **VII** pg 8, **X** pg 11	**III.A**: III.A.1; **III.F**: III.F.1; **IV.A**: IV.A; **IV.B**: IV.B.1; **VII.A**: VII.A.1, VII.A.2; **X.A**: X.A.1
Natural Hazard Areas Management Goal: *Conserve and maintain barrier dunes, beaches, floodplains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues.*		
The planning objectives for natural hazard areas are local government plan policies that:		
• Establish mitigation and adaptation concepts and criteria for development and redevelopment, including public facilities	Goal(s) **VI** pg 7, **VII** pg 8, **X** pg 11, **XII** pg 12	**VI.A**: VI.A.1, VI.A.3**; VII.A**: VII.A.1, VII.A.2; **VII.D**: VII.D.1, VII.D.2; **X.A**: X.A.1; **X.B**: X.B.2, X.B.3, X.B.4, X.B.5, X.B.6; **X.C**; **XI.A**: XII.A.1
• Minimize threats to life, property and natural resources resulting from erosion, high winds, storm surge, flooding, or other natural hazards	Goal(s) **VII** pg 8, **X** pg 11, **XII** pg 12	**VII.A**: VII.A.1, VII.A.2; **VII.D**: VII.D.1, VII.D.2; **X.A**: X.A.1; **X.B**: X.B.2, X.B.3, X.B.4, X.B.5, X.B.6; **X.C**; **XI.A**: XII.A.1
Water Quality Management Goal: *Maintain, protect and where possible enhance water quality in all coastal wetlands, rivers, streams, and estuaries.*		
The planning objectives for water quality are local government		

plan policies that:		
• Establish strategies and practices to prevent or control nonpoint source pollution	Goal(s) **VI** pg 7, **VII** pg 8, **X** pg 11, **XII** pg 12	**VI.A**: VI.A.1; **VII.A**: VII.A.1; **VII.D**: VII.D.1, VII.D.2; **X.B**: X.B.4, X.B.5, X.B.6; **XII.A**: XII.A.1; **XIII.A**: XIII.A.1; **XIII.J**; **XIII.K**; **XIII.L**: XIII.L.1, XIII.L.2; **XIII.M; XIII.O**: XIII.O.1
• Establish strategies and practices to maintain or improve water quality	Goal(s) **III** pg 5, **VII** pg 8, **X** pg 11, **VIII** pg 13-14	**III.A**: III.A.1; **VII.D**: VII.D.1, VII.D.2; **X.B**: X.B.1, X.B.2, X.B.3, X.B.4, X.B.5, X.B.6; **XIII.A**: XIII.A.1; **XIII.B**: XIII.B.1; **XIII.C**; **XIII.D**; **XIII.E**; **XIII.F**; **XIII.G**: XIII.G.1, XIII.G.2; **XIII.H**: X.H.1; **X.I**; **XIII.J**: XIII.J.1; **XIII.K**; **XIII.L**: XIII.L.1, XIII.L.2; **XIII.M**; **XIII.N**: XIII.N.1, XIII.N.2; **XIII.O**: XIII.O.1
Future Land Use Map	**Plan Reference(s)**	
MAP of future land uses that depicts the policies for growth and development and the desired future patterns of land use and development with consideration given to natural system constraints and infrastructure	Ch 4 pg(s) **2-29**	Chapter 4 details the Future Land Use map and its corresponding place types. It also includes Natural System maps that gives considerations to environmental constrains and hazards.
• Descriptions of land uses and development associated with the future land use map designations	Ch 4 pg(s) **3-18**	See Future Land Use map and place type descriptions and exceptional resource area maps.
Tools for Managing Development		
• Description of the role of plan policies, including the future land use map, in local decisions regarding land use and development	Prologue, Ch 4 & Ch 5	
• Description of the community's development management program, including local ordinances, codes, and other plans and policies	Ch 5 pg(s) **2-4** & Appendix pg(s) **151**	Chapter 5 describes the implementation strategies, guidelines and action plan. A new unified development ordinance is scheduled. The appendix includes additional plans and ordinances governed by New Hanover County.
Action Plan and Implementation Schedule		
• Description of actions that will be taken by the local government to implement policies that meet the CRC's management topic goals and objectives, specifying fiscal year(s) in which each action is anticipated to start and finish	Ch 5 pg(s) **2-3**	See the Chapter 5 description of the Action Plan.
• Identification of specific steps the local government plans to take to implement the policies, including adoption and amendment of local ordinances, other plans, and special projects	Ch 5 pg(s) **3**,**4**,**6**,**7**,**8**,**9**,**11**,**12**,**13**,**14**,**15**,**16**,**17**,**18**	See Action Plan & Goal(s) **I.B**, **I.E**, **II.A**, **IV.A**, **V.A**, **VI.B**, **VI.C**, **VII.B**, **VII.C**, **VIII.B**, **X.C**, **XII.B**, **XIII.C**, **XIII.D**, **XIII.E**, **XIII.F**, **XIII.I**, **XIII.K**, **XIII.M**, **XIV.C**, **XVI.C**, **XVII.A**, **XVII.B**, **XVII.D**, **XIX.A**, **XXI.D**



CREATE WILMINGTON COMPREHENSIVE PLAN

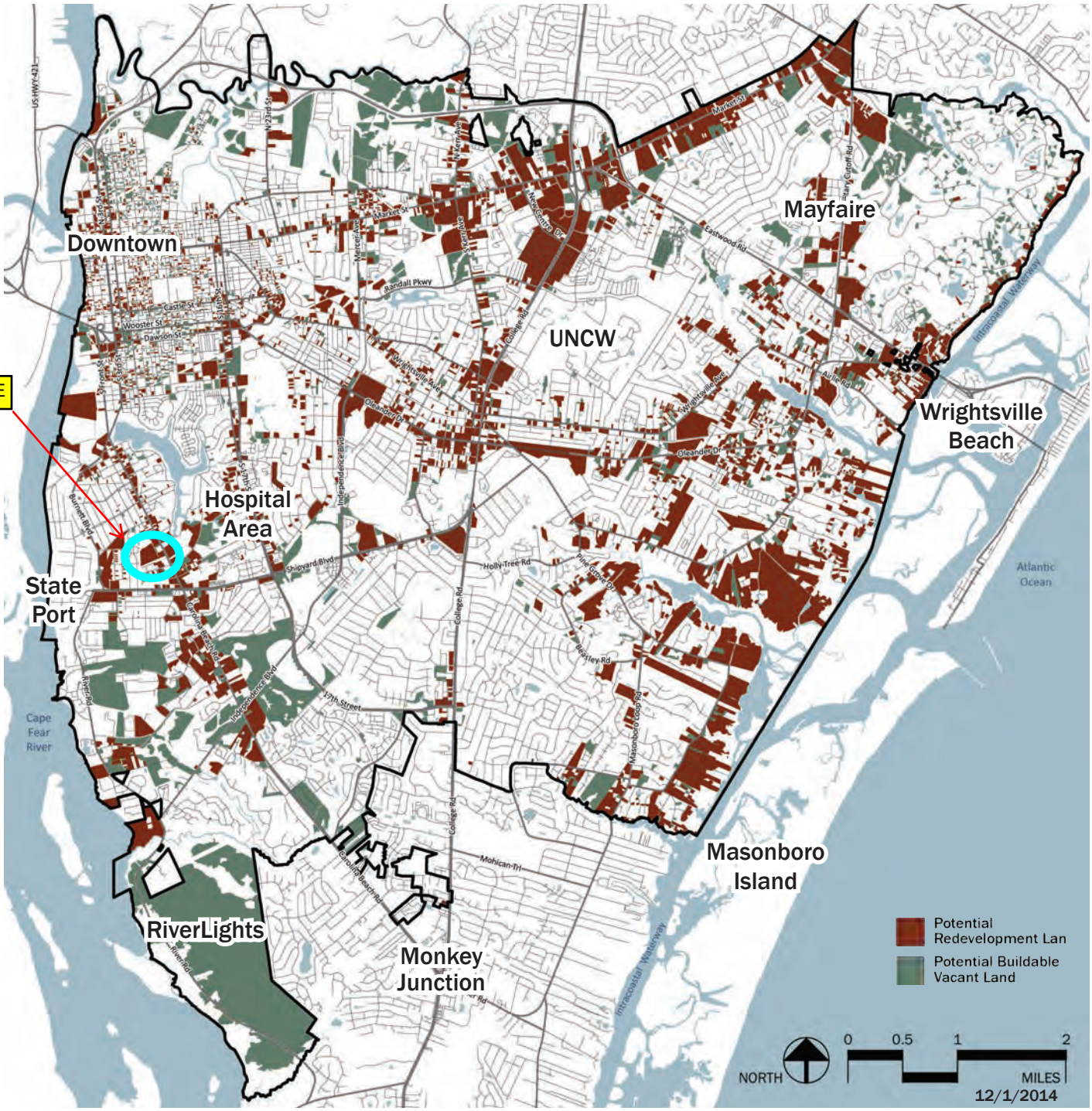
Growth Strategies Report

1 Growth Factors Report
2 Foundations Report
3 Policies
4 Growth Strategies Maps
5 Growth Strategies Report

ADOPTED 3/1/2016

CITY OF WILMINGTON NORTH CAROLINA

Potentially Developable Land & Redevelopment Sites

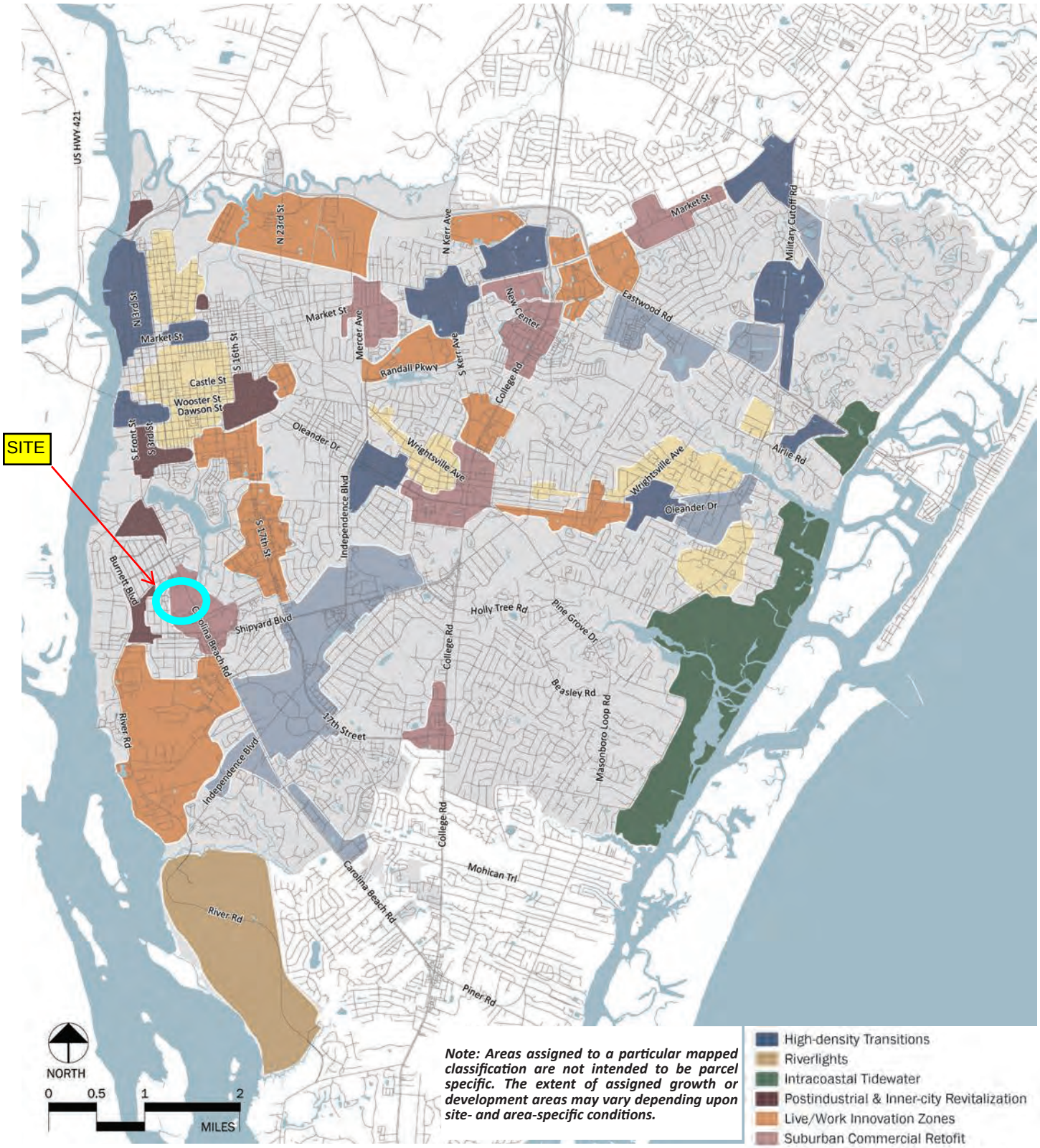


This map depicts potential redevelopment sites and likely buildable vacant land within the city. There are approximately 5,800 acres of potentially redevelopable land and 3,700 acres of potentially buildable vacant land in the city. A large percentage of parcels that are suitable for redevelopment and infill development are less than two acres in size. These smaller sites are typically found within already urbanized areas.

Box Set Cross Reference
Foundations Report

Box Set Cross Reference
Growth Factors Report

These reports provide a series of maps and other foundational data that provide the basis for the Growth Strategies Maps.



Box Set Cross-Reference

Growth Factors Report

This map is primarily based on information contained in the Growth Factors Report, such as the Potentially Developable Land & Redevelopment Sites analysis (shown on page 8 of this document).

NEW HANOVER COUNTY STRATEGIC PLAN 2018-2023

Updated June 2021

INTELLIGENT GROWTH & ECONOMIC DEVELOPMENT

- Leverage public infrastructure to encourage private investment
- Increase the diversity and number of higher-wage jobs
- Encourage development of complete communities in the unincorporated county

SUPERIOR EDUCATION & WORKFORCE

- Promote early learning that ensures life-long resiliency
- Support the private sector's need for talent to fill higher-wage jobs

SUPERIOR PUBLIC HEALTH & SAFETY

- Prevent and reduce opioid abuse
- Increase access to programs to prevent and reduce obesity
- Sustain the community capacity to prepare for and respond to public safety demands

GOOD GOVERNANCE

EFFECTIVE COUNTY MANAGEMENT

- Continuous focus on the customer experience
- Increase transparency and awareness about county actions
- Deliver quality service at the right time

STRONG FINANCIAL PERFORMANCE

- Minimize taxes and fees
- Proactively manage the county budget
- Plan for the long-term financial health of the county

Internal Business Processes	Provide equitable, effective, and efficient customer-driven practices	Align services and programs with strategic priorities	Communicate what the county does and why	Develop and nurture inclusive partnerships to deliver strategic objectives
Organizational Capacity	Hire and retain people committed to public service	Foster an agile culture that embraces diversity and drives innovative solutions	Build capacity for data-driven decision making	Engage in continuous learning

MISSION New Hanover County is committed to providing equitable opportunities and exceptional public services through good governance to ensure a safe, healthy, secure and thriving community for all.

VISION A vibrant, prosperous, diverse coastal community committed to building a sustainable future for future generations.

PROFESSIONALISM • EQUITY • INTEGRITY • INNOVATION • STEWARDSHIP • ACCOUNTABILITY

NEW HANOVER COUNTY STRATEGIC PLAN 2018-2023

INTELLIGENT GROWTH & ECONOMIC DEVELOPMENT

STRATEGIC OBJECTIVE

Leverage public infrastructure to encourage private investment	Increase the diversity and number of higher-wage jobs	Encourage development of complete communities* in the unincorporated county

DESIRED OUTCOME

Current public assets and future investments increase the tax base	More advanced manufacturing, knowledge sector, and skilled trade jobs available locally	Align policies and business practices to support the development of complete communities

TARGET

• $3 billion increase in tax base • 100% return on investment within 3 miles of new public investments	• Increase jobs that pay ≥ 6.5% above the living wage • 6,500 new jobs in advanced manufacturing, knowledge sector, and skilled trades	• Increase elements of complete communities across New Hanover County

SUPERIOR EDUCATION & WORKFORCE

STRATEGIC OBJECTIVE

Promote early learning that ensures life-long resiliency	Support the private sector's need for talent to fill higher-wage jobs

DESIRED OUTCOME

Every child entering kindergarten in NHC has the emotional, social, and physical opportunity to succeed and to, ultimately, perform at grade level	Businesses stay, start, or expand because the talent exists here or is developed quickly

TARGET

• 75% of children are ready for kindergarten on the Kindergarten Entry Assessment • 90% of 3rd graders read at least at grade level on the Read to Achieve Test	• Increase digital access and digital literacy to enhance workforce skills • NHC has 1.5 qualified local candidates for each high-wage job

SUPERIOR PUBLIC HEALTH & SAFETY

STRATEGIC OBJECTIVE

Prevent and reduce opioid abuse	Increase access to programs to prevent and reduce obesity	Sustain the community capacity to prepare for and respond to public safety demands

DESIRED OUTCOME

Fewer people misusing opiates	Community knows risks of obesity and individuals can equitably pursue a life that mitigates risks	Preparation that results in the appropriate response and ensures resiliency

TARGET

• Decrease opioid-related deaths by 100% • Decrease opioid-related overdoses by 50%	• Increase awareness and access to programs and opportunities that promote healthy nutrition or exercise in marginalized communities	• 100% of emergency response calls at 90th percentile of Fiscal Year 2019 data • Reduction in 911 calls per capita

*Complete communities provide a range of housing sizes and price points, employment opportunities, convenience needs, community facilities, and support services to provide access and opportunity for all NHC citizens.

CITY OF WILMINGTON
REGULAR CITY COUNCIL MEETING MINUTES
TUESDAY, SEPTEMBER 21, 2021

The Council of the City of Wilmington met in regular session on the above date at 6:30 p.m. in City Hall, Council Chambers, 102 North 3rd Street, Wilmington, North Carolina.

Those present were: Mayor Bill Saffo, presiding; Mayor Pro-Tem Margaret Haynes; Councilmembers Charlie Rivenbark, Kevin O'Grady, Neil Anderson, Clifford Barnett, Sr., and Kevin Spears; City Manager Tony Caudle, City Attorney John Joye, and City Clerk Penelope Spicer-Sidbury.

Councilmember Barnett gave the Invocation, followed by the Pledge of Allegiance to the Flag.

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Mayor Saffo announced the retirement of Mr. Glenn Harbeck, Director of Planning, Development, and Transportation and thanked him for his years of service to the City of Wilmington.

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PRESENTATION

Mayor Saffo presented a Recognition of the Service of The Wilmington Area Rebuilding Ministry to Ms. JC Lyle, Executive Director.

Mayor Saffo and Chief Donny Williams presented Life Saving Awards to WPD Officers Kyle Petrone and Bradley Speight.

CONSENT AGENDA

Items on the Consent Agenda were acted upon and unanimously adopted on motion of Councilmember Barnett, seconded by Mayor Pro Tem Haynes as presented as follows:

Approved Minutes of the Agenda Briefing Meeting of September 7, 2021and the Regular Council Meeting of September 7, 2021

Adopted Resolution Authorizing Contract Change Order #1 for the 2021 Annual Needs Stormwater Infrastructure Drainage Repairs and Rehabilitation Project in the Amount of $2,065,000 with Nu Pipe, LLC, of Mount Pleasant, S.C.

Adopted Resolution Authorizing the Purchase of Two (2) John Deere 6120E Tractors with Slope Mower Attachments from Deere & Company of Cary, NC for $253,462

Adopted Resolution Authorizing the Purchase of One (1) Combination Vac Truck from Aquip, LLC for $305,252

Adopted Resolution Authorizing the Purchase of One (1) Caterpillar Wheeled Excavator from Gregory Poole Equipment Company of Charlotte, NC for $232,690.76

Adopted Resolution Authorizing the Award of a One Year Extension to the Professional Services Contract to Wilmington Downtown, Incorporated, in the Amount of $562,692 for the Services Provided in the Municipal Services District and Authorizing the City Manager to Enter into that Agreement on the Behalf of the City

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PUBLIC INFORMATION

Mr. Mohamed El Henawy of Pyramids Cab, LLC spoke to Council regarding taxicab rates and stated that there is a shortage of taxicabs in Wilmington, having gone from 200 taxis to about 40 taxis in the last 15 to 20 years. He stated that people coming in from the airport have almost a two-hour wait time. He stated it is because there is an unfair competition from ridesharing services and that most taxicab businesses have shut down, leaving only two in the area. He stated that because of the shortage, on a regular night there are only five to six taxicabs available to serve Wilmington. He stated that at the last concert there were 8,000 to 10,000 people attending, with only 15 taxicabs to respond. He stated that Uber and Lyft were transporting people, but were charging a surcharge due to the high demand for services, with some riders being charged $200 to go from downtown to Monkey Junction. He stated that a rider going from the airport to the Hampton Inn on Eastwood Road, which is approximately 5.9 miles, was charged $52 by a ridesharing service. He stated that for the same trip a taxicab would charge approximately $15. He stated there is not a fair competition between taxicabs and ridesharing. He stated he understands that the State has put restrictions on the City regulating Uber and Lyft, but he feels some of the City regulations for taxicabs should be reconsidered.

Mr. El Henawy stated that City regulations require that the vehicles used for his taxi service be no more than ten years old, while Uber and Lyft are able to use vehicles that are up to 15 years old. He stated that taxicabs also have stricter enforcement by the City for drug tests, background screening, and insurance requirements. He stated his taxicabs are required to have commercial liability insurance, which can cost up to $450 per month. He stated that Uber drivers only pay their personal automobile insurance, and once they have a customer in the vehicle, then the commercial insurance kicks in. He stated if that is true, then an Uber driver should be required to change their tag from a personal tag to a commercial tag when they have a customer, but that does not happen. He is requesting that Council help taxicabs with fair competition, as the situation will ultimately cause the customers to suffer. He requested Council's help in keeping his business running. He stated that during the pandemic, Uber and Lyft shut down, but the taxicabs were still running, although there were not enough to serve all the people in Wilmington.

Councilmember Anderson stated that he flew into the Wilmington airport in June and that almost the entire plane was stuck there, unable to get a ride. He would like to see Staff look into the taxicab regulations to see if they can help. Mayor Saffo agreed and stated he has heard a lot of commentary and complaints from people who are being charged extreme surcharges from Uber and Lyft. He stated the regulations do need to be evaluated to see if something can be done to make the taxicabs more competitive. He stated that the taxi services have served the citizens for years, but are being put out of business due by ridesharing services. He requested that Mr. Tony Caudle, City Manager bring back some recommendations to Council on this issue.

Mr. Caudle stated that he believed the insurance provisions were required by the State, but Staff would look into the issues presented.

Ms. Christine McDow was scheduled to speak to Council regarding the sale of the Belk Berry Building, but she withdrew her request.

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PUBLIC HEARINGS

Public Hearing was held on **Ordinance Directing the Housing Inspector to Vacate, Close and Repair or Demolish the Dwelling at 518 North 11th Street as Unfit for Human Habitation Pursuant to Article V, Chapter 16 of the City Code and Directing that a Notice be Placed Thereon Prohibiting Its Use or Occupancy..**

Mr. Brian Renner, Chief Code Enforcement Officer gave an overview and stated that the hearing on this Item has been continued for several meetings and during that time the property owner, Ms. Elizabeth A. Rivers MacRae passed away. He stated

he has not spoken with any of her heirs and that the attorney who was previously representing the owner did not have contact information. He stated that Staff did comply with the public notice requirements, including publication in the newspaper, so he is prepared to move forward with this Item tonight.

Mr. Renner stated this property is vacant and is a 1,079 square foot single family home that is surrounded by Wilmington Housing Authority property. He stated this case was initiated in October of 2018, it was taken to hearing in July of 2020, and the Finding of Facts and Order expired in January of 2021. He noted that Ms. MacRae's attorney was present at the 2020 hearing. He stated the tax value of the building is $23,500 and there is an estimated rehabilitation cost of $34,156, making the dwelling 145% dilapidated. He listed the sections of the Minimum Housing Code that the dwelling violated and showed Council photographs of the exterior. He noted that the same family owns the green house shown next door in the provided photograph, and stated there is not currently an open case on that property and that it is currently vacant.

Mr. Renner stated that Staff's recommendation is to approve the Ordinance to vacate, close, repair, or demolish the dwelling. He stated that because of the continuances of this Item, the Ordinance will authorize 45 days for the heirs to bring the dwelling into compliance. He stated the Ordinance will provide for 15 days for Staff to keep the dwelling secured. He stated the dwelling is currently secured, but Staff wants to be able to keep a close eye on it, as the condition of the roof could worsen over time.

Councilmember Rivenbark inquired about the green house in the photograph and stated he wanted to avoid a situation where Staff is back in front of Council in the future because that house has also become dilapidated. He inquired if there had been any conversation with the family about the green house. Mr. Renner stated that his Staff does an incredible amount of work trying to locate heirs before a case is taken to hearing. He stated that he had been working through Ms. MacRae's attorney, although he was not sure if she was still involved in the matter now that Ms. MacRae passed. He is still working to find contact information for the family, as they own other properties in Wilmington.

In response to Councilmember Rivenbark's inquiry about the public notice, Mr. Renner stated that Staff published all aspects of this process in the newspaper. In response to Councilmember Spears' inquiry, Mr. Renner stated the Ordinance provides 45 days for the heirs to bring the property into compliance, but added that the timeframe was in Council's discretion. Councilmember Spears stated that if the heirs own several properties around town, then there should be someone to speak to about this dwelling.

In response to Councilmember Barnett's inquiry, Mr. Renner stated the 45 days would start from the adoption of the Ordinance. In response to Councilmember Rivenbark's inquiry about the timeframe for the City to demolish the dwelling, Mr. Renner stated that the process would not start until the 45 day period expired, as the hope is that the owners will do something with the property. He stated that Council could direct Staff to begin the process sooner, if desired. He stated once the process is started the timeline to demolish the dwelling would depend on the availability of contractors.

There being no one present to speak in favor or opposition, the Public Hearing was closed.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance, seconded by Councilmember Rivenbark, and the motion carried 6-1. (Councilmember Spears voted "No"). Council voted 6-1 on Second Reading on motion of Councilmember Rivenbark, seconded by Councilmember Anderson and the Second Reading of the Ordinance was scheduled for Council's October 5, 2021 Meeting. (Councilmember Spears voted "No").

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Public Hearing was held on **Ordinance Amending the Official Zoning Maps of the City to Rezone Property Located at 1121 South Front Street, 1112 South 2nd Street, and 101, 104, 108, 112, 114, 115 & 116 Marstellar Street, from LI, Light Industrial District & R-3, Central City Residential District, to UMX (CD), Urban Mixed Use District**

Mr. John Joye, City Attorney stated the attorney representing the Applicant has requested a continuance of this Item until Council's October 19, 2021 Meeting.

Following further consideration, Councilmember Barnett moved to continue the Public Hearing on the Ordinance to Council's October 19, 2021 Meeting. The motion was seconded by Mayor Pro Tem Haynes and carried unanimously.

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Public Hearing was held on **Ordinance Amending the Official Zoning Map of the City of Wilmington to Rezone Property Located at 2430, 2370, 2374, & 2346 Carolina Beach Road and 2365 Washington Street from CB, Community Business & CS, Commercial Services to MF-MH, Multiple Family, Medium High Density Residential.**

Mr. Jeff Walton, Associate Planner gave the Staff Report and stated that the Applicant proposed to rezone the site from Community Business (CB) and Commercial Services (CS) to Multi-Family, Medium High Density Residential (MF-MH). He stated the application was continued from Council's September 7, 2021 Meeting and he is providing an update to that request. He stated that the Applicant originally proposed a MF-MH general rezoning that would allow 25 units per acre, which would allow for 390 units on this site. He stated the current MF-MH zoning does not include a workforce housing component. He stated that once the new Land Development Code (LDC) is effective on December 1, 2021, the MF-MH zoning district will become a legacy district and if rezoned, this property would be subject to the provisions of the old LDC. He stated at the last meeting, there was concern from Council over the lack of a requirement to have workforce housing in the general rezoning request, and added that conditions are not permitted for a general rezoning.

Staff stated that they have determined another option for this rezoning, which is to rezone the property to the new Multiple Family Residential (MD-17) zoning district, making it effective on December 1, 2021. The MD-17 zoning district allows 17 units per acre, for a total of 265 units, but has the opportunity for a density bonus of 36 units per acre if workforce housing is included. He showed Council a comparison of the allowable uses for both the MF-MH and MD-17 zoning districts. He showed Council an aerial map of the site and a map of the zoning districts adjacent to the site.

Mr. Walton stated the request is consistent with the policies of the Comprehensive Plan and the City's Strategic Plan. Staff believes the request is reasonable, is in the public interest, and recommends approval.

In response to Councilmember O'Grady's inquiry, Mr. Walton stated that the MD-17 district allows multi-family buildings with 17 units per acre by-right. He stated that if the Applicant includes a workforce housing component, there is an incentive to increase the density up to 36 units per acre. He stated that at least 10% of the units must be designated as workforce housing for at least 15 years in order to have the increased density. In response to Councilmember Spears' inquiry, Mr. Walton stated the current MF-MH zoning district allows for 25 units per acre.

Mr. Sam Franck, Attorney on behalf of the Applicant, spoke to Council and stated that after discussion with City Staff, the Applicant agrees with the proposal to request a general zoning to the MD-17 zoning district. He stated the Applicant is fine with the December 1, 2021 effective date and pointed out this would be a more significant downzoning than the original request to rezone to MF-MH, but stated that it

still fits the project. He stated it will be consistent with the neighboring property to the west, which will also become MD-17 zoning on December 1, 2021. He stated it also provides for a similar density for multi-family market rate housing as would be permitted under the current zoning. He stated the MD-17 zoning district incentivizes workforce housing in an appropriate location.

Mr. Franck stated there were open questions from Council at the September 7, 2021 meeting and he anticipates additional questions from tonight's public hearing. He requested to reserve time for his comments until the public had an opportunity to comment on this request.

Ms. Susan Shaloub spoke to Council and stated that she supports affordable housing and supports this project, but she is against the proposed road that would connect Carolina Beach Road to Maryland Avenue. She stated that because this was not a conditional zoning application, there was no site plan, but it was noted by Planning Staff that the residents of the new project would be able to travel from Maryland Avenue, to Bell Street, in order to get to a traffic signal on Carolina Beach Road. She expressed concern about placing an apartment complex where there will be children right on a main highway. She stated that once she heard the application had been filed with the State, she requested information and was provided the map of the proposed road. She stated that residents from Sunset Park are not present because they do not know about this, but they will be affected. She stated they came out in force in 2012 when a similar proposal for a road was made for the north edge of the same property.

Ms. Shaloub stated she spoke with City Staff and was advised the proposal came from the WMPO and it was intended as a collector street. She stated that all the same concerns that were discussed in 2012 still exist today. She stated when issues occur with the neighboring Titan Cement or the State Port, she has contacts that will help resolve those issues. She stated the existing traffic already cuts through residential neighborhoods and it will only increase with growth. She stated that making additional routes for drivers to bypass the lights on Carolina Beach Road will be terrible. She stated that if there are driveways for commercial operations on the new road, then trucks will be able to leave those properties and cut through the State Port community.

She stated the road is not being highlighted and she understands that it involves different governmental entities and processes. She stated she was told once the owner dedicates the right-of-way, the City could either build the right-of-way or allow the developer to do so. She stated that in 2012, there was a different process and adjacent owners received notice of the intended action, which has not happened in this case. She stated that because no one has a site plan, there will be no public hearing on the road issue. She stated the road will be a disaster for the community. She stated again that she does support the project, but not the road. She stated this merits Council's attention because it is important to the community.

Ms. Katrina Knight, Executive Director of the Good Shepherd Center, spoke to Council and stated she was an advocate for affordable housing. She stated the lack of affordable housing is the number one reason they meet families, veterans, and seniors and others who have lost housing. She stated she has been speaking to Council for 17 years and the housing situation has never been as dire as it is now. She stated that one of every two neighbors is currently spending too much on housing. She stated the current affordable housing shortage has been estimated at 10,000 units. She stated they work to create units, but they are losing them faster than they can bring new units online. She stated that Bradley Development and the Kelly Development Company proposed 300-unit development would go far in moving the needle to address the affordable housing crisis. She stated the housing will be targeted to those making 60% of the area median income, which is the range that is needed. She stated this community runs on people earning salaries under $40,000 per year and the City has a responsibility to ensure they can live in the community where they work. She stated

that supporting this proposal also supports the policies in the Comprehensive Plan and acts on the City's goal of dispersing affordable housing throughout the community. She stated these developers have a track record for producing attractive, affordable multi-family housing in North Carolina communities. She requested that Council support this important proposal.

Mr. Patrick Barnes spoke to Council and stated he was speaking on behalf of the vendors at the Starway Flea Market. He stated that on any given weekend there are 600 to 1,200 people that come to the flea market. He stated the market has been an integral part of Wilmington for 35 years and he hopes the area can stay commercial. He stated if the site becomes multi-family housing, it will be the end of that area, as it will completely change the character. He understands that some feel the area is underutilized, but he feels the proposal will make the site over-utilized. He stated the four story building will be out of character for the area. He stated the 290 units can mean up to 600 additional vehicles on the road. He stated the State Ports are getting busier, which will already bring increased traffic.

Mr. Barnes stated after the City's initial review of the proposal, there were a number of areas identified with a red circle, meaning the City's modest non-support of the project. He stated there were 24 items with a red circle, with approximately 30 items that had support. He stated the Comprehensive Plan stated that areas suited for redevelopment should be developed in a way that maintains and enhances the desired character of the surrounding areas. He stated this is a 100-year old community and the four-story building will be out of character and it will be a disaster to change the zoning.

Mr. Barnes stated that he understands that the manager for this property will be the same as the one that manages Woodridge Point, which has income restrictions, but they are at $36,000 for one person, which would be higher than the normal starting salary for a police officer. He requested Council to stop this request before we lose another piece of what makes Wilmington what it is. He stated if the area remains commercial, the City could help in remarketing the area to keep it what it is.

Mrs. Penelope Spicer-Sidbury, City Clerk, advised Council that the only written comments received were provided by one of the speakers present tonight and that her comments would be entered into the record.

Mr. Franck stated this rezoning was recommended by Staff and was subsequently unanimously recommended by the Planning Commission. He stated it is consistent with the Comprehensive Plan, the Strategic Plan, and is good fit for the area. He stated it has been zoned CB for 25 years, but prior to that it was zoned multi-family. He stated that as to intensity of use, traffic is one of the most effective metrics to measure that intensity. He showed Council a chart comparing the traffic impacts between the existing and proposed zoning districts. He stated the intensity of use for the proposed rezoning is substantially less that than the existing zoning. He stated this is a fantastic site for workforce housing and while Council is not approving a particular project, the Applicant is asking Council to approve a rezoning to a particular district that would incentivize workforce housing development, which the current zoning does not do. He showed Council a map of the qualified census tracts in the City and stated that they believe this is one of the last sites in the City that can be developed in this fashion, using the Low Income Housing Tax Credits (LIHTC).

Mr. Franck stated the City is behind other cities for LIHTC projects and there is a definite need. He stated this site has close proximity to services, including the hospital. He stated the proximity to the hospital is not just for housing for hospital personnel, but also will provide for continuity of medical services at times when it is needed the most.

Mr. Franck stated that at the last meeting Councilmember Anderson inquired about other projects completed by these developers that would have similar architectural consistency. He stated there is a LIHTC development in South Carolina called Crescent Villas, which would be similar. He stated that this is a straight rezoning

that has been motivated by a development project that is very well evolved. He stated that in order to submit the application for the tax credit, the project has to go through several steps and demonstrate its ability to move forward. He stated when they include a line stating there will be 278 units and an expected level of traffic, those are not hypothetical. He stated they are based on the actual design of the project, and are reflected in the application for the tax credit. He stated that while that is not applicable to the general rezoning request, he wanted Council to understand how far along the Applicant is in the process and how vested they are in a particular type of development for this property.

Mr. Franck stated that Council asked specific questions about how the development would look and while that information was not presented as part of the general rezoning application, it does exist. He stated if Council would like more information about that for context, they are prepared to provide it at Council's request.

Mr. Franck stated that as to the comments made by Ms. Shaloub, nothing she described would be made worse by the proposed rezoning. He stated this will be a downzoning and added that any redevelopment of this site will include an expansion of the interconnectivity of the public road system and the likely connection of Maryland Avenue to Carolina Beach Road. He stated the crux of her position seemed to be currently people who do not own the property use it for their personal enjoyment and if the property is dedicated for the road, then less of the property would be available for that use. He stated they would take objection to that, and would suggest that the public need would be served by the greater interconnectivity.

Mr. Franck stated that Mr. Barnes shared his strong advocacy for the existing flea market and he understands the passion for the use. He stated that it has never been Council's role to dictate a particular use for a property and that the current use has a limited life.

Councilmember Anderson stated he is in favor of new proposal of rezoning to MD-17, but inquired about the 10% threshold for the increased density. Mr. Franck responded that to have the LIHTC financing, 100% of the units have to be priced at 60% of the area median income. He pointed out that the City's threshold for workforce housing is 80% of the area median income.

In response to Councilmember Anderson's inquiry about the road discussed by Ms. Shaloub, Mr. Franck stated the project has not yet been through the Subdivision Review Board, but he has no indication that it would not be approved. He stated this is a well-considered and thought out design.

Councilmember Barnett stated he was in favor of the workforce housing opportunity, but requested more clarity on the street. He inquired if the Maryland Avenue to Carolina Beach route would be the main exit for the property and whether it runs through Sunset Park. Mr. Franck showed Council an image for the proposed located of the new section of Maryland Avenue, which is the primary ingress/egress point. He stated it also creates an additional point of ingress/egress for those who live in Sunset South. He stated the project's traffic engineer, Mr. Don Bennett, was present to provide additional information

Mr. Bennett spoke to Council and stated that as with all projects that generate more than 100 peak hour trips, a traffic study was commissioned for this project. He stated that scoping is the first step of the project, which established the points of interface of the project with the public road network. He stated in this case, the proposed site accesses were considered and reviewed with the WMPO and they come up with a consensus based scope that identified the points of access, as well as the proposed distribution of traffic at the site. He stated there was collaboration with the City, WMPO, and the N.C. Department of Transportation. He stated in the study, the site trips were distributed based on the existing traffic pattern in the surrounding area. He stated that it was estimated that during the peak morning hour, 11 vehicles would

exit Maryland Avenue to Adams, with a portion going straight and the remaining heading to Southern Boulevard to head north.

Mr. Bennett stated that there was a pending project on Carolina Beach Road that was beginning in the design stage prior to the pandemic, but it was put on hold. He stated the access to Carolina Beach Road is not full access, as the northern site access is proposed as right-out only and the southern access is proposed as right-out, left-in. He stated that the existing traffic signal at Northern will be taken out and relocated to Tennessee Avenue. He stated the site design is consistent with the future plans for Carolina Beach Road and minimal traffic is being sent towards Sunset South at the rear of the site. He stated that none of the intersections will degrade and the level of service will be maintained through the build of the project and that it will have nominal impacts on the intersections that were studied.

In response to Councilmember Spears' inquiry, Mr. Franck stated the standard for LIHTC application is to commit to having units at 60% of the area median income and under the LDC, to get the density benefit, the threshold is 80% of the area median income. Mr. Ted Heilbrand, Applicant, stated the tax credit they have already applied for would require 100% of the project to have rents priced at 60% of the area median income, which are lower than the rents they would be able to charge if they were only operating under the requirements for increased density in the MD-17 zoning district. He provided information on the amount of rent to be charged for the units in this development, as provided to the State in their application. He stated that any changes in the rental prices will have to be approved by the State. He provided a chart comparing their proposed rental prices to market rate rents for similar units. In response to Councilmember Barnett's inquiry, Mr. Heilbrand stated their application to the State was for 278 apartment units, even though a higher density would be permitted under MD-17.

Mayor Pro Tem Haynes stated she supports the project and is in favor of the change to the MD-17 zoning. She stated she was concerned with the road and but that it appeared the project was not dependent on the interconnectivity with Maryland Avenue, but only needed the road from the back to Carolina Beach Road. Mr. Franck agreed, but stated that the interconnectivity was a stated goal of the City. Mayor Pro Tem Haynes stated that she understands the City's goal of interconnectivity, but in this case the residents being connected are objecting. She stated that in other cases, interconnectivity has been abandoned when there were objections to it and she feels it should be considered for this matter.

Mayor Pro Tem Haynes inquired of Mr. Bennett if a final decision had been made by the WMPO and NCDOT on this matter. Mr. Bennett responded that if the connection were deleted, it would require an updated traffic impact study. He stated that prior to the construction of Sunset South, Maryland Avenue did not extend towards its border heading towards Louisiana Avenue. He stated that when Sunset South was redeveloped, that connection was reopened, showing an intent to have interconnectivity. Mr. Franck stated that if they were to dead end Maryland Avenue, they would be denying the residents of Sunset South the opportunity to have that additional point of ingress and egress. Mayor Pro Tem Haynes stated that if the connection was deleted, it did not appear to be a large number of trips that would have to be rerouted. Mr. Bennett stated the traffic study looked at how the traffic spread across the network. He stated it is a small percentage and if the connection were not made, a revision would be made to send those vehicles out through Carolina Beach Road. Mayor Pro Tem Haynes stated doing that would not be detrimental to this project. Mr. Franck responded that question is one that would be best addressed through the Subdivision Review Board. He stated evaluating a particular traffic pattern should not be a part of the consideration of whether the MD-17 zoning district is appropriate. Mayor Pro Tem Haynes stated it is important to have an understanding of what approving this rezoning will mean and restated her initial question of whether or not the road was a done deal. Mr. Tony Caudle, City Manager, stated that a member of

the Subdivision Review Board or the Technical Review Committee would need to answer that question. He stated the City does have a goal of encouraging interconnectivity, but he is not sure how far the City's Technical Standard go to ensure it. Mayor Pro Tem Haynes stated that they do support the goal, but it has been abandoned in other neighborhoods, and maybe it should be abandoned in this case.

Mr. John Joye, City Attorney stated that the question before Council tonight is whether the property be rezoned to MD-17. Council, based on case law, will need to look at the permitted uses in the new zone versus the current zone and determine if it is appropriate in Council's discretion. He stated it would be inappropriate for Council to let its judgment be affected by the particular of traffic and the question of interconnectivity. The City does, through its own controls, will have future opportunities to regulate traffic, but it is not before Council tonight. Mayor Pro Tem Haynes stated her point is that this may be the only time this discussion can happen before the public, as the other processes happen out of the public's view. She stated she was in favor of the project and would vote for it, but the City needs to make sure the public is aware of what is happening. Mr. Bennett stated that the review before the Subdivision Review Board is a public hearing and that all plans reviewed by the Technical Review Committee are entered into Protrack, which the public can access if they choose to do so.

Councilmember O'Grady stated he previously stated that he felt this project could only be accomplished through a conditional district review. However, even though this is still a general rezoning, it functions as a conditional district due to the restrictions from the LIHTC program. He inquired if the access on Carolina Beach Road were right-turn only, where the people traveling north would go. He stated there will be a review of the site plan and he expects it to undergo a rigorous technical review. He stated he will vote for the project because it will provide affordable housing, but stated that Council's approval tonight does not mean they accept that Maryland Avenue will be connected. He stated the technical aspects will be decided later and what is before Council tonight is whether the general rezoning is appropriate.

Councilmember Spears thanked Council for the clarification and stated he feels like they got lost in the details and stated it was important to understand that even if Council approved the proposed zoning, the extension is not a given. He stated he wants to make sure the City does not lose out on the potential for affordable housing. Mr. Franck stated the best way for the developers to show their dedication to the project is to provide details on the LIHTC application they submitted to the State. He reiterated that the site plan was only provided tonight for context, in order to show Council they are serious about this project.

Councilmember Anderson thanked the developer for coming to Wilmington and finding a site to do this, because it is needed in Wilmington.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Ordinance and read the consistency statement as follows:

> I move to approve the proposed amendment to rezone property located at 2430, 2370, 2374, & 2346 Carolina Beach Road and 2365 Washington Street from CB, Community Business and CS, Commercial Service to MD-17, Multiple Dwelling Residential, to be effective December 1, 2021, and find it to be consistent with the relevant policies in the Comprehensive Plan, based on the application materials, and the information provided at the public hearing and in the staff report, and to find Approval of the rezoning request is reasonable and in the public interest for the following reason(s): The proposed rezoning would allow for higher-density residential uses within an area that is near commercial services and uses, near medical services, and within an existing high-capacity transit route. The proposed multi-family zoning provides an appropriate transition from the commercial

areas along Carolina Beach Road to the existing residential uses to the west.

The motion was seconded by Councilmember Rivenbark and carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Rivenbark, seconded by Councilmember Barnett, and carried unanimously.

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Public Hearing was held on **Resolution Denying/Granting a Special Use Permit for Property containing 10.06 acres +/ located at 5814 & 5810 Camellia Lane**

All those wishing to speak were sworn in by Mrs. Penelope Spicer-Sidbury, City Clerk.

Mr. Jeff Walton, Associate Planner gave the Staff Report and stated that this is the Friends School of Wilmington project. He stated that on June 1, 2004, Council approved a Special Use Permit (SUP) to allow the Friends School to use the site for a maximum of 204 students. He stated that in 2016, Council approved a modification to allow for a school campus expansion and to increase the maximum number of students to 250. He showed Council an aerial map and photographs of the existing conditions on the site and the adjacent properties. He stated the proposal before Council is a SUP modification to the existing private school campus and to convert an existing residential house and outbuilding to an environmental learning center. He stated the requirements of the Land Development Code (LDC) require a SUP for primary and secondary school uses in a single-family or multi-family zoning district.

Mr. Walton stated that Camellia Lane is a 30-foot wide public street. He stated even though it is gated during school hours, the subject site does provide interconnectivity at two points. He stated all existing improvements would remain and are part of this modification. He stated there are no additional site changes proposed and total school enrollment would still be capped at 250 students.

Mr. Walton stated the proposal is consistent with the recommendations of the Comprehensive Plan and includes the preservation of additional open space and natural areas. He stated the Plan calls for school institutions to be sensitive to neighborhood issues, maintain quality of life, and enhance the services provided to the neighborhood. He stated that if Council approves the SUP modification, Staff has provided proposed conditions in the Case Summary. He requested that the Staff Report, with all attachments, be entered into the record.

In response to Councilmember O'Grady's inquiry, Mr. Walton stated a community meeting was held.

Ms. Brenda Esch, Head of School, Friends School of Wilmington, spoke to Council and stated the school is rooted in Quaker principles that include environmental stewardship. She stated they were excited when 2.8 acres of greenspace became available and they were able to purchase it in April of 2021. She stated they are seeking to use the property as-is in order to teach environmental education classes. She stated that with her is Ms. Karen Linehan, Director of Environmental Education to discuss the plans for the property.

Ms. Linehan stated she has been employed at the Friends School for 19 years and they are very excited about this property and how it will expand what they are able to do with outdoor learning. She stated the property has wooded areas, open meadows, and farm features. She stated the trees on the site are notable and include long leaf pine, loblolly pine, magnolia, red cedar, sweet gum, and a colony of sassafras. She stated there will be a focus on the natural and cultural history of the long leaf pine tree. She stated they plan to preserve and enhance the natural flora on the site. She stated the site also provides a habitat for wildlife, including migratory and resident birds. She stated they are in the process of mapping and creating trails to highlight features of the property's natural history. She stated the existing cottage is structurally sound and

is an appropriate candidate for renovation as an environmental education center. She stated this property and the environmental education center will benefit the students, wildlife and the surrounding community.

Mr. Randy Pickett, 5808 Verbenia Drive, was sworn in by the City Clerk and spoke to Council. He stated that he owns property that faces the rear entrance to the site being discussed tonight. He stated that the Friends School has received numerous Special Use Permits and they are asking again to approve an SUP based on the one they received previously. He stated he likes what they are doing and approves of their plan; however, he is concerned with what can be done with property in the future. He questioned whether they could hold events such as fundraisers or a school carnival on the property. He is worried that they will work their way into the residential area through Special Use Permits. He stated he has no problems with what they are doing and feels Council should approve the request, but with conditions so that down the road they do not change the nature of the residential neighborhood.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Councilmember Barnett moved approval of the Resolution, seconded by Councilmember O'Grady, and the motion carried unanimously.

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Public Hearing was held on **Ordinance Following Show Cause Hearing Concerning Obstructions and Unpermitted Encroachments into City Property Adjacent and Connected to Real Property Located at 719 Princess Street**

Mayor Saffo noted that Staff was requesting a continuance to Council's November 3, 2021 Meeting.

Following further consideration, Councilmember Spears moved to continue the Public Hearing on the Ordinance to Council's November 3, 2021 Meeting. The motion was seconded by Councilmember Barnett and carried unanimously.

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Public Hearing was held on **Public Hearing FY2020-21 Consolidated Annual Performance and Evaluation Report (CAPER) for CDBG & HOME funds.**

Ms. Suzanne Rogers, Community & Development Housing Planner spoke to Council and stated tonight's Public Hearing is for the draft Consolidated Annual Performance and Evaluation Report (CAPER). She stated the Public Hearing is required by the Department of Housing and Urban Development (HUD), as well as 15-day public comment period, which was advertised and distributed to various stakeholders. She stated that any public comments received will be recorded in the final draft and responded to by Staff.

Ms. Rogers stated that the pandemic resulted in limited access to Staff and required moving their homebuyer education classes to a virtual format. She stated the boom in the housing market meant they had trouble finding available contractors. She stated the six homebuyers purchased a home with financing from the HOP programs, with 11 borrowers pre-qualified as of June 30, 2021. She stated that three homebuyers received downpayment assistance, 94 persons attended homebuyer education classes, four CPLP homebuyer loans closed, three rental rehabilitation loans closed, seven owner-occupied rehabilitation loans projects are underway, and 4,521 youth participated in afterschool/summer programs.

Ms. Rogers stated the Workforce Housing Advisory Committee successfully completed the Housing Needs Analysis and the Housing Opinion Study. The City received and disbursed additional CDBG funds through the CARES Act. She stated the City's Lead Hazard Reduction Grant was fully staffed and they were able to train 45 property managers and contractors on Lead Based Paint Removal.

Ms. Terri Burhans, Community Development Analyst, spoke to Council and stated that over 6,000 households and individuals benefitted from programs in 2021 through CDBG and HOME funds and the City's General Fund. She stated that CDBG and HOME are specifically designed to benefit those households at or below 80% of the area median income. She stated that currently the median income in Wilmington is approximately $73,000 for a four-person household. She stated the vast majority of persons benefitting from the programs were of very low or extremely low income households, which are at or below 50% of the area median income. She stated that the majority of the households were Black or African American and over 800 of the households were Hispanic or Latinx. She stated that in the spring of 2020 the City was awarded over $600,000 in CDBG funds through the CARES Act and focused on educational services, food and supply distribution, and rental assistance. She stated that the funds were allocated to local nonprofits for distribution and administration. She stated for these funds, the majority of those served were very low and extremely low income households.

Ms. Burhans stated that one of the standouts from the additional CDBG funding was the Good Shepherd's Eviction Prevention Project. She stated they were able to process over 1,300 applications and assist over 300 households with rent and utility assistance. She stated she was very grateful for the community partners that worked with the City.

Ms. Rogers stated that for every dollar in CDBG and HOME funds, the City, with its community partners, was able to leverage $2.13 in other funds, including General Fund appropriations. She stated that in the last fiscal year, there were approximately $8.1 million in revenues and showed a chart of where those funds came from. She also showed Council charts of the expenditures by funding source and by activity, which totaled $4.2 million. She stated this left a balance of $3.9 million at the end of the year, but added that there were a number of encumbrances and projects in the pipeline, totaling approximately $4 million, so that it was essentially a break-even year.

Ms. Rogers provided Council maps showing where the services were distributed throughout the City.

In response to Councilmember Barnett's inquiry, Ms. Rogers stated the City has appropriated money for gap financing, along with funding from the American Rescue Plan Act for affordable housing projects. She stated those projects typically require layers of financing, with some governmental assistance. She stated the housing reports received by Council will be used for future planning purposes. She stated that the City is in the final stages of review to become a Certified Housing Counselor, which will become another area of potential growth for the City.

Councilmember O'Grady commented that there is also a collaboration between the City and the County for a $50 million housing bond next year.

There being no one present to speak in favor or opposition, the Public Hearing was closed.

Mayor Saffo announced this Item was on for Public Hearing only and that no action would be taken at this time.

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Public Hearing was held on **Resolution Authorizing City of Wilmington to Pay Economic Development Incentives.**

Mr. Tony Caudle, City Manager stated this Resolution authorizes the City Manager to enter into a business development investment grant with a business proposing to expand in the City of Wilmington. He stated that under the terms of the agreement there would be five payments of $16,000 made annually over five years, in exchange for 104 jobs created in the community with an average wage of at least

$80,000. He stated the agreement will include milestones that must be met before payments are made and the grant is necessary to secure the expansion of business within the City. He stated it is interesting to note that the County was approached yesterday about participating, and their portion was approved at $120,000 over a five year period. He stated the business has also applied for a grant from the State. He stated that Mr. Scott Satterfield, Chief Executive Officer, Wilmington Business Development was present to give additional information and answer questions.

Mr. Satterfield spoke to Council and stated that the Project Manager has been in their portfolio since 2017 and they are a leader in their industry. He stated this will bring 104 jobs, averaging $80,000 a year. He stated the hope is that other jobs will be created as a result. They believe the State and the community college system will participate to encourage jobs in this industry. He stated they have undergone financial review by the State and he feels they are endorsing a great company for the community.

In response to Councilmember Barnett's inquiry, Mr. Satterfield stated that the company is interested in hiring people from this community. He stated the preference of this company is to hire locally and work through the community college to find the appropriate talent.

Councilmember Spears stated he was interested in making sure that people who may not look as good on paper are considered for opportunities. He stated he is not saying that employers should not consider who they are hiring, but there are people who need second chances and should have the ability to work their way up in an organization. Mr. Satterfield stated his organization has always been focused on diversifying the workforce and he is confident that the Project Manager will understand their responsibility to give people a chance.

An unidentified gentleman spoke to Council about this Item.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Councilmember Barnett moved to approve the Resolution, seconded by Councilmember O'Grady and the motion carried unanimously.

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Mayor Saffo requested that Council move Item R2 (**Resolution Declaring Wilmington Fire Station 3, located at 3933 Princess Place Drive as Surplus Property to be Donated for the Public Purpose of Providing Affordable and/or No Cost Housing, Education, Employment, and Life Skills to Young Men in our Community)** up on the Agenda for consideration.

Mr. Tony Caudle, City Manager stated this Resolution will declare Fire Station No. 3, located at 3933 Princess Place Drive as surplus property. He stated there have been unsolicited offers for the use of this property and during a work session there was a discussion about putting this property up for bid. He stated that following that discussion, Council expressed a desire to honor a request from LINC for a new program and to authorize the City Manager and City Attorney to transfer the property.

Mr. Caudle stated the intended program to be run on the property will be a life program to teach life skills to 16-24 year old African Americans who have been involved in the court system. He stated the property will be transferred with the condition that it must be used for a public purpose.

Mr. Frankie Roberts, Executive Director, LINC, stated that when the Fire Station closed in 2017, they made a request to the City for the property. He stated the goal is to provide housing and support services for 16-24 year old young men. He stated they are calling it a boarding school and would focus on school drop outs. He stated they would assist them in getting a GED and obtaining a technical certificate. He stated there is a homeless problem in that age range and they would target those who

have committed low level offenses to get them back on track. He stated they will renovate the property and hope to be up and running within a year.

Mayor Saffo stated that a program such as this for at-risk youth who have dropped out of school is really needed. He stated that he supports this and thinks it is a great program.

Councilmember Barnett stated there is a certain niche that Mr. Roberts is able to reach and he is thankful for that. He stated he is in favor of this program and this Resolution.

Councilmember Anderson inquired if the property will need to be rezoned. Mr. Caudle stated he did not know, but would find out.

Councilmember Spears thanked Mr. Roberts for his years of dedication and for what he has passed down to the community over the years. He stated the lives of these young men are being impacted at younger and younger ages and we are trying to find a solution. He hopes that Mr. Roberts will tap into these individuals for ideas on what that solution might be.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Resolution, seconded by Councilmember Barnett, and the motion carried unanimously.

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ORDINANCES

Ordinance Making Appropriation of $42,464 to Engineering Professional Services was considered.

Mr. Rob Gordon, Plan Review Engineer stated this Ordinance will continue project funding for updates to the City's Technical Specifications and Standards. He stated this contract was funded last year from the Engineering departmental budget. He stated that the remaining contract funds were not identified at the end of last fiscal year for rollover into this year's budget and that this Ordinance would restore those funds.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance, seconded by Councilmember Barnett, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember O'Grady, and carried unanimously.

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Ordinance Making a Supplemental Appropriation in the Amount of $1,432,336 from the Parking Facilities Fund Balance to the Second Street Deck Repair Project to Award a Construction Contract; and **Resolution Authorizing Award of Construction Contract to Capital Restoration and Waterproofing, Inc. for the Second Street Parking Deck Repair Project in the Amount of $1,646,355** were considered.

Mr. Chance Dunbar, Parking Manager stated these Items were related to repairs to the Second Street Parking Deck. He stated the deck is 30 years old and structural repairs were made in 2010 and 2014. He stated a structural survey was completed and the repairs will include:

- Level 5 expansion joint repair, drain repair, and drive surface waterproofing
- Concrete repairs on all levels
- Masonry column and crack repairs on various levels
- Steel corrosion repairs on various levels
- Overhead double tee connection repairs on various levels
- Complete rebuilt of the west stairwell from level 2.5 and down; repairs on remaining stairwells
- Anti-graffiti removal material from all walls and repainting

- Brick masonry sealant and repairs
- Installation of a new handrail
- Waterproofing coating and applications on various surfaces

Mr. Dunbar showed Council photographs of the areas in the deck to be repaired. He stated the project was bid in June of 2021 and the City received five responses, with the lowest responsive bidder being Capital Restoration and Waterproofing, Inc. Staff is recommending awarding the base bid and all alternates in the amount of $1,646,355. He stated a 15% contingency is included in the contract and the City will continue to use construction engineer consulting services. The additional costs bring the total amount to $2,081,355. He stated a Supplemental Appropriation from the Parking Fund for $1.4 million is being requested to complete the project. He stated the project is expected to be completed within eight months and stated the deck will remain open during construction.

Councilmember O'Grady commented that this is why the City charges for parking. He stated we will be able to make these repairs without raising taxes.

In response to Councilmember Barnett's inquiry Mr. Dunbar stated that although some of the repairs were a few years behind, the deck is safe.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance Making a Supplemental Appropriation in the Amount of $1,432,336 from the Parking Facilities Fund Balance to the Second Street Deck Repair Project to Award a Construction Contract, seconded by Mayor Pro Tem Haynes, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember O'Grady, and carried unanimously.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Resolution Authorizing Award of Construction Contract to Capital Restoration and Waterproofing, Inc. for the Second Street Parking Deck Repair Project in the Amount of $1,646,355, seconded by Councilmember O'Grady, and the motion carried unanimously.

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Ordinance Appropriating Funds for Police Headquarters Chiller and Evidence Room HVAC Improvements in the Amount of $180,000; and **Resolution Awarding a Contract in the Amount of $729,000 to Superior Mechanical Services, Inc. of Greensboro, North Carolina for the Police Headquarters Chiller and Evidence Room HVAC Improvements** were considered.

Ms. Christine Sims, Buildings and Facilities Superintendent stated the Items before Council will replace two chillers that serve the entire Wilmington Police Department Headquarters building and will also replace HVAC components that serve the Evidence Room. She stated all of this equipment is original to the building and has fallen into disrepair, partially because the original design did not include corrosion protective inhibitor, which has been included in the new design.

Ms. Sims stated they received three bids for this project, with the lowest responsible bid coming from Superior Mechanical Services in the amount of $729,000. She stated the additional funding needed for this project is recommended as a Fund Balance transfer of $180,000, which will make up the difference between the bid amount and the current available budget. She stated the total amount includes a 7-8% contingency.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance Appropriating Funds for Police Headquarters Chiller and Evidence Room HVAC Improvements in the Amount of $180,000, seconded by Mayor Pro Tem Haynes, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember Spears, and carried unanimously.

Following further consideration, Councilmember Barnett moved approval of the Resolution Awarding a Contract in the Amount of $729,000 to Superior Mechanical Services, Inc. of Greensboro, North Carolina for the Police Headquarters Chiller and Evidence Room HVAC Improvements, seconded by Councilmember Spears, and the motion carried unanimously.

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RESOLUTIONS

Resolution Adopting City Policy on the Naming and Renaming of City Streets, Programs, Facilities and Property, and the Placement of Private Memorials on City Property was considered.

Mr. Thom Moton, Deputy City Manager stated this Item builds on existing policies that needed updating. He stated the proposed policy addresses the naming and renaming of City streets, facilities, and honorific namings. He stated that among the changes is an increase to the percentage of signatures required for a street renaming. He stated that current policy requires 51% of the impacted area and it has been recommended that the threshold be increased to 75%. He stated that honorific street naming, which would not require any address changes, would require only 51%. He stated that the renaming process would be distinguished by it being a rare event, so the recommendation is that consideration of those requests by Council's Naming Committee occur every two years, beginning in 2022. He stated that applications could be submitted at any time. He stated the process would require that once an application is submitted to the City Clerk, it will be forwarded to the Naming Committee, which would make a determination as to whether it has sufficient justification to advance to the next stage of consideration.

Mr. Moton stated that it is also recommended that the placement of private memorials on City-owned property be avoided. He stated this would not prevent the City funding art on public property. He stated that the Special Events policy, the Sponsorship policy, and the Tree Memorial program will not be affected by this policy. He stated this policy would supersede the following policies: the Universal Addressing Standards and Procedures Manual adopted by Council on August 6, 2002; the Resolution adopted by Council on June 17, 2003 Amended the Naming and Renaming of Streets or Alleys; and the policy adopted by Resolution Amending the Policies for Naming Facilities and Public Spaces, adopted October 21, 2014.

In response to Councilmember Rivenbark's inquiry about the percentage required for street namings and renamings, Mr. Moton stated it is recommended at 75%. Councilmember Rivenbark inquired about the threshold for what is considered a private memorial. Mr. Moton responded that what was contemplated was that if a group of citizens took up a collection and made a donation to the City, that was the same as a privately funded memorial. He stated in order to be publicly funded, it should come from City funds.

Mayor Pro Tem Haynes stated that this policy would not prevent citizens from placing art on private property. She stated that if a group of people came to the City and requested art to be installed on public property, and the City agreed to pay for it, then it would undergo a process to determine public support for the project before being installed on public property. Mr. Moton stated the City Attorney has also included a provision that in that case, it would be adopted as government speech. Councilmember Rivenbark stated he feels that provision will make the application of this policy unclear in the future.

Mayor Pro Tem Haynes stated there was a very long process in determining these recommendations. Mr. Moton stated that Council approved a contract with an experienced facilitator and that each member of Council appointed individuals to a focus group, in addition to representatives from other boards, and Council's Naming Facilities Committee. He stated that input was received from the group as to what they wanted to see as outcomes from this effort. He stated this process was triggered by the absence of clear guidelines during the process of the

Major General Joseph McNeil honorific street renaming, as well as experiences Council had with recent alley renamings. He stated the focus group met on several occasions and the feeling was the City should avoid taking on a privately funded memorial and adding it to City property. He stated part of the consideration came from the discussions during the Black Lives Matter monument and the historic monuments that were removed. He stated that Council will be the final determination as requests come forward and this policy is intended as guidance.

Councilmember Spears stated he feels this policy would prevent projects such as the Black Lives Matter monument from coming forward in the future and he is against that. He stated that project did not cost the City a dime, but was brought forward by citizens in the community that wanted to put something positive into the environment for others to see. Mr. Moton stated there are a number of requests that come to the City for private groups to use City property to erect some kind of monument, statute, or art. He stated that from a Staff perspective, there is a finite amount of public space available and it belongs to everyone. He stated they also did not want to impinge on any future plans simply because someone else's art was installed first. He stated it was not directly in response to the Black Lives Matter or Confederate monuments, but an acknowledgement of the pending requests for monuments to be displayed on City property.

Councilmember Anderson stated he was aware of requests from other groups, as well as the issues during the process of the McNeil renaming. He stated he is not sure why the City would not consider a public-private partnership if a group provided funding for a monument to be placed on City property. He stated the policy sets forth standards to be met to guide the decision as to whether an installation would be appropriate. Mr. Moton stated the Sponsorship policy would govern for some of those instances, such as sponsoring a community garden in a public area. He stated this policy would control in a situation where a group, such as the current request from the Scottish Immigrants group, collects funds for a monument that they wish to display in a public area, such as on the Riverwalk. The recommendation is to not allow such an installation on City property. He stated that situation is different from a group paying for planned improvements in a park.

Mayor Pro Tem Haynes stated her understanding that this clarifies the process the City used, which enabled them to install the Black Lives Matter signage. She stated this policy provides the framework to move forward in that type of situation. Mr. Moton stated that in the case of the Major General Joseph McNeil honorific naming, Staff went over and above the policy because Council wanted significant public input during that process. He stated it was not previously written, but this policy codifies the standards for appropriate community engagement as it relates to a naming or renaming. He stated as he understands the policy, it would be difficult going forward to have another privately funded art installation on City property. The individuals would be encouraged to install it on private property.

Councilmember Spears stated he feels this policy will deter groups from even bringing requests forwards and he feels that Council should make the final decision. Councilmember Rivenbark stated in previous years there were no problems in naming and renaming parks, streets, and bridges. He stated that when the Confederate monuments came down, that was not a positive for everybody. He stated the Black Lives Matter sign was a negative to some people in the community. He stated that a policy will not cover everything and it will come down to the opinion of those sitting on Council to make a final decision.

A question/answer and discussion period was held.

Councilmember Spears stated that if there is a group of people in a positive, productive society that feels the City should recognize a group that is being unjustly treated, he feels they went above and beyond for the Black Lives Matter sign. He stated he is not in favor of this policy and will vote against it.

Councilmember Barnett stated that he is the Chair of Council's Naming Committee and he stated that a lot of work went into the recommendations and they were not intended to circumvent anything, but was intended to provide clarity for the process. He stated he was in favor of the policy and added that it can be amended as needed in the future.

Councilmember Anderson stated there should be a policy in place and that Council should not necessarily have to review each request that comes forward. He stated that the process will act as a screening system. He stated there still could be something that rises above and beyond. He stated that there was a lot of input into this process and he hopes the policy is adopted.

Mayor Saffo stated this has been a contentious issue and added this policy does not deny anyone their First Amendment right to tell Council what they want in regards to naming or renaming. He stated there will now be a process in place, like everything else the City does. He stated people may not like the process, but it is the best way for a request to come before the seven people sitting on Council. He stated without the process, it would be chaos. He applauded Staff on their work in getting the Major General Joseph McNeil renaming done quickly.

Following further consideration, Councilmember Barnett moved approval of the Resolution, seconded by Councilmember O'Grady, and the motion carried 6-1. (Councilmember Spears voted "No").

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Resolution Authorizing the City Manager to Enter into a Memorandum of Agreement with the State of North Carolina Relating to the Distribution of Opioid Settlement Funds Within the State of North Carolina; and **Resolution Authorizing the City Manager to Enter into an Interlocal Agreement with New Hanover County Relating to the Distribution of Opioid Settlement Funds Within New Hanover County** were considered.

Mrs. Meredith Everhart, Deputy City Attorney stated that these Items are not settlements in any way and do not involve funds. She stated the purpose of these Items is to set up a distribution mechanism in the event that the opioid litigation cases settle. She stated the first Item is to set up distribution of funds with the State, and the second is to set up the distribution of funds with New Hanover County. She stated any funds would be used in the community to address the ongoing opioid crisis.

Mayor Saffo thanked Ms. Everhart and the City Attorney's Office for their work on this litigation. He stated the City and New Hanover County were one of the first entities to sue the opioid distributors that have admitted to creating this crisis. He hopes this shifts the tide into getting people into recovery. He thanked the City Council and the Board of Commissioners for their willingness to take steps to sue the opioid distributors.

Following further consideration, Councilmember Anderson moved approval of the **Resolution Authorizing the City Manager to Enter into a Memorandum of Agreement with the State of North Carolina Relating to the Distribution of Opioid Settlement Funds Within the State of North Carolina**, seconded by Councilmember Spears, and the motion carried unanimously.

Following further consideration, Councilmember Rivenbark moved approval of the **Resolution Authorizing the City Manager to Enter into an Interlocal Agreement with New Hanover County Relating to the Distribution of Opioid Settlement Funds Within New Hanover County**, seconded by Councilmember Barnett, and the motion carried unanimously.

REPORTS

Mayor Pro-Tem Haynes presented the following revised recommendations of Council's Appointments Committee for Boards, Commissions, and Committees as follows:

GOLF COURSE ADVISORY COMMITTEE

Appoint Jeffrey Darby
Term Expires: 10/09/2024

Appoint Frederick Dunn
Term Expires: 10/09/2024

Appoint Richard King
Term Expires: 10/09/2024

NEW HANOVER COUNTY/CITYOF WILMINGTON COMMUNITY RELATIONS ADVISORY COMMITTEE

Appoint Michael Wentworth (Education)
Term Expires: 09/20/2024

Reappoint Courtney Horton (At Large)
Term Expires: 09/20/2024

WILMINGTON TREE COMMISSION

Appoint Thomas Boland
Term Expires: 06/18/2023

Following further consideration, Mayor Pro Tem Haynes moved approval of the revised recommendations, seconded by Councilmember O'Grady, and the motion carried unanimously.

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ADDITIONAL ITEMS

Councilmember O'Grady stated that today the Cape Fear Public Utility Authority (CFPUA) began its Assistance Program, using funds from the City and County to help those that are unable to pay their water bills. He encouraged those that are behind in paying their water bills to contact CFPUA to set up a payment plan and find out if there are funds to assist them in getting their accounts up to date.

Councilmember Barnett reminded everyone to continue to stay safe, wear a mask, wash their hands, and maintain social distancing. He stated he would be participating in a funeral for a 33-year old and that people are still dying from COVID.

Mayor Pro Tem Haynes stated that wearing a mask is required in areas where there is common space. She stated she went back and reviewed the mandate and stated it is for all buildings in New Hanover County. She stated we don't want to lose anyone else and we want everyone to stay well.

Councilmember Spears stated the vaccination rate for New Hanover County is at 58%, but we need 80% to have herd immunity. He reviewed the specific vaccination rates broken down by race/ethnicity and age.

Mayor Saffo recognized that this is Hispanic Heritage Month, where we celebrate the histories, cultures, and contributions of those citizens with ancestors from Spain, Mexico, and the Caribbean Central and South America. He stated this observation began in 1968 and it was later expanded to a 30-day observation. He stated he wanted to recognize all of the Hispanic Americans that have contributed to this great Country.

ADJOURNMENT

There being no further business to discuss, the meeting adjourned at 10:18 P.M.

Respectfully Submitted,

Penelope Spicer-Sidbury, CMC/MMC/NCCMC
City Clerk

NOTE: THE ABOVE MINUTES ARE NOT A VERBATIM RECORD OF THE PROCEEDINGS. THE ENTIRE PROCEEDINGS ARE RECORDED ON TAPES 1, 2, AND 3, AND ARE INCLUDED AS PART OF THIS OFFICIAL RECORD.

CITY OF WILMINGTON
REGULAR CITY COUNCIL MEETING MINUTES
TUESDAY, SEPTEMBER 21, 2021

The Council of the City of Wilmington met in regular session on the above date at 6:30 p.m. in City Hall, Council Chambers, 102 North 3rd Street, Wilmington, North Carolina.

Those present were: Mayor Bill Saffo, presiding; Mayor Pro-Tem Margaret Haynes; Councilmembers Charlie Rivenbark, Kevin O'Grady, Neil Anderson, Clifford Barnett, Sr., and Kevin Spears; City Manager Tony Caudle, City Attorney John Joye, and City Clerk Penelope Spicer-Sidbury.

Councilmember Barnett gave the Invocation, followed by the Pledge of Allegiance to the Flag.

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Mayor Saffo announced the retirement of Mr. Glenn Harbeck, Director of Planning, Development, and Transportation and thanked him for his years of service to the City of Wilmington.

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PRESENTATION

Mayor Saffo presented a Recognition of the Service of The Wilmington Area Rebuilding Ministry to Ms. JC Lyle, Executive Director.

Mayor Saffo and Chief Donny Williams presented Life Saving Awards to WPD Officers Kyle Petrone and Bradley Speight.

CONSENT AGENDA

Items on the Consent Agenda were acted upon and unanimously adopted on motion of Councilmember Barnett, seconded by Mayor Pro Tem Haynes as presented as follows:

Approved Minutes of the Agenda Briefing Meeting of September 7, 2021and the Regular Council Meeting of September 7, 2021

Adopted Resolution Authorizing Contract Change Order #1 for the 2021 Annual Needs Stormwater Infrastructure Drainage Repairs and Rehabilitation Project in the Amount of $2,065,000 with Nu Pipe, LLC, of Mount Pleasant, S.C.

Adopted Resolution Authorizing the Purchase of Two (2) John Deere 6120E Tractors with Slope Mower Attachments from Deere & Company of Cary, NC for $253,462

Adopted Resolution Authorizing the Purchase of One (1) Combination Vac Truck from Aquip, LLC for $305,252

Adopted Resolution Authorizing the Purchase of One (1) Caterpillar Wheeled Excavator from Gregory Poole Equipment Company of Charlotte, NC for $232,690.76

Adopted Resolution Authorizing the Award of a One Year Extension to the Professional Services Contract to Wilmington Downtown, Incorporated, in the Amount of $562,692 for the Services Provided in the Municipal Services District and Authorizing the City Manager to Enter into that Agreement on the Behalf of the City

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PUBLIC INFORMATION

Mr. Mohamed El Henawy of Pyramids Cab, LLC spoke to Council regarding taxicab rates and stated that there is a shortage of taxicabs in Wilmington, having gone from 200 taxis to about 40 taxis in the last 15 to 20 years. He stated that people coming in from the airport have almost a two-hour wait time. He stated it is because there is an unfair competition from ridesharing services and that most taxicab businesses have shut down, leaving only two in the area. He stated that because of the shortage, on a regular night there are only five to six taxicabs available to serve Wilmington. He stated that at the last concert there were 8,000 to 10,000 people attending, with only 15 taxicabs to respond. He stated that Uber and Lyft were transporting people, but were charging a surcharge due to the high demand for services, with some riders being charged $200 to go from downtown to Monkey Junction. He stated that a rider going from the airport to the Hampton Inn on Eastwood Road, which is approximately 5.9 miles, was charged $52 by a ridesharing service. He stated that for the same trip a taxicab would charge approximately $15. He stated there is not a fair competition between taxicabs and ridesharing. He stated he understands that the State has put restrictions on the City regulating Uber and Lyft, but he feels some of the City regulations for taxicabs should be reconsidered.

Mr. El Henawy stated that City regulations require that the vehicles used for his taxi service be no more than ten years old, while Uber and Lyft are able to use vehicles that are up to 15 years old. He stated that taxicabs also have stricter enforcement by the City for drug tests, background screening, and insurance requirements. He stated his taxicabs are required to have commercial liability insurance, which can cost up to $450 per month. He stated that Uber drivers only pay their personal automobile insurance, and once they have a customer in the vehicle, then the commercial insurance kicks in. He stated if that is true, then an Uber driver should be required to change their tag from a personal tag to a commercial tag when they have a customer, but that does not happen. He is requesting that Council help taxicabs with fair competition, as the situation will ultimately cause the customers to suffer. He requested Council's help in keeping his business running. He stated that during the pandemic, Uber and Lyft shut down, but the taxicabs were still running, although there were not enough to serve all the people in Wilmington.

Councilmember Anderson stated that he flew into the Wilmington airport in June and that almost the entire plane was stuck there, unable to get a ride. He would like to see Staff look into the taxicab regulations to see if they can help. Mayor Saffo agreed and stated he has heard a lot of commentary and complaints from people who are being charged extreme surcharges from Uber and Lyft. He stated the regulations do need to be evaluated to see if something can be done to make the taxicabs more competitive. He stated that the taxi services have served the citizens for years, but are being put out of business due by ridesharing services. He requested that Mr. Tony Caudle, City Manager bring back some recommendations to Council on this issue.

Mr. Caudle stated that he believed the insurance provisions were required by the State, but Staff would look into the issues presented.

Ms. Christine McDow was scheduled to speak to Council regarding the sale of the Belk Berry Building, but she withdrew her request.

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PUBLIC HEARINGS

Public Hearing was held on **Ordinance Directing the Housing Inspector to Vacate, Close and Repair or Demolish the Dwelling at 518 North 11th Street as Unfit for Human Habitation Pursuant to Article V, Chapter 16 of the City Code and Directing that a Notice be Placed Thereon Prohibiting Its Use or Occupancy..**

Mr. Brian Renner, Chief Code Enforcement Officer gave an overview and stated that the hearing on this Item has been continued for several meetings and during that time the property owner, Ms. Elizabeth A. Rivers MacRae passed away. He stated

he has not spoken with any of her heirs and that the attorney who was previously representing the owner did not have contact information. He stated that Staff did comply with the public notice requirements, including publication in the newspaper, so he is prepared to move forward with this Item tonight.

Mr. Renner stated this property is vacant and is a 1,079 square foot single family home that is surrounded by Wilmington Housing Authority property. He stated this case was initiated in October of 2018, it was taken to hearing in July of 2020, and the Finding of Facts and Order expired in January of 2021. He noted that Ms. MacRae's attorney was present at the 2020 hearing. He stated the tax value of the building is $23,500 and there is an estimated rehabilitation cost of $34,156, making the dwelling 145% dilapidated. He listed the sections of the Minimum Housing Code that the dwelling violated and showed Council photographs of the exterior. He noted that the same family owns the green house shown next door in the provided photograph, and stated there is not currently an open case on that property and that it is currently vacant.

Mr. Renner stated that Staff's recommendation is to approve the Ordinance to vacate, close, repair, or demolish the dwelling. He stated that because of the continuances of this Item, the Ordinance will authorize 45 days for the heirs to bring the dwelling into compliance. He stated the Ordinance will provide for 15 days for Staff to keep the dwelling secured. He stated the dwelling is currently secured, but Staff wants to be able to keep a close eye on it, as the condition of the roof could worsen over time.

Councilmember Rivenbark inquired about the green house in the photograph and stated he wanted to avoid a situation where Staff is back in front of Council in the future because that house has also become dilapidated. He inquired if there had been any conversation with the family about the green house. Mr. Renner stated that his Staff does an incredible amount of work trying to locate heirs before a case is taken to hearing. He stated that he had been working through Ms. MacRae's attorney, although he was not sure if she was still involved in the matter now that Ms. MacRae passed. He is still working to find contact information for the family, as they own other properties in Wilmington.

In response to Councilmember Rivenbark's inquiry about the public notice, Mr. Renner stated that Staff published all aspects of this process in the newspaper. In response to Councilmember Spears' inquiry, Mr. Renner stated the Ordinance provides 45 days for the heirs to bring the property into compliance, but added that the timeframe was in Council's discretion. Councilmember Spears stated that if the heirs own several properties around town, then there should be someone to speak to about this dwelling.

In response to Councilmember Barnett's inquiry, Mr. Renner stated the 45 days would start from the adoption of the Ordinance. In response to Councilmember Rivenbark's inquiry about the timeframe for the City to demolish the dwelling, Mr. Renner stated that the process would not start until the 45 day period expired, as the hope is that the owners will do something with the property. He stated that Council could direct Staff to begin the process sooner, if desired. He stated once the process is started the timeline to demolish the dwelling would depend on the availability of contractors.

There being no one present to speak in favor or opposition, the Public Hearing was closed.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance, seconded by Councilmember Rivenbark, and the motion carried 6-1. (Councilmember Spears voted "No"). Council voted 6-1 on Second Reading on motion of Councilmember Rivenbark, seconded by Councilmember Anderson and the Second Reading of the Ordinance was scheduled for Council's October 5, 2021 Meeting. (Councilmember Spears voted "No").

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Public Hearing was held on **Ordinance Amending the Official Zoning Maps of the City to Rezone Property Located at 1121 South Front Street, 1112 South 2nd Street, and 101, 104, 108, 112, 114, 115 & 116 Marstellar Street, from LI, Light Industrial District & R-3, Central City Residential District, to UMX (CD), Urban Mixed Use District**

Mr. John Joye, City Attorney stated the attorney representing the Applicant has requested a continuance of this Item until Council's October 19, 2021 Meeting.

Following further consideration, Councilmember Barnett moved to continue the Public Hearing on the Ordinance to Council's October 19, 2021 Meeting. The motion was seconded by Mayor Pro Tem Haynes and carried unanimously.

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Public Hearing was held on **Ordinance Amending the Official Zoning Map of the City of Wilmington to Rezone Property Located at 2430, 2370, 2374, & 2346 Carolina Beach Road and 2365 Washington Street from CB, Community Business & CS, Commercial Services to MF-MH, Multiple Family, Medium High Density Residential.**

Mr. Jeff Walton, Associate Planner gave the Staff Report and stated that the Applicant proposed to rezone the site from Community Business (CB) and Commercial Services (CS) to Multi-Family, Medium High Density Residential (MF-MH). He stated the application was continued from Council's September 7, 2021 Meeting and he is providing an update to that request. He stated that the Applicant originally proposed a MF-MH general rezoning that would allow 25 units per acre, which would allow for 390 units on this site. He stated the current MF-MH zoning does not include a workforce housing component. He stated that once the new Land Development Code (LDC) is effective on December 1, 2021, the MF-MH zoning district will become a legacy district and if rezoned, this property would be subject to the provisions of the old LDC. He stated at the last meeting, there was concern from Council over the lack of a requirement to have workforce housing in the general rezoning request, and added that conditions are not permitted for a general rezoning.

Staff stated that they have determined another option for this rezoning, which is to rezone the property to the new Multiple Family Residential (MD-17) zoning district, making it effective on December 1, 2021. The MD-17 zoning district allows 17 units per acre, for a total of 265 units, but has the opportunity for a density bonus of 36 units per acre if workforce housing is included. He showed Council a comparison of the allowable uses for both the MF-MH and MD-17 zoning districts. He showed Council an aerial map of the site and a map of the zoning districts adjacent to the site.

Mr. Walton stated the request is consistent with the policies of the Comprehensive Plan and the City's Strategic Plan. Staff believes the request is reasonable, is in the public interest, and recommends approval.

In response to Councilmember O'Grady's inquiry, Mr. Walton stated that the MD-17 district allows multi-family buildings with 17 units per acre by-right. He stated that if the Applicant includes a workforce housing component, there is an incentive to increase the density up to 36 units per acre. He stated that at least 10% of the units must be designated as workforce housing for at least 15 years in order to have the increased density. In response to Councilmember Spears' inquiry, Mr. Walton stated the current MF-MH zoning district allows for 25 units per acre.

Mr. Sam Franck, Attorney on behalf of the Applicant, spoke to Council and stated that after discussion with City Staff, the Applicant agrees with the proposal to request a general zoning to the MD-17 zoning district. He stated the Applicant is fine with the December 1, 2021 effective date and pointed out this would be a more significant downzoning than the original request to rezone to MF-MH, but stated that it

still fits the project. He stated it will be consistent with the neighboring property to the west, which will also become MD-17 zoning on December 1, 2021. He stated it also provides for a similar density for multi-family market rate housing as would be permitted under the current zoning. He stated the MD-17 zoning district incentivizes workforce housing in an appropriate location.

Mr. Franck stated there were open questions from Council at the September 7, 2021 meeting and he anticipates additional questions from tonight's public hearing. He requested to reserve time for his comments until the public had an opportunity to comment on this request.

Ms. Susan Shaloub spoke to Council and stated that she supports affordable housing and supports this project, but she is against the proposed road that would connect Carolina Beach Road to Maryland Avenue. She stated that because this was not a conditional zoning application, there was no site plan, but it was noted by Planning Staff that the residents of the new project would be able to travel from Maryland Avenue, to Bell Street, in order to get to a traffic signal on Carolina Beach Road. She expressed concern about placing an apartment complex where there will be children right on a main highway. She stated that once she heard the application had been filed with the State, she requested information and was provided the map of the proposed road. She stated that residents from Sunset Park are not present because they do not know about this, but they will be affected. She stated they came out in force in 2012 when a similar proposal for a road was made for the north edge of the same property.

Ms. Shaloub stated she spoke with City Staff and was advised the proposal came from the WMPO and it was intended as a collector street. She stated that all the same concerns that were discussed in 2012 still exist today. She stated when issues occur with the neighboring Titan Cement or the State Port, she has contacts that will help resolve those issues. She stated the existing traffic already cuts through residential neighborhoods and it will only increase with growth. She stated that making additional routes for drivers to bypass the lights on Carolina Beach Road will be terrible. She stated that if there are driveways for commercial operations on the new road, then trucks will be able to leave those properties and cut through the State Port community.

She stated the road is not being highlighted and she understands that it involves different governmental entities and processes. She stated she was told once the owner dedicates the right-of-way, the City could either build the right-of-way or allow the developer to do so. She stated that in 2012, there was a different process and adjacent owners received notice of the intended action, which has not happened in this case. She stated that because no one has a site plan, there will be no public hearing on the road issue. She stated the road will be a disaster for the community. She stated again that she does support the project, but not the road. She stated this merits Council's attention because it is important to the community.

Ms. Katrina Knight, Executive Director of the Good Shepherd Center, spoke to Council and stated she was an advocate for affordable housing. She stated the lack of affordable housing is the number one reason they meet families, veterans, and seniors and others who have lost housing. She stated she has been speaking to Council for 17 years and the housing situation has never been as dire as it is now. She stated that one of every two neighbors is currently spending too much on housing. She stated the current affordable housing shortage has been estimated at 10,000 units. She stated they work to create units, but they are losing them faster than they can bring new units online. She stated that Bradley Development and the Kelly Development Company proposed 300-unit development would go far in moving the needle to address the affordable housing crisis. She stated the housing will be targeted to those making 60% of the area median income, which is the range that is needed. She stated this community runs on people earning salaries under $40,000 per year and the City has a responsibility to ensure they can live in the community where they work. She stated

that supporting this proposal also supports the policies in the Comprehensive Plan and acts on the City's goal of dispersing affordable housing throughout the community. She stated these developers have a track record for producing attractive, affordable multi-family housing in North Carolina communities. She requested that Council support this important proposal.

Mr. Patrick Barnes spoke to Council and stated he was speaking on behalf of the vendors at the Starway Flea Market. He stated that on any given weekend there are 600 to 1,200 people that come to the flea market. He stated the market has been an integral part of Wilmington for 35 years and he hopes the area can stay commercial. He stated if the site becomes multi-family housing, it will be the end of that area, as it will completely change the character. He understands that some feel the area is underutilized, but he feels the proposal will make the site over-utilized. He stated the four story building will be out of character for the area. He stated the 290 units can mean up to 600 additional vehicles on the road. He stated the State Ports are getting busier, which will already bring increased traffic.

Mr. Barnes stated after the City's initial review of the proposal, there were a number of areas identified with a red circle, meaning the City's modest non-support of the project. He stated there were 24 items with a red circle, with approximately 30 items that had support. He stated the Comprehensive Plan stated that areas suited for redevelopment should be developed in a way that maintains and enhances the desired character of the surrounding areas. He stated this is a 100-year old community and the four-story building will be out of character and it will be a disaster to change the zoning.

Mr. Barnes stated that he understands that the manager for this property will be the same as the one that manages Woodridge Point, which has income restrictions, but they are at $36,000 for one person, which would be higher than the normal starting salary for a police officer. He requested Council to stop this request before we lose another piece of what makes Wilmington what it is. He stated if the area remains commercial, the City could help in remarketing the area to keep it what it is.

Mrs. Penelope Spicer-Sidbury, City Clerk, advised Council that the only written comments received were provided by one of the speakers present tonight and that her comments would be entered into the record.

Mr. Franck stated this rezoning was recommended by Staff and was subsequently unanimously recommended by the Planning Commission. He stated it is consistent with the Comprehensive Plan, the Strategic Plan, and is good fit for the area. He stated it has been zoned CB for 25 years, but prior to that it was zoned multi-family. He stated that as to intensity of use, traffic is one of the most effective metrics to measure that intensity. He showed Council a chart comparing the traffic impacts between the existing and proposed zoning districts. He stated the intensity of use for the proposed rezoning is substantially less that than the existing zoning. He stated this is a fantastic site for workforce housing and while Council is not approving a particular project, the Applicant is asking Council to approve a rezoning to a particular district that would incentivize workforce housing development, which the current zoning does not do. He showed Council a map of the qualified census tracts in the City and stated that they believe this is one of the last sites in the City that can be developed in this fashion, using the Low Income Housing Tax Credits (LIHTC).

Mr. Franck stated the City is behind other cities for LIHTC projects and there is a definite need. He stated this site has close proximity to services, including the hospital. He stated the proximity to the hospital is not just for housing for hospital personnel, but also will provide for continuity of medical services at times when it is needed the most.

Mr. Franck stated that at the last meeting Councilmember Anderson inquired about other projects completed by these developers that would have similar architectural consistency. He stated there is a LIHTC development in South Carolina called Crescent Villas, which would be similar. He stated that this is a straight rezoning

that has been motivated by a development project that is very well evolved. He stated that in order to submit the application for the tax credit, the project has to go through several steps and demonstrate its ability to move forward. He stated when they include a line stating there will be 278 units and an expected level of traffic, those are not hypothetical. He stated they are based on the actual design of the project, and are reflected in the application for the tax credit. He stated that while that is not applicable to the general rezoning request, he wanted Council to understand how far along the Applicant is in the process and how vested they are in a particular type of development for this property.

Mr. Franck stated that Council asked specific questions about how the development would look and while that information was not presented as part of the general rezoning application, it does exist. He stated if Council would like more information about that for context, they are prepared to provide it at Council's request.

Mr. Franck stated that as to the comments made by Ms. Shaloub, nothing she described would be made worse by the proposed rezoning. He stated this will be a downzoning and added that any redevelopment of this site will include an expansion of the interconnectivity of the public road system and the likely connection of Maryland Avenue to Carolina Beach Road. He stated the crux of her position seemed to be currently people who do not own the property use it for their personal enjoyment and if the property is dedicated for the road, then less of the property would be available for that use. He stated they would take objection to that, and would suggest that the public need would be served by the greater interconnectivity.

Mr. Franck stated that Mr. Barnes shared his strong advocacy for the existing flea market and he understands the passion for the use. He stated that it has never been Council's role to dictate a particular use for a property and that the current use has a limited life.

Councilmember Anderson stated he is in favor of new proposal of rezoning to MD-17, but inquired about the 10% threshold for the increased density. Mr. Franck responded that to have the LIHTC financing, 100% of the units have to be priced at 60% of the area median income. He pointed out that the City's threshold for workforce housing is 80% of the area median income.

In response to Councilmember Anderson's inquiry about the road discussed by Ms. Shaloub, Mr. Franck stated the project has not yet been through the Subdivision Review Board, but he has no indication that it would not be approved. He stated this is a well-considered and thought out design.

Councilmember Barnett stated he was in favor of the workforce housing opportunity, but requested more clarity on the street. He inquired if the Maryland Avenue to Carolina Beach route would be the main exit for the property and whether it runs through Sunset Park. Mr. Franck showed Council an image for the proposed located of the new section of Maryland Avenue, which is the primary ingress/egress point. He stated it also creates an additional point of ingress/egress for those who live in Sunset South. He stated the project's traffic engineer, Mr. Don Bennett, was present to provide additional information

Mr. Bennett spoke to Council and stated that as with all projects that generate more than 100 peak hour trips, a traffic study was commissioned for this project. He stated that scoping is the first step of the project, which established the points of interface of the project with the public road network. He stated in this case, the proposed site accesses were considered and reviewed with the WMPO and they come up with a consensus based scope that identified the points of access, as well as the proposed distribution of traffic at the site. He stated there was collaboration with the City, WMPO, and the N.C. Department of Transportation. He stated in the study, the site trips were distributed based on the existing traffic pattern in the surrounding area. He stated that it was estimated that during the peak morning hour, 11 vehicles would

exit Maryland Avenue to Adams, with a portion going straight and the remaining heading to Southern Boulevard to head north.

Mr. Bennett stated that there was a pending project on Carolina Beach Road that was beginning in the design stage prior to the pandemic, but it was put on hold. He stated the access to Carolina Beach Road is not full access, as the northern site access is proposed as right-out only and the southern access is proposed as right-out, left-in. He stated that the existing traffic signal at Northern will be taken out and relocated to Tennessee Avenue. He stated the site design is consistent with the future plans for Carolina Beach Road and minimal traffic is being sent towards Sunset South at the rear of the site. He stated that none of the intersections will degrade and the level of service will be maintained through the build of the project and that it will have nominal impacts on the intersections that were studied.

In response to Councilmember Spears' inquiry, Mr. Franck stated the standard for LIHTC application is to commit to having units at 60% of the area median income and under the LDC, to get the density benefit, the threshold is 80% of the area median income. Mr. Ted Heilbrand, Applicant, stated the tax credit they have already applied for would require 100% of the project to have rents priced at 60% of the area median income, which are lower than the rents they would be able to charge if they were only operating under the requirements for increased density in the MD-17 zoning district. He provided information on the amount of rent to be charged for the units in this development, as provided to the State in their application. He stated that any changes in the rental prices will have to be approved by the State. He provided a chart comparing their proposed rental prices to market rate rents for similar units. In response to Councilmember Barnett's inquiry, Mr. Heilbrand stated their application to the State was for 278 apartment units, even though a higher density would be permitted under MD-17.

Mayor Pro Tem Haynes stated she supports the project and is in favor of the change to the MD-17 zoning. She stated she was concerned with the road and but that it appeared the project was not dependent on the interconnectivity with Maryland Avenue, but only needed the road from the back to Carolina Beach Road. Mr. Franck agreed, but stated that the interconnectivity was a stated goal of the City. Mayor Pro Tem Haynes stated that she understands the City's goal of interconnectivity, but in this case the residents being connected are objecting. She stated that in other cases, interconnectivity has been abandoned when there were objections to it and she feels it should be considered for this matter.

Mayor Pro Tem Haynes inquired of Mr. Bennett if a final decision had been made by the WMPO and NCDOT on this matter. Mr. Bennett responded that if the connection were deleted, it would require an updated traffic impact study. He stated that prior to the construction of Sunset South, Maryland Avenue did not extend towards its border heading towards Louisiana Avenue. He stated that when Sunset South was redeveloped, that connection was reopened, showing an intent to have interconnectivity. Mr. Franck stated that if they were to dead end Maryland Avenue, they would be denying the residents of Sunset South the opportunity to have that additional point of ingress and egress. Mayor Pro Tem Haynes stated that if the connection was deleted, it did not appear to be a large number of trips that would have to be rerouted. Mr. Bennett stated the traffic study looked at how the traffic spread across the network. He stated it is a small percentage and if the connection were not made, a revision would be made to send those vehicles out through Carolina Beach Road. Mayor Pro Tem Haynes stated doing that would not be detrimental to this project. Mr. Franck responded that question is one that would be best addressed through the Subdivision Review Board. He stated evaluating a particular traffic pattern should not be a part of the consideration of whether the MD-17 zoning district is appropriate. Mayor Pro Tem Haynes stated it is important to have an understanding of what approving this rezoning will mean and restated her initial question of whether or not the road was a done deal. Mr. Tony Caudle, City Manager, stated that a member of

the Subdivision Review Board or the Technical Review Committee would need to answer that question. He stated the City does have a goal of encouraging interconnectivity, but he is not sure how far the City's Technical Standard go to ensure it. Mayor Pro Tem Haynes stated that they do support the goal, but it has been abandoned in other neighborhoods, and maybe it should be abandoned in this case.

Mr. John Joye, City Attorney stated that the question before Council tonight is whether the property be rezoned to MD-17. Council, based on case law, will need to look at the permitted uses in the new zone versus the current zone and determine if it is appropriate in Council's discretion. He stated it would be inappropriate for Council to let its judgment be affected by the particular of traffic and the question of interconnectivity. The City does, through its own controls, will have future opportunities to regulate traffic, but it is not before Council tonight. Mayor Pro Tem Haynes stated her point is that this may be the only time this discussion can happen before the public, as the other processes happen out of the public's view. She stated she was in favor of the project and would vote for it, but the City needs to make sure the public is aware of what is happening. Mr. Bennett stated that the review before the Subdivision Review Board is a public hearing and that all plans reviewed by the Technical Review Committee are entered into Protrack, which the public can access if they choose to do so.

Councilmember O'Grady stated he previously stated that he felt this project could only be accomplished through a conditional district review. However, even though this is still a general rezoning, it functions as a conditional district due to the restrictions from the LIHTC program. He inquired if the access on Carolina Beach Road were right-turn only, where the people traveling north would go. He stated there will be a review of the site plan and he expects it to undergo a rigorous technical review. He stated he will vote for the project because it will provide affordable housing, but stated that Council's approval tonight does not mean they accept that Maryland Avenue will be connected. He stated the technical aspects will be decided later and what is before Council tonight is whether the general rezoning is appropriate.

Councilmember Spears thanked Council for the clarification and stated he feels like they got lost in the details and stated it was important to understand that even if Council approved the proposed zoning, the extension is not a given. He stated he wants to make sure the City does not lose out on the potential for affordable housing. Mr. Franck stated the best way for the developers to show their dedication to the project is to provide details on the LIHTC application they submitted to the State. He reiterated that the site plan was only provided tonight for context, in order to show Council they are serious about this project.

Councilmember Anderson thanked the developer for coming to Wilmington and finding a site to do this, because it is needed in Wilmington.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Ordinance and read the consistency statement as follows:

> I move to approve the proposed amendment to rezone property located at 2430, 2370, 2374, & 2346 Carolina Beach Road and 2365 Washington Street from CB, Community Business and CS, Commercial Service to MD-17, Multiple Dwelling Residential, to be effective December 1, 2021, and find it to be consistent with the relevant policies in the Comprehensive Plan, based on the application materials, and the information provided at the public hearing and in the staff report, and to find Approval of the rezoning request is reasonable and in the public interest for the following reason(s): The proposed rezoning would allow for higher-density residential uses within an area that is near commercial services and uses, near medical services, and within an existing high-capacity transit route. The proposed multi-family zoning provides an appropriate transition from the commercial

areas along Carolina Beach Road to the existing residential uses to the west.

The motion was seconded by Councilmember Rivenbark and carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Rivenbark, seconded by Councilmember Barnett, and carried unanimously.

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Public Hearing was held on **Resolution Denying/Granting a Special Use Permit for Property containing 10.06 acres +/ located at 5814 & 5810 Camellia Lane**

All those wishing to speak were sworn in by Mrs. Penelope Spicer-Sidbury, City Clerk.

Mr. Jeff Walton, Associate Planner gave the Staff Report and stated that this is the Friends School of Wilmington project. He stated that on June 1, 2004, Council approved a Special Use Permit (SUP) to allow the Friends School to use the site for a maximum of 204 students. He stated that in 2016, Council approved a modification to allow for a school campus expansion and to increase the maximum number of students to 250. He showed Council an aerial map and photographs of the existing conditions on the site and the adjacent properties. He stated the proposal before Council is a SUP modification to the existing private school campus and to convert an existing residential house and outbuilding to an environmental learning center. He stated the requirements of the Land Development Code (LDC) require a SUP for primary and secondary school uses in a single-family or multi-family zoning district.

Mr. Walton stated that Camellia Lane is a 30-foot wide public street. He stated even though it is gated during school hours, the subject site does provide interconnectivity at two points. He stated all existing improvements would remain and are part of this modification. He stated there are no additional site changes proposed and total school enrollment would still be capped at 250 students.

Mr. Walton stated the proposal is consistent with the recommendations of the Comprehensive Plan and includes the preservation of additional open space and natural areas. He stated the Plan calls for school institutions to be sensitive to neighborhood issues, maintain quality of life, and enhance the services provided to the neighborhood. He stated that if Council approves the SUP modification, Staff has provided proposed conditions in the Case Summary. He requested that the Staff Report, with all attachments, be entered into the record.

In response to Councilmember O'Grady's inquiry, Mr. Walton stated a community meeting was held.

Ms. Brenda Esch, Head of School, Friends School of Wilmington, spoke to Council and stated the school is rooted in Quaker principles that include environmental stewardship. She stated they were excited when 2.8 acres of greenspace became available and they were able to purchase it in April of 2021. She stated they are seeking to use the property as-is in order to teach environmental education classes. She stated that with her is Ms. Karen Linehan, Director of Environmental Education to discuss the plans for the property.

Ms. Linehan stated she has been employed at the Friends School for 19 years and they are very excited about this property and how it will expand what they are able to do with outdoor learning. She stated the property has wooded areas, open meadows, and farm features. She stated the trees on the site are notable and include long leaf pine, loblolly pine, magnolia, red cedar, sweet gum, and a colony of sassafras. She stated there will be a focus on the natural and cultural history of the long leaf pine tree. She stated they plan to preserve and enhance the natural flora on the site. She stated the site also provides a habitat for wildlife, including migratory and resident birds. She stated they are in the process of mapping and creating trails to highlight features of the property's natural history. She stated the existing cottage is structurally sound and

is an appropriate candidate for renovation as an environmental education center. She stated this property and the environmental education center will benefit the students, wildlife and the surrounding community.

Mr. Randy Pickett, 5808 Verbenia Drive, was sworn in by the City Clerk and spoke to Council. He stated that he owns property that faces the rear entrance to the site being discussed tonight. He stated that the Friends School has received numerous Special Use Permits and they are asking again to approve an SUP based on the one they received previously. He stated he likes what they are doing and approves of their plan; however, he is concerned with what can be done with property in the future. He questioned whether they could hold events such as fundraisers or a school carnival on the property. He is worried that they will work their way into the residential area through Special Use Permits. He stated he has no problems with what they are doing and feels Council should approve the request, but with conditions so that down the road they do not change the nature of the residential neighborhood.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Councilmember Barnett moved approval of the Resolution, seconded by Councilmember O'Grady, and the motion carried unanimously.

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Public Hearing was held on **Ordinance Following Show Cause Hearing Concerning Obstructions and Unpermitted Encroachments into City Property Adjacent and Connected to Real Property Located at 719 Princess Street**

Mayor Saffo noted that Staff was requesting a continuance to Council's November 3, 2021 Meeting.

Following further consideration, Councilmember Spears moved to continue the Public Hearing on the Ordinance to Council's November 3, 2021 Meeting. The motion was seconded by Councilmember Barnett and carried unanimously.

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Public Hearing was held on **Public Hearing FY2020-21 Consolidated Annual Performance and Evaluation Report (CAPER) for CDBG & HOME funds.**

Ms. Suzanne Rogers, Community & Development Housing Planner spoke to Council and stated tonight's Public Hearing is for the draft Consolidated Annual Performance and Evaluation Report (CAPER). She stated the Public Hearing is required by the Department of Housing and Urban Development (HUD), as well as 15-day public comment period, which was advertised and distributed to various stakeholders. She stated that any public comments received will be recorded in the final draft and responded to by Staff.

Ms. Rogers stated that the pandemic resulted in limited access to Staff and required moving their homebuyer education classes to a virtual format. She stated the boom in the housing market meant they had trouble finding available contractors. She stated the six homebuyers purchased a home with financing from the HOP programs, with 11 borrowers pre-qualified as of June 30, 2021. She stated that three homebuyers received downpayment assistance, 94 persons attended homebuyer education classes, four CPLP homebuyer loans closed, three rental rehabilitation loans closed, seven owner-occupied rehabilitation loans projects are underway, and 4,521 youth participated in afterschool/summer programs.

Ms. Rogers stated the Workforce Housing Advisory Committee successfully completed the Housing Needs Analysis and the Housing Opinion Study. The City received and disbursed additional CDBG funds through the CARES Act. She stated the City's Lead Hazard Reduction Grant was fully staffed and they were able to train 45 property managers and contractors on Lead Based Paint Removal.

Ms. Terri Burhans, Community Development Analyst, spoke to Council and stated that over 6,000 households and individuals benefitted from programs in 2021 through CDBG and HOME funds and the City's General Fund. She stated that CDBG and HOME are specifically designed to benefit those households at or below 80% of the area median income. She stated that currently the median income in Wilmington is approximately $73,000 for a four-person household. She stated the vast majority of persons benefitting from the programs were of very low or extremely low income households, which are at or below 50% of the area median income. She stated that the majority of the households were Black or African American and over 800 of the households were Hispanic or Latinx. She stated that in the spring of 2020 the City was awarded over $600,000 in CDBG funds through the CARES Act and focused on educational services, food and supply distribution, and rental assistance. She stated that the funds were allocated to local nonprofits for distribution and administration. She stated for these funds, the majority of those served were very low and extremely low income households.

Ms. Burhans stated that one of the standouts from the additional CDBG funding was the Good Shepherd's Eviction Prevention Project. She stated they were able to process over 1,300 applications and assist over 300 households with rent and utility assistance. She stated she was very grateful for the community partners that worked with the City.

Ms. Rogers stated that for every dollar in CDBG and HOME funds, the City, with its community partners, was able to leverage $2.13 in other funds, including General Fund appropriations. She stated that in the last fiscal year, there were approximately $8.1 million in revenues and showed a chart of where those funds came from. She also showed Council charts of the expenditures by funding source and by activity, which totaled $4.2 million. She stated this left a balance of $3.9 million at the end of the year, but added that there were a number of encumbrances and projects in the pipeline, totaling approximately $4 million, so that it was essentially a break-even year.

Ms. Rogers provided Council maps showing where the services were distributed throughout the City.

In response to Councilmember Barnett's inquiry, Ms. Rogers stated the City has appropriated money for gap financing, along with funding from the American Rescue Plan Act for affordable housing projects. She stated those projects typically require layers of financing, with some governmental assistance. She stated the housing reports received by Council will be used for future planning purposes. She stated that the City is in the final stages of review to become a Certified Housing Counselor, which will become another area of potential growth for the City.

Councilmember O'Grady commented that there is also a collaboration between the City and the County for a $50 million housing bond next year.

There being no one present to speak in favor or opposition, the Public Hearing was closed.

Mayor Saffo announced this Item was on for Public Hearing only and that no action would be taken at this time.

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Public Hearing was held on **Resolution Authorizing City of Wilmington to Pay Economic Development Incentives.**

Mr. Tony Caudle, City Manager stated this Resolution authorizes the City Manager to enter into a business development investment grant with a business proposing to expand in the City of Wilmington. He stated that under the terms of the agreement there would be five payments of $16,000 made annually over five years, in exchange for 104 jobs created in the community with an average wage of at least

$80,000. He stated the agreement will include milestones that must be met before payments are made and the grant is necessary to secure the expansion of business within the City. He stated it is interesting to note that the County was approached yesterday about participating, and their portion was approved at $120,000 over a five year period. He stated the business has also applied for a grant from the State. He stated that Mr. Scott Satterfield, Chief Executive Officer, Wilmington Business Development was present to give additional information and answer questions.

Mr. Satterfield spoke to Council and stated that the Project Manager has been in their portfolio since 2017 and they are a leader in their industry. He stated this will bring 104 jobs, averaging $80,000 a year. He stated the hope is that other jobs will be created as a result. They believe the State and the community college system will participate to encourage jobs in this industry. He stated they have undergone financial review by the State and he feels they are endorsing a great company for the community.

In response to Councilmember Barnett's inquiry, Mr. Satterfield stated that the company is interested in hiring people from this community. He stated the preference of this company is to hire locally and work through the community college to find the appropriate talent.

Councilmember Spears stated he was interested in making sure that people who may not look as good on paper are considered for opportunities. He stated he is not saying that employers should not consider who they are hiring, but there are people who need second chances and should have the ability to work their way up in an organization. Mr. Satterfield stated his organization has always been focused on diversifying the workforce and he is confident that the Project Manager will understand their responsibility to give people a chance.

An unidentified gentleman spoke to Council about this Item.

Everyone being given an opportunity be heard, the Public Hearing was closed.

Following further consideration, Councilmember Barnett moved to approve the Resolution, seconded by Councilmember O'Grady and the motion carried unanimously.

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Mayor Saffo requested that Council move Item R2 (**Resolution Declaring Wilmington Fire Station 3, located at 3933 Princess Place Drive as Surplus Property to be Donated for the Public Purpose of Providing Affordable and/or No Cost Housing, Education, Employment, and Life Skills to Young Men in our Community)** up on the Agenda for consideration.

Mr. Tony Caudle, City Manager stated this Resolution will declare Fire Station No. 3, located at 3933 Princess Place Drive as surplus property. He stated there have been unsolicited offers for the use of this property and during a work session there was a discussion about putting this property up for bid. He stated that following that discussion, Council expressed a desire to honor a request from LINC for a new program and to authorize the City Manager and City Attorney to transfer the property.

Mr. Caudle stated the intended program to be run on the property will be a life program to teach life skills to 16-24 year old African Americans who have been involved in the court system. He stated the property will be transferred with the condition that it must be used for a public purpose.

Mr. Frankie Roberts, Executive Director, LINC, stated that when the Fire Station closed in 2017, they made a request to the City for the property. He stated the goal is to provide housing and support services for 16-24 year old young men. He stated they are calling it a boarding school and would focus on school drop outs. He stated they would assist them in getting a GED and obtaining a technical certificate. He stated there is a homeless problem in that age range and they would target those who

have committed low level offenses to get them back on track. He stated they will renovate the property and hope to be up and running within a year.

Mayor Saffo stated that a program such as this for at-risk youth who have dropped out of school is really needed. He stated that he supports this and thinks it is a great program.

Councilmember Barnett stated there is a certain niche that Mr. Roberts is able to reach and he is thankful for that. He stated he is in favor of this program and this Resolution.

Councilmember Anderson inquired if the property will need to be rezoned. Mr. Caudle stated he did not know, but would find out.

Councilmember Spears thanked Mr. Roberts for his years of dedication and for what he has passed down to the community over the years. He stated the lives of these young men are being impacted at younger and younger ages and we are trying to find a solution. He hopes that Mr. Roberts will tap into these individuals for ideas on what that solution might be.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Resolution, seconded by Councilmember Barnett, and the motion carried unanimously.

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ORDINANCES

Ordinance Making Appropriation of $42,464 to Engineering Professional Services was considered.

Mr. Rob Gordon, Plan Review Engineer stated this Ordinance will continue project funding for updates to the City's Technical Specifications and Standards. He stated this contract was funded last year from the Engineering departmental budget. He stated that the remaining contract funds were not identified at the end of last fiscal year for rollover into this year's budget and that this Ordinance would restore those funds.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance, seconded by Councilmember Barnett, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember O'Grady, and carried unanimously.

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Ordinance Making a Supplemental Appropriation in the Amount of $1,432,336 from the Parking Facilities Fund Balance to the Second Street Deck Repair Project to Award a Construction Contract; and **Resolution Authorizing Award of Construction Contract to Capital Restoration and Waterproofing, Inc. for the Second Street Parking Deck Repair Project in the Amount of $1,646,355** were considered.

