Princeville Levee Floodgate Repairs Project

EO 11988 Floodplain Management and EO 11990 Protection of Wetlands Determination

Infrastructure Recovery Program

April 18, 2023

Introduction & Overview

The purpose of Executive Order (EO) 11988 Floodplain Management is "to avoid to the extent possible the long- and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." 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 proposed action involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program – Disaster Recovery (CDBG-DR) funding to perform inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations. The analysis that follows focuses on floodplain and wetland impacts, as there are direct wetland and floodplain impacts associated with this proposed action. Based on the existing levee system, need for repairs, type of land use, and other case characteristics described herein, it is concluded that there is a reasonable basis to proceed with funding for this proposed action within floodplain and wetland. The HUD CDBG-DR funding is administered through the North Carolina Office of Recovery and Resiliency (NCORR) Infrastructure Recovery Program which is developing sustainable and resilient communities. Thus, alternatives preventing or impeding the development of sustainable and resilient communities are not considered reasonable alternatives.

Description of Proposed Action & Land Use

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). During the Hurricane Matthew storm event, a large majority of the 2,357 citizens residing in the Town of Princeville were displaced by floodwaters, in part due to the functional failure of the Princeville floodgates located along the USACE levee bordering the Tar River. Following the storm event, the Town of Princeville undertook to design construction upgrades and necessary repairs to critical flood control infrastructure so as to prevent flooding of the Town during future storm events. Areas anticipated to be addressed have experienced flooding in the past (See Attachment 1: Hurricanes Matthew and Floyd Extent Map from June 2017 Meeting in *Princeville Levee Floodgate Repairs Project Environmental Assessment [EA] Environmental Review Record [ERR]*).

The proposed action consists of the Town of Princeville, North Carolina performing inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and constructing permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations. The existing levee segments of the proposed action were constructed in 1965 to 1967 by the US Army Corps of Engineers (USACE) but are maintained by Edgecombe County. The Town's procured designer conducted design analysis calculations for these levees, which also contain culverts with flap gates in the existing levee segments, installed by NC Department of Transportation (NCDOT) in 2018 as backflow prevention devices. The proposed floodgate inlet and outlet channel repairs include excavating and installing rip-rap channel linings consistent with the dimensions and extents shown in the original

Princeville Levee construction plans, with some modifications to the rip-rap thickness and size to prevent rip rap loss during high flow events (**Appendix 1**: Design Plans). The access roads consist of constructing 10-foot-wide gravel roads with 1-foot-wide shoulders and 3:1 side-slopes. The access roads constructed of fill material with a gravel, travel way will traverse up, over, and/or down the levee and connect to "stub-roads" that provide access to inlet and outlet channels at Sites 1, 2, and 3. Site 4 already has adequate access for proposed channel repairs and future inspection, maintenance, and flood-fighting operations, therefore, no new access roads are proposed at Site 4.

Proposed location

Four levee floodgate culvert locations along the Tar River, Princeville, Edgecombe County, NC 27886 (Subject Property). *(The structure site locations are also identified on the original USACE Princeville Dike General Plan, Vicinity Map and Index of Drawings Dike Sections "A" and "B", Plate G-1 dated February 15, 1965, included in the USACE Princeville Dike Repairs Operation and Maintenance Manual dated July 2001, and recorded in Map Book 13, Pages 93-109 in the Edgecombe County, NC Register of Deeds Office.)*

Structure Site Location	**Reference Station**	**Approximate Location**
Structure 1 – Princeville Dike	Section A Sta. 10+75	35.890816, -77.532662
Structure 2 – Princeville Dike	Section A Sta. 20+64	35.894597, -77.516820
Structure 3 – Princeville Dike	Section A Sta. 75+16	35.895364, -77.513700
Structure 4 – Princeville Dike	Section B Sta. 40+34	35.873450, -77.525434

The proposed action will occur mainly at four floodgate culvert locations (Subject Property), identified above, located along the intersection of the USACE protective levee and the Tar River (**Appendix 1**: Design Plans and USACE Notice of Preliminary Jurisdictional Determination). This proposed action is anticipated to consist of construction activities that include earthwork, access road construction, replacement of existing culvert infrastructure, placement of base and incidental aggregates, erosion controls, and restoration of the site following construction, with a total of 7.7 acres of ground disturbance potential, with most of the work occurring in areas of previous ground disturbance.

The Subject Property contains areas classified as shaded Zone "X" (areas between the limits of the base flood and the 0.2-percent-annual-chance or 500-year floodplain), Zone "AE" (100-year floodplain), and FEMA-designated regulatory floodway, as denoted by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) in **Appendix 1**. Preliminary FIRMs (PFIRMs) are not available for the Town of Princeville according to the FEMA Map Service Center. The FEMA FIRMs were consulted for the Subject Property. Site 1 is located on FEMA FIRM panel 3720473800K, effective on 06/02/2015. Sites 2 and 3 are located on FEMA FIRM panels 3720473800K and 3720474800K, both effective on 06/02/2015. Site 4 is located on FEMA FIRM panel 3720473700J, effective on 11/03/2004. The proposed action includes work in areas located within a FEMA-designated regulatory floodway. Since the proposed action involves repairing floodgates at an existing levee, the activities are a functionally dependent use. Thus, the proposed action activities may receive federal funding despite location in a regulatory floodway and compliance with 24 CFR 55 and EO 11988 is required (See 24 CFR 55.1(c)(1)). The proposed action does not include an insurable structure according to the National Flood Insurance Program (NFIP) Flood Insurance Manual effective October 1, 2022.

Applicable Regulatory Procedure Per EO 11988 and EO 11990

The proposed action corresponds with a noncritical action not excluded under 24 CFR §55.12, and the use is a functionally dependent use. Funding is permissible for the use in the floodplain, floodway, and wetland if the proposed action is processed under 24 CFR §55.20 and the findings of the determination are affirmative to suggest that the proposed action may proceed.

In accordance with 24 CFR 55, the proposed action's activity to repair floodgates at an existing levee and construct access roads occurs in the Town of Princeville that is a participating community in good standing in the regular program of the National Flood Insurance Program (NFIP). Substantial Improvement/ Substantial Damage calculations do not apply to this proposed action. However, this proposed action involves "modification" of floodplain and floodway. The proposed action's levee floodgate repairs are allowed in floodway since it is classified as non-critical action, is a functionally dependent use that must necessarily be in close proximity to water (24 CFR §55.2[b][6]) and is being processed under 24 CFR 55.20. As such, the full eight-step floodplain determination process in §55.20 is required, and the following analysis examines each step in an EO 11988 floodplain management determination process.

Based on information from the USACE Preliminary Jurisdictional Determination (PJD) (see **Appendix 1**), there will be "new construction" in National Wetlands Inventory (NWI)-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub) and streams. Thus, in accordance with the decision-making process set forth in 24 CFR Part 55, the following analysis also examines each step in an EO 11990 wetlands protection determination process.

Step 1. **Determine Whether the Proposed Action is Located in the 100-year Floodplain (500-year for Critical Actions) or results in New Construction in Wetlands.**

According to the FEMA FIRMs, the proposed action occurs in areas classified as 500-year floodplain, 100-year floodplain (Special Flood Hazard Area [SFHA] - Zone "AE"), and FEMA-designated regulatory floodway (**Appendix 1**). The proposed action is considered "modification" of floodplain and floodway as the activities will involve excavation, fill, and channel repair in the 100-year floodplain and excavation, fill and channel repair in FEMA-designated regulatory floodway. Communities must regulate development in floodways to ensure that there are no increases in upstream flood elevations. A Floodplain Development Permit and no-rise certification obtained for the proposed action concluded that it will not increase base flood elevations within the FEMA floodplain (**Appendix 1**).

Based on the USACE PJD, the proposed action is located in NWI-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub) and streams, as shown in **Appendix 1**. The proposed action is considered "new construction" in wetlands as the activities will involve hand clearing, fill and channel repair in wetlands. In addition, there will be temporary dewatering and channel repair in streams. The USACE Clean Water Act (CWA) Section 404 Nationwide Permit #3 (NWP #3) for Maintenance has been issued for the wetland and stream impacts. A CWA Section 408 Permit has been approved and is being obtained from USACE before commencing work. The NC Department of Environmental Quality (DEQ) Division of Water Resources (NC DWR) has issued the CWA Section 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization for the proposed action.

The proposed action's activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. All necessary permits will be identified and obtained prior to commencing work and appended to the *Princeville Levee Floodgate Repairs Project EA ERR* when received from the permitting agencies.

Step 2. **Initiate Public Notice for Early Review of Proposal.**

Because the proposed action is located in floodplain, floodway and 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 new, substantive public comments were received. Mr. Daniel Webb, Edgecombe County, had previously requested railway access to cross the tracks for maintenance purposes at the end of Site 4 to be incorporated into the proposed project but this was deemed to be outside of the proposed project's scope and timeline. The U.S. EPA commented that the "EPA has not identified any significant environmental impacts associated with the proposed activity and has no further comments."

The early notice and corresponding 15-day public comment period started on December 8, 2022, with the "Early Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland" being published in the Rocky Mount Telegram newspaper and the 15-day period expiring on December 23, 2022. The notice targeted local residents within the community, including those in the floodplain. 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 December 8, 2022: HUD NC Field Office; Federal Emergency Management Agency (FEMA); U.S. Environmental Protection Agency (EPA); U.S Fish and Wildlife Service (USFWS); National Oceanic and Atmospheric Administration (NOAA) Fisheries Service; USACE; NC Wildlife Resource Commission (WRC); and NC State Environmental Clearinghouse. The notice was also sent to Edgecombe County and the Town of Princeville. Project information has been sent to the NC State Historic Preservation Office (SHPO), Catawba Indian Nation, and Tuscarora Nation for review and comment under Section 106 of the National Historic Preservation Act of 1966 (NHPA) (See *Princeville Levee Floodgate Repairs Project EA ERR*). (See **Appendix 2** for the early notice distributed to these agencies, the newspaper publication affidavit, distribution list, and comments received).

Step 3. **Identify and Evaluate Practicable Alternatives to Locating the Proposed Action in a 100-year Floodplain or Wetland.**

The North Carolina Infrastructure Recovery 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.

The main alternative is the "No Action" Alternative for the current proposed action. The "No Action" Alternative is not considered feasible since Princeville has been historically subjected to devastating flooding and storm damage, and action is necessary to protect the residents and community from future storm events. One concern with the "No Action" Alternative is the potential decertification of the levee by FEMA which would result in virtually the whole town being mapped as 100-year floodplain and subsequent requirement for the costly elevation of structures and flood insurance for homeowners according to the Princeville Recovery Plan.

This proposed action involves repairing floodgates at an existing levee and constructing access roads. The proposed action must be performed at the existing floodgates, and project designs have been completed in accordance with agency input to minimize impacts to the environment and community. The existing levee segments of the proposed action were constructed between 1965 to 1967 by the USACE but are maintained by Edgecombe County. According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. When levees fail, or are overtopped, the results can be catastrophic. Levees can and do deteriorate over time and must be maintained

to retain their effectiveness. Deterioration of the levee and, in particular, these sections addressed by the proposed action have been studied and discussed in the Preliminary Engineering Report and Effect of Repeated Rise and Fall of Water Level on Seepage-Induced Deformation and Related Stability Analysis of Princeville Levee, Engineering Geology, Volume 266, 105458, March 5, 2020. During the Preliminary Engineering Report's observations and conversations with Edgecombe County personnel, the structures were ascertained to have sustained damage over the years due to periodic flooding and weathering over time. As shown in Appendix I of the Preliminary Engineering Report, the concrete headwalls have begun to deteriorate and the riprap blankets have been washed out. Without the riprap blankets, the soil foundations of the headwalls have been undercut, sustained erosion is occurring due to lack of energy dissipation at the outlet, and the flapper gates fail to perform properly. Modifications to the riprap erosion blankets are required to improve the functionality of the flapper gates. During the Hurricane Matthew storm event, the floodgate structures were submerged underwater for at least five days resulting in weakness and more erosion around already worn structures, and damaged floodgate hinges. County staff temporarily repaired two broken hinges by welding. The proposed repairs are intended to restore the existing structures to their former as-built condition according to the Preliminary Engineering Report. The "No Action" Alternative is not feasible in relation to the desired objective. 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 floodplain and wetlands and the potential to disrupt the natural, social, economic and beneficial functions and values of the floodplain and wetlands.

Numerous alternative and concerted projects have been considered to address Princeville's historic flooding over the years. (See Town of Princeville's Final Comprehensive Plan.) As a result of Hurricane Floyd in 1999, Princeville experienced catastrophic flooding and the damage or destruction of nearly all 1,000 residential structures. Floodwaters initially entered the Town through a number of ungated culverts located under a section of U.S. Highway 64. This flood of record then overtopped the levee in one location and ultimately circumvented the levee at its north end, inundating the Town with floodwaters. Up to twenty feet of water stood in Princeville for nearly 10 days until river levels subsided enough that the floodwaters drained or could be pumped from the town.

In the aftermath of Hurricane Floyd, President Clinton issued Executive Order 13146, which established a President's Council on the Future of Princeville, North Carolina to consider "…the unique historic and cultural importance of Princeville in American history; the views and recommendations of the relevant State and local governments, the private sector, citizens, community groups and non-profit organizations, on actions that they could take to enhance the future of Princeville and its citizens; and, agency assessments and recommendations to repair and rebuild Princeville, and to the extent practicable, protect Princeville from future floods." The Council's report was submitted in August 2000, and recommended quickly bringing the citizens of Princeville home while rebuilding toward a more disaster-resistant community. The Council's report, EO 13146, EO 12898, and community and agency input were used to determine the best and most feasible storm damage prevention solutions for the future of Princeville. The Town of Princeville has selected the proposed action to assist its residents and community to be protected from future storm damage and flooding.

In 2001, USACE was authorized and funded to prepare a feasibility study to address flood risk management issues. Multiple structural and non-structural measures and alternatives were examined during the course of the feasibility study. The Feasibility Scoping Meeting, held in 2006, discussed the likelihood that many of the most responsive plans might lack economically-justified alternatives that would meet the current guidance requiring National Economic Development (NED) justification. At that time, the entire vertical team agreed to pursue alternatives that addressed all areas of flood risk, including extending the existing levee. The Final Array of Alternatives consisted of a No-Action Plan and an array of structural and non-structural alternatives. Each alternative was formulated to provide an incremental solution to flood risk at the least cost for a given increment of flooding, as well as a suite of non-structural measures considered to

be critical to the success of each alternative. These non-structural measures included a flood warning and evacuation plan, continued floodplain management and updating of local building and zoning codes, and a flood risk management education and communication plan (for both the community and local schools). All of these non-structural components were ultimately deemed essential for an adequate flood risk management strategy for the Town and would substantially reduce remaining levels of flood risk after construction or implementation of any structural plan elements. Consideration of all factors evaluated resulted in a plan that was most responsive to flood risk, while not causing unacceptable impacts to adjacent and downstream assets. According to the April 2016 Final Report, six alternatives were identified and evaluated, including no action and 1) Flap gate additions and culvert modifications; 2) Flap gates, Hwy 33/64 interchange raising, and low shoulder levee on Hwy 64; 3) Flap gates, Hwy 33/64 interchange raising, and higher shoulder levee on Hwy 64; 4) Flap gates, Hwy 33/64 interchange raising, higher shoulder levee on Hwy 64, plus levee extension and Hwy 258 & 111 raises & ltd Shiloh Farm Road raises; 5) Flap gates, Hwy 33/64 interchange raising, higher shoulder levee on Hwy 64, plus levee extension, Hwy 258 & 111 raises & ltd Shiloh Farm Road raises, and other measures such as raise bridges; and 6) Flap gates, Hwy 33/64 interchange raising, higher shoulder levee on Hwy 64, plus levee extension, Hwy 258 & 111 raises & ltd Shiloh Farm Road raises, and other measures such as raise bridges at higher elevation . Alternatives 1 through 3 did not meet the basic objectives established for a project for flood risk reduction, and left considerable life and safety threat unresolved, thus, were incorporated as necessary elements of Alternatives 4 through 6, in order to provide a complete and substantial flood risk management system. After a full evaluation of various opportunities/alternatives and their costs and impacts, Alternative 4 was selected as the recommended plan by the USACE.

A five-day Community Design Workshop was held on August 25-29, 2017 as an intensive design-based event in addition to Town open houses on July 21, July 29, and August 16, 2017. The Princeville Recovery Plan and the Coastal Resilience Center Website discusses the workshops, alternatives, and community input received. The open houses were held for residents of Princeville in order to provide them with the time and space needed to talk in depth with UNC Coastal Resilience Center's Hurricane Matthew Disaster Recovery and Resilience Initiative (HMDRRI) Team members about greenspace, affordable housing, infrastructure, mitigation, health issues, and other recovery topics important to them. The meetings also served to create the Town's vision for the recovery plan and to identify associated goals. Members of the community also participated in discussions with the design team throughout the five-day workshop and associated field visits. This resulted in the Princeville Community Floodprint Resiliency Plan and the Recovery Plan. Town staff worked with the municipal planning team at Stewart, Inc. to craft a new Town Comprehensive Plan that builds on these efforts and engages a broad spectrum of the community to develop implementable strategies towards the community's goals. The Town's Final Comprehensive Plan noted thirteen ongoing recovery projects since 2017 including 1) stormwater repair project; 2) *this floodgate project*; 3) USACE levee expansion, extension, and associated improvements; 4) Town Hall rehabilitation and wet floodproofing; 5) senior center reconstruction; 6) museum upgrades and interactive space; 7) Heritage Park rehabilitation and walking trail; 8) farmers' market construction; 9) 53-acre development; 10) 88-acre land use planning; 11) residential structures' elevation; 12) Floodprint project's resilient development blueprint; and 13) water and wastewater system upgrades. The repair of the levee floodgates is listed as an ongoing disaster recovery effort (#2) in the Town's Final Comprehensive Plan and notes that the floodgates will "help protect the Town from flooding and release stormwater to the Tar River during normal events." Levee repair is prioritized as the #1 project in the Edgecombe County, Hurricane Matthew Resilient Redevelopment Plan, May 2017.

The above-identified alternatives will be re-evaluated in response to public comments received.

Step 4. **Identify and Evaluate Potential Direct and Indirect Impacts Associated with the Occupancy or Modification of 100-year Floodplain and Wetland and the Potential Direct and Indirect Support of Floodplain and Wetland Development that Could Result from Proposed Action.**

The focus of floodplain evaluation should be on adverse impacts to lives and property, and on natural and beneficial floodplain values. Natural and beneficial values include consideration of potential for adverse impacts on water resources such as natural moderation of floods, water quality maintenance, and groundwater recharge.

According to the FEMA Report - A Unified National Program for Floodplain Management, the two definitions commonly used in evaluating actions in floodplain are "structural" and "non-structural" activities. Per the report, structural activity is usually intended to mean adjustments that modify the behavior of floodwaters through the use of measures such as public works dams, levees, and channel work. Non-structural is usually intended to include all other adjustments (e.g., regulations, insurance, etc.) in the way society acts when occupying or modifying a floodplain. These definitions are used in describing impacts that may arise in association with potential advancement of this case.

Natural Moderation of Floods, Water Quality Maintenance, and Groundwater Recharge

According to the FEMA FIRMs, the proposed action occurs in areas classified as 500-year floodplain, 100-year floodplain (SFHA - Zone "AE"), and FEMA-designated regulatory floodway (**Appendix 1**). The proposed action is considered "modification" of floodplain and floodway as the activities will involve excavation, fill, and channel repair in the 100-year floodplain and excavation, fill and channel repair in FEMA-designated regulatory floodway. The proposed action will result in temporary and permanent impacts to 0.11 acres of 100-year floodplain and 1.37 acres of floodway. These impacts will consist of excavation, fill, and channel repair in the 100-year floodplain and in FEMA-designated regulatory floodway. Mitigation measures for the proposed action includes best management practices (BMPs) for erosion and sedimentation control such as silt fencing which will be utilized during construction.

Natural floodplains and wetlands provide flood risk reduction benefits by slowing runoff and storing flood water. The regulatory floodway refers to the channel of the Tar River and adjacent land areas that are reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in floodways to ensure that there are no increases in upstream flood elevations. A Floodplain Development Permit and no-rise certification obtained for the proposed action concluded that it will not increase base flood elevations within the FEMA floodplain (see **Appendix 1**).

Natural floodplains and wetlands provide important functions for water quality maintenance and groundwater recharge. A USACE PJD and Clean Water Act (CWA) Section 404 Nationwide Permit #3 (NWP #3) for Maintenance has been issued for the wetland and stream impacts. NC DEQ Division of Water Resources (NC DWR) has issued the CWA Section 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization. A USACE CWA Section 408 Permit has been approved and is being obtained from USACE before commencing work. Also, the NC DEMLR Erosion and Sediment Control Permit will be obtained. The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. The 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 required should design features meet minimum requirements. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. Thus, measures will be implemented to ensure the proposed project will have no further impacts to natural floodplains, wetlands

and the Tar River during construction. This will ensure that water quality and the ability to maintain water quality and allow for groundwater recharge are not impacted by the proposed action.

This proposed action involves repairing floodgates at an existing levee and constructing access roads. The proposed action must be performed at the existing floodgates, and project designs have been completed in accordance with agency input to minimize impacts to the environment and community. According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. When levees fail, or are overtopped, the results can be catastrophic. The proposed action is necessary to prevent future storm events from flooding the affected areas of the Town of Princeville. Thus, while the proposed action would directly affect the floodplain, it is not anticipated to have an adverse effect on the floodplain for the surrounding communities or environment.

Living Resources such as Flora and Fauna

For this proposed action, the USFWS Raleigh Ecological Services' online 10-step project review process was completed. The proposed action was determined to have "no effect" on proposed, threatened, endangered, or candidate species and proposed or designated critical habitat under USFWS jurisdiction, and a "no Eagle Act permit required" determination for the Bald Eagle. The USACE representative, Billy Standridge, said that since there are no impacts planned for the Tar River, aquatic species did not need to be addressed. The USFWS has tasked the USACE with making determinations regarding protected species issues in Condition 18(c) of the permit application. The USACE has received and reviewed our permit application, told Axiom that the permit application is considered complete by the USACE, and the permit will be issued based on the information provided. NCORR submitted the Self-Certification Letter and online project review certification package to the USFWS Raleigh Field Office (FO) on August 15, 2022. On September 8, 2022, the Self-Certification Letter and supporting No Effect documentation, updated to include the Critical Habitat on the Species Conclusion List and the NC WRC email response, was sent to the USFWS Raleigh FO. No official comment has been received by USFWS. The Applicant will update this determination annually for multi-year activities.

NCORR consulted with the NC WRC since the Tar-Pamlico River is identified as an inland Anadromous Fish Spawning Area (AFSA) under 15A NCAC 10C .0603. Also, NC WRC has designated the Tar River at this location as a primary nursery area (PNA). NC WRC responded that the area is subject to the NC DWR Tar-Pamlico Basin Buffer Rules to ensure the cognizance of nutrient, sedimentation and erosion that may enter into this river basin. The NC WRC said, "it has no specific recommendations for the proposal other than noting the important habitats that are within the immediate area and that best management practices must be implemented to avoid sedimentation and erosion from entering the system." NC WRC also requests that if any project modification occurs, that contact is made with state and federal resource agencies due to the sensitive habitats in the area. NCORR submitted a project review request package to the NOAA Fisheries Service for consultation under the Magnuson-Stevens Act and Wildlife Coordination Act for the Atlantic Sturgeon. On September 9, 2022, Pace Wilber, the South Atlantic and Caribbean Branch Chief of NOAA Fisheries Service's Habitat Conservation Division, responded to NCORR's request that "[b]ased on the description of the work and the locations being near but not within the Tar River, we believe the work would have no effect on Atlantic sturgeon or their habitats within the Tar River provided standard measures are employed to limit sedimentation into the river from construction and from later operation of the flood gates."

The project designs have been completed in accordance with agency input to minimize impacts to the environment and community. The proposed action is not anticipated to introduce nuisance plant species to the Subject Property such as invasive species, or plants that disrupt native plant communities. Additionally, the proposed action will implement the following voluntary conservation measures to benefit wildlife and, in particular, pollinators: plant native trees, shrubs, and flowering plants in landscaping, use plants that bloom spring through fall and remove/control invasive plant species present. The proposed action 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 ERR when received from the permitting agencies. The following permits will be obtained, if applicable, prior to commencing work: USACE NWP #3 (Maintenance) to authorize impacts to wetlands and streams, USACE CWA Section 408 Permit, NC DWR CWA Section 401 Water Quality Certification, NC DWR Tar-Neuse River Riparian Buffer Authorization, NC DEMLR Erosion and Sediment Control Permit, NPDES Construction Stormwater Permit (NCG010000), Floodplain Development Permit and no-rise certification. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. The proposed action has been determined to have "no effect" on proposed, threatened, endangered, or candidate species and proposed or designated critical habitat. Thus, as designed and with mitigation measures implemented, the proposed action will have no or minimal impacts to living resources, such as flora and fauna, during construction and operation as an existing levee system.

Impacts to Property and Lives

The Town of Princeville sits adjacent to the Tar River and, due to the elevation, has flooded six times between 1800 and 1958. Princeville is situated almost entirely within the Tar River floodplain. After a major flood in 1958, Town officials approached the USACE with a proposal to build a dam. (See USACE's Integrated Feasibility Report and Environmental Assessment.) In 1965-1967, USACE built a levee along the Tar River to address the frequent and severe flooding. Once this levee was constructed, the Town did not experience severe flooding again until Hurricane Floyd in 1999 (a greater than 0.2% event), when the Town suffered catastrophic flooding and the damage or destruction of nearly all 1,000 residential structures. Floodwaters initially entered the Town through a number of ungated culverts located under a section of U.S. Highway 64. This record flood then overtopped the levee in one location, ultimately circumvented the levee at its north end, and inundated the Town with floodwaters. Up to 20 feet of water stood in Princeville for nearly 10 days until river levels subsided enough that the floodwaters drained or could be pumped from the Town. According to the Edgecombe County Hurricane Matthew Resilient Redevelopment Plan, Princeville "has flooded multiple times since Hurricane Floyd and strained the resources of underserved residents who often are unable to pay for home elevations or new homes outside of flood zones. Recovery and prevention from hurricane and flood impacts tends to be more difficult in these communities. Over time, recurring impacts strain the mental and physical capabilities of residents and further damage communities." Many of the Town of Princeville's residents have been displaced due to historic flooding and storm events with some housing remaining vacant since Hurricane Floyd.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). During the Hurricane Matthew storm event, a large majority of the 2,357 citizens residing in the Town of Princeville were displaced by floodwaters in part due to the functional failure of the Princeville floodgates located along the USACE levee bordering the Tar River. According to the Coastal Resilience Center, about 450 homes were destroyed during the hurricane and subsequent flooding, and an estimated 80 percent of the Town was underwater. Many of the Town's commercial and institutional structures were damaged as well. According to the Town of Princeville website, "Princeville's town hall, originally built as a schoolhouse in the 1920s, was badly damaged, and past floods destroyed many other older structures. ***Princeville, for much of its history, has been so***

concerned about survival that historic preservation has been almost impossible*"* (emphasis added). The Town Hall, Princeville Elementary School, and the Princeville Volunteer Fire Department were completely destroyed. The floodgate structures were submerged underwater for at least five days. The underwater submersion of these floodgates caused weakness and more erosion around already worn structures, and damaged floodgate hinges. County staff temporarily repaired two broken hinges by welding.

Following the Hurricane Matthew storm event, the Town of Princeville undertook to design construction upgrades and necessary repairs to critical flood control infrastructure so as to prevent flooding of the Town during future storm events. The Town of Princeville has selected the proposed action to assist its residents and community to be protected from future storm damage and flooding. According to the Project Information Form, the proposed project objective is to "[e]valuate the existing flood risk reduction system at Princeville; its current level of flood flow exclusion, and where needed; provide a cost-effective technically-sound and environmentally acceptable plan to better promote the exclusion of floodwaters from the town to a frequency substantially lower than that which currently exists, and so doing reduce monetary flood inundation damage potential by at least 75%." Further, the proposed project design "restores the effectiveness of the floodgates to prevent [the] Tar River overtopping, back flow, and channel control of the outflow of stormwater from the community's stormwater collection and discharge systems."

According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. When levees fail, or are overtopped, the results can be catastrophic. Thus, the proposed action is critical to prevent future storm events from flooding the affected areas of the Town of Princeville, and potentially having "catastrophic" results to property and lives. The proposed project repairs are necessary to have a correctly functioning levee system to protect the residents, the community, and property, from devastating flooding during and after future storm events. The mitigation of future flooding is essential for the safety of residents in the Town of Princeville. Therefore, the proposed action is not anticipated to have adverse impacts to property and lives, but rather aims to provide critically necessary protection of property and lives in the surrounding area during storm events.

Cultural Resources such as Archaeological, Historic and Recreational Aspects

Princeville is the first municipality in America incorporated by former slaves (1885). At the end of the Civil War, freed slaves occupied low-lying land in the Tar River floodplain, purchased plots from local landowners, and eventually incorporated the town as the "Town of Princeville." Princeville was built on low-lying ground in a bend in the Tar River. Because of its low-lying location, Princeville has been repeatedly flooded many times since its founding. (See USACE's Integrated Feasibility Report and Environmental Assessment.) Based on the EJSCREEN Report for Princeville, NC, there is an approximately 95% minority population and approximately 58% low-income population, both of which are higher than State and national averages. According to the NC DEQ Community Mapping System, a portion of Princeville is located in the NC DEQ Potentially Underserved Block Groups 2019.

According to the Town of Princeville website, "Princeville's town hall, originally built as a schoolhouse in the 1920s, was badly damaged, and past floods destroyed many other older structures. ***Princeville, for much of its history, has been so concerned about survival that historic preservation has been almost impossible****"* (emphasis added). President Clinton issued a statement after Hurricane Floyd that stressed the enormous importance of honoring the "long and proud history of this uniquely important town" and of the steps needed to preserve its "special and significant place in our nation's history." The proposed project aims to mitigate floodwaters from accessing areas frequently inundated during storm events. These repairs are necessary to have a correctly functioning levee system to protect the residents, the community, property,

and important historic and cultural resources from devastating flooding during and after future storm events. The Subject Property is a mostly grass-covered, undeveloped approximately 7.7-acre levee system area. The existing levee segments of the proposed action were constructed in 1965 to 1967 by the USACE but are maintained by Edgecombe County. This proposed action is anticipated to consist of construction activities that include earthwork, access road construction, replacement of existing culvert infrastructure, placement of base and incidental aggregates, erosion controls, and restoration of the site following construction, with a total of 7.7 acres of ground disturbance potential, with most of the work occurring in areas of previous ground disturbance. As part of this review, the NC SHPO, Chief and Tribal Historic Preservation Offices (THPO) of all applicable Tribes, Nations, and Communities were consulted regarding any historic properties of religious and cultural significance in the area that could be affected by the proposed actions. The NC SHPO responded on December 30, 2022 that "[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." According to the HUD Tribal Directory Assessment Tool (TDAT), the Catawba Indian Nation and Tuscarora Nation are the only federally-recognized tribes with interests in Edgecombe County, North Carolina. On September 19, 2022, the Catawba Indian Nation's 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." On August 17, 2022, NCORR consulted with the Tuscarora Nation for discussion of historic properties in the proposed project area that may have religious and cultural significance. A response has not been received but will be included in the *Princeville Levee Floodgate Repairs Project EA* ERR when received. The SHPO, Catawba Indian Nation, and Tuscarora Nation Section 106 review and consultation documentation is included in the *Princeville Levee Floodgate Repairs Project EA ERR*.

The proposed action will not introduce new development that would generate demand for open space/ recreational resources or impede open space access. According to the Princeville Community Floodprint, "Princeville has great potential to support a wide range of outdoor recreational activities. Connecting existing environmental assets and opportunities (such as the Tar River, Levee Trail, and canals) to adjacent community points of interest (such as Princeville Elementary and Heritage Park) will enable the town to provide residents and visitors with an interconnected network of passive and active recreational features that contribute to community health." According to TrailLink, the "Princeville Heritage Trail, unveiled in 2002, commemorates the historical significance of this oldest city in the United States to have been incorporated by African Americans. The trail runs atop the grassy levee that follows the southern bank of a Tar River, providing scenic views of the waterway." The proposed action does not redevelop or change the land use of this area, but rather addresses floodgates needing repair along the existing levee. Therefore, the proposed action is not anticipated to have adverse impacts to the Princeville Heritage Trail or other open spaces or recreational areas.

Agricultural, Aquacultural, and Forestry Resources

The Subject Property and immediate area are located in Edgecombe County's Princeville Levee easement area. The Subject Property is a mostly grass-covered, undeveloped approximately 7.7-acre levee system area. The existing levee segments of the proposed action were constructed in 1965 to 1967 by the USACE but are maintained by Edgecombe County. The Subject Property is dedicated to the existing levee system for "water storage" and not used for agriculture and, thus, is not expected to have an adverse impact on agricultural resources. (See Section 523.10[6] land in water storage, including lands that have been acquired or planned for water storage prior to August 5, 1984, and Sections 523.11[C][3] projects planned or constructed prior to August 4, 1984 [FPPA, Part 658] and [4] projects on land already in urban development or used for water storage.) The NC WRC said, "it has no specific recommendations for the proposal other

than noting the important habitats that are within the immediate area and that best management practices must be implemented to avoid sedimentation and erosion from entering the system." On September 9, 2022, Pace Wilber, the South Atlantic and Caribbean Branch Chief of NOAA Fisheries Service's Habitat Conservation Division, responded to NCORR's request that "[b]ased on the description of the work and the locations being near but not within the Tar River, we believe the work would have no effect on Atlantic sturgeon or their habitats within the Tar River provided standard measures are employed to limit sedimentation into the river from construction and from later operation of the flood gates." Therefore, the proposed action is not expected to have an adverse impact on aquacultural resources. According to the project engineer, there will be an estimated total of 0.33 acres of trees removed for the proposed action (Structure 1 – 0.03; Structure 2 – 0.14; Structure 3 – 0.09; and Structure 4 – 0.07 acres). It is anticipated that due to the Subject Property conditions, mostly small trees will be removed. Therefore, the proposed action is not expected to have an adverse impact on forestry resources. Overall, the proposed action is not anticipated to have an effect on agricultural, aquacultural or forestry resources.

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. According to the USFWS NWI Map, there are federally-mapped wetlands situated on and near the Subject Property. Axiom completed wetland and stream delineations, the riparian buffer determination, and the protected species survey. A USACE JD has been issued for the wetland and stream delineations. The proposed action will result in temporary impacts to 0.027 acres of NWI-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub) and 0.05 acres of stream. The proposed action will result in permanent impacts to approximately 0.007 acres of NWI-mapped and USACE verified delineated wetlands and 0.05 acres of stream. Overall, the functions and values associated with the impacted wetland are limited due to small acreage, low diversity, and man-made influences, however, some wildlife habitat, flood flow protection, and water quality functions exist.

Mitigation measures for the proposed action includes BMPs for erosion and sedimentation control such as silt fencing which will be utilized during construction. Additional mitigation measures will include a NC DEMLR Erosion and Sedimentation Control Plan and applicable permit requirements and conditions. The USACE CWA Section 404 NWP #3 for Maintenance has been issued for the wetland and stream impacts. A USACE CWA Section 408 Permit has been approved and is being obtained from USACE before commencing work. NC DWR CWA Section 401 Water Quality Certification(s) including 15A NCAC 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 and will be complied with, as applicable. According to NC DEQ, the proposed action should ensure compliance with Tar-Pamlico Riparian Buffer Rules. The NC DWR has issued the CWA Section 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization for the proposed action. The proposed action's activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. All necessary permits will be identified and obtained prior to commencing work and appended to the *Princeville Levee Floodgate Repairs Project EA ERR* when received from the permitting agencies.

Public Health, Safety, and Welfare, Including Water Supply, Quality, Recharge, and Discharge; Pollution; Flood and Storm Hazards and Hazard Protection; and Sediment and Erosion

Wetlands have unique natural characteristics that play an integral role in the ecology of the watershed. 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. Further, wetlands provide flood risk reduction benefits by slowing runoff and storing flood water. The proposed action entails inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and constructing permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations. According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. When levees fail, or are overtopped, the results can be catastrophic. The proposed action is necessary to prevent future storm events from flooding the affected areas of the Town of Princeville which is a threat to public safety. Therefore, the proposed action should not increase impacts to *public health, safety, and welfare*, but rather aims to provide protection for public safety in the surrounding area during storm events.

Water supply wells were not identified at the Subject Property. The proposed action will not increase demand for water, except as needed during short-term construction. The proposed action should not impact the municipal water supply of the region. According to NC DWR's Public Water Supply section, plan approval is required for relocation of existing water lines during construction, and the construction, expansion, or alteration of a public water system. All public water supply systems must comply with State and federal drinking water monitoring requirements. Plans must be submitted when required to the NC DWR/ Public Water Supply Section (see *Princeville Levee Floodgate Repairs Project EA ERR*). The proposed action will not introduce any new development that would generate waste water. The proposed action is not anticipated to include the discharge of sewer to surfaces of the Subject Property or surrounding properties. The proposed action will not create waste water or affect waste water service in the area. Any additional waste water generated during construction activities would be temporary.

A USACE PJD and CWA Section 404 NWP #3 for Maintenance has been issued for the wetland and stream impacts. A USACE CWA Section 408 Permit has been approved and is being obtained from USACE before commencing work. NC DWR CWA Section 401 Water Quality Certification(s) including 15A NCAC 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 and will be complied with, as applicable. According to NC DEQ, the proposed action should ensure compliance with Tar-Pamlico Riparian Buffer Rules. NC DWR has issued the CWA Section 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization. Also, the NC DEMLR Erosion and Sediment Control Permit will be obtained. The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. The 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 required should design features meet minimum requirements. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. According to NC WRC and NOAA, standard measures and BMPs employed should be sufficient to limit sedimentation into the river from construction and from later operation of the flood gates. This will also ensure that water quality and the ability to maintain water quality and allow for groundwater recharge are not impacted by the proposed action. Thus, measures will be implemented to ensure the proposed action will have no further impacts to wetlands and the Tar River during construction.

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 *Princeville Levee Floodgate Repairs Project EA ERR* 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

The proposed action will occur mainly at four floodgate culvert locations (Subject Property) located along the intersection of the USACE protective levee and the Tar River. The Subject Property is a mostly grass-covered, undeveloped approximately 7.7-acre levee system area located in Edgecombe County's Princeville Levee easement area. According to the project engineer, there will be an estimated total of 0.33 acres of trees removed for the proposed action (Structure 1 – 0.03; Structure 2 – 0.14; Structure 3 – 0.09; and Structure 4 – 0.07 acres). It is anticipated that due to the Subject Property conditions, mostly small trees will be removed. The existing levee segments of the proposed action were constructed in 1965 to 1967 by the USACE but are maintained by Edgecombe County. For this proposed action, the USFWS Raleigh Ecological Services' online 10-step project review process was completed. The proposed action was determined to have "no effect" on proposed, threatened, endangered, or candidate species and proposed or designated critical habitat under USFWS jurisdiction, and a "no Eagle Act permit required" determination for the Bald Eagle. The USACE representative, Billy Standridge, said that since there are no impacts planned for the Tar River, aquatic species did not need to be addressed. The USFWS has tasked the USACE with making determinations regarding protected species issues in Condition 18(c) of the permit application. The USACE has received and reviewed the permit application, told Axiom that the permit application is considered complete by the USACE, and the permit will be issued based on the information provided. NCORR submitted the Self-Certification Letter and online project review certification package to the USFWS Raleigh FO) on August 15, 2022. On September 8, 2022, the Self-Certification Letter and supporting No Effect documentation, updated to include the Critical Habitat on the Species Conclusion List and the NC WRC email response, was sent to the USFWS Raleigh FO. No official comment has been received by USFWS. The Applicant will update this determination annually for multi-year activities.

NCORR consulted with the NC WRC since the Tar-Pamlico River is identified as an inland AFSA under 15A NCAC 10C .0603. Also, NC WRC has designated the Tar River at this location as a PNA. NC WRC responded that the area is subject to the NC DWR Tar-Pamlico Basin Buffer Rules to ensure the cognizance of nutrient, sedimentation and erosion that may enter into this river basin. The NC WRC said, "it has no specific recommendations for the proposal other than noting the important habitats that are within the immediate area and that best management practices must be implemented to avoid sedimentation and erosion from entering the system." NC WRC also requests that if any project modification occurs, that contact is made with state and federal resource agencies due to the sensitive habitats in the area. NCORR submitted a project review request package to the NOAA Fisheries Service for consultation under the Magnuson-Stevens Act and Wildlife Coordination Act for the Atlantic Sturgeon. On September 9, 2022, Pace Wilber, the South Atlantic and Caribbean Branch Chief of NOAA Fisheries Service's Habitat Conservation Division, responded to NCORR's review request that "[b]ased on the description of the work and the locations being near but not within the Tar River, we believe the work would have no effect on Atlantic sturgeon or their habitats within the Tar River provided standard measures are employed to limit sedimentation into the river from construction and from later operation of the flood gates."

The project designs have been completed in accordance with agency input to minimize impacts to the environment and community. The proposed action is not anticipated to introduce nuisance plant species to the Subject Property such as invasive species, or plants that disrupt native plant communities. Native plants will be utilized in the Subject Property's landscaping design. Additionally, the proposed action will implement, as applicable, the following voluntary conservation measures to benefit wildlife and, in particular, pollinators: plant native trees, shrubs, and flowering plants in landscaping, use plants that bloom spring through fall, and remove/control invasive plant species present. The proposed action 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 ERR when received from the permitting agencies. The following permits will be obtained, if applicable, prior to commencing work: USACE NWP #3 (Maintenance) to authorize impacts to wetlands and streams, USACE CWA Section 408 Permit, NC DWR CWA Section 401 Water Quality Certification, NC DWR Tar-Neuse River Riparian Buffer Authorization, NC DEMLR Erosion and Sediment Control Permit, NPDES Construction Stormwater Permit (NCG010000), Floodplain Development Permit and no-rise certification. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. The proposed action has been determined to have "no effect" on proposed, threatened, endangered, or candidate species and proposed or designated critical habitat. In addition, the Subject Property is dedicated to the existing levee system for "water storage" and not used for timber or agriculture and, thus, is not expected to have an adverse impact on timber and food and fiber resources. (See Section 523.10[6] land in water storage, including lands that have been acquired or planned for water storage prior to August 5, 1984, and Sections 523.11[C][3] projects planned or constructed prior to August 4, 1984 [FPPA, Part 658] and [4] projects on land already in urban development or used for water storage.) Thus, as designed and with mitigation measures implemented, the proposed action will have no or minimal impacts on living resources including 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

Princeville Levee Floodgate Repairs Project				
Working in Wetlands & Floodplains - Estimated Additional Costs				
	Sungate	Axiom	Construction	Total
Wetland Delineation		$475.00		$475.00
Wetland Field Surveying	$920.00			$920.00
Wetland Permit Development	$680.00	$5,000.00		$5,680.00
Wetland Permit Fee (NCDWR)	$325.00			$325.00
Wetland Hand Clearing			$100.00	$100.00
Wetland Permanent Fill			$480.00	$480.00
Floodplain No-Rise Certification	$8,800.00			$8,800.00
			Total:	$16,780.00

The proposed project activities involve work in areas classified as 500-year floodplain, 100-year floodplain (SFHA - Zone "AE"), FEMA-designated regulatory floodway and wetland. Additional costs associated with work in the wetlands and floodplain have been identified and broken out in the table above. These costs include Wetland Delineation: $475, Wetland Field Surveying: $920, Wetland Permit Development: $5,680, Wetland Permit Fee (NC DWR): $325, Wetland Hand Clearing: $100, Wetland Permanent Fill: $480, and Floodplain No-rise Certification: $8,800 for a combined total of $16,780. There is $8,800 in total costs for work in wetlands. There is also the additional cost for publication of the Early Notice ($438.60) and Final Notice (which was combined with the FNOSI/NOIRROF) in the newspaper. It was not feasible to design the proposed action to completely avoid the wetlands due to the necessary repairs and access roads for existing levee system structures. However, the project designs have been created to have minimal impacts on the smallest amount of wetlands possible, while still completing the proposed action. The proposed action will result in permanent impacts to approximately 0.007 acres of NWI-mapped and USACE verified delineated wetlands. 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 proposed action will occur mainly at four floodgate culvert locations (Subject Property) located along the intersection of the USACE protective levee and the Tar River. The Subject Property is a mostly grass-covered, undeveloped approximately 7.7-acre levee system area. The existing levee segments of the proposed action were constructed in 1965 to 1967 by the USACE but are maintained by Edgecombe County. The proposed action will result in permanent impacts to approximately 0.007 acres of NWI-mapped and USACE verified delineated wetlands. There are no identifiable recreational, scientific, or cultural uses of the small, impacted wetland (0.007 acre) that will be affected by the proposed action.

According to TrailLink, the "Princeville Heritage Trail, unveiled in 2002, runs atop the grassy levee that follows the southern bank of a Tar River, providing scenic views of the waterway." The proposed action is not anticipated to have adverse impacts to recreational and scientific uses of the wetlands. As part of the 24 CFR 58 environmental review, the NC SHPO, Catawba Indian Nation, and Tuscarora Nation were consulted regarding historic properties of religious and cultural significance in the area that could be affected by the proposed action. On December 30, 2022, the NC SHPO responded that the project will have no effect on historic properties. On September 19, 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." On August 17, 2022, NCORR consulted with the Tuscarora Nation for discussion of historic properties in the proposed project area that may have religious and cultural significance. A response has not been received but will be included in the *Princeville Levee Floodgate Repairs Project EA ERR* when received. The SHPO, Catawba Indian Nation, and Tuscarora Nation Section 106 review and consultation documentation is included in the *Princeville Levee Floodgate Repairs Project EA ERR*.

Step 5. **Where Practicable, Design or Modify the Proposed Action to Minimize the Potential Adverse Impacts to and from the 100-Year Floodplain and the Wetland and to Restore and Preserve its Natural and Beneficial Functions and Values.**

This proposed action involves repairing floodgates at an existing levee and constructing access roads. The proposed action must be performed at the existing floodgates, and project designs have been completed in accordance with agency input to minimize impacts to the floodplain, wetlands, environment and community. According to the FEMA FIRMs, the proposed action occurs in areas classified as 500-year floodplain, 100-year floodplain (SFHA - Zone "AE"), and FEMA-designated regulatory floodway (**Appendix 1**). The proposed action is considered "modification" of floodplain and floodway as the activities will involve excavation, fill, and channel repair in the 100-year floodplain and excavation, fill and channel repair in FEMA-designated regulatory floodway. The proposed action will result in temporary and permanent impacts to 0.11 acres of 100-year floodplain and 1.37 acres of floodway. Mitigation measures for the proposed action includes BMPs for erosion and sedimentation control such as silt fencing which will be utilized during construction. A Floodplain Development Permit and no-rise certification for the proposed action were obtained and concluded that it will not increase base flood elevations within the FEMA floodplain (see **Appendix 1**).

The proposed action will result in temporary impacts to 0.027 acres of NWI-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub) and 0.05 acres of stream. The proposed action will result in permanent impacts to 0.007 acres of NWI-mapped and USACE verified delineated wetlands and 0.05 acres of stream. These impacts will consist of hand clearing, fill and channel repair in wetlands and temporary dewatering and channel repair in stream. 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. It was not feasible to design the proposed action to completely avoid the floodplain, floodway and wetlands due to the necessary repairs and access roads for existing structures. However, the project designs have been created to have minimal impacts on the smallest amount of wetlands possible, while still completing the proposed action. Since the impacts to wetlands are less than one acre, no compensatory mitigation is required.

A USACE PJD and CWA Section 404 NWP #3 for Maintenance has been issued for the wetland and stream impacts. A USACE CWA Section 408 Permit has been approved and is being obtained from USACE before commencing work. NC DWR CWA Section 401 Water Quality Certification(s) including 15A NCAC 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 and will be complied with, as applicable. According to NC DEQ, the proposed action should ensure compliance with Tar-Pamlico Riparian Buffer Rules. NC DWR has issued the CWA Section 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization.

Also, the NC DEMLR Erosion and Sediment Control Permit will be obtained. The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. The 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 required should design features meet minimum requirements. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. 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 Subject Property's landscaping design. Thus, measures will be implemented to ensure the proposed action will have no further impacts to the floodplain, floodway, wetlands and the Tar River during construction. The proposed action 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 *Princeville Levee Floodgate Repairs Project EA ERR* when received from the permitting agencies.

Step 6. **Reevaluate the Alternatives and Proposed Action.**

The main alternative is the "No Action" Alternative for the current proposed action. The "No Action" Alternative is not considered feasible since Princeville has been historically subjected to devastating flooding and storm damage, and action is critically necessary to protect the residents and community from future storm events. One concern with the "No Action" Alternative is the potential decertification of the levee by FEMA which would result in virtually the whole town being mapped as 100-year floodplain and subsequent requirement for the costly elevation of structures and flood insurance for homeowners according to the Princeville Recovery Plan. The Council's report, EO 13146, EO 12898, and community and agency input were used to determine the best and most feasible storm damage prevention solutions for the future of Princeville. With the No Action Alternative, the Town of Princeville would have to redevelop and re-evaluate options to assist its residents and community to be protected from future storm damage and flooding. Meanwhile, the community would be in danger of flooding and the levee's functional failure during future storm events.

This proposed action involves repairing floodgates at an existing levee and constructing access roads. The proposed action must be performed at the existing floodgates. The existing levee segments of the proposed action were constructed between 1965 to 1967 by the USACE but are maintained by Edgecombe County. According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect

against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. When levees fail, or are overtopped, the results can be catastrophic. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. Deterioration of the levee and, in particular, these sections addressed by the proposed action have been studied and discussed in the Preliminary Engineering Report and Effect of Repeated Rise and Fall of Water Level on Seepage-Induced Deformation and Related Stability Analysis of Princeville Levee, Engineering Geology, Volume 266, 105458, March 5, 2020. During the Preliminary Engineering Report's observations and conversations with Edgecombe County personnel, the structures were ascertained to have sustained damage over the years due to periodic flooding and weathering over time. As shown in Appendix I of the Preliminary Engineering Report, the concrete headwalls have begun to deteriorate and the riprap blankets have been washed out. Without the riprap blankets, the soil foundations of the headwalls have been undercut, sustained erosion is occurring due to lack of energy dissipation at the outlet, and the flapper gates fail to perform properly. Modifications to the riprap erosion blankets are required to improve the functionality of the flapper gates. During the Hurricane Matthew storm event, the floodgate structures were submerged underwater for at least five days resulting in weakness and more erosion around already worn structures, and damaged floodgate hinges. County staff temporarily repaired two broken hinges by welding. The proposed repairs are intended to restore the existing structures to their former as-built condition according to the Preliminary Engineering Report. The "No Action" Alternative is not feasible in relation to the desired objective. 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 wetlands and the potential to disrupt the natural and beneficial functions and values of the wetlands.

Numerous alternative and concerted projects have been considered to address Princeville's historic flooding over the years. As a result of Hurricane Floyd in 1999, Princeville experienced catastrophic flooding and the damage or destruction of nearly all 1,000 residential structures. Floodwaters initially entered the Town through a number of ungated culverts located under a section of U.S. Highway 64. This flood of record then overtopped the levee in one location and ultimately circumvented the levee at its north end, inundating the Town with floodwaters. Up to twenty feet of water stood in Princeville for nearly 10 days until river levels subsided enough that the floodwaters drained or could be pumped from the town.

In the aftermath of Hurricane Floyd, President Clinton issued Executive Order 13146, which established a President's Council on the Future of Princeville, North Carolina to consider "…the unique historic and cultural importance of Princeville in American history; the views and recommendations of the relevant State and local governments, the private sector, citizens, community groups and non-profit organizations, on actions that they could take to enhance the future of Princeville and its citizens; and, agency assessments and recommendations to repair and rebuild Princeville, and to the extent practicable, protect Princeville from future floods." The Council's report was submitted in August 2000, and recommended quickly bringing the citizens of Princeville home while rebuilding toward a more disaster-resistant community. The Council's report, EO 13146, EO 12898, and community and agency input were used to determine the best and most feasible storm damage prevention solutions for the future of Princeville. The Town of Princeville has selected the proposed action to assist its residents and community to be protected from future storm damage and flooding.

In 2001, USACE was authorized and funded to prepare a feasibility study to address flood risk management issues. Multiple structural and non-structural measures and alternatives were examined during the course of the feasibility study. The Feasibility Scoping Meeting, held in 2006, discussed the likelihood that many of the most responsive plans might lack economically-justified alternatives that would meet the current guidance requiring National Economic Development (NED) justification. At that time, the entire vertical team agreed to pursue alternatives that addressed all areas of flood risk, including extending the existing levee. The Final Array of Alternatives consisted of a No-Action Plan and an array of structural and non-structural alternatives. Each alternative was formulated to provide an incremental solution to flood risk at

the least cost for a given increment of flooding, as well as a suite of non-structural measures considered to be critical to the success of each alternative. These non-structural measures included a flood warning and evacuation plan, continued floodplain management and updating of local building and zoning codes, and a flood risk management education and communication plan (for both the community and local schools). All of these non-structural components were ultimately deemed essential for an adequate flood risk management strategy for the Town and would substantially reduce remaining levels of flood risk after construction or implementation of any structural plan elements.

A five-day Community Design Workshop was held on August 25-29, 2017 as an intensive design-based event in addition to Town open houses on July 21, July 29, and August 16, 2017. The Princeville Recovery Plan and the Coastal Resilience Center Website discusses the workshops, alternatives, and community input received. The open houses were held for residents of Princeville in order to provide them with the time and space needed to talk in depth with UNC Coastal Resilience Center's Hurricane Matthew Disaster Recovery and Resilience Initiative (HMDRRI) Team members about greenspace, affordable housing, infrastructure, mitigation, health issues, and other recovery topics important to them. The meetings also served to create the Town's vision for the recovery plan and to identify associated goals. Members of the community also participated in discussions with the design team throughout the five-day workshop and associated field visits. This resulted in the Princeville Community Floodprint Resiliency Plan and the Recovery Plan. Town Staff worked with the Municipal Planning team at Stewart, Inc. to craft a new Town Comprehensive Plan that builds on these efforts and engages a broad spectrum of the community to develop implementable strategies towards the community's goals. The repair of the levee floodgates is listed as an ongoing disaster recovery effort (#2) in the Town's Final Comprehensive Plan which notes that the floodgates will "help protect the Town from flooding and release stormwater to the Tar River during normal events." The proposed project repairs are necessary to have a correctly functioning levee system to protect the residents, the community, property, and important historic and cultural resources from devastating flooding during and after future storm events.

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 action shall be obtained before commencing work and appended to the *Princeville Levee Floodgate Repairs Project EA ERR* 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 Princeville Levee Floodgate Repairs Project. The Council's report, EO 13146, EO 12898, and community and agency input were used to determine the best and most feasible storm damage prevention solutions for the future of Princeville. The Town of Princeville would have to redevelop and re-evaluate options to assist its residents and community to be protected from future storm damage and flooding. Meanwhile, the community would be in danger of flooding and the levee's functional failure during future storm events.

A final notice, formally known as "Final Notice and Public Explanation of a Proposed Activity in a 100-year Floodplain and Wetland" was 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 Rocky Mount Telegram newspaper on April 20, 2023, and expires on May 5, 2023. 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 April 20, 2023: HUD NC Field Office; FEMA; EPA; USFWS; NOAA Fisheries Service;

USACE; NC WRC; and NC State Environmental Clearinghouse. The notice was also sent to Edgecombe County and the Town of Princeville. Project information has been sent to the NC SHPO, Catawba Indian Nation, and Tuscarora Nation for review and comment under Section 106 of the NHPA (See Attachment 11 in *Princeville Levee Floodgate Repairs Project EA ERR*). (See **Appendix 3** for the final notice distributed to these agencies, the newspaper publication affidavit [to be added after publication], distribution list, and comments received [to be added after end of comment period]). Any comments received will be addressed, if significant, and added to the EA. If modifications result from public comment, these will be made prior to proceeding with the submission of a request for release of funds.

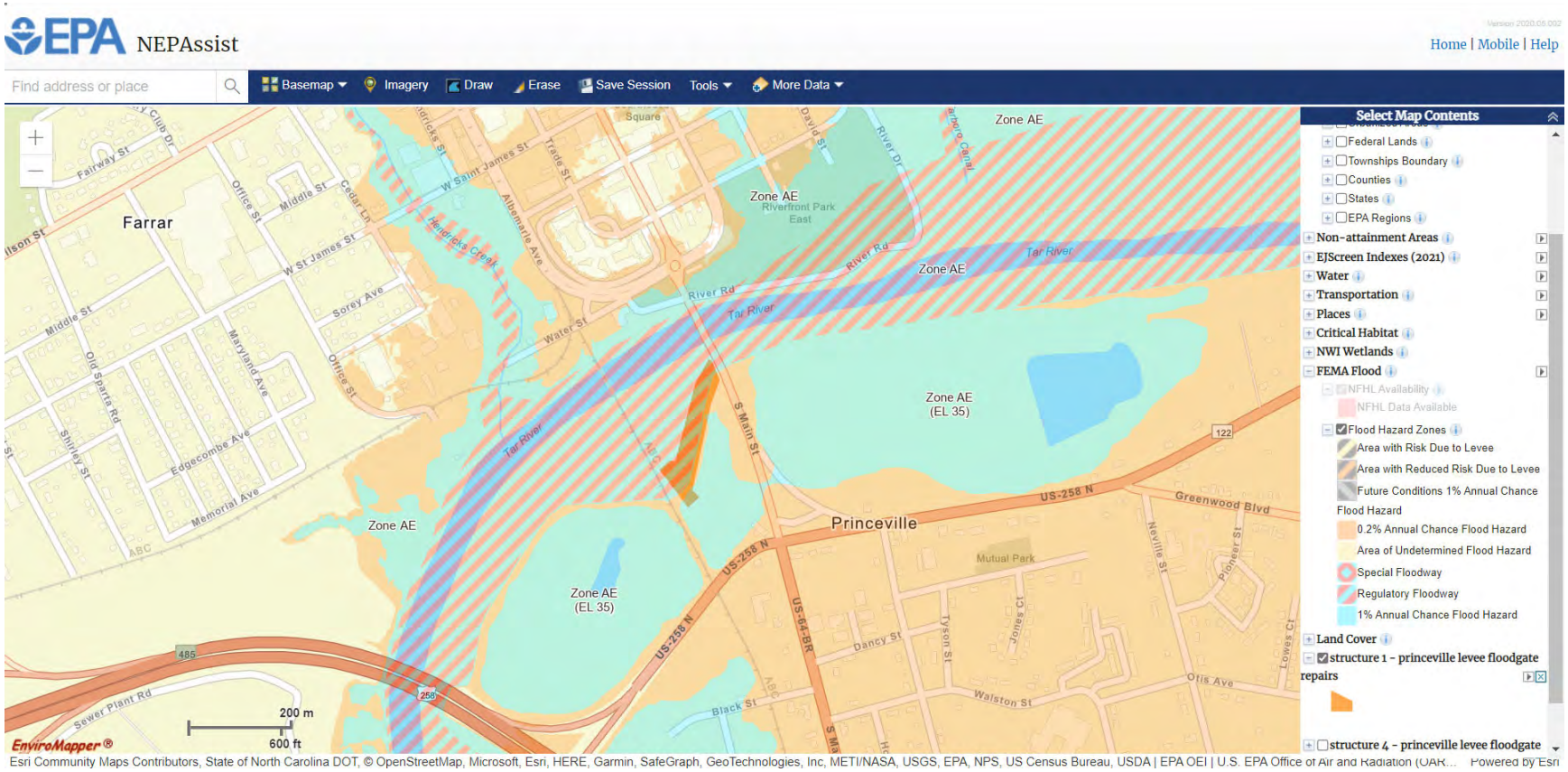
Step 8. **Implementation and Continuing Responsibility of the Responsible Entity and Recipient.**

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

- **FEMA FIRMs data**
- **USACE Jurisdictional Determination**
- **National Wetlands Inventory Maps**
- **Design Plans**
- **Floodplain Development Permit**
- **No Rise Certification**
- **USACE CWA Section 408 Public Notice**
- **USACE CWA Section 404 NWP #3 and Conditions**
- **NC DWR Tar-Pamlico River Riparian Buffer Authorization**

Princeville Levee Floodgate Repairs – Structure 1



National Flood Hazard Layer FIRMette

FEMA

77°32'16"W 35°53'46"N

77°31'39"W 35°53'17"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

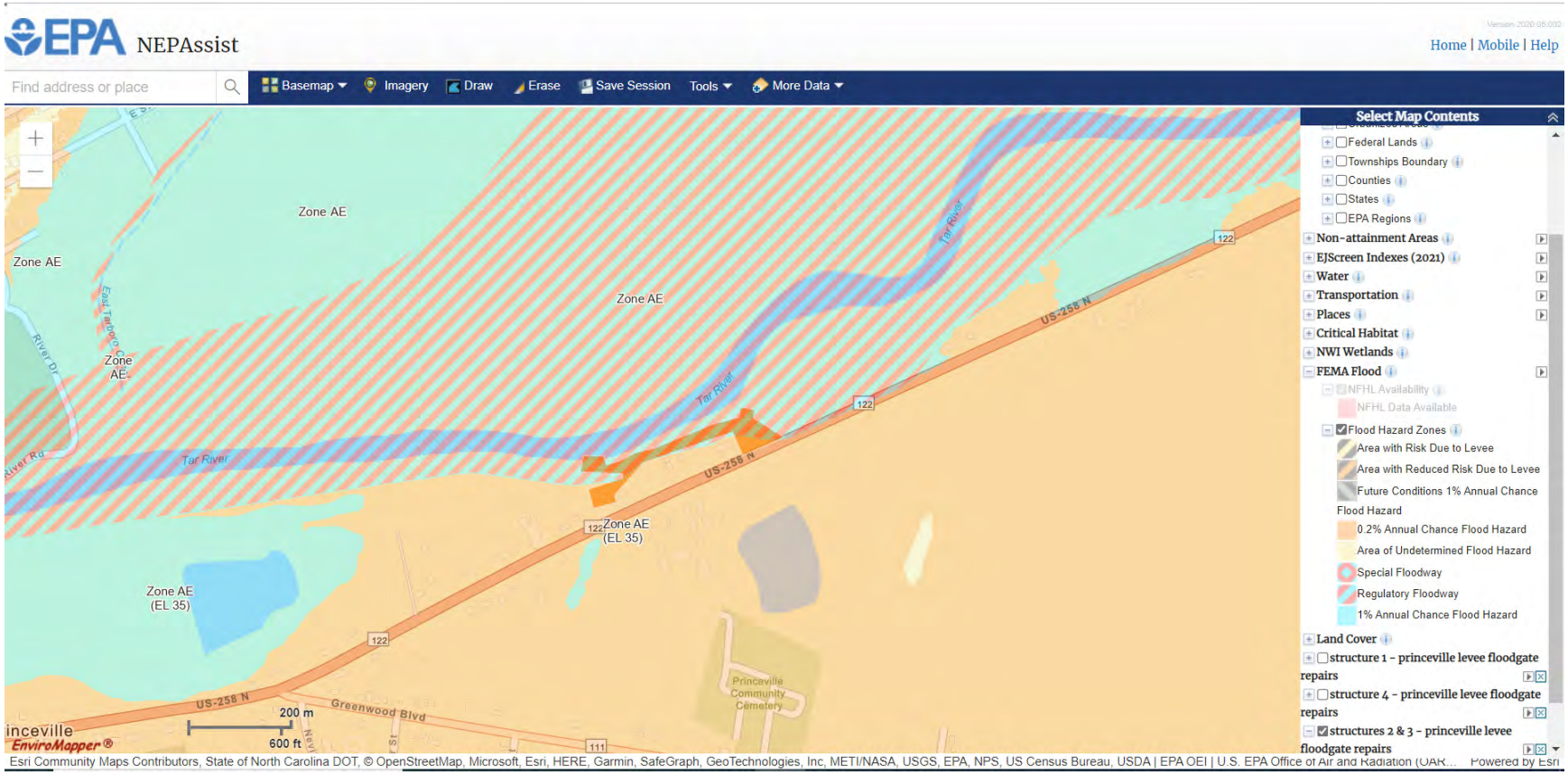
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 3/23/2023 at 5:28 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.

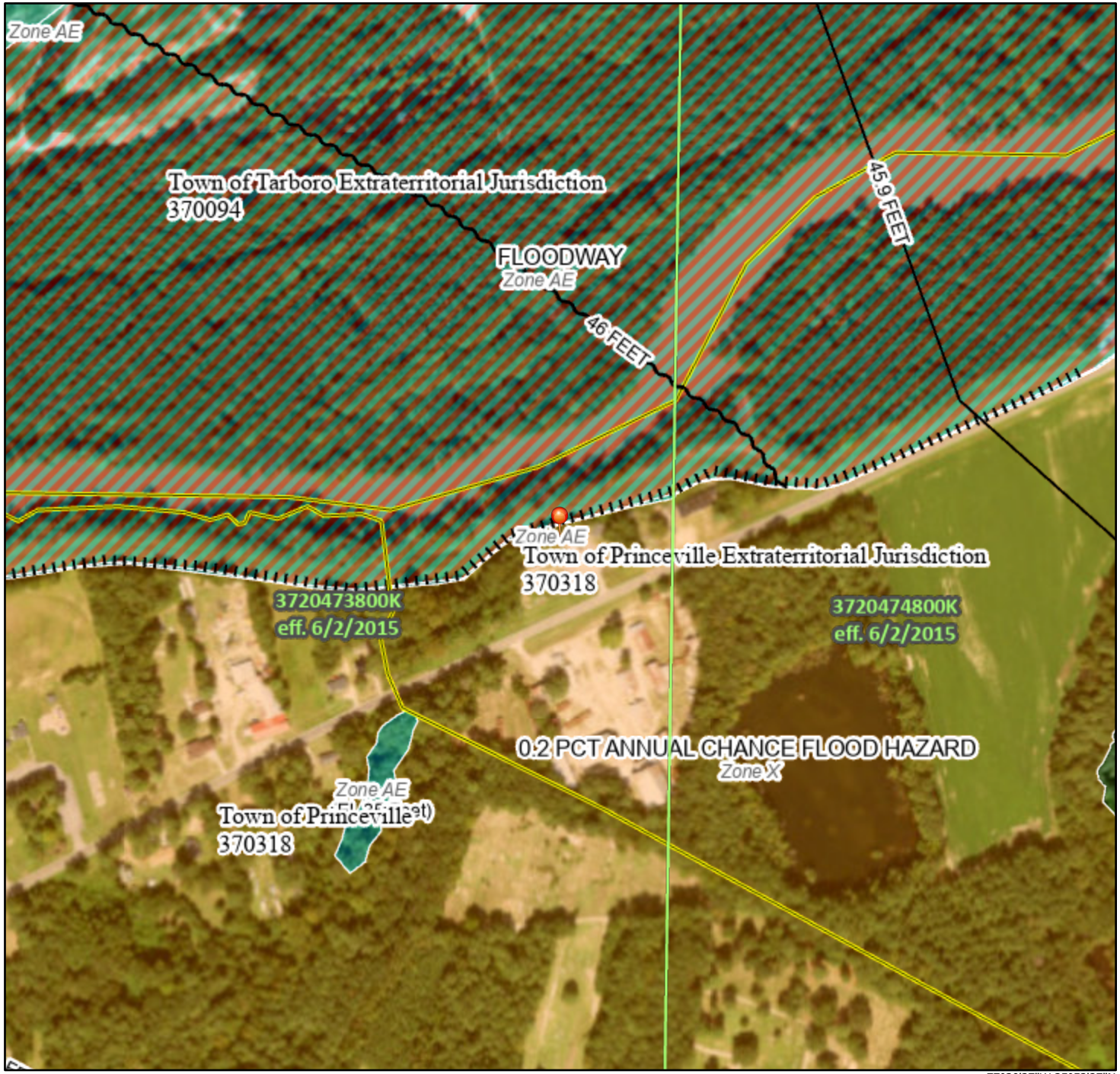
Princeville Levee Floodgate Repairs – Structures 2 & 3



National Flood Hazard Layer FIRMette

FEMA

77°31'14"W 35°53'56"N



77°30'37"W 35°53'27"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
- 513 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

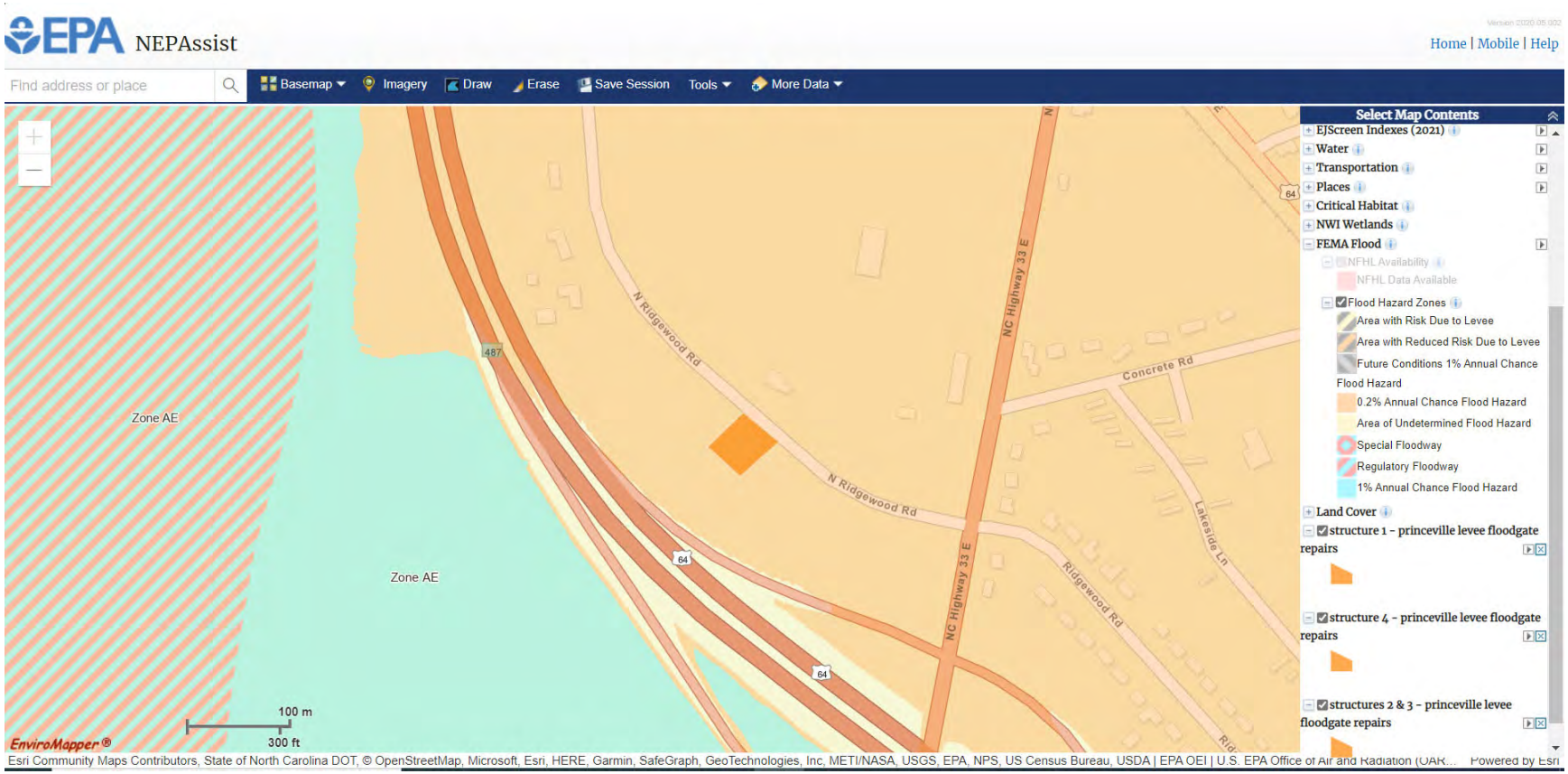
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 3/23/2023 at 5:33 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.

Princeville Levee Floodgate Repairs – Structure 4



National Flood Hazard Layer FIRMette

FEMA

77°31'50"W 35°52'38"N

77°31'13"W 35°52'9"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 3/23/2023 at 5:37 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.

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2021-00964** County: **Edgecombe**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Town of Princeville**
Dr. Glenda Knight
Address: **201 South Main Street**
Princeville, North Carolina 27886
Telephone Number: **(252) 783-1057**
E-mail: **gknight@townofprinceville.com**

Size (acres) **7.7**
Nearest Waterway **Tar River**
USGS HUC **03020103**
Nearest Town **Princeville**
River Basin **Pamlico**
Coordinates Latitude: **35.89087**
Longitude: **-77.53317**

Location description: **The review area for this Jurisdictional Determination includes four project sites of the Princeville Dike in the Town of Princeville, Edgecombe County, North Carolina. Site 1 (35.890816, -77.532662), Site 2 (35.894597, -77.516820), Site 3 (35.895364, -77.513700), Site 4 (35.873450, -77.525434).**

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 **April 2021**. 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. 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 **Billy W. Standridge at (252) 251-4595 or Billy.w.standridge@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the preliminary jurisdictional determination form dated 06/28/2021.

D. Remarks: All aquatic resources within the review area are depicted on the attached *Potential Jurisdictional Features (sites 1-4)* exhibits dated April 2021.

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

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 **Not applicable**.
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: Billy W. Standridge

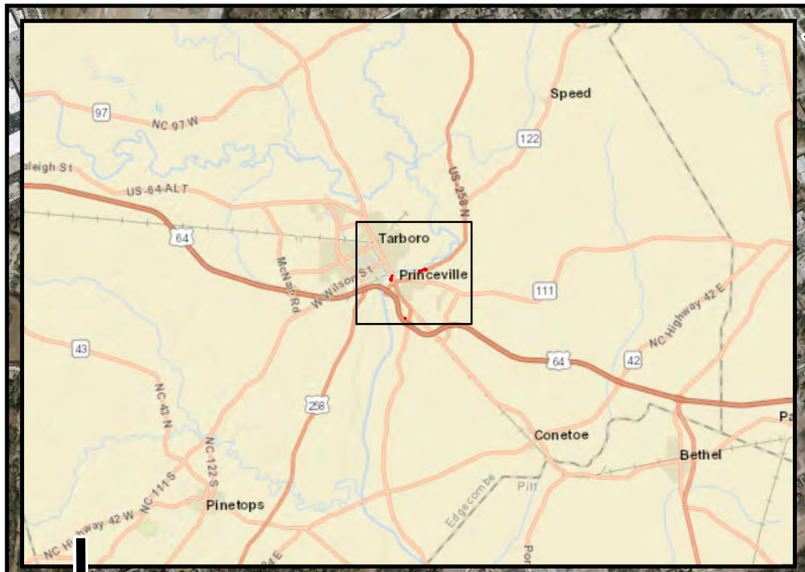
Date of JD: **06/28/2021** Expiration Date of JD: **Not applicable**

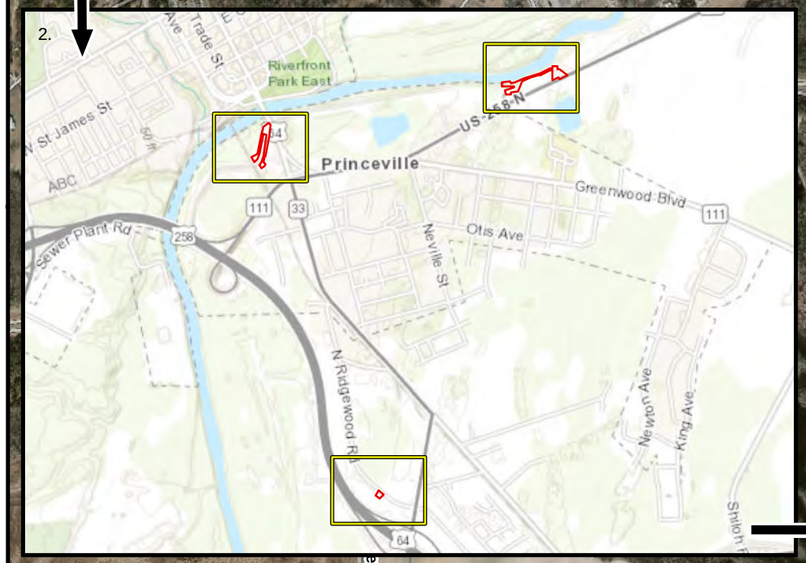
SAW-2021-00964

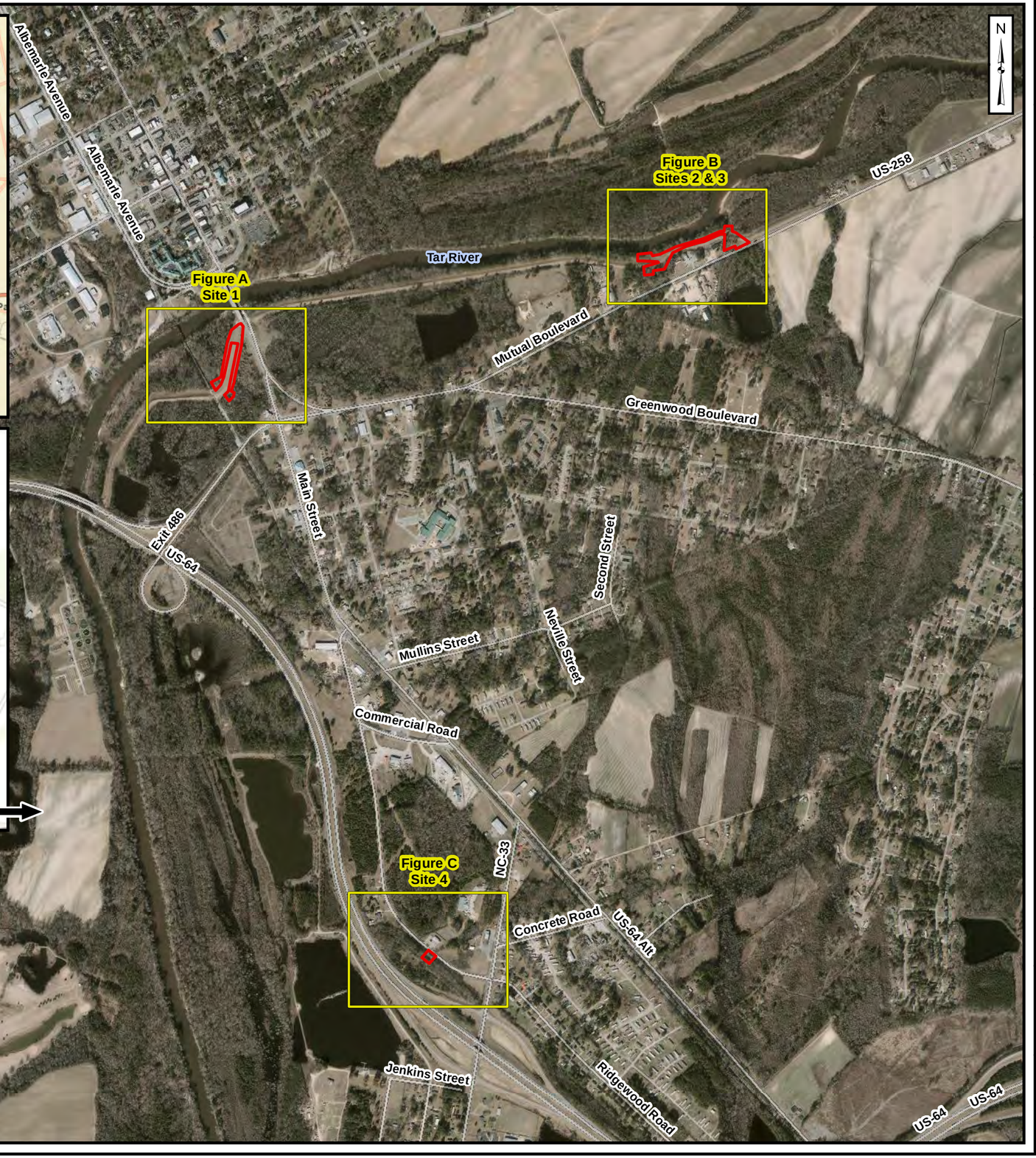
The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy furnished:

Agent:	**Axiom Environmental, Inc.**
	Sandy Smith
Address:	**218 Snow Avenue**
	Raleigh, North Carolina 27603
Telephone Number:	**(919) 215-1693**
E-mail:	**ssmith@axiomenvironmental.org**







Legend

- Project areas
- Detail tile
- NCDOT roads

0 600 1,200 2,400 3,600 4,800 Feet

Axiom Environmental, Inc.

Prepared for:

Sungate Design Group

Project:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

Site Locations

Notes:

1. Background imagery source: 2017 aerial photography provided by the NC OneMap Program (online, supported by the NC Geographic Information Coordination Council).

2. Background imagery source: Tarboro and Old Sparta, NC 7.5-minute topographic quadrangles provided by the U.S. Geological Survey (USGS).

Drawn by:	AEK
Date:	Apr. 2021
Scale:	1:15,000
Project No.:	20-029

FIGURE
1

Axiom Environmental, Inc.

Prepared for:

Sungate Design Group

Project:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

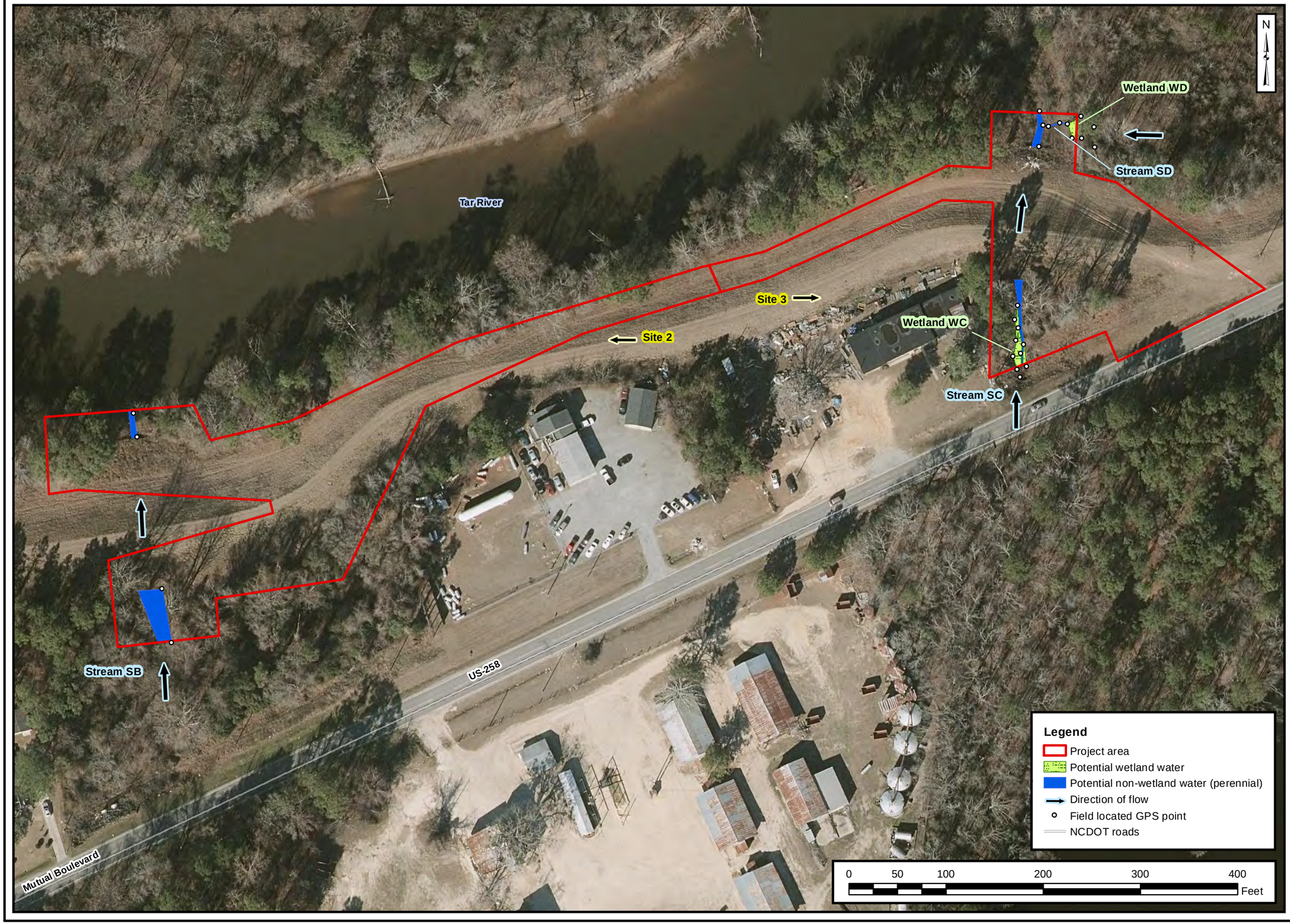
Site 1 Potential Jurisdictional Features

Notes:

1. Background imagery source: 2017 aerial photography provided by the NC OneMap Program (online, supported by the NC Geographic Information Coordination Council).

Drawn by:	AEK
Date:	Apr 2021
Scale:	1:1200
Project No.:	20-029

FIGURE
A



Axiom Environmental, Inc.

Prepared for:

Sungate Design Group

Project:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

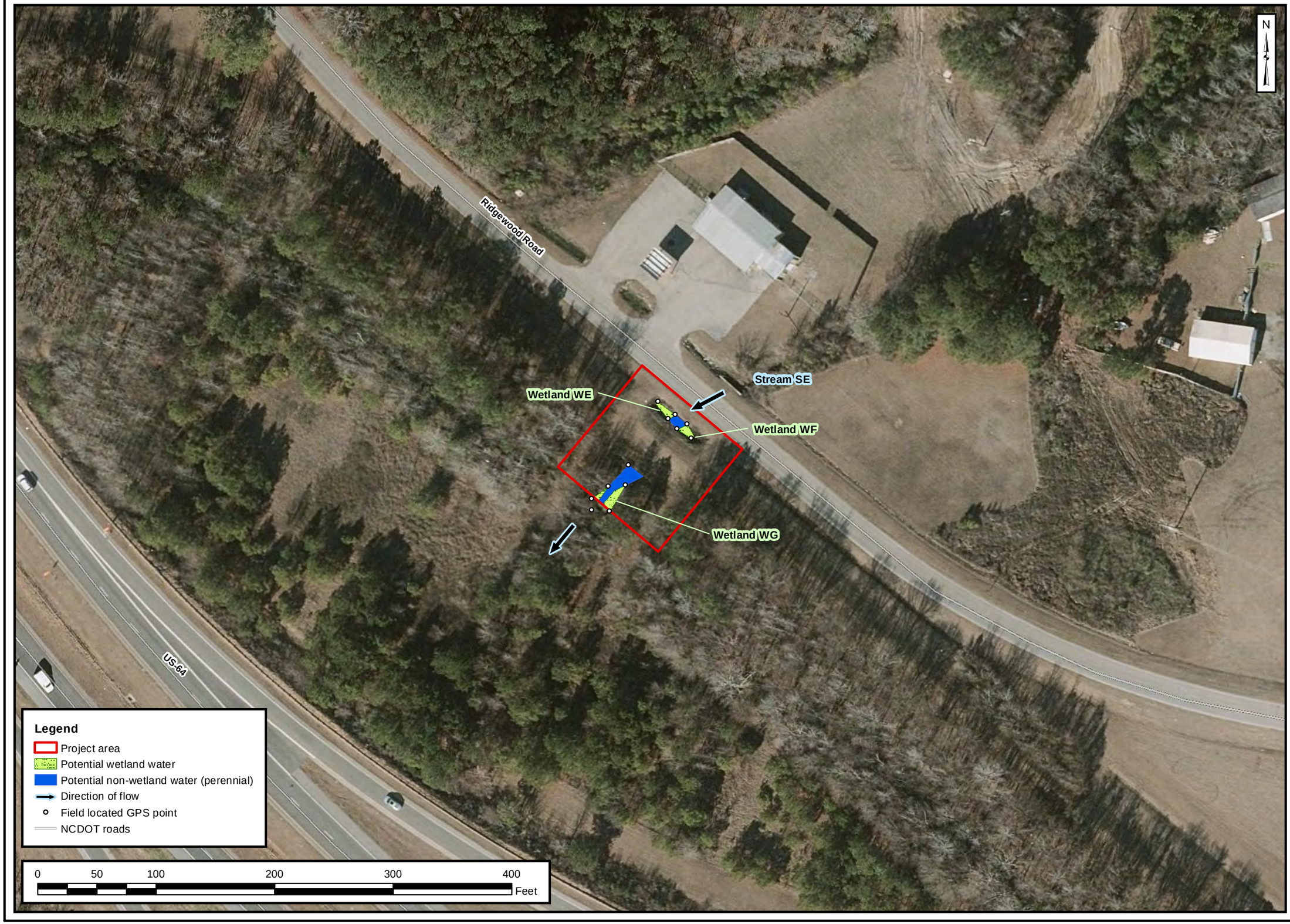
Sites 2 & 3 Potential Jurisdictional Features

Notes:

1. Background imagery source: 2017 aerial photography provided by the NC OneMap Program (online, supported by the NC Geographic Information Coordination Council).

Drawn by:	AEK
Date:	Apr. 2021
Scale:	1:1000
Project No.:	20-029

FIGURE
B



Axiom Environmental, Inc.

Prepared for:

Sungate Design Group

Project:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

Site 3 Potential Jurisdictional Features

Notes:

1. Background imagery source: 2017 aerial photography provided by the NC OneMap Program (online, supported by the NC Geographic Information Coordination Council).

Drawn by:	AEK
Date:	Apr 2021
Scale:	1:900
Project No.:	20-029

FIGURE
C

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **Town of Princeville, Dr. Glenda Knight**	File Number: **SAW-2021-00964**	Date: **06/28/2021**

Attached is:		See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL	C
☐	APPROVED JURISDICTIONAL DETERMINATION	D
☒	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at or http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx or the Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.
SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: **District Engineer, Wilmington Regulatory Division** **Attn: Billy W. Standridge** **Washington Regulatory Office** **U.S Army Corps of Engineers** **2407 West Fifth Street** **Washington, North Carolina 27889**	If you only have questions regarding the appeal process you may also contact: MR. PHILIP A. SHANNIN ADMINISTRATIVE APPEAL REVIEW OFFICER CESAD-PDS-O 60 FORSYTH STREET SOUTHWEST, FLOOR M9 ATLANTA, GEORGIA 30303-8803 PHONE: (404) 562-5136; FAX (404) 562-5138 EMAIL: PHILIP.A.SHANNIN@USACE.ARMY.MIL

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.		
_____ Signature of appellant or agent.	Date:	Telephone number:

For appeals on Initial Proffered Permits send this form to:

District Engineer, Wilmington Regulatory Division, **Attn: Billy W. Standridge, 69 Darlington Avenue, Wilmington, North Carolina 28403**

For Permit denials, Proffered Permits and Approved Jurisdictional Determinations send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Philip Shannin, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801
Phone: (404) 562-5137

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. **REPORT COMPLETION DATE FOR PJD:** 06/28/2021

B. **NAME AND ADDRESS OF PERSON REQUESTING PJD:** Town of Princeville, Dr. Glenda Knight, 201 South Main Street, Princeville, North Carolina 27886

C. **DISTRICT OFFICE, FILE NAME, AND NUMBER:** Wilmington District, Princeville Dike Floodgate Repairs, SAW-2021-00964

D. **PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** The review area for this Jurisdictional Determination includes four project sites of the Princeville Dike in the Town of Princeville, Edgecombe County, North Carolina. Site 1 (35.890816, -77.532662), Site 2 (35.894597, -77.516820), Site 3 (35.895364, -77.513700), Site 4 (35.873450, -77.525434).

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: NC County: Edgecombe City: Princeville
Center coordinates of site (lat/long in degree decimal format): Latitude: 35.89087 Longitude: -77.53317

Universal Transverse Mercator:

Name of nearest waterbody: Tar River

E. **REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

☐Office (Desk) Determination. Date:

☒Field Determination. Date(s): 06/24/2021

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
1. Stream SA	35.890763	-77.53268	R3UB1/2	96 feet length, 6-20 feet avg width	non-section 10 – non-wetland
2. Stream SB	35.894311	-77.516767	R3UB1/2	83 feet length, 4-25 feet avg width	non-section 10 – non-wetland
3. Stream SC	35.895243	-77.313787	R3UB1/2	144 feet length, 2-15 feet avg width	non-section 10 – non-wetland
4. Stream SD	35.895719	-77.513607	R3UB1/2	26 feet length, 2-3 feet avg width	non-section 10 – non-wetland
5. Stream SE	35.873382	-77.525495	R3UB1/2	49 feet length, 6-15 feet avg width	non-section 10 – non-wetland
6. Wetland WA	35.890842	-77.532557	PFO	0.003 acre	non-section 10 wetland
7. Wetland WB	35.891083	-77.533262	PSS	0.006 acre	non-section 10 wetland
8. Wetland WC	35.895081	-77.513791	PFO	0.007 acre	non-section 10 wetland
9. Wetland WD	35.895713	-77.513588	PFO	0.003 acre	non-section 10 wetland
10. Wetland WE	35.873529	-77.525413	PSS	0.002 acre	non-section 10 wetland
11. Wetland WF	35.873471	-77.525339	PSS	0.002 acre	non-section 10 wetland
12. Wetland WG	35.873316	-77.525563	PFO	0.004 acre	non-section 10 wetland

1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: Tarboro and Old Sparta (2019) 7.5-minute topographic quadrangle.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey (online at http://websoilsurvey.nrcs.usda.gov), and the most recent published Soil Survey of Edgecombe County (1979) Maps 18 and 19.

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): NC OneMap 2017 Orthoimagery. or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Billy W. Stanbridge 06/28/2021
Signature and date of Regulatory Project Manager (REQUIRED)

Alexander P. Smith 5/03/2021
Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Princeville Levee Floodgate Repairs NWI Map - Structure 1

August 16, 2022

structure 1 - princeville levee floodgate repairs

Wetlands

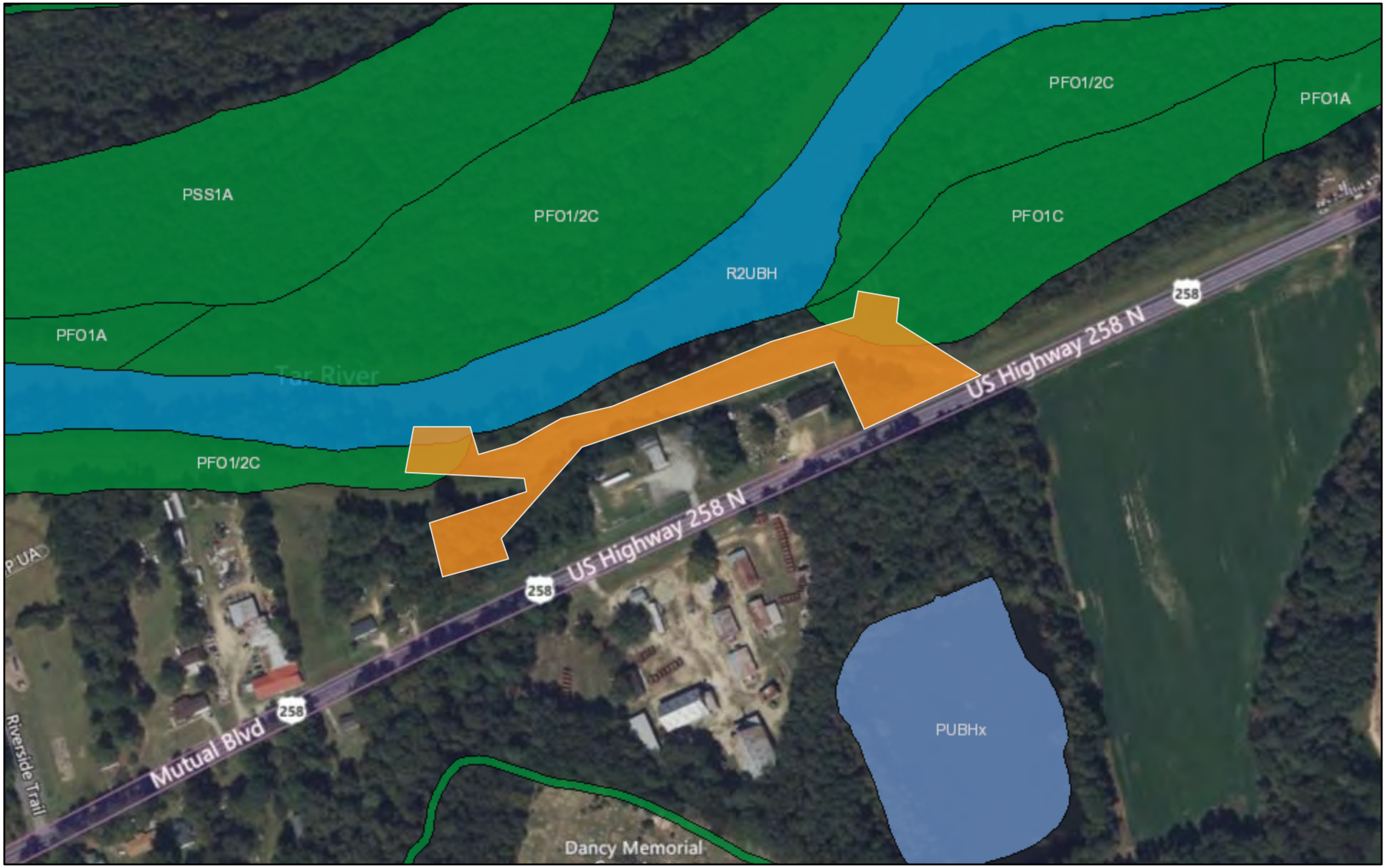
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Princeville Levee Floodgate Repairs NWI Map - Structures 2 & 3



August 16, 2022

structures 2 & 3 - princeville levee floodgate repairs

Wetlands

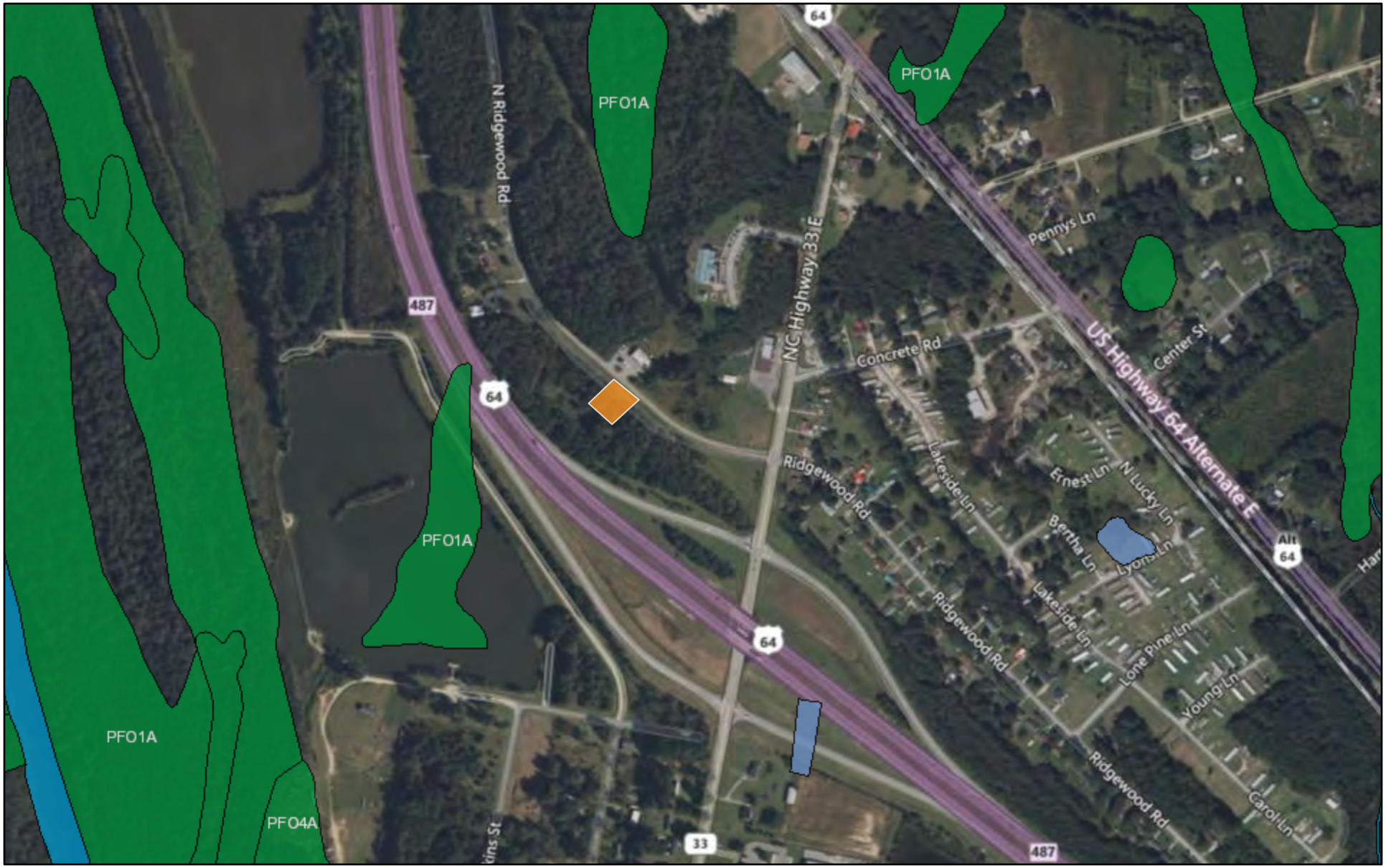
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Princeville Levee Floodgate Repairs NWI Map - Structure 4



August 16, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

PROJECT:

COMMUNITY DEVELOPMENT BLOCK GRANT
DISASTER RECOVERY PROJECT:
PRINCEVILLE LEVEE FLOODGATE REPAIRS

CONSTRUCTION DOCUMENTATION

CLIENT: TOWN OF PRINCEVILLE
DR. GLENDA KNIGHT
201 SOUTH MAIN STREET
PRINCEVILLE, NC 27886

DESIGN TEAM COORDINATOR: SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NC 27606
919-859-2243

DESIGN TEAM:

Axiom Environmental, Inc.
218 Snow Ave
Raleigh, NC 27603

Wooten
The Wooten Company
120 N. Boylan Ave
Raleigh, NC 27603
919-828-0531

NV5
NV5 Engineers and Consultants, Inc.
4905 Professional Court
Raleigh, NC 27609
919-876-9799

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DocuSigned by: Joshua G. Dalton
Signature Legacy

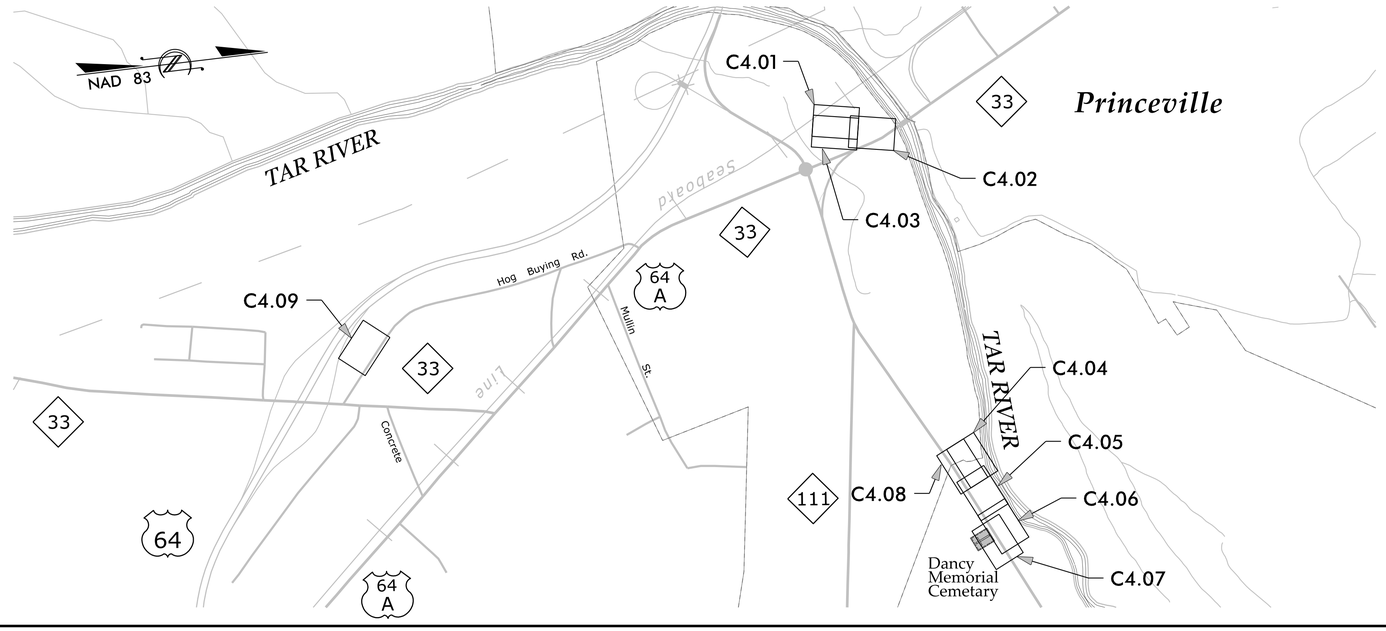
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

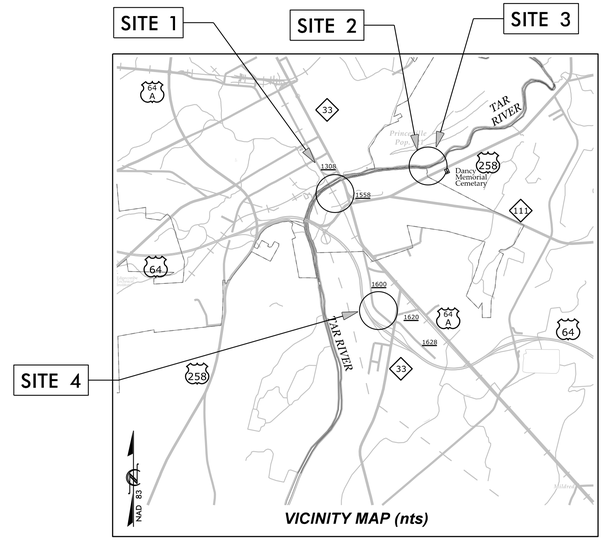
Originally Sealed on 06-17-2021

INDEX OF SHEETS

Revisions:
1. 06-24-2021 – USACE Comment:
– Relocated Spec. Stilling Basin on PSH C3.06 from East to West Side of Stream to Eliminate Temp. Stream Crossing.
2. 07-01-2021 – Added Removable Steel Bollard and Detail at Site 2 / 3 Entrance.
3. 07-26-2021 – NCDOT Comments:
– Revised Detail 7.1 to Include 4' Shoulder.
– Revised Site 4 to Replace Two Existing 12" CMP with Two 18" RCP-IV.

TOTAL DISTURBED AREA = 4.4 ACRES
TAR-PAMLICO RIVER BASIN





VICINITY MAP (nts)

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Property Monument (ECM)
- Parcel/Sequence Number (123)
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary (WLB)
- Proposed Wetland Boundary (WLB)
- Existing Endangered Animal Boundary (EAB)
- Existing Endangered Plant Boundary (EPB)
- Existing Historic Property Boundary (HPB)
- Known Contamination Area: Soil (S)
- Potential Contamination Area: Soil (S)
- Known Contamination Area: Water (W)
- Potential Contamination Area: Water (W)
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign (S)
- Well (W)
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream (JS)
- Buffer Zone 1 (BZ 1)
- Buffer Zone 2 (BZ 2)
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch (FLOW)
- False Sump

RAILROADS:

- Standard Gauge (CSX TRANSPORTATION)
- RR Signal Milepost (MILEPOST 35)
- Switch (SWITCH)
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easment Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line (RW)
- New Right of Way Line with Pin and Cap (RW)
- New Right of Way Line with Concrete or Granite R/W Marker (RW)
- New Control of Access Line with Concrete C/A Marker (CA)
- Existing Control of Access (CA)
- New Control of Access (CA)
- Existing Easement Line (E)
- New Temporary Construction Easement (E)
- New Temporary Drainage Easement (TDE)
- New Permanent Drainage Easement (PDE)
- New Permanent Drainage / Utility Easement (DUE)
- New Permanent Utility Easement (PUE)
- New Temporary Utility Easement (TUE)
- New Aerial Utility Easement (AUE)

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut (C)
- Proposed Slope Stakes Fill (F)
- Proposed Curb Ramp (CR)
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub

- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert (CONC)
- Bridge Wing Wall, Head Wall and End Wall (CONC WW)

MINOR:

- Head and End Wall (CONC HW)
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB (CB)
- Paved Ditch Gutter
- Storm Sewer Manhole (S)
- Storm Sewer (S)

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole (P)
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) (P)
- U/G Power Line LOS C (S.U.E.*) (P)
- U/G Power Line LOS D (S.U.E.*) (P)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole (T)
- Telephone Pedestal (T)
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole (HH)
- U/G Telephone Cable LOS B (S.U.E.*) (T)
- U/G Telephone Cable LOS C (S.U.E.*) (T)
- U/G Telephone Cable LOS D (S.U.E.*) (T)
- U/G Telephone Conduit LOS B (S.U.E.*) (TC)
- U/G Telephone Conduit LOS C (S.U.E.*) (TC)
- U/G Telephone Conduit LOS D (S.U.E.*) (TC)
- U/G Fiber Optics Cable LOS B (S.U.E.*) (T FO)
- U/G Fiber Optics Cable LOS C (S.U.E.*) (T FO)
- U/G Fiber Optics Cable LOS D (S.U.E.*) (T FO)

WATER:

- Water Manhole (W)
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) (W)
- U/G Water Line LOS C (S.U.E.*) (W)
- U/G Water Line LOS D (S.U.E.*) (W)
- Above Ground Water Line (A/G Water)

TV:

- TV Pedestal (C)
- TV Tower
- U/G TV Cable Hand Hole (HH)
- U/G TV Cable LOS B (S.U.E.*) (TV)
- U/G TV Cable LOS C (S.U.E.*) (TV)
- U/G TV Cable LOS D (S.U.E.*) (TV)
- U/G Fiber Optic Cable LOS B (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS C (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS D (S.U.E.*) (TV FO)

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) (G)
- U/G Gas Line LOS C (S.U.E.*) (G)
- U/G Gas Line LOS D (S.U.E.*) (G)
- Above Ground Gas Line (A/G Gas)

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line (SS)
- Above Ground Sanitary Sewer (A/G Sanitary Sewer)
- SS Forced Main Line LOS B (S.U.E.*) (FSS)
- SS Forced Main Line LOS C (S.U.E.*) (FSS)
- SS Forced Main Line LOS D (S.U.E.*) (FSS)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box (S)
- Utility Unknown U/G Line LOS B (S.U.E.*) (?UTL)
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. (UST)
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records (AATUR)
- End of Information (E.O.I.)

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton — Signature | Date

PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

SYMBOLOGY

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C101
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C1.01

9/9/2021 Floodgate_Rdy_psh_C101.dgn User: rch

General Notes

1. All construction shall be in accordance with the latest edition of "NCDOT 2018 Standards and Specifications for Roads and Structures" and "NCDOT 2018 Roadway Standard Drawings" and with the standards and specifications of the Town of Princeville.
2. Existing utilities noted at the time of the field survey are shown for size, material, type, and relative location only. This plan is not a comprehensive inventory or an as-built survey of existing site utilities. The Contractor is to determine the existence and location of all utilities within the work area.
3. The Contractor shall be responsible for the location and/or relocation of all utilities in coordination with the appropriate utility agency or company. The Contractor is required to call 'The NC One Call Center' (1-800-632-4949) before digging.
4. The Contractor shall be responsible for repairing or replacing any existing site features, facilities or improvements that are damaged during the demolition or construction operation that are not indicated to be removed or abandoned.
5. Install tree protection fence and clearing and grubbing erosion control measures prior to any demolition and/or construction activity on site.
6. All disturbed slopes must be stabilized within the time frame indicated on the Ground Stabilization Table (see Erosion Control Plan). All other disturbed areas must be stabilized with the time frame indicated on the Ground Stabilization Table.
7. Contractor is to field locate proposed site improvements that require demolition of existing structures for verification by the Engineer prior to demolition.
8. Construction debris to be removed from the site and properly disposed of by the Contractor. All project waste and demolition materials to be disposed of in accordance with applicable NCDEQ Standards. Contractor to provide written verification of proper disposal to owner.
9. Any buried waste, construction debris or trash which is found during the construction operation shall be thoroughly excavated and removed from the site to an approved facility prior to the placement of any permanent fill material or pavement construction.
10. Contractor to prevent surface and air movement of dust from disturbed soil surfaces through sprinkling until it is wet. Contractor is to maintain dust control measures through dry weather periods until all disturbed areas have been stabilized.
11. All stockpile areas and temporary spoil areas shall be protected by silt fence.
12. All site work shall produce surface grades adequate for storm water runoff to prevent standing water on all developed areas and to meet existing grades in smooth transition.
13. To minimize damage to existing trees, the Contractor shall cut, rather than tear roots.
14. The Contractor is responsible for furnishing and maintaining all work zone signage relative to the work to be performed for the location indicated on the project plan set. All barricading and signage shall conform to the latest edition of "NC-Manual on Uniform Traffic Control Devices for Work Zone."
15. An on-site pre-construction meeting must be held prior to any construction activity.
16. All existing site features shall remain unless noted to be removed or demolished.
17. Construction staging and access limits to be approved by the Owner prior to any construction activity on site.
18. The Contractor shall be responsible for all construction staking. Horizontal and vertical site control coordinates and elevations are shown on sheet C2.01. The contractor is responsible for all site layout, construction staking, and as-built surveys.
19. Topography, existing conditions, easement, and right-of-way survey conducted by Sungate Design Group, PA on 4/6/2021, 4/8/2021, 4/9/2021, and 5/19/2021. Coordinates shown on plan are referenced to NAD 83 (2011) horizontal datum and NAVD 88 vertical datum.
20. The contractor shall note that the drawings may not show every offset, transition, fitting, etc. that may be required. The contractor shall install such standard appurtenances as required to closely follow the grades and alignments depicted on the plans.
21. If departures from the specifications or drawings are deemed necessary by the contractor, details of such departures and reasons therefore shall be submitted to the Owner for review. No departures from contract documents shall be made without the written permission of the Owner.
22. **All dimensions and grades shown on the plans shall be field verified by the Contractor prior to the start of construction in the area. The Contractor shall notify the Owner if any errors or discrepancies exist between the project plans and the field conditions that require plan or grade modification prior to the start of construction of the improvements in the area. No extra compensation shall be paid to the Contractor for any work redone due to grades or dimensions shown incorrectly on these plans, if such notification is not provided to the Owner prior to the initiation of the subject construction and receipt of authorization to proceed with the plans construction as revised by the Engineer.**
23. Construction operations shall be limited to the hours during the day as specified by the Owner.
24. Site access and construction shall be limited to the areas shown on the construction drawings. Any damage or excavation of the existing levee is prohibited.

Riprap Gradation Requirements

Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

SUNGATE DESIGN GROUP, P.A.
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RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

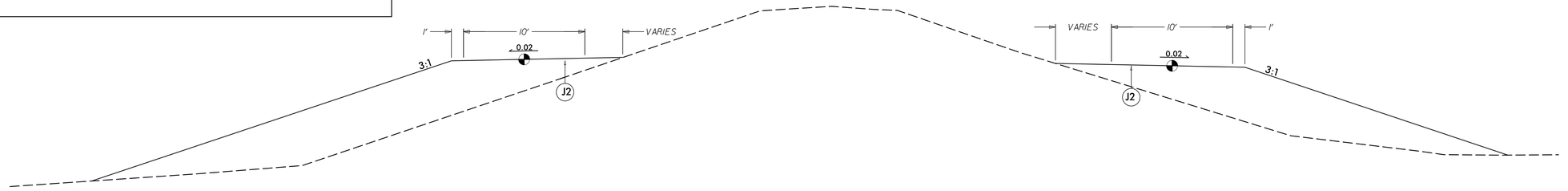
GENERAL NOTES

PROJECT # : I284-2004I
DRAWING NAME: FLOODGATE RDY PSH C20I
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C1.02

9/9/2021
Floodgate_Rdy_psh_C102.dgn
Layout

J2	PROP. 6" AGGREGATE BASE COURSE.

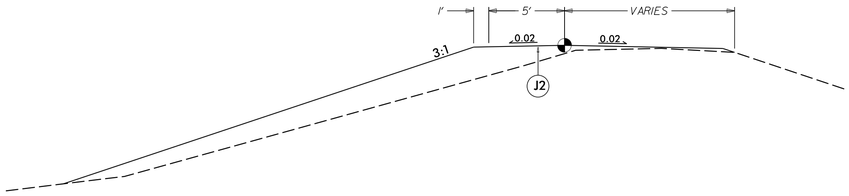


TYPICAL SECTION NO. 1

10+00 to 16+20 -AR1-
10+00 to 12+80 -AR3-
16+10 to 21+80 -AR3-
10+00 to 10+50 -AR5-

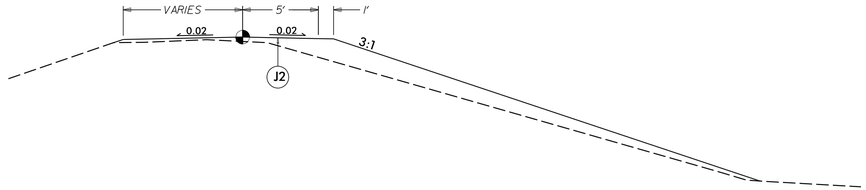
TYPICAL SECTION NO. 2

10+30 to 12+30 -AR2-
22+30 to 22+70 -AR3-
10+10 to 10+15 -AR3B-
10+20 to 10+25 -AR3B-
10+30 to 10+35 -AR3B-
10+60 to 10+70 -AR5-
10+80 to 13+20 -AR5-



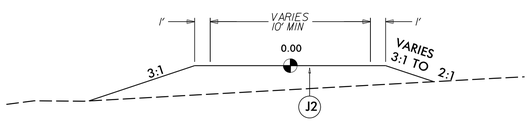
TYPICAL SECTION NO. 3

16+20 to 16+70 -AR1-
12+80 to 13+20 -AR3-
15+60 to 16+10 -AR3-
21+80 to 22+20 -AR3-



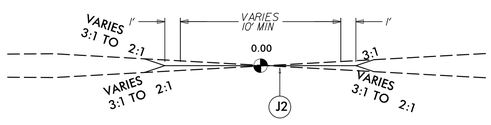
TYPICAL SECTION NO. 4

12+30 to 12+80 -AR2-
22+20 to 22+30 -AR3-
13+20 to 13+70 -AR5-



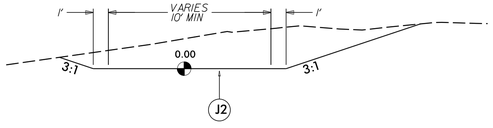
TYPICAL SECTION NO. 5

10+10 to 10+60 -AR1A-
10+10 to 10+40 -AR2A-
22+70 to 23+17 -AR3-
10+10 to 10+80 -AR3A-
10+15 to 10+20 -AR3B-
10+35 to 10+50 -AR3B-
10+15 to 10+30 -AR4-
10+10 to 10+40 -AR5A-



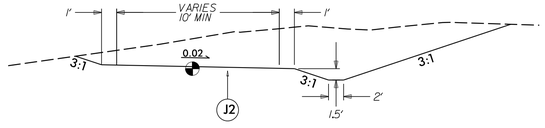
TYPICAL SECTION NO. 6

10+40 to 10+70 -AR2A-
10+25 to 10+30 -AR3B-
10+50 to 10+60 -AR3B-
10+30 to 10+50 -AR4-
10+50 to 10+60 -AR5-
10+70 to 10+80 -AR5-
10+40 to 10+50 -AR5A-



TYPICAL SECTION NO. 7

10+50 to 10+70 -AR4-
10+50 to 11+00 -AR4A-



TYPICAL SECTION NO. 8

10+05 to 10+50 -AR4A-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

Docusigned by:
Joshua G. Dalton
1B9A0C8C1469409...

PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

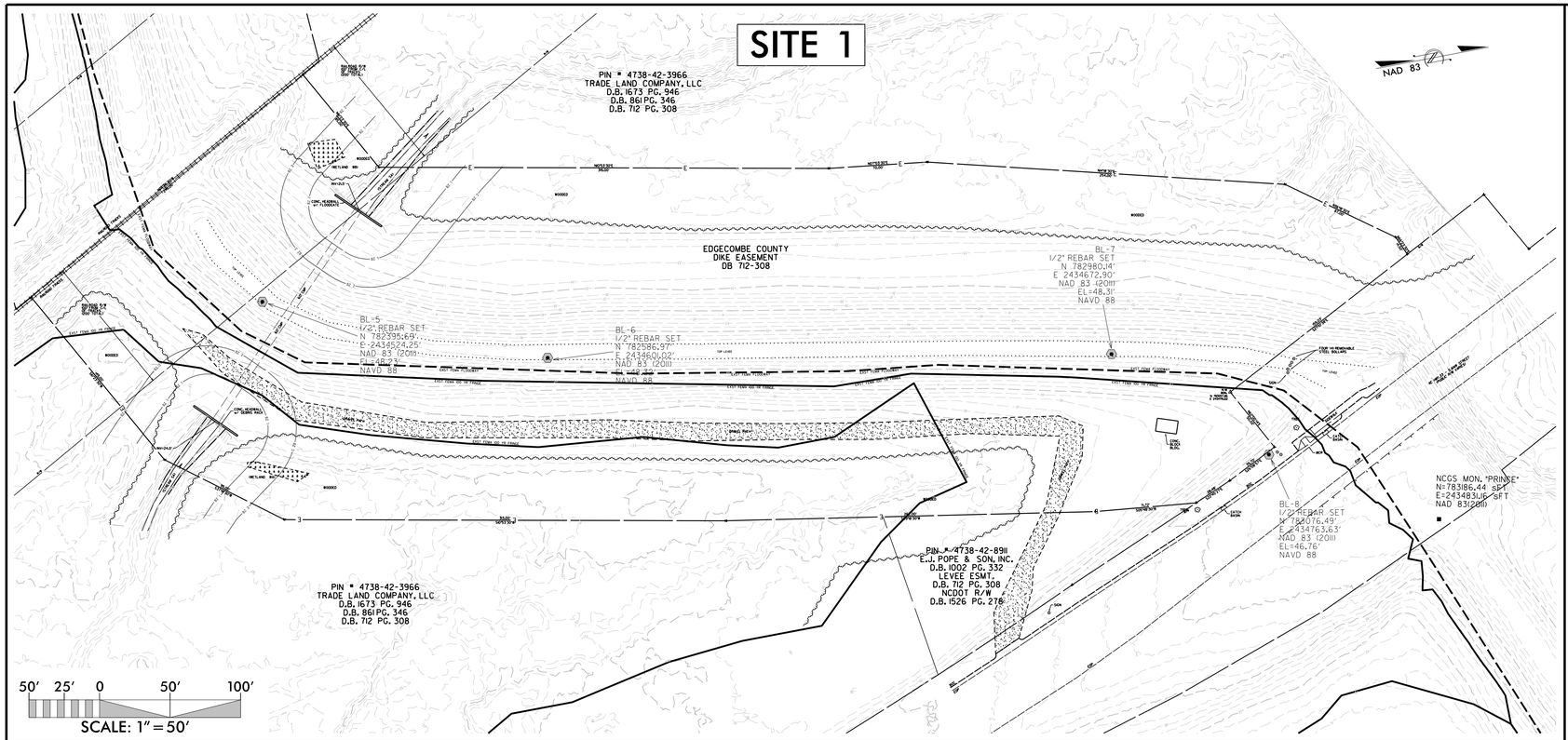
TYPICALS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C103
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

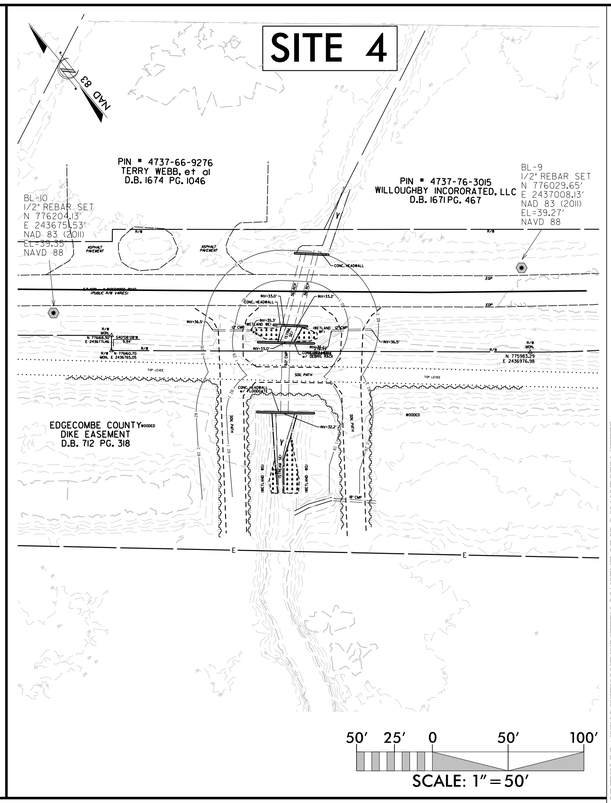
SHEET NO. C1.03

9/9/2021
Floodgate_Rdy_psh_C103.dgn
User:rch

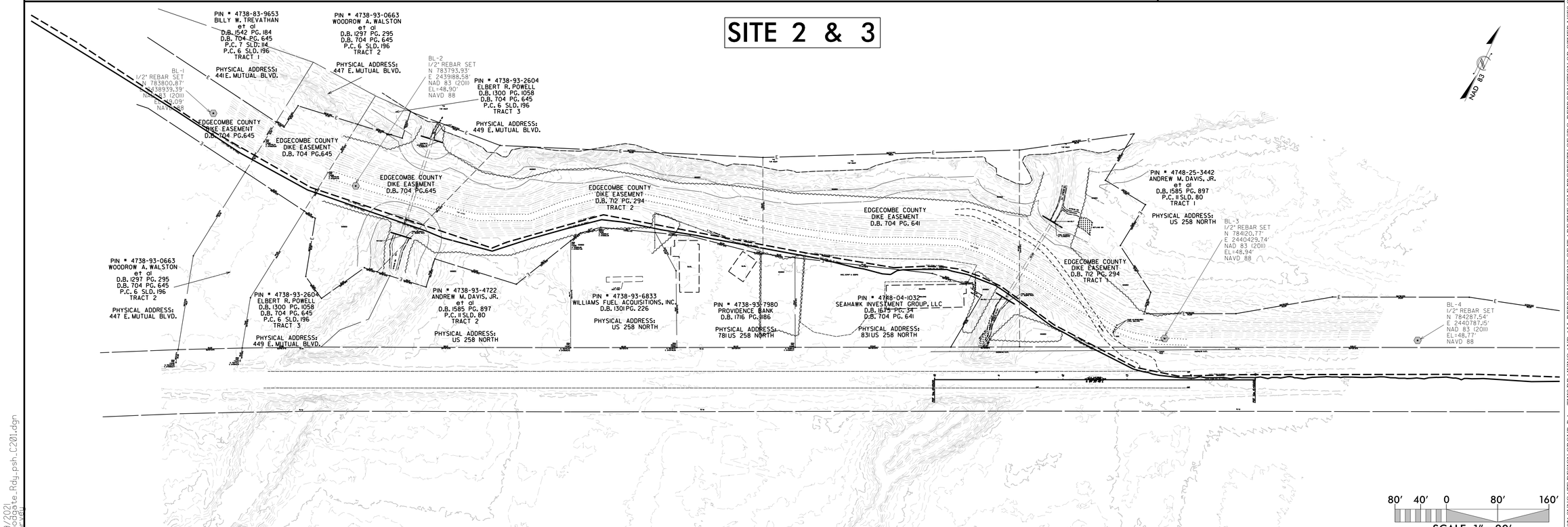
SITE 1



SITE 4



SITE 2 & 3



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
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TEL (919) 859-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by:
Randal C. Howard, PLS
E7DB2260D5B2406...

SEAL
L-5015
LAND SURVEYOR
RANDAL C. HOWARD

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EXISTING CONDITIONS

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C201
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C2.01

9/9/2021
Floodgate_Rdy_psh_C201.dgn
Plot By: rch

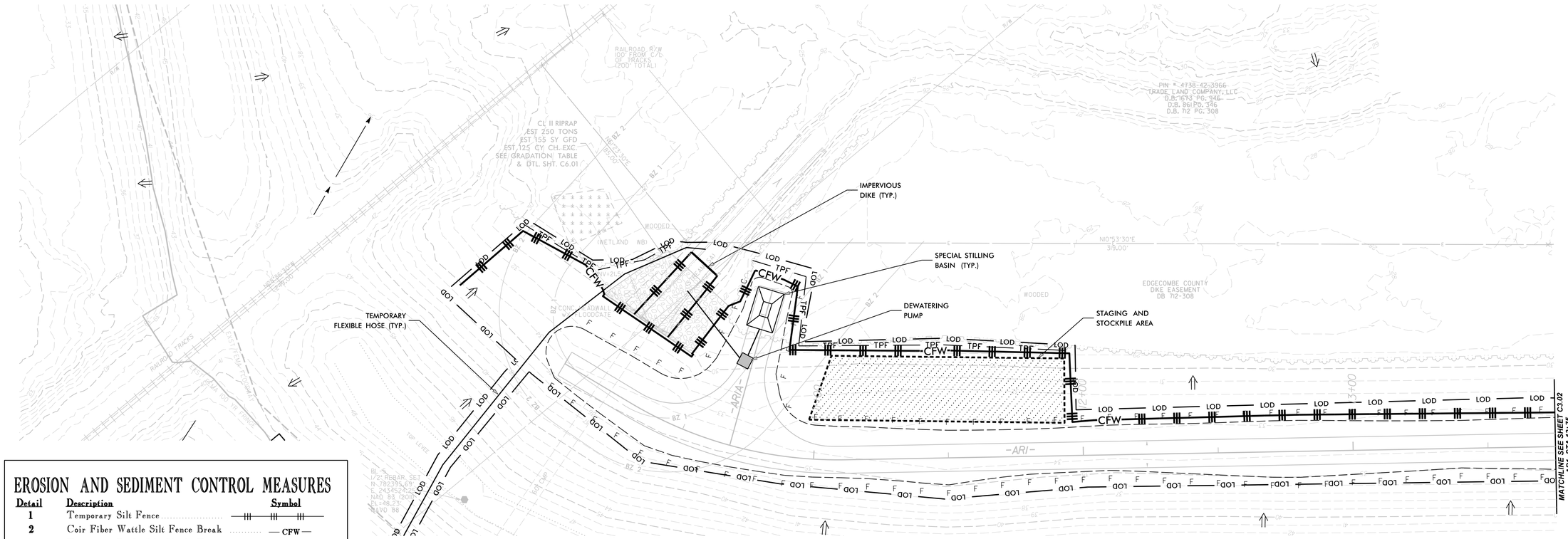
NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″=20′

PHASING FOR SHEETS C3.01 AND C3.03:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF
8	Limits of Disturbance	LOD

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton 1B09A0B1E9404CB...

PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON NORTH CAROLINA

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C301
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.01**

9/9/2021
Floodgate_Rdy_psh_C301.dgn
Ben Kay

NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″=20′

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 15+30 to Sta. 16+70 –AR1– LT (570 SY)
Sta. 10+50 to Sta. 12+80 –AR2– RT (450 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF TPF TPF
8	Limits of Disturbance	LOD LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
NORTH CAROLINA
PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C302
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.02**

9/9/2021
Floodgate_Rdy_psh_C302.dgn
User:rch

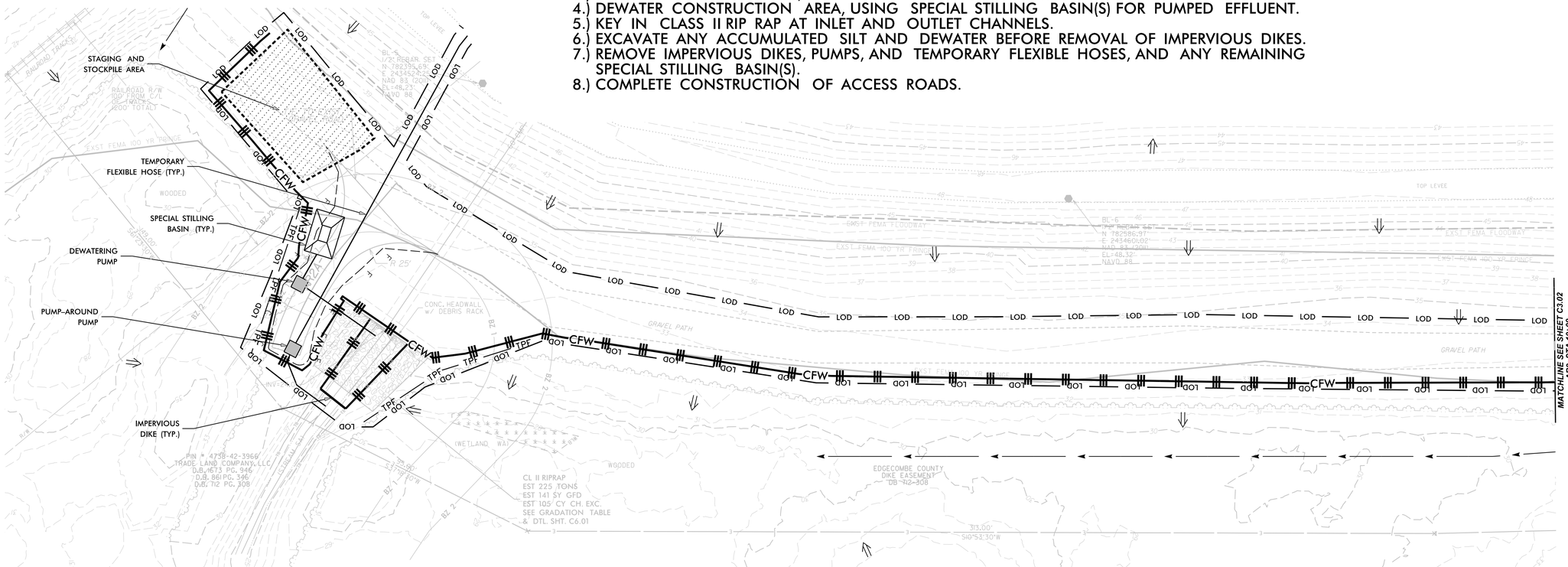
NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″ = 20′

PHASING FOR SHEETS C3.01 AND C3.03:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF
8	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

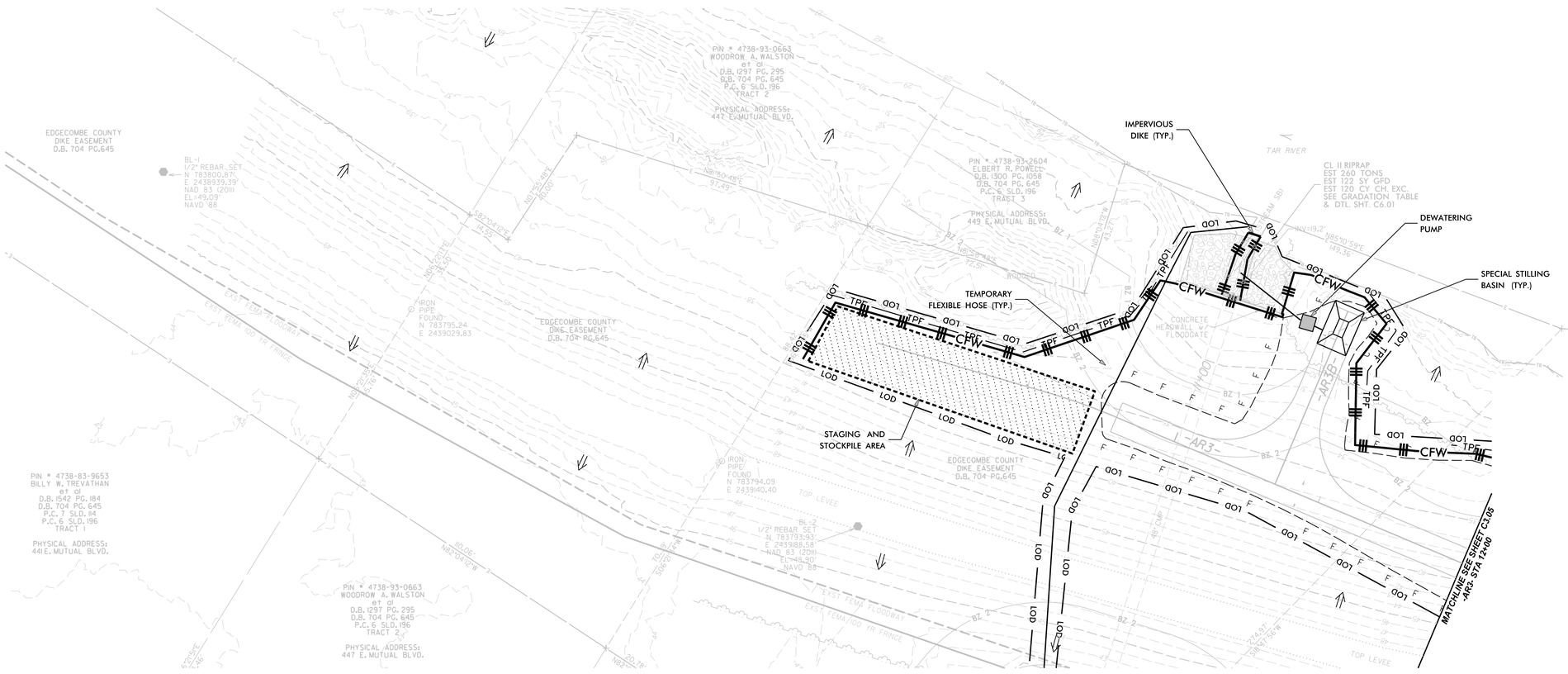
PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C303
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.03**

9/9/2021
F:\floodgate_Rdy_psh_C303.dgn
Thor.zeg

PHASING FOR SHEETS C3.04 AND C3.08:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



Place Matting for Erosion Control on Slope as Work Allows.
Sta. 11+80 to Sta. 12+00 –AR3– LT (55 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	— CFW —
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	— TPF — TPF — TPF —
8	Limits of Disturbance	— LOD — LOD —

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

Docusigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

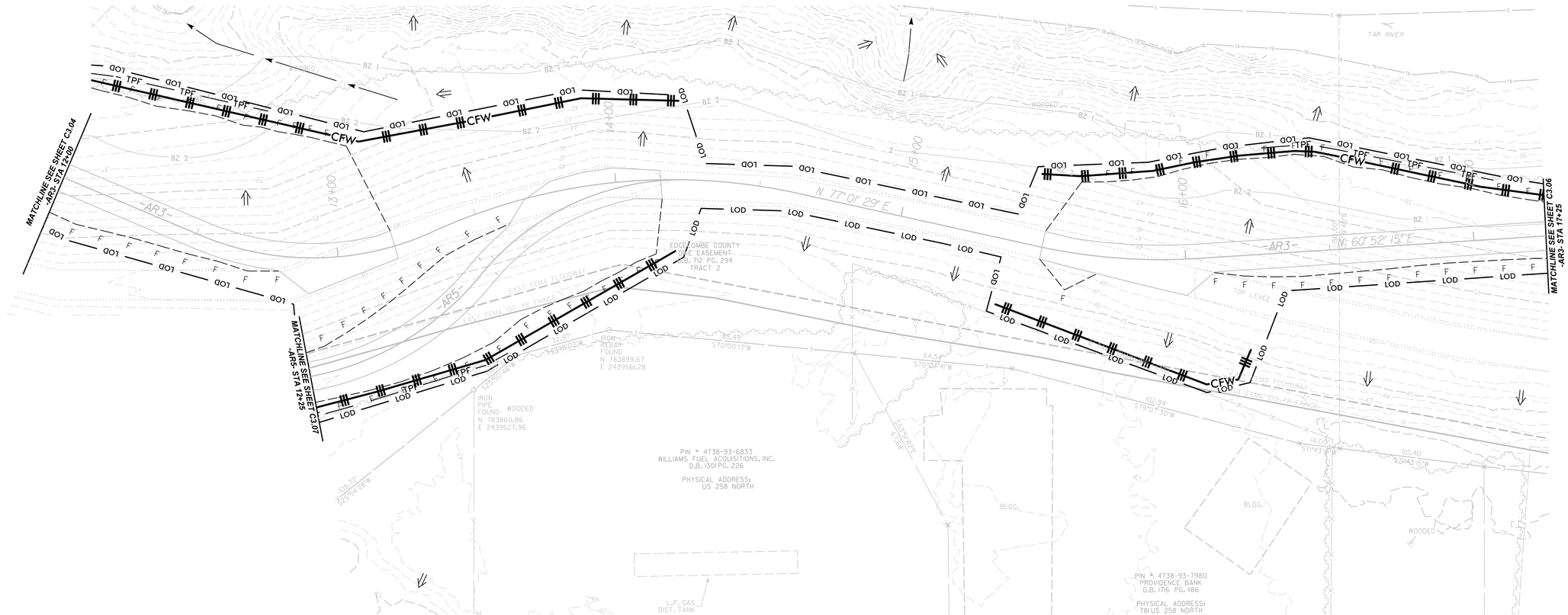
EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C304
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.04**

9/9/2021
Floodgate_Rdy_psh_C304.dgn
jharvey

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 12+00 to Sta. 13+10 –AR3– LT (355 SY)
Sta. 15+90 to Sta. 16+60 –AR3– LT (200 SY)



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF
8	Limits of Disturbance	LOD

SCALE: 1" = 20'

NAD 83

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

Docusigned by: Joshua G. Dalton
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C305
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.05**

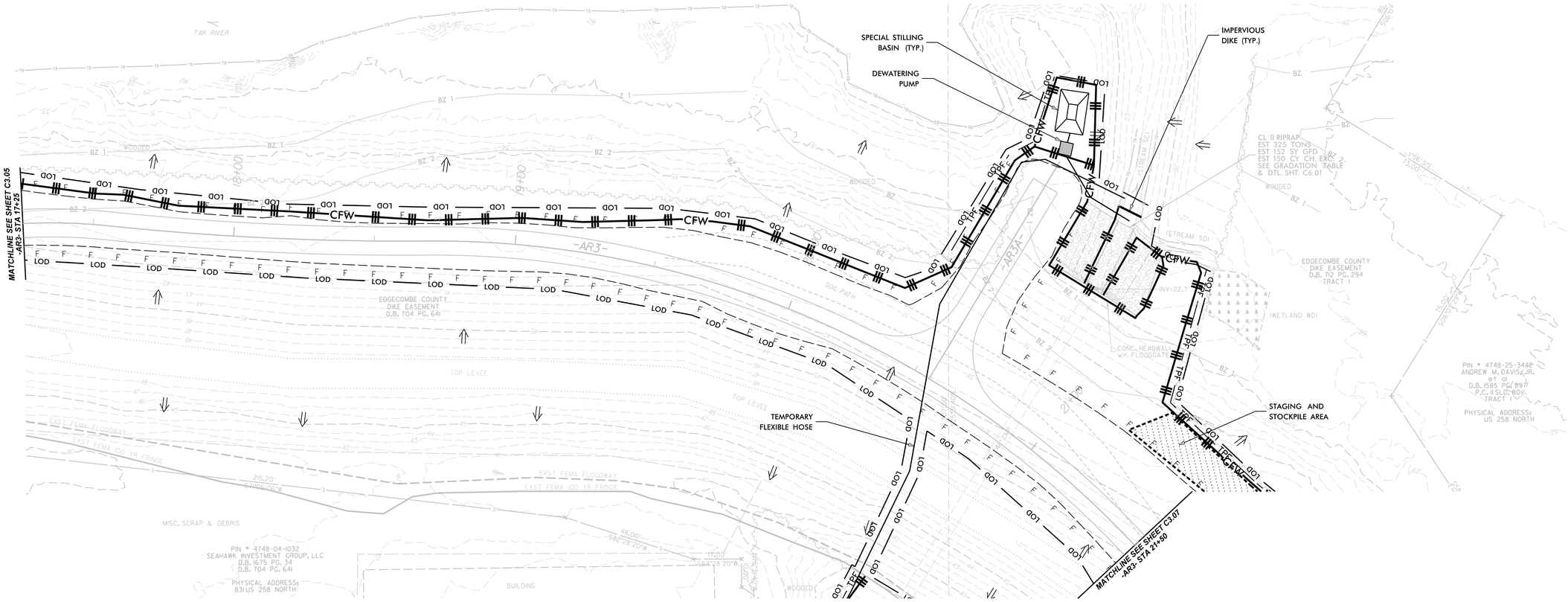
9/9/2021
F:\Floodgate_Rdy_psh_C305.dgn
User:rch

PHASING FOR SHEETS C3.06 AND C3.07:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.

20' 10' 0 20' 40'
SCALE: 1" = 20'

NAD 83



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF TPF TPF
8	Limits of Disturbance	LOD LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C306
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.06

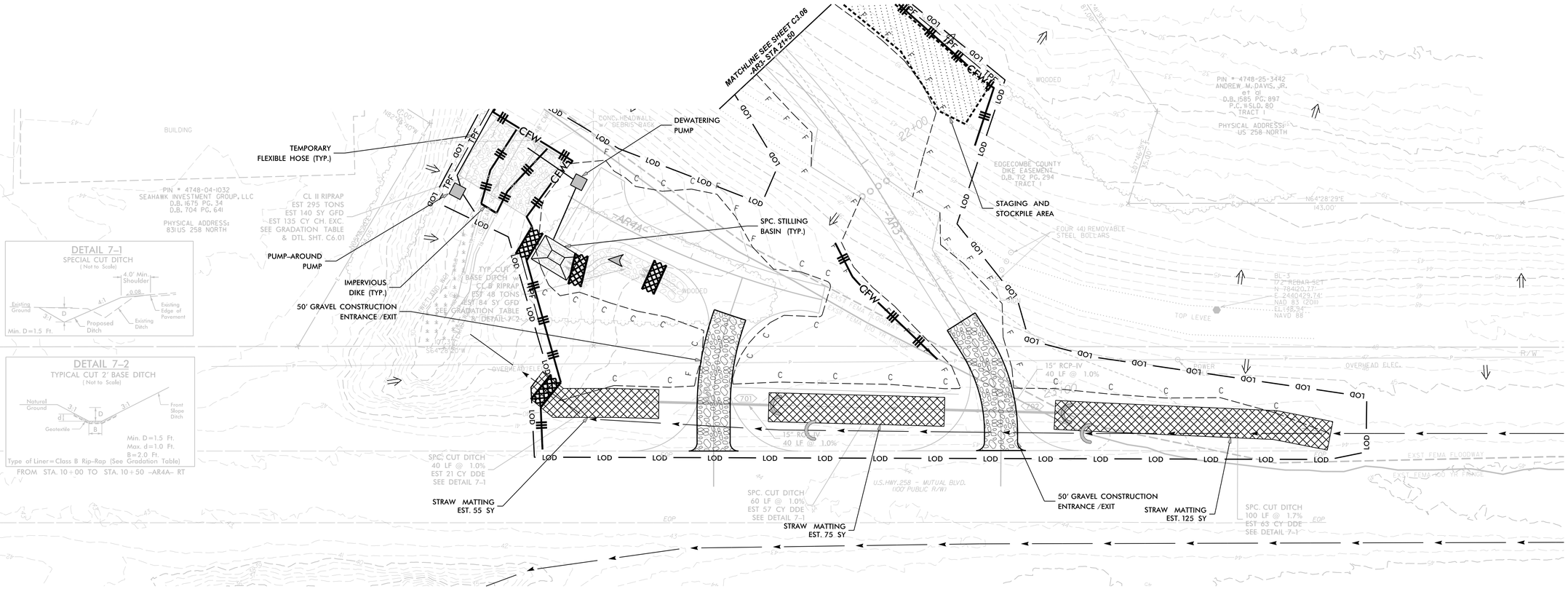
9/9/2021
Floodgate_Rdy_psh_C306.dgn
Harvey

PHASING FOR SHEETS C3.06 AND C3.07:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.

20′ 10′ 0 20′ 40′
SCALE: 1″ = 20′

NAD 83



DETAIL 7-1
SPECIAL CUT DITCH
(Not to Scale)

DETAIL 7-2
TYPICAL CUT 2′ BASE DITCH
(Not to Scale)

FROM STA. 10+00 TO STA. 10+50 –AR4A– RT

Place Straw Matting for Erosion Control on Slope as Work Allows.
Sta. 21+50 to Sta. 22+10 –AR3– LT (185 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF TPF TPF
8	Limits of Disturbance	LOD LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G Dalton
7D5A3DBC1B8A4F5...

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C307
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.07**

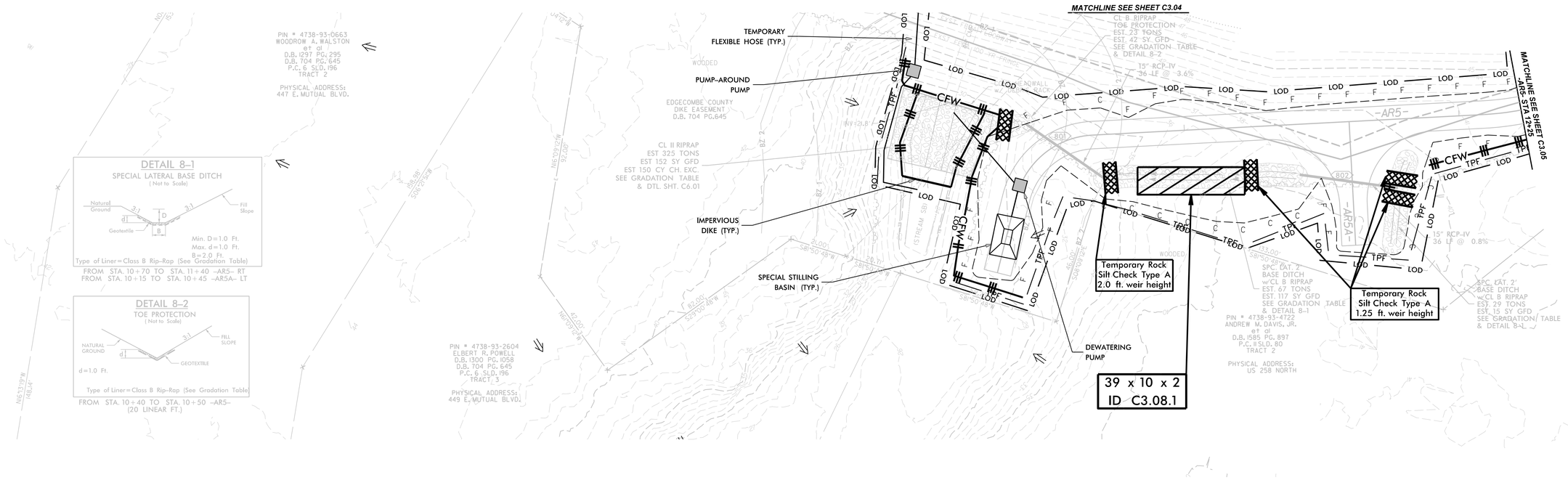
9/9/2021
Floodgate_Rdy_psh_C307.dgn
barney

20′ 10′ 0 20′ 40′
SCALE: 1″=20′

NAD 83

PHASING FOR SHEETS C3.04 AND C3.08:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF TPF TPF
8	Limits of Disturbance	LOD LOD

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

SUNGATE DESIGN GROUP, P.A.
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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G. Dalton
PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C308
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.08

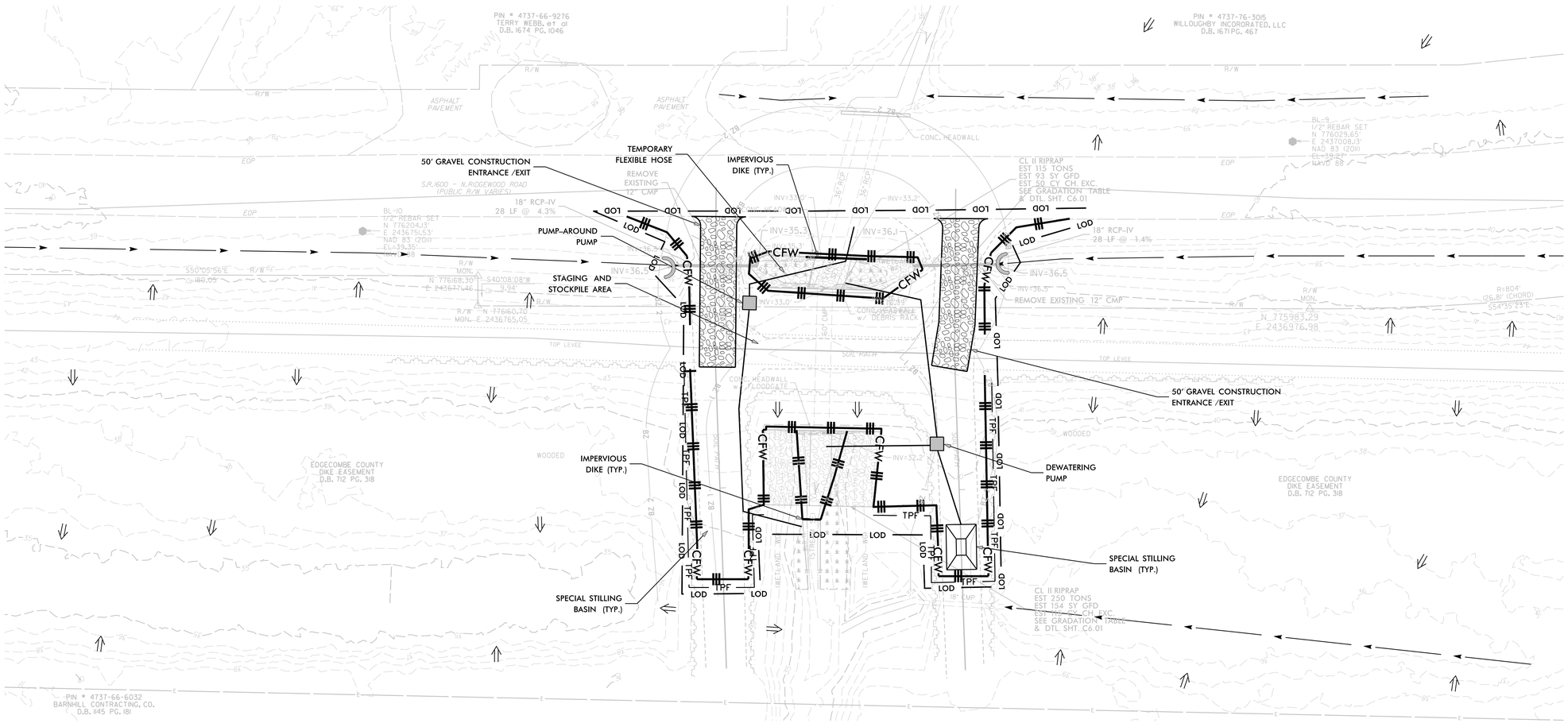
9/9/2021
Floodgate_Rdy_psh_C308.dgn
User: rch

PHASING FOR SHEET C3.09:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.

20' 10' 0 20' 40'
SCALE: 1" = 20'

NAD 83



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Special Stilling Basin	
7	Temp. Tree Prot. Fence	TPF
8	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
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RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 4

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C309
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.09**

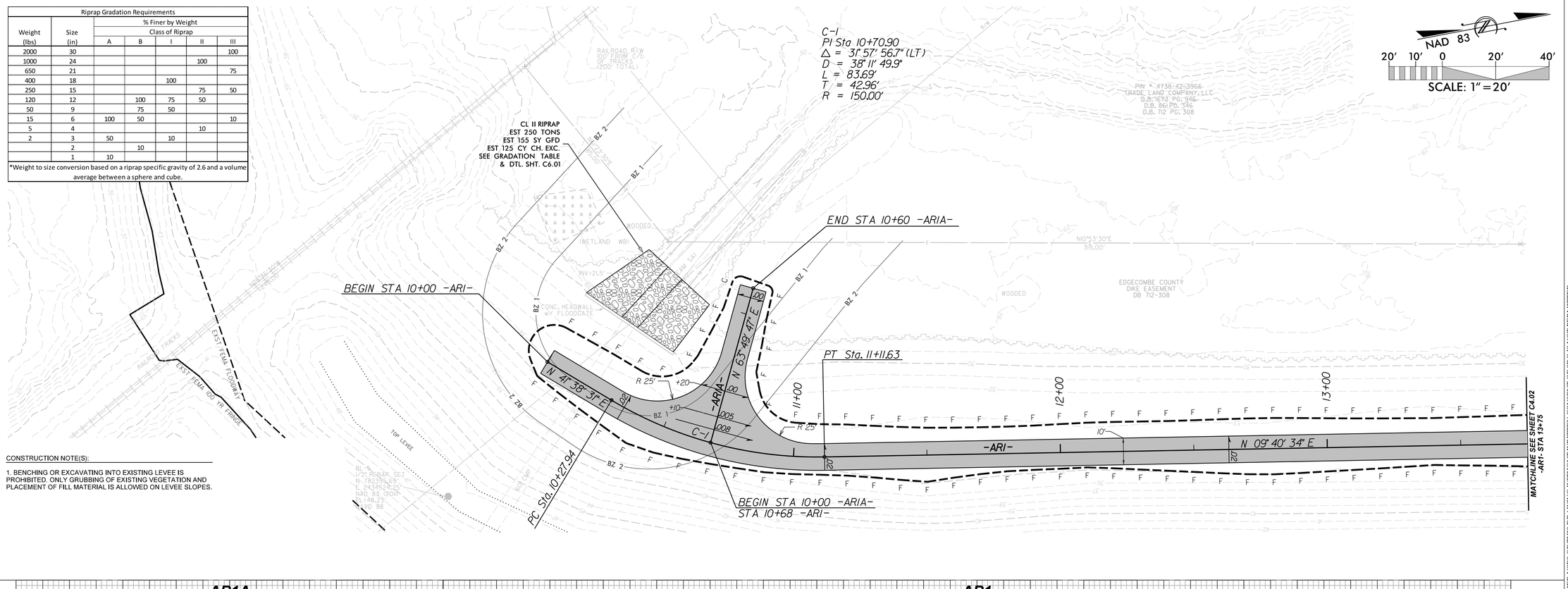
9/9/2021
Floodgate_Rdy_psh_C309.dgn
Harvey

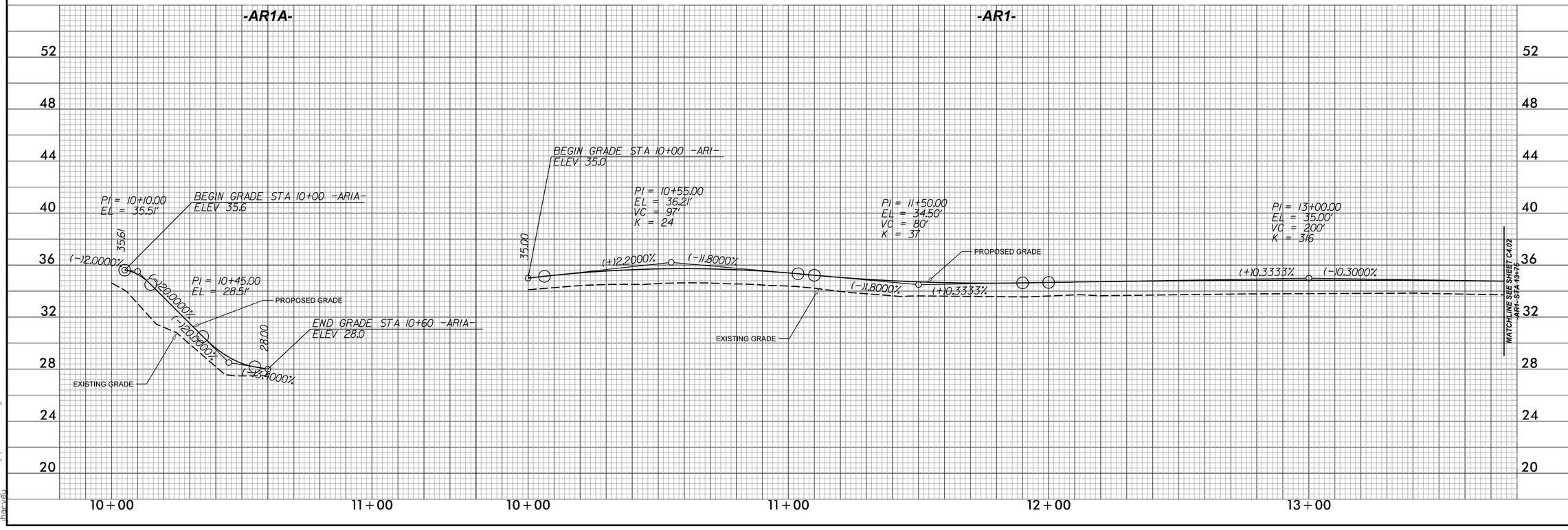
Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap					
		A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.





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RALEIGH, NORTH CAROLINA 27606
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ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G. Dalton 1284D4D0F6FB4C9...

JOSHUA G. DALTON NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

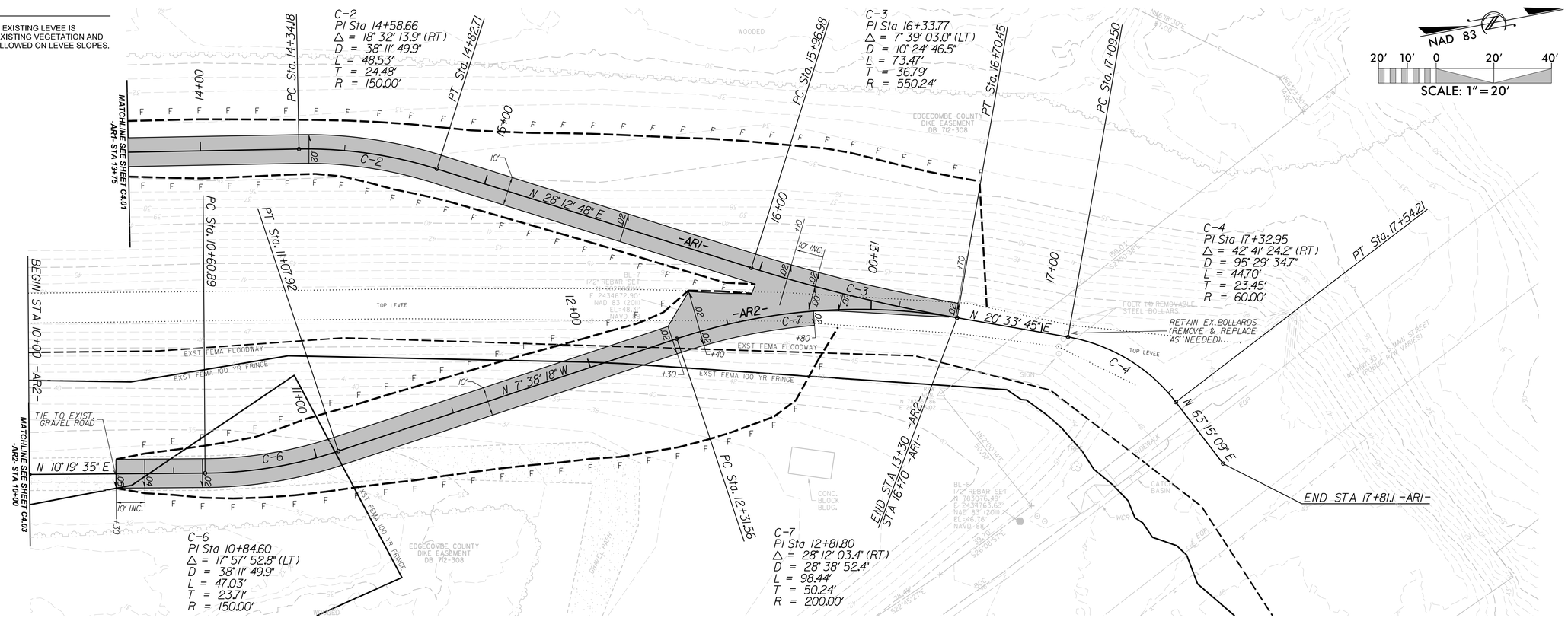
GRADING & DRAINAGE - SITE 1

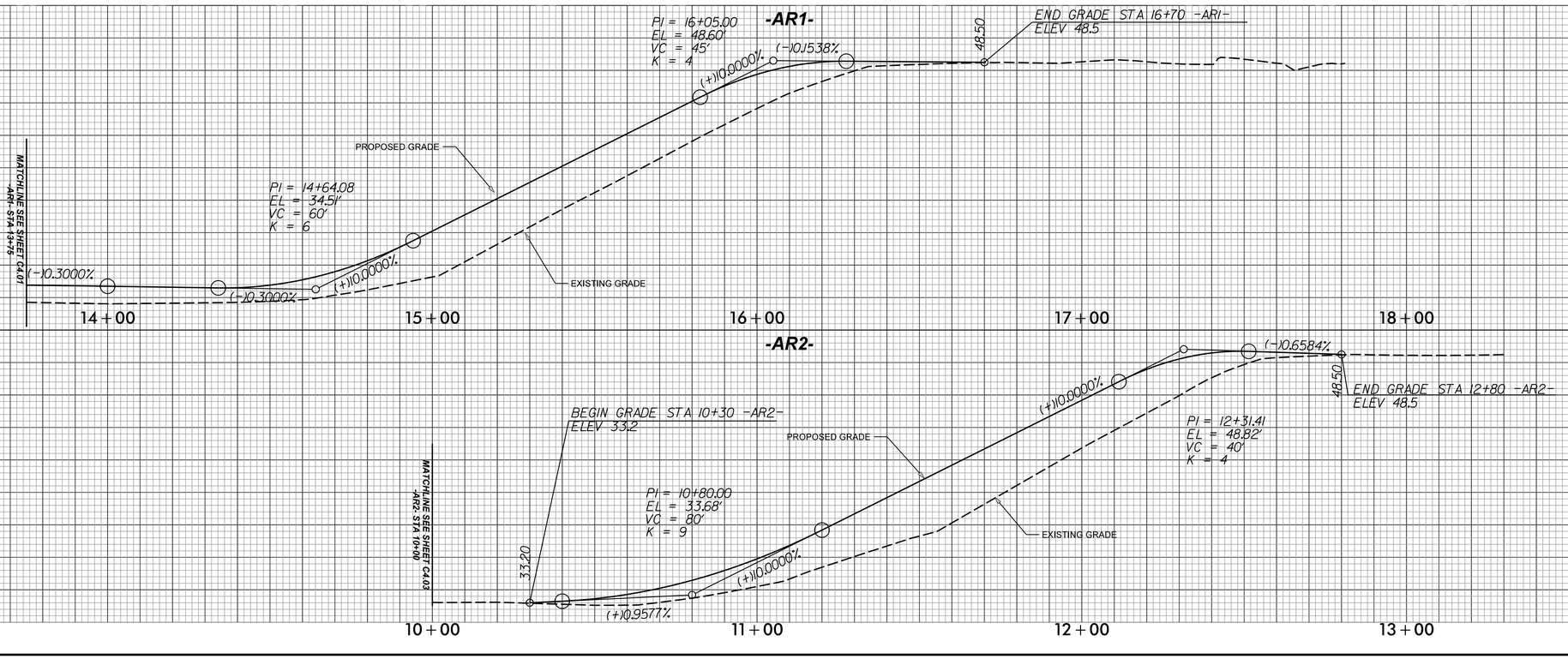
PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C401
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C4.01

9/9/2021
Floodgate_Rdy_psh_C401.dgn
User: rch

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 1

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C402
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C4.02

9/9/2021
Floodgate_Rdy_psh_C402.dgn
User:rch

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

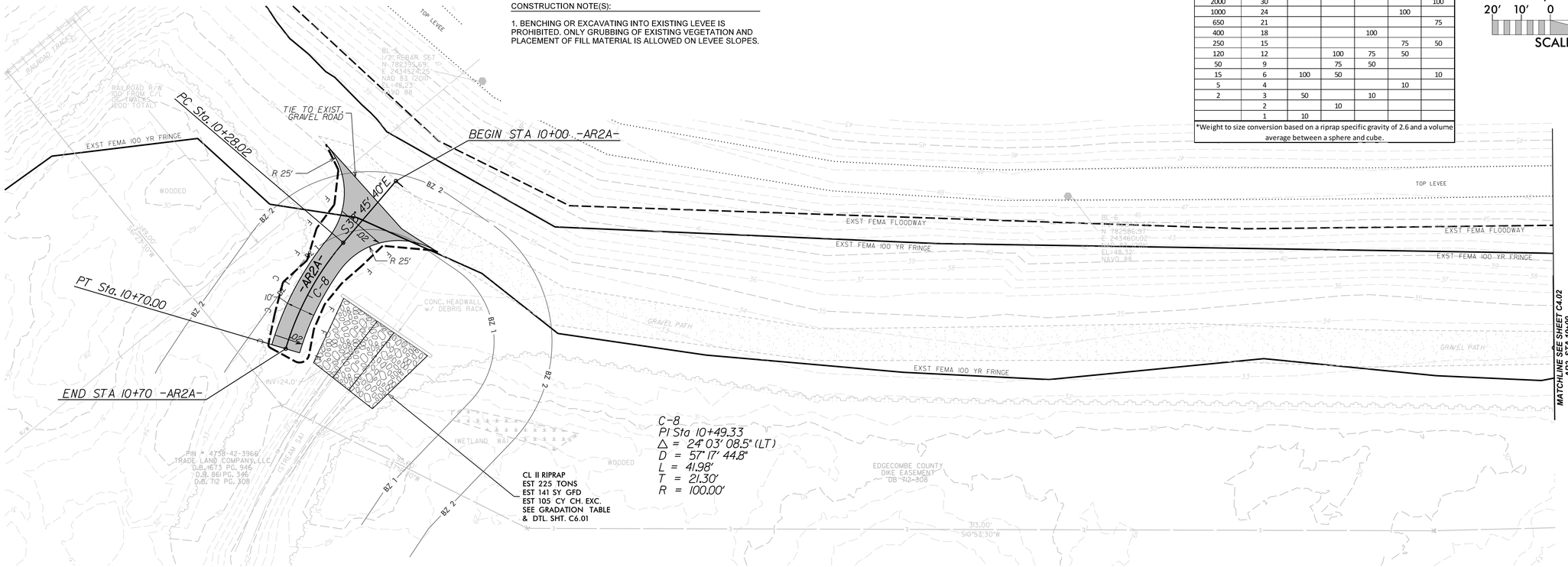
Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

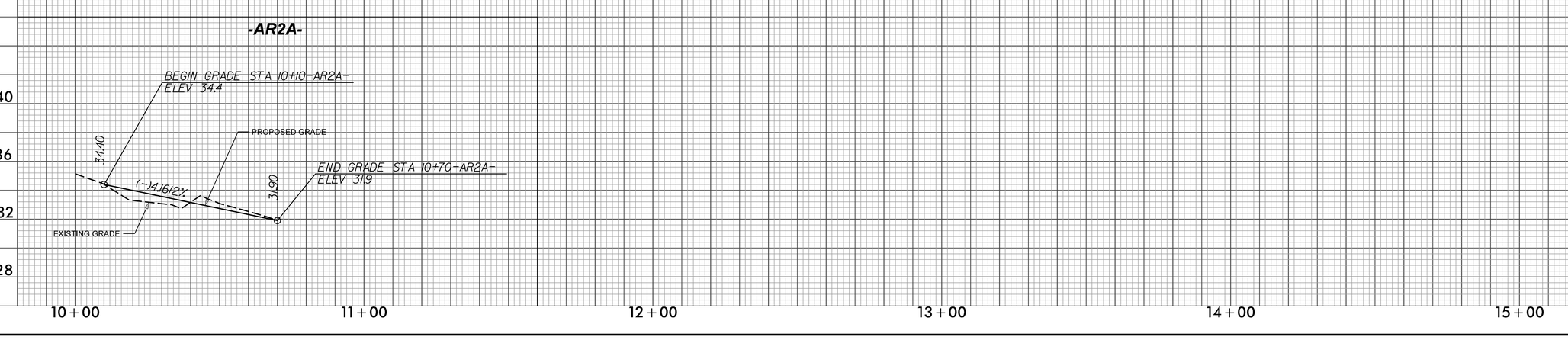
*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″ = 20′





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DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C403
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.03

9/9/2021
Floodgate_Rdy_psh_C403.dgn
User:rch

C-9
PI Sta 10+67.78
Δ = 6° 39' 22.5" (RT)
D = 28° 38' 52.4"
L = 23.23'
T = 11.63'
R = 200.00'

NAD 83

20' 10' 0 20' 40'
SCALE: 1" = 20'

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

BEGIN STA 10+00 -AR3-

END STA 10+60 -AR3B-

CL II RIPRAP
EST 260 TONS
EST 122 SY GFD
EST 120 CY CH. EXC.
SEE GRADATION TABLE
& DTL. SHT. C6.01

EDGECOMBE COUNTY DIKE EASEMENT D.B. 704 PG.645

BL-1 1/2" REBAR SET N 783800.87 E 2438939.39 NAD 83 (2011) EL=49.09' NAVD 88

EXST FEMA 100 YR FRINGE

EXST FEMA FLOODWAY

PIN # 4738-93-0663 WOODROW A. WALSTON et ol D.B. 1297 PG. 295 D.B. 704 PG. 645 P.C. 6 SLD. 196 TRACT 2

PHYSICAL ADDRESS: 447 E. MUTUAL BLVD.

PIN # 4738-93-2604 ELBERT R. POWELL D.B. 1300 PG. 1058 D.B. 704 PG. 645 P.C. 6 SLD. 196 TRACT 3

PHYSICAL ADDRESS: 449 E. MUTUAL BLVD.

TAR RIVER

IRON PIPE FOUND N 783795.24 E 2439029.83

EDGECOMBE COUNTY DIKE EASEMENT D.B. 704 PG.645

CONCRETE HEADWALL w/ FLOODGATE

PIN # 4738-83-9653 BILLY W. TREVATHAN et ol D.B. 1542 PG. 184 D.B. 704 PG. 645 P.C. 7 SLD. 84 P.C. 6 SLD. 196 TRACT 1

PHYSICAL ADDRESS: 441 E. MUTUAL BLVD.

IRON PIPE FOUND N 783794.09 E 2439040.40

BL-2 1/2" REBAR SET N 783793.53 E 2439188.58 NAD 83 (2011) EL=48.90' NAVD 88

TOP LEVEE

PIN # 4738-93-0663 WOODROW A. WALSTON et ol D.B. 1297 PG. 295 D.B. 704 PG. 645 P.C. 6 SLD. 196 TRACT 2

PHYSICAL ADDRESS: 447 E. MUTUAL BLVD.

N 80° 47' 28" E

C-9

PC Sta. 10+56.15

PT Sta. 10+79.38

BEG STA 10+00 -AR3B-
STA 11+35 -AR3-

-AR3B-

-AR3-

N 87° 26' 50" E

MATCHLINE SEE SHEET C4.05
-AR3- STA 12+00

Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight					
		Class of Riprap					
		A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

PI = 10+15.00
EL = 36.90'
BEGIN GRADE STA 10+05 -AR3B-
ELEV 35.9

37.10

(-)12.0000%

PI = 10+45.00
EL = 30.90'
VC = 30'
K = 3

(-)2.0000%

PROPOSED GRADE

END GRADE STA 10+60 -AR3B-
ELEV 30.2

29.40

(+)10.0000%

EXISTING GRADE

BEGIN GRADE STA 10+05 -AR3-
ELEV 36.9

PI = 10+16.00
EL = 36.30'

36.92

(-)15.6250%

(-)0.6452%

PI = 10+78.00
EL = 35.90'
VC = 48'
K = 21

(-)0.6452%

(+)1.6023%

PROPOSED GRADE

PI = 11+48.39
EL = 37.03'
VC = 83'
K = 10

(+)1.6023%

(+)9.9002%

EXISTING GRADE

MATCHLINE SEE SHEET C4.05
-AR3- STA 12+00

10+00 11+00 10+00 11+00 12+00

52 48 44 40 36 32 28 24 20

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

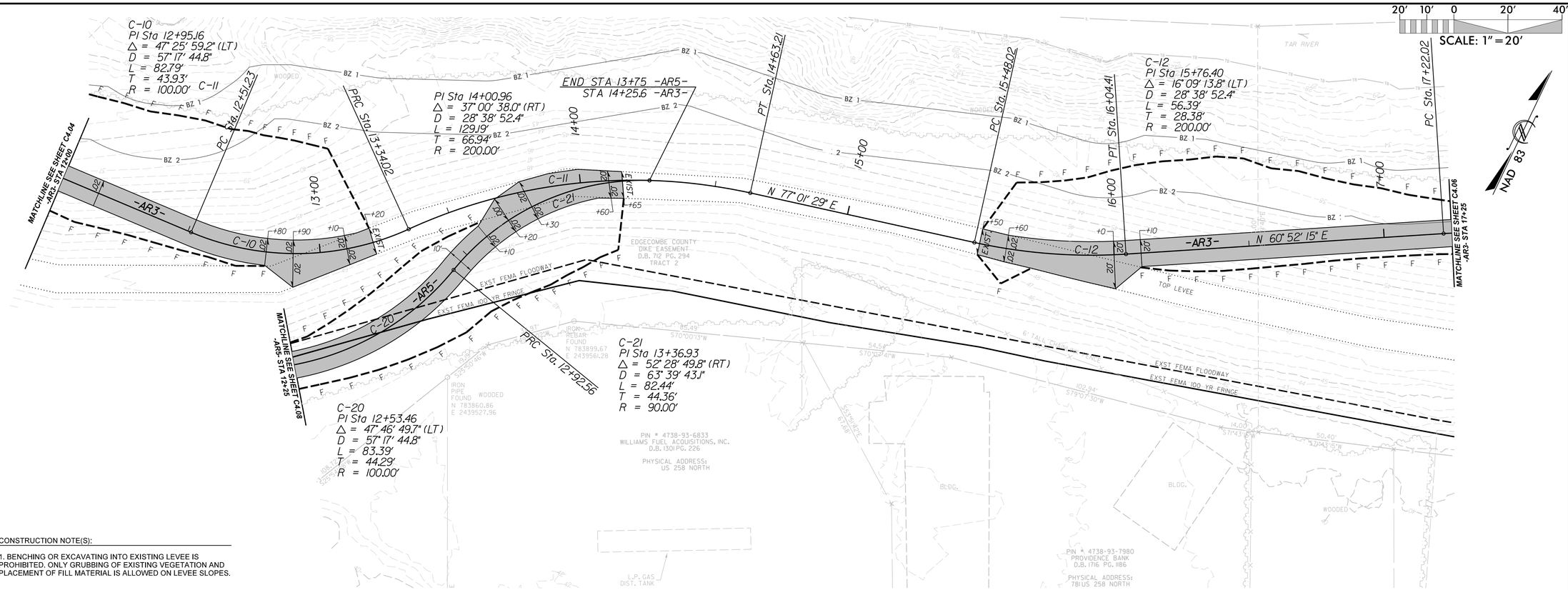
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C404
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

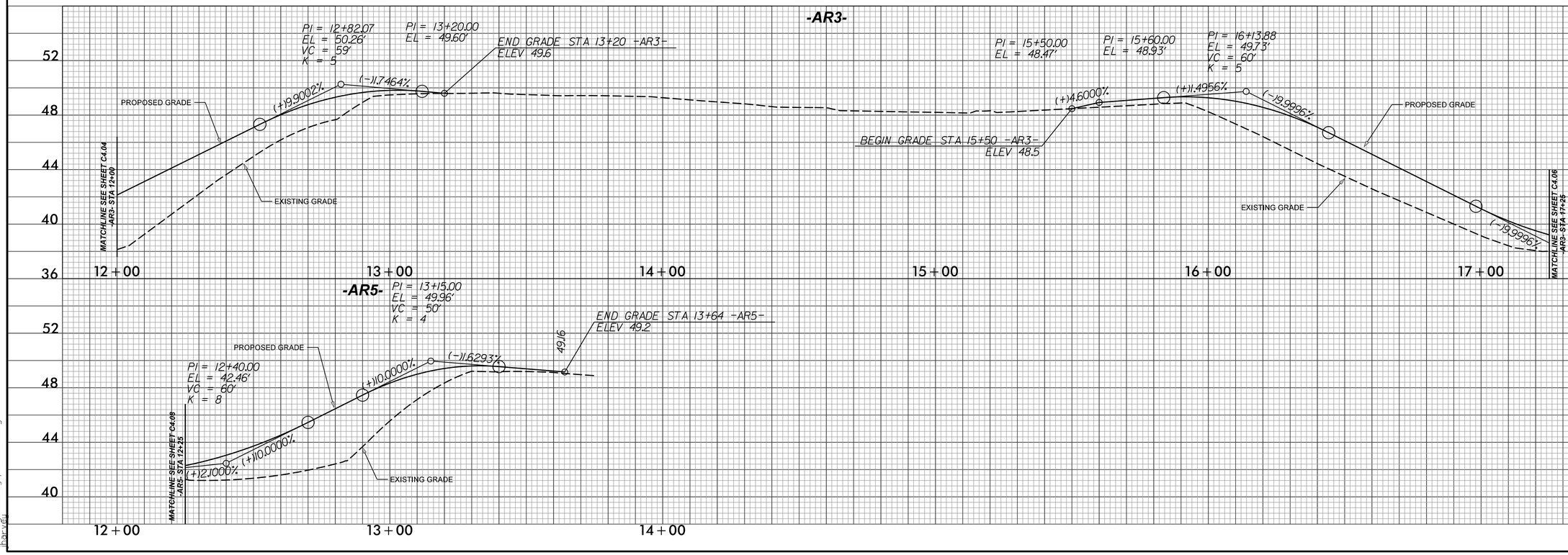
SHEET NO. C4.04

9/9/2021
Floodgate_Rdy_psh_C404.dgn
User:rch



CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

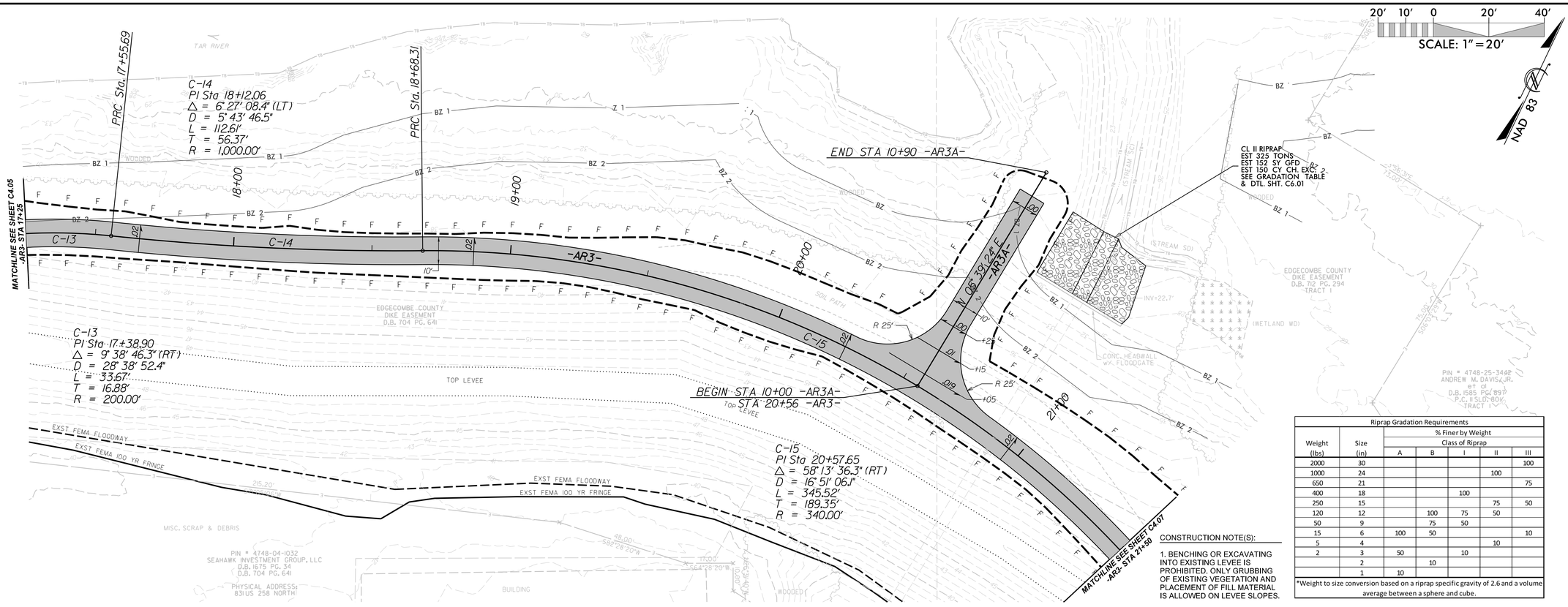
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C405
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.05

9/9/2021
Floodgate_Rdy_psh_C405.dgn
User:rch

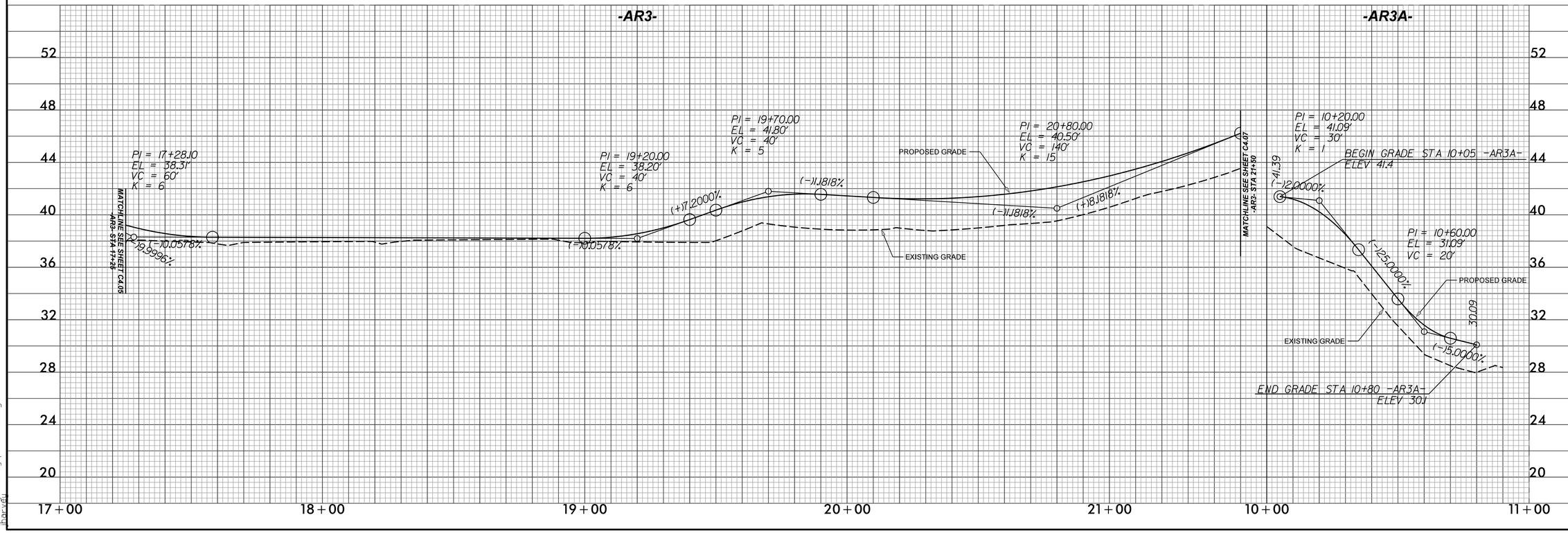


Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.



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ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C406
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

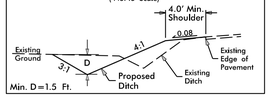
SHEET NO. C4.06

9/9/2021
Floodgate_Rdy_psh_C406.dgn
Harvell

Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

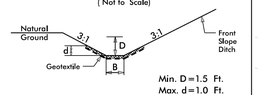
*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

DETAIL 7–1
SPECIAL CUT DITCH
(Not to Scale)



Min. D=1.5 Ft.

DETAIL 7–2
TYPICAL CUT 2' BASE DITCH
(Not to Scale)

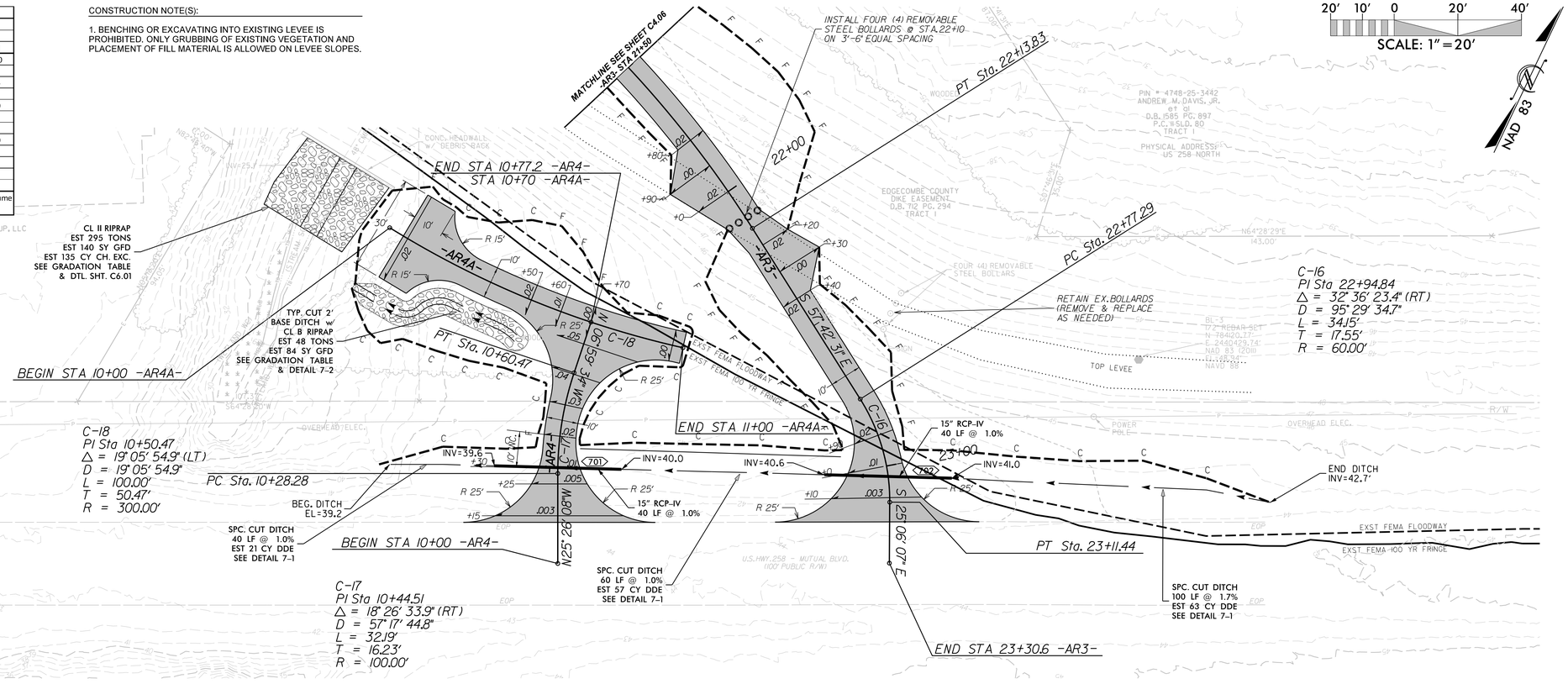


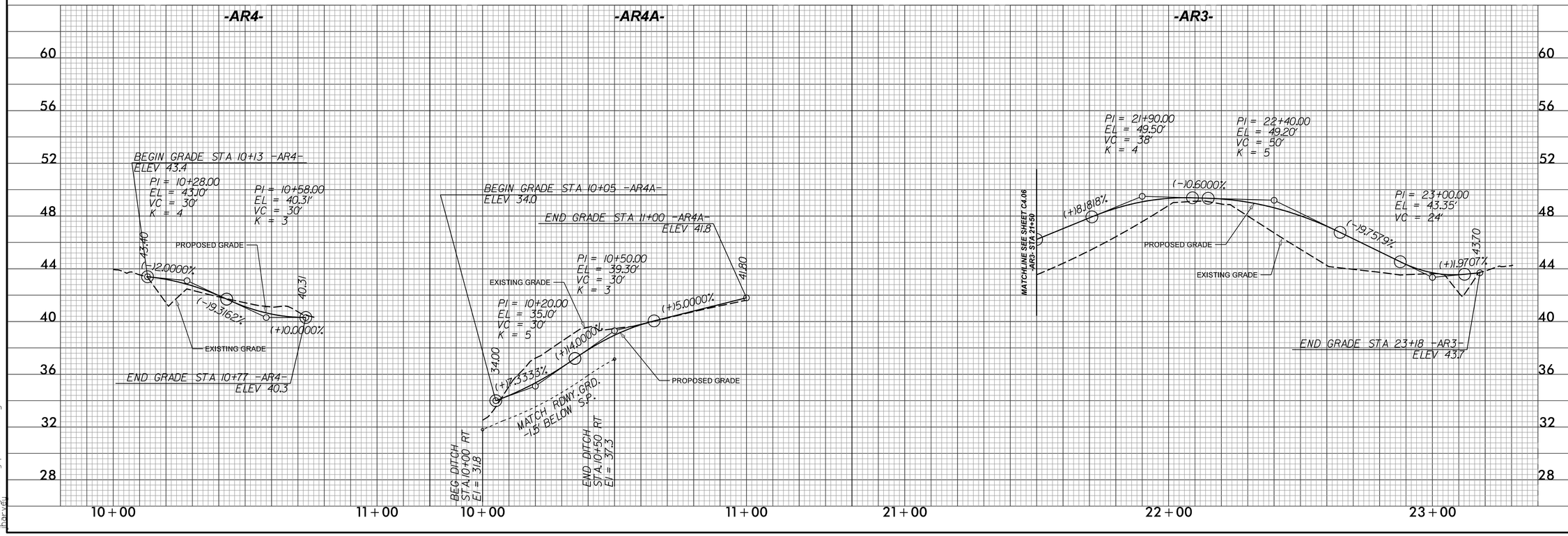
Min. D=1.5 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
Type of Liner=Class B Rip-Rap (See Gradation Table)

FROM STA. 10+00 TO STA. 10+50 –AR4A– RT

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C407
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C4.07**

9/9/2021
Floodgate_Rdy_psh_C407.dgn
Harvell

Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

SCALE: 1" = 20'

NAD 83

DETAIL 8–1
SPECIAL LATERAL BASE DITCH
(Not to Scale)

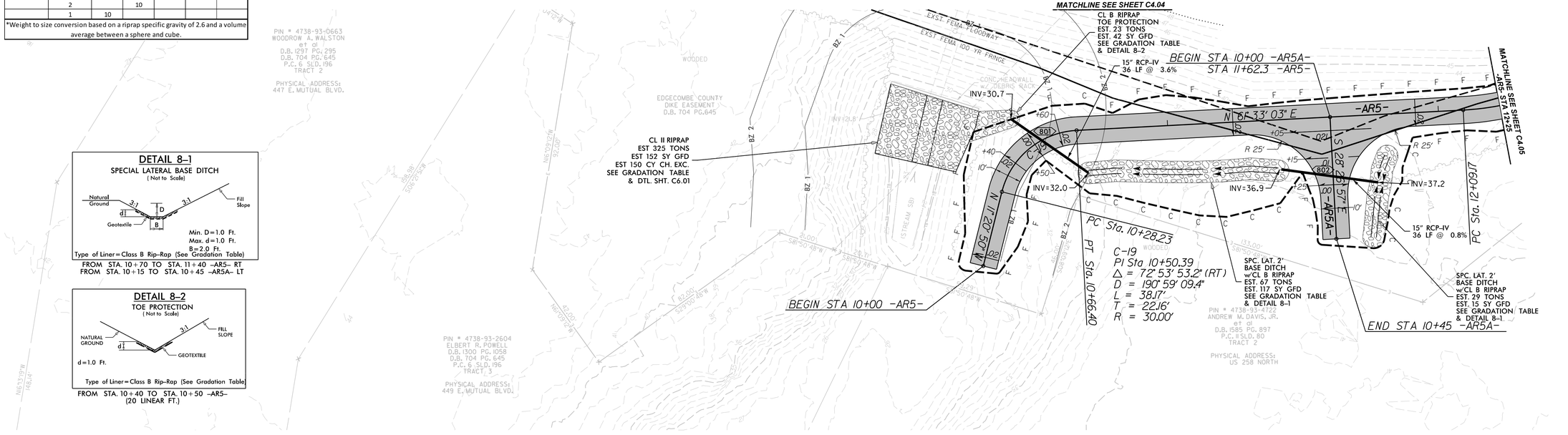
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
Type of Liner = Class B Rip–Rap (See Gradation Table)

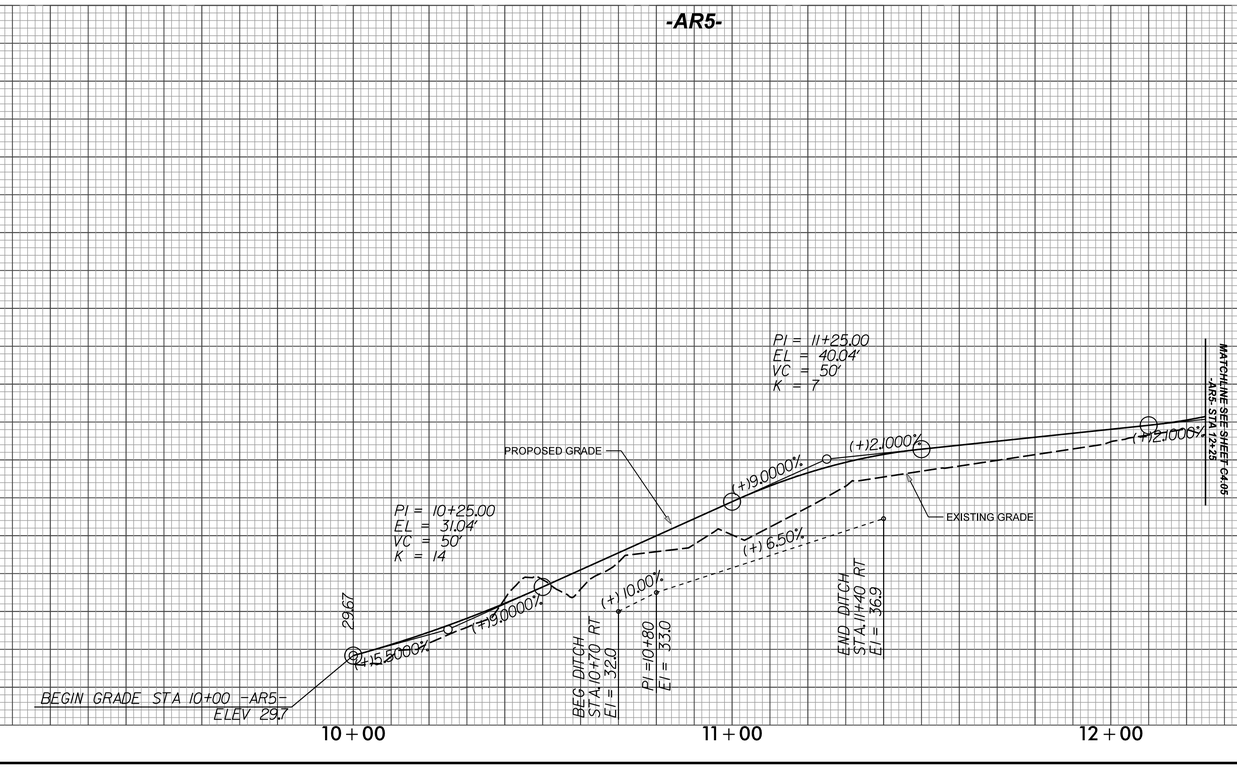
FROM STA. 10+70 TO STA. 11+40 –AR5– RT
FROM STA. 10+15 TO STA. 10+45 –AR5A– LT

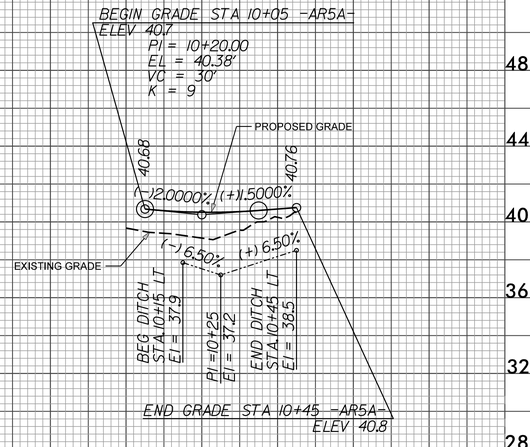
DETAIL 8–2
TOE PROTECTION
(Not to Scale)

d = 1.0 Ft.
Type of Liner = Class B Rip–Rap (See Gradation Table)

FROM STA. 10+40 TO STA. 10+50 –AR5–
(20 LINEAR FT.)







SUNGATE DESIGN GROUP, P.A.
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TEL (919) 839-2243
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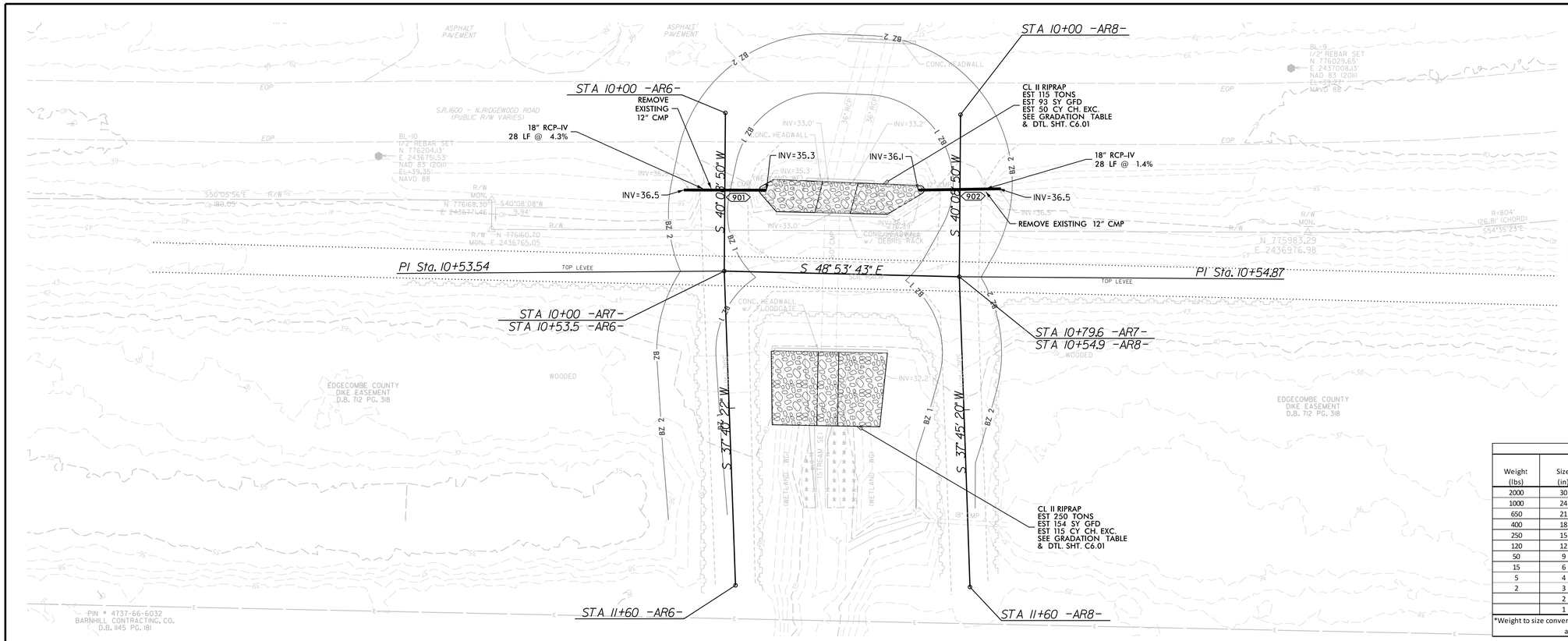
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC
GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C408
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.08

9/9/2021
Floodgate_Rdy_psh_C408.dgn
User:rch



20′ 10′ 0 20′ 40′

SCALE: 1" = 20′

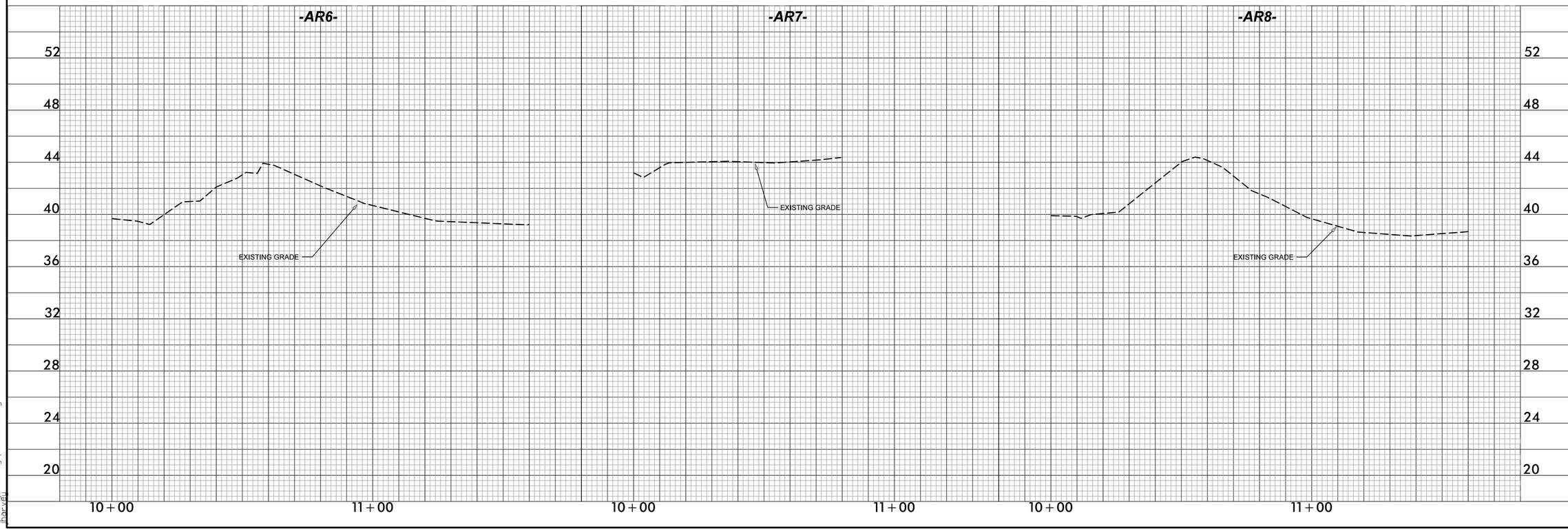
NAD 83

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap				
		A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

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9/9/2021

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

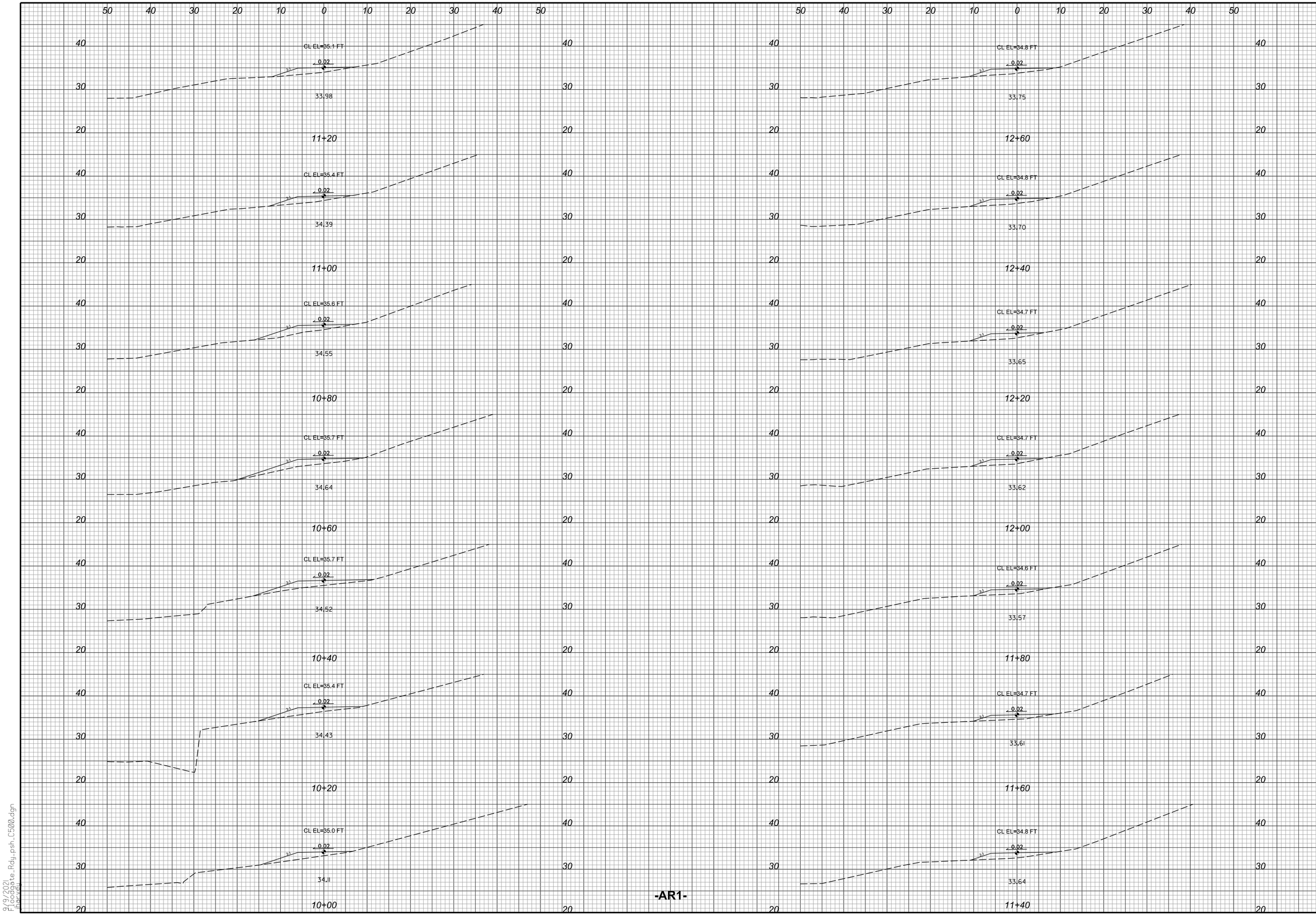
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 4

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C409
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.09

9/9/2021
Floodgate_Rdy_psh_C409.dgn
Harrell



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9/9/2021

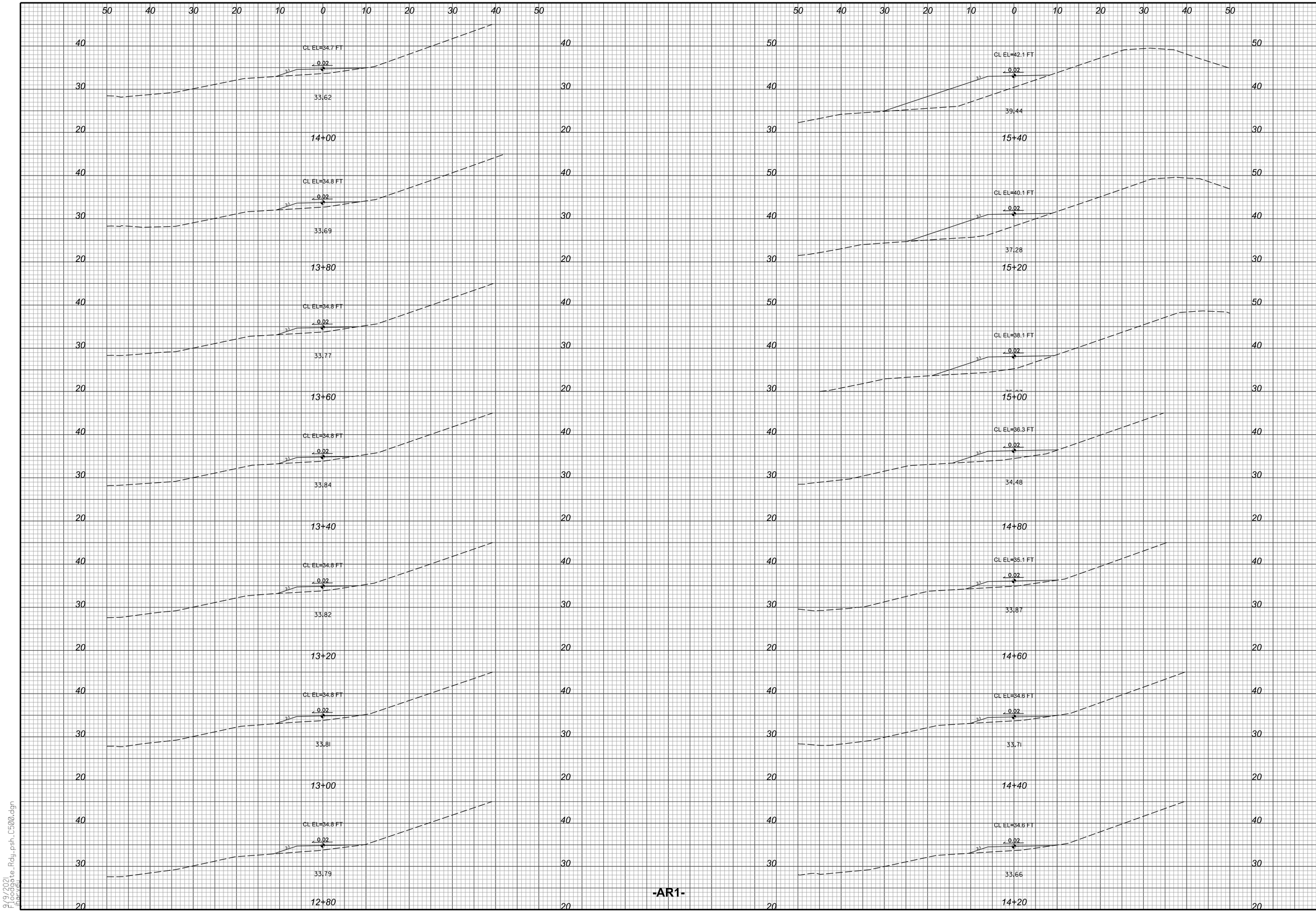
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C501
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.01

9/9/2021
Floodgate Rdy_psh_C500.dgn
by rch



-AR1-

SUNGATE DESIGN GROUP, P.A.
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9/9/2021

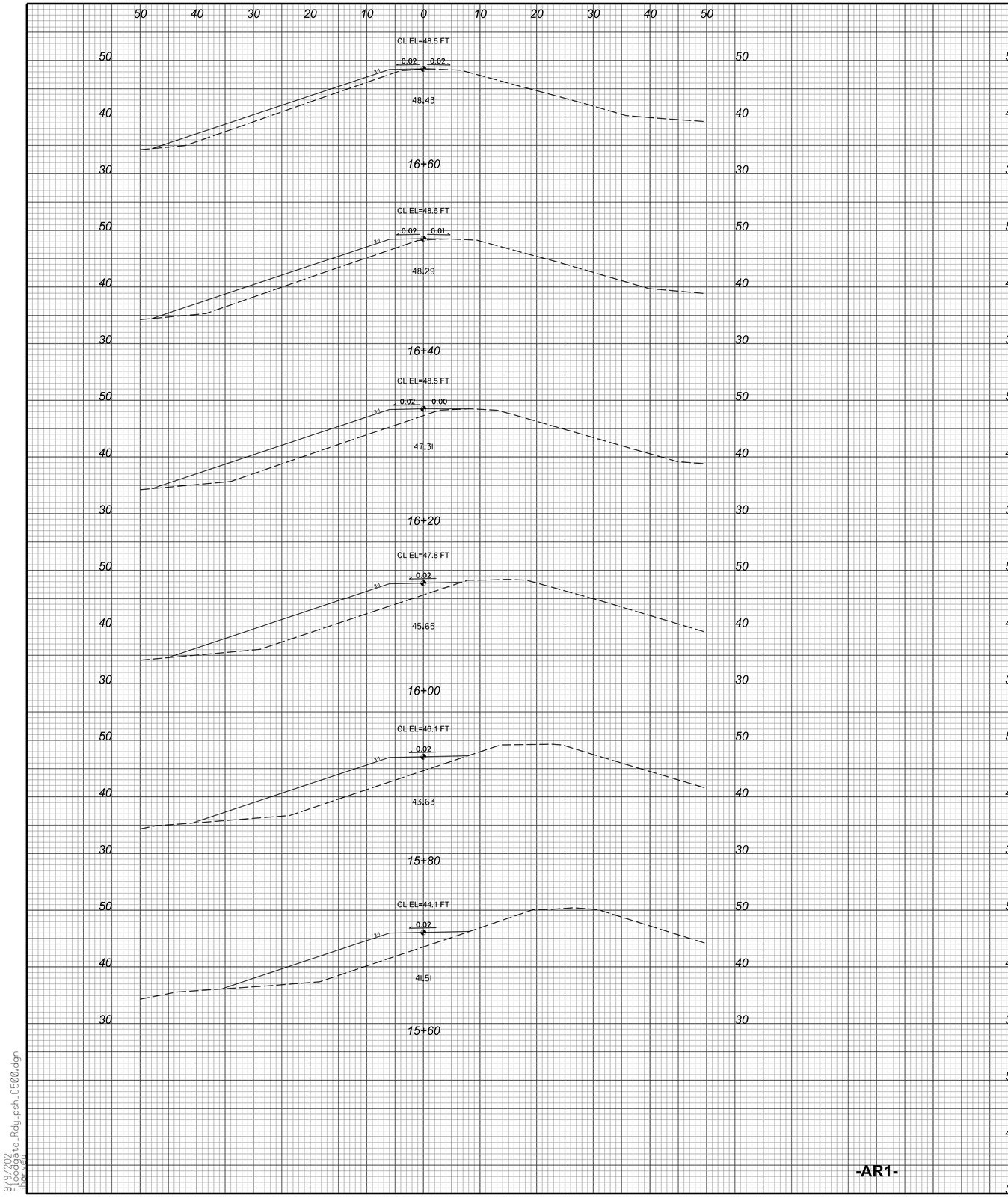
PRINCEVILLE DIKE FLOODGATE REPAIRS

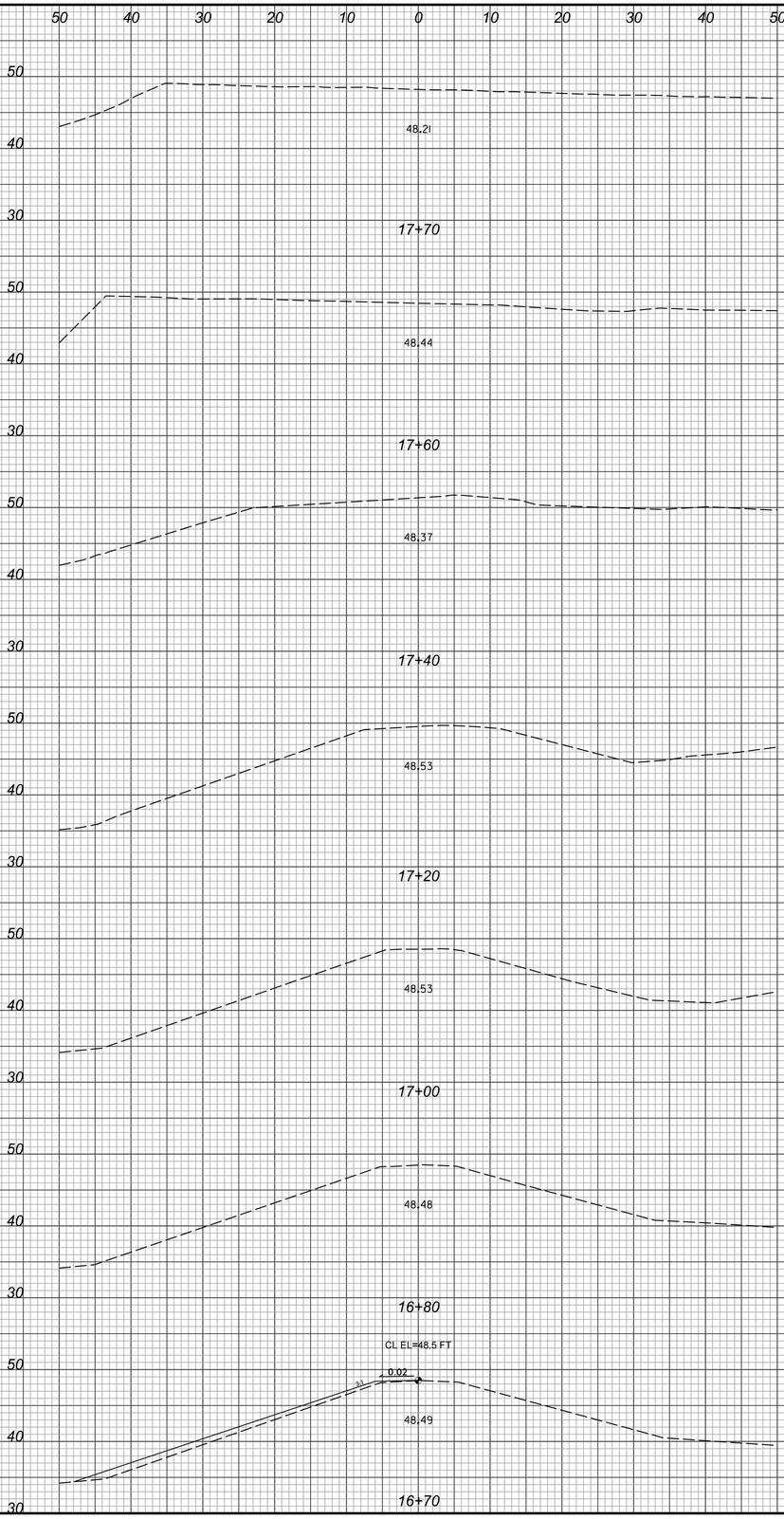
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C502
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.02

9/9/2021
Floodgate Rdy psh C502.dgn
User: rch





-AR1-

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ENG FIRM LICENSE NO. C-890

DocuSigned by:
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PRINCEVILLE DIKE FLOODGATE REPAIRS

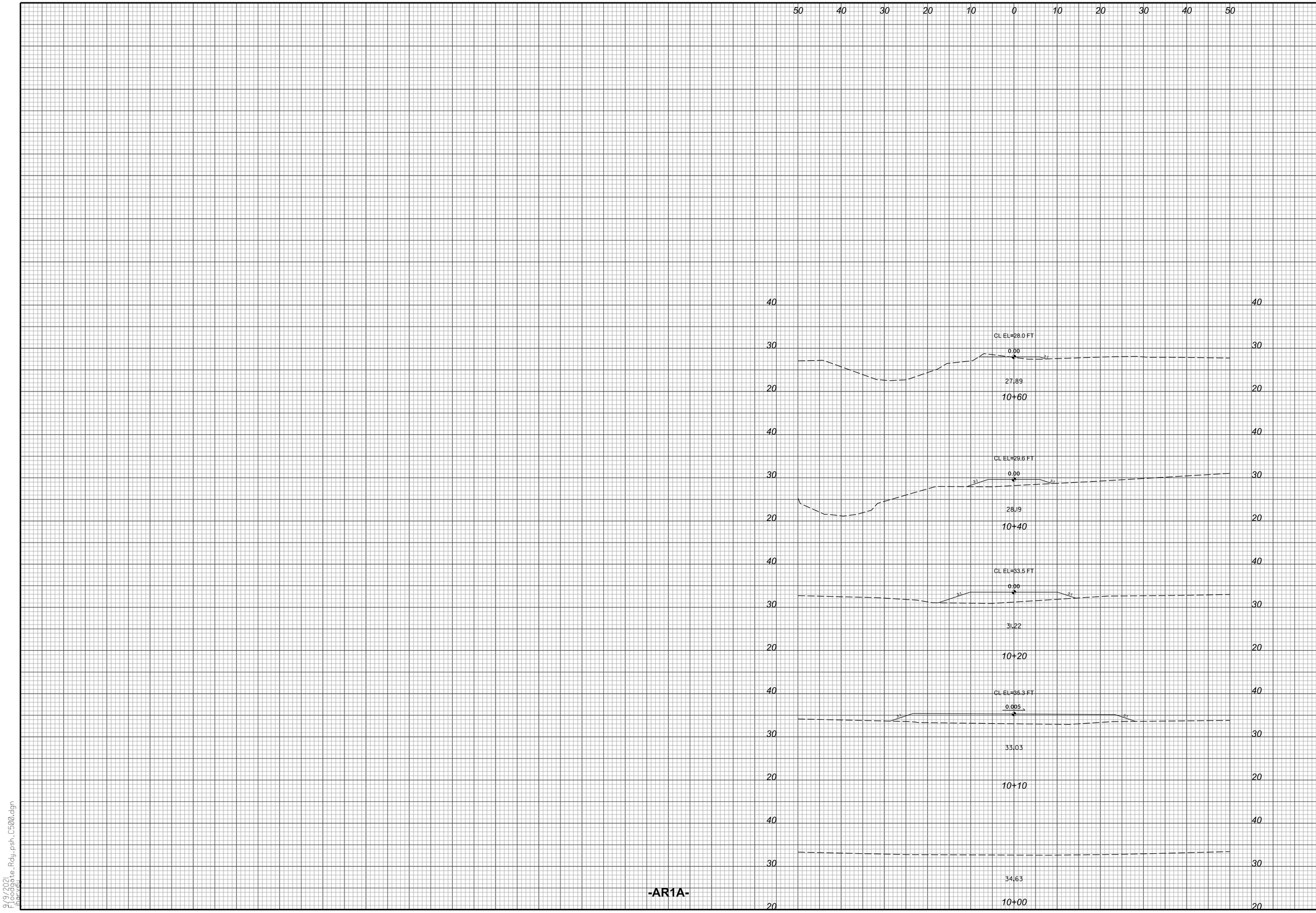
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C503
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C5.03

9/9/2021
Floodgate_Rdy_psh_C500.dgn
Harvey



-AR1A-

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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

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9/9/2021

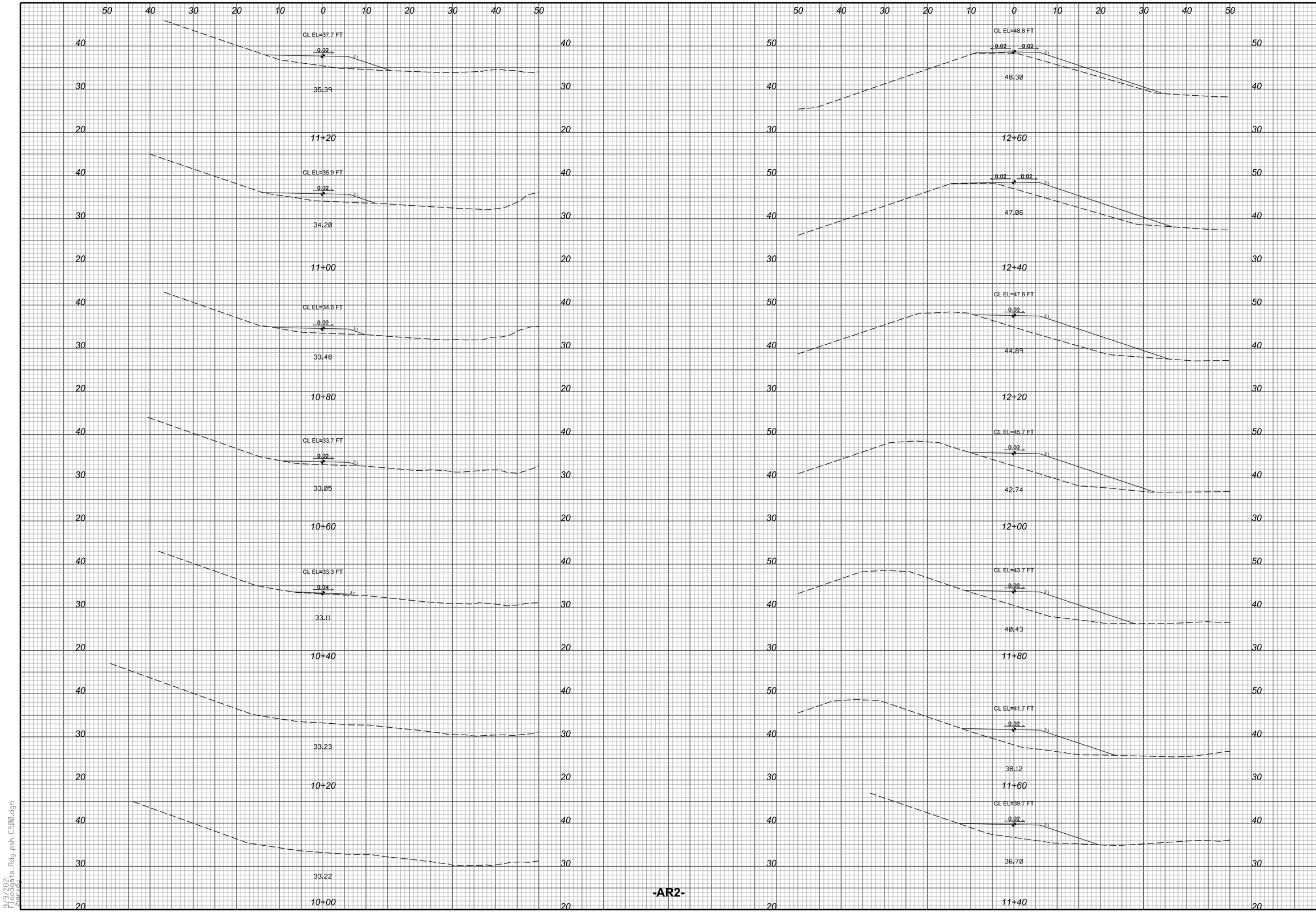
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C504
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.04

9/9/2021
Floodgate_Rdy_psh_C500.dgn
User:rch



-AR2-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by:
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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

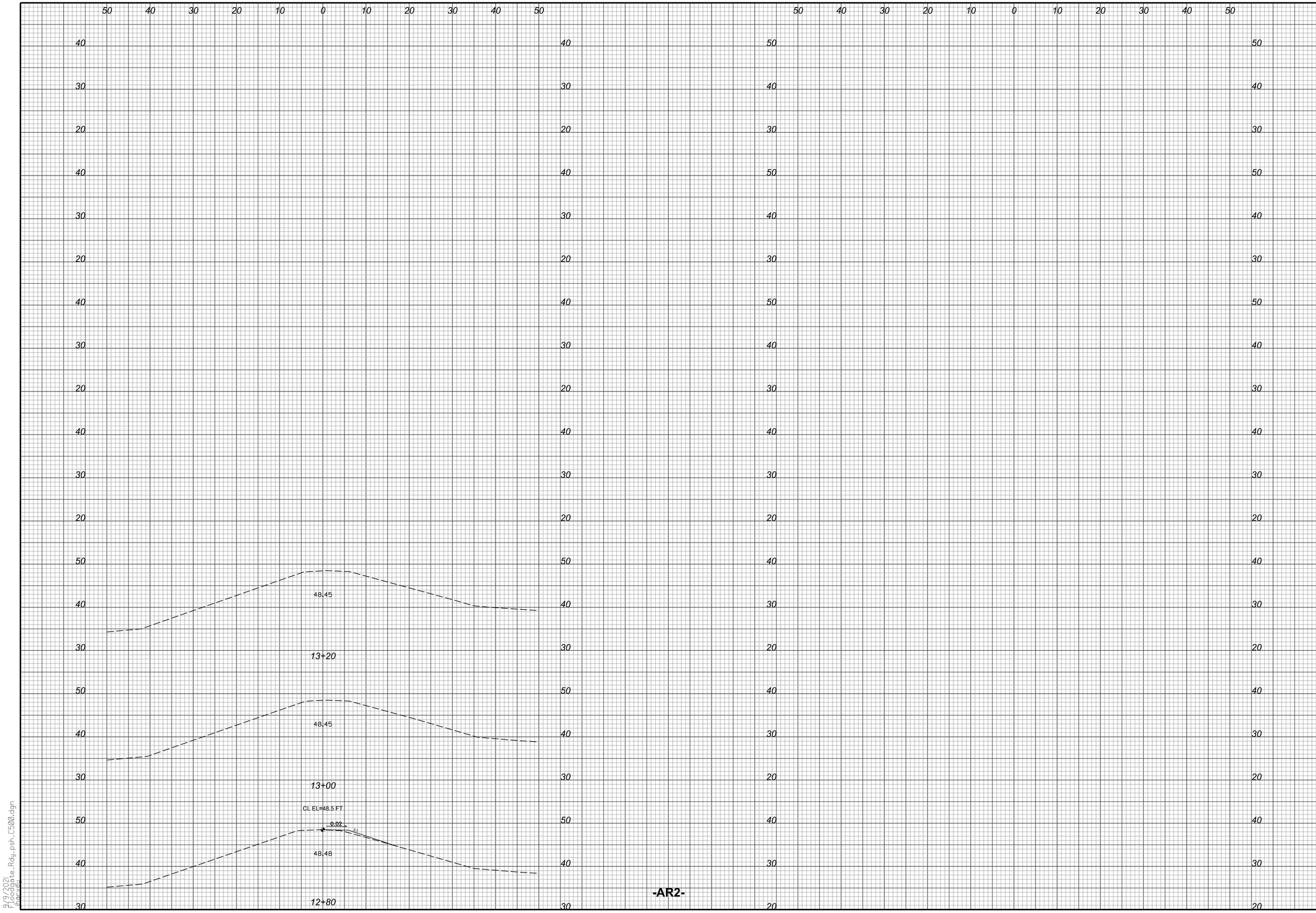
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C505
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C5.05

9/9/2021
Floodgate_Rdy_psh_C500.dgn
User:rch



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
(SEAL)
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

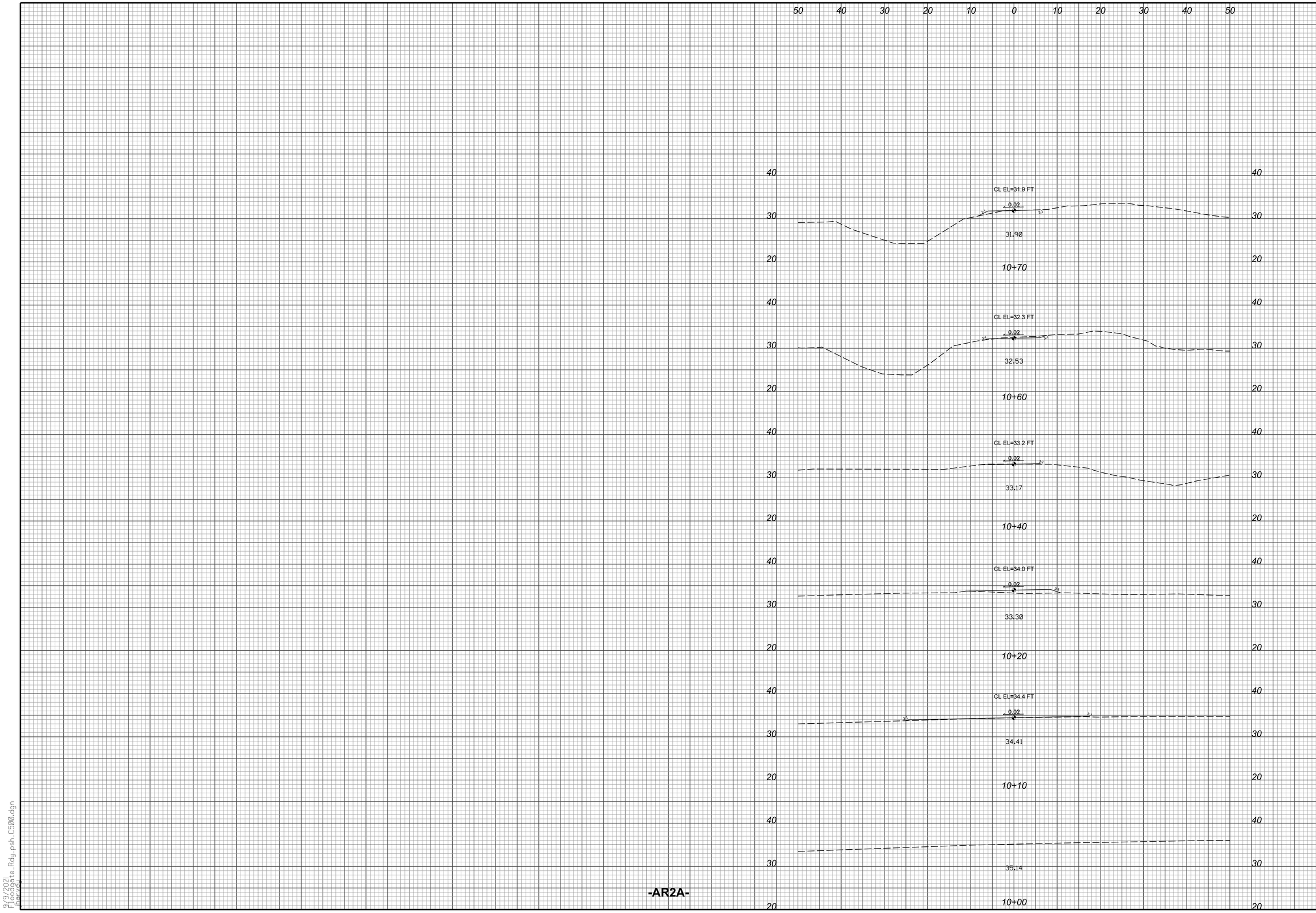
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C506
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C5.06

9/9/2021
Floodgate Rdy_psh_C500.dgn
by cdl



-AR2A-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by:
Joshua G. Dalton
3D6B4B4C14694C3...

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C507
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.07

9/9/2021
Floodgate_Rdy_psh_C500.dgn
Harvey

CL EL=36.7 FT
0.02
3:1
35.80
11+20

CL EL=36.3 FT
0.02
3:1
35.57
11+00

CL EL=36.0 FT
0.02
3:1
35.30
10+80

35.46
10+60

35.54
10+40

36.72
10+20

36.44
10+00

CL EL=48.0 FT
0.02
3:1
46.18
12+60

CL EL=46.1 FT
0.02
3:1
43.64
12+40

CL EL=44.1 FT
0.02
3:1
40.73
12+20

CL EL=42.1 FT
0.02
3:1
38.14
12+00

CL EL=40.2 FT
0.02
3:1
36.90
11+80

CL EL=38.6 FT
0.02
3:1
36.37
11+60

CL EL=37.4 FT
0.02
3:1
11+40

-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
10D9ADBC1499403...