Mr. Chance Dunbar, Parking Manager stated these Items were related to repairs to the Second Street Parking Deck. He stated the deck is 30 years old and structural repairs were made in 2010 and 2014. He stated a structural survey was completed and the repairs will include:

- Level 5 expansion joint repair, drain repair, and drive surface waterproofing
- Concrete repairs on all levels
- Masonry column and crack repairs on various levels
- Steel corrosion repairs on various levels
- Overhead double tee connection repairs on various levels
- Complete rebuilt of the west stairwell from level 2.5 and down; repairs on remaining stairwells
- Anti-graffiti removal material from all walls and repainting

- Brick masonry sealant and repairs
- Installation of a new handrail
- Waterproofing coating and applications on various surfaces

Mr. Dunbar showed Council photographs of the areas in the deck to be repaired. He stated the project was bid in June of 2021 and the City received five responses, with the lowest responsive bidder being Capital Restoration and Waterproofing, Inc. Staff is recommending awarding the base bid and all alternates in the amount of $1,646,355. He stated a 15% contingency is included in the contract and the City will continue to use construction engineer consulting services. The additional costs bring the total amount to $2,081,355. He stated a Supplemental Appropriation from the Parking Fund for $1.4 million is being requested to complete the project. He stated the project is expected to be completed within eight months and stated the deck will remain open during construction.

Councilmember O'Grady commented that this is why the City charges for parking. He stated we will be able to make these repairs without raising taxes.

In response to Councilmember Barnett's inquiry Mr. Dunbar stated that although some of the repairs were a few years behind, the deck is safe.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance Making a Supplemental Appropriation in the Amount of $1,432,336 from the Parking Facilities Fund Balance to the Second Street Deck Repair Project to Award a Construction Contract, seconded by Mayor Pro Tem Haynes, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember O'Grady, and carried unanimously.

Following further consideration, Mayor Pro Tem Haynes moved approval of the Resolution Authorizing Award of Construction Contract to Capital Restoration and Waterproofing, Inc. for the Second Street Parking Deck Repair Project in the Amount of $1,646,355, seconded by Councilmember O'Grady, and the motion carried unanimously.

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Ordinance Appropriating Funds for Police Headquarters Chiller and Evidence Room HVAC Improvements in the Amount of $180,000; and **Resolution Awarding a Contract in the Amount of $729,000 to Superior Mechanical Services, Inc. of Greensboro, North Carolina for the Police Headquarters Chiller and Evidence Room HVAC Improvements** were considered.

Ms. Christine Sims, Buildings and Facilities Superintendent stated the Items before Council will replace two chillers that serve the entire Wilmington Police Department Headquarters building and will also replace HVAC components that serve the Evidence Room. She stated all of this equipment is original to the building and has fallen into disrepair, partially because the original design did not include corrosion protective inhibitor, which has been included in the new design.

Ms. Sims stated they received three bids for this project, with the lowest responsible bid coming from Superior Mechanical Services in the amount of $729,000. She stated the additional funding needed for this project is recommended as a Fund Balance transfer of $180,000, which will make up the difference between the bid amount and the current available budget. She stated the total amount includes a 7-8% contingency.

Following further consideration, Councilmember O'Grady moved approval of the Ordinance Appropriating Funds for Police Headquarters Chiller and Evidence Room HVAC Improvements in the Amount of $180,000, seconded by Mayor Pro Tem Haynes, and the motion carried unanimously. A Second Reading of the Ordinance was waived on motion of Councilmember Barnett, seconded by Councilmember Spears, and carried unanimously.

Following further consideration, Councilmember Barnett moved approval of the Resolution Awarding a Contract in the Amount of $729,000 to Superior Mechanical Services, Inc. of Greensboro, North Carolina for the Police Headquarters Chiller and Evidence Room HVAC Improvements, seconded by Councilmember Spears, and the motion carried unanimously.

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RESOLUTIONS

Resolution Adopting City Policy on the Naming and Renaming of City Streets, Programs, Facilities and Property, and the Placement of Private Memorials on City Property was considered.

Mr. Thom Moton, Deputy City Manager stated this Item builds on existing policies that needed updating. He stated the proposed policy addresses the naming and renaming of City streets, facilities, and honorific namings. He stated that among the changes is an increase to the percentage of signatures required for a street renaming. He stated that current policy requires 51% of the impacted area and it has been recommended that the threshold be increased to 75%. He stated that honorific street naming, which would not require any address changes, would require only 51%. He stated that the renaming process would be distinguished by it being a rare event, so the recommendation is that consideration of those requests by Council's Naming Committee occur every two years, beginning in 2022. He stated that applications could be submitted at any time. He stated the process would require that once an application is submitted to the City Clerk, it will be forwarded to the Naming Committee, which would make a determination as to whether it has sufficient justification to advance to the next stage of consideration.

Mr. Moton stated that it is also recommended that the placement of private memorials on City-owned property be avoided. He stated this would not prevent the City funding art on public property. He stated that the Special Events policy, the Sponsorship policy, and the Tree Memorial program will not be affected by this policy. He stated this policy would supersede the following policies: the Universal Addressing Standards and Procedures Manual adopted by Council on August 6, 2002; the Resolution adopted by Council on June 17, 2003 Amended the Naming and Renaming of Streets or Alleys; and the policy adopted by Resolution Amending the Policies for Naming Facilities and Public Spaces, adopted October 21, 2014.

In response to Councilmember Rivenbark's inquiry about the percentage required for street namings and renamings, Mr. Moton stated it is recommended at 75%. Councilmember Rivenbark inquired about the threshold for what is considered a private memorial. Mr. Moton responded that what was contemplated was that if a group of citizens took up a collection and made a donation to the City, that was the same as a privately funded memorial. He stated in order to be publicly funded, it should come from City funds.

Mayor Pro Tem Haynes stated that this policy would not prevent citizens from placing art on private property. She stated that if a group of people came to the City and requested art to be installed on public property, and the City agreed to pay for it, then it would undergo a process to determine public support for the project before being installed on public property. Mr. Moton stated the City Attorney has also included a provision that in that case, it would be adopted as government speech. Councilmember Rivenbark stated he feels that provision will make the application of this policy unclear in the future.

Mayor Pro Tem Haynes stated there was a very long process in determining these recommendations. Mr. Moton stated that Council approved a contract with an experienced facilitator and that each member of Council appointed individuals to a focus group, in addition to representatives from other boards, and Council's Naming Facilities Committee. He stated that input was received from the group as to what they wanted to see as outcomes from this effort. He stated this process was triggered by the absence of clear guidelines during the process of the

Major General Joseph McNeil honorific street renaming, as well as experiences Council had with recent alley renamings. He stated the focus group met on several occasions and the feeling was the City should avoid taking on a privately funded memorial and adding it to City property. He stated part of the consideration came from the discussions during the Black Lives Matter monument and the historic monuments that were removed. He stated that Council will be the final determination as requests come forward and this policy is intended as guidance.

Councilmember Spears stated he feels this policy would prevent projects such as the Black Lives Matter monument from coming forward in the future and he is against that. He stated that project did not cost the City a dime, but was brought forward by citizens in the community that wanted to put something positive into the environment for others to see. Mr. Moton stated there are a number of requests that come to the City for private groups to use City property to erect some kind of monument, statute, or art. He stated that from a Staff perspective, there is a finite amount of public space available and it belongs to everyone. He stated they also did not want to impinge on any future plans simply because someone else's art was installed first. He stated it was not directly in response to the Black Lives Matter or Confederate monuments, but an acknowledgement of the pending requests for monuments to be displayed on City property.

Councilmember Anderson stated he was aware of requests from other groups, as well as the issues during the process of the McNeil renaming. He stated he is not sure why the City would not consider a public-private partnership if a group provided funding for a monument to be placed on City property. He stated the policy sets forth standards to be met to guide the decision as to whether an installation would be appropriate. Mr. Moton stated the Sponsorship policy would govern for some of those instances, such as sponsoring a community garden in a public area. He stated this policy would control in a situation where a group, such as the current request from the Scottish Immigrants group, collects funds for a monument that they wish to display in a public area, such as on the Riverwalk. The recommendation is to not allow such an installation on City property. He stated that situation is different from a group paying for planned improvements in a park.

Mayor Pro Tem Haynes stated her understanding that this clarifies the process the City used, which enabled them to install the Black Lives Matter signage. She stated this policy provides the framework to move forward in that type of situation. Mr. Moton stated that in the case of the Major General Joseph McNeil honorific naming, Staff went over and above the policy because Council wanted significant public input during that process. He stated it was not previously written, but this policy codifies the standards for appropriate community engagement as it relates to a naming or renaming. He stated as he understands the policy, it would be difficult going forward to have another privately funded art installation on City property. The individuals would be encouraged to install it on private property.

Councilmember Spears stated he feels this policy will deter groups from even bringing requests forwards and he feels that Council should make the final decision. Councilmember Rivenbark stated in previous years there were no problems in naming and renaming parks, streets, and bridges. He stated that when the Confederate monuments came down, that was not a positive for everybody. He stated the Black Lives Matter sign was a negative to some people in the community. He stated that a policy will not cover everything and it will come down to the opinion of those sitting on Council to make a final decision.

A question/answer and discussion period was held.

Councilmember Spears stated that if there is a group of people in a positive, productive society that feels the City should recognize a group that is being unjustly treated, he feels they went above and beyond for the Black Lives Matter sign. He stated he is not in favor of this policy and will vote against it.

Councilmember Barnett stated that he is the Chair of Council's Naming Committee and he stated that a lot of work went into the recommendations and they were not intended to circumvent anything, but was intended to provide clarity for the process. He stated he was in favor of the policy and added that it can be amended as needed in the future.

Councilmember Anderson stated there should be a policy in place and that Council should not necessarily have to review each request that comes forward. He stated that the process will act as a screening system. He stated there still could be something that rises above and beyond. He stated that there was a lot of input into this process and he hopes the policy is adopted.

Mayor Saffo stated this has been a contentious issue and added this policy does not deny anyone their First Amendment right to tell Council what they want in regards to naming or renaming. He stated there will now be a process in place, like everything else the City does. He stated people may not like the process, but it is the best way for a request to come before the seven people sitting on Council. He stated without the process, it would be chaos. He applauded Staff on their work in getting the Major General Joseph McNeil renaming done quickly.

Following further consideration, Councilmember Barnett moved approval of the Resolution, seconded by Councilmember O'Grady, and the motion carried 6-1. (Councilmember Spears voted "No").

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Resolution Authorizing the City Manager to Enter into a Memorandum of Agreement with the State of North Carolina Relating to the Distribution of Opioid Settlement Funds Within the State of North Carolina; and **Resolution Authorizing the City Manager to Enter into an Interlocal Agreement with New Hanover County Relating to the Distribution of Opioid Settlement Funds Within New Hanover County** were considered.

Mrs. Meredith Everhart, Deputy City Attorney stated that these Items are not settlements in any way and do not involve funds. She stated the purpose of these Items is to set up a distribution mechanism in the event that the opioid litigation cases settle. She stated the first Item is to set up distribution of funds with the State, and the second is to set up the distribution of funds with New Hanover County. She stated any funds would be used in the community to address the ongoing opioid crisis.

Mayor Saffo thanked Ms. Everhart and the City Attorney's Office for their work on this litigation. He stated the City and New Hanover County were one of the first entities to sue the opioid distributors that have admitted to creating this crisis. He hopes this shifts the tide into getting people into recovery. He thanked the City Council and the Board of Commissioners for their willingness to take steps to sue the opioid distributors.

Following further consideration, Councilmember Anderson moved approval of the **Resolution Authorizing the City Manager to Enter into a Memorandum of Agreement with the State of North Carolina Relating to the Distribution of Opioid Settlement Funds Within the State of North Carolina**, seconded by Councilmember Spears, and the motion carried unanimously.

Following further consideration, Councilmember Rivenbark moved approval of the **Resolution Authorizing the City Manager to Enter into an Interlocal Agreement with New Hanover County Relating to the Distribution of Opioid Settlement Funds Within New Hanover County**, seconded by Councilmember Barnett, and the motion carried unanimously.

REPORTS

Mayor Pro-Tem Haynes presented the following revised recommendations of Council's Appointments Committee for Boards, Commissions, and Committees as follows:

GOLF COURSE ADVISORY COMMITTEE

Appoint Jeffrey Darby
Term Expires: 10/09/2024

Appoint Frederick Dunn
Term Expires: 10/09/2024

Appoint Richard King
Term Expires: 10/09/2024

NEW HANOVER COUNTY/CITYOF WILMINGTON COMMUNITY RELATIONS ADVISORY COMMITTEE

Appoint Michael Wentworth (Education)
Term Expires: 09/20/2024

Reappoint Courtney Horton (At Large)
Term Expires: 09/20/2024

WILMINGTON TREE COMMISSION

Appoint Thomas Boland
Term Expires: 06/18/2023

Following further consideration, Mayor Pro Tem Haynes moved approval of the revised recommendations, seconded by Councilmember O'Grady, and the motion carried unanimously.

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ADDITIONAL ITEMS

Councilmember O'Grady stated that today the Cape Fear Public Utility Authority (CFPUA) began its Assistance Program, using funds from the City and County to help those that are unable to pay their water bills. He encouraged those that are behind in paying their water bills to contact CFPUA to set up a payment plan and find out if there are funds to assist them in getting their accounts up to date.

Councilmember Barnett reminded everyone to continue to stay safe, wear a mask, wash their hands, and maintain social distancing. He stated he would be participating in a funeral for a 33-year old and that people are still dying from COVID.

Mayor Pro Tem Haynes stated that wearing a mask is required in areas where there is common space. She stated she went back and reviewed the mandate and stated it is for all buildings in New Hanover County. She stated we don't want to lose anyone else and we want everyone to stay well.

Councilmember Spears stated the vaccination rate for New Hanover County is at 58%, but we need 80% to have herd immunity. He reviewed the specific vaccination rates broken down by race/ethnicity and age.

Mayor Saffo recognized that this is Hispanic Heritage Month, where we celebrate the histories, cultures, and contributions of those citizens with ancestors from Spain, Mexico, and the Caribbean Central and South America. He stated this observation began in 1968 and it was later expanded to a 30-day observation. He stated he wanted to recognize all of the Hispanic Americans that have contributed to this great Country.

ADJOURNMENT

There being no further business to discuss, the meeting adjourned at 10:18 P.M.

Respectfully Submitted,

Penelope Spicer-Sidbury, CMC/MMC/NCCMC
City Clerk

NOTE: THE ABOVE MINUTES ARE NOT A VERBATIM RECORD OF THE PROCEEDINGS. THE ENTIRE PROCEEDINGS ARE RECORDED ON TAPES 1, 2, AND 3, AND ARE INCLUDED AS PART OF THIS OFFICIAL RECORD.

ATTACHMENT 19

Land Development

Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff

LAND DEVELOPMENT

PHYSICAL SITE SUITABILITY

1. Will the proposed project be compatible with surrounding development? **Yes. See City of Wilmington Zoning Letters (Attachment 18).**

2. Is the project site served with adequate roads and streets so that residents have acceptable access to employment, shopping, and services? **Yes.**

3. Will the site be affected by potential threats from natural or man-made hazards? **No.**

4. Does the proposed project create slopes by cut and fill? **No.**

5. Are subsurface minerals being extracted, such as coal, oil, gas or water? **No.**

6. Is there evidence that the site has been used as a sanitary landfill or mine waste disposal area? **No.**

7. Does the site have a high-water table? **A recent Geotechnical Engineering Report by Terracon Consultants indicated that measured groundwater tables at borings ranged between 1 and 6 feet below the ground surface. Groundwater level fluctuations will be considered when developing the design and construction plans for the project.**

8. Are there potential hazards related to slope failure or falling rock? **No.**

9. Is there evidence of ground subsidence on the site or is there a history of ground subsidence in the area? **No.**

10. Are there other unusual conditions on the site? **No.**

SOIL SUITABILITY

1. Is there evidence of ground subsidence, seismic activity, a high-water table, or other unusual conditions on the site?
   A recent Geotechnical Engineering Report by Terracon Consultants indicated that measured groundwater tables at borings ranged between 1 and 6 feet below the ground surface. Groundwater level fluctuations will be considered when developing the design and construction plans for the project.

2. Is there any visible evidence of soil problems (foundation cracking or settling, basement flooding, etc.) in the neighborhood of the project site? **No.**

3. Have soil studies or borings been made for the area? Do they indicate marginal or unsatisfactory soil conditions? **Yes (See Attachment 19).**
   USDA-NRCS-SCS, onsite soils are somewhat well-suited for development with a some limiting factors. Urban Land soils have been previously disturbed, are generally well-suited for urban development, and comprise over 77% of the site. Kureb-Urban Land Complex soils are generally considered well-suited for urban development, with a limitation of high erosional qualities, and account for over 7% of onsite soils. Leon and Lynn-Haven soil series are generally poorly suited for urban development with limitations due to depth to the saturated zone and wetness and comprise 16% of the site. Slope are listed from 0-8%; however the site has been previously graded and is nearly level/flat. These limitations can be alleviated by proper design/ grading/ construction installation to mitigate adverse effects.

Terracon Consultants conducted a detailed Geotechnical Engineering Report to confirm soil conditions. Per the report, recommendations for site preparation, earthwork, floor slab design, foundations, subsurface conditions, pavements and groundwater were provided to assist in a successful development.

4. Are there visual indications of filled ground? **No.** If your answer is yes, was a 79(g) report / analysis submitted? **N/A.**

5. Will the project site significantly affect or be affected by unsuitable soil conditions? **No (See Attachment 19).**

6. Will the project significantly affect soils that may be better suited for natural resource management activities such as farming, forestry, unique natural area preservation, etc.? **No.**

SLOPE

1. Is the site on a slope? **No.** If so please define: slight, moderate, severe, or very severe: **Slight (0-8%). Site has been previously graded.**

2. Is there a history of slope failure in the project area? **No.**

3. Is there visual indication of previous slides or slumps in the project area, such as cracked walls, tilted trees, or fences? **No.**

4. Will the project site significantly affect or be affected by slope conditions? If so, does its design plan include measures to overcome potential slope stability problems? **No (See Attachment 19).**

5. Will slope modification activities remove micro-climatic conditions that facilitate the growth of unique natural habitats (e.g., northwest facing slopes occupied by plant communities from cooler regions)? **No.**

6. Will the slope modification activities affect social and cultural resources? **No.**

EROSION

1. Is there evidence of erosion or sedimentation? **No.**

2. Does the project involve development of an erosion sensitive area (near water, on a steep slope, on a sandy or silty soil)? If so, is erosion control included as part of the plan? **No. A sediment and erosion control plan will be submitted/NPDES permit will be obtained prior to construction.**

3. If site clearance is required, explain if it includes removal or vegetation, its effects, and how erosion will be managed and controlled. **Yes. Site will be cleared and graded prior to construction. Landscaping for remaining open areas will be completed once the exterior construction is complete. Sediment and erosion control silt fencing will be in place prior to earthwork.**

4. Is an erosion control plan included as part of construction and the construction contract? **Yes.**

5. Will the project site significantly affect or be affected by erosion or sedimentation conditions? **No.** If so, does the design plan include measures to overcome potential erosion problems? **N/A.**

DRAINAGE/STORM WATER RUNOFF

1. Is there indication of cross-lot runoff, swales, or drainage flows on the site? **One man-made ditch feature was observed on the eastern and southern portion of the site. The ditch will be filled prior to site development.**

2. Are there visual indications of filled ground, active rills, or gullies on site? **No.**

3. Will existing or planned storm water disposal and treatment systems adequately service the proposed development? **Yes. Two stormwater detention ponds will be located on the northern and eastern portions of the site.** Will the proposed project be adversely affected by proximity to these facilities? **No.**

4. If the public storm sewer is not available, how will storm water drainage be handled?
Public storm sewer available.

5. Is state/regional/local permitting required to control stormwater run-off, e.g., a NPDES permit? **Yes.** If so, what conditions will be required by the permit? **On-Site stormwater detention ponds will be located on-site, and off-site storm sewer is available to handle stormwater.**

6. Will the project itself cause or substantially contribute to off-site pollution by stormwater run-off, leaching of chemicals, or other pollutants? **No.**

7. Will the project site significantly affect or be affected by drainage and stormwater conditions? **No.** If so, does its design plan include measures to overcome potential runoff problems? **N/A.**

STORM WATER

1. Will existing or planned system adequately service the proposed development? **Yes.**

2. Can storm water be disposed of on-site? **Yes. Two on-site stormwater detention ponds.**

3. Will surface water be channeled directly into a closed storm drainage system rather than to recharge aquifers? **Yes. On-site stormwater detention ponds to storm sewers.**

Soil Properties

Starway Village Apartments

Soil Name	Slope	Erosion	Suitability	Limitations
Kureb-Urban Land Complex (Ku)	1-8% slopes	High	Good	Erosion
Leon Sand (Le)	0-2% slopes	Low	Poor	Depth to saturated zone
Lynn Haven Fine Sand (Ly)	0-2% slopes	Low	Poor	Depth to saturated zone
Urban Land (Ur)	Nearly Level	Low	Good	Good

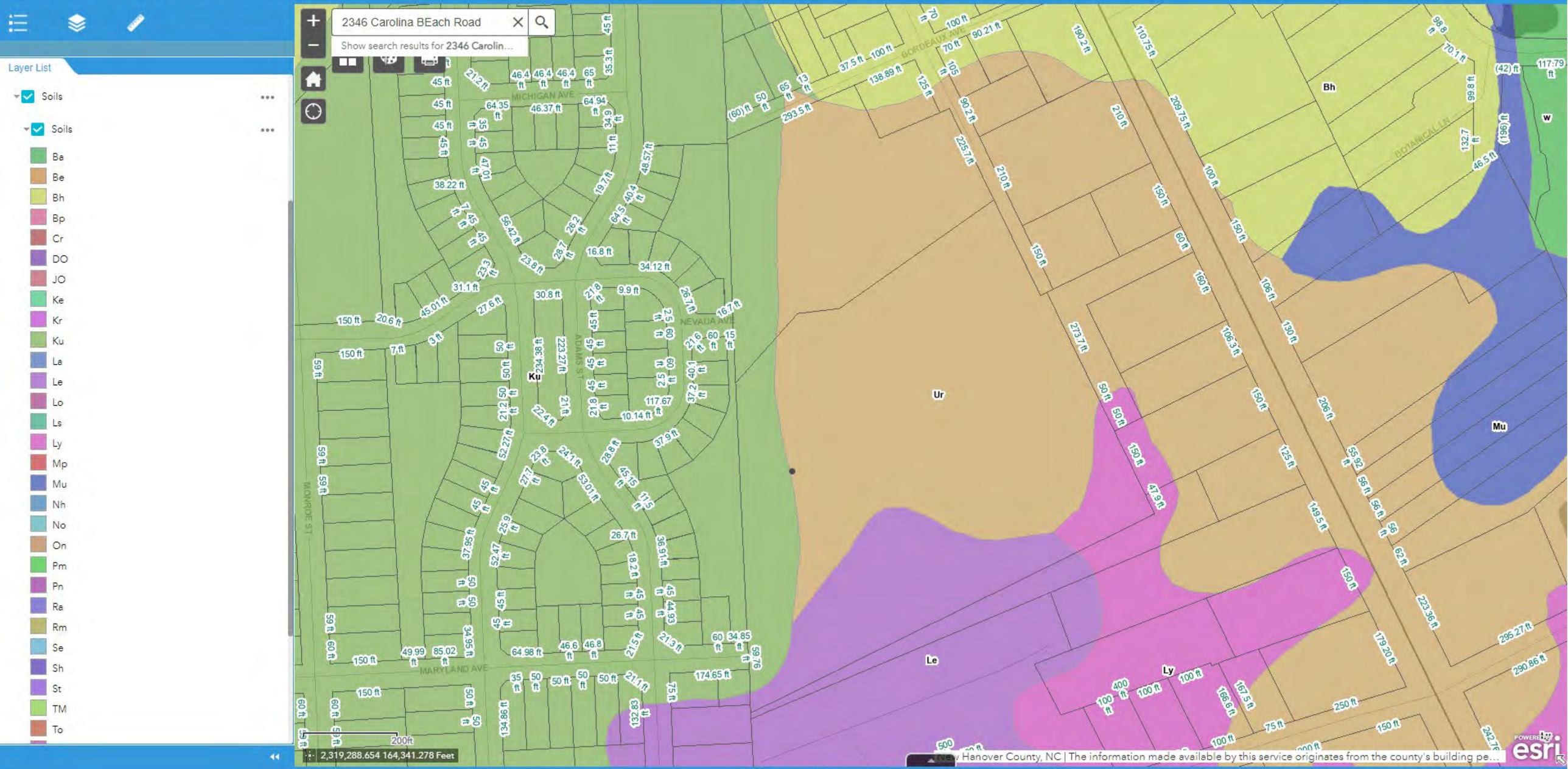
https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

According to USDA-SCS, on-site soils are somewhat well-suited for development with a few limiting factors. However, these limitations can be alleviated by proper design/grading/construction installation to mitigate adverse effects.

Contour Lines & Elevation

An Interactive Web Map of New Hanover County, NC

Help



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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for New Hanover County, North Carolina

Starway Village Apartments



October 31, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: New Hanover County, North Carolina
Survey Area Data: Version 24, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2020—Nov 24, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ku	Kureb-Urban land complex, 1 to 8 percent slopes	1.1	6.6%
Le	Leon sand	1.8	11.0%
Ly	Lynn Haven fine sand	0.9	5.9%
Ur	Urban land	12.3	76.6%
Totals for Area of Interest		**16.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

New Hanover County, North Carolina

Ku—Kureb-Urban land complex, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3wr8
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Kureb and similar soils: 46 percent
Urban land: 44 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kureb

Setting

Landform: Ridges on marine terraces, rims on carolina bays
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian sands and/or sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 26 inches: sand
C/Bh - 26 to 89 inches: sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Le—Leon sand

Map Unit Setting

National map unit symbol: 3wrb
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Leon and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon

Setting

Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile

A - 0 to 3 inches: sand
E - 3 to 15 inches: sand
Bh - 15 to 30 inches: fine sand
BE - 30 to 33 inches: fine sand
E' - 33 to 66 inches: fine sand
B'h - 66 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Ly—Lynn Haven fine sand

Map Unit Setting
National map unit symbol: 3wrf
Elevation: 20 to 160 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 200 to 280 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Lynn haven, undrained, and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lynn Haven, Undrained

Setting
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits and/or eolian sands

Typical profile
A - 0 to 9 inches: sand
E - 9 to 12 inches: fine sand
Bh - 12 to 80 inches: sand

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Ur—Urban land

Map Unit Composition

Urban land: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

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HIGHLY ERODIBLE LAND
New Hanover County, North Carolina

Map Symbol	Map Unit Name	Slope % low	Slope % high	T Factor	K Factor	LS(EI=8)	Status
Cr	Craven fine sandy loam, 1 to 4 percent slopes	1	4	5	0.32	0.36	HEL
No	Norfolk fine sandy loam, 0 to 4 percent slopes	0	4	5	0.20	0.57	PHEL
Kr	Kureb sand, 1 to 8 percent slopes	1	8	5	0.10	1.14	PHEL
Ku	Kureb-Urban land complex, 1 to 8 percent slopes	1	8	5	0.10	1.14	PHEL
La	Lakeland sand, 1 to 8 percent slopes	1	8	5	0.10	1.14	PHEL
Wa	Wakulla sand, 1 to 8 percent slopes	1	8	5	0.10	1.14	PHEL

U. S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service
North Carolina

Technical Guide
Section II-A-1
April 1, 1988

HIGHLY ERODIBLE LANDS
New Hanover County, North Carolina

Map Unit Symbol	Map Unit Name	Slope %	"K"	"T"	LS EI = 8
A. Highly Erodible					
Cr	Craven fine sandy loam	1 - 4%	.32	5	.36
B. Potentially Highly Erodible					
No	Norfolk fine sandy loam	0 - 4%	.20	5	.57

Geotechnical Engineering Report

Starway Apartments
Wilmington, North Carolina
July 22, 2021
Terracon Project No. ER215038

Prepared for:
Kelley Development Company, LLC
Raleigh, NC

Prepared by:
Terracon Consultants, Inc.
Myrtle Beach, SC

July 22, 2021

Kelley Development Company, LLC
106 Hatfield Lane
Raleigh, NC 27603

Attn: Mr. Ted Heilbron
P: (214) 535-0550
E: tedh@kelleydc.com

Re: Geotechnical Engineering Report
Starway Apartments
Wilmington, North Carolina
Terracon Project No. ER215038

Dear Mr. Heilbron,

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PER215038 dated June 3, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and floor slabs for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

SOUTH CAROLINA
TERRACON CONSULTANTS, INC.
No. 2220
CERTIFICATE OF AUTHORIZATION

Dylan Tanner
Field Engineer

Wendy H. Parsons, PE
Senior Engineer

Guoming Lin, Ph.D., P.E.
Senior Principal

REPORT TOPICS

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Note: This report was originally delivered in a web-based format. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

REPORT SUMMARY

Topic [1]	Overview Statement [2]
Project Description	Five 4-story apartment buildings, three 3-story apartment buildings, a clubhouse, one pond and associated parking/drive areas. Max. Column loads: 100 kips (assumed; not available at the time of this report) Max. Wall loads: 4 kips per linear foot (assumed; not available at the time of this report) 2 feet of fill to achieve final grade (assumed; not available at the time of this report) Little excavation other than foundation construction Expected traffic for pavement areas: ■ Up to 2,000 autos/light trucks per day (assumed) ■ Up to 5 package delivery trucks per week (assumed) ■ Up to 2 garbage removal trucks per week (assumed)
Geotechnical Characterization	Topsoil estimated at 6 to 12 inches Sands and silty sands to 11 to 15 feet Intermittent layers of clay/silt mixtures, silty sands to sandy silts and sands to 21 to 31 feet Sands and silty sands to termination of deepest sounding at 39 feet Groundwater encountered at depths ranging from 1 to 6 feet at time of boring
Earthwork	Proofroll and undercut as needed within building pad and pavement areas.
Ground Improvement	The implementation of a ground improvement program, consisting of preloading any required fill material, is recommended within the building pad areas of the two apartment buildings located on the northeast portion of the site where test locations SCPT-01 through CPT-04 are located. The ground improvement plan is to reduce post-construction settlement. The **Ground Improvement** section outlines our recommendations.
Shallow Foundations	Shallow foundations will be sufficient given that the ground improvement plan, consisting of preloading fill material, is implemented for the two apartment buildings located within the northeast portion of the site where test locations SCPT-01 through CPT-04 are located. For all other building pad areas in which a ground improvement plan is not recommended, shallow foundations will be sufficient. The shallow foundations can consist of individual spread footings or monolithic post-tensioned slabs. Allowable bearing pressure = 2,000 psf Expected settlements: < 1-inch total, < 0.5-inch differential Detect and remove unstable near surface soils as noted in **Earthwork**.
Below-Grade Structures	None.
Pavements	With subgrade prepared as noted in **Earthwork**. Asphalt: ■ 2 inches Asphaltic Concrete (AC) Surface Course over 6 inches Graded Aggregate Base Course (GABC) in Light Duty areas ■ 1.5 inches AC Surface Course and 1.5 inches AC Intermediate Course over 8 inches GABC in Heavy Duty areas Concrete: 7 inches Portland Cement Concrete (PCC) over 4 inches of GABC in Heavy Duty areas.

General Comments	This section contains important information about the limitations of this geotechnical engineering report.

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.

Geotechnical Engineering Report

Starway Apartments

Wilmington, North Carolina

Terracon Project No. ER215038

July 22, 2021

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Starway Apartments development to be located off Carolina Beach Road in Wilmington, North Carolina. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC
- Other geotechnical design parameters

The geotechnical engineering Scope of Services for this project included the advancement of one Seismic Cone Penetration Test (SCPT) and sixteen (16) Cone Penetration Test (CPT) to depths of 30 to 39 feet below the existing ground surface. Test location SCPT-01 refused short of the planned depth of 50 feet due to equipment refusal at the time of testing. Adjacent to the insitu tests, Hand Auger Borings (HABs) were performed to a depth of 4 feet below the existing ground surface.

In addition, eight HABs with Dynamic Cone Penetrometer (DCP) testing were performed in the proposed parking and drive areas to depths of approximately 3 to 5 feet below the existing ground surface. Test locations HAB-20 through HAB-23 refused short of the planned depth of 5 feet due to hole collapse at the time of boring. Two HABs (HAB-26 and HAB-27) were performed in the proposed pond area to depths of 3 ½ to 6 ½ feet below the existing ground surface. HAB-26 and HAB-27 refused short of the planned depth of 8 feet due to hole collapse at the time of boring.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located off Carolina Beach Rd in Wilmington, North Carolina. Latitude: 34.19600° Longitude: -77.93955° (See Exhibit D) See **Site Location**
Existing Improvements	Based on our recent site visit, the site is an existing flea market with an existing structure on the west side.
Current Ground Cover	Based on our recent site visit, the majority of the site is cleared containing grass and earthen ground. The perimeter of the site is moderately wooded.
Existing Topography	Topographic information was not available at the time this report was prepared. Based on our recent site visit, the site appears to slope slightly downhill from west to east.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Proposed Development	Based on the Concept Plan provided by the client (not dated) via email June 2, 2021, we understand that proposed improvements will consist of five 4-story apartment buildings, three 3-story apartment buildings, a clubhouse building, one pond and associated parking/drive areas. We have assumed construction will consist of wood-framed structures.
Finished Floor Elevation	Unknown
Maximum Loads	Structural loads for the proposed buildings were not available at the time this report was prepared. Based on Terracon's experience with projects of similar size and scope, the following loading conditions will be assumed for our analysis: n Columns – 100 kips maximum n Walls – 4 kips per linear foot maximum n Slabs – 150 pounds per square foot If final loads vary from those listed above, a review must be made by Terracon to determine if modifications to our recommendations will be required.
Grading	A grading plan was not available during the course of our work. We have assumed a maximum fill height of 2 feet for design purposes. If final grading plans differ from what has been assumed, a review must be made by Terracon to determine if modifications to our design will be required.

Item	Description
Pavements	Paved driveway and parking areas are planned to be constructed on approximately 5.7 acres of the site based on the proposed site plan provided. We assume flexible (asphalt) and rigid (concrete) pavement sections should be considered. Expected traffic for pavement areas: ■ Up to 2,000 autos/light trucks per day (assumed) ■ Up to 5 package delivery trucks per day (assumed) ■ Up to 2 garbage removal trucks per week (assumed)

GEOTECHNICAL CHARACTERIZATION

Subsurface Profile

Based on the results of the field exploration, subsurface conditions on the project site can be generalized as follows:

Description	Approximate Depth to Bottom of Stratum	Material Encountered[1]
Stratum 1	6 to 12 inches	Topsoil
Stratum 2	11 to 15 feet	Loose to very dense sands and silty sands
Stratum 3	20 to 31 feet	Intermittent layers of soft to stiff clay/silt mixtures, silty sands to sandy silts and sands
Stratum 4	39 feet[2]	Loose to very dense sands and silty sands

1. Material descriptions are based on visual classification from HAB samples and correlations with in situ data.
2. Termination of deepest sounding.

Conditions encountered at each test location are indicated on the individual test records. Stratification boundaries on the test records represent the approximate location of changes in soil types. The transition between materials may be gradual. Details for each of the tests can be found in **Exploration Results**.

Groundwater Conditions

The following table lists approximate depths to groundwater encountered below existing grade at the time of our field exploration.

Location	Groundwater Depth (ft)
SCPT-01	2
CPT-02	3 ½
CPT-03	3
CPT-04	3
CPT-05	3 ½
CPT-06	5 ½
CPT-07	5 ½
CPT-08	6
CPT-09	5 ½
CPT-10	6
CPT-11	6
CPT-12	5 ½
CPT-13	4
CPT-14	2
CPT-15	3
CPT-16	2 ½
CPT-17	2 ½
HAB-18	4
HAB-19	*N/E
HAB-20	1 ½
HAB-21	1
HAB-22	2 ½
HAB-23	3
HAB-24	*N/E
HAB-25	*N/E
HAB-26	1 ½
HAB-27	5 ½

*N/E – Not Encountered up to boring termination

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. The groundwater surface should be checked prior to construction to assess its effect on site work and other construction activities. This is especially important due to the shallow groundwater encountered during our field exploration.

Groundwater levels were measured using the following criteria:

- Physical observation within hand auger borings (HAB).
- Where not physically encountered in HABs, groundwater levels are measured using a groundwater probe within the voids left by cone penetration (CPT) tests.
- Where not encountered within CPT voids, groundwater levels are estimated using the hydrostatic line (height of water below the ground surface) on the CPT porewater pressure (U) graph shown on the CPT logs.
- Unless otherwise specified on the logs or in the report, all groundwater measurements are collected during or immediately after drilling.

GEOTECHNICAL OVERVIEW

Effective drainage should be completed early in the construction sequence and maintained after construction to minimize potential issues. If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist. Additional site preparation recommendations, including fill placement, are provided in the **Earthwork** section.

Based on anticipated fill heights of 2 feet across the building pad areas and a structural settlement tolerance of 1 inch or less, the implementation of a ground improvement program is recommended within the building pad areas of the two apartment buildings located on the northeast portion of the site where test locations SCPT-01 through CPT-04 are located. The ground improvement plan is to reduce post-construction settlement due to fill prior to the start of vertical construction within the two building pad areas. Ground improvement should consist of a preload program in these structural areas to minimize fill induced settlement. This is not recommended for all other building pad areas. Provided site preparation and ground improvement recommendations are implemented, shallow foundations can be utilized for support of these two proposed structures.

For all other building pads, based on loading assumptions outlined, shallow foundations can be utilized for support of the proposed structures provided the site has been prepared as recommended. The **Shallow Foundations** section addresses support of the building bearing in structural fill. The **Floor Slabs** section addresses slab-on-grade support of the building.

Recommendations for light and heavy duty flexible and rigid pavement systems have been provided. A rigid pavement section has been provided for areas where dumpsters are to be located and where high turning stresses are expected. The **Pavements** section addresses the design of pavement systems.

The **General Comments** section provides an understanding of the report limitations.

GROUND IMPROVEMENT

Based on the expected loading conditions and the subsurface profile encountered across the site, the soils encountered are suitable for shallow foundation support. However, static settlement due to the added weight of fill is a concern for the two apartment buildings located on the northeast portion of the site where test locations SCPT-01 through CPT-04 are located. Based on anticipated fill heights of 2 feet across the building pad areas and a structural settlement tolerance of 1 inch or less, the implementation of a ground improvement program is recommended to reduce post-construction settlement due to fill prior to the start of vertical construction within these two building pad areas. Following ground improvement, traditional shallow foundation construction can begin.

We have assumed a typical structural settlement tolerance of 1 inch or less of uniform settlement and 0.5 inches or less of differential settlement.

Ground improvement should consist of a preload program in these two structural areas to reduce post-construction settlement due to fill prior to the start of vertical construction. However, shallow foundation excavation may begin before completion of the preload program in order to speed up the construction process.

The following sections outlines our recommendations for a preload program.

Preloading

Where required, a shallow foundation system may be utilized with the implementation of a preload program for the two apartment buildings located on the northeast portion of the site where test locations SCPT-01 through CPT-04 are located. A preload program will allow settlements associated with proposed fill to occur prior to vertical construction and does not involve bringing in additional material. The following steps describe the sequence of a preload program for the applicable areas:

1. Place settlement monitoring plates within the structural footprint of the buildings prior to filling.
2. Bring structural areas to final subgrade elevation with proposed fill.
3. Allow time for structural areas to settle under the weight of proposed fill.
4. Once settlement due to proposed fill has come to an effective conclusion, vertical construction may proceed.

We anticipate that fill induced settlements due to the placement of up to 2 feet of fill will require an estimated preload duration of 2 to 3 months to reach completion.

Settlement Monitoring Plates

We recommend that at least 6 settlement plates be installed within the structural footprint of each of the two proposed buildings. The settlement plates should be installed prior to filling so that fill induced settlements can be monitored during the preload program. Using the settlement plates may allow the geotechnical engineer to end the program early. Terracon can provide settlement plate placement recommendations upon request.

The settlement plates should be monitored once per week for the first two weeks and twice per week thereafter. To end the settlement monitoring program on schedule, it will be imperative that the settlement plates not be disturbed or damaged during fill placement.

EARTHWORK

Earthwork is anticipated to include clearing, grubbing, excavations and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Site Preparation

We recommend that a site drainage plan be established and implemented prior to large scale clearing/stripping activities. This can include directing runoff water to existing drainage features, excavation of temporary sumps, drainage ditches, and/or swales across the project site. These measures will allow for perched water to be directed away from construction areas limiting the softening of near surface soils.

With positive drainage established, the proposed limits of construction should be stripped of trees, organic material, topsoil, root balls, and other deleterious material from within the proposed building footprints and parking areas. Stripping should extend a minimum of 5 feet outside the construction area footprint. Debris associated with removal of the existing building and pavement elements at the site including foundation materials and underground utilities should be removed as well. We anticipate stripping depths to average 6 to 12 inches across the site. **Please bear in mind**, due to the uneven ground surface of the site, the volume of topsoil and organics may be significantly greater than the area times the topsoil/organics thickness indicated in the boring logs. Rutting of the subgrade can also cause mixing of topsoil/organics with underlying soils, which will result in additional required topsoil/organics stripping. Deeper undercut may be needed in some localized areas to remove tree stumps or other unsuitable materials, especially in wetland areas. Voids remaining from the clearing/stripping operation should be backfilled with properly compacted Controlled Fill.

After stripping and subgrade repair is completed, the existing subgrade should be proofrolled with a loaded tandem axle dump truck or other similar approved construction equipment. A geotechnical engineer should monitor proofrolling operations. Areas that pump or rut excessively should be undercut and reworked or replaced with Controlled Fill. Excessively wet or dry material should either be removed or moisture conditioned and recompacted.

It should be noted a topsoil layer was encountered within the HABs at test locations CPT-14 and CPT-15 approximately 2 to 2 ½ feet below the existing ground surface during our field exploration. Depending on proofrolling observations where this material is encountered at the time of construction, this material may need to be removed and backfilled with properly compacted Controlled Fill.

If near surface soils are exposed to rubber-tired traffic during wet periods, they may lose their strength leading to rutting and increased undercutting depths. The ability to maintain competent bearing soils will affect pavement design and overall performance. Placement of base course materials as soon as possible in pavement areas would provide protection for the subgrade as other construction takes place. Clearing techniques that minimize soil subgrade disturbance should be employed.

On-site Borrow Suitability

Two HABs were advanced within the footprint of the proposed pond area on the east side of the site (HAB-26 and HAB-27) to depths of approximately 3 ½ to 6 ½ feet below existing grade. Subsurface conditions can be generalized as follows:

Test Location HAB-26

Description	Approximate Depth to Bottom of Stratum	Material Encountered[1]
Stratum 1	6 inches	Topsoil
Stratum 2	1 ½ feet	Sands (SP)
Stratum 3	3 ½ feet	Sandy Silt/Silty Sand (ML/SM) with significant organics (mulch / finger roots)

1. Material descriptions are based on laboratory test results, visual classification from HAB samples and correlations with in situ data.

Test Location HAB-27

Description	Approximate Depth to Bottom of Stratum	Material Encountered[1]
Stratum 1	6 inches	Topsoil
Stratum 2	6 ½ feet[2]	Sands (SP)

1. Material descriptions are based on laboratory test results, visual classification from HAB samples and correlations with in situ data.
2. Termination of deepest HAB.

SP type soils encountered appear suitable for use as subgrade soils based on conditions encountered to explored depths of approximately 6 ½ feet below the existing ground surface. Sandy silts/silty sands (ML/SM type soils) encountered contain an increased fines content as well as significant organics consisting of mulch material and finger roots and would not be considered suitable for use as fill material.

Soils excavated from beneath the water table can be expected to be wet and at a moisture content significantly higher than optimum. Time for drying should be allowed for during the construction process for soils containing elevated moisture contents at the time of excavation. Soils should be placed in thin lifts (approximately 6 to 8 inches), aerated and dried to ±3% of their optimum moisture content, and compacted to at least 95% of the Maximum Dry Density as determined by ASTM D1557 prior to placing the next lift. Soils should be rolled smooth and crowned to prevent water from ponding. Drying time will be largely weather dependent and will increase with lift thickness.

Terracon has reported our findings at each test location advanced in efforts to determine the extent of suitable fill material at this site. However, we cannot make assumptions regarding soils outside of what is observed at our test locations.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 feet of structures, pavements or constructed slopes. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the following material property requirements:

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Controlled, Imported Fill	SP, SP-SM, SP-SW, SW, SM	Non-plastic Less than 12% passing No. 200 sieve
Onsite Soil	SP, SP-SM, SM	Non-plastic Less than 15% passing No. 200 sieve

1. Structural and general fill should consist of approved materials free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

Fill Compaction Requirements

ITEM	DESCRIPTION
Fill Lift Thickness	When heavy, self-propelled compaction equipment is used, fill lifts shall have a maximum of 8 inches in loose thickness.
	When hand-guided equipment (i.e. jumping jack or plate compactor) is used, fill lifts shall have a maximum of 2 to 4 inches in loose thickness.
Compaction Requirements[1]	The pavement base course and the upper 12 inches of the floor slab subgrade should be compacted to 100% of the material's maximum Modified Proctor dry density (ASTM D1557).
	Other structural areas and the upper 12 inches of the pavement subgrade should be compacted to 95% of the material's maximum Modified Proctor dry density (ASTM D1557).
Moisture Content – Controlled Fill or Onsite Soils[2]	Within the range of ±2% of optimum moisture content value as determined by the Modified Proctor test.

1. Fill should be tested for moisture content and compaction during placement. If the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the Controlled Fill material pumping when proofrolled.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge away from the building.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration. Where landscaped areas abut the proposed structure, drainage measures should be installed to prevent irrigation water from collecting within subgrade soils.

Earthwork Construction Considerations

Shallow excavations for the proposed structure are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction and observed by Terracon.

The groundwater table could affect overexcavation efforts, especially for over-excavation and replacement of lower strength soils. A temporary dewatering system consisting of sumps with pumps could be necessary to achieve the recommended depth of over-excavation.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P and in accordance with any applicable local, and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proofrolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations. The shallow foundations can consist of individual spread footings or monolithic post-tensioned slabs.

Design Parameters – Compressive Loads

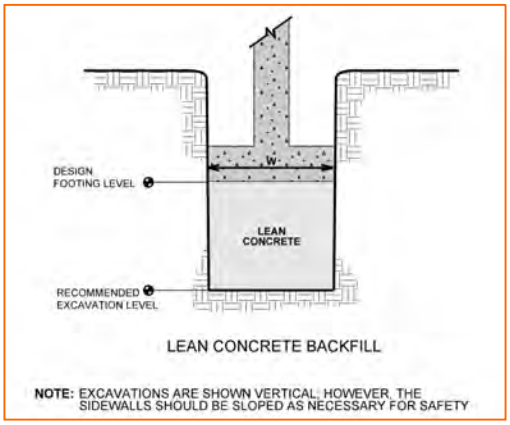
Item	Description
Maximum Net Allowable Bearing pressure [1, 2, 3]	2,000 psf (foundations bearing within structural fill)
Minimum Foundation Dimensions	Columns: 24 inches Continuous: 12 inches
Minimum Embedment below Finished Grade	12 inches
Estimated Total Settlement from Structural Loads [2]	Less than about 1 inch
Estimated Differential Settlement [2, 4]	About 1/2 of total settlement

Item	Description
1.	The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied.
2.	The settlement estimates are based on maximum loads of 100 kips for columns, 4 kips per linear foot strip footings and the above allowable bearing pressure. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth and dimensions of the footings, the thickness of compacted fill, and the quality of the earthwork operations. These settlement magnitudes assume the foundation subgrade will be repaired as recommended in this report. The settlement calculations were based on footing sizes of 7 feet by 7 feet column footings and 2 feet wide strip footings.
3.	Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in the **Earthwork**.
4.	Differential settlements are as measured over a span of 50 feet.

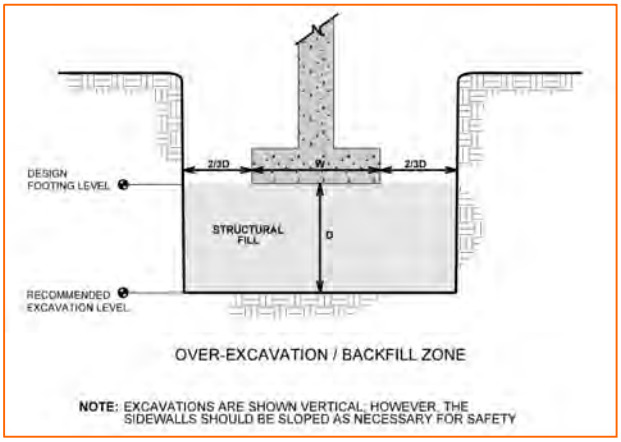
Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with well-graded granular fill material placed, as recommended in the **Earthwork** section.



SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. In accordance with the International Building Code 2018 edition (IBC 2018) and Section 20.4 of ASCE 7-16, the Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength. The shear wave velocity data was collected at CPT sounding SCPT-01. In general accordance with the 2018 International Building Code and ASCE 7-16, and a weighted average shear wave velocity value of 892 ft/sec. Seismic Site Class D would be applicable for this site.

Subsurface explorations at this site were extended to a maximum depth of 39 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

LIQUEFACTION

Due to the high seismicity of the Coastal Plain of South Carolina, we performed a liquefaction potential analysis to evaluate the stability of the soils. Ground shaking at the foundation of structures and liquefaction of the soil under the foundation are the principal seismic hazards identified for the design of earthquake-resistant structures. Liquefaction occurs when a rapid buildup in water pressure, caused by the ground motion, pushes sand particles apart, resulting in a loss of strength and later densification as the water pressure dissipates. This loss of strength can cause bearing capacity failure while the densification can cause excessive settlement.

The amount of settlement is dependent on the magnitude and distance from a seismic event, and geologic age of the soil deposit. Our analysis based on subsurface information obtained indicates the majority of soils encountered within the soil profile are not prone to liquefaction.

FLOOR SLABS

Design parameters for floor slabs assume the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structure and positive drainage of the structural fill beneath the floor slab.

Floor Slab Design Parameters

ITEM	DESCRIPTION
Modulus of subgrade reaction (Controlled Fill)[1]	200 pounds per square inch per inch (psi/in) for point loading conditions[2]

1. Modulus of subgrade reaction value is for a 1 ft by 1 ft area and should be adjusted for appropriate size.
2. This value may be increased depending on the depth of stone placed beneath the slab.

If a conventional slab and shallow foundation are used, the structural engineer should design the slab to limit differential movements between the slab and foundation to reduce the possibility of floor slab cracking. Where appropriate, saw-cut control joints and expansion joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Floor slab subgrade should be compacted to 100% of its modified Proctor maximum dry density (ASTM D1557).

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Floor Slab Construction Considerations

Finished subgrade, within and for at least 10 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

PAVEMENTS

Subgrade Preparation

Pavement subgrades should be carefully evaluated by Terracon personnel as the time for pavement construction approaches. The moisture content and density of the subgrade should be evaluated and the pavement subgrades proofrolled prior to commencement of actual paving operations. Areas not in compliance with the required ranges of moisture or density should be moisture conditioned and recompacted (or removed and replaced). Particular attention should be paid to high traffic areas that were rutted and disturbed during earlier construction activities and to areas where backfilled trenches are located.

If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review.

Estimates of Minimum Pavement Thickness

Anticipated traffic loading conditions were not available at the time this report was prepared; however, based on the anticipated use of the development, we have provided minimum pavement thickness for “light duty” and “heavy duty” traffic areas. “Light duty” pavement is used in parking/drive areas subjected solely to light passenger car and light truck traffic. “Heavy duty” traffic should be used for the main drive lanes in parking and loading areas. Rigid pavement is recommended to be used for trash container pads and areas subjected to heavy wheel loads and/or turning traffic.

Pavement sections were evaluated using the American Association of State Highway and Transportation Official’s (AASHTO) “Structural Number” (S_N) system. For pavement design, the AASHTO system converts an estimated Average Daily Traffic (ADT) or Vehicles per Day (VPD) to an Equivalent 18 kip Single Axle Loads (ESAL’s) placed on the pavement during its design life. In our analysis, light duty pavements are estimated to be subjected to a traffic load on the order of 100,000 ESAL’s whereas heavy duty pavements will be subjected to a loading on the order of 250,000 ESAL’s.

For new flexible pavements, the minimum S_N required by the traffic loading and the subgrade soil strength is calculated from the subgrade strength data, assumed traffic volumes, assumed traffic growth rate, and design life. Based on our experience with similar soils, we have assumed a CBR value of 8 for our design. The following tables provides our recommendations for flexible and rigid pavements. Terracon should be contacted to review and revise these recommendations if traffic loading significantly differs from those assumed herein.

Traffic Area	Alternative	AC Surface[3] Course (NCDOT Type S9.50B)	AC Intermediate Course (NCDOT Type I-19.0C)	Portland Cement Concrete[1]	Graded Aggregate Base Course (NCDOT ABC)	Total Thickness
Light Duty (Car Parking)	AC	2.0	--	--	6.0	8.0
Heavy Duty (Truck and Drive Areas, Access Roadway)	AC	1.5	1.5	--	8.0	11.0
Heavy Duty (Truck and Drive Areas, Loading Areas, and Trash Container Pad[2])	PCC	--	--	7.0	4.0	11.0

1. 4,000 psi at 28 days, 4-inch maximum slump and 5 to 7% air entrained, 6-sack min. mix. PCC pavements are recommended for trash container pads and in any other areas subjected to heavy wheel loads and/or turning traffic.
2. The trash container pad should be large enough to support the container and the tipping axle of the collection truck.
3. AC: Asphalt Concrete

A concrete slab is recommended for any areas where dumpsters are to be located in order to provide a more durable wearing surface. If utilized, the pad should be large enough to encompass both the dumpster and refuse truck. Additionally, the use of concrete should be considered in areas where high turning stresses are expected, such as entrance and exit aprons.

All pavement components, including asphalt concrete aggregates and base course materials, should conform to the North Carolina Department of Transportation (NCDOT) “Standard Specifications for Roads and Structures”.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Openings in pavements, such as decorative landscaped areas, are sources for water infiltration into surrounding pavement systems. Water can collect in the islands and migrate into the surrounding subgrade soils thereby degrading support of the pavement. This is especially applicable for islands with raised concrete curbs, irrigated foliage, and low permeability near-surface soils. The civil design for the pavements with these conditions should include features to restrict or collect and discharge excess water from the islands. Examples of features are edge drains connected to the storm water collection system, longitudinal subdrains, or other suitable outlets and impermeable barriers preventing lateral migration of water such as a cutoff wall installed to a depth below the pavement structure.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Type of Test	Number of Borings	Boring Depth (feet)	Planned Location
Seismic Cone Penetration Test (SCPT)	1	39 feet	Apartment Building
Cone Penetration Test (CPT)	16	30 to 34 feet	Apartment Buildings
Hand Auger Borings (HABs)	17	4 feet	Adjacent to CPTs
Hand Auger Borings (HABs)	8	3 to 5 feet	Parking/Drive areas
Hand Auger Borings (HABs)	2	3 ½ to 6 ½ feet	Pond area

Boring Layout and Elevations: Unless otherwise noted, Terracon personnel provided the boring layout. The test locations were located in the field by Terracon personnel utilizing a commercially available handheld Global Position System (GPS) unit which are typically considered accurate to within ±20 feet. The locations should be considered accurate only to the degree implied by the means and methods used to define them. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

The field exploration was performed on June 14th through 21st, 2021. The in situ tests were advanced with a skid rig.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

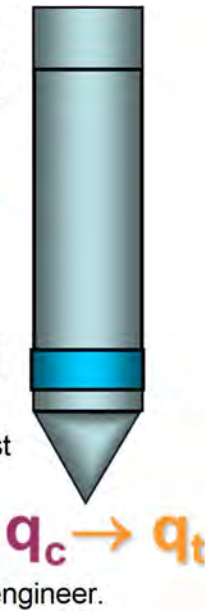
- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than 75-µm (No. 200 Sieve in Soils by Washing

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Subsurface Exploration Procedures:

Cone Penetration Testing

The CPT hydraulically pushes an instrumented cone through the soil while nearly continuous readings are recorded to a portable computer. The cone is equipped with electronic load cells to measure tip resistance and sleeve resistance and a pressure transducer to measure the generated ambient pore pressure. The face of the cone has an apex angle of 60° and an area of 10 cm^2. Digital data representing the tip resistance, friction resistance, pore water pressure, and probe inclination angle are recorded about every 2 centimeters while advancing through the ground at a rate between 1½ and 2½ centimeters per second. These measurements are correlated to various soil properties used for geotechnical design. No soil samples are gathered through this subsurface investigation technique.



CPT testing is conducted in general accordance with ASTM D5778 "Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils."

Upon completion, the data collected were downloaded and processed by the project engineer.

Seismic Cone Penetration Testing (SCPT) includes recording shear wave velocity readings at predetermined intervals (typically 3 to 4 feet) during CPT testing.

Hand Auger Borings

Hand auger borings were conducted in general accordance with ASTM D 1452-80, Standard Practice for Soil Investigation and Sampling by Auger Borings. In this test, hand auger borings are drilled by rotating and advancing a bucket auger to the desired depths while periodically removing the auger from the hole to clear and examine the auger cuttings. The soils were classified in accordance with ASTM D 2488.

SITE LOCATION AND EXPLORATION PLANS

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

SITE LOCATION

Starway Apartments ■ Wilmington, North Carolina
July 22, 2021 ■ Terracon Project No. ER215038

Terracon GeoReport

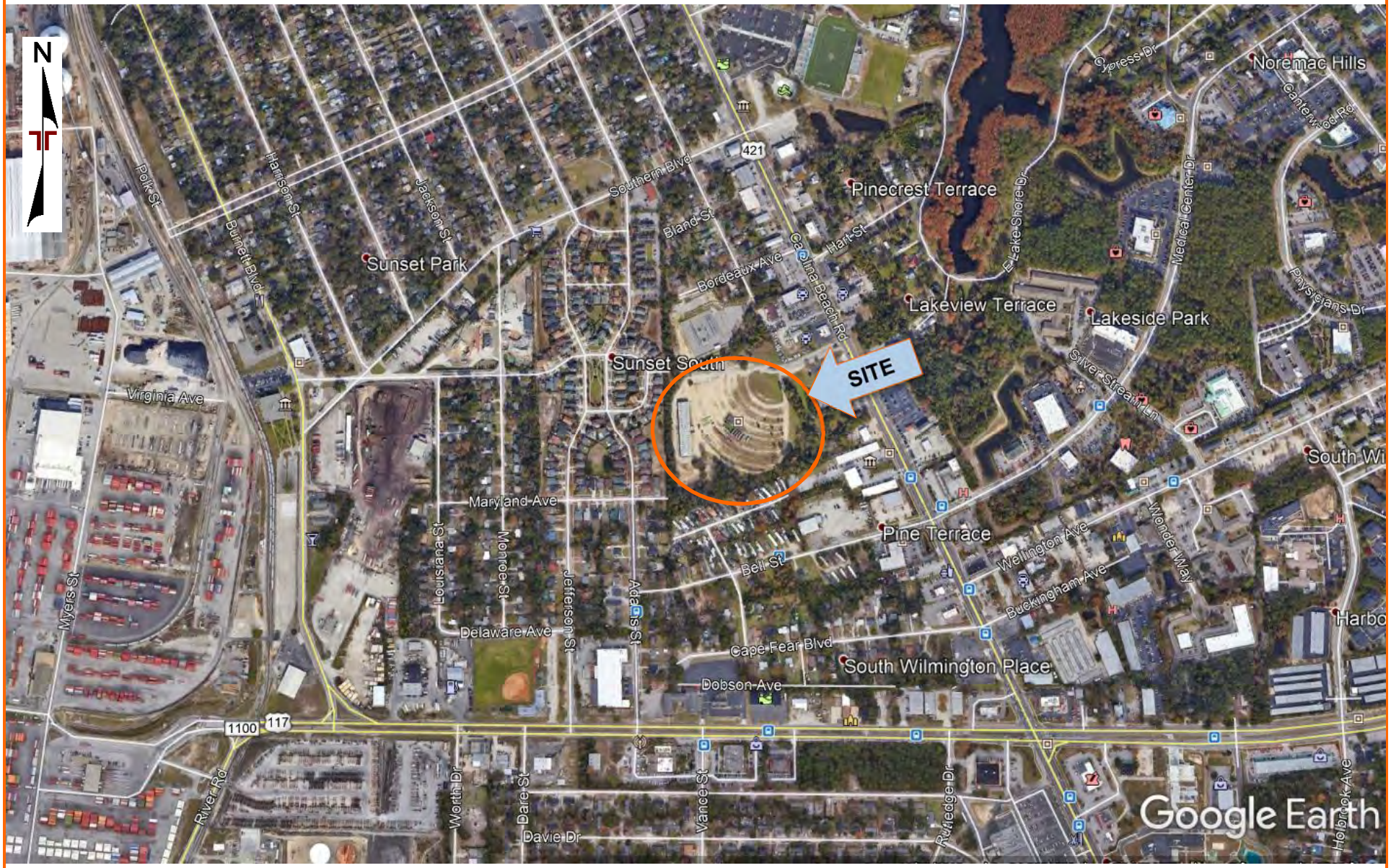


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION PLAN

Starway Apartments ■ Wilmington, North Carolina
July 22, 2021 ■ Terracon Project No. ER215038

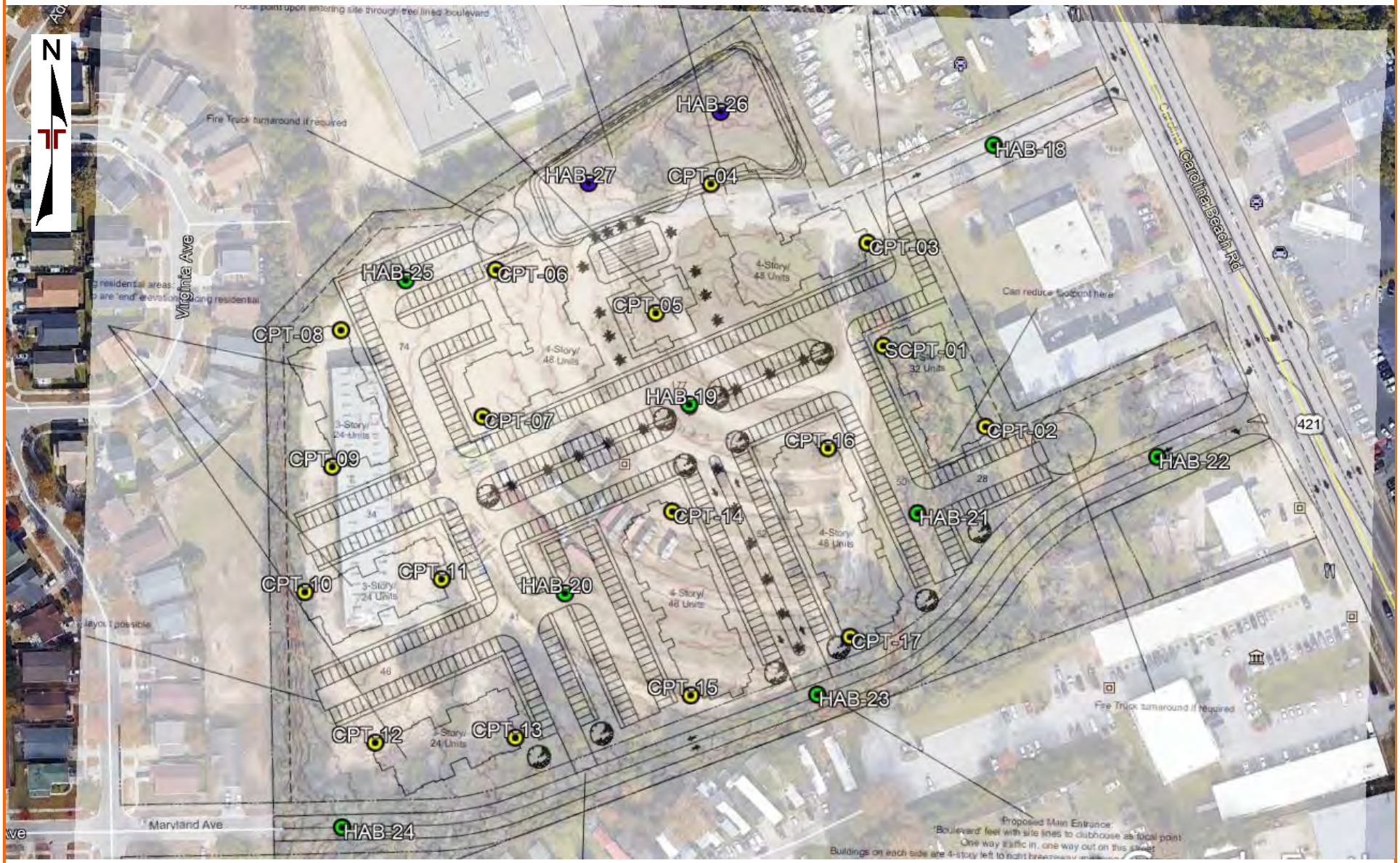


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

CPT Logs (SCPT-01 through CPT-17)
Hand Auger Boring Logs (HAB at SCPT-01 through HAB-27)

Note: All attachments are one page unless noted above.

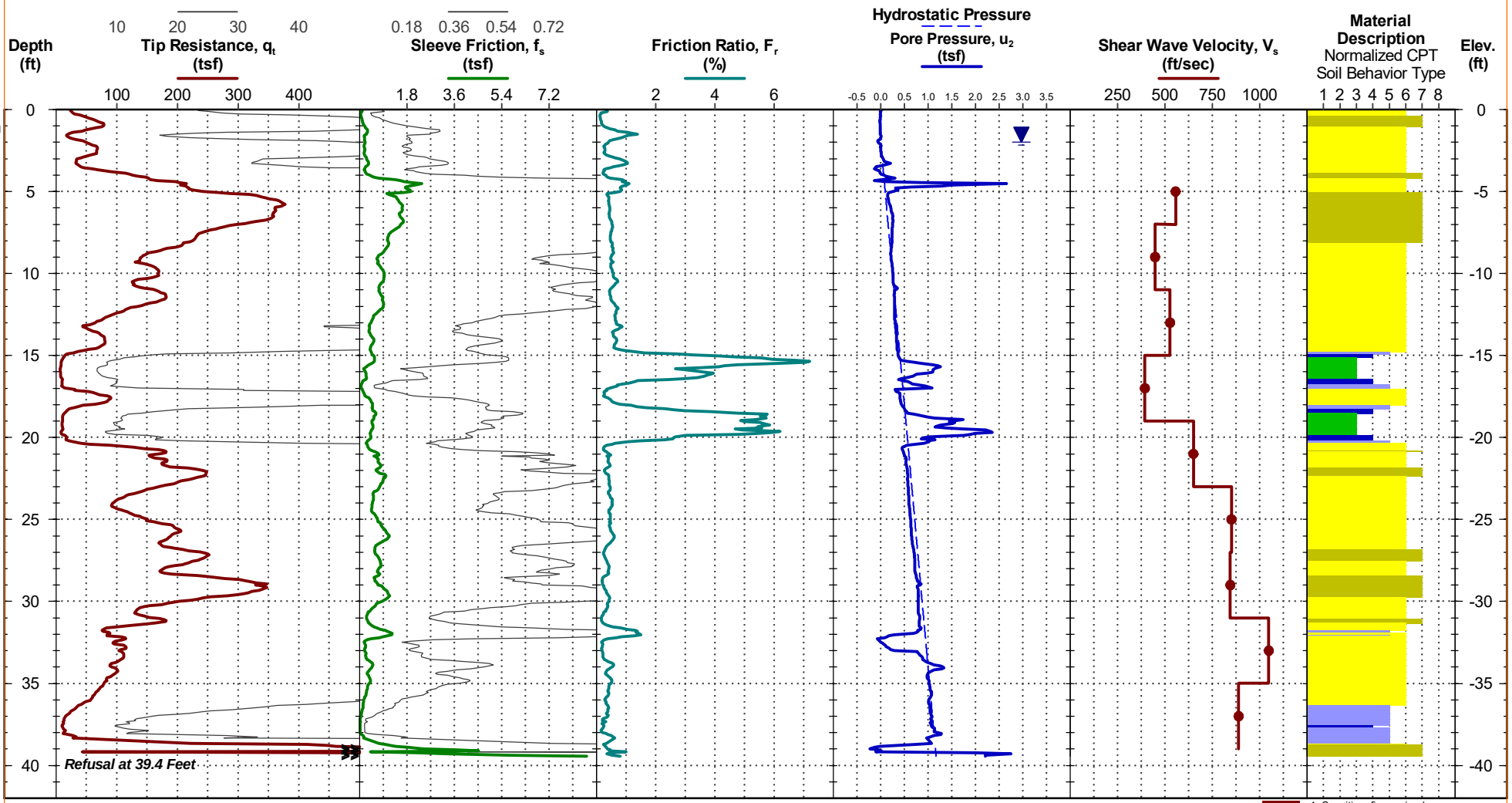
CPT LOG NO. SCPT-01

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 2 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/21/21

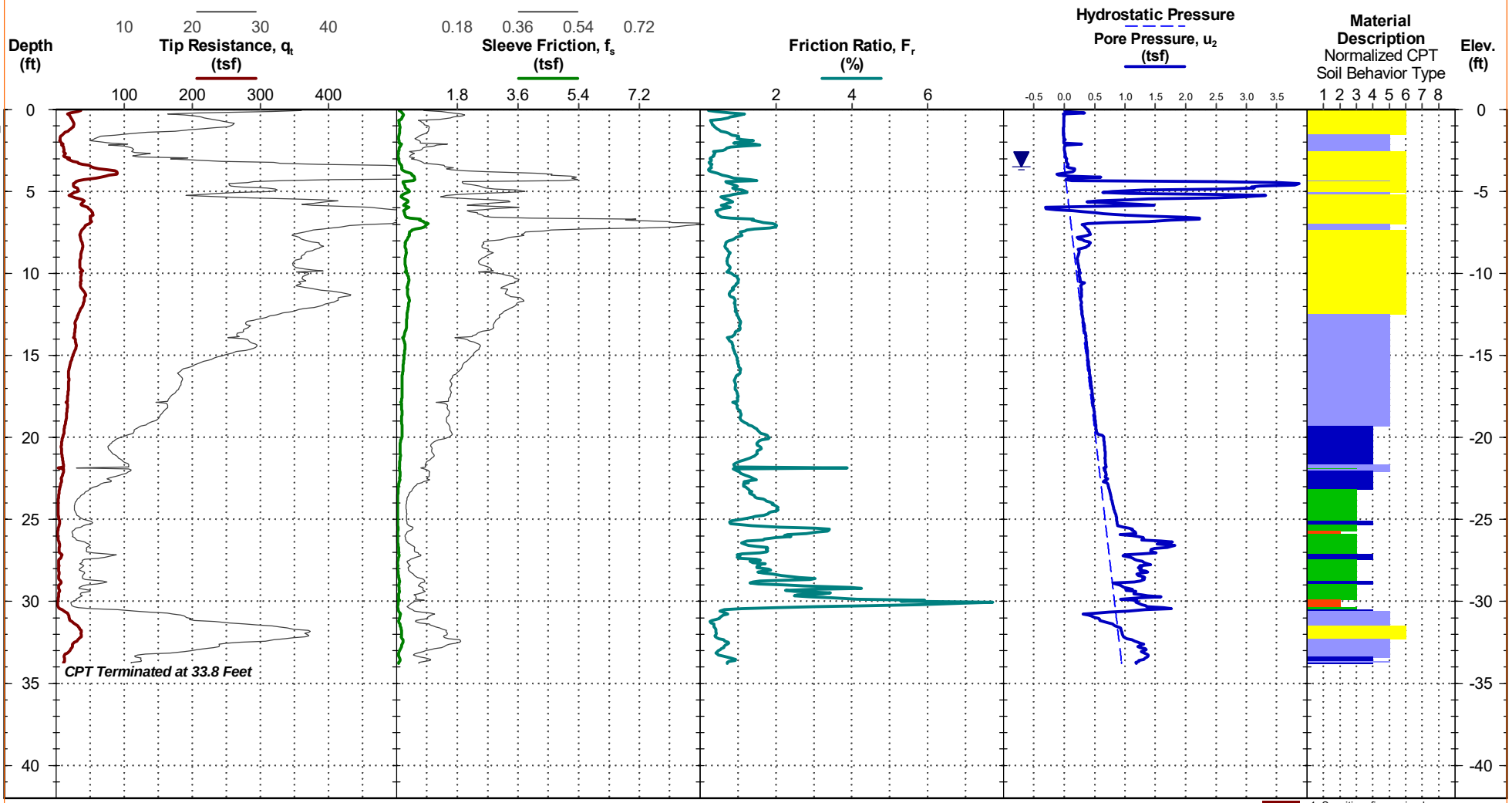
CPT LOG NO. CPT-02

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 3.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

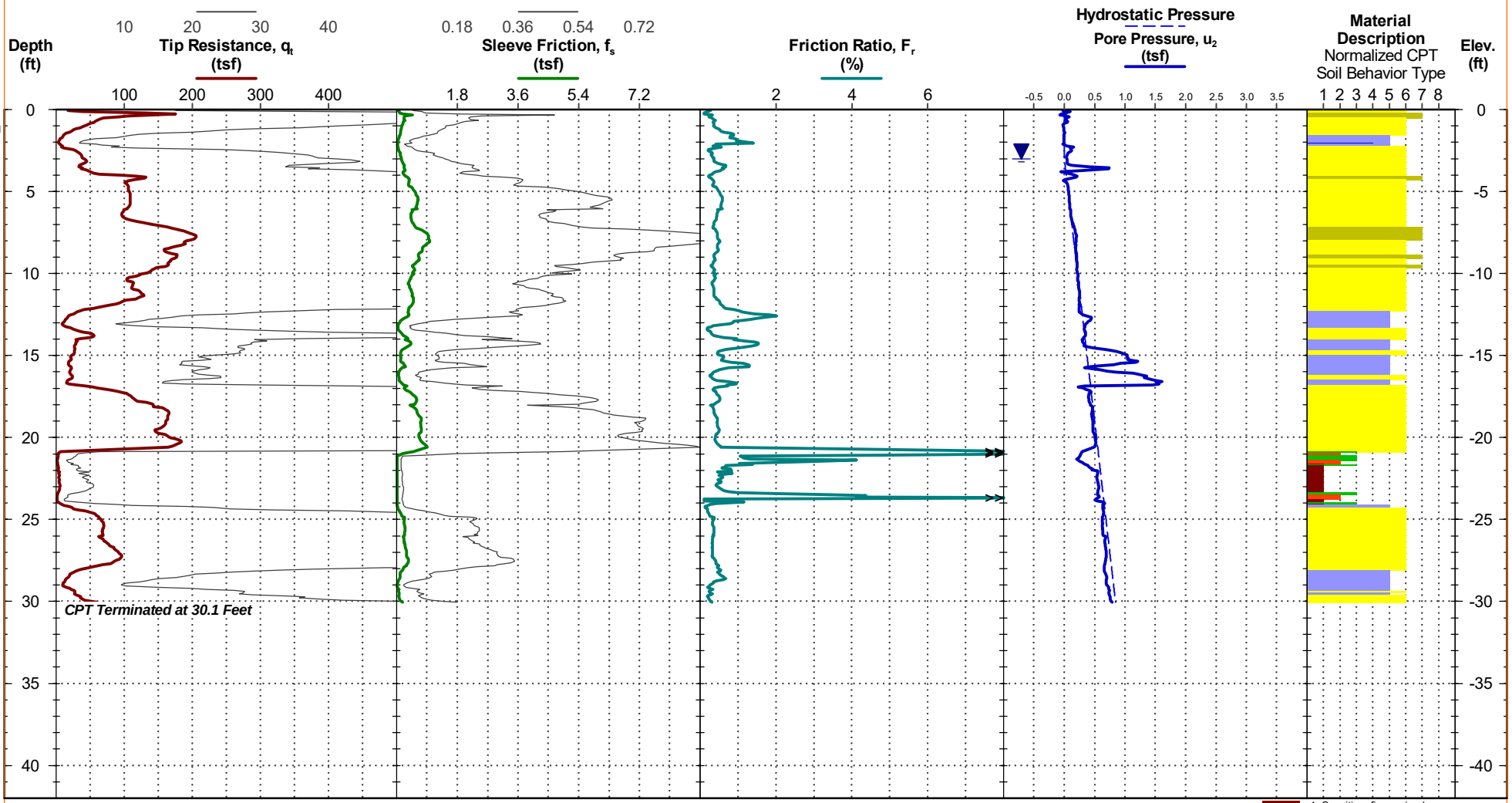
CPT LOG NO. CPT-03

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 3 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

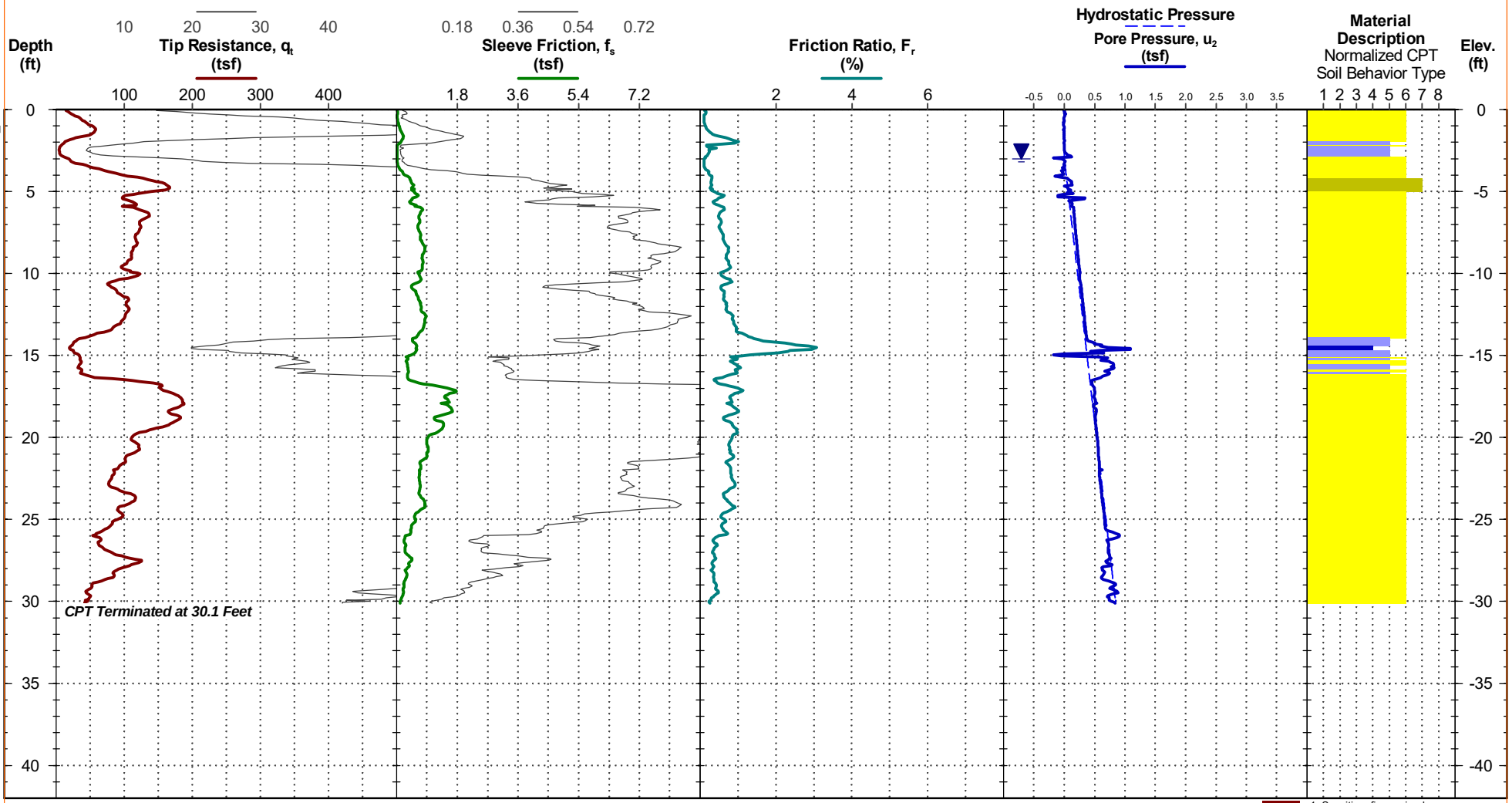
CPT LOG NO. CPT-04

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 3 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

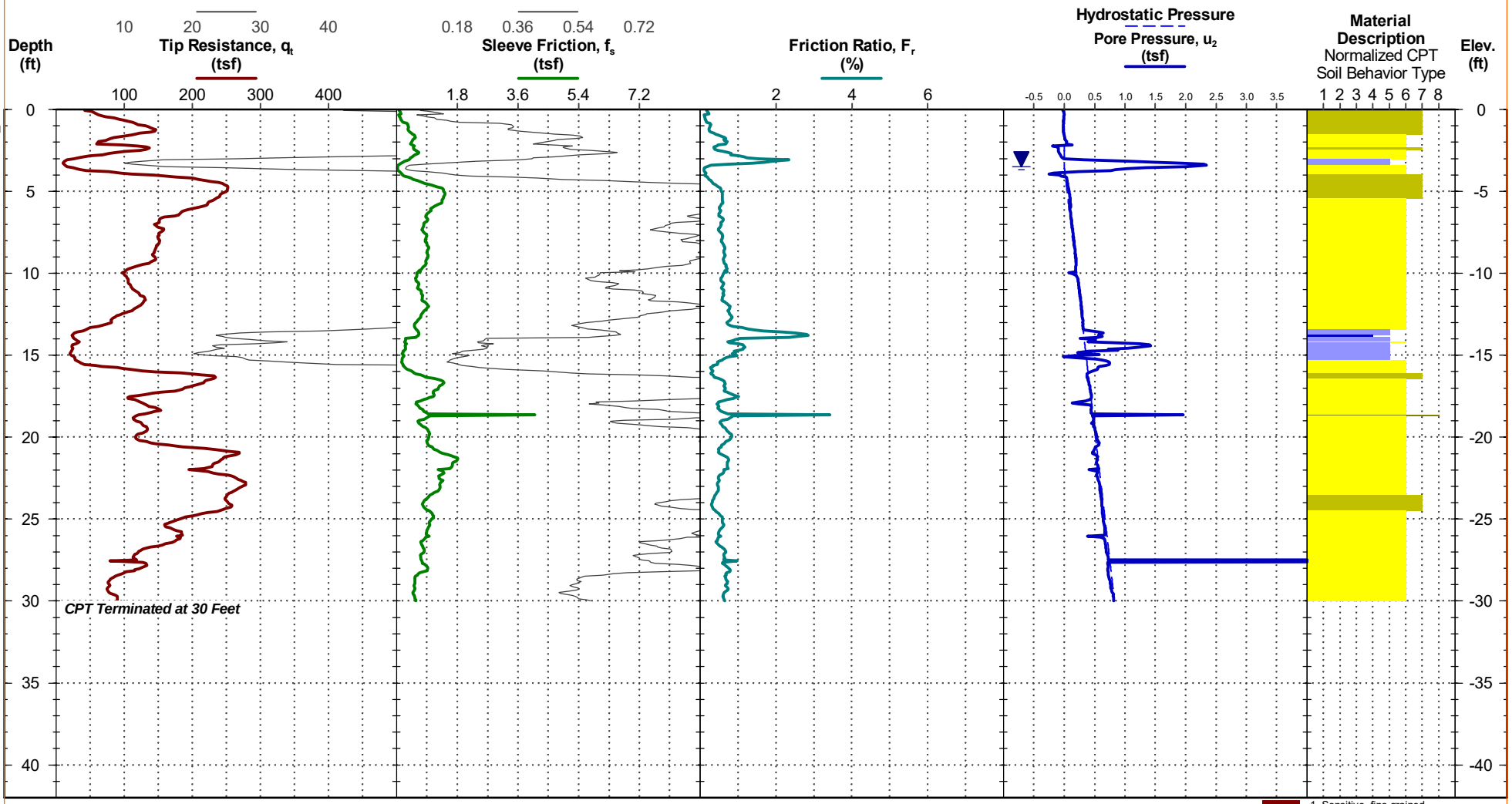
CPT LOG NO. CPT-05

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 3.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

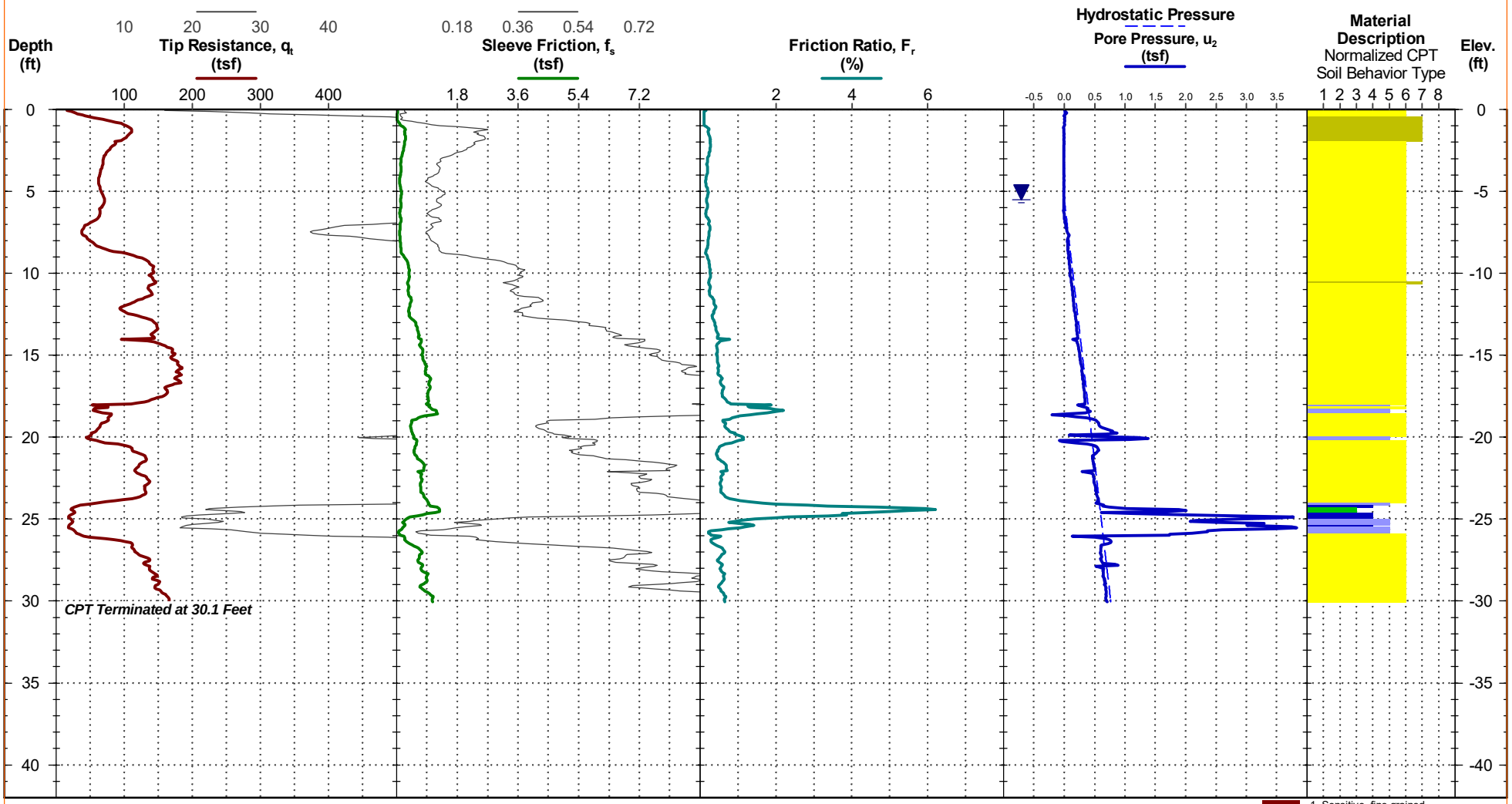
CPT LOG NO. CPT-06

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 5.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

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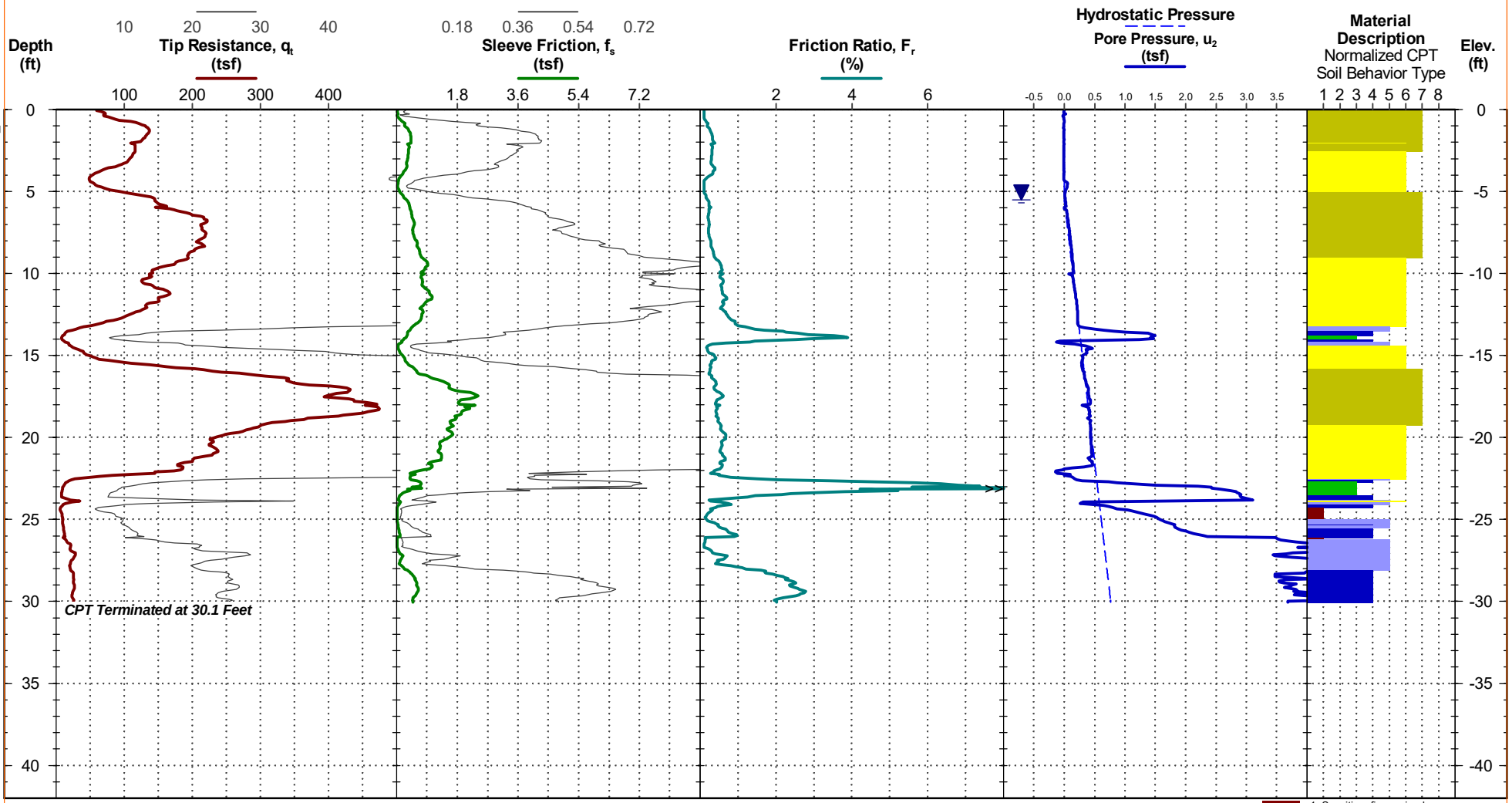
CPT LOG NO. CPT-07

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
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5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 5.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

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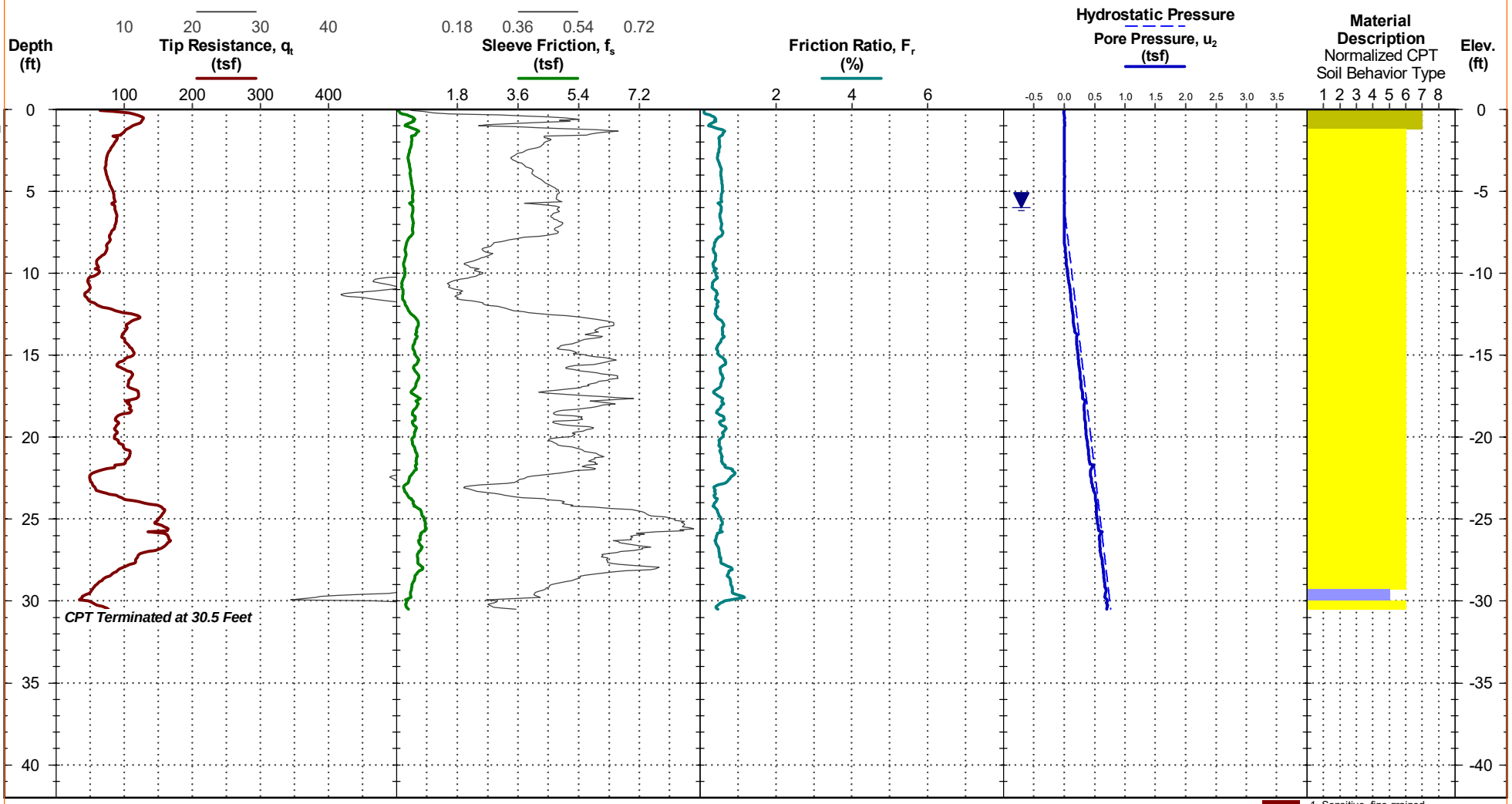
CPT LOG NO. CPT-08

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 6 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

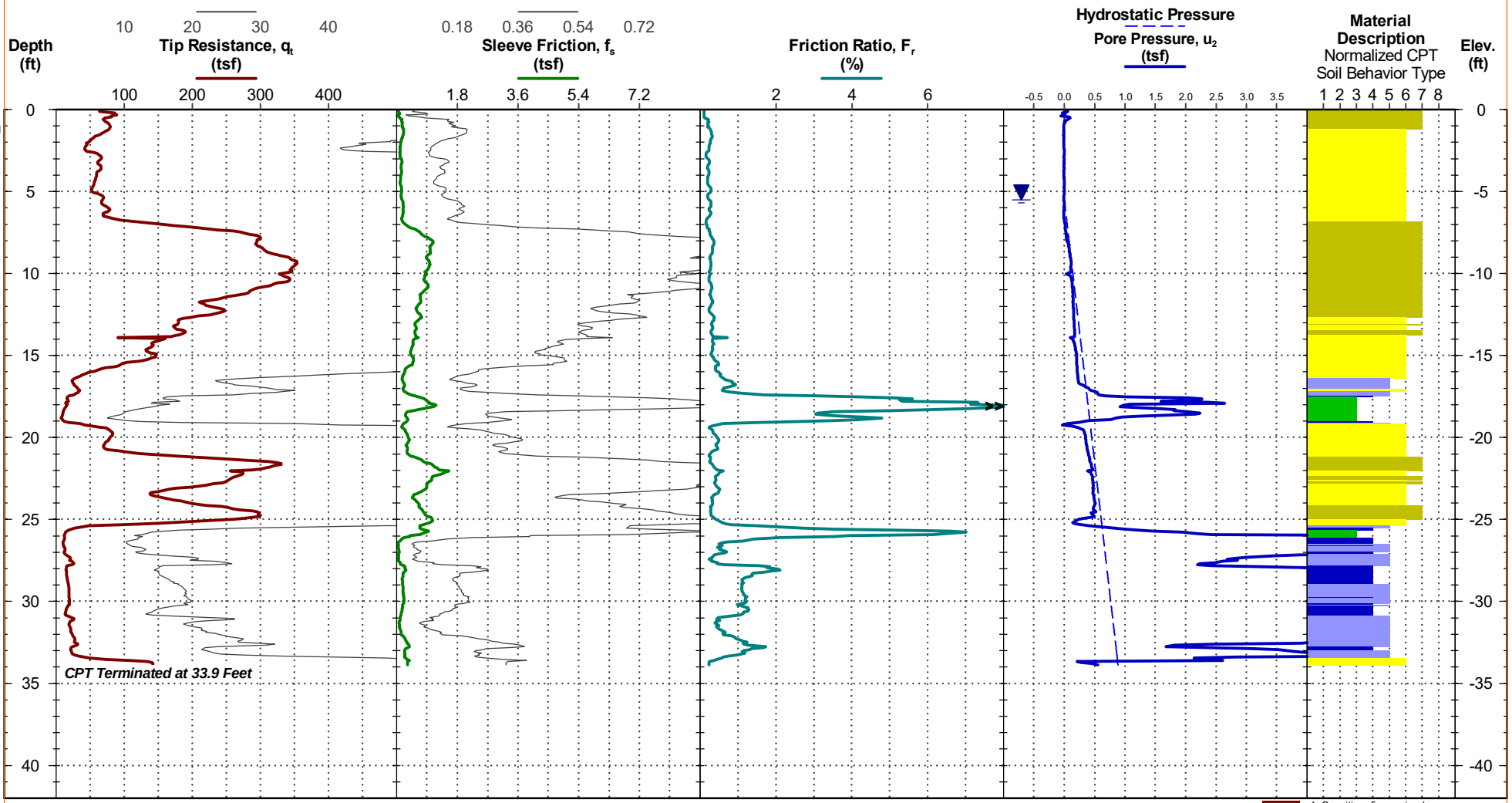
CPT LOG NO. CPT-09

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 5.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

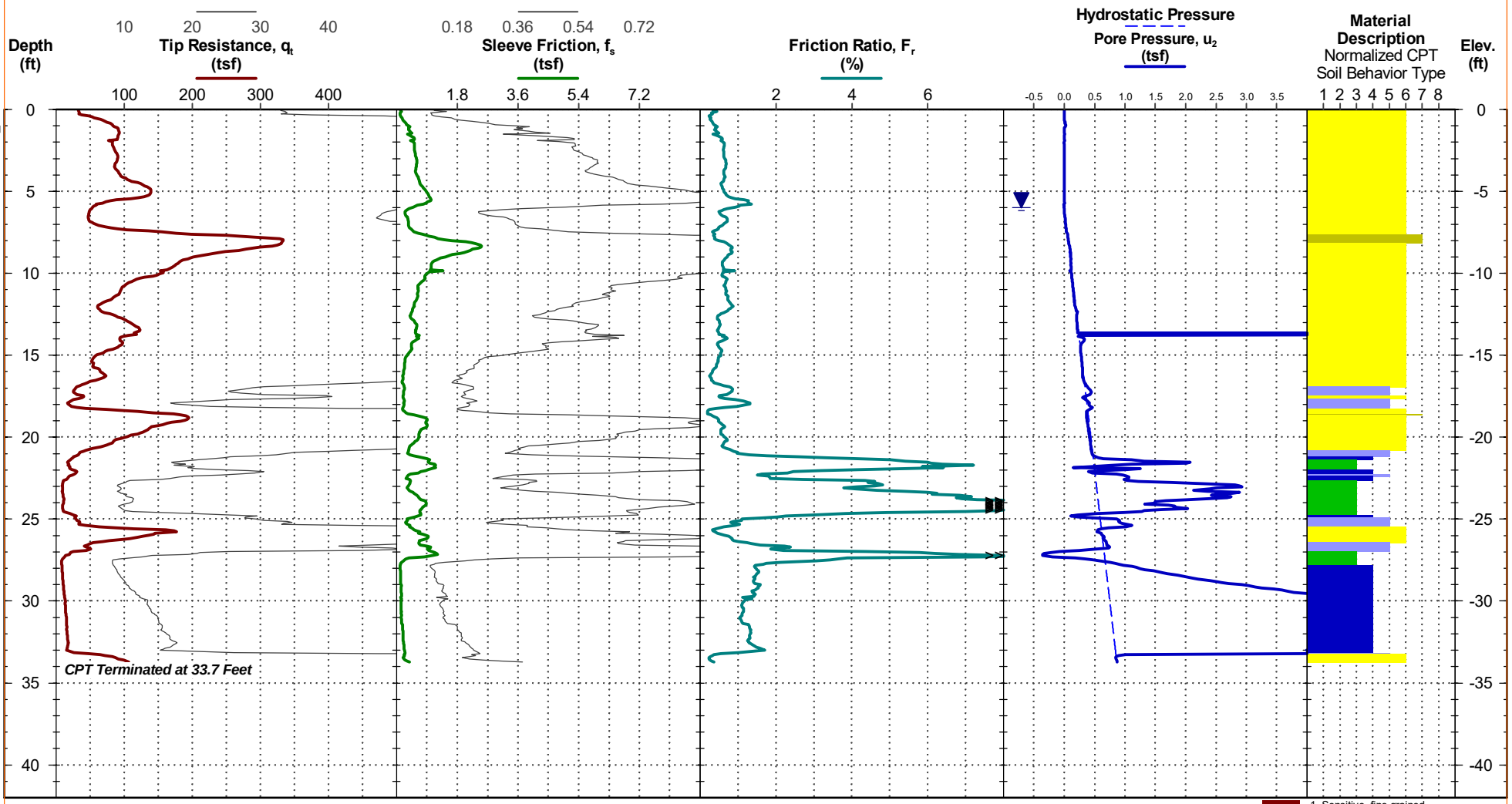
CPT LOG NO. CPT-10

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 6 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

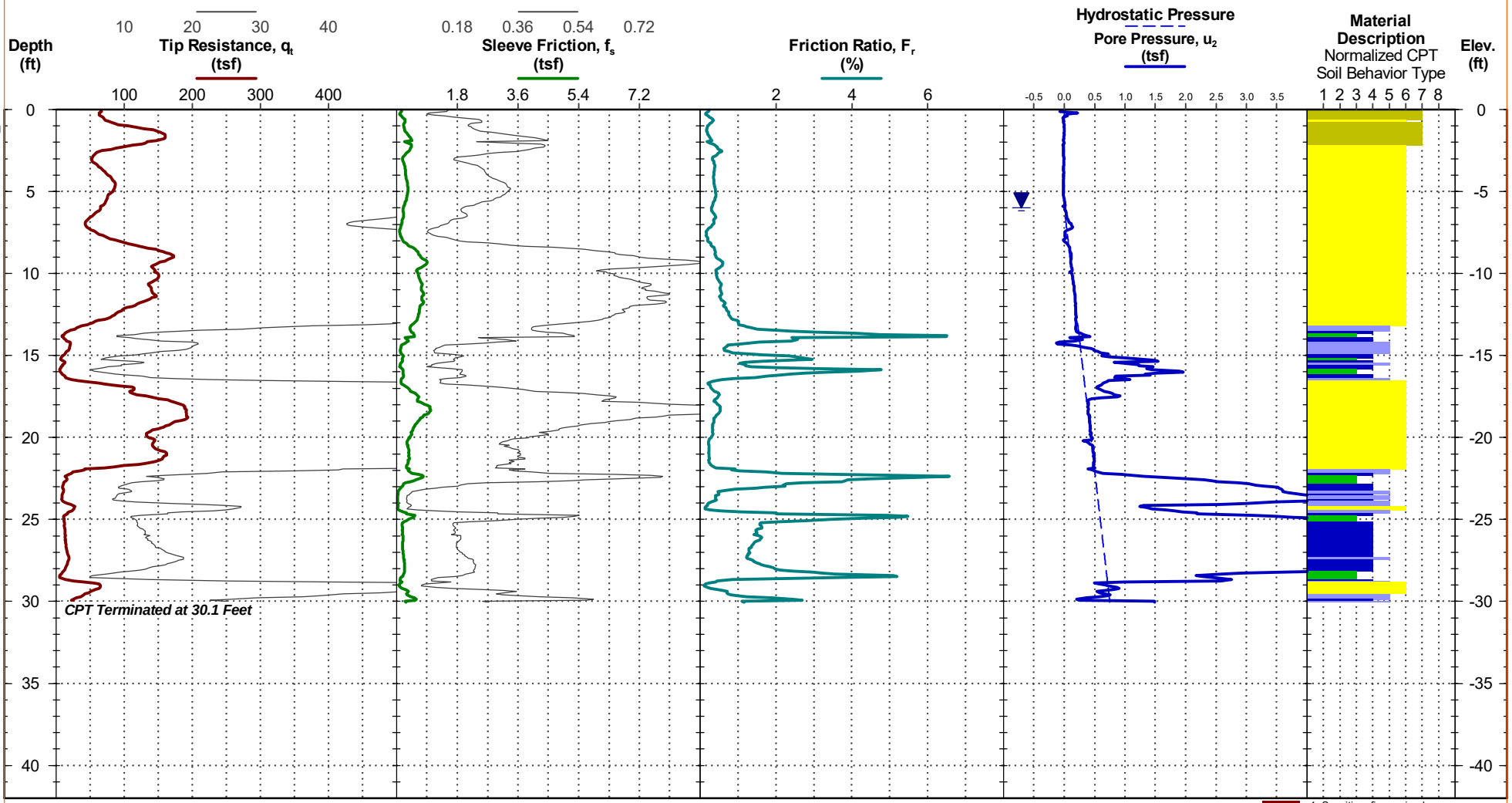
CPT LOG NO. CPT-11

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 6 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

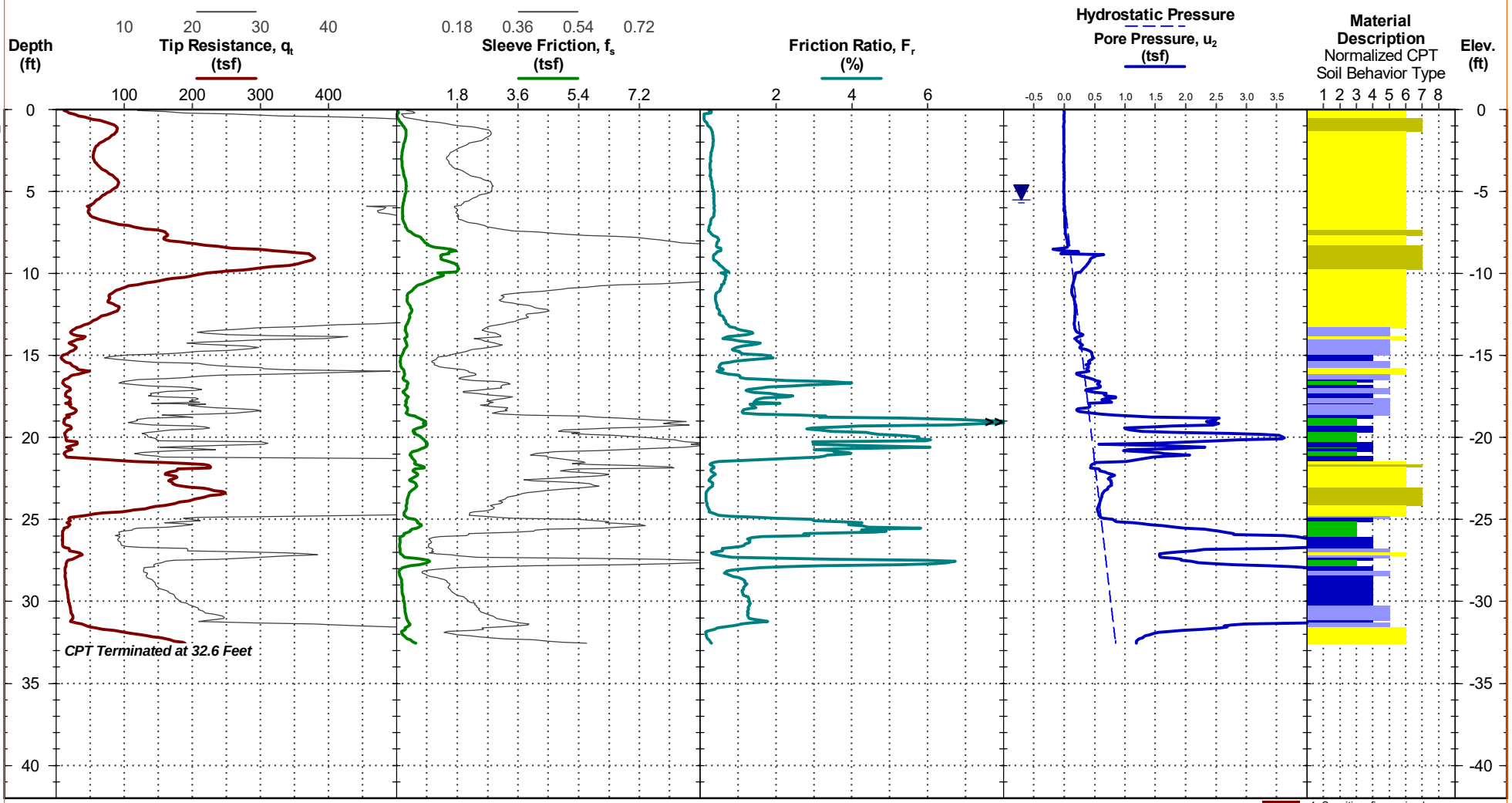
CPT LOG NO. CPT-12

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 5.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