NORTH CAROLINA
PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON

9/9/2021

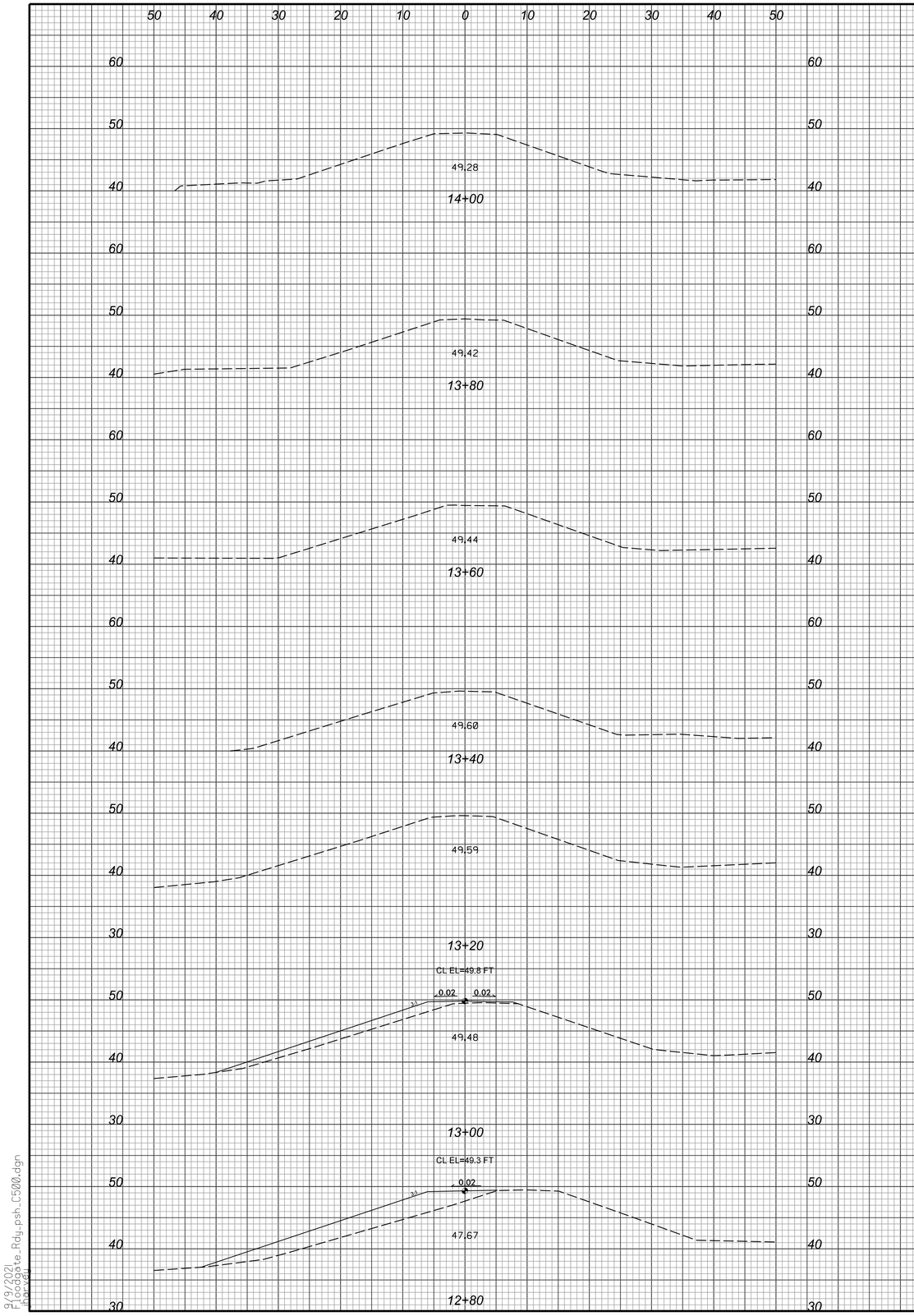
PRINCEVILLE DIKE FLOODGATE REPAIRS

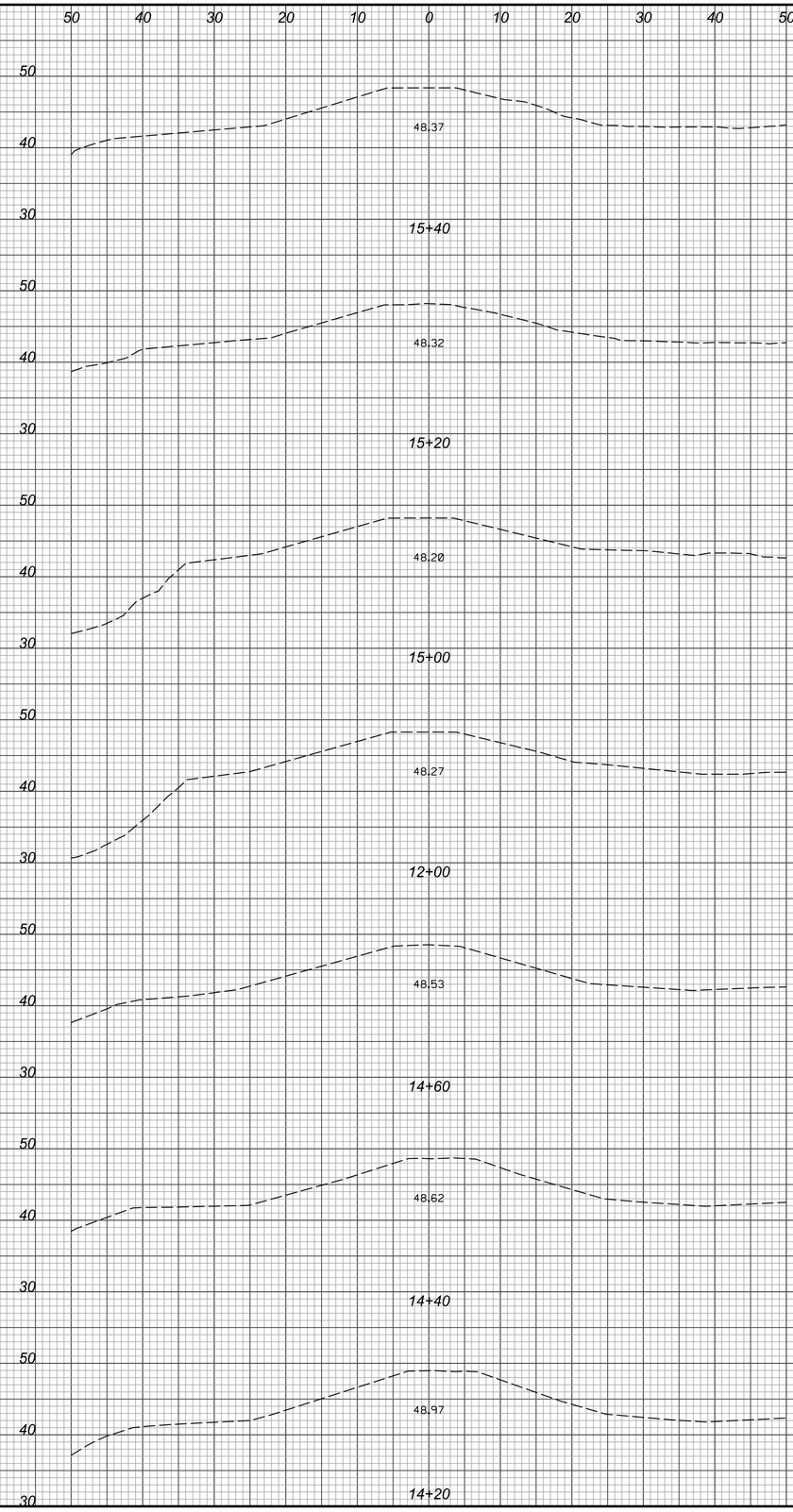
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C508
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.08

9/9/2021
Floodgate_Rdy_psh_C508.dgn
Harvey





-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

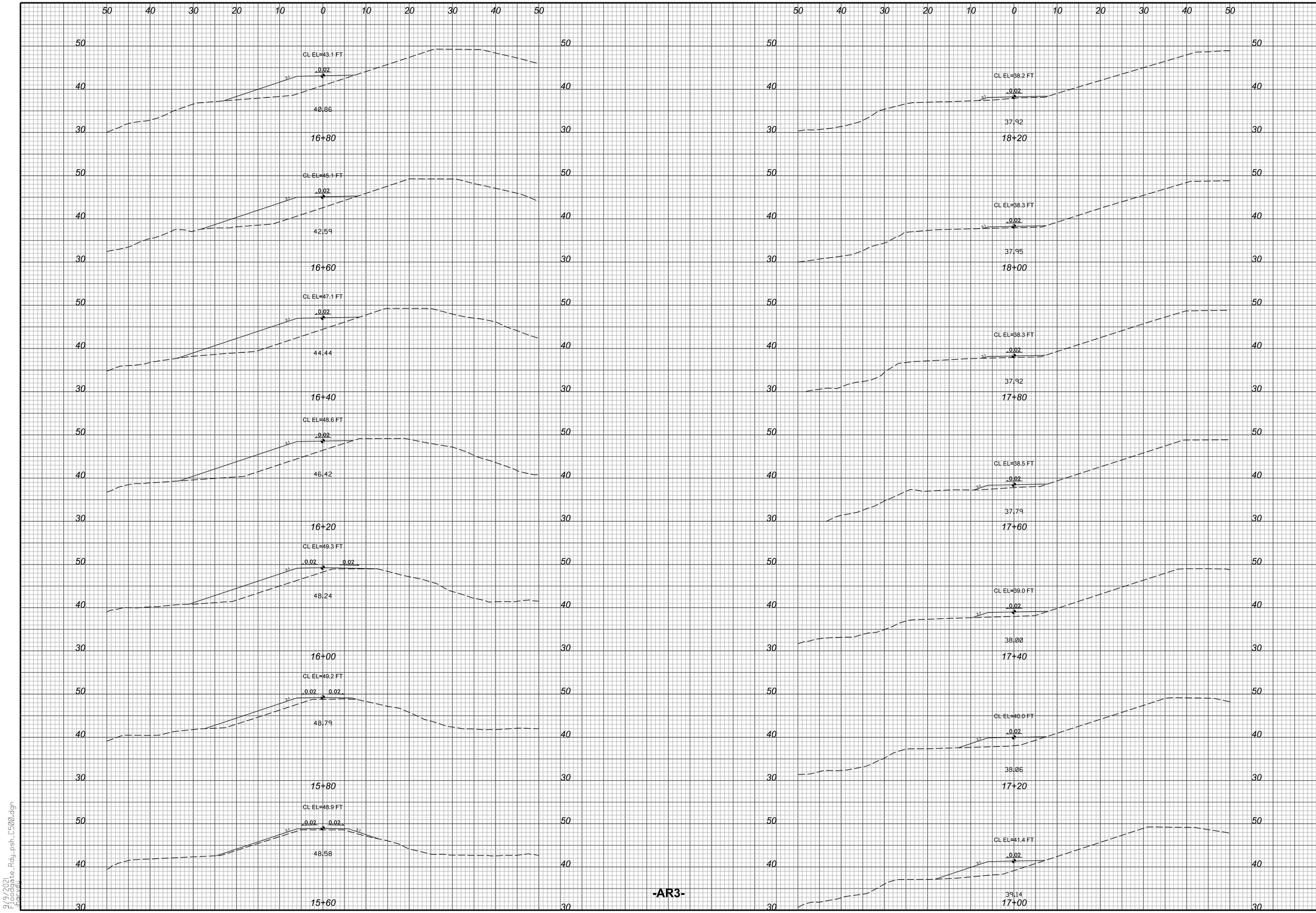
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C509
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C5.09**

9/9/2021
Floodgate_Rdy_psh_C500.dgn
User:rch



-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
[illegible]

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

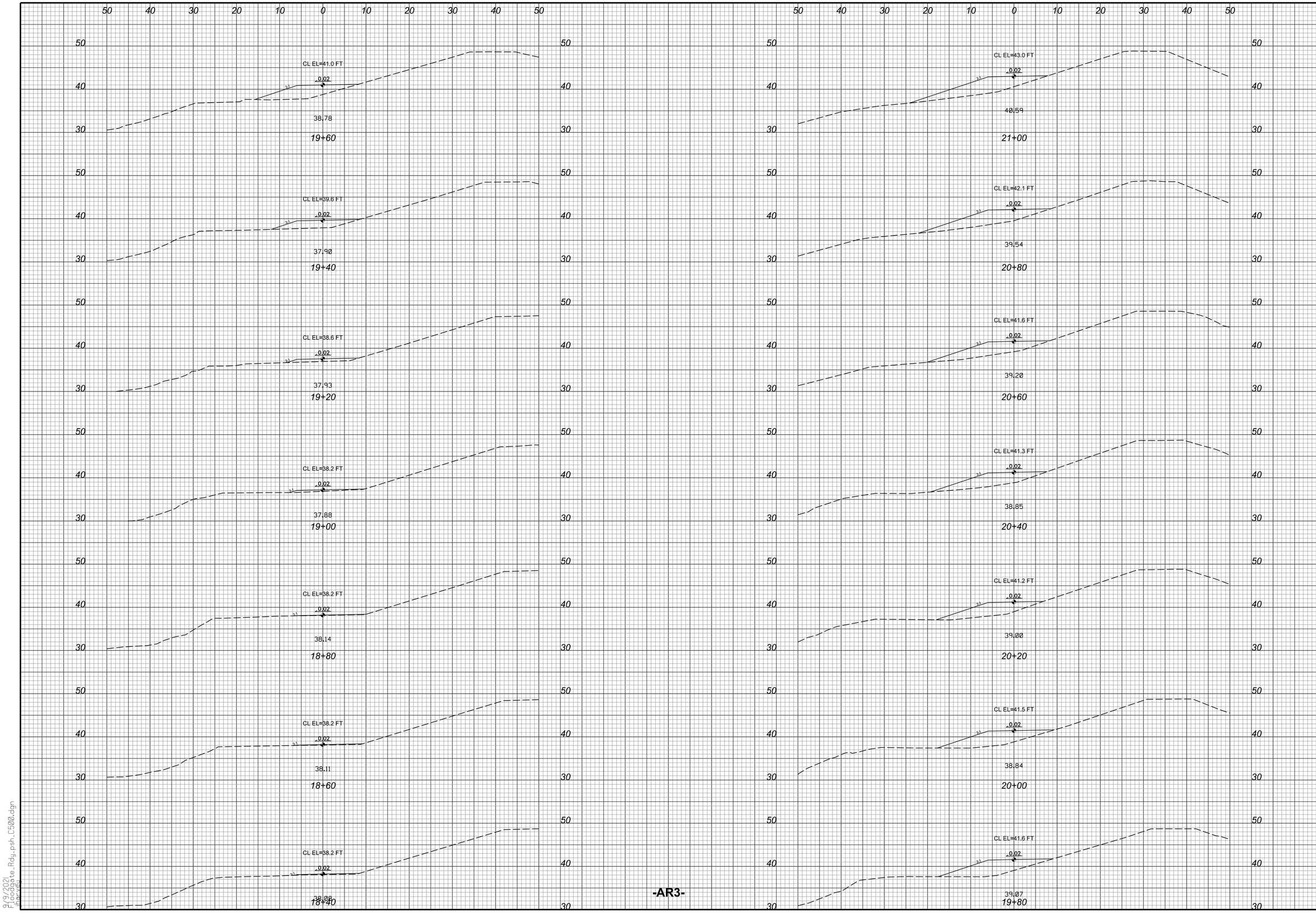
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C510
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.10

9/9/2021
Floodgate_Rdy_psh_C500.dgn
User: rch



-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
Joshua G. Dalton
D8B8A7B0C1464E3...

PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

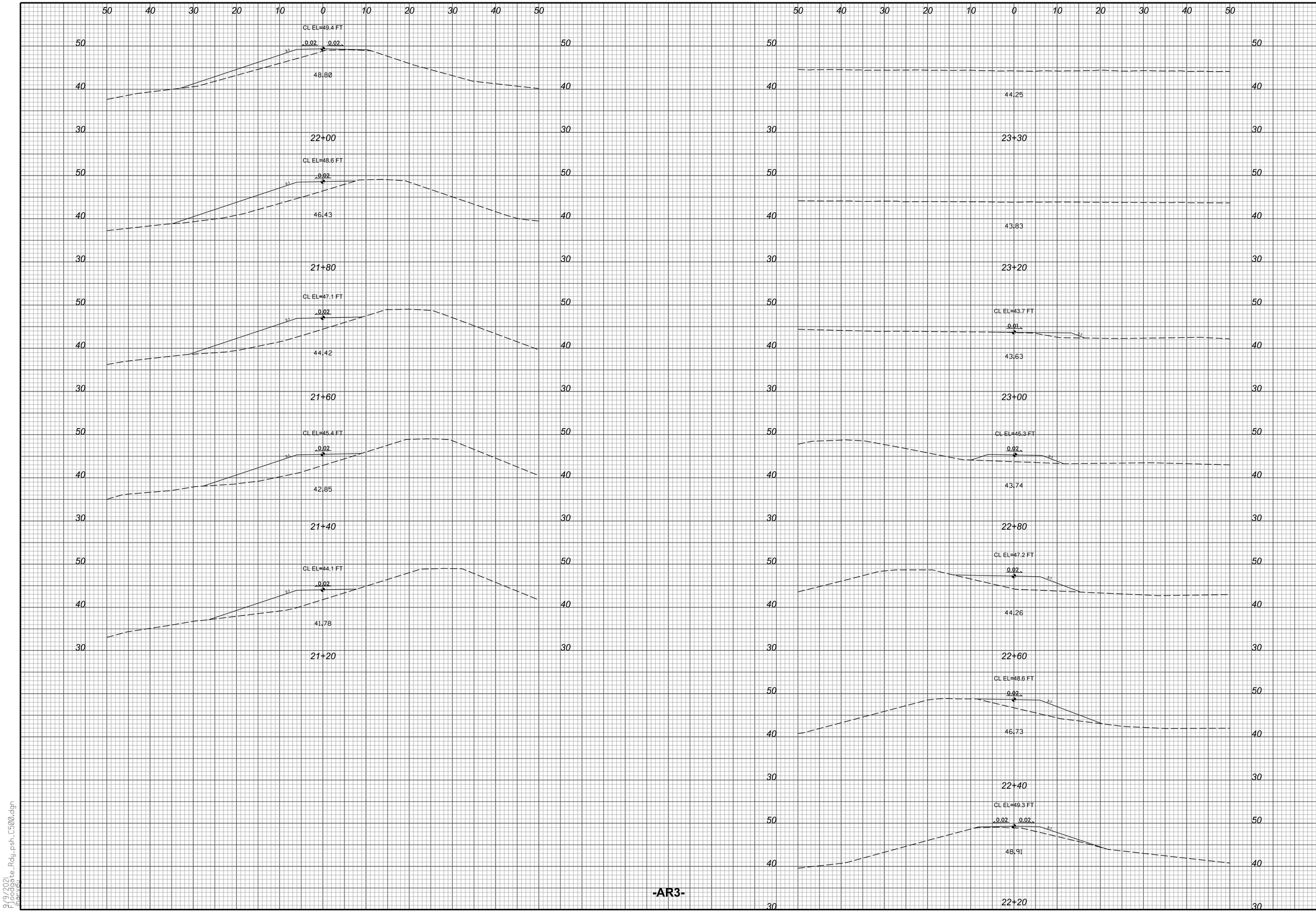
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C5II
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C5.11

9/9/2021
Floodgate_Rdy_psh_C500.dgn
User:rch



-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

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Joshua G. Dalton
10B3A2B01499402...

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C512
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.12

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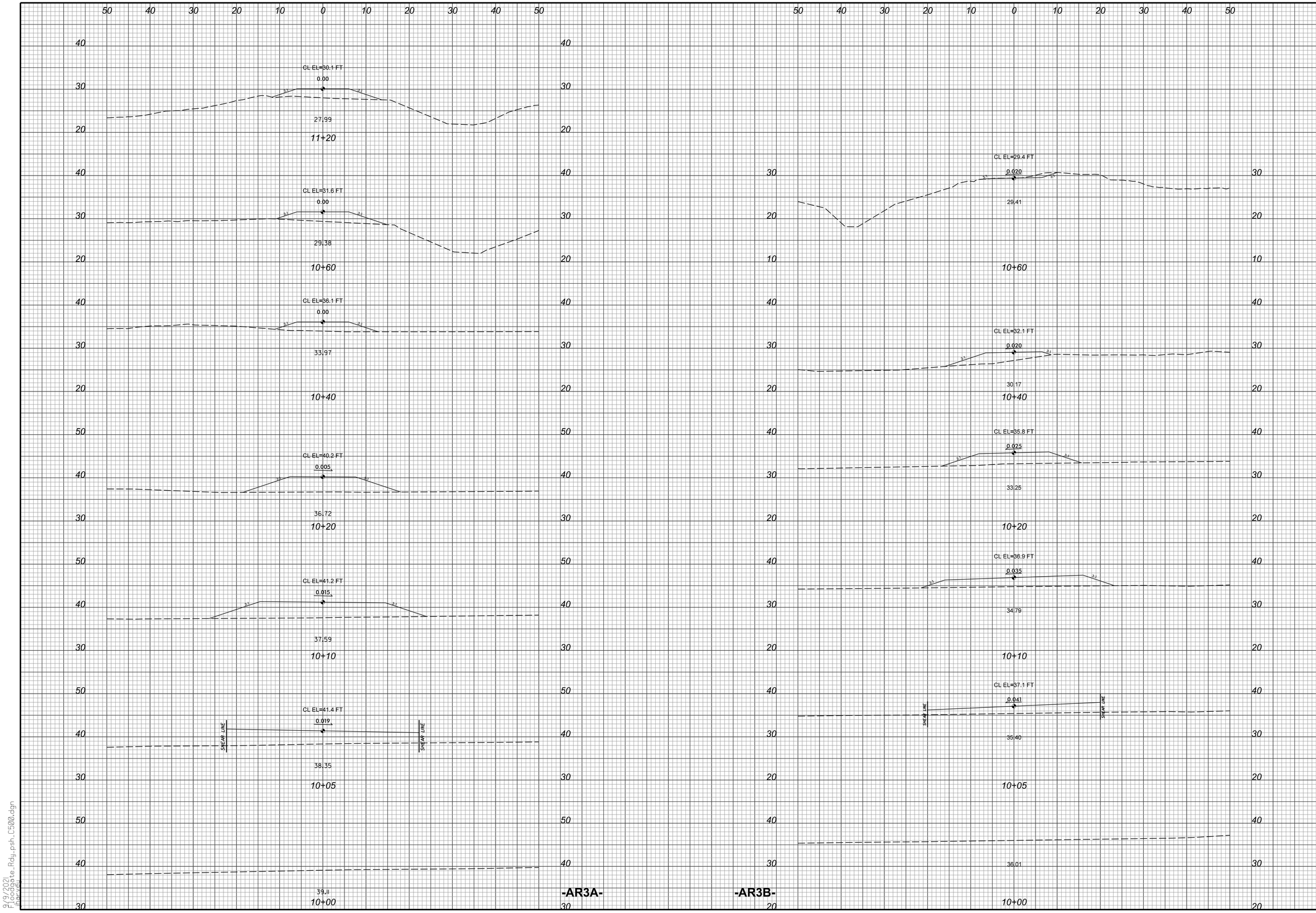

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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3A-, -AR3B-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C513
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.13

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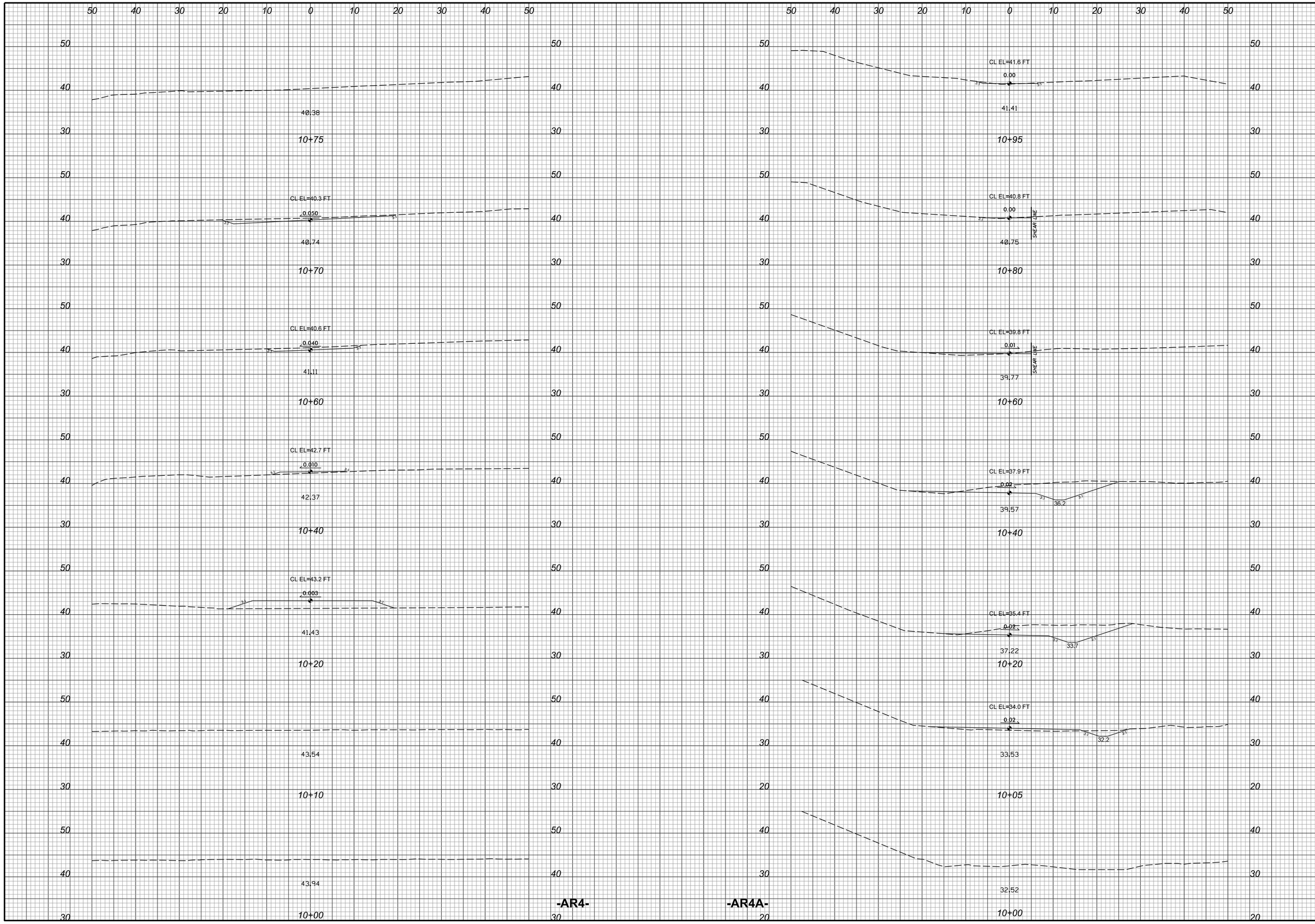

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR4- -AR4A-

PROJECT # :
1284-20041

DRAWING NAME:
FLOODGATE RDY PSH C514

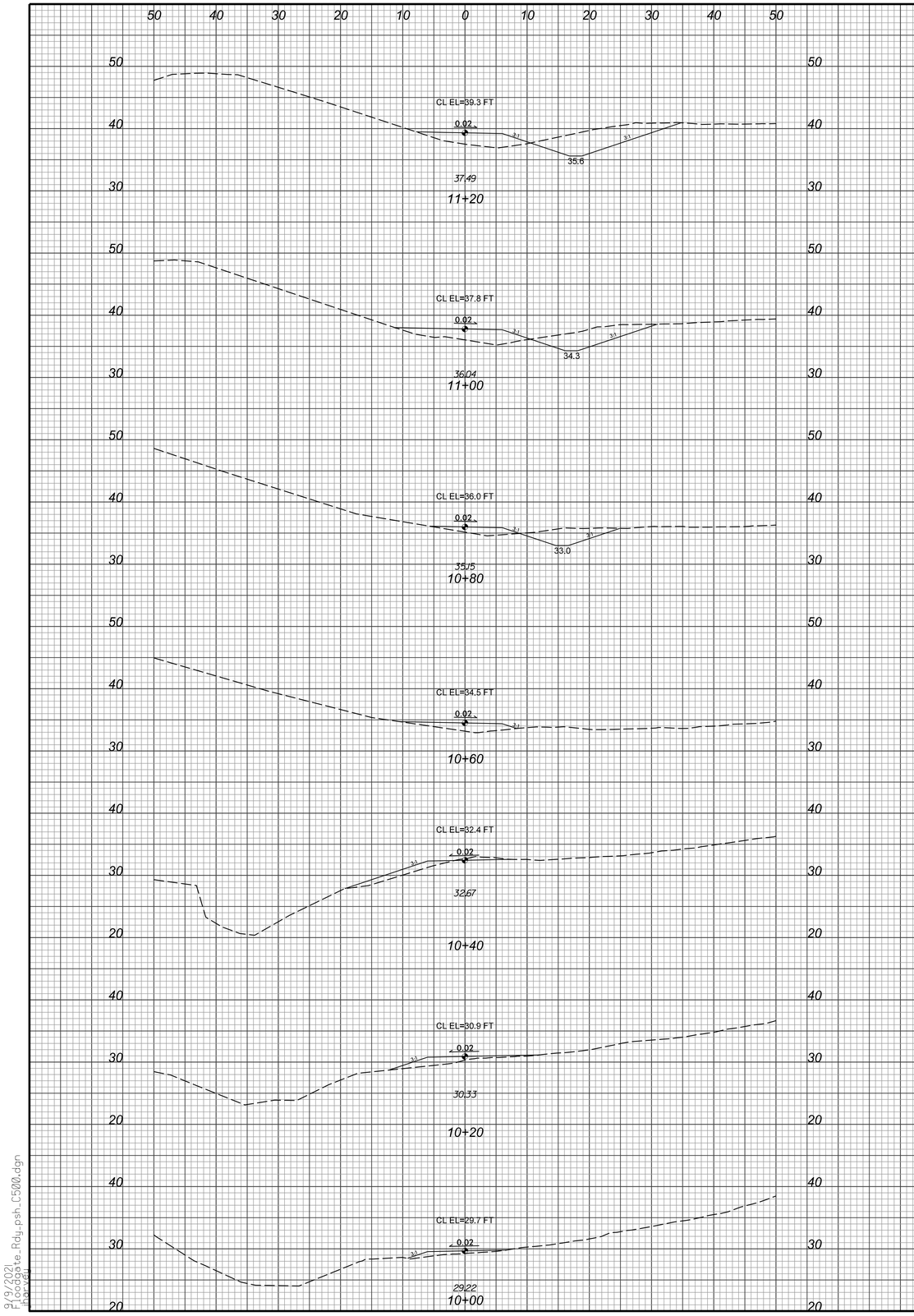
DATE:
6-16-2021

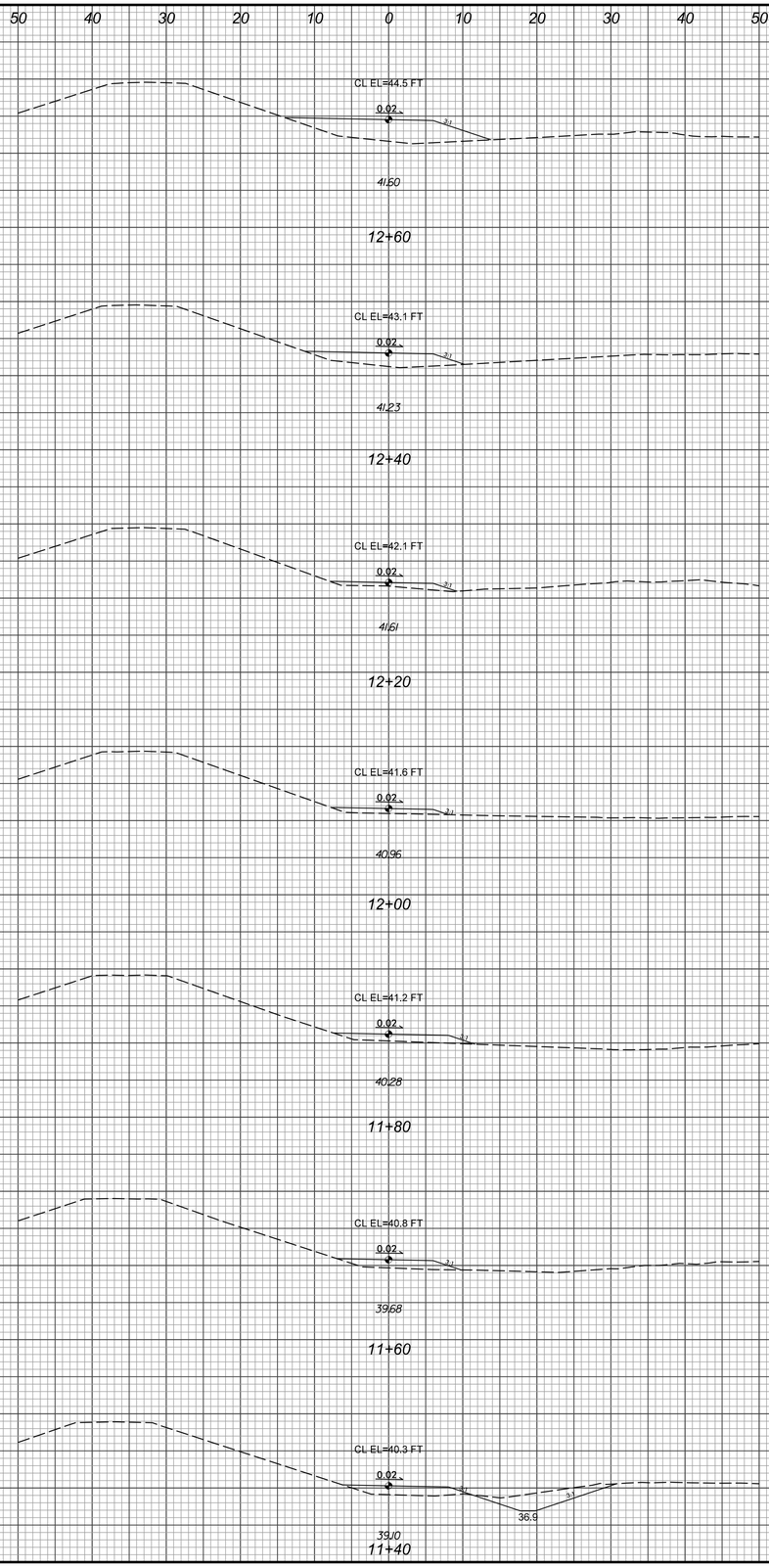
DRAWN BY:

REVIEWED BY:
RCH

REVISIONS:

SHEET NO.
C5.14





-AR5-

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PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR5-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C515
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.15

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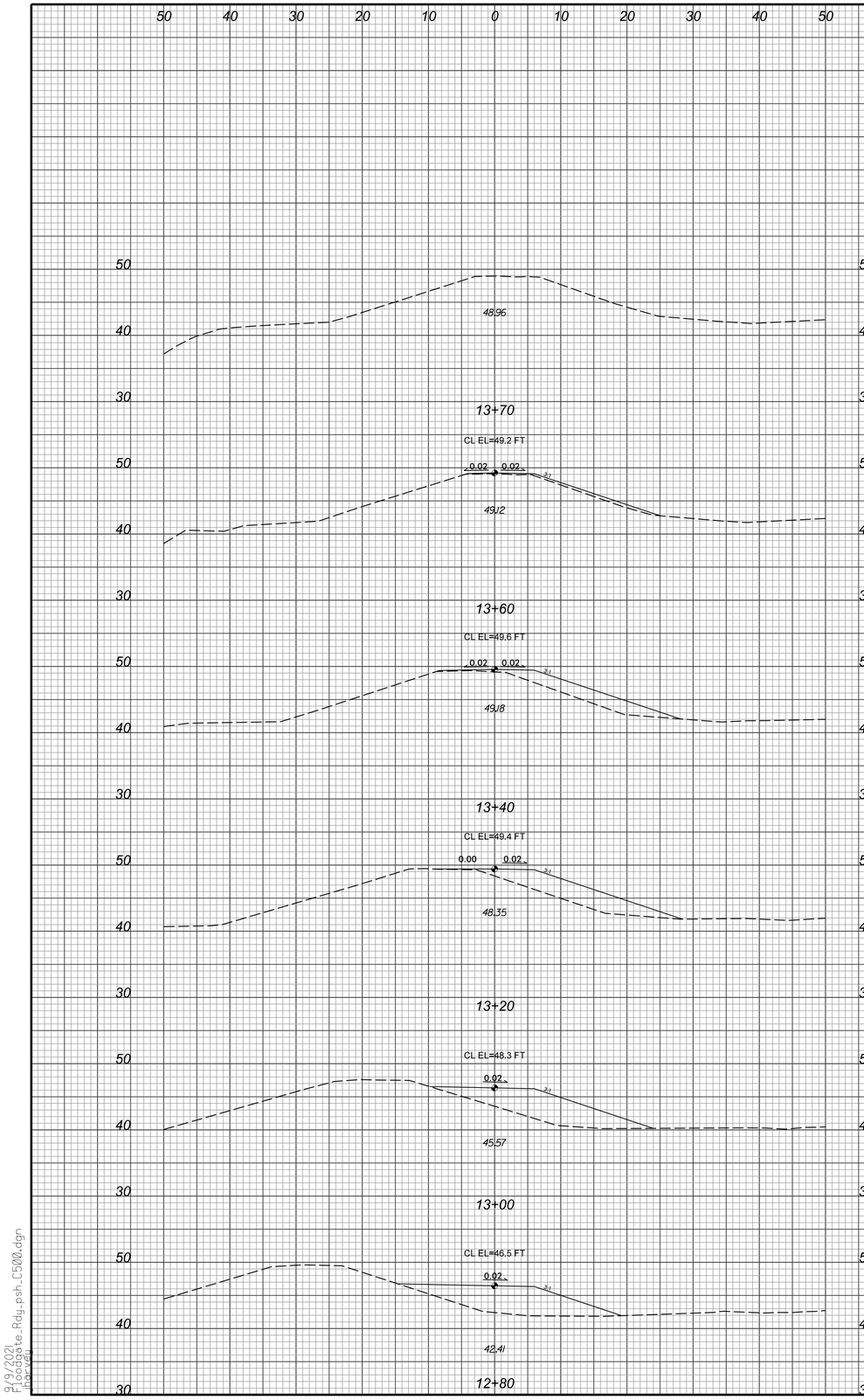

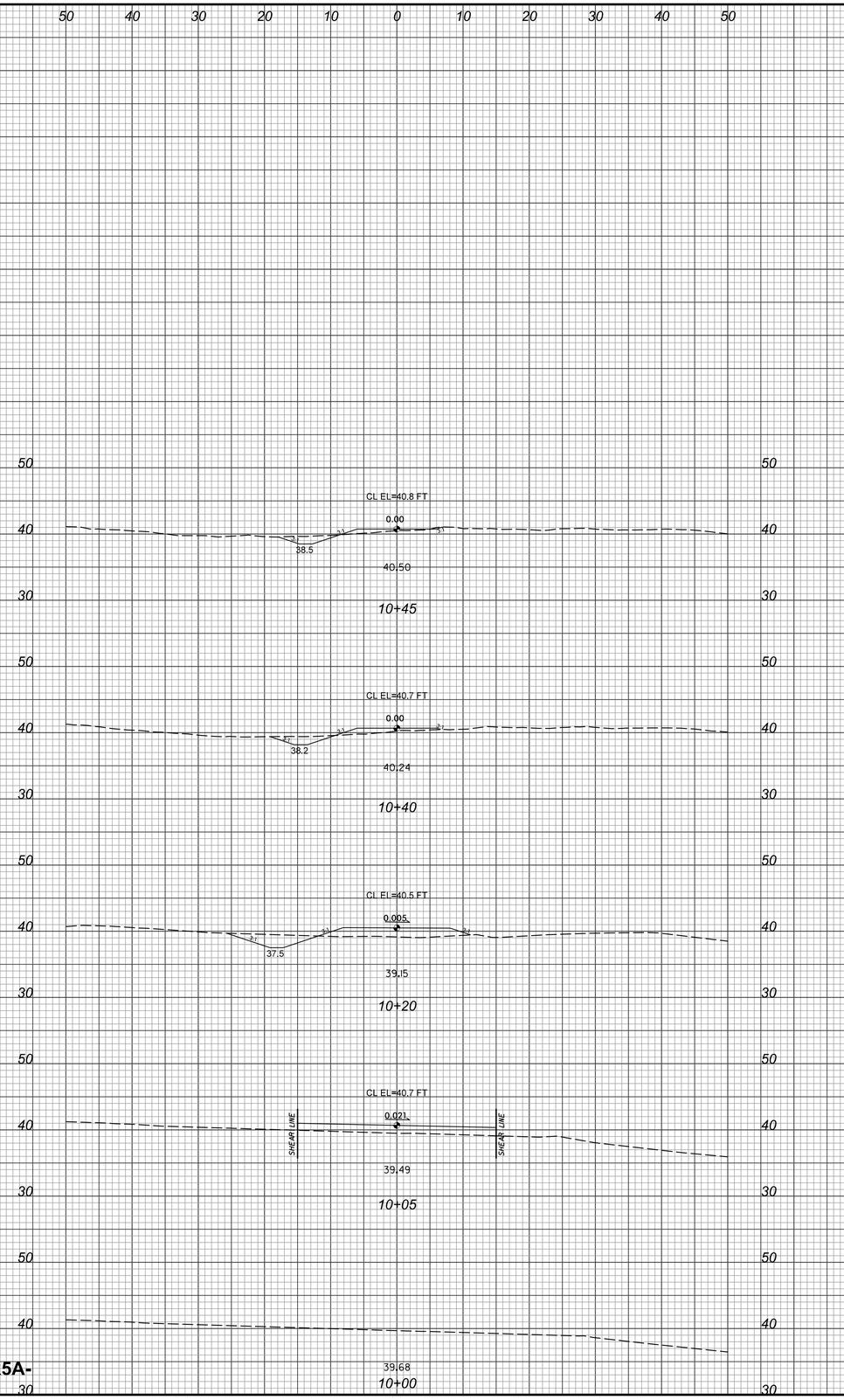

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PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR5-, -AR5A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C516
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.16

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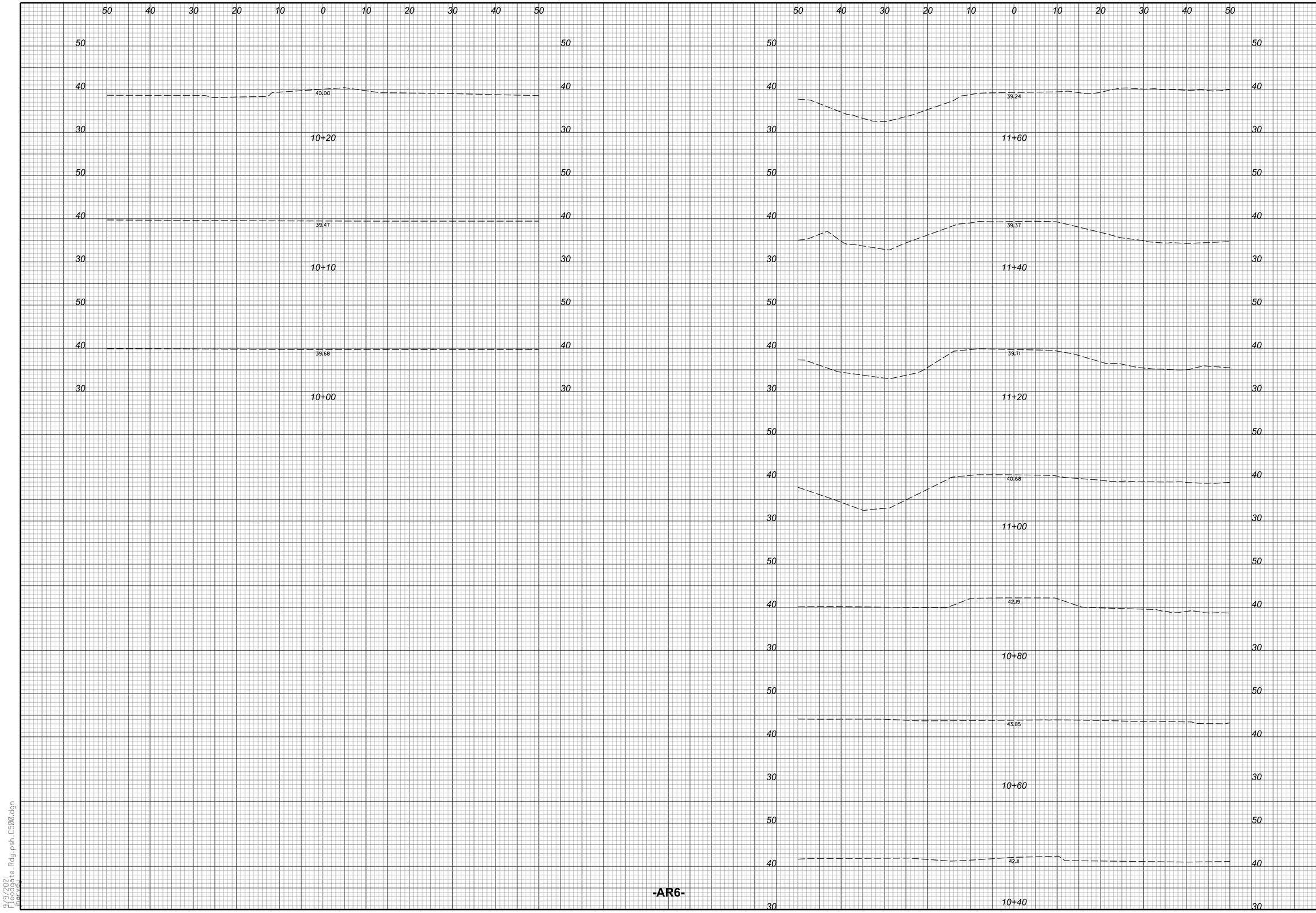

-AR6-

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PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 4 -AR6-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C517
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C5.17**

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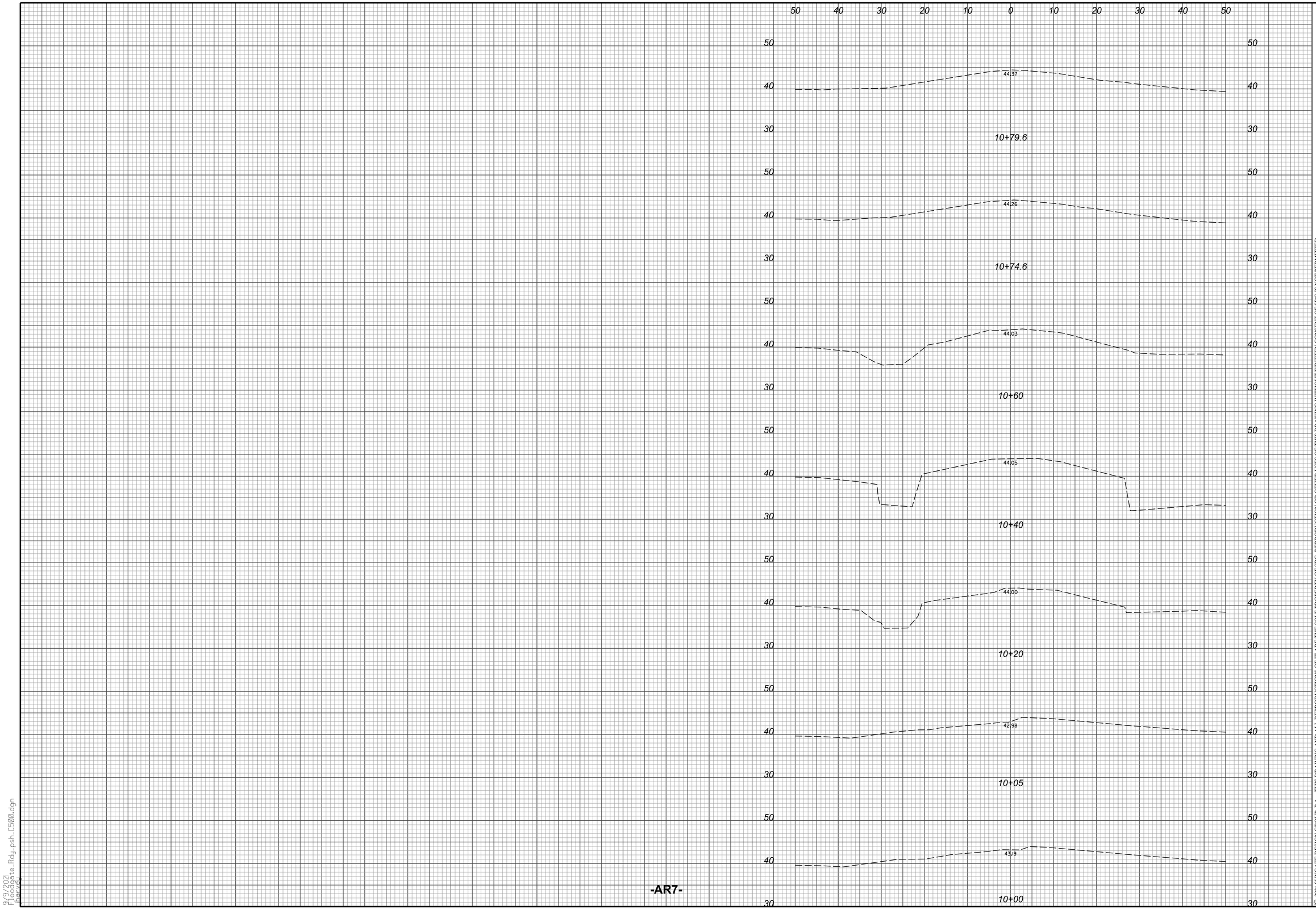

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PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 4 -AR7-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C518
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.18

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Floodgate Rdy_psh_C500.dgn
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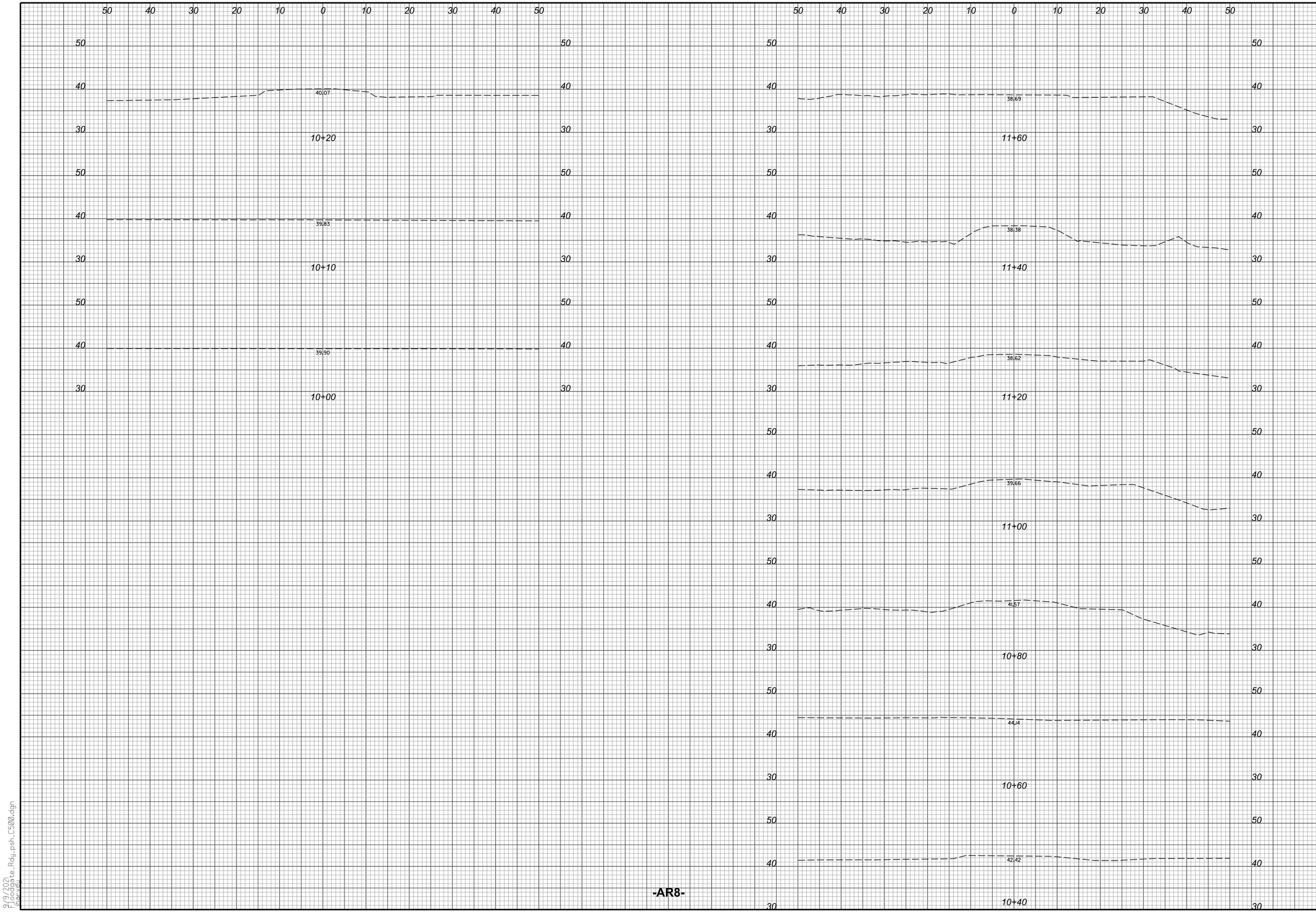

-AR8-

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PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 4 -AR8-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C519
DATE:	6-16-2021
DRAWN BY:	
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.19

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Floodgate Rdy_psh_C500.dgn
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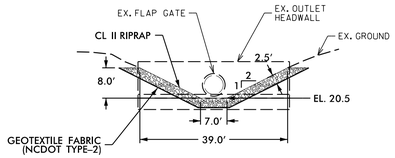
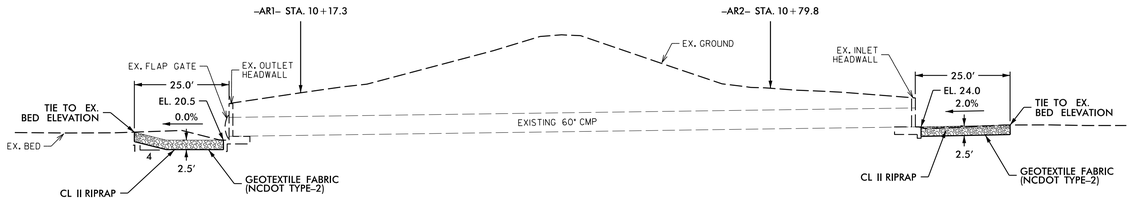
SITE 1

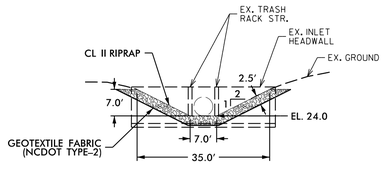
NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL



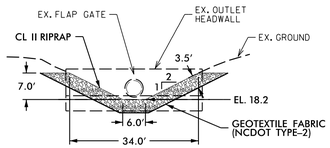
INLET & OUTLET CHANNEL PROFILE



TYPICAL SECTION – INLET CHANNEL

SITE 2

NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



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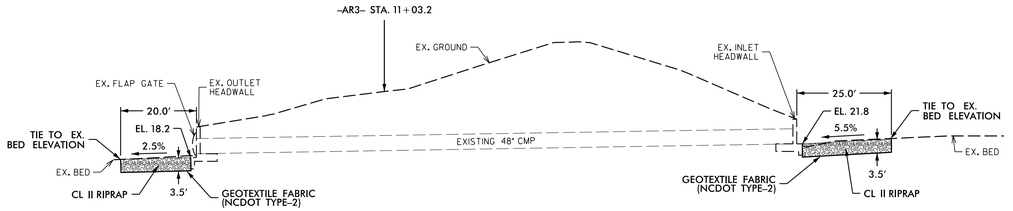
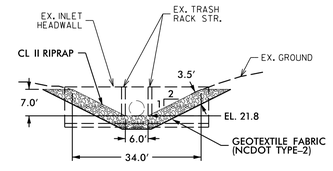


INLET & OUTLET CHANNEL PROFILE



TYPICAL SECTION – INLET CHANNEL

SITE 3

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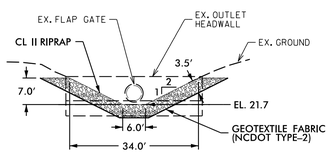

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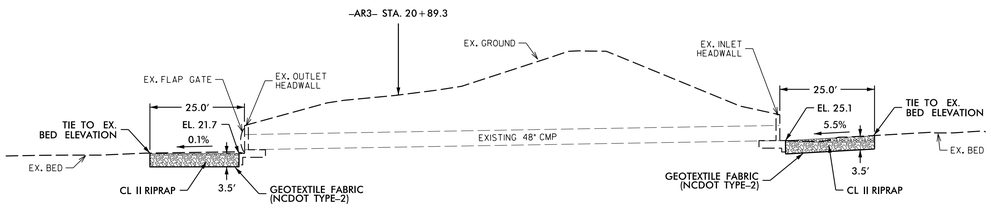
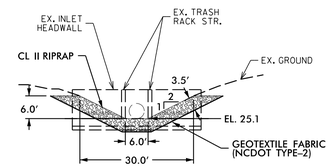
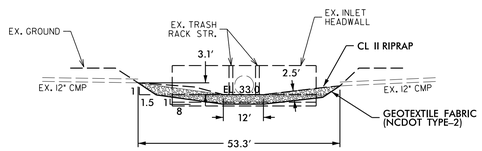


INLET & OUTLET CHANNEL PROFILE



TYPICAL SECTION – INLET CHANNEL

SITE 4



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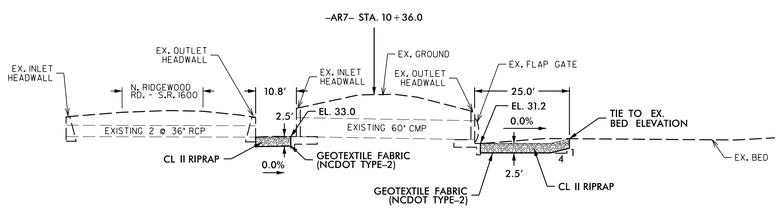
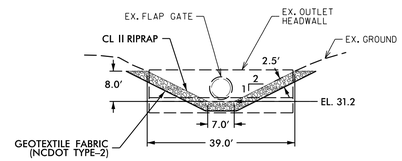


INLET & OUTLET CHANNEL PROFILE

NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CHANNEL PROFILES & TYPICAL SECTIONS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.01

CONSTRUCTION SEQUENCE

1. Obtain a Land Disturbing Permit.
2. Submit documentation required under the site NPDES stormwater permit for construction activity (NCG010000) to Stormwater Inspections throughout the project.
3. Schedule a pre-construction conference with NCDEQ Erosion Control Officer and Erosion Control Design Engineer. Contact DEMLR Raleigh Regional Office at least 48 hours prior to commencing the land-disturbing activity at (919) 791-4200.
4. Erosion and Sediment Control (E&SC) permit and Certificate of Coverage (COC) must be obtained before any land disturbing activities occur.
5. Per NPDES requirements, a rain gauge, self-inspections records, permit, Certificate of Coverage, and E&SC Plan are required to be maintained on-site and accessible during inspection. It is recommended that these items be placed in a permits box at the beginning or entrance of project.
6. Construction activities that have an E&SC Plan approved on or after April 1, 2019 are required to fill out and submit an electronic Notice of Intent (e-NOI) form. All construction activities are required to follow the new NCG01 permit regardless of when plans were approved.
7. The contractor shall conduct self-inspections of the erosion and sediment control measures and complete the following combined self-inspection form found on the DEMLR website:
   https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater/NPDES%20General%20Permits/DEMLR-CSW-Monitoring-Form-Rev-August-8-2019.pdf. Twelve months of complete inspection forms shall be kept on-site and available for inspection at all times. It is recommended a copy be kept in a permits box.
8. Self-inspections for erosion and sedimentation control measures are to be performed at least once every seven calendar days and within 24 hours of every rain event of greater than 1 inch. Any needed repairs shall be made immediately to maintain measures as details on this plan. A rain gauge shall be installed at the project site for monitoring.
9. Install all temporary erosion and sediment control measures including silt fence, tree protection, and inlet protection. Limit clearing and land disturbing activity to the area necessary to install the permitted measures.
10. Begin clearing and grubbing.
11. Stabilize any bare areas resulting from construction activity within times frames established by NCG-01 ground cover stabilization guidelines.
12. Increase maintenance frequency where approved measures fail to prevent accelerated erosion, off-site sedimentation, or repetitive non-compliance issues.
13. At sites 1 through 4:
    a. Install special stilling basin(s).
    b. Install pumps and temporary flexible hoses.
    c. Install impervious dikes, and begin pumping operations for stream diversion.
    d. Dewater construction area, using special stilling basin(s) for pumped effluent.
    e. Key in Class II rip rap at inlet and outlet channels.
    f. Excavate any accumulated silt and dewater before removal of impervious dikes.
    g. Remove impervious dikes, pumps, and temporary flexible hoses, and any remaining special stilling basin(s).
    h. Complete construction of access roads.
14. Maintain all erosion and sediment control measures in good working order. Silt fence, inlet protection and other similar measures must be cleaned out before they are half full. Clogged stone filters must be refreshed or replaced. Silt fence cannot have holes or tears.
15. Stabilize site as areas are brought up to finished grade with vegetation, paving, mulch, matting, etc. Seed and mulch denuded areas per Ground Stabilization.
16. Perimeter silt fence will be maintained throughout the project until permanent ground cover is established.
17. Once the site is completely stabilized, remove temporary erosion control measures and seed out any resulting bare areas.
18. When vegetation has become established, call for a final site inspection by the Erosion Control Design Engineer.
19. When the project is complete, the permittee shall contact DEMLR to close out the E&SC Plan. After DEMLR informs the permittee of the project close out, via inspection report, the permittee shall visit deq.nc.gov/NCG01 to submit an electronic Notice of Termination (e-NOT). A $100 annual general permit fee will be charged until the e-NOT has been filled out.

General Maintenance Requirements:

-1. All erosion and sediment control practices will be checked for stability and operation following every runoff producing rainfall, but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.

-2. All seeded areas will be fertilized, reseeded as necessary, and mulched according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover.

VEGETATIVE PLAN

Seedbed Preparation

1. Chisel compacted areas and spread topsoil 2 to 3 inches deep over adverse soil conditions, if available.
2. Rip the entire area to a depth of not less than 5 inches, unless directed otherwise.
3. Remove all loose rock, roots and other obstructions 3 inches or larger on median, leaving surface reasonably smooth and uniform.
4. Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture below).
5. Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared 2 to 3 inches deep.
6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
7. Mulch within 24 hours after seeding and anchor mulch.
8. Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be more than 60% damaged, re-establish following the original lime, fertilizer and seeding rates.

Mixture

Agricultural Limestone	2 tons/acre in sandy soils (3 tons/acre in clay soils or per soil tests)
Fertilizer	1,000 lbs/acre – 10-10-10
Superphosphate	500 lbs/acre – 20% analysis
Mulch	2 tons/acre – small grain straw
Anchor	Asphalt emulsion at 400 gals/acre

Seeding Schedule

For Shoulders, Side Ditches, Slopes (Max 3:1):

Date	Type	Planting Rate
Aug 15– Nov 1	Tall Fescue	300 lbs/acre
Nov 1– Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1– Apr 15	Tall Fescue	300 lbs/acre
Apr 15– Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1– Aug 15	Tall Fescue AND Browntop Millet or Sorghum-Sudan Hybrids***	125 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Millet); 30 lbs/acre (Sorghum-Sudan Hybrids)

For Shoulders, Side Ditches, Slopes (3:1 to 2:1):

Date	Type	Planting Rate
Mar 1– Jun 1	Sericea Lespedeza (scarified) and use the following combinations:	50 lbs/acre (Sericea Lespedeza);
Mar 1– Apr 15	Add Tall Fescue	120 lbs/acre
Mar 1– Jun 30	Or add Hulled Common Bermudagrass	25 lbs/acre
Jun 1– Sept 1	Tall Fescue AND Browntop Mullet or Sorghum-Sudan Hybrids***	120 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Mullet); 30 lbs/acre (Sorghum-Sudan Hybrids)
Sept 1– Mar 1	Sericea Lespedeza (unhulled – unscarified) AND Tall Fescue	70 lbs/acre (Sericea Lespedeza); 120 lbs/acre (Tall Fescue)
Nov 1– Mar 1	AND Abruzzi Rye	25 lbs/acre

The Contractor shall select a nurse crop from the table below that is best suited to the specific site conditions and characteristics. The nurse crop shall be added to and applied along with the permanent vegetative mixture.

Consult Erosion Control Design Engineer for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those that do well under local conditions; other seeding rate combinations are possible.

*** TEMPORARY: Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow more than 12" in height before mowing; otherwise, fescue may be shaded out.

Riparian Seeding and Mulching

Riparian Seeding and Mulching shall be performed on the disturbed areas of riparian areas within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank.

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

August 1 - June 1		May 1 – September 1	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
8#	Big Bluestem	8#	Big Bluestem
6#	Indiangrass	6#	Indiangrass
4#	Switchgrass	4#	Switchgrass
35#	Rye Grain	25#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Creeping Red Fescue Cultivars:

Aberdeen Boreal Epic Cindy Lou

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Mulch within 24 hours of seeding and anchor mulch.

Mulch 2 tons/acre – small grain straw
Anchor Asphalt emulsion at 400 gals/acre

HERBACEOUS PLANTS-Seeding recommendations for immediate stabilization/nurse crops
(2 to 5 weeks for development; effectiveness goal: 6 months to 1 year stabilization) **Table 6.11.a**

NURSE CROP SPECIES

Common Name	Botanical Name	Native / Introduced	Seeding Rates lbs/acre	Fertilization/ limestone lbs/acre	Optimal Planting Dates: Mountains	Piedmont	Coastal Plains	Sun/Shade tolerant	Wetlands	Riparian Buffers	Invasive Yes or No	Installation / Maintenance Considerations	Other information, commentary
Rye Grain	*Secale cereale*	I	40 lbs	By soil test	11/1 - 4/30	8/15 - 4/15	8/15 - 4/15	Sun	Yes	Yes	No	Must be mown to reduce competitiveness with permanent or long term vegetation	
Wheat	*Triticum aestivum*	I	30 lbs	By soil test	11/1 - 4/30	8/15 - 5/15	8/15 - 4/15	Sun	Yes	Yes	No	Must be mown to reduce competitiveness with permanent or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
German Millet	*Setaria italica*	I	10 lbs	By soil test	5/11 - 9/30	5/15 - 8/15	4/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut / disc prior to planting primary or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
Browntop Millet	*Urochloa ramosa*	I	10 lbs	By soil test	5/11 - 9/30	5/15 - 8/15	4/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut / disc prior to planting primary or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
Sudangrass (hybrids)	*Sorghum saccharatum* *S. bicolor ssp.Drummondi*	I	15 lbs	By soil test	NR	NR	4/15 - 8/15	Sun	No	No	Yes	Crop should be cut / disc prior to planting primary or long term vegetation	Use only where plants and seed can be contained and controlled.
Kobe Lespedeza	*Kummerowia striata v. kobe*	I	10 lbs	By soil test	5/1 - 9/1	5/1 - 9/1	5/1 - 9/1	Sun	No	No	No	Consult qualified horticulturalist or extension agent for over-seeding with primary cover	Use in Coastal Plain
Korean Lespedeza	*Kummerowia stipulacea*	I	10 lbs	By soil test	5/1 - 9/1	5/1 - 9/1	5/1 - 9/1	Sun	No	No	No	Consult qualified horticulturalist or extension agent for over-seeding with primary cover	Use in Piedmont and Mountains. May become invasive

NOTES:
1. Seeding rates are for hulled seed unless otherwise noted.
2. Fertilizer & Limestone - rates to be applied in absense of soils tests. Recommended application rate assumes significantly disturbed site soils with little or no residual value.
3. NR means Species not recommended for this region or application area.
4. Invasive designation as determined by the N.C. Exotic Pest Plant Council and N.C. Native Plant Society .
5. Sprigging is not recommended for immediate stabilization unless terrain is flat heavy mulch is applied and no other immediate stabilization method is practical.

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C6.02**

9/9/2021
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Date:

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
· Temporary grass seed covered with straw or other mulches and tackifiers. · Hydroseeding · Rolled erosion control products with or without temporary grass seed · Appropriately applied straw or other mulch · Plastic sheeting	· Permanent grass seed covered with straw or other mulches and tackifiers · Geotextile fabrics such as permanent soil reinforcement matting · Hydroseeding · Shrubs or other permanent plantings covered with mulch · Uniform and evenly distributed ground cover sufficient to restrain erosion · Structural methods such as concrete, asphalt or retaining walls · Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

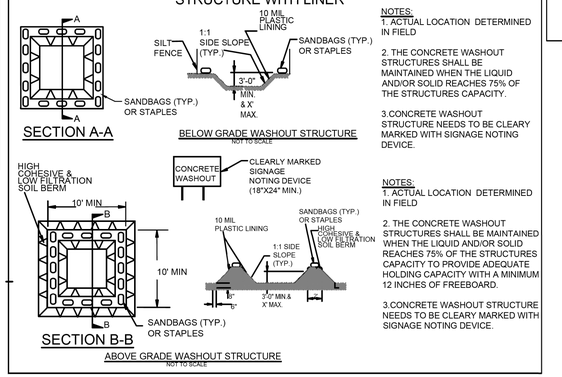
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

NORTH CAROLINA *Environmental Quality*

EFFECTIVE DATE: 11/12/2020

NCG-01 GROUND COVER & MATERIALS HANDLING

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.03

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Harvey

Date:

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PART II, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,

(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,

(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems

(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,

(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and

(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2)Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA Environmental Quality

EFFECTIVE DATE:11/12/2020

NCG-01 SELF INSPECTION

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041

DRAWING NAME: FLOODGATE RDY PSH C600

DATE: 6-16-2021

DRAWN BY:

REVIEWED BY: RCH

REVISIONS:

SHEET NO. C6.04

9/9/2021
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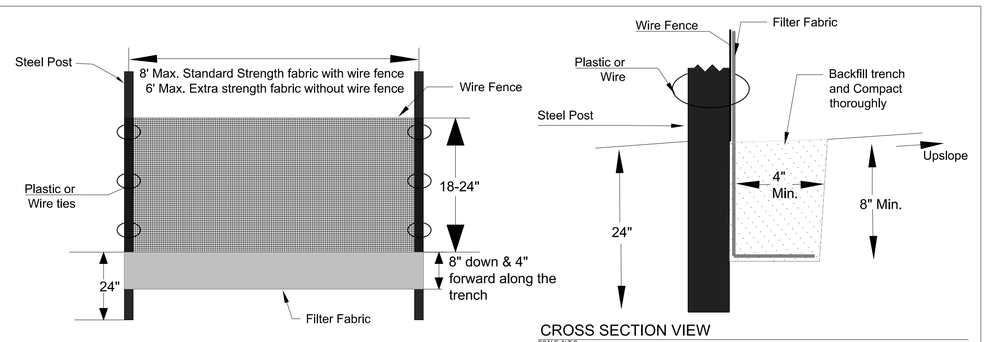
Table 6.62b Specifications For Sediment Fence Fabric

Temporary Silt Fence Material Property Requirements					
	Test Material	Units	Supported[1] Silt Fence	Un-Supported[1] Silt Fence	Type of Value
Grab Strength	ASTM D 4632	N (lbs)			
Machine Direction			400	550	MARV
			(90)	(90)	
X-Machine Direction			400	450	MARV
			(90)	(90)	
Permittivity[2]	ASTM D 4491	sec-1	0.05	0.05	MARV
Apparent Opening Size[2]	ASTM D 4751	mm	0.60	0.60	Max. ARV[3]
		(US Sieve #)	(30)	(30)	
Ultraviolet Stability	ASTM D 4355	% Retained Strength	70% after 500h of exposure	70% after 500h of exposure	Typical

[1] Silt Fence support shall consist of 14 gage steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated poylmer mesh of equivalent strength.
[2] These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.
[3] As measured in accordance with Test Method D 4632.



CROSS SECTION VIEW
SCALE: N.T.S.

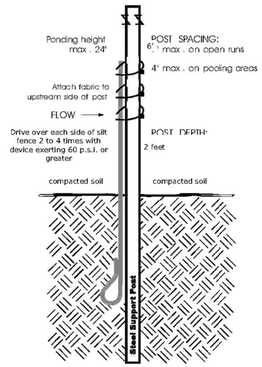
Construction:
1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground. (Higher fences may impound volumes of water sufficient to cause failure of the structure)
3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have a minimum 50 pound tensile strength.
5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Supports should be driven securely into the ground a minimum of 24 inches.
6. Extra strength filter fabric with 6 foot post spacing does not require a wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have a minimum of 50 pound tensile strength.
7. Excavate the trench approximately 4 inches wide and 8 inches deep along the proposed line of the posts and upslope from the barrier.
8. Place 12 inches of fabric along the bottom and side of the trench.
9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
10. Do not attach filter fabric to existing trees.

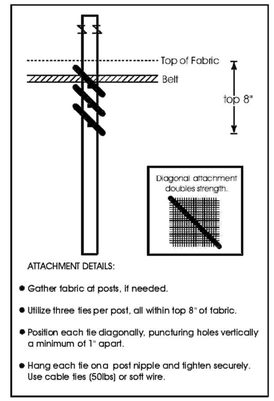
Maintenance:
1. Inspect sediment fences at least once a week and after each 1 inch or greater rainfall. Make any required repairs immediately.
2. Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
3. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
4. Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

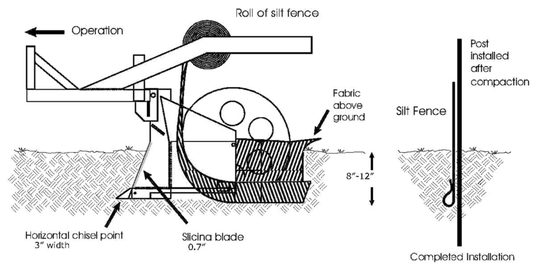
DETAIL - SILT FENCE

SCALE: N.T.S

The Slicing Method







Vibratory plow is not acceptable because of horizontal compaction

Figure 6.62b Schematics for using the slicing method to install a sediment fence. Adapted from *Silt Fence that Works*

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9/9/2021

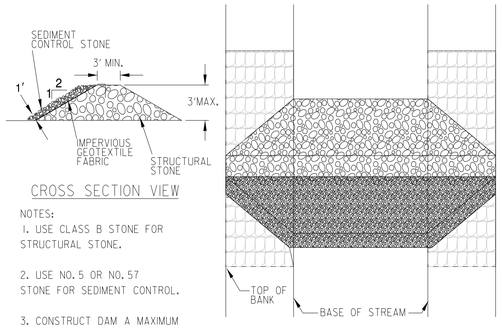
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.05

9/9/2021
Floodgate_Rdy_psh_C600.dgn
Parker



CROSS SECTION VIEW

TOP VIEW

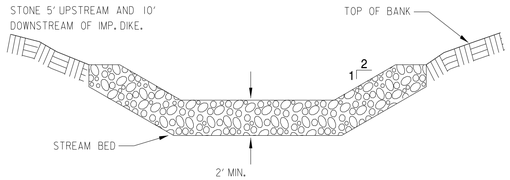
NOTES:
1. USE CLASS B STONE FOR STRUCTURAL STONE.

2. USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

3. CONSTRUCT DAM A MAXIMUM OF 1 FT. ABOVE NORMAL FLOW DEPTH.

4. TOE IN IMPERVIOUS MATERIAL

5. LINE BANKS WITH CLASS B STONE 5' UPSTREAM AND 10' DOWNSTREAM OF IMP. DIKE.



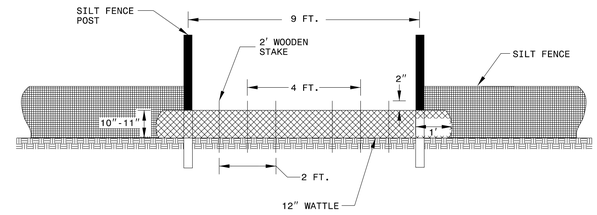
FRONT VIEW

DETAIL - IMPERVIOUS DIKE - STONE LINED WITH POLYPROPYLENE

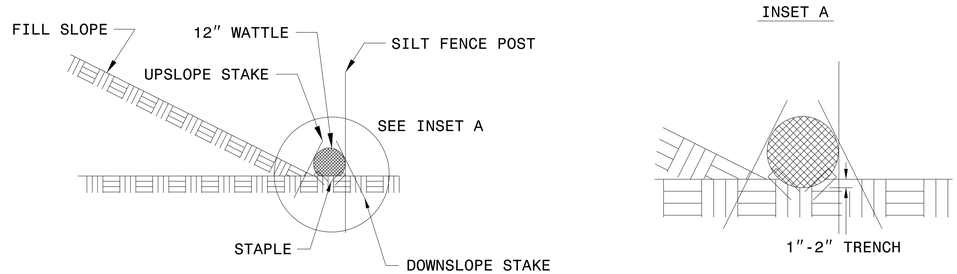
SCALE: N.T.S

CONSTRUCTION SEQUENCE:
- PREPARE THE CHANNEL AND OVERBANKS FOR INSTALLATION.
- REMOVE ALL BRANCHES AND DEBRIS FROM THE AREA WHERE THE STONE DIKE WILL BE PLACED.
- MAKE SURE THAT THERE ARE NO SHARP ROCKS OR ROOTS THAT CAN PUNCTURE THE GEOTEXTILE.
- DO NOT EXCAVATE THE EXISTING CHANNEL OR BANKS.
- PLACE THE HIGH TENSILE IMPERVIOUS GEOTEXTILE WITH THE CENTER OVER THE PROPOSED DIKE UTILIZE A SMALL AMOUNT OF STONE TO HOLD DOWN THE GEOTEXTILE WHILE ADJUSTMENTS ARE BEING MADE.
- THERE SHOULD BE ENOUGH EXTRA GEOTEXTILE ON EACH SIDE OF THE DIKE TO WRAP UP AND OVER THE STONE DIKE TO MAKE IT IMPERVIOUS.
- PILE STONE ON TOP OF THE GEOTEXTILE TO CREATE THE DIKE STRUCTURE.
- ROLL GEOTEXTILE UP OVER THE STONE TO FORM AN IMPERVIOUS DIKE.
- ROLL THE TOP LAYER FROM THE UPSTREAM TO DOWNSTREAM DIRECTION. SECURE GEOTEXTILE WITH METAL FENCE STAKES OR OTHER SUITABLE MATERIAL.

MAINTENANCE:
- PERIODICALLY INSPECT DIKE FOR DAMAGE AND LEAKS AND REPAIR AS NEEDED.
- REMOVE IMPOUNDED TRASH AND SEDIMENT.



VIEW FROM SLOPE



SIDE VIEW

DETAIL - SILT FENCE COIR FIBER WATTLE BREAK

SCALE: N.T.S

MAINTENANCE:
- IF THE NATURAL FIBERS OF THE WATTLE BECOME TOO SATURATED WITH DEBRIS AND SEDIMENT AND REMOVAL OF THE ITEMS IS NOT POSSIBLE, WATTLE BREAKS SHOULD BE REPLACED.
- STAKES SHOULD BE USED TO ANCHOR THE WATTLE BREAKS ADEQUATELY TO THE GROUND TO PREVENT SCOURING AND WASHOUT DURING STORM EVENTS.

CONSTRUCTION SPECIFICATIONS:

INNER MATERIAL	- COCONUT FIBERS
DIMENSIONS	- MINIMUM DIAMETER OF 12 INCHES AND A MAXIMUM OF 20 INCHES - LENGTH OF 10 FEET - DENSITY OF 3.5 LB/FT^3

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

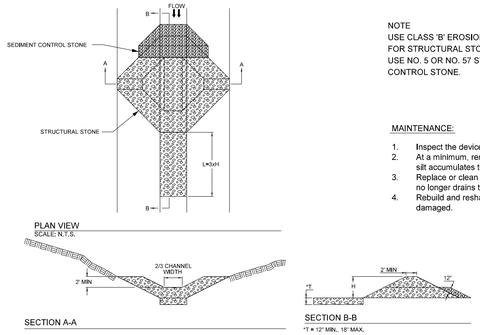
EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.06

9/9/2021
Floodgate_Rdy_psh_C600.dgn
Joshua G. Dalton

Ditch Spacing For Temporary Rock Silt Check Type 'A'	
Channel Slope (%)	Space Between Silt Socks/ Wattles (Feet)
1	100
2	50
3	33
4	25
5	20



NOTE
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

MAINTENANCE:

1. Inspect the device after each significant rainfall.
2. At a minimum, remove silt from the device when silt accumulates to one-half the height of the weir.
3. Replace or clean sediment control stone when water no longer drains through the device between rainfall events.
4. Rebuild and reshape rock weir and check when the device is damaged.

DETAIL - TEMPORARY ROCK SILT CHECK TYPE 'A'

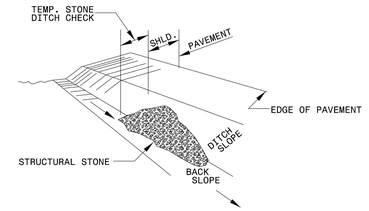
SCALE: N.T.S

Construction Specifications:

Structural Stone	- Use Class B structural stone. - Install stone at a minimum depth of 12 inches. - Install sediment control stone on the upgradient face of the structural stone.
Side Slopes	- 2:1 or flatter.
Weir	- Weir length should be $\frac{2}{3}$ of the channel width. - The weir height shall be a minimum of 1 foot. - The depth of the weir shall be a minimum of 1 foot.

Maintenance:

- Inspect the device periodically and after each significant rainfall event for damage and sediment accumulation.
- Remove sediment when accumulation reaches one-half the height of the weir.
- Replace or clean sediment control stone when water no longer drains through the device between rainfall events.
- Rebuild and reshape rock weir and check when the device is damaged.



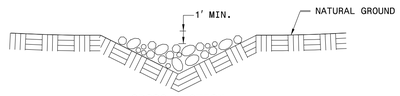
ISOMETRIC VIEW

NOTES:

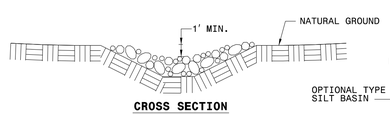
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.

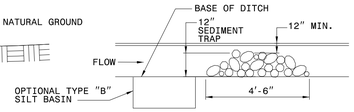
Ditch Spacing For Temporary Rock Silt Check Type 'B'	
Channel Slope (%)	Space Between Silt Socks/ Wattles (Feet)
1	100
2	50
3	33
4	25
5	20



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

DETAIL - TEMPORARY ROCK SILT CHECK TYPE 'B'

SCALE: N.T.S

Construction Specifications:

Installation	- The center of the rock silt check shall be at least 1-foot lower than the outer edges (top of the channel sides). - The maximum height at the center of the rock check should not exceed 2 feet. - The side slopes of the check shall be 2:1 or flatter.
Slope	- Maximum spacing between the checks should place the toe of the upstream check at the top of the downstream check.

Maintenance:

- Inspect the device periodically and after each significant rainfall event for damage and sediment accumulation.
- Remove silt from device when it accumulates.
- Rebuild and reshape device and weir when the device is damaged or as necessary.
- Cleanout when clogged by straw, limbs, or other debris.

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9/9/2021

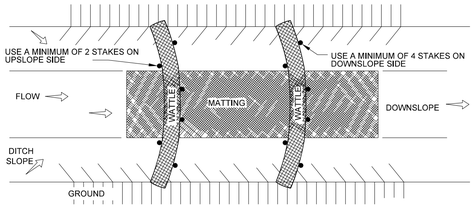
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

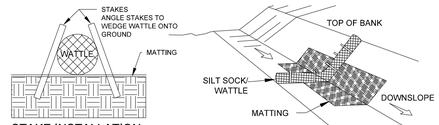
PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.07

9/9/2021
Floodgate_Rdy_psh_C600.dgn
Layout



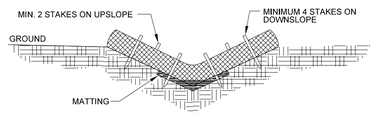
PLAN VIEW
SCALE: N.T.S.



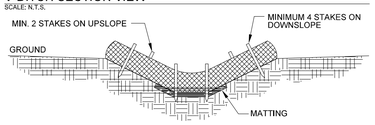
STAKE INSTALLATION
CROSS-SECTION

ISOMETRIC VIEW

Ditch Spacing For 12 Inch Silt Sock/Wattle	
Channel Slope (%)	Space Between Silt Socks/ Wattles (Feet)
1	100
2	50
3	33
4	25
5	20



V-DITCH SECTION VIEW
SCALE: N.T.S.



TRAPEZOIDAL DITCH SECTION VIEW
SCALE: N.T.S.

NOTES:
1. Other materials providing equivalent protection against erosive velocities may be substituted for use in silt socks or wattles.
2. Use a minimum 12 Inch diameter silt sock/wattle.
3. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
4. Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
5. Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
6. Install a minimum of two upslope stakes and four downslope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch.
7. The use of Polyacrylamide (PAM) is recommended. Apply 2-3 ounces of anionic PAM on top of sock/wattle. Apply 1-2 ounces to matting on either side of sock/wattle. Reapply after each 1,0 inch rainfall.

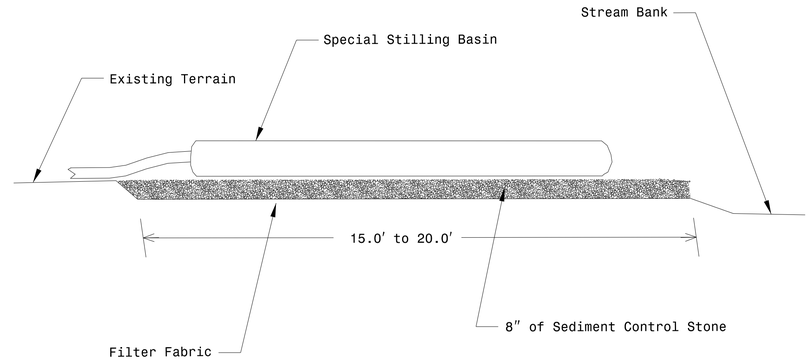
MAINTENANCE:
1. Inspect silt sock/wattle(s) weekly and after each rain of 1 inch or greater. Remove accumulated sediment and any debris.
2. Silt sock/Wattle(s) must be replaced if clogged or torn.
3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
4. Reinstall if damaged or dislodged.
5. Silt socks/Wattles shall be inspected untill land disturbance is compete and the area above the measure is permanently stabilized.

DETAIL - SILT SOCK / WATTLE FOR CHECK DAM
SCALE: N.T.S

Construction Specifications:

Matting	- Install matting in accordance with Section 1631 of the Standard Specifications.
Staples	- Provide staples made of 0.125-inch diameter steel wire formed into a U-shape no less than 12 inches in length. - Install staples approximately every 1 foot on both sides of the wattle and at each end to secure it to the soil.
Stakes	- Use 2-foot wooden stakes with a 2-inch by 2-inch nominal cross section. - Install a minimum of 2 upslope stakes and 4 downslope stakes at an angle to wedge the wattle to the bottom of the ditch. - Drive stakes into the ground a minimum of 10 inches with no more than 2 inches projecting from the top of the wattle.
Flocculant	- Flocculant shall be in powder form and anionic and neutrally charged. - Soil samples should be obtained from areas where wattles will be placed and from off-site material used to construct the roadway. Samples should be analyzed to determine the appropriate flocculant to be used in each wattle. - Flocculant used should be listed on the NCDENR DWR website as an approved product for use in North Carolina. - Flocculant should be applied over the lower center portion of the wattle where the water will flow at a rate of 2 ounces per wattle. - Apply 1 ounce of flocculant on each side of the wattle. - Flocculant should be evaluated and applied after every rainfall event that is equal to or exceeds 0.5 inches.
Overlap	- Overlap adjoining sections of wattles a minimum of 1 foot.

Maintenance:
- The upstream side of the wattle should be maintained to allow the water to flow through, reduce velocity, distribute flocculant and allow sedimentation to occur.
- If the natural fibers of the wattle become too saturated with debris, sediment, etc., and removal of these items is not possible, the wattle should be replaced.
- Stakes should be used to anchor the wattle adequately to the ground to prevent scouring and washout during storm events.
- Maintain excelsior pad beneath the wattle.



MAINTENANCE:
1. The special stilling basin shall be disposed of and replaced when it is ¾ full of sediment or when it is impractical for the bag to filter the sediment out at a reasonable flow rate.
2. The inlet of the bag should be inspected periodically for damage and/or blockage
3. Sediment control stone shall be replaced if damaged by high flows or bag failure.

Note: Provide Stabilized Outlet to Streambank
Not To Scale

DETAIL - SPECIAL STILLING BASIN
SCALE: N.T.S

Construction Specifications:

Special Stilling Basin	- The bag shall be placed on a rock pad constructed of at least 8 inches of sediment control stone. The bag may also be placed on wooden pallets to elevate it above natural ground. - The rock pad should extend at least 1 foot past the bag on all sides. - The special stilling basin should be placed on level ground. - The special stilling basin shall be placed so that incoming water flows into the bag without causing erosion. - Temporary slope drain pipe(s) or pump discharge hoses will be attached to the special stilling basin(s) so that water is routed directly into the special stilling basin(s). - The special stilling basin may be cut to allow slope drain pipe to be inserted if needed and tied of tightly. The remaining sleeve or spout of the bag, if present, may be used to connect more than one special stilling basin in series, as directed. If not used in this manner, the sleeve shall be tied off tightly to allow the bag to contain the effluent and force it to filter through the sides of the special stilling basin. - When being utilized in drilled pier construction, the special stilling basin should be constructed such that it is portable and can be used adjacent to each drilled pier.

Maintenance:
- The special stilling basin shall be disposed and replaced when it is ¾ full of sediment or when it is impractical for the bag to filter the sediment out at a reasonable flow rate.
- The inlet of the bag should be inspected periodically for damage and/or blockage.
- Sediment contorl stone shall be replaced if damaged by high flows or bag failure.

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ENGINEERING SERVICES
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.08

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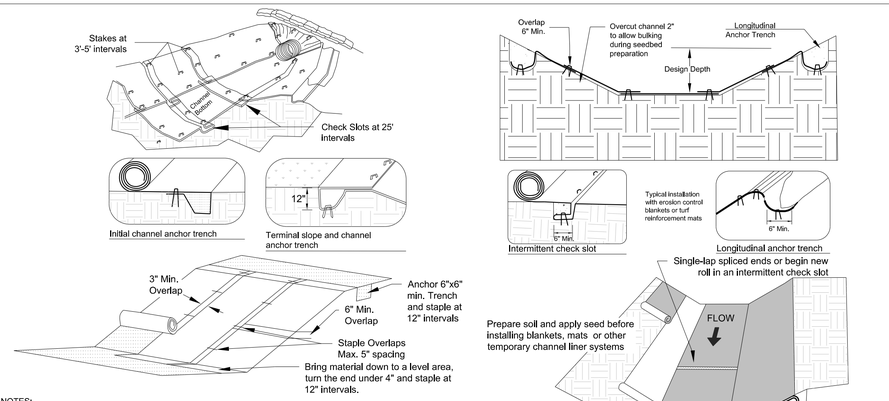
Layout



NOTES:

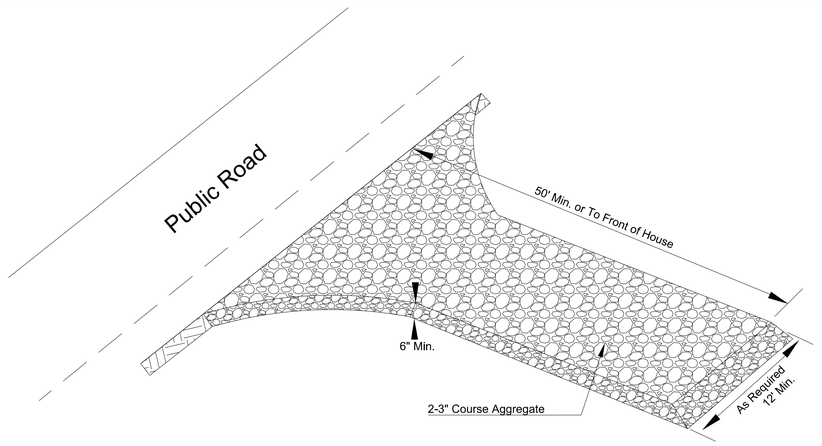
1. Lime, fertilize and seed before installation. Planting of shrubs, trees, etc. should occur after installation.
2. Slope surface shall be smooth before placement for proper soil contact.
3. Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
4. Terminal anchor trenches are required at RECP ends and intermittent check slots must be constructed across channels at 25 foot intervals.
5. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width. Intermittent check slots should be 6 inches deep and 6 inches wide.
6. For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Unroll the RECP down the slope maintaining direct contact between the soil and RECP. Pin using staples or pins in a 3 feet center-to-center pattern.
7. 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
8. Grass-lined channels with design velocities exceeding 6 feet/second should include turf reinforcement mats
9. Check slots to be constructed per manufacturers specifications.
10. Staking or stapling layout per manufacturers specification.
11. If there is a berm at the top of slope, anchor upslope of the berm.
12. Do not stretch blankets/matting tight, allow the rolls to conform to any irregularities.
13. For slopes less than 3H:1V, rolls may be placed in horizontal strips.

MAINTENANCE:

1. Inspect Rolled Erosion Control Products at least weekly and after each rain of 1 inch or greater; repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.

DETAIL - ROLLED EROSION CONTROL PRODUCTS (RECP)

SCALE: N.T.S



Construction:

1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.
2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage to carry water to a sediment trap or other suitable outlet.
4. Use geotextile fabrics in order to improve stability of the foundation in locations subject to seepage or high water table.

Maintenance:

1. Per NCG-01 Inspect at least once a week and after each 1 inch or greater rainfall; make any required repairs immediately.
2. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2 inch stone.
3. Immediately remove all objectionable materials spilled, washed or tracked onto public roadways.

DETAIL - CONSTRUCTION ENTRANCE / EXIT

SCALE: N.T.S

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9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

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DRAWING NAME: FLOODGATE RDY PSH C600
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REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C6.09**

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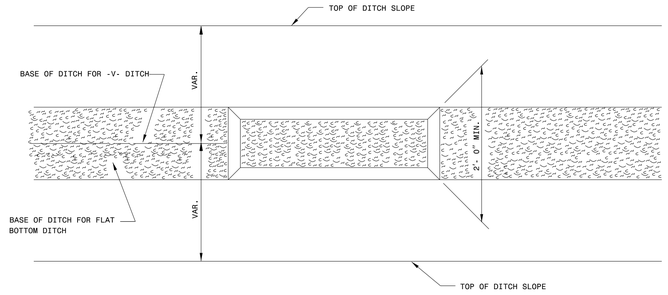
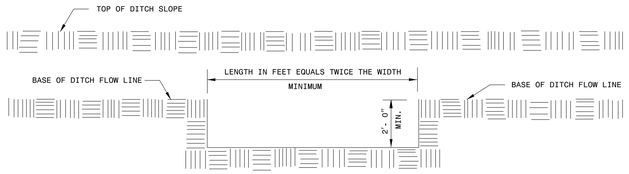
Layout



PLAN



ELEVATION

DETAIL - SILT BASIN - TYPE B

SCALE: N.T.S

Construction Specifications:

Silt Basin - Type B	- Construct basins with an excavated depth of at least 2 feet from the base of the ditch flow line. - Construct basins with non-vertical side slopes and not greater than 1.5:1 slope. - For silt basins at drainage outlets, install a minimum of 3 coir fiber baffles in the basin, with a spacing of ¼ the basin length and in accordance with Section 1640 of the Standard Specifications. - Install a minimum of 2 coir fiber baffles in basins with less than 20 feet of length at a spacing of ⅓ the basin length.

Maintenance:

- Inspect the basin on a regular basis and after every significant rainfall event (½ inch or greater).
- At a minimum, clean out the basins when they are approximately one-half full.
- Check for damage to coir fiber baffles and repair and/or replace the baffles.

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua G. Dalton

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

9/9/2021

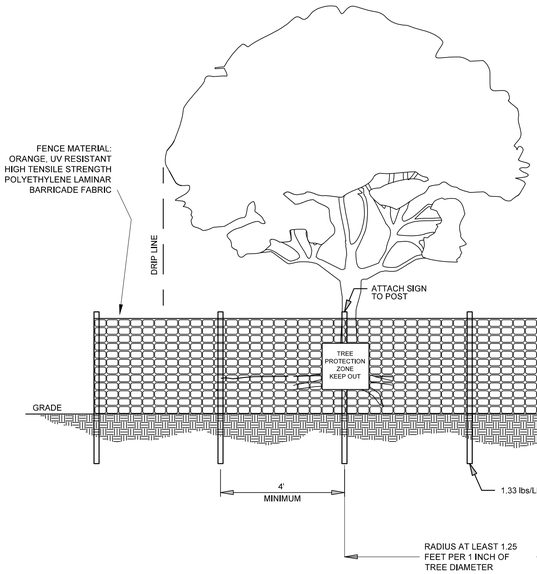
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.10

9/9/2021
Floodgate_Rdy_psh_C600.dgn
Harvey



MATURE TREE PROTECTION ZONE RADIUS

TRUNK DIAMETER	GOOD PROTECTION	BETTER PROTECTION	BEST PROTECTION
8 INCHES	10 FEET	12 FEET	20 FEET
12 INCHES	15 FEET	18 FEET	30 FEET
16 INCHES	20 FEET	24 FEET	40 FEET
20 INCHES	25 FEET	30 FEET	50 FEET

NOTES:
1. Leave critical areas (such as flood plains, steep slopes and wetlands) with desirable trees in their natural condition or only partially cleared.
2. Select trees to be preserved before siting roads, buildings or other structures.
3. Minimize trenching in areas with trees. Place several utilities in the same trench.
4. Prohibit or restrict access to tree protection zones(TPZ). Post "Keep Out" signs on all sides of fencing and do not store construction equipment or materials in TPZ.
5. Monitor trees using a professional or train your staff to monitor tree health during and after construction on a regular, frequent basis.
6. Assign a crew member to weekly TPZ fence integrity checks. Repair and replace TPZ fencing as needed.

MAINTENANCE:
1. Prune any damaged trees. In spite of precautions, some damage to protected trees may occur. In such cases, repair any damage to the crown, trunk, or root system immediately.
2. Repair roots by cutting off the damaged areas and painting them them with tree paint. Spread peat moss or moist topsoil over exposed roots.
3. Repair damage to bark by trimming around the damaged area, taper the cut to provide drainage and paint with tree paint.
4. Cut off all damaged tree limbs above the tree collar at the trunk or main branch. Use three separate cuts to avoid peeling bark from healthy areas of the tree.

DETAIL - TREE PROTECTION ZONES

SCALE: N.T.S

Figure 6.05c Tree protection zone guidelines.

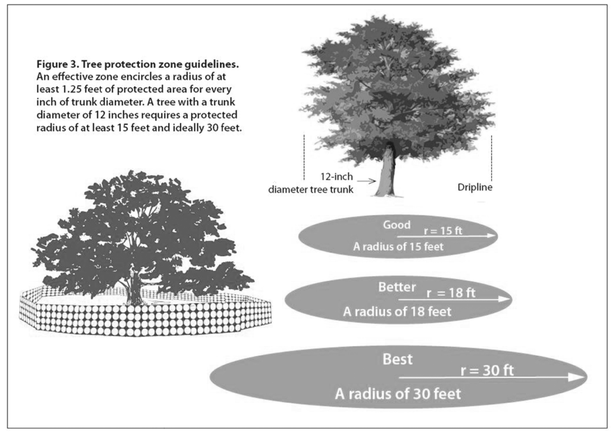
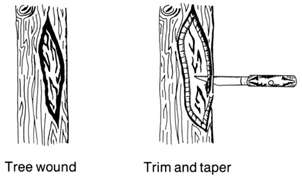
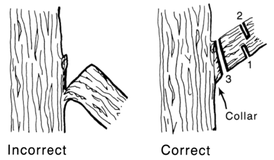


Figure 6.05d Wound repair and pruning of damaged trees.

Trim bark wounds with a tapered cut, then apply tree paint.



Prune damaged branches with three cuts to avoid peeling bark from the trunk when limb falls.



References

Construction and Tree Protection, AG-685 (Revised) North Carolina Cooperative Extension Service

Design Criteria

The following general criteria should be considered when developing sites in wooded areas:

- Leave critical areas (such as flood plains, steep slopes and wetlands) with desirable trees in their natural condition or only partially cleared.
- Locate roadways, storage areas, and parking pads away from valuable tree stands. Follow natural contours, where feasible, to minimize cutting and filling in the vicinity of trees.
- Select trees to be preserved before siting roads, buildings, or other structures.
- Minimize trenching in areas with trees. Place several utilities in the same trench.
- Designate groups of trees and individual trees to be saved on the erosion and sedimentation control plan.
- **Do not excavate, traverse, or fill closer than the drip line, or perimeter of the canopy, of trees to be saved**.

Construction Specifications

1. Erect TPZ fences. Restrict access to TPZs, with tall, bright, protective fencing. Most fencing is inexpensive and durable enough to last throughout most construction projects. Temporary tree protection fencing should be erected before clearing, deliveries and other construction activities begin on the site.

2. Prohibit or restrict access to TPZs. All on-site workers should be aware of the TPZs and the restrictions on activities within the zones. Use these TPZ guidelines for the best effect:

• Post "keep out" signs on all sides of fencing. Do not store construction equipment or materials in TPZs.

• Prohibit construction activities near the most valuable trees, and restrict activities around others.

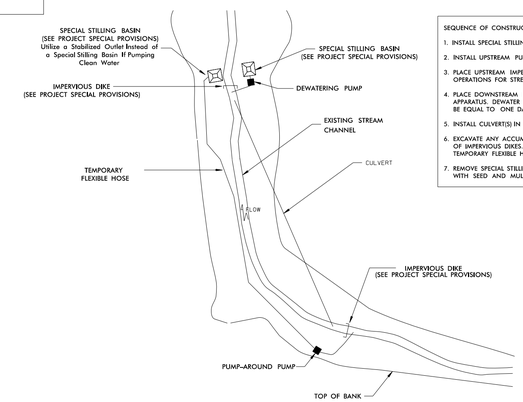
• Assess crew and contractor penalties, if necessary, to keep the TPZs intact.

3. Monitor trees. Vigilance is required to protect trees on construction sites. Use a tree professional or train your staff to monitor tree health during and after construction on a regular, frequent basis. Watch for signs of tree stress, such as dieback, leaf loss, or general decline in tree health or appearance.

4. Monitor TPZ fences. Assign a crewmember the weekly responsibility of checking the integrity of TPZ fences. Repair and replace TPZ fencing as needed.

5. Optimize tree health. Assign a trained crewmember or hire a professional to complete regular tree maintenance tasks, including watering, fertilization, and mulching to protect tree roots. Consult a tree professional for advice on these practices if needed. Survival of protected trees will increase if these practices continue during construction. Healthy trees require undisturbed healthy soils. Do not cause injuries to trees and roots. Do not change the soil, grade, drainage, or aeration without protecting priority trees

NOTES:
1) All excavation shall be performed in only dry or isolated areas of the work zone.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
4) Pumps and hoses shall be of sufficient size to dewater the work area.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

DETAIL - EXAMPLE OF PUMP-AROUND OPERATION

SCALE: N.T.S

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: Joshua C. Dalton
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA C. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

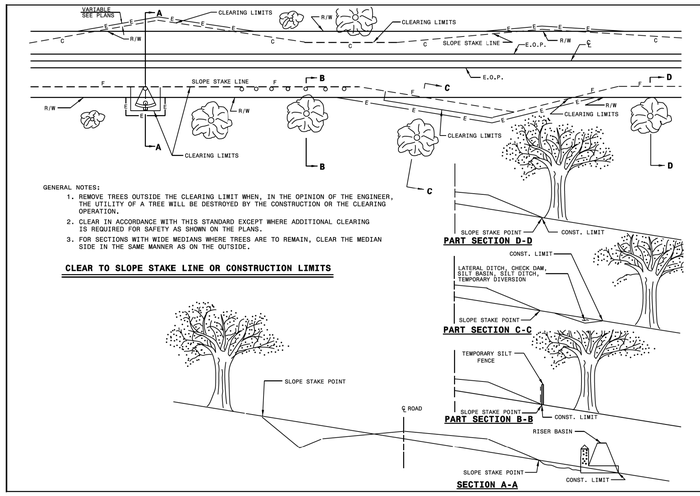
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C6.11**

9/9/2021
Floodgate_Rdy_psh_C600.dgn
Harrell



GENERAL NOTES:

1. REMOVE TREES OUTSIDE THE CLEARING LIMIT WHEN, IN THE OPINION OF THE ENGINEER, THE UTILITY OF A TREE WILL BE DESTROYED BY THE CONSTRUCTION OR THE CLEARING OPERATION.
2. CLEAR IN ACCORDANCE WITH THIS STANDARD EXCEPT WHERE ADDITIONAL CLEARING IS REQUIRED FOR SAFETY AS SHOWN ON THE PLANS.
3. FOR SECTIONS WITH WIDE MEDIANS WHERE TREES ARE TO REMAIN, CLEAR THE MEDIAN SIDE IN THE SAME MANNER AS ON THE OUTSIDE.

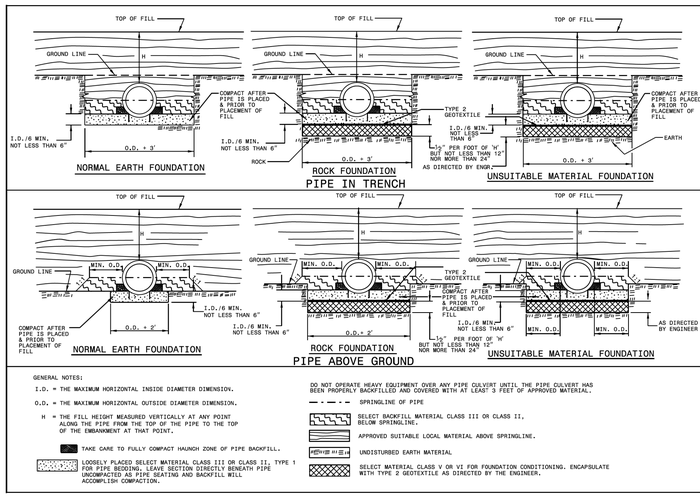
CLEAR TO SLOPE STAKE LINE OR CONSTRUCTION LIMITS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF CLEARING
METHOD - II

SHEET 1 OF 1
200.02



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 3
300.01

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	204	256			
15	12	162	204			
18	12	136	169	239		
21	12	115	145	204		
24	12	100	126	178		
30	12	79	100	142		
36	12	65	83	117	152	
42	12	55	70	100	130	160
48	12	48	61	87	113	139
54	12		54	77	100	123
60	12			69	90	111
66	12				81	100
72	12				74	91
78	12					81
84	12					68

Round Corrugated Aluminum Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	123	155	218	281	324
15	12	98	123	174	224	275
18	12	81	102	144	187	228
21	12	69	87	123	160	195
24	12	60	76	108	139	171
27	12		67	95	123	151
30	12		60	85	111	136
36	12		50	71	92	113
42	12			60	78	96
48	12			52	68	84
54	12			46	50	74
60	12				50	62
66	12					51
72	12					41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

CSP - AASHTO M36
CAAP - AASHTO M196
HDPE - AASHTO M294
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

HDPE - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 60"
* (Maximum fill) 20' for pipe diameters ≥ 24"
17' for pipe diameters ≥ 30" and ≤ 60"

PVC - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 36"
* (Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

RIGID PIPE

RCP - * (Minimum fill) 1' for Class IV & CLASS V
2' for Class III & Class II

* (Maximum fill) 10' - Class II pipe
20' - Class III pipe
30' - Class IV pipe
40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

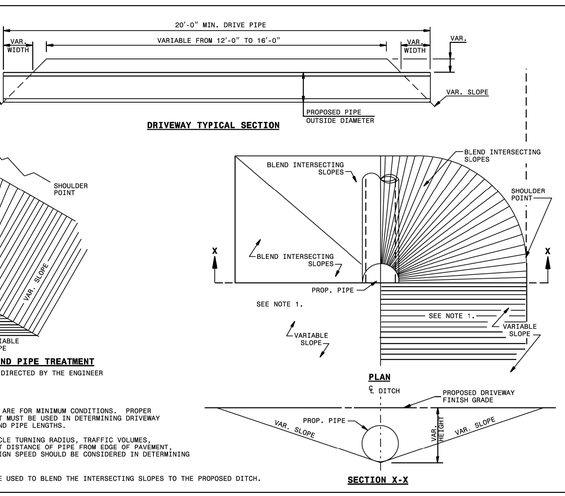
1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FILL HEIGHT TABLES

SHEET 3 OF 3
300.01



USE AT LOCATIONS AS DIRECTED BY THE ENGINEER

GENERAL NOTES:

ALL DIMENSIONS GIVEN ARE FOR MINIMUM CONDITIONS. PROPER ENGINEERING JUDGEMENT MUST BE USED IN DETERMINING DRIVEWAY LOCATIONS, WIDTHS, AND PIPE LENGTHS.

FACTORS SUCH AS VEHICLE TURNING RADIUS, TRAFFIC VOLUMES, DRIVEWAY SKEW, OFFSET DISTANCE OF PIPE FROM EDGE OF PAVEMENT, PIPE DEPTHS, AND DESIGN SPEED SHOULD BE CONSIDERED IN DETERMINING DRIVEWAY WIDTHS.

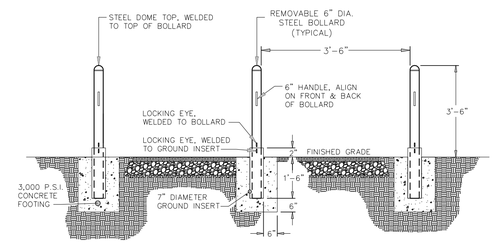
NOTE:
1. THESE AREAS ARE TO BE USED TO BLEND THE INTERSECTING SLOPES TO THE PROPOSED DITCH.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
DRIVEWAY PIPE CONSTRUCTION
USING NO SPECIAL END SECTIONS

SHEET 1 OF 1
310.10



REMOVABLE BOLLARD:
ALIGN BOLLARD PIPE & GROUND INSERT SO EYES ARE LOCATED AT BACK & FRONT OF BOLLARD, IN DIRECTION OF TRAVEL.

NOTE:
ALL METAL SHALL BE GALVANIZED PAINT, ONE COAT METAL PRIMER AND TWO COATS FLUORESCENT YELOOW METAL ENAMEL.

REMOVABLE STEEL BOLLARD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: Joshua G. Dalton
CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/9/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

SITE DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C603
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C6.12**

9/9/2021 Floodgate_Rdy_psh_C600.dgn Shawn

THIS CARD MUST BE DISPLAYED ON OUTSIDE OF BUILDING OR PREMISES FOR WHICH IT IS ISSUED AND BE VISIBLE FROM STREET

EDGECOMBE COUNTY
NORTH CAROLINA

FLOODPLAIN
DEVELOPMENT PERMIT

PERMIT #: 21-004

DATE: 8-26-21
(This permit expires 180 days from this date)

HAS BEEN ISSUED TO

Randall C. Howard
(NAME)

LOCATION: Edgecombe County / Princeville Dike Easement

TYPE OF CONSTRUCTION: Floodgate repairs

Edgecombe County Planning & Inspections
252-641-7802

EDGECOMBE COUNTY
FLOODPLAIN DEVELOPMENT PERMIT

Permit Number: 21-004 Issuance Date: 08/26/2021 PIN: N/A Dike Easement

In accordance with the Edgecombe County Flood Damage Prevention Ordinance, a Floodplain Development Permit is hereby granted to:

(Name) Randall C. Howard/Sungate Design Group
to conduct development activities within the area of special flood hazard on property located at:

Edgecombe County Dike Easement

recorded in Book N/A Page N/A , Registry of Edgecombe County.

Planning Jurisdiction: Princeville
This property is located in a Special Flood Hazard Area,

FIRM Data: Flood Zone: AE Floodway Map Panel No.: 3720473800 & 3720474800 Suffix K
Map Panel Date: 6/2/15 Map Index Date: 6/2/15
Base Flood Elevation(s) (1) 44.9 (2) 45.6 (3) 45.8 (NAVD 1988)
Regulatory Flood Protection Elevation N/A (NAVD 1988)

Regulatory Floodway / Non Encroachment Area Info:
Inside Regulatory Floodway / Non Encroachment Area X
Outside Regulatory Floodway / Non Encroachment Area
No Regulatory Floodway / Non Encroachment Area

This Permit is issued to the aforementioned individual, firm, partnership, etc. for the purpose noted above and in accordance with the Edgecombe County Flood Damage Prevention Ordinance, Floodplain Development Permit No. 21-004 and attachments thereto; and is subject to the following modifications and/or performance reservations:

1. Permit issued for the following development only.
   Excavation: Fill: X Grading: X Utility Construction:
   Road Construction: X Residential Construction: Nonresidential Construction:
   Addition: Renovation: Other (specify): DWMH
   (Comments/Limitations): No Rise Certification attached
2. The lowest floor and all attendant utilities shall be at or above N/A feet. (NAVD 1988)
3. Pursuant to Section 12-2.10(3) of the Edgecombe County Flood Damage Prevention Ordinance, it shall be the duty of the permit holder to submit to the Floodplain Administrator the Elevation/Floodproofing Certification within 21 calendar days after establishment of the lowest floor. Fill material shall not encroach into the floodway of Tar River (Name of Watercourse).
4. Proper Erosion and Sediment control measures shall be installed and maintained in accordance with North Carolina State Standards during fill operations.
5. Provide a minimum of two (2) openings in the foundation wall having a total area of **not less than n/a square inches**. The bottom of the openings shall not be greater than one (1) foot above the ground elevation at the perimeter of the foundation wall. The access area to the crawl space may be utilized to meet these criteria provided a mesh or screen door is used.
   Note: Vent opening area requirement is calculated at 1 sq. in. per sq. ft of structures footprint below BFE.
6. Mobile / Manufactured home shall be installed in accordance with the Edgecombe County Flood Hazard District Overlay Requirements Section B(3).
7. Any below BFE enclosures may only be used for parking vehicles, building access, and storage.
8. Upon completion of foundation construction, contact Floodplain Administrator's office for foundation inspection.
   Failure to comply with the Edgecombe County Flood Damage Prevention Ordinance including any modifications and/or performance reservations could result in assessment of civil penalties or initiation of civil or criminal court actions.

Revised this 26th day of August, 2021.

Katrina Braswell
Floodplain Administrator for Edgecombe County

SECTION 2 – NO-RISE CERTIFICATION

This document is to certify that I am a duly qualified engineer licensed to practice in the State of North Carolina. It is to further certify that the attached technical data supports the fact that the proposed Princeville Levee Floodgate Repairs project will not increase the base flood elevations or floodway elevations, or impact the floodway widths, on the Tar River at published cross-sections in the Flood Insurance Study (FIS) for Town of Princeville, dated Revised: June 2, 2015, and will not increase the base flood elevations or floodway elevations, or impact the floodway widths at unpublished cross-sections in the area of the proposed development.

Joshua G. Dalton, PE

Name

Project Manager

Title

905 Jones Franklin Rd.

Address

Raleigh, NC 27606

6-16-2021

Date

6-16-2021

Seal and Signature

FOR COMMUNITY USE ONLY

☑ Approved ☐ Disapproved

Katina Braswell

Planning Director

Name and Title

Katina Braswell

Signature

8-16-21

Date

North Carolina Department of Public Safety

Emergency Management

Roy Cooper, Governor
Casandra Skinner Hoekstra, Interim Secretary

William C. Ray, Director

August 13, 2021

Katina Braswell
Edgecombe County Planning Director
201 St. Andrew Street
Tarboro, NC 27886

Subject: No-Rise Certification Study for Proposed Princeville Levee Floodgate Repairs Project, Town of Princeville, Edgecombe County

Dear Ms. Braswell:

The North Carolina Department of Public Safety Division of Emergency Management Risk Management National Flood Insurance Program (NCNFIP) staff has reviewed the Engineering No-Rise Study Report and Certification for the proposed Princeville Levee Floodgate Repairs Project in Town of Princeville, Edgecombe County, North Carolina. The Report was prepared by Joshua G. Dalton, P.E., with Sungate Design Group, PA, dated on June 16, 2021. The report was received in this office on July 2, 2021.

Based on the information provided, the NCNFIP review indicates the report meets the requirements of the Federal Emergency Management Agency's (FEMA) guidance for a no-rise certification. The NCNFIP finds no objection to the conclusion of no increase in base flood elevation or floodway elevation as contained in the certification.

A Floodplain Development Permit will be required prior to construction.

If you have any questions or concerns with the items herein, please contact me at (919) 825-2317, by email at jintao.wen@ncdps.gov or at the address shown on the footer of this document.

Sincerely,

Jintao Wen

Jintao Wen, Ph.D., P.E.
NC NFIP Engineer
NC Emergency Management

MAILING ADDRESS:
4218 Mail Service Center
Raleigh, NC 27699-4218
Flood.nc.gov

OFFICE LOCATION:
4105 Reedy Creek Road
Raleigh, NC 27607
Telephone: (919) 825-2341

cc: Milton Carpenter, CFM, NC NFIP Central Branch Planner
Steve Garrett, CFM, NC NFIP Coordinator

File

Community Development Block Grant

Disaster Recovery Project

Princeville Levee Floodgate Repairs

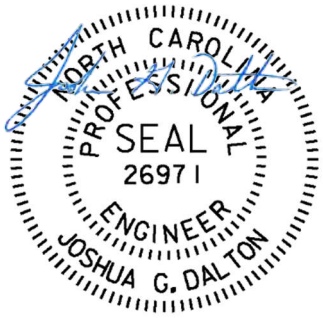
Tar River No-Rise Certification

for

Town of Princeville
Edgecombe County, NC

201 South Main Street
Tarboro, NC 27886

June 16, 2021



Prepared By:

SUNGATE DESIGN GROUP, PA
905 Jones Franklin Road
Raleigh, N. C. 27606
Firm License No. C-890

CLOMR for Tar River

Table of Contents

SECTION 1 - REPORT

Tar River – No-Rise Certification
Town of Princeville, Edgecombe Co, NC

Prepared by: Sungate Design Group, PA
905 Jones Franklin Road
Raleigh, North Carolina

For: Town of Princeville
201 South Main Street
Tarboro, NC 27886

Date: June 16, 2021

Introduction

The Town of Princeville has received Community Development Block Grant - Disaster Recovery (CDBG-DR) funding from the U.S. Department of Housing and Urban Development (HUD) for repairs to the Princeville Levee along the Tar River in the Town of Princeville, Edgecombe County, NC. The Tar River flows along the north and west boundary of the Town and the town is protected from flooding by an earthen levee system built by the US Army Corps of Engineers (USACE) in 1965. Streams and channels conveying stormwater from the town are piped under the levee through corrugated metal pipes with flap gates on the outlet end to allow water out to the river, but not in from the river. The Tar River at this location is part of a FEMA Detailed Study, as shown in the Effective FIS # 37065CV000C for Edgecombe County and Incorporated Areas, dated Revised: June 2, 2015.

The Princeville Levee Floodgate Repairs project proposes to repair inlet and outlet channels at four existing floodgates along the Princeville Levee and construct permanent access roads to each floodgate for construction and future maintenance activities. The floodgate locations are described as Sites 1 thru 4 in the attached Construction Plans. Sites 1, 2, and 3 are partially located in a FEMA regulated floodplain. The repairs will consist of excavation and regrading approximately 25 linear feet of each inlet and outlet channel and the installation of a rip rap channel lining. Temporary impervious dikes and a pump-around system for dewatering are anticipated during channel repairs. Access roads leading from public right-of-way to each channel will also be constructed. The roads will be constructed using fill material at an elevation to avoid cutting into the existing levee but minimize the amount of fill placed in the regulated floodplain. Access road locations, typical sections, profiles, and cross-sections are shown in the included Construction Plans.

Effective Model

The Effective HEC-RAS model (version 4.0), entitled Tar River – AUGUST 20,2010 4650, was downloaded from the NC FRIS website. The model contains two plans entitled Revised and Tar River. The Revised plan contains two profiles, a 100-YEAR, and 100-YEAR FW profile with

encroachment stations. The Tar River plan contains seven profiles, a 10-YEAR, 50-YEAR, 100-YEAR, 500-YEAR, FLOYD, 10%100-yr, and 95 % Conf. 100-yr profile. For this project the Revised plan will be used to establish the No-Rise Certification.

Site 1 is bounded by published cross-sections at RS 243633 and RS 247087, and Sites 2 and 3 are bounded by published cross-sections at RS 247087 and RS 252004, in the Effective FIS. The 100-YEAR profile and 100-YR FW water-surface elevations in the Effective model were compared to the Effective FIS between RS 243633 and RS 252004 and found to match exactly when rounded to the nearest tenth of a foot. Both the Effective model and FIS are reference to NAVD 88. No negative surcharges or surcharges greater than 1.00 feet were observed in the Effective model between the published project limits, however, surcharges greater than 1.00 feet were observed upstream of the project.

It was observed that the 100-YR FW encroachment widths in the Effective model do not match those shown on the Effective FIRM, with some locations being significantly different. It was also observed that the 100-year Flood Fringe and Floodway on the east side of the river, within the project limits, appear to be shown on the land side of the levee. Upon further review, the Floodway Data Table in the Effective FIS notes the floodway widths for RS 243633, RS 247087, and RS 252004 have been adjusted to ensure compliance with FEMA policy regarding the mapping of floodways on levees.

Duplicate Effective

The Revised plan in the Effective HEC-RAS model discussed above was used to create the Duplicate Effective plan (Duplicate). The plan was run in HEC-RAS (version 4.1) and ran without errors. The Duplicate 100-YEAR and 100-YR FW profiles were compared to the Effective model within the published project limits (RS 243633 to RS 252004). 100-YEAR water-surface elevations match exactly. 100-YR FW water-surface elevations varied by 0.01 feet at RS 247087 and RS 252004. The difference in 100-YR FW water-surface elevations between the Effective and Duplicate models is most likely due to computational differences between the two model versions. HEC-RAS version 4.1 will be used for this project.

Existing Conditions

The Duplicate Effective plan was used to create the Existing Conditions plan (Existing). The existing cross-section at RS 245050 was modified to cross perpendicular to the proposed access roads and levee. Geometry was also updated using field survey data collected by Sungate Design Group, PA (Sungate) and supplemented with 2014 QL2 bare-earth LiDAR downloaded from the NC Spatial Data Download website. New cross-sections at RS 245115, RS 245278, RS 250174, RS 250376, RS 250459, RS 250361, RS 250805, RS 250976, RS 251201, and RS 251452 were added to the Existing plan for comparison to the Proposed Conditions plan. Cross-section geometry for new sections was created using field survey data collected by Sungate and supplemented with 2014 QL2 bare-earth LiDAR data. All geometry data used is referenced to NAVD 88. Tar River bed elevations for new cross-sections were set by interpolating the bed elevation between existing sections.

Manning's n values for new cross-sections were set using values established by the effective model and referencing current ortho-imagery. Contraction and expansion coefficients were set to 0.1 and 0.3, respectively, for all new sections, per HEC-RAS modeling guidelines. Downstream reach lengths were set measuring along the effective streamline and match the difference in river stationing between sections. Encroachment stationing for new sections and modified section at RS 245050 were initially set based on the Effective FIRM, however numerous stations fell outside the 100-year floodplain width or inside the channel and had to be adjusted. Adjustments to encroachment stations for new sections from RS 250174 to RS 251452 were also required to remove surcharges greater than 1.00 feet. Existing sections at RS 247087 and RS 252004 have ineffective flow on the right side of the cross-section, as shown on the included work map. Ineffective flow for new sections bounded by the two existing sections was scaled from the work map and set accordingly at the new sections in the Existing plan.

Proposed Conditions

The Existing Conditions plan was used to create the Proposed plan. Cross-section geometry for sections at RS 245050, RS 245115, RS 245278, RS 250376, RS 250459, RS 250805, RS 250967, RS 251201, and RS 251452 were revised to match proposed Construction Plans inside the floodplain. No other changes to the plan were made. No negative surcharges or surcharges greater than 1.00 feet were observed within the project limits.

Results

When comparing the Proposed 100-YEAR profile to the Existing 100-YEAR profile, no increases in water-surface elevations were observed and a maximum decrease in water-surface elevations of 0.01 feet were observed at multiple sections. When comparing the Proposed 100-YR FW profile to the Existing 100-YR FW profile, no increases in water-surface elevations were observed and a maximum decrease of 0.01 feet was observed at RS 250376. Based on the results of the model, this project should qualify for a No-Rise Certification.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD 88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
TAR RIVER								
1956	195,588	1,950	31,542	1.6	38.2	38.2	39.2	1.0
1979	197,930	1,860	35,385	1.4	38.8	38.8	39.8	1.0
1999	199,932	2,300	40,100	1.2	39.2	39.2	40.2	1.0
2027	202,733	2,725	41,348	1.2	39.7	39.7	40.6	0.9
2089	208,947	1,675	33,153	1.4	40.6	40.6	41.6	1.0
2102	210,220	2,362	40,655	1.2	40.7	40.7	41.7	1.0
2128	212,787	2,175	43,909	1.1	41.0	41.0	42.0	1.0
2163	216,325	2,300	35,290	1.3	41.5	41.5	42.5	1.0
2195	219,544	1,980	46,809	1.0	41.9	41.9	42.9	1.0
2222	222,195	1,800	32,799	1.4	42.2	42.2	43.2	1.0
2254	225,423	1,550	32,569	1.5	42.4	42.4	43.4	1.0
2287	228,738	2,100	37,284	1.3	42.7	42.7	43.7	1.0
2323	232,255	2,200	37,444	1.3	42.9	42.9	43.9	1.0
2349	234,886	1,950	33,233	1.4	43.2	43.2	44.1	0.9
2375	237,457	2,180	37,902	1.2	43.5	43.5	44.5	1.0
Project Limits 2436	243,633	618[2]	13,062	3.6	44.6	44.6	45.5	0.9
2471	247,087	926[2]	18,120	2.6	45.4	45.4	46.4	1.0
2520	252,004	3,253[2]	45,394	1.0	45.9	45.9	46.9	1.0
2540	253,976	3,200	45,831	1.0	46.0	46.0	47.0	1.0
2565	256,527	3,740	58,950	0.8	46.2	46.2	47.1	0.9
2585	258,478	4,000	55,165	0.9	46.3	46.3	47.3	1.0
2679	267,935	5,020	77,433	0.6	46.7	46.7	47.7	1.0
2699	269,891	3,430	52,511	0.9	46.8	46.8	47.7	0.9
2750	274,961	6,400	118,176	0.4	47.7	47.7	48.7	1.0
2784	278,394	6,413	115,122	0.4	47.7	47.7	48.7	1.0
2820	281,986	5,166	109,764	0.4	47.7	47.7	48.7	1.0

[1]Feet above mouth

[2]These widths consider adjustments made to ensure compliance with FEMA policy regarding the mapping of floodways on levees

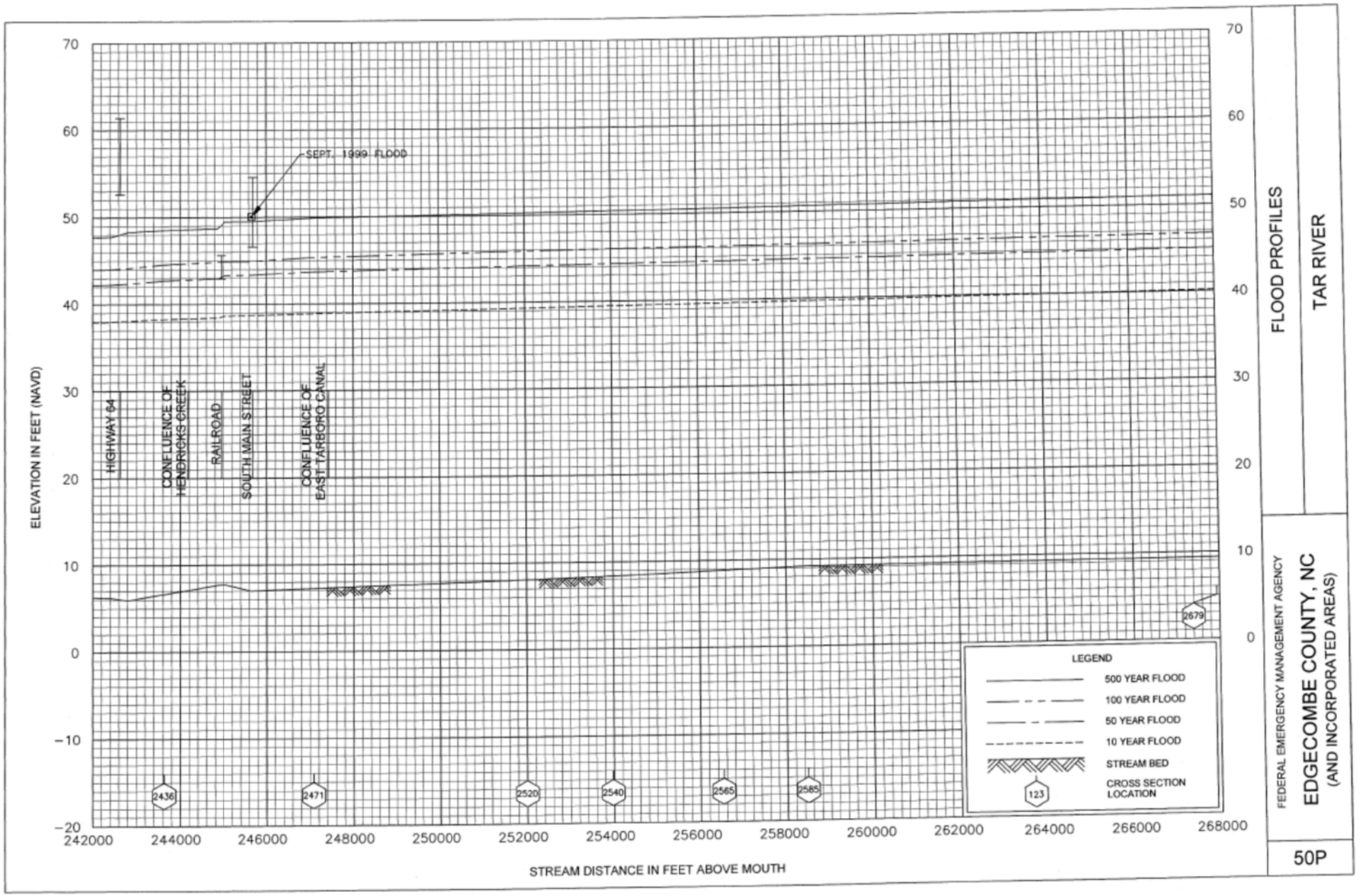
TABLE 18

FEDERAL EMERGENCY MANAGEMENT AGENCY

EDGECOMBE COUNTY, NC AND INCORPORATED AREAS

FLOODWAY DATA

TAR RIVER


ELEVATION IN FEET (NAVD)
70
60
50
40
30
20
10
0
−10
−20
242000
244000
246000
248000
250000
252000
254000
256000
258000
260000
262000
264000
266000
268000
STREAM DISTANCE IN FEET ABOVE MOUTH
SEPT. 1999 FLOOD
HIGHWAY 64
CONFLUENCE OF HENDRICKS CREEK
RAILROAD
SOUTH MAIN STREET
CONFLUENCE OF EAST TARBORO CANAL
2436
2471
2520
2540
2565
2585
2679
LEGEND
500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
123
CROSS SECTION LOCATION
FLOOD PROFILES
TAR RIVER
FEDERAL EMERGENCY MANAGEMENT AGENCY
EDGECOMBE COUNTY, NC
(AND INCORPORATED AREAS)
50P

Site Photos

RS 245115 - Top of Levee Looking North Toward NC 33 Bridge over Tar River

RS 245115 - Top of Levee Looking South Toward R.R. Crossing over Tar River

RS 250294 – Top of Levee Looking East

RS – 251201 – Top of Levee Looking North Toward Tar River

SECTION 2 – NO-RISE CERTIFICATION

This document is to certify that I am a duly qualified engineer licensed to practice in the State of North Carolina. It is to further certify that the attached technical data supports the fact that the proposed Princeville Levee Floodgate Repairs project will not increase the base flood elevations or floodway elevations, or impact the floodway widths, on the Tar River at published cross-sections in the Flood Insurance Study (FIS) for Town of Princeville, dated Revised: June 2, 2015, and will not increase the base flood elevations or floodway elevations, or impact the floodway widths at unpublished cross-sections in the area of the proposed development.

Joshua G. Dalton, PE

Name

Project Manager

Title

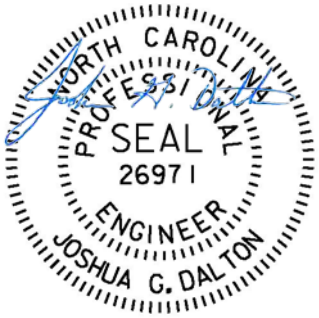
905 Jones Franklin Rd.

Address

Raleigh, NC 27606

6-16-2021

Date



6-16-2021

Seal and Signature

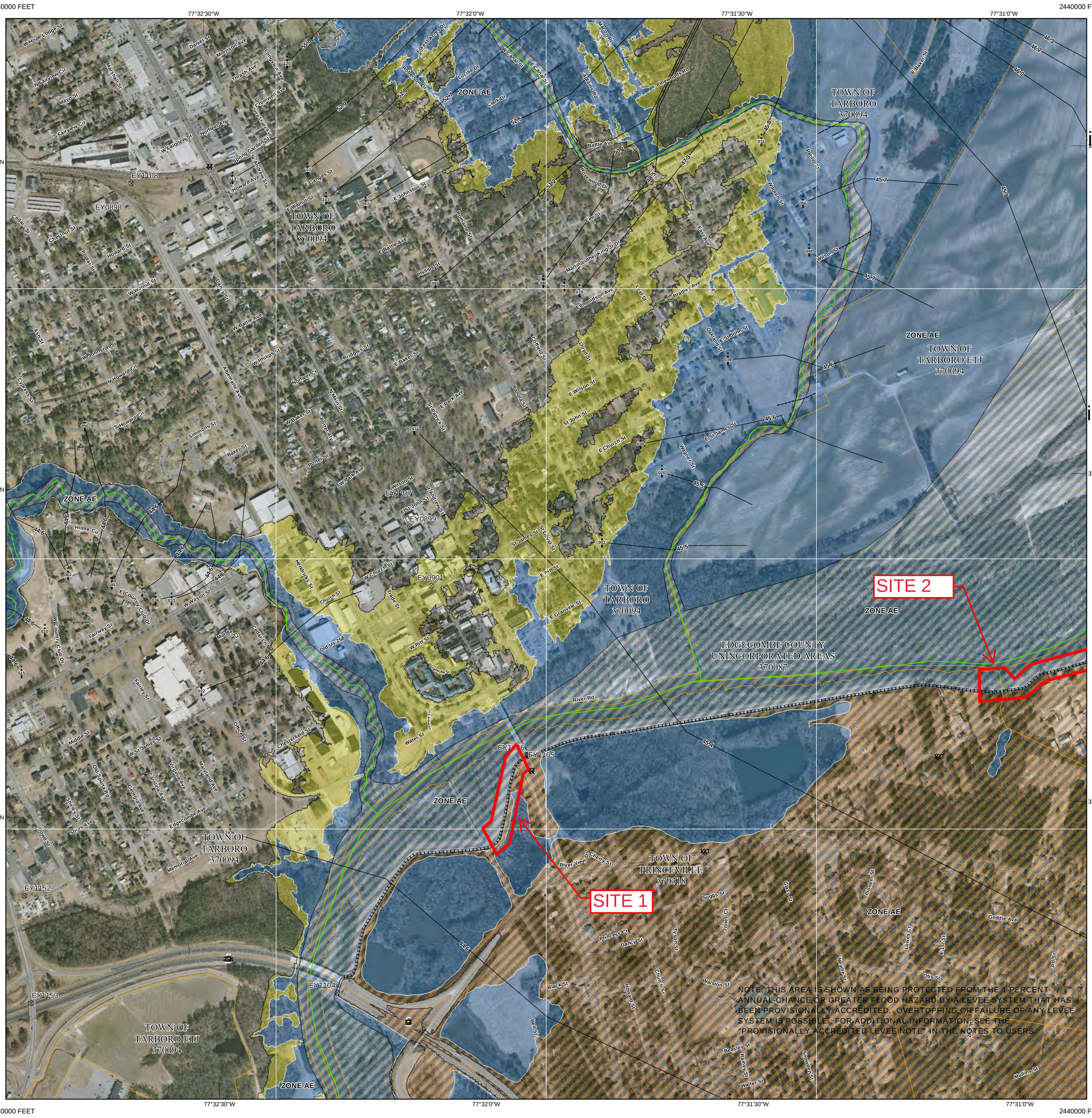
FOR COMMUNITY USE ONLY

☐ Approved ☐ Disapproved

Name and Title | Signature | Date

SECTION 3 – FFECTIVE FIRM

(See Attached)



NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1-PERCENT-ANNUAL-CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM THAT HAS BEEN PROVISIONALLY ACCREDITED. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE "PROVISIONALLY ACCREDITED LEVEE NOTE" IN THE NOTES TO USERS.

NORTH CAROLINA Cooperating Technical State
FEMA'S COOPERATING TECHNICAL PARTNER

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FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP

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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*

OTHER AREAS

- Areas Determined to be Outside the 0.2% Annual Chance Floodplain *Zone X*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Accredited or Provisionally Accredited Levee, Dike, or Floodwall
- Non-accredited Levee, Dike, or Floodwall
- BM5510 D — North Carolina Geodetic Survey bench mark
- BM5510 ? — National Geodetic Survey bench mark
- BM5510 Z — Contractor Est. NCFMP Survey bench mark
- 012 — 18.2 — Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline

OTHER FEATURES

- Hydrographic Feature
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

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LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Limit of Moderate Wave Action (LiMWA)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE

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CBRS Area

Otherwise Protected Area

SCALE

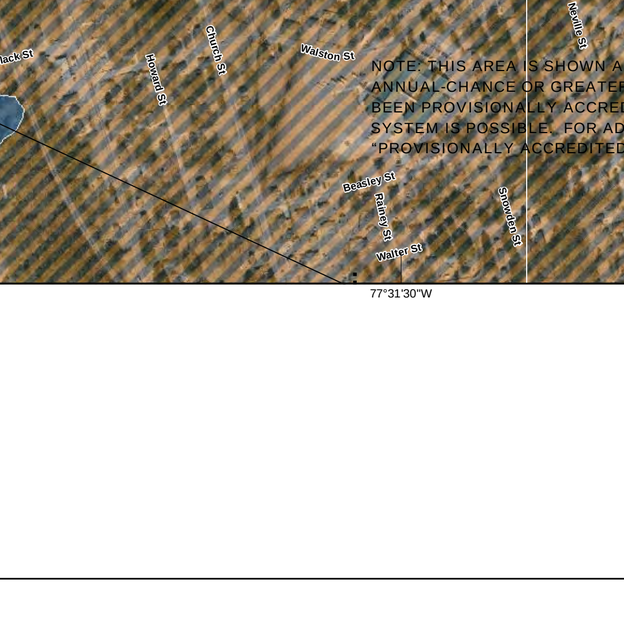
Map Projection:
North Carolina State Plane Projection Feet (Zone 3200)
Datum: NAD 1983 (Horizontal), NAVD 1988 (Vertical)

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

PANEL LOCATOR



NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 4738

FEMA

National Flood Insurance Program

Panel Contains:

COMMUNITY	CID	PANEL	SUFFIX
PRINCEVILLE, TOWN OF	370318	4738	K
TARBORO, TOWN OF	370094	4738	K

MAP NUMBER
3720473800K

EFFECTIVE DATE
06/02/2015

2440000 FEET
790000 FEET
77°30'30"W
77°30'0"W
77°29'30"W
77°29'0"W
2450000 FEET
790000 FEET
35°54'30"N
35°54'0"N
35°53'30"N

ZONE AE
TOWN OF TARBORO ETJ 370094
TOWN OF PRINCEVILLE ETJ 370318
EDGECOMBE COUNTY UNINCORPORATED AREAS 370087
TOWN OF PRINCEVILLE 370318
SITE 3
NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1-PERCENT-ANNUAL-CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM THAT HAS BEEN PROVISIONALLY ACCREDITED. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE "PROVISIONALLY ACCREDITED LEVEE NOTE" IN THE NOTES TO USERS.
DG6071
Howell Rd
Quincy Ln
Arnold Burris Ln
N Shilloh Farm Rd
Cummings Ln
Bridger Pl
Geddie Ave
6th St
4th St
5th St
Otis St
Mullins St
Smackland Dr
Russell Dr
Wiley Ave
122
111
46.2
46.0
45.9
45.4

780000 FEET
2440000 FEET
77°30'30"W
77°30'0"W
77°29'30"W
77°29'0"W
2450000 FEET
780000 FEET

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- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

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SCALE

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Datum: NAD 1983 (Horizontal), NAVD 1988 (Vertical)

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

PANEL LOCATOR

National Flood Insurance Program

FEMA

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

NORTH CAROLINA

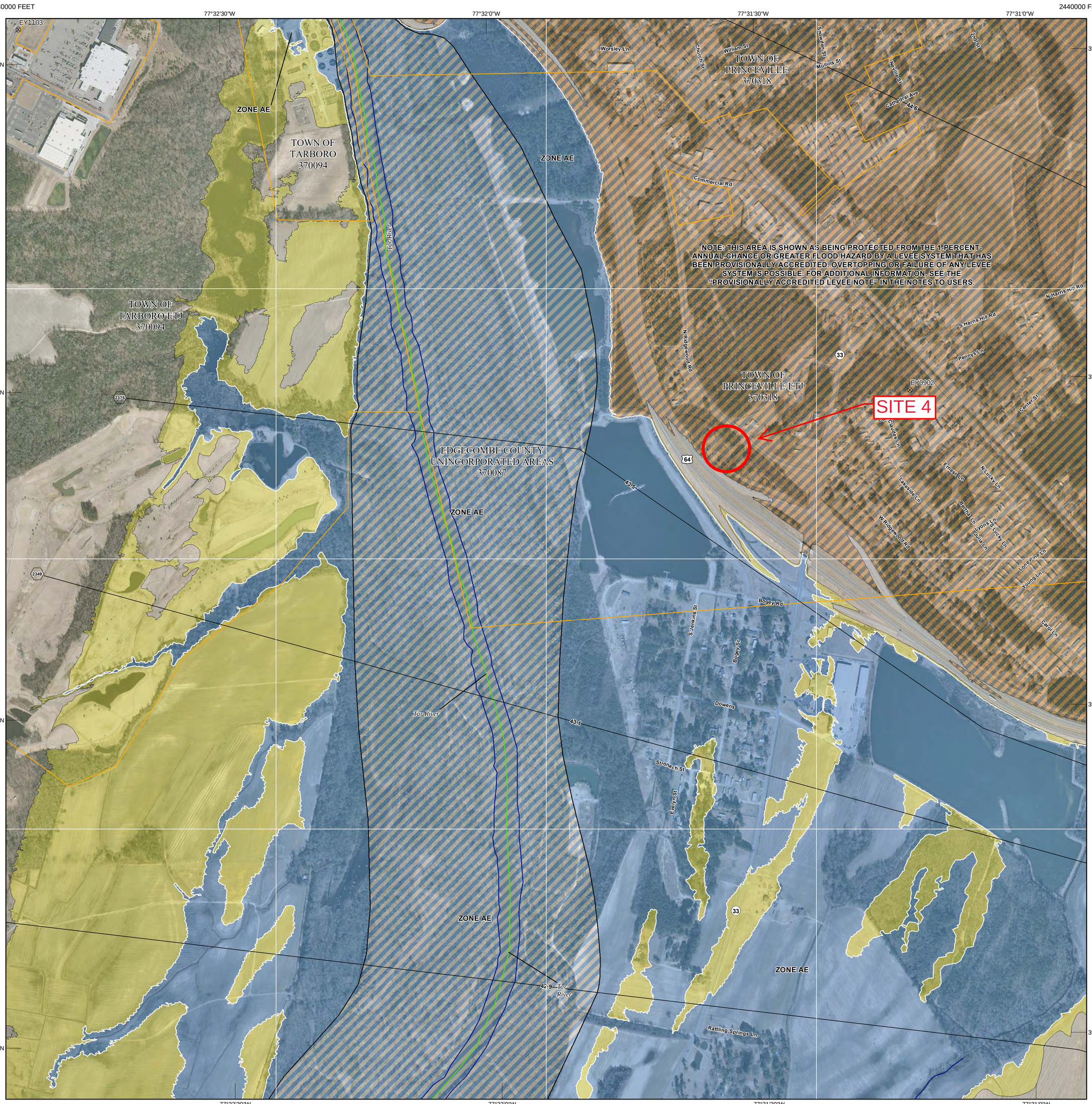
PANEL 4748

Panel Contains:

COMMUNITY	CID	PANEL	SUFFIX
EDGECOMBE COUNTY	370087	4748	K
PRINCEVILLE, TOWN OF	370318	4748	K
TARBORO, TOWN OF	370094	4748	K

MAP NUMBER
3720474800K

EFFECTIVE DATE
06/02/2015



This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map flood hazard areas at the local level. As a part of this effort, the State of North Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTP://FRIS.NC.GOV/FRIS

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*

OTHER AREAS
- Areas Determined to be Outside the 0.2% Annual Chance Floodplain *Zone X*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Accredited or Provisionally Accredited Levee, Dike, or Floodwall
- Non-accredited Levee, Dike, or Floodwall

OTHER FEATURES
- BM5510 North Carolina Geodetic Survey bench mark
- BM5510 National Geodetic Survey bench mark
- BM5510 Contractor Est. NCFMP Survey bench mark
- 012 — 18.2 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at http://www.ncfloodmaps.com, or contact the FEMA Map Service Center.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the North Carolina Floodplain Mapping Program (NCFMP). The source of this information can be determined from the metadata available in the digital FLOOD database and in the Technical Support Data Notebook (TSDN).

ACCREDITED LEVEE NOTES TO USERS: If an accredited levee note appears on this panel check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: If a Provisionally Accredited Levee (PAL) note appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Limit of Moderate Wave Action (LiMWA)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE

This map may include approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see http://www.fws.gov/habitatconservation/coastal_barrier.html, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

CBRS Area

Otherwise Protected Area

SCALE

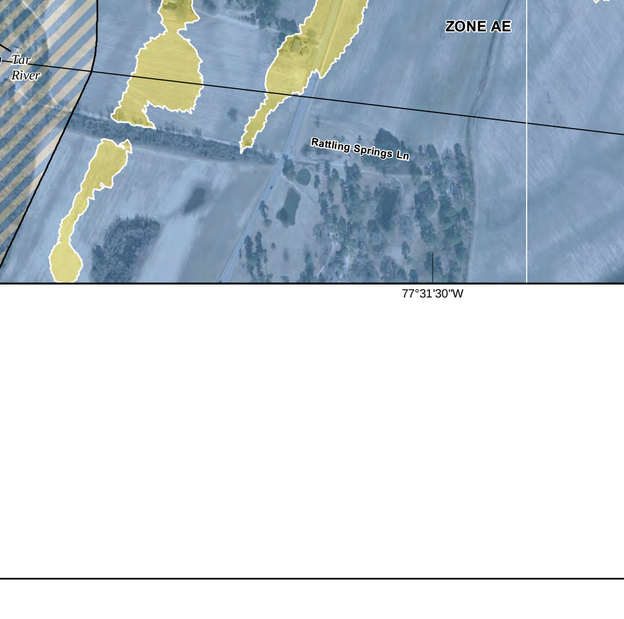
Map Projection:
North Carolina State Plane Projection Feet (Zone 3200)
Datum: NAD 1983 (Horizontal), NAVD 1988 (Vertical)

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

PANEL LOCATOR



FEMA National Flood Insurance Program

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 4737

FEMA

Panel Contains:

COMMUNITY	CID	PANEL	SUFFIX
EDGECOMBE COUNTY	370087	4737	J
PRINCEVILLE, TOWN OF	370318	4737	J
TARBORO, TOWN OF	370094	4737	J

MAP NUMBER
3720473700J

EFFECTIVE DATE
11/3/2004

SECTION 4 – CERTIFIED TOPOGRAPHIC WORK MAP

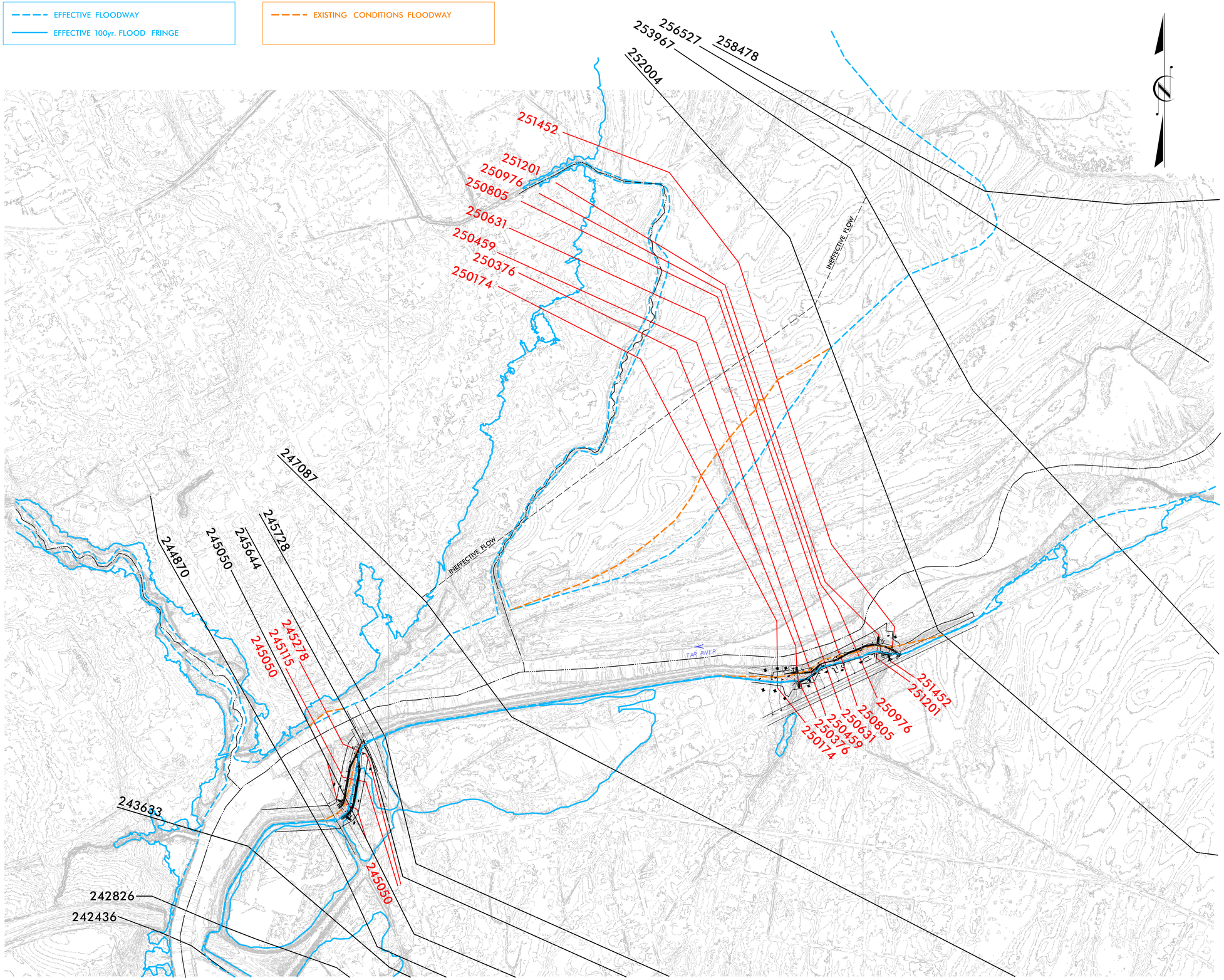
(See Attached)

5/14/99

EFFECTIVE FLOODWAY

EFFECTIVE 100yr. FLOOD FRINGE

EXISTING CONDITIONS FLOODWAY



PROJECT REFERENCE NO.	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6-16-2021

CERTIFIED TOPOGRAPHIC MAP

PRINCEVILLE LEVEE FLOODGATE REPAIRS

TAR RIVER

TOWN OF PRINCEVILLE

EDGECOMBE CO, NC

NAD 83 (2011)

NAVD 88

500′ 250′ 0 500′ 1000′

SCALE: 1″ = 500′

SYSTEMS ENGINEERING

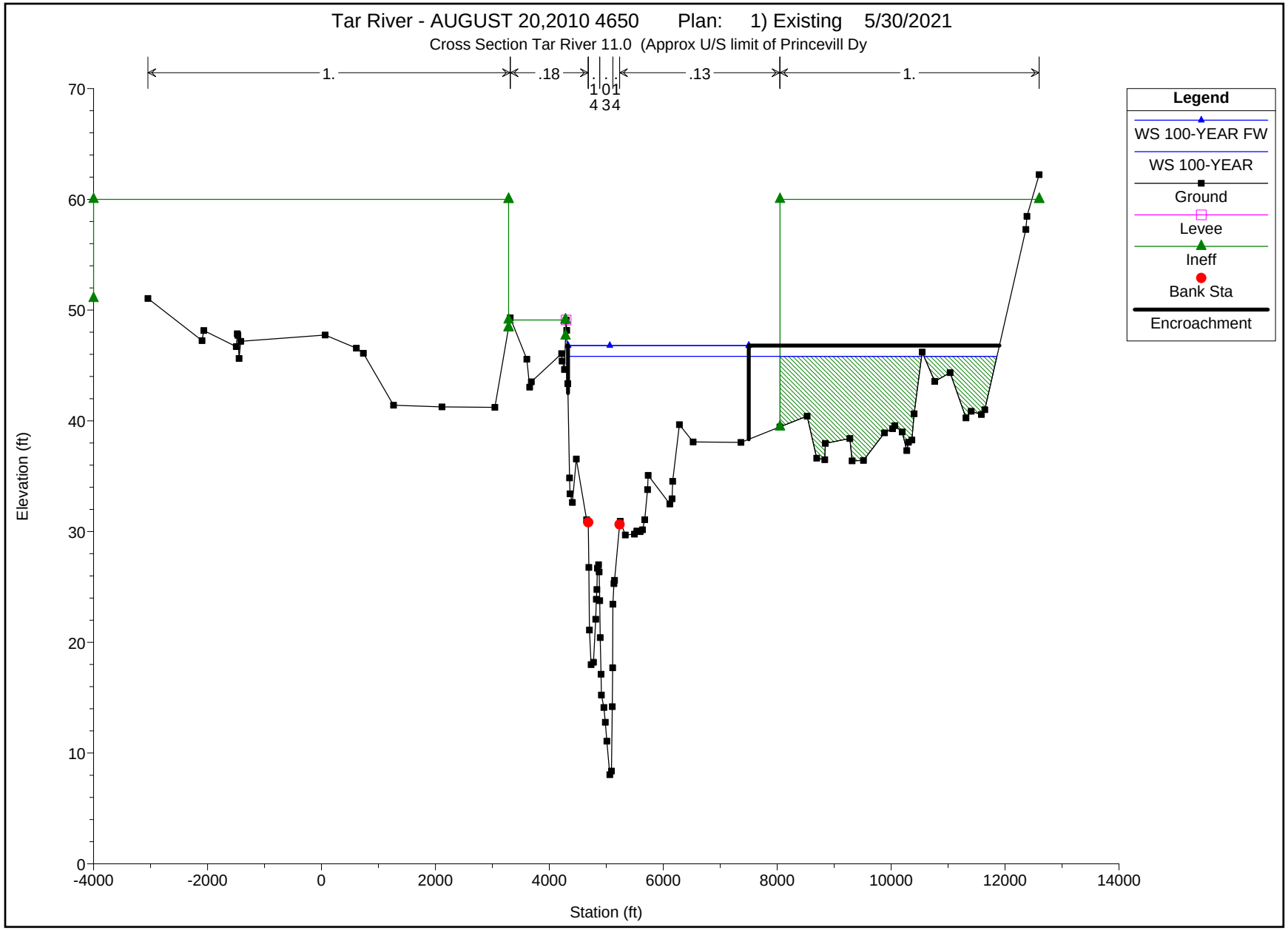
SECTION 5 - COMPARISON TABLES

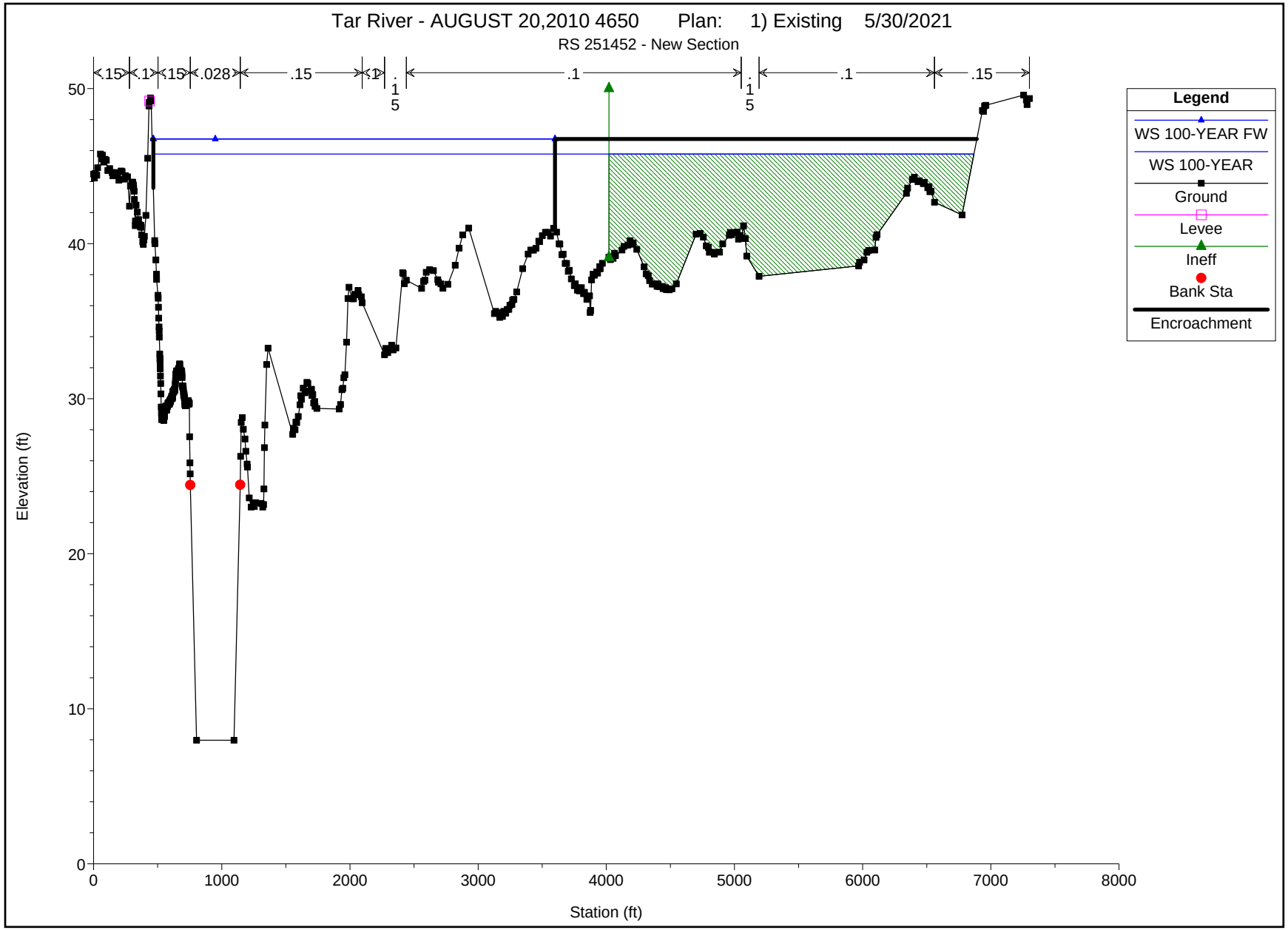
(See Attached)

River Station (RS)	Plan	W.S. Elev 100-YEAR (ft)	W.S. Elev 100-YR FW (ft)	Prof Delta WS (ft)	Top Width Floodplain (ft)	Top Width FW (ft)	Encro. Sta LT (ft)	Encro. Sta RT (ft)	Project Impact 100-YEAR Proposed-Existing (ft)	Project Impact 100-YR FW Proposed-Existing (ft)
253976	Duplicate	46.05	47.02	0.97	4247.40	3200.00	4300.00	7500.00		
253976	Existing	45.96	46.92	0.96	4247.40	3200.00	4300.00	7500.00		
253976	Proposed	45.96	46.92	0.96	4247.40	3200.00	4300.00	7500.00	0.00	0.00
252004	Duplicate	45.91	46.90	0.99	3736.25	3173.00	4327.00	7500.00		
252004	Existing	45.82	46.79	0.97	3735.90	3173.00	4327.00	7500.00		
252004	Proposed	45.82	46.79	0.97	3735.89	3173.00	4327.00	7500.00	0.00	0.00
251452	Existing	45.78	46.75	0.97	3567.20	3134.00	466.00	3600.00		
251452	Proposed	45.78	46.75	0.97	3561.59	3134.00	466.00	3600.00	0.00	0.00
251201	Existing	45.71	46.69	0.98	3449.02	2934.00	566.00	3500.00		
251201	Proposed	45.71	46.69	0.98	3448.98	2934.00	566.00	3500.00	0.00	0.00
250976	Existing	45.67	46.65	0.98	3343.26	2869.00	531.00	3400.00		
250976	Proposed	45.67	46.65	0.98	3343.25	2869.00	531.00	3400.00	0.00	0.00
250805	Existing	45.65	46.63	0.98	3302.49	2744.00	556.00	3300.00		
250805	Proposed	45.65	46.63	0.98	3288.77	2744.00	556.00	3300.00	0.00	0.00
250631	Existing	45.62	46.60	0.98	3221.73	2633.00	567.00	3200.00		
250631	Proposed	45.62	46.60	0.98	3221.73	2633.00	567.00	3200.00	0.00	0.00
250459	Existing	45.62	46.59	0.97	3217.36	2583.00	517.00	3100.00		
250459	Proposed	45.61	46.59	0.97	3207.47	2583.00	517.00	3100.00	-0.01	0.00
250376	Existing	45.60	46.57	0.97	3169.33	2490.00	510.00	3000.00		
250376	Proposed	45.59	46.56	0.97	3169.32	2490.00	510.00	3000.00	-0.01	-0.01
250174	Existing	45.58	46.54	0.97	3061.24	2317.00	583.00	2900.00		
250174	Proposed	45.57	46.54	0.97	3061.24	2317.00	583.00	2900.00	-0.01	0.00
247087	Duplicate	45.38	46.36	0.97	1339.41	800.50	4799.50	5600.00		
247087	Existing	45.30	46.25	0.95	1338.24	800.50	4799.50	5600.00		
247087	Proposed	45.30	46.25	0.95	1338.22	800.50	4799.50	5600.00	0.00	0.00
245728	Duplicate	44.99	45.95	0.96	509.40	322.00	4793.00	5115.00		
245728	Existing	44.90	45.84	0.94	508.84	322.00	4793.00	5115.00		
245728	Proposed	44.90	45.84	0.94	508.83	322.00	4793.00	5115.00	0.00	0.00
245686		Bridge	Bridge							
245644	Duplicate	44.93	45.83	0.89	509.28	322.00	4793.00	5115.00		
245644	Existing	44.84	45.71	0.87	508.72	322.00	4793.00	5115.00		
245644	Proposed	44.84	45.71	0.87	508.71	322.00	4793.00	5115.00	0.00	0.00
245278	Existing	44.90	45.79	0.89	698.32	535.00	4650.00	5185.00		
245278	Proposed	44.89	45.79	0.89	693.00	535.00	4650.00	5185.00	-0.01	0.00
245115	Existing	44.87	45.76	0.89	916.83	750.00	4403.00	5153.00		
245115	Proposed	44.87	45.76	0.89	916.82	750.00	4403.00	5153.00	0.00	0.00
245050	Duplicate	44.94	45.84	0.91	1015.60	825.00	4395.00	5220.00		
245050	Existing	44.82	45.72	0.90	1004.99	924.30	4210.00	5134.30		
245050	Proposed	44.82	45.72	0.90	1004.98	924.30	4210.00	5134.30	0.00	0.00
244960		Bridge	Bridge							
244870	Duplicate	44.85	45.72	0.87	1015.59	825.00	4395.00	5220.00		
244870	Existing	44.85	45.72	0.87	1015.59	825.00	4395.00	5220.00		
244870	Proposed	44.85	45.72	0.87	1015.59	825.00	4395.00	5220.00	0.00	0.00
243633	Duplicate	44.60	45.50	0.90	693.20	467.10	4691.90	5159.00		
243633	Existing	44.60	45.50	0.90	693.20	467.10	4691.90	5159.00		
243633	Proposed	44.60	45.50	0.90	693.20	467.10	4691.90	5159.00	0.00	0.00
242826	Duplicate	44.18	45.06	0.89	536.05	387.00	4763.00	5150.00		
242826	Existing	44.18	45.06	0.89	536.05	387.00	4763.00	5150.00		
242826	Proposed	44.18	45.06	0.89	536.05	387.00	4763.00	5150.00	0.00	0.00

SECTION 6 – CROSS-SECTION PLOTS

(See Attached)


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Cross Section Tar River 11.0 (Approx U/S limit of Princevill Dy
1.
.18
.13
1.
1 0 1
4 3 4
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
70
60
50
40
30
20
10
0
-4000
-2000
0
2000
4000
6000
8000
10000
12000
14000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 251452 - New Section
.15
.1
.15
.028
.15
.1
.15
.1
.15
.1
.15
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
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3000
4000
5000
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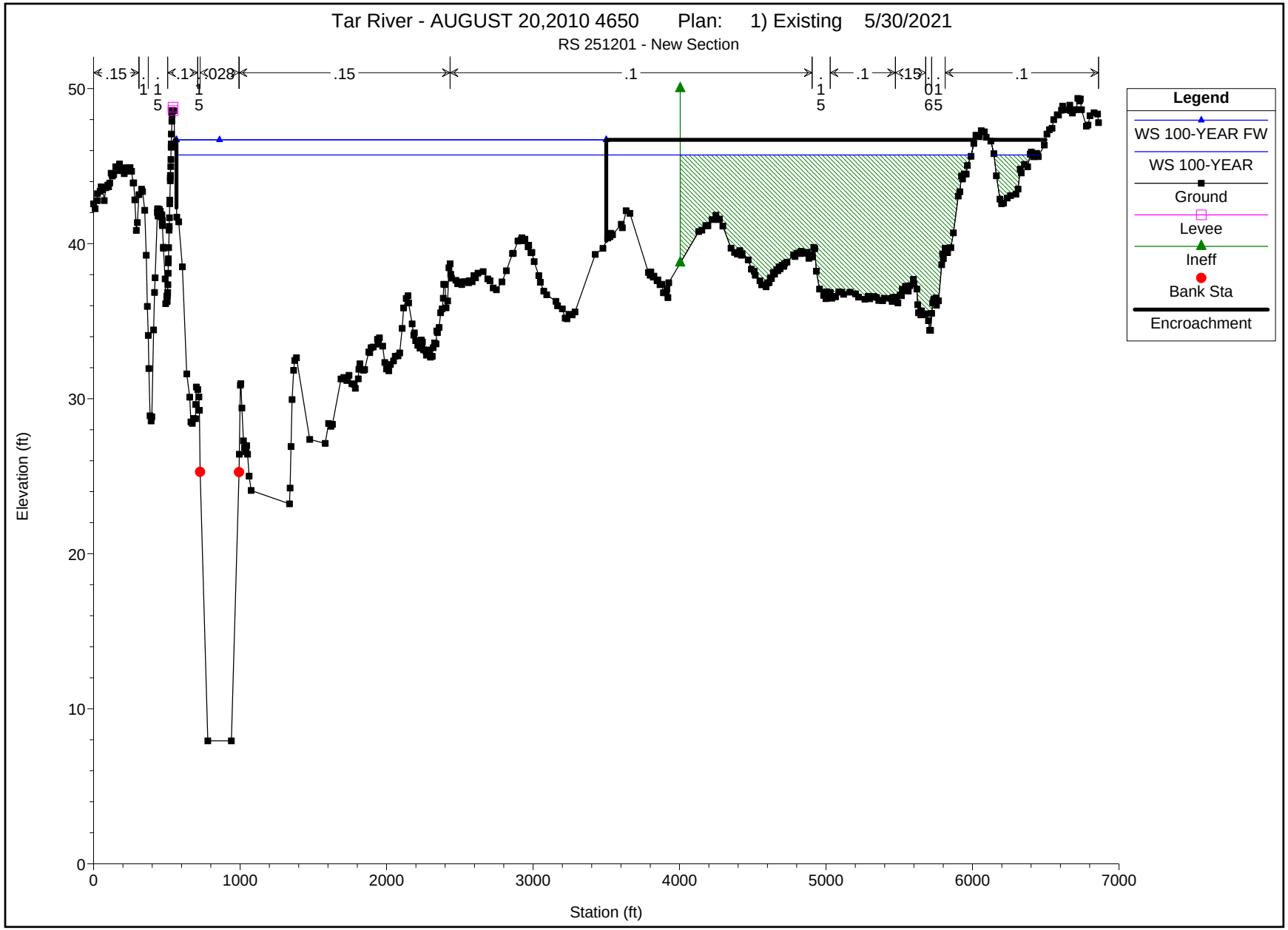
7000
8000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 251201 - New Section
.15
.1
.1
.028
.15
.1
.1
.1
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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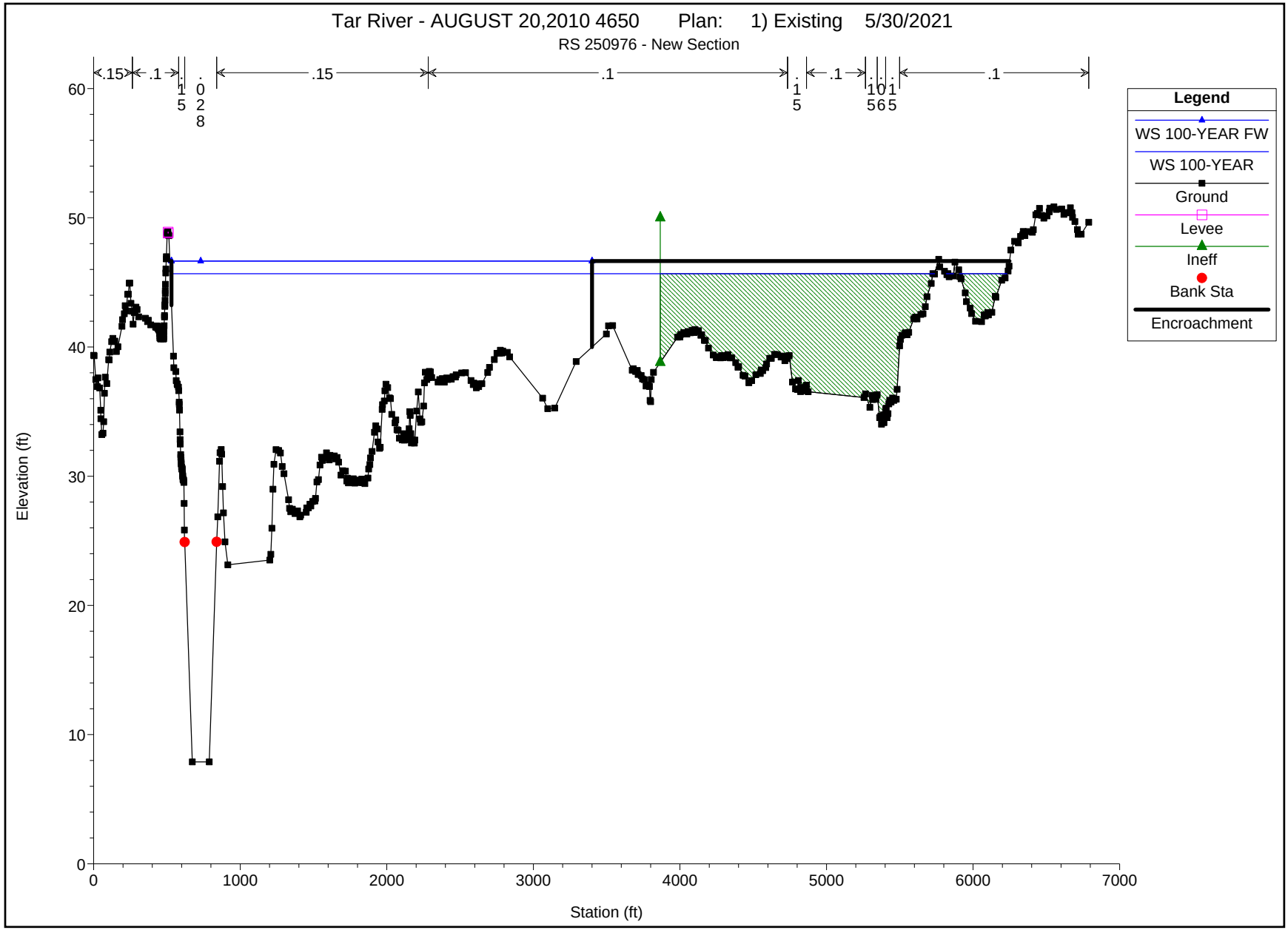
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 250976 - New Section
.15
.1
.15
.1
.15
.1
.1
.1
.15
.028
.1015565
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
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60
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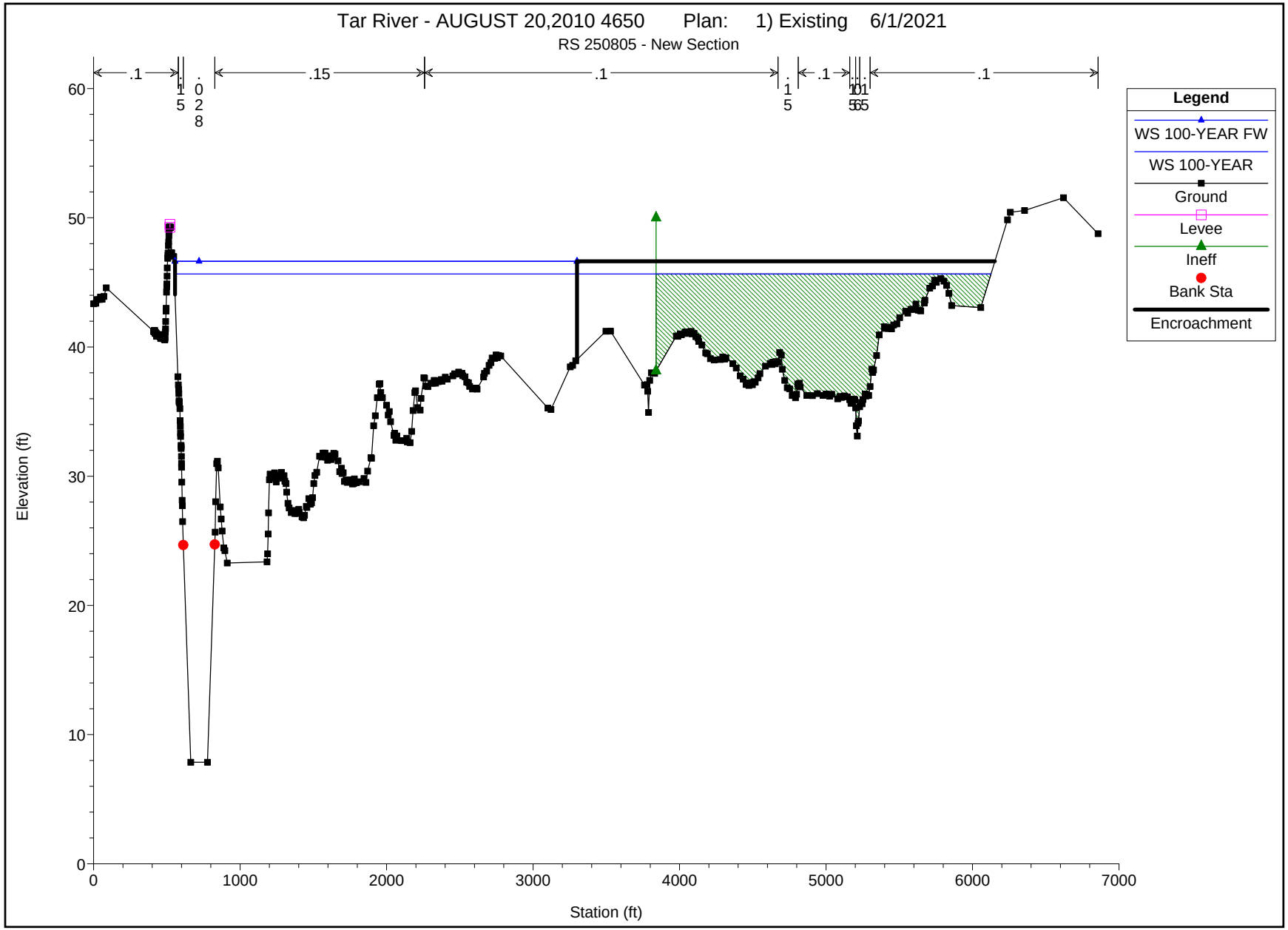
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 6/1/2021
RS 250805 - New Section
.1
.15
.1
.1
.1
.15
.028
.15
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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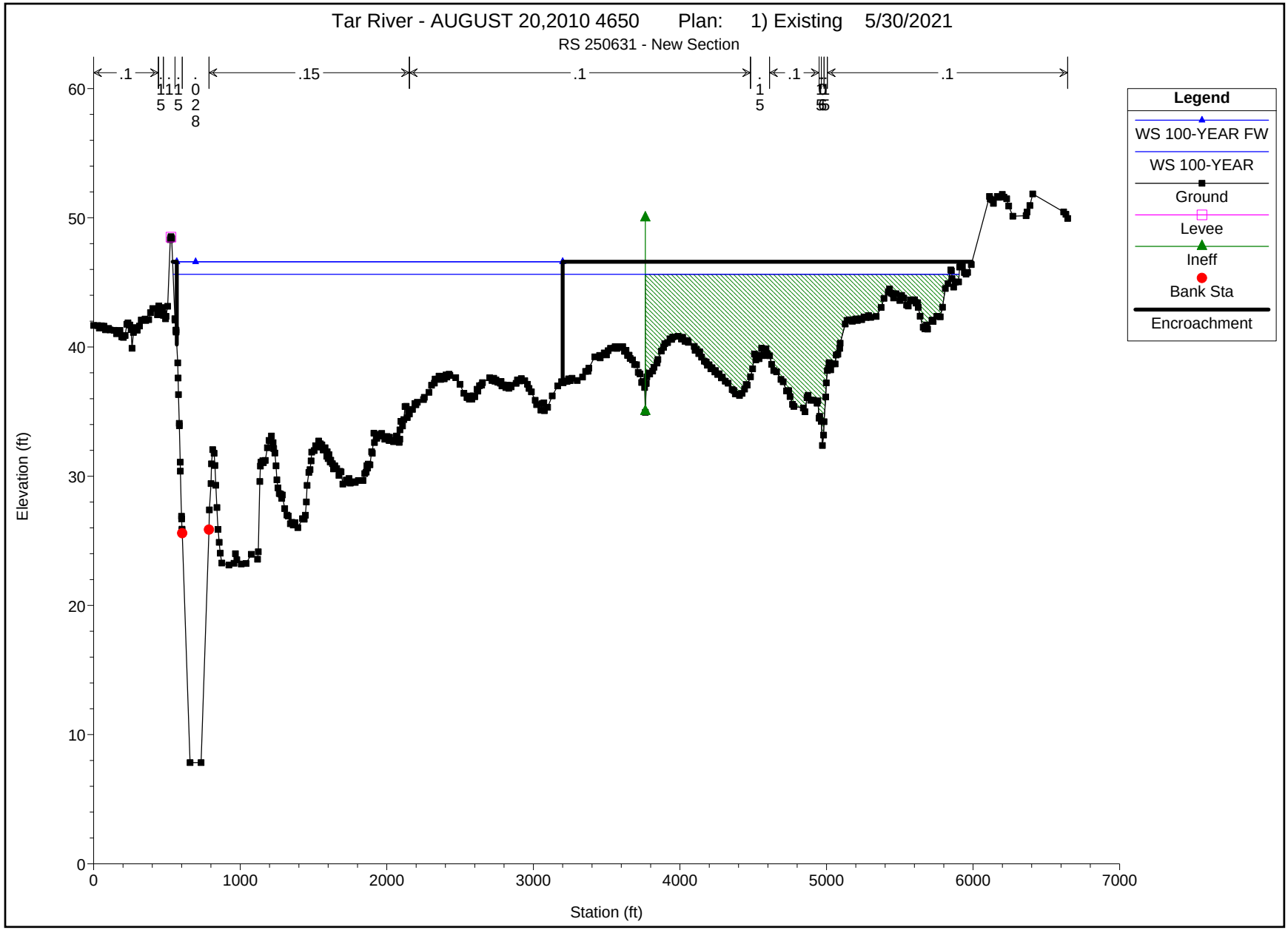
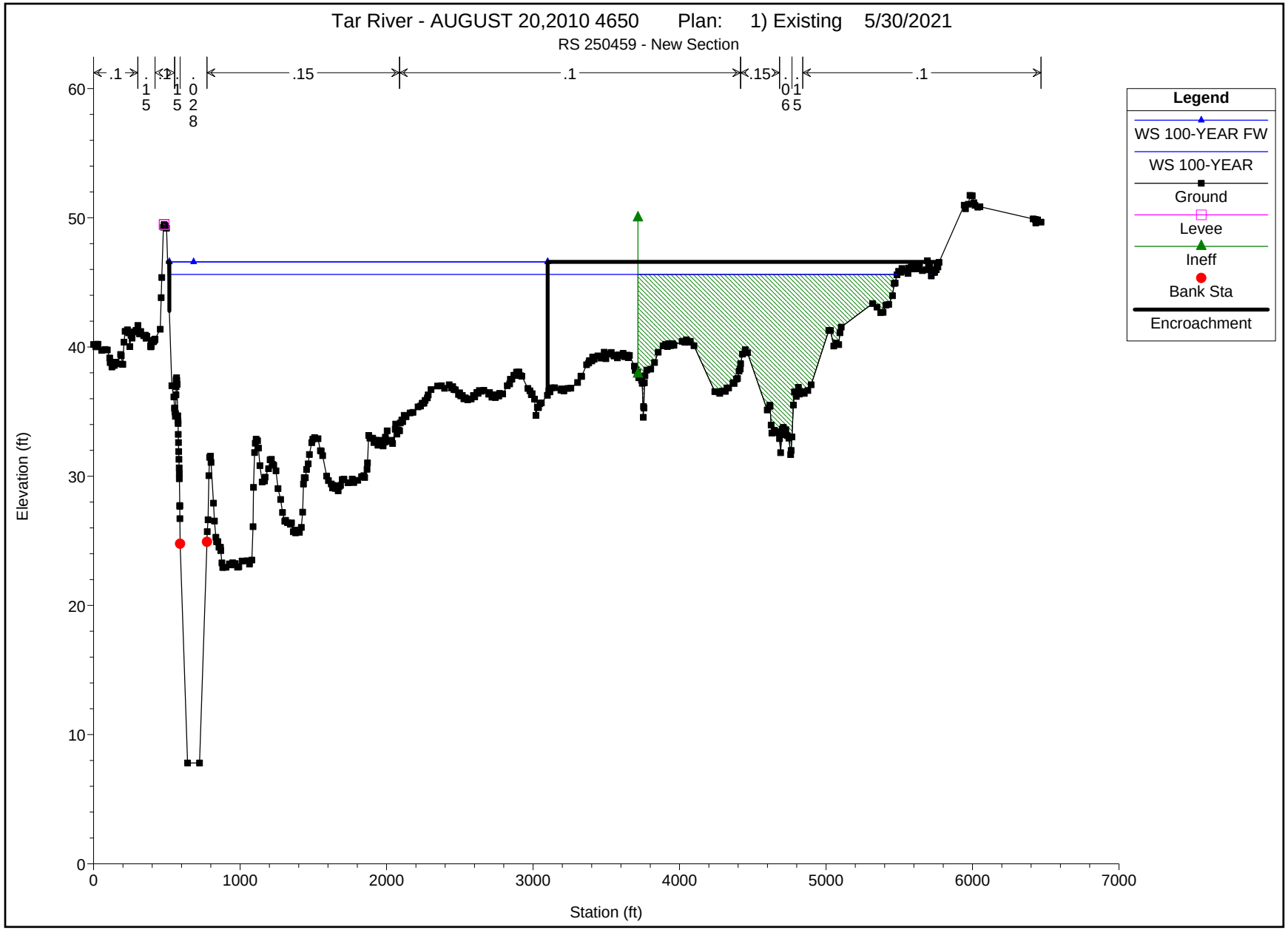
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 250631 - New Section
.1
.15
.1
.1
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 250459 - New Section
.1
.15
.1
.15
.1
.15
.15
.028
.1
.065
.15
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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10
20
30
40
50
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0
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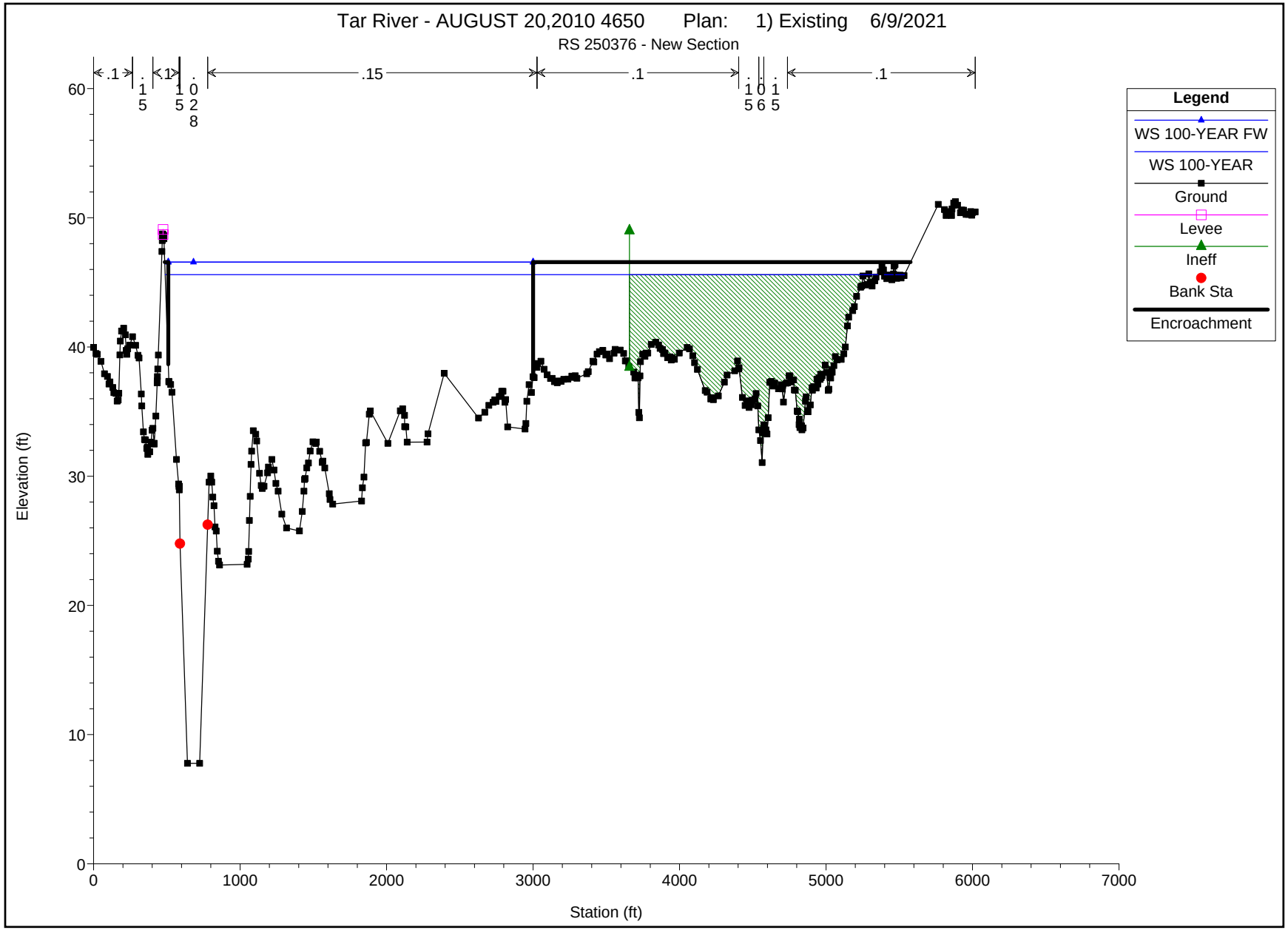
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 6/9/2021
RS 250376 - New Section
.1
.15
.1
.1
.15
.1
.028
.165
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
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40
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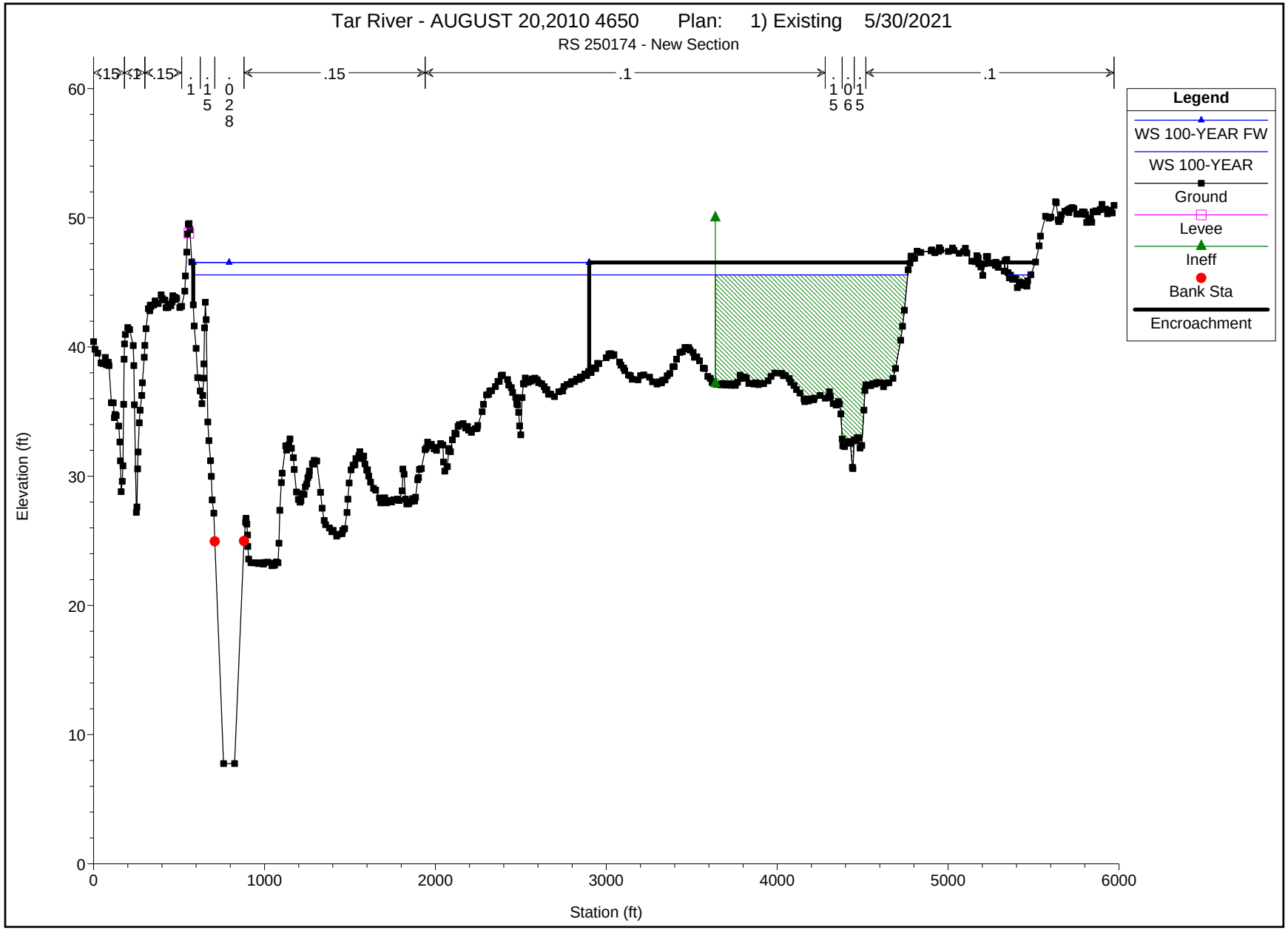
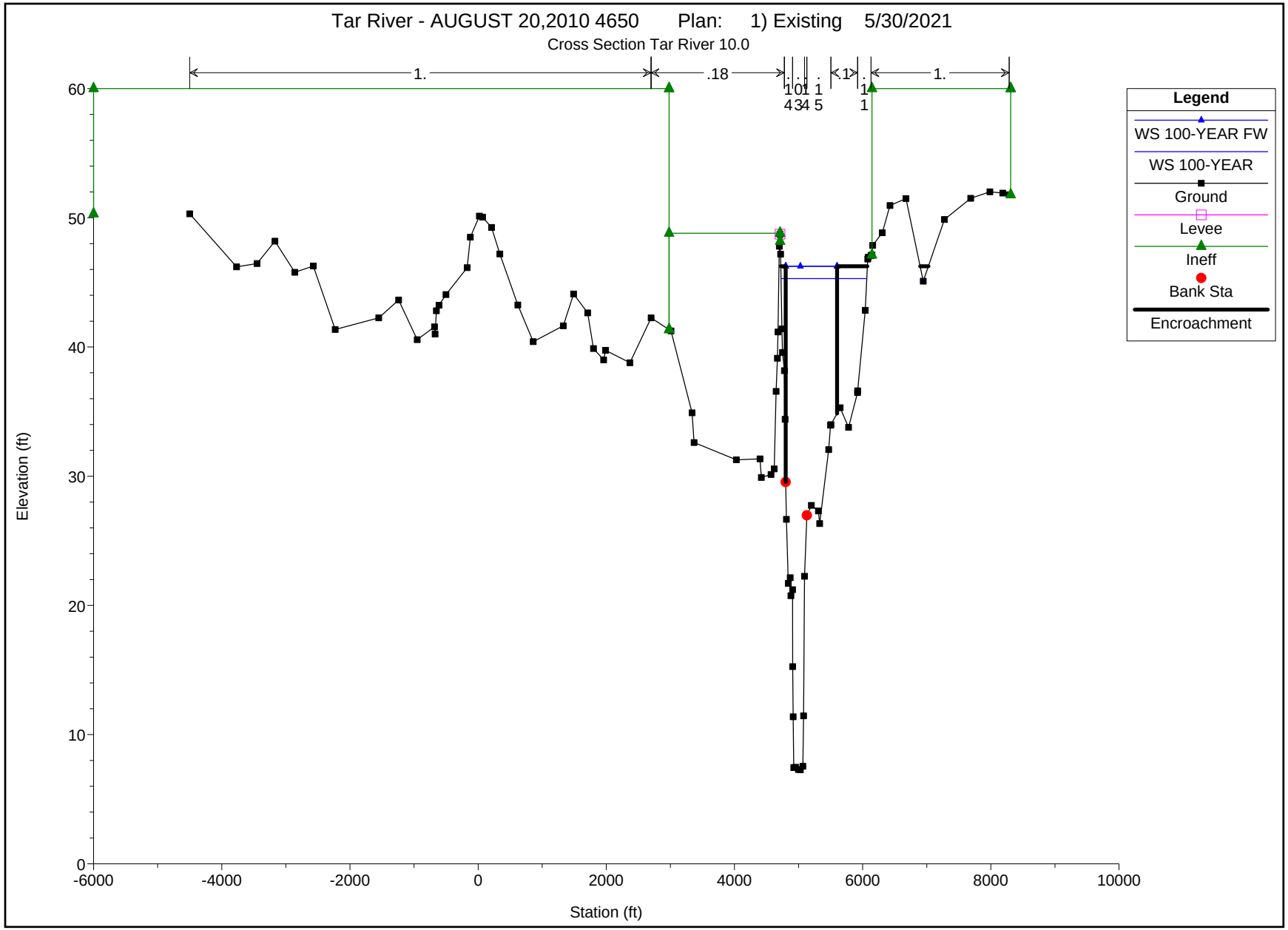
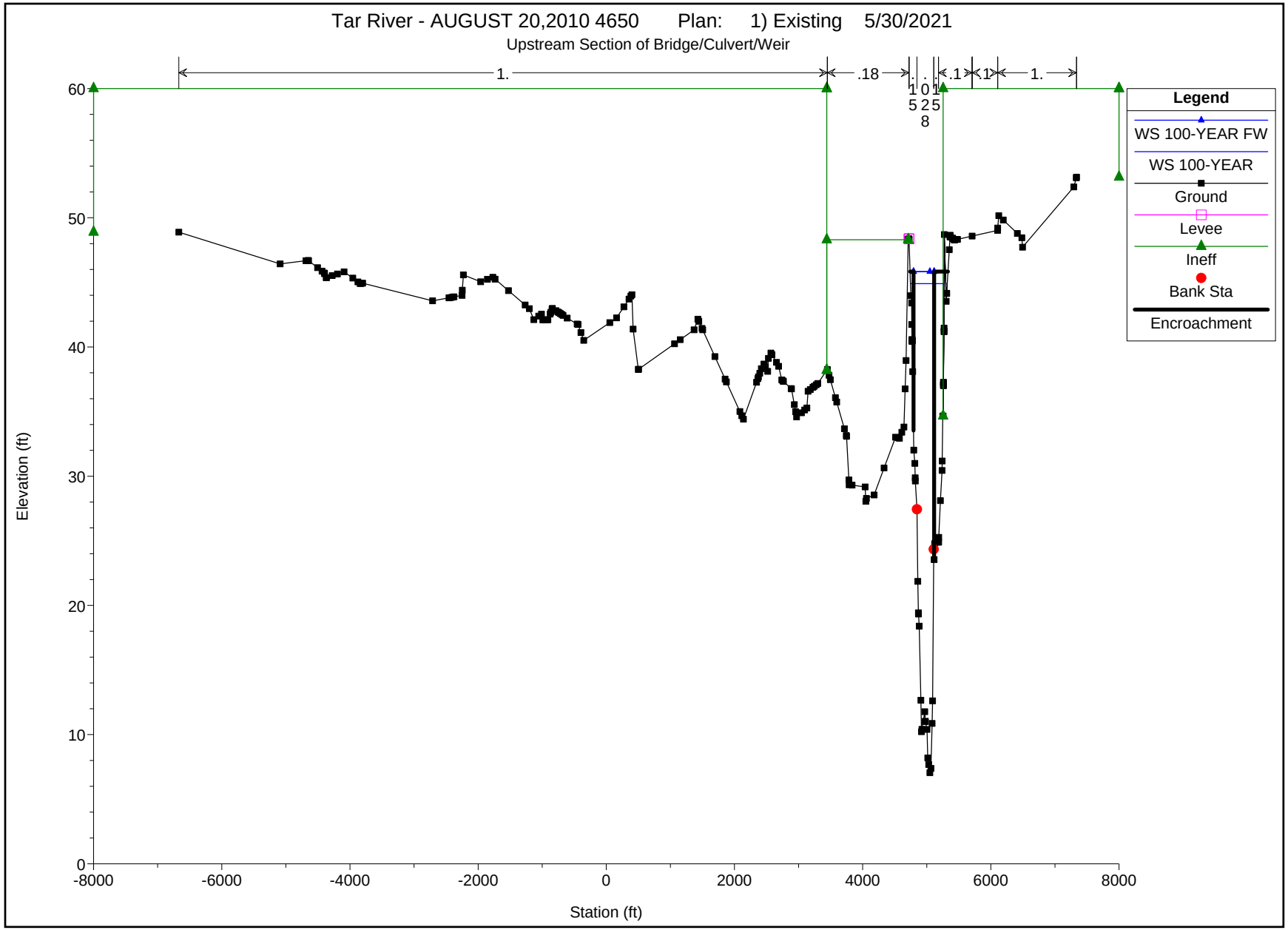
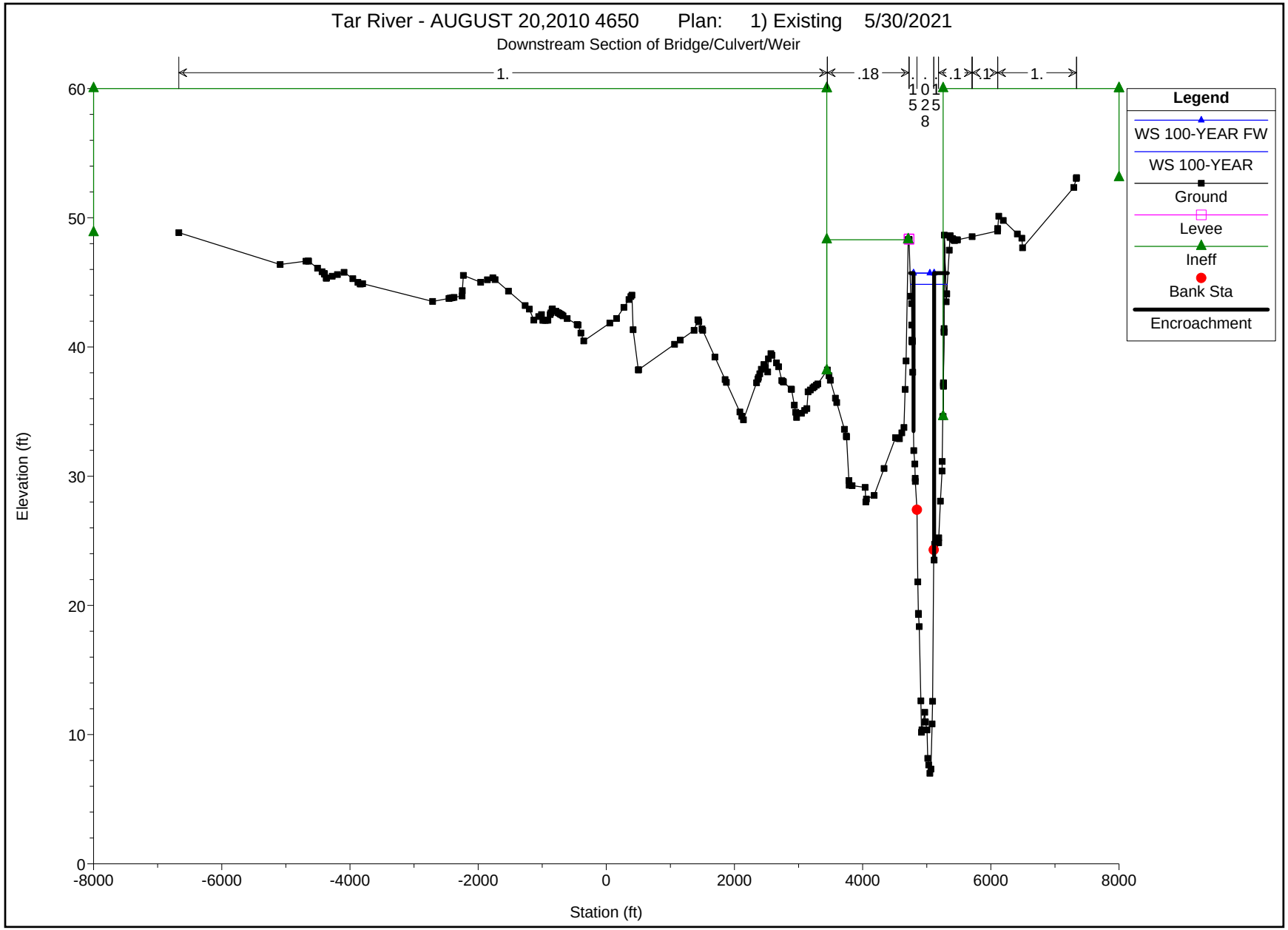
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 250174 - New Section
.15
.1
.15
.1
.15
.1
.115
.028
.115
.065
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Cross Section Tar River 10.0
1.
.18
1.
1.
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000
8000
10000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Upstream Section of Bridge/Culvert/Weir
1.
.18
.1
1
1.
1015258
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-8000
-6000
-4000
-2000
0
2000
4000
6000
8000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Downstream Section of Bridge/Culvert/Weir
1.
.18
.1
1
1.
1015258
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-8000
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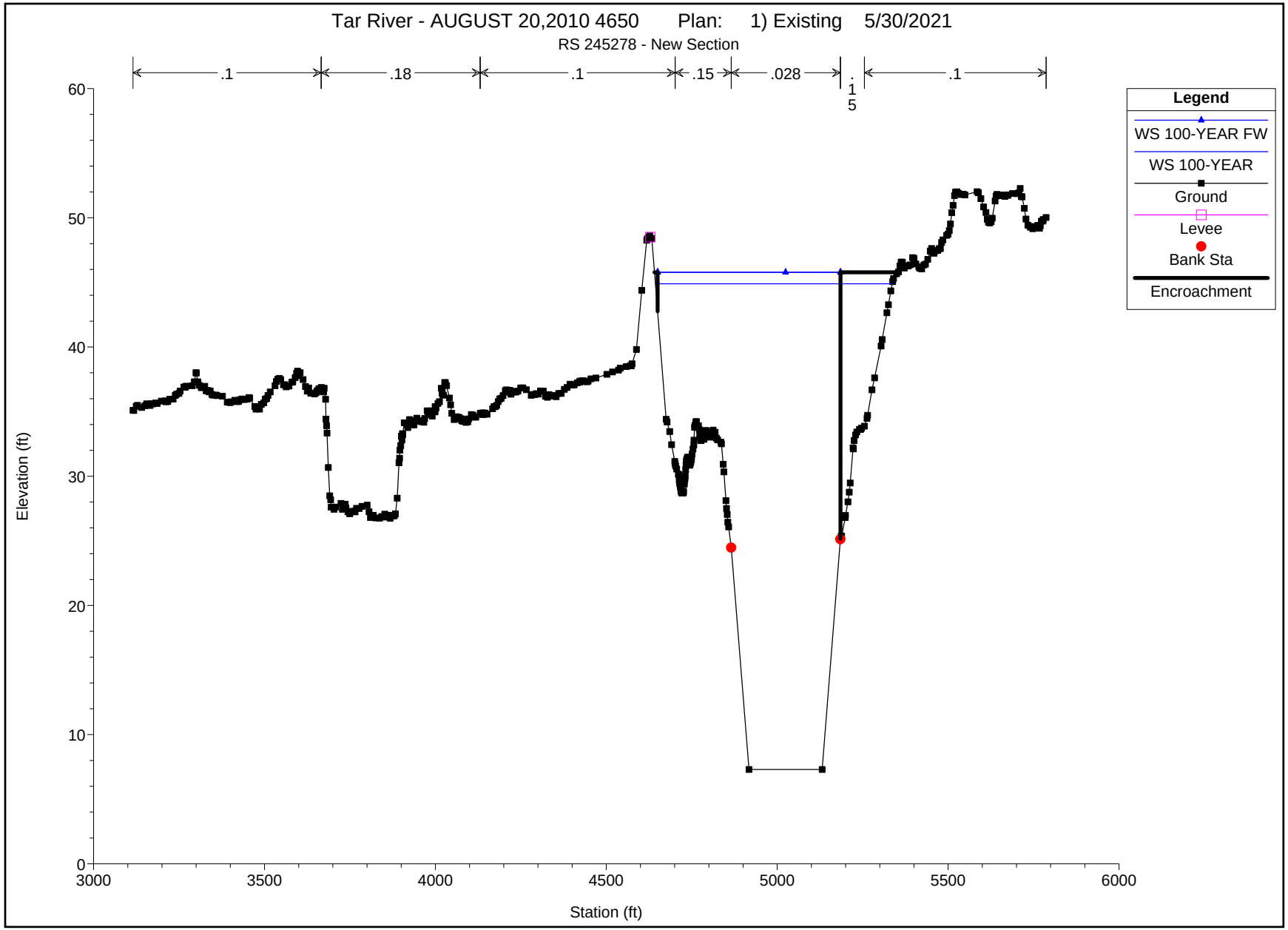
Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 245278 - New Section
.1
.18
.1
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
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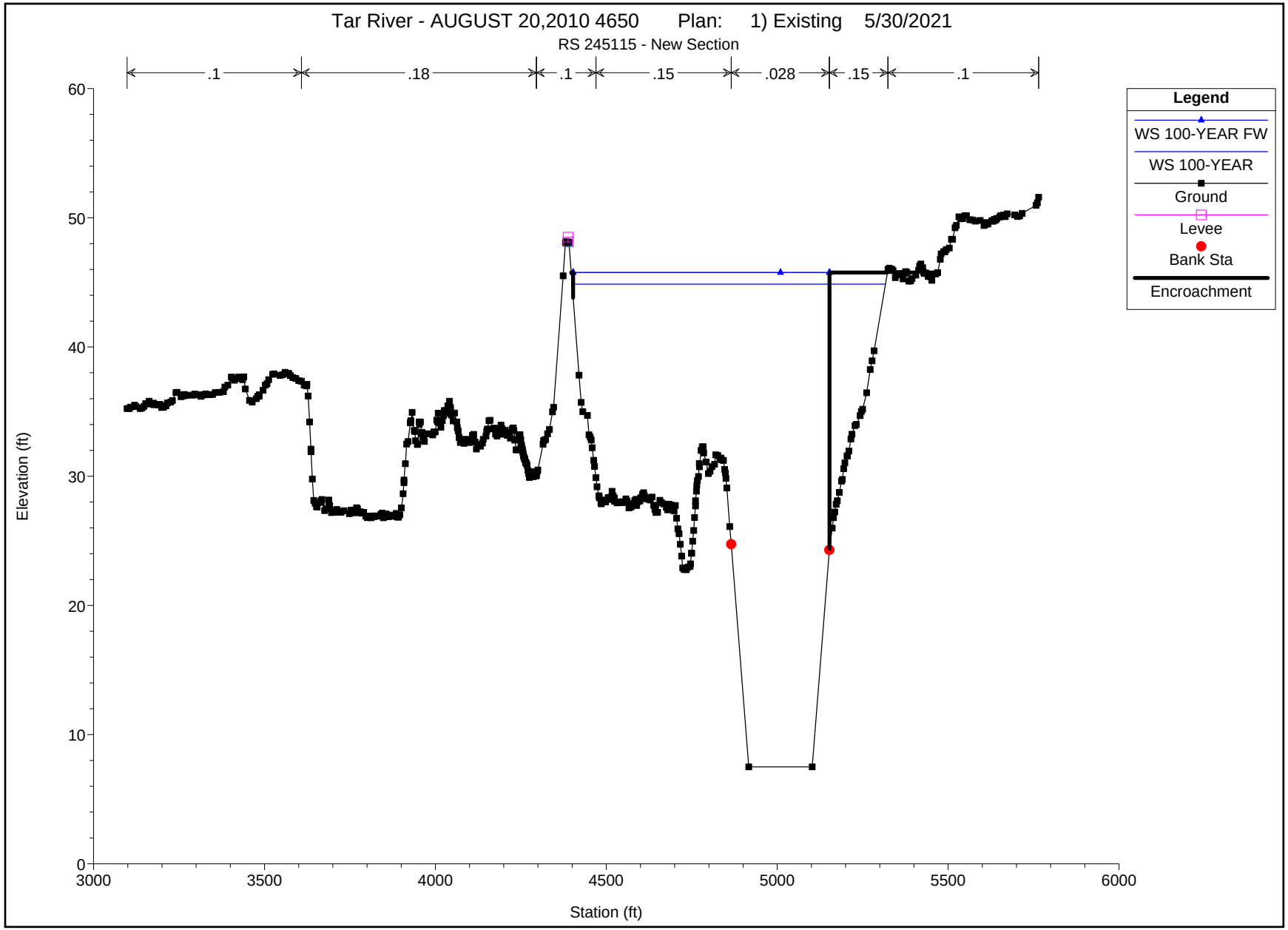
Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 245115 - New Section
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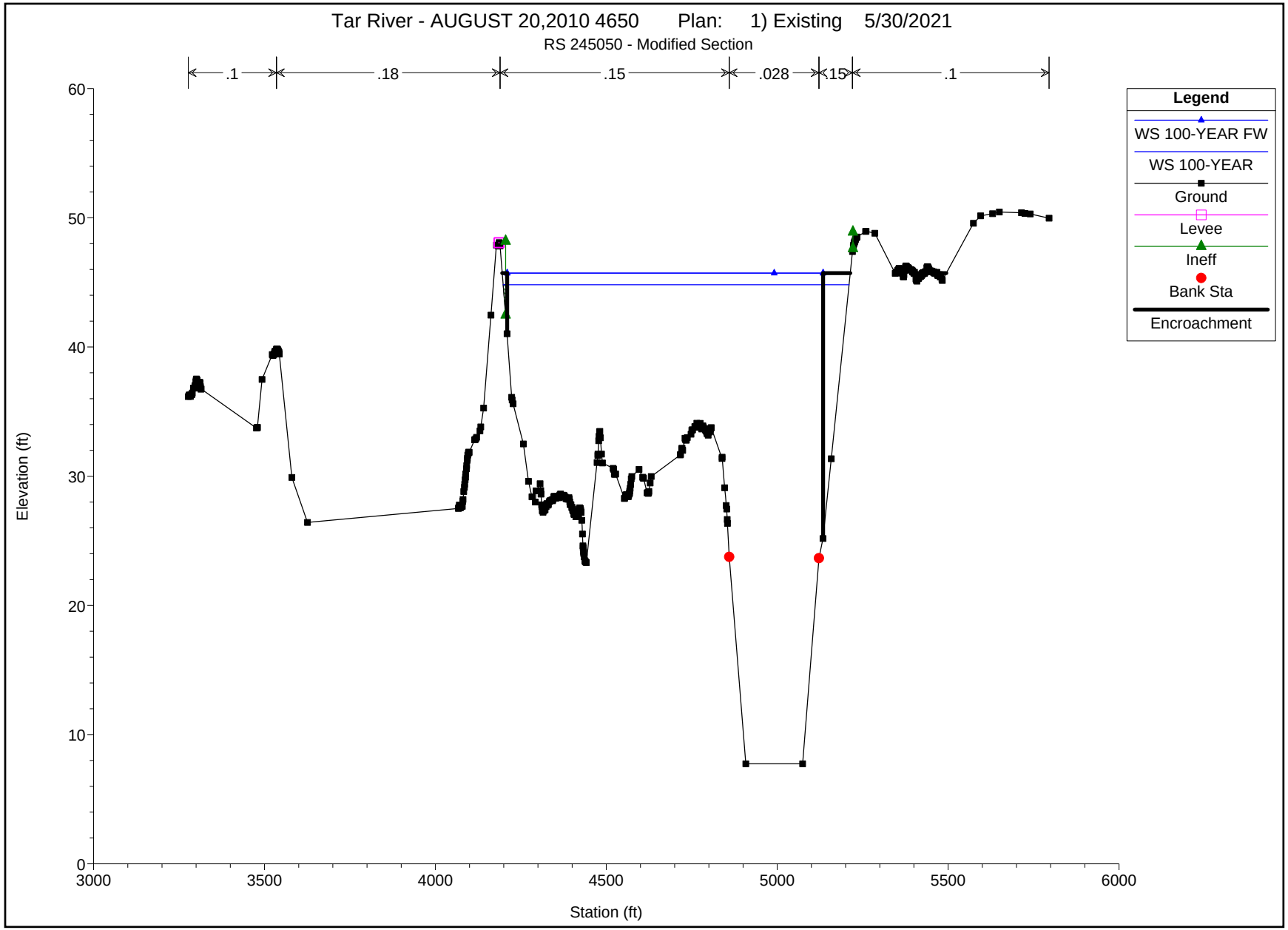
.18
.1
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000


Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
RS 245050 - Modified Section
.1
.18
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
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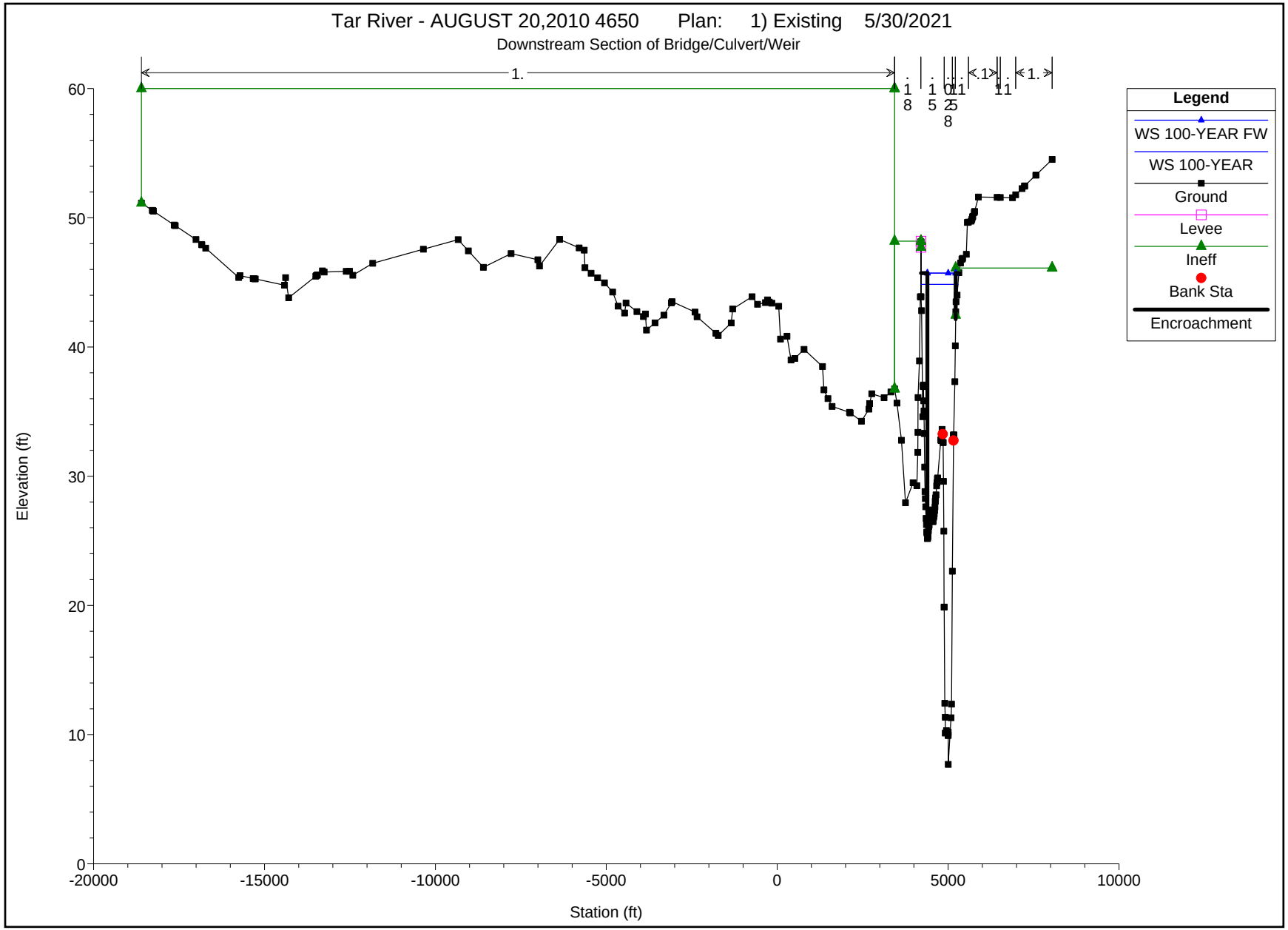
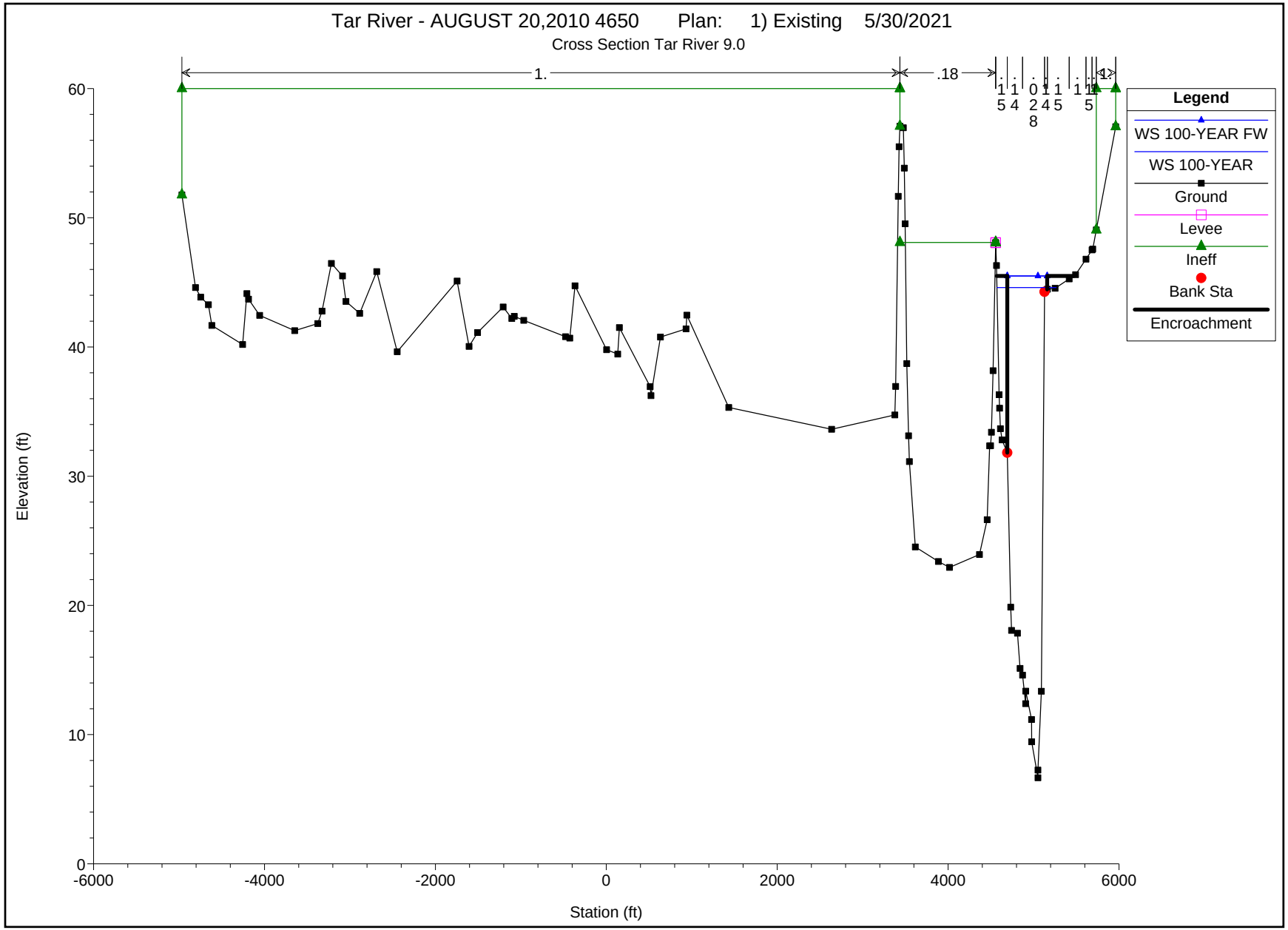
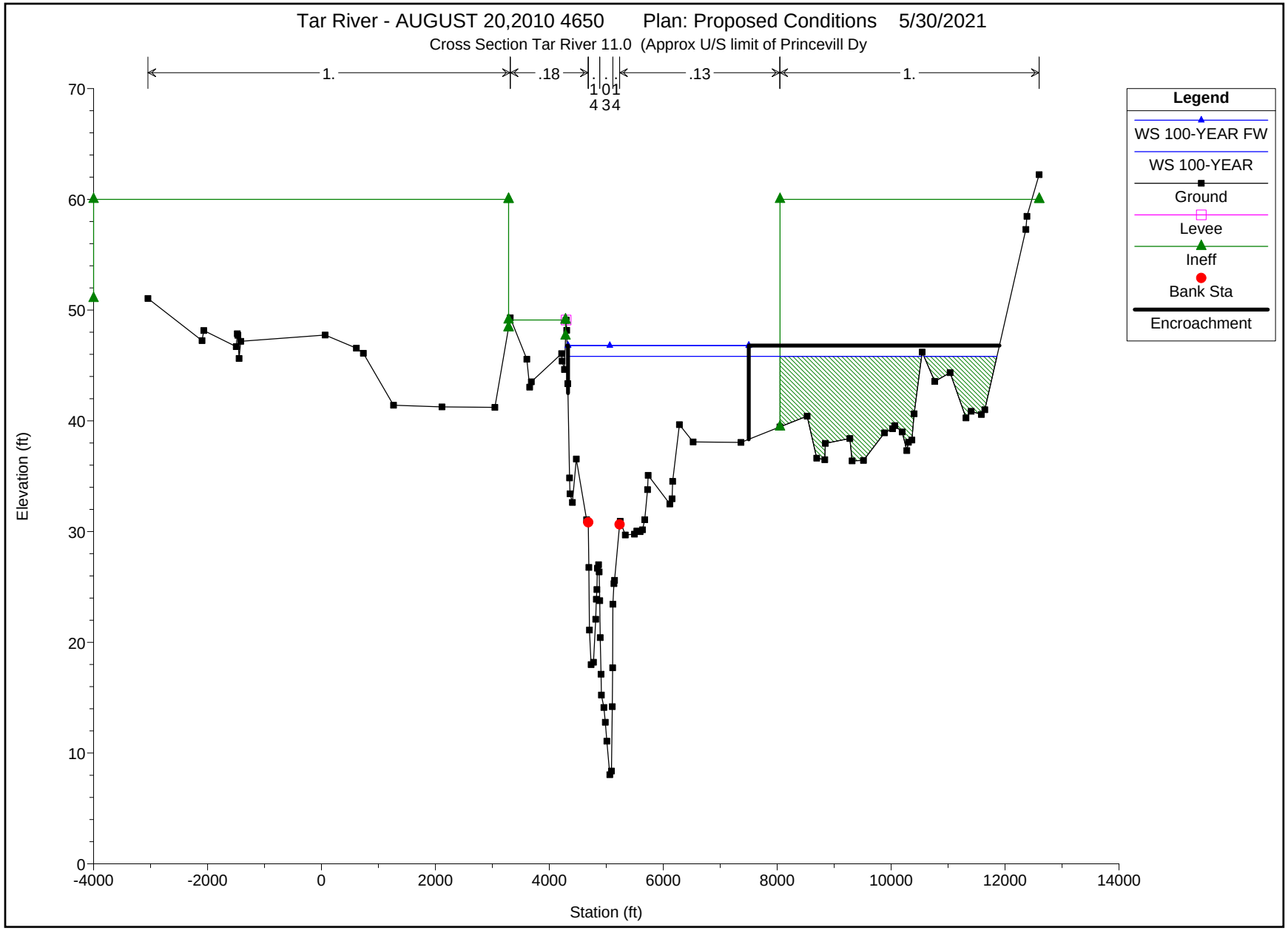
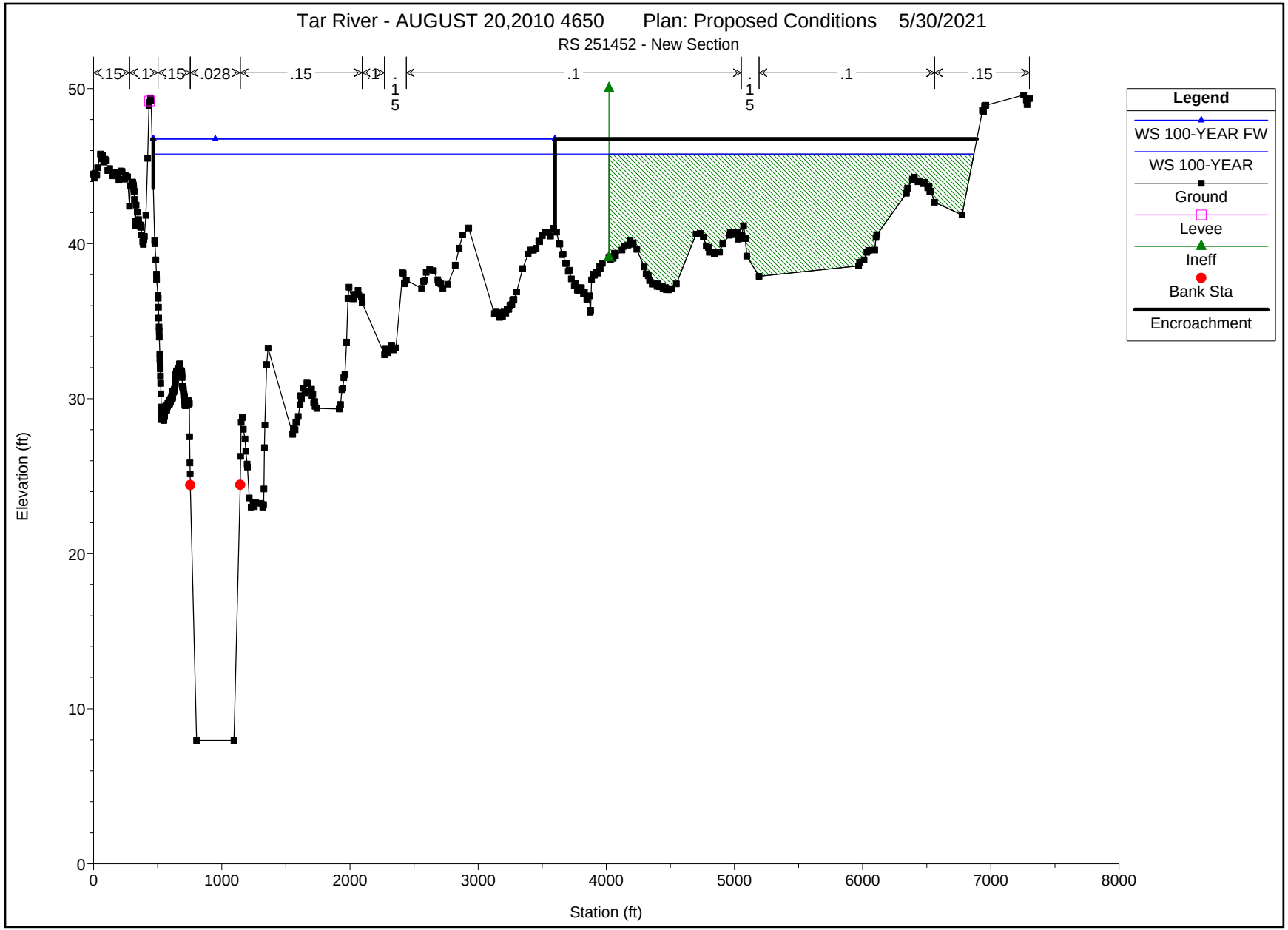
3500
4000
4500
5000
5500
6000

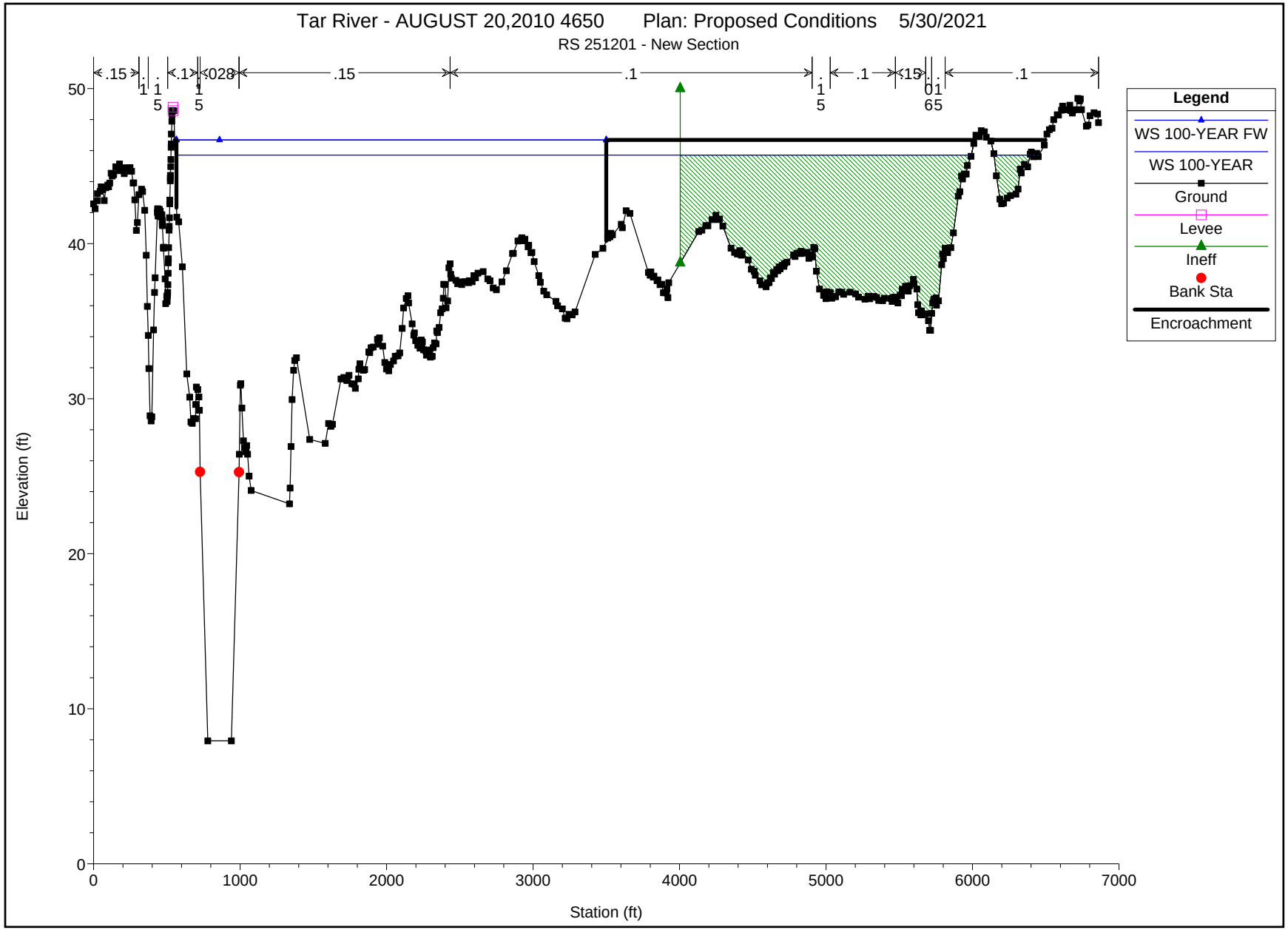
15

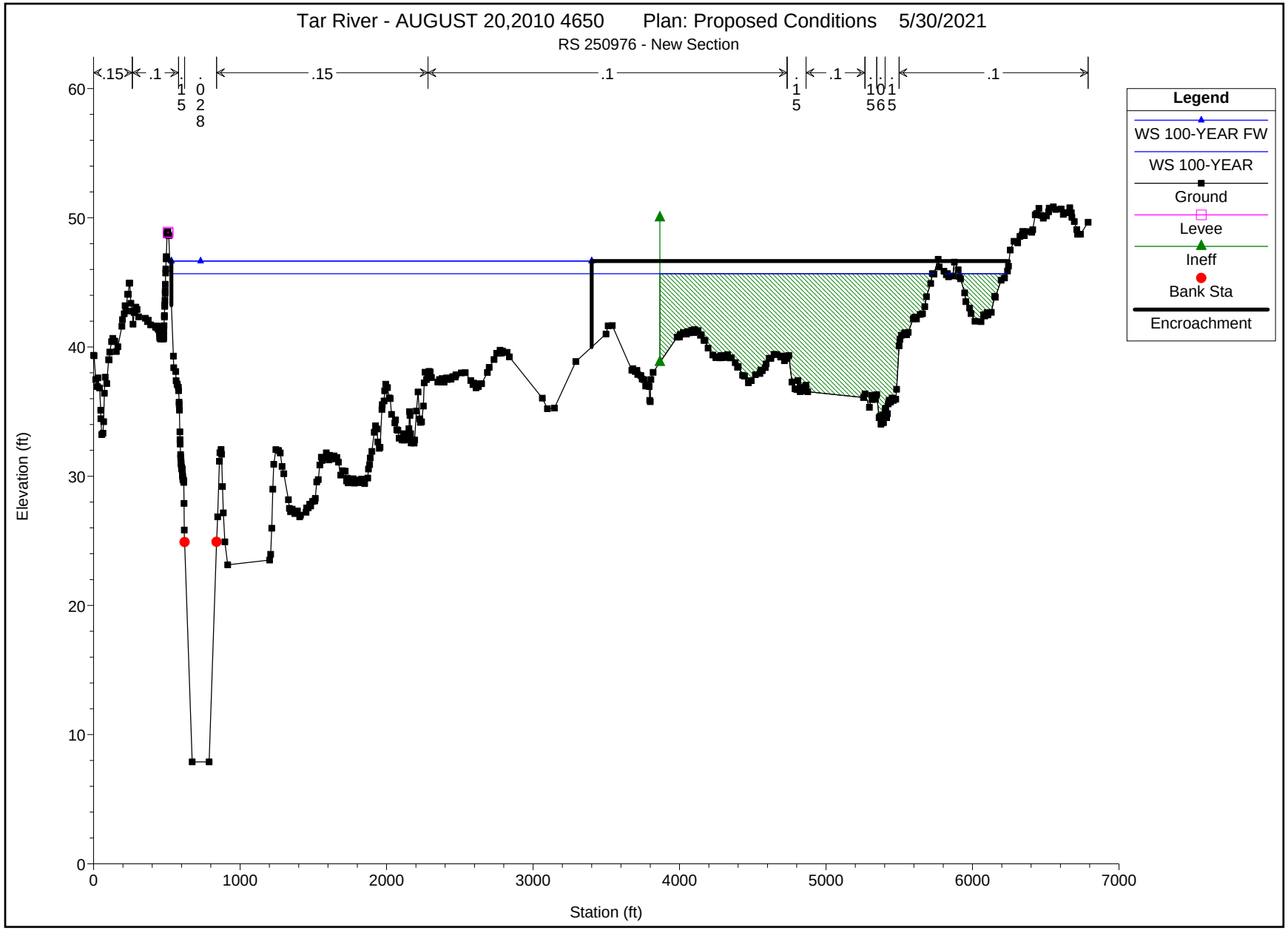

Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Downstream Section of Bridge/Culvert/Weir
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
-20000
-15000
-10000
-5000
0
5000
10000
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment

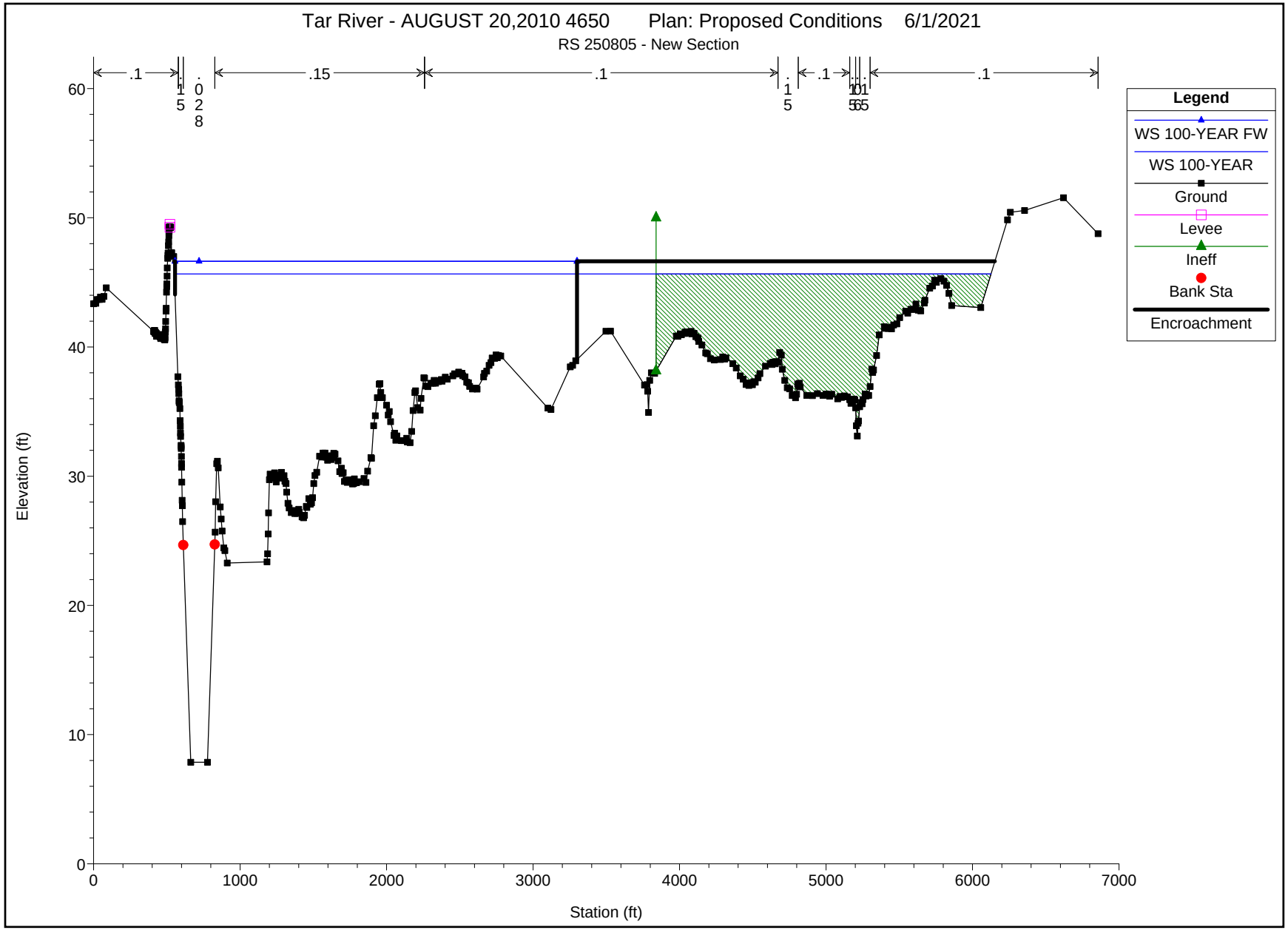

Tar River - AUGUST 20,2010 4650 Plan: 1) Existing 5/30/2021
Cross Section Tar River 9.0
1.
.18
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Cross Section Tar River 11.0 (Approx U/S limit of Princevill Dy
1.
.18
.13
1.
1 0 1
4 3 4
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
70
60
50
40
30
20
10
0
-4000
-2000
0
2000
4000
6000
8000
10000
12000
14000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 251452 - New Section
.15
.1
.15
.028
.15
.1
.1
.15
.1
.15
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
0
1000
2000
3000
4000
5000
6000
7000
8000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 251201 - New Section
.15
.1
.1
.028
.15
.1
.1
.1
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 250976 - New Section
.15
.1
.15
.1
.15
.1
.1
.1
.15
.028
.1015565
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 6/1/2021
RS 250805 - New Section
.1
.15
.1
.1
.1
.15
.028
.15
.1
.05
.05
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
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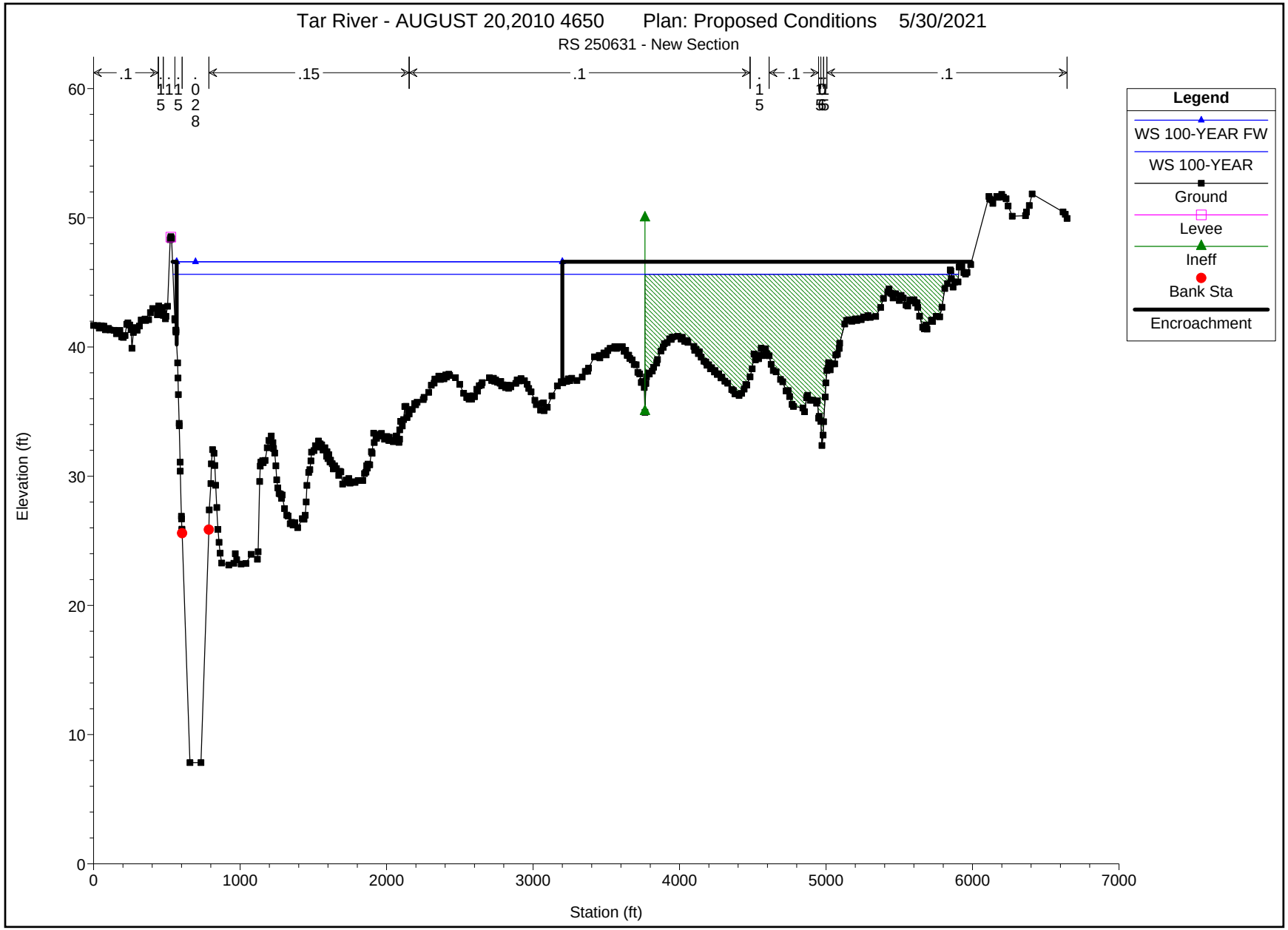
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 250631 - New Section
.1
.15
.1
.1
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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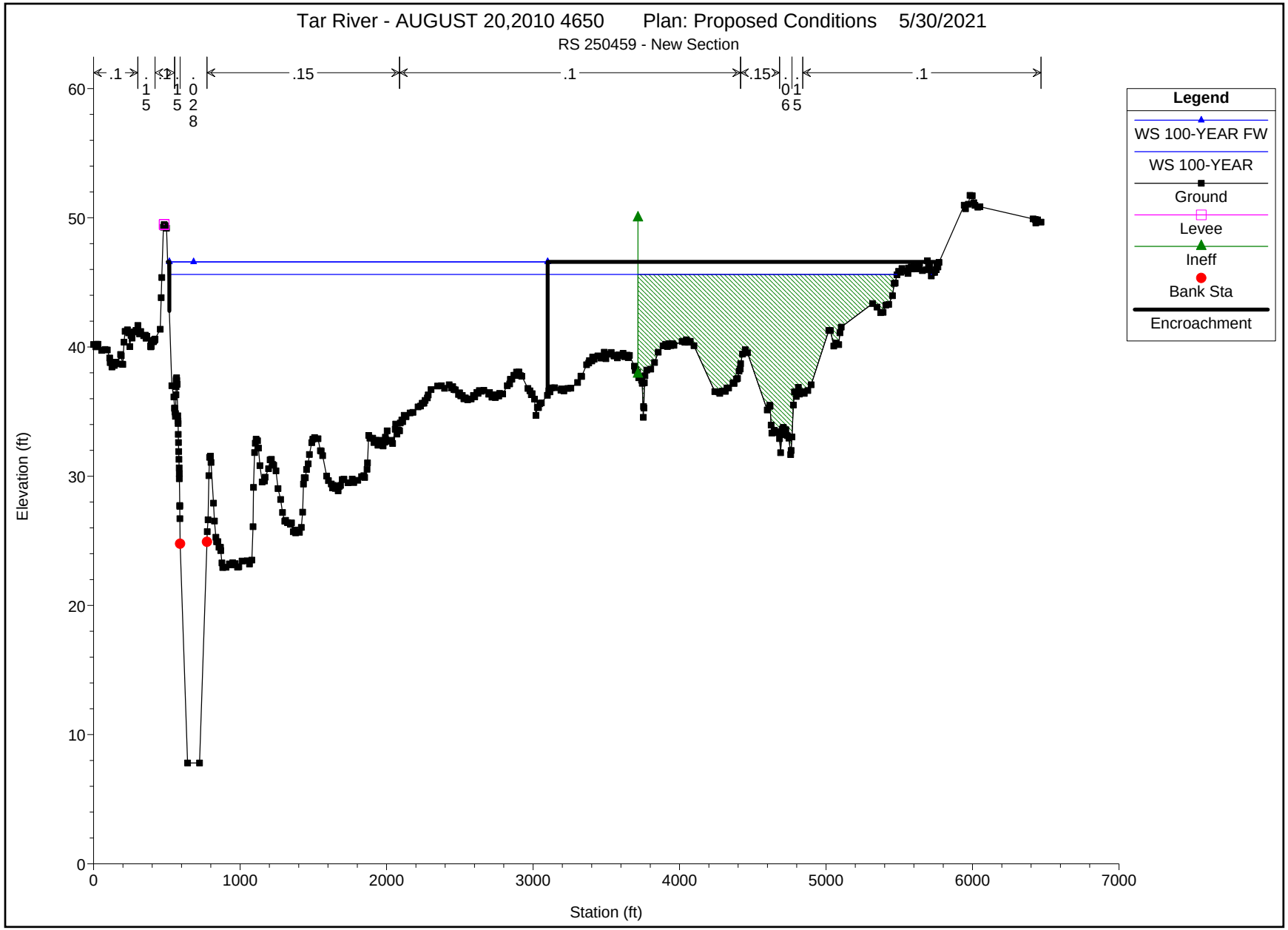
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 250459 - New Section
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.15
.1
.15
.1
.15
.15
.028
.1
.065
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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10
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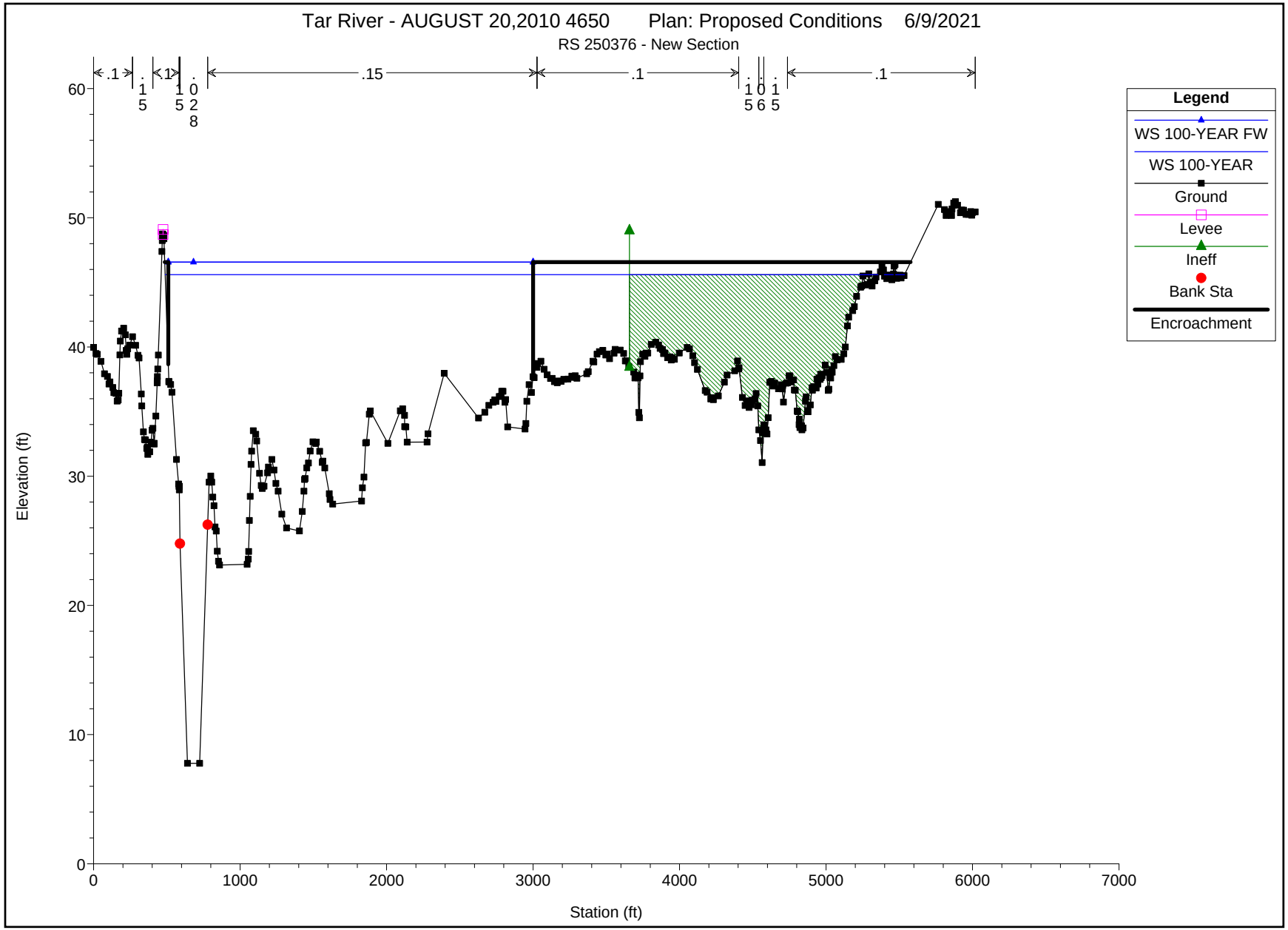
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 6/9/2021
RS 250376 - New Section
.1
.15
.1
.1
.15
.1
.028
.1065
.15
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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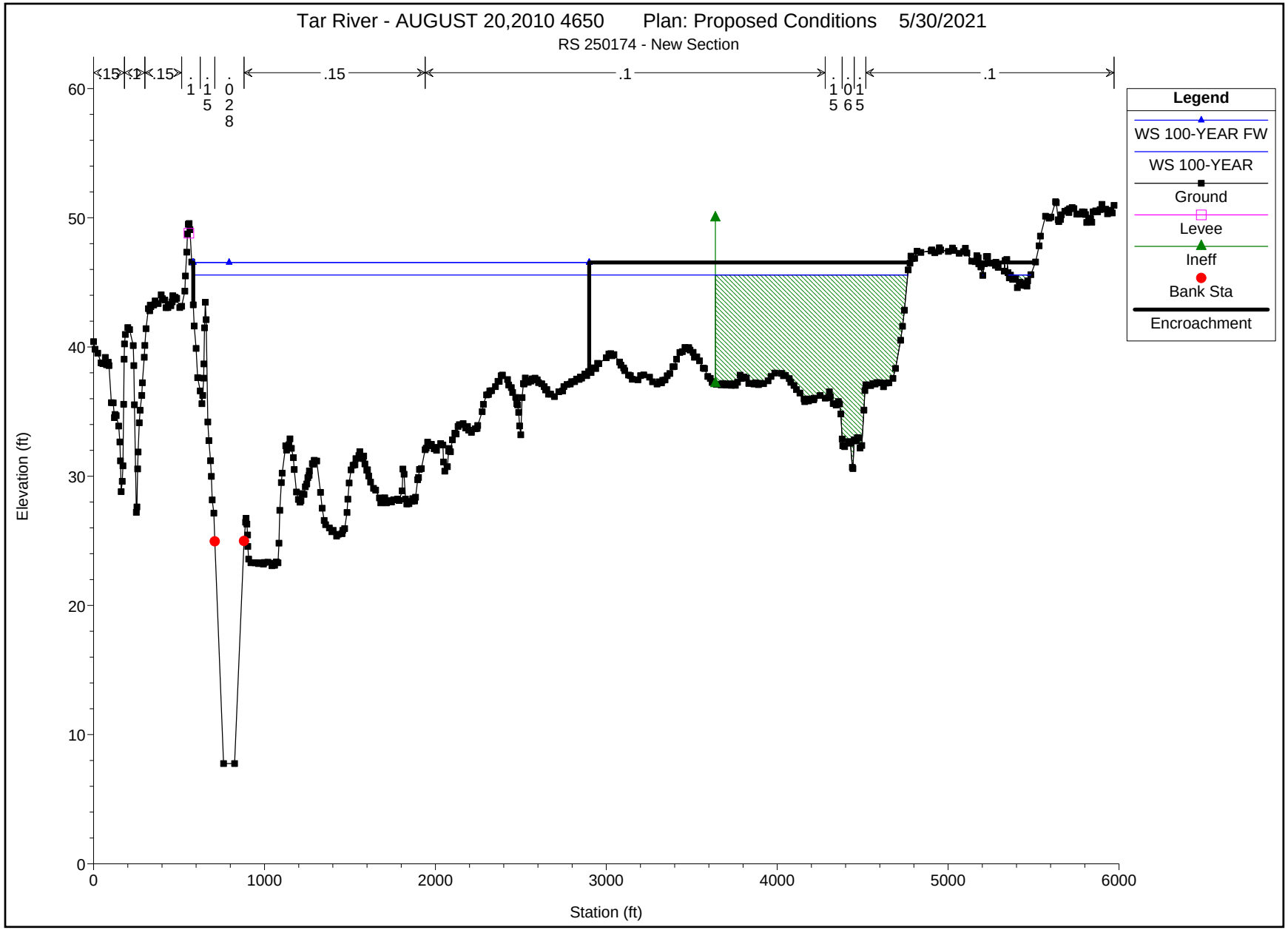
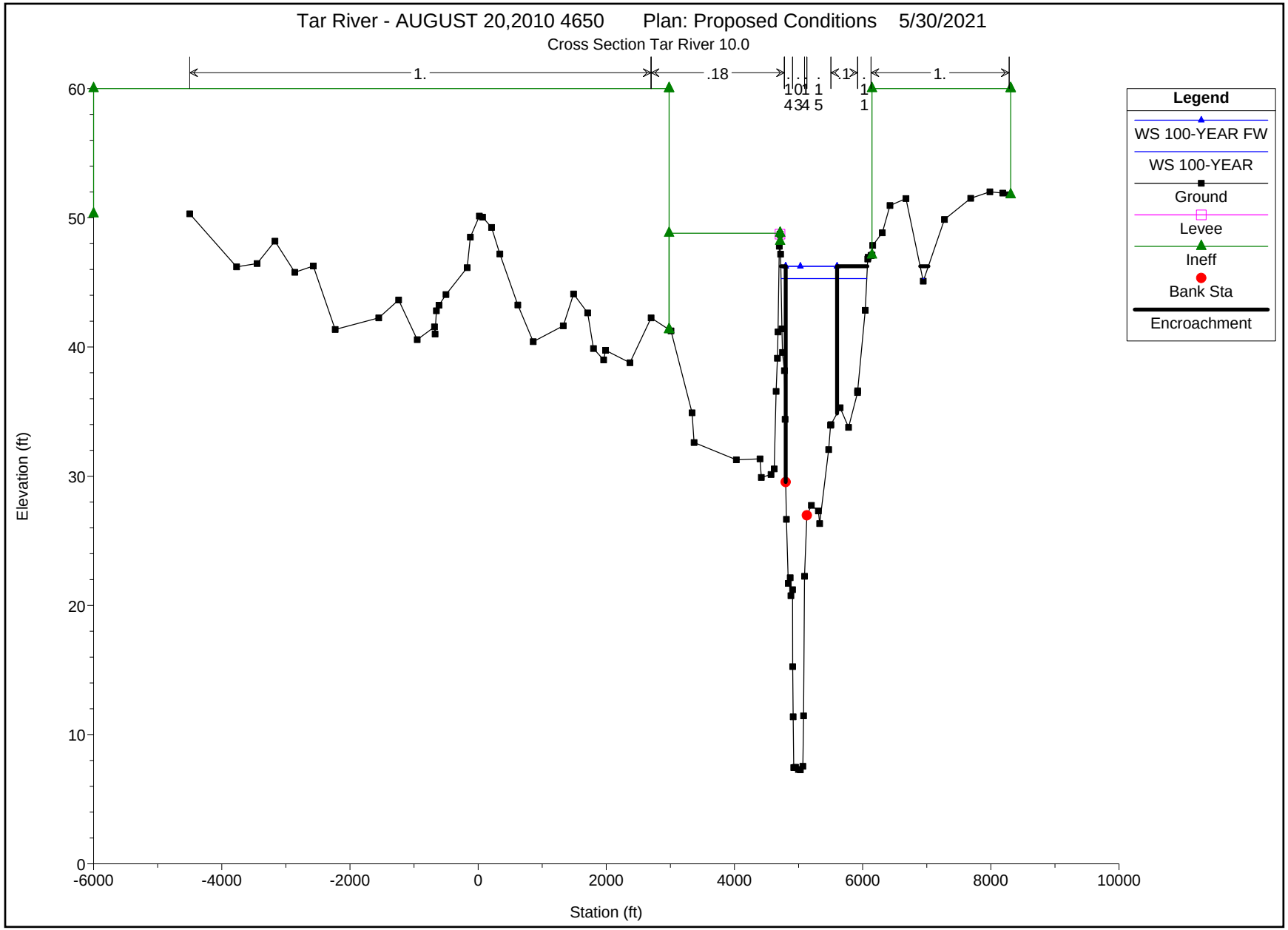
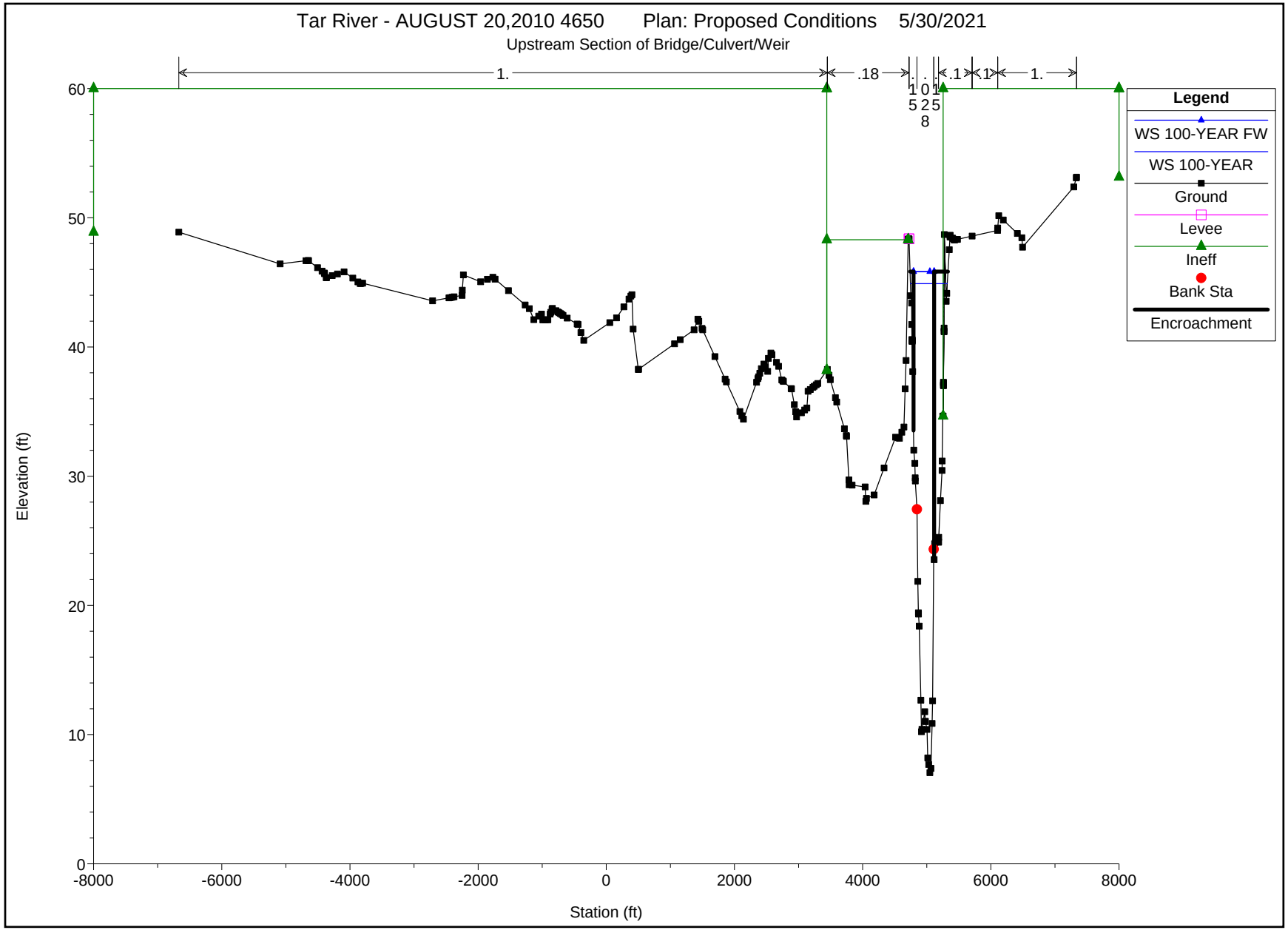
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 250174 - New Section
.15
.1
.15
.1
.15
.115
.028
.1
.165
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Cross Section Tar River 10.0
1.
.18
.1
1.
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000
8000
10000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Upstream Section of Bridge/Culvert/Weir
1.
.18
.1
.1
1.
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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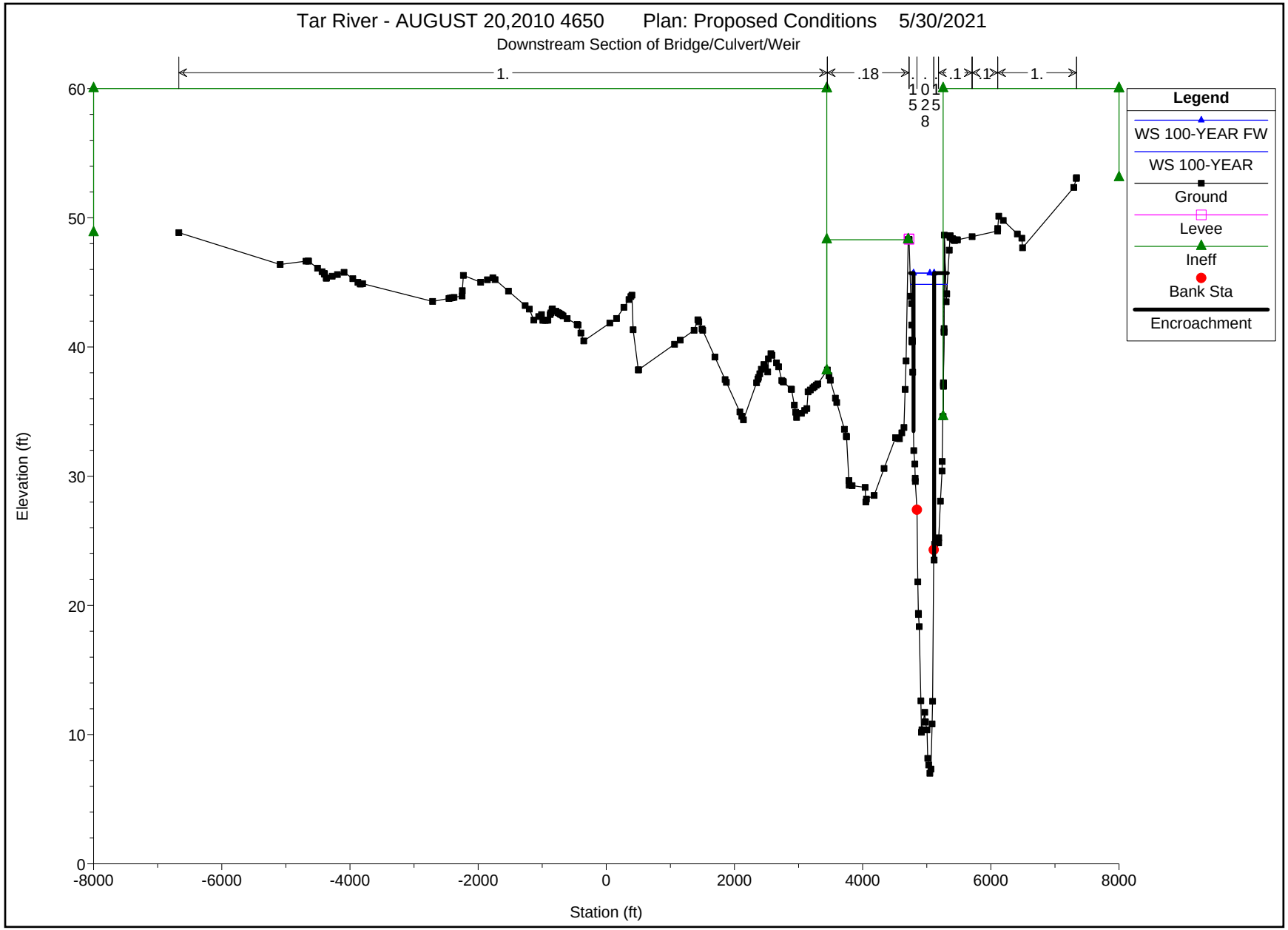
50
40
30
20
10
0
-8000
-6000
-4000
-2000
0
2000
4000
6000
8000


Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Downstream Section of Bridge/Culvert/Weir
1.
.18
.1
.1
1.
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
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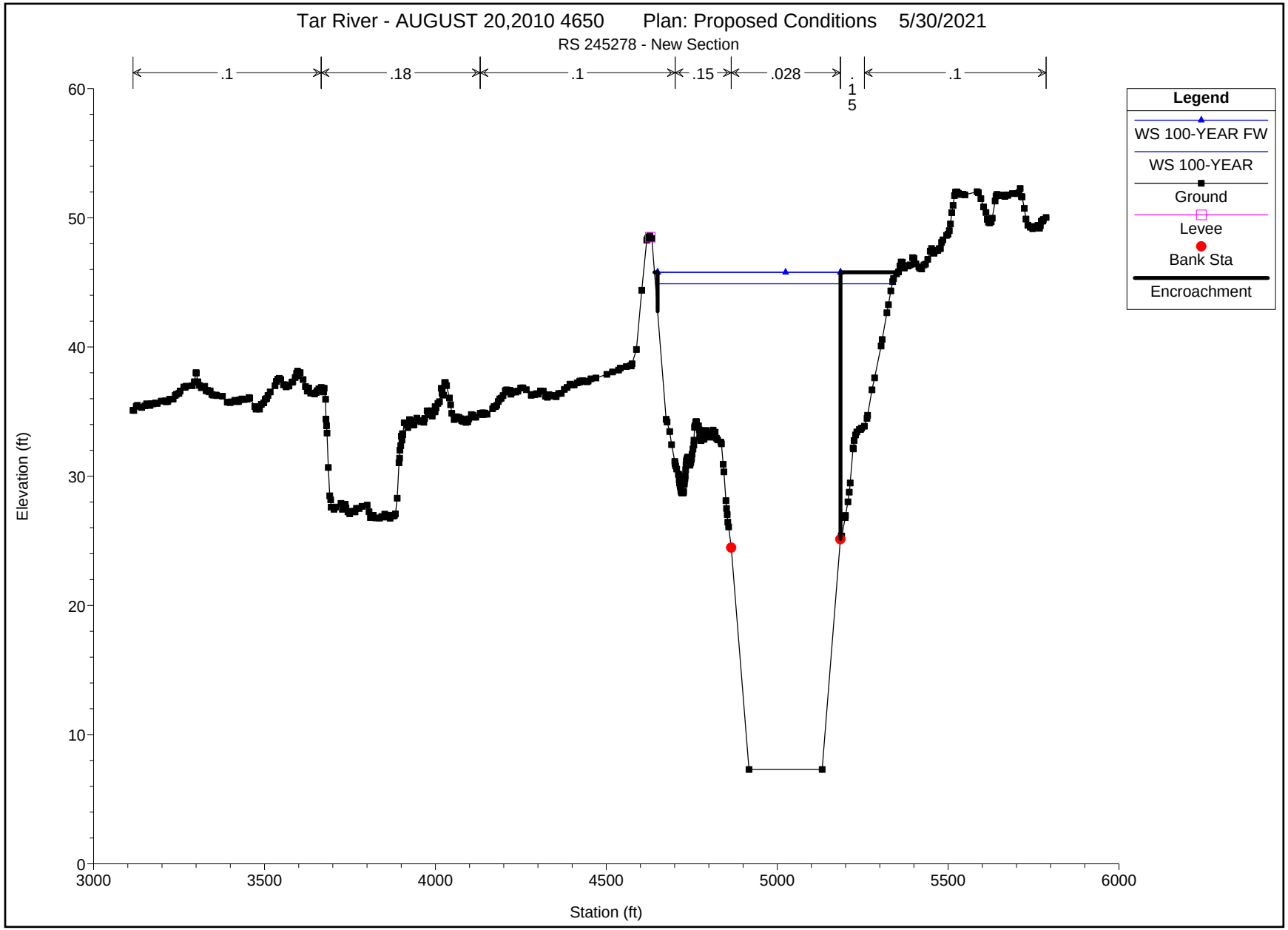
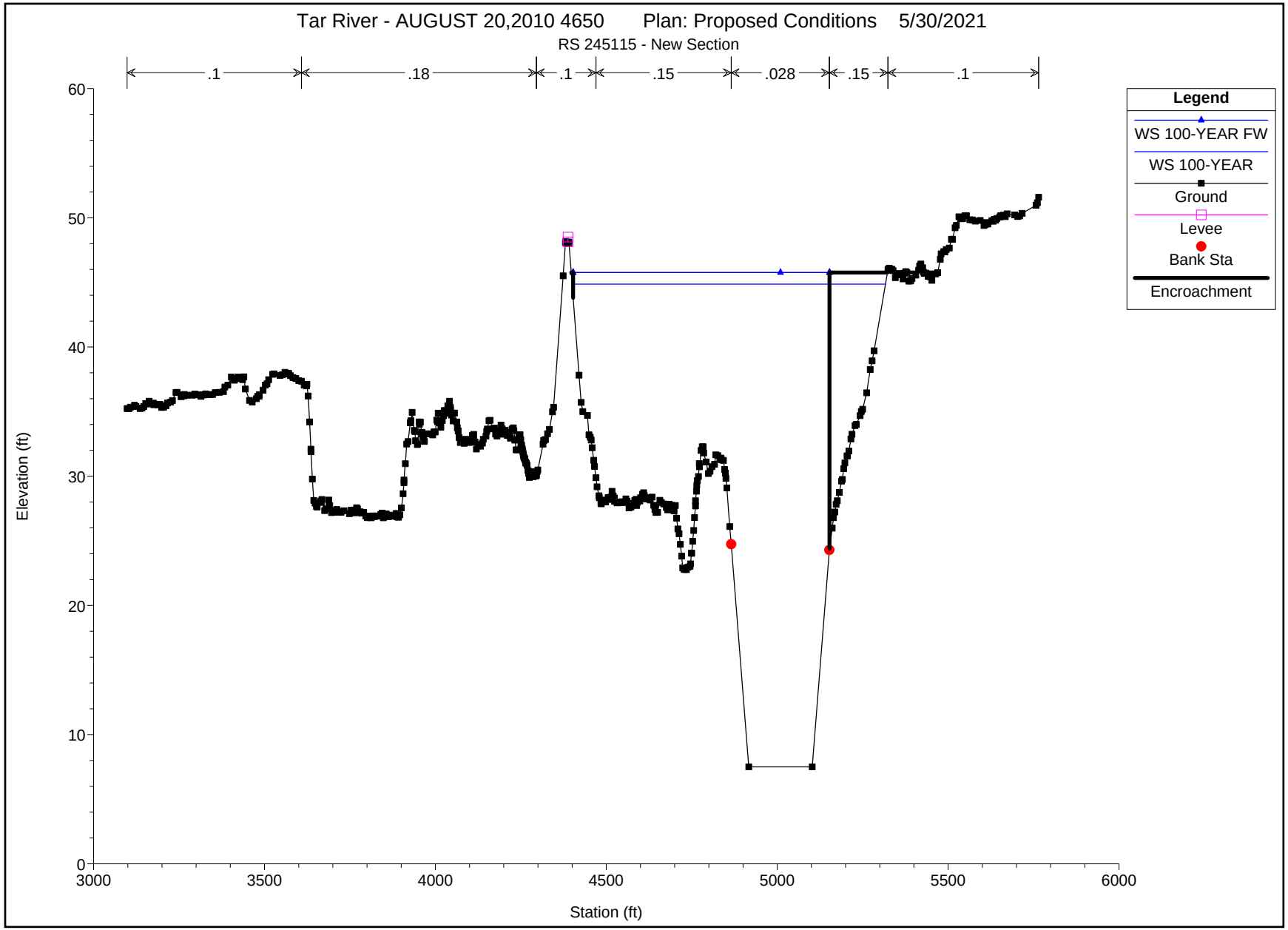
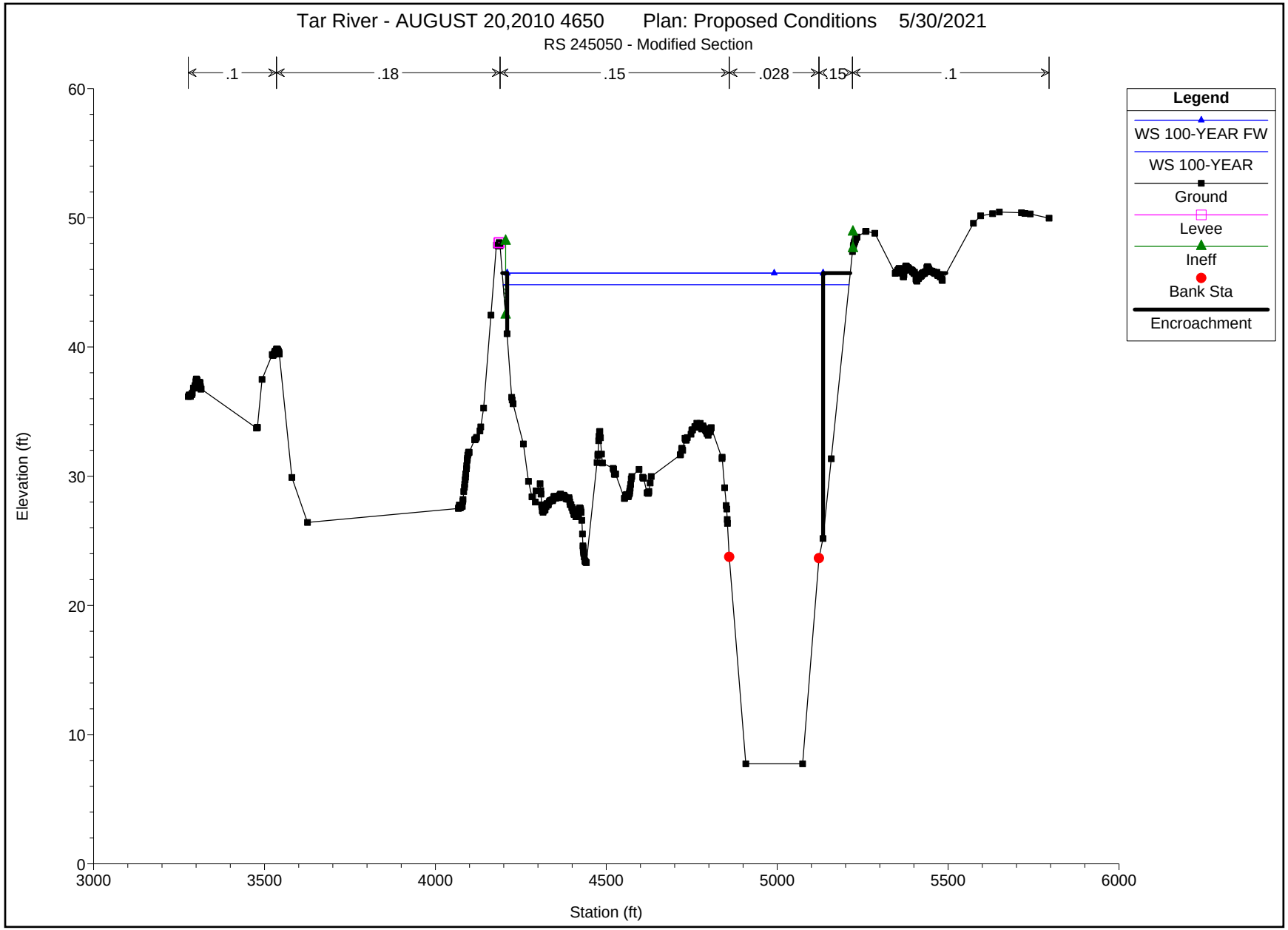
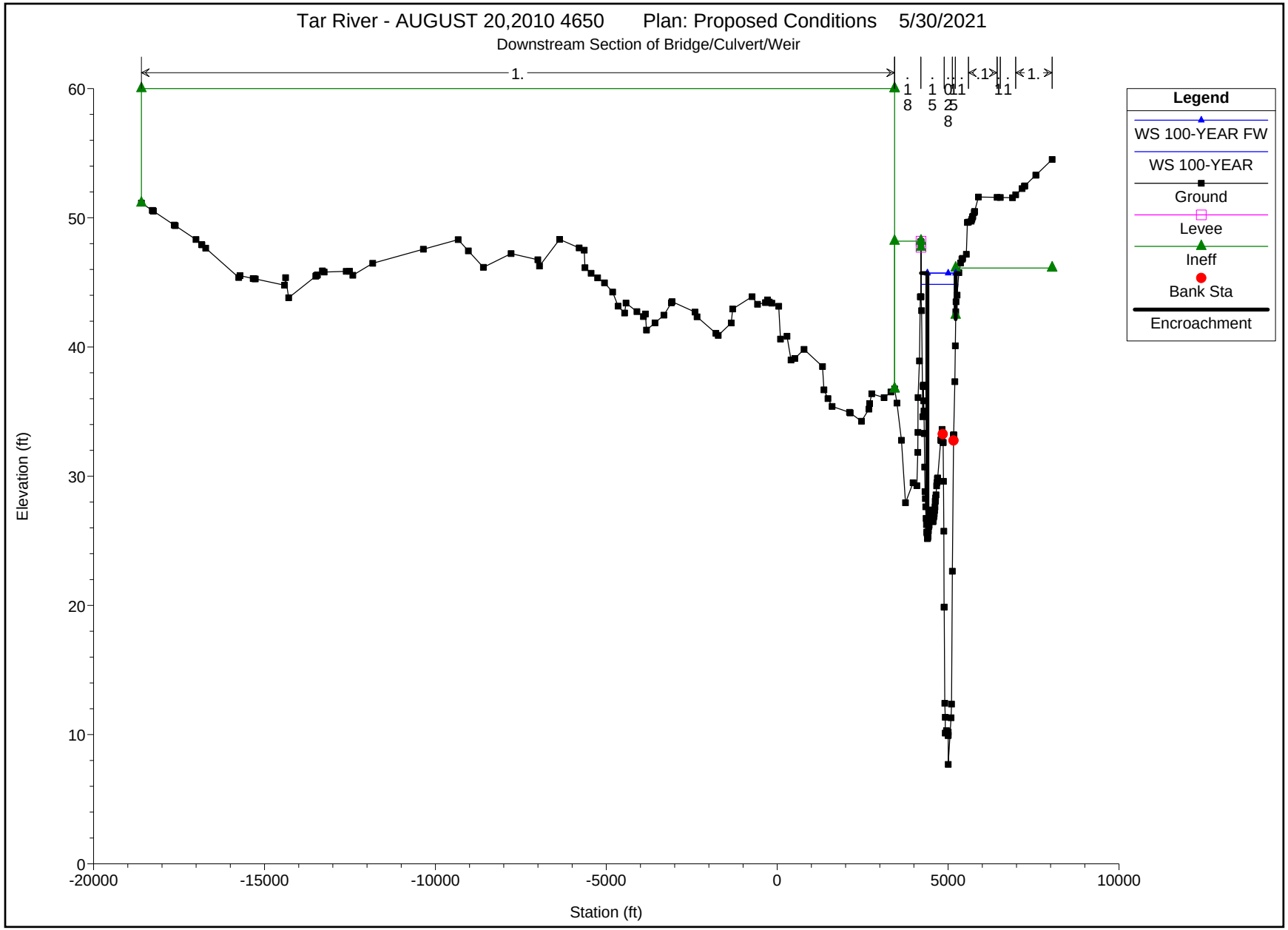
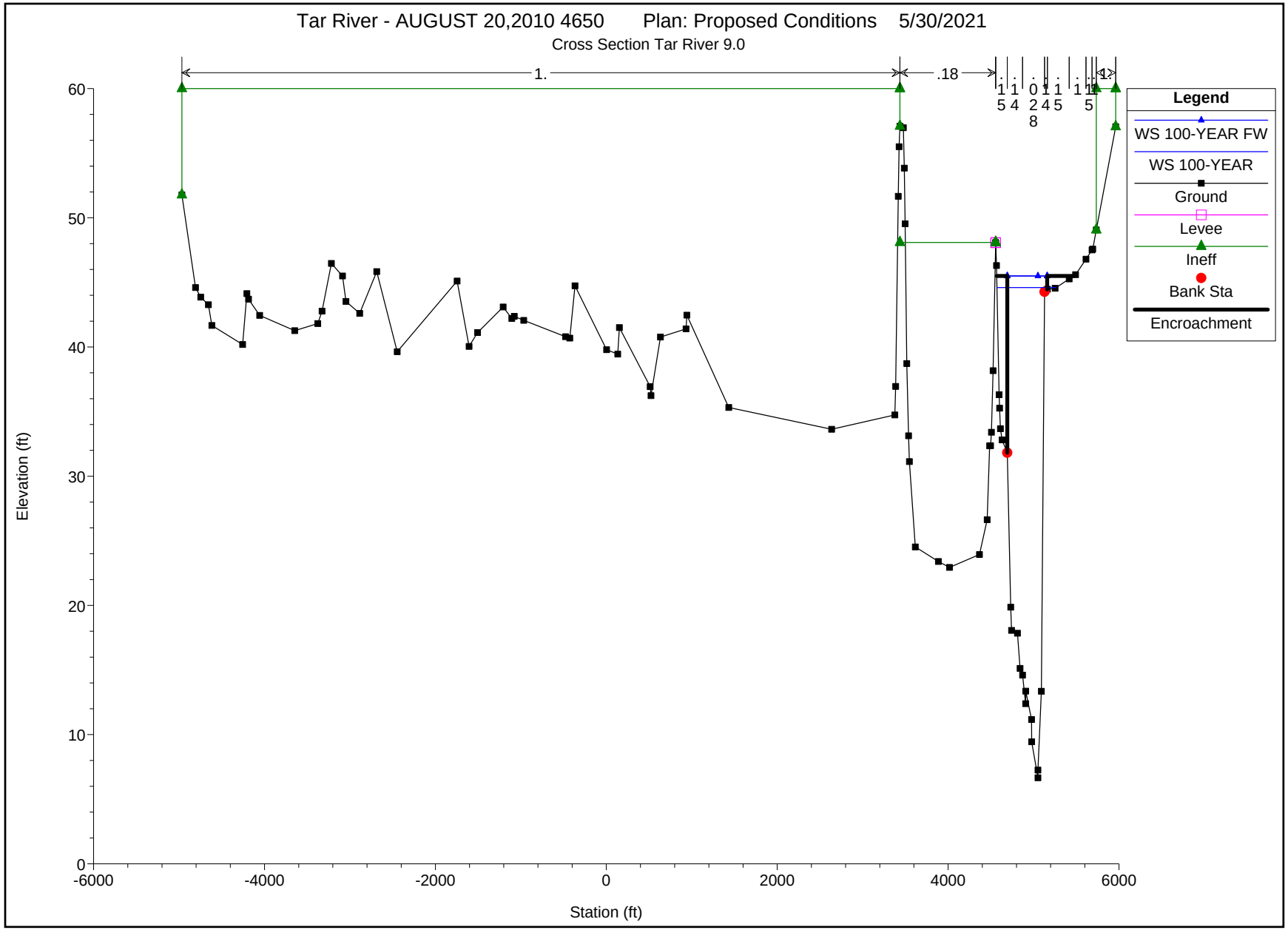
50
40
30
20
10
0
-8000
-6000
-4000
-2000
0
2000
4000
6000
8000

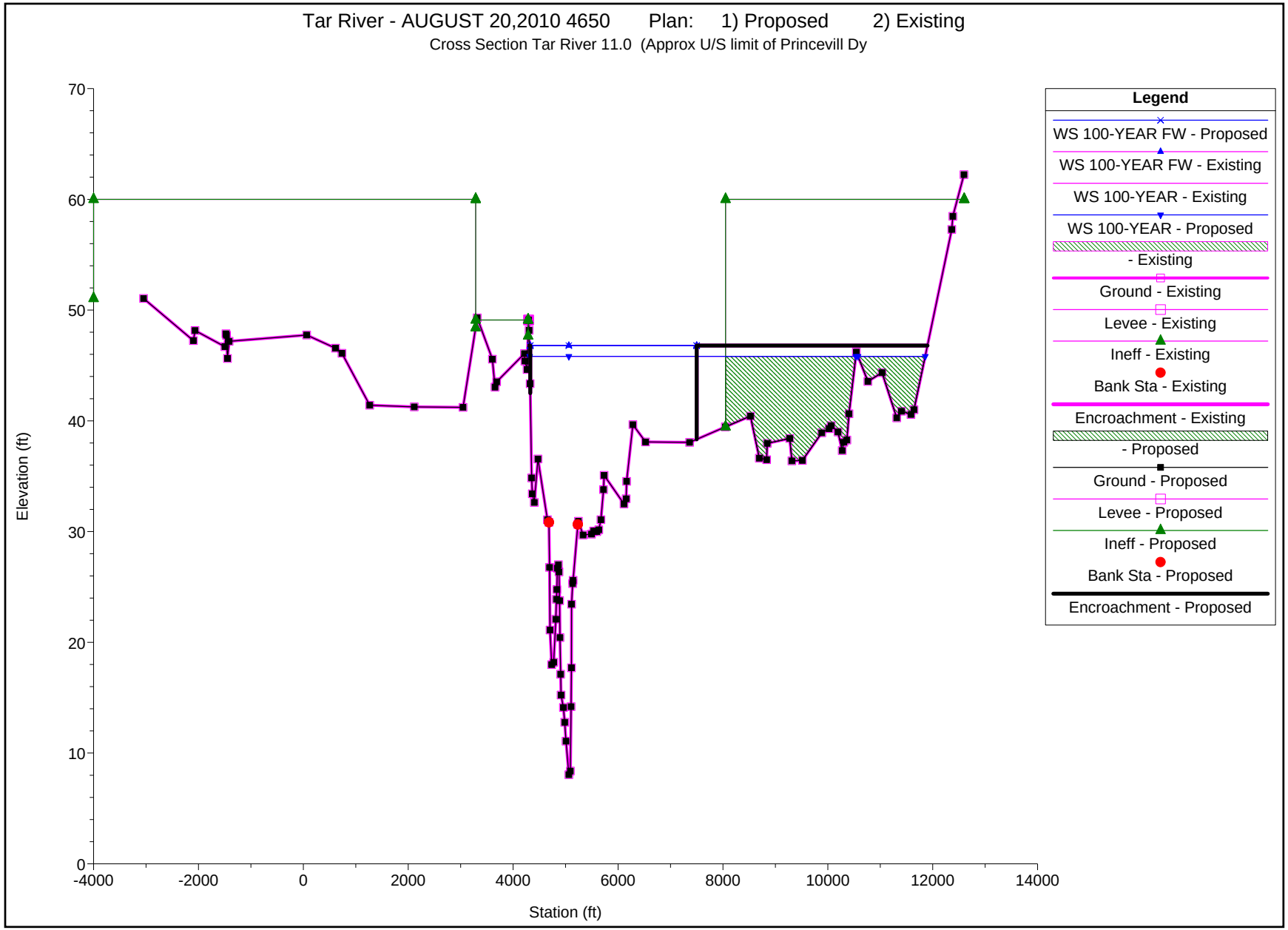

Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 245278 - New Section
.1
.18
.1
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000

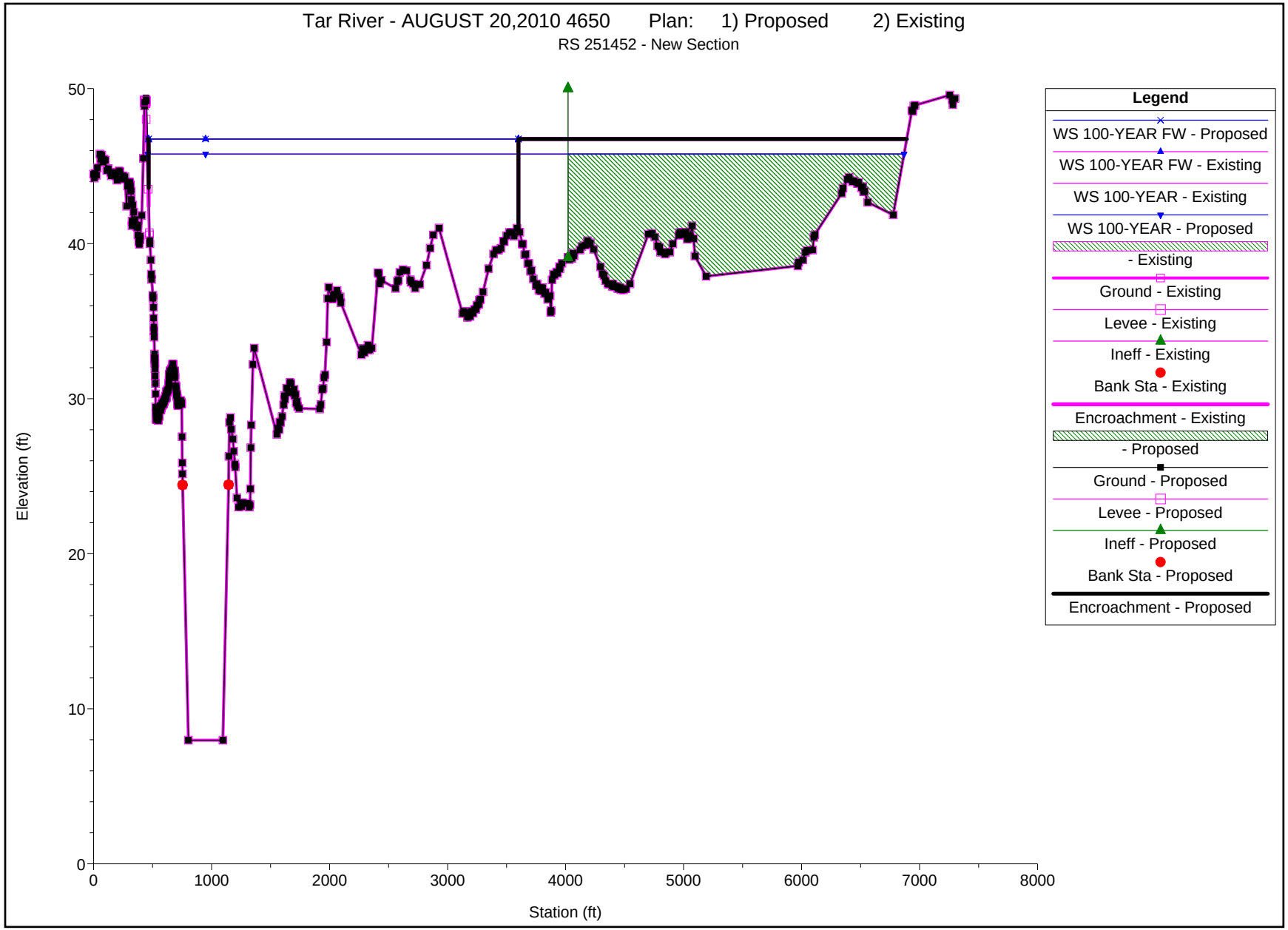

Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 245115 - New Section
.1
.18
.1
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000

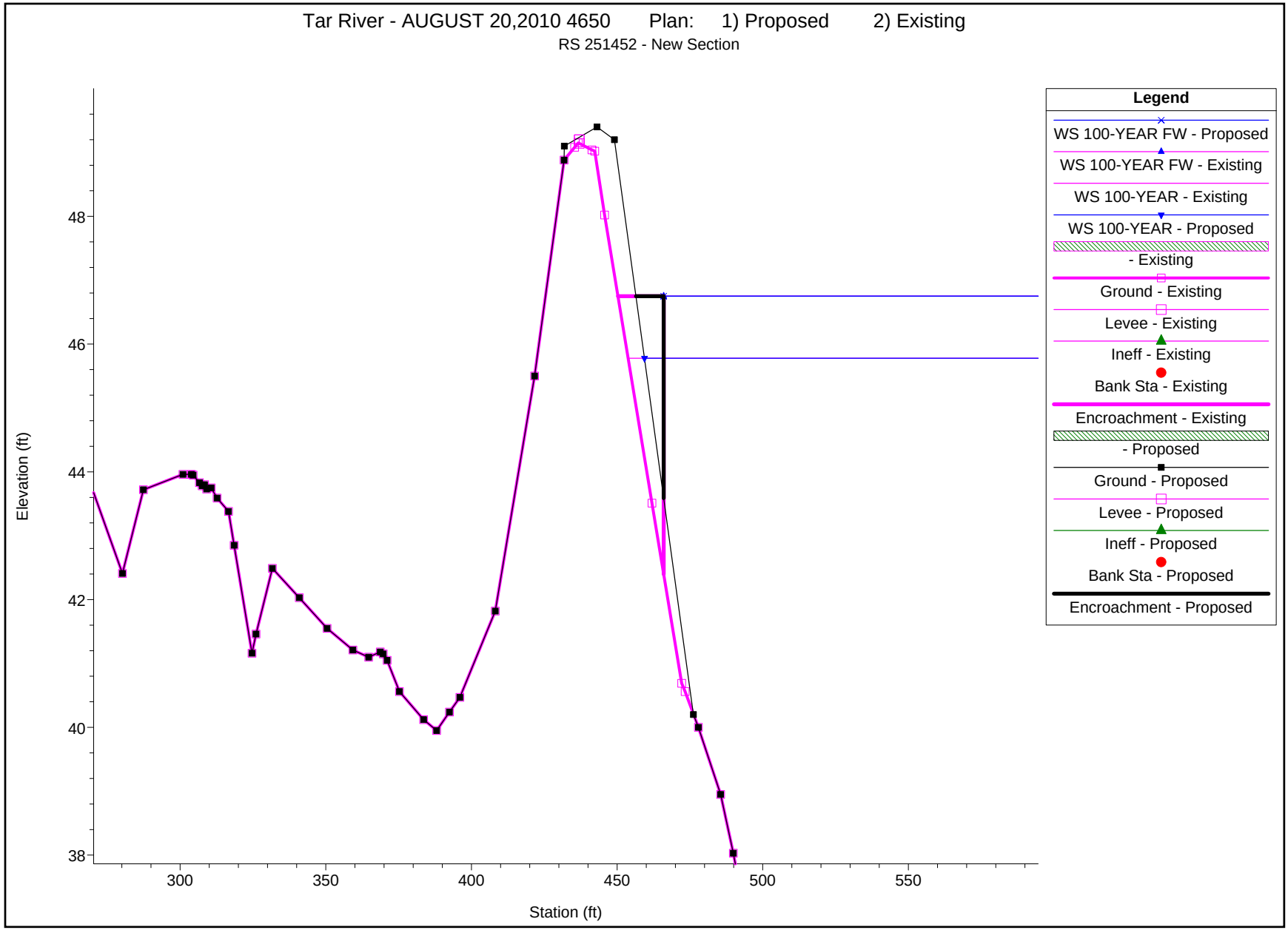

Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
RS 245050 - Modified Section
.1
.18
.15
.028
.15
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000

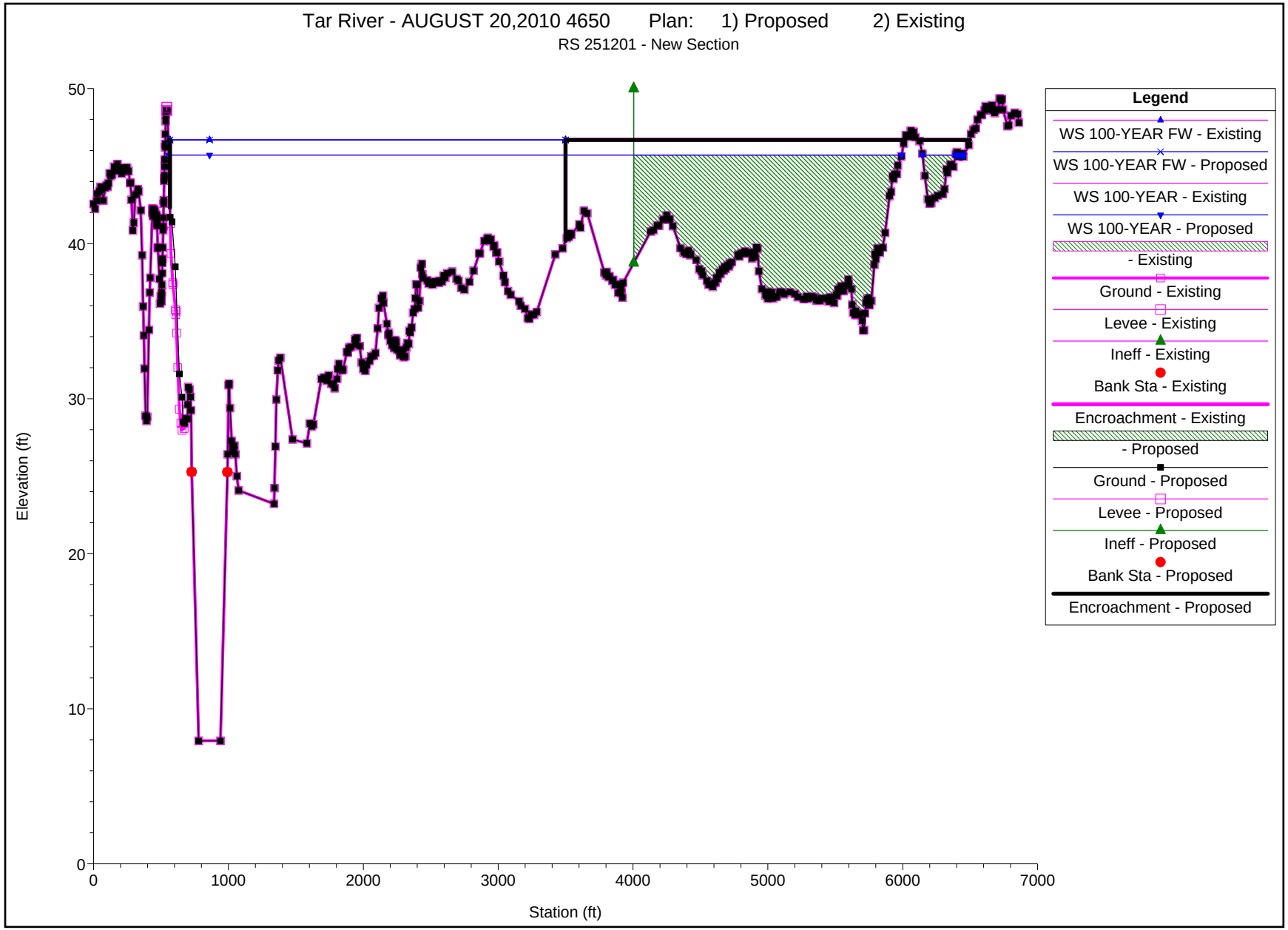

Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Downstream Section of Bridge/Culvert/Weir
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-20000
-15000
-10000
-5000
0
5000
10000

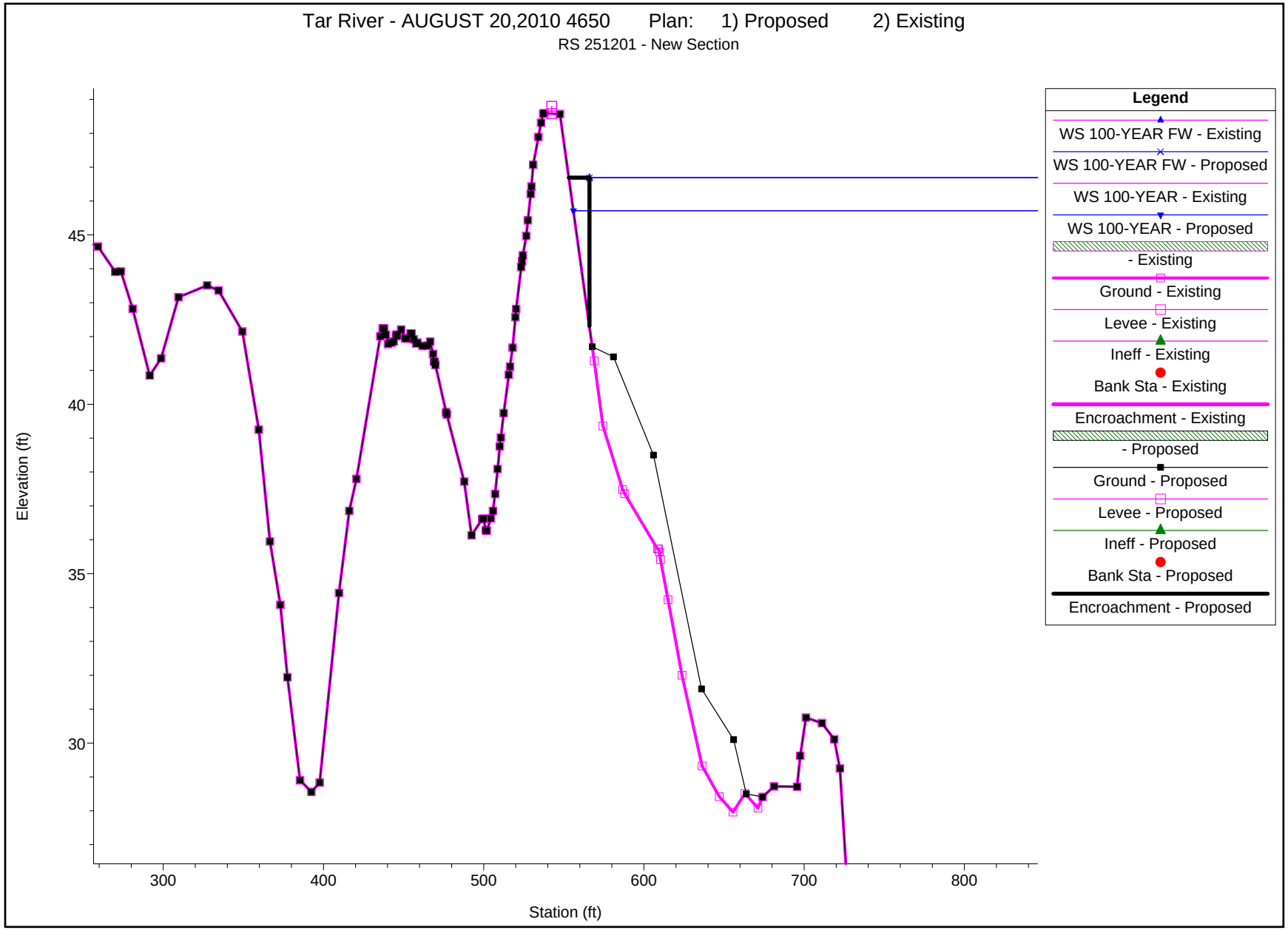

Tar River - AUGUST 20,2010 4650 Plan: Proposed Conditions 5/30/2021
Cross Section Tar River 9.0
1.
.18
.115
.1148
.1245
.115
.115
.1
Legend
WS 100-YEAR FW
WS 100-YEAR
Ground
Levee
Ineff
Bank Sta
Encroachment
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000

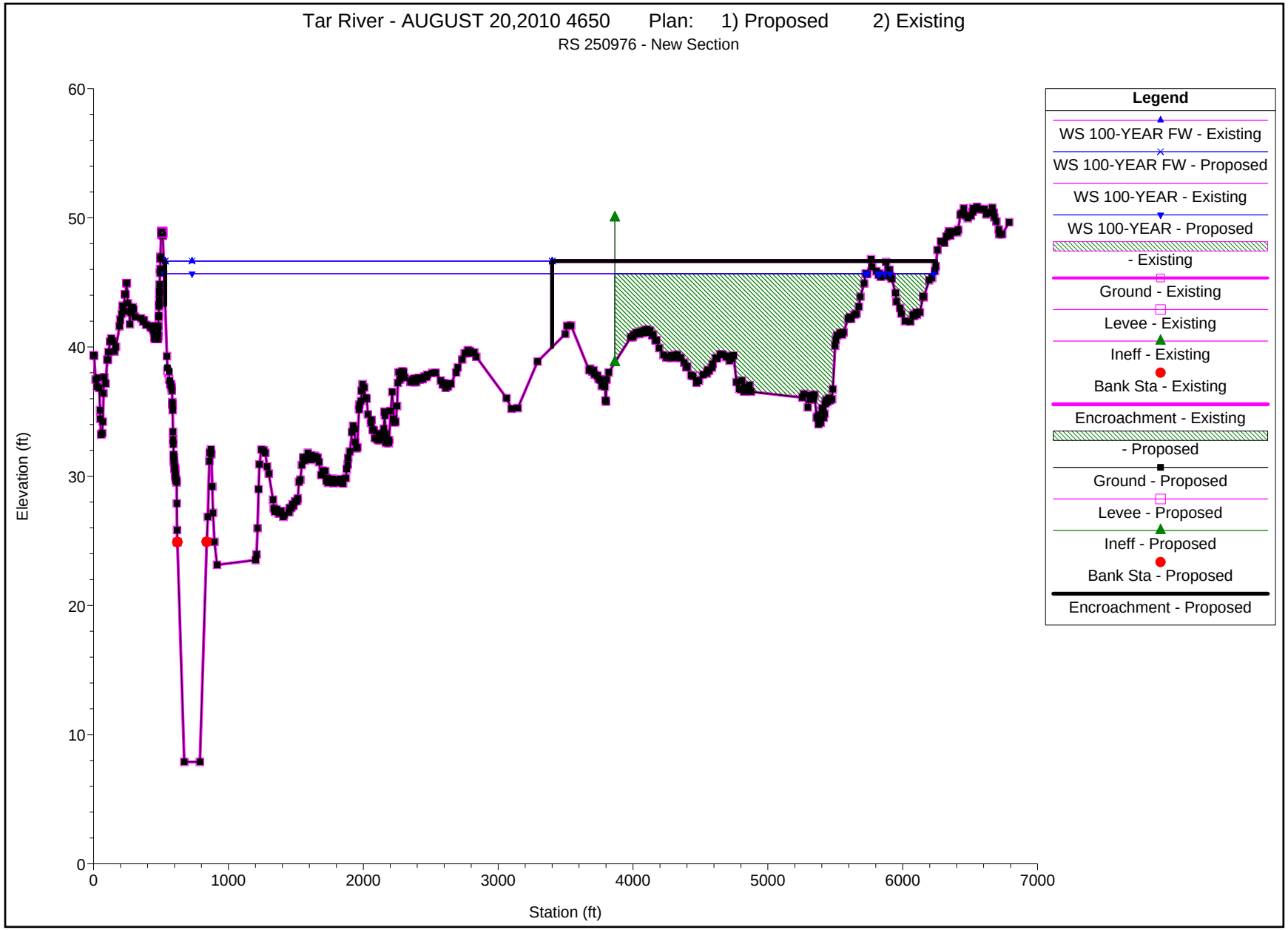

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Cross Section Tar River 11.0 (Approx U/S limit of Princevill Dy
Elevation (ft)
Station (ft)
70
60
50
40
30
20
10
0
-4000
-2000
0
2000
4000
6000
8000
10000
12000
14000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

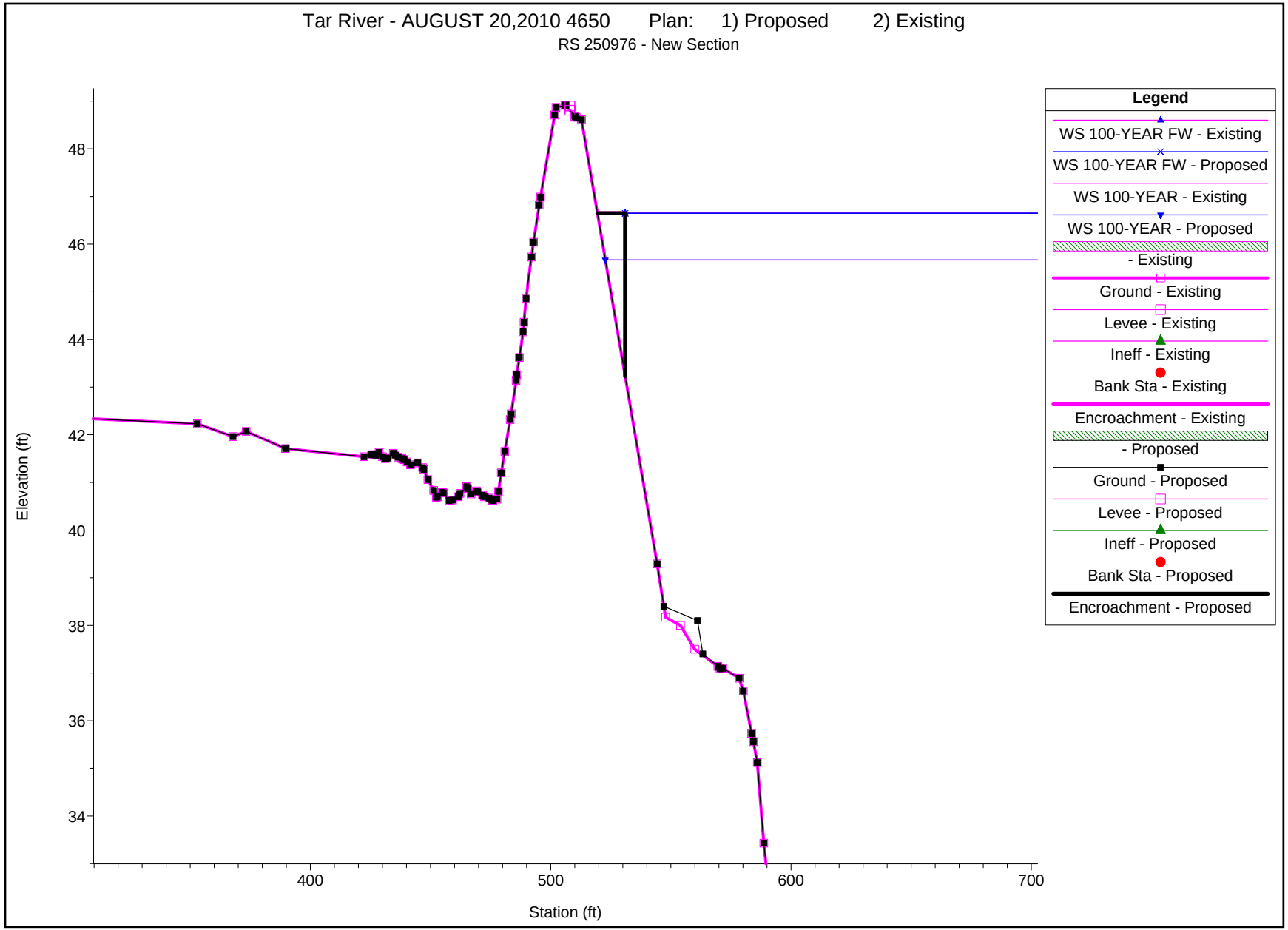

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 251452 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
0
1000
2000
3000
4000
5000
6000
7000
8000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

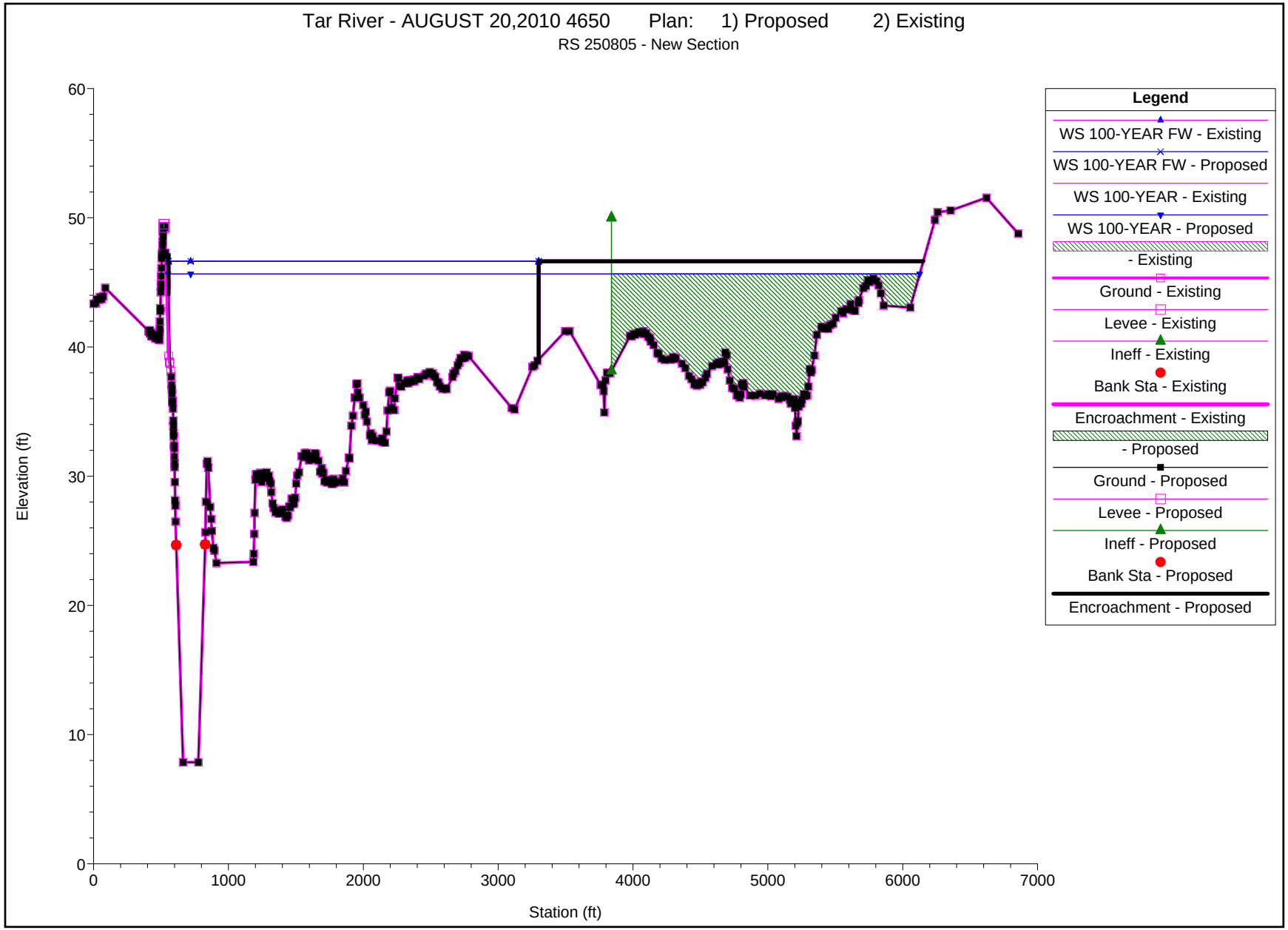

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 251452 - New Section
Elevation (ft)
48
46
44
42
40
38
300
350
400
450
500
550
Station (ft)
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

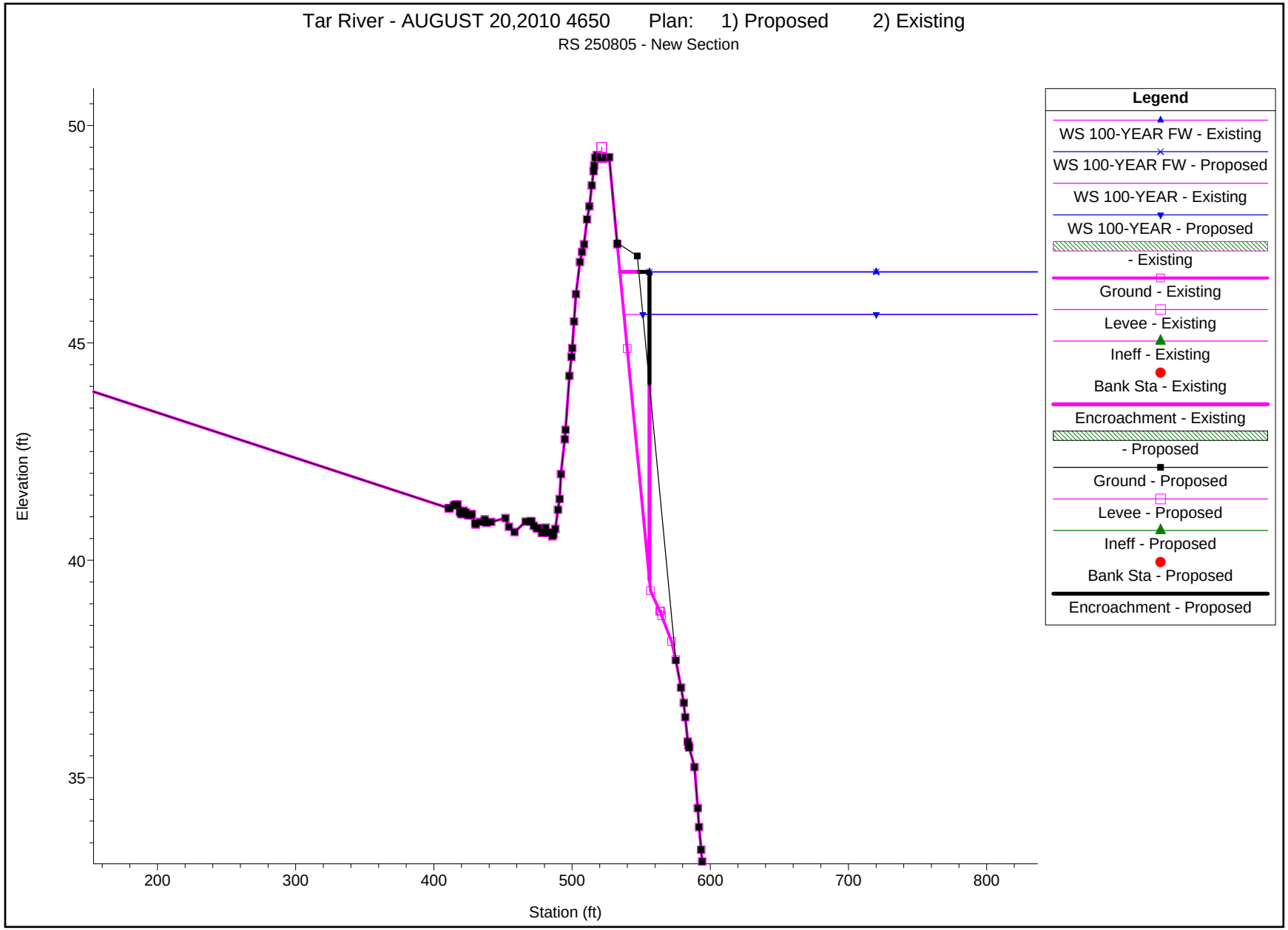

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 251201 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

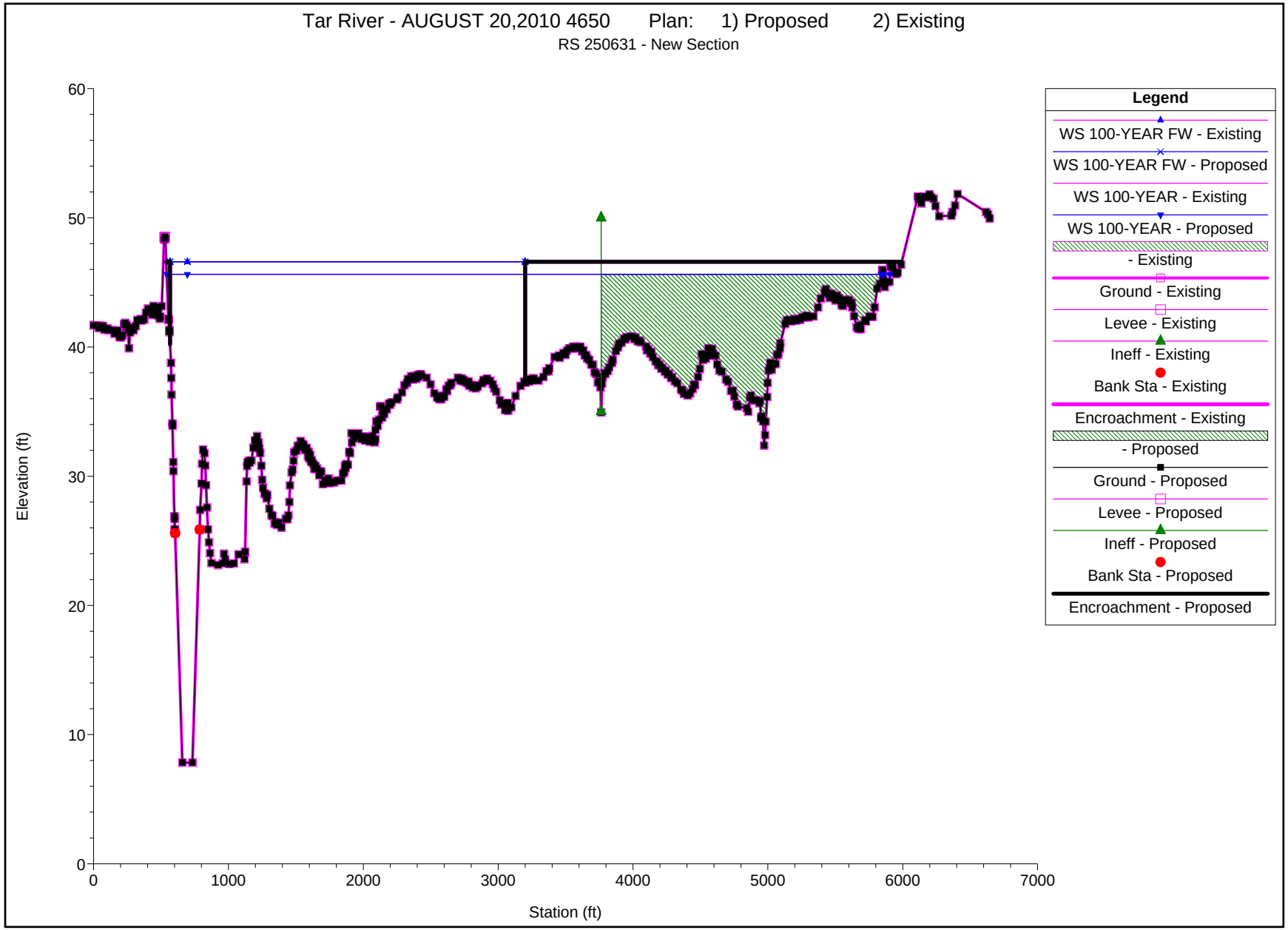

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 251201 - New Section
Elevation (ft)
45
40
35
30
300
400
500
600
700
800
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

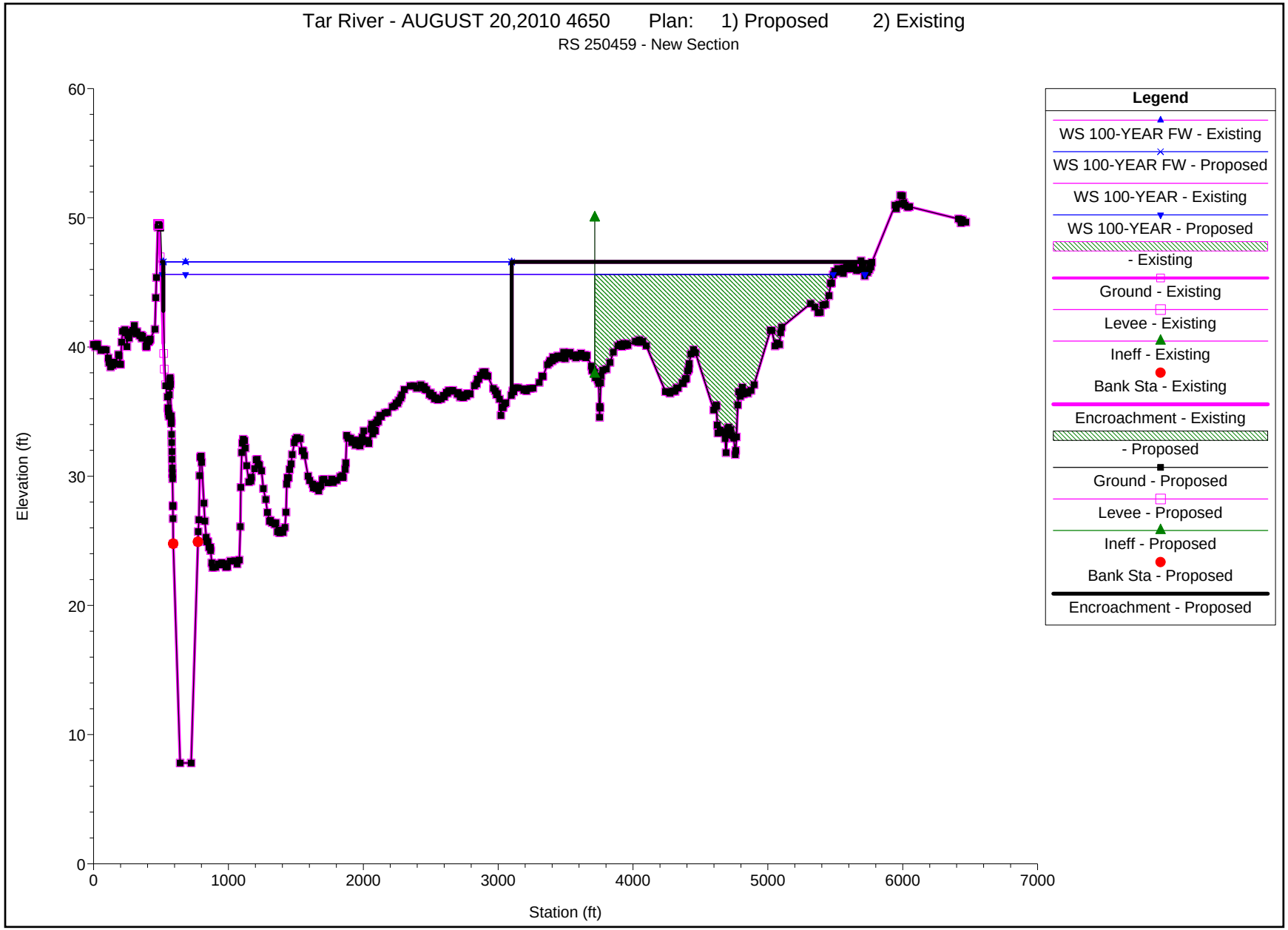

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250976 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

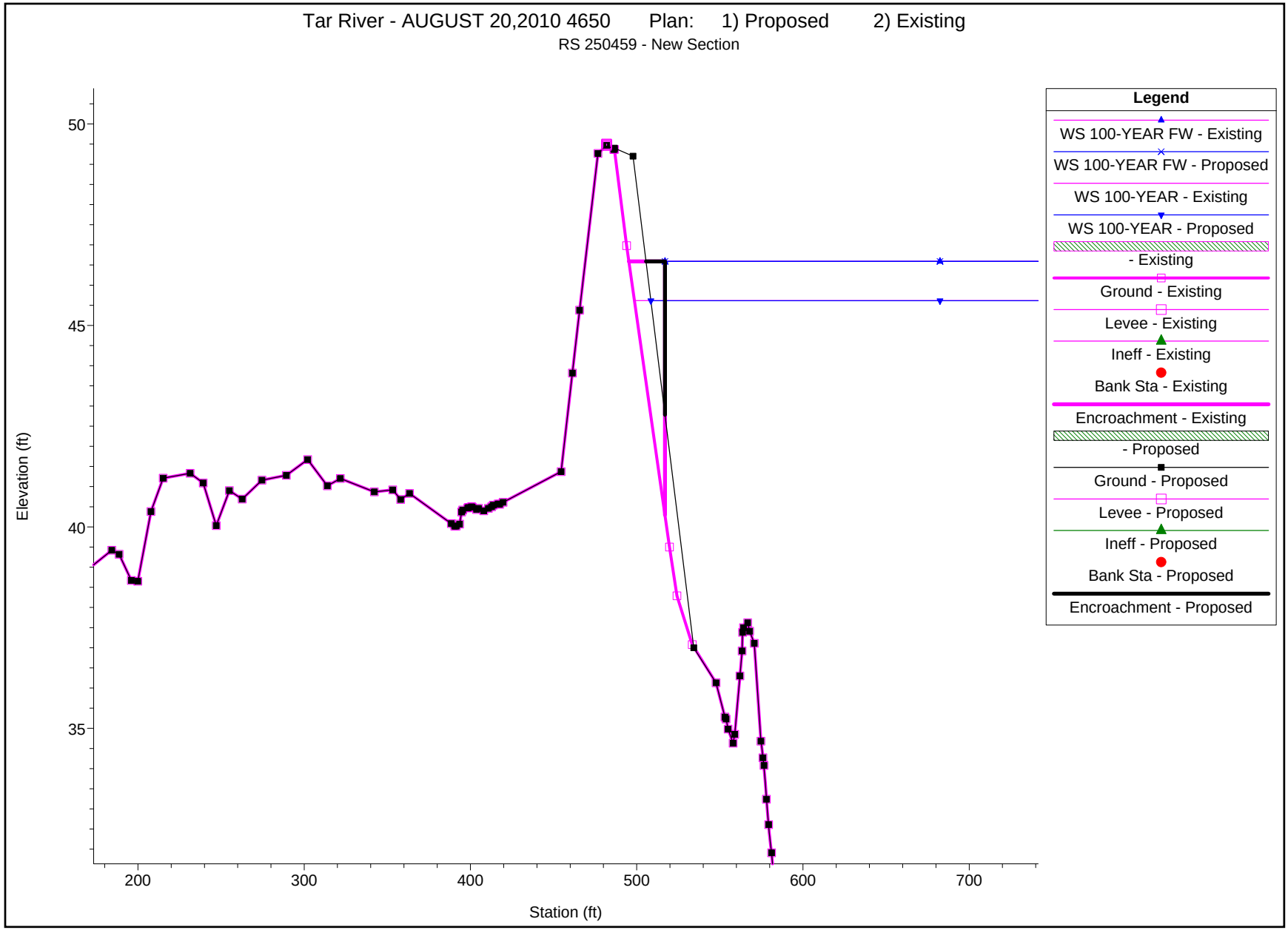

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250976 - New Section
Elevation (ft)
48
46
44
42
40
38
36
34
400
500
600
700
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

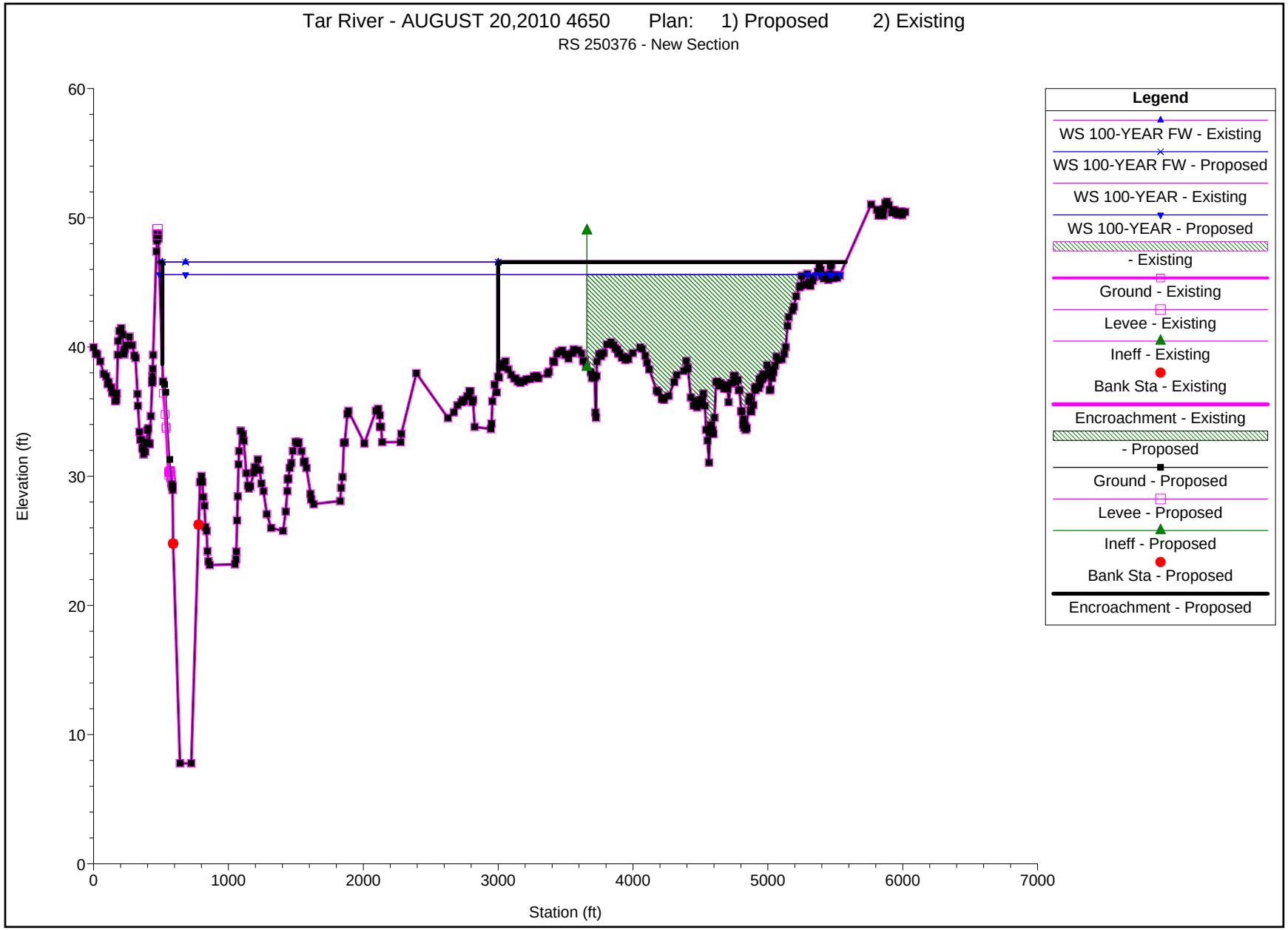

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250805 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

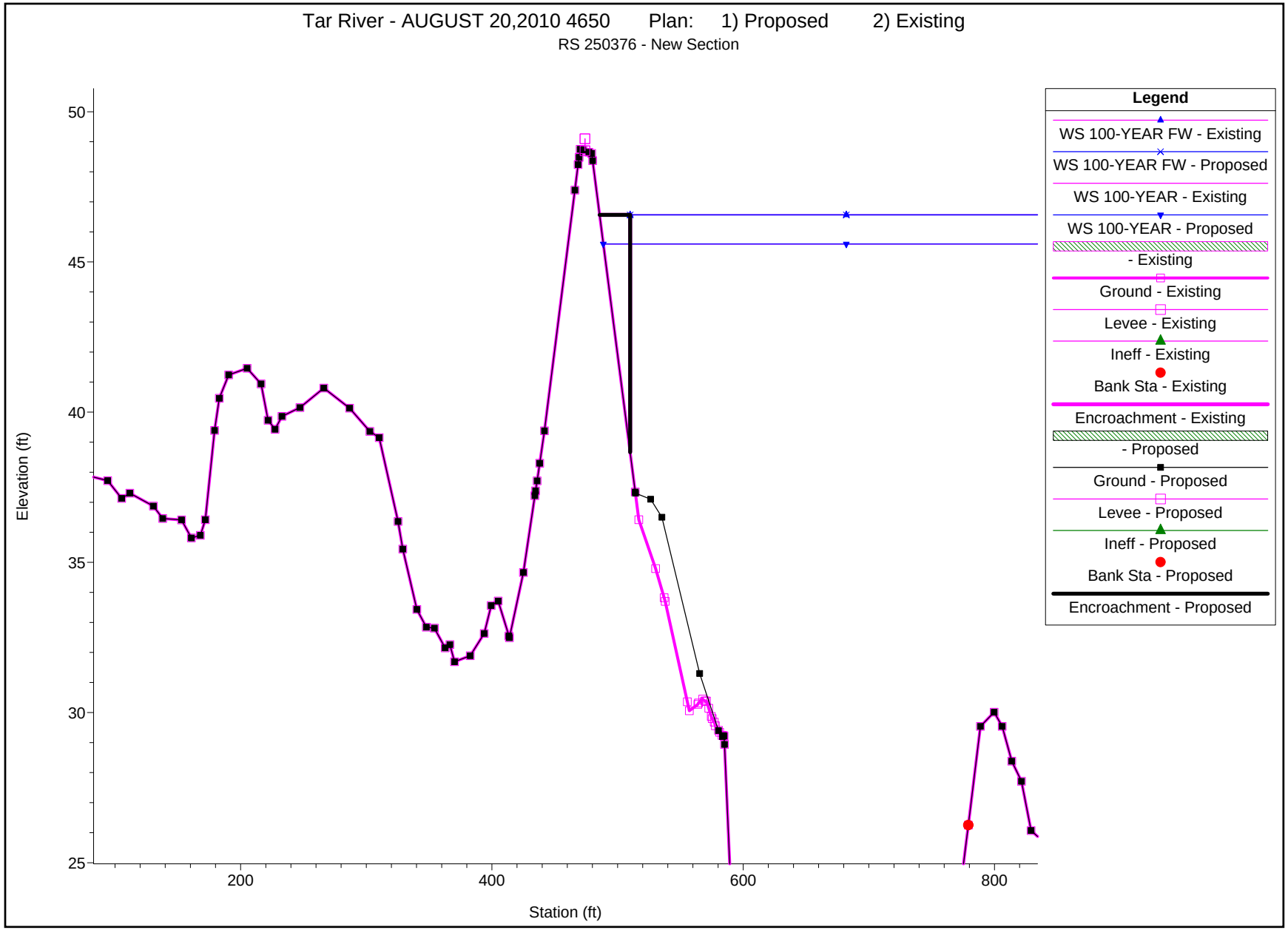

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250805 - New Section
Elevation (ft)
50
45
40
35
200
300
400
500
600
700
800
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

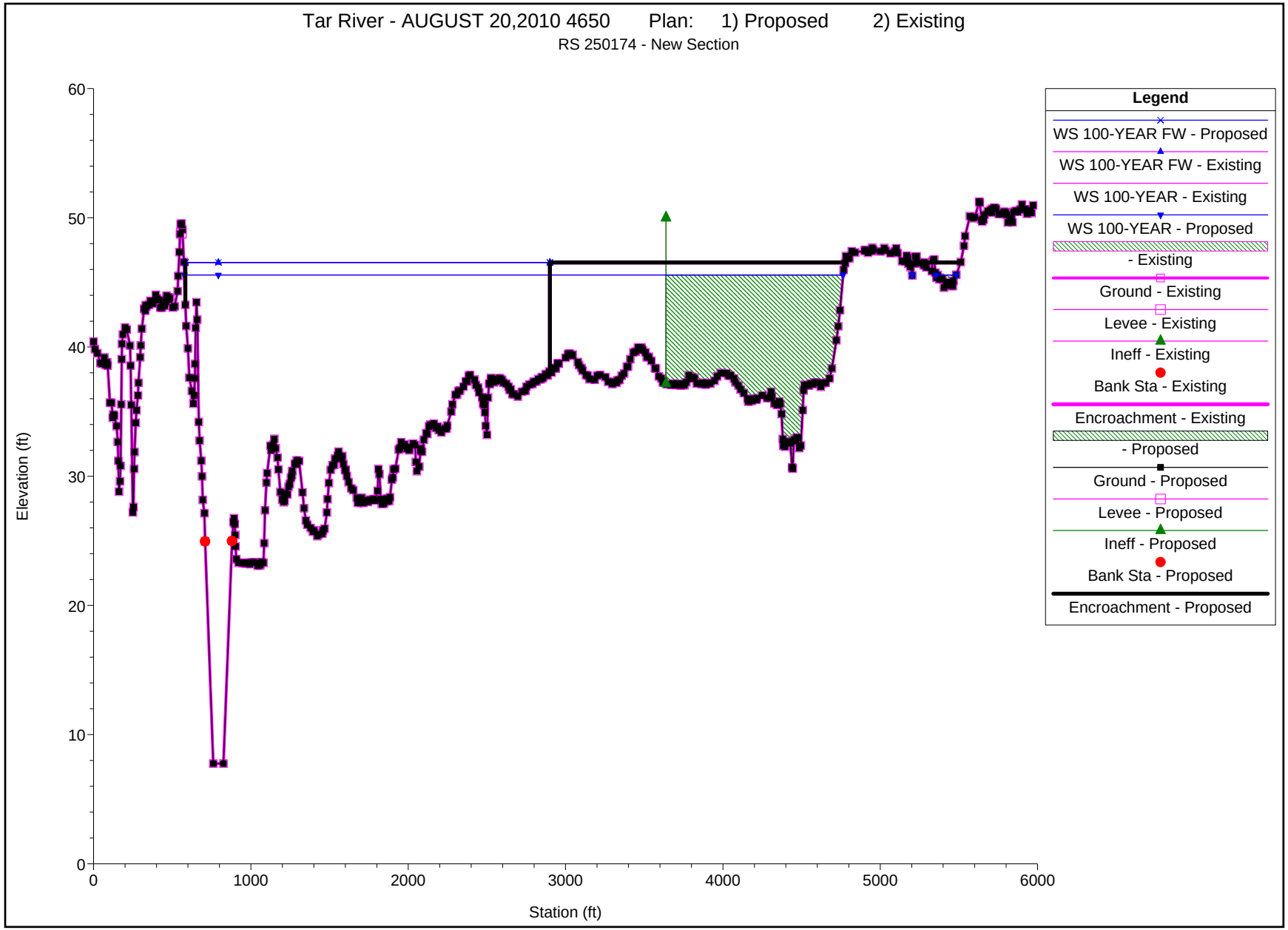

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250631 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

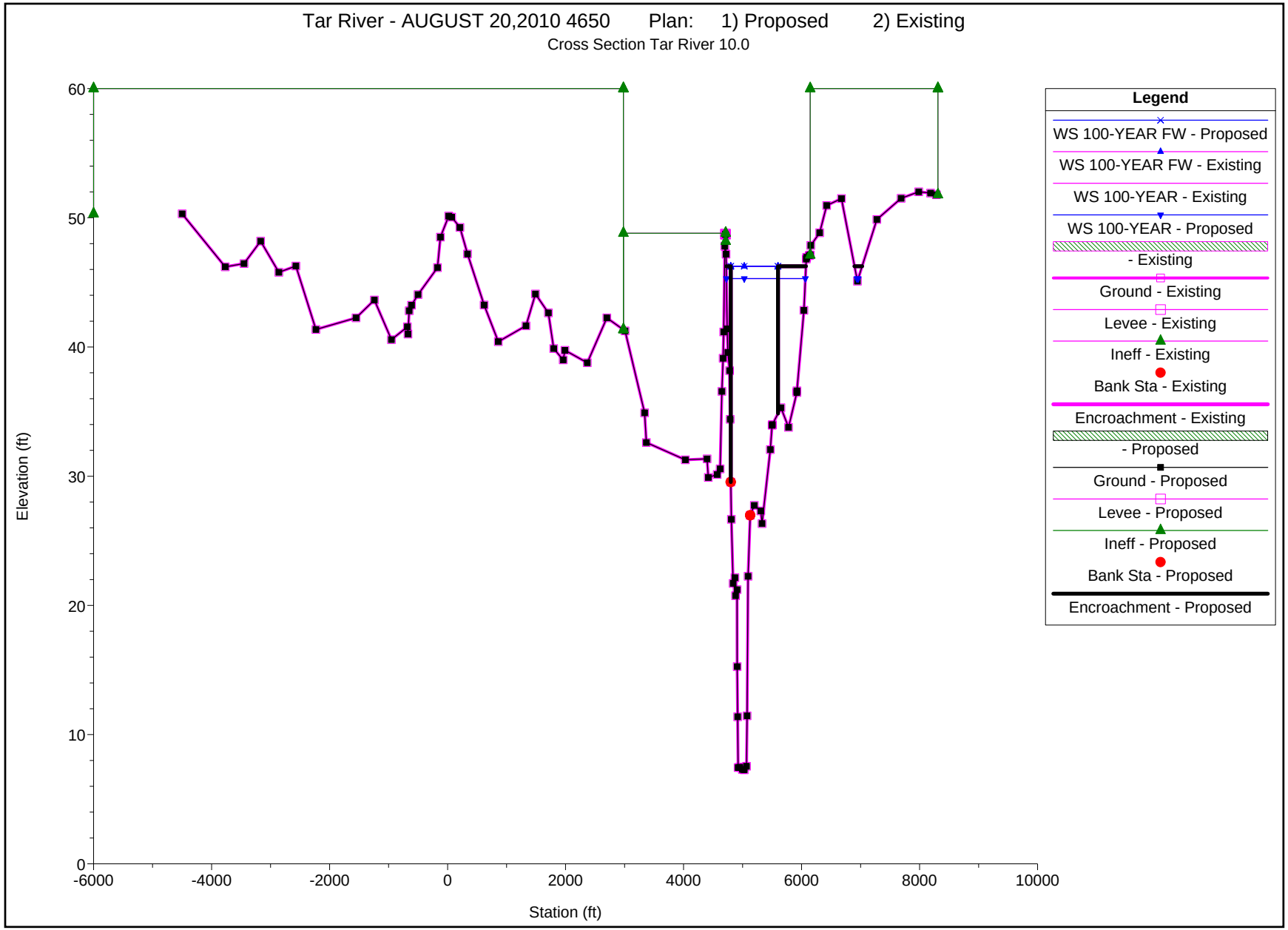

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250459 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

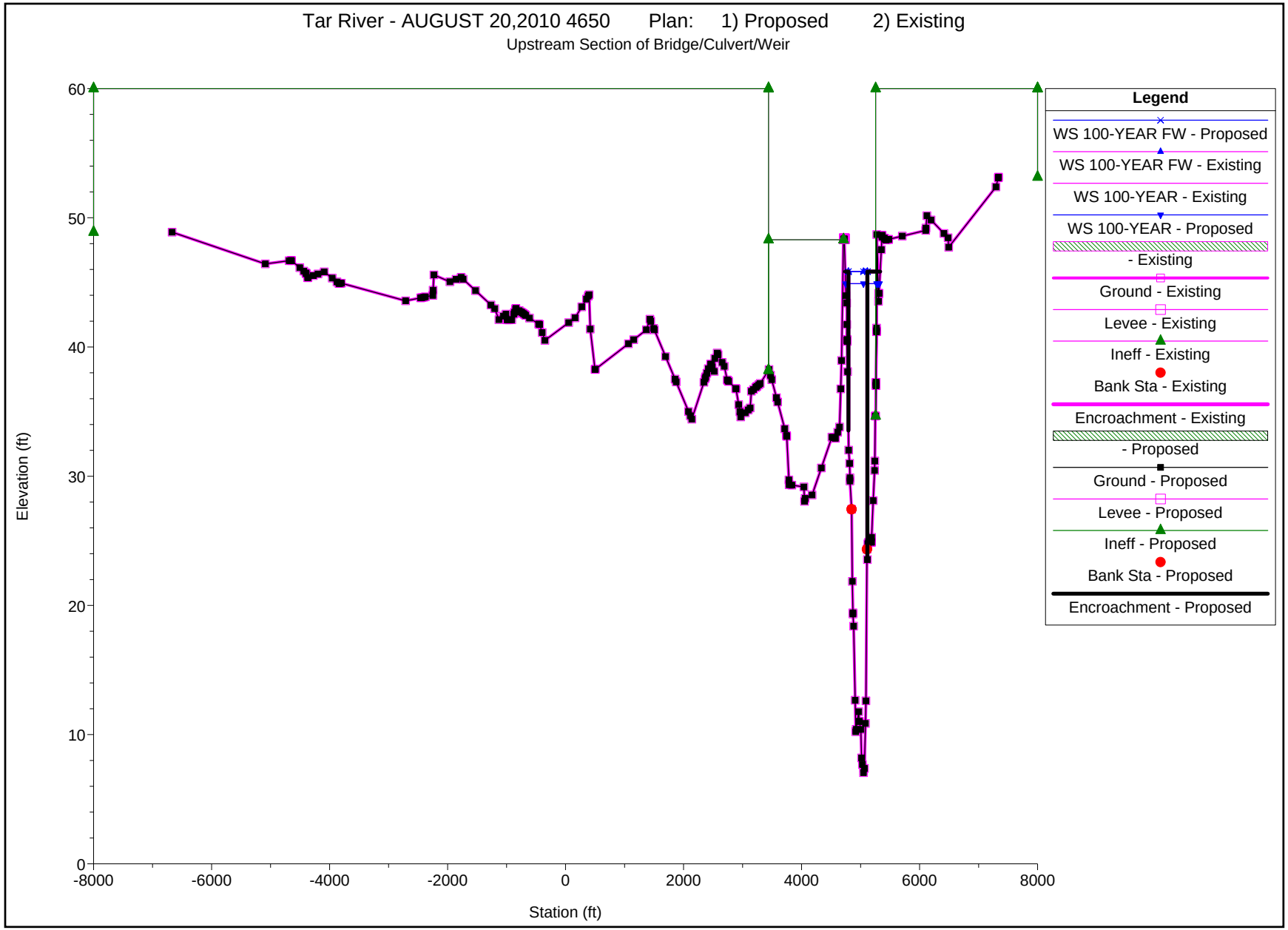

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250459 - New Section
Elevation (ft)
50
45
40
35
200
300
400
500
600
700
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

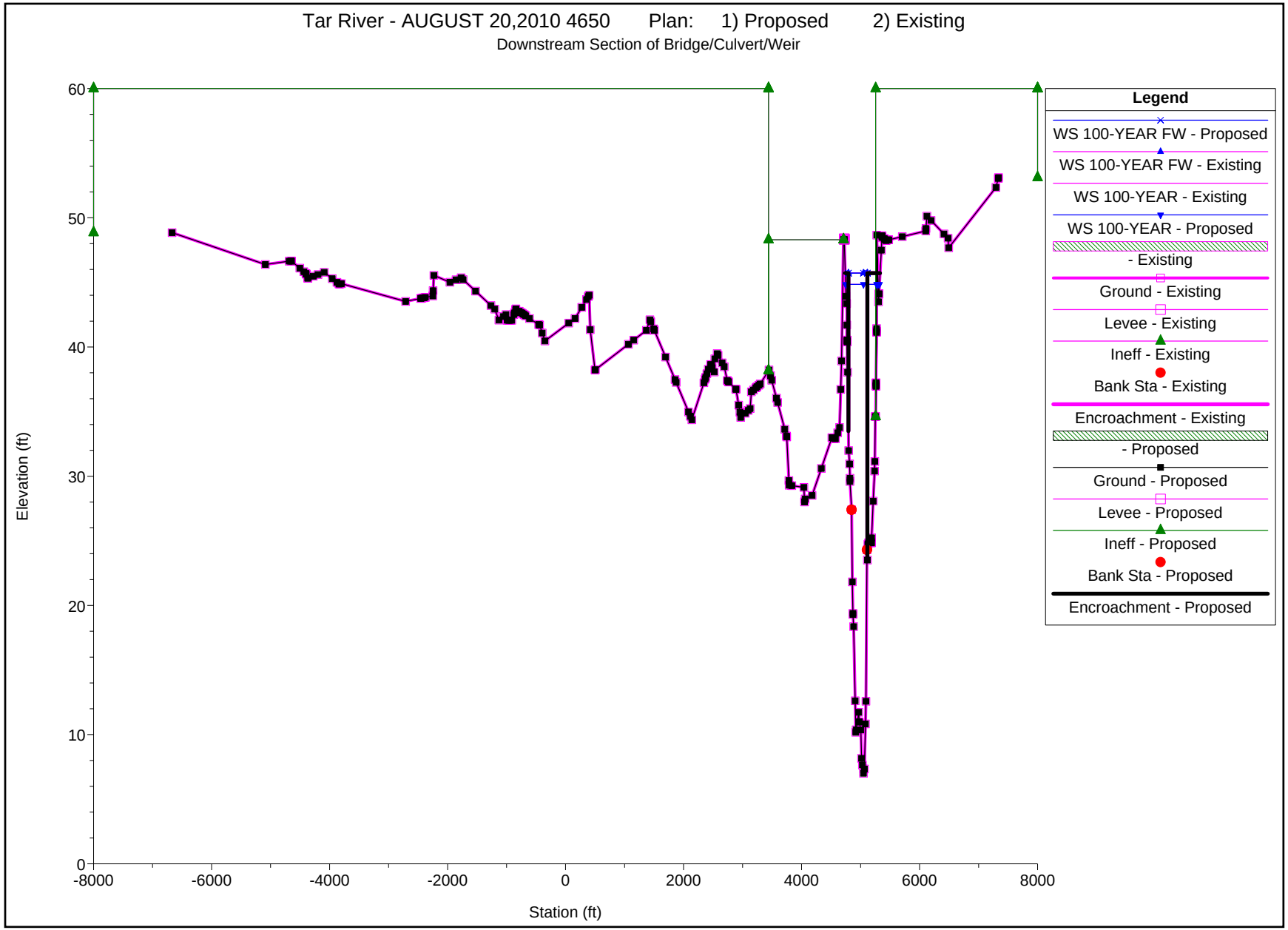

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250376 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
7000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

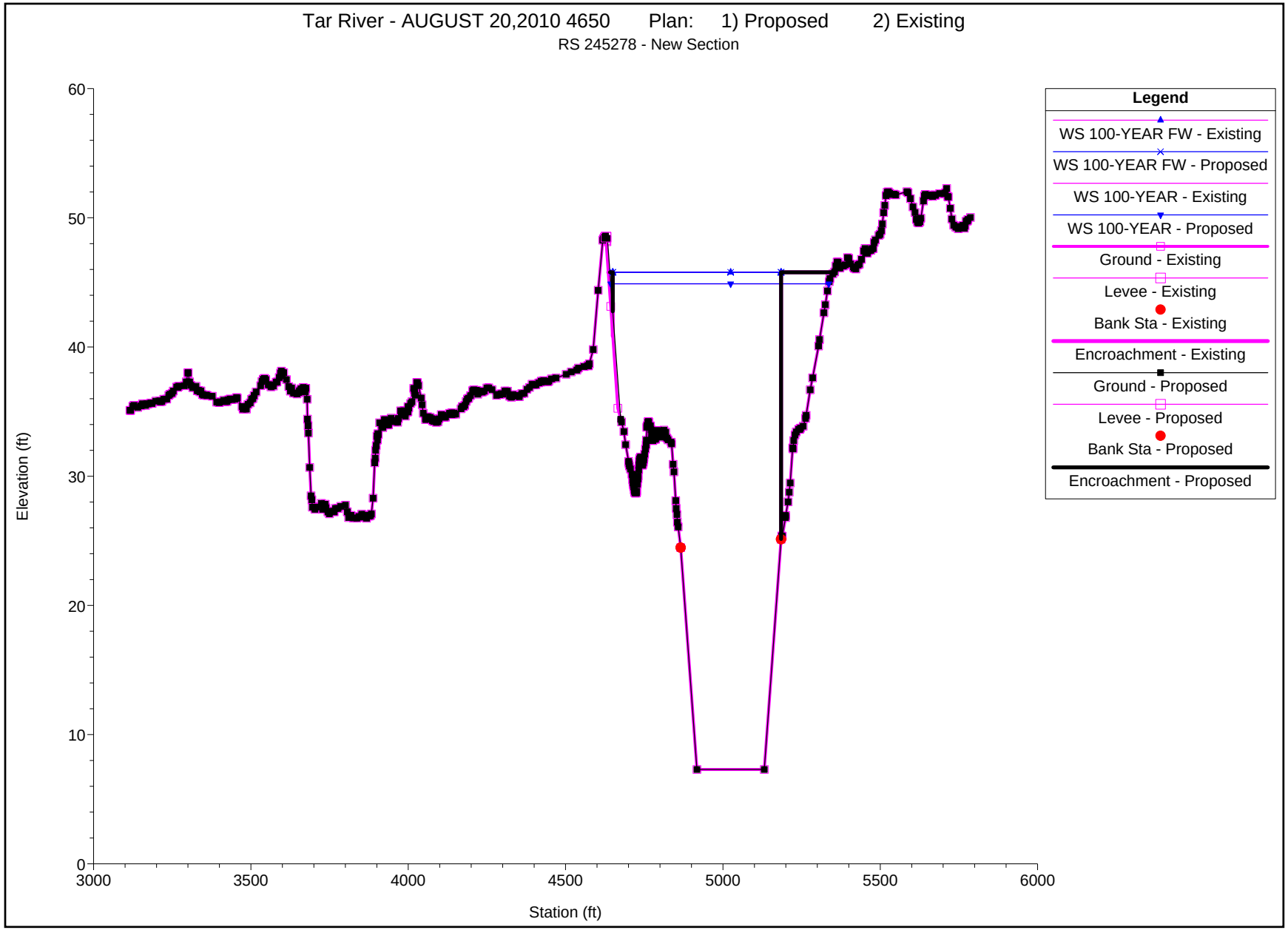

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250376 - New Section
Elevation (ft)
Station (ft)
50
45
40
35
30
25
200
400
600
800
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

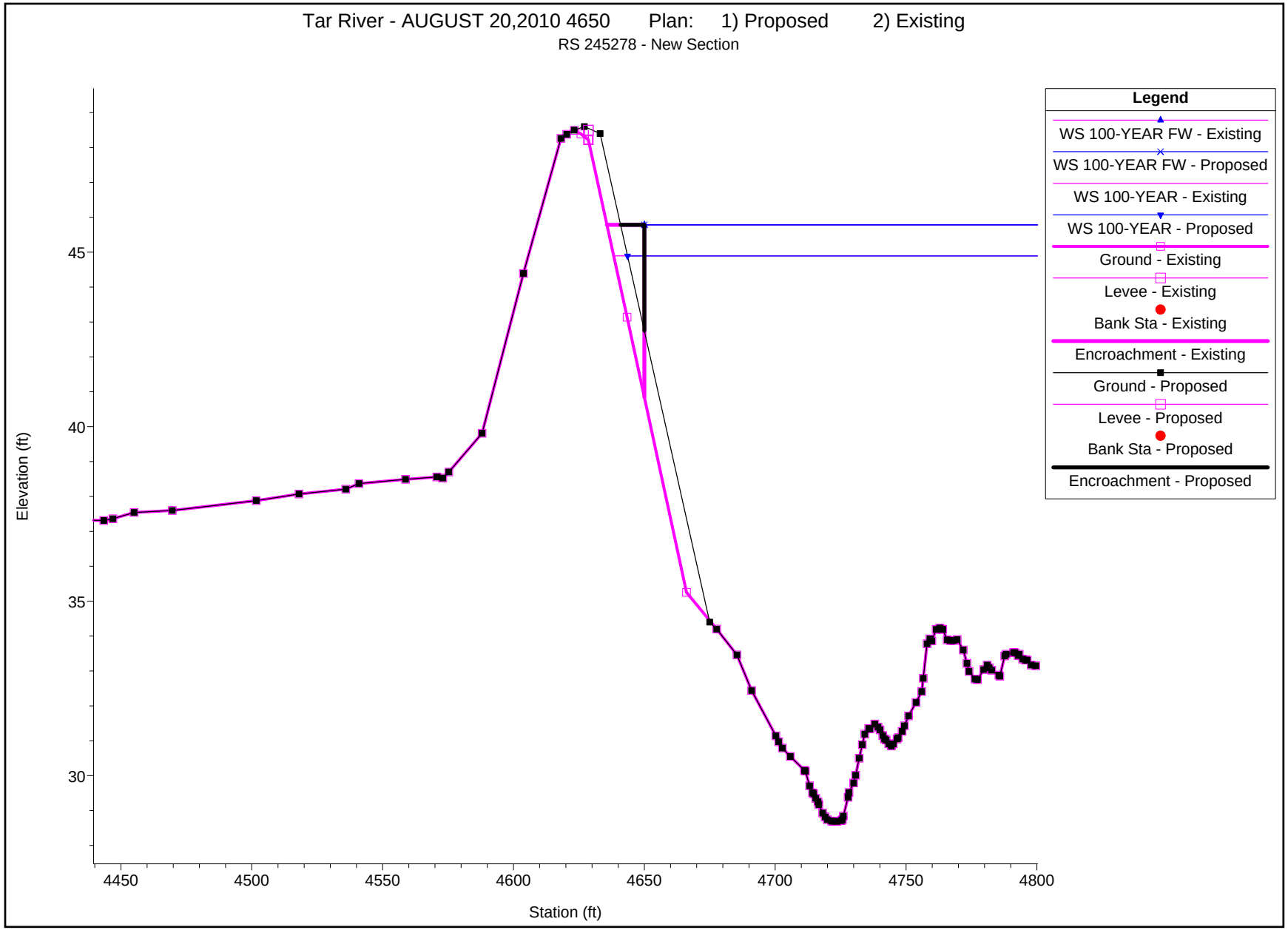

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 250174 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
0
1000
2000
3000
4000
5000
6000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