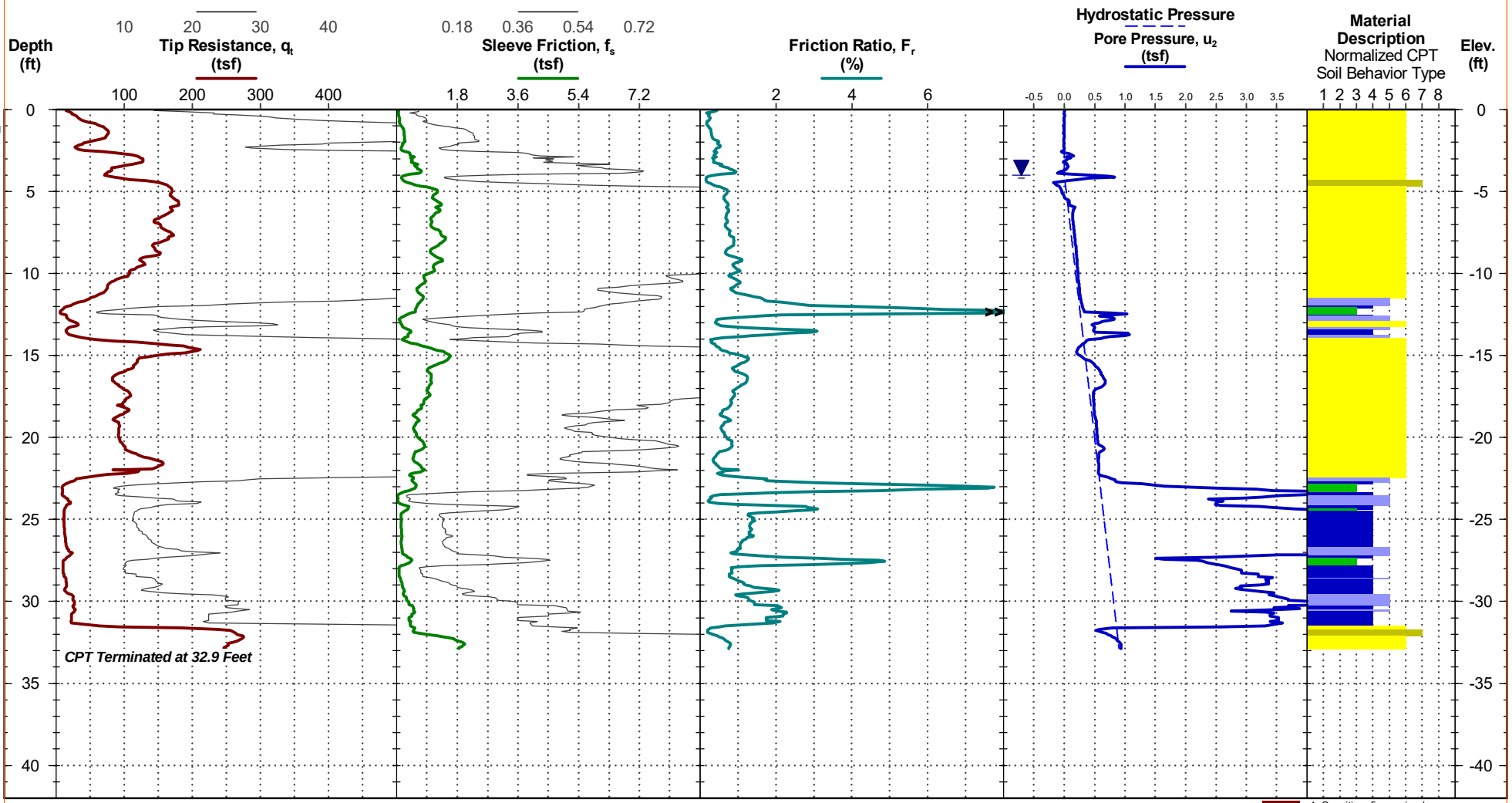
CPT LOG NO. CPT-13

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 4 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

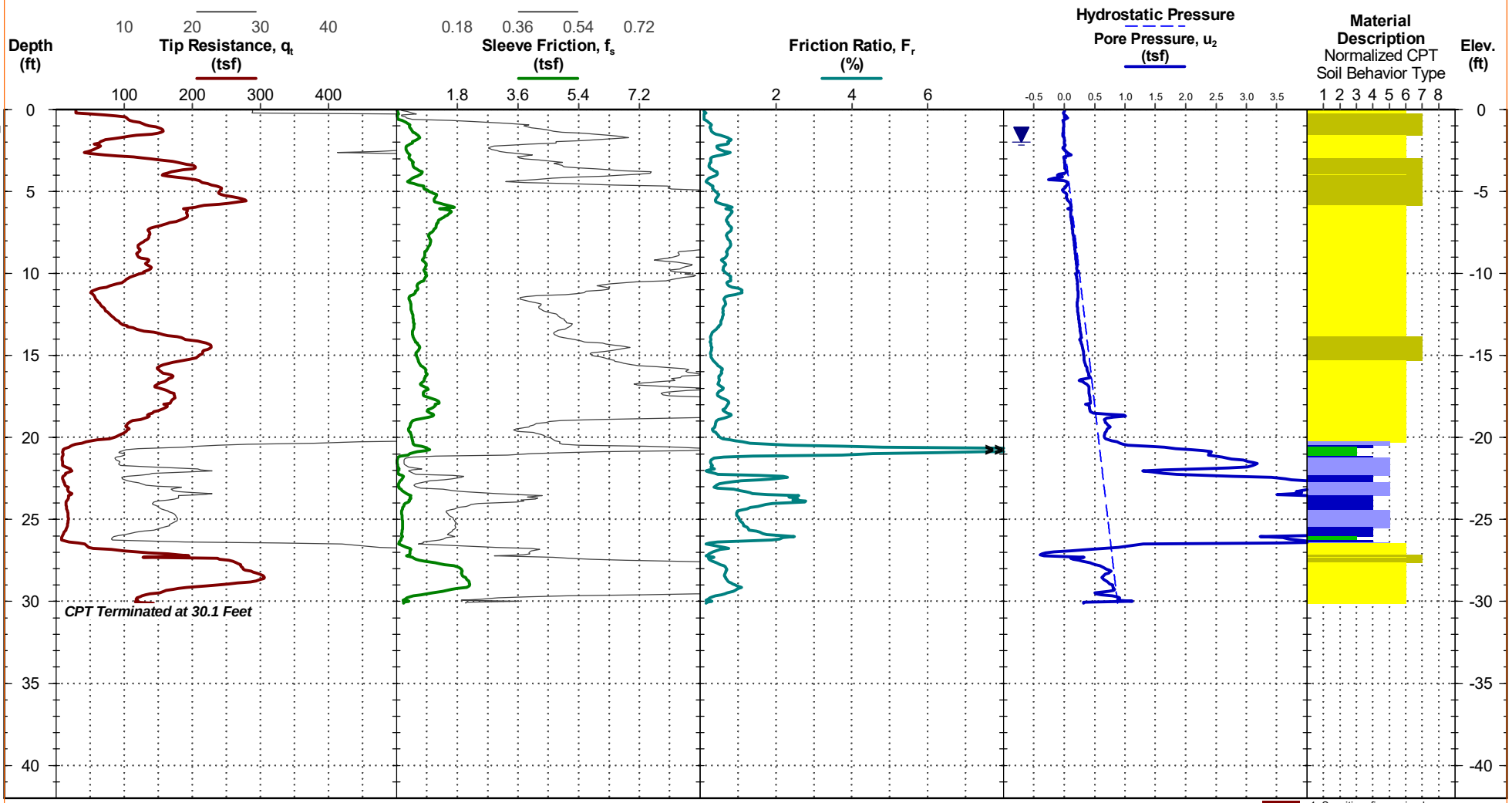
CPT LOG NO. CPT-14

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 2 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

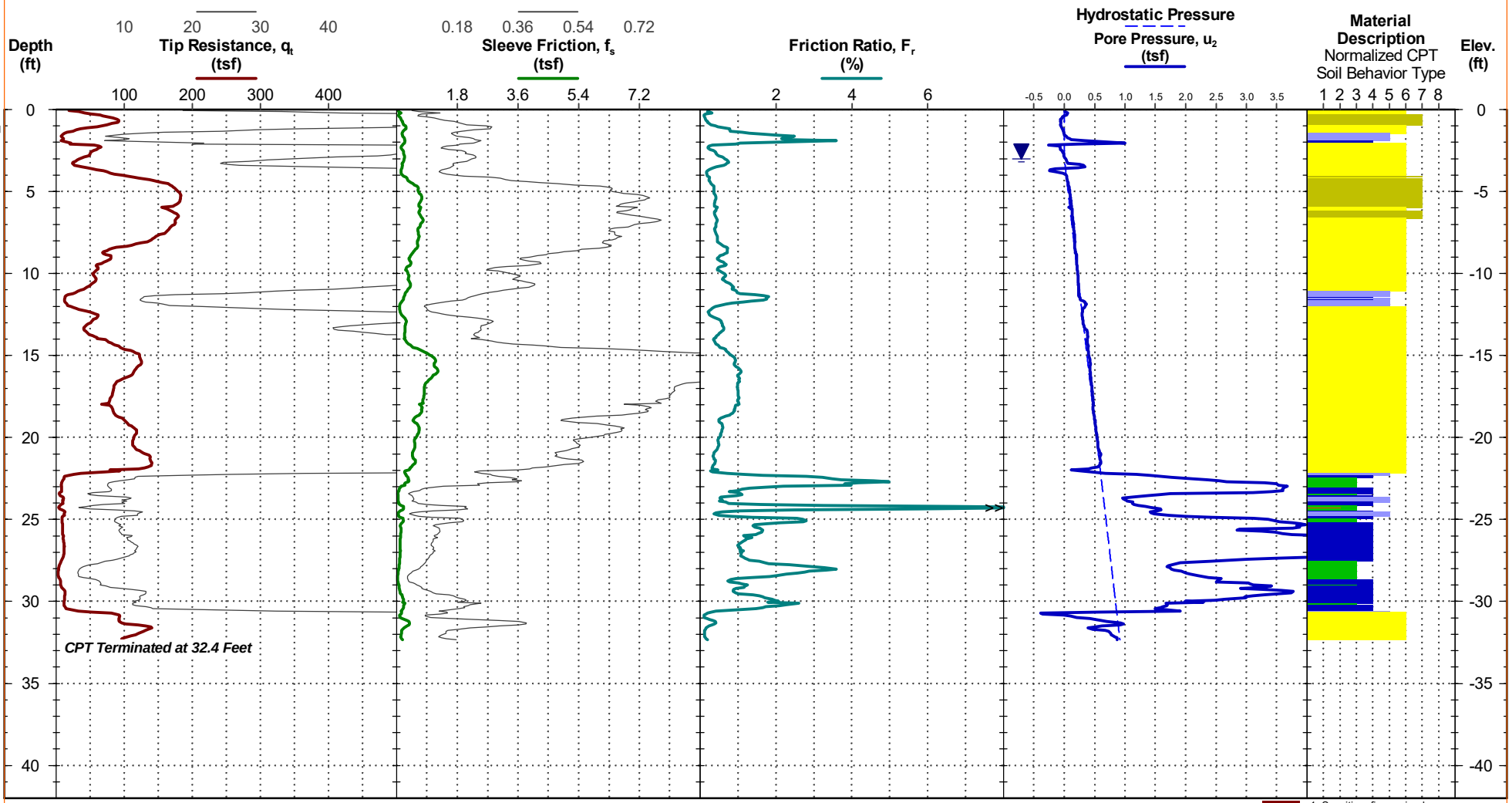
CPT LOG NO. CPT-15

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 3 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

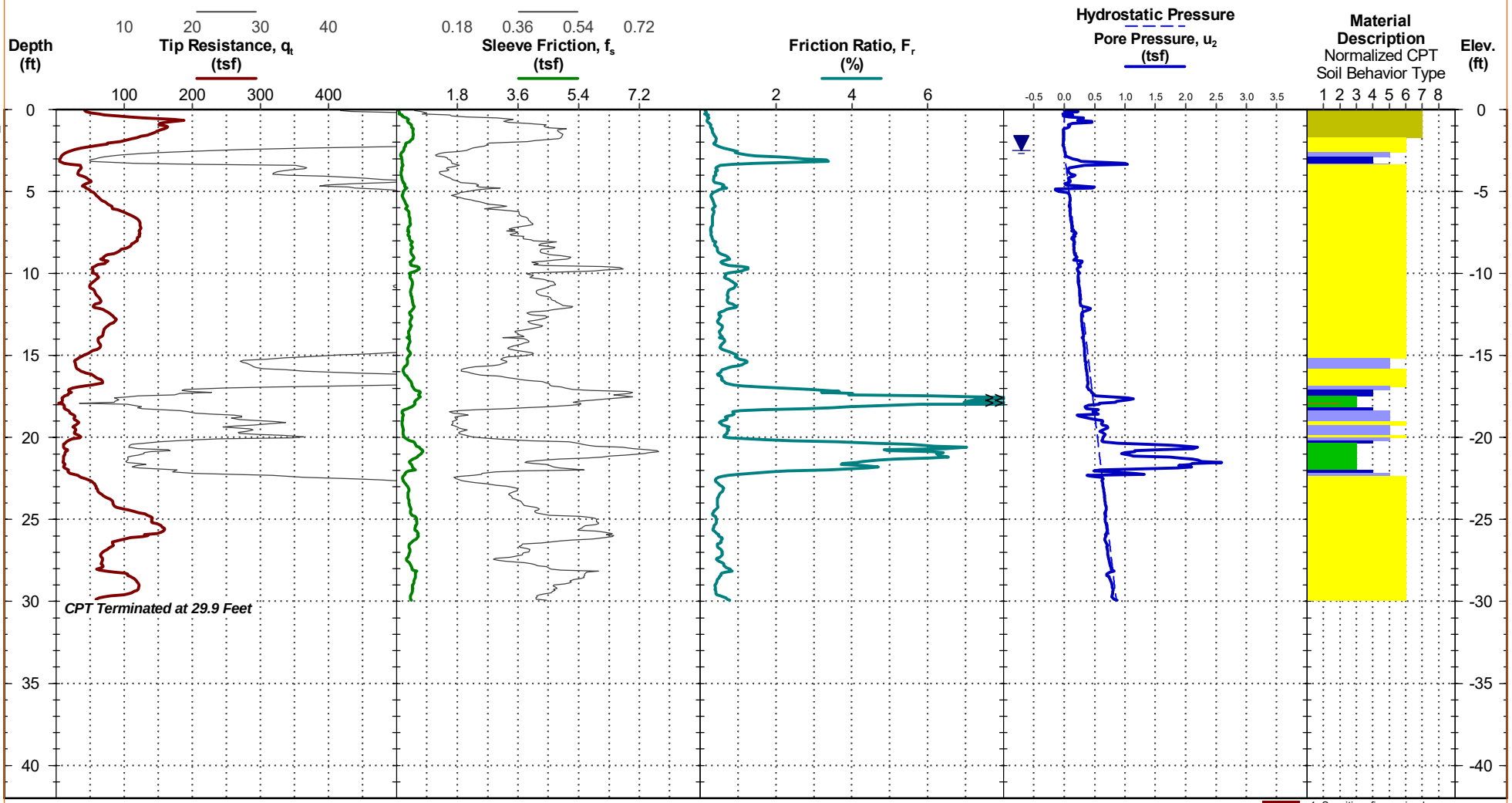
CPT LOG NO. CPT-16

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 2.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/15/2021

CPT Completed: 6/15/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

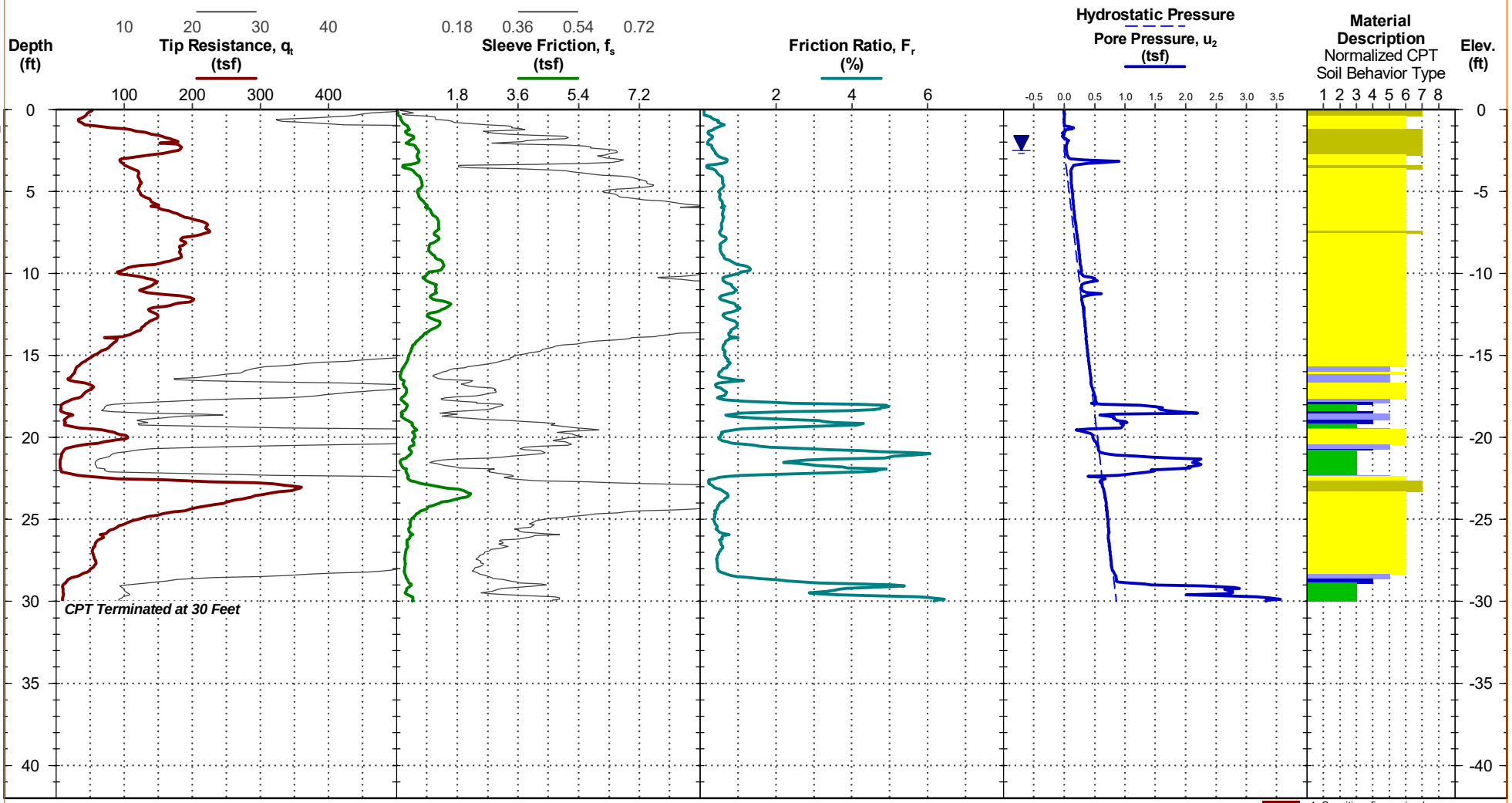
CPT LOG NO. CPT-17

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

TEST LOCATION: See Exploration Plan

SITE: Carolina Beach Rd
Wilmington, NC



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION

▼ 2.5 ft estimated water depth
(used in normalizations and correlations)

Probe no. 4287 with net area ratio of 0.84

Calibrated 11/24/2020

Terracon
1246 Howard Ave
Myrtle Beach, SC

CPT Started: 6/14/2021

CPT Completed: 6/14/2021

Rig: Geoprobe

Operator: ZAB

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 6/17/21

BORING LOG NO. HAB at SCPT-01

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 **POORLY GRADED SAND (SP)**, tan	1		
	1.5 **POORLY GRADED SAND WITH SILT (SP-SM)**, brown with gray	2	▽	
		3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 2 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-02

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	1.0 **SILTY SAND (SM)**, black and tan	1		
	2.0 **POORLY GRADED SAND WITH SILT (SP-SM)**, brown and gray	2		
	3.0 **SILTY SAND (SM)**, brown	3	▽	
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-03

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 0.6 **ASPHALT**, approximately 1 inch in thickness			
	POORLY GRADED SAND (SP), tan and black	1		
		2		
	2.5 **POORLY GRADED SAND WITH SILT (SP-SM)**, dark brown	3	▽	
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-04

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 **POORLY GRADED SAND (SP)**, tan	1 2		
	3.0 **POORLY GRADED SAND WITH SILT (SP-SM)**, black and gray	3	▽	
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-05

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 **POORLY GRADED SAND (SP)**, gray and tan	1		
	1.5 **POORLY GRADED SAND WITH SILT (SP-SM)**, black and gray	2		
	3.0 **SILTY SAND (SM)**, brown, with finger roots	3	▽	
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-06

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND (SP), tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-07

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND WITH GRAVEL (SP), tan, approximately 4 inches in thickness 0.3			
	POORLY GRADED SAND (SP), tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-08

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	AGGREGATE BASE COURSE			
	0.5 **POORLY GRADED SAND (SP)**, tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-09

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND WITH GRAVEL (SP), tan			
	0.5 **POORLY GRADED SAND (SP)**, tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-10

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 **POORLY GRADED SAND (SP)**, tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-11

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND WITH GRAVEL (SP), tan			
	0.5 **POORLY GRADED SAND (SP)**, tannish white to brown	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-12

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND (SP), tan	1 2 3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-13

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	1.0 **POORLY GRADED SAND (SP)**, tan	1		
	2.0 **POORLY GRADED SAND WITH SILT (SP-SM)**, gray to brown	2		
		3		
	4.0 ***Boring Terminated at 4 Feet***	4	▽	

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 4 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-14

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL, with gravel			
	0.5			
	POORLY GRADED SAND (SP), tan	1		
	2.0	2	▽	
	TOPSOIL			
	2.5			
	POORLY GRADED SAND (SP), gray	3		
	4.0	4		
	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 2 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-15

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	TOPSOIL			
	0.5 **POORLY GRADED SAND (SP)**, tan	1		
	2.0 **TOPSOIL**	2		
	2.5 **POORLY GRADED SAND WITH SILT (SP-SM)**, brown and gray	3	▽	
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021 | Boring Completed: 06-14-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-16

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Exploration Plan

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
		TOPSOIL, with gravel			
	0.5	**POORLY GRADED SAND (SP)**, tan	1		
			2	▽	
	2.5	**SILTY SAND (SM)**, brown	3		
	4.0	***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 2.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB at CPT-17

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	POORLY GRADED SAND (SP), tan	1		
	2.0 **POORLY GRADED SAND WITH SILT (SP-SM)**, dark brown, abundance of finger roots from approximately 3 to 4 feet	2	▽	
		3		
	4.0 ***Boring Terminated at 4 Feet***	4		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 2.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-14-2021	Boring Completed: 06-14-2021
Drill Rig:	Driller:
Project No.: ER215038	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-18

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	0.0 **ASPHALT**, approximately 1/4" in thickness **POORLY GRADED SAND (SP)**, tan, medium dense	1			10-15+
	2.0 **POORLY GRADED SAND WITH SILT (SP-SM)**, black and dark brown, loose to medium dense	2			8-8-9
		3			15+
		4	▽		15+
	5.0 ***Boring Terminated at 5 Feet***	5			9-9-10

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 4 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-19

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	0.5 **POORLY GRADED SAND (SP)**, tan and gray, medium dense	1			10-11-12
	2.0 **SILTY SAND (SM)**, black and brown, medium dense	2			15+
		3			7-11-12
		4			8-10-11
	5.0 ***Boring Terminated at 5 Feet***	5			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-20

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	1.0				
	POORLY GRADED SAND (SP), tan, medium dense	1	▽		15+
	2.0				
	SILTY SAND (SM), black to brown, loose to medium dense, with few finger roots	2			3-5-7
		3			15+
	4.0				
	Hole collapse at 4 Feet	4			15+

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 1.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-21

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	0.5 **POORLY GRADED SAND (SP)**, brown, very loose to loose	1	▽		
					5-5-5
		2			
					4-3-2
	3.0 ***Hole collapse at 3 Feet***	3			
					WOH

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 1 foot at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-22

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Exploration Plan

DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
0.0	**TOPSOIL**				
1.0	**POORLY GRADED SAND (SP)**, gray and white, medium dense	1			14-10-10
2.0	**POORLY GRADED SAND WITH SILT (SP-SM)**, black, loose	2	▽		5-5-7
		3			5-5-6
4.0	***Hole collapse at 4 Feet***	4			6-5-6

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 2.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-23

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	0.5 **POORLY GRADED SAND (SP)**, tan to black	1			15-15+
		2			10-15+
	3.0 **SILTY SAND (SM)**, brown	3	▽		9-12-11
	4.0 ***Hole collapse at 4 Feet***	4			13-15+

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 3 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-24

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	0.5				
	POORLY GRADED SAND (SP), tan, loose to medium dense	1			11-13-12
		2			10-7-7
		3			6-6-5
		4			5-5-6
	5.0	5			
	Boring Terminated at 5 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-25

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Field Test Results
	TOPSOIL				
	0.5				
	POORLY GRADED SAND (SP), tan, loose to medium dense	1			10-14-12
		2			7-9-9
		3			8-8-8
		4			9-8-9
	5.0	5			
	Boring Terminated at 5 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered at time of boring

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-26

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Exploration Plan

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
		TOPSOIL			
	0.5	**POORLY GRADED SAND (SP)**, tan	1	▽	
	1.5	**SANDY SILT/SILTY SAND (ML/SM)**, black, significant organics (mulch / finger roots)	2		
	3.5	***Hole collapse at 3.5 Feet***	3		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 1.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

BORING LOG NO. HAB-27

PROJECT: Starway Apartments

CLIENT: Kelley Development Company LLC
Raleigh, NC

SITE: Carolina Beach Rd
Wilmington, NC

LOCATION See Exploration Plan

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
		TOPSOIL			
	0.5	**POORLY GRADED SAND (SP)**, tan and gray	1 2 3 4 5 6	▽	
	6.5	***Hole collapse at 6.5 Feet***			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater encountered at approximately 5.5 feet at time of boring*

Terracon
1246 Howard Ave
Myrtle Beach, SC

Boring Started: 06-21-2021 | Boring Completed: 06-21-2021

Drill Rig: | Driller:

Project No.: ER215038

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ER215038 STARWAY APARTMENT.GPJ TERRACON_DATATEMPLATE.GDT 7/15/21

SUPPORTING INFORMATION

Contents:

Unified Soil Classification System
General Notes
CPT General Notes

Note: All attachments are one page unless noted above.

UNIFIED SOIL CLASSIFICATION SYSTEM

Terracon GeoReport

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [$Cc<1$ or $Cc>3.0$] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [$Cc<1$ or $Cc>3.0$] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

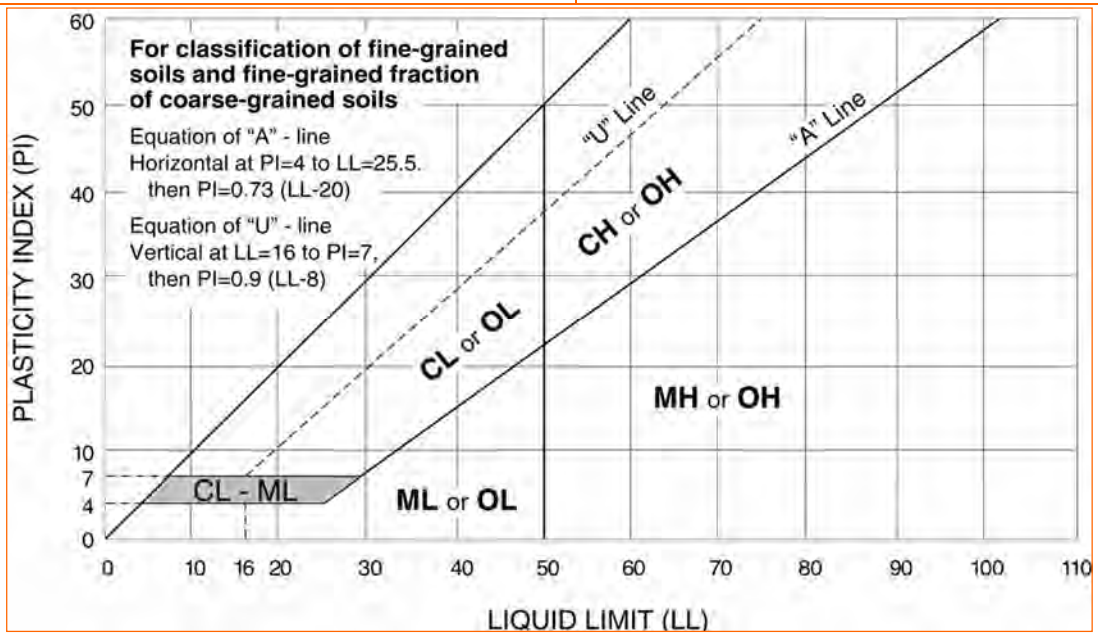
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

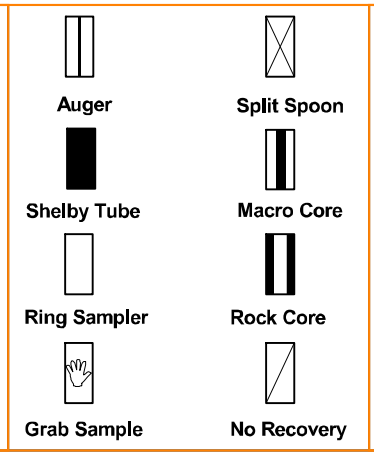
[Q] PI plots below "A" line.



GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING



WATER LEVEL



Water Initially Encountered

Water Level After a Specified Period of Time

Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(b/f)	Standard Penetration Test (blows per foot)
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength, Qu, tsf**	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**
Very Loose	0 - 3	0 - 6	Very Soft	less than 0.25	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	0.25 to 0.50	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	0.50 to 1.00	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	1.00 to 2.00	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	2.00 to 4.00	15 - 30	19 - 42
			Hard	> 4.00	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

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CPT GENERAL NOTES

DESCRIPTION OF MEASUREMENTS AND CALIBRATIONS

To be reported per ASTM D5778:

Uncorrected Tip Resistance, q_c
Measured force acting on the cone divided by the cone's projected area

Corrected Tip Resistance, q_t
Cone resistance corrected for porewater and net area ratio effects
$q_t = q_c + U2(1 - a)$
Where a is the net area ratio, a lab calibration of the cone typically between 0.70 and 0.85

Pore Pressure, U1/U2
Pore pressure generated during penetration
U1 - sensor on the face of the cone
U2 - sensor on the shoulder (more common)

Sleeve Friction, fs
Frictional force acting on the sleeve divided by its surface area

Normalized Friction Ratio, FR
The ratio as a percentage of fs to q_t, accounting for overburden pressure

To be reported per ASTM D7400, if collected:

Shear Wave Velocity, Vs
Measured in a Seismic CPT and provides direct measure of soil stiffness

DESCRIPTION OF GEOTECHNICAL CORRELATIONS

Normalized Tip Resistance, Q_t
$Q_t = (q_t - \sigma_{v0})/\sigma'_{v0}$

Over Consolidation Ratio, OCR
$OCR\ (1) = 0.25(Q_t)^{1.25}$
$OCR\ (2) = 0.33(Q_t)$

Undrained Shear Strength, Su
$Su = Q_t \times \sigma'_{v0}/N_{kt}$
N_{kt} is a geographical factor (shown on Su plot)

Sensitivy, St
$St = (q_t - \sigma_{v0}/N_{kt}) \times (1/fs)$

Effective Friction Angle, ϕ'
$\phi'\ (1) = \tan^{-1}(0.373[\log(q_t/\sigma'_{v0}) + 0.29])$
$\phi'\ (2) = 17.6 + 11[\log(Q_t)]$

Unit Weight
$UW = (0.27[\log(FR)]+0.36[\log(q_t/atm)]+1.236) \times UW_{water}$
σ_{v0} is taken as the incremental sum of the unit weights

Small Strain Shear Modulus, G_0
$G_0\ (1) = \rho\ Vs^2$
$G_0\ (2) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$

Soil Behavior Type Index, Ic
$Ic = [(3.47 - \log(Q_t))^2 + (\log(FR) + 1.22)^2]^{0.5}$

SPT N_{60}
$N_{60} = (q_t/atm) / 10^{(1.1268 - 0.2817Ic)}$

Elastic Modulus, Es (assumes $q/q_{ultimate} \sim 0.3$, i.e. FS = 3)
$Es\ (1) = 2.6\Psi\ G_0$ where $\Psi = 0.56 - 0.33\log Q_{t,clean\ sand}$
$Es\ (2) = G_0$
$Es\ (3) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$
$Es\ (4) = 2.5q_t$

Constrained Modulus, M
$M = \alpha_M(q_t - \sigma_{v0})$
For Ic > 2.2 (fine-grained soils)
$\alpha_M = Q_t$ with maximum of 14
For Ic < 2.2 (coarse-grained soils)
$\alpha_M = 0.0188 \times 10^{(0.55Ic + 1.68)}$

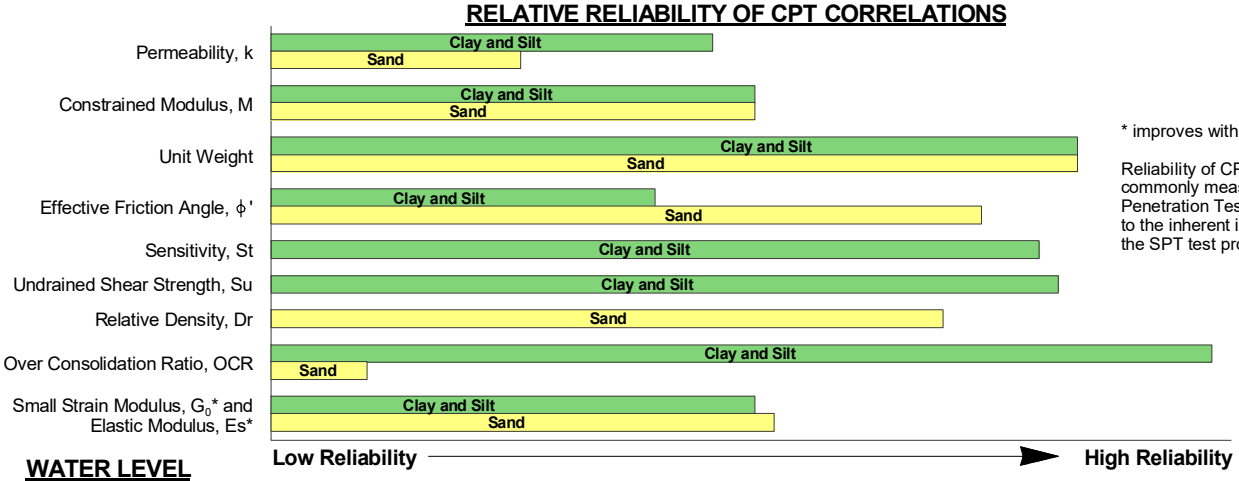
Hydraulic Conductivity, k
For $1.0 < Ic < 3.27$ $k = 10^{(0.952 - 3.04Ic)}$
For $3.27 < Ic < 4.0$ $k = 10^{(-4.52 - 1.37Ic)}$

Relative Density, Dr
$Dr = (Q_t / 350)^{0.5} \times 100$

REPORTED PARAMETERS

CPT logs as provided, at a minimum, report the data as required by ASTM D5778 and ASTM D7400 (if applicable). This minimum data include tip resistance, sleeve resistance, and porewater pressure. Other correlated parameters may also be provided. These other correlated parameters are interpretations of the measured data based upon published and reliable references, but they do not necessarily represent the actual values that would be derived from direct testing to determine the various parameters. The following chart illustrates estimates of reliability associated with correlated parameters based upon the literature referenced below.

RELATIVE RELIABILITY OF CPT CORRELATIONS



* improves with seismic Vs measurements

Reliability of CPT-predicted N_{60} values as commonly measured by the Standard Penetration Test (SPT) is not provided due to the inherent inaccuracy associated with the SPT test procedure.

WATER LEVEL

The groundwater level at the CPT location is used to normalize the measurements for vertical overburden pressures and as a result influences the normalized soil behavior type classification and correlated soil parameters. The water level may either be "measured" or "estimated:"

Measured - Depth to water directly measured in the field

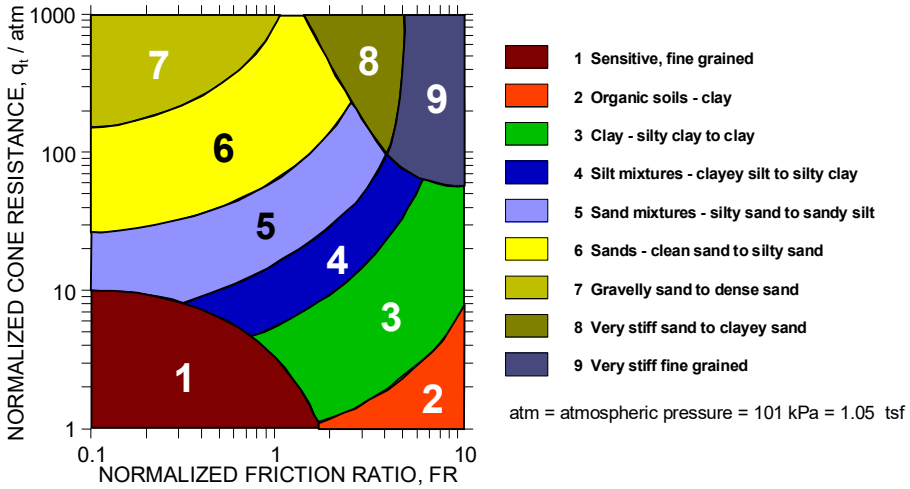
Estimated - Depth to water interpolated by the practitioner using pore pressure measurements in coarse grained soils and known site conditions

While groundwater levels displayed as "measured" more accurately represent site conditions at the time of testing than those "estimated," in either case the groundwater should be further defined prior to construction as groundwater level variations will occur over time.

CONE PENETRATION SOIL BEHAVIOR TYPE

The estimated stratigraphic profiles included in the CPT logs are based on relationships between corrected tip resistance (q_t), friction resistance (fs), and porewater pressure (U2). The normalized friction ratio (FR) is used to classify the soil behavior type.

Typically, silts and clays have high FR values and generate large excess penetration porewater pressures; sands have lower FRs and do not generate excess penetration porewater pressures. Negative pore pressure measurements are indicative of fissured fine-grained material. The adjacent graph (Robertson et al.) presents the soil behavior type correlation used for the logs. This normalized SBT chart, generally considered the most reliable, does not use pore pressure to determine SBT due to its lack of repeatability in onshore CPTs.



atm = atmospheric pressure = 101 kPa = 1.05 tsf

REFERENCES

Kulhawy, F.H., Mayne, P.W., (1997). "Manual on Estimating Soil Properties for Foundation Design," Electric Power Research Institute, Palo Alto, CA.

Mayne, P.W., (2013). "Geotechnical Site Exploration in the Year 2013," Georgia Institue of Technology, Atlanta, GA.

Robertson, P.K., Cabal, K.L. (2012). "Guide to Cone Penetration Testing for Geotechnical Engineering," Signal Hill, CA.

Schmertmann, J.H., (1970). "Static Cone to Compute Static Settlement over Sand," *Journal of the Soil Mechanics and Foundations Division*, 96(SM3), 1011-1043.

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PRELIMINARY SITE LAYOUT

SEPTEMBER 21, 2021

STARWAY VILLAGE

WILMINGTON, NC

Kimley»Horn

ATTACHMENT 20

Land Development

Hazards and Nuisances including Site Safety and Noise

Nuisance and Hazard Checklist

Project Name	Investigator(s)	Site Visit Date
Starway Village Apartments	C. Daves – S&ME, Inc.	August 31, 2022

Check those features that were observed on or adjacent to the property at the time of the visit.

NATURAL HAZARDS			
	Faults, fractures		Fire hazard materials
	Cliffs, bluffs, crevices		Wind/sandstorm concerns
	Slope-failures from rains		Poisonous plants, insects, animals
	Unprotected water bodies		Hazardous terrain features
BUILT HAZARDS & NUISANCES			
	Hazardous street		Inadequate screened drainage catchments
	Dangerous intersection		Hazards in vacant lots
	Through traffic		Chemical tank-car terminal
	Inadequate separation of pedestrian/vehicle traffic		Other hazardous chemical storage
	Play areas next to freeway or other highway traffic		High pressure gas or liquid petroleum transmission lines on site
	Inadequate street lighting		Overhead transmission lines
	Quarries or other excavations		Hazardous cargo transportation routes
	Dumps/sanitary landfills or mining		Oil or gas wells
	Railroad crossing		Industrial operations
NUISANCES			
	Gas, smoke, fumes		Unsightly land uses
	Odors		Front lawn parking
	Vibration		Abandoned vehicle
	Glare from parking area		Vermin infestation
X	Vacant/boarded up buildings		Industrial nuisances
	Other (Specify)		Other (Specify)

Were any nuisances or hazards observed?

☐ Yes ☒ No

If yes, list mitigation strategies below.

One vacant residence, in good condition, will be demolished prior to site development.

One dilapidated building associated with the former Starway Flea Market will also be demolished prior to site development.



Lead Investigator's Signature

8-31-22

Date

LAND DEVELOPMENT

NATURAL HAZARDS

1. Will the site be near a natural hazard involving a potential risk to project residents? **No.**

2. Can the project be protected by mitigation measures? **N/A.**

HAZARDS AND NUISANCES

1. Does the project involve any potential hazards such as those listed in 1 above?
   No. (See checklist Attachment 20).

2. Are there project users or neighboring populations whose special health and safety needs are not anticipated in the project design? **No**. Have actions been taken to protect children from "attractive" nuisances? **N/A.** Have measures been taken to reduce the potential risk to the elderly from dust, and to provide temporary walkways and traffic around construction sites? **N/A.**

3. Can the problems which may generate nuisances be alleviated by designs or plan changes? **N/A.**

4. Will the project need special design or engineering criteria which bring into question its feasibility? **No.**

AIR QUALITY

1. Is the project located in the vicinity of heavy industry, incinerators, power generating plants, oil refineries, parking facilities for 1,000 cars (inside an SMSA) or 2,000 cars (outside an SMSA), or near a highway with six or more traffic lanes? **No.**

2. Are the project users particularly sensitive to existing or projected air pollution levels? **No**
   Has the project been designed to mitigate possible adverse effects? **Yes. Dust suppression during construction.**

3. Is the project located in the vicinity of a monitoring station where air quality violations have been registered? **No.**

ATTACHMENT 21

Land Development

Energy Consumption

LAND DEVELOPMENT

ENERGY CONSUMPTION

1. If the project entails residential new construction or substantial rehabilitation of single-family housing or multi-family buildings up to three-stories, is the project being designed and constructed to meet the current version of the Energy Star performance standard?
   Yes. Site plans call for ENERGY STAR windows, appliances, HVAC systems, refrigerators, and light fixtures.

2. Have the architectural plans and building orientation taken full advantage of potential energy saving measures related to climate, sun and wind? **N/A**. Are Energy Star appliances, lighting heating, cooling and hot water systems to be installed? **Yes. Site plans call for ENERGY STAR windows, appliances, HVAC systems, refrigerators, and light fixtures**. Does the project include programmable thermostats, occupancy sensors in common areas, water filters, insulated hot water pipes, and/or point-of-use/tankless hot water heaters? **Yes.**

3. Is the proposal being rated under LEED, Enterprise Green Communities, or other green standard or sustainability program? **No.**

4. Is the location of the project in close proximity to transit, shopping, services, and employment locations? **Yes.**

5. Are state and federal rebates, tax incentives for energy efficiency strategies, and renewable energy components being considered?
   The developer intends to design the project to meet energy/green standards to qualify for reduced MIP.

6. For multi-family projects, is there individual metering for utilities or a tenant energy efficiency education program? **Unknown at this time.**

7. Is there an opportunity to enter into an energy performance contract? **N/A.**

8. What is the estimated energy consumption of the proposal, and are the energy resources of the utility provider sufficient to support the proposal?
   Typical for 278-unit development. **Utility providers have available capacity to handle.**

9. Are renewable energy strategies being implemented in this project? **No.** If this is a rural project, was on-site energy generation considered (wind, fuel cell, or solar) in lieu of or in addition to a grid connection? **N/A.**

10. What are the projected greenhouse gas (GHG) emissions of the project upon full occupancy?
    Minimal. GHG from car traffic only expected to insignificantly increase. Are they significant? **No.**

11. Does the estimated energy consumption of the proposal require a significant increase in energy production for the energy provider? **No.**

ATTACHMENT 22

Socioeconomics

Demographic Character Changes/Displacement

Starway Village - Proposed Relocation Plan

Due to confidentiality concerns, information might be available upon request from NCORR, Director Laura Hogshead.

SOCIOECONOMICS

EMPLOYMENT AND INCOME PATTERNS

1. Will the project either significantly increase or decrease temporary and/or permanent employment opportunities? **No.**

2. What is the profile of new jobs created by the project? **Management company employee jobs will be created. New temporary construction jobs will be created as a result of this development.** What is the distribution across the skills and income scale? **N/A.** How do these relate to the skills and income profile of project area residents? **N/A**.

3. Will the new jobs likely go to area residents, low-income, unemployed, and minority group members? **Area residents.**

4. If the jobs don't go to area residents, where are the new employees likely to come from (i.e., inner city, suburbs)? **N/A**.

DEMOGRAPHIC/NEIGHBORHOOD CHARACTER

1. What is/are the identifiable neighborhoods within the sphere of likely impact of the proposed project? **Located in southern portion of city limits of Wilmington, NC. Immediately surrounding land uses consist of single-family residences (Sunset Park) to the west; the Pine Terrace Mobile Home Park to the south; a Duke/Progress Energy substation to the north; and commercial parcels located east, northeast, and southeast along Carolina Bach Road. Commercial parcels consist of numerous car and boat repair/parts businesses, a restaurant (Merritt's Burger House), an ABC store, and South Square Plaza. The project would appear to integrate with other surrounding land uses.**

2. What are the factors which contribute to the character of the neighborhoods?
Sunset Park is a previously established neighborhood from the early 2000s to the west. Prior to its development with single-family residences in the early 2000s, this area consisted of a large public housing project. Other surrounding parcels have a residential use (Pine Terrace Mobile Home Park to the south) and heavy commercial use along the Carolina Beach Road corridor.

3. Will the proposed project significantly alter the demographic characteristics (the racial, ethnic, or income segregation) of the neighborhood?
No. Residents are expected to come from the surrounding communities and should not contribute to demographic character changes.

4. Will the proposed project result in physical barriers or reduced access which will isolate a particular neighborhood or population group, making access to local services, facilities and institutions or other parts of the city more difficult or extremely inconvenient? **No.**

5. Will the proposed project substantially alter residential, commercial, or industrial land uses? **No.**

6. Does the proposed project at this site create a concentration of low-income or disadvantaged people, in violation of HUD site and neighborhood standards and HUD Environmental Justice policies? **No.**

DISPLACEMENT

1. Will the project directly displace individuals or families? **No.** How many persons? **N/A.** Is the displacement covered by the Uniform Relocation Act and are funds available for payment? **Yes.**
   Regarding the displacement of residents and Uniform Relocation Act (URA) Compliance, upon approval of City of Wilmington/New Hanover County ARPA loans in late 2021, preliminary URA notices were mailed in January of 2022 to the residents of the two occupied structures on the project site. Three residential tenants, comprising of two separate households, reside at 2374 Carolina Beach Road and one commercial tenant operates a small used car sales operation (County Line Car Sales) at 2370-B Carolina Beach Road. A copy of those preliminary notices and the URA relocation plan was provided to NCHFA in January 2022 with the final 4% tax credit application. The applicant has subsequently worked with each group to process the following forms (Certification of Lawful Presence, Income Certification, Decent Safe and Sanitary Inspection Form, Intake Interview Form) and determined the tenants are eligible to receive compensation via the URA as they will be permanently displaced by the proposed project. The applicant will be following the applicable rules and regulations associated with the URA with respect to both the residential and commercial tenants.

2. Will the project destroy or relocate existing jobs, community facilities, or any business establishments? **Yes. One used car business (County Line Car Sales).** Is the displacement covered by the Uniform Relocation Act, and are funds available for payments? **Yes.**

3. Are replacement facilities or housing units available within the community or in a nearby neighborhood? **No.** What will be the effect of the relocation on these neighborhoods? **N/A**.

4. Will the project result in probable indirect displacement? **No.** If so, have measures been planned to alleviate the hardship on those affected whose displacement is not covered under the Act? **N/A.**

ATTACHMENT 23

Community Facilities and Services

Educational and Cultural Facilities

PUBLIC EDUCATION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

The above project, which is located in the New Hanover Co. school district(s), will [ ] will not [✓] adversely affect the schools serving this project. Furthermore, schools located in this district are [ ] are not [✓] considered high risk or poor performing schools per state or federal performance standards.

The schools that will serve project are: Sunset Park ES, Williston MS, and New Hanover HS

Additional Comments/Conditions/Concerns Williston is considered high risk or poor performing. Sunset and New Hanover are not.

10/10/22
Date

Eddie Anderson
(Officials Signature)

Eddie Anderson
(Officials Name – Print or Type)

Asst. Supt. Ops.
(Official's Title)

Operations
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

Chris Daves

From: Fran Moles <fran.moles@nhcs.net>
Sent: Monday, October 10, 2022 2:21 PM
To: Chris Daves
Subject: Starway Village Apartments PEC
Attachments: Public Education Certification Starway Village Apartments.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Good afternoon,

Please see attached.

Regards, Fran

Fran Moles
Administrative Assistant
Operations Division
New Hanover County Schools
P: 910-254-4243



Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:27 PM
To: Charles.foust@nhcs.net
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 1 Education Resource Letter -Starway.pdf

Dear Dr. Foust,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the New Hanover County Schools regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

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October 4, 2022

New Hanover County Schools
6410 Carolina Beach Road
Wilmington, North Carolina 28412

Attention: Dr. Charles Foust, Superintendent (charles.foust@nhcs.net)

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Dr. Foust:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County Schools regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by New Hanover County Schools or resources managed by New Hanover County Schools.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

PUBLIC EDUCATION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

The above project, which is located in the _____ school district(s), will ☐ will not ☐ adversely affect the schools serving this project. Furthermore, schools located in this district are ☐ are not ☐ considered high risk or poor performing schools per state or federal performance standards.

The schools that will serve project are: _____

Additional Comments/Conditions/Concerns _____

_____ _____
Date (Officials Signature)

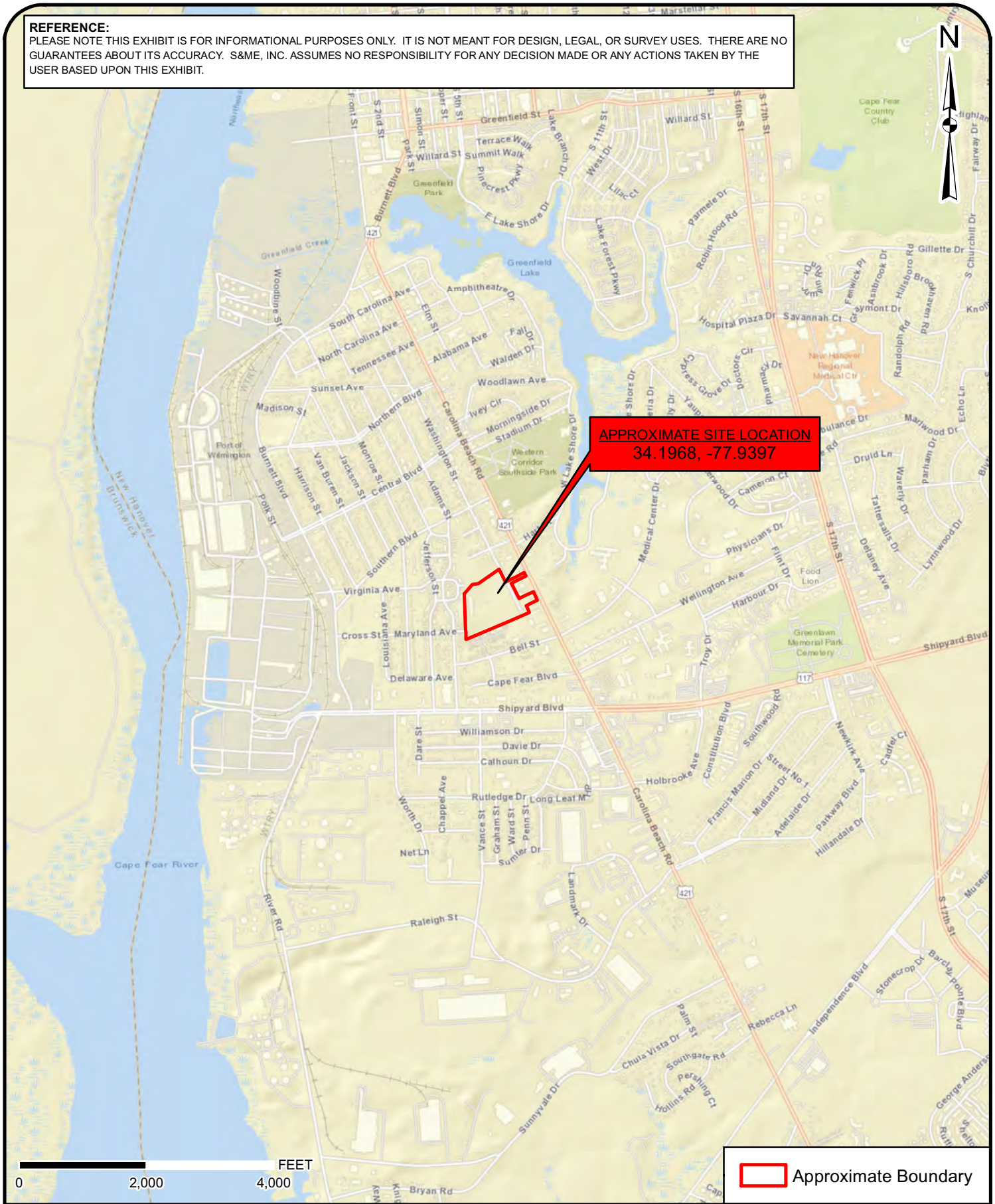
_____
(Officials Name – Print or Type)

_____
(Official's Title)

_____
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022



PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn

COMMUNITY FACILITIES and SERVICES

GENERAL

1. Will an increase in population strain the capacity of existing services and facilities? **No.**

2. Are the existing community services and facilities located an inaccessible and/or "unreasonable" distance from the project site? **No.**

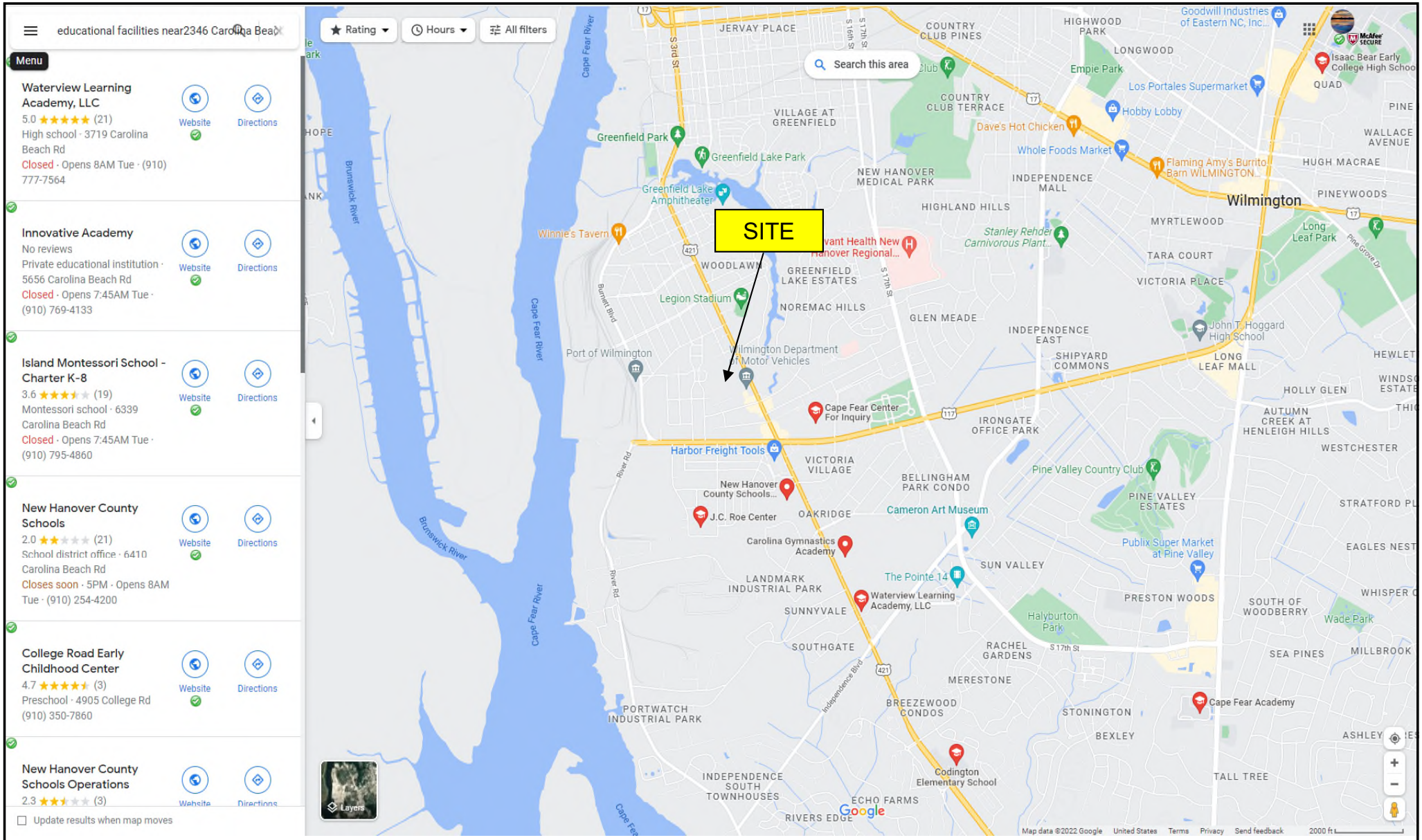
3. Will the project include particular groups, such as the low-income families or elderly, requiring special services or facilities? **No.**

4. Where services and facilities must be extended to the project, does the community have the capacity to extend them in time to meet the need?
   Yes. Short connections along bordering roads. Police, fire, EMS located nearby within minutes.

5. Are there actions which the developer could take to assist the provision of needed services? **N/A.**

SCHOOLS

1. What is the projected increase in student population to be created by the proposed development? **Unknown.**
2. Will the additional school age children in the proposed development exceed the capacity of the school? **No. See letter from Assistant Superintendent Eddie Anderson (Attachment 23).**
3. Do the potentially affected schools have adequate existing facilities (i.e., classroom space, buses) for the projected population increase? **Yes.**
4. Will additional or alternative facilities have to be provided to ensure adequate programs? **No.**
5. What measures will be taken by the school agency or government body to resolve potential problems? **N/A.**
6. Does the potentially affected school(s) have adequate and safe access facilities (i.e., walking paths, bus routes, crosswalks, and guards) given any calculations done for projected population increase? **Bus routes would be created to accommodate new students if demand was there.** Are these adequate both in terms of safety and access? **N/A.**



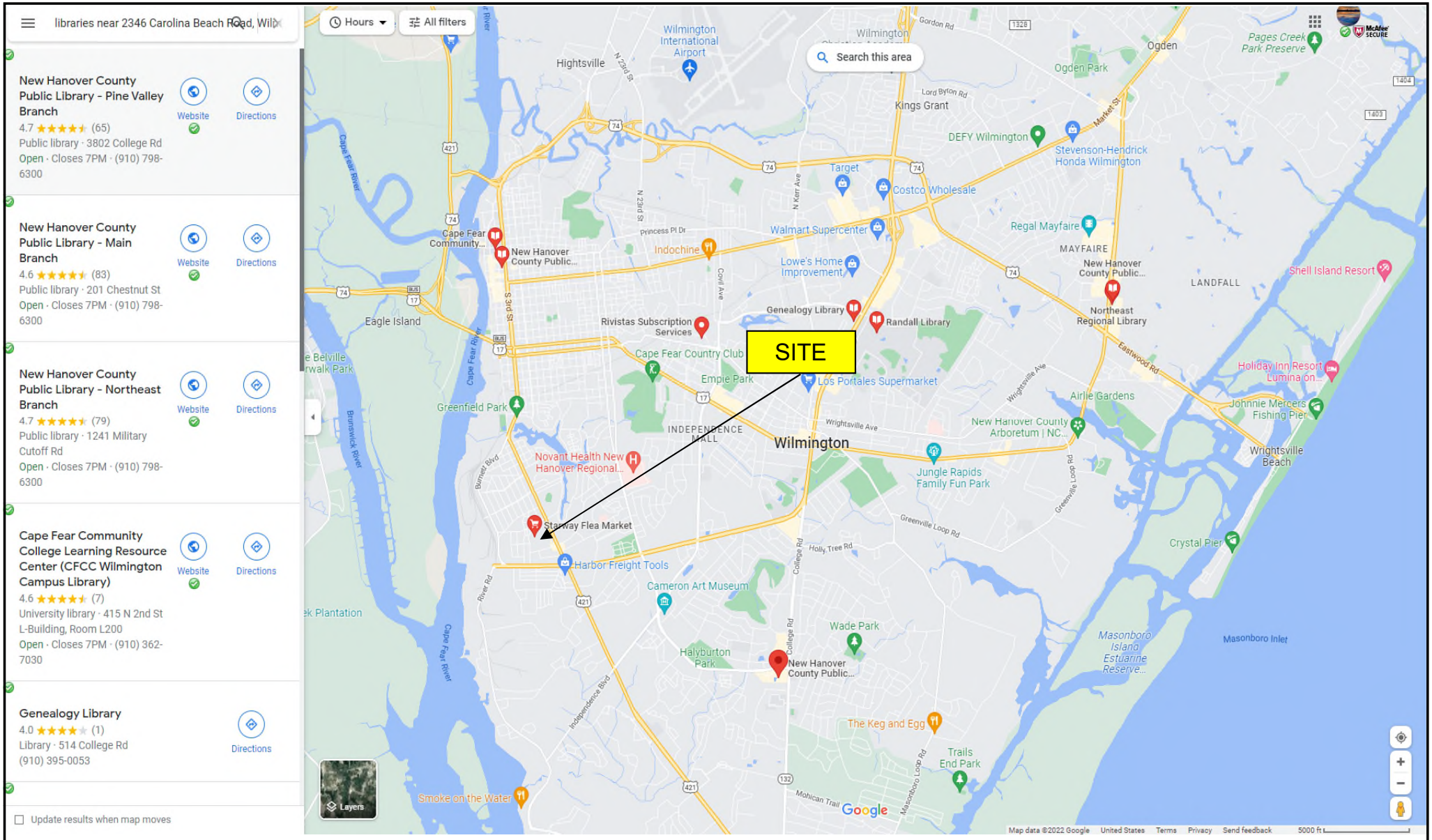
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CHECKED BY:	CD
DATE:	10-31-22

EDUCATIONAL FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILIMGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **22610025**

EXHIBIT NO.



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LIBRARIES FACILITIES EXHIBIT
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WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

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EXHIBIT NO.

NEW HANOVER COUNTY
Public Library

CREATING LIBRARY EXPERIENCES THAT MATTER

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Library Card (https://asknhcpl.nhcgov.com/search/?t=0&a…1&
| **Views:** 12462

How do I place a hold? Renew? Look for an item? (https://asknhcpl.nhcgov.com/faq/1843)
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Last Updated: Jun 25, 2020 |
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PIN (https://asknhcpl.nhcgov.com/search/?t=0&adv=1&topics=PIN)
| **Views:** 5803

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New Arrivals



New Arrivals this week

Featured Guide

Teens

Fiction to Fashion 2022

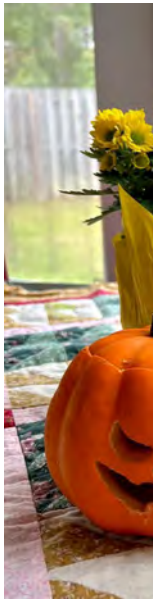


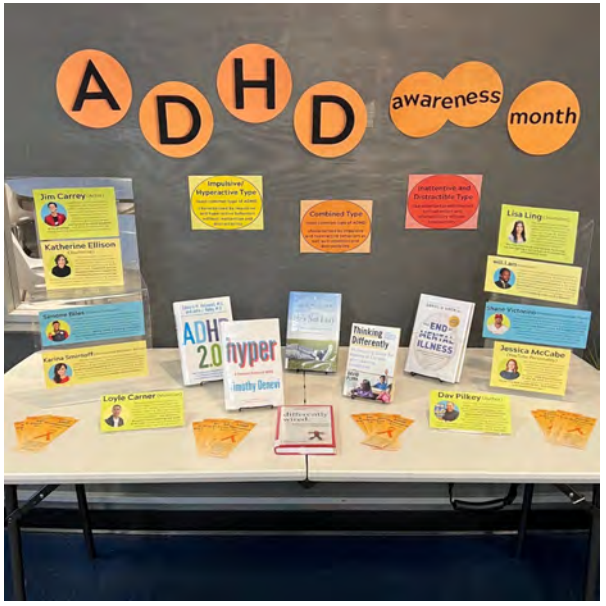
Coming Fall 2022! Calling all creative teens ages Runway style fashion design challenge! Fiction to Public Library's annual fashion design contest for an outfit using unconventional materials including tapes and CDs. Registration will open September

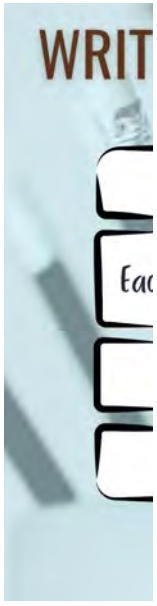
Tutorials

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NHCPL Public Calendar

November 20

Sun	Mon	Tue	Wed	
30	31	1	2	
		Day of the Dead,	Day of the Dead,	N
		NaNoWriMo Raff	NaNoWriMo Raff	1
		11am African Am	**10am** Outdoor S	1
		+5 more	+7 more	+
6	7	8	9	
NaNoWriMo Raff	NaNoWriMo Raff	NaNoWriMo Raff	NaNoWriMo Raff	N
	4pm Advanced N	**12:30pm** Lunch	**10am** Outdoor S	1
	4:30pm Genealc	**1:30pm** Storytim	**10:15am** Indoor	1
		+2 more		

Tutorials

Main Library & Law Library
201 Chestnut Street
Wilmington, NC 28401

Northeast Regional Library
1241 Military Cutoff Road
Wilmington, NC 28405

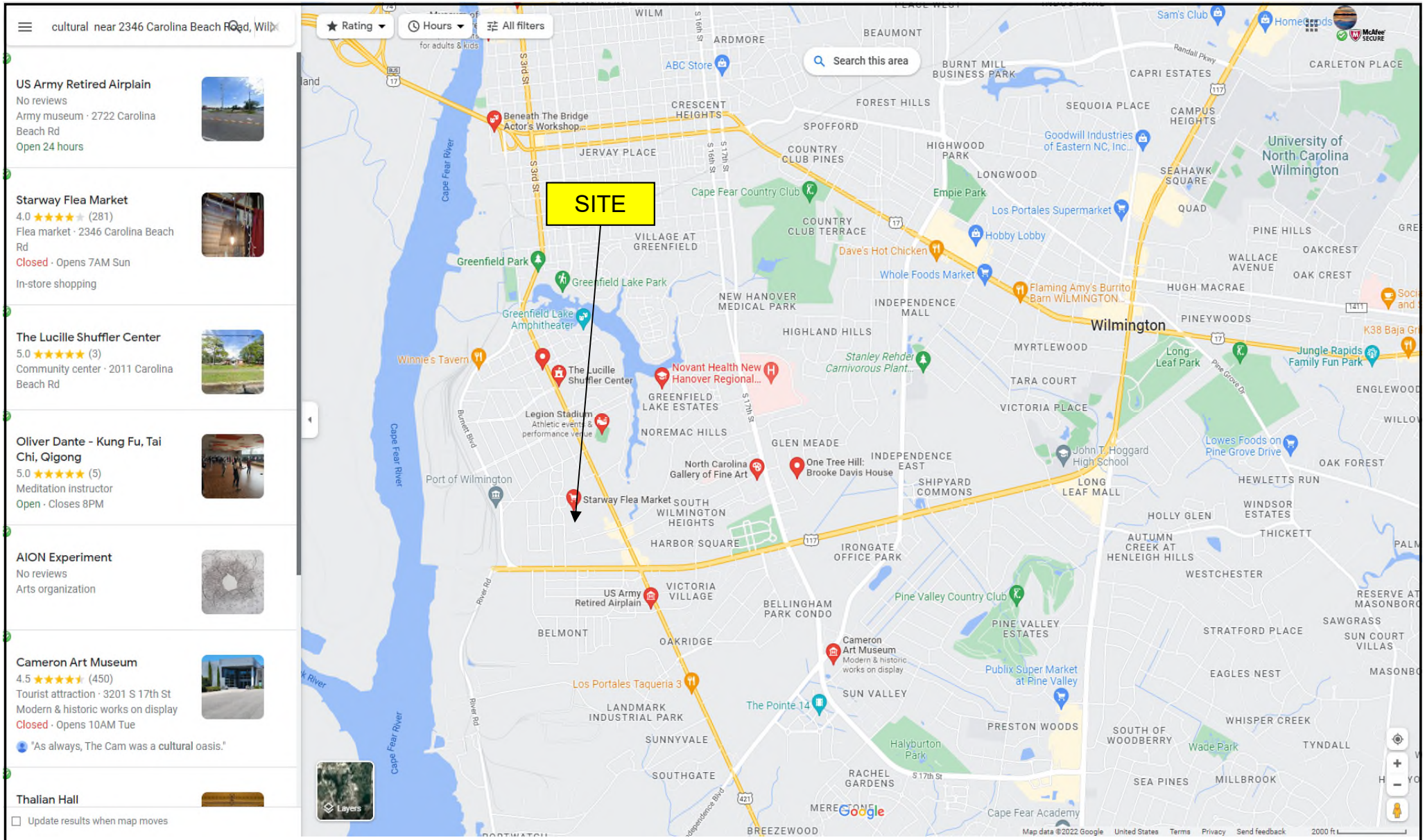
Pine Valley Library
3802 South College Road
Wilmington, NC 28412

Pleasure Island Library
1401 N. Lake Park Boulevard
Carolina Beach, NC 28428

Call (910) 798-6300
Hours: Monday-Thursday 10 am - 7 pm
Friday-Saturday 10 am - 5 pm
Sunday 1 - 5 pm

Tutorials

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CULTURAL FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

HISTORICAL OVERVIEW

Our Legends and Lore Await Your Visit

Rich in history and folklore, Wilmington, North Carolina's historic river district and island beaches are known for beauty, charm, Southern hospitality, and nautical legacy that spans centuries. Nestled on the southeastern coast of North Carolina between the Atlantic Ocean and the Cape Fear River, the region encompasses Wilmington, Carolina Beach, Kure Beach and Wrightsville Beach. Visitors can experience the area’s past at historic sites, museums, and in the 230-plus block National Register Historic District.


Neuse R.
The Sound
C. Hatteras
Hatteras Inlet
The West Branch
C. Fear or Clarendon
Cor anine
Croatoan
C. Lookout
Claredon
County
Longs I.
Cranes I.
Wimgou R.
Charles T.
Cape Fear
Lockwood
Folley
Craven
County
C. Cartaret
Neuse R.
I. Kiawan
Sullivant I.
Stono R.
Pleton Inlet
OCEAN

PRE-COLONIAL

Named for its rough waters and foreboding shoals, the Cape Fear River was first explored in 1524 by Verrazano in the name of the king of France. First permanent settlement did not occur until 1725 with the creation of Brunswick Town, the first capital of the colony of North Carolina and a leading seaport from 1726 to 1776. Rivals for many years, Wilmington (incorporated in 1739) eventually became the center of trade, politics and culture for the region. Named after Spencer Compton, Earl of Wilmington, the city was formerly known as New Carthage, New Liverpool and Newton. The Port City prospered because of its proximity to the Cape Fear River. Manufactured goods were imported and inland settlers transported produce down the river. Planters exported naval stores (turpentine, rosin, tar and pitch) needed for sailing ships for the English crown, an activity which led the region to become politically powerful.


General Cornwallis
Headquarters
1781
BURGWIN-WRIGHT HOUSE
Open for Tours
Tuesday-Saturday
224

REVOLUTIONARY WAR

During the Revolutionary War, the Battle of Moore's Creek Bridge (the Lexington and Concord of the South) was fought 20 miles northwest of Wilmington in February 1776. Later during the American Revolution, British forces occupied Wilmington (January 1781) and evacuated the town the following October. The **Burgwin-Wright House** (c.1770) interprets this era.


LATIMER
HOUSE

EARLY 19TH CENTURY

For half a century, Wilmington grew slowly until the Wilmington & Weldon Railroad in 1840 opened the NC backwoods to the Wilmington marketplace, producing a flurry of trading activity. By 1850, Wilmington was the largest city in NC. During the next ten years, some of the city's most impressive structures were built including **Thalian Hall**/City Hall (c.1858), **Latimer House Museum** (c.1852) and the **Bellamy Mansion Museum** (c.1859).





CIVIL WAR

During the Civil War, a massive network of defenses at Fort Fisher protected the Cape Fear River. Due to the strength of the protection at Fort Fisher, Wilmington was the last Atlantic Coast port of the Confederacy to remain open to trade. The blockade runner brought needed supplies to inland troops. Fort Fisher fell to Federal troops during the largest naval bombardment of the 19th century on January 15, 1865 and the city soon filled with troops in occupation. In February of 1865, the United States Colored Troops (USCT) fought against the Confederate Army in the Battle of Forks Road, which took place on the grounds where Cameron Art Museum sits today. Commemorated with a bronze sculpture, *Boundless*, the battle was won by the USCT and contributed greatly to the Union's control over Wilmington. After the war and a brief period of economic depression, Wilmington regained its prominence as a center of commerce and culture. Cotton became a major export and the city enjoyed a great building boom.



RECONSTRUCTION & BEYOND

After Emancipation, Wilmington's newly-freed Black population started new businesses, ran for office, and took up professions. These freedoms were attacked by a violent white supremacy campaign that resulted in the Wilmington Coup of 1898, an insurrection that culminated in electoral fraud, the burning of the city's Black newspaper offices, and the deaths of an unknown number of African Americans. The 1898 Memorial Park in Wilmington commemorates the coup d'état with six, 16-foot tall bronze paddles symbolizing the role of water in the spiritual belief system of people from the African continent.


D 56
JUDAH P. BENJAMIN
United States Senator. Confederate Attorney General. Secretary of War, & of State, later lawyer in England. His early home was here.

THE MID-20TH CENTURY

Expansion continued through the early years of the 20th century. During World War II, shipbuilding flourished. Economic decline followed when the railroad, the area's major employer, moved its corporate headquarters from Wilmington in 1960. Recovery came with the introduction of new industries. Preservation efforts which continue today, began in the 1960s. In 1974, much of Wilmington's downtown was listed in the National Register of Historic Places. In 2020, Wilmington became the first city in the country to be designated an "American World War II Heritage City" for its efforts to preserve WWII heritage, restoration of wartime facilities, and recognition of veterans.



BEACHES

Incorporated in 1899, Wrightsville Beach was once a summer retreat accessible only by boat and steam train before WWI. Today this small island community thrives with restaurants, shops, marinas, and resorts. Explore the history of the island at the **Wrightsville Beach Museum of History** within a preserved 1900s beach cottage where exhibits explore East Coast surfing, bathing suits throughout the years, Lumina Station and more. To the south, you'll find Carolina Beach and Kure Beach. Incorporated in 1925, Carolina Beach recalls coastal Americana with its boardwalk, central business district, town marina and Carolina Beach State Park. Visit the **Federal Point History Center**, a quaint history museum offering local history exhibits, research archives and a gift shop. Discover local history in the **Ryder Lewis Park**, a 10-acre wetlands park with marsh boardwalks and a walking trail that takes visitors around the earthen fort built by Confederate troops in 1864 along the Sugar Loaf Line of Defense. Kure Beach, incorporated in 1947, includes the **Fort Fisher State Recreation Area**. At the island's southernmost point, you'll find **Fort Fisher State Historic Site**, where the largest land/sea battle of the Civil War took place. Explore the earthworks, seacoast guns, scenic trails and visitor center.

ARTS, THEATER, MUSEUMS & HISTORICAL EVENTS

Discover Events Sure to Inspire in Wilmington, NC

Theater-goers, fine arts enthusiasts and more can find a cultural event sure to inspire and enliven them. Enjoy history and art events at one of Architectural Digest's "America's Great Old Theaters" or in a renovated church built in 1888. See Broadway plays at a modern technologically advanced center or find your muse at an art museum's outdoor sculpture garden. A vibrant arts and culture scene offers year-round entertainment and events sure to be crowd-pleasers. Get the latest events scoops here, including show times, ticket information and more!

Explore family-friendly special interests when you attend 'learning meets fun' events at a history and science museum, a railroad museum and a children's museum. Other favorite sites include historic home museums, an art museum featuring an outdoor sculpture garden, and even a museum of the bizarre!

As a historic destination with seven districts listed on the National Register of Historic Places as well as other prominent historic sites, you can be assured there are a variety of events hosted commemorating the significance of Wilmington's place in history.

Read More

NOV
01

10th Annual Art in the Garden: Hoppy Time Rabbits
Recurring daily until December 31, 2022
Airlie Gardens

NOV
01

60+ Art Restrospective
Recurring daily until April 9, 2023
Cameron Art Museum

NOV
01

Mummenschanz 50th Anniversary
The Wilson Center

NOV
03

Jazz at the CAM: Shana Tucker

Cameron Art Museum

NOV
04

Coastal Carolina Clay Guild Annual Holiday Show & Sale

Recurring daily until November 6, 2022

Hannah Block USO/Community Arts Center

NOV
04

Comedian Caitlin Cook

Recurring daily until November 5, 2022

Dead Crow Comedy Room | Lush Lounge

NOV
04

Swan Lake: World Ballet Series

UNCW Kenan Auditorium

NOV
05

Art in the Arboretum

Recurring daily until November 6, 2022

New Hanover County Arboretum

NOV
05

Festival Latino

Recurring daily until November 6, 2022

Ogden Park

NOV
06

Quarteto Nuevo in Concert

Thalian Hall Center for Performing Arts

NOV
09

Comedian David Sedaris

UNCW Kenan Auditorium

NOV
12

Ballet Hispanico

UNCW Kenan Auditorium

ABOUT WILMINGTON

From the downtown river district and Riverwalk that skirts the storied Cape Fear River to the new and modern facilities that are remaking the riverfront's skyline, Wilmington, NC is a must-see southern destination. Rivaling Charleston and Savannah in its charm and history and voted America's Best Riverfront, Wilmington serves as the portal to all this area has to offer.

You'll love Wilmington's riverfront, historic neighborhoods and everything in between. Enjoy a relaxed coastal lifestyle for the perfect getaway filled with unlimited vacation choices.

1. Historic District
2. Shopping & Nightlife
3. Downtown Cuisine
4. Historic Tours & Cruises
5. Arts, Culture & Theater
6. Parks & Gardens
7. Midtown

Top



HISTORIC DISTRICT

The banks of the river embrace a variety of architectural styles. Moss-draped live oaks line the 230-block National Register **Historic District**, one of the largest in the South. The city's river district pays tribute to the past and the future by seamlessly blending its charming historic district with the more modern architecture of the north end, along with new hotels, restaurants, a performing arts center, a waterfront park and amphitheater, and a marina.

Discover the River District & Downtown



SHOPPING & NIGHTLIFE

Unearth vintage treasures as you browse boutiques, eclectic **shops** and vibrant **nightlife** venues. Your sensitive side will be fed by stirring **theater** productions and the sounds of live music heard while strolling along brick-lined streets.

Experience Nightlife & Music



DOWNTOWN CUISINE

You're welcome to sit down at the water's edge, where your palate will be fed - and thirst quenched - by fresh local seafood and regional specialties at **locally owned restaurants** and pubs in Wilmington's downtown **river district**, many featuring live music long after the sun goes down.

Savor Local Flavor



HISTORIC TOURS & CRUISES

Let the water guide you across the river and aboard the **Battleship NORTH CAROLINA**, where the distinguished service and sacrifice of sailors live on. See the city on **guided tours** from haunted or historic walks to horse-drawn carriage or trolley rides. Take in breathtaking views of downtown from the water by riverboat or catamaran **cruises**. From the click of horses' hooves on the old brick streets to the rhythm of jazz and beach music **festivals**, Wilmington embraces a combination of influences from both past and present.

Embark on Tours & Cruises



ARTS, CULTURE & THEATER

Enrich your artistic spirit through film festivals and museum exhibitions. With a favorable mild climate, varied landscapes and spectacular architecture, it's easy to see why Hollywood filmmakers have logged more than 400 **film-related** credits in the area, a testament to our independent spirit and quirky charm. Visitors enjoy a mix of modern museums, local art galleries, performing arts venues and historic sites that contribute to the vibrant arts and culture scene.

Find your Arts & Culture Muse



PARKS & GARDENS

Surround yourself by a collection of more than 75,000 azaleas under the enchanting live oak branches at **Airlie Gardens**. Embark on nature trails to discover coastal fauna and wildlife unique to the area. From tennis and bicycling to an urban lake park and more, discover nature in Wilmington's picturesque parks and gardens.

Explore Parks & Nature



MIDTOWN

Moving from downtown Wilmington to midtown, discover a family fun park, golf and shopping villages. **Jungle Rapids Family Fun Park** features a waterpark with a million-gallon wave pool, speed slides, lazy river and more, along with dry activities including miniature golf, go-karts, laser tag, mini bowling, a rock climbing wall and arcade. Midtown also offers the Donald Ross-designed **Wilmington Municipal Golf Course** and exceptional shopping opportunities like **Lumina Station**, where visitors can enjoy locally-owned boutiques and cafes set amongst impeccable landscaping, whimsical sculptures and storybook bridges, and **Mayfaire Town Center**, featuring brand name and indie shops, restaurants and the best of cinema at Regal Mayfaire Stadium 16 and IMAX.

More in Midtown

NEIGHBORHOOD DISCOVERIES

Historic Downtown Wilmington, River District and Beyond

Historic charm and rich Southern culture meet modern design, new attractions and vibrant nightlife in Wilmington's Historic Downtown and River District. But there are smaller, unique neighborhoods popping up and forming their own distinct vibe and character across the city that are not to be missed, too. When in Wilmington, be sure to explore them all to live like a local.

Historic Downtown/River District

Stroll along the **Riverwalk** and enjoy a breathtaking view of the Cape Fear River. Stop into the assortment of markets, unique boutiques, art galleries and independently owned outdoor cafés and restaurants that line the nearly two-mile scenic walkway, all set against the picturesque river backdrop that includes the iconic WWII **Battleship NORTH CAROLINA**.



National Register Historic District

Explore the area's historic roots on a self-guided or horse-drawn carriage ride of downtown's **National Register Historic District**. One of the largest and most picturesque historic districts in the South, the 230-plus blocks hold their own alongside the likes of Charleston and Savannah. Visit some of the finest examples of historic Victorian-era architecture at the **Bellamy Mansion**, built on the eve of the Civil War; the **Burgwin-Wright House and Gardens**, the only structure in Wilmington from the colonial era open to the public; and **Latimer House**, which transports visitors back to the Victorian era to learn tales of the Latimer family.



Brooklyn Arts District

Located on the historic north side of downtown Wilmington, Brooklyn Arts District is an artist's dream full of industrial buildings and old churches. It is anchored by the **Brooklyn Arts Center + The Annex.** Originally constructed in 1888 as St. Andrews Church, the building was the center of Wilmington's Brooklyn neighborhood for nearly a century. St. Andrews school building was completed in 1910. Today, both buildings have been restored and refurbished as an event venue that plays host to live music and concerts, weddings, art shows and vintage flea markets.



Flytrap Brewing pays homage to the Venus flytrap, a carnivorous plant whose only native habitat in the world can be found in and around the Wilmington area. Specializing in American- and Belgian-style ales, Flytrap Brewing made its home here in an extensively renovated former office building. It is not only a brewery, but also a place where locals and visitors meet and mingle, artists display their works and live music and food trucks can be found every weekend.

Tempt your tastebuds with a gourmet burger at **Angus Grill** and choose from 30 different burger types, like the Pimento Cheese & Bacon Burger, Brisket Burger or the Queso Burger in one, two or three-patty sizes.



Located inside a 111-year old historic firehouse directly across the street from Brooklyn Arts Center, **Edward Teach Brewing** features a two-story ship-shaped bar with eight craft beers on tap, including the Three Sheets Double Whitt, Cutlass German Lager, Devil's Son IPA and Peg Leg Chocolate Porter. The brewery's namesake is none other than the infamous pirate better known as Blackbeard. To find Edward Teach Brewing, look for the flag Blackbeard flew over the Queen Anne's Revenge above the door.

Brooklyn Arts District is also home to **Bottega Art and Wine**, a wine bar-meets-art gallery. Artists, collectors, wine enthusiasts and beer connoisseurs regularly gather in this inspiring atmosphere, where the backyard courtyard is filled with interesting spaces, sculptures and 3D art pieces.



South Front District

South Front District is home to older buildings and warehouses that have been transformed into delicious restaurants, funky breweries and picturesque wine bars. Feast on tasty tacos at **BlockTaco**, or enjoy a brew and a bite at **Satellite Bar and Lounge** that is located in a renovated grocery store. The bar is home to Sunday Screenings Movie nights, live music and Signature Sunday Evening Live Bluegrass Jam sessions filled with listening and dancing both inside and on the outside patio. Known for its fresh, American spin on classic European brews, **New Anthem Beer Project** opened an expanded taproom and production that includes spirit barrel aging in a restored former industrial building.

Visible from the street, vino lovers won't be able to take their eyes off the temperature-controlled wine cellar that houses nearly 1,000 bottles of wine at **The Second Glass**. This unique eatery and true wine bar offers a full menu, crafted from the freshest local ingredients available, all intended to enhance the flavor and aroma nuances of the drink selections.



Celebrity chef Vivian Howard, the star of the popular PBS series, “A Chef’s Life,” opened **Benny’s Big Time Pizzeria** in this up and coming neighborhood. Benny’s features an open kitchen and a menu filled with wood-fired pizza, homemade pastas, big salads and smaller, shareable dishes. See for yourself why this chef and her talents on display at this restaurant were filmed for a national television show, and the restaurant was previously included on *Southern Living’s* "Top 13 Things to Eat" list.



Castle Street Arts & Antique District

Coffee, wine, antiques, farm-to-table fare and more can be found in Wilmington's Castle Street Arts and Antique District, located just a few blocks away from downtown Wilmington. When you stroll down Castle Street, pop into Gravity Records to find a treasured vinyl and hear sounds from local acts. Or eat at the original farm-to-table spot in Wilmington, **Rx Restaurant & Bar**. Owner James Doss strives to offer his guests seasonally inspired, ingredient-driven Southern cuisine. The menu is packed with regional dishes like Kyle's Fried Chicken, Lady Edison Pork Chop, N.C. Clams and Humble Roots Pork Belly.

The neighborhood is also home to several chic boutiques. Find elegance and style at **Jess James + Co**, a vintage boutique curated by local style editor and fashion consultant Jess James. Her vintage finds range from clothing to accessories to collectibles. Or stop by the socially conscious Half United. Founded by siblings Carmin and Christian Black, the boutique pairs Carmin's elevated fashion sense and Christian's gritty, rock 'n' roll surfer vibe with a shared passion to give back. That's why for every Half United product purchased, seven meals are provided for a child in need.



Cargo District

Catch the container craze in Wilmington's newest neighborhood, the Cargo District. Explore a variety of creative businesses from shopping to dining, housed in reused shipping containers with tons of local charm. Spend time at **End of Days Distillery**, Wilmington's very first craft distillery and sip on craft cocktail drinks created from limited-edition spirits like the Castaway Series of barrel-rested rum and gin and the Port of Entry vodka, rum and gin. Take a guided tour to learn about the distiller's process to create heritage spirits through the process of sourcing, fermentation, distillation and finishing. Take a seat - inside or out - in the communal dining courtyard and choose from eight rotating taps at Alcove Beer Garden, grab a coffee or tea at the Blue Cup Roastery, dine at **Mess Hall**, which offers a variety of burgers and tasty vegan options or stop by **Cheesesmith** for artisanal grilled cheese sandwiches and sides. As the menu says, "Not your Momma's grilled cheese".

Midtown

Airlie Gardens, one of the premier gardens in the South, is home to 67 acres of Gilded Age gardens and lakes, including the famous nearly 500- year-old Airlie Oak.

Visitors will find everything from a family fun park and historic gardens, to golf and shopping villages in midtown. **Jungle Rapids Family Fun Park** features a waterpark with a million-gallon wave pool, speed slides and lazy river, along with dry activities like miniature golf, go-karts, laser tag, mini-bowling, a rock-climbing wall and an arcade.

Midtown also offers exceptional shopping opportunities like **Lumina Station**, where visitors can enjoy locally owned boutiques and cafes set amidst impeccable landscaping, whimsical sculptures and storybook bridges; and **Mayfaire Town Center**, featuring brand-name shops, restaurants and a movie theater.


HI-WIRE BREWING

Soda Pop District

Named for a former Coca-Cola bottling plant built in the 1930s, the emerging Soda Pop District is located just outside of downtown Wilmington. The fledgling neighborhood is already home to a few local favorites including **Folks Cafe**. Get your caffeine fix with the cafe's fair-trade, organic coffee roasted in small batches and be sure to sample their signature empanadas. Raise a glass at **Hi-Wire Brewing**, which is housed in a former car dealership within the district. Enjoy the outdoor beer gardens while sipping from a selection of 21 craft beers. Or, head inside to the pet- and family-friendly taproom for some foosball and table tennis. Explore the arts community at Jengo's Playhouse, a local cinema and home to the Cucalorus Foundation, which hosts the annual **Cucalorus Festival**.

ATTACHMENT 24

Community Facilities and Services

Commercial Facilities

Commercial/Retail Availability Checklist

Project Name	Investigator(s)	Site Visit Date
Starway Village Apartments	Chris Daves – S&ME, Inc.	8-31-2022

Residential Projects

Identify facilities that will be available for residents.

Facility Type	Facility Names	Distance to closest facility
Grocery	Numerous grocery stores and food outlets within 1-mile radius. Food Lion, La Chiquita Mini Mart, and Dollar General are closest.	< 1 Mile
Pharmacy	Numerous pharmacies outlets within 1-mile radius. CVS Pharmacy is the closest.	<1 Mile
Clothing Store	Numerous clothing stores within 2-mile radius. The Sip and Shop Boutique is closest.	< 1 Mile
Retail Store	Numerous retail stores within 2-mile radius. Dollar General is the closest.	< 1 Mile
Restaurants	Numerous restaurants within 2-mile radius. Merritt's Burger House is the closest.	< 1 Mile
Office Space	Office spaces available within the downtown area of Wilmington.	Within 2 Miles
Employment Centers	Downtown Wilmington metro area, staffing centers, and multiple retail establishments within the area.	Within 2 Miles
Other	Numerous gas stations, library, restaurants, offices, barber shops, convenience stores, etc. located within a 2-mile radius of project area within the downtown Wilmington.	Within 2 Miles

****Heavy commercial areas are located within a 2-mile radius of the project area in downtown area of Wilmington. Carolina Beach Road directly east of the site is also a heavily travelled commercial corridor. These shopping areas contain numerous clothing, retail, and office locations.**

If commercial/retail facilities are not available via walking or public transportation, explain how this will be addressed prior to occupancy by residents.

_____

_____

Commercial & Infrastructure Projects

Identify Project Type.

☐ **Manufacturing** ☐ **Retail** ☐ **Job Training** ☐ **Recreational Services**

☐ **Social Services** ☐ **Educational Services** ☐ **Infrastructure (water, sewer, etc.)**

How many residents/employers is the project intended to serve?_____
Where are the potential project users located?_____

Other Project Types

Describe the project type: **Construction of residences (apartments) will lead to increase tax revenues for the City of Wilmington. The project will increase the number of citizens residing in the area, which in turn will provide local businesses with a greater market base. This will also lead to increased property values of the surrounding area.**

Explain how this project may affect retail/commercial services? **After new residences are constructed, this will lead to greater revenue potential for local area businesses and services due to increased families residing in area. Increased number of citizens living in the area will lead to increased retail traffic throughout the immediate areas likely increasing revenue for local businesses.**

List any additional comments/observations below:



_____ **11/1/2022**

Lead Investigator's Signature **Date**

COMMUNITY FACILITIES and SERVICES

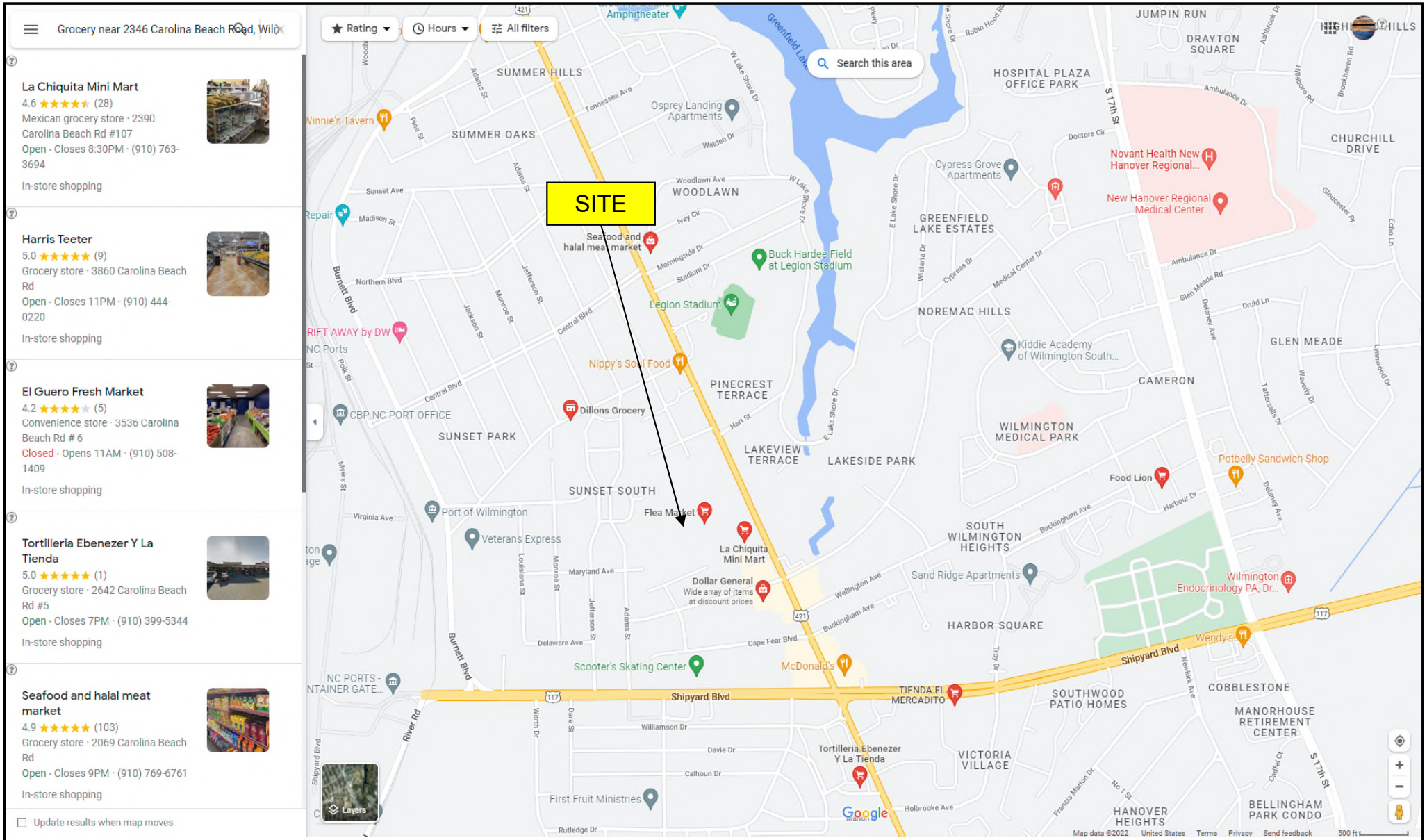
COMMERCIAL/RETAIL FACILITIES

1. Is there adequate and convenient access to retail services? **Yes. (See Attachment 24).**
   In the case of the elderly, this means that shopping for such essential items as food and medicine and services such as banks and other convenience shopping should be within walking distance. **Most services within 1-mile.**

2. In areas not readily serviced by retail services, is public transportation that can carry commuters to retail services within one-half hour available? **Yes.** If public transportation is not available will readily available transportation services be provided? **N/A.**

3. Do local retail services meet the needs of project occupants/users? **Yes.** Are they affordable, and is the range of services adequate? **Yes.**

4. Will existing retail and commercial services be adversely impacted or displaced by the proposed project? **No.**



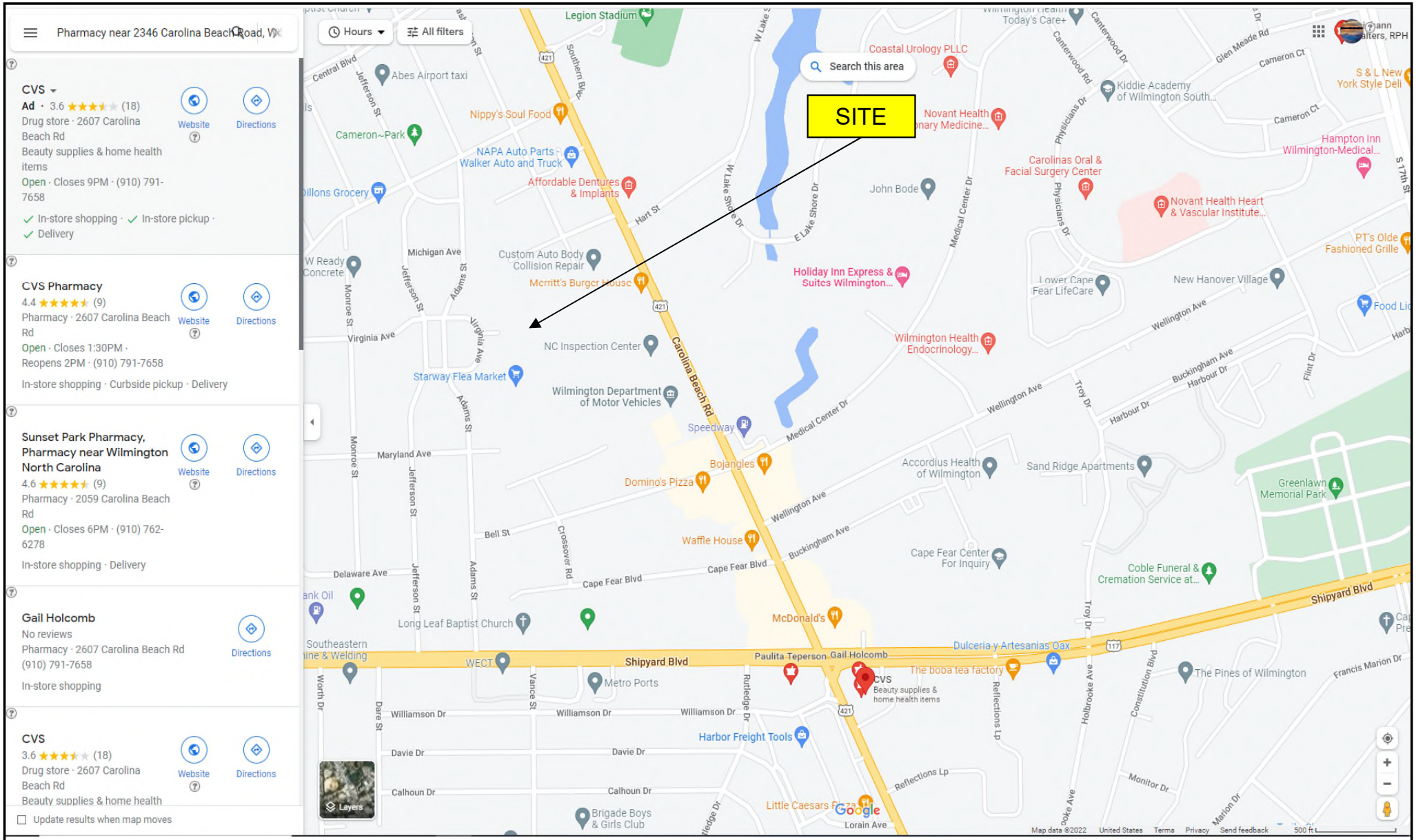
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

COMMERCIAL FACILITIES EXHIBIT (GROCERY)
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



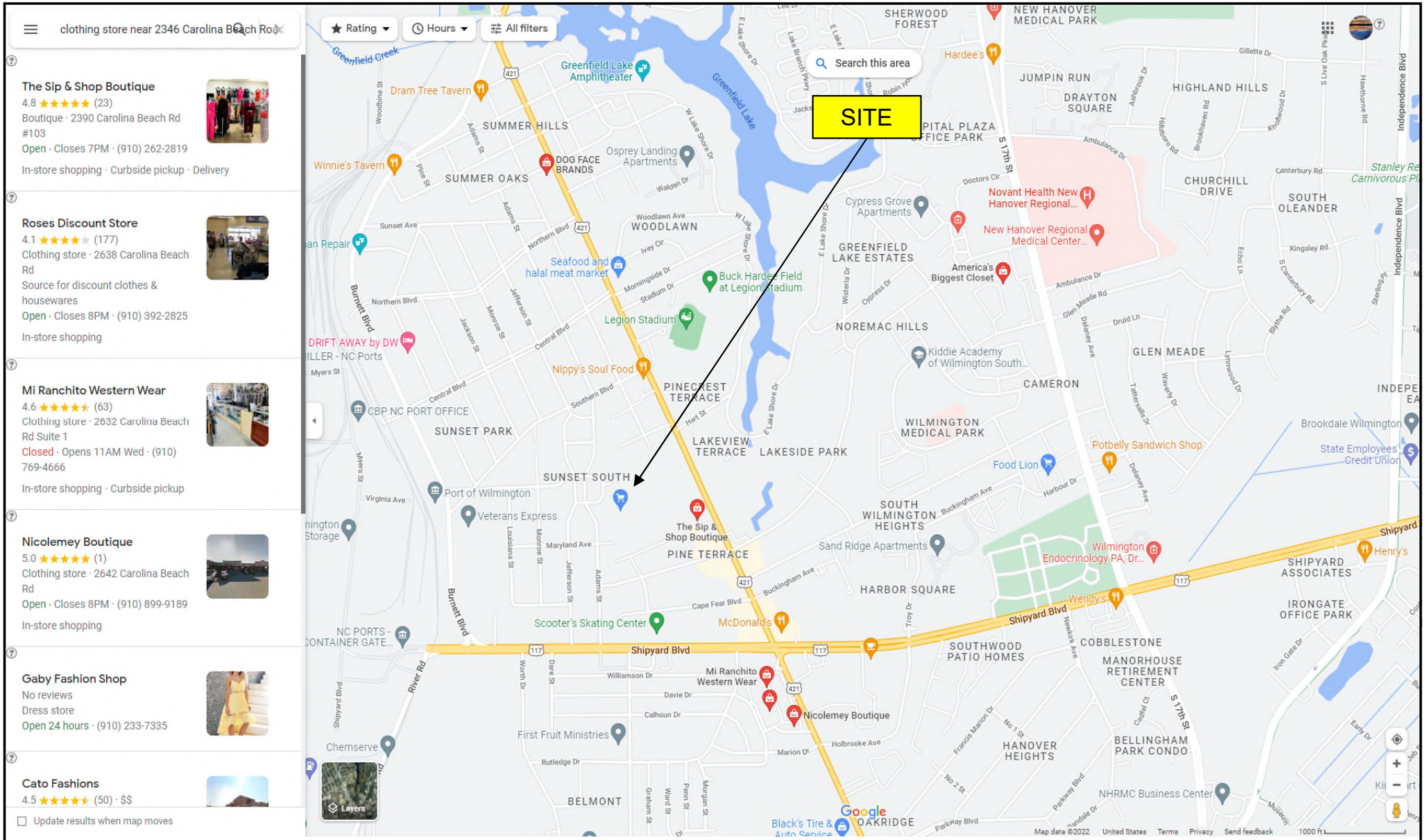
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

COMMERCIAL FACILITIES EXHIBIT (PHARMACY)
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



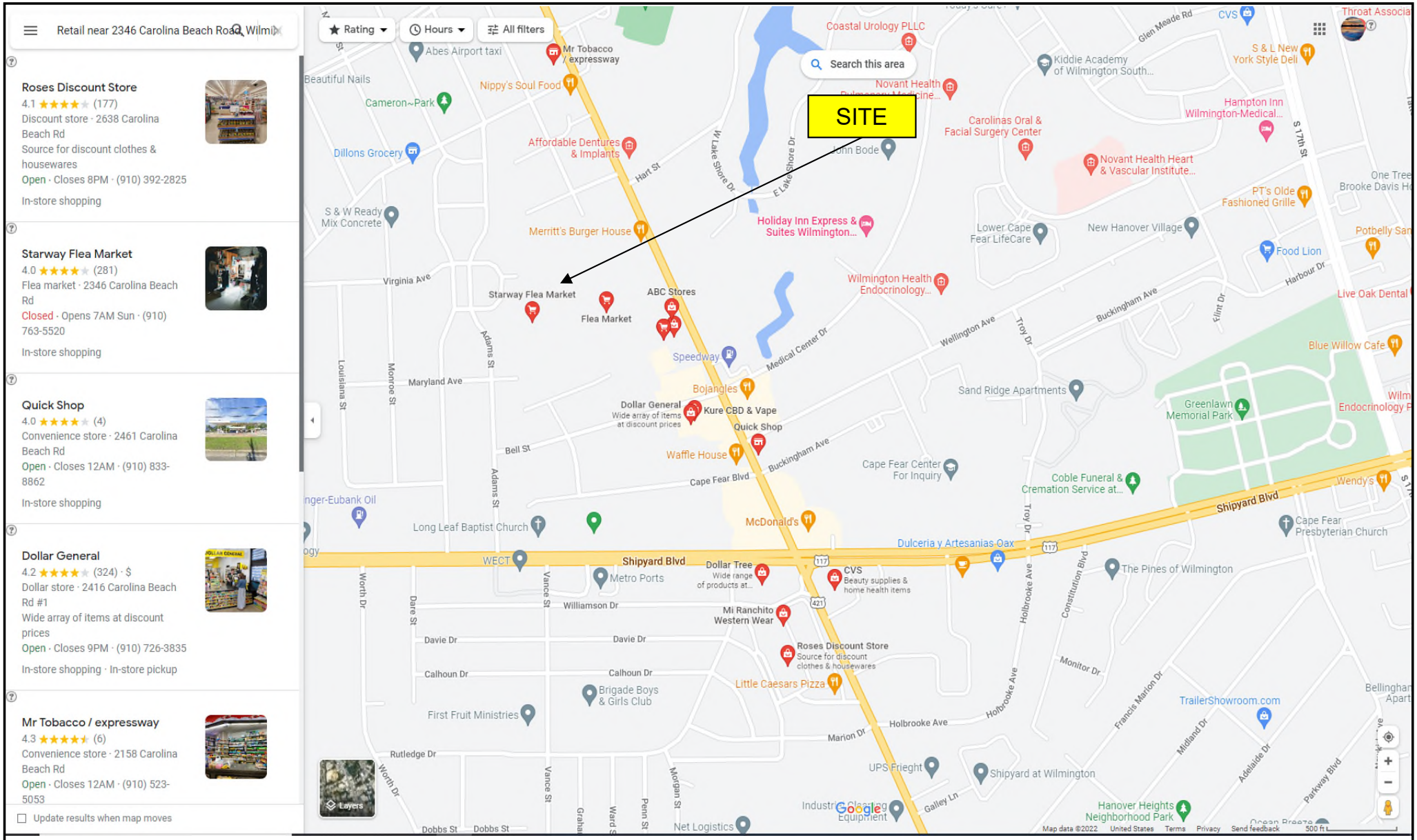
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

COMMERCIAL FACILITIES EXHIBIT (CLOTHING)
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



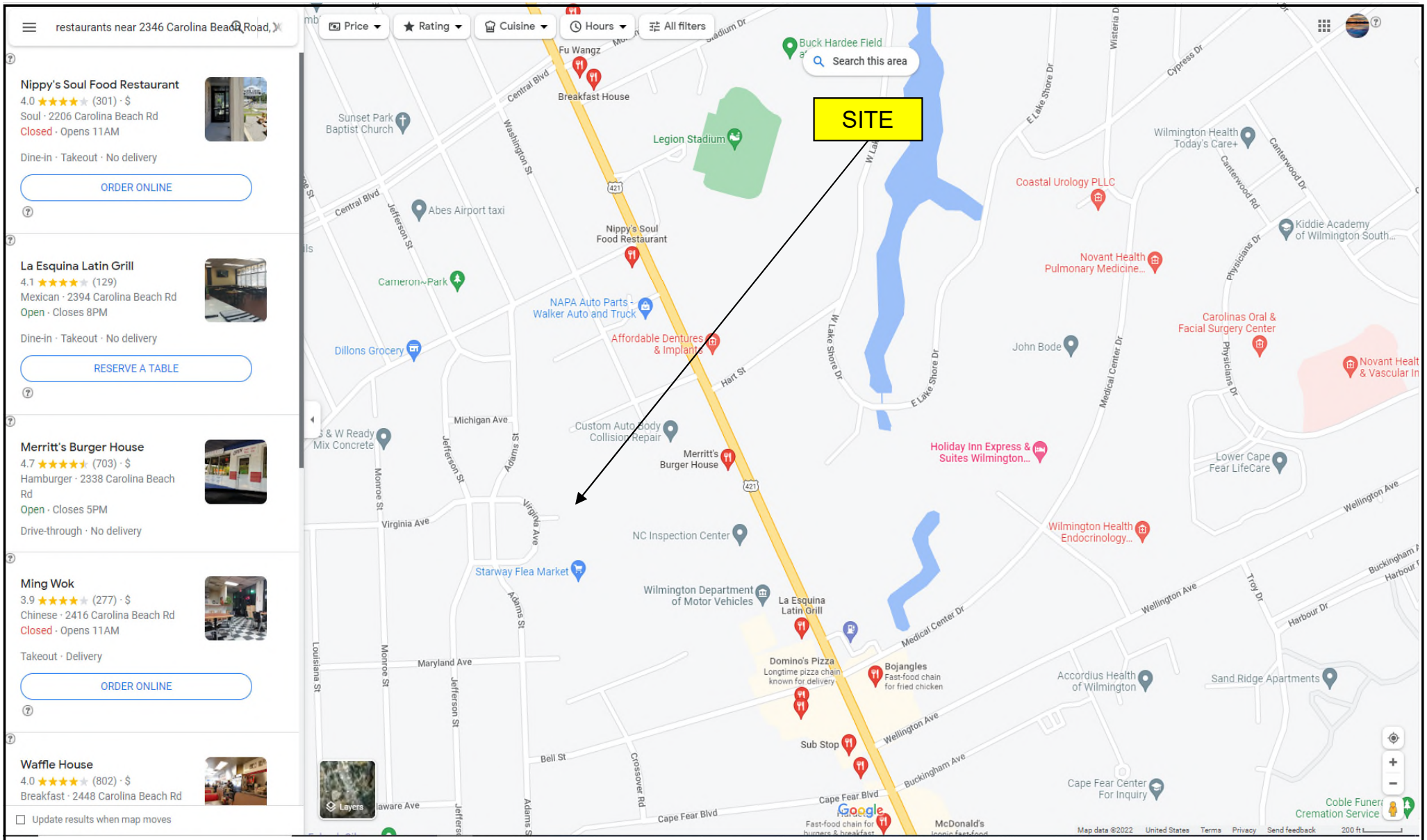
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

COMMERCIAL FACILITIES EXHIBIT (RETAIL)
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

COMMERCIAL FACILITIES EXHIBIT (RESTAURANTS)
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

ATTACHMENT 25

Community Facilities and Services

Health Care and Social Services

COMMUNITY FACILITIES and SERVICES

SOCIAL SERVICES/HEALTH CARE

1. Will residents have specific social service needs? **No.**

2. If so, are social services currently located within a "convenient" and a "reasonable" distance of residents? **Yes (See Attachment 25).**

3. Are the social services available "matched" to the potential users? **Yes.**

4. Will social services be overtaxed or negatively impacted by the proposed project? **No.**

5. Will the provision of additional social services at this site create a concentration of the disadvantaged in violation of HUD site and neighborhood standards? **No.**

Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:24 PM
To: tjackson@nhcgov.com
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 4 Social Services Resource Letter -Starway.pdf

Dear Ms. Jackson,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the Cape Fear Public Transportation Authority regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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October 4, 2022

New Hanover County Social Services
1650 Greenfield Street
Wilmington, North Carolina 28401

Attention: Ms. Tonya Jackson, Director (tjackson@nhcgov.com)

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Ms. Jackson:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County Social Services regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by New Hanover County Social Services or resources managed by New Hanover County Social Services.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

SOCIAL SERVICES CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Adequate and appropriate Social Services are ☐ are not ☐ available for this project
Furthermore, available Social Services will ☐ will not ☐ be adversely affected by this project.