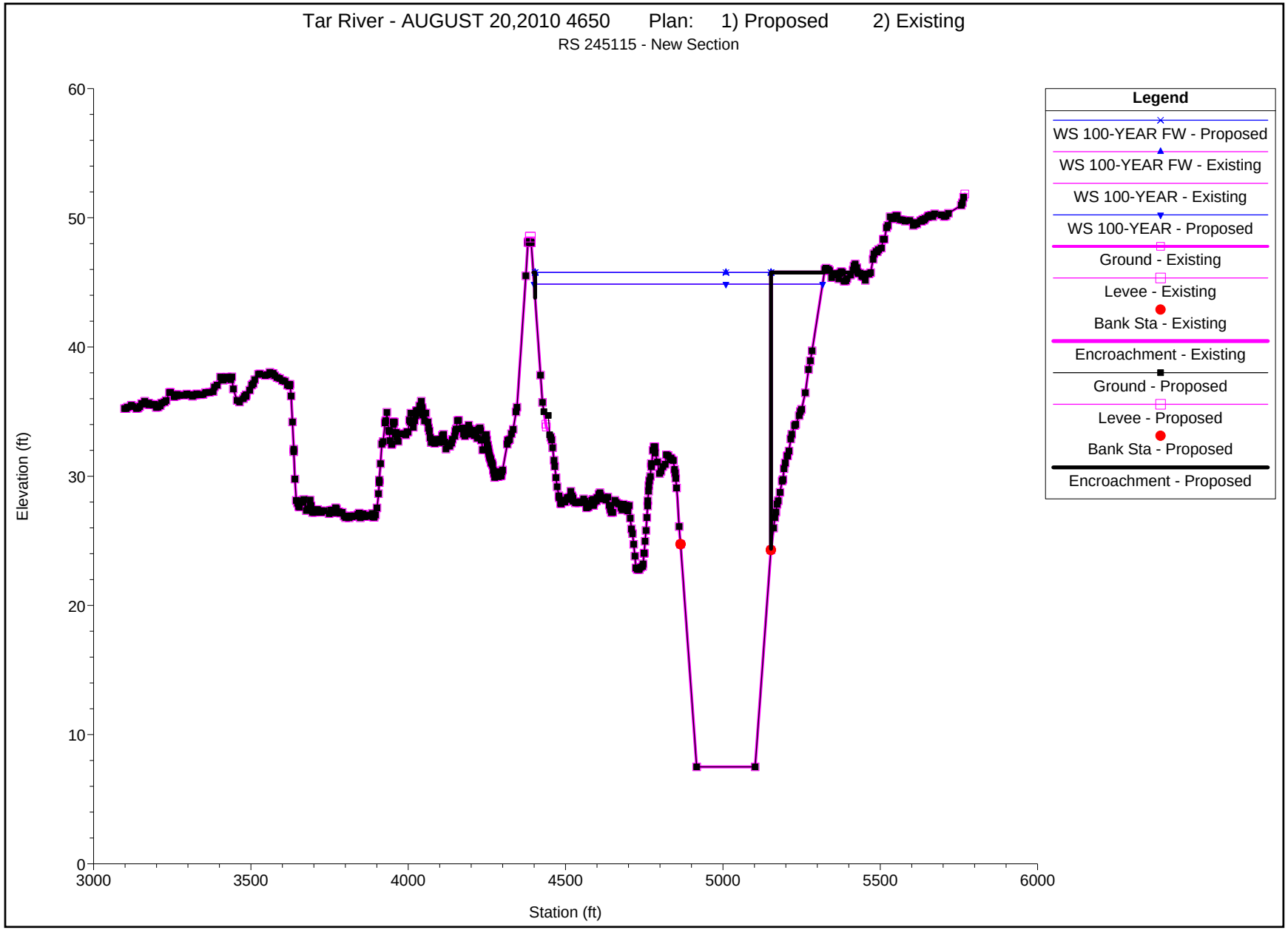

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Cross Section Tar River 10.0
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000
8000
10000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

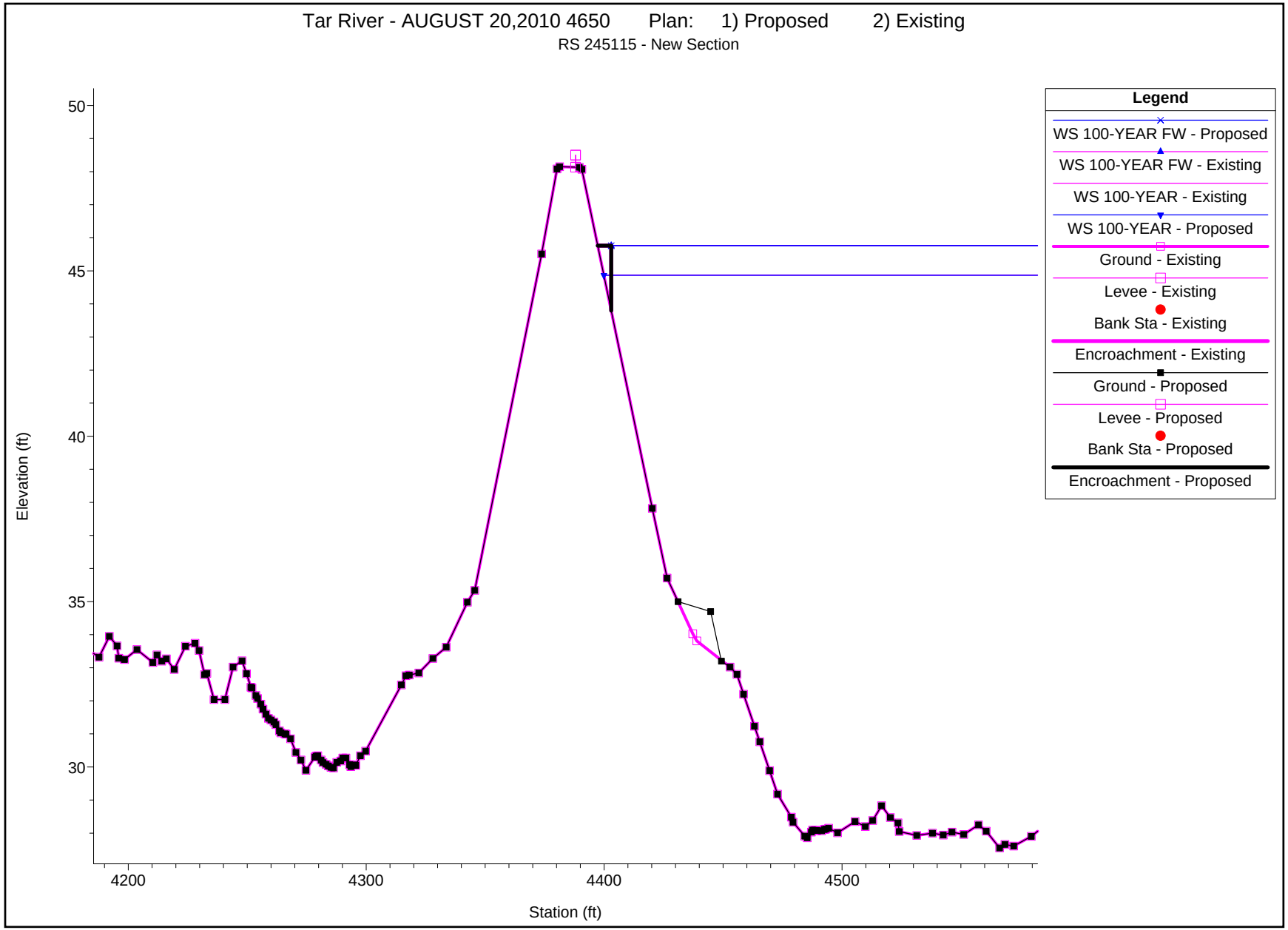

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Upstream Section of Bridge/Culvert/Weir
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-8000
-6000
-4000
-2000
0
2000
4000
6000
8000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

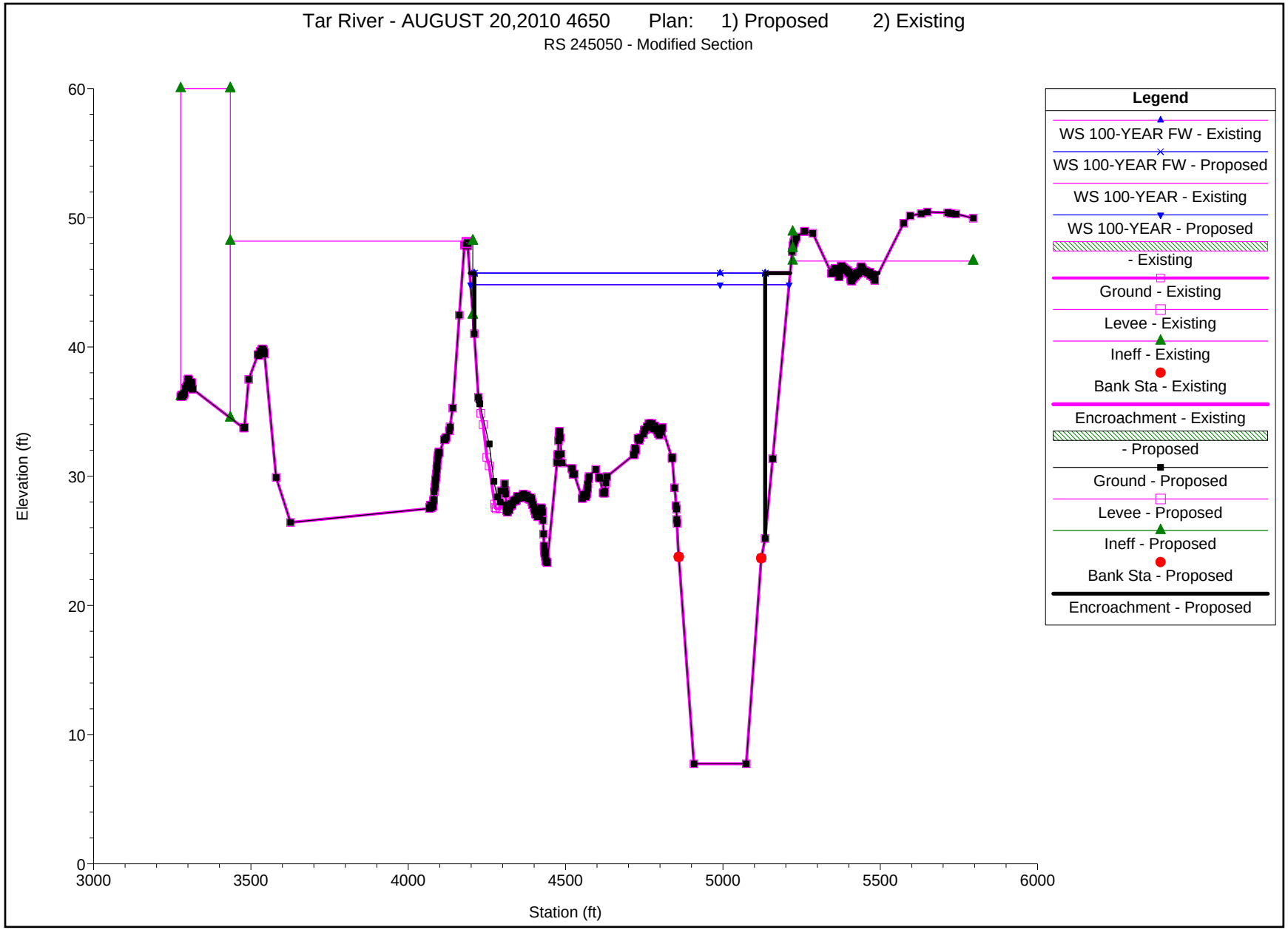

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Downstream Section of Bridge/Culvert/Weir
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-8000
-6000
-4000
-2000
0
2000
4000
6000
8000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

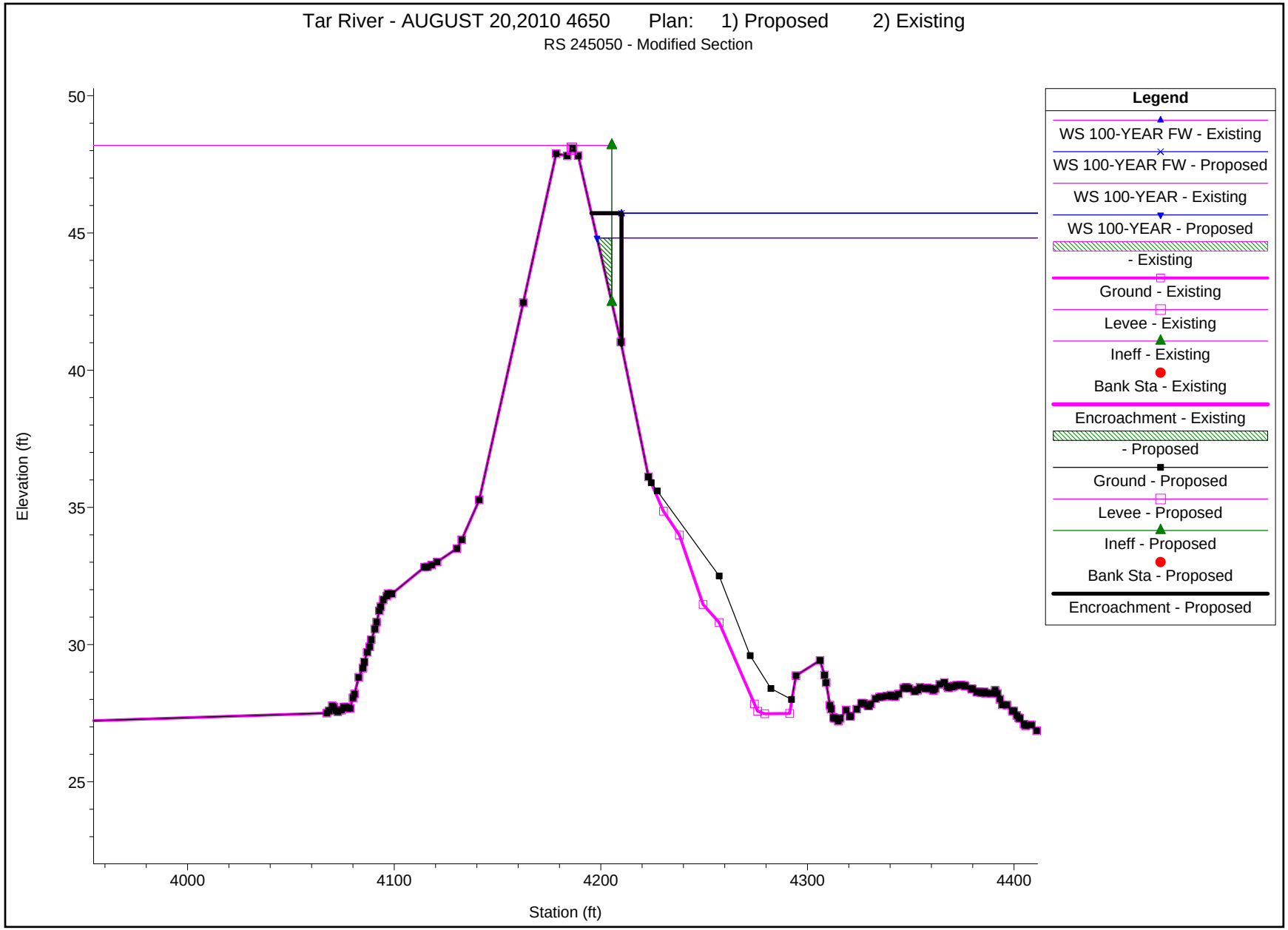

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245278 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
Ground - Existing
Levee - Existing
Bank Sta - Existing
Encroachment - Existing
Ground - Proposed
Levee - Proposed
Bank Sta - Proposed
Encroachment - Proposed

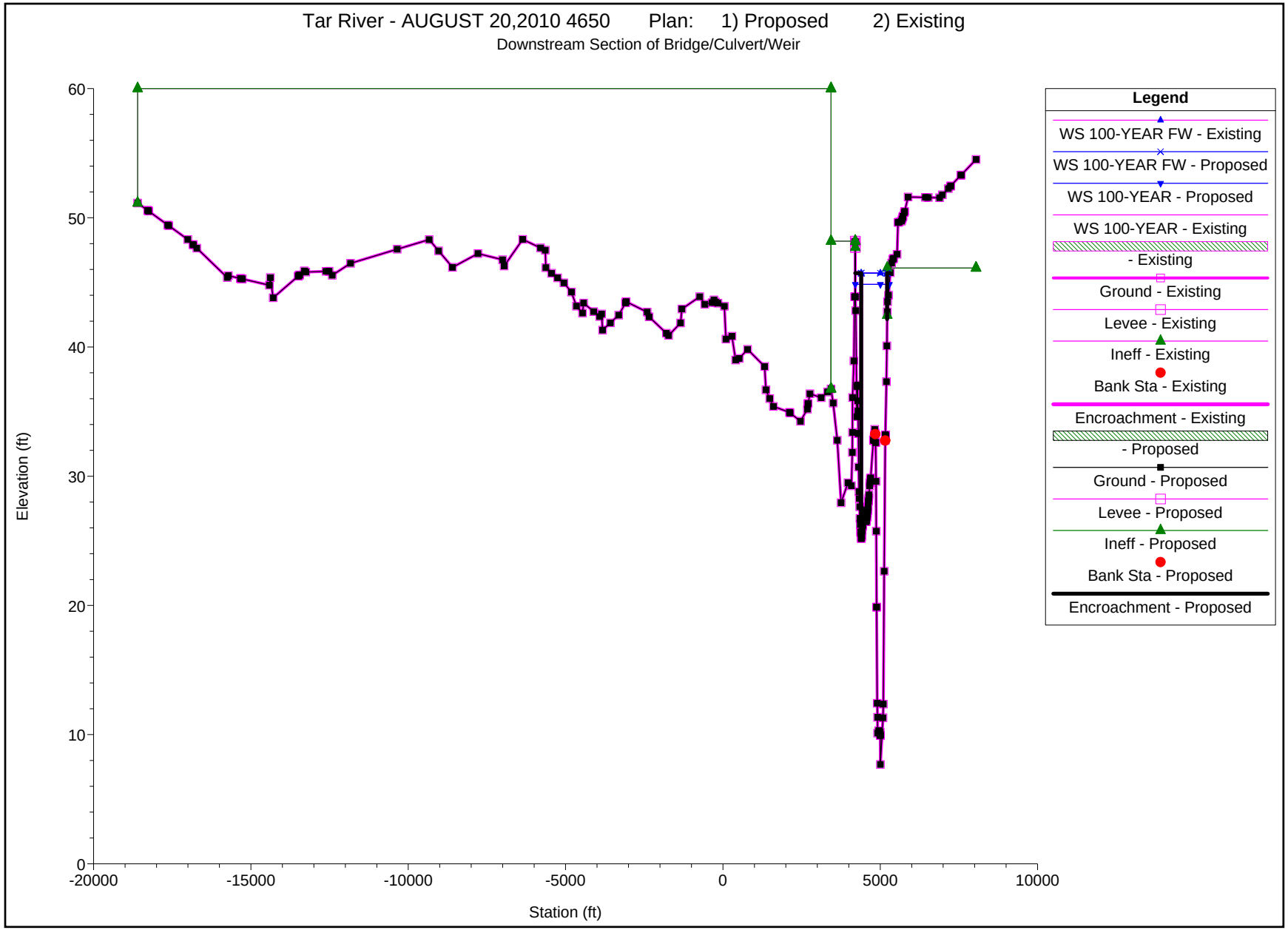

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245278 - New Section
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
Ground - Existing
Levee - Existing
Bank Sta - Existing
Encroachment - Existing
Ground - Proposed
Levee - Proposed
Bank Sta - Proposed
Encroachment - Proposed
Elevation (ft)
45
40
35
30
4450
4500
4550
4600
4650
4700
4750
4800
Station (ft)

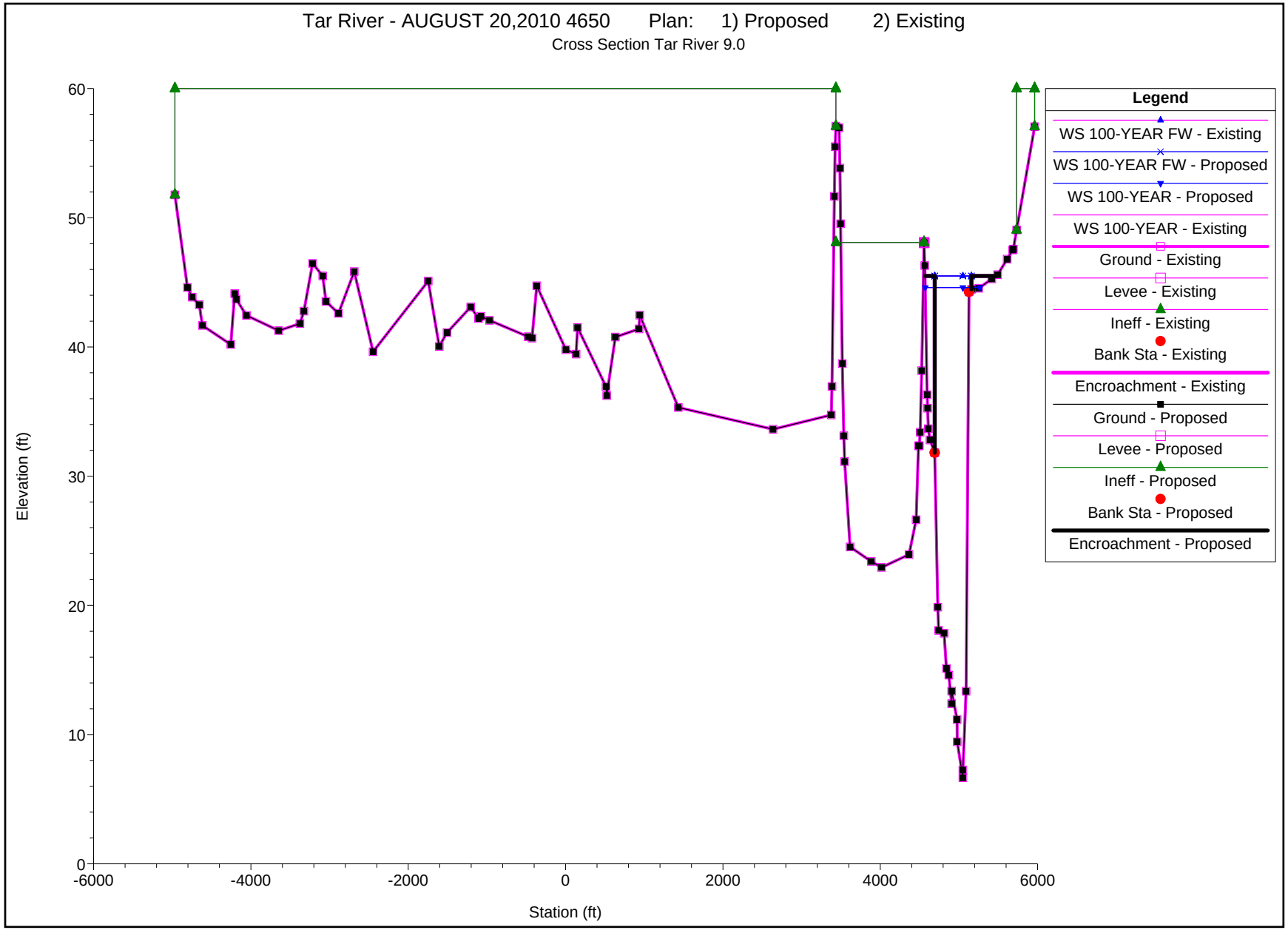

Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245115 - New Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
Ground - Existing
Levee - Existing
Bank Sta - Existing
Encroachment - Existing
Ground - Proposed
Levee - Proposed
Bank Sta - Proposed
Encroachment - Proposed


Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245115 - New Section
Legend
WS 100-YEAR FW - Proposed
WS 100-YEAR FW - Existing
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
Ground - Existing
Levee - Existing
Bank Sta - Existing
Encroachment - Existing
Ground - Proposed
Levee - Proposed
Bank Sta - Proposed
Encroachment - Proposed
Elevation (ft)
50
45
40
35
30
4200
4300
4400
4500
Station (ft)


Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245050 - Modified Section
Elevation (ft)
Station (ft)
0
10
20
30
40
50
60
3000
3500
4000
4500
5000
5500
6000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed


Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
RS 245050 - Modified Section
Elevation (ft)
50
45
40
35
30
25
4000
4100
4200
4300
4400
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Existing
WS 100-YEAR - Proposed
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed


Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Downstream Section of Bridge/Culvert/Weir
Elevation (ft)
60
50
40
30
20
10
0
-20000
-15000
-10000
-5000
0
5000
10000
Station (ft)
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Proposed
WS 100-YEAR - Existing
- Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
- Proposed
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed


Tar River - AUGUST 20,2010 4650 Plan: 1) Proposed 2) Existing
Cross Section Tar River 9.0
Elevation (ft)
Station (ft)
60
50
40
30
20
10
0
-6000
-4000
-2000
0
2000
4000
6000
Legend
WS 100-YEAR FW - Existing
WS 100-YEAR FW - Proposed
WS 100-YEAR - Proposed
WS 100-YEAR - Existing
Ground - Existing
Levee - Existing
Ineff - Existing
Bank Sta - Existing
Encroachment - Existing
Ground - Proposed
Levee - Proposed
Ineff - Proposed
Bank Sta - Proposed
Encroachment - Proposed

SECTION 7 - CONSTRUCTION PLANS

(See Attached)

PROJECT:

COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY PROJECT: PRINCEVILLE LEVEE FLOODGATE REPAIRS

CONSTRUCTION DOCUMENTATION

CLIENT: TOWN OF PRINCEVILLE
DR. GLENDA KNIGHT
201 SOUTH MAIN STREET
PRINCEVILLE, NC 27886

DESIGN TEAM COORDINATOR: SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NC 27606
919-859-2243

DESIGN TEAM:

Axiom Environmental
218 Snow Ave
Raleigh, NC 27603

The Wooten Company
120 N. Boylan Ave
Raleigh, NC 27603
919-828-0531

NV5 Engineers and Consultants, Inc.
4905 Professional Court
Raleigh, NC 27609
919-876-9799

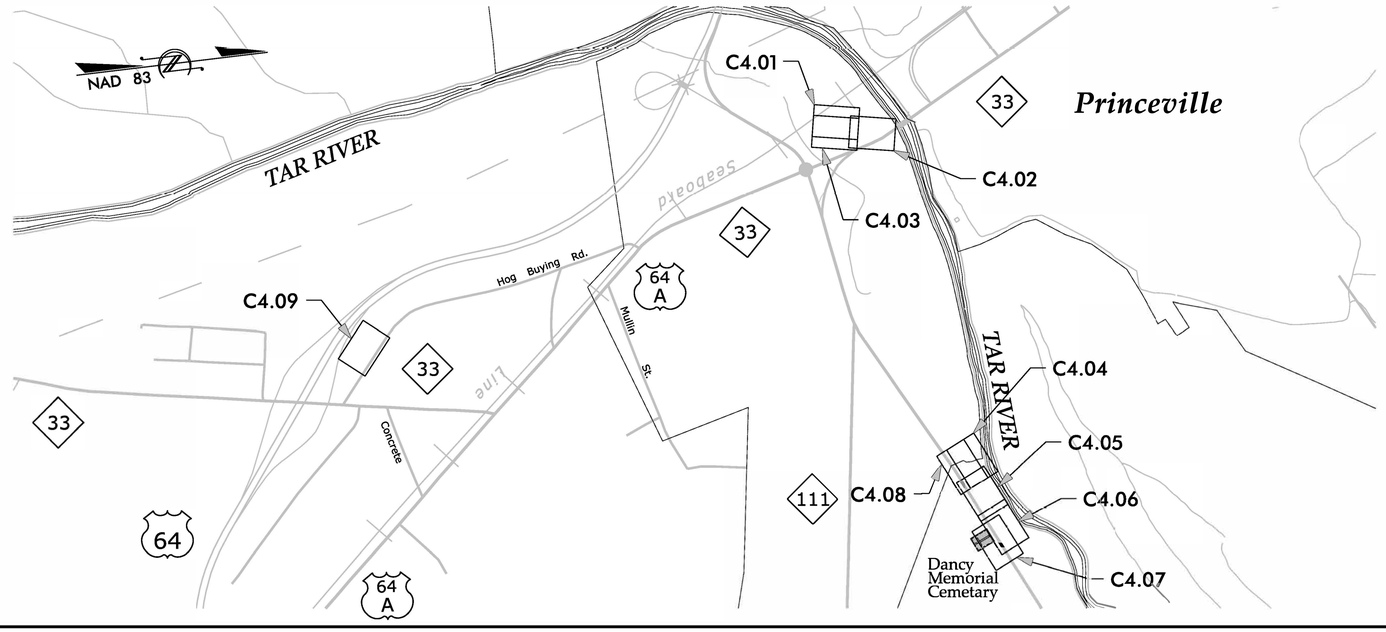
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

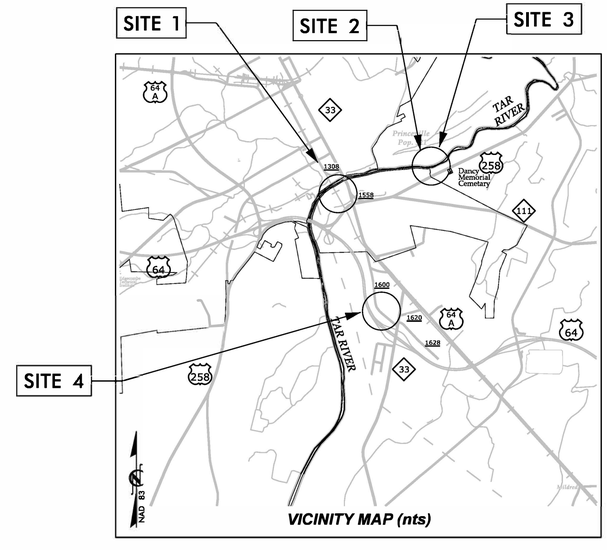
DocuSigned by: JOSH DALTON
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON
6/17/2021

INDEX OF SHEETS

TOTAL DISTURBED AREA = 4.4 ACRES

TAR-PAMLICO RIVER BASIN





VICINITY MAP (nts)

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Property Monument (ECM)
- Parcel/Sequence Number (123)
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary (WLB)
- Proposed Wetland Boundary (WLB)
- Existing Endangered Animal Boundary (EAB)
- Existing Endangered Plant Boundary (EPB)
- Existing Historic Property Boundary (HPB)
- Known Contamination Area: Soil (S)
- Potential Contamination Area: Soil (S)
- Known Contamination Area: Water (W)
- Potential Contamination Area: Water (W)
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign (S)
- Well (W)
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream (JS)
- Buffer Zone 1 (BZ 1)
- Buffer Zone 2 (BZ 2)
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch (FLOW)
- False Sump

RAILROADS:

- Standard Gauge (CSX TRANSPORTATION)
- RR Signal Milepost (MILEPOST 35)
- Switch (SWITCH)
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easment Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line (RW)
- New Right of Way Line with Pin and Cap (RW)
- New Right of Way Line with Concrete or Granite R/W Marker (RW)
- New Control of Access Line with Concrete C/A Marker (CA)
- Existing Control of Access (CA)
- New Control of Access (CA)
- Existing Easement Line (E)
- New Temporary Construction Easement (E)
- New Temporary Drainage Easement (TDE)
- New Permanent Drainage Easement (PDE)
- New Permanent Drainage / Utility Easement (DUE)
- New Permanent Utility Easement (PUE)
- New Temporary Utility Easement (TUE)
- New Aerial Utility Easement (AUE)

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut (C)
- Proposed Slope Stakes Fill (F)
- Proposed Curb Ramp (CR)
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub

- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert (CONC)
- Bridge Wing Wall, Head Wall and End Wall (CONC WW)

MINOR:

- Head and End Wall (CONC HW)
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB (CB)
- Paved Ditch Gutter
- Storm Sewer Manhole (S)
- Storm Sewer (S)

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole (P)
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) (P)
- U/G Power Line LOS C (S.U.E.*) (P)
- U/G Power Line LOS D (S.U.E.*) (P)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole (T)
- Telephone Pedestal (T)
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole (HH)
- U/G Telephone Cable LOS B (S.U.E.*) (T)
- U/G Telephone Cable LOS C (S.U.E.*) (T)
- U/G Telephone Cable LOS D (S.U.E.*) (T)
- U/G Telephone Conduit LOS B (S.U.E.*) (TC)
- U/G Telephone Conduit LOS C (S.U.E.*) (TC)
- U/G Telephone Conduit LOS D (S.U.E.*) (TC)
- U/G Fiber Optics Cable LOS B (S.U.E.*) (T FO)
- U/G Fiber Optics Cable LOS C (S.U.E.*) (T FO)
- U/G Fiber Optics Cable LOS D (S.U.E.*) (T FO)

WATER:

- Water Manhole (W)
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) (W)
- U/G Water Line LOS C (S.U.E.*) (W)
- U/G Water Line LOS D (S.U.E.*) (W)
- Above Ground Water Line (A/G Water)

TV:

- TV Pedestal (C)
- TV Tower
- U/G TV Cable Hand Hole (HH)
- U/G TV Cable LOS B (S.U.E.*) (TV)
- U/G TV Cable LOS C (S.U.E.*) (TV)
- U/G TV Cable LOS D (S.U.E.*) (TV)
- U/G Fiber Optic Cable LOS B (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS C (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS D (S.U.E.*) (TV FO)

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) (G)
- U/G Gas Line LOS C (S.U.E.*) (G)
- U/G Gas Line LOS D (S.U.E.*) (G)
- Above Ground Gas Line (A/G Gas)

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line (SS)
- Above Ground Sanitary Sewer (A/G Sanitary Sewer)
- SS Forced Main Line LOS B (S.U.E.*) (FSS)
- SS Forced Main Line LOS C (S.U.E.*) (FSS)
- SS Forced Main Line LOS D (S.U.E.*) (FSS)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box (S)
- Utility Unknown U/G Line LOS B (S.U.E.*) (?UTL)
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. (UST)
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records (AATUR)
- End of Information (E.O.I.)

SUNGATE DESIGN GROUP, P.A.
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RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON 128BA58C14994C3...
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

SYMBOLOGY

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C101
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C1.01

6/16/2021 Floodgate_Rdy_psh_C101.dgn Howard

General Notes

1. All construction shall be in accordance with the latest edition of "NCDOT 2018 Standards and Specifications for Roads and Structures" and "NCDOT 2018 Roadway Standard Drawings" and with the standards and specifications of the Town of Princeville.
2. Existing utilities noted at the time of the field survey are shown for size, material, type, and relative location only. This plan is not a comprehensive inventory or an as-built survey of existing site utilities. The Contractor is to determine the existence and location of all utilities within the work area.
3. The Contractor shall be responsible for the location and/or relocation of all utilities in coordination with the appropriate utility agency or company. The Contractor is required to call 'The NC One Call Center' (1-800-632-4949) before digging.
4. The Contractor shall be responsible for repairing or replacing any existing site features, facilities or improvements that are damaged during the demolition or construction operation that are not indicated to be removed or abandoned.
5. Install tree protection fence and clearing and grubbing erosion control measures prior to any demolition and/or construction activity on site.
6. All disturbed slopes must be stabilized within the time frame indicated on the Ground Stabilization Table (see Erosion Control Plan). All other disturbed areas must be stabilized with the time frame indicated on the Ground Stabilization Table.
7. Contractor is to field locate proposed site improvements that require demolition of existing structures for verification by the Engineer prior to demolition.
8. Construction debris to be removed from the site and properly disposed of by the Contractor. All project waste and demolition materials to be disposed of in accordance with applicable NCDEQ Standards. Contractor to provide written verification of proper disposal to owner.
9. Any buried waste, construction debris or trash which is found during the construction operation shall be thoroughly excavated and removed from the site to an approved facility prior to the placement of any permanent fill material or pavement construction.
10. Contractor to prevent surface and air movement of dust from disturbed soil surfaces through sprinkling until it is wet. Contractor is to maintain dust control measures through dry weather periods until all disturbed areas have been stabilized.
11. All stockpile areas and temporary spoil areas shall be protected by silt fence.
12. All site work shall produce surface grades adequate for storm water runoff to prevent standing water on all developed areas and to meet existing grades in smooth transition.
13. To minimize damage to existing trees, the Contractor shall cut, rather than tear roots.
14. The Contractor is responsible for furnishing and maintaining all work zone signage relative to the work to be performed for the location indicated on the project plan set. All barricading and signage shall conform to the latest edition of "NC-Manual on Uniform Traffic Control Devices for Work Zone."
15. An on-site pre-construction meeting must be held prior to any construction activity.
16. All existing site features shall remain unless noted to be removed or demolished.
17. Construction staging and access limits to be approved by the Owner prior to any construction activity on site.
18. The Contractor shall be responsible for all construction staking. Horizontal and vertical site control coordinates and elevations are shown on sheet C2.01. The contractor is responsible for all site layout, construction staking, and as-built surveys.
19. Topography, existing conditions, easement, and right-of-way survey conducted by Sungate Design Group, PA on 4/6/2021, 4/8/2021, 4/9/2021, and 5/19/2021. Coordinates shown on plan are referenced to NAD 83 (2011) horizontal datum and NAVD 88 vertical datum.
20. The contractor shall note that the drawings may not show every offset, transition, fitting, etc. that may be required. The contractor shall install such standard appurtenances as required to closely follow the grades and alignments depicted on the plans.
21. If departures from the specifications or drawings are deemed necessary by the contractor, details of such departures and reasons therefore shall be submitted to the Owner for review. No departures from contract documents shall be made without the written permission of the Owner.
22. **All dimensions and grades shown on the plans shall be field verified by the Contractor prior to the start of construction in the area. The Contractor shall notify the Owner if any errors or discrepancies exist between the project plans and the field conditions that require plan or grade modification prior to the start of construction of the improvements in the area. No extra compensation shall be paid to the Contractor for any work redone due to grades or dimensions shown incorrectly on these plans, if such notification is not provided to the Owner prior to the initiation of the subject construction and receipt of authorization to proceed with the plans construction as revised by the Engineer.**
23. Construction operations shall be limited to the hours during the day as specified by the Owner.
24. Site access and construction shall be limited to the areas shown on the construction drawings. Any damage or excavation of the existing levee is prohibited.

Riprap Gradation Requirements

Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

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DocuSigned by:
JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

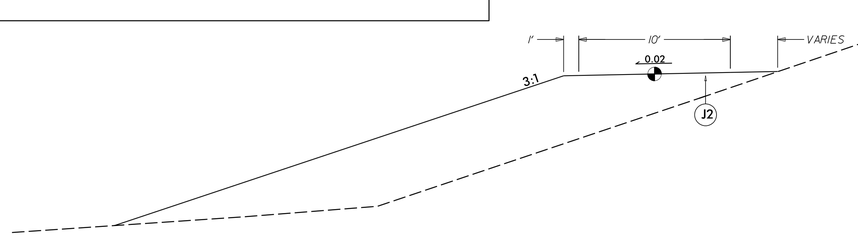
GENERAL NOTES

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C201
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C1.02

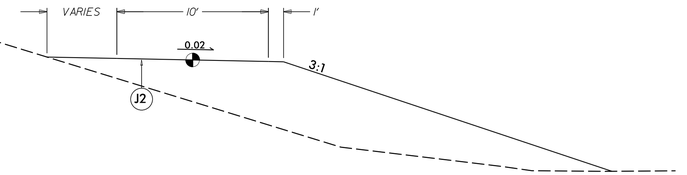
6/16/2021
Floodgate_Rdy_psh_C102.dgn
Howard

J2	PROP. 6" AGGREGATE BASE COURSE.



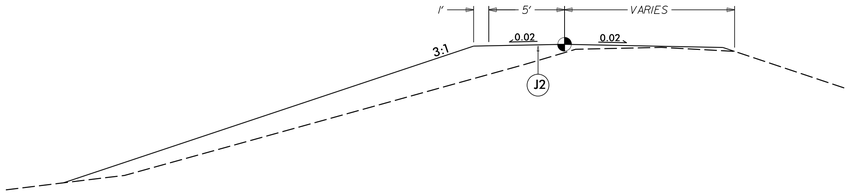
TYPICAL SECTION NO. 1

10+00 to 16+20 -AR1-
10+00 to 12+80 -AR3-
16+10 to 21+80 -AR3-
10+00 to 10+50 -AR5-



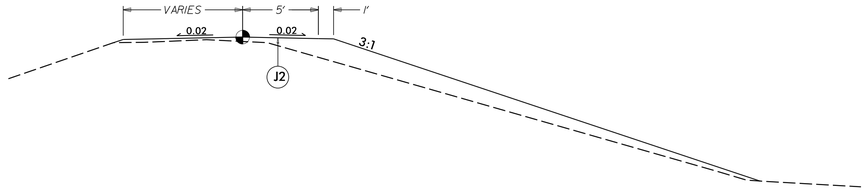
TYPICAL SECTION NO. 2

10+30 to 12+30 -AR2-
22+30 to 22+70 -AR3-
10+10 to 10+15 -AR3B-
10+20 to 10+25 -AR3B-
10+30 to 10+35 -AR3B-
10+60 to 10+70 -AR5-
10+80 to 13+20 -AR5-



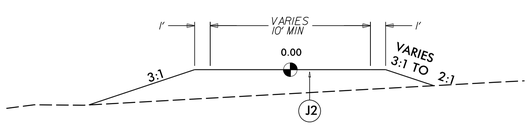
TYPICAL SECTION NO. 3

16+20 to 16+70 -AR1-
12+80 to 13+20 -AR3-
15+60 to 16+10 -AR3-
21+80 to 22+20 -AR3-



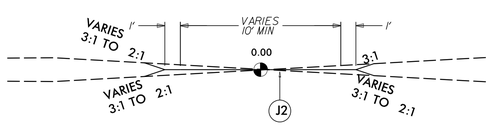
TYPICAL SECTION NO. 4

12+30 to 12+80 -AR2-
22+20 to 22+30 -AR3-
13+20 to 13+70 -AR5-



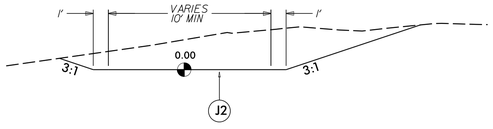
TYPICAL SECTION NO. 5

10+10 to 10+60 -AR1A-
10+10 to 10+40 -AR2A-
22+70 to 23+17 -AR3-
10+10 to 10+80 -AR3A-
10+15 to 10+20 -AR3B-
10+35 to 10+50 -AR3B-
10+15 to 10+30 -AR4-
10+10 to 10+40 -AR5A-



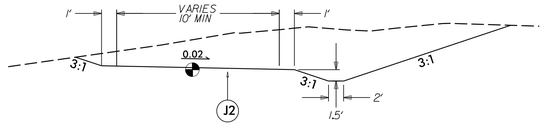
TYPICAL SECTION NO. 6

10+40 to 10+70 -AR2A-
10+25 to 10+30 -AR3B-
10+50 to 10+60 -AR3B-
10+30 to 10+50 -AR4-
10+50 to 10+60 -AR5-
10+70 to 10+80 -AR5-
10+40 to 10+50 -AR5A-



TYPICAL SECTION NO. 7

10+50 to 10+70 -AR4-
10+50 to 11+00 -AR4A-



TYPICAL SECTION NO. 8

10+05 to 10+50 -AR4A-

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ENG FIRM LICENSE NO. C-690

Digitally signed by JOSH DALTON
DocuSigned by: 70B4A2BC7A994C3...

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

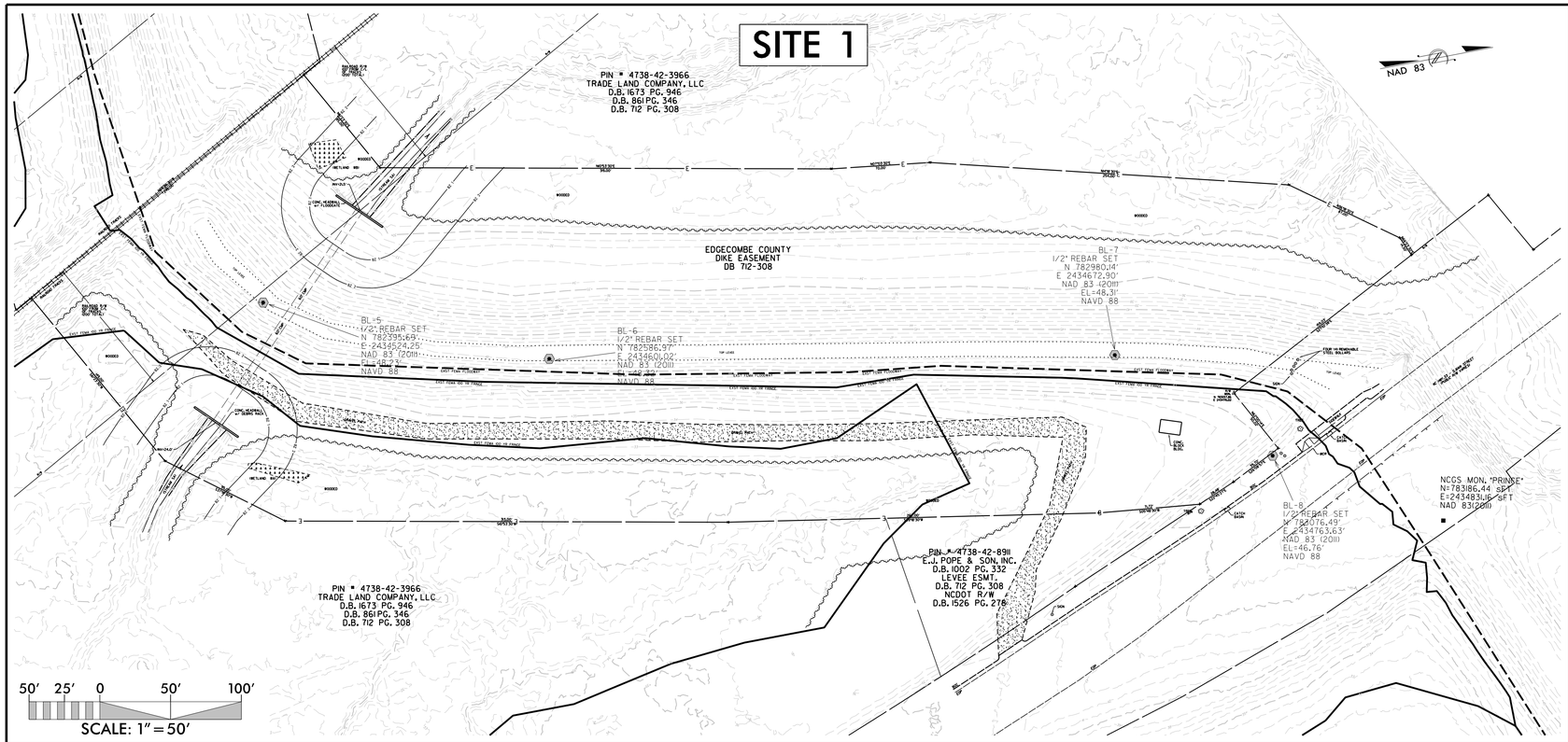
TYPICALS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C103
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

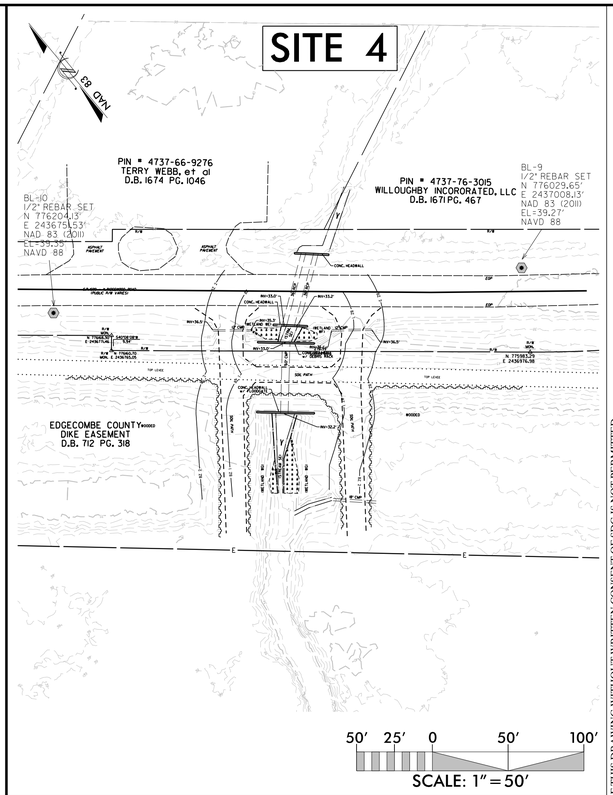
SHEET NO.
C1.03

6/16/2021
Floodgate_Rdy_psh_C103.dgn
Leonard

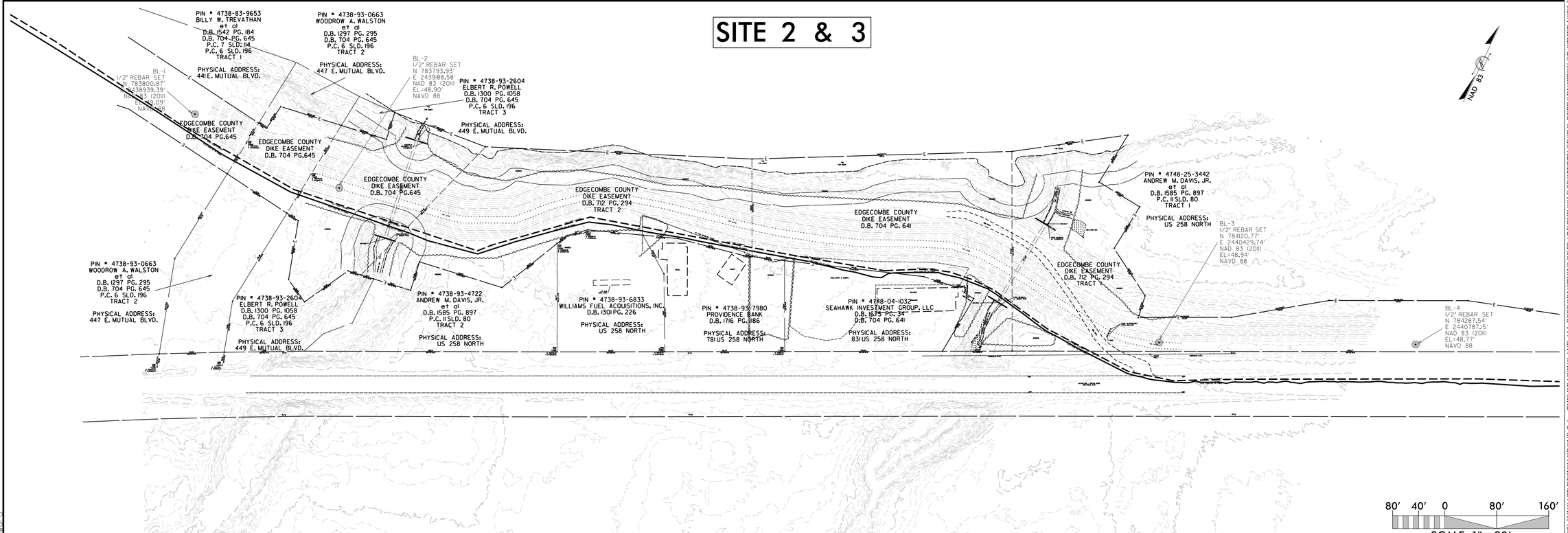
SITE 1



SITE 4



SITE 2 & 3



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DocuSigned by:
Randal C. Howard
3752B3B0B8B7468...

NORTH CAROLINA
PROFESSIONAL
SEAL
L-5015
LAND SURVEYOR
RANDAL C. HOWARD

6/16/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EXISTING CONDITIONS

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C201
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C2.01

6/16/2021
Floodgate_Rdy_psh_C201.dgn
Howard

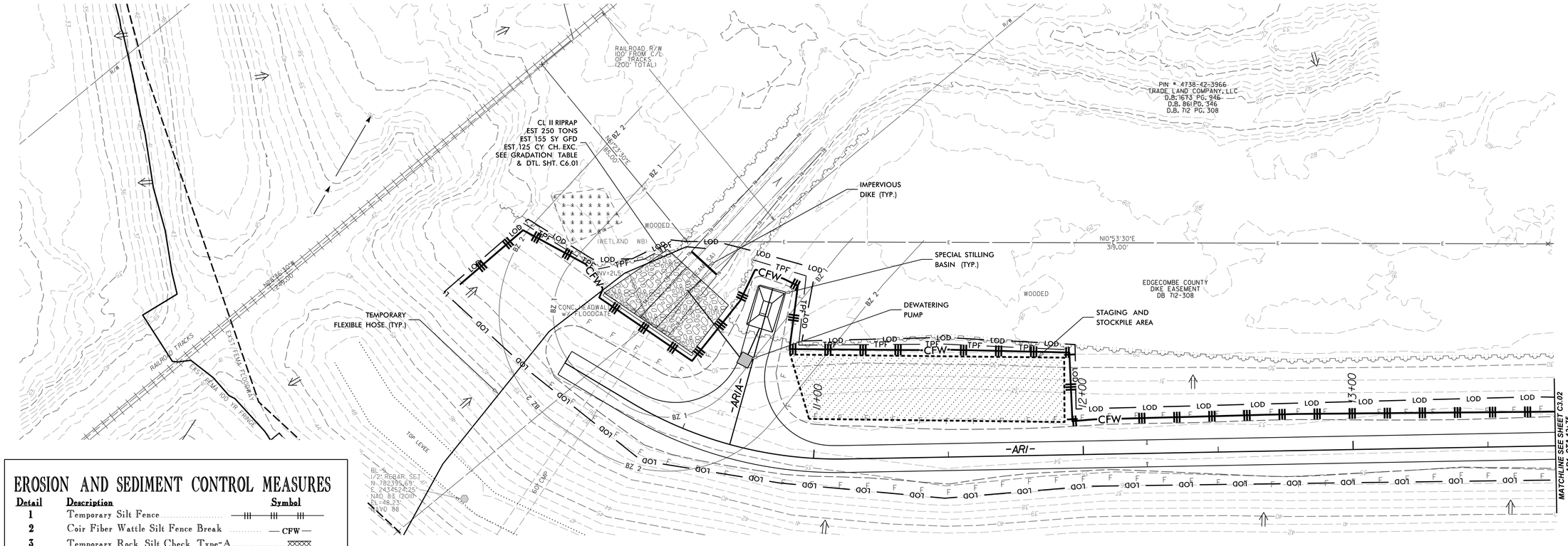
NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″=20′

PHASING FOR SHEETS C3.01 AND C3.03:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

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DocuSigned by: JOSH DALTON

PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

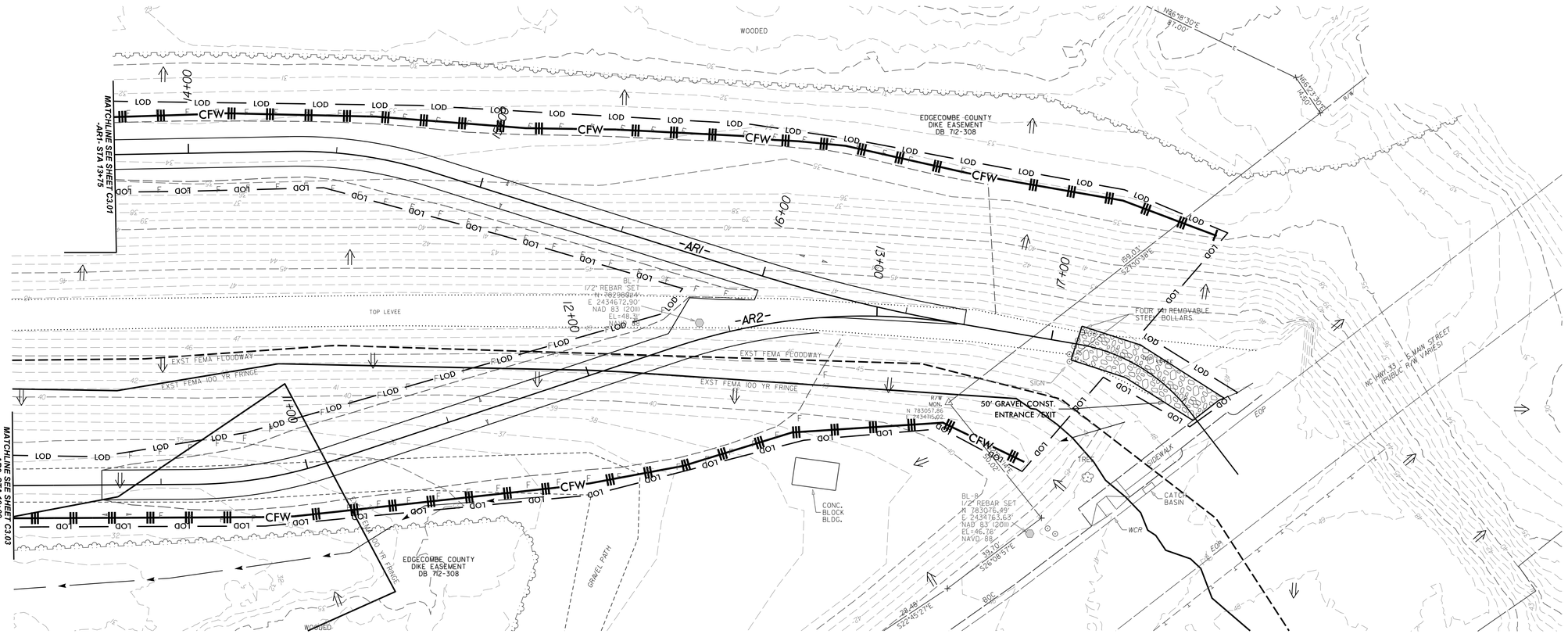
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C301
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.01

6/16/2021
Floodgate_Rdy_psh_C301.dgn
jrhward



Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 15+30 to Sta. 16+70 –AR1– LT (570 SY)
Sta. 10+50 to Sta. 12+80 –AR2– RT (450 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

NAD 83
20′ 10′ 0 20′ 40′
SCALE: 1″=20′

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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C302
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.02**

6/16/2021
Floodgate_Rdy_psh_C302.dgn
Howard

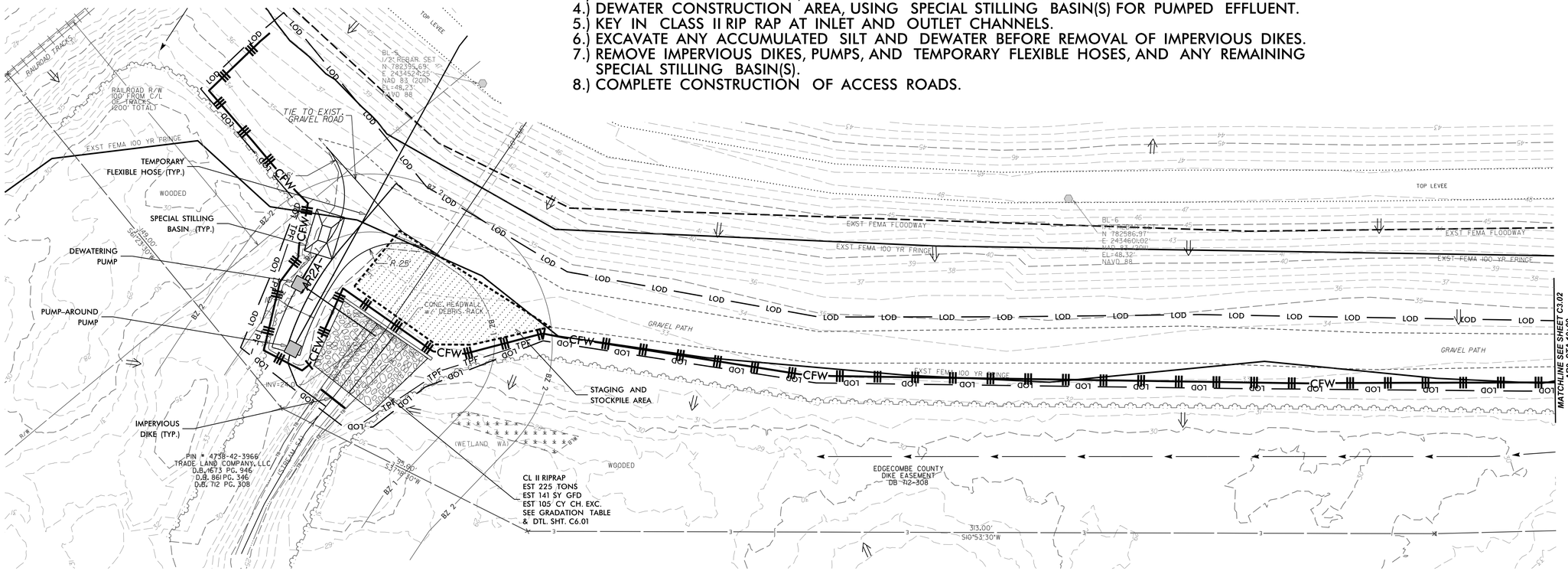
NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″ = 20′

PHASING FOR SHEETS C3.01 AND C3.03:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
JOSH DALTON
NORTH CAROLINA
PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 1

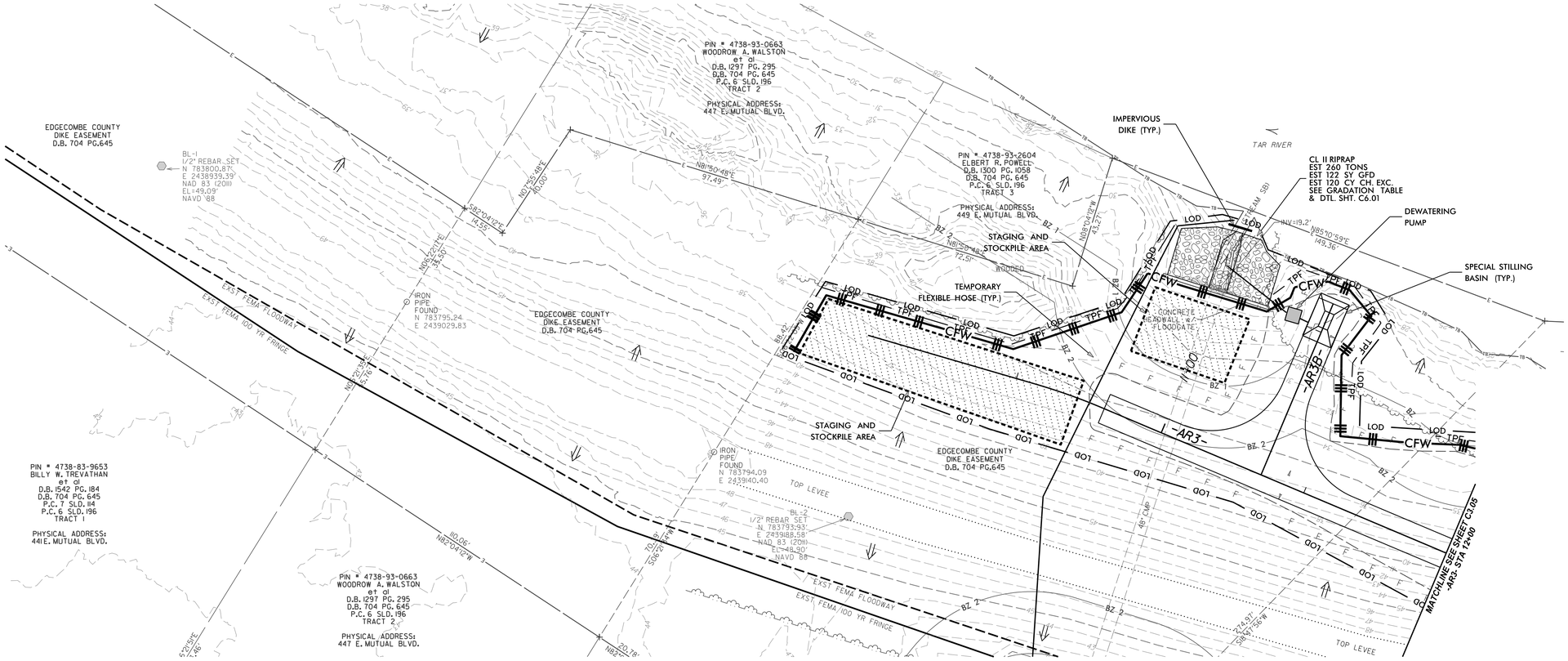
PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C303
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.03

6/16/2021
F:\Floodgate_Rdy_psh_C303.dgn
Howard

PHASING FOR SHEETS C3.04 AND C3.08:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



Place Matting for Erosion Control on Slope as Work Allows.
Sta. 11+80 to Sta. 12+00 –AR3– LT (55 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF TPF TPF
9	Limits of Disturbance	LOD LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

Digitally signed by JOSH DALTON
Date: 2021.06.17 10:48:57 -04'00'
PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C304
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

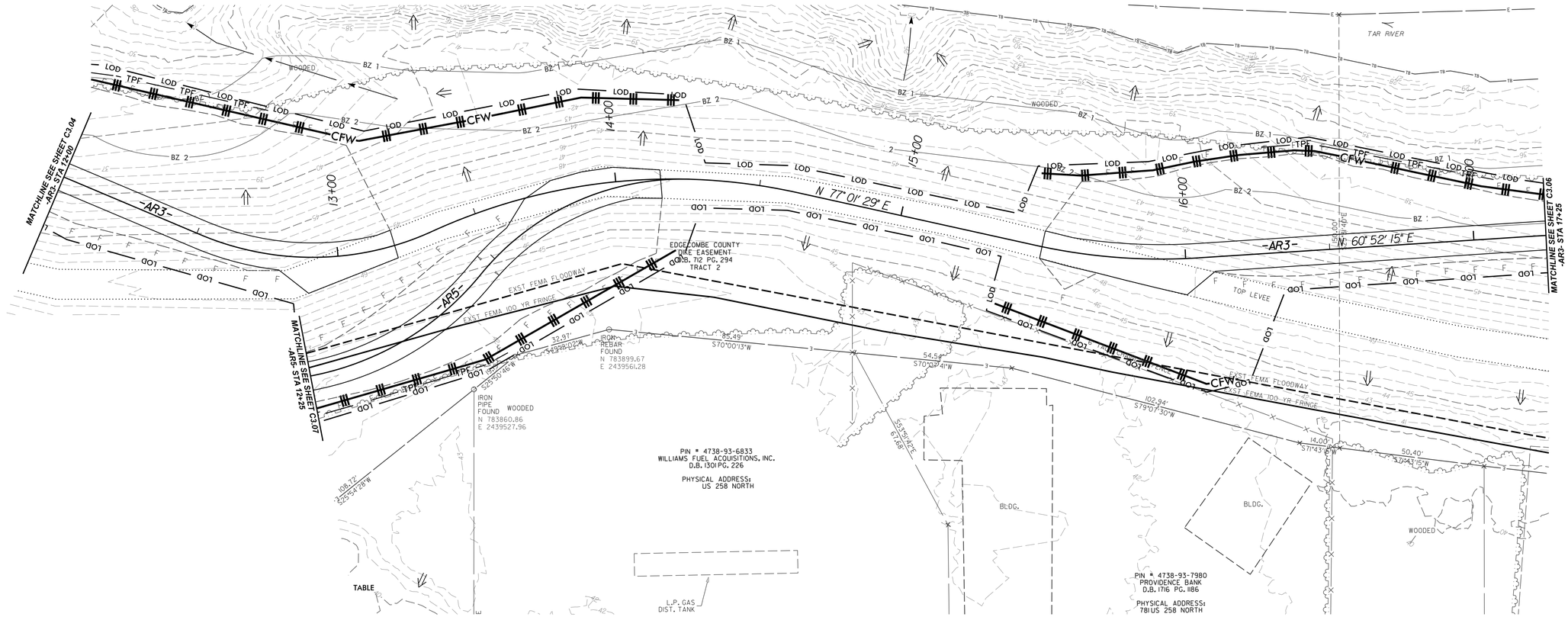
SHEET NO. **C3.04**

6/16/2021
Floodgate_Rdy_psh_C304.dgn
Howard

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 12+00 to Sta. 13+10 –AR3– LT (355 SY)
Sta. 15+90 to Sta. 16+60 –AR3– LT (200 SY)

20′ 10′ 0 20′ 40′
SCALE: 1″=20′

NAD 83



NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C305
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.05**

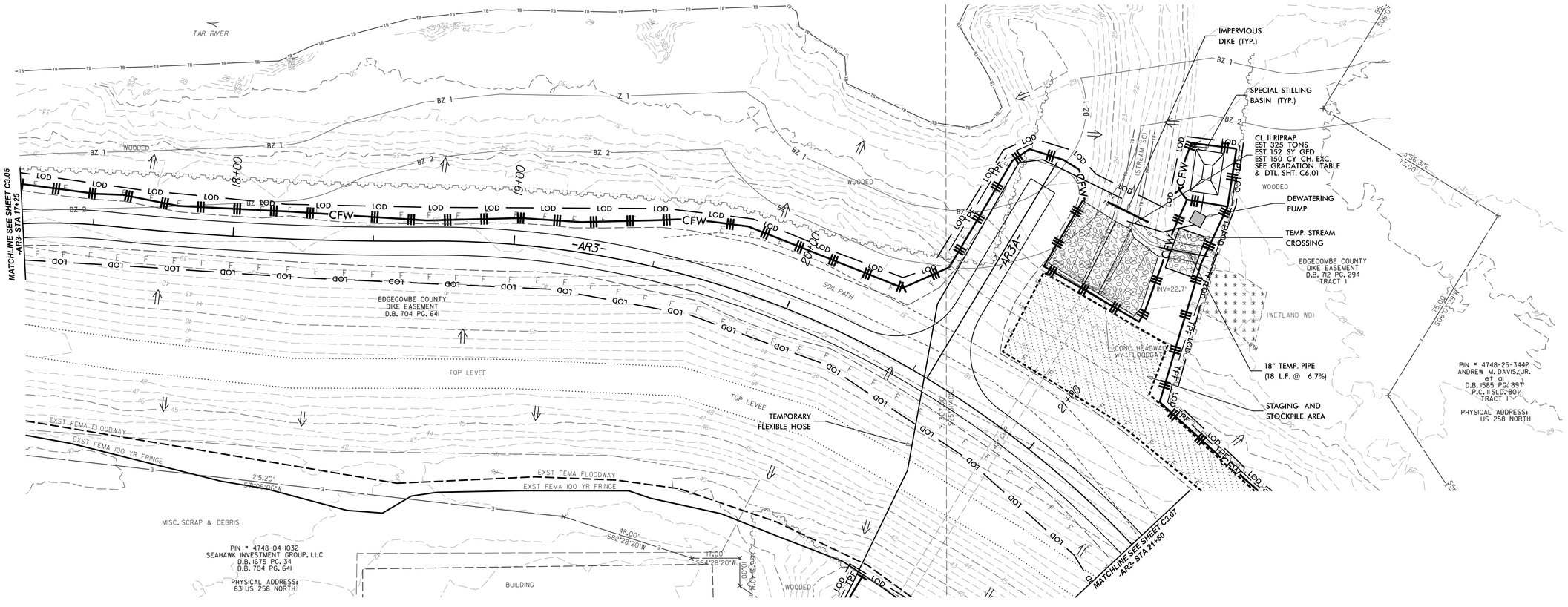
6/16/2021
Floodgate_Rdy_psh_C305.dgn
Harold

SCALE: 1" = 20'

NAD 83

PHASING FOR SHEETS C3.06 AND C3.07:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



NOTE:
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EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
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ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C306
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

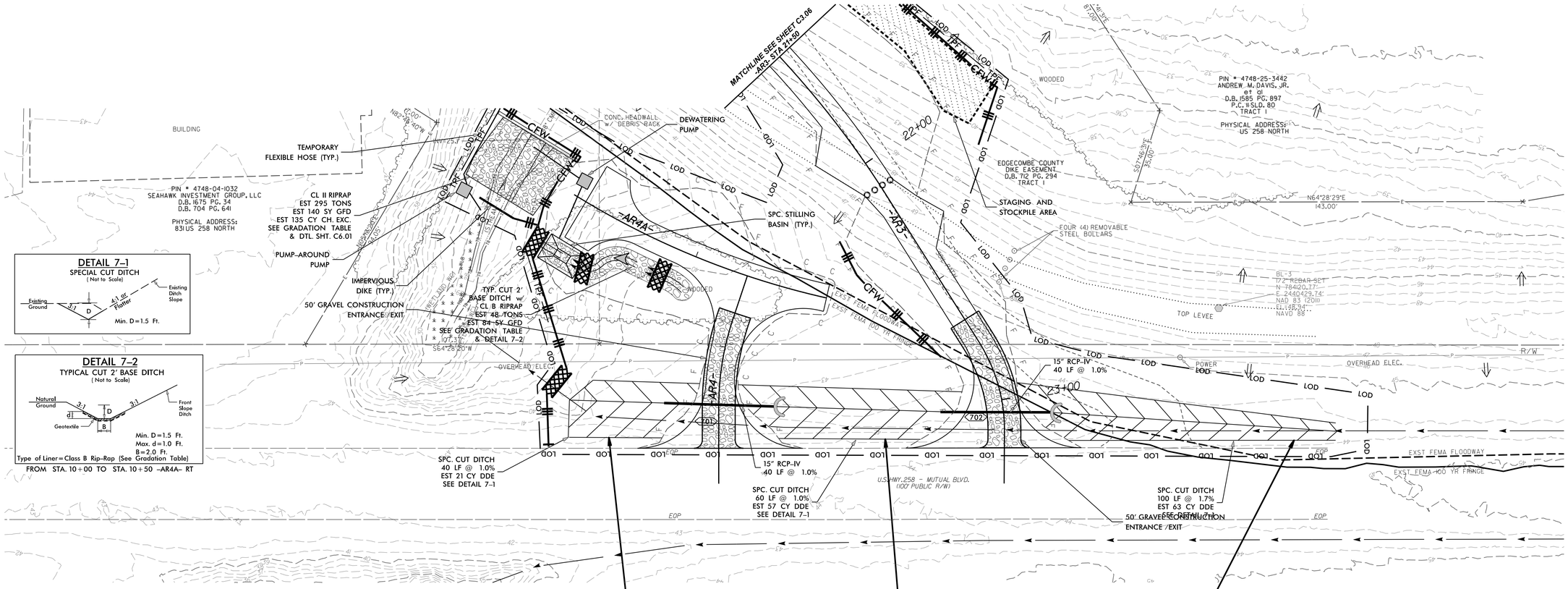
SHEET NO. C3.06

6/16/2021
Floodgate_Rdy_psh_C306.dgn
Howard

SCALE: 1" = 20'

PHASING FOR SHEETS C3.06 AND C3.07:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



DETAIL 7-1
SPECIAL CUT DITCH
(Not to Scale)

DETAIL 7-2
TYPICAL CUT 2' BASE DITCH
(Not to Scale)

Type of Liner = Class B Rip-Rap (See Gradation Table)
FROM STA. 10+00 TO STA. 10+50 -AR4A- RT

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 21+50 to Sta. 22+10 -AR3- LT (185 SY)

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE. (50 SY)

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE. (75 SY)

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE. (125 SY)

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES SYMBOLOGY ARE GRAPHICALLY SHOWN OUTSIDE OF THE LIMITS OF DISTURBANCE ONLY FOR THE PURPOSE OF VISUAL CLARITY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED WITHIN LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C307
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.07

6/16/2021
Floodgate_Rdy_psh_C307.dgn
Howard

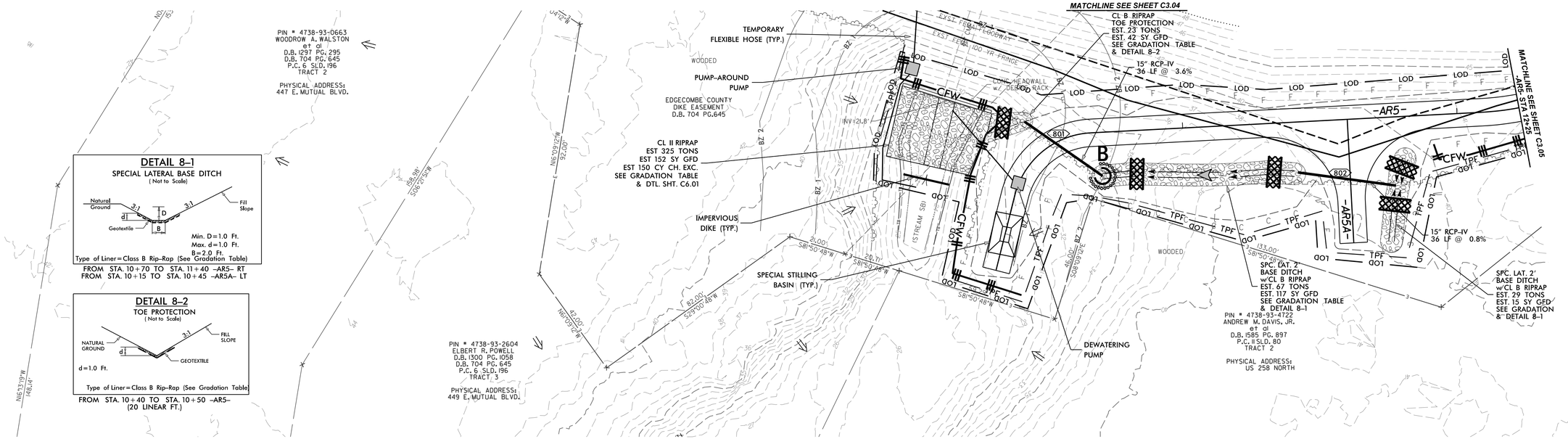
20′ 10′ 0 20′ 40′

SCALE: 1″=20′

NAD 83

PHASING FOR SHEETS C3.04 AND C3.08:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.



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EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	— CFW —
3	Temporary Rock Silt Check Type-A	
4	Temporary Rock Silt Check Type-B	
5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	— TPF — TPF — TPF —
9	Limits of Disturbance	— LOD — LOD —

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C308
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C3.08

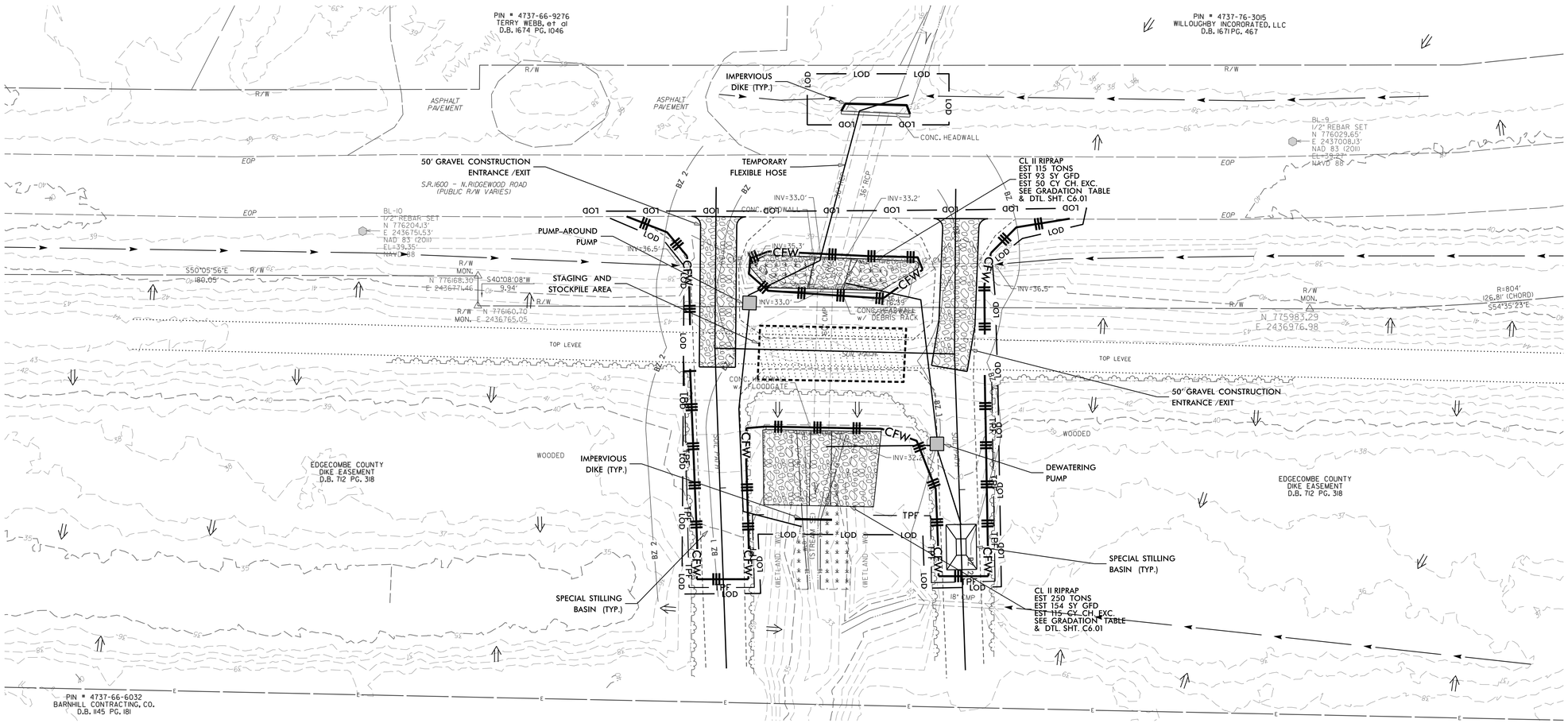
6/16/2021
Floodgate_Rdy_psh_C308.dgn
Howard

PHASING FOR SHEET C3.09:

1.) INSTALL SPECIAL STILLING BASIN(S).
2.) INSTALL PUMPS AND TEMPORARY FLEXIBLE HOSES.
3.) INSTALL IMPERVIOUS DIKES, AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4.) DEWATER CONSTRUCTION AREA, USING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
5.) KEY IN CLASS II RIP RAP AT INLET AND OUTLET CHANNELS.
6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
7.) REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSES, AND ANY REMAINING SPECIAL STILLING BASIN(S).
8.) COMPLETE CONSTRUCTION OF ACCESS ROADS.

20' 10' 0 20' 40'
SCALE: 1" = 20'

NAD 83



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EROSION AND SEDIMENT CONTROL MEASURES

Detail	Description	Symbol
1	Temporary Silt Fence	
2	Coir Fiber Wattle Silt Fence Break	CFW
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5	Wattle / Coir Fiber Wattle	
6	Rock Pipe Inlet Sediment Trap Type-B	
7	Special Stilling Basin	
8	Temp. Tree Prot. Fence	TPF
9	Limits of Disturbance	LOD

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENT CONTROL - SITE 4

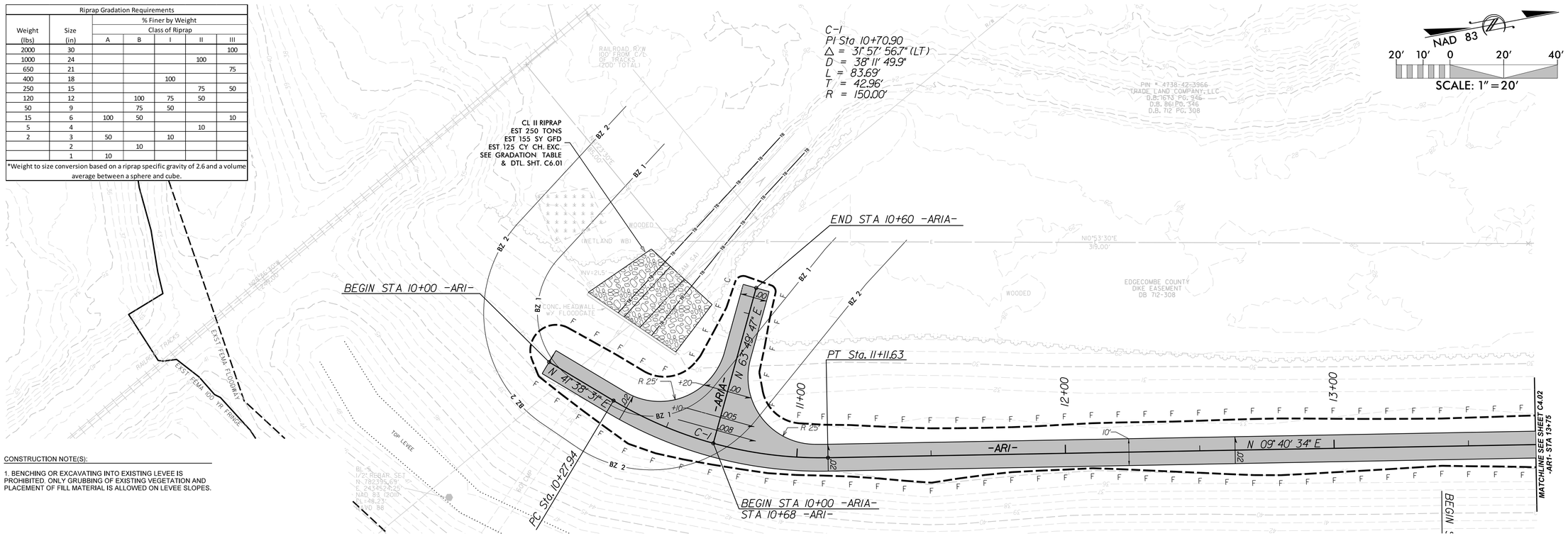
PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C309
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C3.09**

6/16/2021
I:\Floodgate_Rdy_psh_C309.dgn
Howard

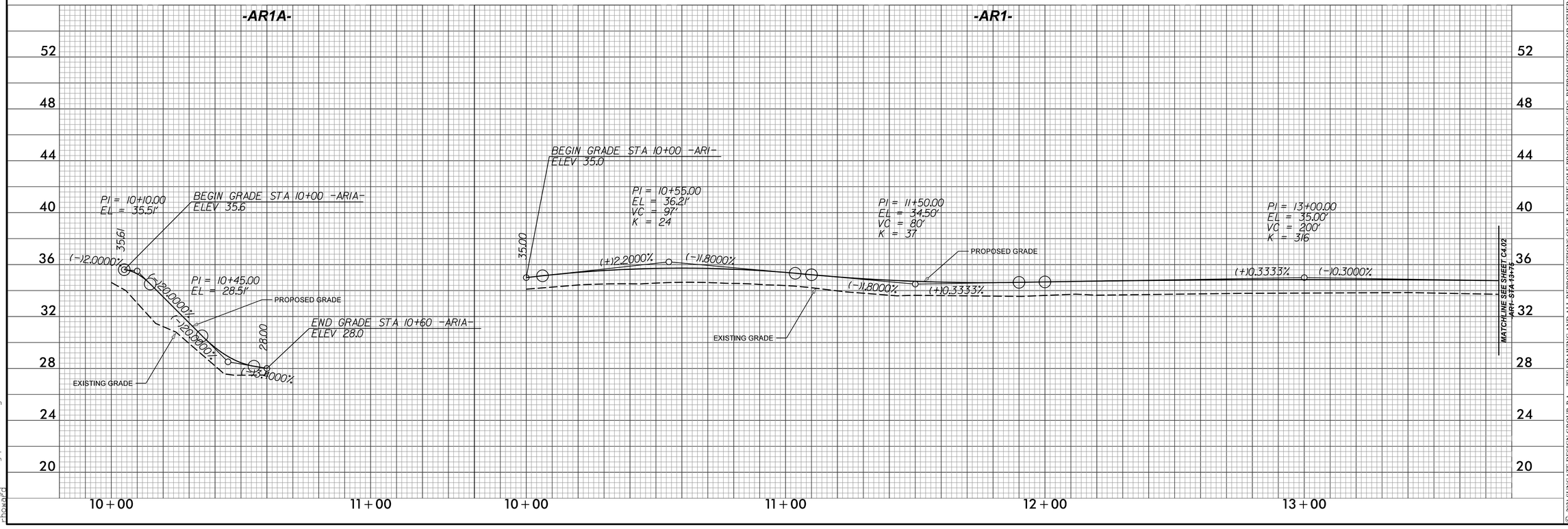
Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap					
		A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by: JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

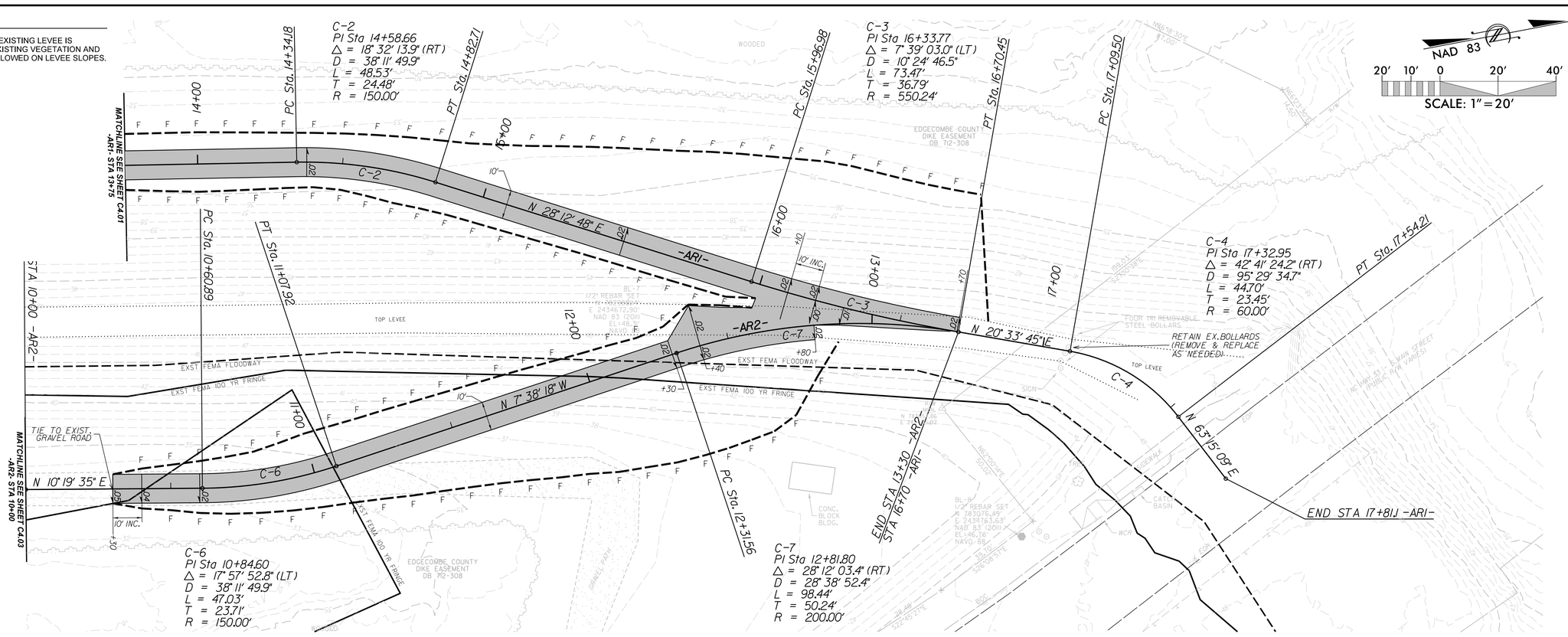
GRADING & DRAINAGE - SITE 1

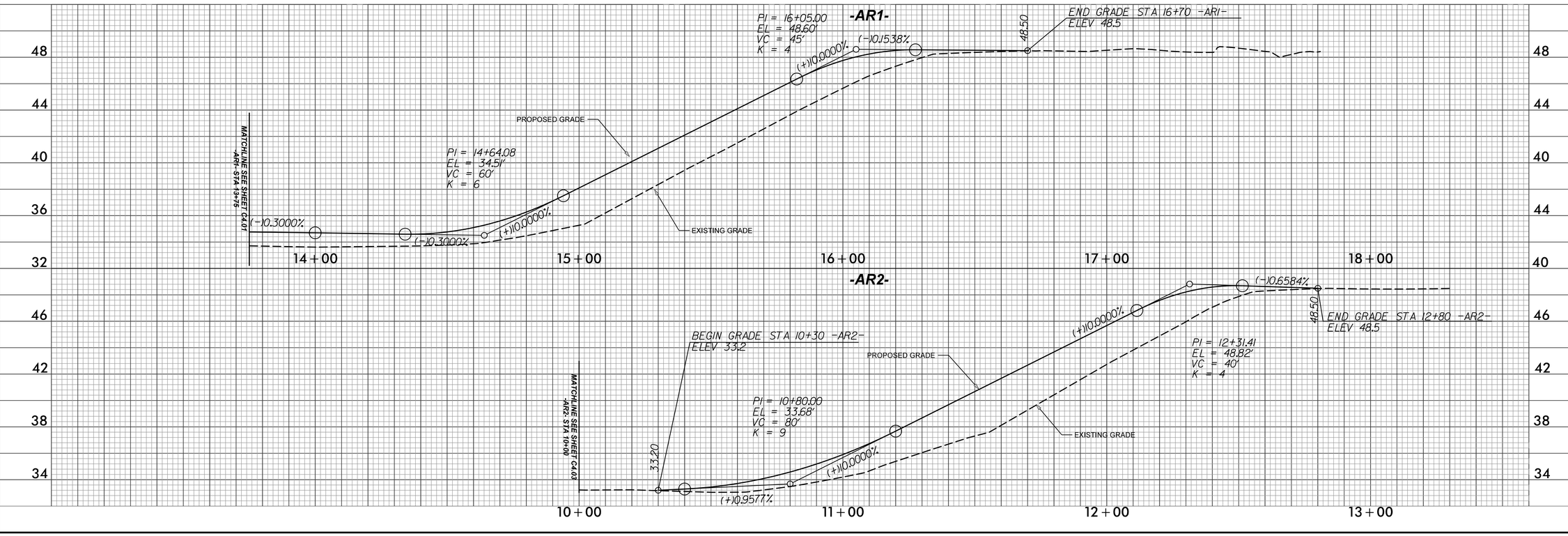
PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C401
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C4.01

6/16/2021 Floodgate_Rdy_psh_C401.dgn Howard

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
LICENSED ENGINEER
PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 1

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C402
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	

SHEET NO. **C4.02**

6/16/2021
Floodgate_Rdy_psh_C402.dgn
Layout

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

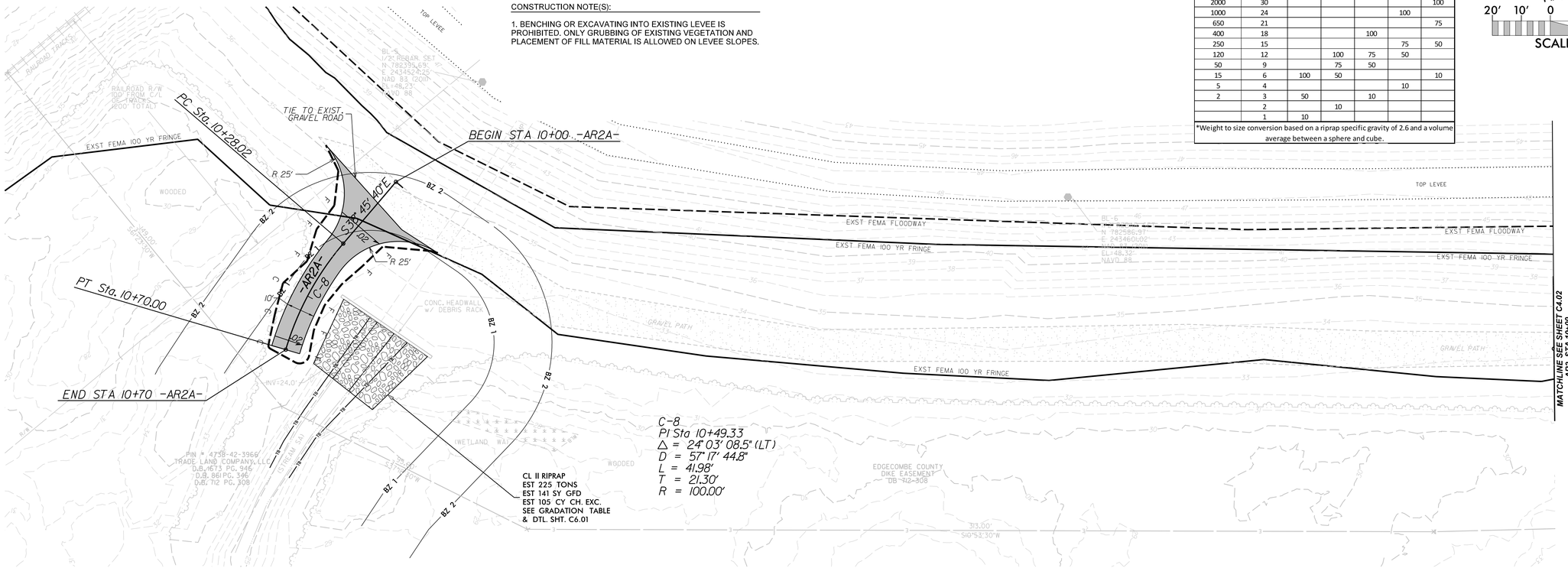
Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

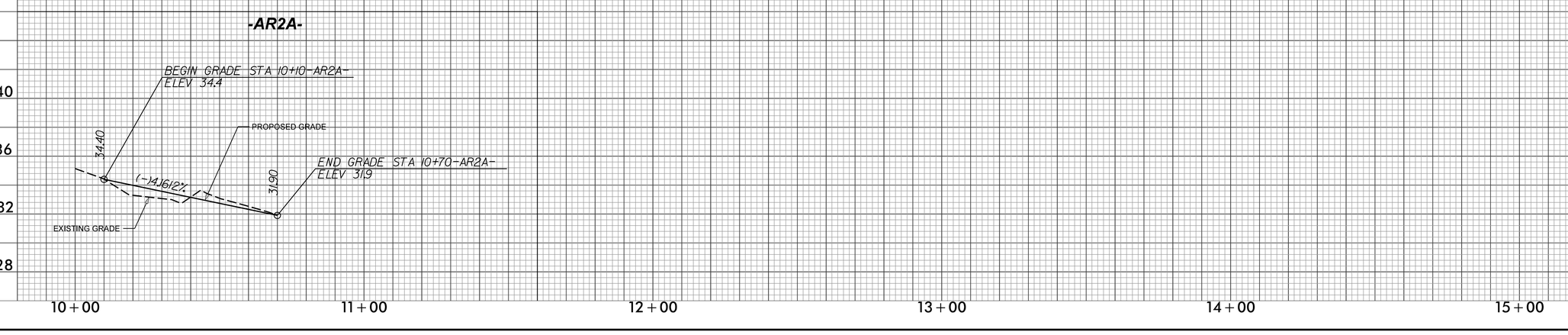
*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

NAD 83

20′ 10′ 0 20′ 40′

SCALE: 1″ = 20′





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

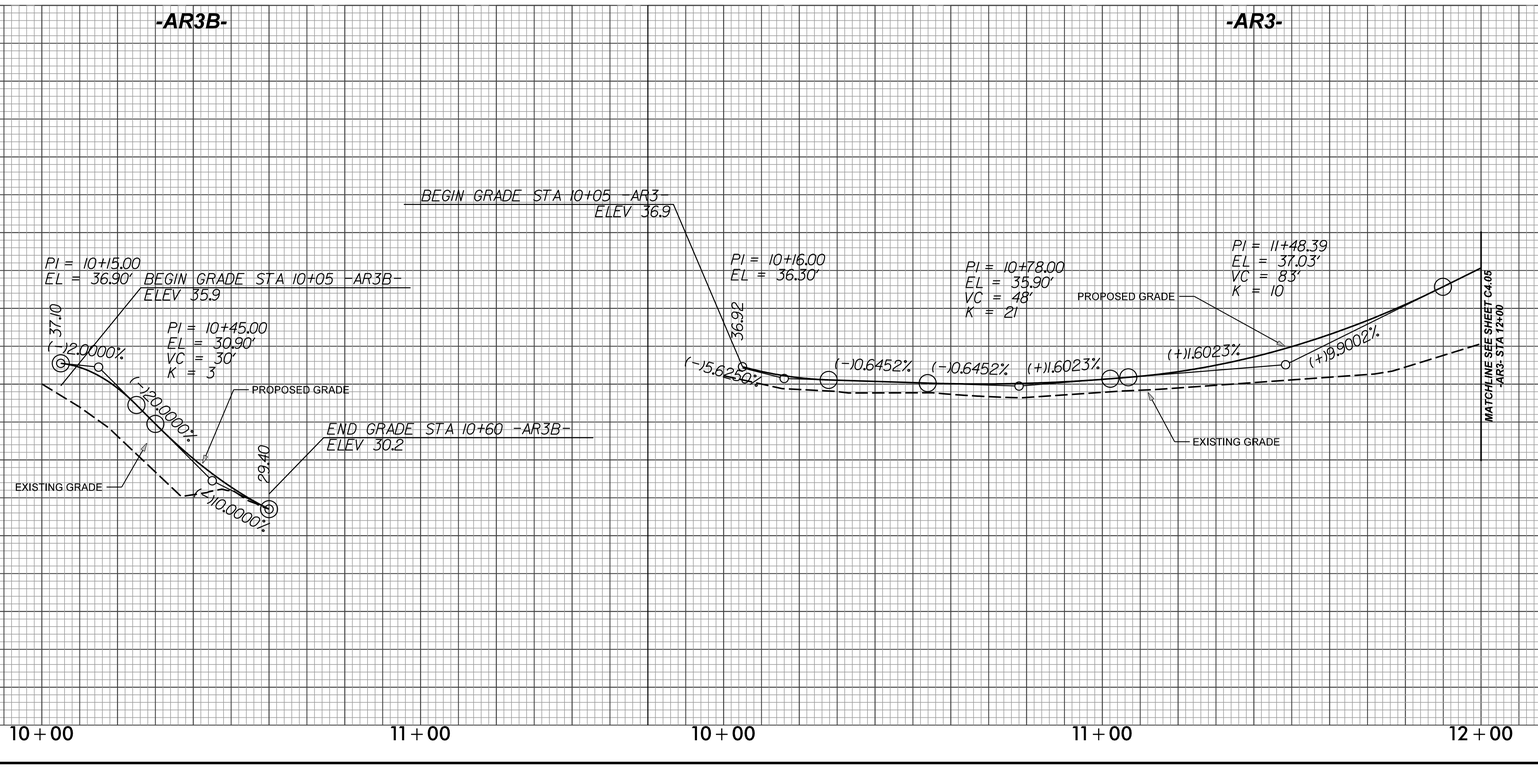
GRADING & DRAINAGE - SITE 1

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C403
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C4.03

6/16/2021
Floodgate_Rdy_psh_C403.dgn
Howard

Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight					
		Class of Riprap					
		A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

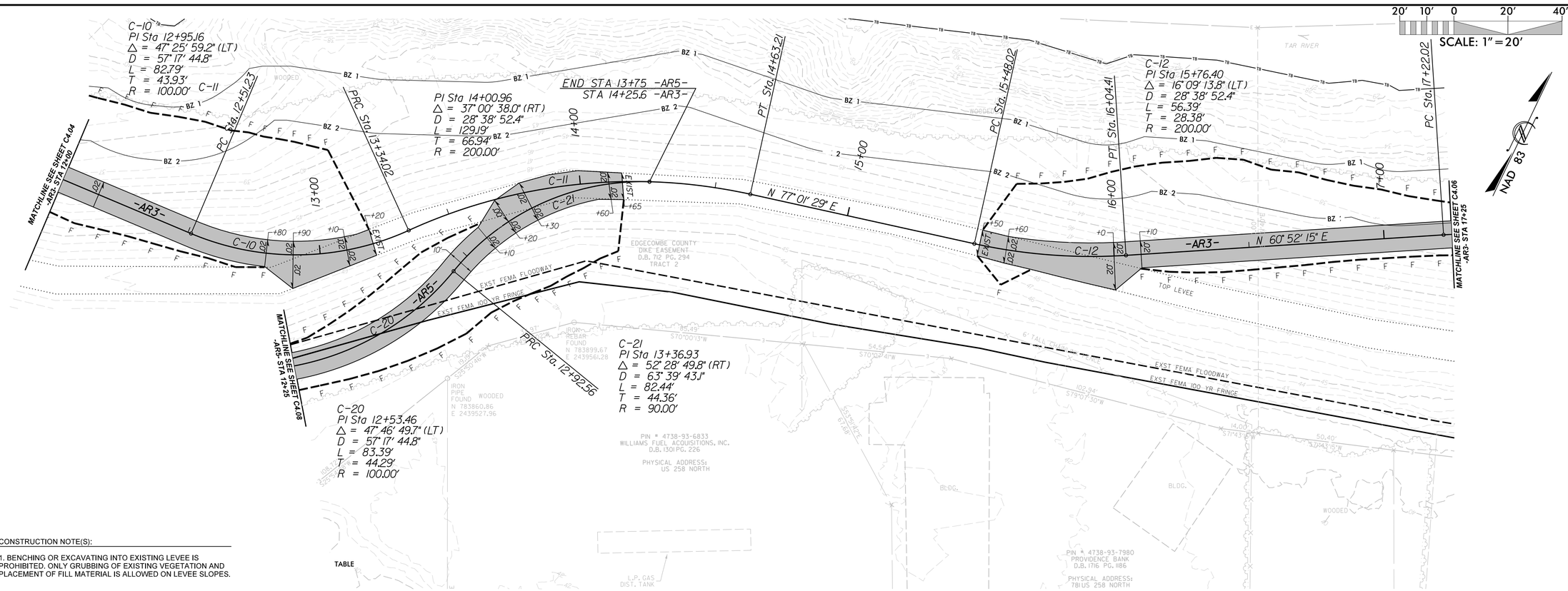
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C404
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.04

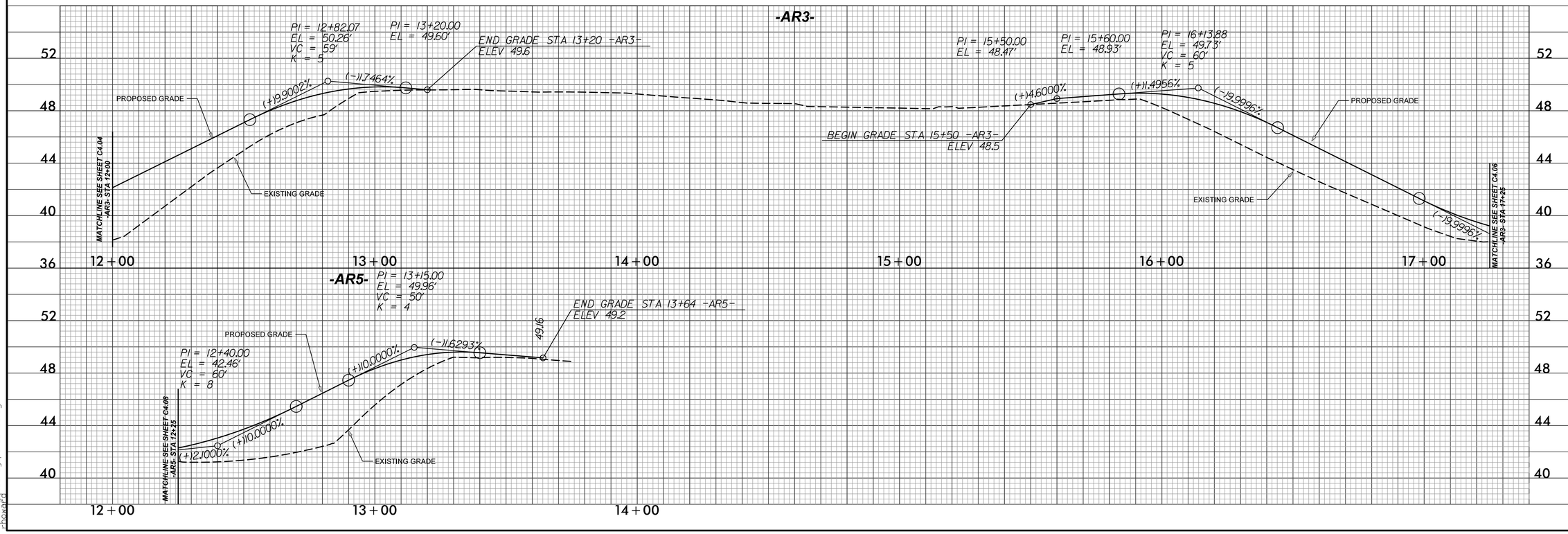
6/16/2021
Floodgate_Rdy_psh_C404.dgn
Howard



CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

TABLE



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Joshua G. Dalton
PROFESSIONAL ENGINEER SEAL 26971 JOSHUA G. DALTON
6/17/2021

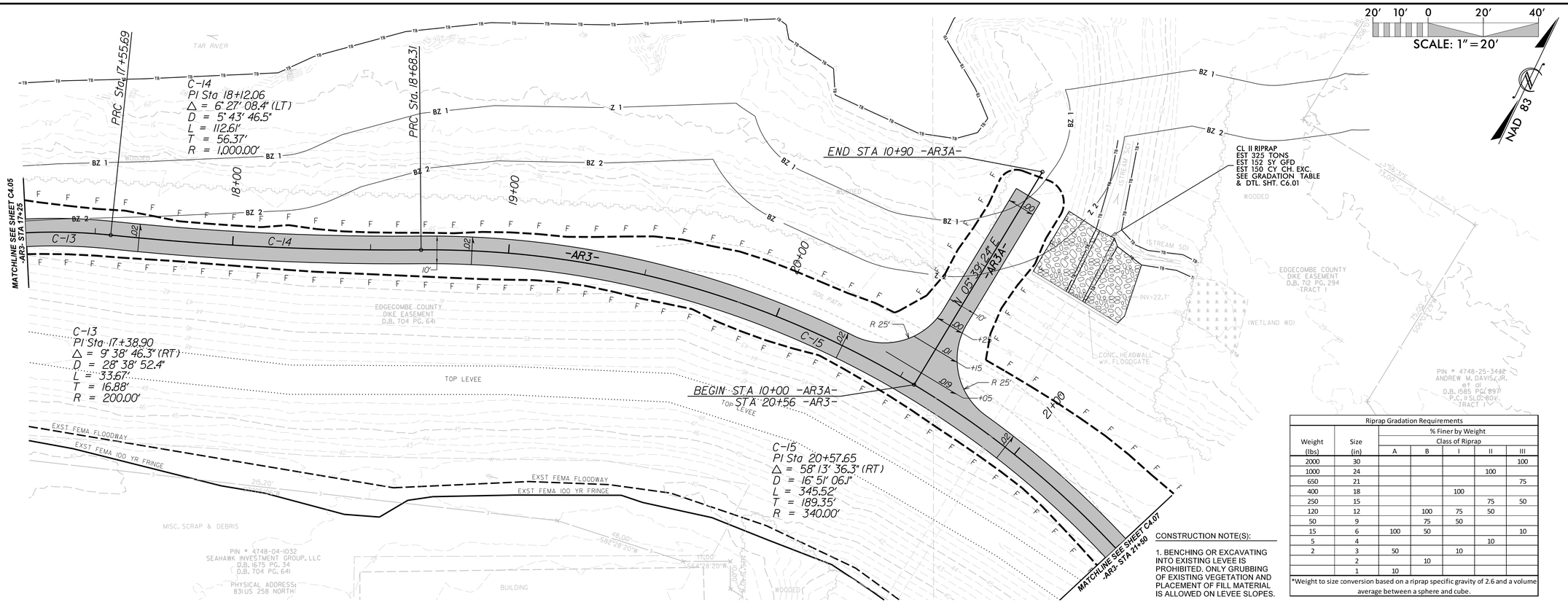
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C405
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C4.05

6/16/2021
Floodgate_Rdy_psh_C405.dgn
Layout

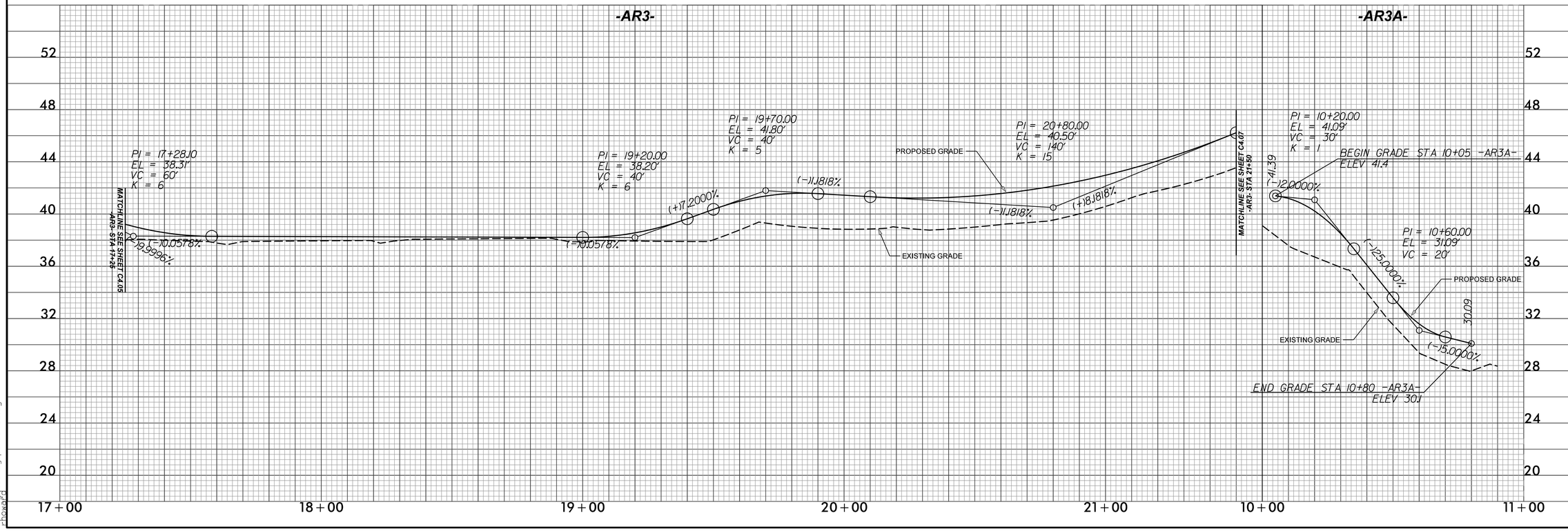


Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.



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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C406
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.06

6/16/2021
Floodgate_Rdy_psh_C406.dgn
Layout

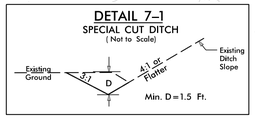
Riprap Gradation Requirements							
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III	
2000	30					100	
1000	24				100		
650	21					75	
400	18			100			
250	15				75	50	
120	12		100	75	50		
50	9		75	50			
15	6	100	50			10	
5	4				10		
2	3	50		10			
	2		10				
	1	10					

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

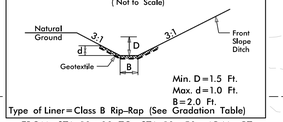
CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

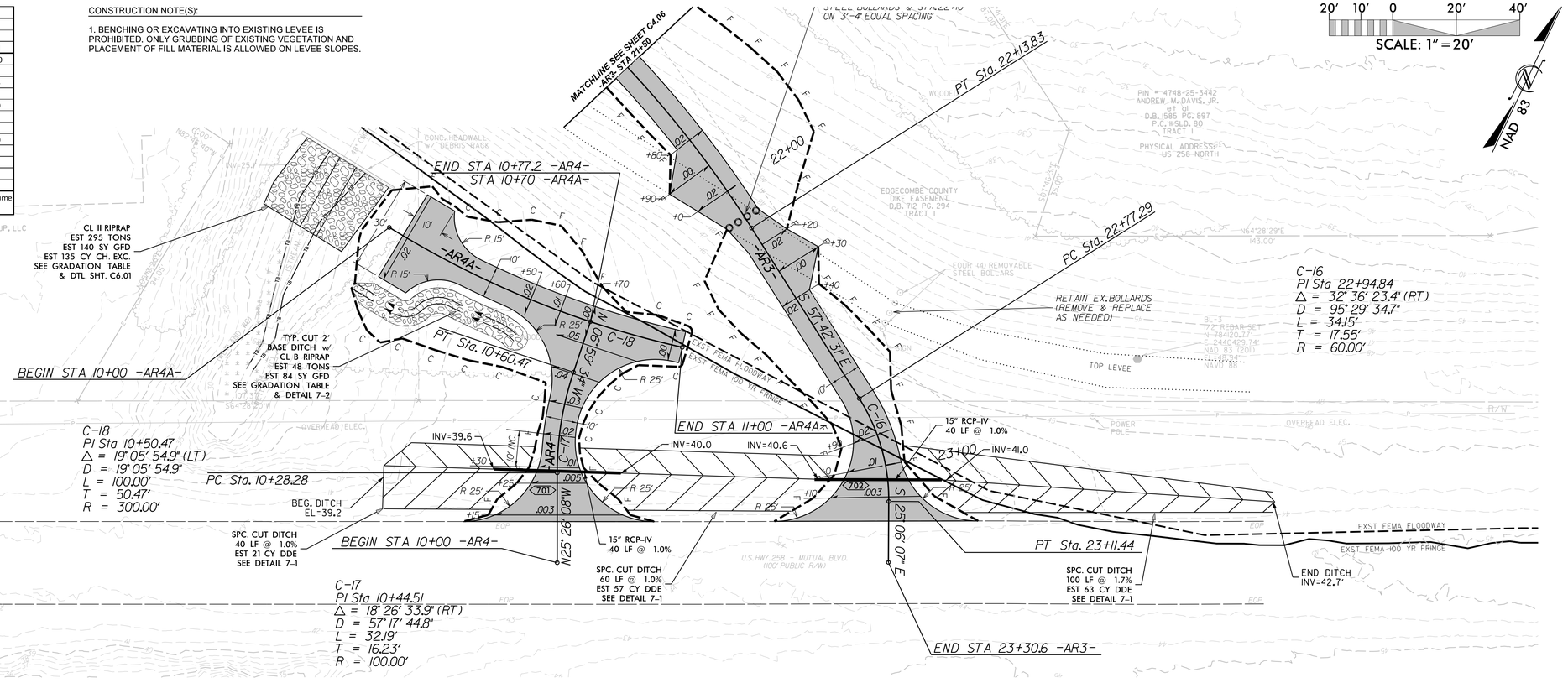
DETAIL 7–1
SPECIAL CUT DITCH
(Not to Scale)

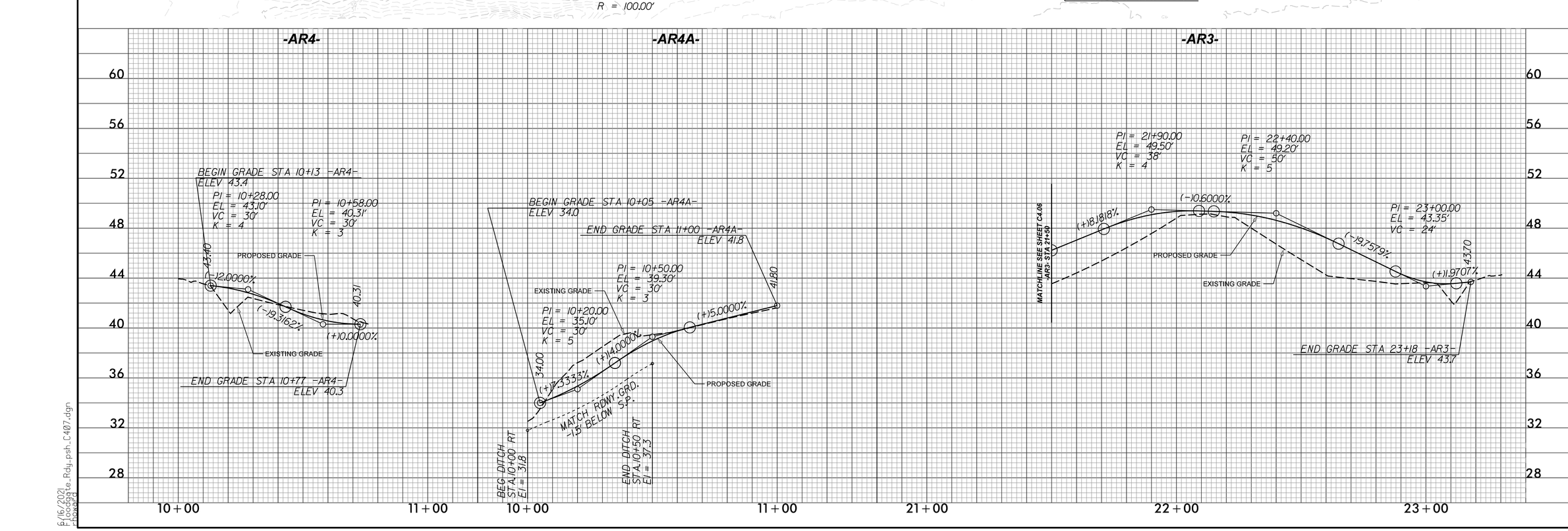


DETAIL 7–2
TYPICAL CUT 2' BASE DITCH
(Not to Scale)



Type of Liner=Class B Rip-Rap (See Gradation Table)
FROM STA. 10+00 TO STA. 10+50 –AR4A– RT





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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C407
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C4.07**

6/16/2021
Floodgate_Rdy_psh_C407.dgn
Layout

Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

SCALE: 1" = 20'

NAD 83

DETAIL 8–1
SPECIAL LATERAL BASE DITCH
(Not to Scale)

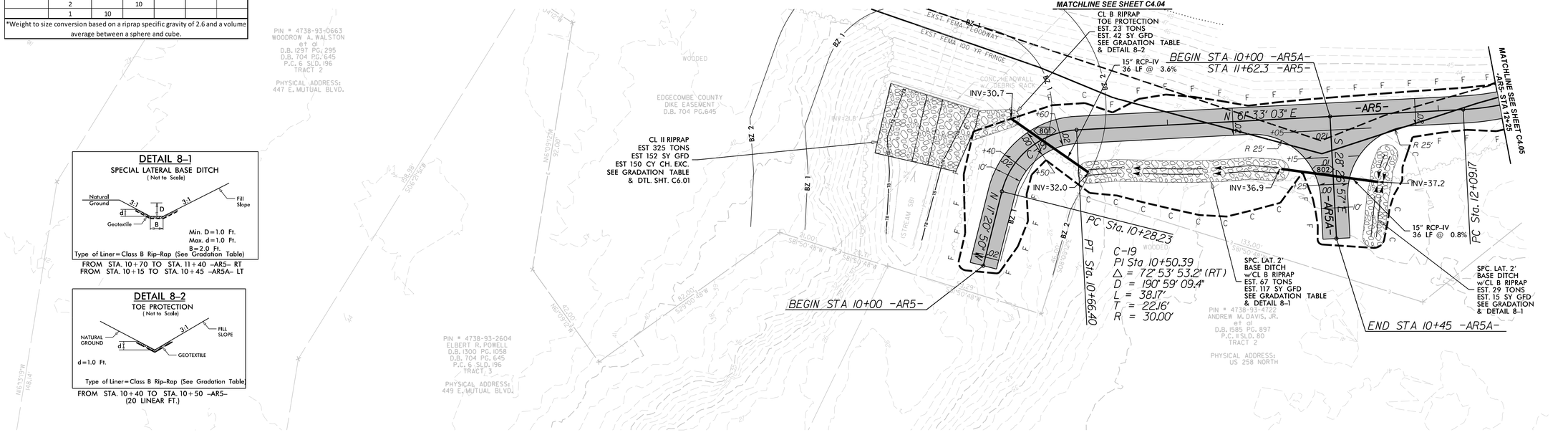
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
Type of Liner = Class B Rip–Rap (See Gradation Table)

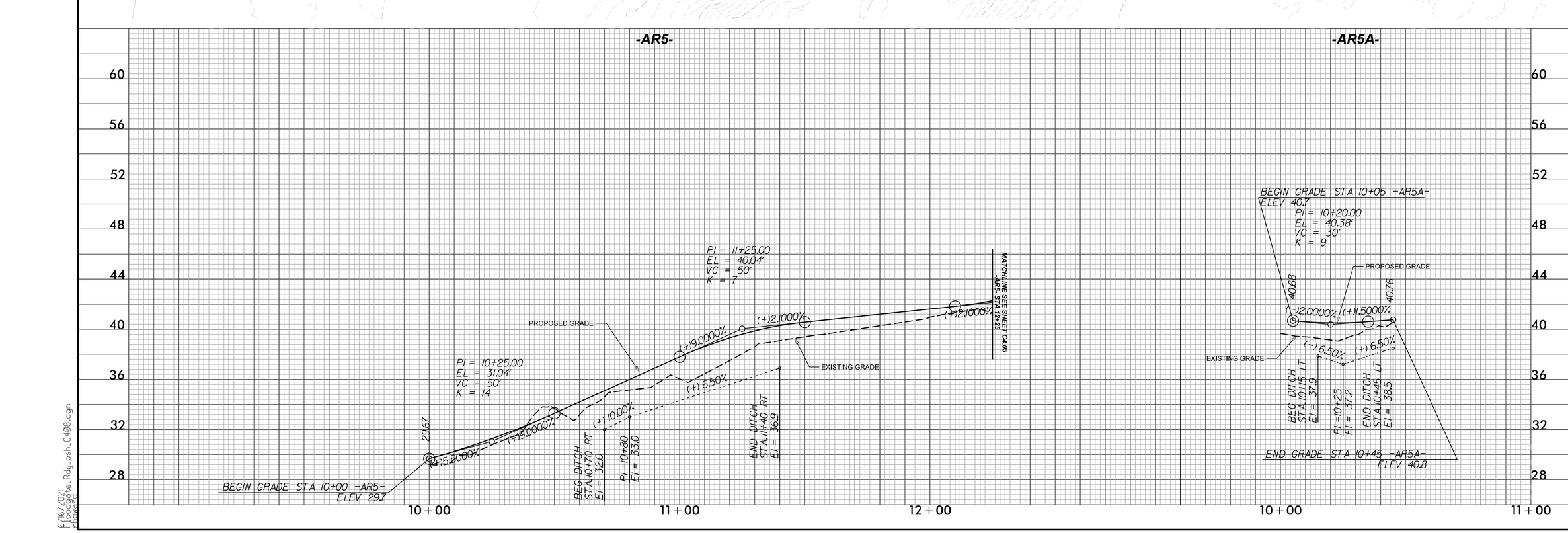
FROM STA. 10+70 TO STA. 11+40 –AR5– RT
FROM STA. 10+15 TO STA. 10+45 –AR5A– LT

DETAIL 8–2
TOE PROTECTION
(Not to Scale)

d = 1.0 Ft.
Type of Liner = Class B Rip–Rap (See Gradation Table)

FROM STA. 10+40 TO STA. 10+50 –AR5–
(20 LINEAR FT.)





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DocuSigned by: JOSH DALTON
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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

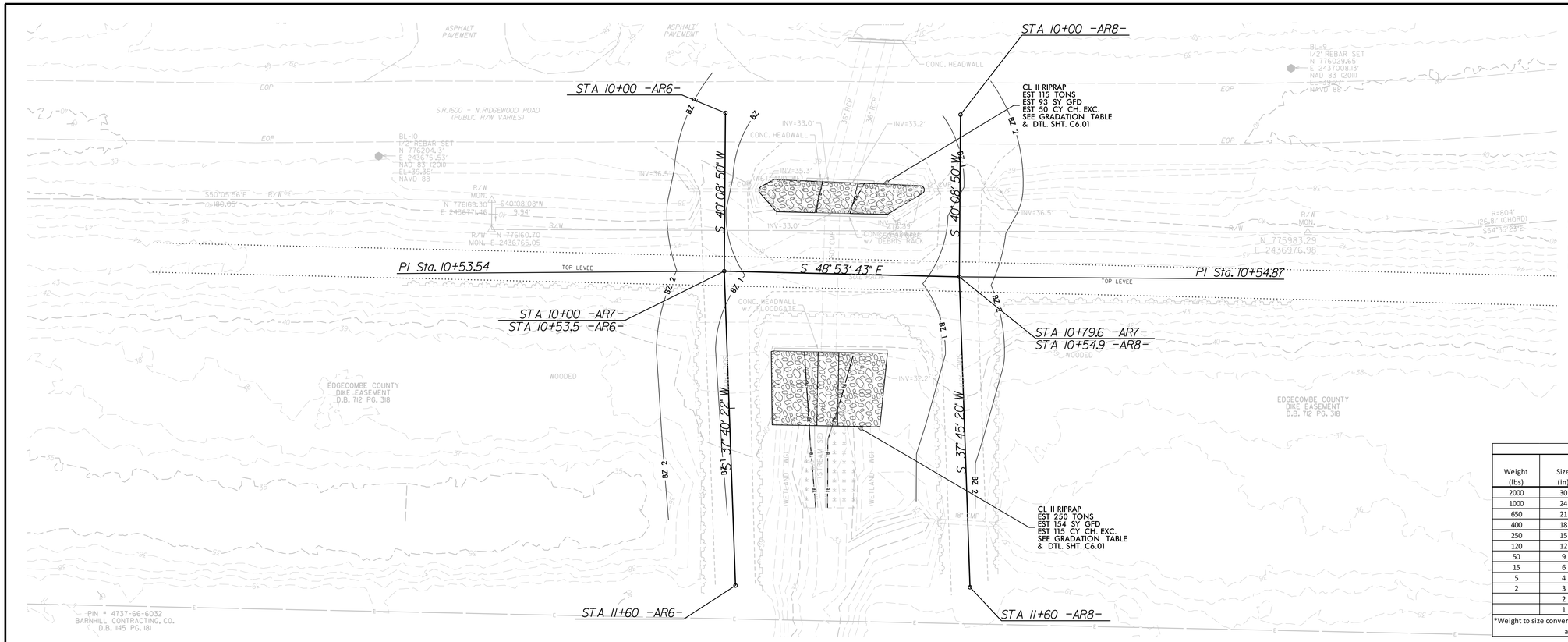
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C408
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	

SHEET NO. **C4.08**

6/16/2021
Floodgate_Rdy_psh_C408.dgn
Layout



20' 10' 0 20' 40'

SCALE: 1" = 20'

NAD 83

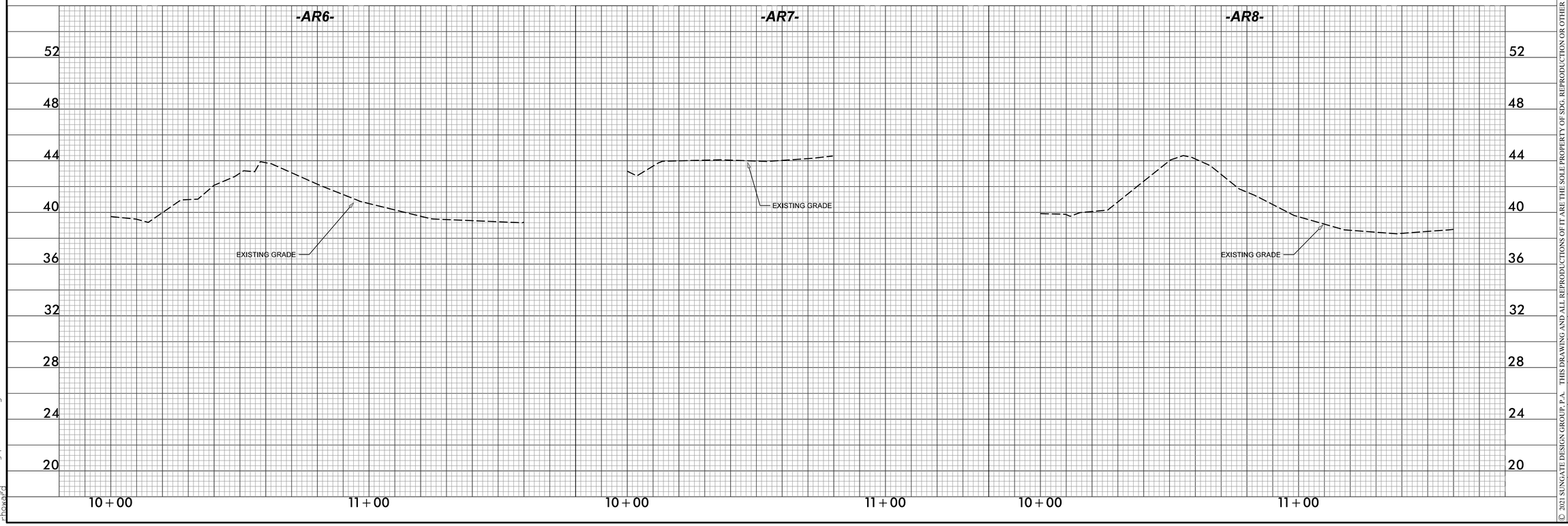
CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

Riprap Gradation Requirements

Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

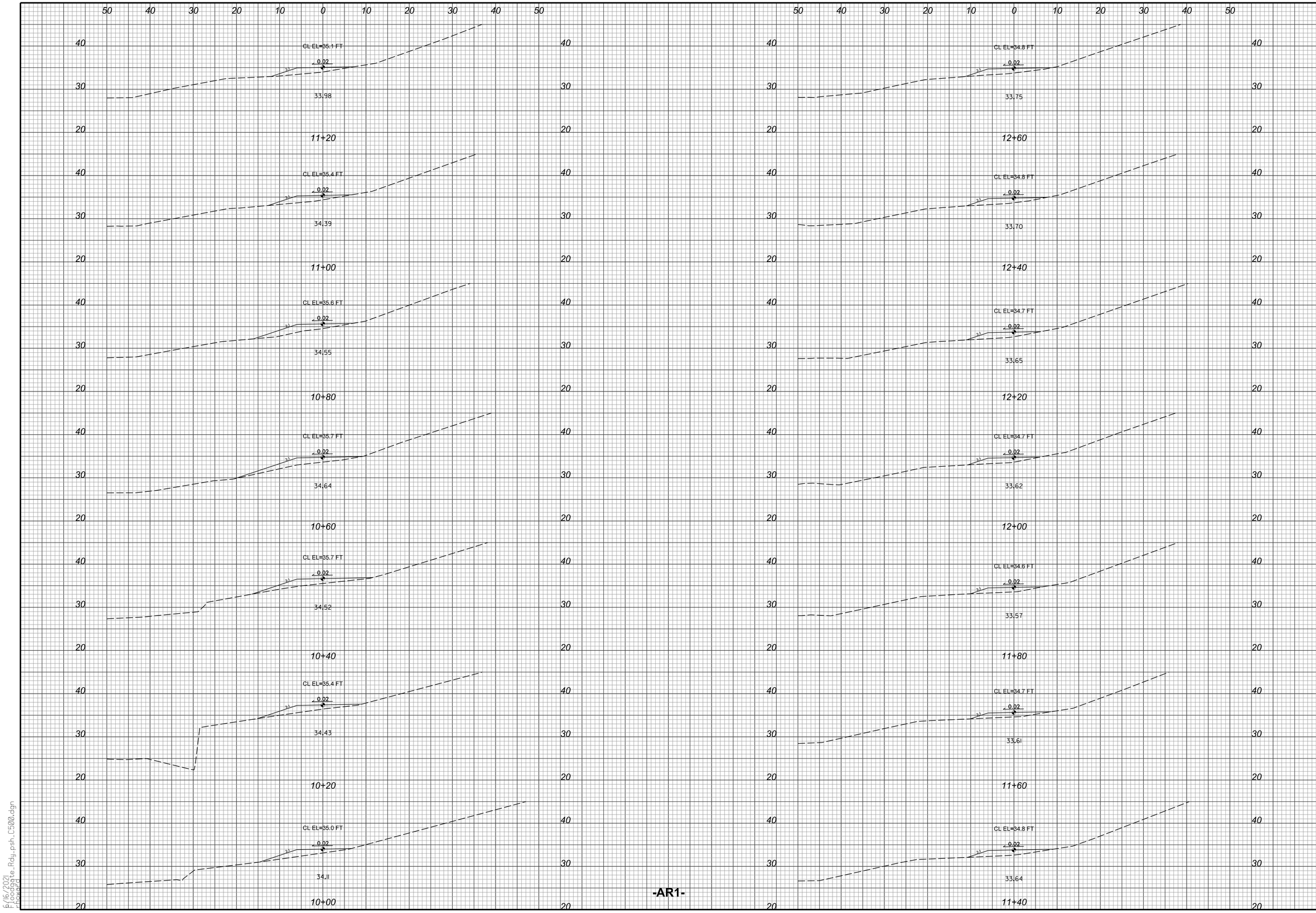
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 4

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C409
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.09

6/16/2021 Floodgate_Rdy_psh_C409.dgn Layout



6/16/2021
Floodgate Rdy_psh_C500.dgn
jrh

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6/17/2021

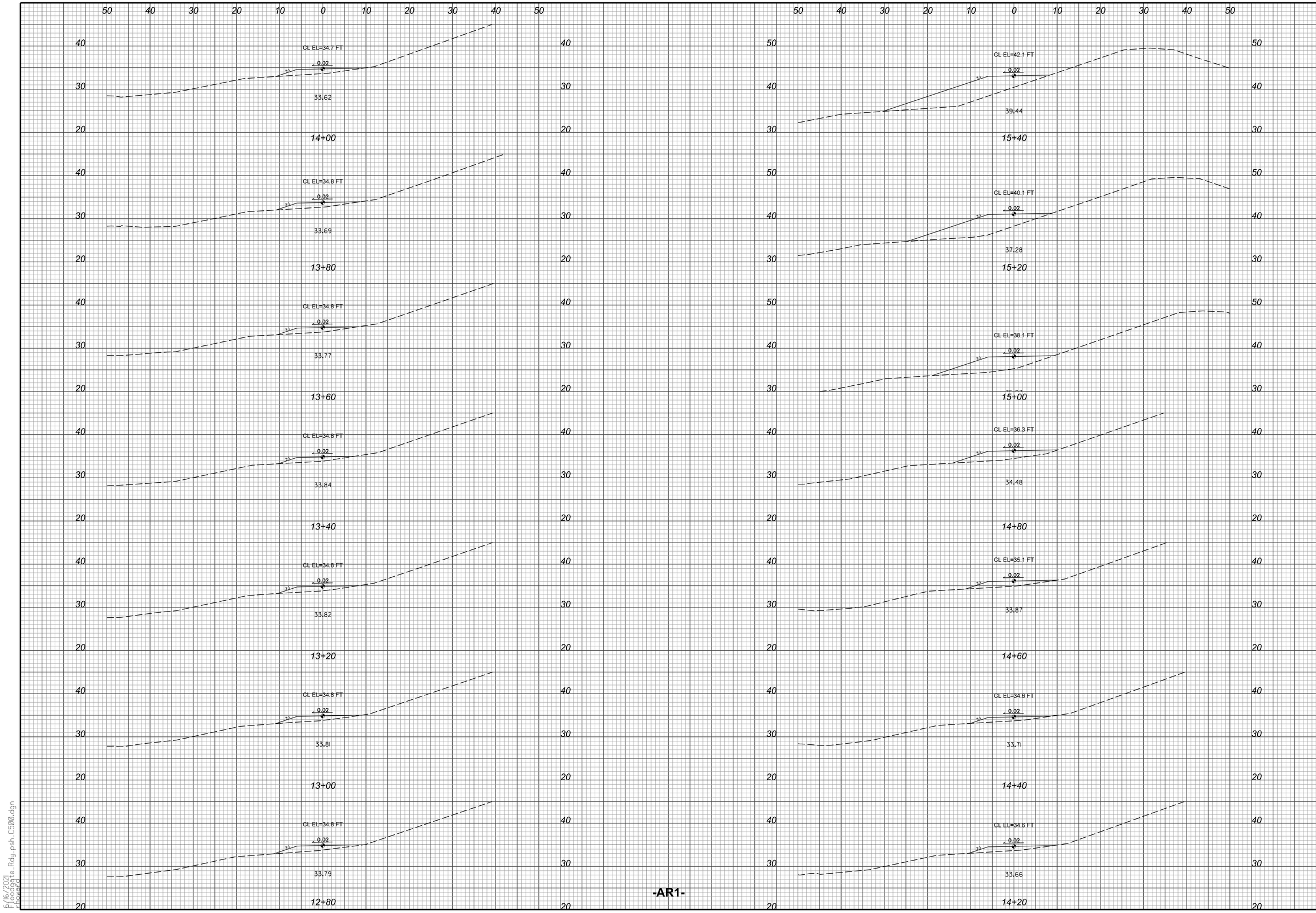
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C501
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C5.01**



-AR1-

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PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON

6/17/2021

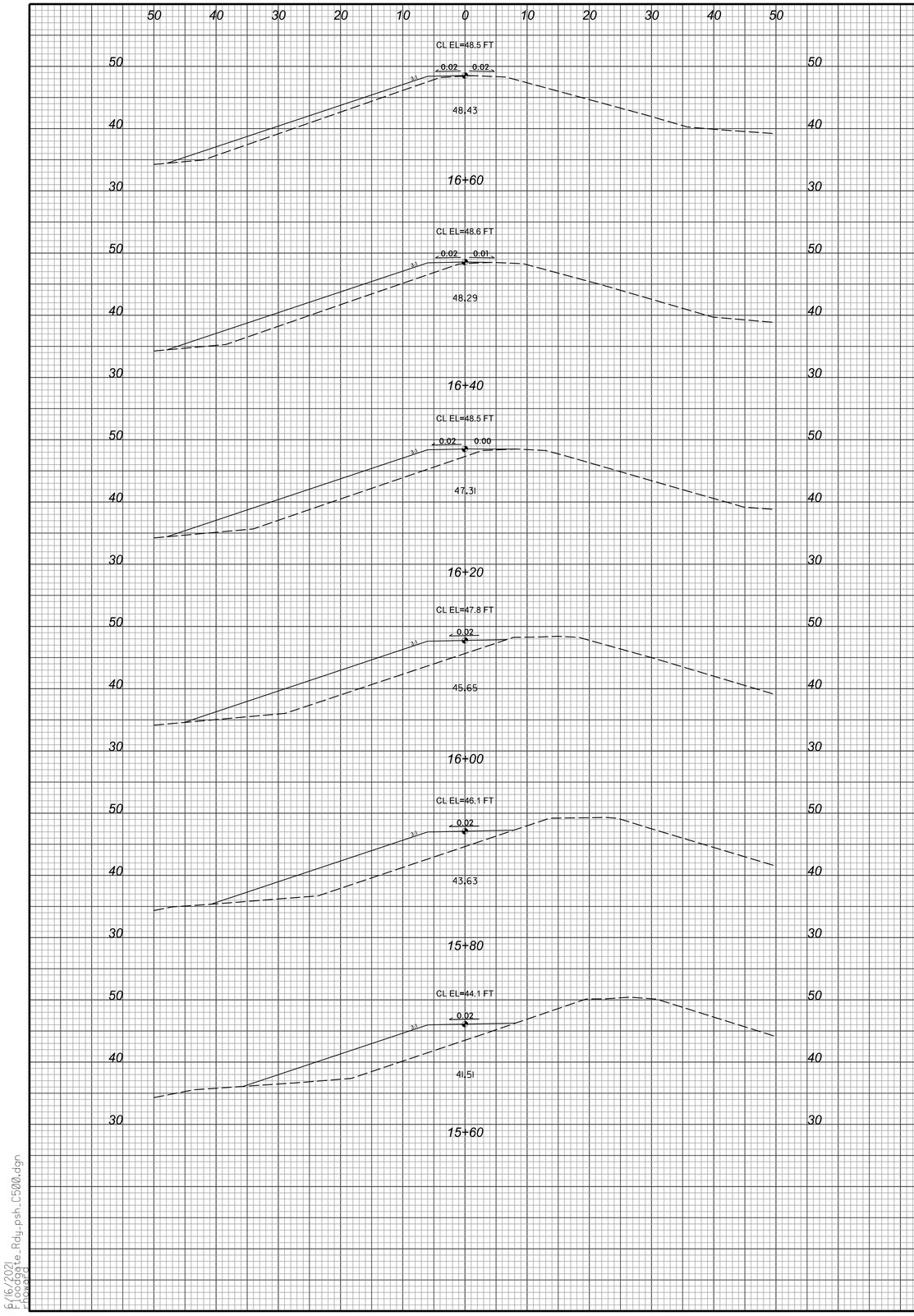
PRINCEVILLE DIKE FLOODGATE REPAIRS

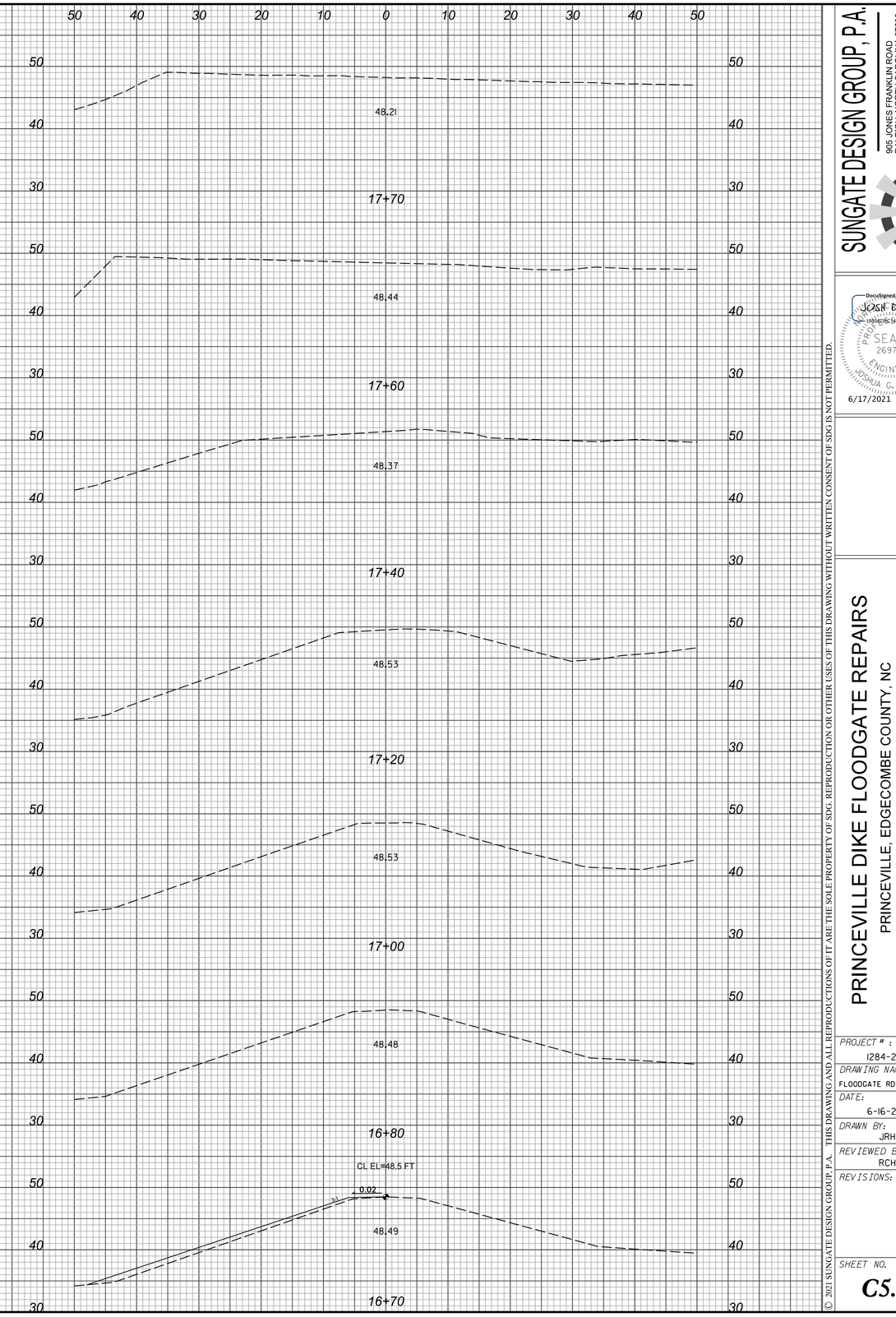
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C502
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.02

6/16/2021
Floodgate Rdy psh C500.dgn
Edward





-AR1-

6/16/2021
Floodgate_Rdy_psh_C500.dgn
Board

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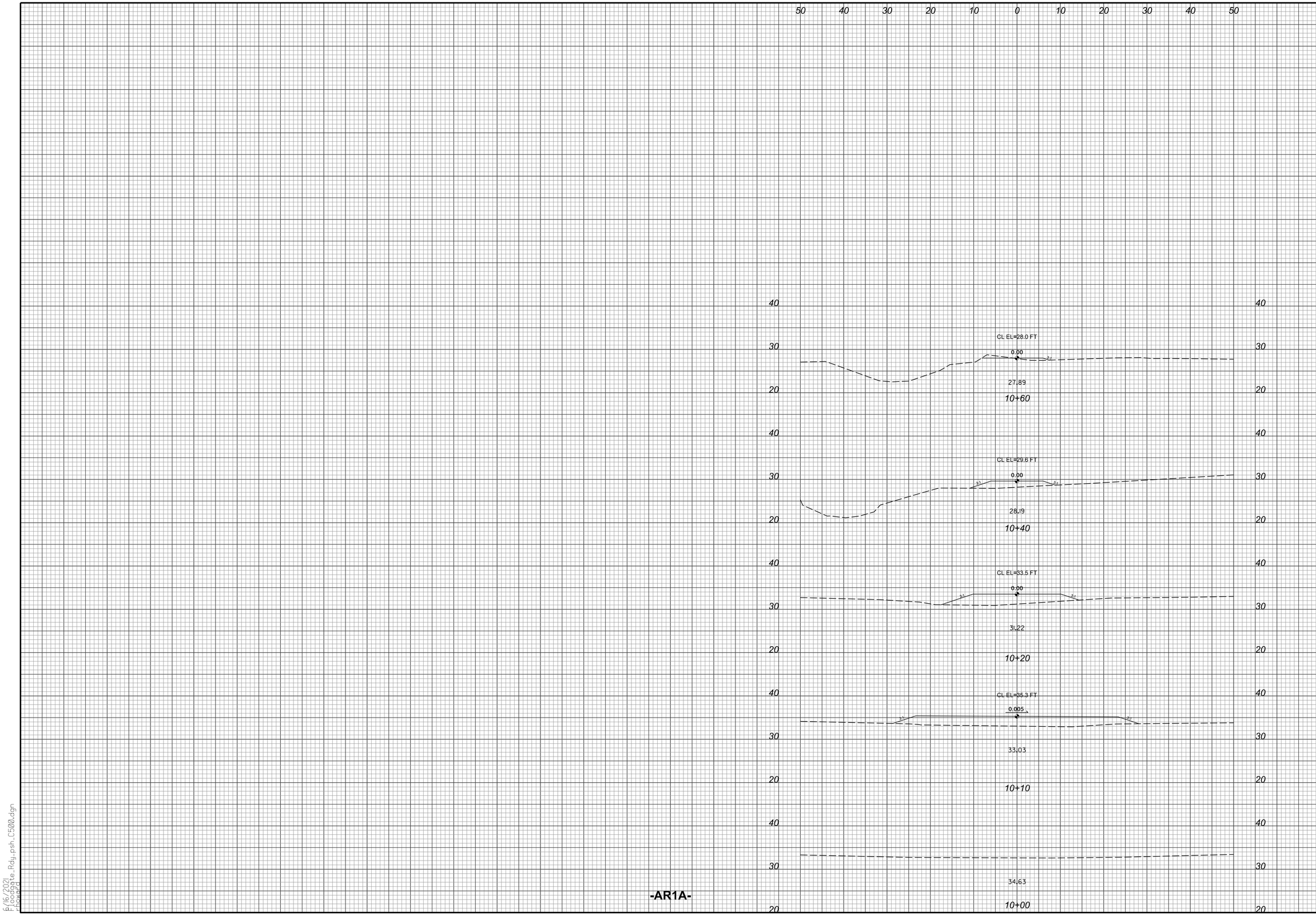
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C503
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.03



-AR1A-

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6/17/2021

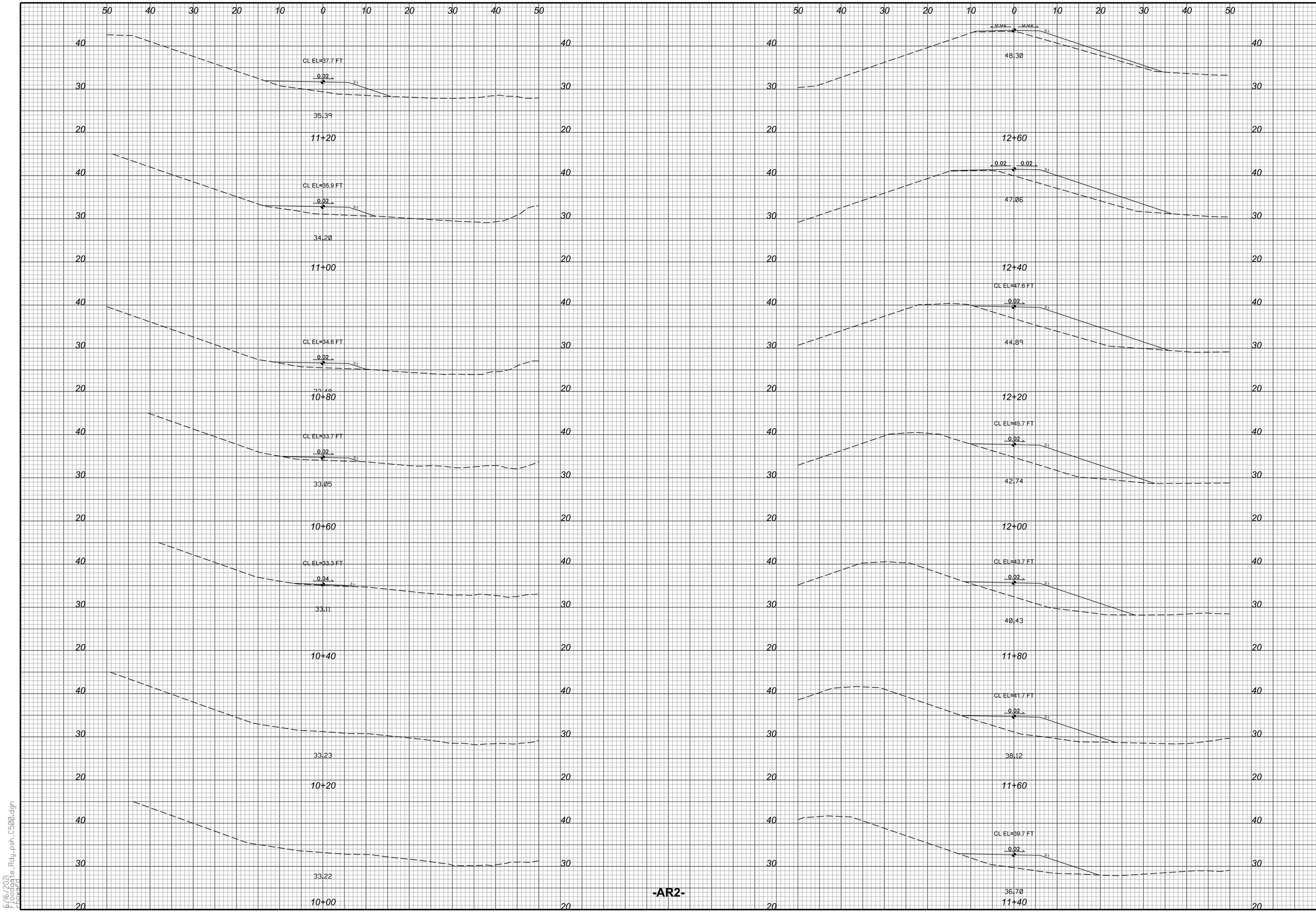
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR1A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C504
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.04

6/16/2021
Floodgate_Rdy_psh_C500.dgn
Flow 23



-AR2-

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ENG FIRM LICENSE NO. C-690

DocuSigned by:
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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

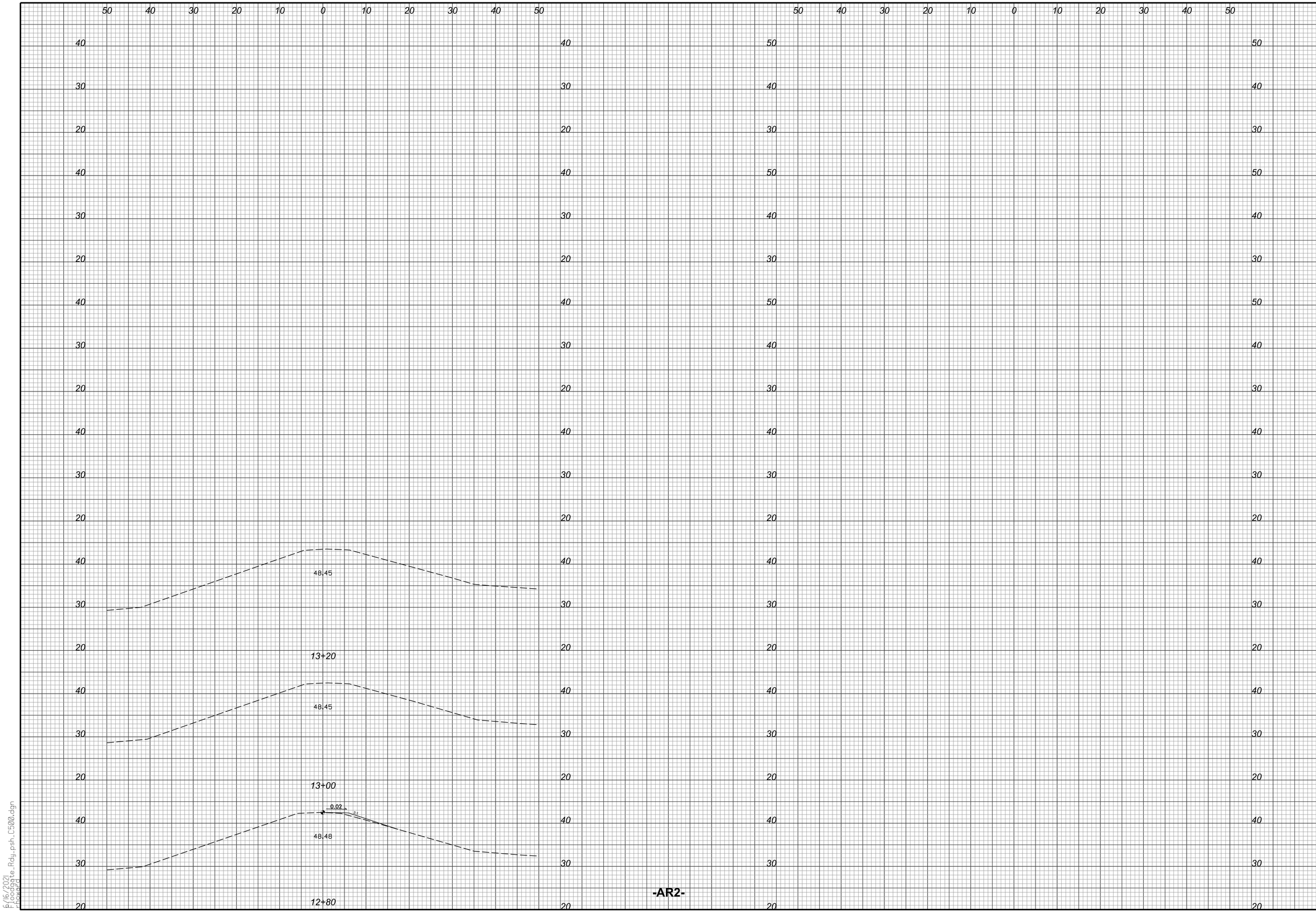
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C505
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.05

6/16/2021
Floodgate Rdy psh C500.dgn
Edward



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ENG FIRM LICENSE NO. C-690

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PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

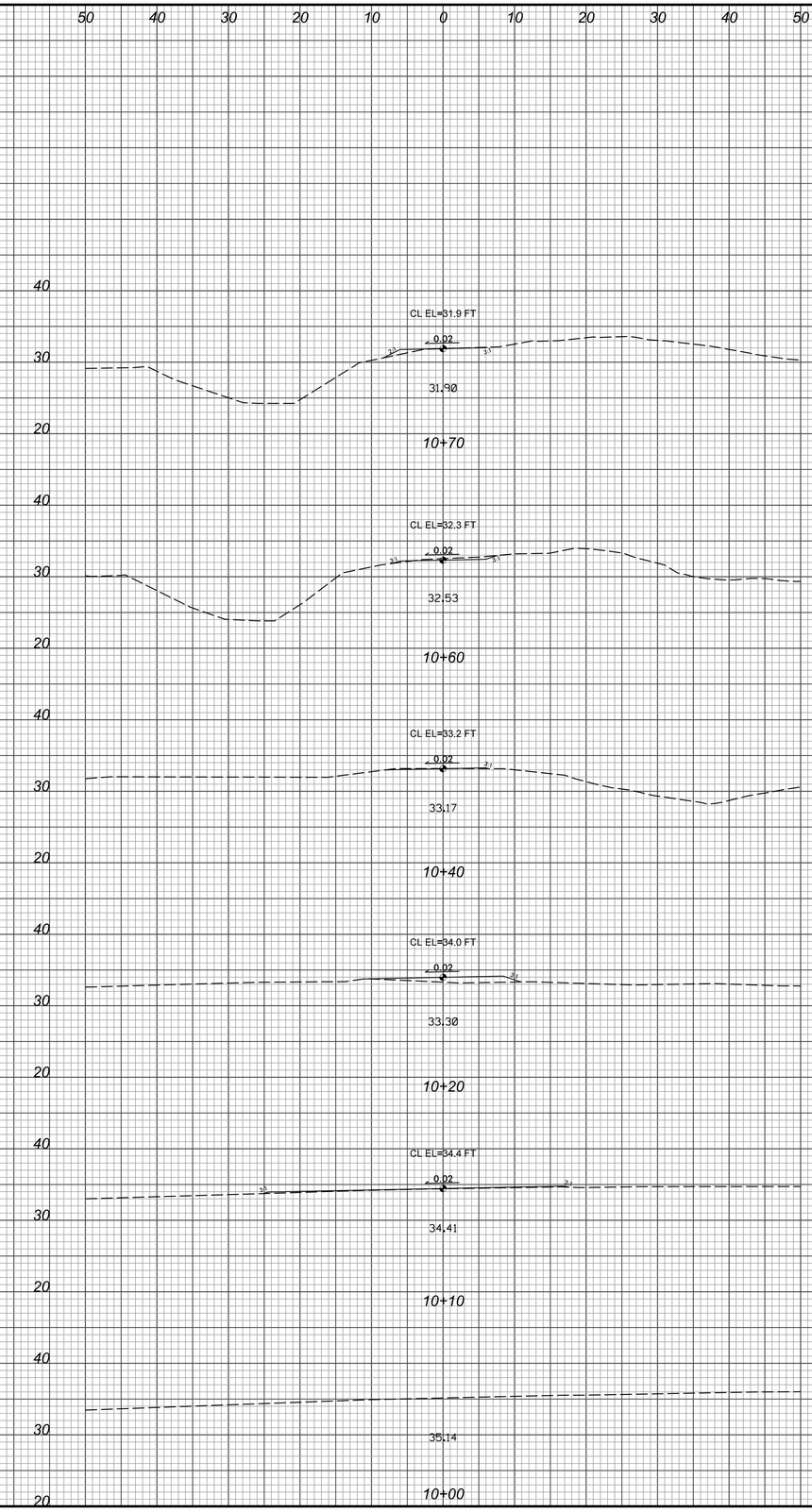
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C506
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.06

6/16/2021
Floodgate Rdy_psh_C500.dgn
Howard



-AR2A-

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ENG FIRM LICENSE NO. C-690

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26971
ENGINEER
JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 1 -AR2A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C507
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.07

6/16/2021
Floodgate Rdy_psh_C500.dgn
Flowers

CL EL=36.7 FT
0.02
35.80
11+20

CL EL=36.3 FT
0.02
35.57
11+00

CL EL=36.0 FT
0.02
35.30
10+80

35.46
10+60

35.54
10+40

36.72
10+20

36.44
10+00

CL EL=48.0 FT
0.02
46.18
12+60

CL EL=46.1 FT
0.02
43.64
12+40

CL EL=44.1 FT
0.02
40.73
12+20

CL EL=42.1 FT
0.02
38.14
12+00

CL EL=40.2 FT
0.02
36.90
11+80

CL EL=38.6 FT
0.02
36.37
11+60

CL EL=37.4 FT
0.02
36.08
11+40

-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-890

DocuSigned by:
JOSH DALTON
C3B8A4B2E14B4C6...

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

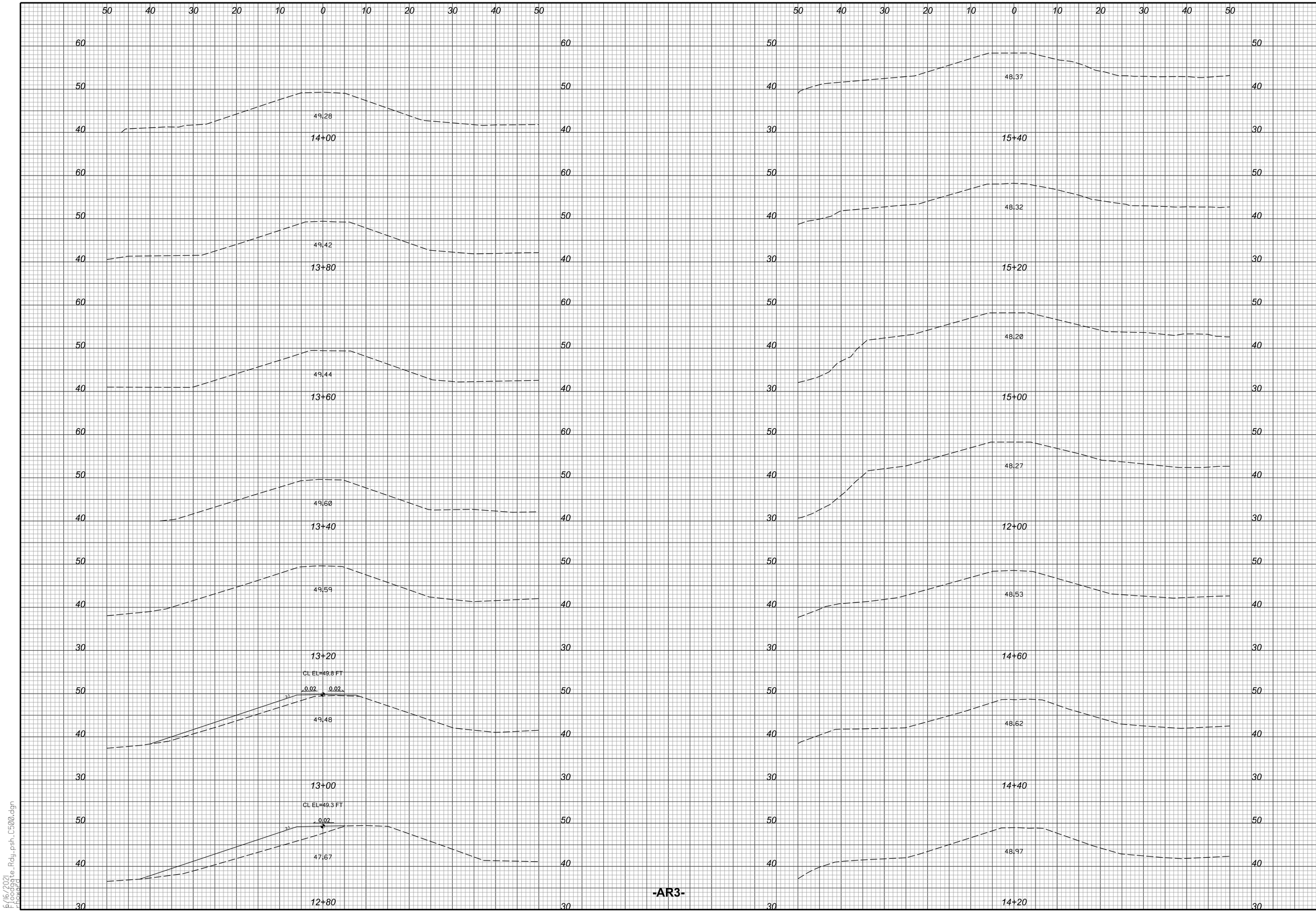
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C508
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.08

6/16/2021
Floodgate_Rdy_psh_C508.dgn
Flow 2-3



-AR3-

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
JOSH DALTON
Certificate of Completion

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C509
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.09

6/16/2021
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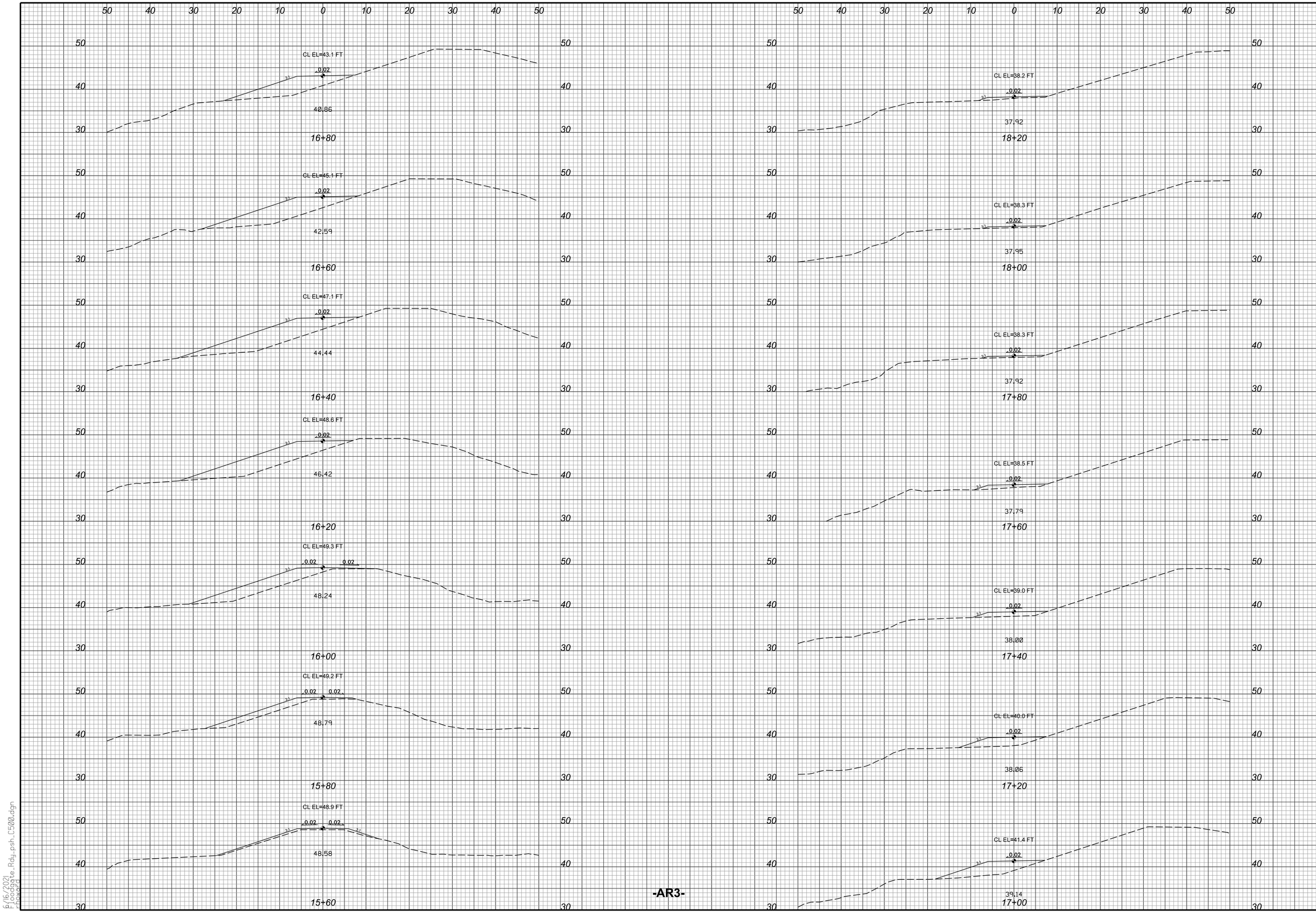

-AR3-

6/16/2021
Floodgate_Rdy_psh_C500.dgn
Floodgate

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RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

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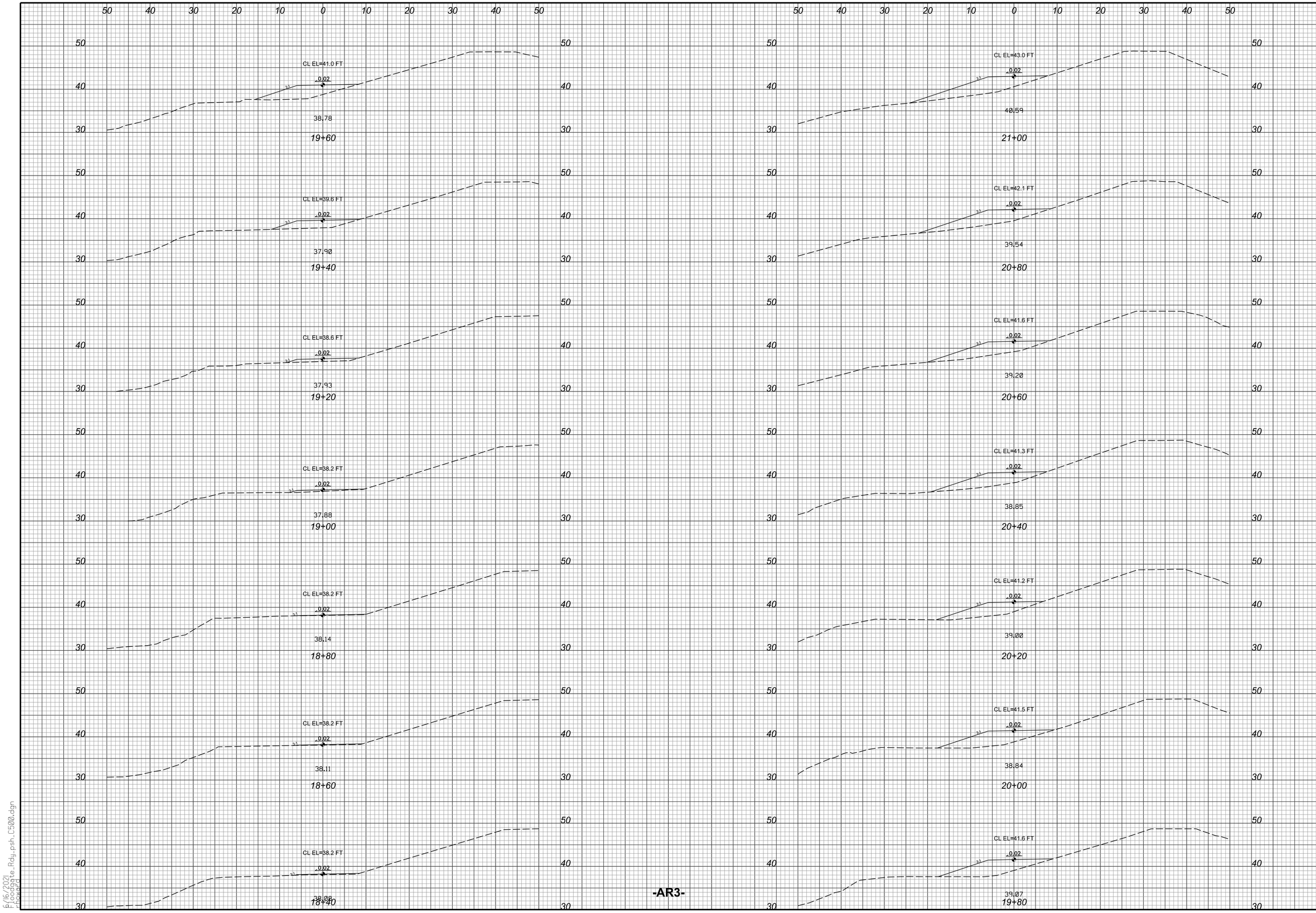
JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C510
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.10



-AR3-

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ENG FIRM LICENSE NO. C-690

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6/17/2021

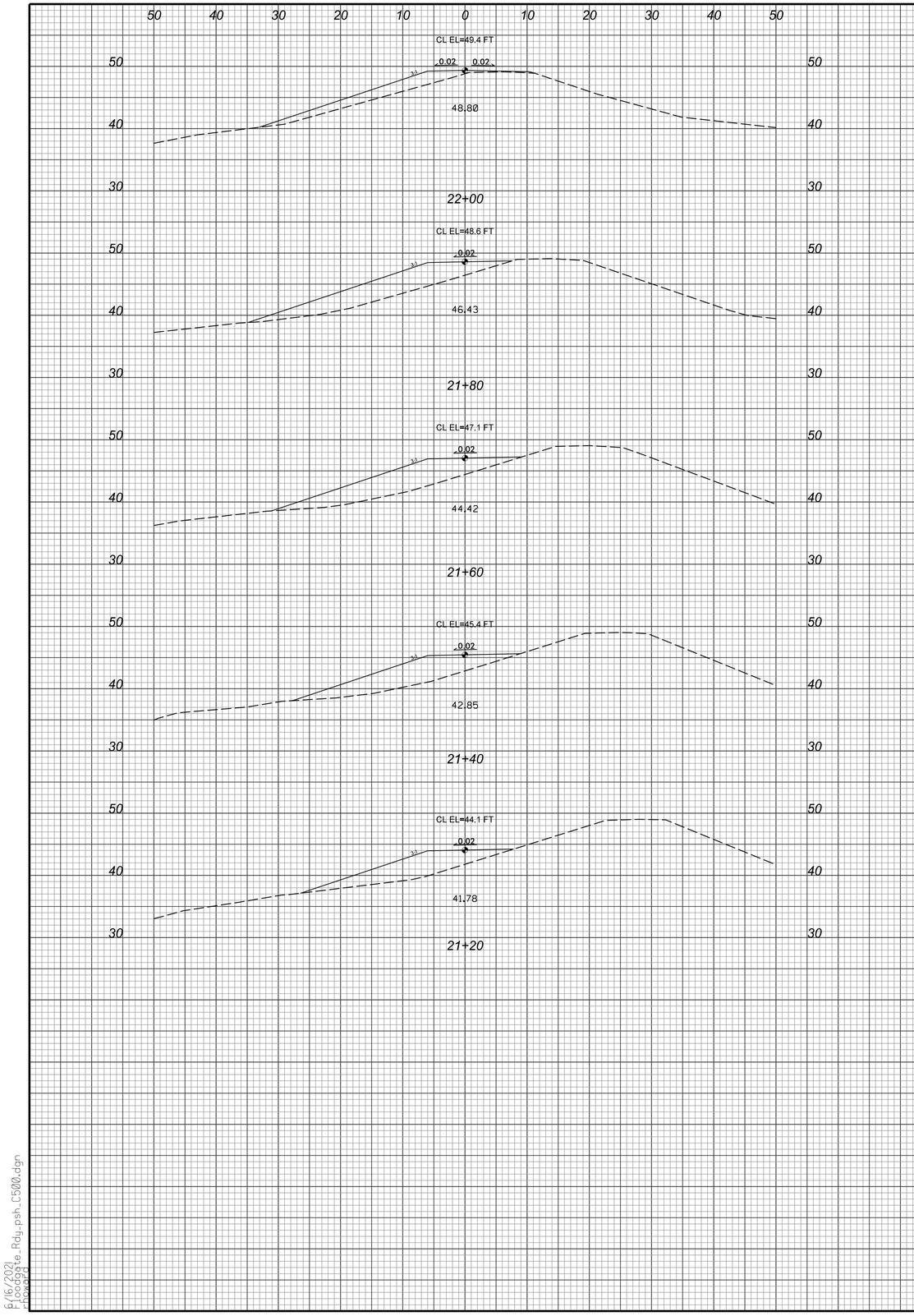
PRINCEVILLE DIKE FLOODGATE REPAIRS

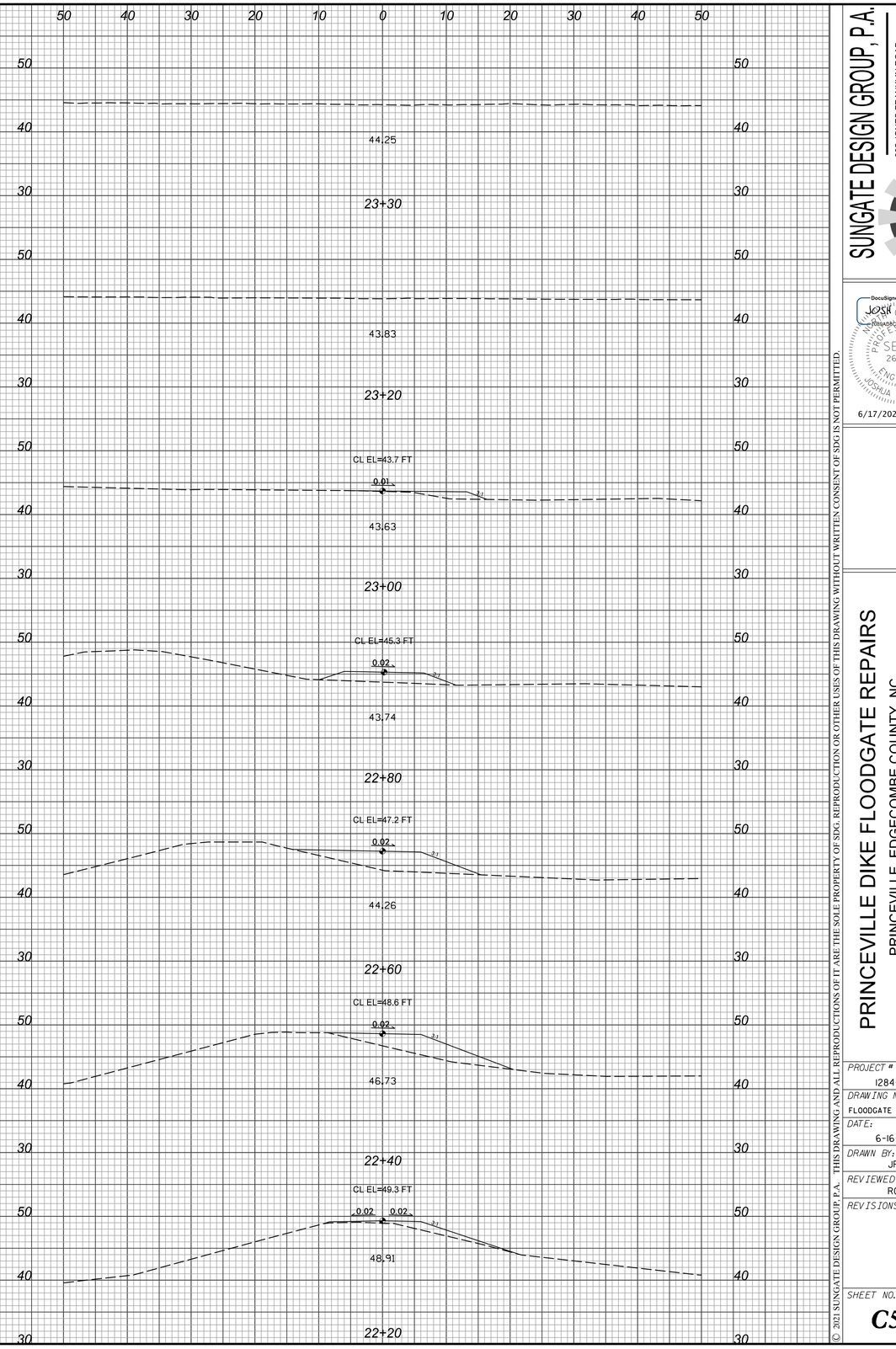
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C5II
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.11

6/16/2021
Floodgate_Rdy_psh_C500.dgn
Plotted





-AR3-

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RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
JOSH DALTON
Josh Dalton

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PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C512
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.12

6/16/2021
Floodgate_Rdy_psh_C500.dgn
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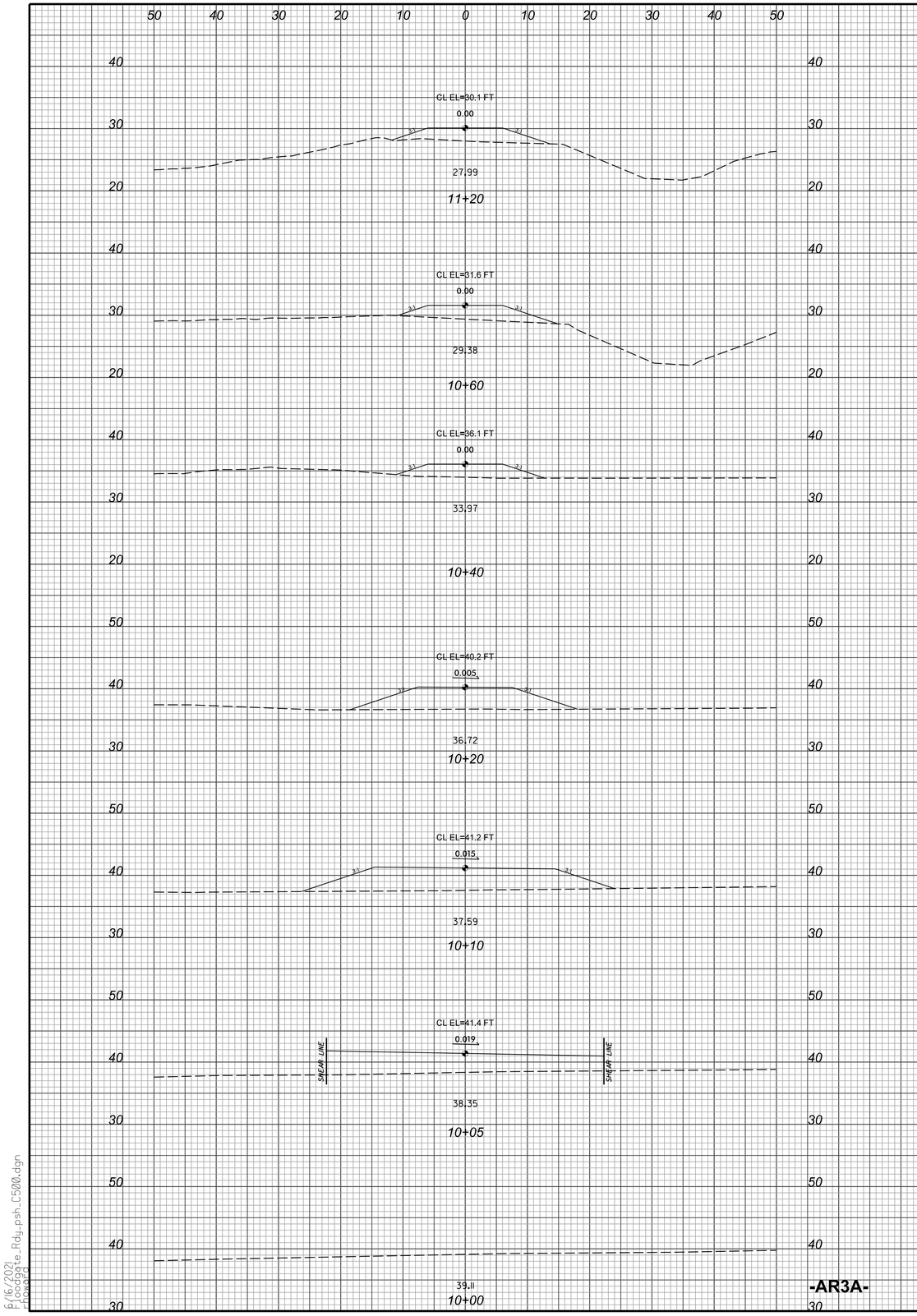
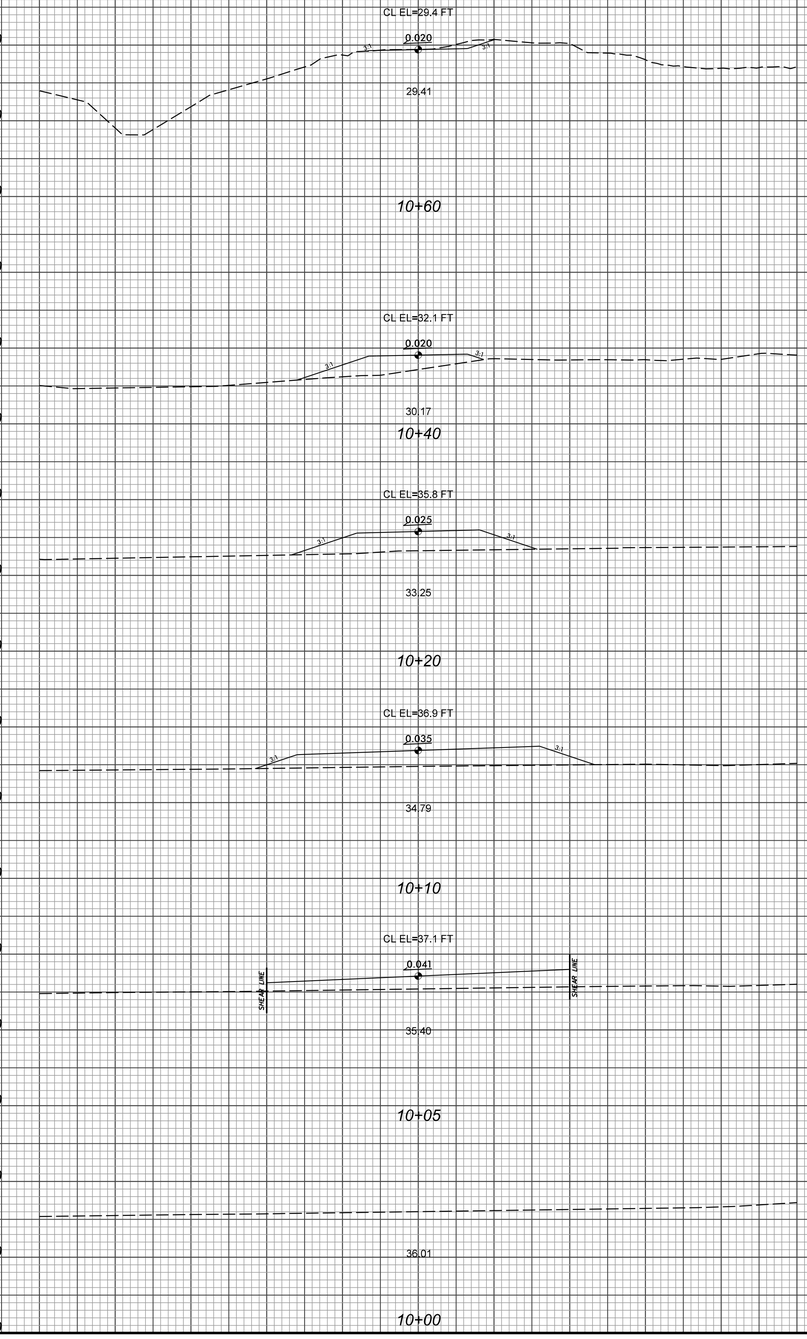


-AR3A-



-AR3B-

SUNGATE DESIGN GROUP, P.A.
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TEL (919) 839-2243
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SEAL
26971
ENGINEER
JOSHUA G. DALTON
6/17/2021

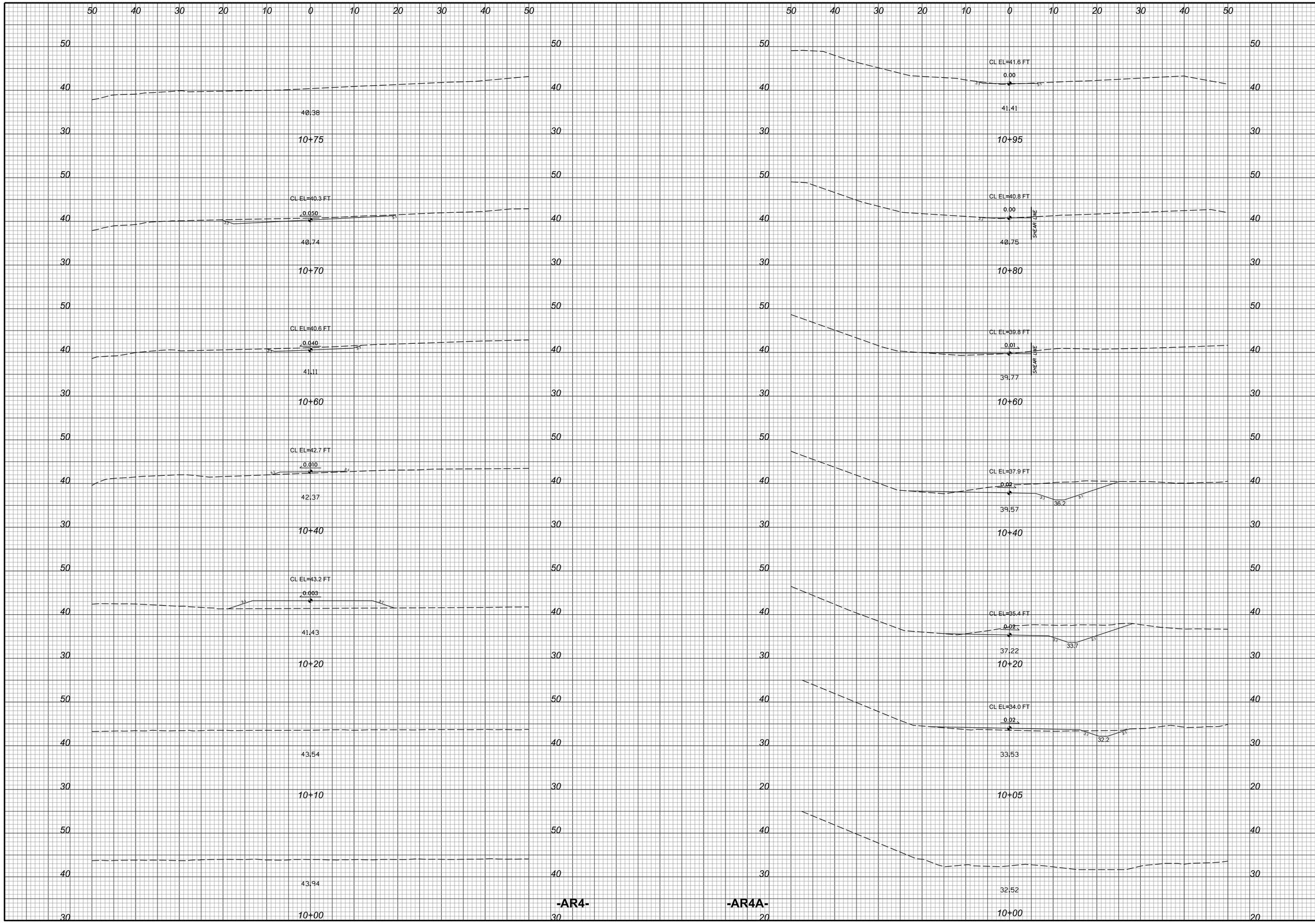
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR3A-, -AR3B-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C513
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.13

6/16/2021
Floodgate_Rdy_psh_C500.dgn
tlowe



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905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

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JOSH DALTON
Commercial Agreement
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

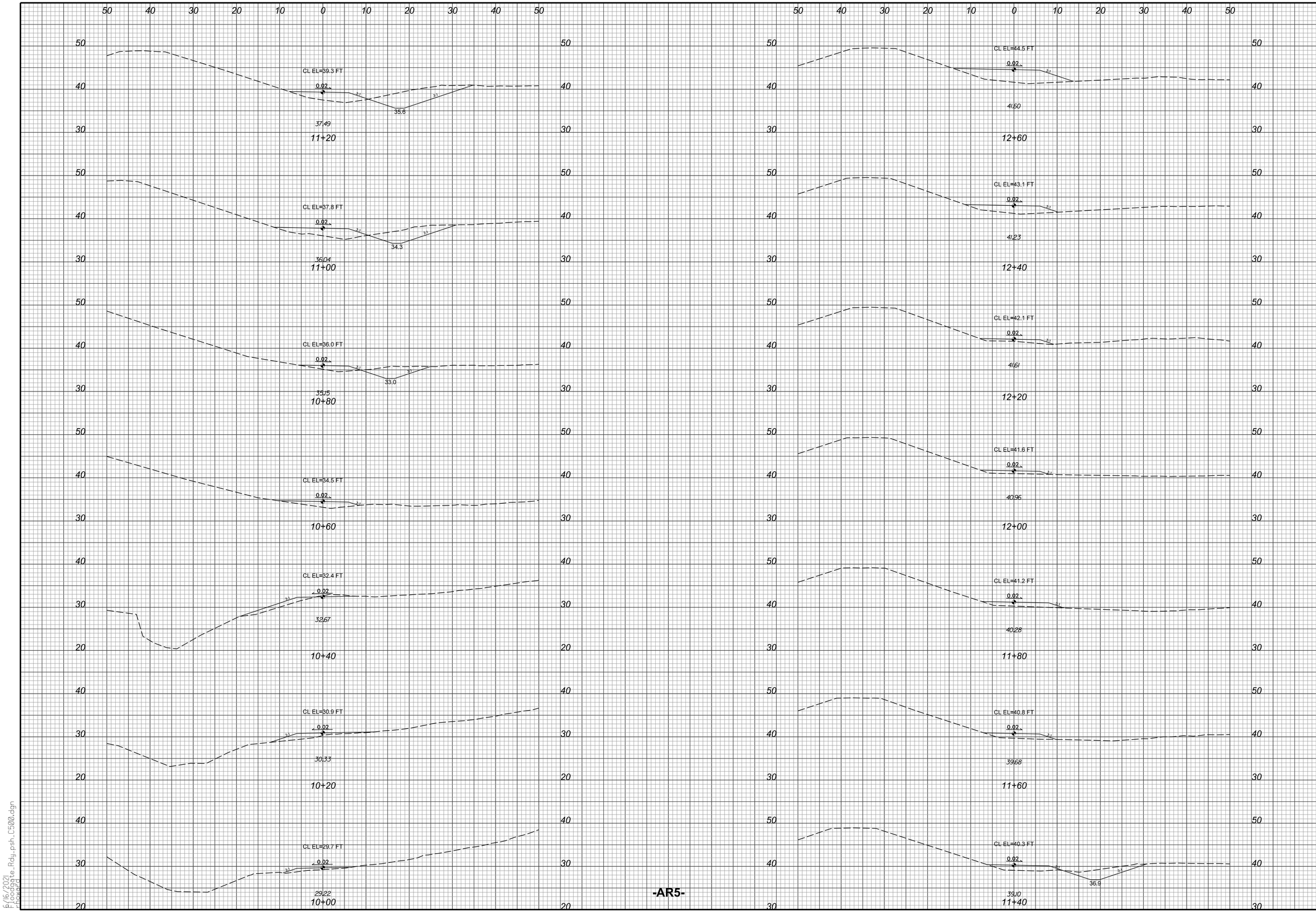
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR4- -AR4A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C514
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.14



-AR5-

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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

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PROFESSIONAL
SEAL
26971
ENGINEER
JOSHUA G. DALTON

6/17/2021

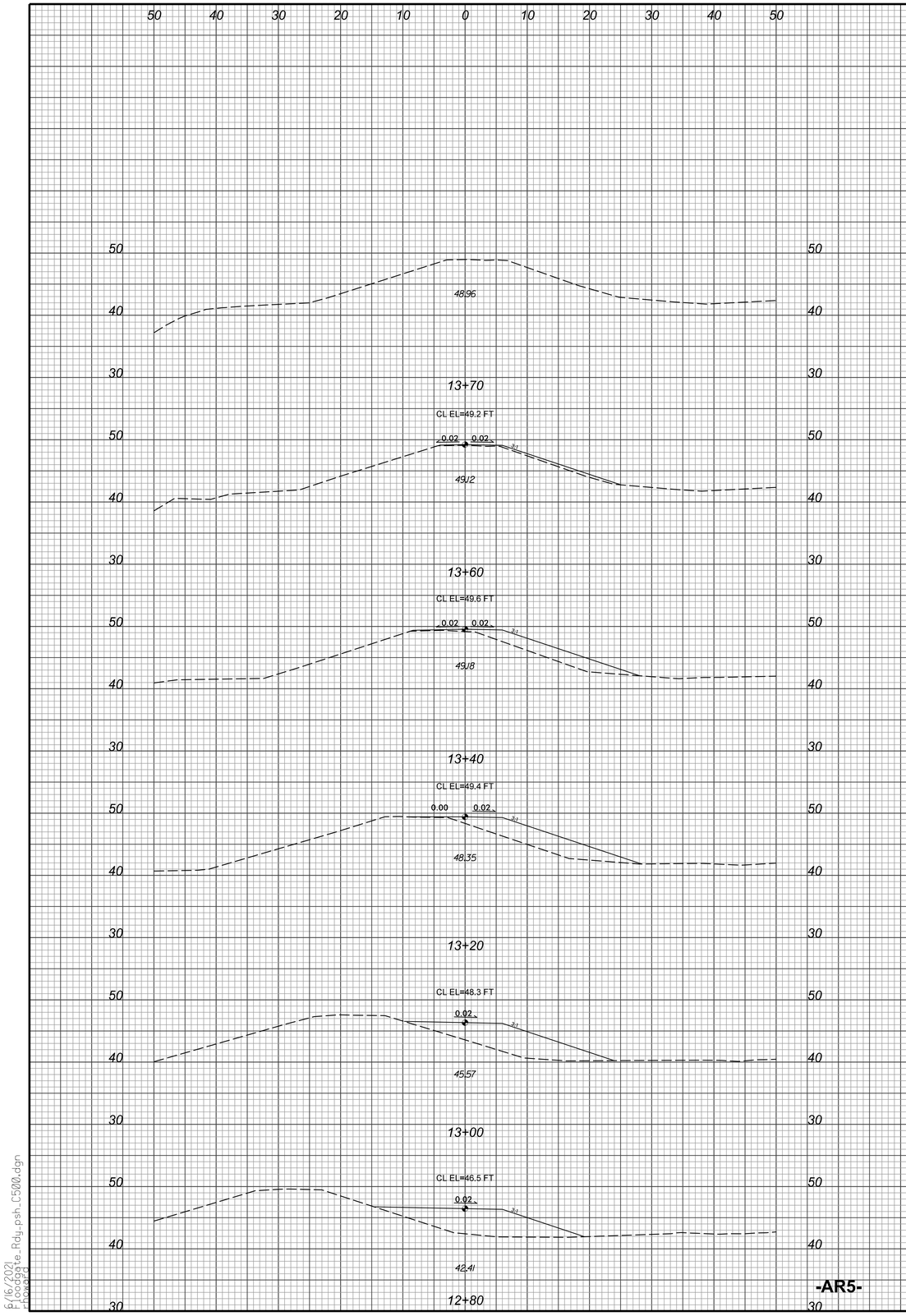
PRINCEVILLE DIKE FLOODGATE REPAIRS

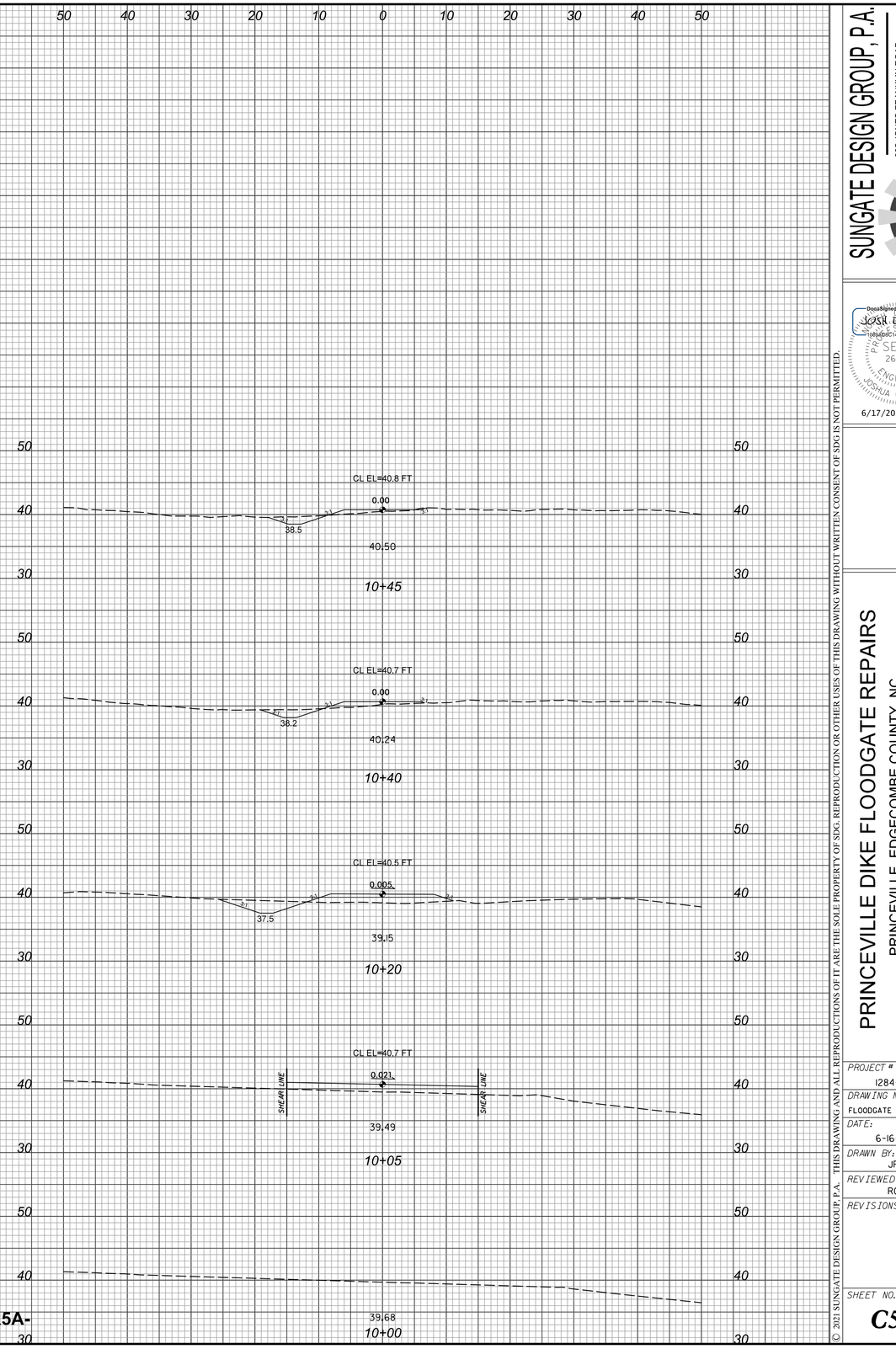
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR5-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C515
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.15

6/16/2021
Floodgate_Rdy_psh_C500.dgn
Flow28





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ENG FIRM LICENSE NO. C-690

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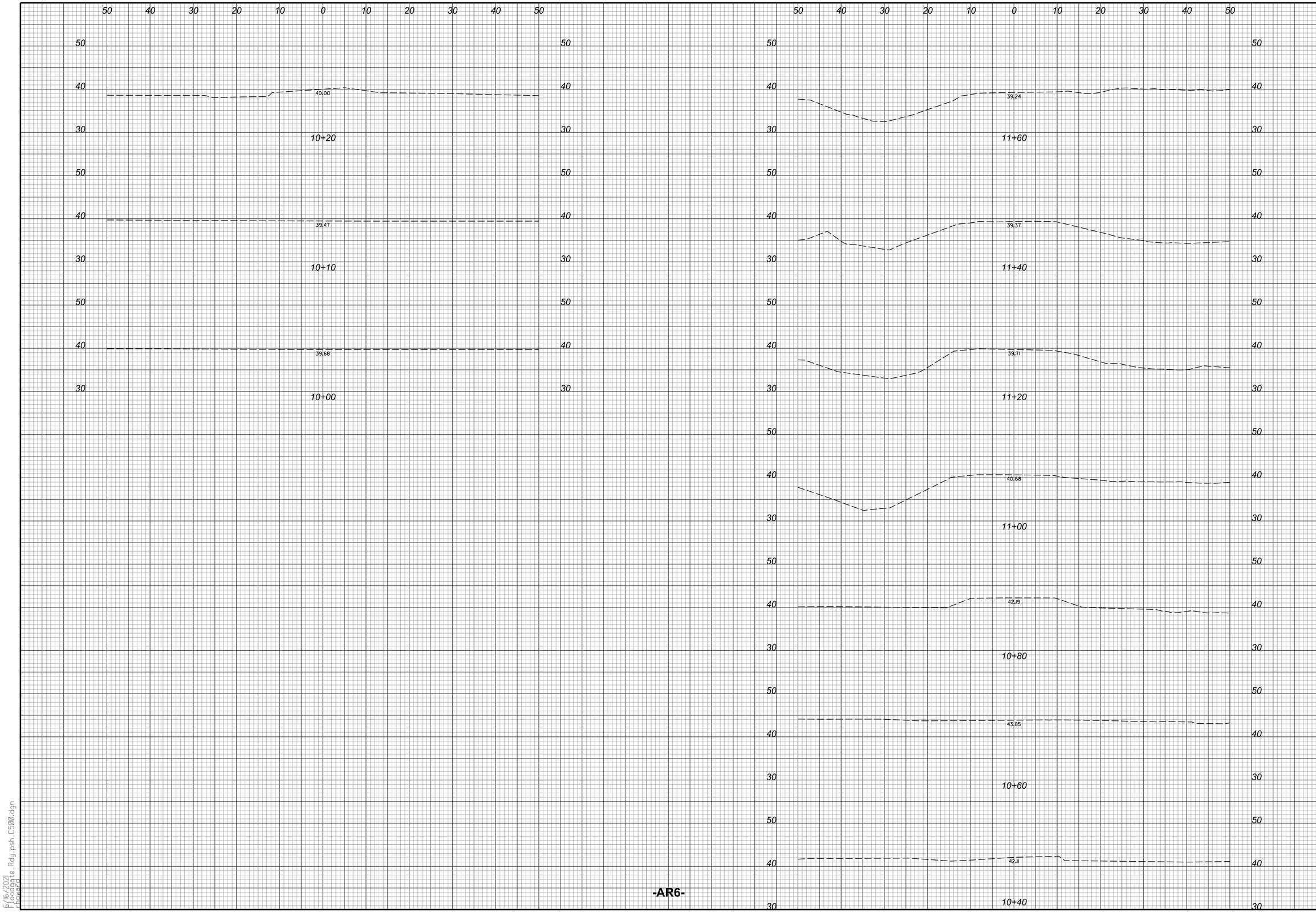
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 2-3 -AR5-, -AR5A-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C516
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.16

6/16/2021
Floodgate Rdy psh C500.dgn
Edward



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TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
JOSH DALTON
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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

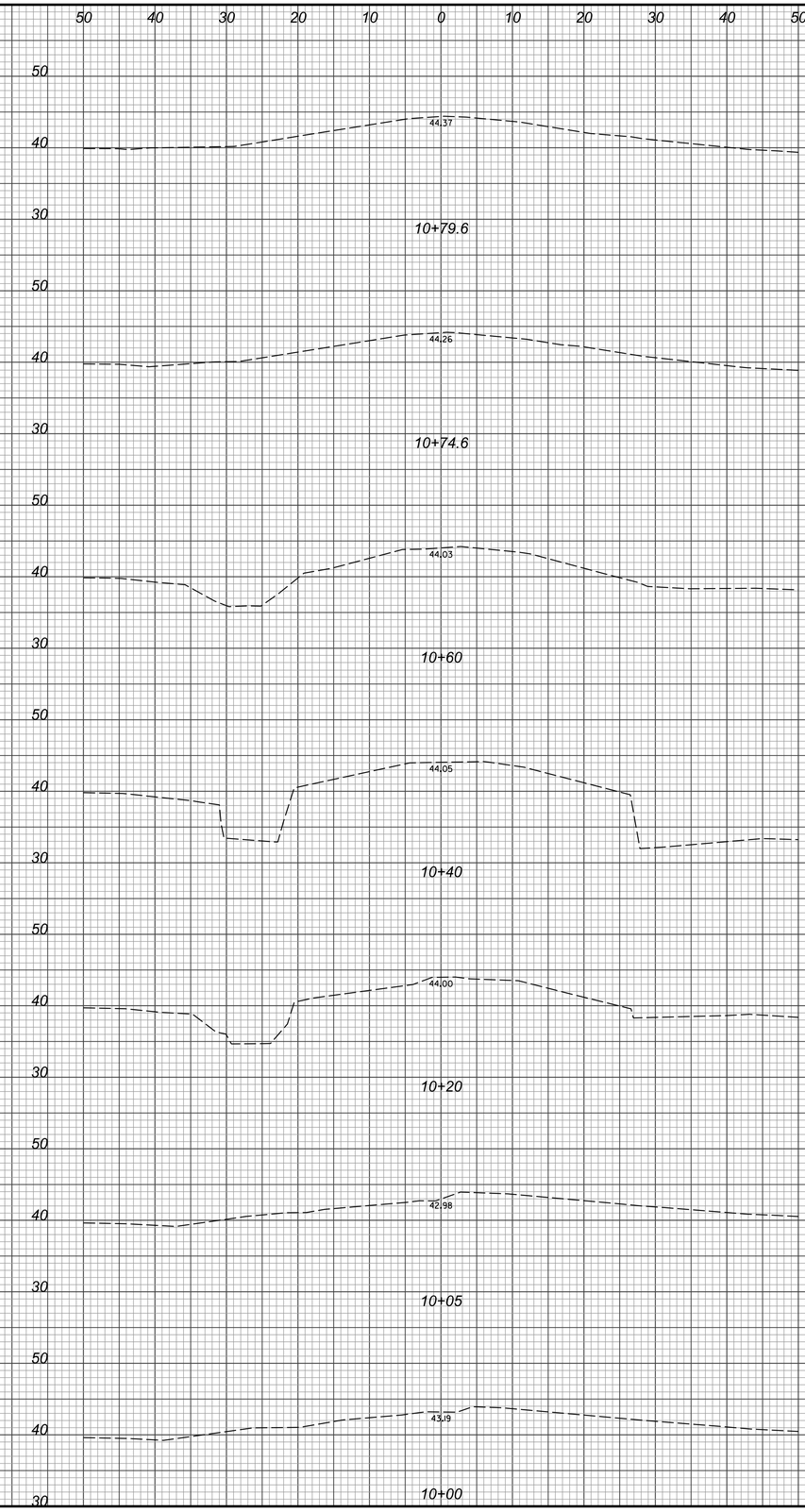
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 4 -AR6-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C517
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.17

-AR6-

6/16/2021
Floodgate Rdy_psh_C500.dgn
Jrhard



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by:
JOSH DALTON
7B0A2B8C4B564C3...
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

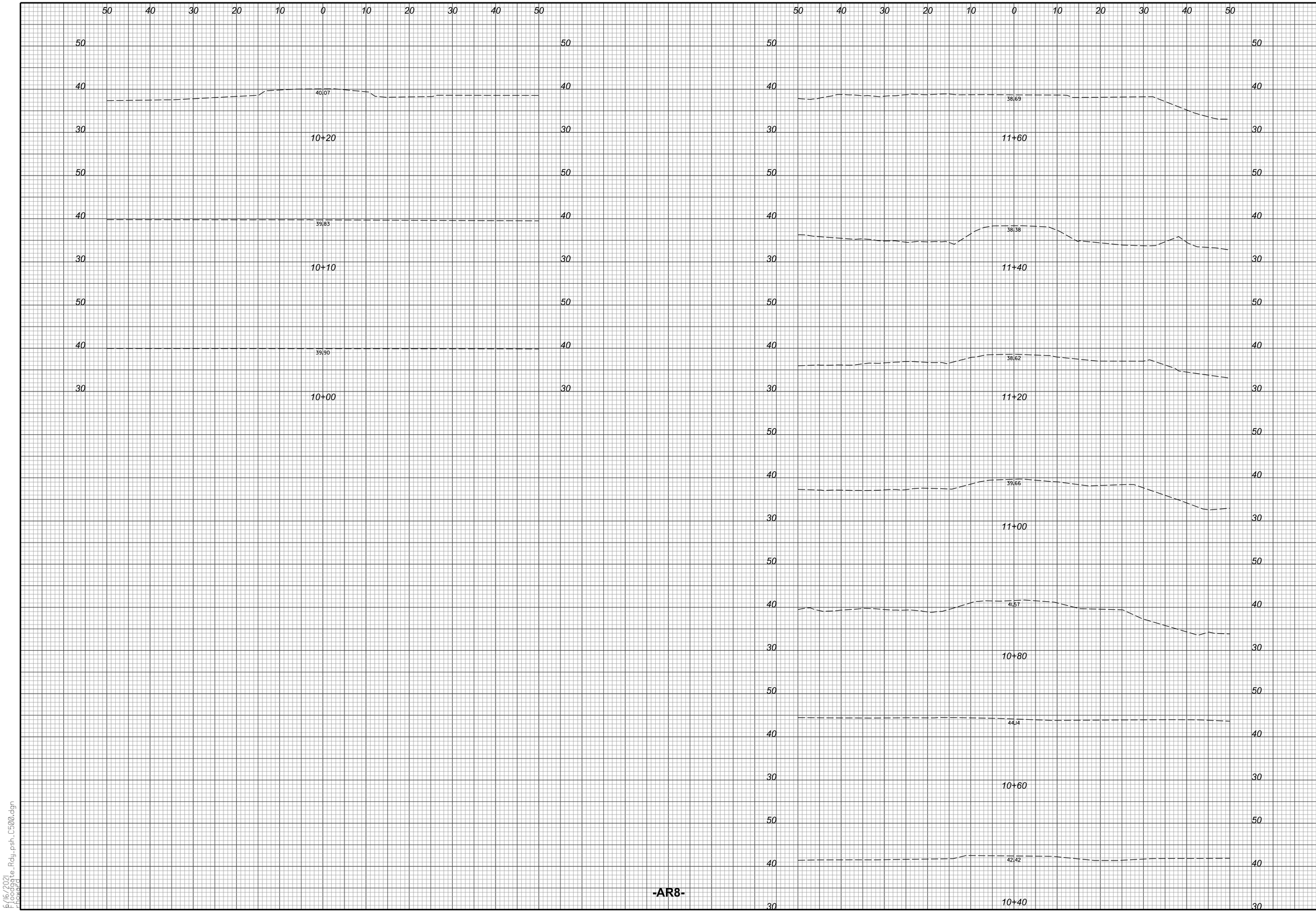
PRINCEVILLE, EDGECOMBE COUNTY, NC

CROSS SECTIONS - SITE 4 -AR7-

PROJECT # :	1284-20041
DRAWING NAME:	FLOODGATE RDY PSH C518
DATE:	6-16-2021
DRAWN BY:	JRH
REVIEWED BY:	RCH
REVISIONS:	
SHEET NO.	C5.18

-AR7-

6/16/2021
Floodgate Rdy_psh_C500.dgn
Powell



-AR8-

6/16/2021
Floodgate Rdy_psh_C500.dgn
Powell

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905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

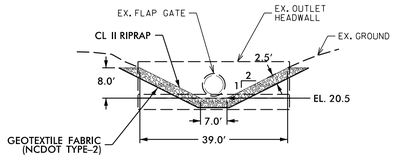
CROSS SECTIONS - SITE 4 -AR8-

PROJECT # :
1284-20041
DRAWING NAME:
FLOODGATE RDY PSH C519
DATE:
6-16-2021
DRAWN BY:
JRH
REVIEWED BY:
RCH
REVISIONS:

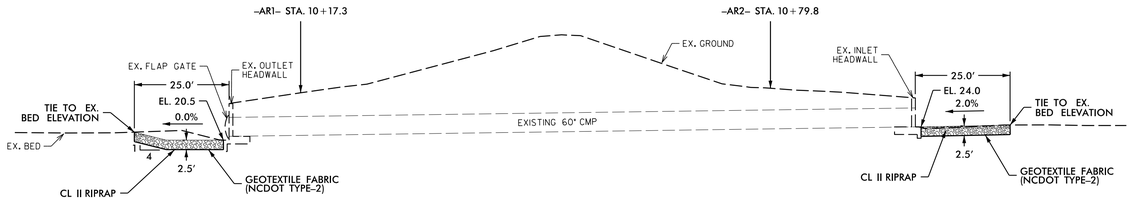
SHEET NO.
C5.19

SITE 1

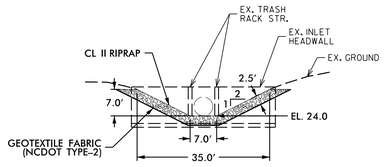
NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL



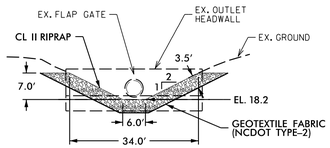
INLET & OUTLET CHANNEL PROFILE



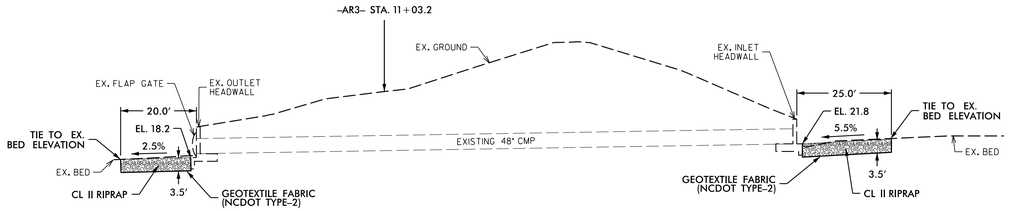
TYPICAL SECTION – INLET CHANNEL

SITE 2

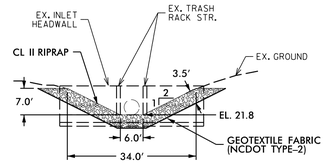
NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL



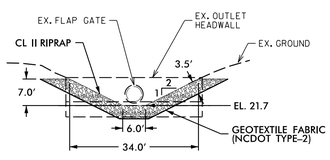
INLET & OUTLET CHANNEL PROFILE



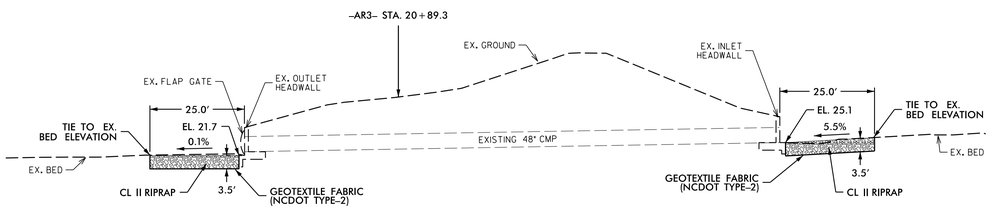
TYPICAL SECTION – INLET CHANNEL

SITE 3

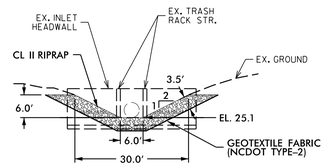
NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL

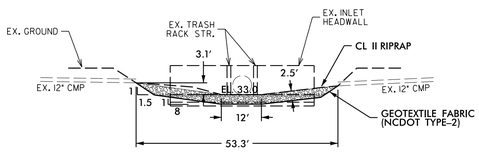


INLET & OUTLET CHANNEL PROFILE

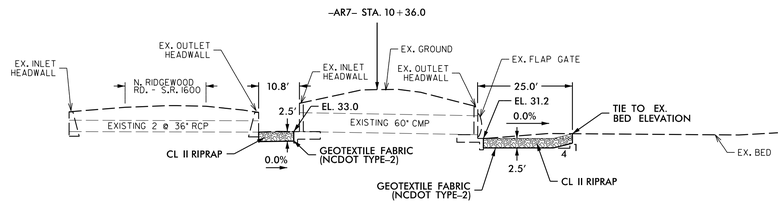


TYPICAL SECTION – INLET CHANNEL

SITE 4

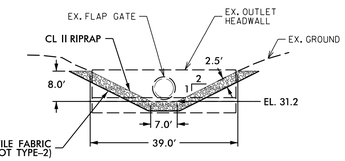


TYPICAL SECTION – INLET CHANNEL



INLET & OUTLET CHANNEL PROFILE

NOTE: RIP-RAP PLACEMENT SHALL NOT INTERFERE OR HINDER FLAP GATE OPERATION.



TYPICAL SECTION – OUTLET CHANNEL

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 839-2243
ENG FIRM LICENSE NO. C-690

DocuSigned by: JOSH DALTON 3/17/2021 | 12B0ADBC1498402...

NORTH CAROLINA PE SEAL 26971 ENGINEER JOSHUA G. DALTON

6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

CHANNEL PROFILES & TYPICAL SECTIONS

PROJECT # : 1284-20041

DRAWING NAME: FLOODGATE RDY PSH C600

DATE: 6-16-2021

DRAWN BY: JRH

REVIEWED BY: RCH

REVISIONS:

SHEET NO. C6.01

6/16/2021 Floodgate_Rdy_psh_C600.dgn Howard

CONSTRUCTION SEQUENCE

1. Obtain a Land Disturbing Permit.
2. Submit documentation required under the site NPDES stormwater permit for construction activity (NCG010000) to Stormwater Inspections throughout the project.
3. Schedule a pre-construction conference with NCDEQ Erosion Control Officer and Erosion Control Design Engineer. Contact DEMLR Raleigh Regional Office at least 48 hours prior to commencing the land-disturbing activity at (919) 791-4200.
4. Erosion and Sediment Control (E&SC) permit and Certificate of Coverage (COC) must be obtained before any land disturbing activities occur.
5. Per NPDES requirements, a rain gauge, self-inspections records, permit, Certificate of Coverage, and E&SC Plan are required to be maintained on-site and accessible during inspection. It is recommended that these items be placed in a permits box at the beginning or entrance of project.
6. Construction activities that have an E&SC Plan approved on or after April 1, 2019 are required to fill out and submit an electronic Notice of Intent (e-NOI) form. All construction activities are required to follow the new NCG01 permit regardless of when plans were approved.
7. The contractor shall conduct self-inspections of the erosion and sediment control measures and complete the following combined self-inspection form found on the DEMLR website:
   https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater/NPDES%20General%20Permits/DEMLR-CSW-Monitoring-Form-Rev-August-8-2019.pdf. Twelve months of complete inspection forms shall be kept on-site and available for inspection at all times. It is recommended a copy be kept in a permits box.
8. Self-inspections for erosion and sedimentation control measures are to be performed at least once every seven calendar days and within 24 hours of every rain event of greater than 1 inch. Any needed repairs shall be made immediately to maintain measures as details on this plan. A rain gauge shall be installed at the project site for monitoring.
9. Install all temporary erosion and sediment control measures including silt fence, tree protection, and inlet protection. Limit clearing and land disturbing activity to the area necessary to install the permitted measures.
10. Begin clearing and grubbing.
11. Stabilize any bare areas resulting from construction activity within times frames established by NCG-01 ground cover stabilization guidelines.
12. Increase maintenance frequency where approved measures fail to prevent accelerated erosion, off-site sedimentation, or repetitive non-compliance issues.
13. At sites 1 through 4:
    a. Install special stilling basin(s).
    b. Install pumps and temporary flexible hoses.
    c. Install impervious dikes, and begin pumping operations for stream diversion.
    d. Dewater construction area, using special stilling basin(s) for pumped effluent.
    e. Key in Class II rip rap at inlet and outlet channels.
    f. Excavate any accumulated silt and dewater before removal of impervious dikes.
    g. Remove impervious dikes, pumps, and temporary flexible hoses, and any remaining special stilling basin(s).
    h. Complete construction of access roads.
14. Maintain all erosion and sediment control measures in good working order. Silt fence, inlet protection and other similar measures must be cleaned out before they are half full. Clogged stone filters must be refreshed or replaced. Silt fence cannot have holes or tears.
15. Stabilize site as areas are brought up to finished grade with vegetation, paving, mulch, matting, etc. Seed and mulch denuded areas per Ground Stabilization.
16. Once the site is completely stabilized, remove temporary erosion control measures and seed out any resulting bare areas.
17. When vegetation has become established, call for a final site inspection by the Erosion Control Design Engineer.
18. When the project is complete, the permittee shall contact DEMLR to close out the E&SC Plan. After DEMLR informs the permittee of the project close out, via inspection report, the permittee shall visit deq.nc.gov/NCG01 to submit an electronic Notice of Termination (e-NOT). A $100 annual general permit fee will be charged until the e-NOT has been filled out.

General Maintenance Requirements:

-1. All erosion and sediment control practices will be checked for stability and operation following every runoff producing rainfall, but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.

-2. All seeded areas will be fertilized, reseeded as necessary, and mulched according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover.

VEGETATIVE PLAN

Seedbed Preparation

1. Chisel compacted areas and spread topsoil 2 to 3 inches deep over adverse soil conditions, if available.
2. Rip the entire area to a depth of not less than 5 inches, unless directed otherwise.
3. Remove all loose rock, roots and other obstructions 3 inches or larger on median, leaving surface reasonably smooth and uniform.
4. Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture below).
5. Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared 2 to 3 inches deep.
6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
7. Mulch within 24 hours after seeding and anchor mulch.
8. Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be more than 60% damaged, re-establish following the original lime, fertilizer and seeding rates.

Mixture

Agricultural Limestone	2 tons/acre (3 tons/acre in clay soils)
Fertilizer	1,000 lbs/acre – 10-10-10
Superphosphate	500 lbs/acre – 20% analysis
Mulch	2 tons/acre – small grain straw
Anchor	Asphalt emulsion at 400 gals/acre

Seeding Schedule

For Shoulders, Side Ditches, Slopes (Max 3:1):

Date	Type	Planting Rate
Aug 15– Nov 1	Tall Fescue	300 lbs/acre
Nov 1– Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1– Apr 15	Tall Fescue	300 lbs/acre
Apr 15– Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1– Aug 15	Tall Fescue AND Browntop Millet or Sorghum-Sudan Hybrids***	125 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Millet); 30 lbs/acre (Sorghum-Sudan Hybrids)

For Shoulders, Side Ditches, Slopes (3:1 to 2:1):

Date	Type	Planting Rate
Mar 1– Jun 1	Sericea Lespedeza (scarified) and use the following combinations:	50 lbs/acre (Sericea Lespedeza);
Mar 1– Apr 15	Add Tall Fescue	120 lbs/acre
Mar 1– Jun 30	Or add Hulled Common Bermudagrass	25 lbs/acre
Jun 1– Sept 1	Tall Fescue AND Browntop Mullet or Sorghum-Sudan Hybrids***	120 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Mullet); 30 lbs/acre (Sorghum-Sudan Hybrids)
Sept 1– Mar 1	Sericea Lespedeza (unhulled – unscarified) AND Tall Fescue	70 lbs/acre (Sericea Lespedeza); 120 lbs/acre (Tall Fescue)
Nov 1– Mar 1	AND Abruzzi Rye	25 lbs/acre

The Contractor shall select a nurse crop from the table below that is best suited to the specific site conditions and characteristics. The nurse crop shall be added to and applied along with the permanent vegetative mixture.

Consult Erosion Control Design Engineer for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those that do well under local conditions; other seeding rate combinations are possible.

*** TEMPORARY: Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow more than 12" in height before mowing; otherwise, fescue may be shaded out.

Riparian Seeding and Mulching

Riparian Seeding and Mulching shall be performed on the disturbed areas of riparian areas within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank.

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

August 1 - June 1		May 1 – September 1	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
8#	Big Bluestem	8#	Big Bluestem
6#	Indiangrass	6#	Indiangrass
4#	Switchgrass	4#	Switchgrass
35#	Rye Grain	25#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Creeping Red Fescue Cultivars:

Aberdeen Boreal Epic Cindy Lou

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Mulch within 24 hours of seeding and anchor mulch.

Mulch 2 tons/acre – small grain straw
Anchor Asphalt emulsion at 400 gals/acre

HERBACEOUS PLANTS-Seeding recommendations for immediate stabilization/nurse crops
(2 to 5 weeks for development; effectiveness goal: 6 months to 1 year stabilization) **Table 6.11.a**

NURSE CROP SPECIES

Common Name	Botanical Name	Native / Introduced	Seeding Rates lbs/acre	Fertilization/ limestone lbs/acre	Optimal Planting Dates: Mountains	Piedmont	Coastal Plains	Sun/Shade tolerant	Wetlands	Riparian Buffers	Invasive Yes or No	Installation / Maintenance Considerations	Other information, commentary
Rye Grain	*Secale cereale*	I	40 lbs	By soil test	11/1 - 4/30	8/15 - 4/15	8/15 - 4/15	Sun	Yes	Yes	No	Must be mown to reduce competitiveness with permanent or long term vegetation	
Wheat	*Triticum aestivum*	I	30 lbs	By soil test	11/1 - 4/30	8/15 - 5/15	8/15 - 4/15	Sun	Yes	Yes	No	Must be mown to reduce competitiveness with permanent or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
German Millet	*Setaria italica*	I	10 lbs	By soil test	5/11 - 9/30	5/15 - 8/15	4/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut / disc prior to planting primary or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
Browntop Millet	*Urochloa ramosa*	I	10 lbs	By soil test	5/11 - 9/30	5/15 - 8/15	4/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut / disc prior to planting primary or long term vegetation	Not water tolerant. May be used in wetlands that are not continuously saturated.
Sudangrass (hybrids)	*Sorghum saccharatum*	I	15 lbs	By soil test	NR	NR	4/15 - 8/15	Sun	No	No	Yes	Crop should be cut / disc prior to planting primary or long term vegetation	Use only where plants and seed can be contained and controlled.
	S. bicolor ssp.Drummondi												
Kobe Lespedeza	*Kummerowia striata v. kobe*	I	10 lbs	By soil test	5/1 - 9/1	5/1 - 9/1	5/1 - 9/1	Sun	No	No	No	Consult qualified horticulturalist or extension agent for over-seeding with primary cover	Use in Coastal Plain
Korean Lespedeza	*Kummerowia stipulacea*	I	10 lbs	By soil test	5/1 - 9/1	5/1 - 9/1	5/1 - 9/1	Sun	No	No	No	Consult qualified horticulturalist or extension agent for over-seeding with primary cover	Use in Piedmont and Mountains. May become invasive

NOTES:
1. Seeding rates are for hulled seed unless otherwise noted.
2. Fertilizer & Limestone - rates to be applied in absense of soils tests. Recommended application rate assumes significantly disturbed site soils with little or no residual value.
3. NR means Species not recommended for this region or application area.
4. Invasive designation as determined by the N.C. Exotic Pest Plant Council and N.C. Native Plant Society .
5. Sprigging is not recommended for immediate stabilization unless terrain is flat heavy mulch is applied and no other immediate stabilization method is practical.

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-2004I
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C6.02

6/16/2021
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Edward

Date:

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
· Temporary grass seed covered with straw or other mulches and tackifiers. · Hydroseeding · Rolled erosion control products with or without temporary grass seed · Appropriately applied straw or other mulch · Plastic sheeting	· Permanent grass seed covered with straw or other mulches and tackifiers · Geotextile fabrics such as permanent soil reinforcement matting · Hydroseeding · Shrubs or other permanent plantings covered with mulch · Uniform and evenly distributed ground cover sufficient to restrain erosion · Structural methods such as concrete, asphalt or retaining walls · Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

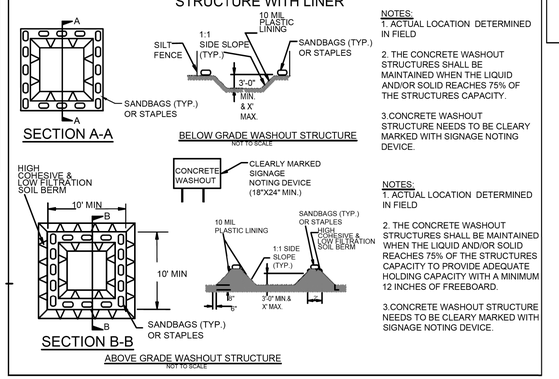
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

NORTH CAROLINA *Environmental Quality*

EFFECTIVE DATE: 11/12/2020

NCG-01 GROUND COVER & MATERIALS HANDLING

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C.603

6/16/2021
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Floodgate Rdy PSH C600

Date:

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PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2)Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA *Environmental Quality*

EFFECTIVE DATE:11/12/2020

NCG-01 SELF INSPECTION

SUNGATE DESIGN GROUP, P.A.
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ENG FIRM LICENSE NO. C-690

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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA C. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

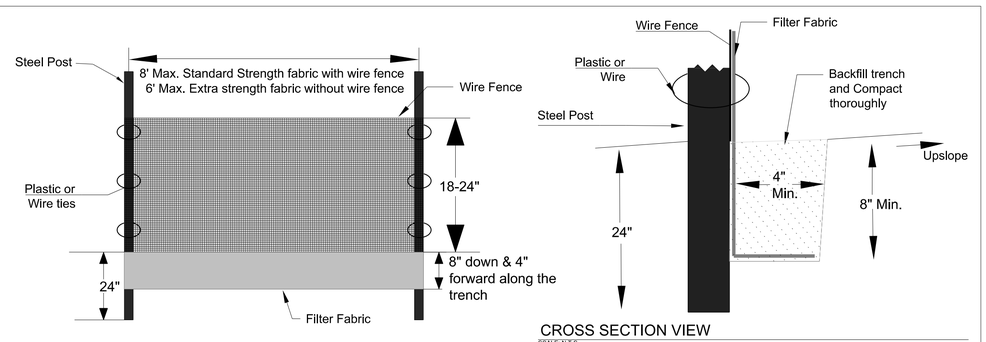
SHEET NO. **C.604**

6/16/2021
Floodgate_Rdy_psh_C600.dgn
Edward

Table 6.62b Specifications For Sediment Fence Fabric

Temporary Silt Fence Material Property Requirements					
	Test Material	Units	Supported[1] Silt Fence	Un-Supported[1] Silt Fence	Type of Value
Grab Strength	ASTM D 4632	N (lbs)			
Machine Direction			400	550	MARV
			(90)	(90)	
X-Machine Direction			400	450	MARV
			(90)	(90)	
Permittivity[2]	ASTM D 4491	sec-1	0.05	0.05	MARV
Apparent Opening Size[2]	ASTM D 4751	mm	0.60	0.60	Max. ARV[3]
		(US Sieve #)	(30)	(30)	
Ultraviolet Stability	ASTM D 4355	% Retained Strength	70% after 500h of exposure	70% after 500h of exposure	Typical

[1] Silt Fence support shall consist of 14 gage steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated poylmer mesh of equivalent strength.
[2] These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.
[3] As measured in accordance with Test Method D 4632.



CROSS SECTION VIEW
SCALE: N.T.S.

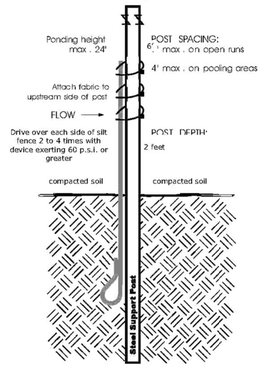
Construction:
1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground. (Higher fences may impound volumes of water sufficient to cause failure of the structure)
3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have a minimum 50 pound tensile strength.
5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Supports should be driven securely into the ground a minimum of 24 inches.
6. Extra strength filter fabric with 6 foot post spacing does not require a wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have a minimum of 50 pound tensile strength.
7. Excavate the trench approximately 4 inches wide and 8 inches deep along the proposed line of the posts and upslope from the barrier.
8. Place 12 inches of fabric along the bottom and side of the trench.
9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
10. Do not attach filter fabric to existing trees.

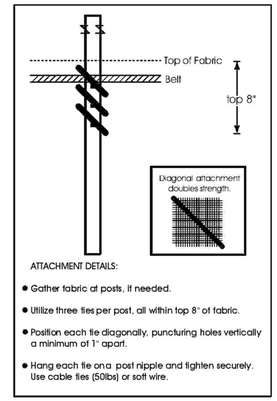
Maintenance:
1. Inspect sediment fences at least once a week and after each 1 inch or greater rainfall. Make any required repairs immediately.
2. Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
3. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
4. Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

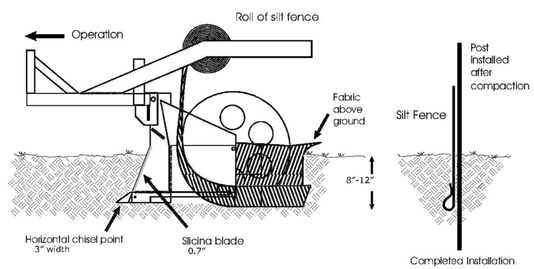
DETAIL - SILT FENCE

SCALE: N.T.S

The Slicing Method







Vibratory plow is not acceptable because of horizontal compaction

Figure 6.62b Schematics for using the slicing method to install a sediment fence. Adapted from *Silt Fence that Works*

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6/17/2021

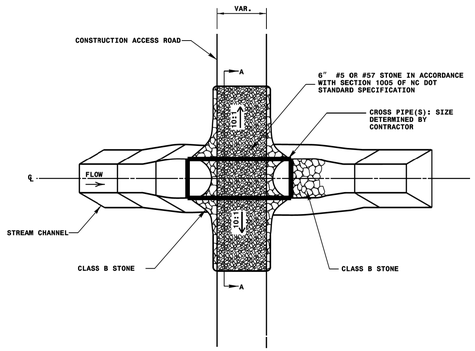
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

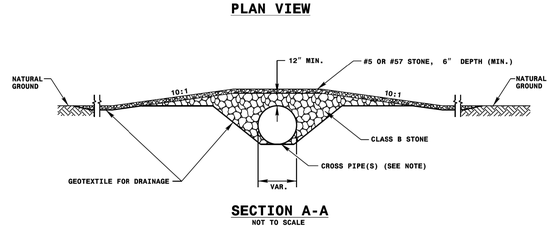
PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C.605

6/16/2021
Floodgate_Rdy_psh_C600.dgn
Floodgate



PLAN VIEW



SECTION A-A
NOT TO SCALE

NOTES

PIPE(S) FOR TEMPORARY STREAM CROSSING SHALL BE DESIGNED TO PASS THE PEAK OR BANKFULL FLOW, WHICHEVER IS LESS, FROM A 2-YEAR PEAK STORM, WITHOUT OVER TOPPING.