Social organizations that may serve the project are:

Additional Comments/Conditions/Concerns

Date

(Officials Signature)

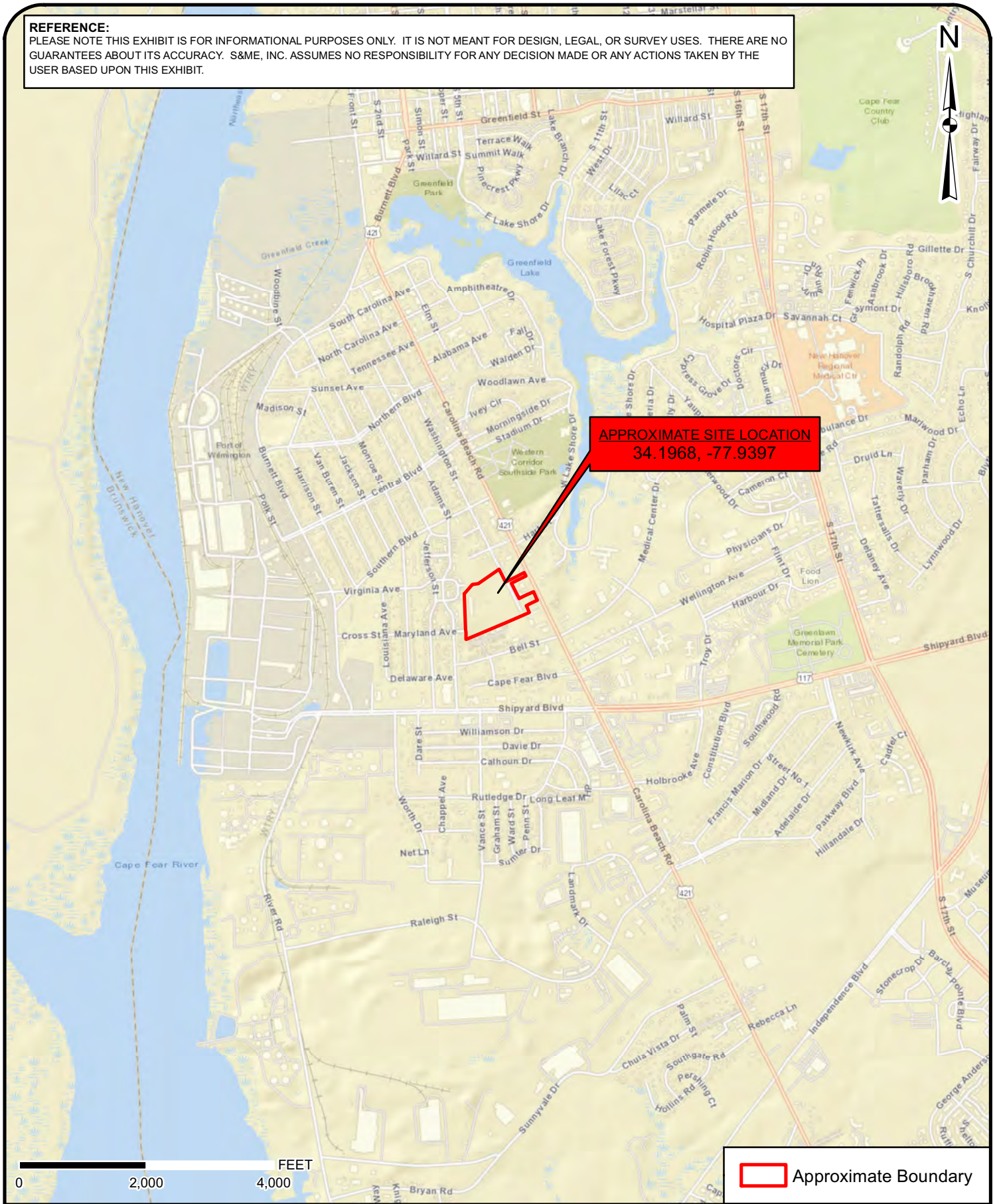
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

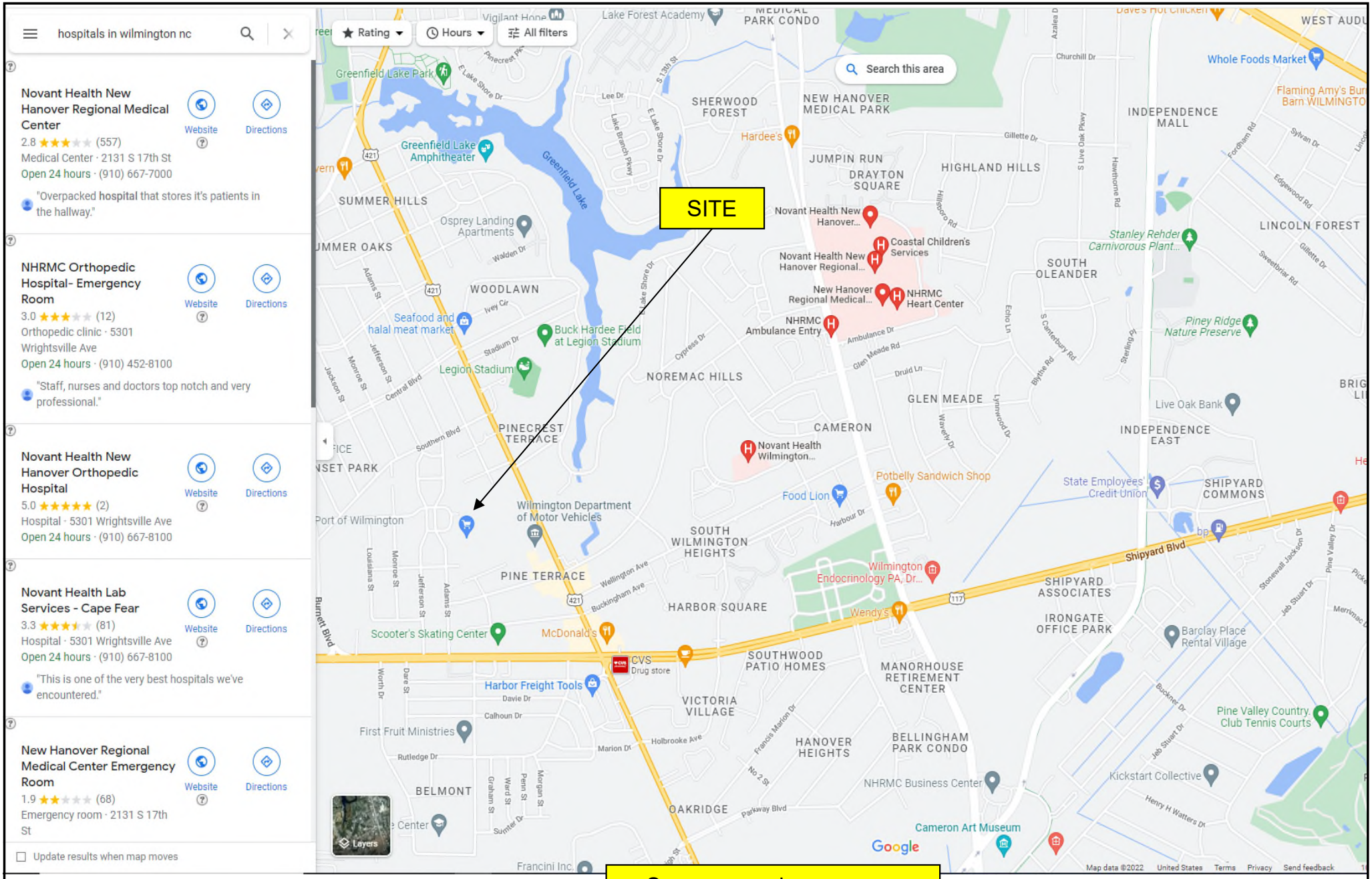
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PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-2022

MEDICAL FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

doctors offices in Wilmington, NC

Novant Health New Hanover Primary Care - Wilmington
3.3 ★★★½☆ (16)
Doctor · 1960 S 16th St
Open · Closes 5PM · (910) 662-6000
Website Directions

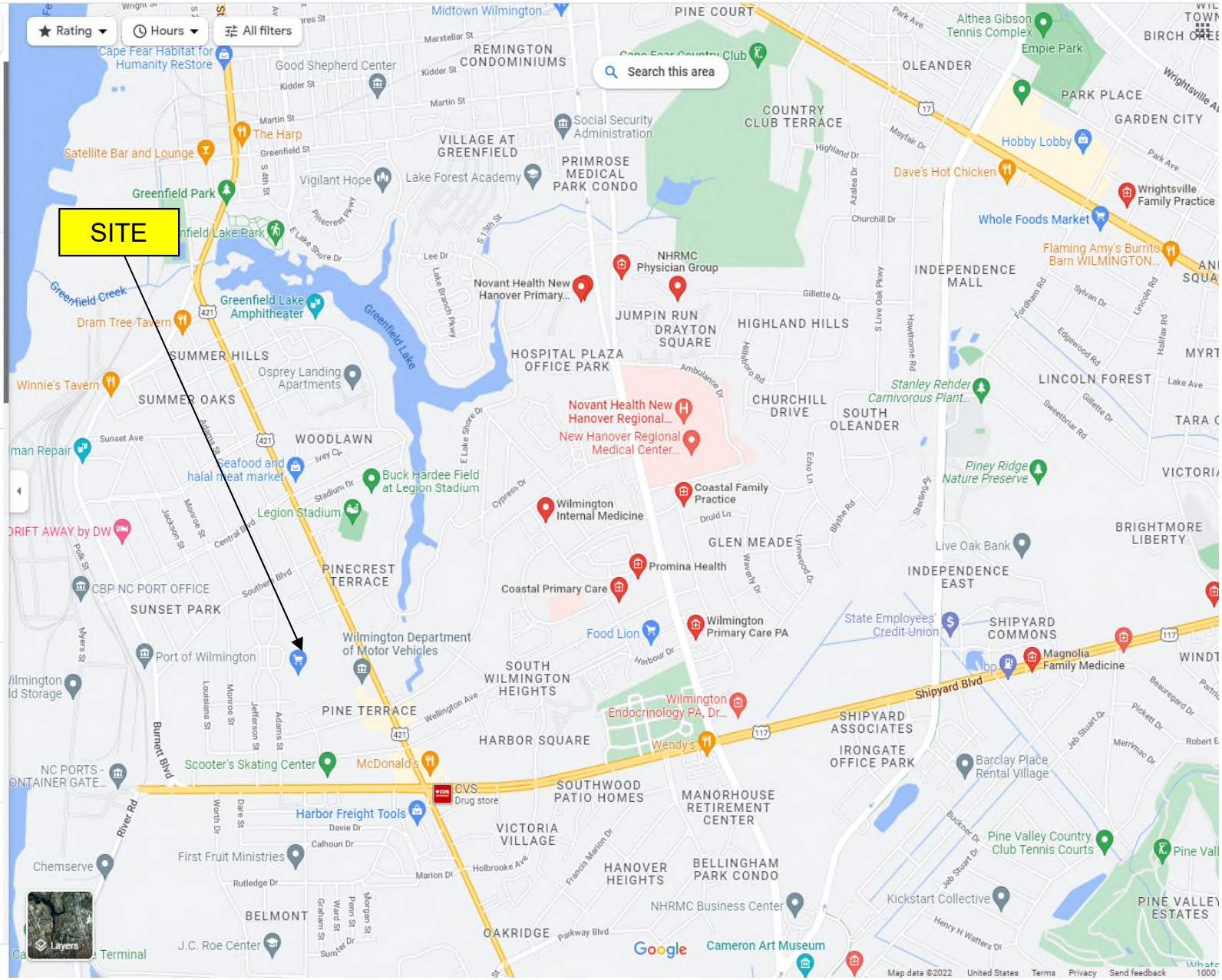
Landfall Family Practice
4.7 ★★★★½ (192)
Diagnostic center · 5710 Oleander Dr #103
Open · Closes 4PM · (910) 772-2092
Website Directions
"This is a doctor's office where you know you are getting the best care."

Novant Health Family Medicine Wrightsville Beach
4.2 ★★★★☆ (38)
Family practice physician · 1721 Allens Ln # 100
Open · Closes 5PM · (910) 344-8900
Website Directions
"Excellent front office staff."

Coastal Family Practice
3.7 ★★★½☆ (10)
Internist · 2207 Delaney Ave
Open · Closes 5PM · (910) 763-3481
Directions
"Friendly staff and a doctor that takes the time to talk to you."

Wilmington Health Family Medicine - Shipyard
4.1 ★★★★☆ (40)
Family practice physician · 4141 Shipyard Blvd
Open · Closes 5PM · (910) 792-
Website Directions

Update results when map moves



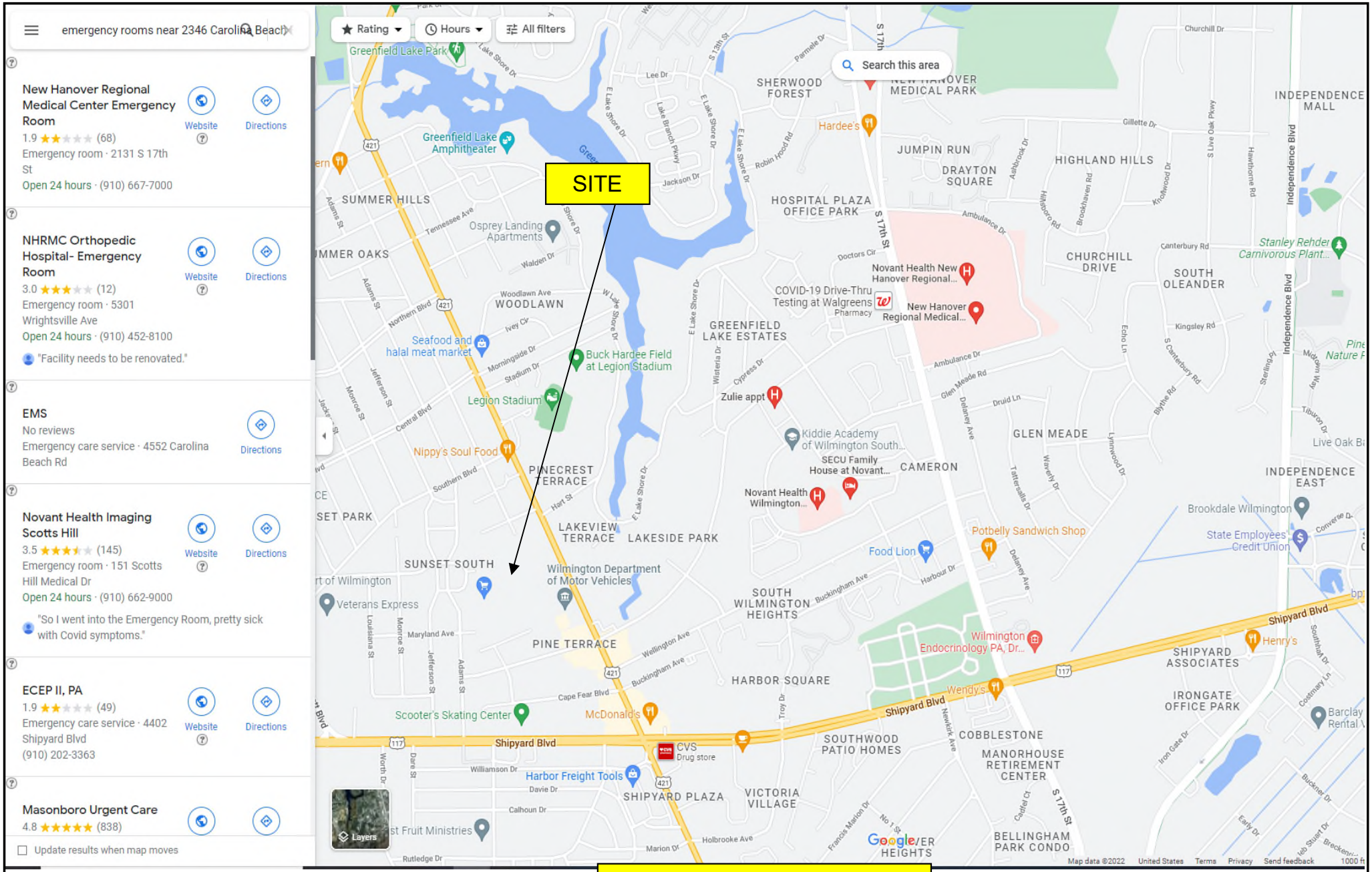
Source: googlemaps.com

SCALE:	NTS
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DATE:	11-1-2022

MEDICAL FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



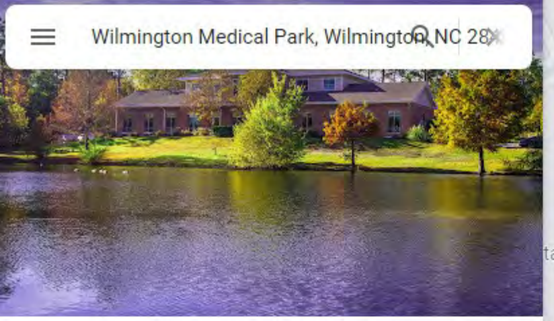
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DATE:	11-1-22

MEDICAL FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



Wilmington Medical Park, Wilmington, NC 28

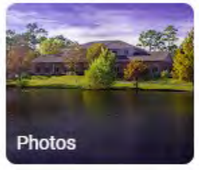
Wilmington Medical Park

Wilmington, NC 28401

Fog · 64°F
8:01 AM

Directions | Save | Nearby | Send to phone | Share

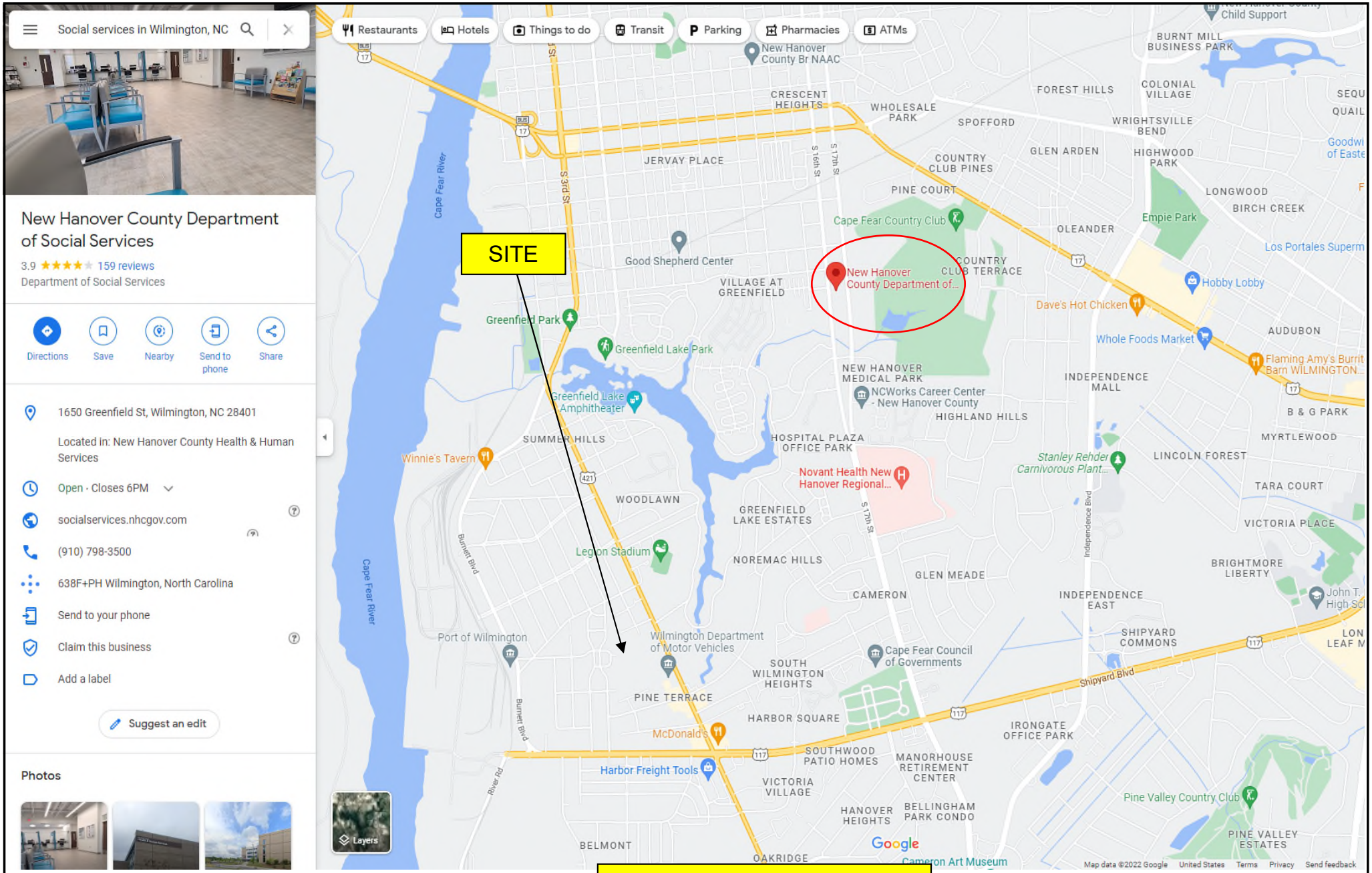
Photos





Restaurants | Hotels | Things to do | Museums | Transit | Pharmacies | ATMs

Legion Stadium
Wilmington Health Today's Care+
Coastal Urology PLLC
CVS
Kiddie Academy of Wilmington South...
Nippy's Soul Food
Novant Health Pulmonary Medicine...
NAPA Auto Parts - Walker Auto and Truck
Affordable Dentures & Implants
John Bode
Carolinas Oral & Facial Surgery Center
Novant Health Heart & Vascular Institute...
Wilmington Medical Park
Custom Auto Body Collision Repair
Merritt's Burger House
SITE
Holiday Inn Express & Suites Wilmington...
Lower Cape Fear LifeCare
New Hanover Village
NC Inspection Center
Wilmington Health Endocrinology...
Wilmington Department of Motor Vehicles
Speedway
Bojangles
Domino's Pizza
Accordius Health of Wilmington
Sand Ridge Apartments
Greenlawn Memorial Park
Waffle House
Cape Fear Center For Inquiry
Coble Funeral & Cremation Service at
Layers
Google
Map data ©2022 United States Terms Privacy Send feedback 200 ft



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-2022

SOCIAL SERVICES FACILITIES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

STAFF



Tonya Jackson
Director of Social Services
Phone: (910) 798-3631
Contact

Mary Beth Rubright
Assistant Director of Social Work Services
Phone: (910) 798-3575
Contact

Brian Bocnuk
Program Manager, Child Welfare Services
Foster Care and Adoption Assistance
Phone: (910) 798-3545
Contact

Alyssa Harrell
Child Support Services
Phone: (910) 343-5291
Contact

Holly Royals
Program Manager, Child Protective Services
Phone: (910) 798-3584
Contact

Michael Bennett
Transportation Services
Phone: (910) 798-3482
Contact

Vanell Walker
Assistant Director for Economic and Family Services
Phone: (910) 798-3417
Contact

Amber Garner
Program Manager, Economic Services
Food & Nutrition Services, Child Daycare and Work First
Phone: (910) 798-3718
Contact

Lori Harvey
Program Manager, Economic Services
Adult and Family & Children Medicaid
Phone: (910) 798-3747
Contact

Sean Dwyer
Program Manager, Adult Services
Phone: (910) 798-3795
Contact

Gwendolyn Williams
Community Services & Facility Coordinator
Phone: 910-798-3470
Contact

About Us

Mission Statement

Hours and Location

HOURS AND LOCATION

Address: 1650 Greenfield Street, Wilmington, NC

Phone: 910-798-3500

Fax: 910-798-7824

Hours:

- 8 a.m. – 5 p.m. (Monday, Wednesday, Thursday & Friday)
- 8 a.m. – 6 p.m. (Tuesday)

> *Social Services is now operating out of the new Health and Human Services building (directly behind the former DSS building). While the former building is new parking lot is built, clients can park behind the new building, entering the back parking lot from 16th Street (entrance is directly after Greenfield Stree about the Health and Human Services building here.*



About Us

Mission Statement

Hours and Location

Staff

FAQs

Health & Human Services

MISSION STATEMENT

New Hanover County Department of Social Services exists to alleviate emotional and economic distress among the people of the county. Providing a essential services, the New Hanover County Department of Social Services seeks to assist and protect our most vulnerable citizens — the poor, the ch disabled, and the sick — and to enhance and maintain the quality of life in our community.

It is the goal of the New Hanover County Department of Social Services to create and sustain a public agency which is:

- Professionally responsive to all clients and sensitive to the uniqueness of each client's problems and needs;
- Valued by our community and publicly accountable for the effective and efficient management of the public's funds;
- Professionally stimulating, rewarding and satisfying to our employees; and
- Creatively adaptive to changing demands, laws and regulations without losing sight of our role as an advocate for the vulnerable people in our concern for the plight of the individual client.

About Us

Mission Statement

Hours and Location

Staff

FAQs

Health & Human Services

Reports

News

Social Services: 1650 Greenfield Street • Wilmington, NC 28401 • Phone 910-798-3500 • Fax 910-798-7824

Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:27 PM
To: dhoward@nhcgov.com
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 5 Health Services Resource Letter -Starway.pdf

Dear Mr. Howard,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the New Hanover County Health Department regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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October 4, 2022

New Hanover County Health Department
1650 Greenfield Street
Wilmington, North Carolina 28401

Attention: Mr. David Howard, Health Director (dhoward@nhcgov.com)

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Mr. Howard:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County Health Department regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by New Hanover County Health Department or resources managed by New Hanover County Health Department.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

HEALTH SERVICES CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Adequate and appropriate Health Services are ☐ are not ☐ available for this project
Furthermore, available Health Services will ☐ will not ☐ be adversely affected
by this project.

Health Service/Provider organizations that may serve the project are:

Additional Comments/Conditions/Concerns

Date

(Officials Signature)

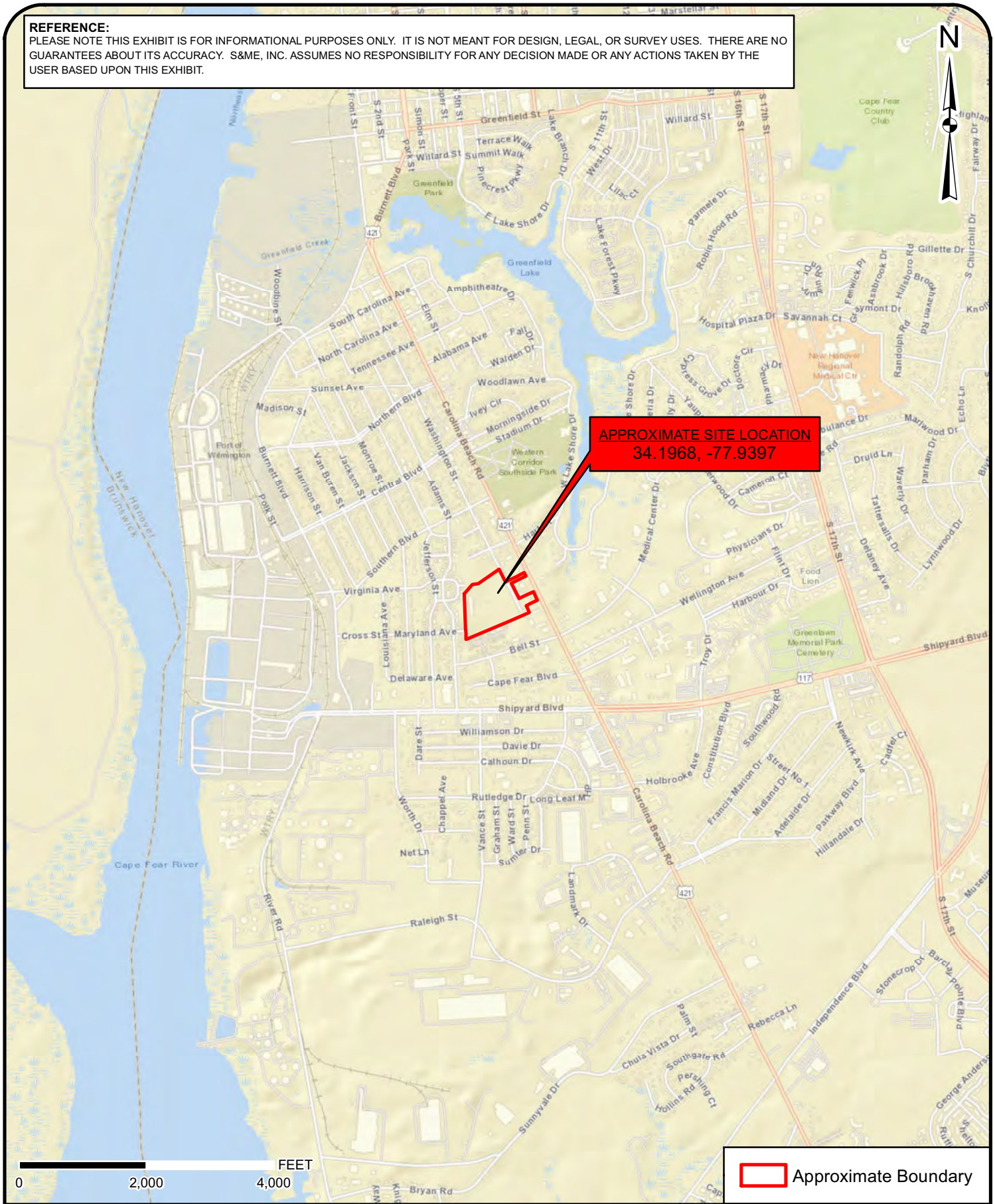
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022



PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn

ATTACHMENT 26

Community Facilities and Services

Solid Waste Disposal / Recycling

SOLID WASTE REMOVAL CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Solid Waste disposal for the above project can be adequately handled by public [ ] or private collectors [✓] without adversely affecting landfill capacity, ; or Solid Waste disposal is limited [ ] due to the unavailability of collectors [ ] or adequate landfill capacity [ ] .

Additional Comments/Conditions/Concerns

11/7/2022
Date

(Officials Signature)

JOE SULEYMAN
(Officials Name – Print or Type)

DIRECTOR
(Official's Title)

RECYCLING & SOLID WASTE
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

Chris Daves

From: Suleyman, Joe <jsuleyman@nhcgov.com>
Sent: Sunday, November 6, 2022 5:17 AM
To: Chris Daves
Subject: RE: Starway Village Apts.
Attachments: SENVMNHC26022110606210.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Chris,

Please see attached certification.

Thank you,

Joe

Joe Suleyman
Environmental Management Director
New Hanover County - Environmental Management - Administration
(910) 798-4403 p | (910) 798-4408 f
jsuleyman@nhcgov.com
3002 U.S. Highway 421 North
Wilmington, NC 28401
www.NHCgov.com

Chris Daves

From: Dave Mayes <Dave.Mayes@wilmingtonnc.gov>
Sent: Monday, October 17, 2022 10:54 AM
To: Chris Daves
Cc: Suzanne Rogers
Subject: Comments - Starway Village Apartements

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Mr Daves

In response to the Solid Waste Removal Certification, the proposed apartments appears to be intended to have dumpster service. The City of Wilmington does not provide dumpster service. A private hauler would have to provide that service.

In addition, the NHC landfill is operated by the County. They would have to respond with any affects this project would have in relation to landfill capacity.

Let me know if you have any further questions.

David B. Mayes, PE

Director
Public Services Department
City of Wilmington
209 Coleman Drive
Wilmington, NC 28412
Dave.mayes@wilmingtonnc.gov
910 341 5880 office
910 470 1869 mobile

E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

Chris Daves

From: Chris Daves
Sent: Friday, October 28, 2022 4:08 PM
To: jSuleyman@nhcgov.com
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter for Recycling and Solid Waste
Attachments: 2 Solid Waste & Recycling Resource Letter -Starway.pdf

Dear Director Suleyman,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the New Hanover County Recycling and Solid Waste regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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October 4, 2022

New Hanover County Recycling and Solid Waste
3002 U. S. Highway 421 North
Wilmington, North Carolina 28401

Attention: Mr. Joe Suleyman, Recycling and Solid Waste Director

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Mr. Suleyman:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County Recycling and Solid Waste regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by New Hanover County Recycling and Solid Waste or resources managed by New Hanover County Recycling and Solid Waste.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

SOLID WASTE REMOVAL CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Solid Waste disposal for the above project can be adequately handled by public ☐ or private collectors ☐ without adversely affecting landfill capacity, ; or Solid Waste disposal is limited ☐ due to the unavailability of collectors ☐ or adequate landfill capacity ☐ .

Additional Comments/Conditions/Concerns

Date

(Officials Signature)

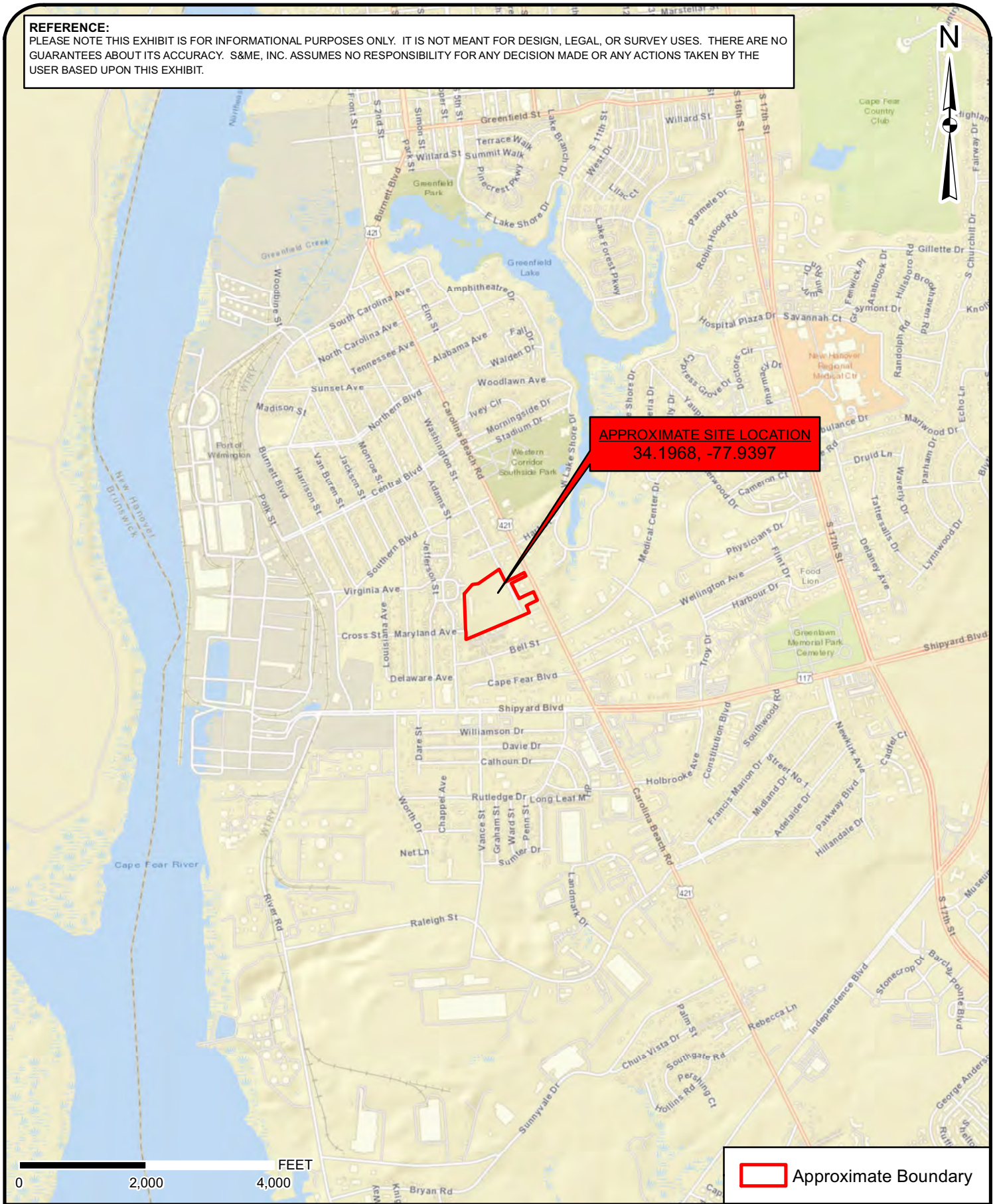
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022



PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn

COMMUNITY FACILITIES and SERVICES

SOLID WASTE DISPOSAL/RECYCLING

1. What types and amounts of waste are to be generated as construction debris?
   Typical construction debris for apartment-type project (wood, concrete, etc.).

2. What solid waste disposal system or company will handle the construction debris? Does it have the capacity to handle the amount of debris?
   Owner of apartment complex will decide on solid waste contractor to handle disposal of household waste from the site. City of Wilmington does not provides curb side pickup or dumpster services for apartment complexes according David Mayes, the Director of the City of Wilmington's Public Services Department. Solid waste will be hauled to the New Hanover County Landfill (Attachment 26).

3. What types of solid waste (including hazardous waste, if any) will be generated by the completed project? **Domestic, household waste. No hazardous waste.**

4. What is the name of the solid waste servicing company or landfill and what is the distance from the proposed project site?
   Owner of apartment complex will decide on solid waste contractor to handle disposal of household waste from the site. City of Wilmington does not provides curb side pickup or dumpster services for apartment complexes according David Mayes, the Director of the City of Wilmington's Public Services Department. Solid waste will be hauled to the New Hanover County Landfill (Attachment 26).

5. Is solid waste permitting required for the project, and/or will the completed project require solid waste permitting and when? **No.**

6. If hazardous waste, does the servicing company/landfill accept hazardous waste? If yes, attach documentation. **N/A**

7. What organization will handle garbage collection, composting, and recycling? **Private entity (dumpster and recycling) to be decided by owner of apartment complex.**

8. Does this organization have the capacity to handle the garbage, composting and recycling, and is the service affordable? **Yes.**

9. Will the waste from the proposal exceed the capacity of the waste system or landfill?
   No. New Hanover County Department of Environmental Management Director, Joe Suleyman, was contacted and requested to provide a response of impacts that the proposed project will have on their local services (landfill). Director Suleyman responded the department can provide adequate services and will not be adversely affected by the proposed project (Attachment 26).

ATTACHMENT 27

Community Facilities and Services

Waste Water / Sanitary Sewers

Cape Fear
Public Utility Authority
Stewardship. Sustainability. Service.

January 12, 2022

Katie Judd, EIT; Civil Analyst
Kimley-Horne
421 Fayetteville Street, Suite 600
Raleigh, NC 27601

Re: Water & Sewer Availability - Starway Village
Situs Address: 2346 Carolina Beach Rd.

Dear Ms. Judd,

This letter is to verify that Cape Fear Public Utility Authority (CFPUA) water and sewer capacity is currently available for the proposed Starway Village project. Sewer capacity is allocated on a first come, first serve basis when capacity is available, the plans meet CFPUA's requirements, and the NCDWQ FTA/FTSE forms are signed by the Authority. If the project plans to use sprinklers for fire suppression, an engineer must perform modeling to determine that the on-site appurtenances can sustain required water flow and pressure. Please feel free to contact me if you have any questions.

Sincerely,

David Dailey, Project Manager
Cape Fear Public Utility Authority
Engineering Department
Development Services Division
910-332-6626

COMMUNITY FACILITIES and SERVICES

WASTE WATER/SANITARY SEWERS

1. Will the existing or planned waste water disposal systems provide satisfactory service to the proposed development? **Yes.**
   What kind of wastewater/sewer system will provide service to the site?
   Public waste water and sanitary sewer services will be provided to the site by the Cape Fear Public Utility Authority (CFPUA). The waste water treatment facilities associated with the site will be able to handle the additional waste generated. See Waste Water Verification Letter (Attachment 27).

2. Will the design capacity of the treatment plant be exceeded by the project as proposed? **No.**

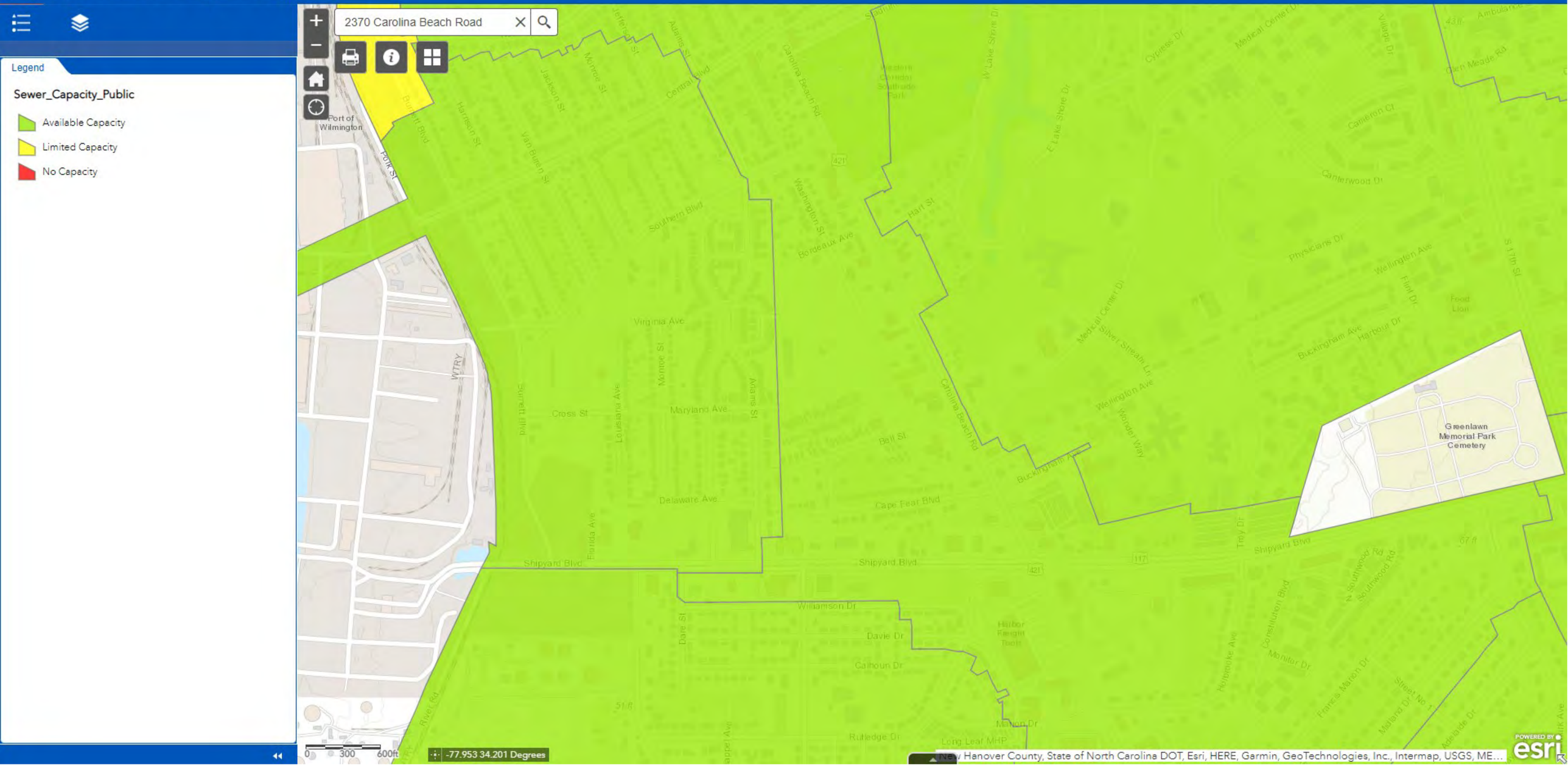
3. Will the proposed project be adversely affected by the proximity of sewage disposal facilities? **No.**

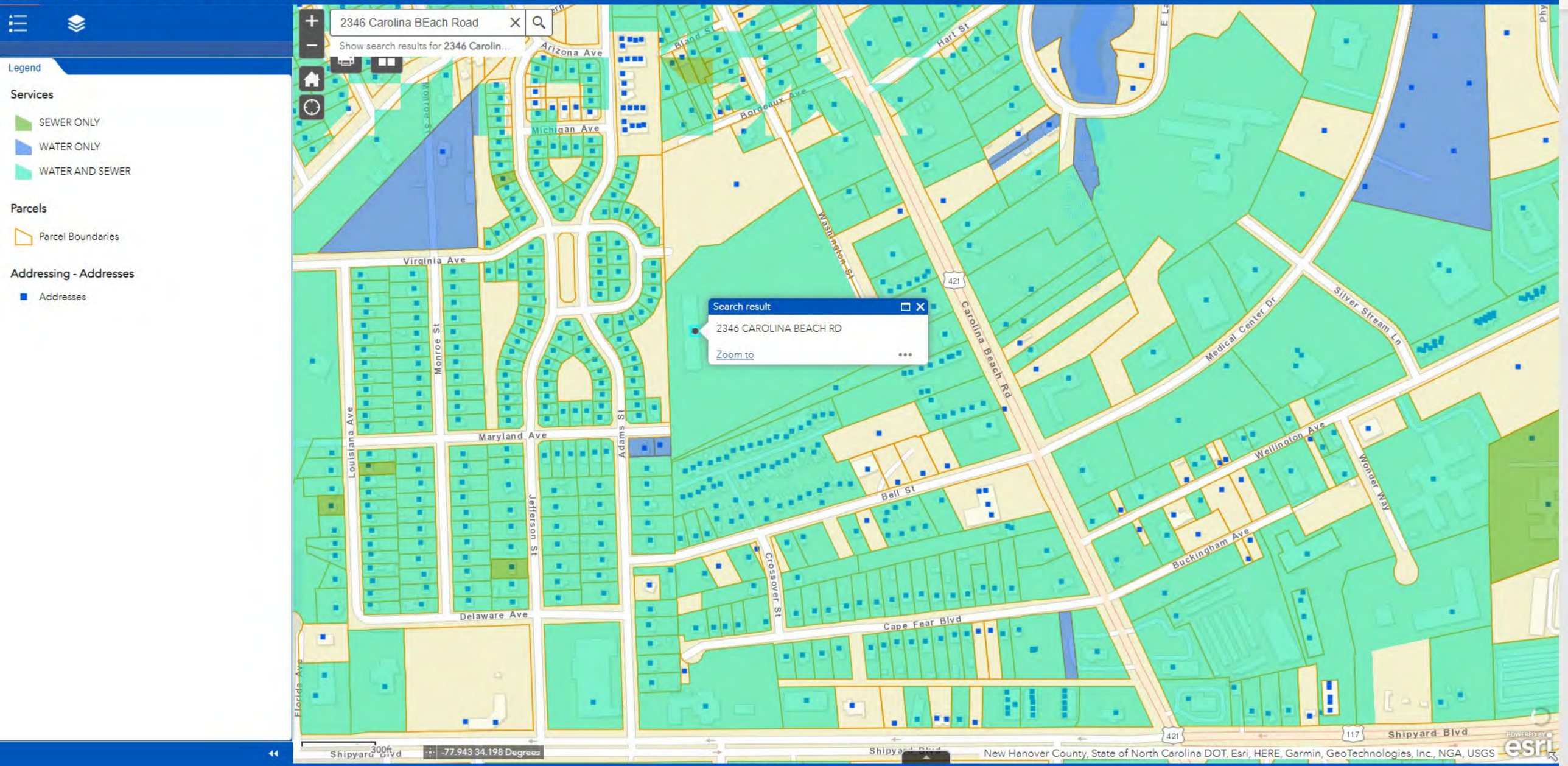
4. In areas remote from existing sewer systems are the soil conditions suitable for on-site septic systems? **N/A**

5. Has a report of the soil conditions suitable for on-site septic systems been submitted? **N/A**

6. Are soil conditions suitable for on-site septic systems? Is there a large variance in the water table elevation? (A high seasonal water table can prevent proper functioning of septic tanks drain fields). **N/A**

7. Have septic disposal systems been properly designed, installed, and maintained, as appropriate, to prevent effluent from contaminating soil or groundwater, including sole source aquifers? **N/A**


2370 Carolina Beach Road
Legend
Sewer_Capacity_Public
Available Capacity
Limited Capacity
No Capacity
Port of Wilmington
Polk St
Burnett Blvd
Harnett St
Van Buren St
Jackson St
Monroe St
Central Blvd
Carolina Beach Rd
Washington St
Bordeaux Ave
Southern Blvd
Hart St
Virginia Ave
WTRY
Sunset Blvd
Louisiana Ave
Cross St
Maryland Ave
Adams St
Ball St
Delaware Ave
Florida Ave
Shipyard Blvd
Williamson Dr
Dare St
Davie Dr
Calhoun Dr
Rutledge Dr
Rivet Rd
Chappel Ave
Long Leaf MHP
Manon Dr
Harbor Freight Tools
Medical Center Dr
Silver Streams Ln
Wellington Ave
Wonder Way
Buckingham Ave
Harbour Dr
Food Lion
Greenlawn Memorial Park Cemetery
Cypress Dr
Medical Center Dr
Village Dr
Glen Meade Rd
Cameron Ct
Canterwood Dr
Physicians Dr
Hunt Dr
S 17th St
Trey Dr
Constitution Blvd
Monitor Dr
Francis Marion Dr
Helmstone Ave
Southwood Rd
N Southwood Rd
Adelaide Dr
0 300 600ft
-77.953 34.201 Degrees
New Hanover County, State of North Carolina DOT, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, ME...
POWERED BY esri



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ATTACHMENT 28

Community Facilities and Services

Water Supply

Cape Fear
Public Utility Authority
Stewardship. Sustainability. Service.

January 12, 2022

Katie Judd, EIT; Civil Analyst
Kimley-Horne
421 Fayetteville Street, Suite 600
Raleigh, NC 27601

Re: Water & Sewer Availability - Starway Village
Situs Address: 2346 Carolina Beach Rd.

Dear Ms. Judd,

This letter is to verify that Cape Fear Public Utility Authority (CFPUA) water and sewer capacity is currently available for the proposed Starway Village project. Sewer capacity is allocated on a first come, first serve basis when capacity is available, the plans meet CFPUA's requirements, and the NCDWQ FTA/FTSE forms are signed by the Authority. If the project plans to use sprinklers for fire suppression, an engineer must perform modeling to determine that the on-site appurtenances can sustain required water flow and pressure. Please feel free to contact me if you have any questions.

Sincerely,

David Dailey, Project Manager
Cape Fear Public Utility Authority
Engineering Department
Development Services Division
910-332-6626

04 November 2022

Ted Heilbron
Kelley Development Company
Brad Queener
Bradley Housing Developers, LLC
Starway Village I Apartment Community- Wilmington, North Carolina

Re: Safe Drinking Water- Starway Village I, Wilmington, NC

Mr. Heilbron, Mr. Queener:

Per current Environmental Review requirements and 2021 NCHFA QAP requirements, Starway Village I Apartments in Wilmington, NC will be constructed using lead-free pipes, solder, and flux. All above and below ground water piping, fittings, components, coatings, joining materials and fixtures will meet the requirements of NSF 61 (manufacturing standard which domestic water products in North America must meet to be lead-free) and Sections 605.4 and 605.5 of the 2018 North Carolina Plumbing Code.

Please let me know if any additional information is needed.

Thank you!

Sincerely,

Michael P. Haynes, AIA
Progress Design Studio, PLLC

04 November 2022

Ted Heilbron
Kelley Development Company
Brad Queener
Bradley Housing Developers, LLC
Starway Village II Apartment Community- Wilmington, North Carolina

Re: Safe Drinking Water- Starway Village II, Wilmington, NC

Mr. Heilbron, Mr. Queener:

Per current Environmental Review requirements and 2021 NCHFA QAP requirements, Starway Village II Apartments in Wilmington, NC will be constructed using lead-free pipes, solder, and flux. All above and below ground water piping, fittings, components, coatings, joining materials and fixtures will meet the requirements of NSF 61 (manufacturing standard which domestic water products in North America must meet to be lead-free) and Sections 605.4 and 605.5 of the 2018 North Carolina Plumbing Code.

Please let me know if any additional information is needed.

Thank you!

Sincerely,

Michael P. Haynes, AIA
Progress Design Studio, PLLC

COMMUNITY FACILITIES and SERVICES

WATER SUPPLY

1. Will either the municipal water utility or on-site water supply system be adequate to serve the proposed project?
   Public water services will be provided to the site by the Cape Fear Public Utility Authority (CFPUA). The water treatment facilities associated with the site will be able to handle the additional demand generated. See Water Verification Letter (Attachment 28).

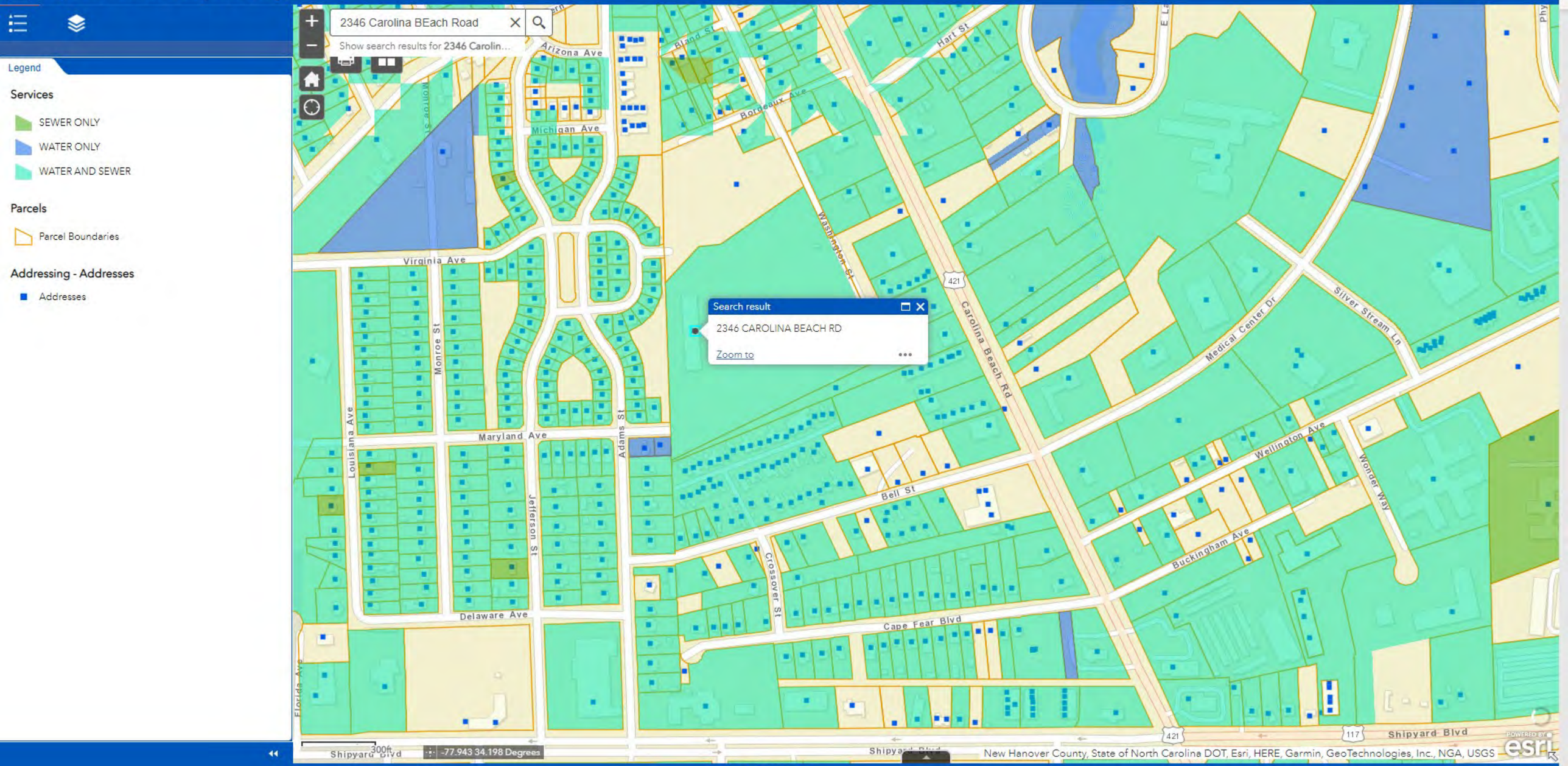
2. If a public system is not available, will individual wells meet HUD's standards? **N/A.**

3. In the water supply quality safe from a chemical and bacteriological standpoint? **Yes, per CFPUA 2021 Drinking Water Quality Report (see attached in Attachment 28).**

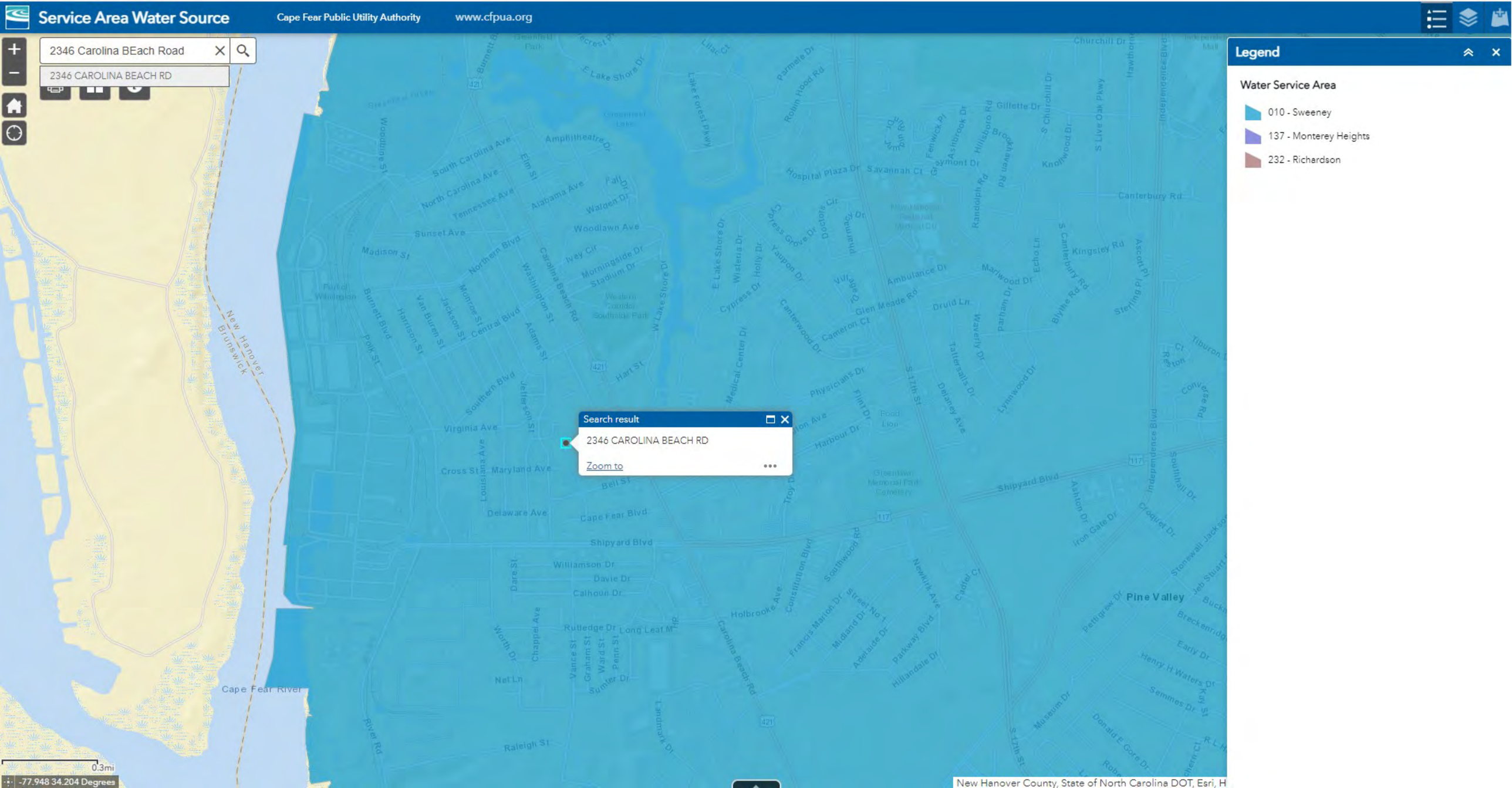
4. If the water supply is non-municipal, has an acceptable system been approved by appropriate authorities and agencies? **N/A.**

5. Will the project water requirements of the proposal result in a significant consumption of the community's available water supply or result in a significant deterioration of water quality? **No.**

6. Will the project affect a sole source or other aquifer? **No.**



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Service Area Water Source
Cape Fear Public Utility Authority
www.cfpua.org
2346 Carolina BEach Road
2346 CAROLINA BEACH RD
Legend
Water Service Area
010 - Sweeney
137 - Monterey Heights
232 - Richardson
Search result
2346 CAROLINA BEACH RD
Zoom to
Cape Fear River
New Hanover Brunswick
Pine Valley
0.3mi
-77.948 34.204 Degrees
New Hanover County, State of North Carolina DOT, Esri, H



2021

Drinking Water Quality Report

Cape Fear
Public Utility Authority
Stewardship. Sustainability. Service.



A Message from the Executive Director

Each year, Cape Fear Public Utility Authority produces this Water Quality Report to give you, our customers, important information about your drinking water. From Ogden and Castle Hayne to downtown Wilmington and Monkey Junction, you can find water quality information specific to your service area in the following pages.

Consider this our report card for 2021. Every day of the year, CFPUA's staff works hard to provide our community with the highest quality drinking water at the lowest practicable cost. In this report, you can read about how our water quality staff, water treatment operators, laboratory staff, engineers, construction and maintenance teams, and other employees across CFPUA work together to meet and exceed the many standards set by the U.S. Environmental Protection Agency and the State of North Carolina.

A major issue for water utilities across the country is addressing lead in water service lines as EPA updated its Lead and Copper Rule late last year. Earlier in 2021, CFPUA proactively launched a survey of water service lines in the oldest part of our service area, from downtown Wilmington to Sunset Park. You can read about this project on page 10 of this report.

Last year, staff also enhanced corrosion control in the Monterey Heights service area through the addition of orthophosphate to the water treatment process. An overview of this initiative can be found on page 11.

While there was much to celebrate in 2021, the coming year will bring even bigger milestones in water treatment at CFPUA. In mid-2022, we will complete our $43 million enhancements project at the Sweeney Water Treatment Plant. The addition of eight deep-bed Granular Activated Carbon (GAC) filters at Sweeney will make the plant highly effective at removing PFAS compounds such as GenX. Visit www.CFPUA.org/Sweeney to learn more about this major investment in the quality of our community's drinking water.

I am proud to share these water quality results with you and hope you will share this report with your friends, family, and other members of our community served by CFPUA.



Kenneth Waldroup, P.E.

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Lead and Home Plumbing 8
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Lead Service Lines and Corrosion Control 10
Glossary of Drinking Water Terms 12
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Monterey Heights System Results 28

Share this Report

This report contains information on drinking water that may be of interest to your family, friends, and others you know in our community. To share a digital copy of this report, use the following link: **www.CFPUA.org/2021WaterQuality**

To receive a printed copy of this report, please email: **Communications@cfpua.org.** You may also contact us on our social media accounts to ask for a copy of this report.

En Español

Para obtener una copia del informe en Español sobre los resultados más recientes de la calidad del agua publicado por el Cape Fear Public Utility Authority, **llame al 910-332-6550**.

Your Water Service Area

This report includes drinking water quality results for CFPUA's three water distribution systems.

Results from this testing period found that our drinking water continues to meet or exceed federal and state regulatory standards. These standards are designed to protect public health and the taste and appearance of drinking water.

Cape Fear Public Utility Authority is required by the Environmental Protection Agency to produce an Annual Water Quality Report for its customers. However, this report goes beyond basic requirements and provides you with interesting information on the water systems that serve your home, workplace, and the places you visit for entertainment and community services. We hope you find it informative and educational.

If you have any questions about this report or concerning your water, please contact **CFPUA's Water Treatment Division at 910-332-6739**.

We want our valued customers to be informed about their water utility. If you want to learn more, consider attending an **Authority Board Meeting on the second Wednesday of each month at 9 a.m. in Room 601 of the New Hanover County Government Center Complex.**



New Hanover County



Richardson Water System

(CFPUA/NHC system PWS ID# 04-65-232): CFPUA's second-largest system, which distributes water in northern New Hanover County in areas including Murrayville, Northchase, Porters Neck, and parts of Castle Hayne and Ogden. Water is provided via the Richardson Water Treatment Plant using groundwater sourced from the Castle Hayne and PeeDee aquifers.

Sweeney Water System

(CFPUA/Wilmington system PWS ID# 04-65-010): CFPUA's largest system, which distributes water within the City of Wilmington, parts of the Ogden area, Monkey Junction/Independence Boulevard (including Pine Valley, Echo Farms, Barclay, Crosswinds, and Lake Brewster), Kings Grant, Tarin Woods, River Lights, U.S. 421, and Wrightsboro. Water is provided via the Sweeney Water Treatment Plant using source water from the Cape Fear River.

Monterey Heights Water System

(CFPUA/Monterey Heights system PWS ID# 04-65-137): CFPUA's smallest system, which distributes water in southern New Hanover County in areas including Monterey Heights, Woodlake, Laurel Ridge, Sentry Oaks, and Veterans Park. Groundwater is sourced from the Castle Hayne aquifer and distributed by a series of wells. This system differs from our two other drinking water systems in that it does not rely on a centralized water treatment plant.

Protecting Your Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Cape Fear Public Utility Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at **www.epa.gov/safewater/lead.**





Across the nation, rivers, lakes, streams, ponds, reservoirs, springs, and wells are sources of drinking water (both tap and bottled). As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up contaminants resulting from animal or human activity. Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amounts of certain contaminants in water provided by public water systems. FDA regulations establish limits for substances in bottled water to provide protection for public health.

Lead and Home Plumbing

Lead in drinking water has been a concern in the water and wastewater industries for decades. The primary sources of lead in drinking water are corrossion in drinking water pipes and household plumbing and appliances maintained by homeowners.

In 1991, the EPA introduced the Lead and Copper Rule (LCR) to ensure public water suppliers manage lead and copper in drinking water. Public water suppliers have several tools to make sure they are meeting the requirements of this rule.

To effectively monitor and manage lead and copper in drinking water, public water suppliers often implement corrosion-control measures. CFPUA staff regularly test lead and copper levels in homes and businesses across the service area, and operators introduce orthophosphate into the water systems to line pipes and add more protection.

CFPUA's corrosion-control program has successfully managed the threat of lead in our drinking water. However, we cannot control the variety of materials used in internal plumbing components—the private parts of water systems that are owned and maintained by home and business owners.

In older areas of New Hanover County, homes may rely on aging plumbing systems that haven't been updated to meet newer standards. When internal plumbing components contain lead, residents and customers are more likely to be exposed to these metals as they leach into drinking water from faucets and other plumbing materials.

Reducing Lead Exposure at Home



- **Use only cold water for drinking, cooking, and making baby formula (boiling water does not remove lead from water).**
- **Regularly clean your faucet's screen (also known as an aerator).**
- **Before use, flush your pipes by running your tap.**
- **Contact CFPUA to learn more about sources of lead and removing lead service lines.**

Water Disinfection and Health Effects

Disinfecting source water is a critical part of any water treatment process. Chlorine and other disinfectants eliminate water-borne pathogens such as Giardia, Cryptosporidium, E. Coli, bacteria, and viruses. These microbial pathogens are known to cause gastrointestinal illnesses and other health issues. Because these pathogens are found in the Cape Fear River, the water source for the Sweeney Water Treatment Plant, CFPUA uses UV technology and chlorine to disinfect your water prior to its distribution. The Richardson and Monterey Heights water systems also undergo chlorine disinfection.

Chlorine treatment has proven to be a transformative achievement in public health. Introduced as the solution to the 1850 cholera epidemic in London, chlorine became a widely used water disinfectant by the 1900s. Chlorine was first used in the United States as a major water disinfectant in 1908 in Jersey City, New Jersey. By 1995, 64% of all community water systems in the country used chlorine to disinfect water.

Unfortunately, chlorine and other disinfectants may cause problems once in the distribution system. They can react with naturally occurring compounds in water to form byproducts such as Trihalomethanes (THM), Haloacetic acids (HAA), Chlorite, and Bromate. According to the EPA, some disinfection byproducts are “suspected to cause bladder cancer and reproductive effects in humans.” To ensure that public water suppliers such as CFPUA provide clean drinking water, the U.S. Environmental Protection Agency (EPA) developed the Stage 2 Disinfection Byproduct rule.

CFPUA developed a plan to not only meet but surpass state and federal regulations. As part of the plan, 5 tank mixers and 17 floating aeration systems have been installed at the Sweeney Plant as well as elevated storage tanks within the Sweeney System. These systems reduce the disinfection byproducts already formed by spraying fine, uniform particles of water into the air. This process allows these volatile compounds to escape into the atmosphere and be removed from customers' water.

CFPUA also practices routine water system flushing. This helps maintain water pressure and pipe integrity and minimizes the formation of disinfection byproducts. During flushing, water is forced through pipes and out of fire hydrants at a high velocity, removing accumulated mineral sediment until the water is clear. Because disinfection byproducts are more easily formed at high temperatures, CFPUA conducts increased flushing during the summer months.

CFPUA conducts sampling to confirm that these protocols effectively reduce disinfection byproducts and ensure compliance with state and federal requirements.

Getting the Lead Out

The 2014 Flint, Michigan water crisis prompted lawmakers to reexamine the nation's standards for lead and copper in drinking water. Now that the U.S. Environmental Protection Agency has rolled out its updated Lead and Copper Rule, CFPUA is proactively surveying our water lines years ahead of the compliance deadline.

Lead in drinking water can usually be traced to old plumbing fixtures in homes and water service lines made from lead. A service line is the pipe connecting your private property to the public water supply. Corrosion of older service lines, particularly those installed before the 1950s, is a concern for all water utilities.

For years, CFPUA has had a Corrosion-Control Program that is highly effective at preventing pipes from leaching metals, especially lead. Orthophosphate, a corrosion-inhibiting mineral that is safe to drink, creates a protective coating on pipes as it flows through CFPUA's water system and is the key to the successful Corrosion-Control Program that provides the time to survey the services lines in the water system. *(Read more on the following page)*. CFPUA's Lead and Copper Sampling Program also ensures corrosion control is working effectively by having staff work with our customers to sample water from homes across our system.

The new EPA standards require utilities to complete an inventory of their water service lines by fall 2024, with future timetables for replacement of some service lines. Rather than wait for the deadline, CFPUA staff launched the start of our inventory in 2021. Phase 1 of the inventory focused on the area from downtown Wilmington's Northside to Sunset Park, one of the oldest parts of CFPUA's service area that is, therefore, more likely to have pre-1950s service lines. Phase 1 included the survey of approximately 10,500 properties, with important data collected on specific service line locations and materials.

The next phases of CFPUA's Lead and Copper plan include surveying the other parts of our service area, creating a public database of water service line materials, including lead, and a collaborative effort of planning for the replacement of lead lines.

To learn more about the EPA's Lead and Copper Rule, visit **epa.gov/dwreginfo/lead-and-copper-rule**.

...and corrosion control in

CFPUA's smallest water system received several important updates this past year. The Monterey Heights Water System is located in southern New Hanover County and serves just under 10,000 people in and around Monterey Heights. Only about 5% of the water CFPUA delivers each day to customers comes from the Monterey Heights System, which sources and treats groundwater from the Castle Hayne aquifer.

In 2021, CFPUA added treatment systems to each Monterey Heights source well to provide corrosion control protection through the addition of an orthophosphate blended product.

Advanced monitoring and control systems were also installed at each water source for Monterey Heights, allowing enhanced monitoring and control of the treatment process at each production well. A booster pump station was also installed, which will allow CFPUA to provide water to Monterey Heights from the Sweeney System during periods of high demand or when water sources are down for maintenance. CFPUA also installed advanced water softening treatment systems at two source wells. This will allow the characteristics of water provided by the Monterey Heights System to match those of water from the Sweeney System in the event Sweeney is called upon as an emergency water source.

As development booms in southern New Hanover County and customer water demand increases, or in the event of a water shortage in the Monterey Heights Water System, the addition of the orthophosphate and the source water softening systems would allow the interconnection between Monterey Heights and CFPUA's much larger Sweeney Water Treatment System (which has long contained an orthophosphate) to be used to meet the need with a similar water quality.

For a full list of water quality characteristics, see pages 28-30.



Glossary of Drinking Water Terms

Action Level (AL) - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Locational Running Annual Average (LRAA) - The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfection Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Million Fibers per Liter (MFL) - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Not-Applicable (N/A) - Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

Parts per million (ppm) or Milligrams per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (ng/L) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/L) - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in water.

Secondary Maximum Contaminant Level (SMCL) - The highest level of a contaminant that is allowed in drinking water under the EPA's National Secondary Drinking Water Regulations. These non-mandatory regulations provide standards for aesthetic considerations in water, such as taste, color, and odor. These contaminants are not considered to present a risk to human health.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

2021 Drinking Water Quality Results – PWS ID# 04-65-010, Sweeney Water System

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2021. The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Microbiological | Inorganic Contaminants | Other Disinfection Byproducts | Disinfection Residuals Summary

Contaminant (units)	Contaminant Type	Reporting Basis	Your Water	Sample Date	MCL/ MRDL Violation	Range Low - High	MCLG/ MRDL	MCL	Likely Source of Contamination
Total Coliform Bacteria	Microbiological Contaminants in the Distribution System	N/A	N/A	2021	NO	N/A	N/A	TT*	Naturally present in the environment
E. coli	Microbiological Contaminants in Distribution System	Highest Monthly Percent of Positive Samples	0%	2021	NO	N/A	0	**	Human and animal fecal waste
Fluoride (ppm)	Inorganic Contaminants	Highest Compliance Result	0.66	2019 2020 2021	NO	0.1 – 0.66	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizers and aluminum factories
Thallium (ppb)	Inorganic Contaminants	Highest Compliance Result	1.0	2019 2020 2021	NO	ND – 1.0	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Bromate (ppb)	Other Disinfection Byproducts	Highest Compliance Result	1.7	2021	NO	ND – 1.7	0	10	Byproduct of drinking water disinfection
Chlorine (ppm)	Disinfection Residuals Summary	Highest Running Annual Average	1.11	2021	N/A	0.2 – 1.89	4	4	Water additive used to control microbes

*If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

**Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*. If either an original routine sample and/or its repeat sample(s) are *E. coli* positive, a Tier 1 violation exists.

Turbidity

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Contaminant (units)	Reporting Basis	Your Water	Sample Date	TT Violation	Likely Source of Contamination
Turbidity (NTU)	Highest Single Measurement	0.218	2021	NO[1]	Soil Runoff
Turbidity (NTU)	Lowest Monthly Percent of Sample Meeting Limits	100%	2021	NO[2]	Soil Runoff

[1] TT Violation if: Turbidity > 1 NTU.
[2] TT Violation if: Less than 95% of monthly turbidity measurements are < 0.3 NTU.

Lead & Copper

Contaminant (units)	Reporting Basis	Your Water	Sample Date	# Sites Above AL	MCLG	Action Level	Likely Source of Contamination
Copper (ppm)	90th percentile	0.150	2020	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	90th percentile	< 3	2020	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Total Organic Carbon

Contaminant (units)	Contaminant Type	Reporting Basis	Your Water	Sample Date	TT Violation	Range Low - High	Compliance Method	Likely Source of Contamination
Total Organic Carbon [TOC Treated] (removal ratio)	Disinfection Byproduct Precursors – TOC	RAA Removal Ratio	1.86	2021	NO	68% – > 85%	Step 1	Naturally present in environment

Disinfection Byproduct Compliance

Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfection Byproduct	Your Water (LRAA)	Date Sampled	MCL Violation	Range Low - High	MCL	Likely Source of Contamination
TTHM (ppb)	35.9	2021	NO	22.0 – 35.9	80	Byproduct of drinking water disinfection
B01	24.6	2021	NO	16.7 – 32.7	80	
B02	22.0	2021	NO	12.8 – 32.6	80	
B03	23.1	2021	NO	12.6 – 34.5	80	
B04	25.7	2021	NO	13.5 – 39.7	80	
B05	22.4	2021	NO	13.4 – 33.7	80	
B06	29.1	2021	NO	15.3 – 39.9	80	
B07	35.9	2021	NO	20.0 – 52.1	80	
B08	25.1	2021	NO	13.5 – 36.3	80	
HAA5 (ppb)	15.7	2021	NO	9.6 – 15.7	60	Byproduct of drinking water disinfection
B01	11.3	2021	NO	6.8 – 22.6	60	
B02	11.5	2021	NO	3.6 – 21.5	60	
B03	10.3	2021	NO	3.6 – 22.1	60	
B04	11.2	2021	NO	3.4 – 24.7	60	
B05	9.6	2021	NO	3.4 – 20.8	60	
B06	13.5	2021	NO	5.7 – 24.5	60	
B07	15.7	2021	NO	7.0 – 26.9	60	
B08	11.2	2021	NO	4.2 – 23.0	60	

Water Characteristics Contaminants

Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.

Contaminant (units)	Reporting Basis	Your Water	Sample Date	Range Low - High	SMCL
Iron (ppm)	Highest Compliance Result	0.53	2019 2020 2021	ND – 0.53	0.3 mg/L
Manganese (ppm)	Highest Compliance Result	0.017	2019 2020 2021	ND – 0.017	0.05 mg/L
pH (standard units)	Highest Compliance Result	8.1	2019 2020 2021	7.2 – 8.1	6.5 to 8.5
Sodium (ppm)	Highest Compliance Result	37	2019 2020 2021	12 – 37	N/A
Sulfate (ppm)	Highest Compliance Result	36	2019 2020 2021	ND – 36	250 mg/L

Unregulated Contaminants

The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

1,4-Dioxane

1,4-Dioxane is a likely human carcinogen, according to the U.S. EPA, and has been found in groundwater at sites throughout the United States. The physical and chemical properties and behavior of 1,4-dioxane create challenges for its characterization and treatment. It is highly mobile and does not readily biodegrade in the environment.

Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
1,4-Dioxane (ppb)	2021	0.45	ND – 2.20	EPA established a 1-day health advisory of 4000 ppb and a 10-day health advisory of 400 ppb for a 10-kg child and a lifetime health advisory of 200 ppb in drinking water

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are found in a wide range of consumer products that people use daily such as cookware, pizza boxes, and stain repellants. Most people have been exposed to PFAS. Certain PFAS can accumulate and stay in the human body for long periods of time. There is evidence that exposure to PFAS can lead to adverse health outcomes in humans. The most-studied PFAS chemicals are PFOA and PFOS. Studies indicate that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. Both chemicals have caused tumors in animals.

Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
GenX (ppt)	2021	7.35	2.58 – 16.1	NC DHHS health goal is 140 ppt
PFOS (ppt)	2021	2.08	0.638 – 5.31	70 ppt EPA Health Advisory for Total Combined Concentration of PFOA and PFOS
PFOA (ppt)	2021	2.53	0.893 – 7.35	
NVHOS (ppt)	2021	2.51	ND – 9.77	None
PFEESA (ppt)	2021	0.010	ND – 0.292	None
10:2 FTS (ppt)	2021	0.007	ND – 0.214	None
PMPA (ppt)	2021	10.3	4.35 – 17.0	None
NFDHA (ppt)	2021	0.010	ND – 0.309	None
PFUdA (ppt)	2021	0.004	ND – 0.121	None
N-methylperfluoro-1-octanesulfonamidoacetic acid (ppt)	2021	0.008	ND – 0.233	None
Byproduct 4 (BP4); R-PSDA (ppt)	2021	8.42	ND – 39.7	None
Byproduct 5 (BP5); Hydrolyzed PSDA (ppt)	2021	7.96	2.97 – 26.8	None
Byproduct 6 (BP6); R-PSDCA (ppt)	2021	0.011	ND – 0.321	None
R-EVE (ppt)	2021	7.29	2.12 – 20.6	None
N-MeFOSE (ppt)	2021	0.113	ND – 3.39	None
PEPA (ppt)	2021	3.33	ND – 10.6	None
PFPeA (ppt)	2021	7.00	1.48 – 22.1	None

Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
PFPeS (ppt)	2021	0.217	ND – 0.851	None
6:2 FTS (ppt)	2021	0.083	ND – 0.541	None
Nafion Byproduct 1 (ppt)	2021	0.006	ND – 0.191	None
N-ethylperfluoro-1-octanesulfonamidoacetic acid (ppt)	2021	0.008	ND – 0.226	None
FBSA (ppt)	2021	0.109	ND – 0.667	None
PFHxA (ppt)	2021	4.90	1.30 – 15.8	None
PFDoA (ppt)	2021	0.005	ND – 0.155	None
PFDA (ppt)	2021	0.051	ND – 0.298	None
PFHxS (ppt)	2021	1.31	ND – 4.09	None
PFBA (ppt)	2021	4.64	ND – 10.7	None
PFBS (ppt)	2021	2.70	0.615 – 8.71	None
PFHpA (ppt)	2021	1.96	0.624 – 5.53	None
PFHpS (ppt)	2021	0.022	ND – 0.255	None
PFNA (ppt)	2021	0.163	ND – 0.719	None
PFTeDA (ppt)	2021	0.007	ND – 0.213	None
PFMPA (ppt)	2021	0.314	ND – 2.72	None
8:2 FTS (ppt)	2021	0.008	ND – 0.229	None
PFO2HxA (ppt)	2021	6.70	2.22 – 12.3	None
PFO3OA (ppt)	2021	1.18	ND – 5.78	None
PFMOAA (ppt)	2021	37.3	4.92 – 79.7	None
PFNS (ppt)	2021	0.006	ND – 0.190	None
EVE Acid (ppt)	2021	0.013	ND – 0.376	None
PFTrDA (ppt)	2021	0.008	ND – 0.239	None

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Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
Nafion Byproduct 2 (ppt)	2021	0.041	ND – 0.386	None
PFOSA (ppt)	2021	0.011	ND – 0.325	None
9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (ppt)	2021	0.007	ND – 0.216	None
4:2 FTS (ppt)	2021	0.005	ND – 0.146	None
PF3OUdS (ppt)	2021	0.008	ND – 0.242	None
Hydro-EVE (ppt)	2021	0.022	ND – 0.422	None
PFECA-G (ppt)	2021	0.005	ND – 0.165	None
PFMBA (ppt)	2021	0.175	ND – 3.67	None
ADONA (ppt)	2021	0.006	ND – 0.184	None
PPF Acid (ppt)	2021	30.3	17.0 – 44.0	None

NOTE: The PFAS contaminants listed in this report are those that were detected in one or more samples of treated water in 2021. For the full list of PFAS compounds for which CFPUA tests treated water, including those that were not detected in any 2021 samples, **visit www.CFPUA.org/Sweeney and click on "Latest PFAS Test Results."**

Physical and Mineral Characteristics

Contaminant (units)	Sample Date	Your Water Average	Range Low - High
Hardness (ppm)	2021	23	16 – 35
Alkalinity (ppm)	2021	20	11 – 27
Conductivity (umhos/cm)	2021	169	116– 263
Total Dissolved Solids (ppm)	2021	111	77 – 174
Chloride (ppm)	2021	14	13 – 14
Ortho Phosphate (ppm)	2021	0.97	0.70 – 1.50
Total Phosphate (ppm)	2021	1.23	0.98 – 1.87
Chlorate (ppb)	2021	37.5	29 – 46
Perchlorate (ppb)	2021	0.08	0.06 – 0.10

Source Water Assessment Program (SWAP)

As part of the Source Water Assessment Program (SWAP), the North Carolina Department of Environmental Quality's Public Water Supply Section conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information, and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for the Sweeney Water System was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Source Name	Susceptibility Rating	SWAP Report Date
Cape Fear River Kings Bluff	Moderate	2020
Lower Cape Fear Water and Sewer Authority Kings Bluff	Moderate	2020
Well 31: Queens Point	Moderate	2020
Well 34: Sea Spray	Higher	2020
Well 38: Fox Croft	Moderate	2020
Well 34: Masonboro Forest	Lower	2020
Well 44: Sea Pines	Lower	2020
Well 45: Beacon Woods	Lower	2020

The complete SWAP Assessment report for the Sweeney Water System may be viewed on the Web at: www.ncwater.org/?page=600. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this report was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate the system name and number (CFPUA/Wilmington System, PWS ID# 04-65-010) and provide your name, mailing address, and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

2021 Drinking Water Quality Results – PWS ID# 04-65-232, Richardson Water System

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2021. The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Microbiological | Inorganic Contaminants

Contaminant (units)	Contaminant Type	Reporting Basis	Your Water	Sample Date	MCL/ MRDL Violation	Range Low - High	MCLG/ MRDL	MCL	Likely Source of Contamination
Total Coliform Bacteria	Microbiological Contaminants in the Distribution System	N/A	N/A	2021	NO	N/A	N/A	TT*	Naturally present in the environment
E. coli	Microbiological Contaminants in the Distribution System	Highest Monthly Percent of Positive Samples	0%	2021	NO	N/A	0	**	Human and animal fecal waste
Barium (ppm)	Inorganic Contaminants	Highest Compliance Result	0.0094	2019 2020 2021	NO	ND – 0.0094	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	Inorganic Contaminants	Highest Compliance Result	1.8	2019 2020 2021	NO	ND – 1.8	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	Inorganic Contaminants	Highest Compliance Result	0.60	2019 2020 2021	NO	ND – 0.60	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizers and aluminum factories

*If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

**Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*. If either an original routine sample and/or its repeat sample(s) are *E. coli* positive, a Tier 1 violation exists.

Disinfection Residuals Summary

Contaminant (units)	Reporting Basis	Your Water	Sample Date	MCL/ MRDL Violation	Range Low - High	MCLG/ MRDL	MCL	Likely Source of Contamination
Chlorine (ppm)	Highest Running Annual Average	1.44	2021	N/A	0.64 – 1.97	4	4	Water additive used to control microbes

Lead & Copper

Contaminant (units)	Reporting Basis	Your Water	Sample Date	# Sites Above AL	MCLG	Action Level	Likely Source of Contamination
Copper (ppm)	90th percentile	0.410	2019	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	90th percentile	6	2019	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfection Byproduct Compliance

Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfection Byproduct	Your Water (LRAA)	Date Sampled	MCL Viola-tion	Range Low - High	MCL	Likely Source of Contamination
TTHM (ppb)	32.6	2021	NO	25.7 – 32.6	80	Byproduct of drinking water disinfection
B01	32.6	2021	NO	N/A	80	
B02	25.7	2021	NO	N/A	80	
HAA5 (ppb)	24.0	2021	NO	20.0 – 24.0	60	Byproduct of drinking water disinfection
B01	24.0	2021	NO	N/A	60	
B02	20.0	2021	NO	N/A	60	

Water Characteristics Contaminants

Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.

Contaminant (units)	Reporting Basis	Your Water	Sample Date	Range Low - High	SMCL
Iron (ppm)	Highest Compliance Result	0.54	2019 2020 2021	ND – 0.54	0.3 mg/L
Manganese (ppm)	Highest Compliance Result	0.026	2019 2020 2021	ND – 0.026	0.05 mg/L
pH (standard units)	Highest Compliance Result	7.6	2019 2020 2021	7.1 – 7.6	6.5 to 8.5
Sodium (ppm)	Highest Compliance Result	32.0	2019 2020 2021	8.50 – 32.0	N/A
Sulfate (ppm)	Highest Compliance Result	20.0	2019 2020 2021	ND – 20.0	250 mg/L

Physical and Mineral Characteristics

Contaminant (units)	Sample Date	Your Water Average	Range Low - High
Hardness (ppm)	2021	46	36 – 58
Alkalinity (ppm)	2021	51	38 – 58
Conductivity (umhos/cm)	2021	127	99 – 150
Total Dissolved Solids (ppm)	2021	83.9	65.4 – 98.7
Chloride (ppm)	2021	8.4	6.6 – 9.7
Ortho Phosphate (ppm)	2021	0.86	0.41 – 1.41
Total Phosphate (ppm)	2021	1.28	0.95 – 2.57

Unregulated Contaminants

The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

Per- and Polyfluoroalkyl Substances (PFAS)

Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
GenX (ppt)	2021	0.117	ND – 0.233	NC-DHHS health goal is 140 ppt for GenX
PFOS (ppt)	2021	ND	ND	70 ppt EPA Health Advisory for Total Combined Concentration of PFOA and PFOS
PFOA (ppt)	2021	0.184	ND – 0.368	
PFTDA (ppt)	2021	0.320	ND – 0.641	None



Source Water Assessment Program (SWAP)

As part of the Source Water Assessment Program (SWAP), the North Carolina Department of Environmental Quality's Public Water Supply Section conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information, and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for the Richardson Water System was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below and continued on the following page:

Source Name	Susceptibility Rating	SWAP Report Date
Well 15: Elkmont	Moderate	2020
Well 19: Marsh Oaks	Moderate	2020
Well 20: Old Marsh Oaks	Higher	2020
Well 28: M	Higher	2020
Well 4: White Road	Moderate	2020
Well A: Castle Hayne	Higher	2020
Well A: PeeDee	Higher	2020
Well B: Castle Hayne	Higher	2020
Well B: PeeDee	Higher	2020
Well C: Castle Hayne	Moderate	2020
Well C: PeeDee	Moderate	2020
Well F: Castle Hayne	Lower	2020
Well F: PeeDee	Lower	2020
Well G: Castle Hayne	Moderate	2020

Source Name	Susceptibility Rating	SWAP Report Date
Well G: PeeDee	Moderate	2020
Well H: Castle Hayne	Moderate	2020
Well H: PeeDee	Moderate	2020
Well I: Castle Hayne	Lower	2020
Well I: PeeDee	Lower	2020
Well J: Castle Hayne	Lower	2020
Well J: PeeDee	Lower	2020
Well K: Castle Hayne	Moderate	2020
Well K: PeeDee	Moderate	2020
Well L: Castle Hayne	Moderate	2020
Well L: PeeDee	Moderate	2020
Well P: PeeDee	Moderate	2020
Well Q: PeeDee	Higher	2020
Well 29: N	Higher	2020
Well 30: O	Moderate	2020

The complete SWAP Assessment report for the Richardson Water System may be viewed on the Web at: www.ncwater.org/?page=600. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this report was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate the system name and number (CFPUA/NHC System, PWS ID# 04-65-232) and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

2021 Drinking Water Quality Results – PWS ID# 04-65-137, Monterey Heights Water System

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2021. The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Microbiological | Inorganic Contaminants

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take 0 corrective actions and we completed 0 of these actions. The assessment found no issues during the review process. Two positive total coliform samples were collected on June 7th, the repeat and triggered source water samples collected on June 8th were all negative indicating that the likely cause for the original positive samples were likely caused by human error during sampling.

Contaminant (units)	Contaminant Type	Reporting Basis	Your Water	Sample Date	MCL/ MRDL Violation	Range Low - High	MCLG/ MRDL	MCL	Likely Source of Contamination
Total Coliform Bacteria	Microbiological Contaminants in the Distribution System	N/A	N/A	2021	NO	N/A	N/A	TT*	Naturally present in the environment
E. coli	Microbiological Contaminants in the Distribution System	Highest Monthly Percent of Positive Samples	0%	2021	NO	N/A	0	**	Human and animal fecal waste
Fluoride (ppm)	Inorganic Contaminants	Highest Compliance Result	0.3	2019 2020	NO	ND – 0.3	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizers and aluminum factories

*If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

**Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*. If either an original routine sample and/or its repeat sample(s) are *E. coli* positive, a Tier 1 violation exists.

Disinfection Residuals Summary

Contaminant (units)	Contaminant Type	Reporting Basis	Your Water	Sample Date	MCL/ MRDL Violation	Range Low - High	MCLG/ MRDL	MCL	Likely Source of Contamination
Chlorine (ppm)	Disinfectant Residuals Summary	Highest Running Annual Average	1.04	2021	NO	0.23 – 1.85	4	4	Water additive used to control microbes

Lead & Copper

Contaminant (units)	Reporting Basis	Your Water	Sample Date	# Sites Above AL	MCLG	Action Level	Likely Source of Contamination
Copper (ppm)	90th percentile	0.330	2019	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	90th percentile	5	2019	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfection Byproduct Compliance

Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfection Byproduct	Your Water (LRAA)	Date Sampled	MCL Violation	Range Low - High	MCL	Likely Source of Contamination
TTHM (ppb)	47.8	2021	NO	29.1 – 47.8	80	Byproduct of drinking water disinfection
B01	47.8	2021	NO	N/A	80	
B02	29.1	2021	NO	N/A	80	
HAA5 (ppb)	34.0	2021	NO	23.8 – 34.0	60	Byproduct of drinking water disinfection
B01	34.0	2021	NO	N/A	60	
B02	23.8	2021	NO	N/A	60	

Water Characteristics Contaminants

Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.

Contaminant (units)	Reporting Basis	Your Water	Sample Date	Range, Low - High	SMCL
Iron (ppm)	Highest Compliance Result	0.20	2019 2020	ND – 0.20	0.3 mg/L
Manganese (ppm)	Highest Compliance Result	0.031	2019 2020	ND – 0.031	0.05 mg/L
pH (standard units)	Highest Compliance Result	8.1	2019 2020	7.2 – 8.1	6.5 to 8.5
Sodium (ppm)	Highest Compliance Result	39	2019 2020	7.1 - 39	N/A

Additional Monitoring of Other Contaminants

In 2021, CFPUA added an orthophosphate blended product to the water treatment process for the Monterey Heights system. Orthophosphate is a corrosion-inhibiting mineral that is safe to drink and is already used in CFPUA's other water systems. For more information, **see page 11 of this report**.

Contaminant (units)	Sample Date	Your Water Average	Range, Low - High
Ortho Phosphate (ppm)	2021	0.81	ND – 1.71

Unregulated Contaminants

The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are found in a wide range of consumer products that people use daily such as cookware, pizza boxes, and stain repellants. Most people have been exposed to PFAS. Certain PFAS can accumulate and stay in the human body for long periods of time. There is evidence that exposure to PFAS can lead to adverse health outcomes in humans. The most-studied PFAS chemicals are PFOA and PFOS. Studies indicate that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. Both chemicals have caused tumors in animals.

Contaminant (units)	Sample Date	Your Water Average	Range Low - High	Health Information
GenX (ppt)	2021	0.031	ND – 0.367	NC DHHS health goal is 140 ppt for GenX
PFOS (ppt)	2021	0.020	ND – 0.235	70 ppt EPA Health Advisory for Total Combined Concentration of PFOA and PFOS
PFOA (ppt)	2021	0.111	ND – 0.526	
N-methylperfluoro-1-octanesulfonamidoacetic acid (ppt)	2021	0.062	ND – 0.742	None
PFPeA (ppt)	2021	0.108	ND – 0.768	None
PFPeS (ppt)	2021	0.083	ND – 0.998	None
6:2 FTS (ppt)	2021	0.100	ND – 0.693	None
Nafion Byproduct 1 (ppt)	2021	0.059	ND – 0.705	None
PFHxA (ppt)	2021	0.929	ND – 9.43	None
PFHxS (ppt)	2021	0.353	ND – 3.55	None
PFBA (ppt)	2021	0.111	ND – 0.817	None
PFBS (ppt)	2021	0.220	ND – 2.64	None
PFHpA (ppt)	2021	0.061	ND – 0.400	None
PFTeDA (ppt)	2021	0.041	ND – 0.488	None
PFMPA (ppt)	2021	0.249	ND – 2.99	None
PFMOAA (ppt)	2021	1.00	ND – 10.9	None
EVE Acid (ppt)	2021	0.104	ND – 1.25	None
Nafion Byproduct 2 (ppt)	2021	0.100	ND – 1.20	None
PFDoS (ppt)	2021	0.378	ND – 4.54	None
PFMBA (ppt)	2021	0.093	ND – 1.11	None

Source Water Assessment Program (SWAP)

As part of the Source Water Assessment Program (SWAP), the North Carolina Department of Environmental Quality's Public Water Supply Section conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information, and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for the Monterey Heights Water System was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Source Name	Susceptibility Rating	SWAP Report Date
Hillside	Moderate	2020
Lords Creek	Lower	2020
Well # 1	Higher	2020
Well # 2	Moderate	2020
Well # 3	Moderate	2020

The complete SWAP Assessment report for Monterey Heights Water System may be viewed on the Web at: www.ncwater.org/?page=600. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate the system name and number (CFPUA/Monterey Heights System, PWS ID# 04-65-137) and provide your name, mailing address, and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

Cape Fear Public Utility Authority

235 Government Center Drive
Wilmington, NC 28403
910-332-6550 | CFPUA.org



ATTACHMENT 29

Community Facilities and Services

Public Safety: Police, Fire, and Emergency Medical

COMMUNITY FACILITIES and SERVICES

PUBLIC SAFETY – POLICE

1. Does the project location provide adequate access for police services? **Yes (See Attachment 29).** Does the project design provide easy and unrestricted access for fire emergency vehicles and individuals? **Yes.** Are there existing obstacles to access to the project such as one-way roads, narrow bridges, waterways, expressways, railroads which would limit access in an emergency situation? **No.** Will the project create such obstacles? **No.**

2. Are police protection services available to the project adequate to meet project needs? **Yes.**

3. Does the area have a particularly high crime rate? **No**. Are there special plans for a security system which has been approved by the police department? **No.** Can the development be patrolled easily by the police from the street? **Yes.**

4. Will the project create a burden on existing facilities in terms of personnel and/or equipment? **No.**

5. Can services either be expanded or be provided by the project, such as an in-house security force? **N/A.**

PUBLIC SAFETY – FIRE

1. Does the project location provide adequate access for fire vehicles? **Yes.** Does the project design provide easy and unrestricted access for fire emergency vehicles and individuals? **Yes.** Are there existing obstacles to access to the project such as one-way roads, narrow bridges, waterways, expressways, railroads which would limit access in an emergency situation? **No.** Will the project create such obstacles? **No.**

2. Will the project create a burden on existing facilities in terms of manpower and/or equipment? **No. (See Attachment 29).**

3. If so, can services be expanded? **N/A.**

4. Is the water supply and water pressure adequate for fighting fires? **Yes.**

EMERGENCY HEALTH CARE

1. Are emergency health care providers located within reasonable proximity to proposed project? **Yes (See Attachment 29).**

2. Will the increase in population from the proposed development increase the need for area health care services beyond current capacities? **No.**

3. Are non-emergency health care services located within a reasonable proximity to the proposed project (less than a half-hour drive or commute away)? **Yes.**

4. Are emergency health services available within approximately three to five minutes? Such services can often be provided by police and fire personnel as well as by ambulance staff. **Yes. Multiple medical facilities +fire/police stations located in Wilmington. Nearest hospital (Novant NHC Regional) is within 1.5 miles from the site.**

5. Is the number of doctors, dentist, nurses, and other trained medical staff realistic in proportion to an increase in residents/users? **Yes.** If not, can provisions be made for additional skilled staff? **N/A**

6. Will project residents/users require special medical services or skills such as geriatric clinics? **No**.

Chris Daves

From: Kathryn Thurston <Kathryn.Thurston@wilmingtonnc.gov>
Sent: Tuesday, November 1, 2022 11:18 AM
To: Chris Daves
Cc: Daniel J. Thurston; Donny Williams; Sharon McCormick; Linda Painter
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Mr. Daves,

The city's Technical Review Committee will review the proposed project for compliance with dimensional requirements (setbacks), landscaping, parking, traffic management, stormwater, engineering, emergency access, and other development-related issues. Projected policing needs are not considered as part of the technical review process.

Kind regards,

Kathryn H. Thurston, AICP
Zoning Administrator/Floodplain Manager
City of Wilmington
Department of Planning, Development, and Transportation
PO Box 1810
Wilmington, NC 28402-1810
910.341.3249
Wilmingtonnc.gov



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@cityofwilm

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From: Donny Williams <Donny.Williams@wilmingtonnc.gov>
Sent: Tuesday, November 1, 2022 10:46 AM
To: Kathryn Thurston <Kathryn.Thurston@wilmingtonnc.gov>; Chris Daves <CDaves@smeinc.com>
Cc: Daniel J. Thurston <Daniel.Thurston@wilmingtonnc.gov>
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

We cannot give a response on projecting policing services for this proposed complex and our staff will be unable to answer this question as stated below. Thanks!

From: Kathryn Thurston <Kathryn.Thurston@wilmingtonnc.gov>
Sent: Tuesday, November 1, 2022 10:39 AM
To: Chris Daves <CDaves@smeinc.com>
Cc: Daniel J. Thurston <Daniel.Thurston@wilmingtonnc.gov>; Donny Williams <Donny.Williams@wilmingtonnc.gov>
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

Good morning, Mr. Daves,

I believe that your questions would be best directed to the city's Police Chief, Donny Williams. I have copied him on this response.

Kind regards,

Kathryn H. Thurston, AICP
Zoning Administrator/Floodplain Manager
City of Wilmington
Department of Planning, Development, and Transportation
PO Box 1810
Wilmington, NC 28402-1810
910.341.3249
Wilmingtonnc.gov



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From: Chris Daves <CDaves@smeinc.com>
Sent: Friday, October 28, 2022 4:20 PM
To: Kathryn Thurston <Kathryn.Thurston@wilmingtonnc.gov>
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

Good afternoon, Ms. Thurston,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from City of Wilmington related to police services regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Chris

Chris Daves, P.W.S.
Biologist/Senior Scientist
M: 803.446.2980
cdaves@smeinc.com

From: Sharon McCormick <Sharon.McCormick@wilmingtonnc.gov>
Sent: Wednesday, October 5, 2022 3:38 PM
To: Chris Daves <CDaves@smeinc.com>
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Dear Chris Davis,
The Chief of Police would prefer this be reviewed and responded to by the City's Zoning Department. There is a Zoning Committee set up to review such proposals.

Here is the email for the Zoning Administrator: Kathryn.thurston@wilmingtonnc.gov
Thank you sincerely,
Sharon

Sharon McCormick
Administrator to the Chief of Police
Wilmington Police Department
615 Bess Street
Wilmington, North Carolina 28402
910/343-3610
910/343-3636 (fax)
Sharon.McCormick@wilmingtonnc.gov
www.wilmingtonnc.gov

From: Chris Daves <CDaves@smeinc.com>
Sent: Tuesday, October 04, 2022 4:30 PM
To: Police Office of the Chief <OfficeoftheChief@wilmingtonnc.gov>
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter

Dear Mr. Chief Williams,

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Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,

Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

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M: 803.446.2980
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Chris Daves

From: Chris Daves
Sent: Friday, October 28, 2022 4:20 PM
To: Kathryn.thurston@wilmingtonnc.gov
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 8 Police Services Resource Letter -Starway.pdf

Good afternoon, Ms. Thurston,

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Thank you in advance for your input for this project.

Chris

Chris Daves, P.W.S.
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Sent: Wednesday, October 5, 2022 3:38 PM
To: Chris Daves <CDaves@smeinc.com>
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Thank you sincerely,
Sharon

Sharon McCormick
Administrator to the Chief of Police
Wilmington Police Department
615 Bess Street

Wilmington, North Carolina 28402
910/343-3610
910/343-3636 (fax)
Sharon.McCormick@wilmingtonnc.gov
www.wilmingtonnc.gov

From: Chris Daves <CDaves@smeinc.com>
Sent: Tuesday, October 04, 2022 4:30 PM
To: Police Office of the Chief <OfficeoftheChief@wilmingtonnc.gov>
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter

Dear Mr. Chief Williams,

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Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

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Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:30 PM
To: 'officeofthechief@wilmingtonnc.gov'
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 8 Police Services Resource Letter -Starway.pdf

Dear Mr. Chief Williams,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from City of Wilmington Police Department regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

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Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

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October 4, 2022

City of Wilmington Police Department
615 Bess Street
Wilmington, North Carolina 28401

Attention: Chief Donny Williams, Police Chief

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Chief Williams:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from City of Wilmington Police Department regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by City of Wilmington Police Department or resources managed by City of Wilmington Police Department.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

LAW ENFORCEMENT CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Police Service is available and adequate ☐ for the project as the average response time of _____ minutes falls within the average community response time of _____ minutes; or adequate Police Service is not available ☐ for the project. Furthermore, available Police Service will ☐ will not ☐ be adversely affected by the project.

Additional Comments/Conditions/Concerns _____

Date

(Officials Signature)

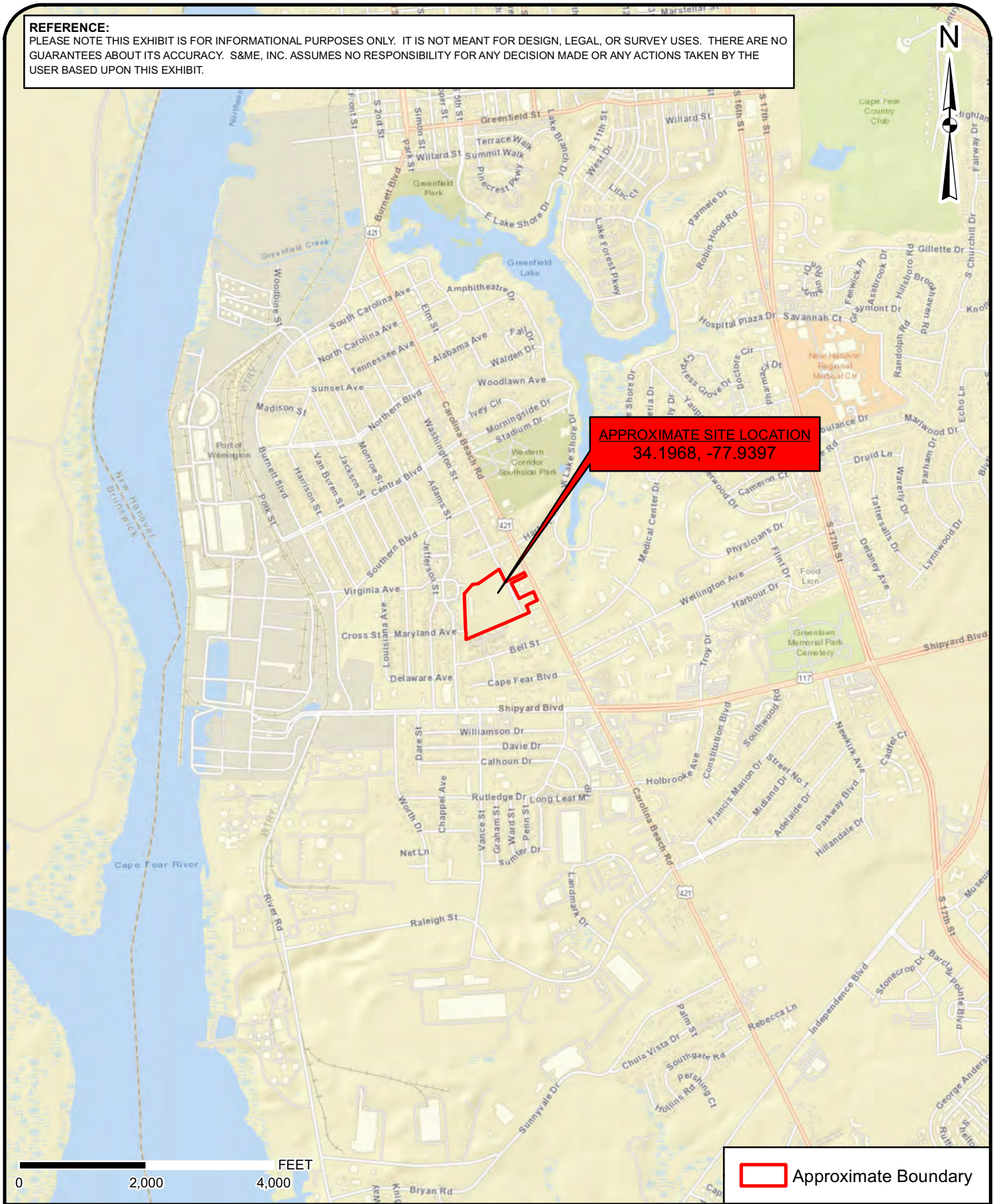
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
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DATE: 8-29-22	
PROJECT NUMBER 21610025	

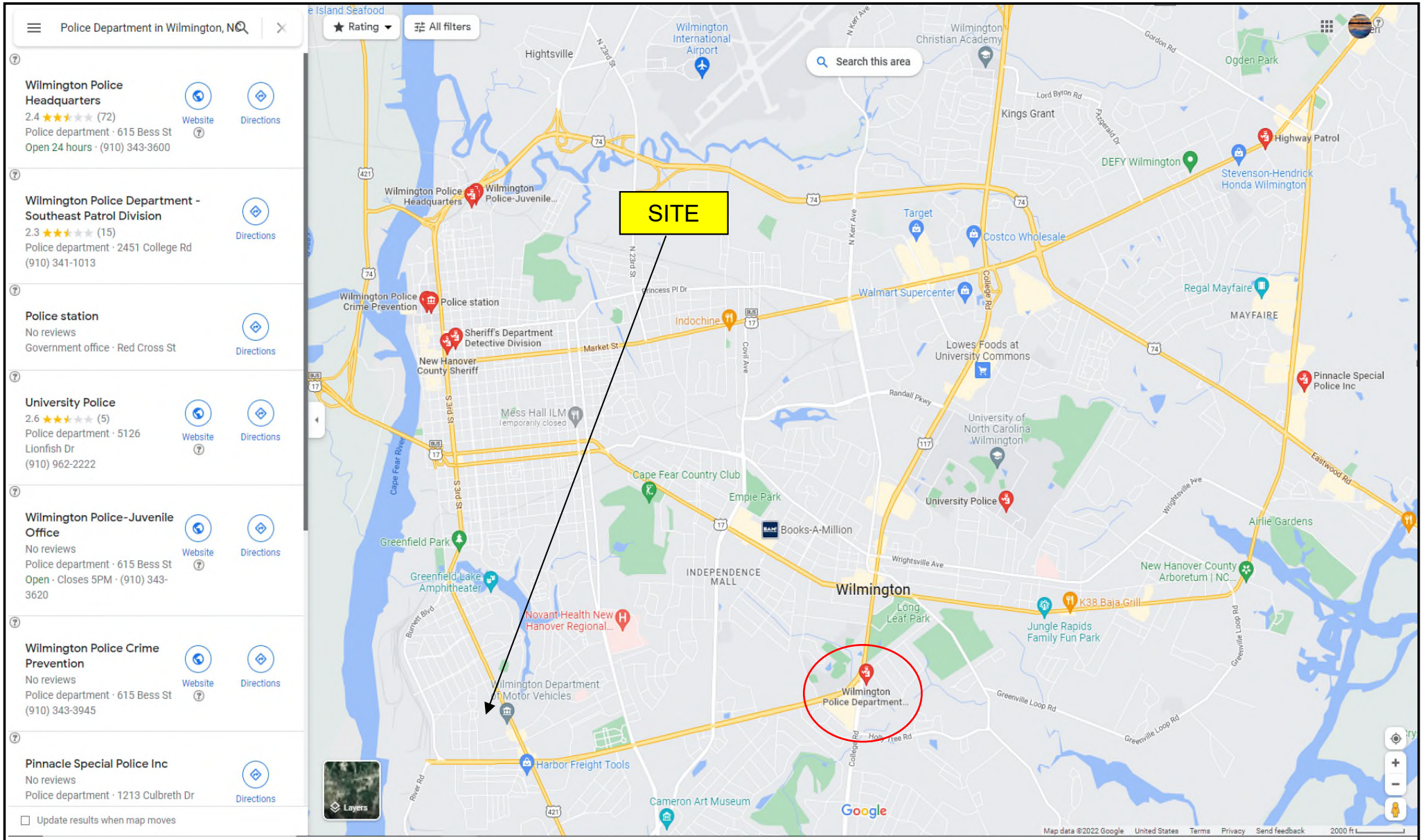
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PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn



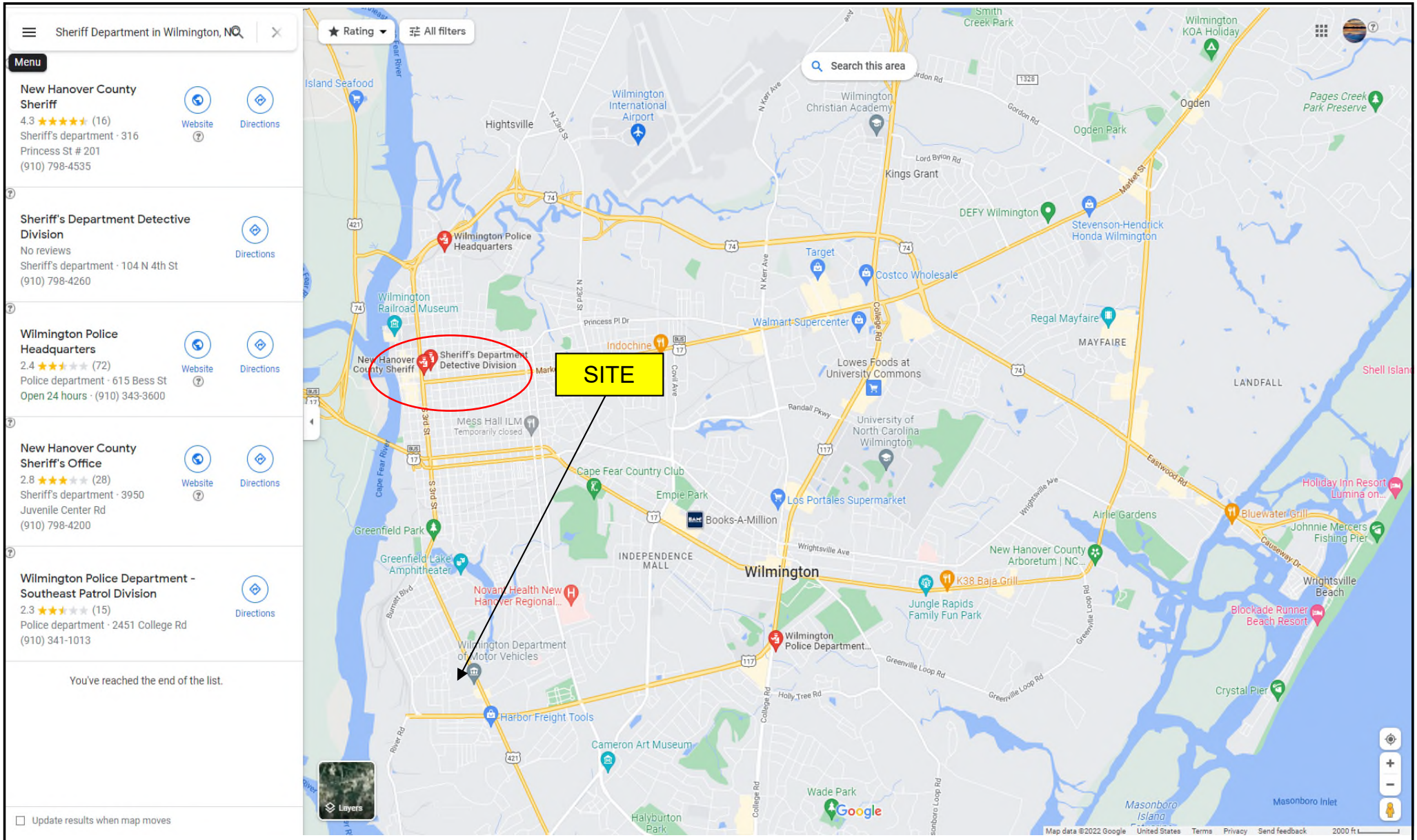
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

LAW ENFORCEMENT SERVICES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



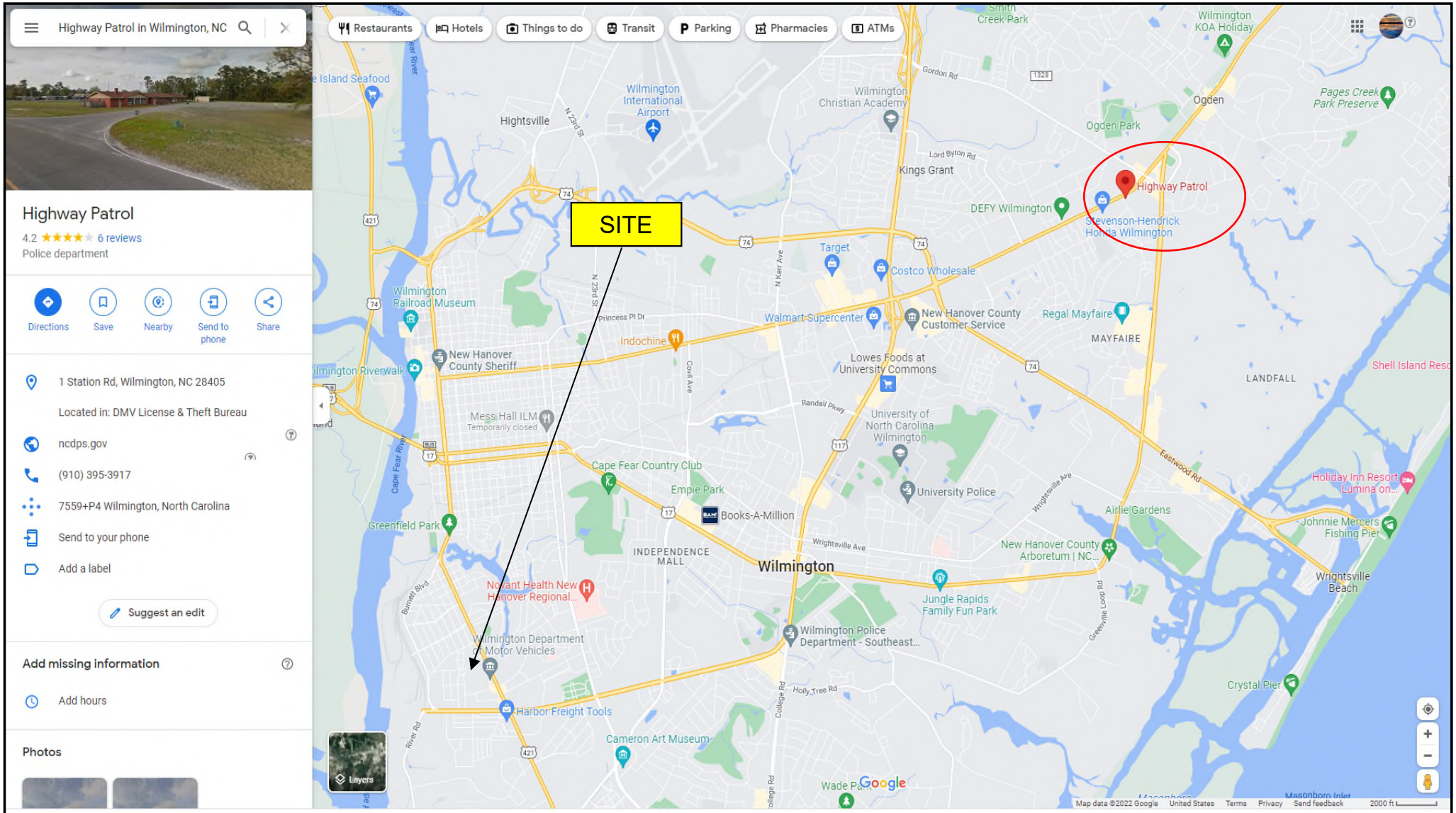
Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

LAW ENFORCEMENT SERVICES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

LAW ENFORCEMENT SERVICES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

FIRE SERVICES

WILMINGTON
FIRE DEPARTMENT
Serving and Protecting Wilmington since 1897

Wilmington Fire Department
801 Market Street
Wilmington, NC 28401
(910) 343-3946

FIRE PROTECTION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Fire Protection is available and adequate ☑ for the project as the average response time of 3:39 minutes falls within the average community response time of 4:30 minutes; or adequate Fire Protection is not available ☐ for the project. Furthermore, available Fire Protection will ☑ will not ☐ be adversely affected by the project.

Additional Comments/Conditions/Concerns Fire station #5 is located within 1 mile of the proposed project location.

10/21/22
Date

(Officials Signature)

Jon S. Mason
(Officials Name – Print or Type)

Fire Chief
(Official's Title)

City of Wilmington, NC
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

Chris Daves

From: Deborah Montgomery <Deborah.Montgomery@wilmingtonnc.gov>
Sent: Monday, October 24, 2022 9:21 AM
To: Chris Daves
Cc: Jon Mason; Chris Walker
Subject: Starway Village Apartments - Fire Protection Certification
Attachments: DOC102422-10242022092301.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Mr. Daves, per your request, attached please find the completed Fire Protection Certification for the Starway Village Apartments.

Please let me know if you have any questions or need additional information.

Regards

Deborah Montgomery
Administrative Support Specialist
Wilmington Fire Department
801 Market Street
Post Office Box 1810
Wilmington NC, 28401
Phone: 910-343-3946
deborah.montgomery@wilmingtonnc.gov
Dial711 TTY/Voice

"What lies behind you and what lies in front of you, pales in comparison to what lies inside of you."
- Ralph Waldo Emerson

-----Original Message-----
From: Fire HQ <Fire.HQ@wilmingtonnc.gov>
Sent: Monday, October 24, 2022 12:23 PM
To: Deborah Montgomery <Deborah.Montgomery@wilmingtonnc.gov>
Subject: Protected: Fire HQ 10/24/2022 09:23

Scanned from MFP13523659
Date:10/24/2022 09:23
Pages:1
Resolution:200x200 DPI

E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

October 4, 2022

City of Wilmington Fire Department
801 Market Street
Wilmington, North Carolina 28401

Attention: Chief Steven Mason, Fire Chief

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Chief Mason:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from City of Wilmington Fire Department regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by City of Wilmington Fire Department or resources managed by City of Wilmington Fire Department.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

FIRE PROTECTION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Fire Protection is available and adequate ☐ for the project as the average response time of _____ minutes falls within the average community response time of _____ minutes; or adequate Fire Protection is not available ☐ for the project. Furthermore, available Fire Protection will ☐ will not ☐ be adversely affected by the project.

Additional Comments/Conditions/Concerns _____

_____ _____
Date (Officials Signature)

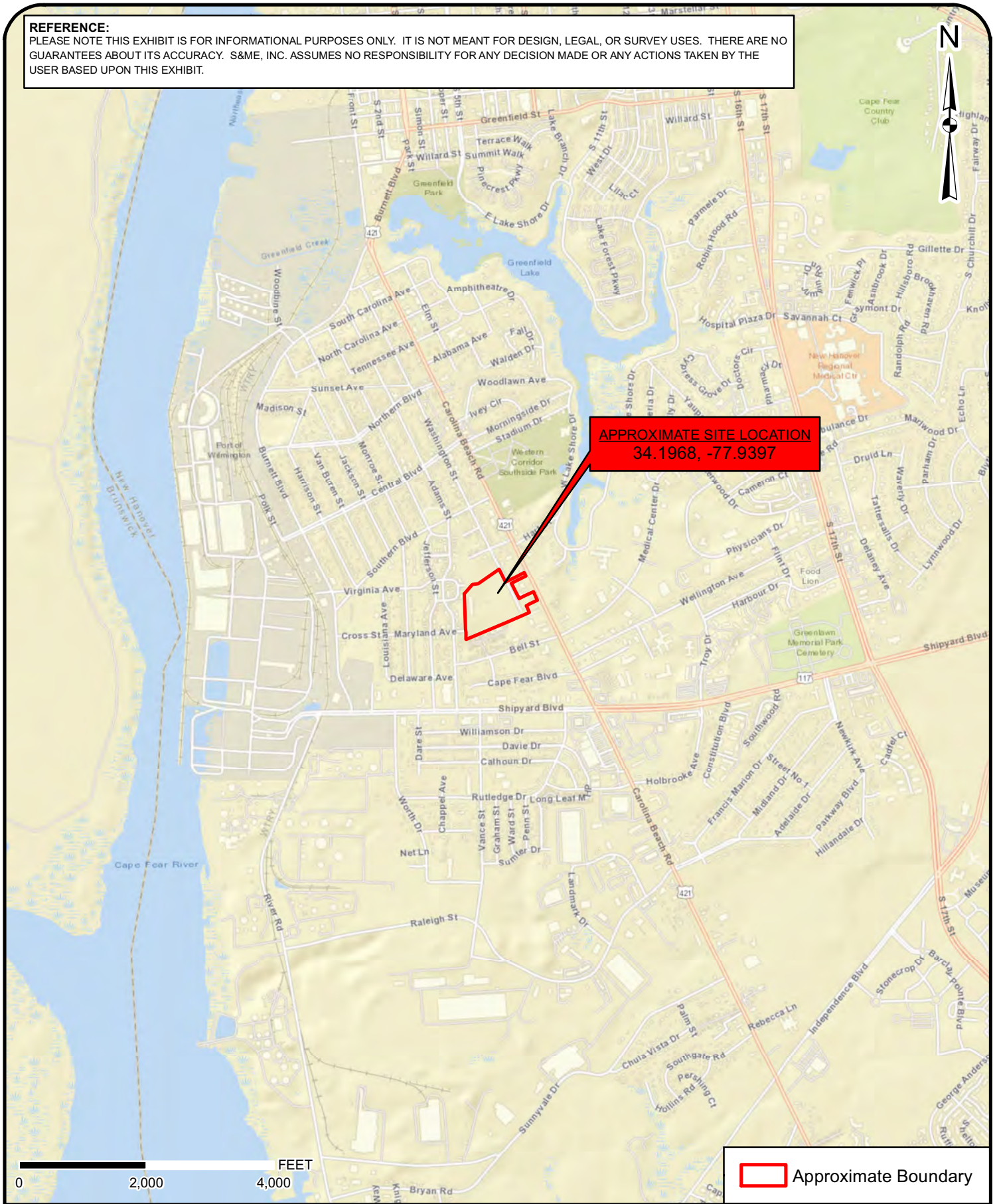
_____
(Officials Name – Print or Type)

_____
(Official's Title)

_____
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

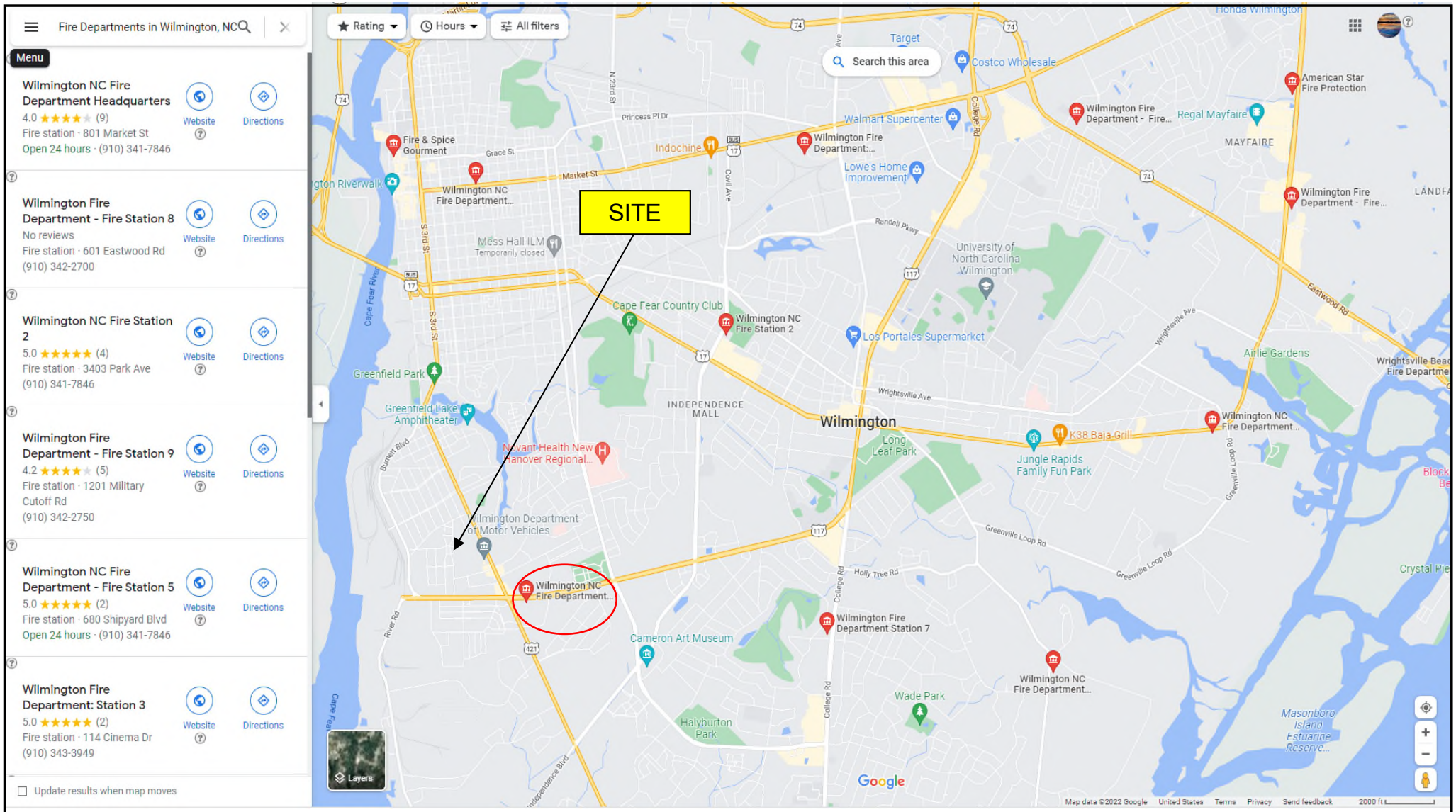
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PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

FIRE SERVICES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

EMS SERVICES

Chris Daves

From: Still, Steven <SStill@nhcgov.com>
Sent: Wednesday, October 5, 2022 8:22 AM
To: Chris Daves
Cc: O'Donnell, Rick
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Chris,
I have cc'ed Rick O'Donnell. He his the EMS director for Novant Health (New Hanover County).

Steven Still
Emergency Management Director
New Hanover County - Emergency Management
(910) 798-6910 p | (910) 798-6904 f
SStill@nhcgov.com
230 Government Center Drive, Suite 115
Wilmington, NC 28403
www.NHCgov.com

From: Chris Daves <CDaves@smeinc.com>
Sent: Tuesday, October 4, 2022 4:29 PM
To: Still, Steven <SStill@nhcgov.com>
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter

** External Email: Do not click links, open attachments, or reply until you know it is safe **
Dear Mr. Still,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County EMS regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:29 PM
To: 'sstill@nhcgov.com'
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 6 Emergency Services Resource Letter -Starway.pdf

Dear Mr. Still,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County EMS regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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October 4, 2022

New Hanover County EMS
23 Government Center Drive, Suite 115
Wilmington, North Carolina 28403

Attention: Mr. Steven Still, Director (sstill@nhcgov.com)

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Mr. Still:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from New Hanover County EMS regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by New Hanover County EMS or resources managed by New Hanover County EMS.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

EMERGENCY MEDICAL SERVICE CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Emergency Medical Service is available and adequate ☐ for the project as the average response time of ___ minutes falls within the average community response time of _____ minutes; or adequate Emergency Medical Service is not available ☐ for the project. Furthermore, available Emergency Medical Service will ☐ will not ☐ be adversely affected by the project.

Additional Comments/Conditions/Concerns _____

_____ _____
Date (Officials Signature)

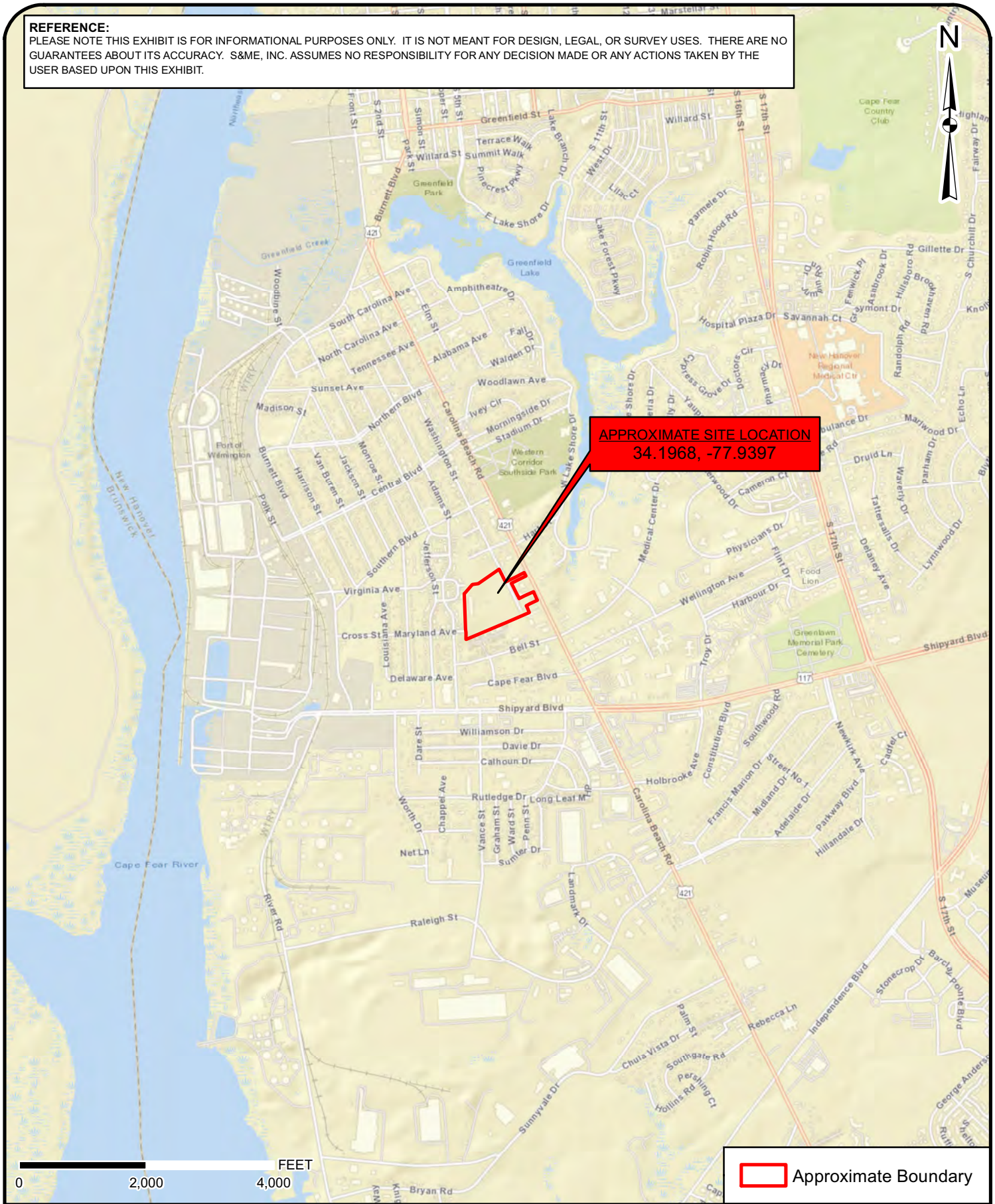
_____
(Officials Name – Print or Type)

_____
(Official's Title)

_____
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

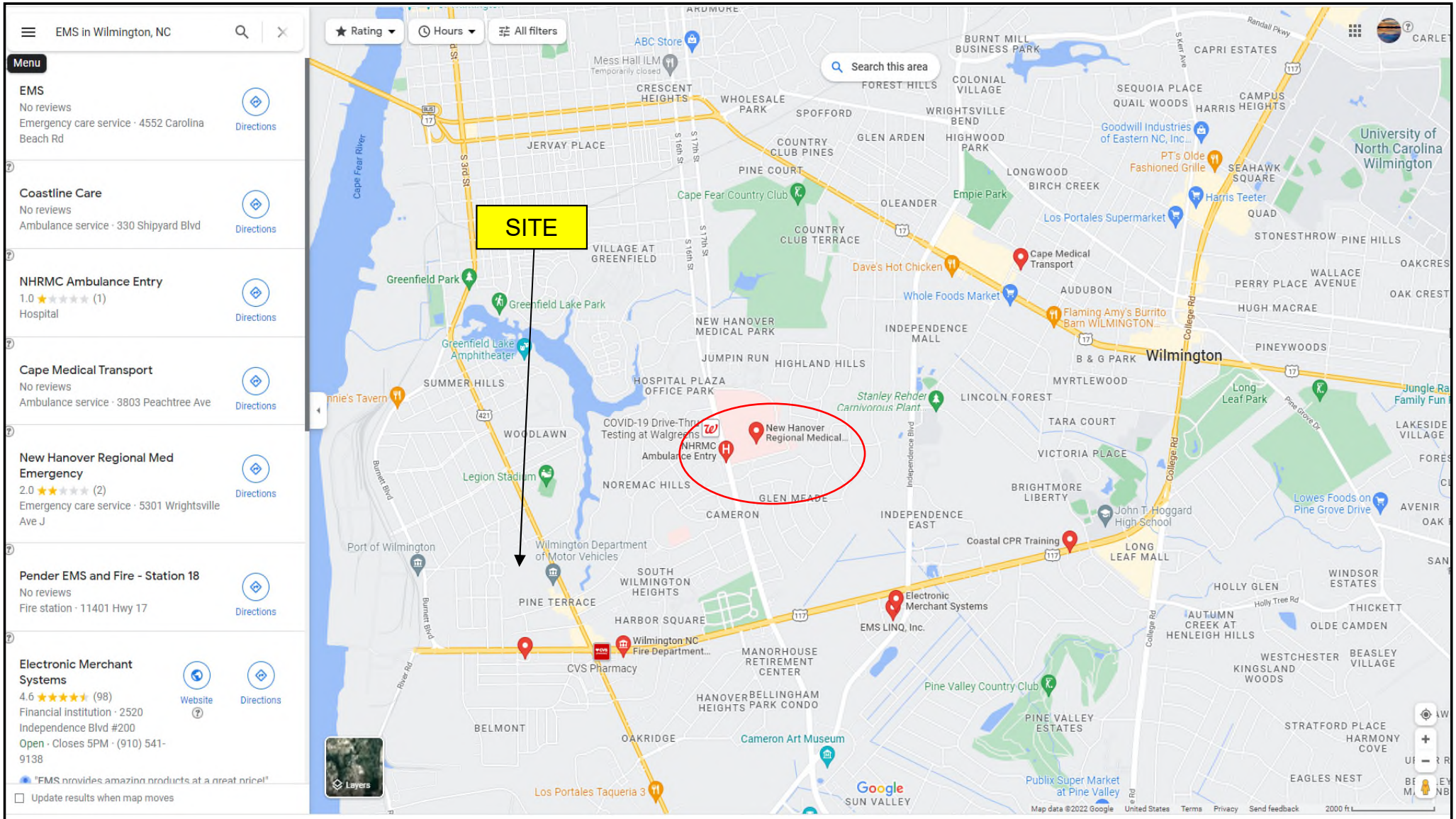
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PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

EMS SERVICES EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., SOUTH CAROLINA

PROJECT NO: 21610025

EXHIBIT NO.

ATTACHMENT 30

Community Facilities and Services

Parks, Open Space, and Recreation

COMMUNITY FACILITIES and SERVICES

PARKS, OPEN SPACE, AND RECREATION

1. Are open spaces, recreational and cultural facilities within reasonable walking distance to the project area? **Yes. (See Attachment 30). Two playgrounds and a pool/clubhouse complex will be constructed as part of the proposed development.**
   Or is adequate public transportation available from the project to these facilities? **Yes.**

2. Will the proposed project overload existing facilities? **No.**

3. If the project includes special groups such as small children, or the elderly and handicapped, are there convenient facilities to meet their particular needs? For example, are there tot lots for very small children, playgrounds for elementary school children, drop-in centers for senior citizens and ball fields for teenagers? (Note that privately-owned, vacant land cannot be considered to be park or playground space.) **N/A.**

4. If the development is family housing, has space for informal play for children been included on-site? **N/A**. Have areas for recreation for adults and elderly been provided including places for passive recreation? **N/A**.

RECREATIONAL SERVICES CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Adequate and appropriate Recreational Services and Facilities are [✓] are not [ ] available for this project. Furthermore, available Recreational Services and Facilities will [ ] will not [✓] be adversely affected by this project.

Recreational facilities and organization that may serve the project are: Legion Sports Complex tennis courts and pool, Greenfield Lake Park

Additional Comments/Conditions/Concerns none

10.13.22
Date

(Officials Signature)

Amy Beatty
(Officials Name – Print or Type)

Community Services Dept.
(Official's Title)

Community Services
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

Chris Daves

From: Suzanne Rogers <Suzanne.Rogers@wilmingtonnc.gov>
Sent: Thursday, October 13, 2022 12:16 PM
To: Chris Daves
Subject: FW: Protected: Scanned from Community Services 5560C 10/13/2022 10:53
Attachments: DOC101322-10132022105342.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

For Starway EA

Suzanne E. Rogers, MPA
Community Development and Housing Planner
City of Wilmington/Community Services Department
Community Development and Housing
910.341.5809
Suzanne.rogers@wilmingtonnc.gov

-----Original Message-----
From: Amy Beatty <Amy.Beatty@wilmingtonnc.gov>
Sent: Thursday, October 13, 2022 11:01 AM
To: Suzanne Rogers <Suzanne.Rogers@wilmingtonnc.gov>
Subject: FW: Protected: Scanned from Community Services 5560C 10/13/2022 10:53

Hi Suzanne,

Please find the completed recreation services certification form for Starway Village.

Best,

Amy Beatty
City of Wilmington
Community Services Director
305 Chestnut Street
Wilmington, NC 28401
910-341-5838
amy.beatty@wilmingtonnc.gov
www.wilmingtonnc.gov

For updates on City of Wilmington's operational changes and cancellations due to the Coronavirus (COVID- 19), please visit the City's Website

-----Original Message-----
From: CommSvcs.BlacknWhiteCopier <commsvcs.blacknwhitecopier@wilmingtonnc.gov>
Sent: Thursday, October 13, 2022 10:54 AM
To: Amy Beatty <Amy.Beatty@wilmingtonnc.gov>
Subject: Protected: Scanned from Community Services 5560C 10/13/2022 10:53

Scanned from MFP13544370
Date:10/13/2022 10:53
Pages:1
Resolution:200x200 DPI

E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

October 4, 2022

City of Wilmington Parks and Recreation
302 Willard Street
Wilmington, North Carolina 28401

Attention: Ms. Margaret Isbell, Administrative Support Specialist

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Ms. Isbell:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from City of Wilmington Parks and Recreation regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by City of Wilmington Parks and Recreation or resources managed by City of Wilmington Parks and Recreation.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

RECREATIONAL SERVICES CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Adequate and appropriate Recreational Services and Facilities are ☐ are not ☐ available for this project. Furthermore, available Recreational Services and Facilities will ☐ will not ☐ be adversely affected by this project.

Recreational facilities and organization that may serve the project are:

Additional Comments/Conditions/Concerns

Date

(Officials Signature)

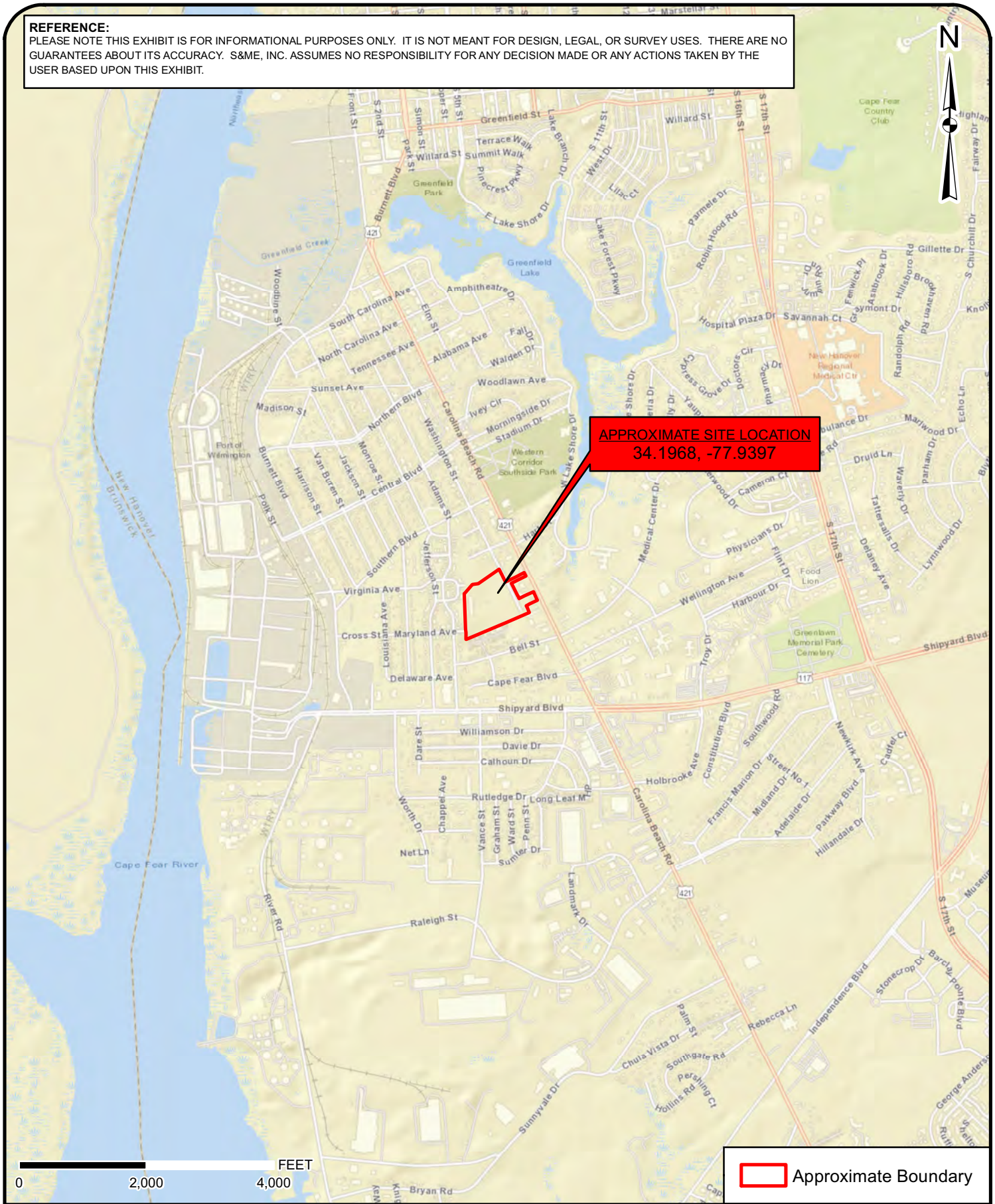
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
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Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

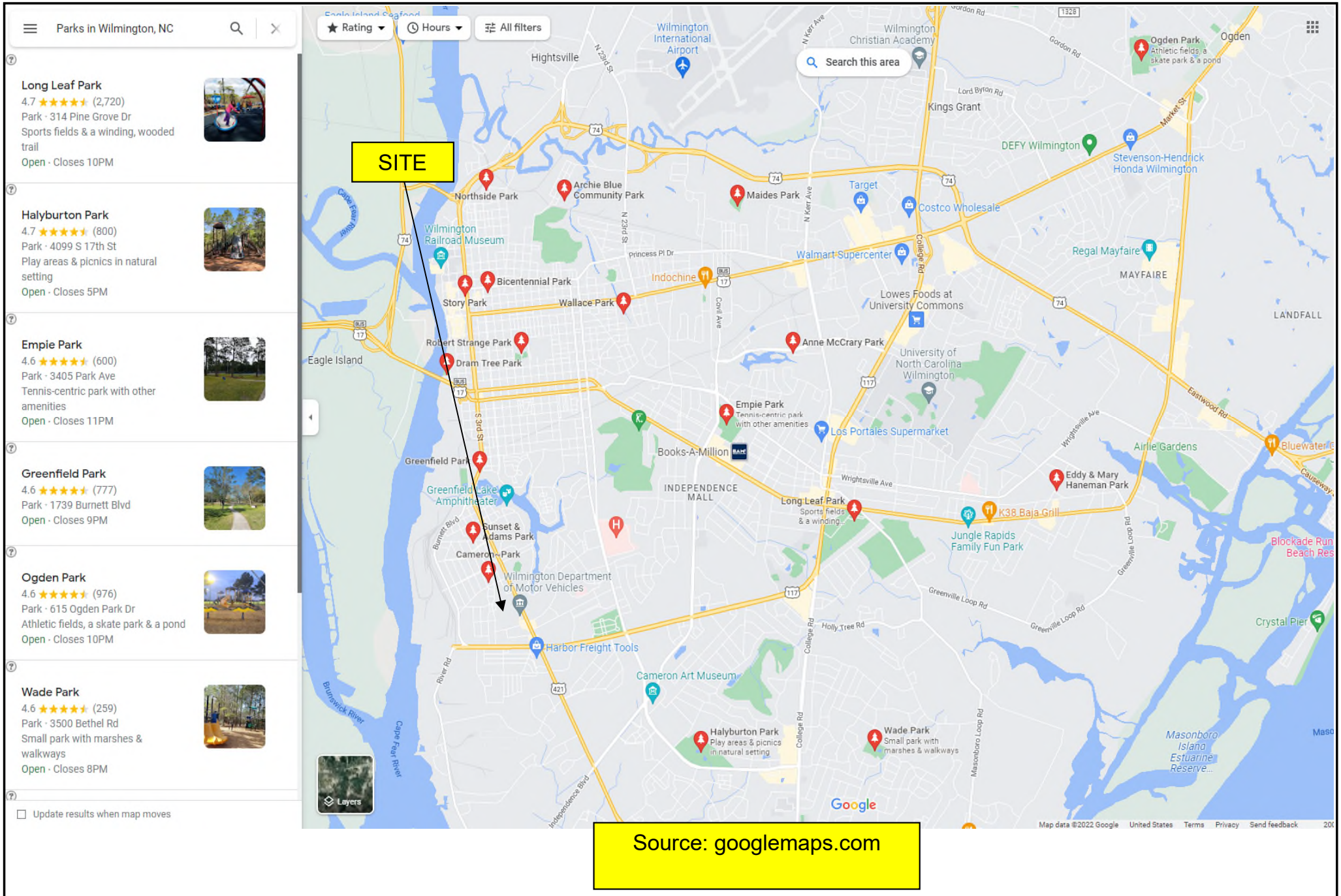
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PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn



Source: googlemaps.com

SCALE:	NTS
DRAWN BY:	WT
CHECKED BY:	CD
DATE:	11-1-22

PARKS EXHIBIT
STARWAY VILLAGE APARTMENTS
WILMINGTON, NEW HANOVER CO., NORTH CAROLINA

PROJECT NO: **21610025**

EXHIBIT NO.

CITY PARKS & ATHLETIC FACILITIES

		PARKING	RESTROOMS	PLAYGROUNDS	SHELTERS/PICNIC	BASKETBALL	TENNIS COURTS	ATHLETIC FIELDS	SWIMMING POOL	REC. CENTER	BIKE RACKS	VOLLEYBALL	FISHING	KAYAK ACCESS	WATER ACCESS	NATURE PROGRAMS
Anne McCrary Park 4000 Randall Pkwy	44 Acres	●			●											
Archie Blue Park 1306 Stanley St	7 Acres	●	●	●	●	●		●						●		
Beaumont Park 101 Wayne Drive	4 .1 Acres			●	●	●										
Bicentennial Park 206 N. 5th St	1 Acres			●		●										
Bijou Park 209 N. Front St	0.13 Acres										●					
Bulluck Park 2013 Market St	3.15 Acres															
Cameron Park 245 Southern Blvd	1.6 Acres			●	●	●		●								
Church & Nun Park 1922 Nun St	0.25 Acres			●	●											
Claude Howell Park 200 S Water St	0.1 Acres										●					
Dram Tree Park 602 Surry St	2.95 Acres	●												●	●	
1898 Park 1074 N. 3rd St	.8 Acres	●														
Empie Park 3405 Park Ave	32 Acres	●	●	●	●	●	●				●					
Godwin Stadium 215 Shipyard Blvd	5 Acres	●	●					●								
Greenfield Park 1739 Burnett Blvd	190 Acres	●	●	●	●		●				●		●	●	●	
Halyburton Park 4099 S 17th St	60 Acres	●	●	●	●					●	●					●
Hanover Heights Park 801 Adelaide Dr	0.5 Acres			●	●											
Innis Park 102 N 3rd St	.48 Acres										●					
James E.L.Wade Park 3500 Bethel Rd	16.78 Acres	●	●	●	●						●					
Kennedy Park 2108 Plaza Dr	.77 Acres			●	●	●										
Legion Sports Complex 2131 Carolina Beach Rd	29 Acres	●	●				●	●	●		●					
Maides Park 1101 Manley Ave	13 Acres	●	●	●	●	●	●	●		●	●					

CITY PARKS & ATHLETIC FACILITIES

		PARKING	RESTROOMS	PLAYGROUNDS	SHELTERS/PICNIC	BASKETBALL	TENNIS COURTS	ATHLETIC FIELDS	SWIMMING POOL	REC. CENTER	BIKE RACKS	VOLLEYBALL	FISHING	KAYAK ACCESS	WATER ACCESS	NATURE PROGRAMS
MarStella Park 202 Marstellar St	.16 Acres			●	●											
Mary Bridgers Park 1925 Chestnut	5.13 Acres															
Mothers Park 3206 Camden Circle	.24 Acres			●	●											
Northside Park 610 Bess St	4.25 Acres			●	●	●			●							
Nunalee Park 416 S 17th St	.80 Acres															
Olsen Park 5510 Olsen Park Lane	89 Acres	●	●	●	●			●				●				
Piney Ridge Nature Preserve 3800 Canterbury	3 acres Phase I	●														●
Portia Hines Park 400 N 10th	2.78 Acres			●	●	●										
Riverfront Park 10 Harnett St	6.6 Acres		●	●							●					
Robert Strange Park 401 S 8th St	18 Acres	●	●	●	●	●	●	●		●						
Eddy & Mary Haneman Park 6001 Mariner Ave	.88 Acres	●		●	●				●		●					
Southgate Park 201 Pershing Ct	.58 Acres			●							●					
Sunset & Adams Park 250 Sunset Ave	0.32 Acres			●	●											
Thomas B. Lilly Park 502 Forest Hills Dr	1.66 Acres				●											
Thomas & Willlie Jervay Freedom Walk 1305 N. 4th St.																
Tower Park 910 Wooster St	1.45 Acres				●	●										
Triangle Park 2900 Wrightsville Ave	.48 Acres															
Trolley Stop Park Park & 42nd	.26 Acres				●											
Wallace Park 2710 Market Street	13 Acres			●	●	●										
Water Street Park Water St/Market St.	.31 acres	This park was formerly Riverfront Park. It is located across from Federal Courthouse and currently under construction.														

Select Language

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Recreation Facilities & Amenities

Wilmington Parks & Recreation

Our parks each feature different amenities from basketball courts, trails, tennis courts and more.

Amphitheater

Hugh Morton Amphitheater
1941 Amphitheatre Drive, Wilmington
Questions? Call 910.341.4604 or email

The Hugh Morton Amphitheater at Greenfield Park is a city of Wilmington facility managed by Live Nation.

For information on concerts visit website.

Athletic Fields

FIELD RENTAL INFORMATION

Questions? Call Andrea Talley at 910.343.3682

Stadiums/Complexes

Godwin Stadium
215 Shipyard Blvd., Wilmington
General Policies **Rental Application**

- Baseball Stadium with 1000 seats
- Parking
- Restrooms
- Lights
- Fees: $15/hour without lights and $35/hour with lights

Legion Sports Complex
2131 Carolina Beach Rd, Wilmington

General Policies **Rental Application**

- Baseball Stadium
- Football/Athletic Stadium
- Backfield
- Fees & More Information

Olsen Park
5510 Olsen Park Lane, Wilmington
General Policies & Rental Application

- 5 baseball/softball fields with lights
- Tournament venue or fields can be rented individually
- Fees & More Information

Community Center Fields

Maides Park (1 field/no lights)
1101 Manly Avenue, Wilmington Field Rental Application

Robert Strange Park (3 fields / 1 field has lights)

Basketball Courts

Indoor Basketball Court:

- MLK Community Center, 401 S. 8th St. Wilmington
  Questions? call 341.7866 or email

Note:

Schedule

Adult Open Gym	M/W/F	10 am -12 pm
Youth Open Gym	M-F	4 pm-6:30 pm
Open Gym	Sat	10 am - 2 pm; 3 pm -6 pm (clean 2-3 pm)

Rules

- One person, one goal (6 reservation slots per time slot)
- One half-hour time slot per person per day
- No spectators.Players come in immediately prior to their time slot and leave immediately after.
- A sign-up sheet will be kept at the front desk.Players can either come in or call to sign up for a time slot.Reservations will be taken at most one day in advance.
- A parent and child can play at the same goal, but **each must have a time slot reservation**.No more than 6 people are allowed in the gym at a time.Two children may not play at the same goal.
- Players 9 years old and over may practice without an adult.
- Each player/guardian must sign a Covid-19 waiver and will have their temperature scanned prior to practicing.
- Reservations can be made one day in advance either at the MLK front desk or by calling 341-7866.

Outdoor Basketball Courts

- Archie Blue Park, 1306 Stanley St, Wilmington
- Beaumont Park, 101 Wayne Drive, Wilmington
- Bicentennial Park, 206 N .5th St, Wilmington
- Cameron Park, 245 Southern Blvd. Wilmington
- Empie Park, 3405 Park Avenue, Wilmington
- Kennedy Park, 2108 Plaza Drive, Wilmington
- Maides Park, 1101 Manly Avenue, Wilmington
- Northside Park, 610 Bess St. Wilmington
- Portia Mills Hines Park, 400 N. 10th St. Wilmington
- Tower Park, 910 Wooster St. Wilmington

Community Centers

The City of Wilmington has three community centers:

MLK Community Center

Programs & More Information

401 S. 8th Street, Wilmington Phone: 910.341.7866 (TTY Relay 711)

Mary Jones, Recreation Supervisor
Yosha Martinez, Recreation Coordinator
Morrell Fox, Recreation Coordinator (Athletics)

Derick G.S. Davis Center @ Maides Park

Programs & More Information

1101 Manly Avenue Wilmington, NC | Phone: 910.341.7867 (TTY Relay 711)
Isaiah Lubben, Recreation Supervisor
Gabriel Guerra, Recreation Coordinator

Hemenway Community Center

Managed by the Blue Ribbon Commission to Prevent Youth Violence

507 McRae Street
Wilmington, NC
Phone: 910.341.4633 (TDD 341.7873/TTY 711)

Features and Amenities:

- Multi-Purpose Rooms
- Computer Room
- Kitchen

Docks (downtown)



Wilmington City Docks

Wilmington City Docks

Effective July 1:

- City docks will be self service day docking only
- Overnight docking will be prohibited
- Water & power will be provided
- No fee will be charged for day docking

Market Street Landing Docks

- 200' of floating dock space
- 30 amp & 50 amp available

Coastline Docks

- 11 slips; floating dock
- 30 amp available

Docks behind Hotel Ballast

- 450' of floating dock space
- 30 amp & 50 amp available

Questions?

Doug Lewis

Dog Park

Empie Dog Park



OPERATION CHANGES

In response to the Governor's Stay at Home order and due to health and safety concerns about the Coronavirus (COVID-19) the Empie Dog Park is closed until further notice. Please email staff if you have questions.

3405 Park Avenue, Wilmington | 910.341.4631
Dog Park Information Report a Problem

Other Area Dog Parks

- Ogden Dog Park & Hugh MacRae Park: For more information, call New Hanover Parks at 910.798.7620
- Kure Beach Dog Park

Event & Wedding Venues (outside)

Indoor Event Venues

Fishing

Fishing

There are two locations that are available for fishing within city limits:

- Greenfield Park (1739 Burnett Blvd)
- Anne McCrary Park (4000 Randall Parkway)

Greenfield Park has a boat ramp available to launch boats, canoes, and kayaks. Anne McCrary is limited to small boats, canoes and kayaks - no boat ramp is available. Fishing license is required; any persons under the age of 16 are not required to have a fishing license as long as they are accompanied by a licensed adult. Any further information relating to NC STATE FISHING REGULATIONS can be found at www.NCWildlife.org

Fitness Center

Golf Courses

Nature Preserves

Picnic Shelters

Questions? call 341.7855 or email

Picnic Shelters

Picnic Shelters are available for rental at:

- Empie Park, 3405 Park Avenue | 341.7855
- Robert Strange Park - 401 S. 8th St. | 341.7866
- Maides Park -1101 Manly Ave | 341.7867
- Halyburton Park, 4099 S. 17th St. | 341.0075

Questions? 910.341.7855 or Reserve Online

Rates:

- $30 for 4 hours (city taxpayer)
- $35 for 4 hours (non city taxpayer)

Organization with 501(c) 3 status (must show 501c3 documentation):

- $20 for 4 hours (city resident)
- $25 for 4 hours (non-city resident)

Playgrounds

The following parks have playgrounds: Printable List of Parks

- Archie Blue Park
- Beaumont Park
- Bicentennial Park
- Cameron Park
- Church & Nun
- Empie Park
- Greenfield Park
- Halyburton Park
- Hanover Heights
- Kennedy Park
- Maides Park
- Marstella Park
- Mothers Park
- Northside Park
- Olsen Park
- Optimist Park
- Portia Mills Hines Park

- Robert Strange Park

Preschool Activity Center

Skate Park

GREENFIELD GRIND SKATE PARK @ Greenfield Lake

(located behind 302 Willard Street, Wilmington) | 910.341.7855 Jonathan Batts, Manager

July 1, 2019: The skate park is now an open-use facility and is free of charge. It is open from sunrise to sunset.

About the Skate Park

The all concrete facility spans over 9,000 square feet consisting of multi-bowls with a banked street course. The park features a variety of hips, rails and ledges. The park is open 7 days a week from sunrise to sunset. All park rules must be followed. Usage is intended for skateboards, inline skates & BMX freestyle bikes.

Hours

Sunrise to Sunset.

Fees

There are no fees to use this facility.

Park Rules

This is an unsupervised park. The City of Wilmington does not assume responsibility for injuries. Use this facility at your own risk.

- Do not use the skate park when wet or rainy condi. ons exist.

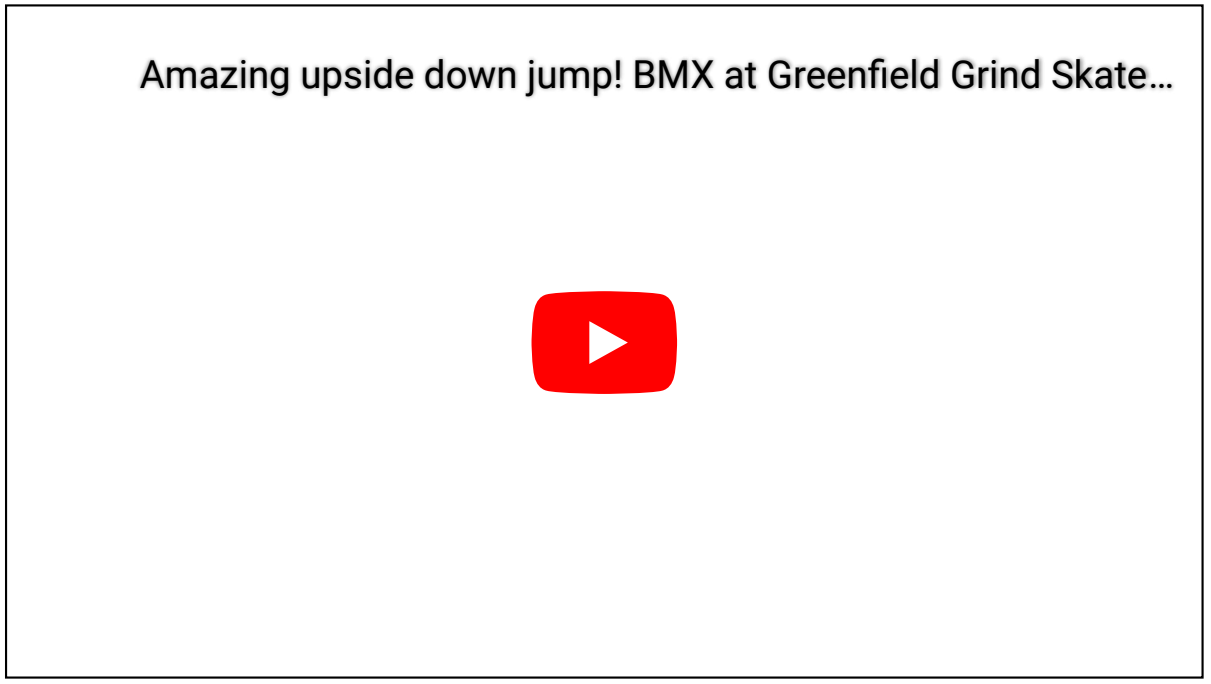
- Loitering in the skate park outside of open hours is prohibited.
- Usage is intended for skateboards, inline skates and BMX freestyle bikes.
- Safety first – all participants must wear appropriate safety gear (helmets, knee and elbow pads are required).
- Ages 13 and under must be accompanied by an adult.
- Be courteous and respectful of others. No foul language or fighting.
- Dispose of all trash properly. Food, drinks, gum, and glass containers are not permi□ed inside the park.
- No additional obstacles including rails, ramps or other materials may be brought into the park.
- Pets are not allowed inside the park.
- Spectators are to remain outside of the skatepark designator area.
- The use of alcohol, tobacco, or drugs is strictly prohibited.
- Competitive or demonstrative events are not allowed without prior approval from the Parks and Recreation Division.
- Report damage/hazards and vandalism to the Parks and Recreation Division.
- For emergencies, call 911.

Questions? Contact Parks and Recreation at (910) 341-7855

Please help us keep your park clean and safe. Thank you.

BMX @ Greenfield Grind Skatepark

North Carolina is home to some of the best BMX trick riders in the world. Many top professionals live in Greenville (known as "Protown"), including Dave Mirra, who held the world record for the most X-Games medals (24) until 2013. Watch a BMX rider displays his amazing talents at the Greenfield Grind Skatepark at Greenfield Lake.



Swimming Pool & Splash Pad

Tennis Courts

Tennis Courts with lights

- Althea Gibson Tennis Complex @ Empie Park
  3405 Park Avenue (19 courts)
- Legion Sports Complex, 2131 Carolina Beach Rd., Wilmington
  (4 courts)
- MLK Community Center, 401 S. 8th Street, Wilmington
  (6 courts)

Courts with no lights

- Greenfield Park, 302 Willard Street, Wilmington
  (2 courts)
- Maides Park, 1101 Manly Avenue, Wilmington
  (2 courts)

Trails

Trail Locator Map

Gary Shell Cross City Trail

The Cross-City Trail is a 15 mile off-road, multi-use trail that runs from Wade Park, through Halyburton Park and Empie Park to the Heide-Trask Drawbridge at the Intracoastal Waterway. The trail provides bicycle and pedestrian access to numerous recreational, cultural and educational destinations in Wilmington. **More information**

Greenfield Lake

Greenfield Park (located behind 302 Willard Street) The paved path that runs around Greenfield Lake is 4.8 miles long. There is ample parking and restrooms at this location.

Halyburton Park

4099 S. 17th St,Wilmington | 341.0075 1.3 mile paved path that goes around Halyburton Park Also connects to the **Gary Shell Cross City Trail.**

Maides Park

1101 Manly Avenue, 910.341.7867
Paved path that is 4/10 of a mile long

Military Cutoff Trail

This paved path on Military Cutoff runs from Eastwood Road to Gordon Road and is approximately 2.28 miles.

River to Sea Bikeway

The River to the Sea Bikeway is an 11-mile, on and off-road bicycle route that follows the Historic Beach Car Line, which years ago carried vacationers from downtown Wilmington to Wrightsville Beach by trolley. The bikeway is comprised of neighborhood residential streets, off-road multi-use paths, and a few busy arterial roadways. More information Map

Riverwalk

The Riverwalk is located in downtown Wilmington adjacent to the Cape Fear River. The 1.75 miles of scenic walkway that runs from Governor's Landing (Nun St) to Harnett Street. More Information

Summer Rest Trail

1981 Eastwood Road
Path is 1.15 miles

Wade Park

3500 Bethel Road, Wilmington | 910.341.7852
1/2 mile paved path that goes around the Wade Park. There is limited parking as well as restrooms at this park. Wade Park is also the starting point for the Gary Shell Cross-City Trail.

Water Access

ATTACHMENT 31

Community Facilities and Services

Transportation and Accessibility

Wave
CAPE FEAR PUBLIC TRANSPORTATION AUTHORITY

PUBLIC TRANSPORTATION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Public transportation is [x] or is not available [ ] to serve the above project.
If available, Public transportation includes: bus [x] train [ ] cab [ ] other [ ]

Additional Comments/Conditions/Concerns There is an existing shelter stop 435 feet south of the southern entrance/exit of the development on Carolina Beach Road. There is an additional stop with no bench or shelter 488 feet north of the northern exit from the development. The Authority suggests the installation of a shelter and bench directly in front of the project based on the anticipated need and use based on the number of units and the project type.

10/05/2022
Date

Marie Parker
(Officials Signature)

Marie Parker
(Officials Name – Print or Type)

Executive Director
(Official's Title)

Cape Fear Public Transportation Authority/Wave Transit

Chris Daves

From: Marie Parker <mparker@wavetransit.com>
Sent: Wednesday, October 5, 2022 3:53 PM
To: Chris Daves
Subject: RE: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 20221005152214976.pdf

This message originated outside of S&ME. Please report this as phishing if it implies it is from an S&ME employee.

Hi Chris,

See attached response. Let me know if you need anything else.

All the best,

Marie Parker
Executive Director
Cape Fear Public Transportation Authority (Wave Transit)
Office: (910) 202-2035

From: Chris Daves <CDaves@smeinc.com>
Sent: Tuesday, October 4, 2022 4:24 PM
To: Marie Parker <mparker@wavetransit.com>
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter

Dear Ms. Parker,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the Cape Fear Public Transportation Authority regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
O: 803.561.9024
M: 803.446.2980
www.smeinc.com
LinkedIn | Twitter | Facebook

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Chris Daves

From: Chris Daves
Sent: Tuesday, October 4, 2022 4:24 PM
To: mparker@wavetransit.com
Subject: Starway Village Apartments in Wilmington, NC - Scoping Letter
Attachments: 9 Public Transportation Services Resource Letter -Starway.pdf

Dear Ms. Parker,

On behalf of Starway Village I/II, LLC, S&ME is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the Cape Fear Public Transportation Authority regarding the Starway Village Apartments project located in Wilmington, New Hanover Co., NC.

Attached please find a brief description and location of the project.

Thank you in advance for your input for this project.

Sincerely,
Chris Daves

Chris Daves, P.W.S.
Biologist/Senior Scientist

S&ME
134 Suber Road
Columbia, SC 29210 map
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October 4, 2022

Cape Fear Public Transportation Authority
Post Office Box 12630
Wilmington, North Carolina 28405-0130

Attention: Ms. Marie Parker, Executive Director

Reference: **Request for Comments**
Starway Village Apartments
Wilmington, New Hanover County, North Carolina
S&ME Project No. 21610025

Dear Ms. Parker:

On behalf of Starway Village I/II, LLC (recipient), S&ME, Inc. (S&ME) is currently seeking information necessary for the completion of a U.S. Department of Housing and Urban Development (HUD) Environmental Assessment. Please accept this letter as a request for comments from the Cape Fear Public Transportation Authority regarding the above-referenced project located in Wilmington, New Hanover County, North Carolina.

♦ Project Introduction

Starway Village I/II, LLC is seeking Community Block Development Grant-Disaster Recovery Program (CBDG-DR) federal funding to complete the project. To facilitate compliance with the National Environmental Policy Act of 1969 and HUD Regulations at 24 CFR Part 50, an Environmental Assessment must be completed prior to releasing funds for the project. This letter is a formal request to determine what effect(s) the proposed activity may have on operations and services provided by the Cape Fear Public Transportation Authority or resources managed by the Cape Fear Public Transportation Authority.

Using your area of expertise as a guide, please indicate within 30 days of receipt of this letter which of the type of impact(s) your agency anticipates due to the proposed activity by completing the **Certification Form for Local Resource Agency Analysis**, attaching necessary documentation, and returning this form to S&ME.

♦ Project Description

The site is located west of U.S. Highway 421 (Carolina Beach Road) in Wilmington, New Hanover County, North Carolina. The approximate 15.67-acre site is represented by four New Hanover County tax parcel numbers: R06013-021-001-000 (12.76 acres), R06018-002-006-001 (1.16 acres), R06014-001-001-000 (1.03 acres), and R06014-001-004-000 (0.72 acre.).

The development will consist of 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, and two stormwater detention ponds. An extension of Maryland Avenue to Carolina Beach Road across the southern portion of the site is also indicated on the site plan. The development will be conducted in two phases. The location of the proposed project area is shown on **Exhibits** and **Site Plan** attached to this scoping letter.

Closing

Thank you for your assistance in this project. We look forward to receiving your agency's comments. If you have questions or need additional information, please contact me at 803-561-9024 or cdaves@smeinc.com.

Sincerely,

S&ME

Chris Daves

Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Enclosures

Certification Form for Local Resource Agency Analysis

Vicinity Exhibit

Site Plan

PUBLIC TRANSPORTATION CERTIFICATION

Project Name: **Starway Village Apartments**
Proposed No. of Units: 278
Address: 2346 Carolina Beach Road (US 421)
Wilmington, New Hanover County, NC 28401

Closest street intersection or landmark: Starway Flea Market (landmark)

Public transportation is ☐ or is not available ☐ to serve the above project.
If available, Public transportation includes: bus ☐ train ☐ cab ☐ other ☐

Additional Comments/Conditions/Concerns

Date

(Officials Signature)

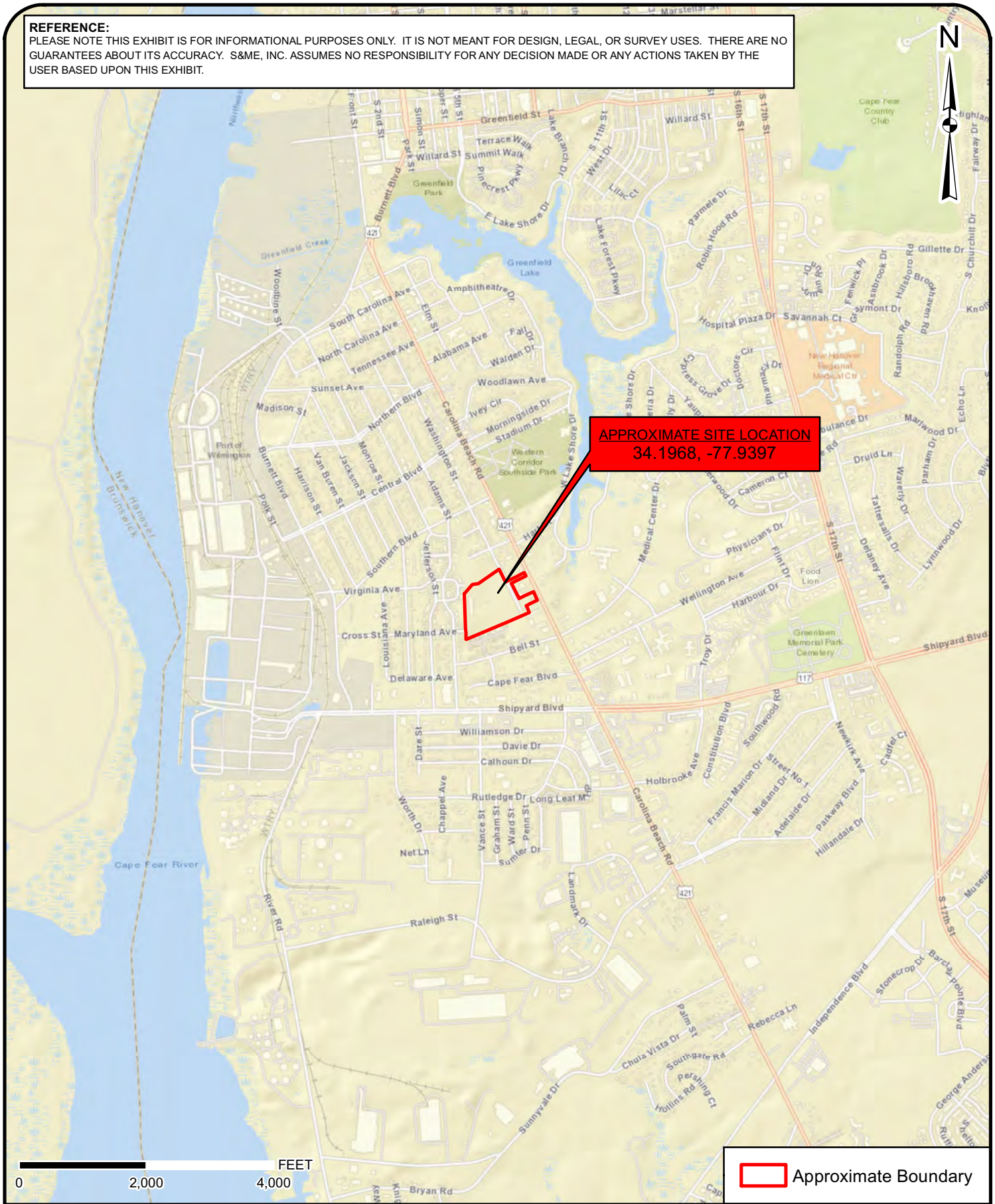
(Officials Name – Print or Type)

(Official's Title)

(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Vicinity Exhibit

Starway Village Apartments +/- 15.67 Acres

Wilmington, New Hanover County, North Carolina

Source: World Street Map

SCALE:	EXHIBIT NO.
1 " = 2,000 '	1
DATE: 8-29-22	
PROJECT NUMBER 21610025	

Drawing Path: T:\ENV\Projects\2022\21610025_Starway Village I and II, LLC_Starway Village Apartments_Wilmington, NC\4 ENV\GIS\mxds\Starway Village Apartments Vicinity Exhibit.mxd plotted by chandley 08-29-2022



PRELIMINARY SITE LAYOUT
SEPTEMBER 21, 2021

STARWAY VILLAGE
WILMINGTON, NC

Kimley»Horn

COMMUNITY FACILITIES and SERVICES

TRANSPORTATION

Access

1. Will transportation facilities and services be adequate to meet the needs of the project's users? **Yes. Public bus transportation available via WAVE (Cape Fear Public Transportation Authority (See Attachment 31). Personal vehicles also to be utilized by tenants.**
   Is off-street parking available and adequate? **On-site parking provided.** Is adequate public transportation available? **Yes.**

2. Are there special transportation needs (programs for the elderly and handicapped, bridge clearances for trucks, emergency vehicle access) which have not been adequately provided for? **No.**

3. Will the project serve to reduce the mobility of any group? **No.**

Balance

1. Will the project encourage additional private vehicle trips? **No.**

Safety

1. Will the project create any safety hazards? **No.** For example, have curbs been designed with wheelchair ramps, have pedestrian activated signal lights or pedestrian overpasses been included in plans where needed? **Yes.** Is traffic light timing adequate for elderly pedestrians? **No.**

2. Is the project safely accessible to vehicles and is vehicle parking adequate, including parking for moving vans/trucks? **Yes.**

3. Are there any barriers to emergency vehicle access? **No.**

Level of Service

1. Will the project be provided with an adequate level of transportation service? **Yes.** Will it overload existing or proposed transportation services or conversely, create a situation whereby facilities are seriously underused? **No.**

   A Transportation Impact Analysis (Starway Redevelopment) was conducted by Davenport to assess the ppotential traffic impacts of the development and identify transportation improvements that will be required to accommodate the impacts of both background traffic and new development traffic (See Attachment 31). Two access points are proposed along Carolina Beach Road: the northern access point will be an exit-only right out, while the southern access point will be left-in/right-in/right-out. One access point to the west on the southern portion of the site is proposed to connect to the existing Maryland Avenue stub. The conceptual site plan reflects an extension of Maryland Avenue from the existing stub west of the site through the development to Carolina Beach Road, and until accepted for maintenance by the City of Wilmington as a dedicated public roadway, it will function as an extension of the site driveways.

   Regarding intersection improvements at the two access points at Carolina Beach Road, the following are proposed:

- **Provide a single ingress and a single egress lane.**
- **A 100-foot southbound right-turn taper is required.**
- **For the southbound U-turn, 75 feet of storage is required utilizing the two-way left-turn lane for deceleration length.**
- **For the northbound left-turn lane, 75 feet of storage is required utilizing the two-way left turn lane for deceleration length.**

  A signaled access is proposed at the Maryland Avenue extension location on the southeastern portion of the site.

2. Overall, will the existing and reasonably foreseeable transportation facilities and services be adequate to meet the needs of the project? **Yes. See above.**

3. Will the project itself cause a significant adverse impact on the local or regional transportation system (e.g., by reducing the level of service of roadways)? **No.**

4. Does the project require a traffic study? **Yes.** Has one already been performed? **Yes**. Are there any actions identified in the study that need to be taken? **No.**

SITE ACCESSIBILITY

1. Is the site location readily accessible to employment, shopping, and service areas? **Yes.**

2. Is the access to the site free from impediments such as railroad crossings at grade, steep hills, prone to flash floods, etc.? **Yes.**

3. Does the site plan make arrangements for necessary street and road improvements to serve the residents, and to decrease the possible hazards to pedestrians in the area? **Yes. Sidewalks and street infrastructure already in place surrounding the site.**

4. Is the project an addition to already existing development or will it be completely new? **New.** Will the project be isolated from all services and have to provide its own access roads and streets? **No.**

5. Does the project facilitate pedestrian movement (e.g., sidewalks, pavement markings, landscaping, pedestrian-activated signal lights or pedestrian overpasses)? **Yes.**

6. Is the project area served by bicycle lanes or trails and does the project provide parking for bicycles, including covered, secure parking for employees and residents? **Yes.**

7. Is the project accessible to the elderly and disabled (e.g., wheelchair ramps, traffic light timing, handicapped parking, shuttle services)? **Yes. Project will follow ADA guidelines.**

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October 12, 2021

TRANSPORTATION IMPACT ANALYSIS

Starway Redevelopment

Wilmington, NC

Prepared for
Kelley Development Company

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Transportation Impact Analysis

Starway Redevelopment
Wilmington, NC

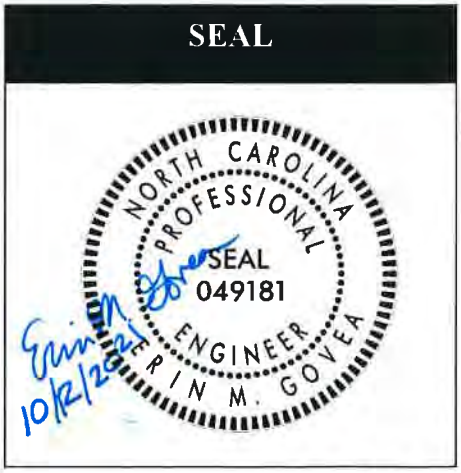
Prepared for Kelley Development Company
October 12, 2021

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Starway Redevelopment – Transportation Impact Analysis
Wilmington, NC
Kelley Development Company
October 12, 2021

Executive Summary

The proposed development is to be located on the west side of Carolina Beach Road (US 421) at the former Starway flea market site between Southern Boulevard and Bell Street/Medical Center Drive. The site is planned as a multifamily midrise apartment complex and is proposed to have 300 dwelling units in eight separate buildings.

Two access points are proposed along Carolina Beach Road: the northern access point will be an exit-only right out, while the southern access point will be left-in/right-in/right-out. One access point to the west is proposed to connect to the existing Maryland Avenue stub. The conceptual site plan reflects an extension of Maryland Avenue from the existing stub west of the site through the development to Carolina Beach Road, and until accepted for maintenance by the City of Wilmington as a dedicated public roadway, it will function as an extension of the site driveways.

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate these impacts.

The planned build-out year for this development is 2024. This Transportation Impact Analysis (TIA) was carried out based on the scope agreed upon with NCDOT and WMPO. Information regarding the property was provided by Kelley Development Company. This site has a trip generation potential of 100 trips in the AM peak hour and 127 trips in the PM peak hour.

Based on the capacity analysis, recommendations have been given where necessary to mitigate the impacts of future traffic. The recommendations include restriping the center two-way left-turn lane at the Primary Site Access to accommodate 75 feet of storage with appropriate taper for the northbound left-turn and the southbound U-turn. In addition, a 100-foot southbound right-turn taper is recommended at the Primary Site Drive. Recommended improvements are summarized in Table A.

In conclusion, this study has determined the potential traffic impacts of this development and identified transportation improvements that will be required to accommodate the impacts of both background traffic and new development traffic. The recommendations in Figure A and in Table A should be constructed to comply with NCDOT Policy on Street and Driveway Access to North Carolina Highways and City of Wilmington standards where applicable.

Table A – Recommended Improvements	
INTERSECTION	**RECOMMENDATIONS**
Carolina Beach Road (US 421) and Southern Boulevard	• No improvements are recommended
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive	• No improvements are recommended.
Carolina Beach Road and Site Exit Driveway	• Provide a single right-turn egress lane. • Site drive should be designed in accordance with applicable NCDOT and City of Wilmington standards.
Carolina Beach Road and Primary Site Access	• Provide a single ingress and a single egress lane. • A 100-foot southbound right-turn taper is required. • For the southbound U-turn, 75 feet of storage is required utilizing the two-way left-turn lane for deceleration length. • For the northbound left-turn lane, 75 feet of storage is required utilizing the two-way left turn lane for deceleration length. • Site drive should be designed in accordance with applicable NCDOT and City of Wilmington standards.
Adams Street and Southern Boulevard	• No improvements are recommended.
Adams Street and Maryland Avenue	• Connection from site to Maryland Avenue should be designed in accordance with applicable City of Wilmington standards. • No additional improvements are recommended.
Adams Street and Bell Street	• No improvements are recommended.

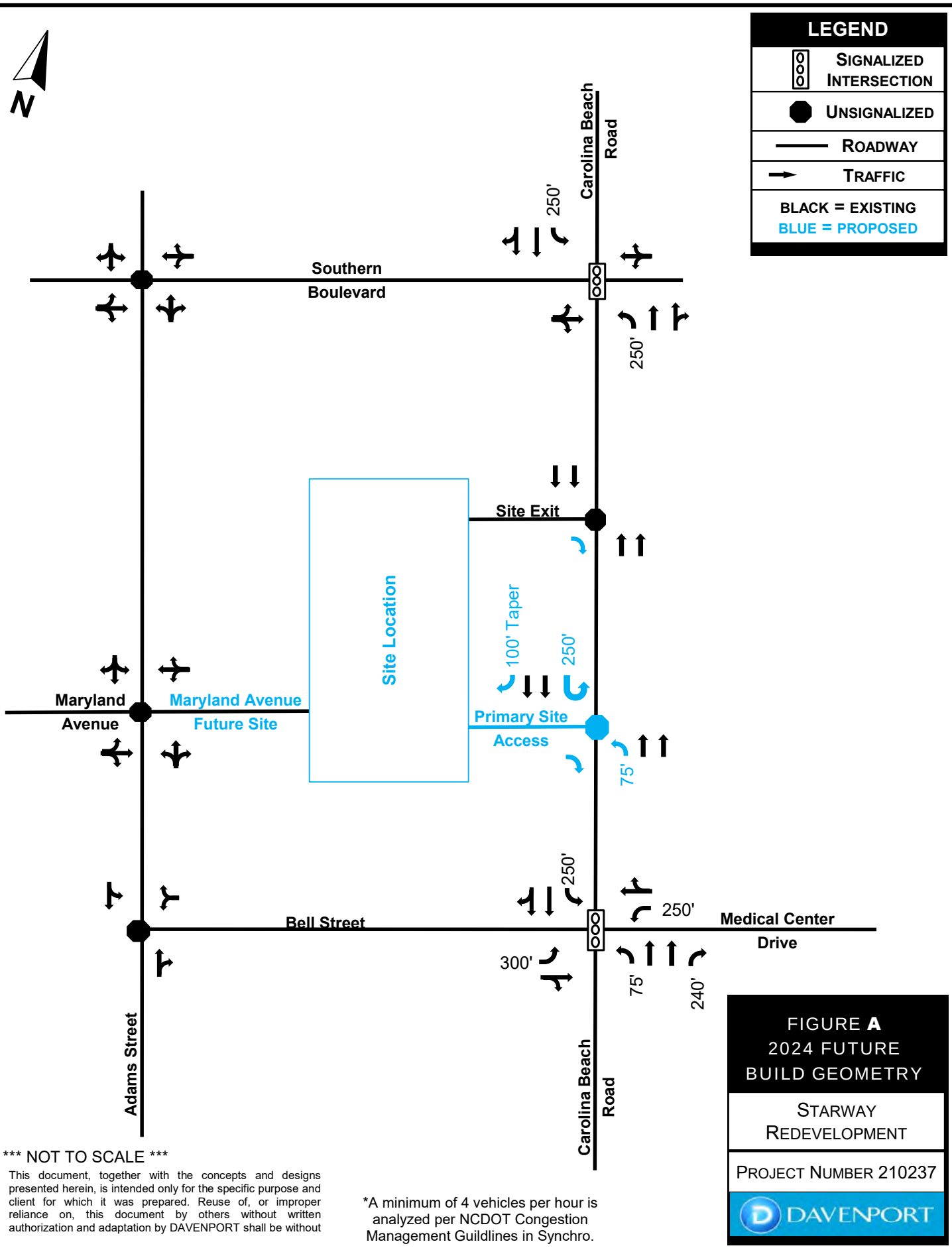


FIGURE **A**
2024 FUTURE BUILD GEOMETRY

STARWAY REDEVELOPMENT

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*A minimum of 4 vehicles per hour is analyzed per NCDOT Congestion Management Guildlines in Synchro.

Starway Redevelopment – Transportation Impact Analysis
Wilmington, NC
Kelley Development Company
October 12, 2021

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Starway Redevelopment – Transportation Impact Analysis
Wilmington, NC
Kelley Development Company
October 12, 2021

1.0 Introduction

The proposed development is to be located on the west side of Carolina Beach Road (US 421) at the former Starway flea market site between Southern Boulevard and Bell Street/Medical Center Drive. The site is planned as a multifamily midrise apartment complex and is proposed to have 300 dwelling units in eight separate buildings. Figure 1 depicts the conceptual site plan.

Two access points are proposed along Carolina Beach Road: the northern access point will be an exit-only right out, while the southern access point will be left-in/right-in/right-out. One access point to the west is proposed to connect to the existing Maryland Avenue stub. The conceptual site plan reflects an extension of Maryland Avenue from the existing stub west of the site through the development to Carolina Beach Road, and until accepted for maintenance by the City of Wilmington as a dedicated public roadway, it will function as an extension of the site driveways. A site location map and a vicinity map are provided in Figures 2A and 2B, respectively.

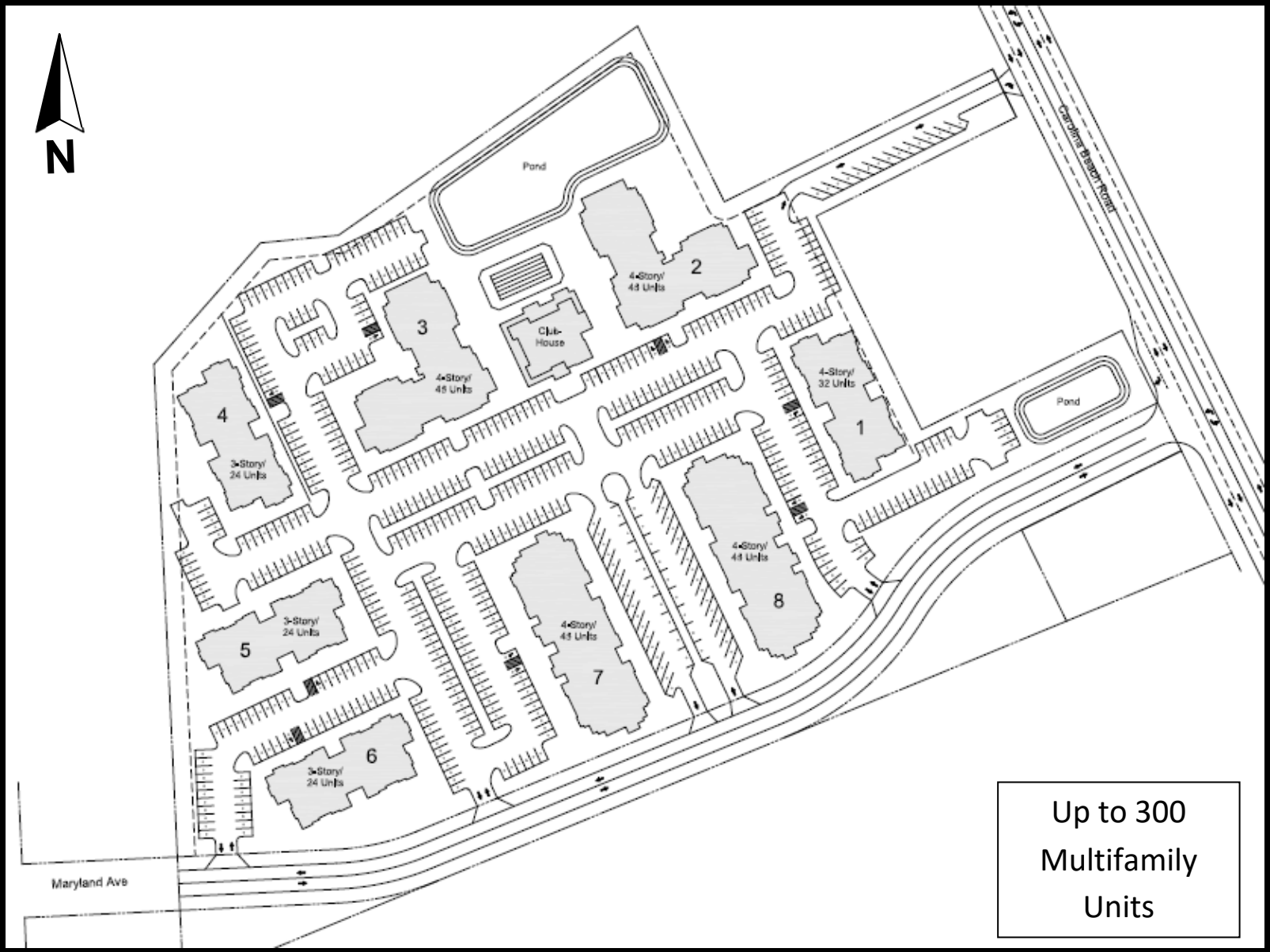
DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate these impacts. The following intersections were included in the study:

1. Carolina Beach Road (US 421) and Southern Boulevard (signalized)
2. Carolina Beach Road (US 421) Bell Street/Medical Center Drive (signalized)
3. Adams Street and Southern Boulevard (unsignalized)
4. Adams Street and Maryland Avenue (existing unsignalized intersection and future access point)
5. Adams Street and Bell Street (unsignalized)
6. Carolina Beach Road (US 421) and North Site Access (unsignalized right-out only)
7. Carolina Beach Road (US 421) and South Site Access (unsignalized right-in/left-in/right-out)

These intersections were analyzed during the AM and PM peaks for the following conditions:

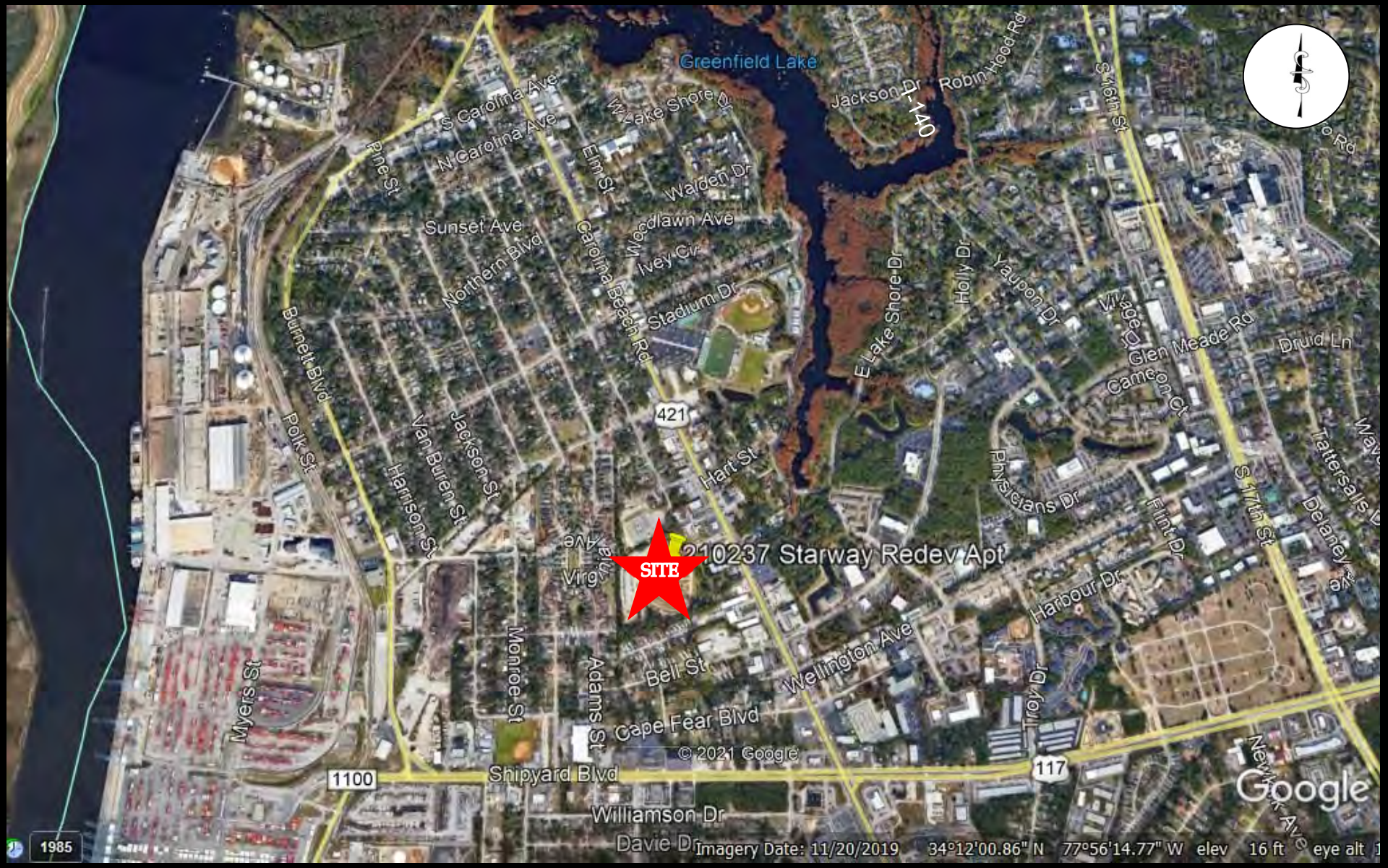
- 2021 Existing Conditions
- 2024 Future No Build Conditions
- 2024 Future Build Conditions
- 2024 Future Build Conditions + Improvements

The planned build-out year for this development is 2024. The Transportation Impact Analysis (TIA) was performed based on the scope agreed upon with NCDOT and WMPO. Information regarding the property was provided by Kelley Development Company.



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FIGURE 1
PRELIMINARY SITE PLAN (June 9, 2021)

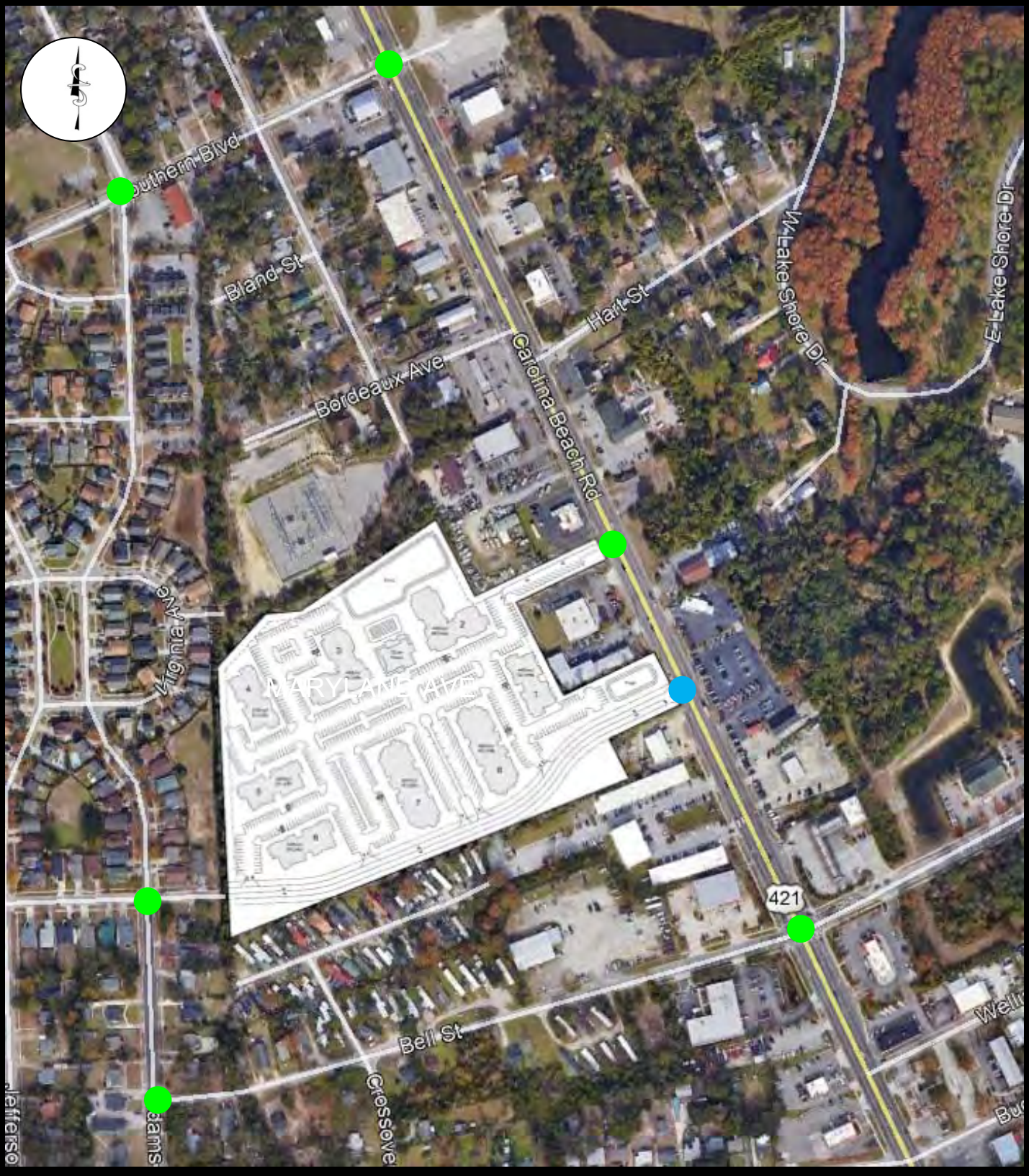


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FIGURE 2A

SITE LOCATION MAP

SITE INDICATOR



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FIGURE 2B
VICINITY MAP

STUDY INTERSECTIONS
EXISTING
PROPOSED

2.0 Existing Conditions

2.1 Inventory

A desktop investigation was conducted by DAVENPORT staff to determine the existing roadway conditions in the study area. Table 2.1 presents a summary of this investigation. Figure 3 presents the existing lane geometry. AADT values were obtained through previous NCDOT counts for Carolina Beach Road. For city streets without NCDOT data, an ADT of less than 4,000 vehicles was indicated based on counts gathered and a 10% design hourly vehicle factor.

Table 2.1 - Street Inventory

Facility Name	Route #	Typical Cross Section	Pavement Width	Speed Limit	Maintained By
Carolina Beach Road	US 421	4-lane with center two-way left-turn lane	10-foot lanes; 10-foot TWLTL	40 MPH	NCDOT
Southern Boulevard	N/A	2-lane undivided	12-foot lanes	25 MPH	City of Wilmington
Adams Street	N/A	2-lane undivided	10-foot lanes	25 MPH	City of Wilmington
Maryland Avenue	N/A	2-lane undivided	12-foot lanes	25 MPH	City of Wilmington
Bell Street	N/A	2-lane undivided	9-foot lanes	25 MPH	City of Wilmington
Medical Center Drive	N/A	2-lane with center two-way left-turn lane	10-foot lanes	35 MPH	City of Wilmington

2.2 Existing Traffic Volumes

Existing traffic volumes for this project were collected by DAVENPORT staff. Table 2.2 below contains the dates these counts were conducted. Traffic counts were taken in fifteen (15) minute intervals.

Table 2.2 - Traffic Volume Data

Count Location:	Date Taken:	By:
Carolina Beach Road and Southern Boulevard	5/25/2021	DAVENPORT
Carolina Beach Road and Bell St/Medical Center Dr	5/26/2021	DAVENPORT
Adams Street and Southern Boulevard	5/25/2021	DAVENPORT
Adams Street and Maryland Avenue	5/25/2021	DAVENPORT
Adams Street and Bell Street	5/25/2021	DAVENPORT

The 2021 existing volumes for AM and PM peak hours are shown in Figure 4. More information can be found in the Traffic Volume Data section of the Appendix.

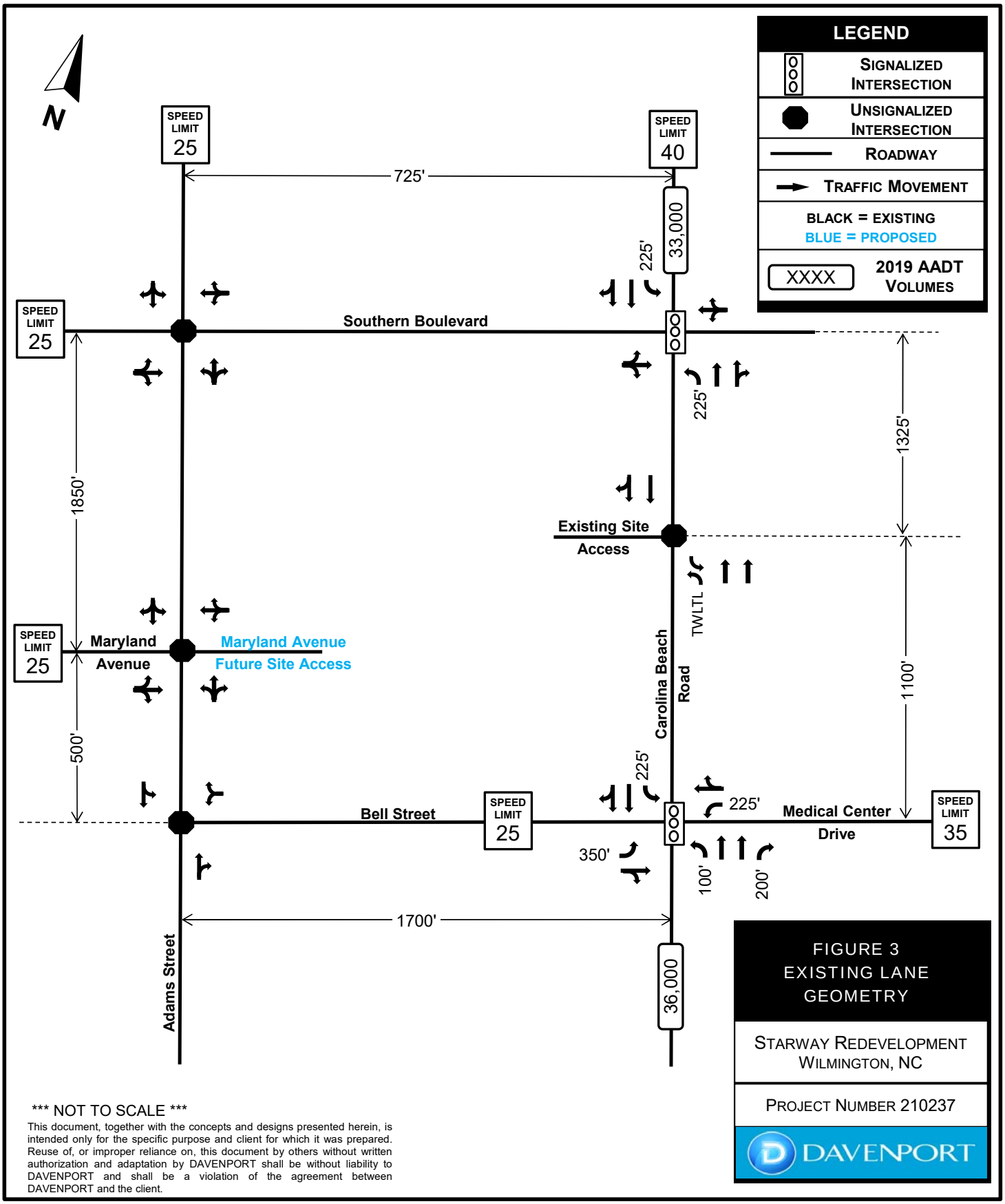


FIGURE 3
EXISTING LANE GEOMETRY

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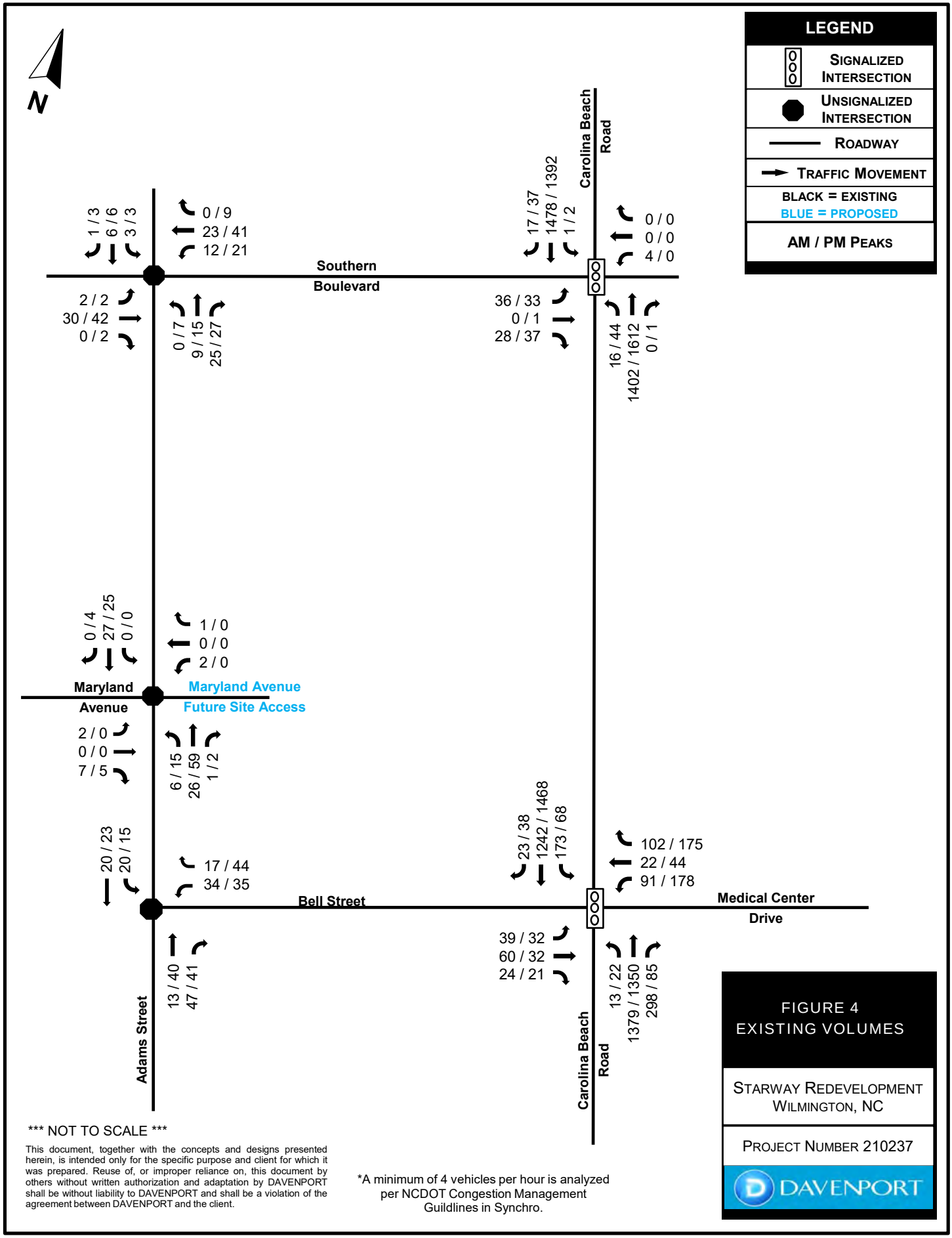


FIGURE 4
EXISTING VOLUMES

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3.0 Approved Development and Committed Improvements

3.1 Approved Developments

Approved developments are developments that have been recently approved in the area, but not yet constructed. Per NCDOT, there are no approved developments to be included in this study.

3.2 Committed Improvements

Committed improvements are improvements that are planned by NCDOT, the County, the City, or a developer in the area, but which are not yet constructed. From the NCDOT STIP Map, TIP U-5729REG (SPOTID H110987) is a committed improvement within the study area. U-5729 upgrades US 421 (Carolina Beach Road) to a four-lane divided superstreet, which removes the existing center two-way left-turn lane. Because the listed construction year is 2029, this committed project is NOT assumed for this study with a build-out analysis year of 2024. The appendix has more details.

4.0 Methodology

4.1 Base Assumptions and Standards

In general, the analysis for this project was conducted utilizing commonly accepted NCDOT standards. The following table contains a summary of the base assumptions:

Table 4.1 - Assumptions	
Background Traffic Annual Growth Rate	1%
Analysis Software	Synchro/SimTraffic Version 10.0
Lane widths	12 feet
Peak Hour Factor	0.90
Truck percentage	Based on traffic counts

4.2 Trip Generation

The proposed development will be a multifamily midrise apartment complex containing 300 dwelling units in 8 separate buildings. The trip generation potential of this site was projected based on the 10th edition of ITE Trip Generation Manual. Table 4.2 presents the results.

Table 4.2 - ITE Trip Generation

Starway Redevelopment – Wilmington, NC

Average Weekday Driveway Volumes					24 Hour Two-Way	AM Peak Hour		PM Peak Hour	
Land Use	ITE Land Code	Size		Data Source	Volume	Enter	Exit	Enter	Exit
Multifamily Housing (Midrise)	221	300	Units	Adjacent - Rate	1,633	26	74	77	50
Total Trips					**1,633**	**26**	**74**	**77**	**50**

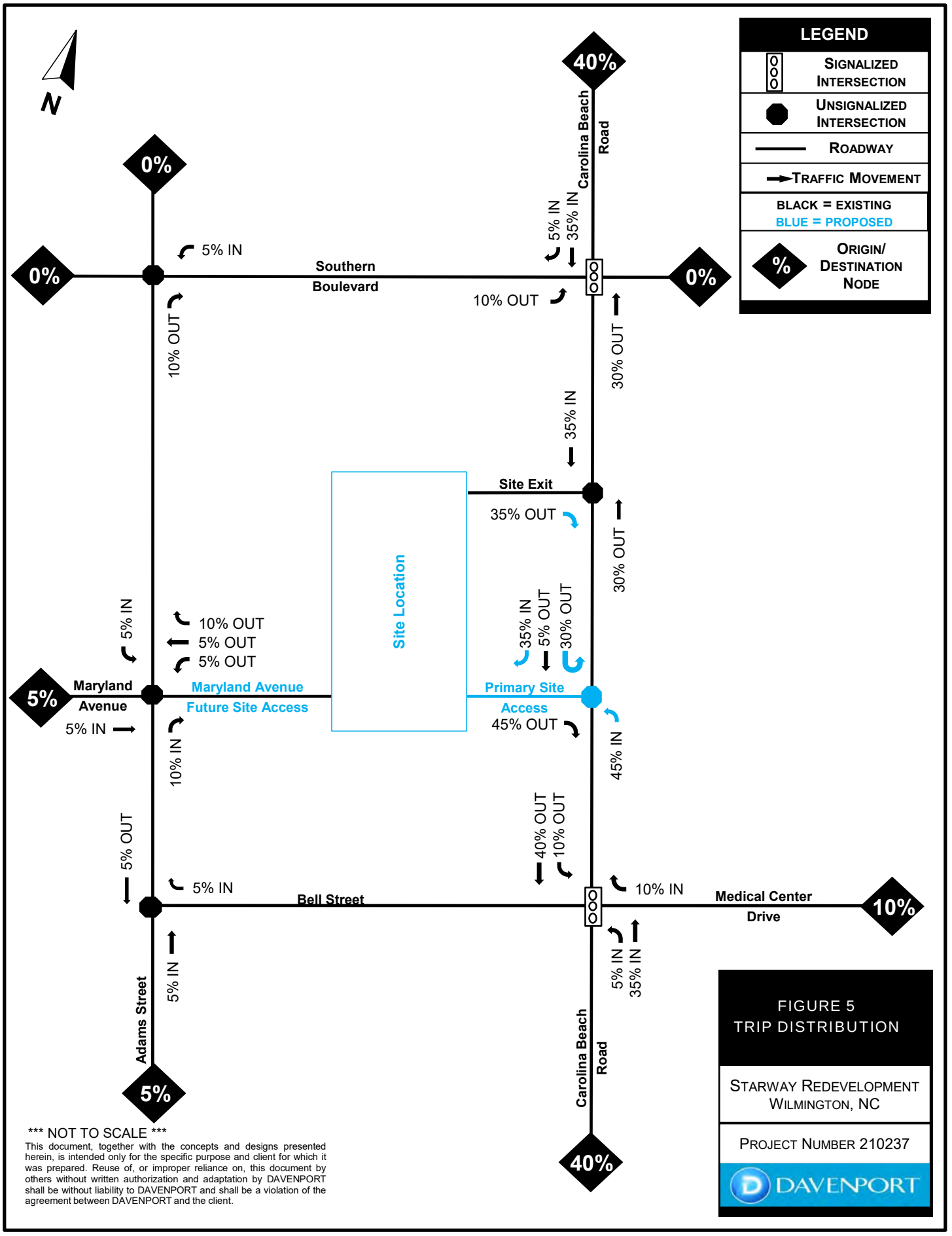
4.3 Trip Distribution

Site trips for this proposed development were distributed based on the existing traffic patterns and engineering judgment. The primary trip distribution model is shown in Figure 5, and the directional distribution for new primary site trips is:

- 40% to/from the north on Carolina Beach Road,
- 40% to/from the south on Carolina Beach Road,
- 10% to/from the east on Medical Center Drive
- 5% to/from the south on Adams Street, and
- 5% to/from the west on Maryland Avenue.

4.4 Future Build Volumes

As agreed upon with NCDOT staff, Future Build volumes were computed as the sum of existing volumes plus a one percent (1%) growth rate and projected site trips. The existing volumes with growth rate applied are shown in Figure 6. Primary site trips are shown in Figure 7 with the resulting Future Build volumes being shown in Figure 8.



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FIGURE 5
TRIP DISTRIBUTION

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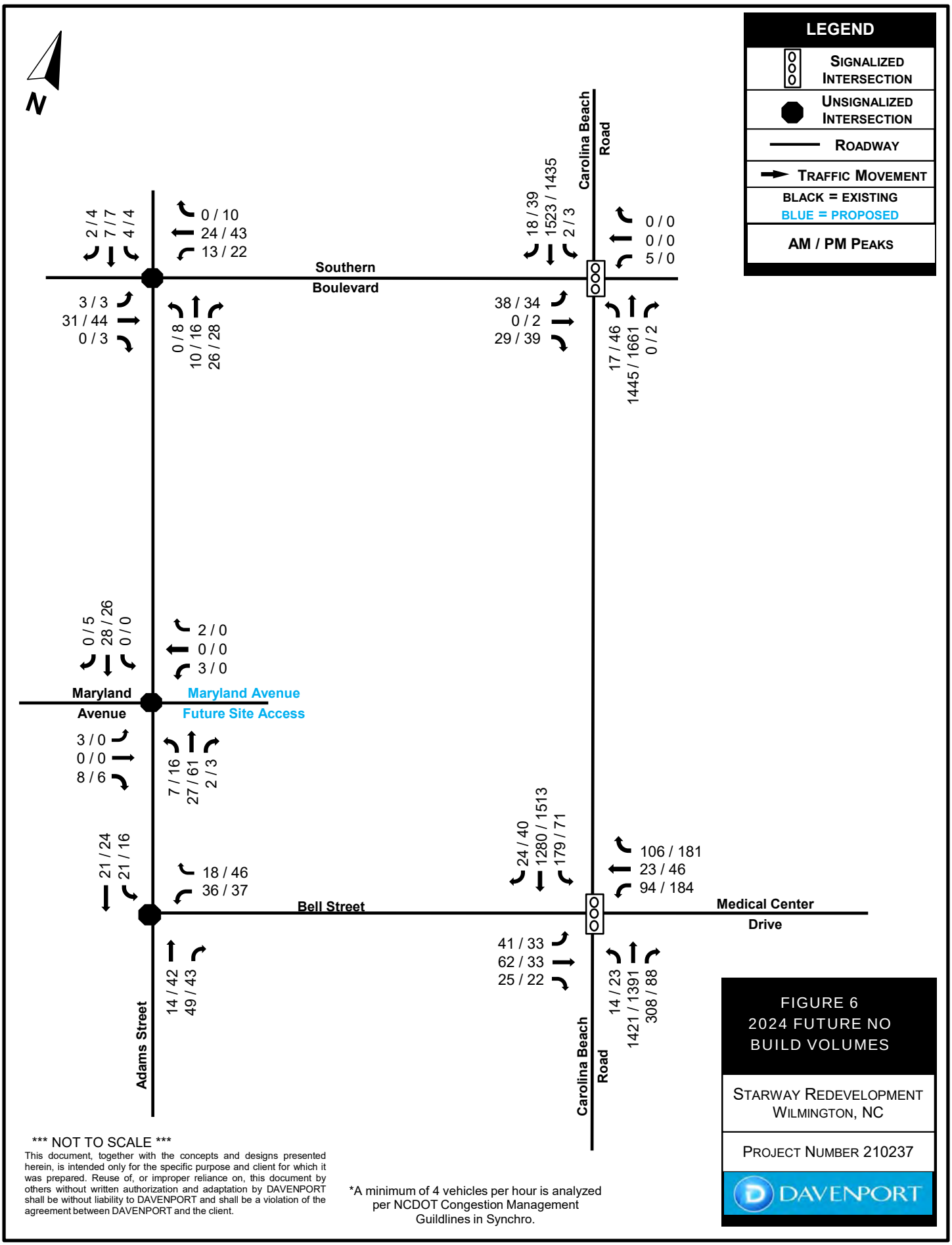


FIGURE 6
2024 FUTURE NO BUILD VOLUMES

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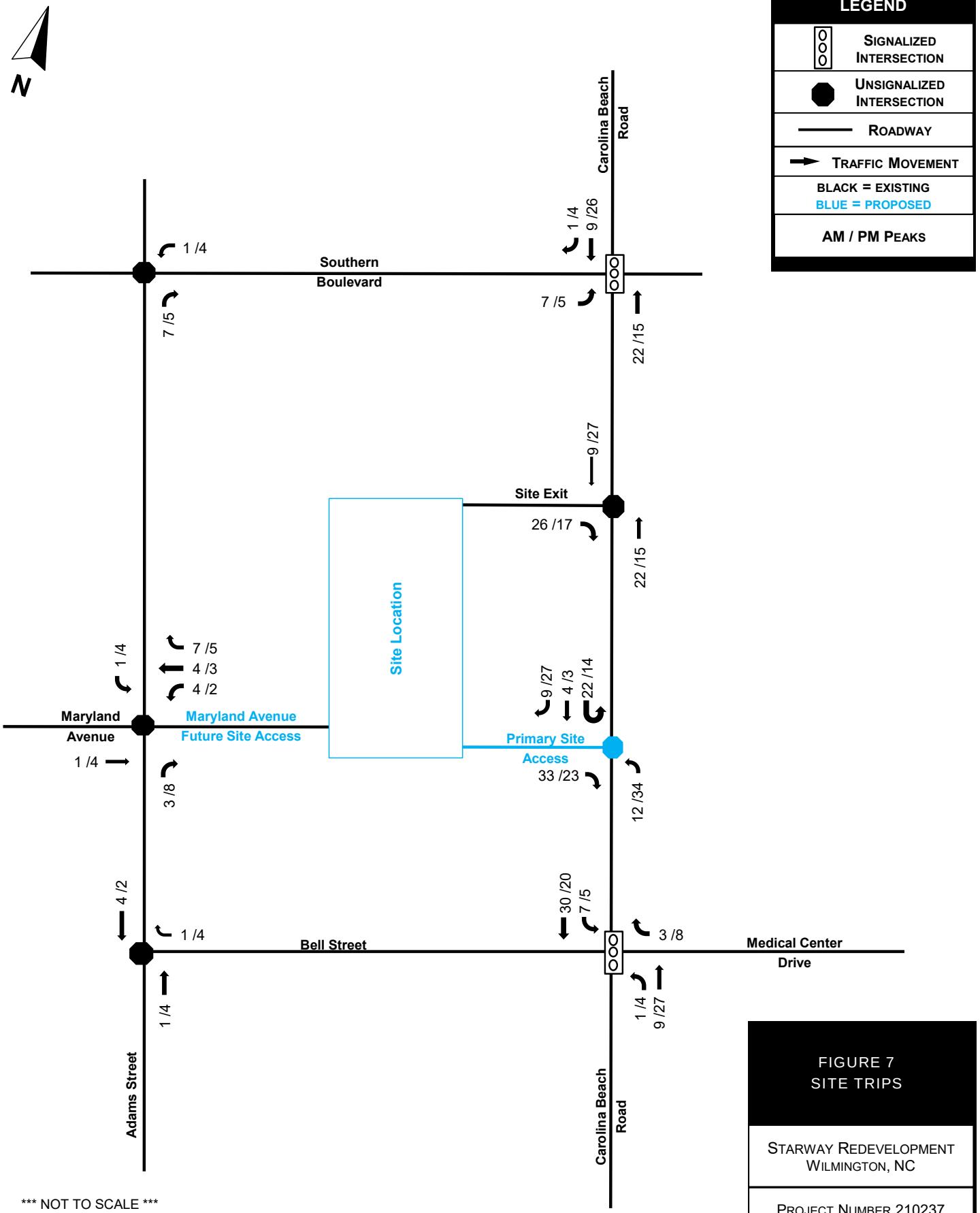


FIGURE 7
SITE TRIPS

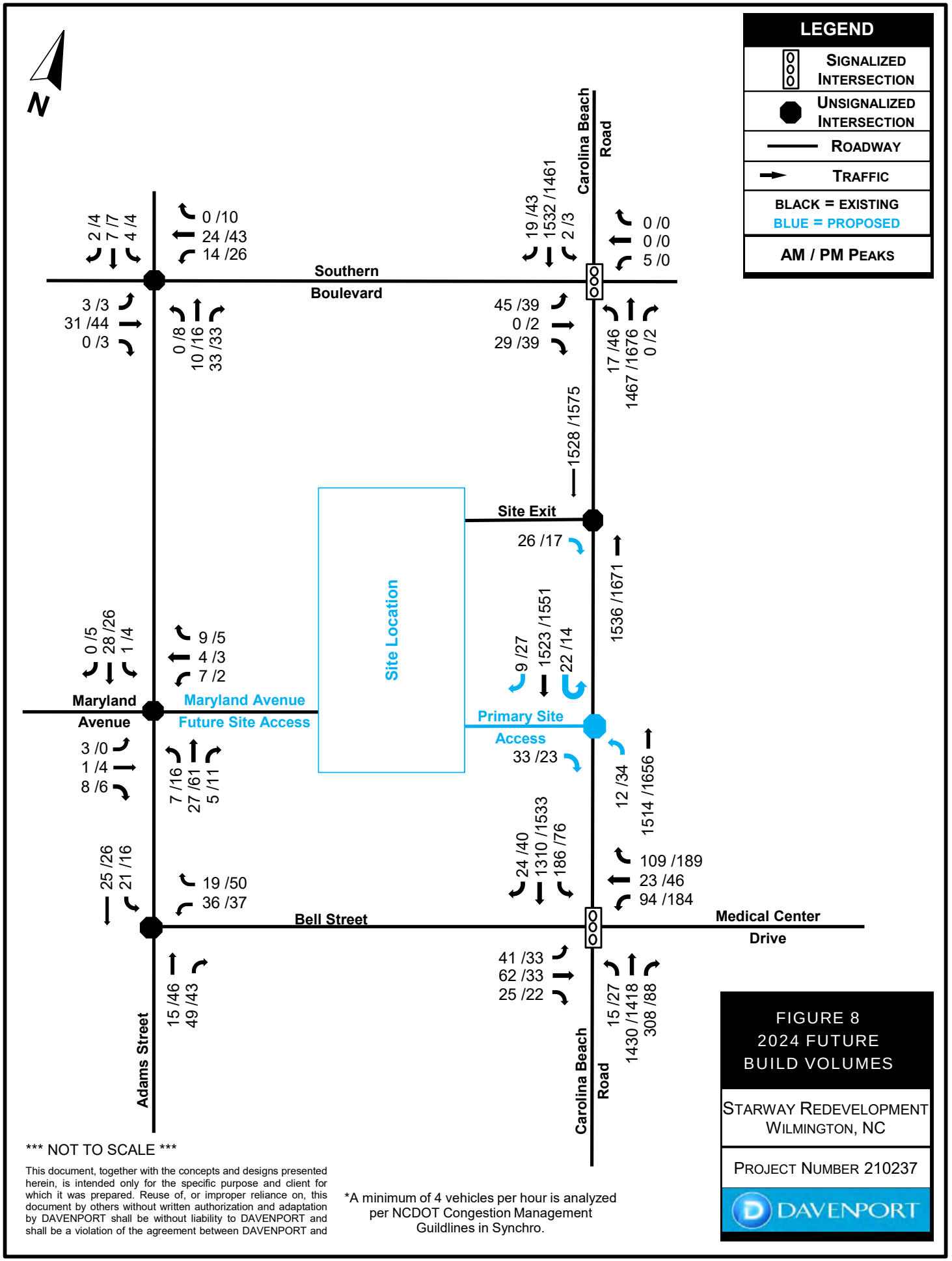
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FIGURE 8
2024 FUTURE BUILD VOLUMES

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WILMINGTON, NC

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5.0 Capacity Analysis

5.1 Level of Service Evaluation Criteria

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" (LOS) to measure how traffic operates in intersections and on roadway segments. There are currently six levels of service ranging from A to F as shown in Table 5.1. Level of service "A" represents low-volume traffic operations and level of service "F" represents high-volume, oversaturated traffic operations. Synchro traffic modeling software was used to determine the LOS and delay for studied intersections. For unsignalized intersection analyses, the LOS noted is for the worst approach of the intersection, which is typically the left-turn movement for the side street approach, due to the number of opposing movements. Worksheet reports from the analyses are provided in the Appendix.

Table 5.1 – Highway Capacity Manual

Levels of Service and Control Delay Criteria

Signalized Intersection		**Unsignalized Intersection**	
Level of Service	Control Delay Per vehicle (seconds)	Level of Service	Delay Range (seconds)
A	≤ 10	A	≤ 10
B	> 10 and ≤ 20	B	> 10 and ≤ 15
C	> 20 and ≤ 35	C	> 15 and ≤ 25
D	> 35 and ≤ 55	D	> 25 and ≤ 35
E	> 55 and ≤ 80	E	> 35 and ≤ 50
F	> 80	F	> 50

5.2 Level of Service Results

The results of the level of service analysis are summarized in Table 5.2. The results and recommendations are discussed by intersection below:

Table 5.2 - Level of Service Summary			
AM Peak	2021 Existing	2024 No Build	2024 Build
Carolina Beach Road (US 421) and Southern Boulevard	A (5.2)	A (8.2)	A (9.0)
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive	C (20.4)	C (25.2)	C (25.9)
Adams Street and Southern Boulevard	A (9.3) SB Approach	A (9.3) SB Approach	A (9.4) SB Approach
Adams Street and Maryland Avenue	A (9.1) WB Approach	A (9.1) WB Approach	A (9.0) WB Approach
Adams Street and Bell Street	A (9.2) WB Approach	A (9.2) WB Approach	A (9.2) WB Approach
Carolina Beach Road and Site Exit Driveway			C (18.5) EB Approach
Carolina Beach Road and Primary Site Access			C (18.5) EB Approach
PM Existing	2021 Existing	2024 No Build	2024 Build
Carolina Beach Road (US 421) and Southern Boulevard	B 11.4	B 11.9	B 12.3
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive	C 24.4	C 28.2	C 28.9
Adams Street and Southern Boulevard	A 9.6 SB	A 9.7 SB	A 9.8 SB
Adams Street and Maryland Avenue	A 9.4 WB	A 9.4 WB	A 9.4 WB
Adams Street and Bell Street	A 9.3 WB	A 9.3 WB	A 9.4 WB
Carolina Beach Road and Site Exit Driveway			C 18.2 EB
Carolina Beach Road and Primary Site Access			C 18.5 EB
LOS (delay in seconds) Note for unsignalized conditions, LOS and delay indicates only minor street approach with longest delay.			

Carolina Beach Road (US 421) and Southern Boulevard

This signalized intersection currently operates at LOS A in the AM peak and LOS B in the PM peak. LOS A in the AM peak and LOS B in the PM peak is also expected under future no build and future build conditions. While some side street movements operate at LOS E or F, they operate similarly or better under Build conditions than under No Build conditions. No improvements are recommended.

Carolina Beach Road (US 421) and Bell Street/Medical Center Drive

This signalized intersection currently operates at LOS C in both the AM and PM peaks. The 2024 future no build and future build conditions are expected to operate at LOS C in the AM peak and PM peak as well. While some side street and left-turn movements operate at LOS E or F, they operate similarly or better under Build conditions than under No Build conditions. No improvements are recommended.

Adams Street and Southern Boulevard

All movements at this unsignalized intersection currently operate at LOS A in both the AM and PM peaks. The 2024 future no build and future build conditions are expected to operate at LOS A in the AM peak and PM peak as well. No improvements are recommended.

Adams Street and Maryland Avenue

All movements at this unsignalized intersection currently operate at LOS A in both the AM and PM peaks. The 2024 future no build and future build conditions are expected to operate at LOS A in the AM peak and PM peak as well. No improvements are recommended.

Adams Street and Bell Street

All movements at this unsignalized intersection currently operate at LOS A in both the AM and PM peaks. The 2024 future no build and future build conditions are expected to operate at LOS A in the AM peak and PM peak as well. No improvements are recommended.

Carolina Beach Road and Site Exit Driveway

The eastbound approach for this proposed exit-only, unsignalized driveway is expected to operate at LOS C in the AM peak and PM peak under 2024 future build conditions. No improvements are recommended.

Carolina Beach Road and Primary Site Access

The eastbound approach exiting the site and northbound left-turn into the site are expected to operate at LOS C during the AM and PM peak hours under future 2024 build conditions.

The southbound U-turn is expected to operate at LOS E in the AM peak with 42.5 seconds of delay but only 22 vehicles. In the PM peak hour, the U-turn movement operates only 0.2 seconds over the threshold for LOS F with a delay of 50.2 seconds but only 14 vehicles making the turn during the hour. Such delays are common and expected for stop-controlled movements onto routes with significant volumes during peak hours, such as Carolina Beach Road. No improvements are recommended.

This intersection was analyzed for using the Division 3 methodology for the turn lane warrant nomograph from page 80 of the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The turn lane warrant nomographs are provided in the Appendix.

During the highest peak hour, 27 of the total 1,572 southbound vehicles make a right turn. Because the volumes plot in between the 25 and 50-foot curves on the nomograph, a 100-foot taper is advised.

For the northbound left-turn movement, the highest peak hour experienced 34 vehicles turning against 1,592 southbound vehicles. The nomograph advises a left-turn lane of approximately 300 feet. Synchro and SimTraffic reports show a maximum queue length of 59 feet, indicating that a minimum storage length of 75 feet is required. The existing two-way left-turn lane can be restriped to accommodate the storage and appropriate taper and deceleration.

For the southbound U-turn movement, the highest peak hour experienced 14 vehicles turning against 1,690 northbound vehicles. The nomograph advises a U-turn lane of approximately 200 feet. Synchro and SimTraffic reports show a maximum queue length of 58 feet, indicating that a minimum storage length of 75 feet is required. The existing two-way left-turn lane can be restriped to accommodate the storage and appropriate taper and deceleration.

5.3 Queuing Analysis

A queuing analysis was performed using Synchro and SimTraffic simulation, based on a minimum 10-minute seeding and 60-minute recording period. The results of the analysis show that all of the queues can be accommodated by existing storage except for some movements at the Carolina Beach Road and Bell Street/Medical Center Drive intersection. These movements experience queues that exceed the available existing and no build storage and are not significantly different under future build conditions. Details are provided in the Synchro and SimTraffic reports in the Appendix.

6.0 Summary and Conclusion

The proposed development is to be located on the west side of Carolina Beach Road (US 421) at the former Starway flea market site between Southern Boulevard and Bell Street/ Medical Center Drive. The site is planned as a multifamily midrise apartment complex. The site is proposed to have 300 dwelling units in eight separate buildings.

Two access points are proposed along Carolina Beach Road: the northern access point will be an exit-only right out, while the southern access point will be left-in/right-in/right-out. One access point to the west is proposed to connect to the existing Maryland Avenue stub. The conceptual site plan reflects an extension of Maryland Avenue from the existing stub west of the site through the development to Carolina Beach Road, and until accepted for maintenance by the City of Wilmington, it will function as an extension of the site driveways.

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate these impacts.

The planned build-out year for this development is 2024. This Transportation Impact Analysis (TIA) was carried out based on the scope agreed upon with NCDOT and WMPO. Information regarding the property was provided by Kelley Development Company. This site has a trip generation potential of 100 trips in the AM peak hour and 127 trips in the PM peak hour.

In conclusion, this study has determined the potential traffic impacts of this development. Two improvements are recommended to accommodate the impacts of new development traffic. The center two-way left-turn lane at the Primary Site Access should be restriped to accommodate 75 feet of storage with appropriate taper for the northbound left-turn and the southbound U-turn. In addition, a 100-foot southbound right-turn taper is recommended at the Primary Site Drive. Table 6.1 summarizes the recommended improvements, which are reflected in Figure 9. The site shown in Figures 1 and 8 should be constructed to comply with NCDOT Policy on Street and Driveway Access to North Carolina Highways where applicable.

Table 6.1 – Recommended Improvements	
INTERSECTION	**RECOMMENDATIONS**
Carolina Beach Road (US 421) and Southern Boulevard	• No improvements are recommended
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive	• No improvements are recommended.
Carolina Beach Road and Site Exit Driveway	• Provide a single right-turn egress lane. • Site drive should be designed in accordance with applicable NCDOT and City of Wilmington standards.
Carolina Beach Road and Primary Site Access	• Provide a single ingress and a single egress lane. • A 100-foot southbound right-turn taper is required. • For the southbound U-turn, 75 feet of storage is required utilizing the two-way left-turn lane for deceleration length. • For the northbound left-turn lane, 75 feet of storage is required utilizing the two-way left turn lane for deceleration length. • Site drive should be designed in accordance with applicable NCDOT and City of Wilmington standards.
Adams Street and Southern Boulevard	• No improvements are recommended.
Adams Street and Maryland Avenue	• Connection from site to Maryland Avenue should be designed in accordance with applicable City of Wilmington standards. • No additional improvements are recommended.
Adams Street and Bell Street	• No improvements are recommended.

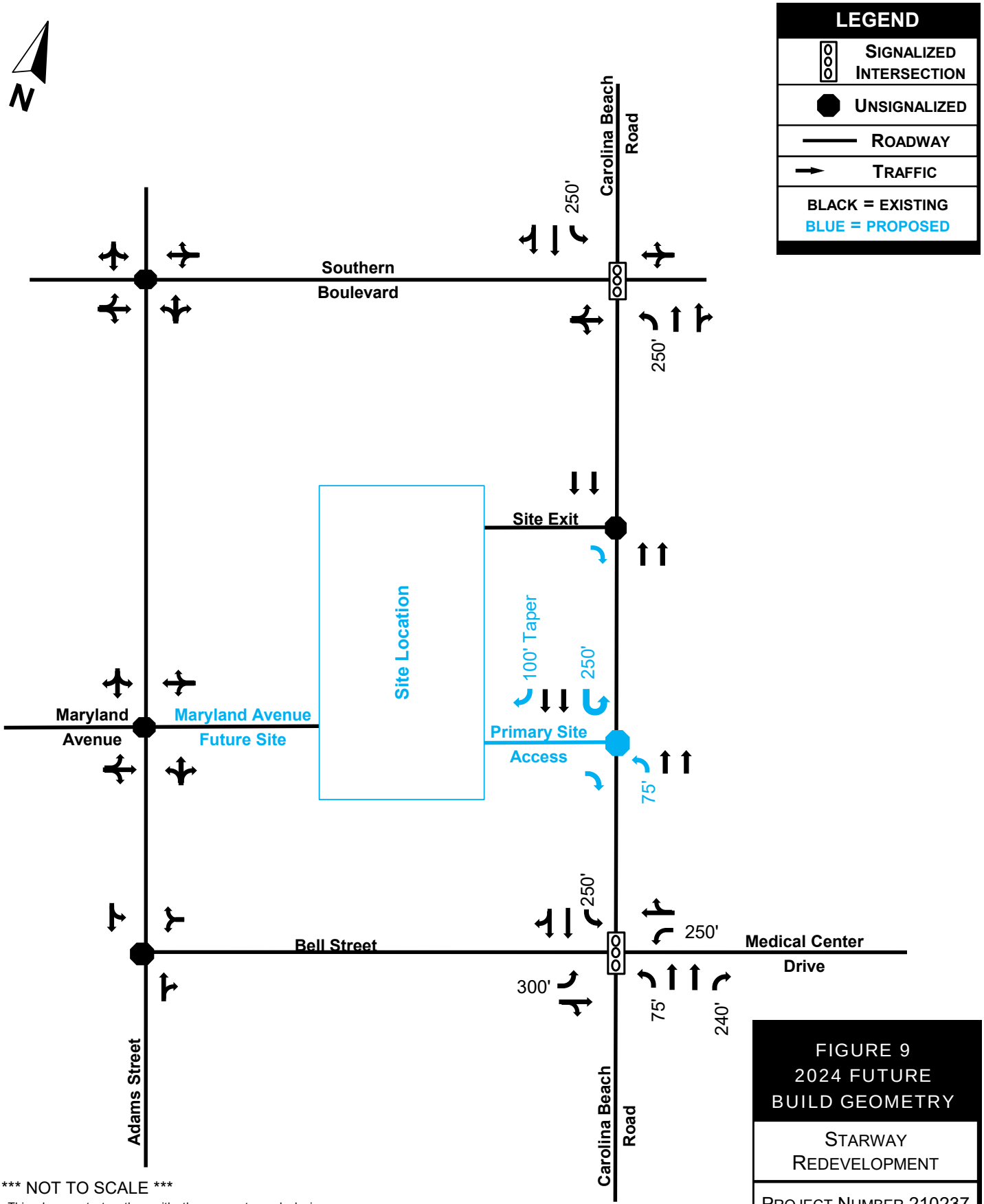


FIGURE 9
2024 FUTURE BUILD GEOMETRY

STARWAY REDEVELOPMENT

PROJECT NUMBER 210237

DAVENPORT

*** NOT TO SCALE ***

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of, or improper reliance on, this document by others without written authorization and adaptation by DAVENPORT shall be without

*A minimum of 4 vehicles per hour is analyzed per NCDOT Congestion Management Guildlines in Synchro.

Appendix

Approved Scoping Documents

WMPO

305 Chestnut Street
PO Box 1810
Wilmington, NC 28402
Ph: (910) 341-3258
Fax: (910) 341-7801
www.wmpo.org

~~May 21, 2021~~ **June 23, 2021**

Ms. Erin Govea, PE
DAVENPORT
4600 Marriott Drive, Suite 340
Raleigh, NC 27612

RE: **REVISED** Approved Scope for the Traffic Impact Analysis (TIA) associated with the proposed Residential development located west of Carolina Beach Road/Southern Boulevard in Wilmington, NC

Dear Ms. Govea:

Based on the information provided and conversations held to date, it is our understanding that the proposed development, with a build out year of 2024, will consist of:

- ITE Land Use Code 220 – ~~330~~ **300** multi-family apartments

Below please find the scope to be used in the Traffic Impact Analysis:

1. **Data Collection – Analysis Parameters:**

    a. Study Intersections

        i. For existing intersections, provide turning movement counts, including pedestrians for weekday during school (T,W,TH) morning (7:00am-9:00am) and afternoon (4:00pm-6:00pm) peak travel periods:

            1. Carolina Beach Road (US 421)/Southern Blvd,
            2. Carolina Beach Road (US 421)/Bell Street and Medical Center Drive
            3. Adams Street/Southern Blvd (unsignalized)
            4. Adams Street/Maryland Ave (unsignalized)
            5. Adams Street/Bell Street (unsignalized), and
            6. **Carolina Beach Rd (US 421)/north site access driveway (unsignalized, right out only)**
            7. **Carolina Beach Rd (US 421)/Maryland Avenue extension (unsignalized, full access)**

Note: Maryland Avenue to connect across site as a public street to Carolina Beach Road. The number of site driveways onto Maryland Avenue is subject to change.

b. Site Trip Generation, Site Trip Distribution and Background Traffic Assumptions:

i. Site Trip Generation Estimate
   1. Trip Generation
      - Attached
   2. Site Trip Distribution
      - The site access operations must be submitted and approved before use in TIA.
   3. Adjacent Development (approved but not yet built):
      - None
   4. Background Traffic Assumptions
      - Future Build - 2024
      - Growth Rate – 1% per year

2. **Capacity Analysis: Weekday AM & PM Peak Hour**
   a. Technical Analysis to use current signal timing and existing geometry and lane configurations.

      i. 2021 Existing Conditions
      ii. 2024 Future No-Build
          [Existing + 1% background growth]
      iii. 2024 Build Conditions (assume RI/RO access due to Carolina Beach Rd Streetscape, U - 5729)
          [Existing + 1% background growth + site trips]
      iv. 2024 Build Conditions + Improvements

3. **Final Report Submittal:**

   a. Completed TIA Application
   b. Signed and sealed by a Professional Engineer
   c. Electronic copy submitted via file share link to include PDF of TIA and Synchro output files as well as digital Synchro files
   d. City of Wilmington $250 TIA Review Fee

4. **Notes:**
   a. This scope shall remain valid for three months from the date of this letter
   b. Please note that if any changes occur (including but not limited to: land use, intensity, phasing, and/or site access) additional analysis may be required.

Please feel free to contact me at (910) 473 – 5130 if you have any questions regarding this scope.

Sincerely,

Scott A. James, PE
Transportation Planning Engineer
Wilmington Urban Area MPO

Attachments:

Traffic Impact Analysis Supplemental Guidelines
Trip Generation Summary (provided by DAVENPORT)

Ec: Denys Vielkanowitz, PE, City Traffic Engineer, City of Wilmington
Thomas Bradshaw, PE, ITS Engineer, City of Wilmington
Brian Chambers, AICP, Senior Planner, City of Wilmington
Ben Hughes, PE, District Engineer, NCDOT
Jessi Leonard, PE, Division Traffic Engineer, NCDOT
Eva Covarrubias, EI, Transportation Engineering Associate, NCDOT
Mike Kozlosky, Executive Director, WMPO
Bill McDow, Transportation Planner, WMPO

DAVENPORT

June 9, 2021

Scott A. James, P.E.
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305 Chestnut Street, Wilmington, NC 28402-1810
Ph: 910.473.5130

Transportation Impact Analysis (TIA) Scoping (Step One) *DAVENPORT Project Number 210237*
Starway Redevelopment Apartments, Wilmington, NC

Summary of Project Changes – After the WMPO sent an approved scoping letter (attached) on May 21, 2021, the client decided to update their site plan. The new site plan offers a connection from Maryland Avenue through the property to connect to Carolina Beach Road and proposes a right-out only driveway. The residential type has been updated to midrise multifamily housing, and the number of residential units decreased slightly from 330 to 296 with the analysis showing 300 multifamily (low rise) units.

Site Location – The proposed location development is located on the west side of Carolina Beach Road at the former Starway flea market between Southern Boulevard and Bell Street in the City of Wilmington.

Proposed Land Uses

- 300 Dwelling Units of Multifamily Housing (Midrise) (LUC 221)

Proposed Study Intersections

1. Carolina Beach Road (US 421) and Southern Boulevard (signalized)
2. Carolina Beach Road (US 421) Bell Street/Medical Center Drive (signalized)
3. Adams Street and Southern Boulevard (unsignalized)
4. Adams Street and Maryland Avenue (existing unsignalized intersection and future access point)
5. Adams Street and Bell Street (unsignalized)
6. Carolina Beach Road (US 421) and North Site Access (unsignalized right out only)
7. Carolina Beach Road (US 421) and South Site Access (unsignalized full access)

Proposed Count Locations – New counts during the weekday AM (7-9 am) and PM (4-6 pm) peak hours will be collected at the existing study intersections (#1 through #5). No adjustment factors will be applied due to COVID. Truck percentages will be included in the traffic counts.

Proposed Trip Generation – Based on ITE Trip Generation Manual 10th Edition. No pass-by or internal capture reductions are included. See table below.

Table - ITE Trip Generation

Starway Redevelopment Apartments - City of Wilmington, NC

Average Weekday Driveway Volumes					24-Hour Two-Way	AM Peak Hour		PM Peak Hour	
Land Use	ITE Land Code	Size		Method	Volume	Enter	Exit	Enter	Exit
Multifamily Housing (Midrise)	221	300	Units	Adjacent - Rate	1,633	26	74	77	50
				Total Trips	**1,633**	**26**	**74**	**77**	**50**

Proposed site trip directional distribution – Proposed 55 percent to/from the north and 45 percent to/from the south, consistent with the existing and future data provided in the travel forecast model. To be completed and sent for approval after data collection.

Approved developments – None assumed. (Please advise otherwise)

Committed Improvements – From the NCDOT STIP Map, TIP U-5729REG (SPOTID H110987) is a committed improvement to include within the scope of this study. U-5729 upgrades US 421 to a four-lane divided superstreet, which removes the existing center two-way left-turn lane, with 2029 being the listed construction year. No committed projects are assumed by 2024.

Proposed annual growth rate – 1%
NCDOT traffic forecasts from 2019 are available for U-5729 and U-5734 (combined) and U-4738. The former (U-5729) is more precise within the study area and includes U-4738, so its data was used, as shown in the following table. After comparing the various alternatives, an average growth rate of 0.66% was calculated. A conservative growth rate of one percent is recommended.

Table 2 - Travel Forecast Data

Year	Scenario from U-5749	Volume	Straight-Line Growth Rate	Future 2022 Volume
2019	No Build	34,500	n/a	n/a
2040	No Build Alternative M	34,500	0.00%	34,500
2040	No Build Alternative N	35,900	0.19%	34,651
2040	Build Alternative 1 - Option M	39,200	0.65%	34,623
2040	Build Alternative 1 - Option N	41,000	0.90%	34,379
2040	Build Alternative 2 - Option M	41,600	0.98%	34,262
2040	Build Alternative 2 - Option N	43,400	1.23%	33,803
		Average Growth Rate:	0.66%	

Proposed Analysis Scenarios – Per the 5/21/21 approved scoping letter, the technical analysis will use current signal timing and existing geometry and lane configurations.

- Existing Conditions
- Future No Build (2024)
- Future Build (2024)
- Future Build (2024) with Improvements

Capacity Analysis
Synchro Worksheets

Table A.1 - Existing LOS and Queueing Carolina Beach Road (US 421) and Southern Boulevard														
AM Peak Hour														
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**												
		Queue (feet)												
		Eastbound			**Westbound**			**Northbound**			**Southbound**			
Carolina Beach Road (US 421) and Southern Boulevard														
2021 Base	A 5.2	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 88.9	-	-	E 64.7	-	A 1.3	A 1.3	-	A 2.5	A 4.6	-	
		F 88.9			E 64.7			A 1.3			A 4.6			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	129	-	-	33	-	m2	76	-	3	314	-	
	Max Queue	-	148	-	-	59	-	47	121	-	30	201	-	
Carolina Beach Road (US 421) and Southern Boulevard														
2024 No Build	A 8.2	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 88.9	-	-	E 64.8	-	A 2.4	A 7.3	-	A 2.8	A 5.0	-	
		F 88.9			E 64.8			A 7.2			A 4.9			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	133	-	-	37	-	m3	496	-	3	341	-	
	Max Queue	-	151	-	-	65	-	48	134	-	26	241	-	
Carolina Beach Road (US 421) and Southern Boulevard														
2024 Build	A 9.0	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 88.8	-	-	E 63.5	-	A 2.7	A 8.1	-	A 3.0	A 5.4	-	
		F 88.8			E 63.5			A 8.1			A 5.4			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	143	-	-	37	-	m3	626	-	3	365	-	
	Max Queue	-	166	-	-	69	-	48	149	-	29	227	-	
	Max Queue w/ Imp	-	174	-	-	55	-	50	154	-	32	238	-	
PM Peak Hour														
Carolina Beach Road (US 421) and Southern Boulevard														
2021 Base	B 11.4	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 86.1	-	-	E 62.1	-	A 8.4	B 13.8	-	A 3.0	A 4.7	-	
		F 86.1			E 62.1			B 13.7			A 4.6			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	135	-	-	32	-	m32	910	-	3	296	-	
	Max Queue	-	148	-	-	55	-	91	300	-	26	207	-	
Carolina Beach Road (US 421) and Southern Boulevard														
2024 No Build	B 11.9	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 85.8	-	-	E 62.2	-	A 7.1	B 14.5	-	A 3.0	A 5.0	-	
		F 85.8			E 62.2			B 14.3			A 4.9			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	139	-	-	36	-	m20	941	-	3	322	-	
	Max Queue	-	177	-	-	57	-	77	521	-	32	206	-	
Carolina Beach Road (US 421) and Southern Boulevard														
2024 Build	B 12.3	-	LTR	-	-	LTR	-	L	TR	-	L	TR	-	
		-	F 86.2	-	-	E 61.0	-	A 7.5	B 14.9	-	A 3.2	A 5.3	-	
		F 86.2			E 61.0			B 14.7			A 5.3			
	Available Storage	-	652 link	-	-	181 link	-	250	2337 link	-	250	1112 link	-	
	95th% Queue	-	144	-	-	32	-	m20	953	-	3	344	-	
	Max Queue	-	158	-	-	53	-	96	332	-	32	226	-	
	Max Queue w/ Imp	-	150	-	-	53	-	98	265	-	30	213	-	

Notes:

m = Volume for 95th percentile queue is metered by upstream signal.

Exceeds Capacity

Table A.2 - Future No Build LOS and Queueing Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
AM Peak Hour														
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**												
		Queue (feet)												
		Eastbound			**Westbound**			**Northbound**			**Southbound**			
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2021 Base	C 20.4	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		F 81.9	E 70.6	-	F 103.3	F 87.1	-	B 12.1	B 18.8	B 12.8	C 26.6	A 5.3	-	
		E 74.1			F 94.0			B 17.7			A 7.9			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m82	146	-	164	204	-	17	641	219	135	296	-	
	Max Queue	117	171	-	178	217	-	162	519	290	242	304	-	
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2024 No Build	C 25.2	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		F 82.6	E 69.1	-	F 101.6	F 86.5	-	B 12.9	C 20.0	B 13.3	F 103.5	A 6.6	-	
		E 73.5			F 92.8			B 18.8			B 18.3			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m87	150	-	169	213	-	19	687	230	#359	410	-	
	Max Queue	122	189	-	199	214	-	147	506	290	249	368	-	
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2024 Build	C25.9	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		F 83.2	E 68.7	-	F 100.1	F 86.7	-	B 13.2	C 20.3	B 13.4	F 111.7	A 7.1	-	
		E 73.4			F 92.2			B 19.1			B 19.9			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m87	150	-	169	217	-	21	695	230	#380	450	-	
	Max Queue	102	169	-	180	213	-	130	524	290	250	435	-	
	Max Queue w/ Imp	106	161	-	180	211	-	161	512	290	249	424	-	
PM Peak Hour														
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2021 Base	C 24.4	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		E 63.2	D 50.6	-	F 82.4	E 78.8	-	B 16.3	B 18.3	B 10.8	A 9.6	B 14.9	-	
		E 55.3			F 80.4			B 17.8			B 14.6			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m67	m 85	-	266	312	-	31	658	68	48	736	-	
	Max Queue	87	115	-	249	398	-	132	443	234	213	412	-	
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2024 No Build	C 28.2	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		E 62.8	D 49.9	-	F 81.8	E 78.5	-	C 21.0	C 23.5	B 13.4	E 76.7	B 16.0	-	
		D 54.8			E 80.0			C 22.9			B 18.6			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m68	m88	-	272	321	-	38	778	79	129	794	-	
	Max Queue	88	109	-	249	388	-	146	488	268	230	437	-	
Carolina Beach Road (US 421) and Bell Street/Medical Center Drive														
2024 Build	C 28.9	L	TR	-	L	TR	-	L	T	R	L	TR	-	
		E 62.9	D 49.2	-	E 78.7	E 78.9	-	C 23.6	C 24.9	B 13.8	E 77.3	B 16.5	-	
		D 54.4			E 78.8			C 24.2			B 19.3			
	Available Storage	300	385 link	-	250	949 link	-	75	1043 link	240	250	2337 link	-	
	95th% Queue	m67	m88	-	271	333	-	46	807	79	136	817	-	
	Max Queue	96	124	-	249	388	-	174	515	289	242	439	-	
	Max Queue w/ Imp	84	122	-	250	392	-	173	513	270	243	429	-	

Notes:

m = Volume for 95th percentile queue is metered by upstream signal.

= 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

Exceeds Capacity

Queue exceeds available storage.

Table A.3 - Future Build LOS and Queueing Southern Boulevard and Adams Street													
AM Peak Hour													
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**											
		Queue (feet)											
		Eastbound			**Westbound**			**Northbound**			**Southbound**		
Southern Boulevard and Adams Street													
2021 Base	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.3	A 0.0	-	-	A 9.0	-	-	A 9.3	-
			A 0.8			A 2.2			A 9.0			A 9.3	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	3	-	-	1	-
	Max Queue	-	3	-	-	6	-	-	35	-	-	33	-
Southern Boulevard and Adams Street													
2024 No Build	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.3	A 0.0	-	-	A 9.0	-	-	A 9.3	-
			A 0.7			A 2.3			A 9.0			A 9.3	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	4	-	-	1	-
	Max Queue	-	9	-	-	6	-	-	45	-	-	36	-
Southern Boulevard and Adams Street													
2024 Build	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.3	A 0.0	-	-	A 9.0	-	-	A 9.4	-
			A 0.7			A 2.4			A 9.0			A 9.4	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	4	-	-	1	-
	Max Queue	-	8	-	-	15	-	-	39	-	-	33	-
	Max Queue w/ Imp	-	-	-	-	9	-	-	43	-	-	33	-
PM Peak Hour													
Southern Boulevard and Adams Street													
2021 Base	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.3	A 0.0	-	-	A 9.4	-	-	A 9.6	-
			A 0.6			A 2.2			A 9.4			A 9.6	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	5	-	-	1	-
	Max Queue	-	9	-	-	18	-	-	44	-	-	33	-
Southern Boulevard and Adams Street													
2024 No Build	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.4	A 0.0	-	-	A 9.5	-	-	A 9.7	-
			A 0.6			A 2.2			A 9.5			A 9.7	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	5	-	-	2	-
	Max Queue	-	12	-	-	20	-	-	46	-	-	31	-
Southern Boulevard and Adams Street													
2024 Build	-	L	T	-	L	T	-	-	T	-	-	T	-
		A 7.3	A 0.0	-	A 7.4	A 0.0	-	-	A 9.5	-	-	A 9.8	-
			A 0.6			A 2.4			A 9.5			A 9.8	
	Available Storage	-	1860 link	-	-	732 link	-	-	1004 link	-	-	716 link	-
	95th% Queue	-	0	-	-	1	-	-	6	-	-	2	-
	Max Queue	-	-	-	-	28	-	-	47	-	-	33	-
	Max Queue w/ Imp	-	3	-	-	9	-	-	47	-	-	35	-

Table A.3 - Future Build LOS and Queueing Adams Street and Maryland Avenue													
AM Peak Hour													
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**											
		Queue (feet)											
		Eastbound			**Westbound**			**Northbound**			**Southbound**		
Adams Street and Maryland Avenue													
2021 Base	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.0	-	-	A 9.1	-	A 7.3	A 0.0	-	A 7.3	A 0.0	-
			A 9.0			A 9.1			A 1.2			A 0.8	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	1	-	-	0	-	-	0	-
	Max Queue	-	36	-	-	33	-	-	-	-	-	-	-
Adams Street and Maryland Avenue													
2024 No Build	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.0	-	-	A 9.1	-	A 7.3	A 0.0	-	A 7.3	A 0.0	-
			A 9.0			A 9.1			A 1.4			A 0.8	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	1	-	-	0	-	-	0	-
	Max Queue	-	31	-	-	33	-	-	9	-	-	-	-
Adams Street and Maryland Avenue													
2024 Build	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.0	-	-	A 9.0	-	A 7.3	A 0.0	-	A 7.3	A 0.0	-
			A 9.0			A 9.0			A 1.3			A 0.8	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	2	-	-	0	-	-	0	-
	Max Queue	-	36	-	-	38	-	-	6	-	-	3	-
	Max Queue w/ Imp	-	34	-	-	36	-	-	9	-	-	6	-
PM Peak Hour													
Adams Street and Maryland Avenue													
2021 Base	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.3	-	-	A 9.4	-	A 7.3	A 0.0	-	A 7.4	A 0.0	-
			A 9.3			A 9.4			A 1.4			A 0.9	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	1	-	-	1	-	-	0	-
	Max Queue	-	34	-	-	31	-	-	12	-	-	12	-
Adams Street and Maryland Avenue													
2024 No Build	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.2	-	-	A 9.4	-	A 7.3	A 0.0	-	A 7.4	A 0.0	-
			A 9.2			A 9.4			A 1.4			A 0.8	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	1	-	-	1	-	-	0	-
	Max Queue	-	31	-	-	36	-	-	18	-	-	9	-
Adams Street and Maryland Avenue													
2024 Build	-	-	T	-	-	T	-	L	T	-	L	T	-
		-	A 9.3	-	-	A 9.4	-	A 7.3	A 0.0	-	A 7.4	A 0.0	-
			A 9.3			A 9.4			A 1.3			A 0.8	
	Available Storage	-	1067 link	-	-	278 link	-	-	519 link	-	-	528 link	-
	95th% Queue	-	1	-	-	1	-	-	1	-	-	0	-
	Max Queue	-	31	-	-	36	-	-	12	-	-	6	-
	Max Queue w/ Imp	-	34	-	-	36	-	-	12	-	-	12	-

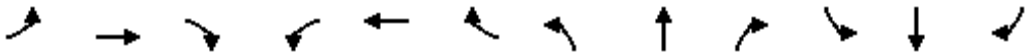
Table A.3 - Future Build LOS and Queueing Adams Street and Bell Street														
AM Peak Hour														
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**												
		Queue (feet)												
		Eastbound			**Westbound**			**Northbound**			**Southbound**			
Adams Street and Bell Street														
2021 Base	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.2	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.2			A 0.0			A 3.7			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	5	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	52	-	-	-	-	-	32	-	
Adams Street and Bell Street														
2024 No Build	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.2	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.2			A 0.0			A 3.7			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	5	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	56	-	-	2	-	-	25	-	
Adams Street and Bell Street														
2024 Build	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.2	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.2			A 0.0			A 3.4			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	5	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	57	-	-	2	-	-	30	-	
	Max Queue w/ Imp	-	-	-	-	50	-	-	2	-	-	27	-	
PM Peak Hour														
Adams Street and Bell Street														
2021 Base	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.3	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.3			A 0.0			A 2.9			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	8	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	68	-	-	-	-	-	30	-	
Adams Street and Bell Street														
2024 No Build	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.3	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.3			A 0.0			A 3.0			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	8	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	71	-	-	2	-	-	25	-	
Adams Street and Bell Street														
2024 Build	-	-	-	-	-	T	-	-	T	-	L	T	-	
		-	-	-	-	A 9.4	-	-	-	-	A 7.4	A 0.0	-	
		-			A 9.4			A 0.0			A 2.8			
	Available Storage	-	-	-	-	1211 link	-	-	1078 link	-	-	519 link	-	
	95th% Queue	-	-	-	-	9	-	-	0	-	-	1	-	
	Max Queue	-	-	-	-	61	-	-	-	-	-	25	-	
	Max Queue w/ Imp	-	-	-	-	66	-	-	2	-	-	22	-	

Table A.3 - Future Build LOS and Queueing Carolina Beach Road (US 421) and Site Drives													
AM Peak Hour													
Scenario	**Overall LOS**	**Level of Service (Delay) per Movement & by Approach (Delay in seconds/vehicle)**											
		Queue (feet)											
		Eastbound			**Westbound**			**Northbound**			**Southbound**		
Carolina Beach Road (US 421) and Site Exit Driveway													
2024 Build	-	-	-	R	-	-	-	-	T	-	-	T	-
		-	-	C 18.1	-	-	-	-	-	-	-	-	-
		C 18.1			-			A 0.0			A 0.0		
	Available Storage	-	-	598 link	-	-	-	-	389 link	-	-	1339 link	-
	95th% Queue	-	-	8	-	-	-	-	0	-	-	0	-
	Max Queue	-	-	59	-	-	-	-	-	-	-	-	-
	Max Queue w/ Imp	-	-	58	-	-	-	-	-	-	-	-	-
Carolina Beach Road (US 421) and Primary Site Access													
2024 Build	-	-	-	R	-	-	-	L	T	-	U	T	-
		-	-	C 15.1	-	-	-	C 18.5	-	-	E 42.5	-	-
		C 18.5			-			A 0.1			A 0.6		
	Available Storage	-	-	1186 link	-	-	-	75	689 link	-	75	389 link	-
	95th% Queue	-	-	10	-	-	-	3	0	-	0	0	-
	Max Queue	-	-	65	-	-	-	46	-	-	58	2	-
	Max Queue w/ Imp	-	-	71	-	-	-	41	-	-	42	12	-
PM Peak Hour													
Carolina Beach Road (US 421) and Site Exit Driveway													
2024 Build	-	-	-	R	-	-	-	-	T	-	-	T	-
		-	-	C 18.2	-	-	-	-	-	-	-	-	-
		C 18.2			-			A 0.0			A 0.0		
	Available Storage	-	-	598 link	-	-	-	-	389 link	-	-	1339 link	-
	95th% Queue	-	-	5	-	-	-	-	0	-	-	0	-
	Max Queue	-	-	40	-	-	-	-	-	-	-	-	-
	Max Queue w/ Imp	-	-	47	-	-	-	-	-	-	-	-	-
Carolina Beach Road (US 421) and Primary Site Access													
2024 Build	-	-	-	R	-	-	-	L	T	-	U	T	-
		-	-	C 18.5	-	-	-	C 16.4	-	-	F 50.2	-	-
		C 18.5			-			A 0.3			A 0.4		
	Available Storage	-	-	1186 link	-	-	-	75	689 link	-	75	389 link	-
	95th% Queue	-	-	7	-	-	-	9	0	-	0	0	-
	Max Queue	-	-	56	-	-	-	59	-	-	47	8	-
	Max Queue w/ Imp	-	-	46	-	-	-	63	46	-	40	10	-

Notes:

Exceeds Capacity

Existing Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	4	28	4	4	4	16	1402	4	4	1478	17
Future Volume (vph)	36	4	28	4	4	4	16	1402	4	4	1478	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.944			0.955						0.998	
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1721	0	0	1742	0	1770	3374	0	1770	3369	0
Flt Permitted		0.827			0.924		0.129			0.145		
Satd. Flow (perm)	0	1461	0	0	1636	0	240	3374	0	270	3369	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			2417			1192	
Travel Time (s)		20.0			7.1			41.2			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	40	4	31	4	4	4	18	1558	4	4	1642	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	12	0	18	1562	0	4	1661	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	31.0	31.0		31.0	31.0		125.0	125.0		125.0	125.0	
Total Split (%)	19.9%	19.9%		19.9%	19.9%		80.1%	80.1%		80.1%	80.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.1			13.1		132.9	132.9		132.9	132.9	
Actuated g/C Ratio		0.08			0.08		0.85	0.85		0.85	0.85	

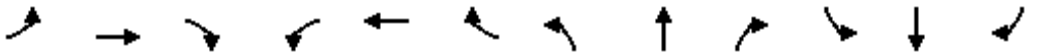
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.61			0.09		0.09	0.54		0.02	0.58	
Control Delay		88.9			64.7		1.3	1.3		2.5	4.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		88.9			64.7		1.3	1.3		2.5	4.6	
LOS		F			E		A	A		A	A	
Approach Delay		88.9			64.7			1.3			4.6	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		75			12		1	68		1	204	
Queue Length 95th (ft)		129			33		m2	76		3	314	
Internal Link Dist (ft)		652			181			2337			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		243			272		204	2874		230	2870	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.31			0.04		0.09	0.54		0.02	0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 156			
Actuated Cycle Length: 156			
Offset: 131 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 5.2		Intersection LOS: A	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	60	24	91	22	102	13	1379	298	173	1242	23
Future Volume (vph)	39	60	24	91	22	102	13	1379	298	173	1242	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.957			0.876				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1783	0	1743	1607	0	1687	3374	1583	1770	3367	0
Flt Permitted	0.437			0.598			0.164			0.107		
Satd. Flow (perm)	755	1783	0	1097	1607	0	291	3374	1583	199	3367	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		465			1029			1123			2417	
Travel Time (s)		12.7			20.0			19.1			41.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	43	67	27	101	24	113	14	1532	331	192	1380	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	94	0	101	137	0	14	1532	331	192	1406	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2	2		
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	41.0	41.0		41.0	41.0		91.0	91.0	91.0	24.0	115.0	
Total Split (%)	26.3%	26.3%		26.3%	26.3%		58.3%	58.3%	58.3%	15.4%	73.7%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lead	Lead	Lag		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	18.3	18.3		18.3	18.3		103.7	103.7	103.7	122.7	127.7	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.66	0.66	0.66	0.79	0.82	

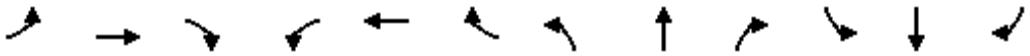
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.49	0.45		0.79	0.73		0.07	0.68	0.31	0.55	0.51	
Control Delay	81.9	70.6		103.3	87.1		12.1	18.8	12.8	26.6	5.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	81.9	70.6		103.3	87.1		12.1	18.8	12.8	26.6	5.3	
LOS	F	E		F	F		B	B	B	C	A	
Approach Delay		74.1			94.0			17.7			7.9	
Approach LOS		E			F			B			A	
Queue Length 50th (ft)	43	91		102	137		5	474	134	33	190	
Queue Length 95th (ft)	m82	146		164	204		17	641	219	135	296	
Internal Link Dist (ft)		385			949			1043			2337	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	174	411		253	370		193	2242	1051	347	2755	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.23		0.40	0.37		0.07	0.68	0.31	0.55	0.51	

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Offset: 107 (69%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 76.0% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

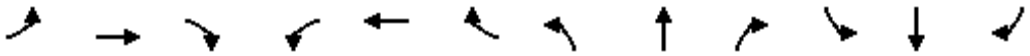
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	30	4	12	23	4	4	9	25	4	6	4
Future Volume (vph)	4	30	4	12	23	4	4	9	25	4	6	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.987			0.910			0.964	
Flt Protected		0.995			0.985			0.995			0.987	
Satd. Flow (prot)	0	1829	0	0	1811	0	0	1687	0	0	1772	0
Flt Permitted		0.995			0.985			0.995			0.987	
Satd. Flow (perm)	0	1829	0	0	1811	0	0	1687	0	0	1772	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	33	4	13	26	4	4	10	28	4	7	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	43	0	0	42	0	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	30	4	12	23	4	4	9	25	4	6	4
Future Volume (Veh/h)	4	30	4	12	23	4	4	9	25	4	6	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	33	4	13	26	4	4	10	28	4	7	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	30			37			104	99	35	130	99	28
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	30			37			104	99	35	130	99	28
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	97	100	99	100
cM capacity (veh/h)	1583			1574			859	783	1038	805	783	1047

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	41	43	42	15
Volume Left	4	13	4	4
Volume Right	4	4	28	4
cSH	1583	1574	946	846
Volume to Capacity	0.00	0.01	0.04	0.02
Queue Length 95th (ft)	0	1	3	1
Control Delay (s)	0.7	2.3	9.0	9.3
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	2.3	9.0	9.3
Approach LOS			A	A

Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	14.6%	ICU Level of Service	A	
Analysis Period (min)	15			

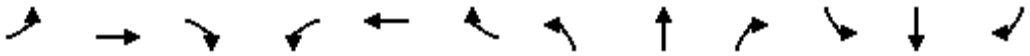
Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	30	4	12	23	4	4	9	25	4	6	4
Future Vol, veh/h	4	30	4	12	23	4	4	9	25	4	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	33	4	13	26	4	4	10	28	4	7	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	37	0	0	103	99	35	116	99	28
Stage 1	-	-	-	-	-	-	43	43	-	54	54	-
Stage 2	-	-	-	-	-	-	60	56	-	62	45	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1583	-	-	1574	-	-	877	791	1038	861	791	1047
Stage 1	-	-	-	-	-	-	971	859	-	958	850	-
Stage 2	-	-	-	-	-	-	951	848	-	949	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1583	-	-	1574	-	-	860	782	1038	823	782	1047
Mov Cap-2 Maneuver	-	-	-	-	-	-	860	782	-	823	782	-
Stage 1	-	-	-	-	-	-	968	856	-	955	843	-
Stage 2	-	-	-	-	-	-	932	841	-	910	854	-

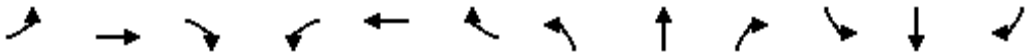
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	2.2	9	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	944	1583	-	-	1574	-	-	856
HCM Lane V/C Ratio	0.045	0.003	-	-	0.008	-	-	0.018
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	7	4	4	4	6	26	4	4	27	4
Future Volume (vph)	4	4	7	4	4	4	6	26	4	4	27	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.955			0.986			0.986	
Flt Protected		0.988			0.984			0.991			0.995	
Satd. Flow (prot)	0	1715	0	0	1750	0	0	1820	0	0	1827	0
Flt Permitted		0.988			0.984			0.991			0.995	
Satd. Flow (perm)	0	1715	0	0	1750	0	0	1820	0	0	1827	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	8	4	4	4	7	29	4	4	30	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	12	0	0	40	0	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	7	4	4	4	6	26	4	4	27	4
Future Volume (Veh/h)	4	4	7	4	4	4	6	26	4	4	27	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	8	4	4	4	7	29	4	4	30	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	91	87	32	95	87	31	34			33		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	91	87	32	95	87	31	34			33		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	100			100		
cM capacity (veh/h)	882	798	1042	873	798	1043	1578			1579		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	12	40	38
Volume Left	4	4	7	4
Volume Right	8	4	4	4
cSH	929	893	1578	1579
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	8.9	9.1	1.3	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.1	1.3	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

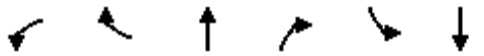
Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	7	4	4	4	6	26	4	4	27	4
Future Vol, veh/h	4	4	7	4	4	4	6	26	4	4	27	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	8	4	4	4	7	29	4	4	30	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	89	87	32	91	87	31	34	0	0	33	0	0
Stage 1	40	40	-	45	45	-	-	-	-	-	-	-
Stage 2	49	47	-	46	42	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	896	803	1042	893	803	1043	1578	-	-	1579	-	-
Stage 1	975	862	-	969	857	-	-	-	-	-	-	-
Stage 2	964	856	-	968	860	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	883	797	1042	877	797	1043	1578	-	-	1579	-	-
Mov Cap-2 Maneuver	883	797	-	877	797	-	-	-	-	-	-	-
Stage 1	970	859	-	964	853	-	-	-	-	-	-	-
Stage 2	950	852	-	953	857	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.1	1.2	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1578	-	-	922	895	1579	-	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.015	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	34	17	13	47	20	20
Future Volume (vph)	34	17	13	47	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955		0.894			
Flt Protected	0.968					0.976
Satd. Flow (prot)	1722	0	1665	0	0	1818
Flt Permitted	0.968					0.976
Satd. Flow (perm)	1722	0	1665	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	1211		1078			519
Travel Time (s)	33.0		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	38	19	14	52	22	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	0	66	0	0	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	34	17	13	47	20	20
Future Volume (Veh/h)	34	17	13	47	20	20
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	38	19	14	52	22	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	106	40			66	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106	40			66	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	98			99	
cM capacity (veh/h)	879	1031			1536	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	57	66	44
Volume Left	38	0	22
Volume Right	19	52	0
cSH	924	1700	1536
Volume to Capacity	0.06	0.04	0.01
Queue Length 95th (ft)	5	0	1
Control Delay (s)	9.1	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	9.1	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

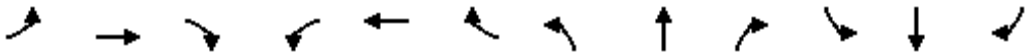
Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	17	13	47	20	20
Future Vol, veh/h	34	17	13	47	20	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	19	14	52	22	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	106	40	0	0	66	0
Stage 1	40	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	892	1031	-	-	1536	-
Stage 1	982	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	879	1031	-	-	1536	-
Mov Cap-2 Maneuver	879	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	943	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	924	1536	-
HCM Lane V/C Ratio	-	-	0.061	0.014	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	4	37	4	4	4	44	1612	4	4	1392	37
Future Volume (vph)	33	4	37	4	4	4	44	1612	4	4	1392	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.932			0.955						0.996	
Flt Protected		0.978			0.984		0.950			0.950		
Satd. Flow (prot)	0	1706	0	0	1742	0	1770	3374	0	1770	3364	0
Flt Permitted		0.849			0.924		0.139			0.107		
Satd. Flow (perm)	0	1481	0	0	1636	0	259	3374	0	199	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			2417			1192	
Travel Time (s)		20.0			7.1			41.2			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	37	4	41	4	4	4	49	1791	4	4	1547	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	12	0	49	1795	0	4	1588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	28.0	28.0		28.0	28.0		124.0	124.0		124.0	124.0	
Total Split (%)	18.4%	18.4%		18.4%	18.4%		81.6%	81.6%		81.6%	81.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.6			13.6		128.4	128.4		128.4	128.4	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

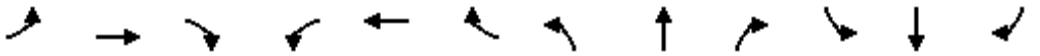
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.62			0.08		0.22	0.63		0.02	0.56	
Control Delay		86.1			62.1		8.4	13.8		3.0	4.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		86.1			62.1		8.4	13.8		3.0	4.7	
LOS		F			E		A	B		A	A	
Approach Delay		86.1			62.1			13.7			4.6	
Approach LOS		F			E			B			A	
Queue Length 50th (ft)		80			11		18	588		1	193	
Queue Length 95th (ft)		135			32		m32	910		3	296	
Internal Link Dist (ft)		652			181			2337			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		224			247		218	2851		168	2842	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.37			0.05		0.22	0.63		0.02	0.56	

Intersection Summary			
Area Type:	Other		
Cycle Length: 152			
Actuated Cycle Length: 152			
Offset: 40 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 59.4%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	32	21	178	44	175	22	1350	85	68	1468	38
Future Volume (vph)	32	32	21	178	44	175	22	1350	85	68	1468	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.942			0.880				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1755	0	1743	1615	0	1687	3374	1583	1770	3364	0
Flt Permitted	0.301			0.719			0.117			0.115		
Satd. Flow (perm)	520	1755	0	1319	1615	0	208	3374	1583	214	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		465			1029			1123			2417	
Travel Time (s)		12.7			20.0			19.1			41.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	36	36	23	198	49	194	24	1500	94	76	1631	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	59	0	198	243	0	24	1500	94	76	1673	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2	2		
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	50.0	50.0		50.0	50.0		87.0	87.0	87.0	15.0	102.0	
Total Split (%)	32.9%	32.9%		32.9%	32.9%		57.2%	57.2%	57.2%	9.9%	67.1%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	28.3	28.3		28.3	28.3		101.6	101.6	101.6	108.7	113.7	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.67	0.67	0.67	0.72	0.75	

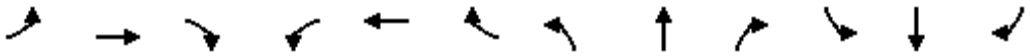
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.37	0.18		0.81	0.81		0.17	0.67	0.09	0.34	0.66	
Control Delay	63.2	50.6		82.4	78.8		16.3	18.3	10.8	9.6	14.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	63.2	50.6		82.4	78.8		16.3	18.3	10.8	9.6	14.9	
LOS	E	D		F	E		B	B	B	A	B	
Approach Delay		55.3			80.4			17.8			14.6	
Approach LOS		E			F			B			B	
Queue Length 50th (ft)	31	50		191	234		8	432	30	23	505	
Queue Length 95th (ft)	m67	m85		266	312		31	658	68	48	736	
Internal Link Dist (ft)		385			949			1043			2337	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	153	519		390	478		139	2254	1057	259	2516	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.11		0.51	0.51		0.17	0.67	0.09	0.29	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 152
Actuated Cycle Length: 152
Offset: 130 (86%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 85.7% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

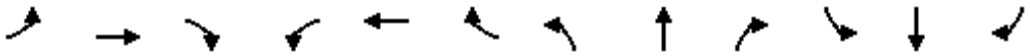
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	42	4	21	41	9	7	15	27	4	6	4
Future Volume (vph)	4	42	4	21	41	9	7	15	27	4	6	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.983			0.926			0.964	
Flt Protected		0.996			0.986			0.993			0.987	
Satd. Flow (prot)	0	1837	0	0	1805	0	0	1713	0	0	1772	0
Flt Permitted		0.996			0.986			0.993			0.987	
Satd. Flow (perm)	0	1837	0	0	1805	0	0	1713	0	0	1772	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	47	4	23	46	10	8	17	30	4	7	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	79	0	0	55	0	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	42	4	21	41	9	7	15	27	4	6	4
Future Volume (Veh/h)	4	42	4	21	41	9	7	15	27	4	6	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	47	4	23	46	10	8	17	30	4	7	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	56			51			162	159	49	192	156	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	56			51			162	159	49	192	156	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	98	97	99	99	100
cM capacity (veh/h)	1549			1555			784	720	1020	722	723	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	55	79	55	15
Volume Left	4	23	8	4
Volume Right	4	10	30	4
cSH	1549	1555	870	783
Volume to Capacity	0.00	0.01	0.06	0.02
Queue Length 95th (ft)	0	1	5	1
Control Delay (s)	0.6	2.2	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.6	2.2	9.4	9.7
Approach LOS			A	A

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	19.3%	ICU Level of Service	A	
Analysis Period (min)	15			

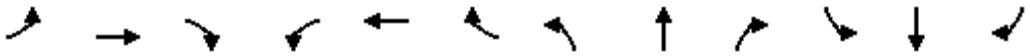
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	42	4	21	41	9	7	15	27	4	6	4
Future Vol, veh/h	4	42	4	21	41	9	7	15	27	4	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	47	4	23	46	10	8	17	30	4	7	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	51	0	0	160	159	49	178	156	51
Stage 1	-	-	-	-	-	-	57	57	-	97	97	-
Stage 2	-	-	-	-	-	-	103	102	-	81	59	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1555	-	-	806	733	1020	784	736	1017
Stage 1	-	-	-	-	-	-	955	847	-	910	815	-
Stage 2	-	-	-	-	-	-	903	811	-	927	846	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1549	-	-	1555	-	-	786	720	1020	737	723	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	786	720	-	737	723	-
Stage 1	-	-	-	-	-	-	952	844	-	907	803	-
Stage 2	-	-	-	-	-	-	878	799	-	879	843	-

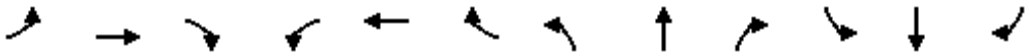
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.2	9.4	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	872	1549	-	-	1555	-	-	793
HCM Lane V/C Ratio	0.062	0.003	-	-	0.015	-	-	0.02
HCM Control Delay (s)	9.4	7.3	0	-	7.3	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	5	4	4	4	15	59	4	4	25	4
Future Volume (vph)	4	4	5	4	4	4	15	59	4	4	25	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.955			0.994			0.985	
Flt Protected		0.986			0.984			0.990			0.994	
Satd. Flow (prot)	0	1730	0	0	1750	0	0	1833	0	0	1824	0
Flt Permitted		0.986			0.984			0.990			0.994	
Satd. Flow (perm)	0	1730	0	0	1750	0	0	1833	0	0	1824	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	6	4	4	4	17	66	4	4	28	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	12	0	0	87	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	5	4	4	4	15	59	4	4	25	4
Future Volume (Veh/h)	4	4	5	4	4	4	15	59	4	4	25	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	6	4	4	4	17	66	4	4	28	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	146	142	30	148	142	68	32			70		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	146	142	30	148	142	68	32			70		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	99			100		
cM capacity (veh/h)	808	739	1044	804	739	995	1580			1531		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	14	12	87	36
Volume Left	4	4	17	4
Volume Right	6	4	4	4
cSH	869	833	1580	1531
Volume to Capacity	0.02	0.01	0.01	0.00
Queue Length 95th (ft)	1	1	1	0
Control Delay (s)	9.2	9.4	1.5	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.2	9.4	1.5	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	16.6%	ICU Level of Service	A	
Analysis Period (min)	15			

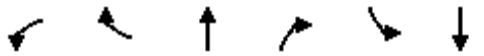
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	5	4	4	4	15	59	4	4	25	4
Future Vol, veh/h	4	4	5	4	4	4	15	59	4	4	25	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	6	4	4	4	17	66	4	4	28	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	144	142	30	145	142	68	32	0	0	70	0	0
Stage 1	38	38	-	102	102	-	-	-	-	-	-	-
Stage 2	106	104	-	43	40	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	825	749	1044	824	749	995	1580	-	-	1531	-	-
Stage 1	977	863	-	904	811	-	-	-	-	-	-	-
Stage 2	900	809	-	971	862	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	809	739	1044	808	739	995	1580	-	-	1531	-	-
Mov Cap-2 Maneuver	809	739	-	808	739	-	-	-	-	-	-	-
Stage 1	966	860	-	894	802	-	-	-	-	-	-	-
Stage 2	881	800	-	958	859	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.4	1.4	0.9
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1580	-	-	858	834	1531	-	-
HCM Lane V/C Ratio	0.011	-	-	0.017	0.016	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9.3	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	44	40	41	15	23
Future Volume (vph)	35	44	40	41	15	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.931			
Flt Protected	0.978					0.981
Satd. Flow (prot)	1685	0	1734	0	0	1827
Flt Permitted	0.978					0.981
Satd. Flow (perm)	1685	0	1734	0	0	1827
Link Speed (mph)	25		25			25
Link Distance (ft)	1211		1078			519
Travel Time (s)	33.0		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	49	44	46	17	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	90	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	35	44	40	41	15	23
Future Volume (Veh/h)	35	44	40	41	15	23
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	49	44	46	17	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	127	67			90	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	127	67			90	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			99	
cM capacity (veh/h)	858	997			1505	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	88	90	43
Volume Left	39	0	17
Volume Right	49	46	0
cSH	930	1700	1505
Volume to Capacity	0.09	0.05	0.01
Queue Length 95th (ft)	8	0	1
Control Delay (s)	9.3	0.0	3.0
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	3.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.3

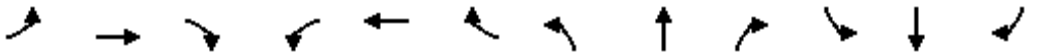
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	44	40	41	15	23
Future Vol, veh/h	35	44	40	41	15	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	49	44	46	17	26

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	127	67	0	0	90	0
Stage 1	67	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	868	997	-	-	1505	-
Stage 1	956	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	858	997	-	-	1505	-
Mov Cap-2 Maneuver	858	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	930	1505	-
HCM Lane V/C Ratio	-	-	0.094	0.011	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Future No Build Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	4	29	5	4	4	17	1445	4	4	1523	18
Future Volume (vph)	38	4	29	5	4	4	17	1445	4	4	1523	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.945			0.961						0.998	
Flt Protected		0.974			0.979		0.950			0.950		
Satd. Flow (prot)	0	1723	0	0	1744	0	1770	3374	0	1770	3369	0
Flt Permitted		0.824			0.889		0.120			0.136		
Satd. Flow (perm)	0	1458	0	0	1583	0	224	3374	0	253	3369	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			2417			1192	
Travel Time (s)		20.0			7.1			41.2			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	42	4	32	6	4	4	19	1606	4	4	1692	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	14	0	19	1610	0	4	1712	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	31.0	31.0		31.0	31.0		125.0	125.0		125.0	125.0	
Total Split (%)	19.9%	19.9%		19.9%	19.9%		80.1%	80.1%		80.1%	80.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.5			13.5		132.5	132.5		132.5	132.5	
Actuated g/C Ratio		0.09			0.09		0.85	0.85		0.85	0.85	

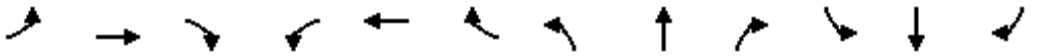
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.62			0.10		0.10	0.56		0.02	0.60	
Control Delay		88.9			64.8		2.4	7.3		2.8	5.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		88.9			64.8		2.4	7.3		2.8	5.0	
LOS		F			E		A	A		A	A	
Approach Delay		88.9			64.8			7.2			4.9	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		78			13		2	565		1	222	
Queue Length 95th (ft)		133			37		m3	496		3	341	
Internal Link Dist (ft)		652			181			2337			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		243			263		190	2866		214	2861	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.32			0.05		0.10	0.56		0.02	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 156			
Actuated Cycle Length: 156			
Offset: 22 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 8.2		Intersection LOS: A	
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





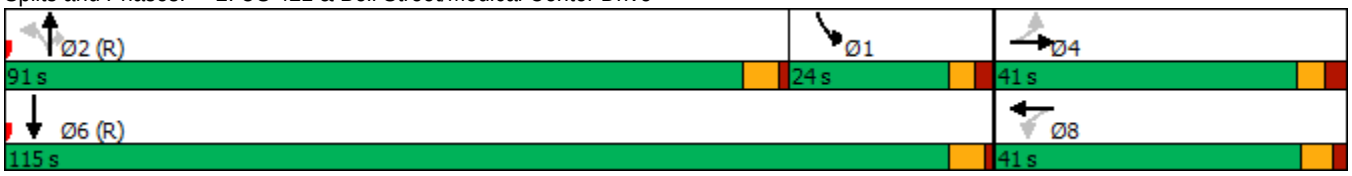
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	62	25	94	23	106	14	1421	308	179	1280	24
Future Volume (vph)	41	62	25	94	23	106	14	1421	308	179	1280	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.957			0.877				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1783	0	1743	1609	0	1687	3374	1583	1770	3367	0
Flt Permitted	0.425			0.593			0.154			0.950		
Satd. Flow (perm)	734	1783	0	1088	1609	0	273	3374	1583	1770	3367	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1670			1029			1123			2417	
Travel Time (s)		45.5			20.0			19.1			41.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	46	69	28	104	26	118	16	1579	342	199	1422	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	97	0	104	144	0	16	1579	342	199	1449	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	41.0	41.0		41.0	41.0		91.0	91.0	91.0	24.0	115.0	
Total Split (%)	26.3%	26.3%		26.3%	26.3%		58.3%	58.3%	58.3%	15.4%	73.7%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lead	Lead	Lag		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	19.1	19.1		19.1	19.1		102.9	102.9	102.9	19.0	126.9	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.66	0.66	0.66	0.12	0.81	

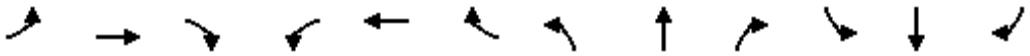
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.52	0.44		0.78	0.73		0.09	0.71	0.33	0.93	0.53	
Control Delay	82.6	69.1		101.6	86.5		12.9	20.0	13.3	103.5	6.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	82.6	69.1		101.6	86.5		12.9	20.0	13.3	103.5	6.6	
LOS	F	E		F	F		B	C	B	F	A	
Approach Delay		73.5			92.8			18.8			18.3	
Approach LOS		E			F			B			B	
Queue Length 50th (ft)	45	94		105	144		6	510	143	205	207	
Queue Length 95th (ft)	m87	150		169	213		19	687	230	#359	410	
Internal Link Dist (ft)		1590			949			1043			2337	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	169	411		251	371		180	2225	1044	215	2739	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.27	0.24		0.41	0.39		0.09	0.71	0.33	0.93	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Offset: 131 (84%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

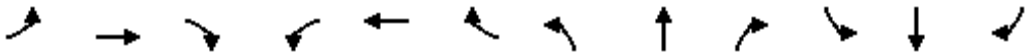
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	31	4	13	24	4	4	10	26	4	7	4
Future Volume (vph)	4	31	4	13	24	4	4	10	26	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.988			0.911			0.966	
Flt Protected		0.995			0.985			0.995			0.988	
Satd. Flow (prot)	0	1829	0	0	1813	0	0	1688	0	0	1778	0
Flt Permitted		0.995			0.985			0.995			0.988	
Satd. Flow (perm)	0	1829	0	0	1813	0	0	1688	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	34	4	14	27	4	4	11	29	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	45	0	0	44	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	31	4	13	24	4	4	10	26	4	7	4
Future Volume (Veh/h)	4	31	4	13	24	4	4	10	26	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	34	4	14	27	4	4	11	29	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	31			38			109	103	36	136	103	29
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	31			38			109	103	36	136	103	29
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	97	99	99	100
cM capacity (veh/h)	1582			1572			852	778	1037	797	778	1046

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	42	45	44	16
Volume Left	4	14	4	4
Volume Right	4	4	29	4
cSH	1582	1572	940	836
Volume to Capacity	0.00	0.01	0.05	0.02
Queue Length 95th (ft)	0	1	4	1
Control Delay (s)	0.7	2.3	9.0	9.4
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	2.3	9.0	9.4
Approach LOS			A	A

Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	15.0%	ICU Level of Service	A	
Analysis Period (min)	15			

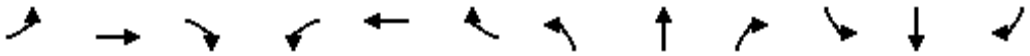
Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	31	4	13	24	4	4	10	26	4	7	4
Future Vol, veh/h	4	31	4	13	24	4	4	10	26	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	34	4	14	27	4	4	11	29	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	31	0	0	38	0	0	107	103	36	121	103	29
Stage 1	-	-	-	-	-	-	44	44	-	57	57	-
Stage 2	-	-	-	-	-	-	63	59	-	64	46	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1572	-	-	872	787	1037	854	787	1046
Stage 1	-	-	-	-	-	-	970	858	-	955	847	-
Stage 2	-	-	-	-	-	-	948	846	-	947	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1582	-	-	1572	-	-	854	778	1037	814	778	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	854	778	-	814	778	-
Stage 1	-	-	-	-	-	-	967	855	-	952	839	-
Stage 2	-	-	-	-	-	-	927	838	-	906	854	-

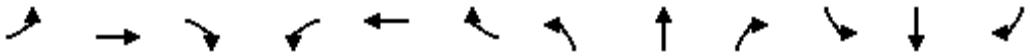
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.3	9	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	939	1582	-	-	1572	-	-	846
HCM Lane V/C Ratio	0.047	0.003	-	-	0.009	-	-	0.02
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	8	4	4	4	7	27	2	4	28	4
Future Volume (vph)	4	4	8	4	4	4	7	27	2	4	28	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.955			0.993			0.986	
Flt Protected		0.988			0.984			0.990			0.995	
Satd. Flow (prot)	0	1710	0	0	1750	0	0	1831	0	0	1827	0
Flt Permitted		0.988			0.984			0.990			0.995	
Satd. Flow (perm)	0	1710	0	0	1750	0	0	1831	0	0	1827	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	9	4	4	4	8	30	2	4	31	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	12	0	0	40	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	8	4	4	4	7	27	2	4	28	4
Future Volume (Veh/h)	4	4	8	4	4	4	7	27	2	4	28	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	9	4	4	4	8	30	2	4	31	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	94	89	33	99	90	31	35			32		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	94	89	33	99	90	31	35			32		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	99			100		
cM capacity (veh/h)	877	795	1041	867	794	1043	1576			1580		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	12	40	39
Volume Left	4	4	8	4
Volume Right	9	4	2	4
cSH	932	890	1576	1580
Volume to Capacity	0.02	0.01	0.01	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	8.9	9.1	1.5	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.1	1.5	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	4	8	4	4	4	7	27	2	4	28	4
Future Vol, veh/h	4	4	8	4	4	4	7	27	2	4	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	9	4	4	4	8	30	2	4	31	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	92	89	33	95	90	31	35	0	0	32	0	0
Stage 1	41	41	-	47	47	-	-	-	-	-	-	-
Stage 2	51	48	-	48	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	892	801	1041	888	800	1043	1576	-	-	1580	-	-
Stage 1	974	861	-	967	856	-	-	-	-	-	-	-
Stage 2	962	855	-	965	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	879	795	1041	871	794	1043	1576	-	-	1580	-	-
Mov Cap-2 Maneuver	879	795	-	871	794	-	-	-	-	-	-	-
Stage 1	969	858	-	962	852	-	-	-	-	-	-	-
Stage 2	948	851	-	949	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.1	1.4	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	927	891	1580	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.015	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	36	18	14	49	21	21
Future Volume (vph)	36	18	14	49	21	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955		0.896			
Flt Protected	0.968					0.976
Satd. Flow (prot)	1722	0	1669	0	0	1818
Flt Permitted	0.968					0.976
Satd. Flow (perm)	1722	0	1669	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	1670		1078			519
Travel Time (s)	45.5		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	20	16	54	23	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	70	0	0	46
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	36	18	14	49	21	21
Future Volume (Veh/h)	36	18	14	49	21	21
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	40	20	16	54	23	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	112	43			70	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	112	43			70	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	98			98	
cM capacity (veh/h)	871	1027			1531	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	60	70	46
Volume Left	40	0	23
Volume Right	20	54	0
cSH	918	1700	1531
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (ft)	5	0	1
Control Delay (s)	9.2	0.0	3.8
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	3.8
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

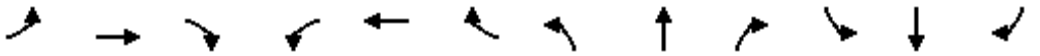
Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	18	14	49	21	21
Future Vol, veh/h	36	18	14	49	21	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	20	16	54	23	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	112	43	0	0	70	0
Stage 1	43	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	885	1027	-	-	1531	-
Stage 1	979	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	872	1027	-	-	1531	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	918	1531	-
HCM Lane V/C Ratio	-	-	0.065	0.015	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	4	39	5	4	4	46	1661	4	4	1435	39
Future Volume (vph)	34	4	39	5	4	4	46	1661	4	4	1435	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.932			0.961						0.996	
Flt Protected		0.978			0.979		0.950			0.950		
Satd. Flow (prot)	0	1706	0	0	1744	0	1770	3374	0	1770	3364	0
Flt Permitted		0.850			0.886		0.131			0.099		
Satd. Flow (perm)	0	1483	0	0	1578	0	244	3374	0	184	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			2417			1192	
Travel Time (s)		20.0			7.1			41.2			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	38	4	43	6	4	4	51	1846	4	4	1594	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	14	0	51	1850	0	4	1637	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	28.0	28.0		28.0	28.0		124.0	124.0		124.0	124.0	
Total Split (%)	18.4%	18.4%		18.4%	18.4%		81.6%	81.6%		81.6%	81.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.9			13.9		128.1	128.1		128.1	128.1	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

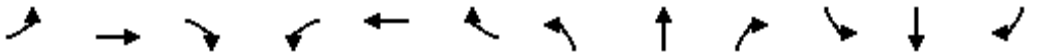
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.63			0.10		0.25	0.65		0.03	0.58	
Control Delay		85.8			62.2		7.1	14.5		3.0	5.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		85.8			62.2		7.1	14.5		3.0	5.0	
LOS		F			E		A	B		A	A	
Approach Delay		85.8			62.2			14.3			4.9	
Approach LOS		F			E			B			A	
Queue Length 50th (ft)		83			13		19	773		1	208	
Queue Length 95th (ft)		139			36		m20	941		3	322	
Internal Link Dist (ft)		652			181			2337			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		224			238		205	2843		155	2835	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.38			0.06		0.25	0.65		0.03	0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 152			
Actuated Cycle Length: 152			
Offset: 40 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	33	22	184	46	181	23	1391	88	71	1513	40
Future Volume (vph)	33	33	22	184	46	181	23	1391	88	71	1513	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.941			0.880				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1753	0	1743	1615	0	1687	3374	1583	1770	3364	0
Flt Permitted	0.292			0.717			0.112			0.950		
Satd. Flow (perm)	504	1753	0	1316	1615	0	199	3374	1583	1770	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1671			1029			1123			2417	
Travel Time (s)		45.6			20.0			19.1			41.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	37	37	24	204	51	201	26	1546	98	79	1681	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	61	0	204	252	0	26	1546	98	79	1725	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	50.0	50.0		50.0	50.0		87.0	87.0	87.0	15.0	102.0	
Total Split (%)	32.9%	32.9%		32.9%	32.9%		57.2%	57.2%	57.2%	9.9%	67.1%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	29.1	29.1		29.1	29.1		96.0	96.0	96.0	11.9	112.9	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.63	0.63	0.63	0.08	0.74	

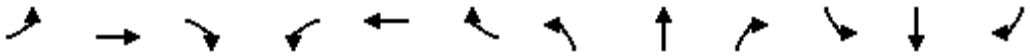
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.18		0.81	0.82		0.21	0.73	0.10	0.57	0.69	
Control Delay	62.8	49.9		81.8	78.5		21.0	23.5	13.4	76.7	16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	62.8	49.9		81.8	78.5		21.0	23.5	13.4	76.7	16.0	
LOS	E	D		F	E		C	C	B	E	B	
Approach Delay		54.8			80.0			22.9			18.6	
Approach LOS		D			E			C			B	
Queue Length 50th (ft)	32	52		196	243		10	522	36	77	548	
Queue Length 95th (ft)	m68	m88		272	321		38	778	79	129	794	
Internal Link Dist (ft)		1591			949			1043			2337	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	149	518		389	478		125	2130	999	144	2498	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.12		0.52	0.53		0.21	0.73	0.10	0.55	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 152			
Actuated Cycle Length: 152			
Offset: 130 (86%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 87.5%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

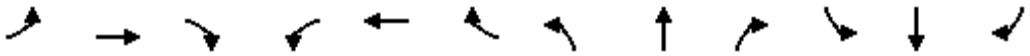
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	4	22	43	10	8	16	28	4	7	4
Future Volume (vph)	4	44	4	22	43	10	8	16	28	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.982			0.928			0.966	
Flt Protected		0.997			0.986			0.992			0.988	
Satd. Flow (prot)	0	1840	0	0	1804	0	0	1715	0	0	1778	0
Flt Permitted		0.997			0.986			0.992			0.988	
Satd. Flow (perm)	0	1840	0	0	1804	0	0	1715	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	49	4	24	48	11	9	18	31	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	83	0	0	58	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	44	4	22	43	10	8	16	28	4	7	4
Future Volume (Veh/h)	4	44	4	22	43	10	8	16	28	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	49	4	24	48	11	9	18	31	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	59			53			168	166	51	200	162	54
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			53			168	166	51	200	162	54
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	97	97	99	99	100
cM capacity (veh/h)	1545			1553			775	714	1017	711	717	1014

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	57	83	58	16
Volume Left	4	24	9	4
Volume Right	4	11	31	4
cSH	1545	1553	862	772
Volume to Capacity	0.00	0.02	0.07	0.02
Queue Length 95th (ft)	0	1	5	2
Control Delay (s)	0.5	2.2	9.5	9.8
Lane LOS	A	A	A	A
Approach Delay (s)	0.5	2.2	9.5	9.8
Approach LOS			A	A

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	20.1%	ICU Level of Service	A	
Analysis Period (min)	15			

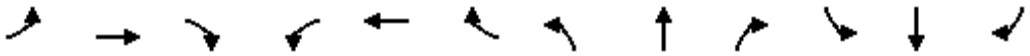
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	44	4	22	43	10	8	16	28	4	7	4
Future Vol, veh/h	4	44	4	22	43	10	8	16	28	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	49	4	24	48	11	9	18	31	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	59	0	0	53	0	0	167	166	51	186	163	54
Stage 1	-	-	-	-	-	-	59	59	-	102	102	-
Stage 2	-	-	-	-	-	-	108	107	-	84	61	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1545	-	-	1553	-	-	797	727	1017	775	729	1013
Stage 1	-	-	-	-	-	-	953	846	-	904	811	-
Stage 2	-	-	-	-	-	-	897	807	-	924	844	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1553	-	-	775	713	1017	726	715	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	775	713	-	726	715	-
Stage 1	-	-	-	-	-	-	950	843	-	901	798	-
Stage 2	-	-	-	-	-	-	870	794	-	874	841	-

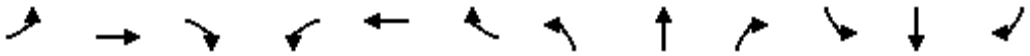
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.2	9.5	9.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	862	1545	-	-	1553	-	-	779
HCM Lane V/C Ratio	0.067	0.003	-	-	0.016	-	-	0.021
HCM Control Delay (s)	9.5	7.3	0	-	7.4	0	-	9.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	4	4	4	16	61	4	4	26	5
Future Volume (vph)	4	4	6	4	4	4	16	61	4	4	26	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937			0.955			0.994			0.979	
Flt Protected		0.987			0.984			0.990			0.995	
Satd. Flow (prot)	0	1723	0	0	1750	0	0	1833	0	0	1815	0
Flt Permitted		0.987			0.984			0.990			0.995	
Satd. Flow (perm)	0	1723	0	0	1750	0	0	1833	0	0	1815	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	7	4	4	4	18	68	4	4	29	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	12	0	0	90	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	6	4	4	4	16	61	4	4	26	5
Future Volume (Veh/h)	4	4	6	4	4	4	16	61	4	4	26	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	7	4	4	4	18	68	4	4	29	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152	148	32	155	149	70	35			72		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152	148	32	155	149	70	35			72		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	99	99	100	99			100		
cM capacity (veh/h)	800	733	1042	794	732	993	1576			1528		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	12	90	39
Volume Left	4	4	18	4
Volume Right	7	4	4	6
cSH	873	826	1576	1528
Volume to Capacity	0.02	0.01	0.01	0.00
Queue Length 95th (ft)	1	1	1	0
Control Delay (s)	9.2	9.4	1.5	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.2	9.4	1.5	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	17.1%	ICU Level of Service	A	
Analysis Period (min)	15			

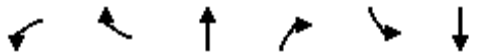
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	6	4	4	4	16	61	4	4	26	5
Future Vol, veh/h	4	4	6	4	4	4	16	61	4	4	26	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	7	4	4	4	18	68	4	4	29	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	150	148	32	152	149	70	35	0	0	72	0	0
Stage 1	40	40	-	106	106	-	-	-	-	-	-	-
Stage 2	110	108	-	46	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	818	743	1042	815	743	993	1576	-	-	1528	-	-
Stage 1	975	862	-	900	807	-	-	-	-	-	-	-
Stage 2	895	806	-	968	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	802	732	1042	797	732	993	1576	-	-	1528	-	-
Mov Cap-2 Maneuver	802	732	-	797	732	-	-	-	-	-	-	-
Stage 1	963	859	-	889	797	-	-	-	-	-	-	-
Stage 2	875	796	-	954	856	-	-	-	-	-	-	-

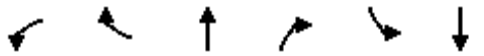
Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.4	1.4	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	864	827	1528	-	-
HCM Lane V/C Ratio	0.011	-	-	0.018	0.016	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9.2	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	46	42	43	16	24
Future Volume (vph)	37	46	42	43	16	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.932			
Flt Protected	0.978					0.980
Satd. Flow (prot)	1685	0	1736	0	0	1825
Flt Permitted	0.978					0.980
Satd. Flow (perm)	1685	0	1736	0	0	1825
Link Speed (mph)	25		25			25
Link Distance (ft)	1671		1078			519
Travel Time (s)	45.6		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	51	47	48	18	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	95	0	0	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	46	42	43	16	24
Future Volume (Veh/h)	37	46	42	43	16	24
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	51	47	48	18	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	134	71			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134	71			95	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			99	
cM capacity (veh/h)	849	991			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	92	95	45
Volume Left	41	0	18
Volume Right	51	48	0
cSH	923	1700	1499
Volume to Capacity	0.10	0.06	0.01
Queue Length 95th (ft)	8	0	1
Control Delay (s)	9.3	0.0	3.0
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	3.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.3

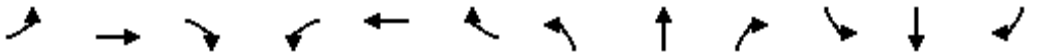
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	46	42	43	16	24
Future Vol, veh/h	37	46	42	43	16	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	51	47	48	18	27

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	134	71	0	0	95	0
Stage 1	71	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	860	991	-	-	1499	-
Stage 1	952	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	850	991	-	-	1499	-
Mov Cap-2 Maneuver	850	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	923	1499	-
HCM Lane V/C Ratio	-	-	0.1	0.012	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Future Build Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	29	5	4	4	17	1467	4	4	1532	19
Future Volume (vph)	45	4	29	5	4	4	17	1467	4	4	1532	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.950			0.961						0.998	
Flt Protected		0.972			0.979		0.950			0.950		
Satd. Flow (prot)	0	1729	0	0	1744	0	1770	3374	0	1770	3369	0
Flt Permitted		0.813			0.892		0.117			0.131		
Satd. Flow (perm)	0	1446	0	0	1589	0	218	3374	0	244	3369	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			1339			1192	
Travel Time (s)		20.0			7.1			22.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	50	4	32	6	4	4	19	1630	4	4	1702	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	14	0	19	1634	0	4	1723	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	31.0	31.0		31.0	31.0		125.0	125.0		125.0	125.0	
Total Split (%)	19.9%	19.9%		19.9%	19.9%		80.1%	80.1%		80.1%	80.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		14.5			14.5		131.5	131.5		131.5	131.5	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

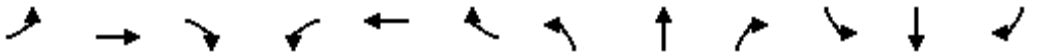
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.64			0.10		0.10	0.57		0.02	0.61	
Control Delay		88.8			63.5		2.7	8.1		3.0	5.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		88.8			63.5		2.7	8.1		3.0	5.4	
LOS		F			E		A	A		A	A	
Approach Delay		88.8			63.5			8.1			5.4	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		86			13		2	584		1	238	
Queue Length 95th (ft)		143			37		m3	626		3	365	
Internal Link Dist (ft)		652			181			1259			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		241			264		183	2845		205	2840	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.36			0.05		0.10	0.57		0.02	0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 156			
Actuated Cycle Length: 156			
Offset: 22 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





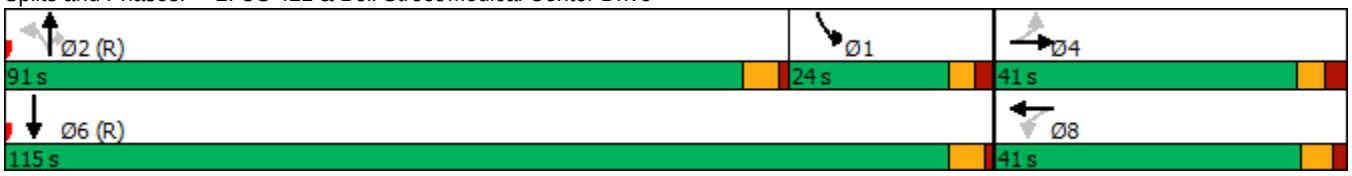
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	62	25	94	23	109	15	1430	308	186	1310	24
Future Volume (vph)	41	62	25	94	23	109	15	1430	308	186	1310	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.957			0.877				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1783	0	1743	1609	0	1687	3374	1583	1770	3367	0
Flt Permitted	0.417			0.594			0.146			0.950		
Satd. Flow (perm)	720	1783	0	1090	1609	0	259	3374	1583	1770	3367	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1670			1029			1123			689	
Travel Time (s)		45.5			20.0			19.1			11.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	46	69	28	104	26	121	17	1589	342	207	1456	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	97	0	104	147	0	17	1589	342	207	1483	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	41.0	41.0		41.0	41.0		91.0	91.0	91.0	24.0	115.0	
Total Split (%)	26.3%	26.3%		26.3%	26.3%		58.3%	58.3%	58.3%	15.4%	73.7%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lead	Lead	Lag		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	19.3	19.3		19.3	19.3		102.7	102.7	102.7	19.0	126.7	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.66	0.66	0.66	0.12	0.81	

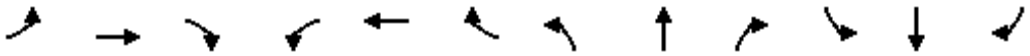
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.52	0.44		0.78	0.74		0.10	0.72	0.33	0.96	0.54	
Control Delay	83.2	68.7		100.1	86.7		13.2	20.3	13.4	111.7	7.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	83.2	68.7		100.1	86.7		13.2	20.3	13.4	111.7	7.1	
LOS	F	E		F	F		B	C	B	F	A	
Approach Delay		73.4			92.2			19.1			19.9	
Approach LOS		E			F			B			B	
Queue Length 50th (ft)	44	94		104	147		6	519	143	214	219	
Queue Length 95th (ft)	m87	150		169	217		21	695	230	#380	450	
Internal Link Dist (ft)		1590			949			1043			609	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	166	411		251	371		170	2221	1042	215	2734	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.28	0.24		0.41	0.40		0.10	0.72	0.33	0.96	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Offset: 131 (84%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 78.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

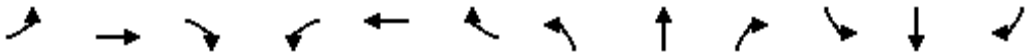
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	31	4	14	24	4	4	10	33	4	7	4
Future Volume (vph)	4	31	4	14	24	4	4	10	33	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.989			0.904			0.966	
Flt Protected		0.995			0.983			0.996			0.988	
Satd. Flow (prot)	0	1829	0	0	1811	0	0	1677	0	0	1778	0
Flt Permitted		0.995			0.983			0.996			0.988	
Satd. Flow (perm)	0	1829	0	0	1811	0	0	1677	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	34	4	16	27	4	4	11	37	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	47	0	0	52	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	31	4	14	24	4	4	10	33	4	7	4
Future Volume (Veh/h)	4	31	4	14	24	4	4	10	33	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	34	4	16	27	4	4	11	37	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	31			38			113	107	36	148	107	29
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	31			38			113	107	36	148	107	29
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	96	99	99	100
cM capacity (veh/h)	1582			1572			846	773	1037	775	773	1046

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	42	47	52	16
Volume Left	4	16	4	4
Volume Right	4	4	37	4
cSH	1582	1572	952	828
Volume to Capacity	0.00	0.01	0.05	0.02
Queue Length 95th (ft)	0	1	4	1
Control Delay (s)	0.7	2.5	9.0	9.4
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	2.5	9.0	9.4
Approach LOS			A	A

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	15.3%	ICU Level of Service	A	
Analysis Period (min)	15			

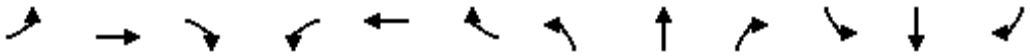
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	31	4	14	24	4	4	10	33	4	7	4
Future Vol, veh/h	4	31	4	14	24	4	4	10	33	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	34	4	16	27	4	4	11	37	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	31	0	0	38	0	0	111	107	36	129	107	29
Stage 1	-	-	-	-	-	-	44	44	-	61	61	-
Stage 2	-	-	-	-	-	-	67	63	-	68	46	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1572	-	-	867	783	1037	844	783	1046
Stage 1	-	-	-	-	-	-	970	858	-	950	844	-
Stage 2	-	-	-	-	-	-	943	842	-	942	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1582	-	-	1572	-	-	848	773	1037	798	773	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	848	773	-	798	773	-
Stage 1	-	-	-	-	-	-	967	855	-	947	836	-
Stage 2	-	-	-	-	-	-	921	834	-	894	854	-

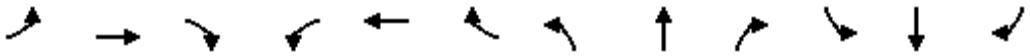
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.4	9	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	950	1582	-	-	1572	-	-	838
HCM Lane V/C Ratio	0.055	0.003	-	-	0.01	-	-	0.02
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	8	7	4	9	7	27	5	4	28	4
Future Volume (vph)	4	4	8	7	4	9	7	27	5	4	28	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.939			0.982			0.986	
Flt Protected		0.988			0.982			0.991			0.995	
Satd. Flow (prot)	0	1710	0	0	1718	0	0	1813	0	0	1827	0
Flt Permitted		0.988			0.982			0.991			0.995	
Satd. Flow (perm)	0	1710	0	0	1718	0	0	1813	0	0	1827	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	9	8	4	10	8	30	6	4	31	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	22	0	0	44	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	8	7	4	9	7	27	5	4	28	4
Future Volume (Veh/h)	4	4	8	7	4	9	7	27	5	4	28	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	9	8	4	10	8	30	6	4	31	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	102	93	33	101	92	33	35			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102	93	33	101	92	33	35			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	99	99	99	99			100		
cM capacity (veh/h)	862	791	1041	864	792	1041	1576			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	22	44	39
Volume Left	4	8	8	4
Volume Right	9	10	6	4
cSH	927	920	1576	1575
Volume to Capacity	0.02	0.02	0.01	0.00
Queue Length 95th (ft)	1	2	0	0
Control Delay (s)	9.0	9.0	1.4	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.0	9.0	1.4	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

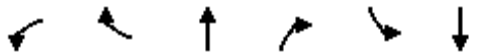
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	8	7	4	9	7	27	5	4	28	4
Future Vol, veh/h	4	4	8	7	4	9	7	27	5	4	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	9	8	4	10	8	30	6	4	31	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	97	93	33	97	92	33	35	0	0	36	0	0
Stage 1	41	41	-	49	49	-	-	-	-	-	-	-
Stage 2	56	52	-	48	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	885	797	1041	885	798	1041	1576	-	-	1575	-	-
Stage 1	974	861	-	964	854	-	-	-	-	-	-	-
Stage 2	956	852	-	965	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	867	791	1041	868	792	1041	1576	-	-	1575	-	-
Mov Cap-2 Maneuver	867	791	-	868	792	-	-	-	-	-	-	-
Stage 1	969	858	-	959	850	-	-	-	-	-	-	-
Stage 2	937	848	-	949	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9	1.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	922	919	1575	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.024	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	36	19	15	49	21	25
Future Volume (vph)	36	19	15	49	21	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.954		0.897			
Flt Protected	0.968					0.978
Satd. Flow (prot)	1720	0	1671	0	0	1822
Flt Permitted	0.968					0.978
Satd. Flow (perm)	1720	0	1671	0	0	1822
Link Speed (mph)	25		25			25
Link Distance (ft)	1670		1078			519
Travel Time (s)	45.5		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	21	17	54	23	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	71	0	0	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	36	19	15	49	21	25
Future Volume (Veh/h)	36	19	15	49	21	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	40	21	17	54	23	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	118	44			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118	44			71	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	98			98	
cM capacity (veh/h)	865	1026			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	61	71	51
Volume Left	40	0	23
Volume Right	21	54	0
cSH	914	1700	1529
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (ft)	5	0	1
Control Delay (s)	9.2	0.0	3.4
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	3.4
Approach LOS	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

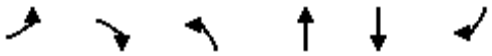
Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	19	15	49	21	25
Future Vol, veh/h	36	19	15	49	21	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	21	17	54	23	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	118	44	0	0	71	0
Stage 1	44	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	878	1026	-	-	1529	-
Stage 1	978	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	865	1026	-	-	1529	-
Mov Cap-2 Maneuver	865	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	935	-	-	-	-	-

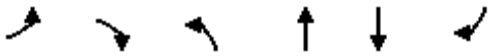
Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	915	1529	-
HCM Lane V/C Ratio	-	-	0.067	0.015	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	26	0	1536	1528	0
Future Volume (vph)	0	26	0	1536	1528	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	598			389	1339	
Travel Time (s)	16.3			6.6	22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	29	0	1707	1698	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	0	1707	1698	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	26	0	1536	1528	0
Future Volume (Veh/h)	0	26	0	1536	1528	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	29	0	1707	1698	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1078		
pX, platoon unblocked	0.69					
vC, conflicting volume	2552	849	1698			
vC1, stage 1 conf vol	1698					
vC2, stage 2 conf vol	854					
vCu, unblocked vol	2346	849	1698			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	128	304	371			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	29	854	854	849	849
Volume Left	0	0	0	0	0
Volume Right	29	0	0	0	0
cSH	304	1700	1700	1700	1700
Volume to Capacity	0.10	0.50	0.50	0.50	0.50
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	18.1	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.1	0.0		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	52.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	0	1536	1528	0
Future Vol, veh/h	0	26	0	1536	1528	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	0	1707	1698	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	849	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	304	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	304	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	304	-
HCM Lane V/C Ratio	-	0.095	-
HCM Control Delay (s)	-	18.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	0	33	12	1514	22	1523	9
Future Volume (vph)	0	33	12	1514	22	1523	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		250		0
Storage Lanes	0	1	1		1		0
Taper Length (ft)	25		0		0		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt		0.865				0.999	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	0	1611	1770	3539	1770	3536	0
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	0	1611	1770	3539	1770	3536	0
Link Speed (mph)	25			40		40	
Link Distance (ft)	1186			689		389	
Travel Time (s)	32.3			11.7		6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	37	13	1682	24	1692	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	37	13	1682	24	1702	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	R NA	Left	Right
Median Width(ft)	0			12		12	
Link Offset(ft)	0			0		0	
Crosswalk Width(ft)	16			16		16	
Two way Left Turn Lane				Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9		9
Sign Control	Stop			Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	0	33	12	1514	22	1523	9
Future Volume (Veh/h)	0	33	12	1514	22	1523	9
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	37	13	1682	0	1692	10
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				TWLTL		TWLTL	
Median storage veh)				2		2	
Upstream signal (ft)				689			
pX, platoon unblocked	0.69				0.00		
vC, conflicting volume	2564	851	1702		0		
vC1, stage 1 conf vol	1697						
vC2, stage 2 conf vol	867						
vCu, unblocked vol	2367	851	1702		0		
tC, single (s)	6.8	6.9	4.1		0.0		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	100	88	96		0		
cM capacity (veh/h)	128	303	370		0		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	13	841	841	1128	574	0
Volume Left	0	13	0	0	0	0	0
Volume Right	37	0	0	0	0	10	0
cSH	303	370	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.04	0.49	0.49	0.66	0.34	0.00
Queue Length 95th (ft)	10	3	0	0	0	0	0
Control Delay (s)	18.5	15.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	18.5	0.1			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

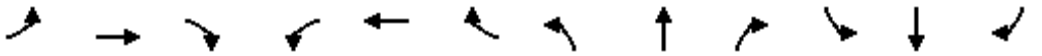
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	33	12	1514	22	1523	9
Future Vol, veh/h	0	33	12	1514	22	1523	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	250	-	250	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	37	13	1682	24	1692	10

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	-	851	1702	0	1682	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	0	303	370	-	120	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	-	303	370	-	120	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.1	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	370	-	303	120	-	-
HCM Lane V/C Ratio	0.036	-	0.121	0.204	-	-
HCM Control Delay (s)	15.1	-	18.5	42.5	-	-
HCM Lane LOS	C	-	C	E	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.7	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	4	39	4	4	4	46	1676	4	4	1461	43
Future Volume (vph)	39	4	39	4	4	4	46	1676	4	4	1461	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.935			0.955						0.996	
Flt Protected		0.977			0.984		0.950			0.950		
Satd. Flow (prot)	0	1710	0	0	1742	0	1770	3374	0	1770	3365	0
Flt Permitted		0.842			0.923		0.125			0.097		
Satd. Flow (perm)	0	1474	0	0	1634	0	233	3374	0	181	3365	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			1326			1192	
Travel Time (s)		20.0			7.1			22.6			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	43	4	43	4	4	4	51	1862	4	4	1623	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	12	0	51	1866	0	4	1671	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	28.0	28.0		28.0	28.0		124.0	124.0		124.0	124.0	
Total Split (%)	18.4%	18.4%		18.4%	18.4%		81.6%	81.6%		81.6%	81.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		14.4			14.4		127.6	127.6		127.6	127.6	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

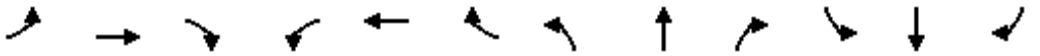
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.65			0.08		0.26	0.66		0.03	0.59	
Control Delay		86.2			61.0		7.5	14.9		3.2	5.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		86.2			61.0		7.5	14.9		3.2	5.3	
LOS		F			E		A	B		A	A	
Approach Delay		86.2			61.0			14.7			5.3	
Approach LOS		F			E			B			A	
Queue Length 50th (ft)		88			11		19	820		1	223	
Queue Length 95th (ft)		144			32		m20	953		3	344	
Internal Link Dist (ft)		652			181			1246			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		223			247		195	2831		151	2823	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.40			0.05		0.26	0.66		0.03	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 152			
Actuated Cycle Length: 152			
Offset: 40 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	33	22	184	46	189	27	1418	88	76	1533	40
Future Volume (vph)	33	33	22	184	46	189	27	1418	88	76	1533	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.941			0.879				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1753	0	1743	1613	0	1687	3374	1583	1770	3364	0
Flt Permitted	0.282			0.717			0.107			0.950		
Satd. Flow (perm)	487	1753	0	1316	1613	0	190	3374	1583	1770	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1671			1029			1123			702	
Travel Time (s)		45.6			20.0			19.1			12.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	37	37	24	204	51	210	30	1576	98	84	1703	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	61	0	204	261	0	30	1576	98	84	1747	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	50.0	50.0		50.0	50.0		87.0	87.0	87.0	15.0	102.0	
Total Split (%)	32.9%	32.9%		32.9%	32.9%		57.2%	57.2%	57.2%	9.9%	67.1%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	29.8	29.8		29.8	29.8		94.9	94.9	94.9	12.3	112.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.62	0.62	0.62	0.08	0.74	

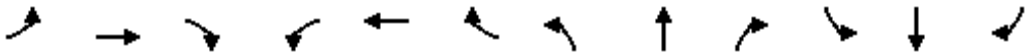
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.18		0.79	0.83		0.25	0.75	0.10	0.59	0.70	
Control Delay	62.9	49.2		78.7	78.9		23.6	24.9	13.8	77.3	16.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	62.9	49.2		78.7	78.9		23.6	24.9	13.8	77.3	16.5	
LOS	E	D		E	E		C	C	B	E	B	
Approach Delay		54.4			78.8			24.2			19.3	
Approach LOS		D			E			C			B	
Queue Length 50th (ft)	32	51		195	251		13	557	37	83	574	
Queue Length 95th (ft)	m67	m88		271	333		46	807	79	136	817	
Internal Link Dist (ft)		1591			949			1043			622	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	144	518		389	477		118	2106	988	147	2482	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.26	0.12		0.52	0.55		0.25	0.75	0.10	0.57	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 152
Actuated Cycle Length: 152
Offset: 130 (86%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 88.5% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

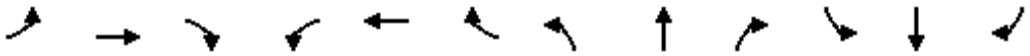
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	4	26	43	10	8	16	33	4	7	4
Future Volume (vph)	4	44	4	26	43	10	8	16	33	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.983			0.922			0.966	
Flt Protected		0.997			0.984			0.993			0.988	
Satd. Flow (prot)	0	1840	0	0	1802	0	0	1705	0	0	1778	0
Flt Permitted		0.997			0.984			0.993			0.988	
Satd. Flow (perm)	0	1840	0	0	1802	0	0	1705	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	49	4	29	48	11	9	18	37	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	88	0	0	64	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	44	4	26	43	10	8	16	33	4	7	4
Future Volume (Veh/h)	4	44	4	26	43	10	8	16	33	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	49	4	29	48	11	9	18	37	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	59			53			178	176	51	216	172	54
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			53			178	176	51	216	172	54
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	97	96	99	99	100
cM capacity (veh/h)	1545			1553			761	702	1017	688	705	1014

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	57	88	64	16
Volume Left	4	29	9	4
Volume Right	4	11	37	4
cSH	1545	1553	867	758
Volume to Capacity	0.00	0.02	0.07	0.02
Queue Length 95th (ft)	0	1	6	2
Control Delay (s)	0.5	2.5	9.5	9.9
Lane LOS	A	A	A	A
Approach Delay (s)	0.5	2.5	9.5	9.9
Approach LOS			A	A

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	21.4%	ICU Level of Service	A	
Analysis Period (min)	15			

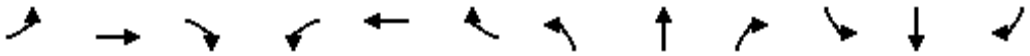
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	44	4	26	43	10	8	16	33	4	7	4
Future Vol, veh/h	4	44	4	26	43	10	8	16	33	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	49	4	29	48	11	9	18	37	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	59	0	0	53	0	0	177	176	51	199	173	54
Stage 1	-	-	-	-	-	-	59	59	-	112	112	-
Stage 2	-	-	-	-	-	-	118	117	-	87	61	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1545	-	-	1553	-	-	785	717	1017	760	720	1013
Stage 1	-	-	-	-	-	-	953	846	-	893	803	-
Stage 2	-	-	-	-	-	-	887	799	-	921	844	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1553	-	-	762	701	1017	707	704	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	762	701	-	707	704	-
Stage 1	-	-	-	-	-	-	950	843	-	890	788	-
Stage 2	-	-	-	-	-	-	858	784	-	866	841	-

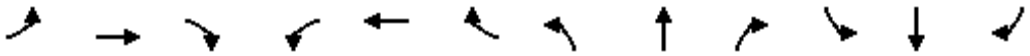
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.4	9.5	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1545	-	-	1553	-	-	767
HCM Lane V/C Ratio	0.073	0.003	-	-	0.019	-	-	0.022
HCM Control Delay (s)	9.5	7.3	0	-	7.4	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	4	4	5	16	61	11	4	26	5
Future Volume (vph)	4	4	6	4	4	5	16	61	11	4	26	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937			0.942			0.983			0.979	
Flt Protected		0.987			0.986			0.991			0.995	
Satd. Flow (prot)	0	1723	0	0	1730	0	0	1815	0	0	1815	0
Flt Permitted		0.987			0.986			0.991			0.995	
Satd. Flow (perm)	0	1723	0	0	1730	0	0	1815	0	0	1815	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	7	4	4	6	18	68	12	4	29	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	14	0	0	98	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	6	4	4	5	16	61	11	4	26	5
Future Volume (Veh/h)	4	4	6	4	4	5	16	61	11	4	26	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	7	4	4	6	18	68	12	4	29	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	158	156	32	159	153	74	35			80		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	158	156	32	159	153	74	35			80		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	99	99	99	99			100		
cM capacity (veh/h)	791	726	1042	789	728	988	1576			1518		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	14	98	39
Volume Left	4	4	18	4
Volume Right	7	6	12	6
cSH	868	842	1576	1518
Volume to Capacity	0.02	0.02	0.01	0.00
Queue Length 95th (ft)	1	1	1	0
Control Delay (s)	9.2	9.3	1.4	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.2	9.3	1.4	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	17.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	6	4	4	5	16	61	11	4	26	5
Future Vol, veh/h	4	4	6	4	4	5	16	61	11	4	26	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	7	4	4	6	18	68	12	4	29	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	156	32	156	153	74	35	0	0	80	0	0
Stage 1	40	40	-	110	110	-	-	-	-	-	-	-
Stage 2	115	116	-	46	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	812	736	1042	810	739	988	1576	-	-	1518	-	-
Stage 1	975	862	-	895	804	-	-	-	-	-	-	-
Stage 2	890	800	-	968	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	794	725	1042	792	728	988	1576	-	-	1518	-	-
Mov Cap-2 Maneuver	794	725	-	792	728	-	-	-	-	-	-	-
Stage 1	963	859	-	884	794	-	-	-	-	-	-	-
Stage 2	869	790	-	954	856	-	-	-	-	-	-	-

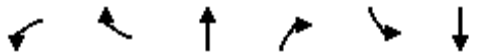
Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.4	1.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	858	833	1518	-	-
HCM Lane V/C Ratio	0.011	-	-	0.018	0.017	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9.3	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	50	46	43	16	26
Future Volume (vph)	37	50	46	43	16	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922		0.935			
Flt Protected	0.979					0.981
Satd. Flow (prot)	1681	0	1742	0	0	1827
Flt Permitted	0.979					0.981
Satd. Flow (perm)	1681	0	1742	0	0	1827
Link Speed (mph)	25		25			25
Link Distance (ft)	1671		1078			519
Travel Time (s)	45.6		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	56	51	48	18	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	99	0	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	50	46	43	16	26
Future Volume (Veh/h)	37	50	46	43	16	26
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	56	51	48	18	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	140	75			99	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	75			99	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	94			99	
cM capacity (veh/h)	843	986			1494	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	97	99	47
Volume Left	41	0	18
Volume Right	56	48	0
cSH	920	1700	1494
Volume to Capacity	0.11	0.06	0.01
Queue Length 95th (ft)	9	0	1
Control Delay (s)	9.4	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

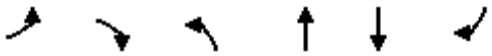
Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	50	46	43	16	26
Future Vol, veh/h	37	50	46	43	16	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	56	51	48	18	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	140	75	0	0	99	0
Stage 1	75	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	853	986	-	-	1494	-
Stage 1	948	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	843	986	-	-	1494	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	947	-	-	-	-	-

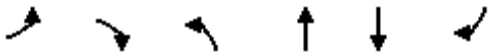
Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	2.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	920	1494	-
HCM Lane V/C Ratio	-	-	0.105	0.012	-
HCM Control Delay (s)	-	-	9.4	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	17	0	1671	1575	0
Future Volume (vph)	0	17	0	1671	1575	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	635			389	1326	
Travel Time (s)	17.3			6.6	22.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	19	0	1857	1750	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	19	0	1857	1750	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	17	0	1671	1575	0
Future Volume (Veh/h)	0	17	0	1671	1575	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	19	0	1857	1750	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1091		
pX, platoon unblocked	0.66					
vC, conflicting volume	2678	875	1750			
vC1, stage 1 conf vol	1750					
vC2, stage 2 conf vol	928					
vCu, unblocked vol	2510	875	1750			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	119	292	354			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	19	928	928	875	875
Volume Left	0	0	0	0	0
Volume Right	19	0	0	0	0
cSH	292	1700	1700	1700	1700
Volume to Capacity	0.06	0.55	0.55	0.51	0.51
Queue Length 95th (ft)	5	0	0	0	0
Control Delay (s)	18.2	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.2	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	1671	1575	0
Future Vol, veh/h	0	17	0	1671	1575	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	0	1857	1750	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	875	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	292	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	292	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	292	-
HCM Lane V/C Ratio	-	0.065	-
HCM Control Delay (s)	-	18.2	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	0	23	34	1656	14	1551	27
Future Volume (vph)	0	23	34	1656	14	1551	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		250		0
Storage Lanes	0	1	1		1		0
Taper Length (ft)	25		0		0		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt		0.865				0.997	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	0	1611	1770	3539	1770	3529	0
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	0	1611	1770	3539	1770	3529	0
Link Speed (mph)	25			40		40	
Link Distance (ft)	1194			702		389	
Travel Time (s)	32.6			12.0		6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	26	38	1840	16	1723	30
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	26	38	1840	16	1753	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	R NA	Left	Right
Median Width(ft)	0			12		12	
Link Offset(ft)	0			0		0	
Crosswalk Width(ft)	16			16		16	
Two way Left Turn Lane				Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9		9
Sign Control	Stop			Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	0	23	34	1656	14	1551	27
Future Volume (Veh/h)	0	23	34	1656	14	1551	27
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	26	38	1840	0	1723	30
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				TWLTL		TWLTL	
Median storage veh)				2		2	
Upstream signal (ft)				702			
pX, platoon unblocked	0.66				0.00		
vC, conflicting volume	2734	876	1753		0		
vC1, stage 1 conf vol	1738						
vC2, stage 2 conf vol	996						
vCu, unblocked vol	2597	876	1753		0		
tC, single (s)	6.8	6.9	4.1		0.0		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	100	91	89		0		
cM capacity (veh/h)	120	292	353		0		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	26	38	920	920	1149	604	0
Volume Left	0	38	0	0	0	0	0
Volume Right	26	0	0	0	0	30	0
cSH	292	353	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.11	0.54	0.54	0.68	0.36	0.00
Queue Length 95th (ft)	7	9	0	0	0	0	0
Control Delay (s)	18.5	16.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	18.5	0.3			0.0		
Approach LOS	C						

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	53.7%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.5

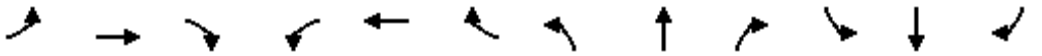
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	23	34	1656	14	1551	27
Future Vol, veh/h	0	23	34	1656	14	1551	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	250	-	250	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	26	38	1840	16	1723	30

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	-	877	1753	0	1840	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	0	292	353	-	95	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	-	292	353	-	95	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.3	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	353	-	292	95	-	-
HCM Lane V/C Ratio	0.107	-	0.088	0.164	-	-
HCM Control Delay (s)	16.4	-	18.5	50.2	-	-
HCM Lane LOS	C	-	C	F	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	0.6	-	-

Future Build Improvements



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	29	5	4	4	17	1467	4	4	1532	19
Future Volume (vph)	45	4	29	5	4	4	17	1467	4	4	1532	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.950			0.961						0.998	
Flt Protected		0.972			0.979		0.950			0.950		
Satd. Flow (prot)	0	1729	0	0	1744	0	1770	3374	0	1770	3369	0
Flt Permitted		0.813			0.892		0.117			0.131		
Satd. Flow (perm)	0	1446	0	0	1589	0	218	3374	0	244	3369	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			1339			1192	
Travel Time (s)		20.0			7.1			22.8			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	50	4	32	6	4	4	19	1630	4	4	1702	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	14	0	19	1634	0	4	1723	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	31.0	31.0		31.0	31.0		125.0	125.0		125.0	125.0	
Total Split (%)	19.9%	19.9%		19.9%	19.9%		80.1%	80.1%		80.1%	80.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		14.5			14.5		131.5	131.5		131.5	131.5	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

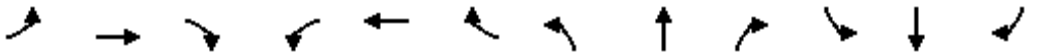
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.64			0.10		0.10	0.57		0.02	0.61	
Control Delay		88.8			63.5		2.7	8.1		3.0	5.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		88.8			63.5		2.7	8.1		3.0	5.4	
LOS		F			E		A	A		A	A	
Approach Delay		88.8			63.5			8.1			5.4	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		86			13		2	584		1	238	
Queue Length 95th (ft)		143			37		m3	626		3	365	
Internal Link Dist (ft)		652			181			1259			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		241			264		183	2845		205	2840	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.36			0.05		0.10	0.57		0.02	0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 156			
Actuated Cycle Length: 156			
Offset: 22 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





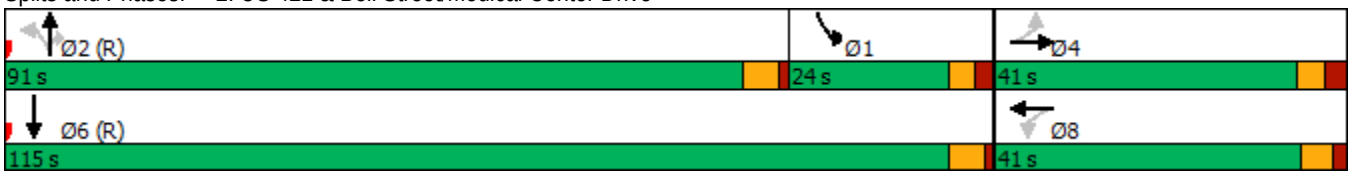
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	62	25	94	23	109	15	1430	308	186	1310	24
Future Volume (vph)	41	62	25	94	23	109	15	1430	308	186	1310	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.957			0.877				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1783	0	1743	1609	0	1687	3374	1583	1770	3367	0
Flt Permitted	0.417			0.594			0.146			0.950		
Satd. Flow (perm)	720	1783	0	1090	1609	0	259	3374	1583	1770	3367	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1670			1029			1123			689	
Travel Time (s)		45.5			20.0			19.1			11.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	46	69	28	104	26	121	17	1589	342	207	1456	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	97	0	104	147	0	17	1589	342	207	1483	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	41.0	41.0		41.0	41.0		91.0	91.0	91.0	24.0	115.0	
Total Split (%)	26.3%	26.3%		26.3%	26.3%		58.3%	58.3%	58.3%	15.4%	73.7%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lead	Lead	Lag		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	19.3	19.3		19.3	19.3		102.7	102.7	102.7	19.0	126.7	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.66	0.66	0.66	0.12	0.81	

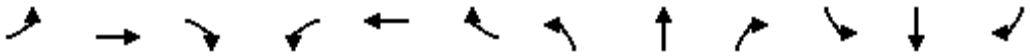
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.52	0.44		0.78	0.74		0.10	0.72	0.33	0.96	0.54	
Control Delay	83.2	68.7		100.1	86.7		13.2	20.3	13.4	111.7	7.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	83.2	68.7		100.1	86.7		13.2	20.3	13.4	111.7	7.1	
LOS	F	E		F	F		B	C	B	F	A	
Approach Delay		73.4			92.2			19.1			19.9	
Approach LOS		E			F			B			B	
Queue Length 50th (ft)	44	94		104	147		6	519	143	214	219	
Queue Length 95th (ft)	m87	150		169	217		21	695	230	#380	450	
Internal Link Dist (ft)		1590			949			1043			609	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	166	411		251	371		170	2221	1042	215	2734	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.28	0.24		0.41	0.40		0.10	0.72	0.33	0.96	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Offset: 131 (84%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 78.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

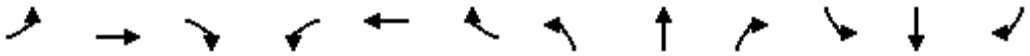
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	31	4	14	24	4	4	10	33	4	7	4
Future Volume (vph)	4	31	4	14	24	4	4	10	33	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.989			0.904			0.966	
Flt Protected		0.995			0.983			0.996			0.988	
Satd. Flow (prot)	0	1829	0	0	1811	0	0	1677	0	0	1778	0
Flt Permitted		0.995			0.983			0.996			0.988	
Satd. Flow (perm)	0	1829	0	0	1811	0	0	1677	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	34	4	16	27	4	4	11	37	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	47	0	0	52	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	31	4	14	24	4	4	10	33	4	7	4
Future Volume (Veh/h)	4	31	4	14	24	4	4	10	33	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	34	4	16	27	4	4	11	37	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	31			38			113	107	36	148	107	29
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	31			38			113	107	36	148	107	29
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	96	99	99	100
cM capacity (veh/h)	1582			1572			846	773	1037	775	773	1046

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	42	47	52	16
Volume Left	4	16	4	4
Volume Right	4	4	37	4
cSH	1582	1572	952	828
Volume to Capacity	0.00	0.01	0.05	0.02
Queue Length 95th (ft)	0	1	4	1
Control Delay (s)	0.7	2.5	9.0	9.4
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	2.5	9.0	9.4
Approach LOS			A	A

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	15.3%	ICU Level of Service	A	
Analysis Period (min)	15			

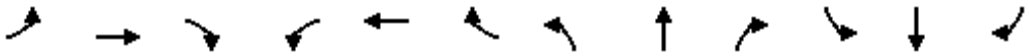
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	31	4	14	24	4	4	10	33	4	7	4
Future Vol, veh/h	4	31	4	14	24	4	4	10	33	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	34	4	16	27	4	4	11	37	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	31	0	0	38	0	0	111	107	36	129	107	29
Stage 1	-	-	-	-	-	-	44	44	-	61	61	-
Stage 2	-	-	-	-	-	-	67	63	-	68	46	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1572	-	-	867	783	1037	844	783	1046
Stage 1	-	-	-	-	-	-	970	858	-	950	844	-
Stage 2	-	-	-	-	-	-	943	842	-	942	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1582	-	-	1572	-	-	848	773	1037	798	773	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	848	773	-	798	773	-
Stage 1	-	-	-	-	-	-	967	855	-	947	836	-
Stage 2	-	-	-	-	-	-	921	834	-	894	854	-

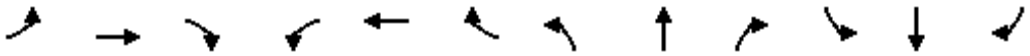
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.4	9	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	950	1582	-	-	1572	-	-	838
HCM Lane V/C Ratio	0.055	0.003	-	-	0.01	-	-	0.02
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	8	7	4	9	7	27	5	4	28	4
Future Volume (vph)	4	4	8	7	4	9	7	27	5	4	28	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.939			0.982			0.986	
Flt Protected		0.988			0.982			0.991			0.995	
Satd. Flow (prot)	0	1710	0	0	1718	0	0	1813	0	0	1827	0
Flt Permitted		0.988			0.982			0.991			0.995	
Satd. Flow (perm)	0	1710	0	0	1718	0	0	1813	0	0	1827	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	9	8	4	10	8	30	6	4	31	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	22	0	0	44	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	8	7	4	9	7	27	5	4	28	4
Future Volume (Veh/h)	4	4	8	7	4	9	7	27	5	4	28	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	9	8	4	10	8	30	6	4	31	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	102	93	33	101	92	33	35			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102	93	33	101	92	33	35			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	99	99	99	99			100		
cM capacity (veh/h)	862	791	1041	864	792	1041	1576			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	22	44	39
Volume Left	4	8	8	4
Volume Right	9	10	6	4
cSH	927	920	1576	1575
Volume to Capacity	0.02	0.02	0.01	0.00
Queue Length 95th (ft)	1	2	0	0
Control Delay (s)	9.0	9.0	1.4	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.0	9.0	1.4	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

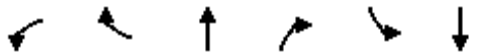
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	8	7	4	9	7	27	5	4	28	4
Future Vol, veh/h	4	4	8	7	4	9	7	27	5	4	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	9	8	4	10	8	30	6	4	31	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	97	93	33	97	92	33	35	0	0	36	0	0
Stage 1	41	41	-	49	49	-	-	-	-	-	-	-
Stage 2	56	52	-	48	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	885	797	1041	885	798	1041	1576	-	-	1575	-	-
Stage 1	974	861	-	964	854	-	-	-	-	-	-	-
Stage 2	956	852	-	965	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	867	791	1041	868	792	1041	1576	-	-	1575	-	-
Mov Cap-2 Maneuver	867	791	-	868	792	-	-	-	-	-	-	-
Stage 1	969	858	-	959	850	-	-	-	-	-	-	-
Stage 2	937	848	-	949	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9	1.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	922	919	1575	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.024	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	36	19	15	49	21	25
Future Volume (vph)	36	19	15	49	21	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.954		0.897			
Flt Protected	0.968					0.978
Satd. Flow (prot)	1720	0	1671	0	0	1822
Flt Permitted	0.968					0.978
Satd. Flow (perm)	1720	0	1671	0	0	1822
Link Speed (mph)	25		25			25
Link Distance (ft)	1670		1078			519
Travel Time (s)	45.5		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	21	17	54	23	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	71	0	0	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	36	19	15	49	21	25
Future Volume (Veh/h)	36	19	15	49	21	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	40	21	17	54	23	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	118	44			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118	44			71	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	98			98	
cM capacity (veh/h)	865	1026			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	61	71	51
Volume Left	40	0	23
Volume Right	21	54	0
cSH	914	1700	1529
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (ft)	5	0	1
Control Delay (s)	9.2	0.0	3.4
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	3.4
Approach LOS	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

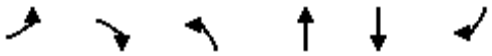
Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	19	15	49	21	25
Future Vol, veh/h	36	19	15	49	21	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	21	17	54	23	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	118	44	0	0	71	0
Stage 1	44	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	878	1026	-	-	1529	-
Stage 1	978	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	865	1026	-	-	1529	-
Mov Cap-2 Maneuver	865	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	935	-	-	-	-	-

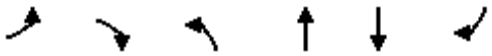
Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	915	1529	-
HCM Lane V/C Ratio	-	-	0.067	0.015	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	26	0	1536	1528	0
Future Volume (vph)	0	26	0	1536	1528	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	598			389	1339	
Travel Time (s)	16.3			6.6	22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	29	0	1707	1698	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	0	1707	1698	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	26	0	1536	1528	0
Future Volume (Veh/h)	0	26	0	1536	1528	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	29	0	1707	1698	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1078		
pX, platoon unblocked	0.69					
vC, conflicting volume	2552	849	1698			
vC1, stage 1 conf vol	1698					
vC2, stage 2 conf vol	854					
vCu, unblocked vol	2346	849	1698			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	128	304	371			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	29	854	854	849	849
Volume Left	0	0	0	0	0
Volume Right	29	0	0	0	0
cSH	304	1700	1700	1700	1700
Volume to Capacity	0.10	0.50	0.50	0.50	0.50
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	18.1	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.1	0.0		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	52.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	0	1536	1528	0
Future Vol, veh/h	0	26	0	1536	1528	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	0	1707	1698	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	849	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	304	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	304	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	304	-
HCM Lane V/C Ratio	-	0.095	-
HCM Control Delay (s)	-	18.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	0	33	12	1514	22	1523	9
Future Volume (vph)	0	33	12	1514	22	1523	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	75		75		0
Storage Lanes	0	1	1		1		0
Taper Length (ft)	25		100		100		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt		0.865				0.999	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	0	1611	1770	3539	1770	3536	0
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	0	1611	1770	3539	1770	3536	0
Link Speed (mph)	25			40		40	
Link Distance (ft)	1186			689		389	
Travel Time (s)	32.3			11.7		6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	37	13	1682	24	1692	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	37	13	1682	24	1702	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	R NA	Left	Right
Median Width(ft)	0			12		12	
Link Offset(ft)	0			0		0	
Crosswalk Width(ft)	16			16		16	
Two way Left Turn Lane				Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9		9
Sign Control	Stop			Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	0	33	12	1514	22	1523	9
Future Volume (Veh/h)	0	33	12	1514	22	1523	9
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	37	13	1682	0	1692	10
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				TWLTL		TWLTL	
Median storage veh)				2		2	
Upstream signal (ft)				689			
pX, platoon unblocked	0.69				0.00		
vC, conflicting volume	2564	851	1702		0		
vC1, stage 1 conf vol	1697						
vC2, stage 2 conf vol	867						
vCu, unblocked vol	2367	851	1702		0		
tC, single (s)	6.8	6.9	4.1		0.0		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	100	88	96		0		
cM capacity (veh/h)	128	303	370		0		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	13	841	841	1128	574	0
Volume Left	0	13	0	0	0	0	0
Volume Right	37	0	0	0	0	10	0
cSH	303	370	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.04	0.49	0.49	0.66	0.34	0.00
Queue Length 95th (ft)	10	3	0	0	0	0	0
Control Delay (s)	18.5	15.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	18.5	0.1			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

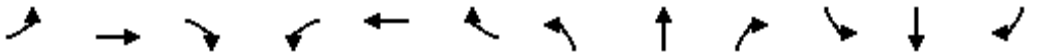
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	33	12	1514	22	1523	9
Future Vol, veh/h	0	33	12	1514	22	1523	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	75	-	75	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	37	13	1682	24	1692	10

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	-	851	1702	0	1682	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	0	303	370	-	120	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	-	303	370	-	120	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.1	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	370	-	303	120	-	-
HCM Lane V/C Ratio	0.036	-	0.121	0.204	-	-
HCM Control Delay (s)	15.1	-	18.5	42.5	-	-
HCM Lane LOS	C	-	C	E	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.7	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	4	39	4	4	4	46	1676	4	4	1461	43
Future Volume (vph)	39	4	39	4	4	4	46	1676	4	4	1461	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			1%			0%			0%	
Storage Length (ft)	0		0	0		0	250		0	250		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.935			0.955						0.996	
Flt Protected		0.977			0.984		0.950			0.950		
Satd. Flow (prot)	0	1710	0	0	1742	0	1770	3374	0	1770	3365	0
Flt Permitted		0.842			0.923		0.125			0.097		
Satd. Flow (perm)	0	1474	0	0	1634	0	233	3374	0	181	3365	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		732			261			1326			1192	
Travel Time (s)		20.0			7.1			22.6			20.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	7%	2%
Adj. Flow (vph)	43	4	43	4	4	4	51	1862	4	4	1623	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	12	0	51	1866	0	4	1671	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	0.99	0.99	0.99	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	24.9	24.9		26.1	26.1		17.3	17.3		17.3	17.3	
Total Split (s)	28.0	28.0		28.0	28.0		124.0	124.0		124.0	124.0	
Total Split (%)	18.4%	18.4%		18.4%	18.4%		81.6%	81.6%		81.6%	81.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.9	2.9		3.1	3.1		1.1	1.1		1.1	1.1	
Lost Time Adjust (s)		-0.9			-1.1		-0.3	-0.3		-0.3	-0.3	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		14.4			14.4		127.6	127.6		127.6	127.6	
Actuated g/C Ratio		0.09			0.09		0.84	0.84		0.84	0.84	

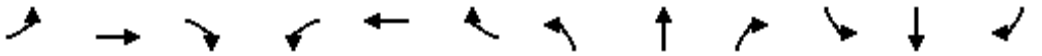
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.65			0.08		0.26	0.66		0.03	0.59	
Control Delay		86.2			61.0		7.5	14.9		3.2	5.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		86.2			61.0		7.5	14.9		3.2	5.3	
LOS		F			E		A	B		A	A	
Approach Delay		86.2			61.0			14.7			5.3	
Approach LOS		F			E			B			A	
Queue Length 50th (ft)		88			11		19	820		1	223	
Queue Length 95th (ft)		144			32		m20	953		3	344	
Internal Link Dist (ft)		652			181			1246			1112	
Turn Bay Length (ft)							250			250		
Base Capacity (vph)		223			247		195	2831		151	2823	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.40			0.05		0.26	0.66		0.03	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 152			
Actuated Cycle Length: 152			
Offset: 40 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: US 421 & Southern Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	33	22	184	46	189	27	1418	88	76	1533	40
Future Volume (vph)	33	33	22	184	46	189	27	1418	88	76	1533	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	300		0	250		0	75		240	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			0			100			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.941			0.879				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1753	0	1743	1613	0	1687	3374	1583	1770	3364	0
Flt Permitted	0.282			0.717			0.107			0.950		
Satd. Flow (perm)	487	1753	0	1316	1613	0	190	3374	1583	1770	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			40			40	
Link Distance (ft)		1671			1029			1123			702	
Travel Time (s)		45.6			20.0			19.1			12.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	2%	2%	2%	7%	7%	2%	2%	7%	2%
Adj. Flow (vph)	37	37	24	204	51	210	30	1576	98	84	1703	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	61	0	204	261	0	30	1576	98	84	1747	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2			
Detector Phase	4	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		12.0	12.0	12.0	5.0	12.0	
Minimum Split (s)	37.0	37.0		10.6	10.6		21.4	21.4	21.4	10.4	17.4	
Total Split (s)	50.0	50.0		50.0	50.0		87.0	87.0	87.0	15.0	102.0	
Total Split (%)	32.9%	32.9%		32.9%	32.9%		57.2%	57.2%	57.2%	9.9%	67.1%	
Yellow Time (s)	3.2	3.2		3.7	3.7		4.2	4.2	4.2	3.0	4.2	
All-Red Time (s)	2.8	2.8		1.9	1.9		1.2	1.2	1.2	2.4	1.2	
Lost Time Adjust (s)	-1.0	-1.0		-0.6	-0.6		-0.4	-0.4	-0.4	-0.4	-0.4	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	29.8	29.8		29.8	29.8		94.9	94.9	94.9	12.3	112.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.62	0.62	0.62	0.08	0.74	

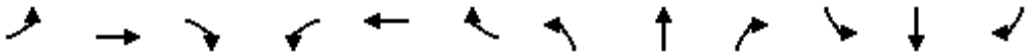
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.18		0.79	0.83		0.25	0.75	0.10	0.59	0.70	
Control Delay	62.9	49.2		78.7	78.9		23.6	24.9	13.8	77.3	16.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	62.9	49.2		78.7	78.9		23.6	24.9	13.8	77.3	16.5	
LOS	E	D		E	E		C	C	B	E	B	
Approach Delay		54.4			78.8			24.2			19.3	
Approach LOS		D			E			C			B	
Queue Length 50th (ft)	32	51		195	251		13	557	37	83	574	
Queue Length 95th (ft)	m67	m88		271	333		46	807	79	136	817	
Internal Link Dist (ft)		1591			949			1043			622	
Turn Bay Length (ft)	300			250			75		240	250		
Base Capacity (vph)	144	518		389	477		118	2106	988	147	2482	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.26	0.12		0.52	0.55		0.25	0.75	0.10	0.57	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 152
Actuated Cycle Length: 152
Offset: 130 (86%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 88.5% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

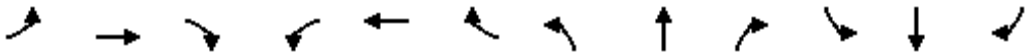
Splits and Phases: 2: US 421 & Bell Street/Medical Center Drive





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	4	26	43	10	8	16	33	4	7	4
Future Volume (vph)	4	44	4	26	43	10	8	16	33	4	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.983			0.922			0.966	
Flt Protected		0.997			0.984			0.993			0.988	
Satd. Flow (prot)	0	1840	0	0	1802	0	0	1705	0	0	1778	0
Flt Permitted		0.997			0.984			0.993			0.988	
Satd. Flow (perm)	0	1840	0	0	1802	0	0	1705	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1860			732			1004			716	
Travel Time (s)		50.7			20.0			27.4			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	49	4	29	48	11	9	18	37	4	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	88	0	0	64	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	44	4	26	43	10	8	16	33	4	7	4
Future Volume (Veh/h)	4	44	4	26	43	10	8	16	33	4	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	49	4	29	48	11	9	18	37	4	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					732							
pX, platoon unblocked												
vC, conflicting volume	59			53			178	176	51	216	172	54
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			53			178	176	51	216	172	54
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	97	96	99	99	100
cM capacity (veh/h)	1545			1553			761	702	1017	688	705	1014

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	57	88	64	16
Volume Left	4	29	9	4
Volume Right	4	11	37	4
cSH	1545	1553	867	758
Volume to Capacity	0.00	0.02	0.07	0.02
Queue Length 95th (ft)	0	1	6	2
Control Delay (s)	0.5	2.5	9.5	9.9
Lane LOS	A	A	A	A
Approach Delay (s)	0.5	2.5	9.5	9.9
Approach LOS			A	A

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	21.4%	ICU Level of Service	A	
Analysis Period (min)	15			

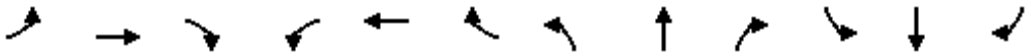
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	44	4	26	43	10	8	16	33	4	7	4
Future Vol, veh/h	4	44	4	26	43	10	8	16	33	4	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	49	4	29	48	11	9	18	37	4	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	59	0	0	53	0	0	177	176	51	199	173	54
Stage 1	-	-	-	-	-	-	59	59	-	112	112	-
Stage 2	-	-	-	-	-	-	118	117	-	87	61	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1545	-	-	1553	-	-	785	717	1017	760	720	1013
Stage 1	-	-	-	-	-	-	953	846	-	893	803	-
Stage 2	-	-	-	-	-	-	887	799	-	921	844	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1553	-	-	762	701	1017	707	704	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	762	701	-	707	704	-
Stage 1	-	-	-	-	-	-	950	843	-	890	788	-
Stage 2	-	-	-	-	-	-	858	784	-	866	841	-

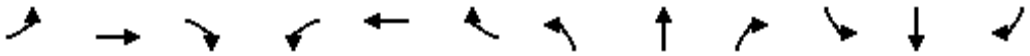
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.4	9.5	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1545	-	-	1553	-	-	767
HCM Lane V/C Ratio	0.073	0.003	-	-	0.019	-	-	0.022
HCM Control Delay (s)	9.5	7.3	0	-	7.4	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	4	4	5	16	61	11	4	26	5
Future Volume (vph)	4	4	6	4	4	5	16	61	11	4	26	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937			0.942			0.983			0.979	
Flt Protected		0.987			0.986			0.991			0.995	
Satd. Flow (prot)	0	1723	0	0	1730	0	0	1815	0	0	1815	0
Flt Permitted		0.987			0.986			0.991			0.995	
Satd. Flow (perm)	0	1723	0	0	1730	0	0	1815	0	0	1815	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1067			278			519			528	
Travel Time (s)		29.1			7.6			14.2			14.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	4	7	4	4	6	18	68	12	4	29	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	14	0	0	98	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	4	6	4	4	5	16	61	11	4	26	5
Future Volume (Veh/h)	4	4	6	4	4	5	16	61	11	4	26	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	4	7	4	4	6	18	68	12	4	29	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	158	156	32	159	153	74	35			80		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	158	156	32	159	153	74	35			80		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	99	99	99	99			100		
cM capacity (veh/h)	791	726	1042	789	728	988	1576			1518		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	14	98	39
Volume Left	4	4	18	4
Volume Right	7	6	12	6
cSH	868	842	1576	1518
Volume to Capacity	0.02	0.02	0.01	0.00
Queue Length 95th (ft)	1	1	1	0
Control Delay (s)	9.2	9.3	1.4	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	9.2	9.3	1.4	0.8
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	17.5%	ICU Level of Service	A	
Analysis Period (min)	15			

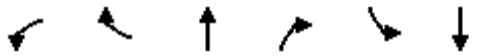
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	4	6	4	4	5	16	61	11	4	26	5
Future Vol, veh/h	4	4	6	4	4	5	16	61	11	4	26	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	7	4	4	6	18	68	12	4	29	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	156	32	156	153	74	35	0	0	80	0	0
Stage 1	40	40	-	110	110	-	-	-	-	-	-	-
Stage 2	115	116	-	46	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	812	736	1042	810	739	988	1576	-	-	1518	-	-
Stage 1	975	862	-	895	804	-	-	-	-	-	-	-
Stage 2	890	800	-	968	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	794	725	1042	792	728	988	1576	-	-	1518	-	-
Mov Cap-2 Maneuver	794	725	-	792	728	-	-	-	-	-	-	-
Stage 1	963	859	-	884	794	-	-	-	-	-	-	-
Stage 2	869	790	-	954	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.4	1.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	858	833	1518	-	-
HCM Lane V/C Ratio	0.011	-	-	0.018	0.017	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9.3	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	50	46	43	16	26
Future Volume (vph)	37	50	46	43	16	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922		0.935			
Flt Protected	0.979					0.981
Satd. Flow (prot)	1681	0	1742	0	0	1827
Flt Permitted	0.979					0.981
Satd. Flow (perm)	1681	0	1742	0	0	1827
Link Speed (mph)	25		25			25
Link Distance (ft)	1671		1078			519
Travel Time (s)	45.6		29.4			14.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	56	51	48	18	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	99	0	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	50	46	43	16	26
Future Volume (Veh/h)	37	50	46	43	16	26
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	56	51	48	18	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	140	75			99	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	75			99	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	94			99	
cM capacity (veh/h)	843	986			1494	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	97	99	47
Volume Left	41	0	18
Volume Right	56	48	0
cSH	920	1700	1494
Volume to Capacity	0.11	0.06	0.01
Queue Length 95th (ft)	9	0	1
Control Delay (s)	9.4	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

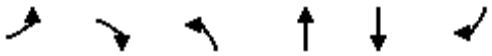
Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	50	46	43	16	26
Future Vol, veh/h	37	50	46	43	16	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	56	51	48	18	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	140	75	0	0	99	0
Stage 1	75	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	853	986	-	-	1494	-
Stage 1	948	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	843	986	-	-	1494	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	947	-	-	-	-	-

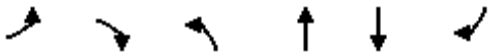
Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	2.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	920	1494	-
HCM Lane V/C Ratio	-	-	0.105	0.012	-
HCM Control Delay (s)	-	-	9.4	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	17	0	1671	1575	0
Future Volume (vph)	0	17	0	1671	1575	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	635			389	1326	
Travel Time (s)	17.3			6.6	22.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	19	0	1857	1750	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	19	0	1857	1750	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	17	0	1671	1575	0
Future Volume (Veh/h)	0	17	0	1671	1575	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	19	0	1857	1750	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1091		
pX, platoon unblocked	0.66					
vC, conflicting volume	2678	875	1750			
vC1, stage 1 conf vol	1750					
vC2, stage 2 conf vol	928					
vCu, unblocked vol	2510	875	1750			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	119	292	354			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	19	928	928	875	875
Volume Left	0	0	0	0	0
Volume Right	19	0	0	0	0
cSH	292	1700	1700	1700	1700
Volume to Capacity	0.06	0.55	0.55	0.51	0.51
Queue Length 95th (ft)	5	0	0	0	0
Control Delay (s)	18.2	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.2	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	1671	1575	0
Future Vol, veh/h	0	17	0	1671	1575	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	0	1857	1750	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	875	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	292	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	292	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	292	-
HCM Lane V/C Ratio	-	0.065	-
HCM Control Delay (s)	-	18.2	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	0	23	34	1656	14	1551	27
Future Volume (vph)	0	23	34	1656	14	1551	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	75		75		0
Storage Lanes	0	1	1		1		0
Taper Length (ft)	25		100		100		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt		0.865				0.997	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	0	1611	1770	3539	1770	3529	0
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	0	1611	1770	3539	1770	3529	0
Link Speed (mph)	25			40		40	
Link Distance (ft)	1194			702		389	
Travel Time (s)	32.6			12.0		6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	26	38	1840	16	1723	30
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	26	38	1840	16	1753	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	R NA	Left	Right
Median Width(ft)	0			12		12	
Link Offset(ft)	0			0		0	
Crosswalk Width(ft)	16			16		16	
Two way Left Turn Lane				Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9		9
Sign Control	Stop			Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	0	23	34	1656	14	1551	27
Future Volume (Veh/h)	0	23	34	1656	14	1551	27
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	26	38	1840	0	1723	30
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				TWLTL		TWLTL	
Median storage veh)				2		2	
Upstream signal (ft)				702			
pX, platoon unblocked	0.66				0.00		
vC, conflicting volume	2734	876	1753		0		
vC1, stage 1 conf vol	1738						
vC2, stage 2 conf vol	996						
vCu, unblocked vol	2597	876	1753		0		
tC, single (s)	6.8	6.9	4.1		0.0		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	100	91	89		0		
cM capacity (veh/h)	120	292	353		0		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	26	38	920	920	1149	604	0
Volume Left	0	38	0	0	0	0	0
Volume Right	26	0	0	0	0	30	0
cSH	292	353	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.11	0.54	0.54	0.68	0.36	0.00
Queue Length 95th (ft)	7	9	0	0	0	0	0
Control Delay (s)	18.5	16.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	18.5	0.3			0.0		
Approach LOS	C						

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	53.7%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	23	34	1656	14	1551	27
Future Vol, veh/h	0	23	34	1656	14	1551	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	75	-	75	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	26	38	1840	16	1723	30

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	-	877	1753	0	1840	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	0	292	353	-	95	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	-	292	353	-	95	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.3	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	353	-	292	95	-	-
HCM Lane V/C Ratio	0.107	-	0.088	0.164	-	-
HCM Control Delay (s)	16.4	-	18.5	50.2	-	-
HCM Lane LOS	C	-	C	F	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	0.6	-	-

Queueing Analysis
SimTraffic Worksheets

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	148	59	47	99	121	30	201	194
Average Queue (ft)	68	14	13	15	21	2	76	56
95th Queue (ft)	125	45	39	62	76	14	169	143
Link Distance (ft)	657	214		2346	2346		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	117	171	178	217	162	519	491	290	242	304	302
Average Queue (ft)	38	74	74	101	15	261	228	134	119	115	134
95th Queue (ft)	94	144	142	184	72	445	423	281	213	232	253
Link Distance (ft)		384		969		1088	1088			2346	2346
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)				0	0	26	5	0	0	0	
Queuing Penalty (veh)				0	2	3	16	2	2	0	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	3	9	39	33
Average Queue (ft)	0	0	16	11
95th Queue (ft)	3	6	35	35
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	36	33
Average Queue (ft)	14	10
95th Queue (ft)	39	34
Link Distance (ft)	1039	249
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Adams Street & Bell Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	52	32
Average Queue (ft)	27	2
95th Queue (ft)	51	17
Link Distance (ft)	1153	466
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 25

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	148	55	91	273	300	26	207	193
Average Queue (ft)	67	11	30	96	112	3	76	57
95th Queue (ft)	126	37	70	220	243	17	169	146
Link Distance (ft)	657	214		2346	2346		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)				0			0	
Queuing Penalty (veh)				0			0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	87	115	249	398	132	443	413	234	213	405	412
Average Queue (ft)	28	40	148	178	19	224	188	38	54	193	219
95th Queue (ft)	72	91	247	306	71	377	347	137	150	360	379
Link Distance (ft)		384		969		1088	1088			2346	2346
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			1	2	0	21	3		0	3	
Queuing Penalty (veh)			1	4	2	5	2		0	2	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	9	18	44	33
Average Queue (ft)	0	1	17	11
95th Queue (ft)	6	10	36	34
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	34	31	12	12
Average Queue (ft)	11	10	0	1
95th Queue (ft)	35	34	6	7
Link Distance (ft)	1039	249	466	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	68	30
Average Queue (ft)	34	2
95th Queue (ft)	57	15
Link Distance (ft)	1153	466
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 17

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	151	65	48	113	134	26	241	217
Average Queue (ft)	68	17	12	27	42	2	86	63
95th Queue (ft)	126	51	38	83	102	14	189	161
Link Distance (ft)	657	214		2348	2348		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	122	189	199	214	147	506	465	290	249	364	368
Average Queue (ft)	43	75	84	101	15	295	263	147	162	155	171
95th Queue (ft)	95	151	166	184	69	455	427	296	256	329	326
Link Distance (ft)		1590		969		1088	1088			2348	2348
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			0	0	0	29	7	0	3	1	
Queuing Penalty (veh)			0	0	0	4	22	1	22	3	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	9	6	45	36
Average Queue (ft)	0	0	16	12
95th Queue (ft)	5	4	35	36
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	31	33	9
Average Queue (ft)	14	11	0
95th Queue (ft)	39	36	5
Link Distance (ft)	1039	249	463
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Adams Street & Bell Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	56	2	25
Average Queue (ft)	26	0	2
95th Queue (ft)	53	2	13
Link Distance (ft)	1590	1038	463
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 52

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	177	57	77	273	521	32	206	197
Average Queue (ft)	79	15	31	91	115	3	88	65
95th Queue (ft)	144	45	64	216	371	18	180	151
Link Distance (ft)	657	214		2346	2346		1163	1163
Upstream Blk Time (%)					0			
Queuing Penalty (veh)					0			
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)				0			0	
Queuing Penalty (veh)				0			0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	88	109	249	388	146	488	481	268	230	411	437
Average Queue (ft)	27	42	148	172	23	289	256	54	74	204	227
95th Queue (ft)	72	91	244	300	84	443	428	181	164	363	385
Link Distance (ft)		1588		969		1088	1088			2346	2346
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			1	2	0	29	7		0	3	
Queuing Penalty (veh)			2	5	1	7	6		0	2	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	12	20	46	31
Average Queue (ft)	0	1	19	12
95th Queue (ft)	6	10	38	37
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	36	18	9
Average Queue (ft)	11	10	1	0
95th Queue (ft)	35	35	8	6
Link Distance (ft)	1039	249	461	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	71	2	25
Average Queue (ft)	34	0	2
95th Queue (ft)	58	2	13
Link Distance (ft)	1588	1039	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 23

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	166	69	48	149	146	29	227	217
Average Queue (ft)	74	17	14	44	52	4	88	67
95th Queue (ft)	137	53	40	118	121	19	190	163
Link Distance (ft)	657	214		1294	1294		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	102	169	180	213	130	524	496	290	250	435	435
Average Queue (ft)	38	69	80	103	17	317	283	157	194	203	206
95th Queue (ft)	86	134	150	182	75	471	447	308	289	415	394
Link Distance (ft)		1589		969		1088	1088			618	618
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			0	0	0	30	8	0	11	4	
Queuing Penalty (veh)			0	0	1	4	24	2	72	8	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	8	15	39	33
Average Queue (ft)	0	1	17	13
95th Queue (ft)	5	8	34	38
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	38	6	3
Average Queue (ft)	12	16	0	0
95th Queue (ft)	38	42	4	3
Link Distance (ft)	1039	219	463	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	57	2	30
Average Queue (ft)	28	0	2
95th Queue (ft)	54	2	14
Link Distance (ft)	1589	1038	463
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US 421 & Site Exit

Movement	EB
Directions Served	R
Maximum Queue (ft)	59
Average Queue (ft)	21
95th Queue (ft)	50
Link Distance (ft)	551
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: US 421 & Primary Site Access

Movement	EB	NB	SB	SB
Directions Served	R	L	U	TR
Maximum Queue (ft)	65	46	58	2
Average Queue (ft)	26	9	15	0
95th Queue (ft)	55	33	43	2
Link Distance (ft)	1110			334
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250	250	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 111

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	158	53	96	284	332	32	226	211
Average Queue (ft)	76	14	29	78	91	3	86	68
95th Queue (ft)	137	43	69	206	236	18	186	166
Link Distance (ft)	657	214		1282	1282		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)				0			0	
Queuing Penalty (veh)				0			0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	96	124	249	388	174	515	499	289	242	420	439
Average Queue (ft)	31	43	150	189	32	311	272	58	85	221	239
95th Queue (ft)	74	95	251	324	106	468	441	193	182	389	406
Link Distance (ft)		1588		969		1088	1088			630	630
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			1	3	1	31	8		0	4	
Queuing Penalty (veh)			2	5	10	8	7		1	3	

Intersection: 3: Adams Street & Southern Boulevard

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	47	33
Average Queue (ft)	1	19	11
95th Queue (ft)	13	39	35
Link Distance (ft)	657	942	687
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	36	12	6
Average Queue (ft)	13	11	0	0
95th Queue (ft)	38	35	7	5
Link Distance (ft)	1039	219	461	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	61	25
Average Queue (ft)	34	1
95th Queue (ft)	56	10
Link Distance (ft)	1588	461
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: US 421 & Site Exit

Movement	EB
Directions Served	R
Maximum Queue (ft)	40
Average Queue (ft)	15
95th Queue (ft)	40
Link Distance (ft)	589
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: US 421 & Primary Site Access

Movement	EB	NB	SB	SB
Directions Served	R	L	U	TR
Maximum Queue (ft)	56	59	47	8
Average Queue (ft)	19	20	10	0
95th Queue (ft)	48	51	34	5
Link Distance (ft)	1117			334
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250	250	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 37

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	174	55	50	152	154	32	238	206
Average Queue (ft)	81	15	13	42	52	3	90	65
95th Queue (ft)	150	45	39	115	121	17	195	159
Link Distance (ft)	657	214		1294	1294		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	106	161	180	211	161	512	503	290	249	420	424
Average Queue (ft)	36	75	81	110	19	312	275	139	185	190	191
95th Queue (ft)	83	141	149	181	80	460	438	289	280	396	378
Link Distance (ft)		1589		969		1088	1088			618	618
Upstream Blk Time (%)										0	0
Queuing Penalty (veh)										0	0
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)				0	0	30	7	0	8	4	
Queuing Penalty (veh)				0	4	4	22	2	50	7	

Intersection: 3: Adams Street & Southern Boulevard

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	9	43	33
Average Queue (ft)	0	17	12
95th Queue (ft)	6	36	36
Link Distance (ft)	657	942	687
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	34	36	9	6
Average Queue (ft)	14	16	0	0
95th Queue (ft)	39	42	5	4
Link Distance (ft)	1039	219	463	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	50	2	27
Average Queue (ft)	28	0	1
95th Queue (ft)	50	2	11
Link Distance (ft)	1589	1038	463
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US 421 & Site Exit

Movement	EB
Directions Served	R
Maximum Queue (ft)	58
Average Queue (ft)	20
95th Queue (ft)	49
Link Distance (ft)	551
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: US 421 & Primary Site Access

Movement	EB	NB	SB	SB	SB
Directions Served	R	L	U	T	TR
Maximum Queue (ft)	71	41	42	8	12
Average Queue (ft)	23	9	11	0	1
95th Queue (ft)	56	32	34	8	11
Link Distance (ft)	1110			334	334
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		75	75		
Storage Blk Time (%)		0	0	0	
Queuing Penalty (veh)		0	0	0	

Network Summary

Network wide Queuing Penalty: 91

Intersection: 1: US 421 & Southern Boulevard

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	150	53	98	232	265	30	213	193
Average Queue (ft)	72	14	29	71	80	3	84	62
95th Queue (ft)	130	44	70	179	198	17	178	146
Link Distance (ft)	657	214		1282	1282		1163	1163
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)				0			0	
Queuing Penalty (veh)				0			0	

Intersection: 2: US 421 & Bell Street/Medical Center Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	84	122	250	392	173	513	492	270	243	429	428
Average Queue (ft)	26	39	156	185	36	314	273	56	90	227	242
95th Queue (ft)	66	90	261	329	118	478	442	188	189	401	412
Link Distance (ft)		1588		969		1088	1088			630	630
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300		250		75			240	250		
Storage Blk Time (%)			1	3	1	31	9	0	0	5	
Queuing Penalty (veh)			2	5	6	8	8	0	0	4	

Intersection: 3: Adams Street & Southern Boulevard

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	3	9	47	35
Average Queue (ft)	0	0	20	12
95th Queue (ft)	4	6	41	36
Link Distance (ft)	1820	657	942	687
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Adams Street & Maryland Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	34	36	12	12
Average Queue (ft)	13	11	1	1
95th Queue (ft)	38	35	9	7
Link Distance (ft)	1039	219	461	479
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Adams Street & Bell Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	66	2	22
Average Queue (ft)	35	0	2
95th Queue (ft)	59	2	13
Link Distance (ft)	1588	1039	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US 421 & Site Exit

Movement	EB
Directions Served	R
Maximum Queue (ft)	47
Average Queue (ft)	15
95th Queue (ft)	42
Link Distance (ft)	589
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: US 421 & Primary Site Access

Movement	EB	NB	NB	SB	SB	SB
Directions Served	R	L	T	U	T	TR
Maximum Queue (ft)	46	63	46	40	10	9
Average Queue (ft)	17	20	2	9	0	0
95th Queue (ft)	44	51	36	32	6	4
Link Distance (ft)	1117		630		334	334
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		75		75		
Storage Blk Time (%)		0	0			
Queuing Penalty (veh)		4	0			

Network Summary

Network wide Queuing Penalty: 38

Turning Movement Counts

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : US_421_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 1

Groups Printed- Cars - Buses - Trucks - Pedestrians

	US 421 Southbound					Southern Blvd. Westbound					US 421 Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	251	2	0	253	0	0	0	0	0	2	305	1	0	308	11	0	2	0	13	574
07:15 AM	0	359	3	0	362	1	0	0	1	2	5	343	0	0	348	4	0	10	1	15	727
07:30 AM	0	372	8	0	380	0	0	0	3	3	2	341	0	0	343	17	0	9	0	26	752
07:45 AM	0	384	5	0	389	3	0	0	0	3	4	355	0	0	359	9	0	3	0	12	763
Total	0	1366	18	0	1384	4	0	0	4	8	13	1344	1	0	1358	41	0	24	1	66	2816
08:00 AM	1	363	1	0	365	0	0	0	1	1	5	363	0	0	368	6	0	6	0	12	746
08:15 AM	0	299	3	0	302	1	0	0	0	1	5	317	3	0	325	6	0	6	0	12	640
08:30 AM	0	358	2	0	360	0	0	0	0	0	4	338	0	0	342	8	0	7	0	15	717
08:45 AM	1	285	3	0	289	0	5	0	0	5	4	326	1	0	331	7	0	9	0	16	641
Total	2	1305	9	0	1316	1	5	0	1	7	18	1344	4	0	1366	27	0	28	0	55	2744
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : US_421_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 2

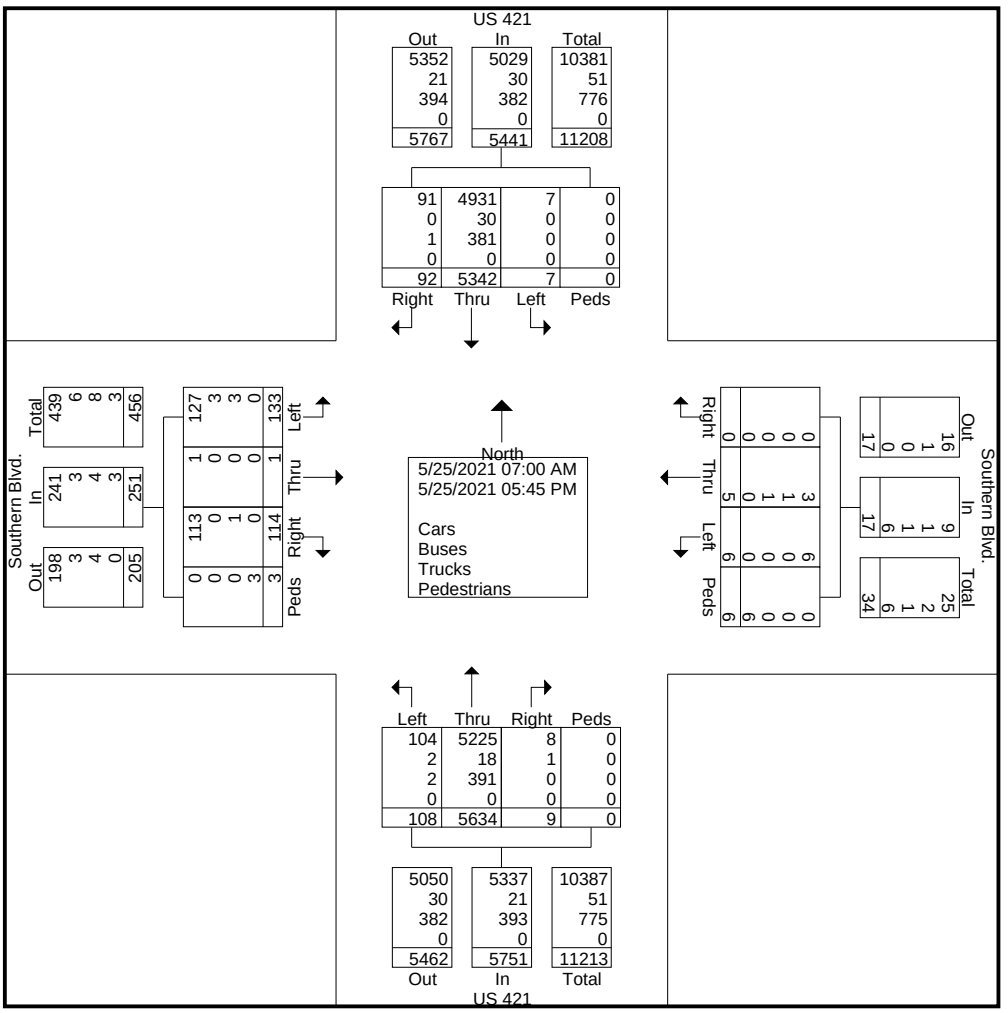
Groups Printed- Cars - Buses - Trucks - Pedestrians

	US 421 Southbound					Southern Blvd. Westbound					US 421 Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	303	7	0	310	0	0	0	0	0	3	351	1	0	355	5	0	7	0	12	677
04:15 PM	1	332	7	0	340	0	0	0	0	0	9	308	0	0	317	8	0	6	0	14	671
04:30 PM	0	330	5	0	335	0	0	0	0	0	9	360	1	0	370	8	0	5	0	13	718
04:45 PM	0	340	10	0	350	0	0	0	1	1	3	426	0	0	429	6	0	10	0	16	796
Total	1	1305	29	0	1335	0	0	0	1	1	24	1445	2	0	1471	27	0	28	0	55	2862
05:00 PM	1	325	10	0	336	0	0	0	0	0	18	453	0	0	471	13	1	8	0	22	829
05:15 PM	0	393	10	0	403	0	0	0	0	0	11	365	0	0	376	6	0	11	1	18	797
05:30 PM	1	334	7	0	342	0	0	0	0	0	12	368	1	0	381	12	0	4	1	17	740
05:45 PM	2	314	9	0	325	1	0	0	0	1	12	315	1	0	328	7	0	11	0	18	672
Total	4	1366	36	0	1406	1	0	0	0	1	53	1501	2	0	1556	38	1	34	2	75	3038
Grand Total	7	5342	92	0	5441	6	5	0	6	17	108	5634	9	0	5751	133	1	114	3	251	11460
Apprch %	0.1	98.2	1.7	0		35.3	29.4	0	35.3		1.9	98	0.2	0		53	0.4	45.4	1.2		
Total %	0.1	46.6	0.8	0	47.5	0.1	0	0	0.1	0.1	0.9	49.2	0.1	0	50.2	1.2	0	1	0	2.2	
Cars	7	4931	91	0	5029	6	3	0	0	9	104	5225	8	0	5337	127	1	113	0	241	10616
% Cars	100	92.3	98.9	0	92.4	100	60	0	0	52.9	96.3	92.7	88.9	0	92.8	95.5	100	99.1	0	96	92.6
Buses	0	30	0	0	30	0	1	0	0	1	2	18	1	0	21	3	0	0	0	3	55
% Buses	0	0.6	0	0	0.6	0	20	0	0	5.9	1.9	0.3	11.1	0	0.4	2.3	0	0	0	1.2	0.5
Trucks	0	381	1	0	382	0	1	0	0	1	2	391	0	0	393	3	0	1	0	4	780
% Trucks	0	7.1	1.1	0	7	0	20	0	0	5.9	1.9	6.9	0	0	6.8	2.3	0	0.9	0	1.6	6.8
Pedestrians	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	3	3	9
% Pedestrians	0	0	0	0	0	0	0	0	100	35.3	0	0	0	0	0	0	0	0	100	1.2	0.1

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File Name : US_421_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 3

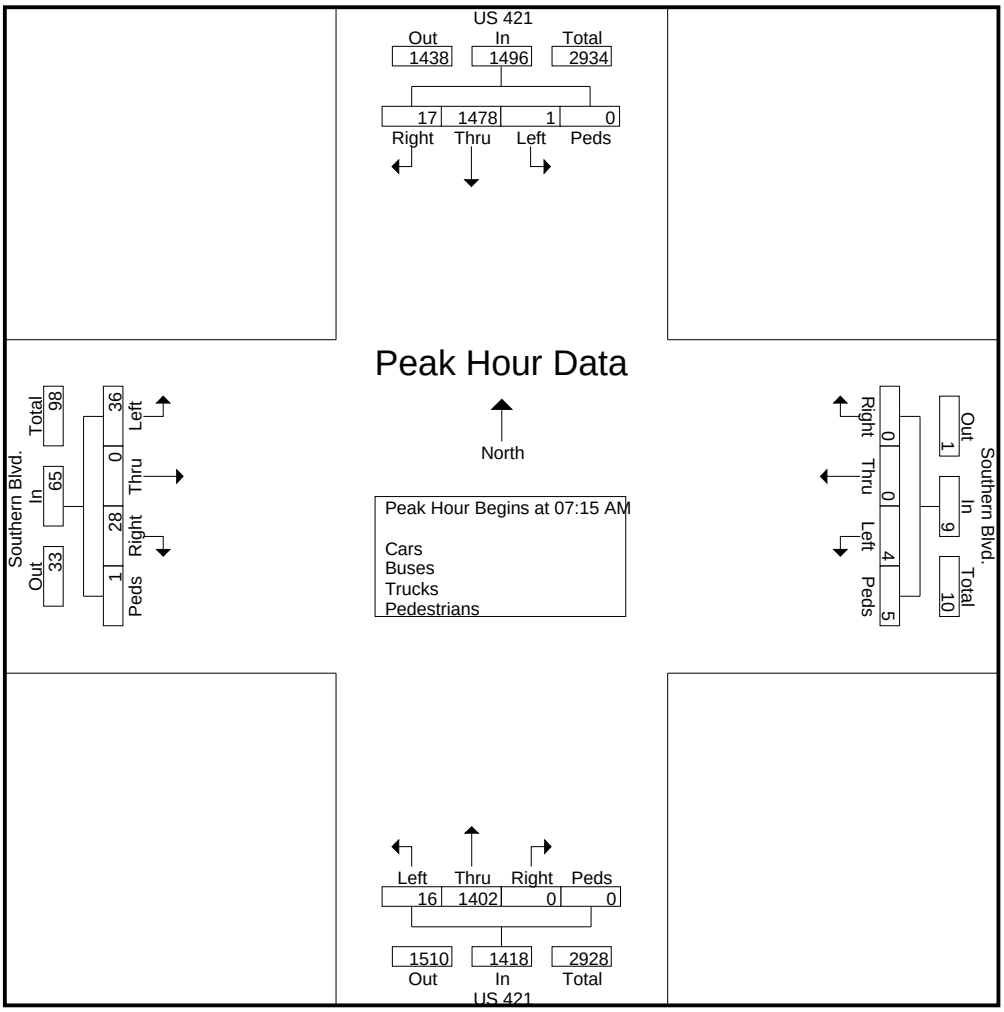


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File Name : US_421_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
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	US 421 Southbound					Southern Blvd. Westbound					US 421 Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	359	3	0	362	1	0	0	1	2	**5**	343	0	0	348	4	0	**10**	**1**	15	727
07:30 AM	0	372	**8**	0	380	0	0	0	**3**	**3**	2	341	0	0	343	**17**	0	9	0	**26**	752
07:45 AM	0	**384**	5	0	**389**	**3**	0	0	0	3	4	355	0	0	359	9	0	3	0	12	**763**
08:00 AM	**1**	363	1	0	365	0	0	0	1	1	5	**363**	0	0	**368**	6	0	6	0	12	746
Total Volume	1	1478	17	0	1496	4	0	0	5	9	16	1402	0	0	1418	36	0	28	1	65	2988
% App. Total	0.1	98.8	1.1	0		44.4	0	0	55.6		1.1	98.9	0	0		55.4	0	43.1	1.5		
PHF	.250	.962	.531	.000	.961	.333	.000	.000	.417	.750	.800	.966	.000	.000	.963	.529	.000	.700	.250	.625	.979

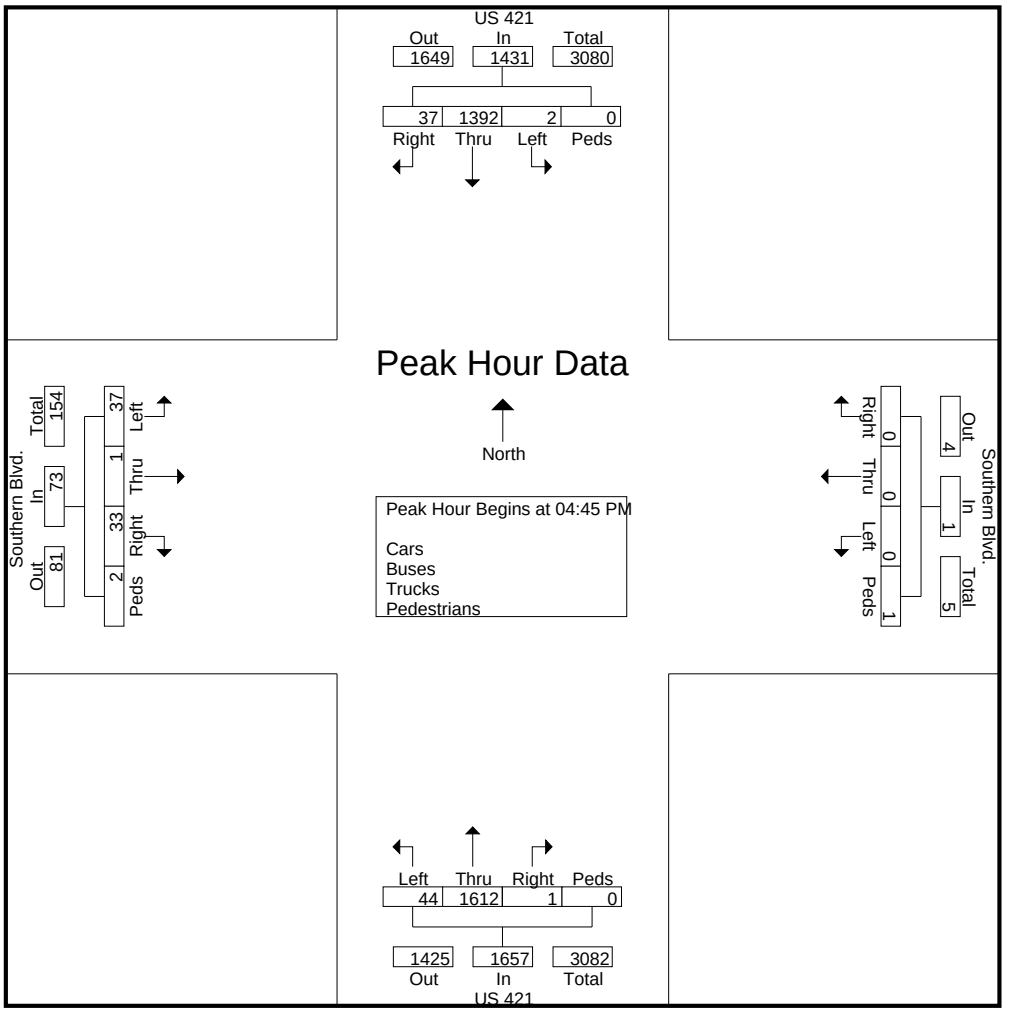


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File Name : US_421_and_Southern_Blvd
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	US 421 Southbound					Southern Blvd. Westbound					US 421 Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	340	**10**	0	350	0	0	0	**1**	**1**	3	426	0	0	429	6	0	10	0	16	796
05:00 PM	**1**	325	10	0	336	0	0	0	0	0	**18**	**453**	0	0	**471**	**13**	**1**	8	0	**22**	**829**
05:15 PM	0	**393**	10	0	**403**	0	0	0	0	0	11	365	0	0	376	6	0	**11**	**1**	18	797
05:30 PM	1	334	7	0	342	0	0	0	0	0	12	368	**1**	0	381	12	0	4	1	17	740
Total Volume	2	1392	37	0	1431	0	0	0	1	1	44	1612	1	0	1657	37	1	33	2	73	3162
% App. Total	0.1	97.3	2.6	0		0	0	0	100		2.7	97.3	0.1	0		50.7	1.4	45.2	2.7		
PHF	.500	.885	.925	.000	.888	.000	.000	.000	.250	.250	.611	.890	.250	.000	.880	.712	.250	.750	.500	.830	.954



DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_US_421_and_Bell_Street_848064_05-26-2021
Site Code : 210237
Start Date : 5/26/2021
Page No : 1

Groups Printed- Cars - Buses - Trucks - Pedestrians

	US 421 Southbound					Bell Street Westbound					US 421 Northbound					Medical Center Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	26	234	3	0	263	17	4	13	3	37	2	281	38	1	322	8	4	9	0	21	643
07:15 AM	30	302	6	0	338	23	3	24	2	52	1	358	66	0	425	8	12	3	0	23	838
07:30 AM	46	311	7	0	364	23	3	23	0	49	3	341	87	0	431	14	20	12	0	46	890
07:45 AM	47	290	4	0	341	28	8	22	1	59	7	346	73	0	426	7	16	6	1	30	856
Total	149	1137	20	0	1306	91	18	82	6	197	13	1326	264	1	1604	37	52	30	1	120	3227
08:00 AM	50	339	6	0	395	28	8	22	0	58	2	334	72	0	408	10	12	3	0	25	886
08:15 AM	35	259	4	0	298	22	2	18	0	42	5	290	49	0	344	5	12	3	0	20	704
08:30 AM	35	276	7	0	318	28	2	19	1	50	7	292	47	0	346	10	4	6	0	20	734
08:45 AM	20	275	9	0	304	34	4	29	0	67	3	324	43	0	370	7	14	9	0	30	771
Total	140	1149	26	0	1315	112	16	88	1	217	17	1240	211	0	1468	32	42	21	0	95	3095
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

119 Brookstown Ave., Suite PH1,
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Ph: (336)744-1636

File Name : 210237_US_421_and_Bell_Street_848064_05-26-2021
Site Code : 210237
Start Date : 5/26/2021

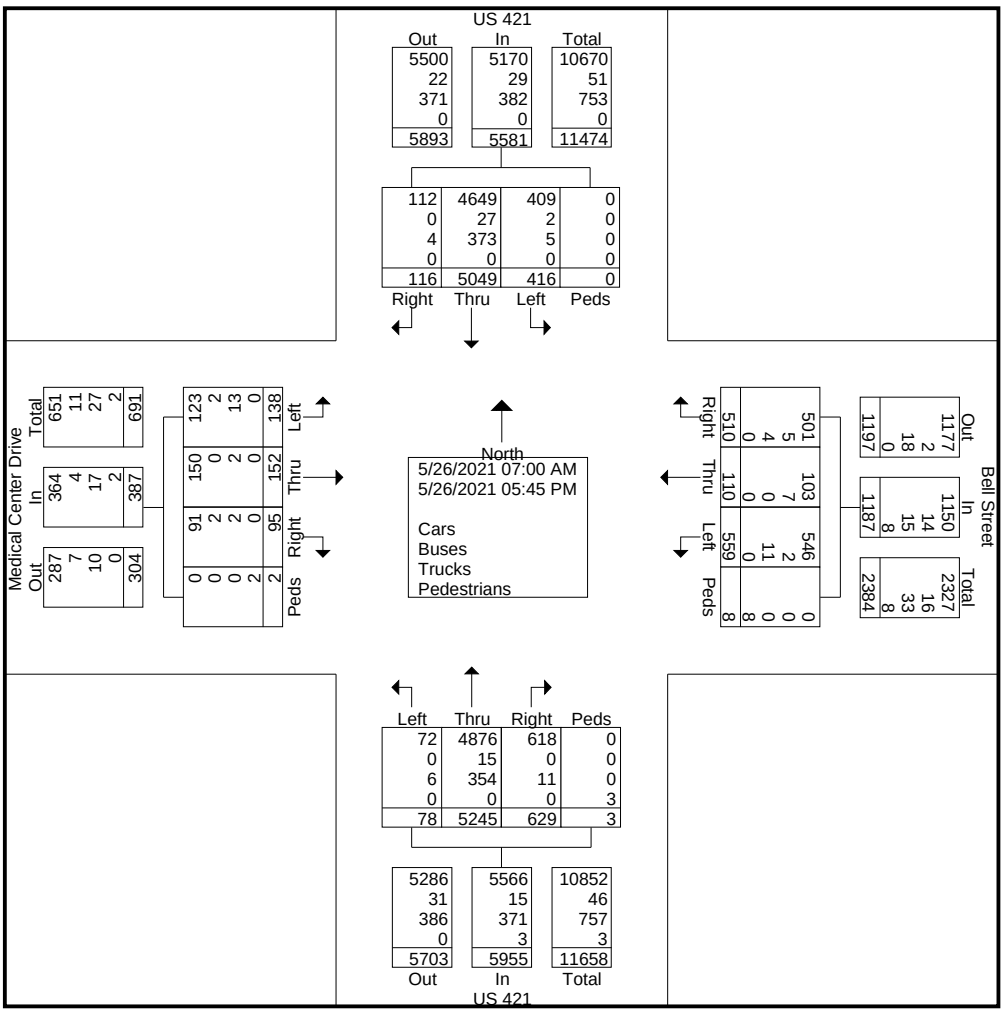
Groups Printed- Cars - Buses - Trucks - Pedestrians

	US 421 Southbound					Bell Street Westbound					US 421 Northbound					Medical Center Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	24	339	10	0	373	38	8	52	0	98	5	341	16	0	362	12	3	8	0	23	856
04:15 PM	17	319	6	0	342	52	6	37	0	95	8	332	18	1	359	7	9	5	1	22	818
04:30 PM	11	304	10	0	325	56	16	50	0	122	4	343	8	0	355	8	4	4	0	16	818
04:45 PM	23	347	12	0	382	45	5	45	0	95	3	325	9	1	338	5	8	5	0	18	833
Total	75	1309	38	0	1422	191	35	184	0	410	20	1341	51	2	1414	32	24	22	1	79	3325
05:00 PM	22	368	8	0	398	70	15	62	0	147	7	348	26	0	381	8	11	6	0	25	951
05:15 PM	16	374	8	0	398	38	15	38	1	92	6	348	32	0	386	10	10	4	0	24	900
05:30 PM	7	379	10	0	396	25	9	30	0	64	6	330	18	0	354	9	3	6	0	18	832
05:45 PM	7	333	6	0	346	32	2	26	0	60	9	312	27	0	348	10	10	6	0	26	780
Total	52	1454	32	0	1538	165	41	156	1	363	28	1338	103	0	1469	37	34	22	0	93	3463
Grand Total	416	5049	116	0	5581	559	110	510	8	1187	78	5245	629	3	5955	138	152	95	2	387	13110
Apprch %	7.5	90.5	2.1	0		47.1	9.3	43	0.7		1.3	88.1	10.6	0.1		35.7	39.3	24.5	0.5		
Total %	3.2	38.5	0.9	0	42.6	4.3	0.8	3.9	0.1	9.1	0.6	40	4.8	0	45.4	1.1	1.2	0.7	0	3	
Cars	409	4649	112	0	5170	546	103	501	0	1150	72	4876	618	0	5566	123	150	91	0	364	12250
% Cars	98.3	92.1	96.6	0	92.6	97.7	93.6	98.2	0	96.9	92.3	93	98.3	0	93.5	89.1	98.7	95.8	0	94.1	93.4
Buses	2	27	0	0	29	2	7	5	0	14	0	15	0	0	15	2	0	2	0	4	62
% Buses	0.5	0.5	0	0	0.5	0.4	6.4	1	0	1.2	0	0.3	0	0	0.3	1.4	0	2.1	0	1	0.5
Trucks	5	373	4	0	382	11	0	4	0	15	6	354	11	0	371	13	2	2	0	17	785
% Trucks	1.2	7.4	3.4	0	6.8	2	0	0.8	0	1.3	7.7	6.7	1.7	0	6.2	9.4	1.3	2.1	0	4.4	6
Pedestrians	0	0	0	0	0	0	0	0	8	8	0	0	0	3	3	0	0	0	2	2	13
% Pedestrians	0	0	0	0	0	0	0	0	100	0.7	0	0	0	100	0.1	0	0	0	100	0.5	0.1

DAVENPORT

119 Brookstown Ave., Suite PH1,
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Ph: (336)744-1636

File Name : 210237_US_421_and_Bell_Street_848064_05-26-2021
Site Code : 210237
Start Date : 5/26/2021
Page No : 3

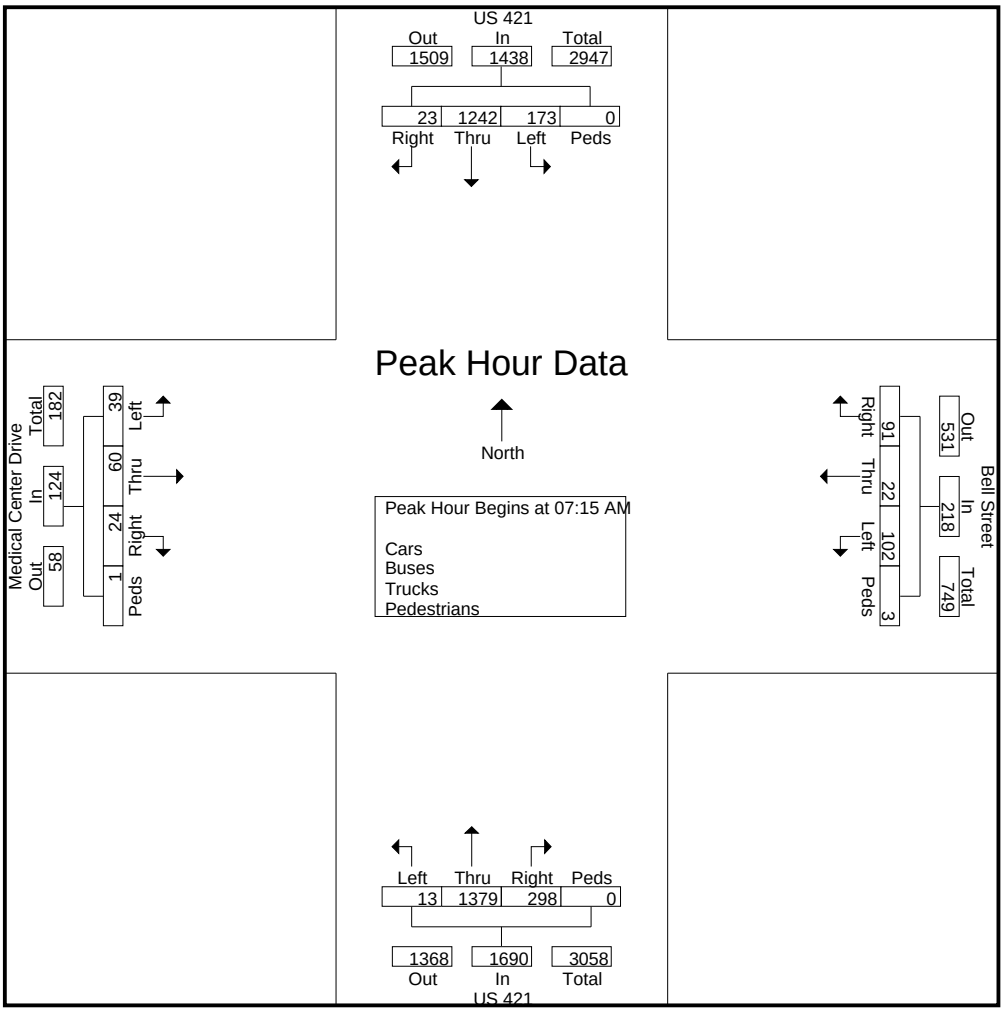


DAVENPORT

119 Brookstown Ave., Suite PH1,
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Ph: (336)744-1636

File Name : 210237_US_421_and_Bell_Street_848064_05-26-2021
Site Code : 210237
Start Date : 5/26/2021
Page No : 4

	US 421 Southbound					Bell Street Westbound					US 421 Northbound					Medical Center Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	30	302	6	0	338	23	3	**24**	**2**	52	1	**358**	66	0	425	8	12	3	0	23	838
07:30 AM	46	311	**7**	0	364	23	3	23	0	49	3	341	**87**	0	**431**	**14**	**20**	**12**	0	**46**	**890**
07:45 AM	47	290	4	0	341	**28**	**8**	22	1	**59**	**7**	346	73	0	426	7	16	6	**1**	30	856
08:00 AM	**50**	**339**	6	0	**395**	28	8	22	0	58	2	334	72	0	408	10	12	3	0	25	886
Total Volume	173	1242	23	0	1438	102	22	91	3	218	13	1379	298	0	1690	39	60	24	1	124	3470
% App. Total	12	86.4	1.6	0		46.8	10.1	41.7	1.4		0.8	81.6	17.6	0		31.5	48.4	19.4	0.8		
PHF	.865	.916	.821	.000	.910	.911	.688	.948	.375	.924	.464	.963	.856	.000	.980	.696	.750	.500	.250	.674	.975

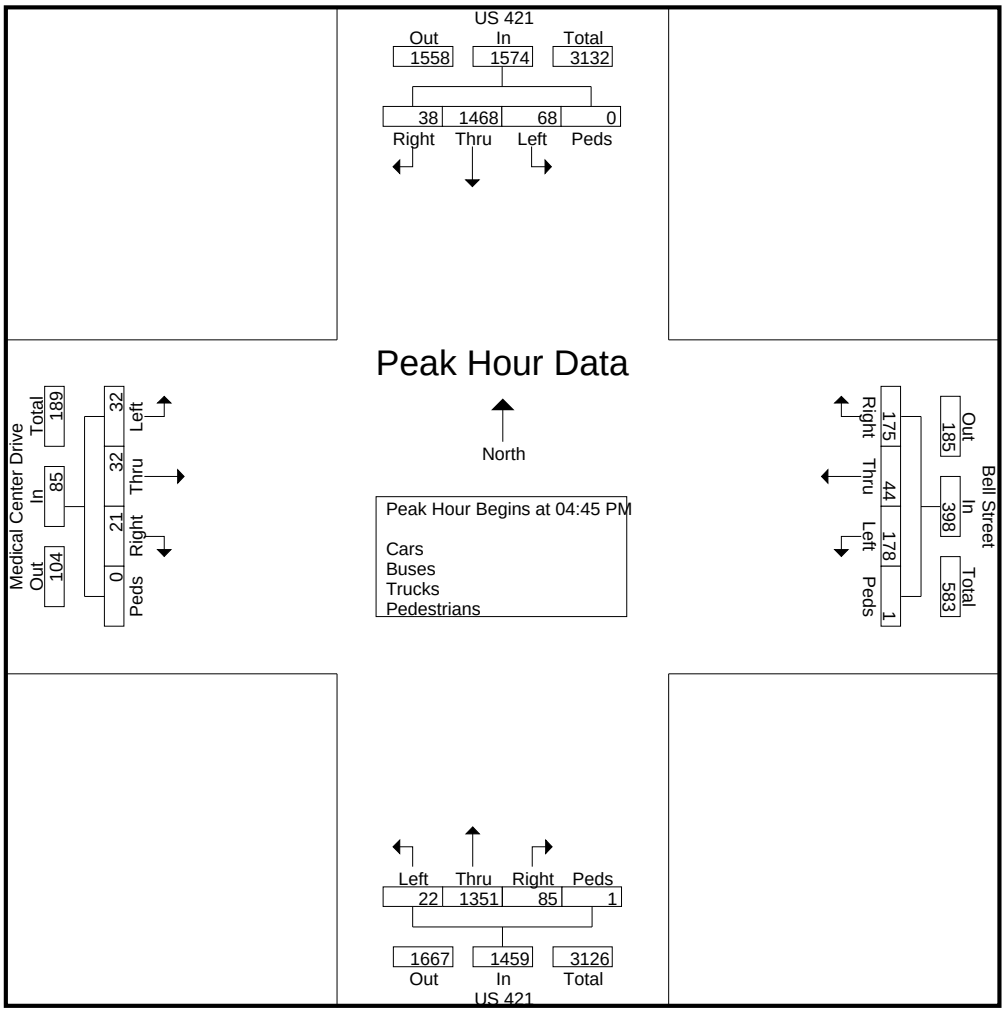


DAVENPORT

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File Name : 210237_US_421_and_Bell_Street_848064_05-26-2021
Site Code : 210237
Start Date : 5/26/2021
Page No : 5

	US 421 Southbound					Bell Street Westbound					US 421 Northbound					Medical Center Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**23**	347	**12**	0	382	45	5	45	0	95	3	325	9	**1**	338	5	8	5	0	18	833
05:00 PM	22	368	8	0	**398**	**70**	**15**	**62**	0	**147**	**7**	**348**	26	0	381	8	**11**	**6**	0	**25**	**951**
05:15 PM	16	374	8	0	398	38	15	38	**1**	92	6	348	**32**	0	**386**	**10**	10	4	0	24	900
05:30 PM	7	**379**	10	0	396	25	9	30	0	64	6	330	18	0	354	9	3	6	0	18	832
Total Volume	68	1468	38	0	1574	178	44	175	1	398	22	1351	85	1	1459	32	32	21	0	85	3516
% App. Total	4.3	93.3	2.4	0		44.7	11.1	44	0.3		1.5	92.6	5.8	0.1		37.6	37.6	24.7	0		
PHF	.739	.968	.792	.000	.989	.636	.733	.706	.250	.677	.786	.971	.664	.250	.945	.800	.727	.875	.000	.850	.924



DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Adams Street Southbound				Southern Blvd. Westbound				Adams Street Northbound				Southern Blvd. Eastbound				
Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Int. Total
07:00 AM	1	2	0	0	5	9	0	0	0	3	7	0	1	9	0	0	37
07:15 AM	0	2	0	0	3	6	0	0	0	4	8	0	0	6	0	0	29
07:30 AM	1	0	0	0	2	4	0	0	0	1	7	0	1	8	0	0	24
07:45 AM	1	2	1	0	2	4	0	0	0	1	3	0	0	7	0	0	21
Total	3	6	1	0	12	23	0	0	0	9	25	0	2	30	0	0	111
08:00 AM	1	1	1	0	3	3	0	0	1	2	2	0	1	13	1	0	29
08:15 AM	3	1	0	0	1	6	0	0	1	1	3	0	2	10	1	0	29
08:30 AM	0	0	0	0	2	3	1	0	1	0	4	0	0	8	3	0	22
08:45 AM	2	0	0	0	0	9	0	0	1	0	3	0	0	9	0	0	24
Total	6	2	1	0	6	21	1	0	4	3	12	0	3	40	5	0	104
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

119 Brookstown Ave., Suite PH1,
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Ph: (336)744-1636

File Name : Adams_Street_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021

Groups Printed- Cars - Buses - Trucks

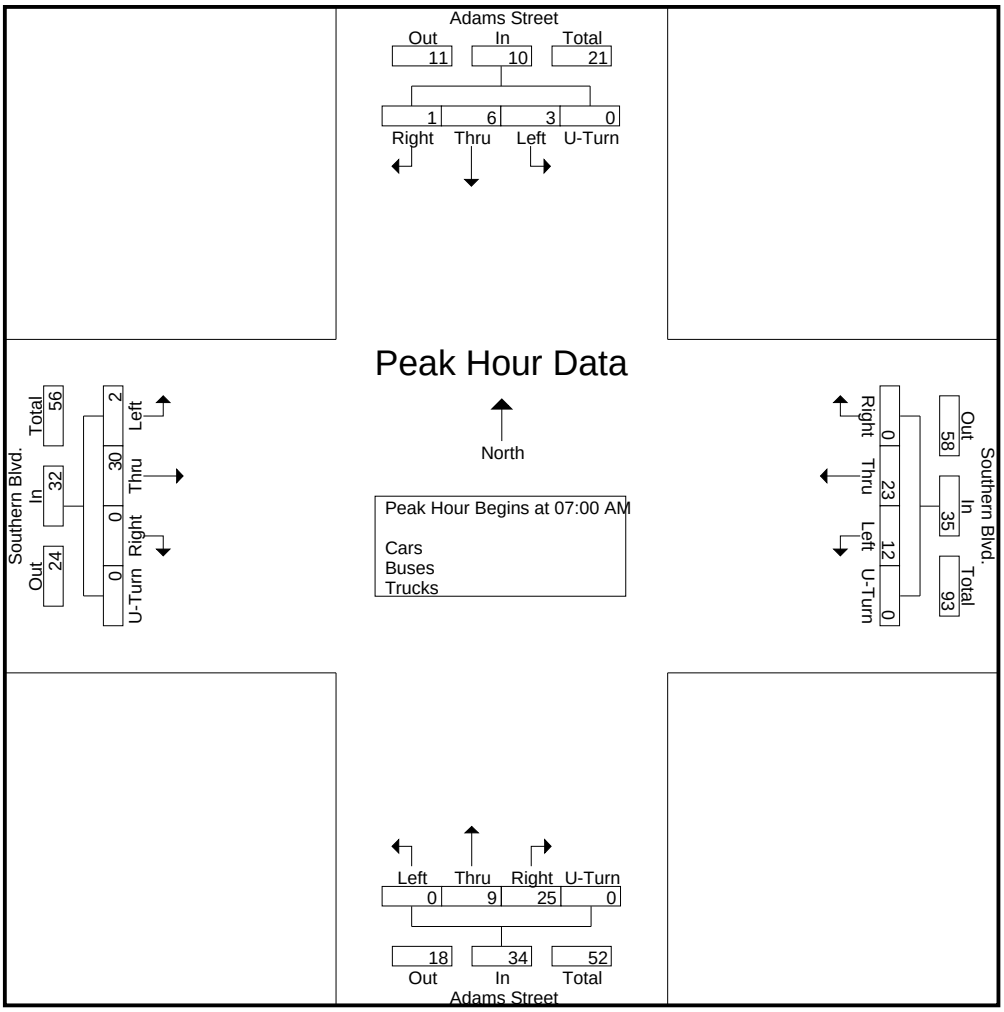
	Adams Street Southbound				Southern Blvd. Westbound				Adams Street Northbound				Southern Blvd. Eastbound				
Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Int. Total
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	1	1	1	0	3	11	3	0	0	2	7	0	0	5	0	0	34
04:15 PM	0	1	0	0	4	8	1	0	0	4	6	0	1	8	0	0	33
04:30 PM	1	1	0	0	9	11	2	0	0	1	7	0	0	12	1	0	45
04:45 PM	0	0	1	0	6	11	4	0	3	5	8	0	1	11	0	0	50
Total	2	3	2	0	22	41	10	0	3	12	28	0	2	36	1	0	162
05:00 PM	0	4	1	0	3	8	2	0	3	6	5	0	1	9	0	0	42
05:15 PM	2	1	1	0	3	11	1	0	1	3	7	0	0	10	1	0	41
05:30 PM	1	1	0	0	6	12	0	0	1	2	8	0	1	8	0	0	40
05:45 PM	0	1	1	0	4	7	0	0	2	2	6	0	0	6	0	0	29
Total	3	7	3	0	16	38	3	0	7	13	26	0	2	33	1	0	152
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	14	18	7	0	56	123	14	0	14	37	91	0	9	139	7	0	529
Apprch %	35.9	46.2	17.9	0	29	63.7	7.3	0	9.9	26.1	64.1	0	5.8	89.7	4.5	0	
Total %	2.6	3.4	1.3	0	10.6	23.3	2.6	0	2.6	7	17.2	0	1.7	26.3	1.3	0	
Cars	14	18	7	0	56	121	14	0	13	37	88	0	9	133	6	0	516
% Cars	100	100	100	0	100	98.4	100	0	92.9	100	96.7	0	100	95.7	85.7	0	97.5
Buses	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
% Buses	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0.4
Trucks	0	0	0	0	0	2	0	0	1	0	1	0	0	6	1	0	11
% Trucks	0	0	0	0	0	1.6	0	0	7.1	0	1.1	0	0	4.3	14.3	0	2.1

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 3

	Adams Street Southbound					Southern Blvd. Westbound					Adams Street Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	**1**	**2**	0	0	3	**5**	**9**	0	0	**14**	0	3	7	0	10	**1**	**9**	0	0	**10**	**37**
07:15 AM	0	2	0	0	2	3	6	0	0	9	0	**4**	**8**	0	**12**	0	6	0	0	6	29
07:30 AM	1	0	0	0	1	2	4	0	0	6	0	1	7	0	8	1	8	0	0	9	24
07:45 AM	1	2	**1**	0	**4**	2	4	0	0	6	0	1	3	0	4	0	7	0	0	7	21
Total Volume	3	6	1	0	10	12	23	0	0	35	0	9	25	0	34	2	30	0	0	32	111
% App. Total	30	60	10	0		34.3	65.7	0	0		0	26.5	73.5	0		6.2	93.8	0	0		
PHF	.750	.750	.250	.000	.625	.600	.639	.000	.000	.625	.000	.563	.781	.000	.708	.500	.833	.000	.000	.800	.750

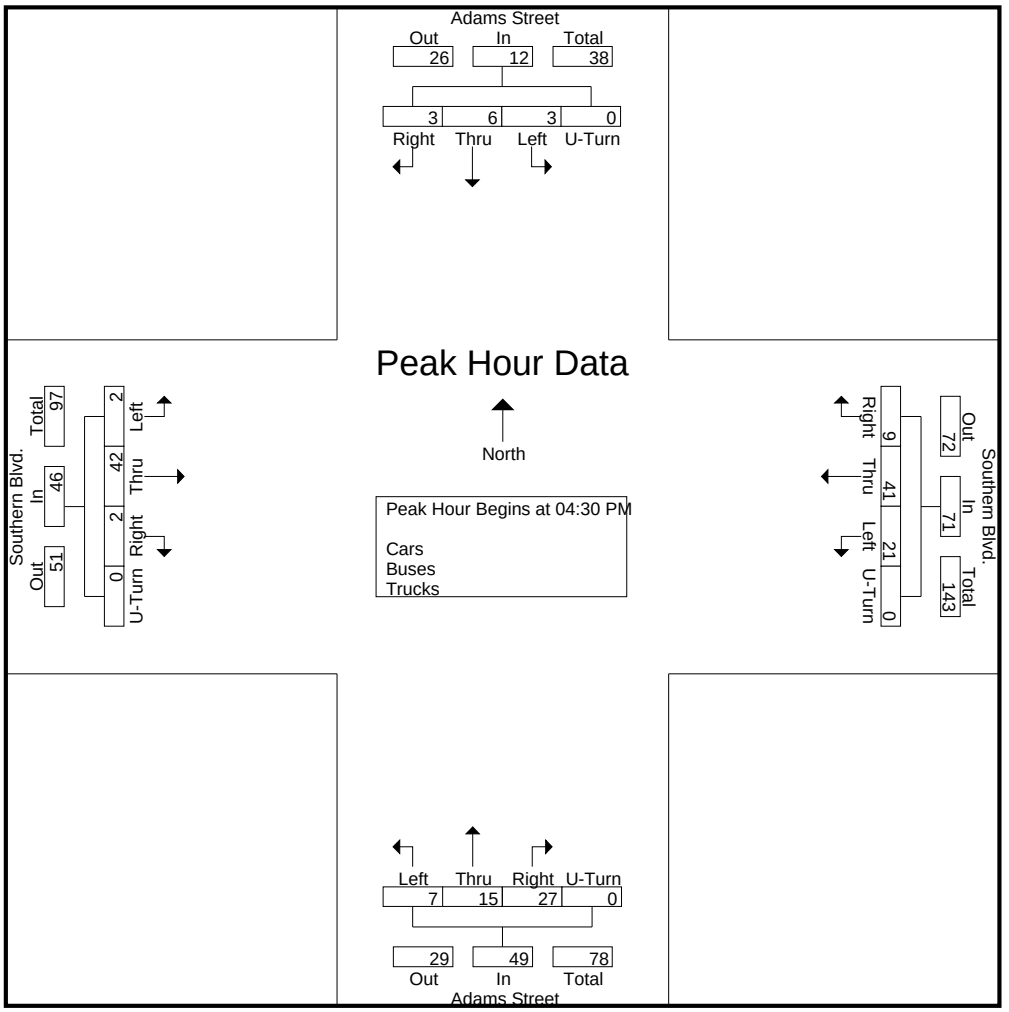


DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Southern_Blvd
Site Code : 210237
Start Date : 5/25/2021
Page No : 4

	Adams Street Southbound					Southern Blvd. Westbound					Adams Street Northbound					Southern Blvd. Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	1	0	0	2	**9**	**11**	2	0	**22**	0	1	7	0	8	0	**12**	**1**	0	**13**	45
04:45 PM	0	0	**1**	0	1	6	11	**4**	0	21	**3**	5	**8**	0	**16**	**1**	11	0	0	12	**50**
05:00 PM	0	**4**	1	0	**5**	3	8	2	0	13	3	**6**	5	0	14	1	9	0	0	10	42
05:15 PM	**2**	1	1	0	4	3	11	1	0	15	1	3	7	0	11	0	10	1	0	11	41
Total Volume	3	6	3	0	12	21	41	9	0	71	7	15	27	0	49	2	42	2	0	46	178
% App. Total	25	50	25	0		29.6	57.7	12.7	0		14.3	30.6	55.1	0		4.3	91.3	4.3	0		
PHF	.375	.375	.750	.000	.600	.583	.932	.563	.000	.807	.583	.625	.844	.000	.766	.500	.875	.500	.000	.885	.890



DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_Adams_Street_and_Maryland_Avenue
Site Code : 210237
Start Date : 5/25/2021

Groups Printed- Cars - Buses - Trucks

	Adams Street Southbound					Maryland Avenue Westbound					Adams Street Northbound					Maryland Avenue Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
07:15 AM	0	0	0	0	0	0	0	0	0	0	3	4	0	0	7	0	0	3	0	3	10
07:30 AM	0	4	0	0	4	0	0	0	0	0	2	2	0	0	4	0	0	2	0	2	10
07:45 AM	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	11
Total	0	15	0	0	15	0	0	0	0	0	5	18	0	0	23	0	0	5	0	5	43
08:00 AM	0	5	0	0	5	1	0	0	0	1	1	10	0	0	11	0	0	6	0	6	23
08:15 AM	0	9	0	0	9	1	0	0	0	1	2	6	0	0	8	0	0	1	0	1	19
08:30 AM	0	8	0	0	8	0	0	1	0	1	3	4	1	0	8	2	0	0	0	2	19
08:45 AM	0	5	0	0	5	0	0	0	0	0	1	4	0	0	5	0	0	1	0	1	11
Total	0	27	0	0	27	2	0	1	0	3	7	24	1	0	32	2	0	8	0	10	72
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_Adams_Street_and_Maryland_Avenue
Site Code : 210237
Start Date : 5/25/2021
Page No : 2

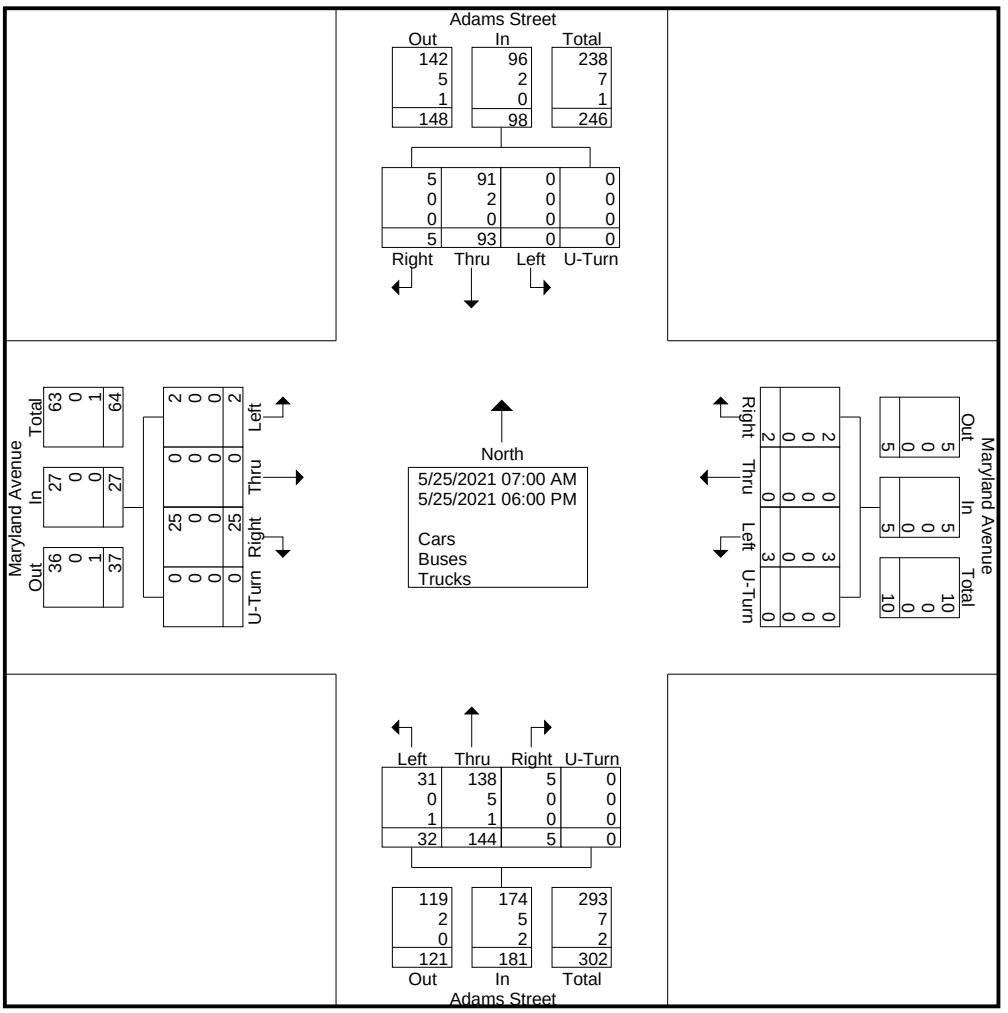
Groups Printed- Cars - Buses - Trucks

	Adams Street Southbound					Maryland Avenue Westbound					Adams Street Northbound					Maryland Avenue Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	10	0	0	10	0	0	0	0	0	1	13	0	0	14	0	0	1	0	1	25
04:15 PM	0	7	0	0	7	0	0	1	0	1	3	8	1	0	12	0	0	1	0	1	21
04:30 PM	0	6	1	0	7	1	0	0	0	1	0	12	1	0	13	0	0	3	0	3	24
04:45 PM	0	3	0	0	3	0	0	0	0	0	1	10	0	0	11	0	0	2	0	2	16
Total	0	26	1	0	27	1	0	1	0	2	5	43	2	0	50	0	0	7	0	7	86
05:00 PM	0	6	0	0	6	0	0	0	0	0	6	11	0	0	17	0	0	1	0	1	24
05:15 PM	0	3	1	0	4	0	0	0	0	0	4	12	1	0	17	0	0	3	0	3	24
05:30 PM	0	12	1	0	13	0	0	0	0	0	3	19	0	0	22	0	0	1	0	1	36
05:45 PM	0	4	2	0	6	0	0	0	0	0	2	17	1	0	20	0	0	0	0	0	26
Total	0	25	4	0	29	0	0	0	0	0	15	59	2	0	76	0	0	5	0	5	110
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	93	5	0	98	3	0	2	0	5	32	144	5	0	181	2	0	25	0	27	311
Apprch %	0	94.9	5.1	0		60	0	40	0		17.7	79.6	2.8	0		7.4	0	92.6	0		
Total %	0	29.9	1.6	0	31.5	1	0	0.6	0	1.6	10.3	46.3	1.6	0	58.2	0.6	0	8	0	8.7	
Cars	0	91	5	0	96	3	0	2	0	5	31	138	5	0	174	2	0	25	0	27	302
% Cars	0	97.8	100	0	98	100	0	100	0	100	96.9	95.8	100	0	96.1	100	0	100	0	100	97.1
Buses	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
% Buses	0	2.2	0	0	2	0	0	0	0	0	0	3.5	0	0	2.8	0	0	0	0	0	2.3
Trucks	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
% Trucks	0	0	0	0	0	0	0	0	0	0	3.1	0.7	0	0	1.1	0	0	0	0	0	0.6

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_Adams_Street_and_Maryland_Avenue
Site Code : 210237
Start Date : 5/25/2021
Page No : 3

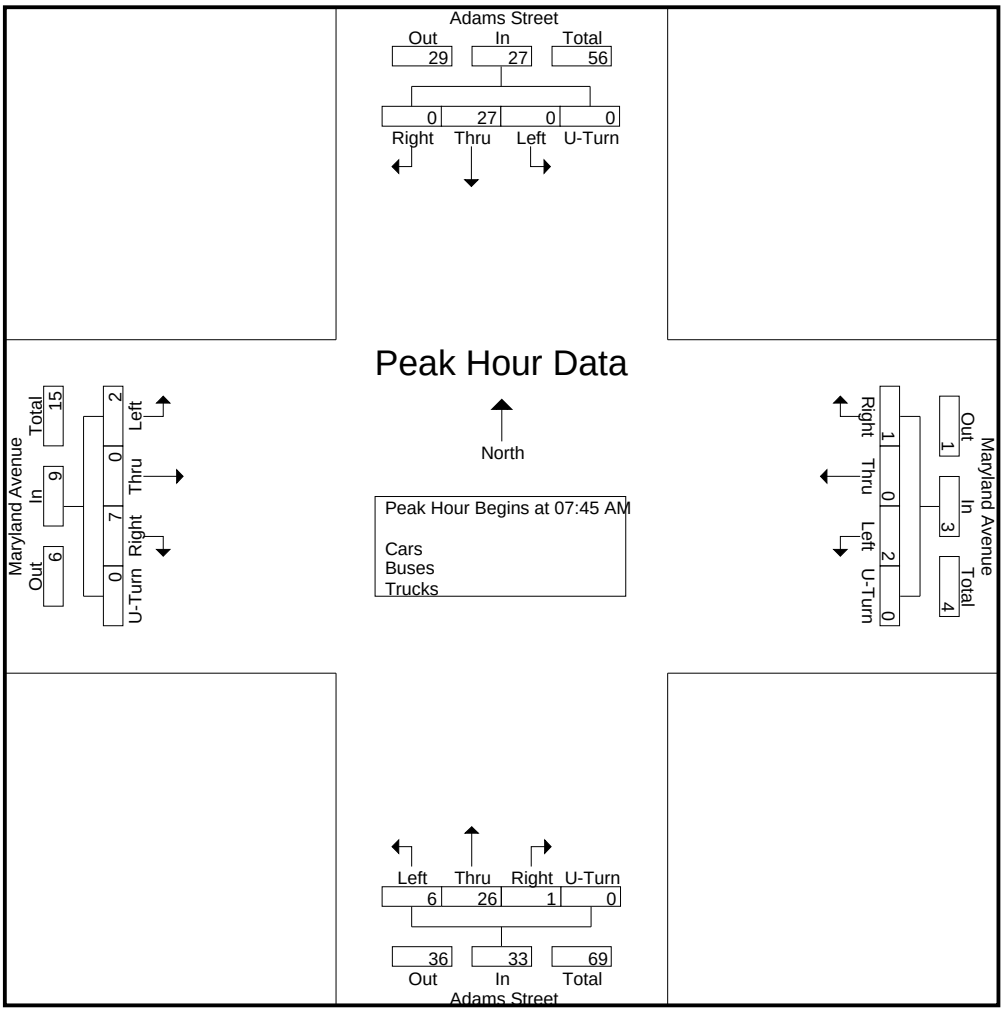


DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_Adams_Street_and_Maryland_Avenue
Site Code : 210237
Start Date : 5/25/2021
Page No : 4

	Adams Street Southbound					Maryland Avenue Westbound					Adams Street Northbound					Maryland Avenue Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	11
08:00 AM	0	5	0	0	5	**1**	0	0	0	**1**	1	**10**	0	0	**11**	0	0	**6**	0	**6**	**23**
08:15 AM	0	**9**	0	0	**9**	1	0	0	0	1	2	6	0	0	8	0	0	1	0	1	19
08:30 AM	0	8	0	0	8	0	0	**1**	0	1	**3**	4	**1**	0	8	**2**	0	0	0	2	19
Total Volume	0	27	0	0	27	2	0	1	0	3	6	26	1	0	33	2	0	7	0	9	72
% App. Total	0	100	0	0		66.7	0	33.3	0		18.2	78.8	3	0		22.2	0	77.8	0		
PHF	.000	.750	.000	.000	.750	.500	.000	.250	.000	.750	.500	.650	.250	.000	.750	.250	.000	.292	.000	.375	.783

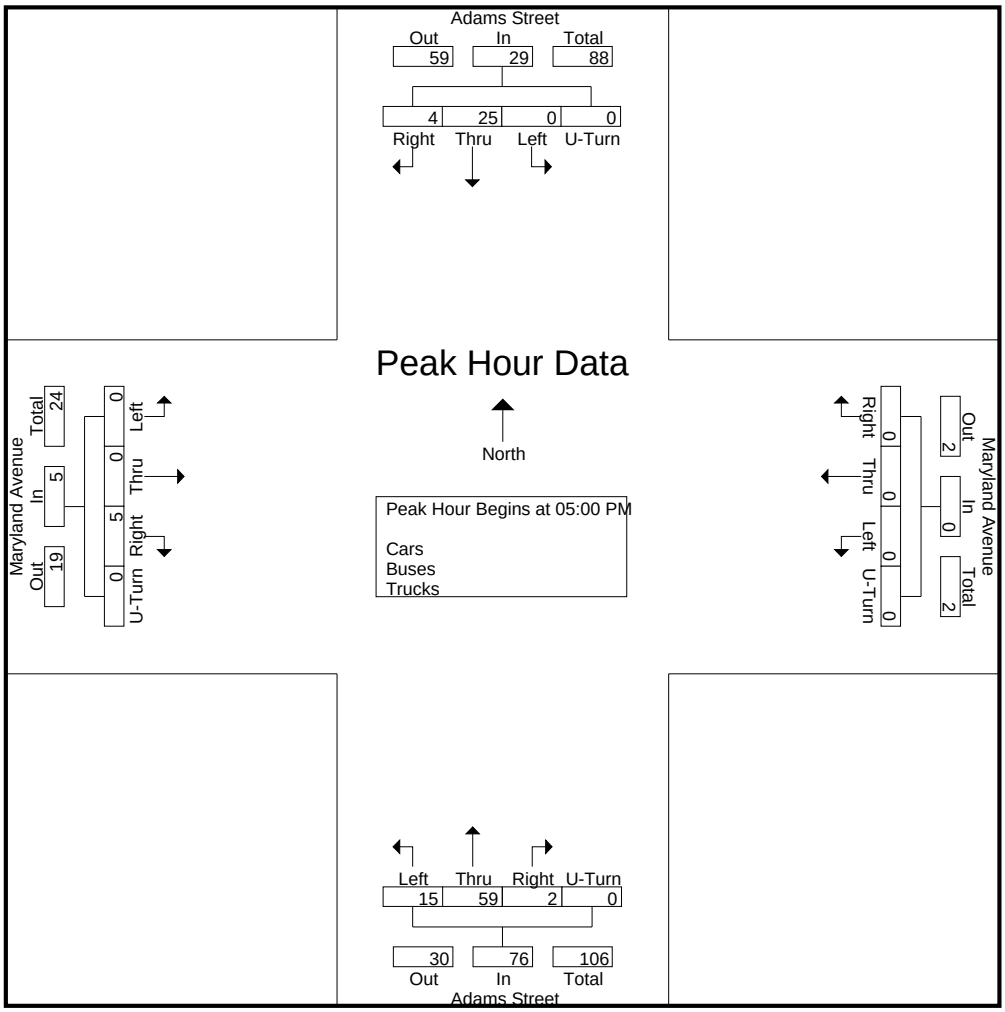


DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : 210237_Adams_Street_and_Maryland_Avenue
Site Code : 210237
Start Date : 5/25/2021
Page No : 5

	Adams Street Southbound					Maryland Avenue Westbound					Adams Street Northbound					Maryland Avenue Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	6	0	0	6	0	0	0	0	0	**6**	11	0	0	17	0	0	1	0	1	24
05:15 PM	0	3	1	0	4	0	0	0	0	0	4	12	**1**	0	17	0	0	**3**	0	**3**	24
05:30 PM	0	**12**	1	0	**13**	0	0	0	0	0	3	**19**	0	0	**22**	0	0	1	0	1	**36**
05:45 PM	0	4	**2**	0	6	0	0	0	0	0	2	17	1	0	20	0	0	0	0	0	26
Total Volume	0	25	4	0	29	0	0	0	0	0	15	59	2	0	76	0	0	5	0	5	110
% App. Total	0	86.2	13.8	0		0	0	0	0		19.7	77.6	2.6	0		0	0	100	0		
PHF	.000	.521	.500	.000	.558	.000	.000	.000	.000	.000	.625	.776	.500	.000	.864	.000	.000	.417	.000	.417	.764



DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Bell_Street
Site Code : 210237
Start Date : 5/25/2021
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Adams Street Southbound				Bell Street Westbound				Adams Street Northbound				BellStreet Eastbound				
Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Int. Total
07:00 AM	5	2	0	0	3	0	3	0	0	4	5	0	0	0	0	0	22
07:15 AM	6	0	0	1	1	0	7	0	0	2	6	0	0	0	0	0	23
07:30 AM	0	5	0	0	4	0	3	0	0	3	8	0	0	0	0	0	23
07:45 AM	6	4	0	0	11	0	4	0	0	0	12	0	0	0	0	0	37
Total	17	11	0	1	19	0	17	0	0	9	31	0	0	0	0	0	105
08:00 AM	7	5	0	0	14	0	4	0	0	6	16	0	0	0	0	0	52
08:15 AM	1	7	0	1	2	0	4	0	0	5	8	0	0	0	0	0	28
08:30 AM	6	4	0	0	7	0	5	0	0	2	11	0	0	0	0	0	35
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	14	16	0	1	23	0	13	0	0	13	35	0	0	0	0	0	115
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Bell_Street
Site Code : 210237
Start Date : 5/25/2021
Page No : 2

Groups Printed- Cars - Buses - Trucks

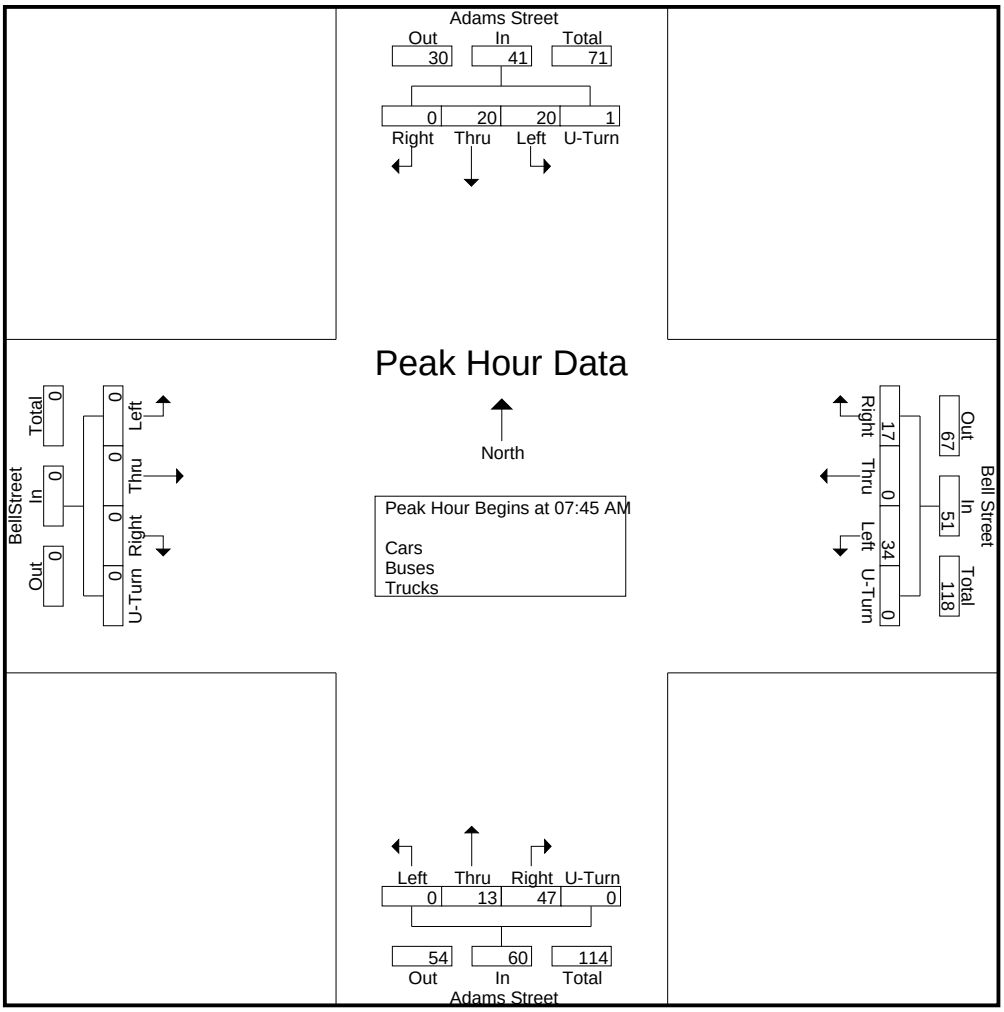
	Adams Street Southbound				Bell Street Westbound				Adams Street Northbound				BellStreet Eastbound				
Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Int. Total
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	5	8	0	0	7	0	11	0	0	6	5	0	0	0	0	0	42
04:15 PM	7	1	0	0	7	0	3	0	0	6	7	0	0	0	0	0	31
04:30 PM	3	6	0	0	4	0	9	0	1	8	5	0	0	0	0	0	36
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	15	0	0	18	0	23	0	1	20	17	0	0	0	0	0	109
05:00 PM	6	3	0	0	7	0	12	1	0	11	10	0	0	0	0	0	50
05:15 PM	2	11	0	0	9	0	6	0	0	7	12	0	0	0	0	0	47
05:30 PM	2	4	0	0	8	0	15	0	0	9	10	0	0	0	0	0	48
05:45 PM	5	5	0	0	11	0	11	0	0	13	9	0	0	0	0	0	54
Total	15	23	0	0	35	0	44	1	0	40	41	0	0	0	0	0	199
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	61	65	0	2	95	0	97	1	1	82	124	0	0	0	0	0	528
Apprch %	47.7	50.8	0	1.6	49.2	0	50.3	0.5	0.5	39.6	59.9	0	0	0	0	0	
Total %	11.6	12.3	0	0.4	18	0	18.4	0.2	0.2	15.5	23.5	0	0	0	0	0	
Cars	59	63	0	2	91	0	94	1	1	78	121	0	0	0	0	0	510
% Cars	96.7	96.9	0	100	95.8	0	96.9	100	100	95.1	97.6	0	0	0	0	0	96.6
Buses	1	1	0	0	2	0	2	0	0	3	0	0	0	0	0	0	9
% Buses	1.6	1.5	0	0	2.1	0	2.1	0	0	3.7	0	0	0	0	0	0	1.7
Trucks	1	1	0	0	2	0	1	0	0	1	3	0	0	0	0	0	9
% Trucks	1.6	1.5	0	0	2.1	0	1	0	0	1.2	2.4	0	0	0	0	0	1.7

DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Bell_Street
Site Code : 210237
Start Date : 5/25/2021
Page No : 3

	Adams Street Southbound					Bell Street Westbound					Adams Street Northbound					BellStreet Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	6	4	0	0	10	11	0	4	0	15	0	0	12	0	12	0	0	0	0	0	37
08:00 AM	**7**	5	0	0	**12**	**14**	0	4	0	**18**	0	**6**	**16**	0	**22**	0	0	0	0	0	**52**
08:15 AM	1	**7**	0	**1**	9	2	0	4	0	6	0	5	8	0	13	0	0	0	0	0	28
08:30 AM	6	4	0	0	10	7	0	**5**	0	12	0	2	11	0	13	0	0	0	0	0	35
Total Volume	20	20	0	1	41	34	0	17	0	51	0	13	47	0	60	0	0	0	0	0	152
% App. Total	48.8	48.8	0	2.4		66.7	0	33.3	0		0	21.7	78.3	0		0	0	0	0		
PHF	.714	.714	.000	.250	.854	.607	.000	.850	.000	.708	.000	.542	.734	.000	.682	.000	.000	.000	.000	.000	.731

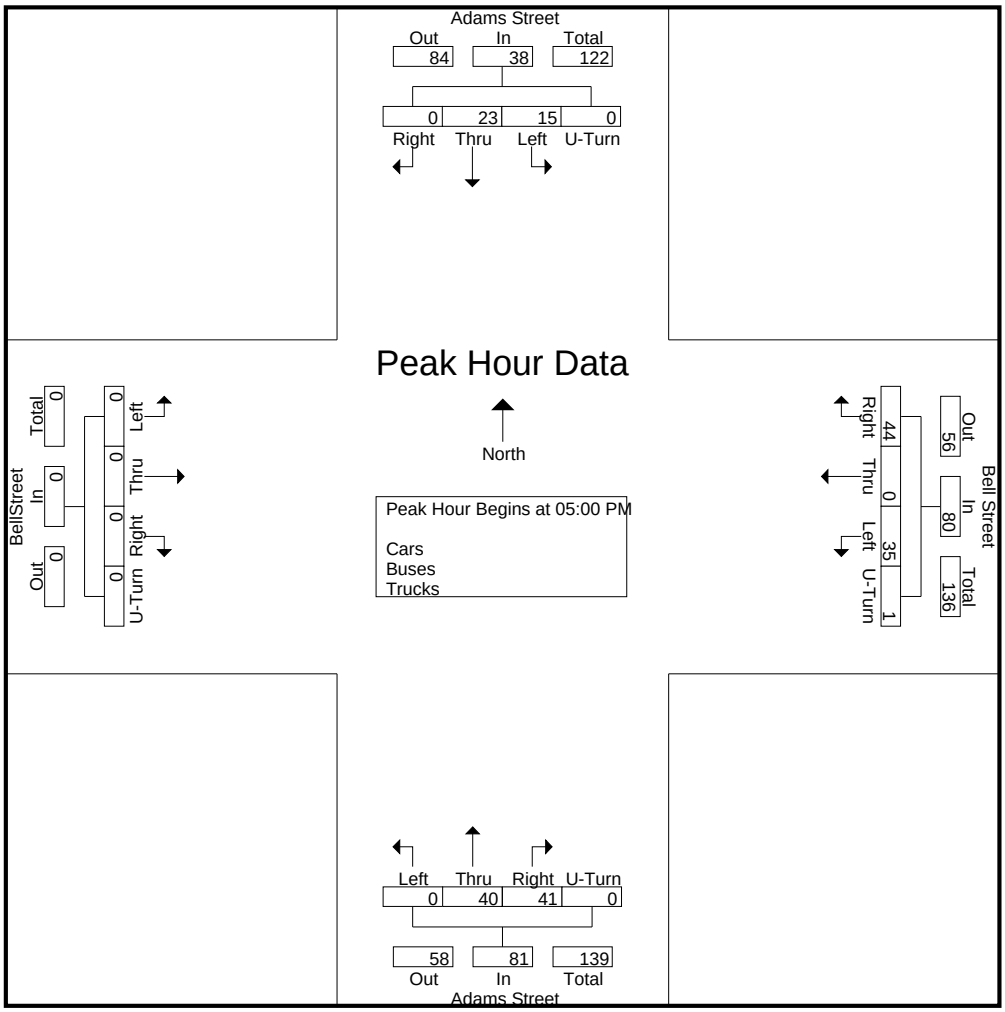


DAVENPORT

119 Brookstown Ave., Suite PH1,
Winston Salem NC, 27101
Ph: (336)744-1636

File Name : Adams_Street_and_Bell_Street
Site Code : 210237
Start Date : 5/25/2021
Page No : 4

	Adams Street Southbound					Bell Street Westbound					Adams Street Northbound					BellStreet Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**6**	3	0	0	9	7	0	12	**1**	20	0	11	10	0	21	0	0	0	0	0	50
05:15 PM	2	**11**	0	0	**13**	9	0	6	0	15	0	7	**12**	0	19	0	0	0	0	0	47
05:30 PM	2	4	0	0	6	8	0	**15**	0	**23**	0	9	10	0	19	0	0	0	0	0	48
05:45 PM	5	5	0	0	10	**11**	0	11	0	22	0	**13**	9	0	**22**	0	0	0	0	0	**54**
Total Volume	15	23	0	0	38	35	0	44	1	80	0	40	41	0	81	0	0	0	0	0	199
% App. Total	39.5	60.5	0	0		43.8	0	55	1.2		0	49.4	50.6	0		0	0	0	0		
PHF	.625	.523	.000	.000	.731	.795	.000	.733	.250	.870	.000	.769	.854	.000	.920	.000	.000	.000	.000	.000	.921

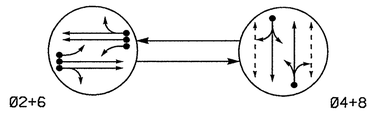


Supporting Documentation

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PROJECT REFERENCE NO.	SHEET NO.
U-5017A	9

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	PHASE FLASH
21, 22	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y
81, 82	R	G	R
P41, P42	DW	W	DRK
P81, P82	DW	W	DRK

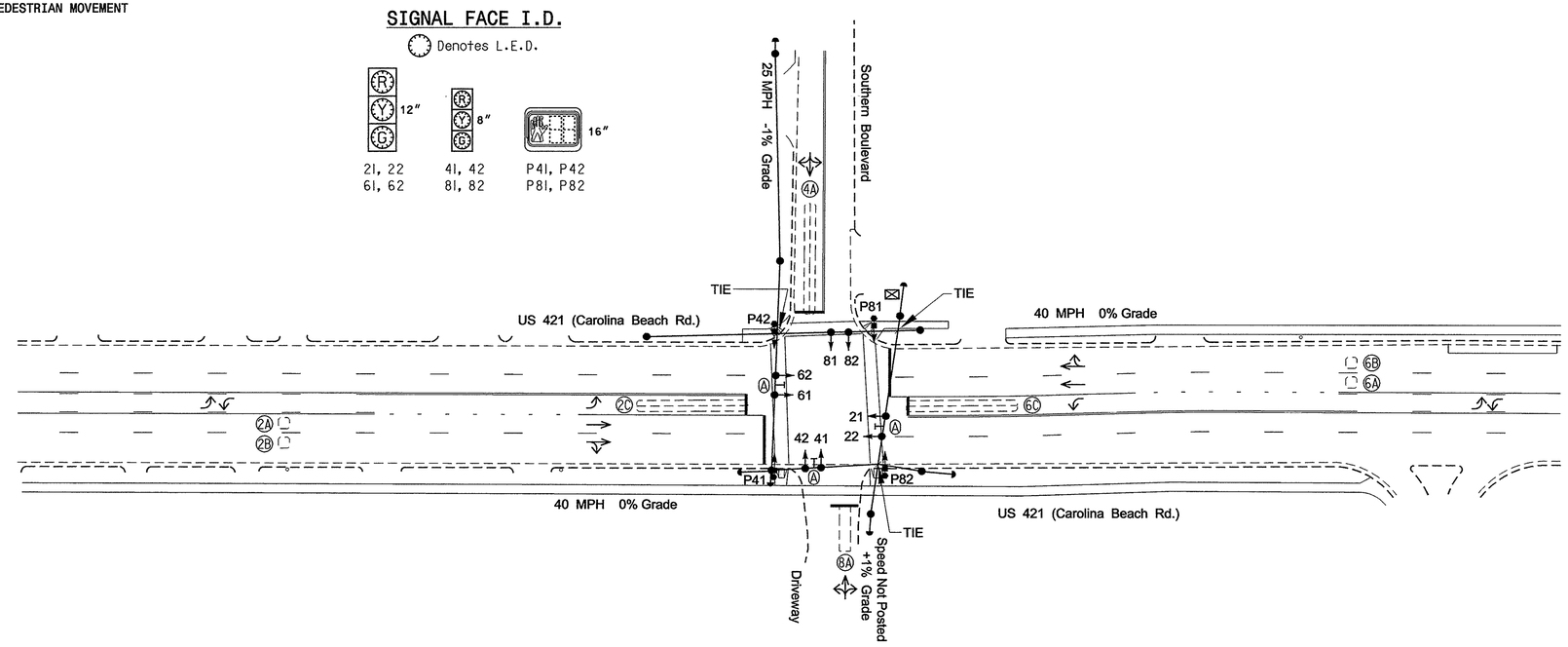
2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	255	Existing	-	2	Y	Y	-	——	——	-	Y
2B	6X6	255	Existing	-	2	Y	Y	-	——	——	-	Y
2C	6X60	0	2-4-2	-	2	Y	Y	Y	——	3	-	Y
4A	6X60	0	2-4-2	-	4	Y	Y	-	——	10	-	Y
6A	6X6	250	Existing	-	6	Y	Y	-	——	——	-	Y
6B	6X6	250	Existing	-	6	Y	Y	-	——	——	-	Y
6C	6X60	0	2-4-2	-	6	Y	Y	Y	——	3	-	Y
8A	6X25	+1	Existing	-	8	Y	Y	-	——	10	-	Y

SIGNAL FACE I.D.

Denotes L.E.D.

21, 22 61, 62 — 41, 42 81, 82 — P41, P42 P81, P82



2070L TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	10	7	10	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	45	20	45	20
Yellow Clearance	4.2	3.0	4.2	3.0
Red Clearance	1.1	2.9	1.1	3.1
Walk 1 *	-	4	-	4
Don't Walk 1	-	15	-	16
Seconds Per Actuation *	1.5	-	1.5	-
Max Variable Initial *	24	-	24	-
Time Before Reduction *	10	-	10	-
Time To Reduce *	30	-	30	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

2 Phase
Fully Actuated
(Wilmington Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Reposition existing signal heads numbered 21 ,22, 61, and 62.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Signal system data:
    Controller Asset #: 0023.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Signal Pedestal	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	Wheelchair Ramp	
	Street Sign	

Signal Upgrade

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
North Carolina Department of Transportation
Signals and Geometrics Section
750 N. Greenfield Pkwy, Garner, NC 27529

SCALE 0 40 1"=40'

US 421 (Carolina Beach Road)
at
Southern Boulevard

Division 3 New Hanover County Wilmington

PLAN DATE: August 2007 REVIEWED BY:
PREPARED BY: Sterling REVIEWED BY:

REVISIONS	INIT.	DATE

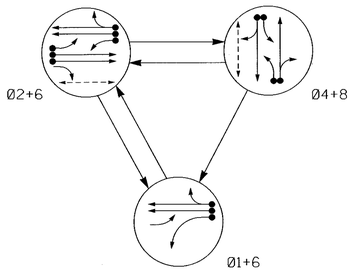
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA
SIGNATURE 5/13/08 DATE
SIG. INVENTORY NO. 03-0023

13-MAY-2008 17:26
S:\TIS\Signals\Workgroups\alexander\u-5017 (wilmington city system\MO3-0023\MO3002 3_sig_dsn_20080205.dgn
rztembo

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PROJECT REFERENCE NO.	SHEET NO.
36249.3167	Sig. 1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

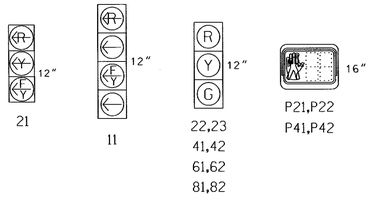
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø4+8	FLASH
11	~~G~~	~~Y~~	~~R~~	~~Y~~
21	~~G~~	~~Y~~	~~R~~	~~Y~~
22,23	R	G	R	Y
41,42	R	R	G	R
61,62	G	G	R	Y
81,82	R	R	G	R
P21,P22	DW	W	DW	DRK
P41,P42	DW	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



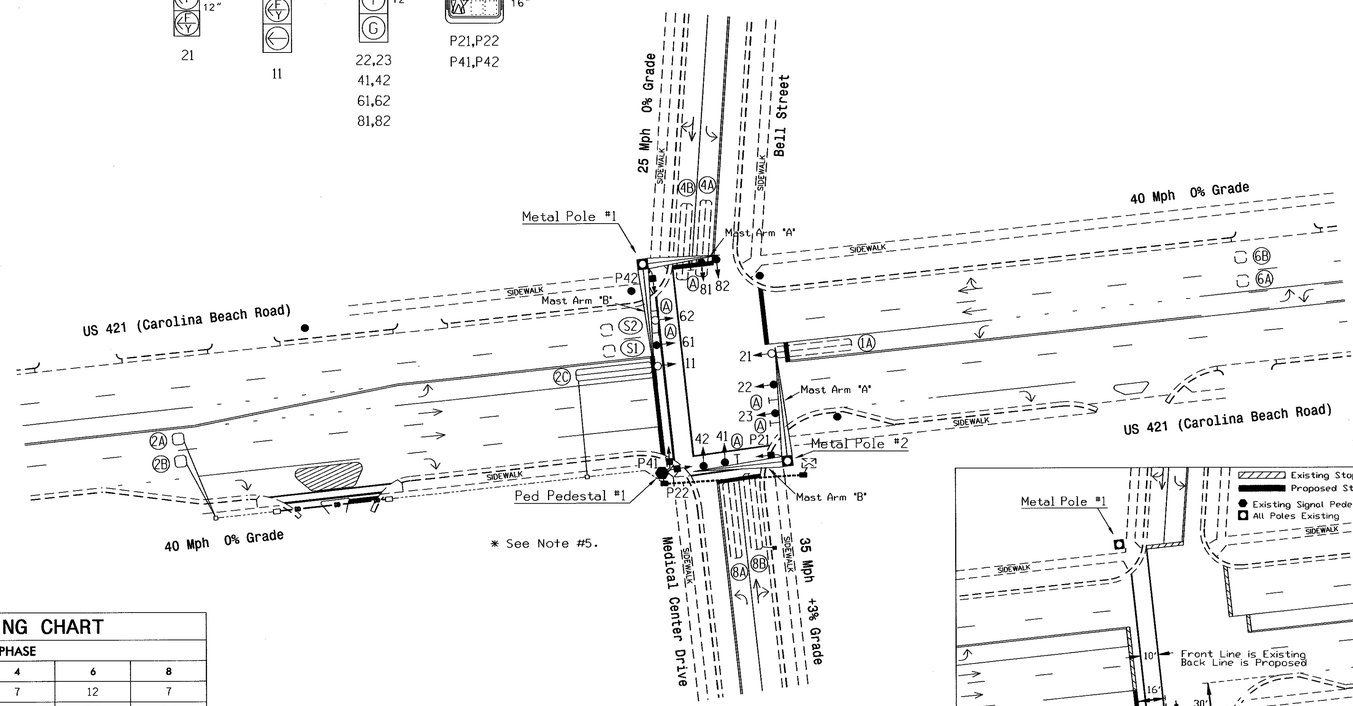
OASIS 2070L LOOP & DETECTOR INSTALLATION

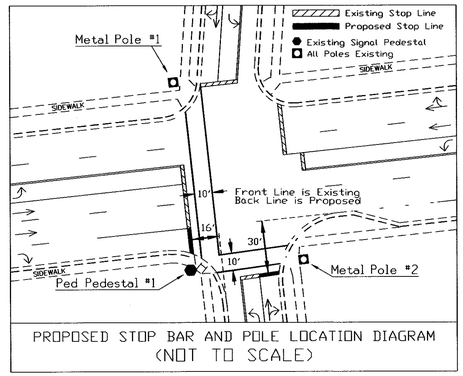
INDUCTIVE LOOPS						DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6x40	+5	2-4-2	-	1	Y	Y	-	-	15	-	-
					6	Y	Y	Y	-	3	-	-
2A	6x6	250	4	Y	2	Y	Y	-	-	-	-	-
2B	6x6	250	4	Y	2	Y	Y	-	-	-	-	-
2C	6x40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	-
4A	6x40	+6	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	6x40	+6	2-4-2	-	4	Y	Y	-	-	10	-	-
6A	6x6	250	4	-	6	Y	Y	-	-	-	-	-
6B	6x6	250	4	-	6	Y	Y	-	-	-	-	-
8A	6x40	0	2-4-2	-	8	Y	Y	-	-	3	-	-
8B	6x40	+4	2-4-2	-	8	Y	Y	-	-	10	-	-
S1	6x6	+80	3	-	-	-	-	-	-	-	Y	-
S2	6x6	+80	3	-	-	-	-	-	-	-	Y	-

3 Phase
Fully Actuated
(Wilmington Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012. "Standard Specifications for Roads and Structures" dated January 2012, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: "http://connect.ncdot.gov/resources/safety/pages/its-and-signals.aspx"
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 may be lagged.
4. Reposition existing signal heads numbered 22, 23, and 61.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to count down the flashing "Don't Walk" time only.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Signal system data: Controller Asset #0996.





PROPOSED STOP BAR AND POLE LOCATION DIAGRAM
(NOT TO SCALE)

NC Dept of Transportation
Division of Highways
Final Drawing Date 10/17/12
Traffic Engineering Branch
JASON GALLOWAY

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
○	Signal Pole with Guy	●
○	Signal Pole with Sidewalk Guy	●
	Metal Pole with Mastarm	
⬡	Pedestrian Signal Pedestal	⬢
	Inductive Loop Detector	
	Controller & Cabinet	
□	Junction Box	■
	2-in Underground Conduit	
DD	Directional Drill	
N/A	Right of Way	
→	Directional Arrow	→
Ⓐ	Street Sign	Ⓐ

OASIS 2070L TIMING CHART

FEATURE	PHASE 1	2	4	6	8
Min Green 1 *	7	12	7	12	7
Extension 1 *	2.0	5.0	2.0	5.0	2.0
Max Green 1 *	15	60	25	60	25
Yellow Clearance	3.0	4.2	3.2	4.2	3.7
Red Clearance	2.4	1.2	2.8	1.2	1.9
Walk 1 *	-	7	7	-	-
Don't Walk 1	-	9	24	-	-
Seconds Per Actuation *	-	1.8	-	1.8	-
Max Variable Initial *	-	30	-	30	-
Time Before Reduction *	-	15	-	15	-
Time To Reduce *	-	30	-	30	-
Minimum Gap	-	3.0	-	3.0	-
Recall Mode	-	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	YELLOW	-
Dual Entry	-	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Project #: 12-202

DAVENPORT
TRANSPORTATION CONSULTING
HOME OFFICE:
305 WEST FOURTH STREET, SUITE 2A
WINSTON-SALEM, NC 27101
336.744.1636 www.davenportworld.com
NCBELS FIRM LICENSE NO. C-2522

Signal Upgrade

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy.Garner, NC 27529

US 421 (Carolina Beach Road) at Medical Center Drive/ Bell Street

Division 3 New Hanover County Wilmington

PLAN DATE: October 2012 REVIEWED BY: R. Hinshaw
PREPARED BY: C. Reich REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032117 ENGINEER F. ROYAL HINSHAW
SIGNATURE DATE 10-3-12

SIG. INVENTORY NO. 03-0996

Carolina Beach Road at Southern Boulevard

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Time Min 2	
Time Extension 2	
Time Max 2	
Soft Recall	
Minimum Recall	2 6
Maximum Recall 1	
Maximum Recall 2	
Call Non-Act 1	
Call Non-Act 2	
Omit Phase	
Dual Entry	4 8
No Skip	
Added Extension	
Simultaneous Gap	1 2 3 4 5 6 7 8
Guaranteed Passage	
Green Interval Flash	
Fast Green Flash	
Red Rest	
Backup Protection	
Inhibit Reservice	
Inhibit Max (Coord)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Inhibit Coordination	
Dynamic Max/Max3	
Variable Initial	2 6
Gap Reduction	2 6
Omit Pedestrian	
Time Walk 2	
Time FDWalk 2	

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Ped Soft Recall	
Ped Recall	
Rest In Walk	
Modified Rest In Walk	
Ped Reservice	
Flashing Walk	
Advanced Walk	
Delayed Walk	
Ped Yellow Clear	
Ped Red Clear	
Startup In Green	2 6
Startup In Yellow	
Startup Red Clear	
First Phases	
Startup Calls	
Startup Ped Calls	
Flash Entry	2 6
Yellow Flash	
Wag Phases	1 3 6 8
Wag Overlaps	
Manual Control	1 2 3 4 5 6 7 8
Manual Control Omit Ped	
Red Detector Lock	
Yellow Detector Lock	2 6
Active Logic 1 - 16	
Active Logic 17 - 32	
Dynamic/Backup	

	Phase														
Phase Timing Elements	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Minimum Green 1	0	12	0	5	0	12	0	5	0	0	0	0	0	0	0
Minimum Green 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Re-service Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extension 1 (Gap 1)	0.0	6.0	0.0	2.0	0.0	6.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extension 2 (Gap 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Green 1	0	90	0	30	0	90	0	30	0	0	0	0	0	0	0
Maximum Green 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clearance	4.0	4.2	4.0	3.0	4.0	4.2	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance	2.0	1.1	2.0	2.9	2.0	1.1	2.0	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dont Walk 1	0	0	0	15	0	0	0	16	0	0	0	0	0	0	0
Dont Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Advance Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Delay Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Dont Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max / Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seconds / Actuation	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Variable Initial	0	24	0	0	0	24	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
Time To Reduce	0	30	0	0	0	30	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Flash Frequency (0-25.5 Hz)	1.0														

Carolina Beach Road at Southern Boulevard

AM & PM Peaks

Rings	Barrier 1				Barrier 2				Barrier 3				Barrier 4			
1	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	
2	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

AM Peak

Coordination Plan # 4

Cycle length (0-999 sec)	156
Min Transition Cycle (0-999 sec)	0
Max Transition Cycle (0-999 sec)	180

Offset # or Ring:	1	2	3	4
Offsets (0-999 sec)	22	0	0	0
Act Coord Phase Min Green (0-255)	0	0	0	0

Splits (0-255 sec)

Phase	1	2	3	4	5	6	7	8
Split	0	125	0	31	0	125	0	31
Phase	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0

Verify Plan Data

Phase/Function Settings:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phase		2				6										
Float Force Offs																
Hold to Force Off																
Hi Priority Ped																
Dynamic/Backup																

PM Peak

Coordination Plan # 13

Cycle length (0-999 sec)	152
Min Transition Cycle (0-999 sec)	0
Max Transition Cycle (0-999 sec)	180

Offset # or Ring:	1	2	3	4
Offsets (0-999 sec)	0	40	0	0
Act Coord Phase Min Green (0-255)	0	0	0	0

Splits (0-255 sec)

Phase	1	2	3	4	5	6	7	8
Split	0	124	0	28	0	124	0	28
Phase	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0

Verify Plan Data

Phase/Function Settings:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phase		2				6										
Float Force Offs																
Hold to Force Off																
Hi Priority Ped																
Dynamic/Backup																

Carolina Beach Road at Medical Center

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time Min 2																
Time Extension 2																
Time Max 2																
Soft Recall																
Minimum Recall		2				6										
Maximum Recall 1																
Maximum Recall 2																
Call Non-Act 1																
Call Non-Act 2																
Omit Phase																
Dual Entry				4				8								
No Skip																
Added Extension																
Simultaneous Gap	1	2	3	4	5	6	7	8								
Guaranteed Passage																
Green Interval Flash																
Fast Green Flash																
Red Rest																
Backup Protection																
Inhibit Reservice																
Inhibit Max (Coord)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Inhibit Coordination																
Dynamic Max/Max3																
Variable Initial		2				6										
Gap Reduction		2				6										
Omit Pedestrian																
Time Walk 2																
Time FDWalk 2																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Soft Recall																
Ped Recall																
Rest In Walk																
Modified Rest In Walk																
Ped Reservice																
Flashing Walk																
Advanced Walk																
Delayed Walk																
Ped Yellow Clear																
Ped Red Clear																
Startup In Green		2				6										
Startup In Yellow																
Startup Red Clear																
First Phases																
Startup Calls																
Startup Ped Calls																
Flash Entry		2				6										
Yellow Flash		2				6										
Wag Phases	1		3			6		8								
Wag Overlaps	1															
Manual Control	1	2	3	4	5	6	7	8								
Manual Control Omit Ped																
Red Detector Lock																
Yellow Detector Lock		2				6										
Active Logic 1 - 16	1	2	3													
Active Logic 17 - 32																
Dynamic/Backup																

	Phase														
Phase Timing Elements	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Minimum Green 1	5	12	0	5	0	12	0	5	0	0	0	0	0	0	0
Minimum Green 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Re-service Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extension 1 (Gap 1)	2.0	5.0	0.0	2.0	0.0	5.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extension 2 (Gap 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Green 1	15	90	0	30	0	90	0	30	0	0	0	0	0	0	0
Maximum Green 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clearance	3.0	4.2	4.0	3.2	4.0	4.2	4.0	3.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance	2.4	1.2	2.0	2.8	2.0	1.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Red Revert	2.0	2.0	2.0	2.0	2.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dont Walk 1	0	9	0	24	0	0	0	0	0	0	0	0	0	0	0
Dont Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Advance Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Delay Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Dont Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max / Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seconds / Actuation	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Variable Initial	0	30	0	0	0	30	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	15	0	0	0	15	0	0	0	0	0	0	0	0	0
Time To Reduce	0	30	0	0	0	30	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Flash Frequency (0-25.5 Hz)	1.0														

Carolina Beach Road at Medical Center

AM Peak

Coordination Plan # 4

Cycle length (0-999 sec)	156
Min Transition Cycle (0-999 sec)	0
Max Transition Cycle (0-999 sec)	180

Offset # or Ring:	1	2	3	4
Offsets (0-999 sec)	131	0	0	0
Act Coord Phase Min Green (0-255)	0	0	0	0

Splits (0-255 sec)

Phase	1	2	3	4	5	6	7	8
Split	24	91	0	41	0	115	0	41
Phase	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0

Verify Plan Data

Phase/Function Settings:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phase		2				6										
Float Force Offs																
Hold to Force Off																
Hi Priority Ped																
Dynamic/Backup																

Rings	Barrier 1				Barrier 2				Barrier 3				Barrier 4			
1	0	2	1	0	0	4	0	0	0	0	0	0	0	0	0	
2	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

PM Peak

Coordination Plan # 13

Cycle length (0-999 sec)	152
Min Transition Cycle (0-999 sec)	0
Max Transition Cycle (0-999 sec)	180

Offset # or Ring:	1	2	3	4
Offsets (0-999 sec)	0	130	0	0
Act Coord Phase Min Green (0-255)	0	0	0	0

Splits (0-255 sec)

Phase	1	2	3	4	5	6	7	8
Split	15	87	0	50	0	102	0	50
Phase	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0

Verify Plan Data

Phase/Function Settings:

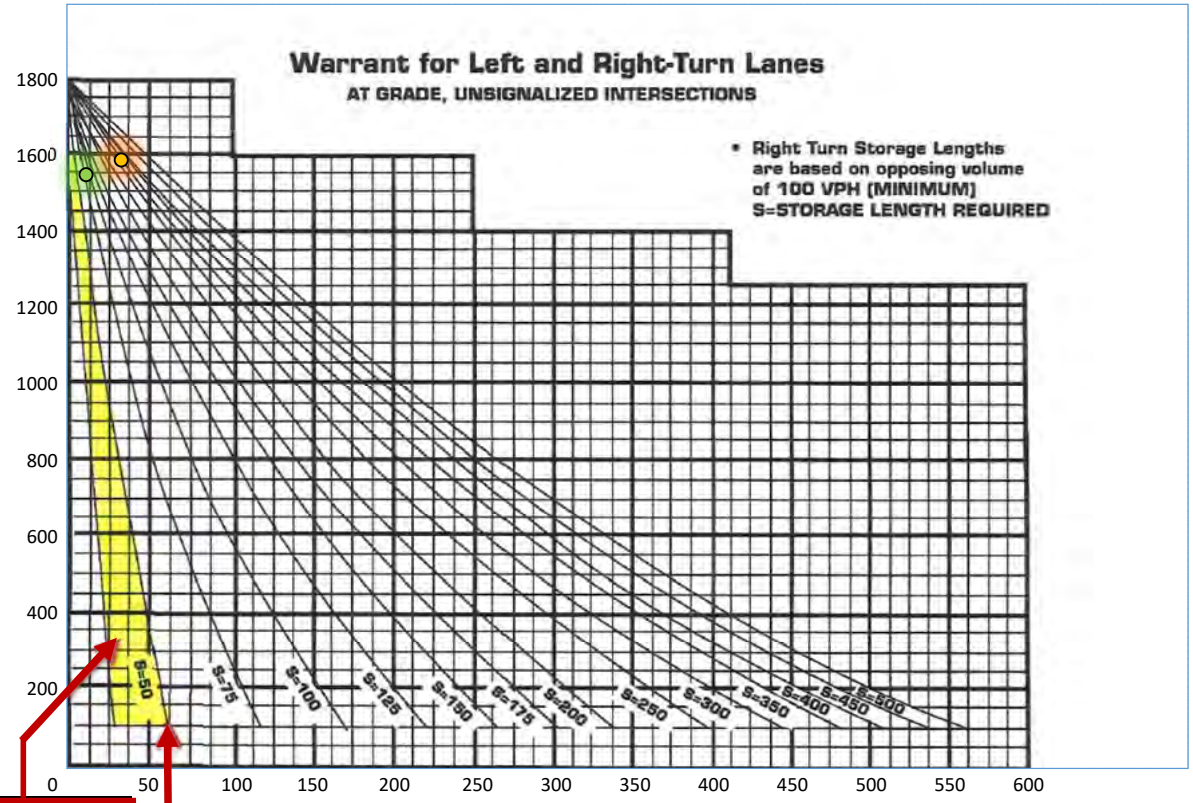
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phase		2				6										
Float Force Offs																
Hold to Force Off																
Hi Priority Ped																
Dynamic/Backup																

Rings	Barrier 1				Barrier 2				Barrier 3				Barrier 4			
1	1	2	0	0	0	4	0	0	0	0	0	0	0	0	0	
2	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Primary Site Drive Northbound Left Turn Warrant

	AM Peak	PM Peak
Left Turning Traffic (Horizontal Axis)	12	34
Opposing Volume (Vertical Axis)	1554	1592

Enter Values Here



RIGHT TURN TAPER DESIGN SPEED
30 MPH = 75'
35 MPH = 75'
40 MPH = 100'
45 MPH = 100'
50 MPH = 100'
55 MPH = 150'
60 MPH = 200'

60

V_L: LEFT TURNING VOLUMN (VPH)
V_R: RIGHT TURNING VOLUMN (VPH)

Note: Where adjacent signalization may provide opportunities for gaps In the traffic stream a reduction in the above storage values can be considered on a case by case basis.

NO TURN LANES WARRANTED FOR ROADS WITH LESS THAN 4,000 AADT

*SPECIAL HIGH SPEED DESIGN REQUIRED. SEE ROADWAY DESIGN MANUAL FIGURE 1

*STORAGE LENGTH(S) DOES NOT INCLUDE DECELERATION LENGTH

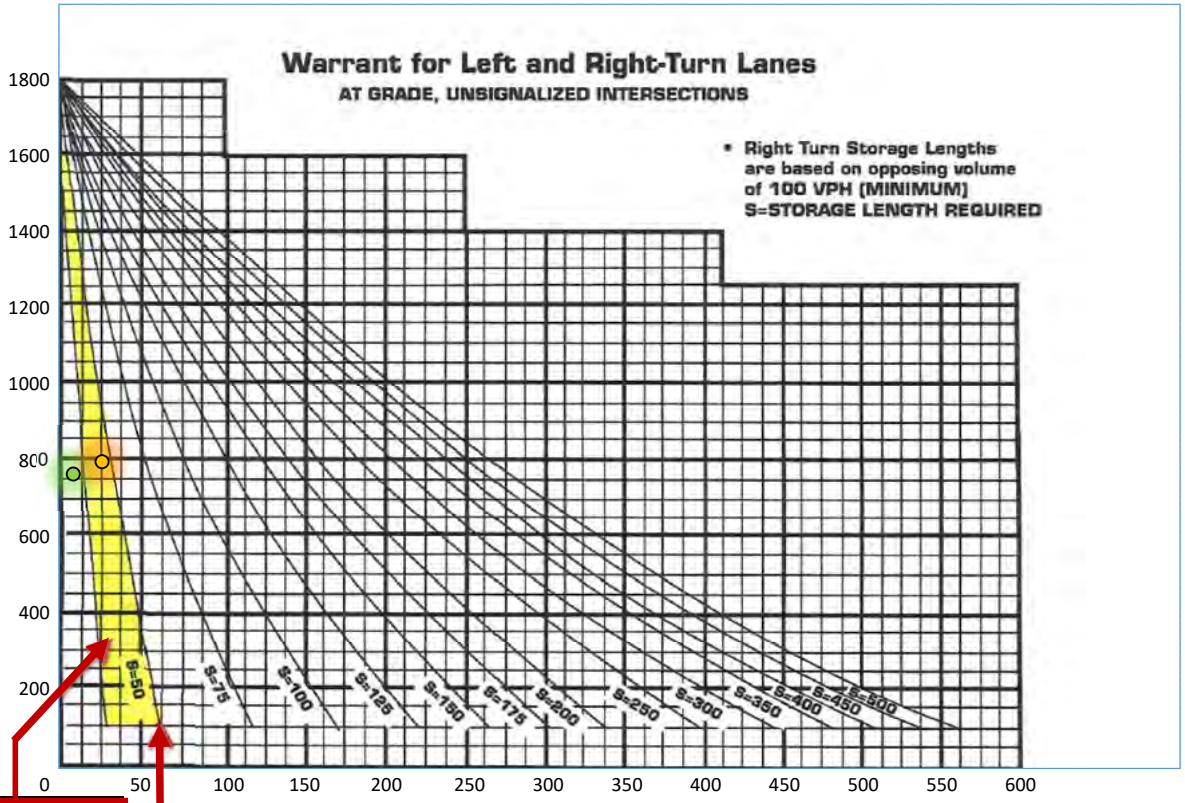
RIGHT TURN LANE STORAGE CALCULATION:

V:	OPPOSING VOLUMNE (VPH)	=	ADJACENT VOLUME	+	RIGHT TURN VOLUME (*100 VPH MINIMUM)
V_R:	RIGHT TURNING TRAFFIC				

Primary Site Drive Southbound Right Turn Warrant

	AM Peak	PM Peak
Right Turning Traffic (Horizontal Axis)	9	27
Opposing Volume (Vertical Axis)	770.5	802.5

Enter Values Here



RIGHT TURN TAPER DESIGN SPEED
30 MPH = 75'
35 MPH = 75'
40 MPH = 100'
45 MPH = 100'
50 MPH = 100'
55 MPH = 150'
60 MPH = 200'

60

V_L: LEFT TURNING VOLUMN (VPH)
V_R: RIGHT TURNING VOLUMN (VPH)

Note: Where adjacent signalization may provide opportunities for gaps In the traffic stream a reduction in the above storage values can be considered on a case by case basis.

NO TURN LANES WARRANTED FOR ROADS WITH LESS THAN 4,000 AADT

*SPECIAL HIGH SPEED DESIGN REQUIRED. SEE ROADWAY DESIGN MANUAL FIGURE 1

*STORAGE LENGTH(S) DOES NOT INCLUDE DECELERATION LENGTH

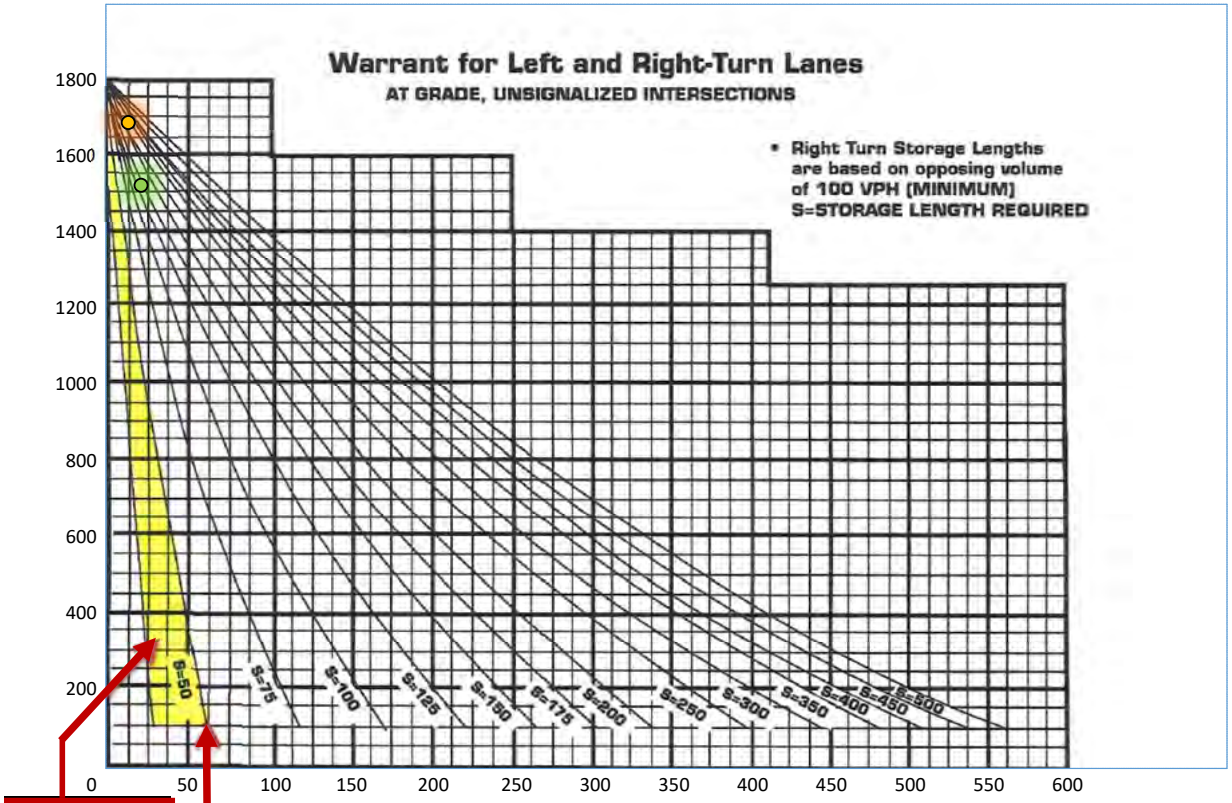
RIGHT TURN LANE STORAGE CALCULATION:

V:	OPPOSING VOLUMNE (VPH)	=	ADJACENT VOLUME	+	RIGHT TURN VOLUME (*100 VPH MINIMUM)
V_R:	RIGHT TURNING TRAFFIC				

Primary Site Drive Southbound U-turn Turn Warrant

	AM Peak	PM Peak
U-turn Turning Traffic (Horizontal Axis)	22	14
Opposing Volume (Vertical Axis)	1526	1690

Enter Values Here



RIGHT TURN TAPER DESIGN SPEED
30 MPH = 75'
35 MPH = 75'
40 MPH = 100'
45 MPH = 100'
50 MPH = 100'
55 MPH = 150'
60 MPH = 200'

60

V_L: LEFT TURNING VOLUMN (VPH)
V_R: RIGHT TURNING VOLUMN (VPH)

Note: Where adjacent signalization may provide opportunities for gaps In the traffic stream a reduction in the above storage values can be considered on a case by case basis.

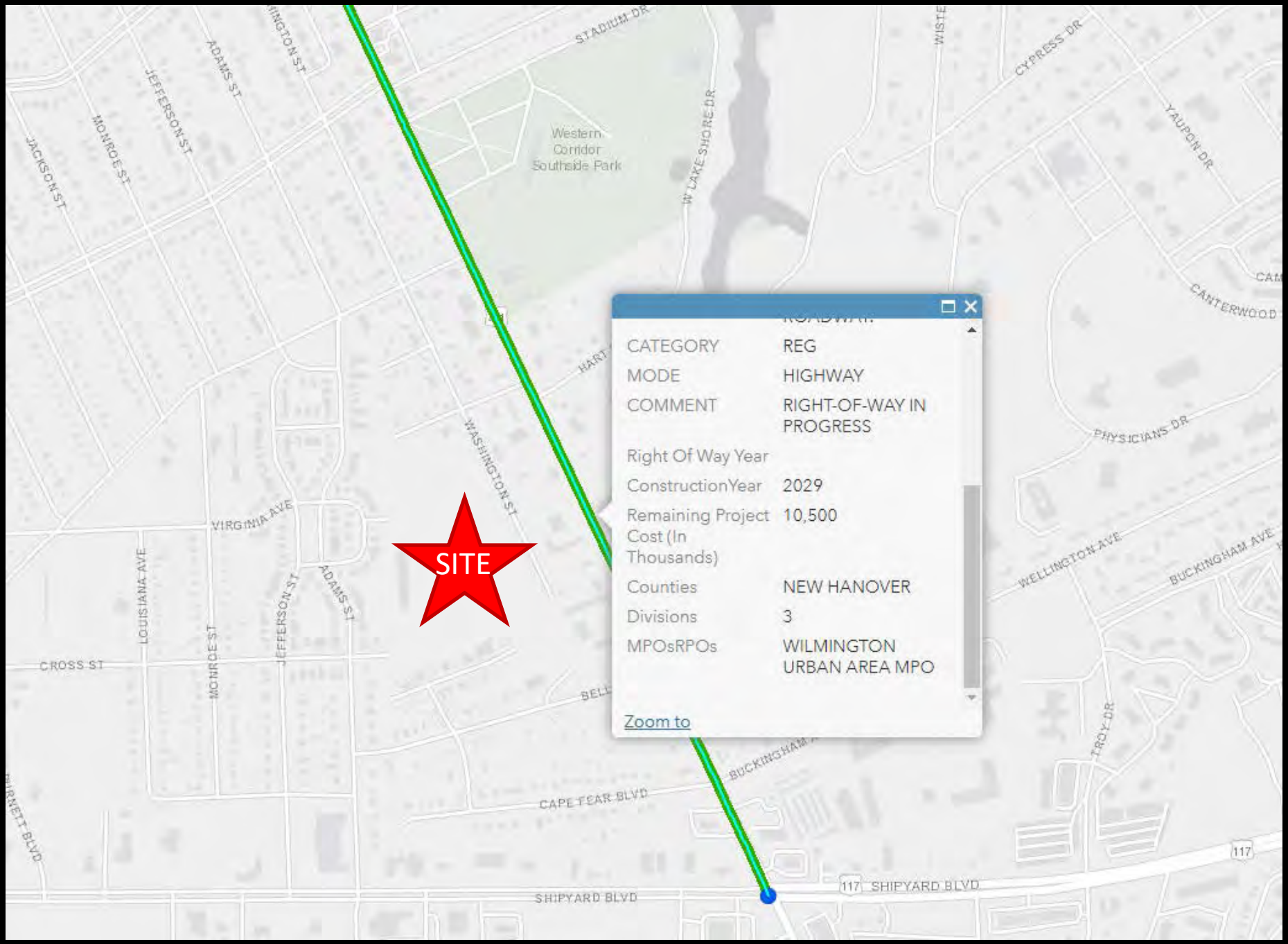
NO TURN LANES WARRANTED FOR ROADS WITH LESS THAN 4,000 AADT

*SPECIAL HIGH SPEED DESIGN REQUIRED. SEE ROADWAY DESIGN MANUAL FIGURE 1

*STORAGE LENGTH(S) DOES NOT INCLUDE DECELERATION LENGTH

RIGHT TURN LANE STORAGE CALCULATION:

V:	OPPOSING VOLUMNE (VPH)	=	ADJACENT VOLUME	+	RIGHT TURN VOLUME (*100 VPH MINIMUM)
V_R:	RIGHT TURNING TRAFFIC				



DAVENPORT

STIP U-5729

Get on Board...
Ride the Wave!

Rider Information

- Central Wilmington Transfer Station:
  Forden Station
  505 Cando Street
- Downtown Wilmington Transfer Station:
  Padgett Station
  520 N. 3rd Street
- UNCW Transfer Station:
  Teal Terminal
  Fisher University Union
- 100 series routes serve Forden Station.
  200 series routes serve Padgett Station.
  700 series routes serve UNCW Campus.
  *some routes serve multiple transfer stations.
- Routes 101 Princess Place Drive and 108 Market Street connect to both Forden Station and Padgett Station.
- Only major timepoints are listed. For all other stops, estimate departure times using published times. Please see a complete list of all bus stops at **wavetransit.com**.
- Time points indicate the minutes after each hour that a bus will depart from a specific location.
- Peak service operates on a 30 minute frequency (Mon-Fri 6:00am-6:00pm) and off peak service operates on a 60 minute frequency.
- The last bus operating during peak hours begins at 5:30pm (Mon-Fri) and ends downtown at 6:00pm.
- The last bus leaves its starting point at 7:00pm and ends at 8:00pm.

Holiday Schedule

Wave Transit does not operate on the following holidays: New Year's Day, Birthday of Martin Luther King, Jr., Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. (Service may be limited on Christmas Eve.)

Bikes on Buses



Wave Transit has bike racks on all vehicles. Each rack is located in the front of the bus and accommodates up to two bicycles.

Customers can load at any bus stop. There is no charge for your bicycle and the loading process is quick and easy. Use your bicycle for part of your trip and the bus for the rest and make bike riding part of your daily commute. Only two-wheeled, non-motorized bikes are permitted.

Bus Signs & Markers



Arrive at the bus stop at least five minutes before the bus schedule departure time. Watch for the bus displaying your route name on the sign above the front window.

When the bus has come to a complete stop, board through the front door, and pay fare.

If you need a transfer pass, please inform the operator upon boarding. Take your seat as soon as possible and exit through the rear door.

When waiting at a bus stop, look for these bus stop signs that will list the route number and time (minutes after the hour) the bus will depart that location. Both timepoints indicate when a bus will depart during peak service. The second timepoint is the departure time for off peak and weekend service. Wave Transit buses do not stop for passengers who are not waiting at official Wave Transit bus stop locations. Buses will only drop off passengers at official stops.

The Seahawk Shuttle

Students and employees of UNCW are eligible to ride all Wave Transit fixed route buses for free by simply showing a valid student or employee UNCW ID card. All Wave Transit Passengers may ride UNCW Shuttles and pay regular fare.



For more information about the UNCW shuttle routes, you may pick up a map at the UNCW Auxilliary Services office or visit our website, **wavetransit.com**

Accessibility

All Wave Transit buses are wheelchair accessible to serve those with mobility needs. Buses are also equipped with talking bus technology that provides audible stop announcements. Passengers who are unable to use Wave Transit buses due to disability may contact our ADA accessible transportation service. The Dial a Ride Transportation (DART) program provides origin to destination transportation service.

For more information about eligibility and our accessible transportation services please visit our website at **wavetransit.com** or call our DART office at (910) 202-2053.

Port City Trolley

Trolley service is free. All stops are marked with signage indicating the trolley stop number and service information.



DOWNTOWN DISTRICTS

NORTH WATERFRONT DISTRICT
CFCC/Wilson Center, Riverfront Park Ampitheater, Convention Center, Railroad Museum

BROOKLYN ARTS DISTRICT
Concert venues, art studios, restaurants, neighborhood pubs, and home of Padgett Station Multi-Model Transportation Center

CENTRAL BUSINESS DISTRICT
Riverwalk, Performing Arts, Restaurants, Nightlife, Shopping, CFCC

CASTLE STREET DISTRICT
Eclectic Arts, Antiques, Vintage Shops, Cafes, Art Galleries, Wine

SOUTH FRONT DISTRICT
Restaurants, Breweries, Wine Bars, Greenfield Lake Park & Ampitheater

Get the apps

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- Book a microtransit trip
- Find your nearest stop



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GET IT ON Google Play

Wave | RIDE MICRO



Trip Tips

Wave Transit kindly asks that you be courteous to your fellow passengers:

- The seats in the front of the bus should be offered to senior citizens or passengers with mobility impairments.
- No eating or drinking allowed on Wave Transit vehicles. Food and beverage items must be stowed or discarded prior to boarding the vehicle.
- If listening to music, please use headphones and keep the sound level at a volume that only you can hear.
- No animals allowed on Wave Transit property, with the exception of service animals. A copy of Wave Transit's adopted Service Animal Policy is located on the website at **wavetransit.com**
- When seated, please keep arms, legs and personal items out of the aisles.
- Carts, carriages, and strollers must be folded while riding.
- No weapons, alcohol, or illegal substances are permitted on the property.
- Smoking and the use of electronic cigarettes is prohibited on all Wave Transit property.
- In consideration of other passengers, please refrain from using profanity while on Wave Transit property.
- For passengers using a cell phone, please talk on a low voice and move to an appropriate area.

Go Safely

- When riding the bus, please be seated. If you must stand, please hold on to the railing.
- At the bus stop, please stand clear of the curb while the bus is approaching.
- When boarding or alighting, please watch your step, and do not rush.
- Never cross the street in front of the bus unless it is stopped at a red light at a designated crosswalk. Please wait for the bus to leave before crossing. (Cars beside or behind the bus may not see you).

Schedules

Peak service operates on 30-minute frequency. Off Peak (times listed in bold) service operates on 60-minute frequency. Time points listed in the schedules indicate departure times.

101 Princess Place

MONDAY–FRIDAY: Peak 6:00am – 6:00pm; Off Peak 6:00pm – 8:00pm
SATURDAY: Off Peak 8:00am – 6:00pm
SUNDAY: Off Peak 9:00am – 5:00pm

*Monday-Friday, first trips depart both Forden Station and Padgett Station at 6:00am. Saturday & Sunday, first trip departs Forden Station.

	BUS STOP	PEAK		OFF PEAK
1	Forden Station*	:00	:30	**:00**
2	Market St / Kerr Ave	:06	:36	**:06**
3	Emory St at Creekwood Comm. Ctr	:11	:41	**:11**
4	Nixon St at DC Virgo Middle School	:24	:54	**:24**
5	4th St at MedNorth Health Center	:26	:56	**:26**
6	Padgett Station*	:30	:00	**:30**
7	McRae St / Fanning St	:36	:06	**:36**
8	Princess Place Dr at Mary C Mosley	:45	:15	**:45**
9	Market St / Kerr Ave (Food Lion)	:50	:20	**:50**
10	Market St at Walton Rd	:52	:22	**:52**

103 Oleander East

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Forden Station	:00
2	New Centre Dr at Colonial Park Apartments	:07
3	College Rd at Harris Teeter Shopping Center	:11
4	Wrightsville Ave / Kerr Ave	:14
5	Oleander Dr / Fordham Rd (Whole Foods)	:18
6	Oleander Dr / Hawthorn Ave (Oleander Rehab)	:26
7	Oleander Dr / Greenville Loop (Arboretum)	:31
8	Wrightsville Ave / Hawthorne Ave (Hospital)	:37
9	College Rd at Chili's Restaurant	:44
10	Government Center Dr at Government Center	:50

104 East

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Forden Station	:00
2	Randall Pkwy at Bear Hall (UNCW Campus)	:09
3	Eastwood Rd / Military Cutoff Rd	:22
4	Military Cutoff Rd / Drysdale Dr (NHC Library)	:34
5	Military Cutoff Rd / E Westwood Rd	:42
6	Market St / N Cardinal Dr	:51

105 Medical Center

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Forden Station	:00
2	Market St / Kerr Ave	:07
3	Market Street / 29th St (YMCA)	:12
4	16th St / Dock St	:16
5	New Hanover County Regional Medical Center	:24
6	Independence Mall	:32
7	Wilshire Blvd at Emerald Square Plaza	:38
8	Wilshire Blvd / Kerr Ave	:42
9	Kerr Ave / McClelland Dr	:50
10	Ringo Dr at Lennon Dr (Lennon Woods Apt.)	:55

106 Shipyard Blvd

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Forden Station	:00
2	Market St / Kerr Ave	:08
3	Covil Ave / Broad St	:13
4	Independence Station	:19
5	Carolina Beach Rd / Shipyard Blvd	:25
6	Shipyard Blvd at 17th St	:35
7	Independence Blvd / Canterbury Dr	:38
8	Independence Blvd / Park Ave	:41
9	Darlington Ave / Covil Ave (The Reserve)	:44
10	Market St / Lullwater Dr (Miller-Motte College)	:52

107 College Road

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Forden Station	:00
2	College Rd / University Dr	:06
3	College Rd / Oleander Dr	:10
4	College Rd / East Cascade Rd	:14
5	College Rd / South 17th St	:19
6	Monkey Junction Walmart	:30
7	College Rd / Greenbriar Rd	:33
8	College Rd / Waltmoor Rd	:37
9	College Rd / East Cascade Rd	:41
10	College Rd at Chili's Restaurant	:49

108 Market Street

MONDAY–FRIDAY: Peak 6:00am – 6:00pm; Off Peak 6:00pm – 8:00pm
SATURDAY: Off Peak 8:00am – 6:00pm
SUNDAY: Off Peak 9:00am – 5:00pm

*Monday-Friday, first trips depart both Forden Station and Padgett Station at 6:00am. Saturday & Sunday, first trip departs Forden Station.

	BUS STOP	PEAK		OFF PEAK
1	Forden Station*	:00	:30	**:00**
2	New Centre Dr at Colonial Park Apt.	:07	:37	**:07**
3	Randall Pkwy at Vocational Rehab	:14	:44	**:14**
4	Market St at 29th St (YMCA)	:20	:50	**:20**
5	Market St / 16th St	:22	:52	**:22**
6	Padgett Station*	:30	:00	**:30**
7	Market St / 9th St (Cape Fear Museum)	:37	:07	**:37**
8	Market St at YMCA	:42	:12	**:42**
9	Market St / Kerr Ave (Food Lion)	:45	:15	**:45**
10	Sigmon Rd at WalMart	:49	:19	**:49**

201 Carolina Beach Rd

MONDAY–FRIDAY: Peak 6:00am – 6:00pm; Off Peak 6:00pm – 8:00pm
SATURDAY: Off Peak 8:00am – 6:00pm
SUNDAY: Off Peak 9:00am – 5:00pm

*Monday-Friday, first trips depart both Forden Station and Monkey Junction at 6:00am. Saturday & Sunday, first trip departs Padgett Station.

	BUS STOP	PEAK		OFF PEAK
1	Padgett Station*	:00	:30	**:00**
2	Front St / Castle St	:10	:40	**:10**
3	Carolina Bch Rd / Northern Blvd	:14	:44	**:14**
4	Carolina Bch Rd / Medical Center Dr	:16	:46	**:16**
5	Carolina Bch Rd / Shipyard Blvd (Roses)	:18	:48	**:18**
6	Monkey Junction Walmart*	:30	:00	**:30**
7	Carolina Bch Rd / Independence Blvd	:42	:12	**:42**
8	Carolina Bch Rd / Medical Center Dr	:46	:16	**:46**
9	Carolina Bch Rd / Tennessee Ave	:50	:20	**:50**
10	3rd St / Dock St	:56	:26	**:56**

202 Oleander West

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Padgett Station	:00
2	5th St / Castle St	:05
3	Dawson St /10th St	:09
4	Oleander Dr at Independence Mall	:16
5	Lake Ave (Roland-Grise Middle School)	:21
6	Shipyard Blvd / Pickard Rd	:25
7	41st at Brightmore Retirement Community	:33
8	Oleander Dr / Floral Parkway	:39
9	Wrightsville Ave / Dawson St	:43
10	5th St / Ann St	:53

205 Long Leaf Park

MONDAY–FRIDAY: Peak 6:00am – 6:00pm; Off Peak 6:00pm – 8:00pm
SATURDAY: Off Peak 8:00am – 6:00pm
SUNDAY: Off Peak 9:00am – 5:00pm

*Monday-Friday, first trips depart both Padgett Station and Medical Center Dr at 6:00am. Saturday & Sunday, first trip departs Padgett Station.

	BUS STOP	PEAK		OFF PEAK
1	Padgett Station*	:00	:30	**:00**
2	Front St / Ann St	:05	:35	**:05**
3	Castle St / 10th St	:11	:41	**:11**
4	Greenfield St / 16th St	:17	:47	**:17**
5	16th St / Doctors Circle	:22	:52	**:22**
6	Medical Center Dr / Silver Stream*	:25	:55	**:25**
7	Wellington / 17th St	:34	:04	**:34**
8	Greenfield St /16th St (Social Services)	:43	:13	**:43**
9	5th St / Martin St	:48	:18	**:48**
10	Front St / Castle St (Solomon Towers)	:54	:24	**:54**

210 South 17th Street

MONDAY–FRIDAY: 6:00am – 8:00pm
SATURDAY: 8:00am – 6:00pm
SUNDAY: 9:00am – 5:00pm

	BUS STOP	HOURLY
1	Padgett Station	:00
2	Dawson St / 10th St (Jervay)	:07
3	16th St / Greenfield St (DHHS)	:12
4	17th St / Wellington Ave	:19
5	17th St at the Point at Barclay Hills Dr	:22
6	Monkey Junction Walmart	:30
7	St. Andrew's Dr at Crosswinds Apartments	:36
8	17th St / Independence Blvd (Cameron Art Museum)	:40
9	17th St / NHRMC Inner Loop Rd (Zimmer Cancer Ctr)	:44
10	3rd St / Nun St	:54

712 UNCW Teal Route

MONDAY–FRIDAY: 7:00am – 6:40pm (every 20 minutes)
SATURDAY & SUNDAY: NO SERVICE
Teal Route does not operate when UNCW classes are not in session.
For a list of UNCW closures, please consult our website, **wavetransit.com**.

	BUS STOP	TIMES		
1	Forden Station	:00	:20	:40
2	NHC Government Offices	:04	:24	:44
3	Racine Commons	:05	:25	:45
4	Clear Run Apartments	:07	:27	:47
5	Brookstone Village	:08	:28	:48
6	Campus Edge Apartments	:09	:29	:49
7	Leutze Hall (UNCW)	:11	:31	:51
8	Bear Hall (UNCW)	:13	:33	:53
9	University Landing	:15	:35	:55
10	New Centre Dr / S College Rd	:17	:37	:57

203 Port City Trolley

FREE Downtown Service!

Peak Season *(March-November)*
MONDAY–THURSDAY: 7:00am–7:00pm
FRIDAY & SATURDAY: 7:00am–8:00pm

Off Peak Season *(December-February)*
MONDAY–SATURDAY: 8:00am–5:00pm

Service operates on a 40-minute frequency. Major scheduled stop departure times are listed in **bold** on the schedule below. Other times listed are estimated departure times. Please arrive at your stop 5 minutes before the scheduled time. The trolley returns to its starting point (trolley stop #1) after leaving trolley stop #25.

	TROLLEY STOPS	40-Minute Schedule		
1	**Padgett Station**	**:00**	**:40**	**:20**
2	4th St / Brunswick St	:03	:43	:23
3	Front St / Cowan St	:06	:46	:26
4	Harnett St / Pavilion	:07	:47	:27
5	**Nutt St / Convention Center**	**:08**	**:48**	**:28**
6	Nutt St / Railroad Museum	:08	:48	:28
7	Red Cross / Front St (CFCC)	:09	:49	:29
8	Front St / Chestnut St	:10	:50	:30
9	Front St / Market St	:11	:51	:31
10	**Front St / Orange St**	**:12**	**:52**	**:32**
11	Front St / Castle St	:13	:53	:33
12	Castle St / 5th St	:16	:56	:36
13	5th St / Dawson St	:19	:59	:39
14	5th St / Greenfield St	:21	:01	:41
15	Greenfield St / 3rd St	:22	:02	:42
16	**Greenfield St / 2nd St**	**:23**	**:03**	**:43**
17	Front St / Laughing Oak Ln	:26	:06	:46
18	Front St / Queen St	:27	:07	:47
19	Front St / Castle St	:28	:08	:47
20	**Front St / Orange St**	**:29**	**:09**	**:49**
21	Front St / Market St	:30	:10	:50
22	Front St / Grace St	:32	:11	:51
23	Front St / Hanover St	:33	:13	:53
24	Front St / Harnett St	:34	:14	:54
25	**Front St / Cowan St**	**:35**	**:15**	**:55**

Fares

Fare Type	Full Fare	Reduced Fare[1]
One-way Cash Fare	$ 2.00	$ 1.00
1-Day Pass	$ 5.00	$ 2.50
7-Day Pass	$20.00	$10.00
31-Day Pass	$80.00	$40.00
10-Ride Pass	$20.00	$10.00
Children Age 4 or Younger		Free[2]

[1] **Reduced Fare Eligibility:**
- Customers 65 or older with a Medicare Card or valid ID card.
- Customers with disabilities with a Medicare Card or a Wave Transit Reduced Fare ID card.
- Students in grade 1-12, and local college students with a valid school ID or Wave Transit Reduced Fare ID card.
- Veteran's with a New Hanover Veteran ID Card.

[2] **Free Fares**
- UNCW Students and Staff with valid ID.
- Children 4 years and under. Limit 3 free children per paying adult.

Transfers
- Transfers are free. Request a transfer from the driver when paying the fare on the bus.

10-Ride, 7-Day and 31-Day Passes
- Ten ride passes are valid for ten one-way trips. They have no expiration.
- 7-Day Passes and 31-Day Passes are activated on first use and are valid for period of the pass.

Purchasing Tickets and Passes
Bus tickets and passes may be purchased on the bus or at the Wave Transit office between the hours of 8:30am to 4:30pm Monday thru Friday.

Wave

Welcome Aboard!

The Cape Fear Public Transportation Authority Makes Your Commute Easy!

Wave Transit provides bus, microtransit, paratransit, and shuttle service to the Wilmington metropolitan area.

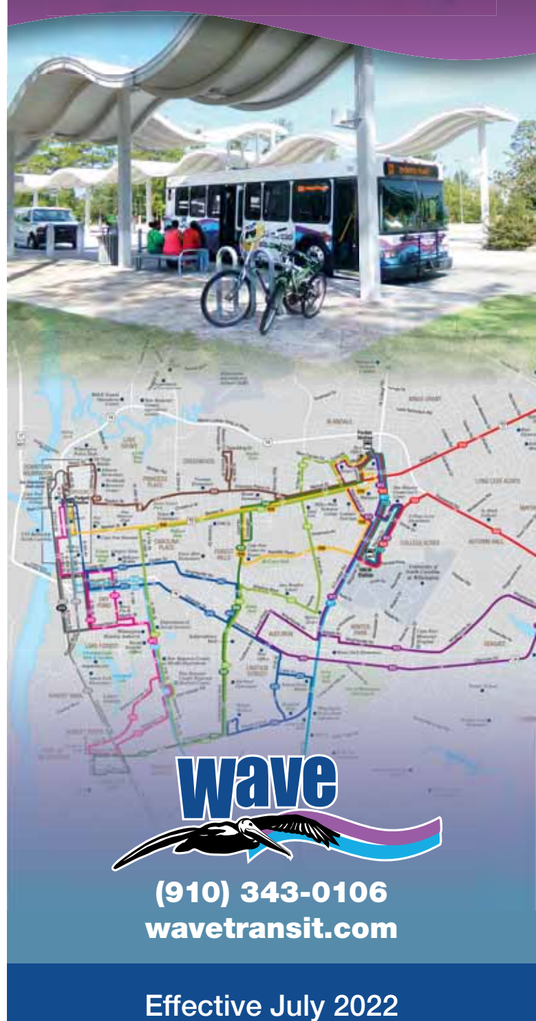
Wave Transit is your safe, convenient, environmentally friendly and cost-efficient way to get around the area.

Contact:

- **Wave Transit**
  505 Cando Street
  Wilmington, NC 28405
- Mail: Wave Transit, PO Box 12630, Wilmington, NC 28405
- Information Line: (910) 343-0106
  (Monday-Friday 6:00am-8:00pm, Saturday 8:00am-6:00pm, Sunday 9:00am-5:00pm)
- Online via e-mail at **info@wavetransit.com**

Wave Transit ILM
@RideTheWaveILM
@WaveTransitILM

System Map



Effective July 2022

Wave

Downtown Wilmington

Nixon
Swann
Harnett
Bladen
Brunswick
Campbell
Red Cross
Walnut
Grace
Chestnut
Princess St
Market
Dock
Orange
Ann
Nun

Cowan
N Front
Davis St
1898 Memorial
MedNorth Health Center
Port City Marina
Nutt
N 3rd
N 4th
N 5th
Hanover
Cape Fear Community College
Padgett Station
BROOKLYN
McRae
Rankin
Wilmington Convention Center
Wilmington Railroad Museum
Water
N 2nd
DOWNTOWN
Optimist Park
Bicentennial Park
NHC Public Library
City Council/ Thalian Hall
Battleship USS North Carolina
US Post Office
Bellamy Mansion
Employment Security Commission
Fire Dept. HQ
Riverfront Park
S Front
S 2nd
S 3rd
S 5th
NHC Courthouse
Hannah Block Historic USO/ Community Arts Center
Eagle Island
Children's Museum of Wilmington
St. Mary Catholic
Cape Fear Museum
Chandler's Wharf
Cape Fear River

RideMICRO North Zone

New Hanover County Jail & Sheriff
Cape Fear Community College North Campus
Blue Clay Rd
NORTHCHASE
Northchase Pkwy
N College Rd
Corporate Dr
Trask Middle
Laney High
Olsen Park
Arlene Dr
Murrayville Rd
N Kerr Av
Bavarian Ln
Old Wrightsboro Rd
Farley Dr
Gordon Rd
Brookfield Dr
BROOKFIELD
Harris Rd
White Rd
Ogden Park
Eaton Elementary
Market St
Wilmington Christian Academy
Kings Dr
Grathwol Dr
KINGS GRANT
Lord Tennyson Rd
Green Meadows Dr
Old Dairy Rd
Covil Farm Rd
Airport Blvd
Wilmington International Airport (ILM)
Martin Luther King Jr Pkwy
ALANDALE
Judges Rd
Harley Rd
Elisha Dr
Highway Patrol
Station Rd
Blair Elementary
Noble Middle
Military Cutoff Rd
Arboretum Dr
Forden Station
Post Office
Target
Costco
Lemon
Ring
Columb
New Centre Dr
Cardinal Dr
LONG LEAF ACRES
Town Center Dr
Main St
Eastwood Rd
Windemere Rd
New Hanover County Gov't. Center
Walmart
Miller-Motte Technical College
Colonial Park Apts.
Food Lion
College Acres Elementary
St. Mark Catholic
MAYFAIRE
Destiny Way
Oriole Dr
Racine Dr
COLLEGE ACRES
AUTUMN HALL
New Hanover County Public Library
LANDFALL
Greenway Av
Randall Pkwy
McCrary Park
Cape Fear Center for Inquiry
UNCW Station
University of North Carolina at Wilmington
Hooker Rd
Rogersville Rd
Price Dr
Reynolds
Walton Dr
Hurst Dr
S College Rd
Wagoner Dr
S Kerr Av
Wilmington
Gord
Eaton Elementary
Market St
Ogden
Covil Farm Rd
Arboretum Dr
Military Cutoff Rd
Destiny Way
Eastwood Rd
Wrightsville Rd
Airlie Rd
Airlie Gardens
Bradley Creek
New Hanover County Arboretum
Oleander Dr
Wrightsville Av
Greenville Av
SEAGATE
WINTER PARK
Cape Fear Memorial Hospital
Maple Av
Rose Av
Hawthorne Dr
Wooddale Dr
Riegel Rd
N MacMillan
Winter Park Elementary
AUDUBON
Floral Pkwy
Empie Park
Harris Teeter
Varsity
Amy Bradley School
Wilshire Blvd
Fordham Rd
Post Office
41st St
LINCOLN FOREST
Lake Av
Roland-Grise Middle
Long Leaf Hills Dr
Pine Grove Dr
Long Leaf Park
City of Wilmington Golf Course
Alderman Elementary
Verizon Wireless
Hoggard High
Wilmington Police Dept. Substation
Long Leaf Mall
Shipyard Blvd
Independence Blvd
Friends' School
Greenville Loop Rd
Bradley Creek Elementary
YWCA
Holly Tree Rd
Holly Tree Elementary
Wilmington Health Pediatrics
The Courtyard at Masonboro
Hewletts Creek
Jeb Stuart Dr
PINE VALLEY
Publix Super Market at Pine Valley
Pine Valley Elementary
Bragg Dr
Waltmoor Rd
James E.L. Wade Park
Halyburton Park
S 17th St
Cameron Art Museum
Coastal Christian High
New Hanover County Public Library Pine Valley Branch
Cape Fear Academy
Lansdowne Rd
Navaho Trail
Masonboro Station
Masonboro Loop Rd
Mohican Trl
Marvin K Moss Ln
UNCW Center for Marine Science
Village at Myrtle Grove
Piner Rd
Antoinette Dr
Carolina Beach Rd
S College Rd
Saint Andrews Dr
Coddington Elementary
ECHO FARMS
City of Wilmington Operations Center
Sunnyvale Dr
George Anderson Dr
Cape Fear River
Arrowhead Park
Fort Fisher Ferry
Atlantic Ocean

RideMICRO South Zone
Southern New Hanover County

Beau Rivage Shopping Center
Carolina Beach Rd
Myrtle Grove Rd
Wilmington Academy of Arts & Sciences
Masonboro Commons
Golden Rd
Eugene Ashley High School
Veteran's Park
Halyburton Memorial Pkwy
St Vincent Dr
River Rd
Snow's Cut
Carolina Beach State Park
Snow's Cut Crossing
Lewis Dr
Federal Point Historic Preservation Society
N Park Lake Blvd
Publix
Carolina Beach Ave N
Canal Dr
CAROLINA BEACH
PLEASURE ISLAND
Harper Ave
Carolina Beach Lake Park
Carolina Beach Boardwalk
Dow Rd
Fort Fisher Blvd
WILMINGTON BEACH
K Ave
Ocean Front Pavilion
H Ave
KURE BEACH
Atlantic Ocean

Wave Routes

- 101 Princess Place
- 103 Oleander East
- 104 East
- 105 Medical Center
- 106 Shipyard Blvd
- 107 College Road
- 108 Market Street
- 201 Carolina Beach Road
- 202 Oleander West
- 203 Port City Trolley
- 205 Long Leaf Park
- 210 South 17th Street
- 712 UNCW Teal

Legend

- 101 Bus Route
- Transit Station
- Landmark
- P Public Parking Deck
- H Hospital
- 40 Interstate
- 17 US Highway
- 43 State Highway

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0 0.25 0.5 0.75 1.0
Miles

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ECO FRIENDLY

Microtransit Zone continues to Pleasure Island and Kure Beach (See inset at right)

Routes & Schedules

Need a route for a specific bus? Trying to plan your journey?

Get all the information you need for our buses and shuttles right here.

View Maps & Schedules

Real Time Tracking

Never miss your bus again thanks to real time tracking. Updated automatically every 10 seconds, you can easily see where your bus is and when it will arrive.

View Bus Locations

Service Alerts

November 1: Route 108 – Market St, 201 – Carolina Beach Rd, and 205 – Longleaf Park are offering hourly service until 8:00pm.

Construction on Front St. between Grace St and Chestnut St impacts **Port City Trolley** service. The Trolley stop at Front St and Chestnut St will not be served until construction is complete. Updates will be posted here.

Systemwide Service Improvements launched Sunday, July 3, 2022. View the project page for more info and view new service map.

Plan Your Trip

Where do you want to go today?

Start Location

Choose start location

End Location

Choose end location

Date

11/01/2022

Time

10:00 AM

Plan by:

Departure Time

Get Directions

Community Outreach

We're out in the community keeping you informed of available transportation, and getting your input to make sure our services reflect your needs.

The **Go Coast Commuter Challenge** is an annual event that encourages WMPO Area residents to move sustainably!

Traffic congestion is a major cause of much of our stress. We challenge you to use an SOV (single occupancy vehicle) as little as possible and instead utilize alternative transportation like biking, walking, carpool, transit, and telecommuting. Top participants will win prizes like gift cards to local businesses. Learn more and sign up.

More Outreach & Events

Get Accessible Services

We provide a variety of services including **Accessible Van Service (DART)**, Travel Training, and Community Outreach to help everyone connect to public transportation.

View Services

Sign up for our newsletter!

Stay up-to-date on service improvements, events, and important news from Wave Transit!

Email (required)

First Name

Last Name

Company

Job Title

☐ Yes, I want to receive Wave Transit's Community Newsletter. (You can unsubscribe anytime)

Sign Up

You are subscribing to emails from Wave Transit. Unsubscribe using the link at the bottom of every email.

Making Waves Foundation

This important foundation provides help to those who wouldn't otherwise have access to transportation. You can impact someone's life with a tax deductible donation.

Learn More

Public Notices

Notice of Public Meeting

The next regularly scheduled meeting of the Cape Fear Public Transportation Authority will be held on Thursday, October 27, 2022 at 12:30 pm EDT at Forden Station located at 505 Cando St., 28405. A copy of the agenda can be obtained HERE**.**

Members of the public can attend the meeting in person and virtually through the GoToMeeting platform. The internet interface is available at the following **URL:** https://global.gotomeeting.com/join/844936749**.** The meeting is also available via audio conference at: **(312) 757-3121 | Access Code: 844-936-749.**

A public comment period limited to five (5) minutes per person will be offered at the meeting. For community members who wish to provide comment not in person, a hard copy comment form can be downloaded HERE. Completed forms must be submitted by 5:00 pm on Wednesday, October 26 via e-mail to the following address: info@wavetransit.com. Comments can be provided in person or via written form. ADA accommodations will be provided upon request. Inquiries for ADA accommodations and general information about the meeting should be addressed by email to info@wavetransit.com or by phone at (910) 343-0106 prior to the meeting.

Accessible Information

Website content and other resource material is available in alternate formats and will be provided upon request. Click the icon below to request information in an alternate format.



CLOSE

Contact Us

Email Us

T: (910) 343-0106
F: (910) 343-8317

Transit Services

- Fixed-Route Bus
- Seahawk Shuttle
- Accessible Van Service
- Port City Trolley
- Vanpool
- Intercity Transportation

Inside Wave Transit

- Mission and History
- Board
- Documents and Plans
- Vehicle Advertising
- Employment

Sustainability Initiatives

- Breathe Easy Initiative
- Low Emmissions Vehicles
- Sustainably Built Facilities

Making Waves Foundation

- Foundation Board of Directors
- Donate

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Transportation

Transportation Planning

The City of Wilmington leads the Metropolitan Planning Organization (MPO) to conduct regional transportation planning.

Bike and pedestrian facilities, including the Cross City Trail map, is available on the city's GIS portal. Visit the Bicycle and Pedestrian facility map to find a facility or trail near you!

Trails and Routes

The Cross City Trail reaches many neighborhoods, parks and employment centers. Many sections are off the road on a multi-use path. The Cross City Trail is a great way to explore the city by bike.

Follow the historic streetcar line route from downtown Wilmington to Wrightsville beach by following the River to Sea bikeway.

East Coast Greenway is a 2,900 mile route from Maine to Florida, passing through Wilmington, NC. Find more information on the website, www.greenway.org

Riverwalk is a great way to build an understanding of the connection between the city and the Cape Fear River. Explore the city's Riverwalk map to plan your visit.

Public Transportation, Carpool and Vanpool

The regional public transportation authority, WAVE transit, operates several fixed bus routes and contracts to offer a vanpool service, called WAVE pool. Information on WAVE transit, can be found on their website,www.wavetransit.com

A state-wide carpool matching program is available through Share the Ride NC. Visit www.sharetheridenc.org for more information.

Three newly marked Park and Ride lots are located in Leland, NC. The lots are located on the Brunswick Connector route and available to community members who carpool, vanpool or utilize public transportation. The lots are located at the Food Lion on Mt. Misery Road near US 74/76, the Lowes Foods near Brunswick Forest and the Leland Town Hall.

Vanpools are available to area employers or groups through WAVE transit's 'WAVE pool'. Contact WAVE transit for more details.

Electric Vehicle Charging Station

The City of Wilmington was selected to participate in the Electric Vehicle Supply Equipment (EVSE) Load Progress Energy Research Project managed by Progress Energy in 2011 for a period of two (2) years. Progress Energy purchased and installed an Eaton Level 2 Charging Station in the Market Street parking deck. In June 2013, ownership of the station was transferred to the city. Although the city charges for the parking time, the electricity is not charged to the user due to North Carolina restrictions on third-party sales of electricity in a regulated utility landscape. Try it out today!

Fleet Operations

The Public Services' Fleet of approximately 89 vehicles were outfitted with Global Positioning System (GPS) technology in 2014. The GPS devices were installed to promote efficiency and asset management. In FY2016, City Council approved the purchase and installation of GPS units for the remainder of the fleet, approximately 550 vehicles.

FIND COMMUTE MATCHES

From

To

SEARCH

Welcome to Share the Ride NC!

This website will help you quickly and securely find commute partners anywhere in North Carolina! Using your home and work or school addresses, you will be matched to nearby commuters with similar schedules. Your home address will never appear on match lists.

Get Started!

When you receive your list of matches, you may choose who to contact. There are no obligations or requirements.

Download on the App Store

GET IT ON Google Play

CARPOOL TRANSIT TELEWORK BIKE/WALK VANPOOL







FIND EMPLOYER OR UNIVERSITY

ABOUT US

CONTACT US

About Us

Share the Ride NC is a statewide website that was created to help form carpools and vanpools. It is provided free of charge in support of the effort to improve air quality. Funding is secured by the NCDOT and these agencies:



- Charlotte Area Transit System (CATS): Managed by the Public Transit Department of the City of Charlotte, CATS operates local and express buses, neighborhood shuttles, vanpools and carpools, and specialized transportation services for special needs customers. CATS also has a state-of-the-art rapid transit system which integrates bus and light rail into a comprehensive public transportation network

- GoTriangle: A partnership of public transit agencies and organizations funded to promote commuter benefits in the Triangle. The GoTriangle Regional Call Center (919-485-RIDE) and gotriangle.org help people find more sustainable ways to get around -- transit, carpool, biking and more! Need a personal step-by-step process on how commuting in the Triangle works - Individualized Assistance.

- Land of Sky Council of Governments (COG): Spanning North Carolina's majestic western mountains, the Land-of-Sky Region is a dynamic center of tourism, manufacturing trade, and education. The 1,867 square mile region encompasses Buncombe, Henderson, Madison and Transylvania Counties and almost 320,000 people.

- Piedmont Authority for Regional Transportation (PART): Provides connections between major cities and 10 counties (Alamance, Davidson, Davie, Forsyth, Guilford, Randolph, Rockingham, Stokes, Surry, and Yadkin) in the Piedmont Triad region. Riders can

call 336-883-7278 to learn more about express buses, shuttles, vanpools, carpools and various TDM resources.

- Go Coast: Wilmington's regional Transportation Demand Management (TDM) program. The goal of the program is to develop and promote a range of transportation choices for the Wilmington region's citizens and visitors.

NCDOT Resources

NCDOT Public Transportation Division links to more than 100 urban and rural public transportation systems serving all 100 counties in North Carolina. NCDOT Traffic & Travel Conditions provides real-time travel and weather information, as well as transit, rail, and airport information for North Carolina travelers.

Please be aware that the automobiles used in this service are not under the control of participating agencies and therefore may not be cleaned or sanitized in accordance with CDC or State recommendations.

Terms & Conditions | Privacy Statement

ATTACHMENT 32

Unique Natural Features - Water Resources

NATURAL FEATURES

UNIQUE NATURAL FEATURES AND AREAS

1. Will the project location, construction, or activities affect unique natural features or resource extraction on or near the site? **No.** Will the project either destroy or isolate the unique natural feature from public or scientific access? **N/A.**

2. Will the unique feature or resource extraction activity pose safety hazards for a proposed development? **No.**

WATER RESOURCES

1. Is the site subject to rapid water withdrawal problems that change the depth or character of the water table or aquifer? **No.** Are there a large number of wells or wells that pump large quantities of water from the water table near the proposed project site? **No.**

2. Will the project use groundwater for its water supply? **No.** If so, is the groundwater safe for use for the intended purposes? **NA.**

3. Will the project use a septic system? **No.** If so, is the system in proximity to sensitive natural receptors (e.g., wetlands) that could be adversely impacted by the design or location? **No.** Is there a large variance in the water table? **No.**

4. Are there visual or other indications of water quality problems on or near the site (e.g., algae blooms or state listing as an impaired stream/waterway)? **No.** Will the riparian buffer (i.e., natural wooded buffer adjacent to a stream) be maintained in a conservation easement or, conversely, diminished, damaged or destroyed? **NA.**

5. Will the project involve a substantial increase in impervious surface area? **No.** Have runoff control measures and/or permeable surfaces been included in the design? **Yes.**

6. Will the project substantially reduce groundwater recharge due to increase in impervious surface area? **No.** If so, are sensitive groundwater dependent features (e.g., rare wetlands) present that could be affect? **NA.** If yes, have appropriate measure been included in the design to promote groundwater recharge? **NA.**

7. Is the project located in a state or locally designated sensitive watershed area? **No.** If so, have appropriate run-off control measures been included in the design? **NA.**

8. Is the project located in the watershed of a particularly sensitive natural area? **No.** If so, have additional run-off control measures been included in the design. **No.**

9. Will the project involve the impoundment of over 10 acres or divert or change a stream or lake? **No.**

10. Will the project affect a Wild and Scenic River or a river in the Nationwide Rivers inventory? **No.**

IMPORTANT AND PRODUCTIVE FARMLANDS (AGRICULTURAL LANDS)

1. Will the proposed project be located on or directly adjacent to land that is categorized as prime, unique, or of State or local importance?
   No. The project location within an Urbanized Area (Wilmington, NC Urban Area), per the US Census Bureau; the Farmland Protection Policy Act is not applicable.

2. Will the project location, construction, or activities of project users adversely affect farmland on or near the site by conversion? **No.**

3. Will drainage from the project adversely affect farmland? **No.**

4. Will the project create problems by introducing nuisance species of vegetation which may spread to adjacent farmland? **No.**

VEGETATION AND WILDLIFE

1. Will the project create special hazards for animal life? What types and numbers of animals will be affected and how? **No.**

2. Will the project impact migratory birds? **No.**

3. Does the project site host any species that are monitored or listed by local, state, tribal or the federal government? **No.**

4. Will the project damage or destroy existing wildlife habitats (e.g., removal or blockage of wildlife corridors, such as a riparian buffer?). **No.**

5. Will excessive grading alter the groundwater level and thus cause death of trees and ground cover which in turn diminishes animal habitat? **No.**

6. Will the project damage game fish habitat or spawning grounds? **No.**

7. Will the project create conditions favorable to the proliferation of pest/nuisance species? **No.**

8. Will the project create conditions (e.g., generate excessive noise, introduce pesticide usage) that could harm or harass wildlife species that are nationally, regionally or locally rare or protected by state or local ordinance? **No.**

ATTACHMENT 33

Climate Change Documentation

Hazard Report

Extreme Heat

Census Tract in
New Hanover County, North Carolina

National Risk Index Rating
Relatively Moderate

Total Population
2,653

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
Yes

Explore additional data



U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Extreme Heat Annualized Frequency
0.97

Expected Annual Loss Rating
Relatively Moderate

Expected Annual Loss Total ($)
US$14,185.12



Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Annual days with:						
Maximum temperature > 105°F	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	2 days 2 - 2
Maximum temperature > 100°F	1 days 1 - 1	1 days 1 - 1	2 days 2 - 2	3 days 3 - 3	4 days 4 - 2	15 days 15 - 15
Maximum temperature > 95°F	13 days 13 - 13	15 days 15 - 15	20 days 20 - 20	27 days 27 - 27	28 days 28 - 28	62 days 62 - 62
Maximum temperature > 90°F	61 days 61 - 61	65 days 65 - 65	75 days 75 - 75	85 days 85 - 85	86 days 86 - 86	120 days 120 - 120
Average Daily temperature:						
Average daily minimum temperature °F	55 °F 55 - 55	55 °F 55 - 55	56 °F 56 - 56	57 °F 57 - 57	57 °F 57 - 57	60 °F 60 - 60
Average daily maximum temperature °F	55 °F 76 - 76	76 °F 76 - 76	56 °F 77 - 77	78 °F 78 - 78	57 °F 78 - 78	81 °F 81 - 81
Annual temperature:						
Annual single highest maximum temperature °F	100 °F 100 - 100	100 °F 100 - 100	100 °F 100 - 100	101 °F 101 - 101	102 °F 102 - 102	105 °F 105 - 105
Annual highest maximum temperature averaged over a 5-day period °F	97 °F 97 - 97	97 °F 97 - 97	98 °F 98 - 98	99 °F 99 - 99	99 °F 99 - 99	102 °F 102 - 102
Cooling degree days (CDD)	2,397 days 2,397 - 2,397	2,438 days 2,438 - 2,438	2,604 days 2,604 - 2,604	2,780 days 2,780 - 2,780	2,807 days 2,807 - 2,807	3,487 days 3,487 - 3,487

N/A = Data Not Available for the selected area

Hazard Report

Drought

Census Tract in
New Hanover County, North Carolina

National Risk Index Rating
No Rating

Total Population
2,653

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
Yes

Explore additional data



U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Drought Annualized Frequency
8.56

Expected Annual Loss Rating
No Expected Annual Losses

Expected Annual Loss Total ($)
US$0.00

Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Annual days with:						
Maximum temperature > 100 °F	1 days 1 - 1	1 days 1 - 1	2 days 2 - 2	3 days 3 - 3	4 days 4 - 2	15 days 15 - 15
Maximum temperature > 90 °F	61 days 61 - 61	65 days 65 - 65	75 days 75 - 75	85 days 85 - 85	86 days 86 - 86	120 days 120 - 120
Average Daily temperature:						
Average daily maximum temperature °F	55 °F 76 - 76	76 °F 76 - 76	56 °F 77 - 77	78 °F 78 - 78	57 °F 78 - 78	81 °F 81 - 81
Annual temperature:						
Annual single highest maximum temperature °F	100 °F 100 - 100	100 °F 100 - 100	100 °F 100 - 100	101 °F 101 - 101	102 °F 102 - 102	105 °F 105 - 105
Annual highest maximum temperature averaged over a 5-day period °F	97 °F 97 - 97	97 °F 97 - 97	98 °F 98 - 98	99 °F 99 - 99	99 °F 99 - 99	102 °F 102 - 102
Annual average total precipitation	58" 58 - 58	58" 58 - 58	59" 59 - 59	59" 59 - 59	59" 59 - 59	59" 59 - 59
Annual average number of dry days	178 days 178 - 178	179 days 179 - 179	179 days 179 - 179	181 days 181 - 181	181 days 181 - 181	187 days 187 - 187
Annual number of days with measurable precipitation (wet days)	187 days 187 - 187	186 days 186 - 186	186 days 186 - 186	184 days 184 - 184	184 days 184 - 184	178 days 178 - 178
Maximum number of consecutive dry days	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	14 days 14 - 14
Maximum number of consecutive wet days	15 days 15 - 15	15 days 15 - 15	15 days 15 - 15	16 days 16 - 16	16 days 16 - 16	16 days 16 - 16

N/A = Data Not Available for the selected area

Hazard Report

Wildfire

Census Tract in
New Hanover County, North Carolina

National Risk Index Rating
Relatively Low

Total Population
2,653

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
Yes

Explore additional data



U.S. Climate Resilience Toolkit
Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Wildfire Annualized Frequency
0.00

Wildfire Hazard Potential (Mean)
296.45

Expected Annual Loss Rating
Relatively Low

Expected Annual Loss Total ($)
US$1,825.64

Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Annual days with:						
Maximum temperature > 100°F	1 days 1 - 1	1 days 1 - 1	2 days 2 - 2	3 days 3 - 3	4 days 4 - 2	15 days 15 - 15
Maximum temperature > 90°F	61 days 61 - 61	65 days 65 - 65	75 days 75 - 75	85 days 85 - 85	86 days 86 - 86	120 days 120 - 120
Daily temperature:						
Average daily minimum temperature °F	55 °F 55 - 55	55 °F 55 - 55	56 °F 56 - 56	57 °F 57 - 57	57 °F 57 - 57	60 °F 60 - 60
Average daily maximum temperature °F	55 °F 76 - 76	76 °F 76 - 76	56 °F 77 - 77	78 °F 78 - 78	57 °F 78 - 78	81 °F 81 - 81
Annual temperature:						
Annual single highest maximum temperature °F	100 °F 100 - 100	100 °F 100 - 100	100 °F 100 - 100	101 °F 101 - 101	102 °F 102 - 102	105 °F 105 - 105
Annual highest maximum temperature averaged over a 5-day period °F	97 °F 97 - 97	97 °F 97 - 97	98 °F 98 - 98	99 °F 99 - 99	99 °F 99 - 99	102 °F 102 - 102
Annual number of dry days	178 days 178 - 178	179 days 179 - 179	179 days 179 - 179	181 days 181 - 181	181 days 181 - 181	187 days 187 - 187
Annual number of days with measurable precipitation (wet days)	187 days 187 - 187	186 days 186 - 186	186 days 186 - 186	184 days 184 - 184	184 days 184 - 184	178 days 178 - 178
Maximum number of consecutive dry days	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	13 days 13 - 13	14 days 14 - 14
Maximum number of consecutive wet days	15 days 15 - 15	15 days 15 - 15	15 days 15 - 15	15 days 16 - 16	16 days 16 - 16	16 days 16 - 16

N/A = Data Not Available for the selected area

Hazard Report

Flooding

Census Tract in
New Hanover County, North Carolina

National Risk Index Rating
Very Low

Total Population
2,653

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
Yes

Explore additional data

Historical Risk

according to the FEMA National Risk Index

Flooding Annualized Frequency
2.83

Expected Annual Loss Rating
Very Low

Expected Annual Loss Total ($)
US$85.80

Area in a 100-year / 500-year flood zone (%)
12.81% / 1.34%

Area outside 100-year or 500-year flood zone (%)
85.85%

Area unmapped/undetermined for flooding (%)
0.00%

Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Annual days with:						
Total precipitation > 1"	12 days 12 - 12	12 days 12 - 12	12 days 12 - 12	12 days 12 - 12	12 days 12 - 12	13 days 13 - 13
Total precipitation > 2"	2 days 2 - 2	2 days 2 - 2	3 days 3 - 3	2 days 2 - 2	3 days 3 - 3	3 days 3 - 3
Total precipitation > 3"	1 days 1 - 1	1 days 1 - 1	1 days 1 - 1	1 days 1 - 1	1 days 1 - 1	1 days 1 - 1
Annual precipitation:						
Average annual total precipitation	58"	58"	59"	59"	59"	59"



U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

	58 - 58	58 - 58	59 - 59	59 - 59	59 - 59	59 - 59
Annual days with measurable precipitation	**187 days** 187 - 187	**186 days** 186 - 186	**186 days** 186 - 186	**184 days** 184 - 184	**184 days** 184 - 184	**178 days** 178 - 178
Maximum period of consecutive wet days	**15 days** 15 - 15	**15 days** 15 - 15	**15 days** 15 - 15	**16 days** 16 - 16	**16 days** 16 - 16	**16 days** 16 - 16
Days with maximum temperature below 32 °F	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0
Annual days that exceed 99th percentile precipitation	**8 days** 8 - 8	**8 days** 8 - 8	**8 days** 8 - 8	9 days 9 - 9	**9 days** 9 - 9	**9 days** 9 - 9

N/A = Data Not Available for the selected area

Hazard Report

Coastal Inundation

Census Tract in
New Hanover County, North Carolina

National Risk Index Rating
Very Low

Total Population
2,653

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
Yes

Explore additional data



U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Coastal Inundation Annualized Frequency
2.76

Expected Annual Loss Rating
Very Low

Expected Annual Loss Total ($)
US$21.65

Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Sea Level Rise:						
Percent of selected area impacted by global sea level rise	0%	0%	0%	0%	1%	1%

N/A = Data Not Available for the selected area

ATTACHMENT 34

State Environmental Clearinghouse Comments

NC DOA
Department of Administration

Roy Cooper
Governor

Pamela B. Cashwell
Secretary

November 17, 2022

Andrea Gievers
Starway Village Apartments
c/o NC Department of Public Safety
Office of Recovery and Resiliency
Durham, NC 27709-

Re: SCH File # 23-E-4600-0064 Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories),

Dear Andrea Gievers:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act.

Attached to this letter are comments made by the agencies in the review of this document. If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

If you have any questions, please do not hesitate to contact me at (984) 236-0000.

Sincerely,

CRYSTAL BEST
State Environmental Review Clearinghouse

Attachments

Mailing
1301 Mail Service Center | Raleigh, NC 27699-1301

Location
116 West Jones St. | Raleigh NC 27603
984-236-0000 T

ncadmin.nc.gov

Control No.: 23-E-4600-0064

County.: NEW HANOVER

Date Received: 10/17/2022

Agency Response: 11/16/2022

Review Closed: 11/16/2022

LYN HARDISON

CLEARINGHOUSE COORDINATOR

DEPT OF ENVIRONMENTAL QUALITY

Project Information

Type: National Environmental Policy Act ping

Applicant: Starway Village Apartments

Project Desc.: Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: LYN HARDISON Date: 11/16/2022

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary

NORTH CAROLINA
Environmental Quality

To: Crystal Best
State Clearinghouse
NC Department of Administration

From: Lyn Hardison
Division of Environmental Assistance and Customer Service
Washington Regional Office

Re: 23-0064
Scoping - Proposed project is for the construction of Starway Village Apartments which will include 278-units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements. New Hanover County

Date: November 15, 2022

The Department of Environment Quality has reviewed the proposal for the referenced project Based on the information provided, twelve (12) contamination sites were identified within one mile of the project site. In addition, several of our agencies have identified permits that may be required and offered some valuable guidance. The comments are attached for the applicant's review.

The Department will continue to be available to assist the applicant with any questions or concerns.

Thank you for the opportunity to respond.

Attachments

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: WIRO
Project Number: 23-0064 Due Date: 11/09/2022
County: New Hanover

After review of this project it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters.	Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual.	30 days (90 days)
☐	Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system	Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria.	30 days (N/A)
☐	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
☐	Water Use Permit	Pre-application technical conference usually necessary.	30 days (N/A)
☐	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well.	7 days (15 days)
☐	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☐	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.O100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
☐	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☐	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950	Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building.	60 days (90 days)
☐	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of $65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
☐	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		(30 days)
☐	Sedimentation and erosion control must be addressed in accordance with _____ Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		Based on Local Program
☐	Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre.		30-60 days (90 days)
☐	Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state.		45 days (90 days)

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: WIRO
Project Number: 23-0064 Due Date: 11/09/2022
County: New Hanover

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Mining Permit	On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)
☐	Oil Refining Facilities	N/A	90-120 days (N/A)
☐	Permit to drill exploratory oil or gas well	File surety bond of $5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations.	10 days N/A
☐	Geophysical Exploration Permit	Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
☐	State Lakes Construction Permit	Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property	15-20 days N/A
☐	401 Water Quality Certification	Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323.	60 days (130 days)
☐	Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program		
☐	Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information		
☐	CAMA Permit for MAJOR development	$250.00 - $475.00 fee must accompany application	75 days (150 days)
☐	CAMA Permit for MINOR development	$100.00 fee must accompany application	22 days (25 days)
☐	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
☐	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
☒	Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☒	If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☐	Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information.		

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: WIRO
Project Number: 23-0064 Due Date: 11/09/2022
County: New Hanover

Other Comments (attach additional pages as necessary, being certain to comment authority)

Division	Initials	No comment	Comments	Date Review
DAQ	DAC	☒		10/20/2022
DWR-WQROS (Aquifer & Surface)	&	☐	It is recommended to schedule a site visit with 401 Water quality staff to discuss the proposal and to ensure compliance will be maintained per 401 surface Water requirements, surface water standards and buffer rules. & If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization.	/ /
DWR-PWS	HLC	☐	see above comments	10/21/2022
DEMLR (LQ & SW)		☐	If greater than one acre of disturbance is proposed, an approved Sedimentation and Erosion Control and State Stormwater permit will be required prior to any land disturbance.	/ /
DWM – UST	LEP	☐	As per a search of the UST Section databases, no reported petroleum releases are known to exist at this location, nor are there any records of registered USTs. To view/find other petroleum related incidents in the area please use the LINK TO UST Section GIS MAP: http://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/waste-management-gis-maps	10/20/2022
Other Comments		☐		/ /

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043

☐ **Fayetteville Regional Office**
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040

☐ **Raleigh Regional Office**
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718

☐ **Washington Regional Office**
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716

☒ **Wilmington Regional Office**
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004

☐ **Winston-Salem Regional Office**
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

Date: November 1, 2022

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Robert J Kelley
Inactive Hazardous Sites Branch

Subject: NEPA Project # 23-0064 Starway Village Apartments/HUD CDBG-DR, New Hanover County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the Starway Village Apartments/HUD CDBG-DR Project. Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

Twelve (12) sites were identified within one mile of the project as shown on the attached report. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

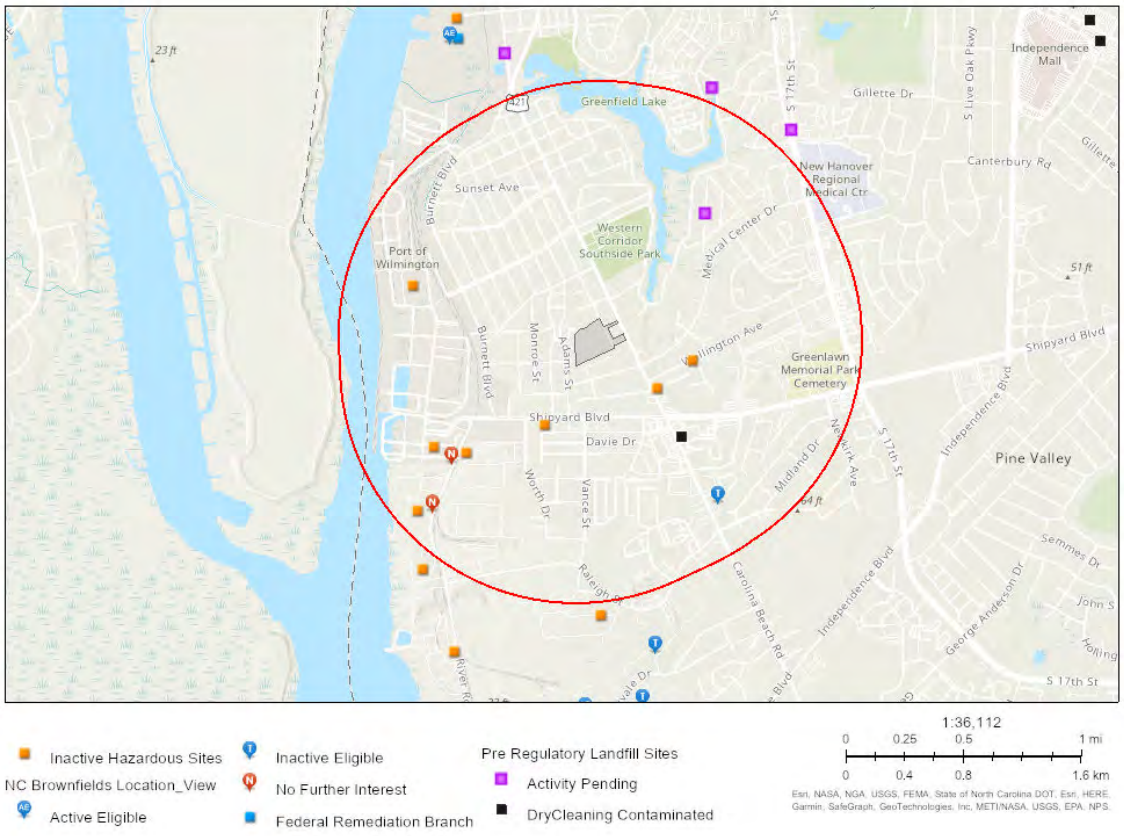
Superfund & Brownfield Sites SEPA/NEPA Review Report

Area of Interest (AOI) Information

New Hanover NEPA Project #20-0064

Area : 2,452.09 acres

Nov 1 2022 8:16:46 Eastern Daylight Time



Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

Summary

Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	1	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	7	N/A	N/A
Pre-Regulatory Landfill Sites	1	N/A	N/A
Brownfields Program Sites	3	N/A	N/A

Certified DSCA Sites

#	Site_ID	Site_Name	Count
1	DC650004	Coastal Dry Cleaners	1

Inactive Hazardous Sites

#	EPAID	SITENAME	Count
1	NONCD0001723	FLINT HILLS RESOURCES-CMT SITE	1
2	NONCD0002194	NCSPA BLDG C-1	1
3	NONCD0002426	ROYSTER TRANSPORT CO., INC.	1
4	NONCD0002561	SUNOCO BULK TERMINAL	1
5	NONCD0002750	WK HOBBS BP SITE	1
6	NONCD0002781	ADAMS PAINTING SERVICE	1
7	NONCD0002797	KOCH NORTH PARAXYLENE	1

Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NONCD0000758	Wisteria Dr. LF	1

Brownfields Program Sites

#	BF_ID	BF_Name	Count
1	802404065	North Terminal	1
2	2303319065	Travelers Oil Co	1
3	903005065	South Terminal	1

Department of Environmental Quality
Project Review Form

Project Number: 23-0064 **County: New Hanover** **Date Received: 10-17-2022**

Due Date: 11-11-2022

Project Description: Scoping - Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

This Project is being reviewed as indicated below:

Regional Office	Regional Office Area	In-House Review	
___ Asheville	✓ Air	___ Air Quality	___ Coastal Management
___ Fayetteville	✓ DWR	___ Parks & Recreation	___ Marine Fisheries
___ Mooresville	✓ DWR - Public Water	✓ Waste Mgmt	___ Military Affairs
___ Raleigh	✓ DEMLR (LQ & SW)	___ Water Resources Mgmt (Public Water, Planning & Water Quality Program)	___ DMF-Shellfish Sanitation
___ Washington	✓ DWM	___ DWR-Transportation Unit	✓ Wildlife Maria
✓ Wilmington			___ Wildlife/DOT
___ Winston-Salem			

Manager Sign-Off/Region:	Date:	In-House Reviewer/Agency:
	10-20-2022	MJD / NCWRC

Response (check all applicable)

___ No objection to project as proposed.

✓ No Comment

___ Insufficient information to complete review

___ Other (specify or attach comments)

If you have any questions, please contact:

Lyn Hardison at lyn.hardison@ncdenr.gov or (252) 948-3842
943 Washington Square Mall Washington NC 27889
Courier No. 16-04-01

Department of Environmental Quality
Project Review Form

Project Number: 23-0064 **County: New Hanover** **Date Received: 10-17-2022**

Due Date: 11-11-2022

Project Description: Scoping - Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

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___ Washington	✓ DWM		✓ Wildlife Maria
✓ Wilmington		___ DWR-Transportation Unit	___ Wildlife/DOT
___ Winston-Salem			

Manager Sign-Off/Region:	Date:	In-House Reviewer/Agency:
	11/7/22	Melodi Deaver, Hazardous Waste Section

Response (check all applicable)

___ No objection to project as proposed.

X
___ No Comment

___ Insufficient information to complete review

___ Other (specify or attach comments)

If you have any questions, please contact:

Lyn Hardison at lyn.hardison@ncdenr.gov or (252) 948-3842
943 Washington Square Mall Washington NC 27889
Courier No. 16-04-01

Control No.: 23-E-4600-0064

County.: NEW HANOVER

Date Received: 10/17/2022

Agency Response: 11/16/2022

Review Closed: 11/16/2022

JINTAO WEN

CLEARINGHOUSE COORDINATOR

DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ping

Applicant: Starway Village Apartments

Project Desc.: Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 11/7/2022

Control No.: 23-E-4600-0064

County.: NEW HANOVER

Date Received: 10/17/2022

Agency Response: 11/16/2022

Review Closed: 11/16/2022

DEVON BORGARDT

CLEARINGHOUSE COORDINATOR

DEPT OF NATURAL & CULTURAL RESOURCE

Project Information

Type: National Environmental Policy Act ping

Applicant: Starway Village Apartments

Project Desc.: Proposed project is for the construction of Starway Village Apartments. The project site is located at 2346 Carolina Beach Road in Wilmington, NC and is comprised of four contiguous parcels. The proposed project entails constructing 278 units in seven apartment buildings (three and four stories), two playgrounds, a clubhouse, a pool, parking, two stormwater detention ponds, and landscaping improvements.

As a result of this review the following is submitted:

☐ No Comment ☑ Comments Below ☑ Documents Attached

No historic properties affected. Memo to applicant requested.

Reviewed By: DEVON BORGARDT Date: 11/14/2022

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

November 14, 2022

MEMORANDUM

TO: Andrea Geivers andrea.l.gievers@rebuild.nc.gov
North Carolina Office of Recovery and Resiliency
Department of Public Safety

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer RMB for Ramona M. Bartos

SUBJECT: Construct Starway Village Apartments, 2346 Carolina Beach Road, Wilmington, New Hanover County, SCH 23-E-4600-0064, ER 22-2557

Thank you for your submission concerning the above referenced project. We have reviewed the materials provided to us by the State Clearinghouse on October 17, 2022, and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above-referenced tracking number.