1-18

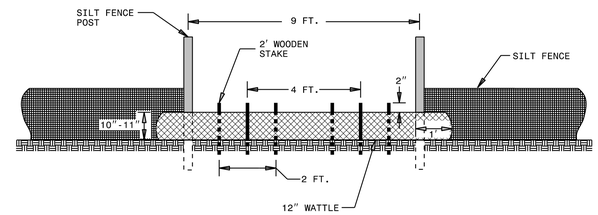
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR

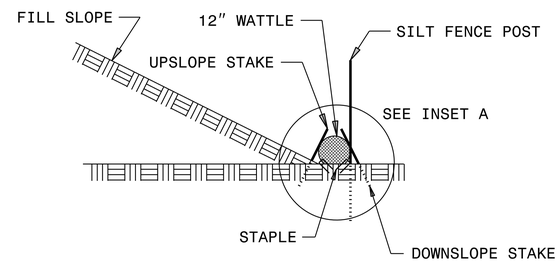
TEMPORARY STREAM CROSSING

SHEET 1 OF 1

1645.01

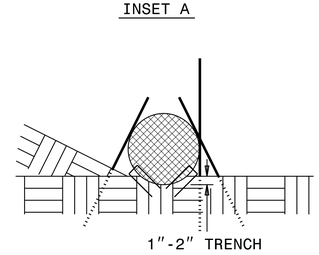


VIEW FROM SLOPE



SIDE VIEW

INSET A



DETAIL - SILT FENCE COIR FIBER WATTLE BREAK

SCALE: N.T.S

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

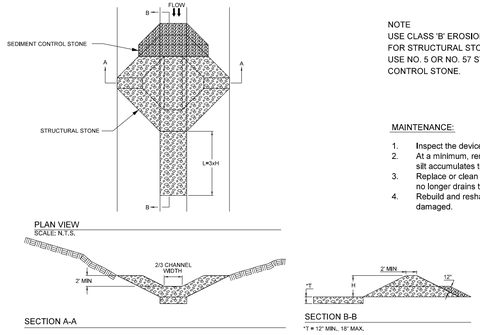
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO.
C.606

6/16/2021
Floodgate_Rdy_psh_C600.dgn
Howard



NOTE
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

MAINTENANCE:

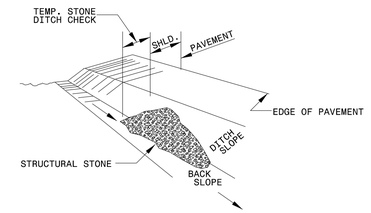
1. Inspect the device after each significant rainfall.
2. At a minimum, remove silt from the device when silt accumulates to one-half the height of the weir.
3. Replace or clean sediment control stone when water no longer drains through the device between rainfall events.
4. Rebuild and reshape rock weir and check when the device is damaged.

DETAIL - TEMPORARY ROCK SILT CHECK TYPE 'A'

SCALE: N.T.S

Construction Specifications:

Structural Stone	- Use Class B structural stone. - Install stone at a minimum depth of 12 inches. - Install sediment control stone on the upgradient face of the structural stone.
Side Slopes	- 2:1 or flatter.
Weir	- Weir length should be $\frac{2}{3}$ of the channel width. - The weir height shall be a minimum of 1 foot. - The depth of the weir shall be a minimum of 1 foot.

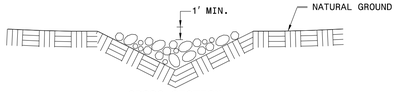


ISOMETRIC VIEW

NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

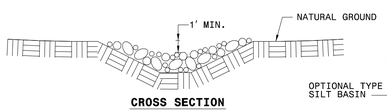
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



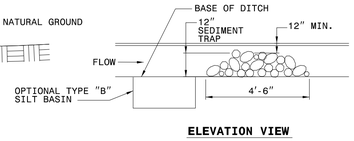
CROSS SECTION
VEE DITCH

MAINTENANCE:

1. Inspect the device periodically and after each significant rainfall event for damage and sediment accumulation.
2. Remove silt from device when it accumulates.
3. Rebuild and reshape device and weir when the device is damaged or as necessary.
4. Cleanout when clogged by straw, limbs, or other debris.



CROSS SECTION
TRAPEZOIDAL DITCH



ELEVATION VIEW

DETAIL - TEMPORARY ROCK SILT CHECK TYPE 'B'

SCALE: N.T.S

Construction Specifications:

Installation	- The center of the rock silt check shall be at least 1-foot lower than the outer edges (top of the channel sides). - The maximum height at the center of the rock check should not exceed 2 feet. - The side slopes of the check shall be 2:1 or flatter.
Slope	- Maximum spacing between the checks should place the toe of the upstream check at the top of the downstream check.

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-2004I
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-I6-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO.
C.607

6/16/2021
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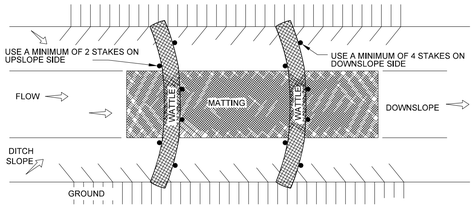
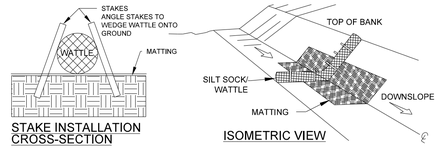
Howard



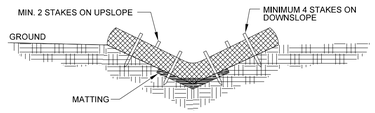
PLAN VIEW
SCALE: N.T.S.



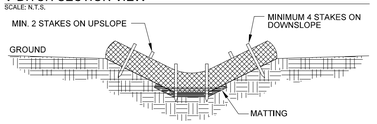
STAKE INSTALLATION CROSS-SECTION

ISOMETRIC VIEW

Ditch Spacing For 12 Inch Silt Sock/Wattle	
Channel Slope (%)	Space Between Silt Socks/ Wattles (Feet)
1	100
2	50
3	33
4	25
5	20



V-DITCH SECTION VIEW
SCALE: N.T.S.



TRAPEZOIDAL DITCH SECTION VIEW
SCALE: N.T.S.

NOTES:
1. Other materials providing equivalent protection against erosive velocities may be substituted for use in silt socks or wattles.
2. Use a minimum 12 Inch diameter silt sock/wattle.
3. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
4. Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
5. Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
6. Install a minimum of two upslope stakes and four downslope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch.
7. The use of Polyacrylamide (PAM) is recommended. Apply 2-3 ounces of anionic PAM on top of sock/wattle. Apply 1-2 ounces to matting on either side of sock/wattle. Reapply after each 1,0 inch rainfall.

MAINTENANCE:
1. Inspect silt sock/wattle(s) weekly and after each rain of 1 inch or greater. Remove accumulated sediment and any debris.
2. Silt sock/Wattle(s) must be replaced if clogged or torn,
3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
4. Reinstall if damaged or dislodged.
5. Silt socks/Wattles shall be inspected untill land disturbance is compete and the area above the measure is permanently stabilized.

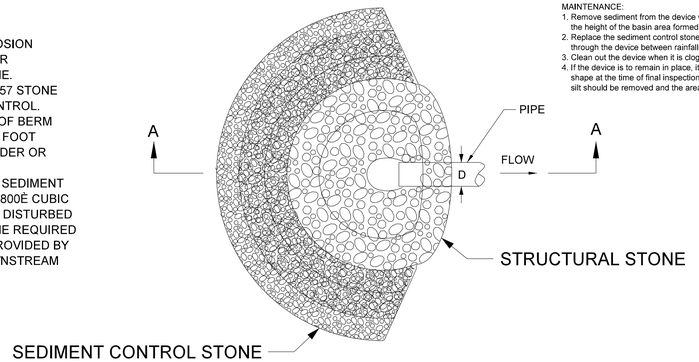
DETAIL - SILT SOCK / WATTLE FOR CHECK DAM

SCALE: N.T.S

Construction Specifications:

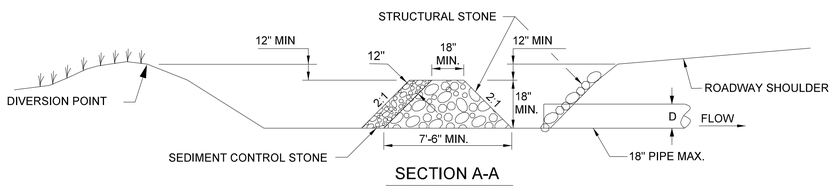
Matting	- Install matting in accordance with Section 1631 of the Standard Specifications.
Staples	- Provide staples made of 0.125-inch diameter steel wire formed into a U-shape no less than 12 inches in length. - Install staples approximately every 1 foot on both sides of the wattle and at each end to secure it to the soil.
Stakes	- Use 2-foot wooden stakes with a 2-inch by 2-inch nominal cross section. - Install a minimum of 2 upslope stakes and 4 downslope stakes at an angle to wedge the wattle to the bottom of the ditch. - Drive stakes into the ground a minimum of 10 inches with no more than 2 inches projecting from the top of the wattle.
Flocculant	- Flocculant shall be in powder form and anionic and neutrally charged. - Soil samples should be obtained from areas where wattles will be placed and from off-site material used to construct the roadway. Samples should be analyzed to determine the appropriate flocculant to be used in each wattle. - Flocculant used should be listed on the NCDENR DWR website as an approved product for use in North Carolina. - Flocculant should be applied over the lower center portion of the wattle where the water will flow at a rate of 2 ounces per wattle. - Apply 1 ounce of flocculant on each side of the wattle. - Flocculant should be evaluated and applied after every rainfall event that is equal to or exceeds 0.5 inches.
Overlap	- Overlap adjoining sections of wattles a minimum of 1 foot.

NOTE:
USE CLASS 'A' EROSION CONTROL STON FOR STRUCTURAL STONE.
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.
CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR DIVERSION POINT.
PROVIDE A TOTAL SEDIMENT TRAP VOLUME OF 1800È CUBIC FEET PER ACRE OF DISTURBED AREA. SOME OF THE REQUIRED VOLUME MAY BE PROVIDED BY OTHER UP OR DOWNSTREAM CONTROLS.



PLAN VIEW
SCALE: N.T.S.

MAINTENANCE:
1. Remove sediment from the device when accumulations reach one-half the height of the basin area formed by the device.
2. Replace the sediment control stone as needed to allow water to drain through the device between rainfall events.
3. Clean out the device when it is clogged with debris.
4. If the device is to remain in place, it should be cleaned and in proper shape at the time of final inspection. If it is removed, all accumulated silt should be removed and the area seeded.



SECTION A-A

DETAIL - ROCK PIPE INLET SEDIMENT TRAP TYPE-B

SCALE: N.T.S

Construction Specifications:

Berm	- Top of berm should be a minimum of 12 inches below the shoulder or any diversion point. - Side slopes should be no steeper than 2:1. - Berm should have a minimum height of 18 inches.
Sediment Control Stone	- No. 5 or No. 57 stone to be installed on the outer face of the stone dam in a layer 1-foot thick.
Structural Stone	- Class A stone installed in a doughnut-shaped ring around the inlet. - Installed with a berm on the top that is 18 inches wide. - Stone should have a minimum base width of 7.5 feet.

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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-2004I
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-I6-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO.
C.608

6/16/2021
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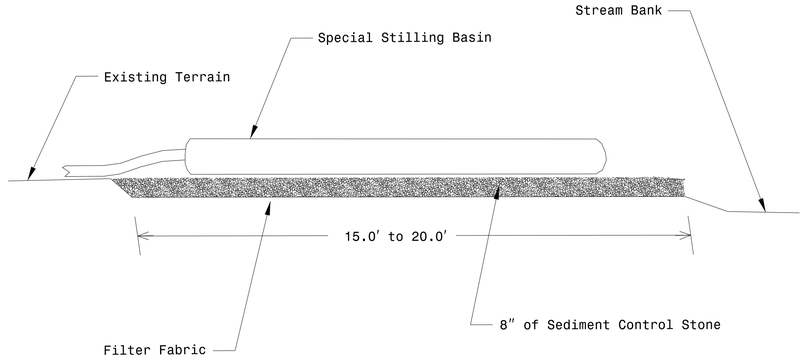
Layout



MAINTENANCE:
1. The special stilling basin shall be disposed of and replaced when it is ¾ full of sediment or when it is impractical for the bag to filter the sediment out at a reasonable flow rate.
2. The inlet of the bag should be inspected periodically for damage and/or blockage
3. Sediment control stone shall be replaced if damaged by high flows or bag failure.

Note: Provide Stabilized Outlet to Streambank
Not To Scale

DETAIL - SPECIAL STILLING BASIN

SCALE: N.T.S

Construction Specifications:

Special Stilling Basin	- The bag shall be placed on a rock pad constructed of at least 8 inches of sediment control stone. The bag may also be placed on wooden pallets to elevate it above natural ground. - The rock pad should extend at least 1 foot past the bag on all sides. - The special stilling basin should be placed on level ground. - The special stilling basin shall be placed so that incoming water flows into the bag without causing erosion. - Temporary slope drain pipe(s) or pump discharge hoses will be attached to the special stilling basin(s) so that water is routed directly into the special stilling basin(s). - The special stilling basin may be cut to allow slope drain pipe to be inserted if needed and tied of tightly. The remaining sleeve or spout of the bag, if present, may be used to connect more than one special stilling basin in series, as directed. If not used in this manner, the sleeve shall be tied off tightly to allow the bag to contain the effluent and force it to filter through the sides of the special stilling basin. - When being utilized in drilled pier construction, the special stilling basin should be constructed such that it is portable and can be used adjacent to each drilled pier.

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ENG FIRM LICENSE NO. C-690

Documents signed by: JOSH DALTON
PROFESSIONAL ENGINEER SEAL 26971 ENGINEER JOSHUA C. DALTON
6/17/2021

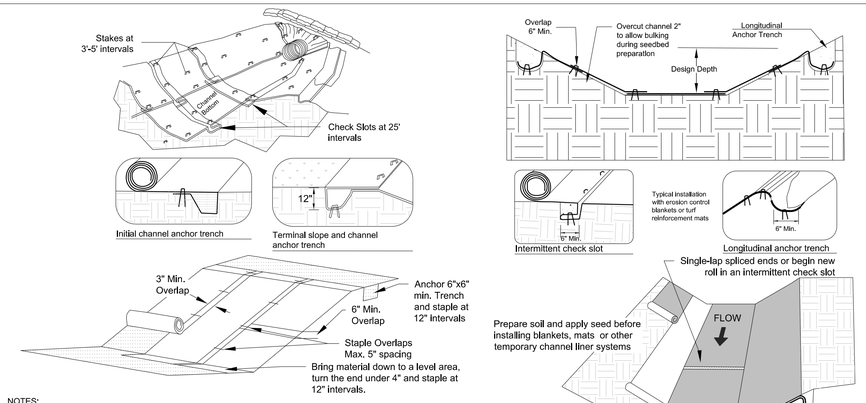
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C.609

6/16/2021
Floodgate_Rdy_psh_C600.dgn
Josh J

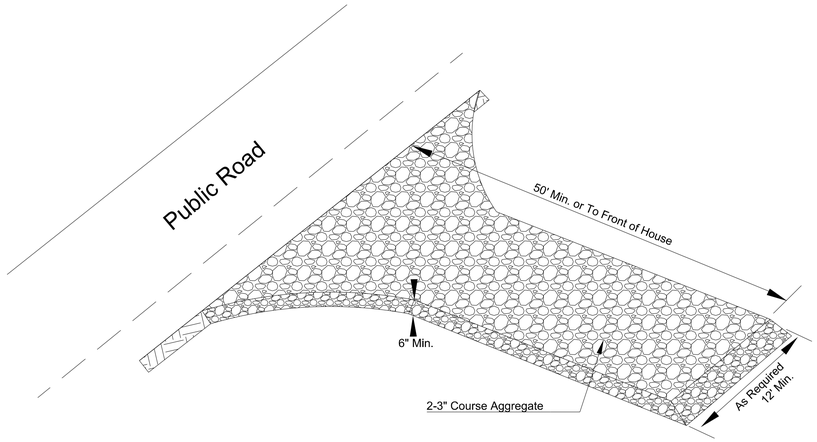


NOTES:
1. Lime, fertilize and seed before installation. Planting of shrubs, trees, etc. should occur after installation.
2. Slope surface shall be smooth before placement for proper soil contact.
3. Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
4. Terminal anchor trenches are required at RECP ends and intermittent check slots must be constructed across channels at 25 foot intervals.
5. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width. Intermittent check slots should be 6 inches deep and 6 inches wide.
6. For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Unroll the RECP down the slope maintaining direct contact between the soil and RECP. Pin using staples or pins in a 3 feet center-to-center pattern.
7. 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
8. Grass-lined channels with design velocities exceeding 6 feet/second should include turf reinforcement mats
9. Check slots to be constructed per manufacturers specifications.
10. Staking or stapling layout per manufacturers specification.
11. If there is a berm at the top of slope, anchor upslope of the berm.
12. Do not stretch blankets/matting tight, allow the rolls to conform to any irregularities.
13. For slopes less than 3H:1V, rolls may be placed in horizontal strips.

MAINTENANCE:
1. Inspect Rolled Erosion Control Products at least weekly and after each rain of 1 inch or greater; repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.

DETAIL - ROLLED EROSION CONTROL PRODUCTS (RECP)

SCALE: N.T.S



Construction:
1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.
2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage to carry water to a sediment trap or other suitable outlet.
4. Use geotextile fabrics in order to improve stability of the foundation in locations subject to seepage or high water table.

Maintenance:
1. Per NCG-01 inspect at least once a week and after each 1 inch or greater rainfall; make any required repairs immediately.
2. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2 inch stone.
3. Immediately remove all objectionable materials spilled, washed or tracked onto public roadways.

DETAIL - CONSTRUCTION ENTRANCE / EXIT

SCALE: N.T.S

Construction Specifications

Construction
Even if properly designed, if not properly installed, RECP's will probably not function as desired. Proper installation is imperative. Even if properly installed, if not properly timed and nourished, vegetation will probably not grow as desired. Proper seed/vegetation selection is also imperative.

Grade the surface of installation areas so that the ground is smooth and loose. When seeding prior to installation, follow the steps for seed bed preparation, soil amendments, and seeding in *Surface Stabilization*, 6.1. All gullies, rills, and any other disturbed areas must be fine graded prior to installation. Spread seed before RECP installation. (**Important**: Remove all large rocks, dirt clods, stumps, roots, grass clumps, trash, and other obstructions from the soil surface to allow for direct contact between the soil surface and the RECP.)

Terminal anchor trenches are required at RECP ends and intermittent trenches must be constructed across channels at 25-foot intervals. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width, while intermittent trenches need be only 6 inches deep and 6 inches wide.

Installation for Slopes— Place the RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill, and compact. Unroll the RECP down (or along) the slope maintaining direct contact between the soil and the RECP. Overlap adjacent rolls a minimum of 3 inches. Pin the RECP to the ground using staples or pins in a 3 foot center-to-center pattern. Less frequent stapling/pinning is acceptable on moderate slopes.

Installation in Channels— Excavate terminal trenches (12 inches deep and 6 inches wide) across the channel at the upper and lower end of the lined channel sections. At 25-foot intervals along the channel, anchor the RECP across the channel either in 6 inch by 6 inch trenches or by installing two closely spaced rows of anchors. Excavate longitudinal trenches 6 inches deep and wide along channel edges (above water line) in which to bury the outside RECP edges. Place the first RECP at the downstream end of the channel. Place the end of the first RECP in the terminal trench and pin it at 1 foot intervals along the bottom of the trench.

Note: The RECP should be placed upside down in the trench with the roll on the downstream side of the bench.

Once pinned and backfilled, the RECP is deployed by wrapping over the top of the trench and unrolling upstream. If the channel is wider than the provided rolls, place ends of adjacent rolls in the terminal trench, overlapping the adjacent rolls a minimum of 3 inches. Pin at 1 foot intervals, backfill, and compact. Unroll the RECP in the upstream direction until reaching the first intermittent trench. Fold the RECP back over itself, positioning the roll on the downstream side of the trench, and allowing the mat to conform to the trench.

Then pin the RECP (two layers) to the bottom of the trench, backfill, and compact. Continue up the channel (wrapping over the top of the intermittent trench) repeating this step at other intermittent trenches, until reaching the upper terminal trench.

At the upper terminal trench, allow the RECP to conform to the trench, secure with pins or staples, backfill, compact and then bring the mat back over the top of the trench and onto the existing mat (2 to 3 feet overlap in the downstream direction), and pin at 1 foot intervals across the RECP. When starting installation of a new roll, begin in a trench or shingle-lap ends of rolls a minimum of 1 foot with upstream RECP on top to prevent uplifting. Place the outside edges of the RECP(s) in longitudinal trenches, pin, backfill, and compact.

Anchoring Devices—11 gauge, at least 6 inches length by 1 inch width staples or 12 inch minimum length wooden stakes are recommended for anchoring the RECP to the ground.

Drive staples or pins so that the top of the staple or pin is flush with the ground surface. Anchor each RECP every 3 feet along its center. Longitudinal overlaps must be sufficient to accommodate a row of anchors and uniform along the entire length of overlap and anchored every 3 feet along the overlap length. Roll ends may be spliced by overlapping 1 foot (in the direction of water flow), with the upstream/upslope mat placed on top of the downstream/downslope RECP. This overlap should be anchored at 1 foot spacing across the RECP. When installing multiple width mats heat seamed in the factory, all factory seams and field overlaps should be similarly anchored.

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Designed by:
JOSH DALTON
10881DOC1694C1

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA C. DALTON

6/17/2021

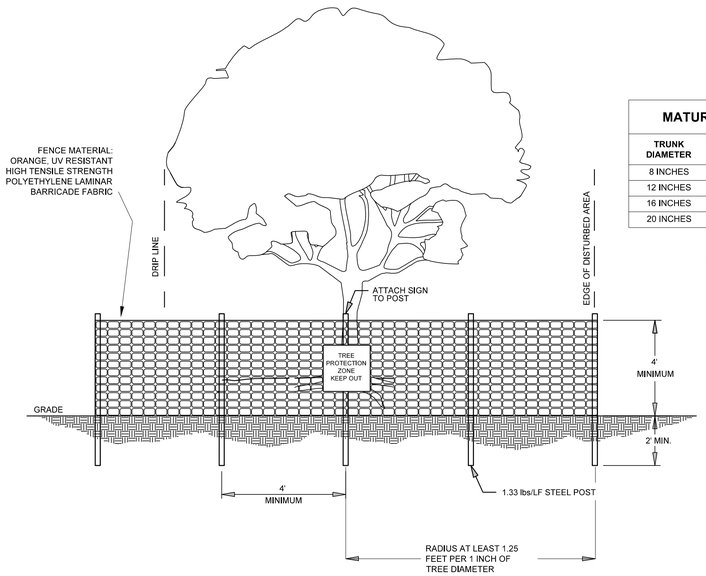
PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C.610**

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

6/16/2021
Floodgate_Rdy_psh_C600.dgn
Howard



MATURE TREE PROTECTION ZONE RADIUS

TRUNK DIAMETER	GOOD PROTECTION	BETTER PROTECTION	BEST PROTECTION
8 INCHES	10 FEET	12 FEET	20 FEET
12 INCHES	15 FEET	18 FEET	30 FEET
16 INCHES	20 FEET	24 FEET	40 FEET
20 INCHES	25 FEET	30 FEET	50 FEET

NOTES:
1. Leave critical areas (such as flood plains, steep slopes and wetlands) with desirable trees in their natural condition or only partially cleared.
2. Select trees to be preserved before siting roads, buildings or other structures.
3. Minimize trenching in areas with trees. Place several utilities in the same trench.
4. Prohibit or restrict access to tree protection zones(TPZ). Post "Keep Out" signs on all sides of fencing and do not store construction equipment or materials in TPZ.
5. Monitor trees using a professional or train your staff to monitor tree health during and after construction on a regular, frequent basis.
6. Assign a crew member to weekly TPZ fence integrity checks. Repair and replace TPZ fencing as needed.

MAINTENANCE:
1. Prune any damaged trees. In spite of precautions, some damage to protected trees may occur. In such cases, repair any damage to the crown, trunk, or root system immediately.
2. Repair roots by cutting off the damaged areas and painting them them with tree paint. Spread peat moss or moist topsoil over exposed roots.
3. Repair damage to bark by trimming around the damaged area, taper the cut to provide drainage and paint with tree paint.
4. Cut off all damaged tree limbs above the tree collar at the trunk or main branch. Use three separate cuts to avoid peeling bark from healthy areas of the tree.

DETAIL - TREE PROTECTION ZONES

SCALE: N.T.S

Design Criteria

The following general criteria should be considered when developing sites in wooded areas:

- Leave critical areas (such as flood plains, steep slopes and wetlands) with desirable trees in their natural condition or only partially cleared.
- Locate roadways, storage areas, and parking pads away from valuable tree stands. Follow natural contours, where feasible, to minimize cutting and filling in the vicinity of trees.
- Select trees to be preserved before siting roads, buildings, or other structures.
- Minimize trenching in areas with trees. Place several utilities in the same trench.
- Designate groups of trees and individual trees to be saved on the erosion and sedimentation control plan.
- **Do not excavate, traverse, or fill closer than the drip line, or perimeter of the canopy, of trees to be saved**.

Construction Specifications

1. Erect TPZ fences. Restrict access to TPZs, with tall, bright, protective fencing. Most fencing is inexpensive and durable enough to last throughout most construction projects. Temporary tree protection fencing should be erected before clearing, deliveries and other construction activities begin on the site.

2. Prohibit or restrict access to TPZs. All on-site workers should be aware of the TPZs and the restrictions on activities within the zones. Use these TPZ guidelines for the best effect:

• Post "keep out" signs on all sides of fencing. Do not store construction equipment or materials in TPZs.

• Prohibit construction activities near the most valuable trees, and restrict activities around others.

• Assess crew and contractor penalties, if necessary, to keep the TPZs intact.

3. Monitor trees. Vigilance is required to protect trees on construction sites. Use a tree professional or train your staff to monitor tree health during and after construction on a regular, frequent basis. Watch for signs of tree stress, such as dieback, leaf loss, or general decline in tree health or appearance.

4. Monitor TPZ fences. Assign a crewmember the weekly responsibility of checking the integrity of TPZ fences. Repair and replace TPZ fencing as needed.

5. Optimize tree health. Assign a trained crewmember or hire a professional to complete regular tree maintenance tasks, including watering, fertilization, and mulching to protect tree roots. Consult a tree professional for advice on these practices if needed. Survival of protected trees will increase if these practices continue during construction. Healthy trees require undisturbed healthy soils. Do not cause injuries to trees and roots. Do not change the soil, grade, drainage, or aeration without protecting priority trees

Figure 6.05c Tree protection zone guidelines.

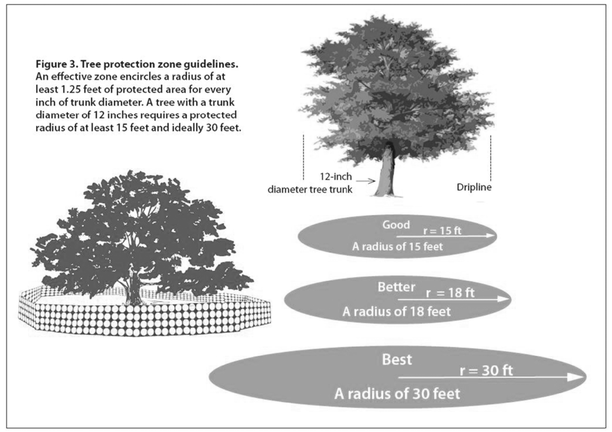
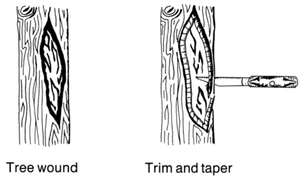
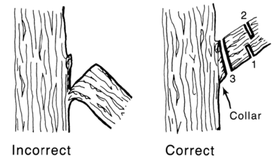


Figure 6.05d Wound repair and pruning of damaged trees.

Trim bark wounds with a tapered cut, then apply tree paint.



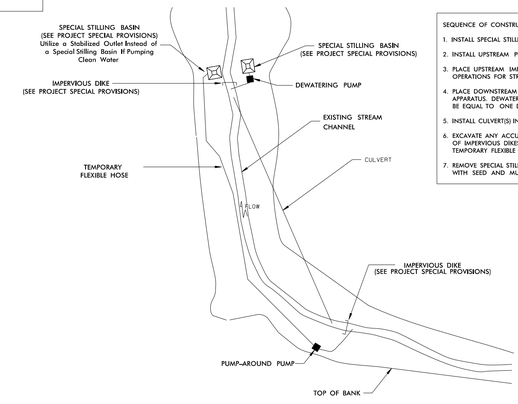
Prune damaged branches with three cuts to avoid peeling bark from the trunk when limb falls.



References

Construction and Tree Protection, AG-685 (Revised) North Carolina Cooperative Extension Service

NOTES:
1) All excavation shall be performed in only dry or isolated areas of the work zone.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
4) Pumps and hoses shall be of sufficient size to dewater the work area.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

DETAIL - EXAMPLE OF PUMP-AROUND OPERATION

SCALE: N.T.S

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NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA C. DALTON
6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

EROSION AND SEDIMENTATION CONTROL DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C600
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C.611

6/16/2021
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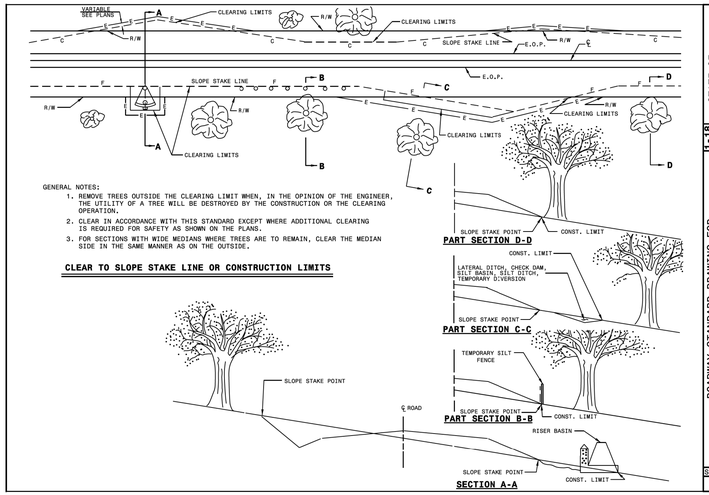


GENERAL NOTES:

1. REMOVE TREES OUTSIDE THE CLEARING LIMIT WHEN, IN THE OPINION OF THE ENGINEER, THE UTILITY OF A TREE WILL BE DESTROYED BY THE CONSTRUCTION OR THE CLEARING OPERATION.
2. CLEAR IN ACCORDANCE WITH THIS STANDARD EXCEPT WHERE ADDITIONAL CLEARING IS REQUIRED FOR SAFETY AS SHOWN ON THE PLANS.
3. FOR SECTIONS WITH WIDE MEDIANS WHERE TREES ARE TO REMAIN, CLEAR THE MEDIAN SIDE IN THE SAME MANNER AS ON THE OUTSIDE.

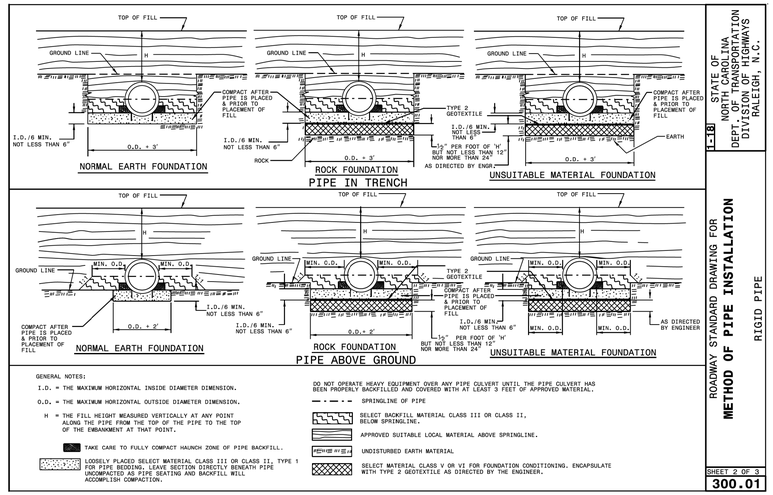
CLEAR TO SLOPE STAKE LINE OR CONSTRUCTION LIMITS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF CLEARING
METHOD - II

SHEET 1 OF 1
200.02



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 ENCAPSULATION. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED SO PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 3
300.01

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	(Ga)	Maximum Height of Cover (feet) 16	14	12	10	8
12	12		204	256			
15	12		162	204			
18	12		136	169	239		
21	12		115	145	204		
24	12		100	126	178		
30	12		79	100	142		
36	12		65	83	117	152	
42	12		55	70	100	130	160
48	12		48	61	87	113	139
54	12			54	77	100	123
60	12				69	90	111
66	12					81	100
72	12					74	91
78	12						81
84	12						68

Round Corrugated Aluminum Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	(Ga)	Maximum Height of Cover (feet) 16	14	12	10	8
12	12		123	155	218	281	344
15	12		98	123	174	224	275
18	12		81	102	144	187	228
21	12		69	87	123	160	195
24	12		60	76	108	139	171
27	12			67	95	123	151
30	12			60	85	111	136
36	12			50	71	92	113
42	12				60	78	96
48	12				52	68	84
54	12				46	50	74
60	12					50	62
66	12						51
72	12						41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

CSP - AASHTO M36
CAAP - AASHTO M196
HDPE - AASHTO M294
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

HDPE - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 60"
* (Maximum fill) 20' for pipe diameters ≤ 24"
17' for pipe diameters ≥ 30" and ≤ 60"

PVC - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 36"
(Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

RIGID PIPE

RCP - * (Minimum fill) 1' for Class IV & CLASS V
2' for Class III & Class II

* (Maximum fill) 10' - Class II pipe
20' - Class III pipe
30' - Class IV pipe
40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

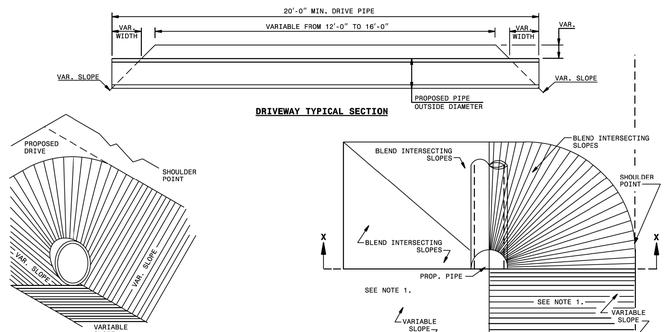
1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FILL HEIGHT TABLES

SHEET 3 OF 3
300.01



USE AT LOCATIONS AS DIRECTED BY THE ENGINEER

GENERAL NOTES:

ALL DIMENSIONS GIVEN ARE FOR MINIMUM CONDITIONS. PROPER ENGINEERING JUDGEMENT MUST BE USED IN DETERMINING DRIVEWAY LOCATIONS, WIDTHS, AND PIPE LENGTHS.

FACTORS SUCH AS VEHICLE TURNING RADIUS, TRAFFIC VOLUMES, DRIVEWAY SKEW, OFFSET DISTANCE OF PIPE FROM EDGE OF PAVEMENT, PIPE DEPTHS, AND DESIGN SPEED SHOULD BE CONSIDERED IN DETERMINING DRIVEWAY WIDTHS.

NOTE:
1. THESE AREAS ARE TO BE USED TO BLEND THE INTERSECTING SLOPES TO THE PROPOSED DITCH.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
DRIVEWAY PIPE CONSTRUCTION
USING NO SPECIAL END SECTIONS

SHEET 1 OF 1
310.10

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6/17/2021

PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

SITE DETAILS

PROJECT # : I284-20041
DRAWING NAME: FLOODGATE RDY PSH C603
DATE: 6-16-2021
DRAWN BY: JRH
REVIEWED BY: RCH
REVISIONS:

SHEET NO. **C6.12**

6/16/2021
Floodgate Rdy psh C600.dgn
Howard

SECTION 8 - HYDRAULIC MODELS

Electronic files for the Effective Model and the Project Model are included with this report.

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
370091K	PINETOPS, TOWN OF	EDGECOMBE COUNTY	01/09/74	03/28/80	06/02/15	03/28/80	No					
370160F	PINEVILLE, TOWN OF	MECKLENBURG COUNTY	06/21/74	03/18/87	09/02/15	03/18/87	No	10/01/91	10/01/20	5	25%	10%
370599#	PINK HILL, TOWN OF	LENOIR COUNTY		07/02/04	(NSFHA)	01/26/12	No					
370372L	PITT COUNTY *	PITT COUNTY	06/30/78	01/06/83	06/19/20	01/06/83	No	10/01/02	10/01/18	8	10%	05%
370420K	PITTSBORO, TOWN OF	CHATHAM COUNTY	10/20/78	02/02/07	11/17/17	02/02/07	No					
370618#	PLEASANT GARDEN, TOWN OF	GUILFORD COUNTY		06/18/07	03/16/09	03/17/09	No					
370249#	PLYMOUTH, TOWN OF	WASHINGTON COUNTY	05/20/77	08/19/85	02/04/09	08/19/85	No	10/01/94	10/01/99	8	10%	05%
370194#	POLK COUNTY*	POLK COUNTY	11/29/74	01/01/87	10/02/08	01/01/87	No					
370286#	POLKTON, TOWN OF	ANSON COUNTY	02/10/78	09/03/08	10/16/08	08/20/08	No					
370634#	POLKVILLE, TOWN OF	CLEVELAND COUNTY		02/20/08	02/20/08	03/22/12	No					
370142K	POLLOCKSVILLE, TOWN OF	JONES COUNTY	03/15/74	09/04/86	06/15/22	09/04/86	No					
370485J	PRINCETON, TOWN OF	JOHNSTON COUNTY		10/20/00	06/20/18	02/14/97	No					
370318K	PRINCEVILLE, TOWN OF	EDGECOMBE COUNTY	07/25/75	04/15/80	06/02/15	04/15/80	No					
370635#	PROCTORVILLE, TOWN OF	ROBESON COUNTY		01/19/05	01/05/07	10/24/12	No					
370132#	RAEFORD, CITY OF	HOKE COUNTY	12/20/74	06/03/86	12/18/07	06/03/86	No					
370243N	RALEIGH, CITY OF	WAKE COUNTY	06/28/74	08/15/78	07/19/22	08/15/78	No	10/01/91	10/01/14	10		0%
370198#	RAMSEUR, TOWN OF	RANDOLPH COUNTY	02/15/74	03/01/87	03/16/09	03/01/87	No					
370199#	RANDLEMAN, CITY OF	RANDOLPH COUNTY	11/22/74	07/01/87	03/16/09	07/01/87	No					
370195C	RANDOLPH COUNTY *	RANDOLPH COUNTY	01/03/75	07/16/81	11/17/17	07/16/81	No					
370324#	RANLO, TOWN OF	GASTON COUNTY	06/27/75	03/03/03	11/04/09	03/03/03	No					
370079#	RED CROSS, TOWN OF	STANLY COUNTY		09/03/08	06/16/09	07/29/10	No					
370516#	RED OAK, TOWN OF	NASH COUNTY		01/20/82	06/18/13	01/22/99	No					
370204#	RED SPRINGS, TOWN OF	ROBESON COUNTY	04/01/77	05/01/87	01/05/07	05/01/87	No					
370209#	REIDSVILLE, CITY OF	ROCKINGHAM COUNTY	08/01/75	09/29/78	09/28/07	09/29/78	No					
370643#	RENNERT, TOWN OF	ROBESON COUNTY		01/19/05	01/05/07	06/23/11	No					
370041#	RHODHISS, TOWN OF	BURKE COUNTY/CALDWELL COUNTY	06/21/74	07/03/86	07/07/09	07/03/86	No					
370176#	RICH SQUARE, TOWN OF	NORTHAMPTON COUNTY		02/04/09	(NSFHA)	04/25/19	No					
370511#	RICHFIELD, TOWN OF	STANLY COUNTY		09/21/00	06/16/09(M)	01/31/12	No					
370341K	RICHLANDS, TOWN OF	ONSLOW COUNTY	07/11/75	07/03/86	06/19/20	07/03/86	No					
370348#	RICHMOND COUNTY*	RICHMOND COUNTY	07/28/78	09/06/89	07/07/14	09/06/89	No					
370432K	RIVER BEND, TOWN OF	CRAVEN COUNTY	05/14/82	08/19/86	06/15/22	08/19/86	No	05/01/10	05/01/10	8	10%	05%
370117#	ROANOKE RAPIDS, CITY OF	HALIFAX COUNTY	03/08/74	04/17/78	02/04/09	04/17/78	No					
370166#	ROBBINS, TOWN OF	MOORE COUNTY	11/22/74	07/03/86	01/02/08	07/03/86	No					
370106#	ROBBINSVILLE, TOWN OF	GRAHAM COUNTY	06/14/74	12/01/89	04/19/10	12/01/89	No					
370156#	ROBERSONVILLE, TOWN OF	MARTIN COUNTY	06/07/74	07/01/87	02/04/09	07/01/87	No					
370202K	ROBESON COUNTY *	ROBESON COUNTY	07/28/78	02/17/89	12/06/19	02/17/89	No					
370350#	ROCKINGHAM COUNTY*	ROCKINGHAM COUNTY	06/16/78	05/15/91	01/02/09	05/15/91	No					
370201#	ROCKINGHAM, CITY OF	RICHMOND COUNTY	06/11/76	09/06/89	09/03/08	09/06/89	No					
370214#	ROCKWELL, TOWN OF	ROWAN COUNTY	03/08/74	05/15/78	06/16/09	05/15/78	No					
370092#	ROCKY MOUNT, CITY OF	EDGECOMBE COUNTY/NASH COUNTY	03/01/74	05/01/78	06/18/13	05/01/78	No	10/01/92	10/01/19	7	15%	05%
	THE TOWN OF BATTLEBORO (370088) , EDGECOMBE COUNTY, WAS MERGED INTO THE CITY OF ROCKY MOUNT EFFECTIVE 7-1-96.											
370468K	ROLESVILLE, TOWN OF	WAKE COUNTY		03/03/92	07/19/22	07/31/01	No					
370258#	RONDA, TOWN OF	WILKES COUNTY	09/06/74	07/03/86	12/03/09(M)	07/03/86	No					
370421#	ROPER, TOWN OF	WASHINGTON COUNTY	06/21/74	08/05/85	02/04/09	08/05/85	No	10/01/94	10/01/99	8	10%	05%
	FORMERLY UNDER WASHINGTON COUNTY											
370375#	ROSE HILL, TOWN OF	DUPLIN COUNTY		02/16/06	02/16/07	07/17/06	No					
375358#	ROSMAN, TOWN OF	TRANSYLVANIA COUNTY	06/03/72	06/02/72	04/19/10	06/02/72	No					
370351B	ROWAN COUNTY *	ROWAN COUNTY	07/28/78	11/01/79	11/16/18	11/01/79	No					
370347K	ROXBORO, CITY OF	PERSON COUNTY	01/13/78	09/14/90	12/06/19	03/25/91	No					
370605#	ROXOBEL, TOWN OF	BERTIE COUNTY		02/04/09	08/03/09	02/04/09	No					

US Army Corps of Engineers ®
Wilmington District

PM-D-2023-S408-0002

PUBLIC NOTICE
REQUEST FOR PERMISSION
TO MODIFY A
U.S. ARMY CORPS OF ENGINEERS PROJECT UNDER SECTION 408

TITLE: Princeville Levee Floodgate Repairs, Princeville, North Carolina

PUBLIC NOTICE COMMENT PERIOD:
Begins: February 13, 2023
Expires: February 27, 2023

Interested parties are hereby notified that an application has been received for Department of the Army Section 408 (Section 14 of the Rivers and Harbors Act of 1899; 33 U.S.C. 408; hereinafter Section 408) approval to conduct proposed work impacting the Tar River, Princeville, North Carolina (NC) Flood Damage Reduction Project (Figure 1), as described below. Written comments are being solicited from anyone having an interest in the requested alteration. Comments received will become part of the U.S. Army Corps of Engineers' (USACE) administrative record and will be considered in determining whether to approve the request. Comments supporting, opposing, or identifying concerns that should be considered by the USACE in its decision process are welcome. Comments providing substantive information and/or a rationale for the commenter's position are the most helpful. Comments regarding the proposed work should reference the USACE public notice number (PM-D-2023-S408-0002) and must reach the USACE via email no later than **February 27, 2023** to become part of the public record and be considered in the USACE's decision. Please send comments to the Wilmington District Section 408 Coordinator at: kent.tranter@usace.army.mil.

REQUESTER: In compliance with Section 408, the Town of Princeville, NC has requested permission to alter the existing Federal project. The town desires to complete levee floodgate repairs at four (4) sites on the existing levee along the Tar River and construct access roads along the levee to facilitate future inspection, maintenance, and flood fighting operations.

LOCATION: The portion of the existing project impacted by the proposed repairs are located at four (4) sites on the existing levee as shown below in Figure 1.

PROPOSED ACTION: The proposed floodgate inlet and outlet channel repairs include excavating and installing rip-rap channel linings. The access roads consist of constructing 10-foot-wide gravel roads with 1-foot-wideshoulders and 3: 1 side-slopes. The access roads will traverse up, over, and/or down the levee, and connect to "stub-roads" that provide access to inlet and outlet channels at the sites.

REGULATORY AUTHORITY: This request will be reviewed according to the provisions of Section 408. A requester has the responsibility to acquire all other permissions or authorizations required by federal, state, and local laws or regulations. An approval under Section 408 does not grant any property rights or exclusive privileges, nor does it authorize any injury to the property or rights of others.

EVALUATION: The decision whether to grant the requested permission for federal project modification under Section 408 will be based on several factors and will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. Review of the request for modification will be reviewed by a USACE technical review team and will consider, but not necessarily be limited to, the following factors:

1. Impair the Usefulness of the Project Determination. The review team will determine if the proposed alteration would limit the ability of the projects to function as authorized, or would compromise or change any authorized project's conditions, purposes, or outputs. The decision whether to approve a request for modification would be based on a determination of no impairments.

2. Injurious to the Public Interest Determination. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest.

SUMMARY: It should be noted that materials submitted as part of Section 408 requests become part of the public record and will be available to the general public under the provisions of the Freedom of Information Act (FOIA). Individuals may submit a written request to obtain materials under the FOIA or make an appointment to view the project file at the USACE Wilmington District's Office of Counsel.

Interested parties wishing to comment on the proposed action must do so in writing no later than **February 27, 2023**. It is presumed that all parties viewing this notice will wish to respond; therefore, a lack of response will be interpreted as meaning there is no objection to the proposed action as described.

Kent Tranter
Wilmington District
U.S. Army Corps of Engineers

Public Notice: Princeville Levee Floodgate Repairs, Princeville, North Carolina

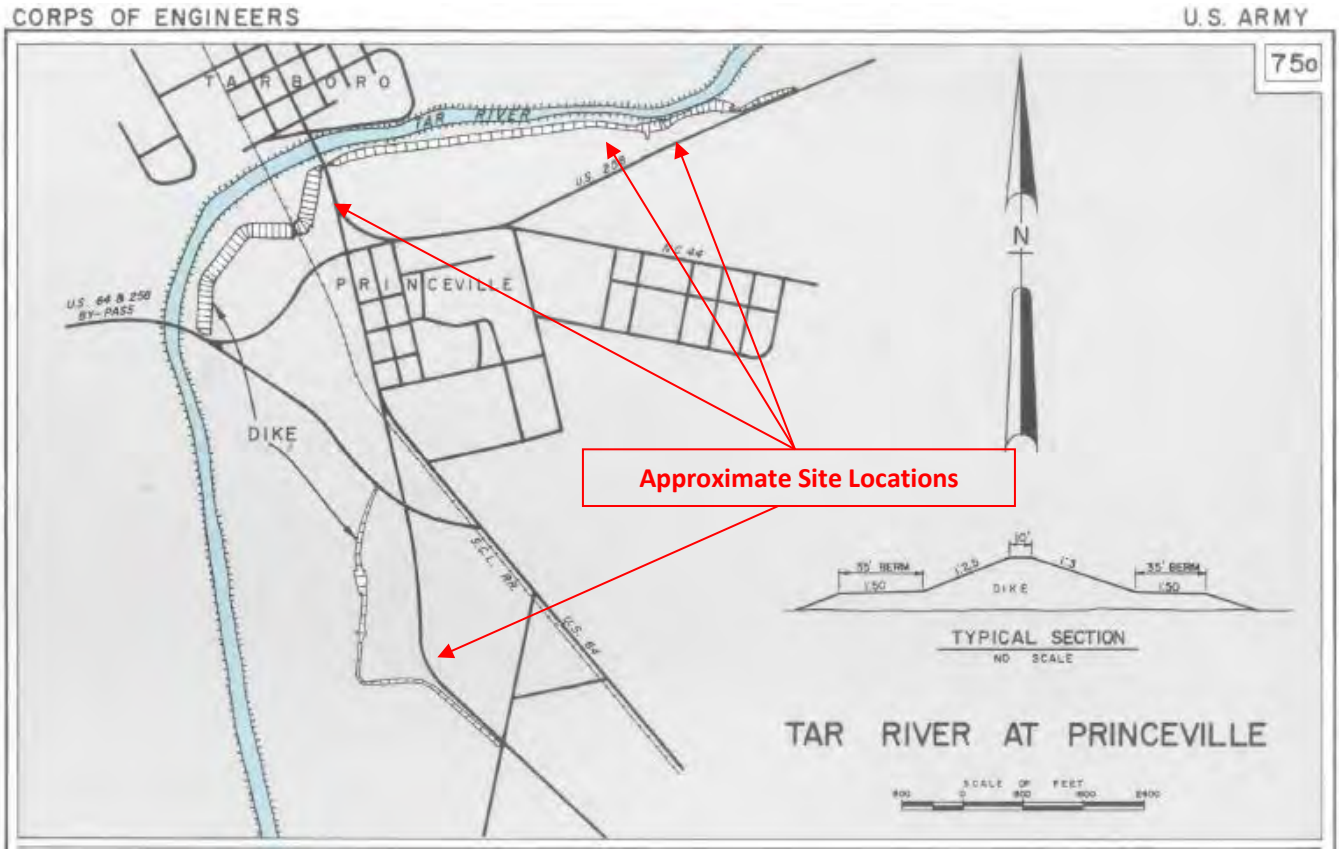


Figure 1. Tar River, Princeville, North Carolina Federal Project Map

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2021-00964** County: **Edgecombe** U.S.G.S. Quad: **NC-Tarboro**

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: **Town of Princeville**
Dr. Glenda Knight
Address: **201 South Main Street**
Princeville, NC 27886
Telephone Number: **(252) 783-1057**
E-mail: **gknight@townofprinceville.com**

Size (acres) **7.7**
Nearest Waterway **Tar River**
USGS HUC **03020103**

Nearest Town **Princeville**
River Basin **Pamlico**
Coordinates Latitude: **35.8908**
Longitude: **-77.5326**

Location description: **The overall project area includes four project sites located along the Princeville Dike in the Town of Princeville, Edgecombe County, North Carolina. Site 1 (35.890816, -77.532662), Site 2 (35.894597, -77.516820), Site 3 (35.895364, -77.513700), Site 4 (35.873450, -77.525434).**

Description of projects area and activity: **This verification authorizes 261 linear feet of stream impacts (181 LF permanent, 80 LF temporary) and 0.007 acres of wetland impacts (0.005 acres permanent, 0.002 acres temporary) associated with floodgate repairs located within the above-described project area.**

Applicable Law(s): ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: **Nationwide Permit 3 for Maintenance**

SEE ATTACHED NWP GENERAL, REGIONAL, AND/OR SPECIAL CONDITIONS

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached Conditions, your application signed and dated 10/20/2021, and the enclosed plans Permit Drawings Sheets 1-9 dated 6/16/2021. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits. If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Billy W. Standridge at (910) 251-4595or Billy.w.standridge@usace.army.mil**.

Corps Regulatory Official: Billy W. Standridge Date: **04/12/2023**
Expiration Date of Verification: **3/14/2026**

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 the Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Copy furnished:

Agent:	**Axiom Environmental, Inc.**
	Alexander P. Smith
Address:	**218 Snow Avenue**
	Raleigh, NC 27603
Telephone Number:	**(919) 270-9306**
E-mail:	**ssmith@axiomenvironmental.org**

Action ID Number: SAW-2021-00964 **County: Edgecombe**

Permittee: Town of Princeville, Dr. Glenda Knight

Project Name: Princeville Floodgate Repairs / Princeville Dike / Town of Princeville

Date Verification Issued: 04/12/2023

USACE Project Manager: Billy W. Standridge

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Billy W. Standridge
Washington Regulatory Office
U.S Army Corps of Engineers
2407 West Fifth Street
Washington, North Carolina 27889
or
Billy.w.standridge@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee **Date**

PERMIT DRAWING
SHEET 1 OF 9

PROJECT:

COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY PROJECT: PRINCEVILLE LEVEE FLOODGATE REPAIRS

CONSTRUCTION DOCUMENTATION

CLIENT: TOWN OF PRINCEVILLE
DR. GLENDA KNIGHT
201 SOUTH MAIN STREET
PRINCEVILLE, NC 27886

DESIGN TEAM COORDINATOR: SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NC 27606
919-859-2243

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Originally Sealed on 06-17-2021

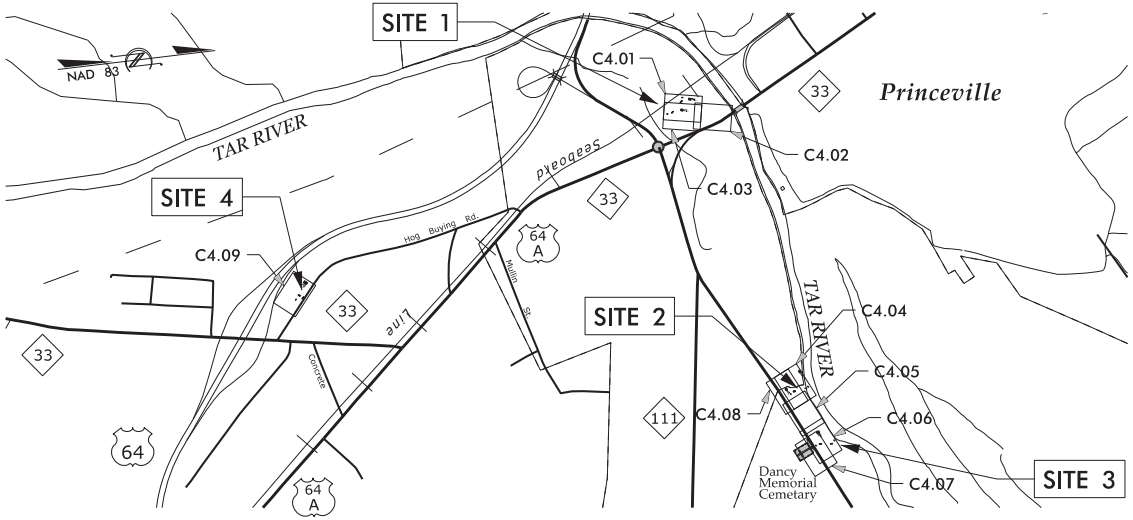
WETLAND AND SURFACE WATER IMPACTS PERMIT

DESIGN TEAM:

Axiom Environmental
218 Snow Ave
Raleigh, NC 27603

The Wooten Company
120 N. Boylan Ave
Raleigh, NC 27603
919-828-0531

NV5 Engineers and Consultants, Inc.
4905 Professional Court
Raleigh, NC 27609
919-876-9799

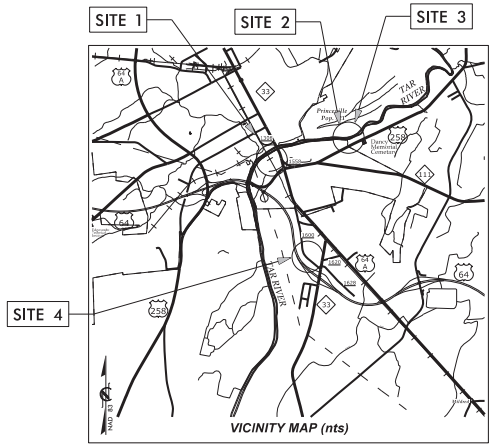


INDEX OF SHEETS

SHEET NUMBER	SHEET
C1.00	Title Sheet
C1.01	Symbology
C1.02 THRU C1.03	General Notes, Typicals
C2.01	Overall Existing Conditions
C2.02	Existing Drainage Flow – Site 1
C2.03	Existing Drainage Flow – Site 2, 3
C2.04	Existing Drainage Flow – Site 4
C3.01 THRU C3.03	Erosion and Sediment Control Plan – Site 1
C3.04 THRU C3.08	Erosion and Sediment Control Plan – Site 2, 3
C3.09	Erosion and Sediment Control Plan – Site 4
C4.01 THRU C4.03	Grading and Storm Drainage/ Profile - Site 1
C4.04 THRU C4.08	Grading and Storm Drainage/ Profile - Site 2, 3
C4.09	Grading and Storm Drainage/ Profile - Site 4
C5.01 THRU C5.07	Cross Sections - Site 1
C5.08 THRU C5.16	Cross Sections – Site 2, 3
C5.17 THRU C5.19	Cross Sections – Site 4
C6.01 THRU C6.12	Details

Revisions:
1. 06-24-2021 – USACE Comment:
– Relocated Spec. Stilling Basin on PSH C3.06 from East to West Side of Stream to Eliminate Temp. Stream Crossing.
2. 07-09-2021 – Added Removable Steel Bollard and Detail at Site 2 / 3 Entrance.
3. 07-26-2021 – NCDOT Comments:
– Revised Detail 7.1 to Include 4' Shoulder.
– Revised Site 4 to Replace Two Existing 12" CMP with Two 18" RCP-IV.

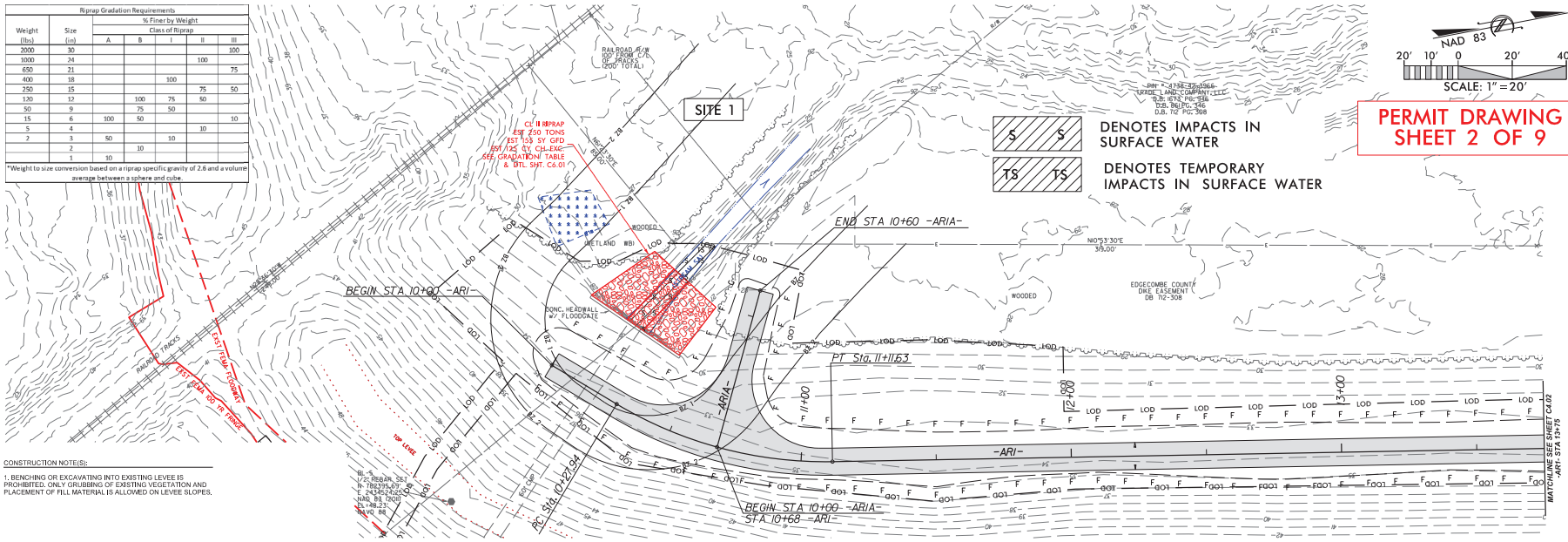
TOTAL DISTURBED AREA = 4.4 ACRES
TAR-PAMLICO RIVER BASIN

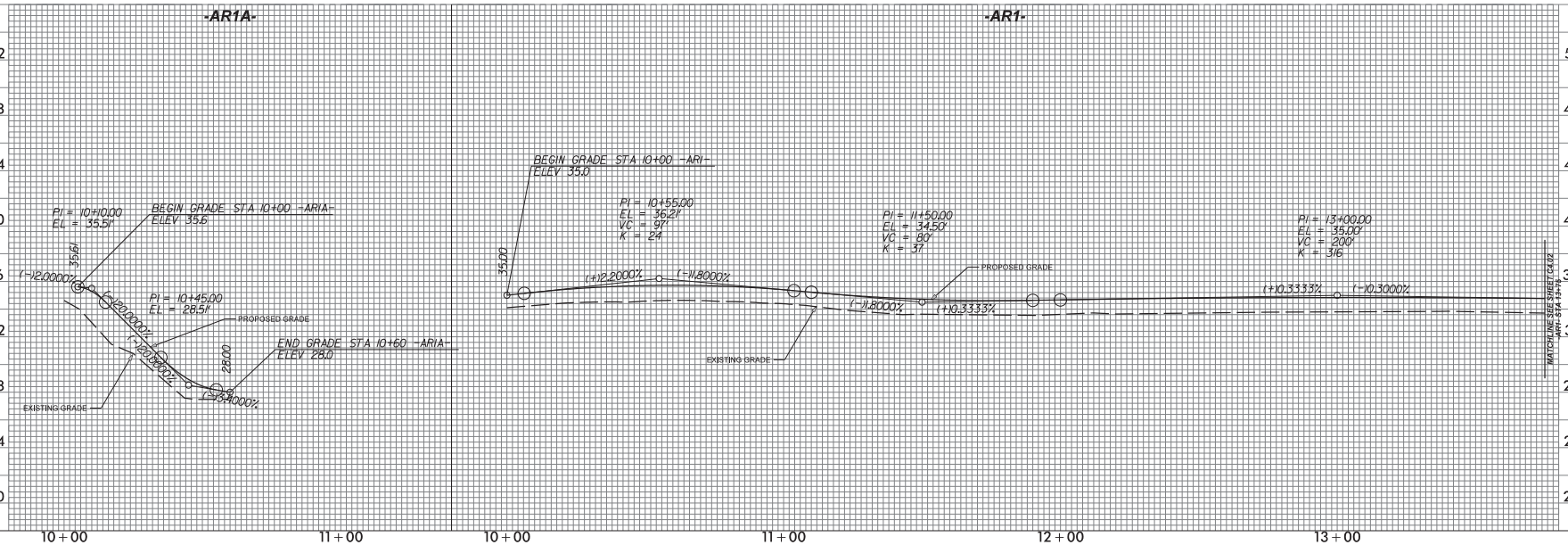


VICINITY MAP (nts)

Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap				
		A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-2318
ENG FIRM LICENSE NO. C-2890

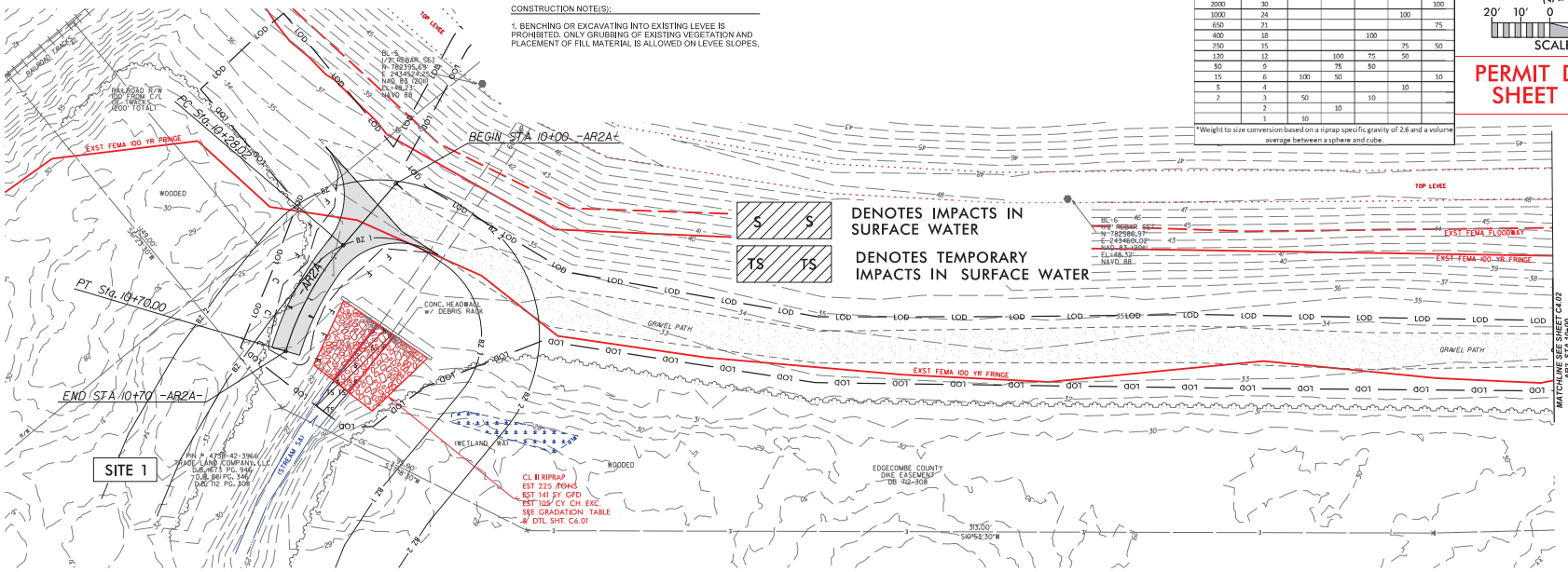
PRINCEVILLE DIKE FLOODGATE REPAIRS

PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C401
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

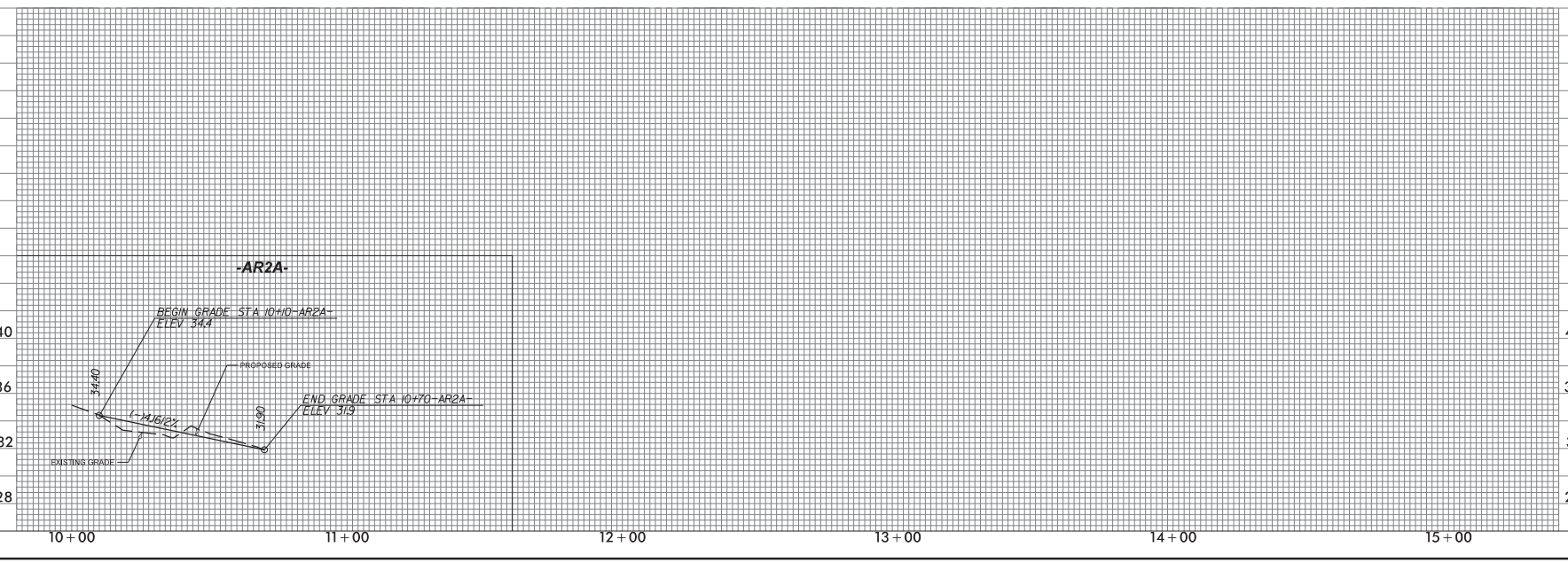
SHEET NO. C4.01



Riprap Gradation Requirements

Weight (lbs)	Size (in)	% Finer by Weight, Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
1	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



SUNGATE DESIGN GROUP, P.A.
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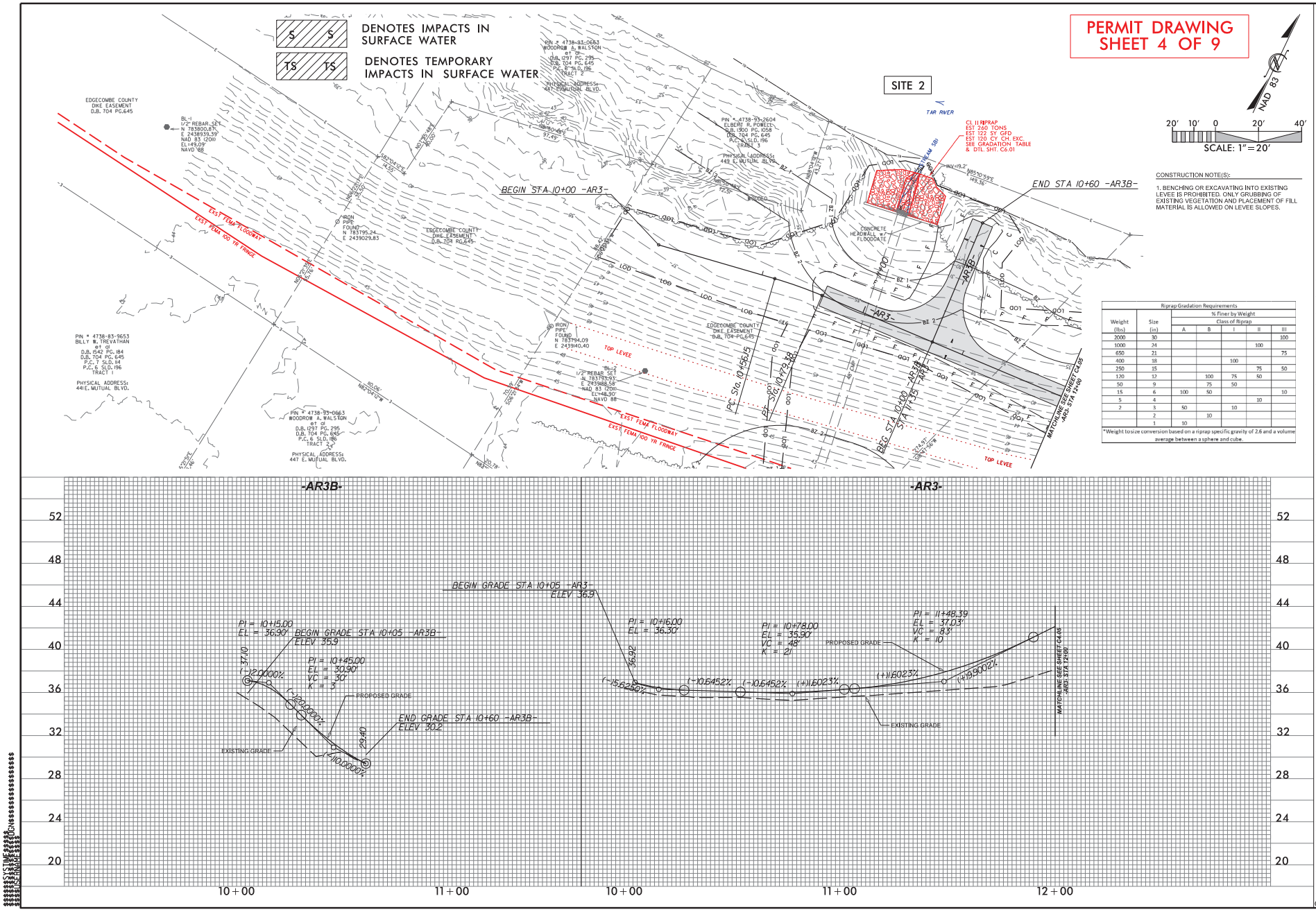
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-2318
ENG FIRM LICENSE NO. C-3890

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 1

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C403
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.03



Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight				
		Class of Riprap				
		A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

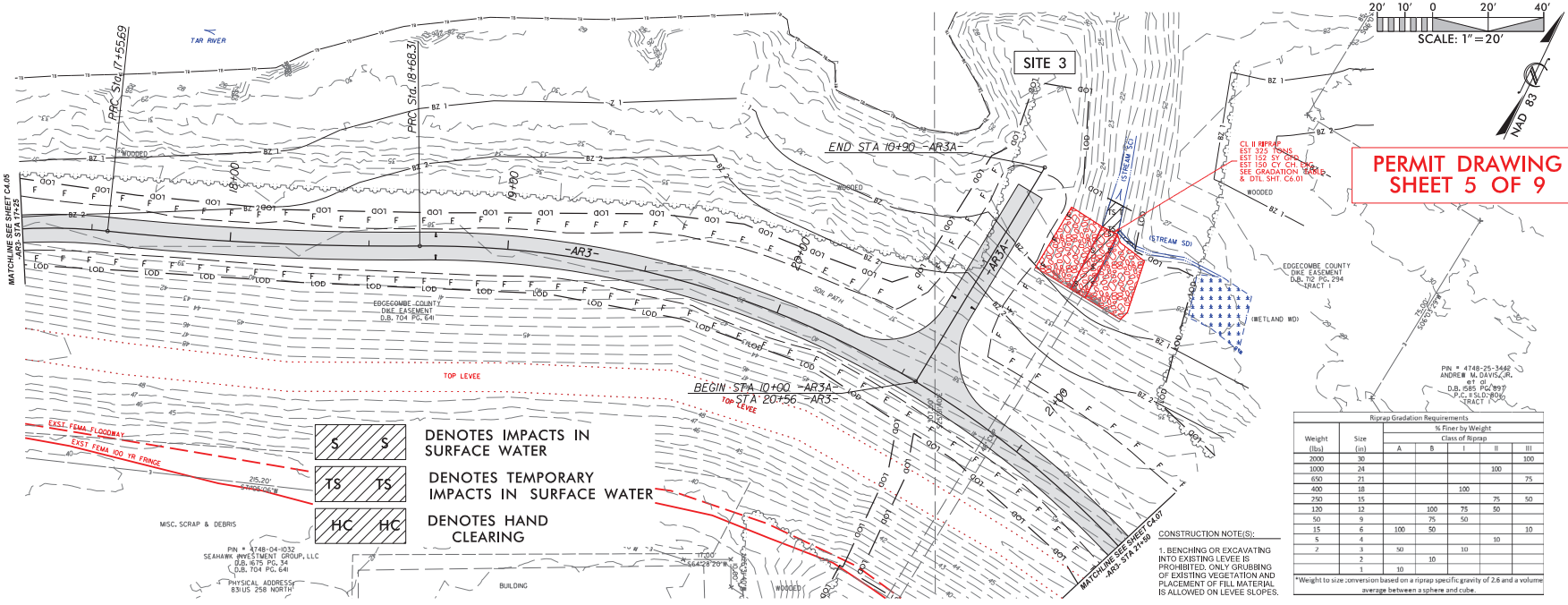
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-2545
ENG FIRM LICENSE NO. C-2810

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C404
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.04



SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-2318
ENG FIRM LICENSE NO. C-3810

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # :
1284-20041
DRAWING NAME:
FLOODGATE RDY PSH C406
DATE:
6-16-2021
DRAWN BY:
REVIEWED BY:
RCH
REVISIONS:

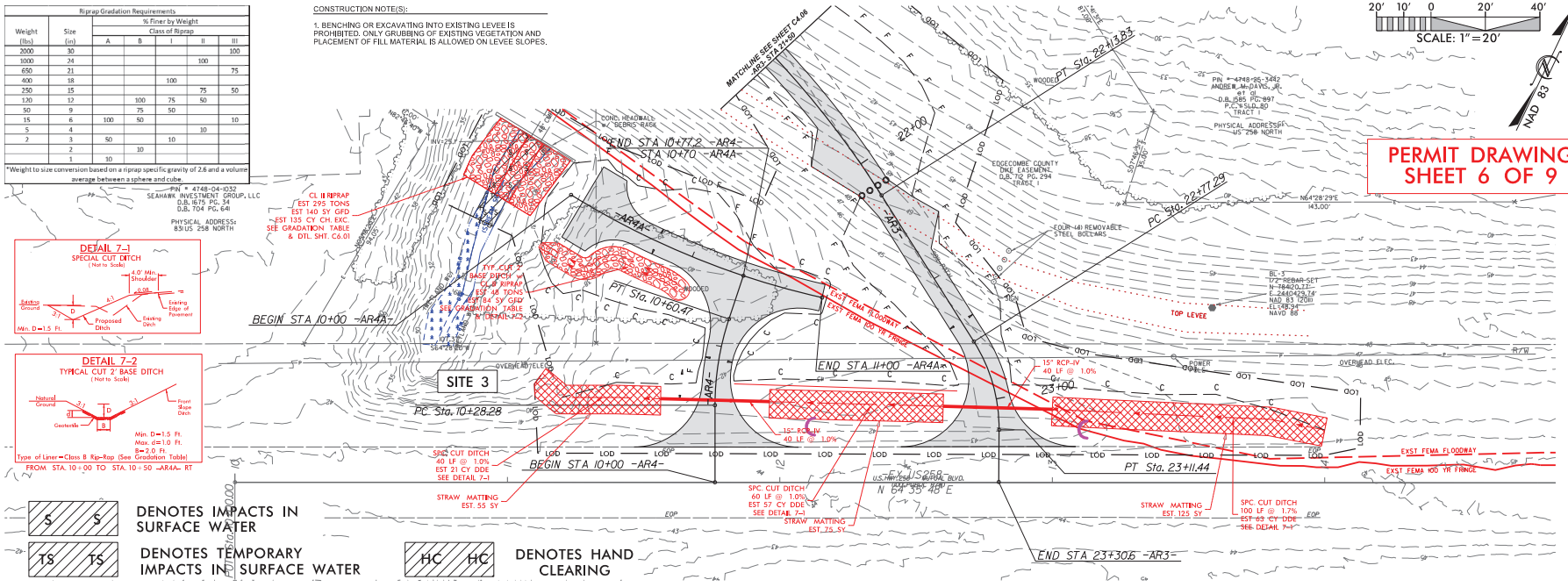
SHEET NO.
C4.06

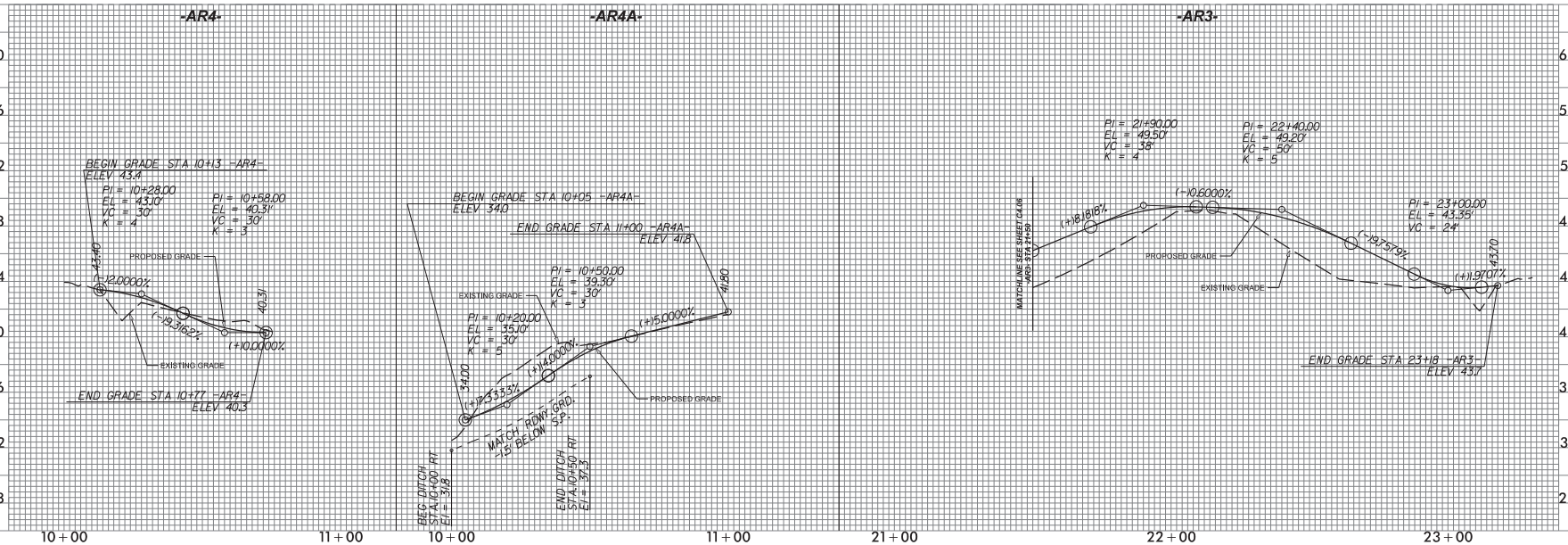
Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

CONSTRUCTION NOTE(S):

1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.





SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-2318
ENG FIRM LICENSE NO. C-2890

PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C407
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.07

Riprap Gradation Requirements						
Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
130	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.

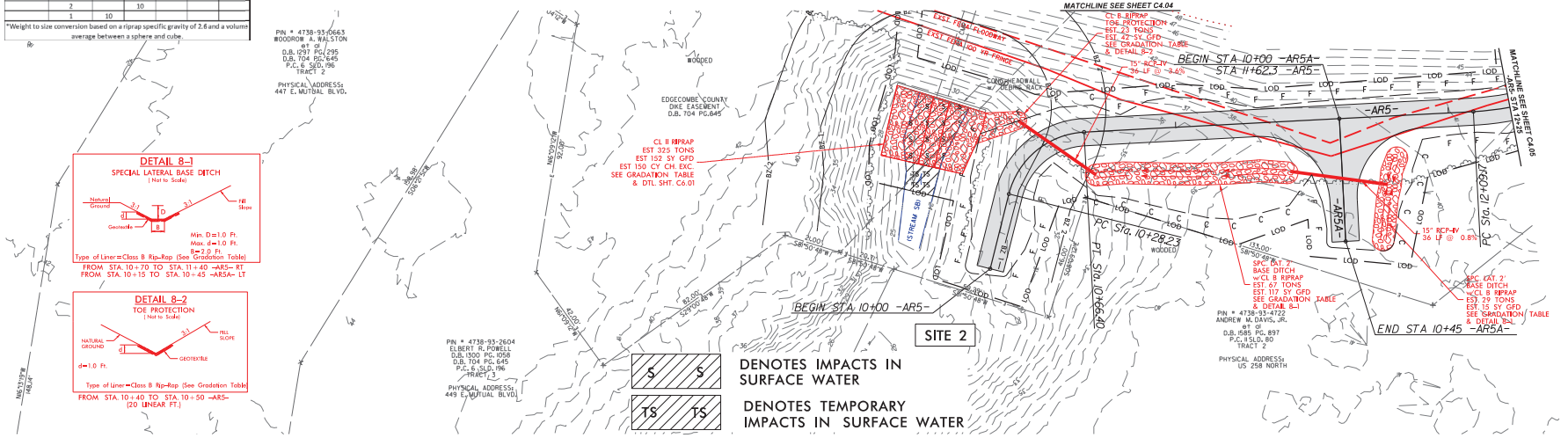
CONSTRUCTION NOTE(S):

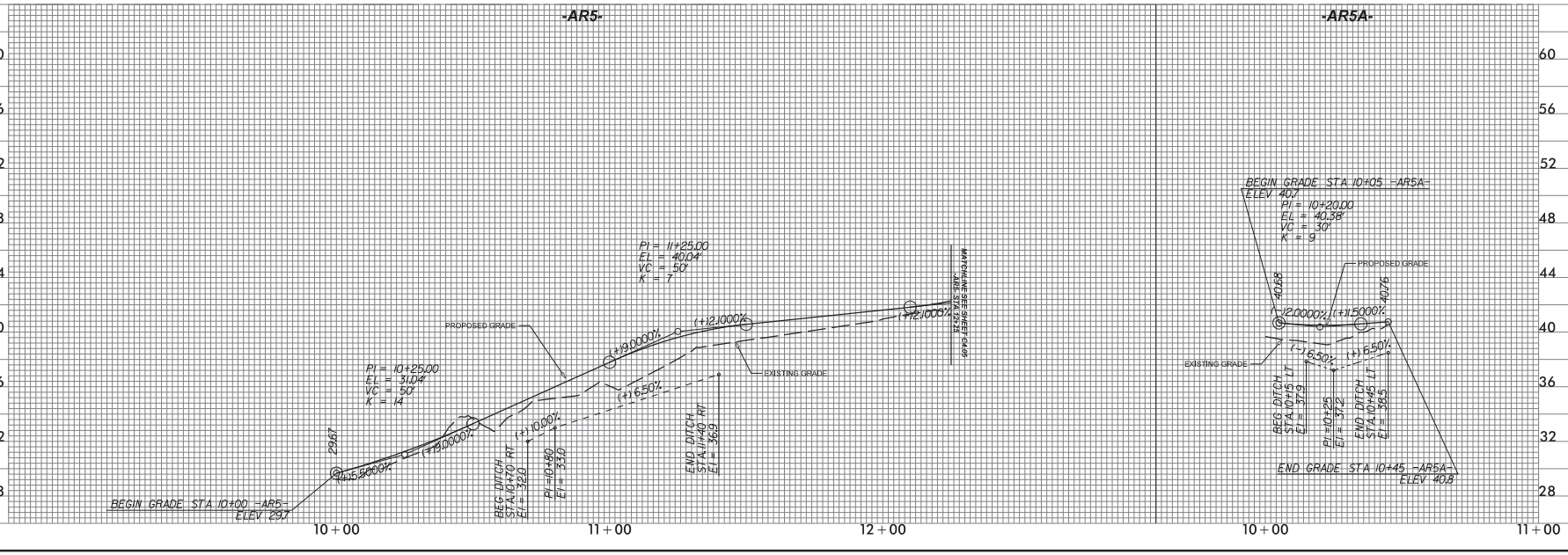
1. BENCHING OR EXCAVATING INTO EXISTING LEVEE IS PROHIBITED. ONLY GRUBBING OF EXISTING VEGETATION AND PLACEMENT OF FILL MATERIAL IS ALLOWED ON LEVEE SLOPES.

20' 10' 0 20' 40'
SCALE: 1" = 20'

NAD 83

PERMIT DRAWING SHEET 7 OF 9





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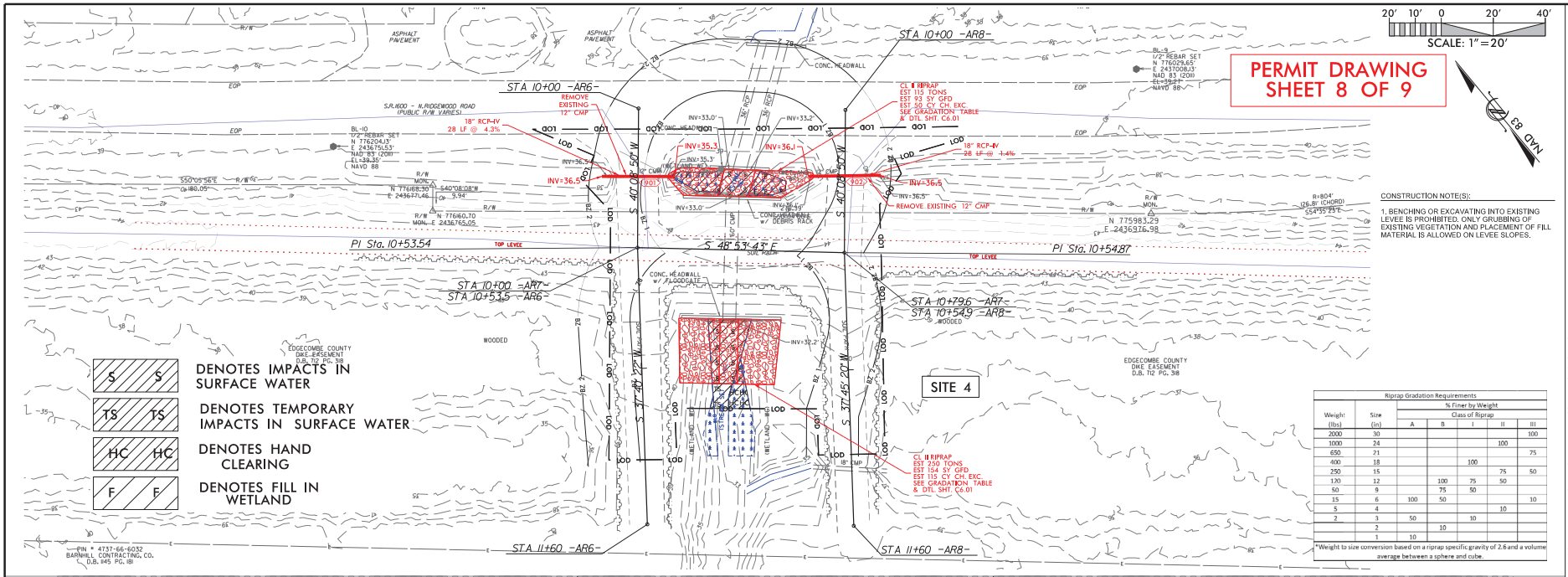
PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 2 & 3

PROJECT # :
1284-20041
DRAWING NAME:
FLOODGATE RDY PSH C408
DATE:
6-16-2021
DRAWN BY:
REVIEWED BY:
RCH
REVISIONS:

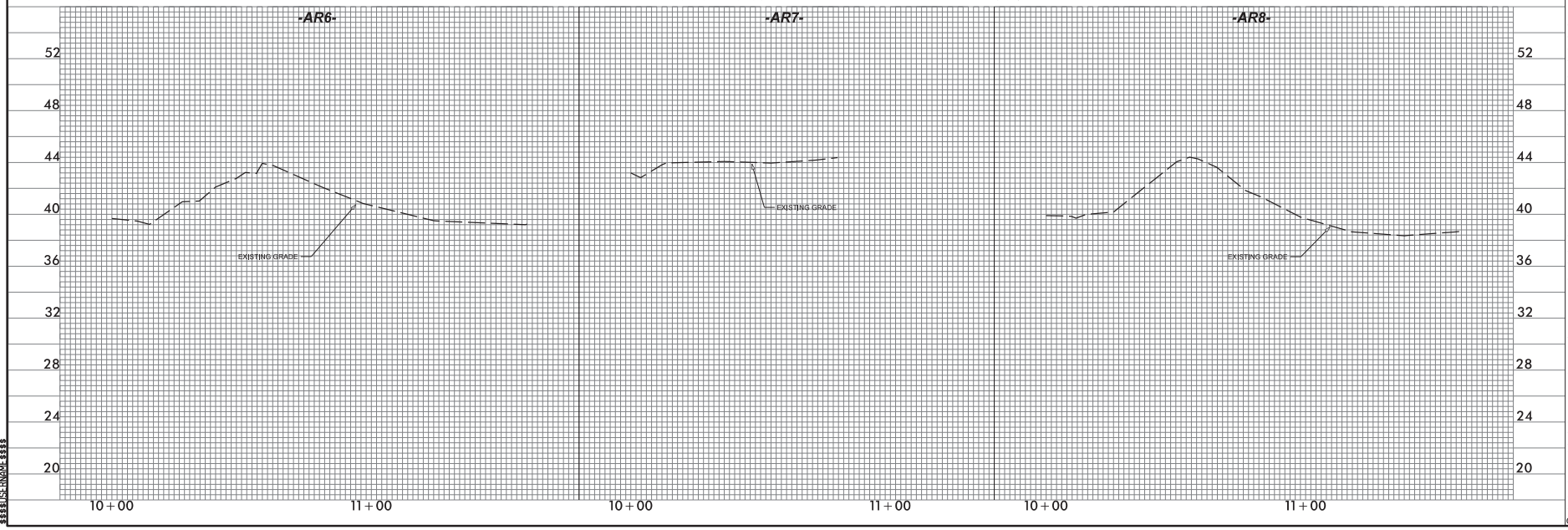
SHEET NO.
C4.08



Riprap Gradation Requirements

Weight (lbs)	Size (in)	% Finer by Weight Class of Riprap A	B	I	II	III
2000	30					100
1000	24				100	
650	21					75
400	18			100		
250	15				75	50
120	12		100	75	50	
50	9		75	50		
15	6	100	50			10
5	4				10	
2	3	50		10		
	2		10			
	1	10				

*Weight to size conversion based on a riprap specific gravity of 2.6 and a volume average between a sphere and cube.



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PRINCEVILLE DIKE FLOODGATE REPAIRS
PRINCEVILLE, EDGECOMBE COUNTY, NC

GRADING & DRAINAGE - SITE 4

PROJECT # : 1284-20041
DRAWING NAME: FLOODGATE RDY PSH C409
DATE: 6-16-2021
DRAWN BY:
REVIEWED BY: RCH
REVISIONS:

SHEET NO. C4.09

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Location	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	Outlet Channel	Class II Riprap						< 0.01	< 0.01	25	15	
	Inlet Channel							< 0.01	< 0.01	25	11	
2	Outlet Channel	Class II Riprap						< 0.01	< 0.01	20	4	
	Inlet Channel							0.01	< 0.01	25	10	
3	Outlet Channel	Class II Riprap						< 0.01	< 0.01	25	19	
	Inlet Cannel						< 0.01	< 0.01	< 0.01	25	11	
4	Outlet Channel	Class II Riprap	< 0.01				< 0.01	< 0.01	< 0.01	25	10	
	Inlet Channel		< 0.01					< 0.01		11		
TOTALS*:			< 0.01				< 0.01	0.04	0.01	181	80	0

*Rounded totals are sum of actual impacts

NOTES:
1. Site 3 outlet channel llinear feet of temporary channel impacts includes 10 LF for Stream SC and 9 LF for Stream SD.

PRINCEVILLE LEVEE FLOODGATE REPAIRS
CDBG-DR PROJECT
9-28-2021
EDGECOMBE COUNTY

Nationwide Permit 3
Maintenance

Effective Date: February 25, 2022 / Expiration Date: March 14, 2026
Authority: Sections 10 and 404

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built but cannot extend farther than 200 feet in any direction from the structure. This 200-foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Sections 10 and 404))

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

GENERAL CONDITIONS

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.**

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee’s expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects from Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. **Removal of Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers.**

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species.**

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be

necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non- Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre- construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their worldwide Web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. **Migratory Birds and Bald and Golden Eagles**. The permittee is responsible for ensuring that an action authorized by NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. **Historic Properties.**

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR

800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 5258 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.,* on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the

waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee- responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (*e.g.,* resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to an herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. **Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. **Water Quality.**

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFF 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. **Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

_____

(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. **Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a ‘‘USACE project’’), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.**

(a) *Timing.* Where required by the terms of the NWP, the permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is ''no effect'' on listed species or ''no potential to cause effects'' on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the pr set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4)

(i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse

environmental effects of the proposed linear project and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans).

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate.

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act.

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ‘‘study river’’ for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the ‘‘study river’’ (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a

written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:*

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for:

(i) All NWP activities that require pre-construction notification and result in the loss of greater than 1⁄2-acre of waters of the United States;

(ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and

(iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so, contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre- construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

DISTRICT ENGINEER'S DECISION

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with

the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either:

(a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

(b) that the activity is authorized under the NWP subject to the applicant’s submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or

(c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term ‘‘discharge’’ means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National

Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non- tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of ‘‘open waters’’ include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre- construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may

consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term ''single and complete project'' is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term ''single and complete project'' is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of ''independent utility''). Single and complete non-linear projects may not be ''piecemealed'' to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no

longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a ‘‘water of the United States.’’ If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a sing e aquatic unit (see 33 CFR 328.4(c)(2)).

REGIONAL CONDITIONS:

The following Regional Conditions have been approved by the Wilmington District for the Nationwide Permits (NWPs) published in the January 13, 2021, and December 27, 2021, *Federal Register* (86 FR 2744 and 86 FR 73522) announcing the reissuance of 52 existing (NWPs) and five new NWPs, as well as the reissuance of NWP general conditions and definitions with some modifications.

A. EXCLUDED WATER AND/OR AREAS

The Corps has identified waters that will be excluded from the use of all NWP's during certain timeframes. These waters are:

1. **Anadromous Fish Spawning Areas.** Work in waters of the U.S. designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are prohibited from February 15th through June 30th, without prior written approval from the Corps and the appropriate wildlife agencies (NCDMF, NCWRC and/or the National Marine Fisheries Service (NMFS)). Work in waters of the U.S. designated by NCWRC as primary nursery areas in inland waters are prohibited from February 15th through September 30th, without prior written approval from the Corps and the appropriate wildlife agencies. Work in waters of the U.S. designated by NCDMF as primary nursery areas shall be coordinated with NCDMF prior to being authorized by this NWP. Coordination with NCDMF may result in a required construction moratorium during periods of significant biological productivity or critical life stages.

2. **Trout Waters Moratorium.** Work in waters of the U.S. in the designated trout watersheds of North Carolina are prohibited from October 15th through April 15th without prior written approval from the NCWRC, or from the Eastern Band of Cherokee Indians (EBCI) Fisheries and Wildlife Management (FWM) office if the project is located on EBCI trust land. (See Section C.3. below for information on the designated trout watersheds).

3. **Sturgeon Spawning Areas.** No in-water work shall be conducted in waters of the U.S. designated by the National Marine Fisheries Service as Atlantic sturgeon critical habitat from February 1st through June 30th. No in-water work shall be conducted in waters of the U.S. in the Roanoke River designated as Atlantic sturgeon critical habitat from February 1st through June 30th, and August 1st through October 31st, without prior written approval from NMFS.

4. **Submerged Aquatic Vegetation.** Impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP, except NWP 48, NWP 55 and NWP 56, unless Essential Fish Habitat (EFH) consultation has been completed pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act (Magnuson-Stevens Act). Permittees shall submit a PCN (See NWP General Condition 32) to the District Engineer prior to commencing the activity if the project would affect SAV. The permittee may not begin work until notified by the Corps that the requirements of the Magnuson-Stevens Act have been satisfied and that the activity is verified.

B. REGIONAL CONDITIONS APPLICABLE TO ALL NWP's

1. **Critical Habitat in Western NC.** For proposed activities within waters of the U.S. that require a Pre-Construction Notification (PCN) and are located in the thirteen counties listed below, permittees must provide a copy of the PCN to the U.S. Fish and Wildlife Service (USFWS), 160 Zillicoa Street, Asheville, North Carolina 28801 and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific PCN requirements

related to the Endangered Species Act and the below website for information on the location of designated critical habitat.

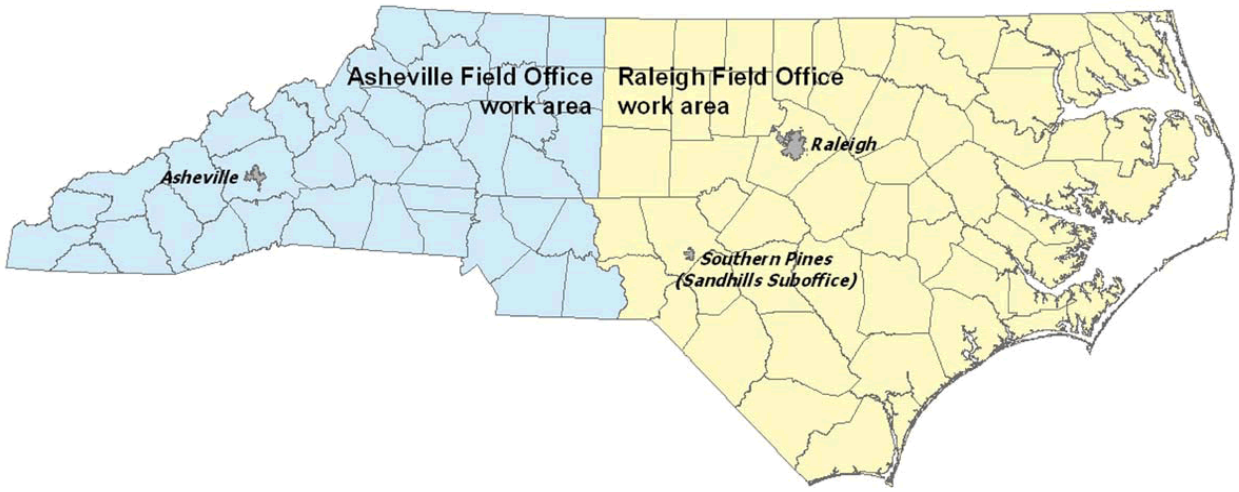
Counties with tributaries that drain to designated critical habitat that require notification to the Asheville U.S. Fish and Wildlife Service: Avery, Cherokee, Graham, Haywood, Henderson, Jackson, Macon, Mecklenburg, Mitchell, Swain, Transylvania, Union and Yancey.

Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for permittees which provides guidelines on how to review linked websites and maps in order to fulfill NWP General Condition 18 (Endangered Species) requirements: http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram/AgencyCoordination/ESA.aspx.

Permittees who do not have internet access may contact the appropriate U.S. Fish and Wildlife Service offices listed below or Corps at (910) 251-4850.

Below is a map of the USFWS Field Office Boundaries:



Asheville U.S. Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsythe and Stokes Counties.

U.S. Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801
Telephone: (828) 258-3939

Raleigh U.S. Fish and Wildlife Service Office counties: All counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Telephone: (919) 856-4520

2. **Special Designation Waters.** Prior to the use of any NWP that involves a discharge of dredged or fill material in any of the following identified waters and/or adjacent wetlands in North Carolina, permittees shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). The North Carolina waters and wetlands that require additional PCN requirements are:

"Primary Nursery Areas" (PNA), including inland PNA, as designated by the North Carolina Marine Fisheries Commission and/or the North Carolina Wildlife Resources Commission. The definition of and designated PNA waters can be found in the North Carolina State Administrative Code at Title 15A, Subchapters 3R and 10C (15A NCAC 03R .0103; 15A NCAC 10C .0502; and 15A NCAC 10C .0503) and at the following web pages:

- http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2003%20-%20marine%20fisheries/subchapter%20r/15a%20ncac%2003r%20.0103.pdf

- http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2010%20-%20wildlife%20resources%20and%20water%20safety/subchapter%20c/15a%20ncac%2010c%20.0502.pdf

- http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2010%20-%20wildlife%20resources%20and%20water%20safety/subchapter%20c/15a%20ncac%2010c%20.0503.pdf

3. **Trout Waters.** Prior to any discharge of dredge or fill material into streams, waterbodies or wetlands within the 294 designated trout watersheds of North Carolina, the permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity. The permittee shall also provide a copy of the PCN to the appropriate NCWRC office, or to the EBCI FWM Office (if the project is located on EBCI trust land), to facilitate the determination of any potential impacts to designated Trout Waters.

NCWRC and NC Trout Watersheds:

NCWRC Contact**	Counties that are entirely within Trout Watersheds*	Counties that are partially within Trout Watersheds*

Mountain Coordinator 645 Fish Hatchery Rd., Building B Marion, NC 28752 828-803-6054 For NCDOT Projects: NCDOT Coordinator 12275 Swift Rd. Oakboro, NC 28129 704-984-1070	Alleghany Ashe Avery Graham Haywood Jackson Macon Swain Transylvania Watauga	Burke Buncombe Caldwell Cherokee Clay Henderson Madison McDowell Mitchell Polk Rutherford Surry Wilkes Yancey
EBCI Contact**	**Counties that are within Trout Watersheds***	
Office of Natural Resources P.O. Box 1747, Cherokee, NC 28719 (828) 359-6113	Qualla Boundary and non-contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties.	

*NOTE: To determine PCN requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps showing trout watersheds in each County at the following webpage: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout/.

**If a project is located on EBCI trust land, submit the PCN in accordance with Regional Condition C.16. Contact the Corps Asheville Regulatory Field Office at (828) 271-7980 with questions.

4. **Western NC Waters and Corridors.** The permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity in waters of the U.S. if the activity will occur within any of the following identified waters in western North Carolina, within 0.5 mile on either side of these waters, or within 0.75 mile of the Little Tennessee River, as measured from the top of the bank of the respective water (i.e., river, stream, or creek):

Brasstown Creek
Burningtown Creek

Cane River
Caney Fork
Cartoogechaye Creek
Chattooga River
Cheoah River
Cowee Creek
Cullasaja River
Deep Creek
Ellijay Creek
French Broad River
Garden Creek
Hiwassee River
Hominy Creek
Iotla Creek
Little Tennessee River (within the river or within 0.75 mile on either side of this river)
Nantahala River
Nolichucky River
North Fork French Broad River
North Toe River
Nottley River
Oconaluftee River (portion not located on trust/EBCI land)
Peachtree Creek
Shooting Creek
Snowbird Creek
South Toe River
Stecoah Creek
Swannanoa River
Sweetwater Creek
Tuckasegee River (also spelled Tuckaseegee or Tuckaseigee)
Valley River
Watauga Creek
Watauga River
Wayah Creek
West Fork French Broad River

To determine PCN requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps for all corridors at the following webpage: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Designated-Special-Waters.aspx .

5. **Limitation of Loss of Stream Bed.** NWPs may not be used for activities that may result in the loss of more than 0.05 acres of stream bed, except for NWP 32.

6. **Pre-Construction Notification for Loss of Stream Bed Exceeding 0.02 acres.** The permittee shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32) prior to the use of any NWP for any activity that results in the loss of more than 0.02 acres of stream bed. This applies to NWPs that do not have PCN requirements as well as those NWPs that require a PCN.

7. **Mitigation for Loss of Stream Bed.** For any NWP that results in a loss of more than 0.02 acres of stream bed, the permittee shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment, unless the

District Engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal. For stream bed losses of 0.02 acres or less that require a PCN, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

8. **Riprap.** For all NWPs that allow for the use of riprap material for bank stabilization, the following conditions shall be applied:

a. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters. The placement of filter fabric is not required if the riprap will be pushed or “keyed” into the bank of the waterbody. A waiver from the specifications in this Regional Condition must be requested in writing.

b. Riprap shall be placed only on the stream banks, or, if it is necessary to be placed in the stream bed, the finished top elevation of the riprap should not exceed that of the original stream bed.

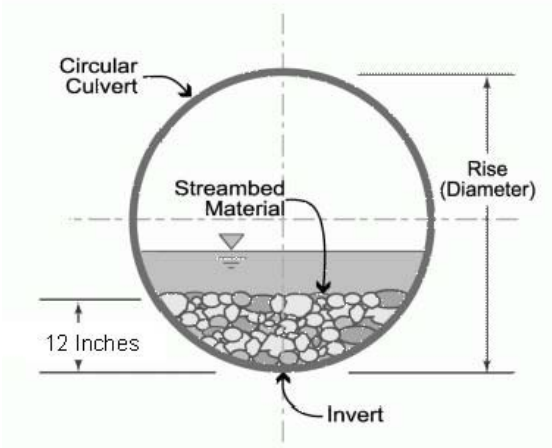
9. **Culvert Placement.** For all NWPs that allow for culvert placement, the following conditions shall be applied:

a. For all NWPs that involve the construction/installation of culverts, measures shall be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms

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. 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.

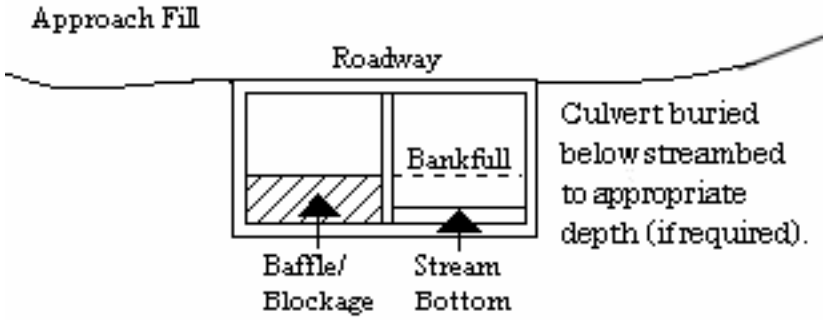
Culvert burial is not required for structures less than 72 inch diameter/width, where the slope of the culvert will be greater than 2.5%, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g., rock ladders, cross vanes, sills, baffles etc.). Culvert burial is not required when bedrock is present in culvert locations.

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 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.



A waiver from the depth specifications in this condition may be requested, in writing, by the permittee and issued by the Corp. This waiver request must be specific as to the reasons(s) for the request. The waiver will be issued if it can be demonstrated that the proposed design would result in less impacts to the aquatic environment. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

b. Bank-full flows (or less) shall be accommodated through maintenance of the existing bank-full channel cross sectional area. Additional culverts or culvert barrels at such crossings shall be allowed only to receive bank-full flows.



c. 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.

10. **Utility Lines.** For all NWPs that allow for the construction and installation of utility lines, the following conditions shall be applied:

a. Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the U.S. (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

b. The work area authorized by this permit, including temporary and/or permanent fills, will be minimized to the greatest extent practicable. Justification for work corridors exceeding forty (40) feet in width is required and will be based on pipeline diameter and length, size of equipment required to construct the utility line, and other construction information deemed necessary to support the request. The permittee is required to provide this information to the Corps with the initial PCN package.

c. A plan to restore and re-vegetate wetland areas cleared for construction must be submitted with the required PCN. Cleared wetland areas shall be re-vegetated, as appropriate, with species of canopy, shrub, and herbaceous species. The permittee shall not use fescue grass or any other species identified as invasive or exotic species by the NC Native Plant Society (NCNPS): https://ncwildflower.org/invasive-exotic-species-list/.

d. Any permanently maintained corridor along the utility right of way within forested wetlands shall be considered a loss of aquatic function. A compensatory mitigation plan will be required for all such impacts associated with the requested activity if the activity requires a PCN and the cumulative total of permanent conversion of forested wetlands exceeds 0.1 acres, unless the District Engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal.

Where permanently maintained corridor within forested wetlands is 0.1 acres or less, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.

e. When directional boring or horizontal directional drilling (HDD) under waters of the U.S., including wetlands, permittees shall closely monitor the project for hydraulic fracturing or “fracking.” Any discharge from hydraulic fracturing or “fracking” into waters of the U.S., including wetlands, shall be reported to the appropriate Corps Regulatory Field Office within 48 hours. Restoration and/or compensatory mitigation may be required as a result of any unintended discharges.

11. **Temporary Access Fills.** The permittee shall submit a PCN to the District Engineer prior to commencing the activity if the activity will involve the discharge of dredged or fill material into more than 0.1 acres of wetlands or 0.02 acres of stream channel for the construction of temporary access fills and/or temporary road crossings. The PCN must include a restoration plan that thoroughly describes how all temporary fills will be removed, how pre-project conditions will be restored, and include a timetable for all restoration activities.

12. **Federal Navigation Channel Setbacks.** Authorized structures and fills located in or adjacent to Federally authorized waterways must be constructed in accordance with the latest setback criteria established by the Wilmington District Engineer. You may review the setback policy at http://www.saw.usace.army.mil/Missions/Navigation/Setbacks.aspx. This general permit does not authorize the construction of hardened or permanently fixed structures within the Federally Authorized Channel Setback, unless the activity is approved by the Corps. The permittee shall submit a PCN (see General Condition 32) to the District Engineer to obtain a written verification prior to the construction of any structures or fills within the Federally Authorized Channel Setback.

13. **Northern Long-eared Bat – Endangered Species Act Compliance.** The Wilmington District, U.S. Army Corps of Engineers has consulted with the United States Fish and Wildlife

Service (USFWS) in regard to the threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) and Standard Local Operating Procedures for Endangered Species (SLOPES) have been approved by the Corps and the USFWS. This condition concerns effects to the NLEB only and does not address effects to other federally listed species and/or federally designated critical habitat.

a. Procedures when the Corps is the lead federal* agency for a project:

The permittee must comply with (1) and (2) below when:

• the project is located in the western 41 counties of North Carolina, to include non-federal aid North Carolina Department of Transportation (NCDOT) projects, OR;

• the project is located in the 59 eastern counties of North Carolina and is a non-NCDOT project.

*Generally, if a project is located on private property or on non-federal land, and the project is not being funded by a federal entity, the Corps will be the lead federal agency due to the requirement to obtain Department of the Army authorization to impact waters of the U.S. If the project is located on federal land, contact the Corps to determine the lead federal agency.

(1) A permittee using an NWP must check to see if their project is located in the range of the NLEB by using the following website: http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf. If the project is within the range of the NLEB, or if the project includes percussive activities (e.g., blasting, pile driving, etc.), the permittee is then required to check the appropriate website in the paragraph below to discover if their project:

• is located in a 12-digit Hydrologic Unit Code area (“red HUC” - shown as red areas on the map), AND/OR;

• involves percussive activities within 0.25 mile of a red HUC.

Red HUC maps - for the western 41 counties in NC (covered by the Asheville Ecological Services Field Office), check the project location against the electronic maps found at: http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html. For the eastern 59 counties in NC (covered by the Raleigh Ecological Services Field Office), check the project location against the electronic maps found at: https://www.fws.gov/raleigh/NLEB_RFO.html.

(2) A permittee must submit a PCN to the District Engineer, and receive written verification from the District Engineer, prior to commencing the activity, if the activity will involve any of the following:

• tree clearing/removal and/or, construction/installation of wind turbines in a red HUC, AND/OR;

• bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, (applies anywhere in the range of the NLEB), AND/OR:

• percussive activities in a red HUC, or within 0.25 mile of a red HUC.

The permittee may proceed with the activity without submitting a PCN to either the Corps or the USFWS, provided the activity complies with all applicable NWP terms and general and regional conditions, if the permittee's review under A.(1) and A.(2) above shows that the project is:

- located outside of a red HUC (and there are no percussive activities), and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;
- located outside of a red HUC and there are percussive activities, but the percussive activities will not occur within 0.25-mile of a red HUC boundary, and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;
- located in a red HUC, but the activity will NOT include tree clearing/removal; construction/installation of wind turbines; bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, and/or; any percussive activities.

b. Procedures when the USACE is not the lead federal agency:

For projects where another federal agency is the lead federal agency - if that other federal agency has completed project-specific ESA Section 7(a)(2) consultation for the NLEB, and has (1) determined that the project would not cause prohibited incidental take of the NLEB, and (2) completed coordination/consultation that is required by the USFWS (per the directions on the respective USFWS office's website), that project may proceed without PCN to either the USACE or the USFWS, provided all General and Regional Permit Conditions are met.

The NLEB SLOPES can be viewed on the USACE website at: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/. Permittees who do not have internet access may contact the USACE at (910) 251- 4633.

14. **West Indian Manatee Protection.** In order to protect the endangered West Indian manatee (*Trichechus manatus*) the Permittee shall implement the USFWS' Manatee Guidelines, and strictly adhere to all requirements therein. The guidelines can be found at https://www.fws.gov/raleigh/pdfs/ManateeGuidelines2017.pdf.

15. **ESA Programmatic Biological Opinions.** The Wilmington District, USFWS, NCDOT, and the FHWA have conducted programmatic Section 7(a)(2) consultation for a number of federally listed species and designated critical habitat (DCH), and programmatic consultation concerning other federally listed species and/or DCH may occur in the future. The result of completed programmatic consultation is a Programmatic Biological Opinion (PBO) issued by the USFWS. These PBOs contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" of whichever species or critical habitat is covered by a specific PBO. Authorization under NWPs is conditional upon the permittee's compliance with all the mandatory terms and conditions associated with incidental take of the applicable PBO (or PBOs), which are incorporated by reference in the NWPs. Failure to comply with the terms and conditions associated with incidental take of an applicable PBO, where a take of the federally listed species occurs, would constitute an unauthorized take by the permittee, and would also constitute permittee non-compliance with the authorization under the NWPs. If the terms and conditions of a specific PBO (or PBOs) apply to a project, the Corps will include this/these requirements in any NWP verification that may be issued for a project. For an activity/project that does not require a PCN, the terms and conditions of the applicable PBO(s) also apply to that non-notifying

activity/project. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO and the ESA. All PBOs can be found on our website at: https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/.

16. **Work on Eastern Band of Cherokee Indian Land.**

Notifying NWPs - All PCNs submitted for activities in waters of the U.S. on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties), must comply with the requirements of the latest MOU between the Wilmington District and the EBCI.

Non-notifying NWPs - Prior to the use of any non-notifying NWP for activities in waters of the U.S. on EBCI trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties), all prospective permittees must comply with the requirements of the latest MOU between the Wilmington District and the EBCI; this includes coordinating the proposed project with the EBCI Natural Resources Program and obtaining a Tribal Approval Letter from the Tribe.

The EBCI MOU can be found at the following URL: http://saw-reg.usace.army.mil/FO/Final-MOU-EBCI-USACE.pdf

17. **Sedimentation and Erosion Control Structures and Measures.**

All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the U.S. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

C. REGIONAL CONDITIONS APPLICABLE TO NWP 3

1. In designated trout watersheds, a PCN is not required for impacts to a maximum of 0.02 acres for temporary dewatering) of streams and waterbodies when conducting maintenance activities. Minor deviations in an existing structure's configuration, temporary structures and temporary fills are authorized as part of the maintenance activity. In designated trout watersheds, the permittee shall submit a PCN (see Regional Condition C.3 above and General Condition 32) to the District Engineer prior to commencing the activity if; 1) impacts (other than temporary dewatering to work in dry conditions) to streams or waterbodies exceed 0.008 acres; 2) temporary impacts to streams or waterbodies associated with dewatering to work in dry conditions exceeds 0.02 acres; 3) the project will involve impacts to wetlands; 4) the project involves the replacement of a bridge or spanning structure with a culvert or non-spanning structure in waters of the United States; or 5) the activity will be constructed during the trout waters moratorium (October 15 through April 15).

D. SECTION 401 WATER QUALITY CERTIFICATION (WQC) AND/OR COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION SUMMARY AND APPLICABLE CONDITIONS

The CZMA Consistency Determination and all Water Quality Certifications for the NWPs can be found at: https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Permits/2017-Nationwide-Permits/

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

August 4, 2021

U.S. Army Corps of Engineers
Attn: Tim Jones
P.O. Box 1890
Wilmington, NC 28420-1890
(via email Timothy.c.jones@usace.army.mil)

Subject: Buffer Determination Letter
NBRRO #21-193
Edgecombe County

Determination Type:	
Buffer	Intermittent/Perennial
☐ Neuse (15A NCAC 2B .0714) ☒ Tar-Pamlico (15A NCAC 2B .0734) ☐ Jordan (15A NCAC 2B .0267) (governmental and/or interjurisdictional projects)	☐ Intermittent/Perennial Determination (where local buffer ordinances apply)

Project Name: Princeville Dike Floodgate Repairs

Address/Location: Princeville Dike, Princeville, NC

Stream(s): Tar River

Determination Date: August 4, 2021 **Staff: Stephanie Goss**

Feature	E/I/P (1)	Not Subject (2)	Subject	Start @	Stop @	Soil Survey	USGS Topo
Tar River	P		X	Throughout		X	X
SA	P		X	Throughout project boundary*		X	
SB	P		X	Throughout project boundary**		X	
SC	P	N/A		Throughout project boundary*		Not Mapped	
SD	P		X	Off Property	Flows into SC	X	
SE	P		X	Throughout project boundary*		X	

*Features SA, SC & SE start off property then flow into a culvert under the dike, then flow off property.
**Feature SB starts off property then flows into a culvert under the dike, then flows into the Tar River.
(1) E = Ephemeral, I = Intermittent, P = Perennial, NP = Not Present, N/A=Not Applicable
(2) Refers to State riparian buffer rules only. Stream, wetland, or pond impacts are still subject to applicable water quality standards and permitting requirements.

Explanation: The stream(s) listed above been located on the most recent published NRCS Soil Survey of Edgecombe County, North Carolina and/or the most recent copy of the USGS Topographic map at a 1:24,000 scale. Each stream that is checked "Not Subject" has been determined to not be at least intermittent or is not present. Streams that are checked "Subject" have been located on the property and possess characteristics that qualify it to be at least an intermittent stream. There may be other streams located on the property that do not show up on the maps referenced above but may be considered jurisdictional according to the US Army Corps of Engineers.

This on-site determination shall expire five (5) years from the date of this letter. Landowners or affected parties that dispute a determination made by the DWR may request a determination by the Director. An appeal request must be made within sixty (60) days of date of this letter. A request for a determination by the Director shall be referred to the Director in writing. ***If sending via US Postal Service:*** **c/o** ***Paul Wojoski; DWR – 401 & Buffer Permitting Unit; 1617 Mail Service Center; Raleigh, NC 27699-1617. If sending via delivery service (UPS, FedEx, etc.): Paul Wojoski; DWR – 401 & Buffer Permitting Unit; 512 N. Salisbury Street; Raleigh, NC 27604.***

This determination is final and binding unless, as detailed above, unless an appeal is requested within sixty (60) days.

This project may require a Section 404/401 Permit for the proposed activity. Any inquiries should be directed to the US Army Corp of Engineers (Raleigh Regulatory Field Office) at (919)-554-4884.

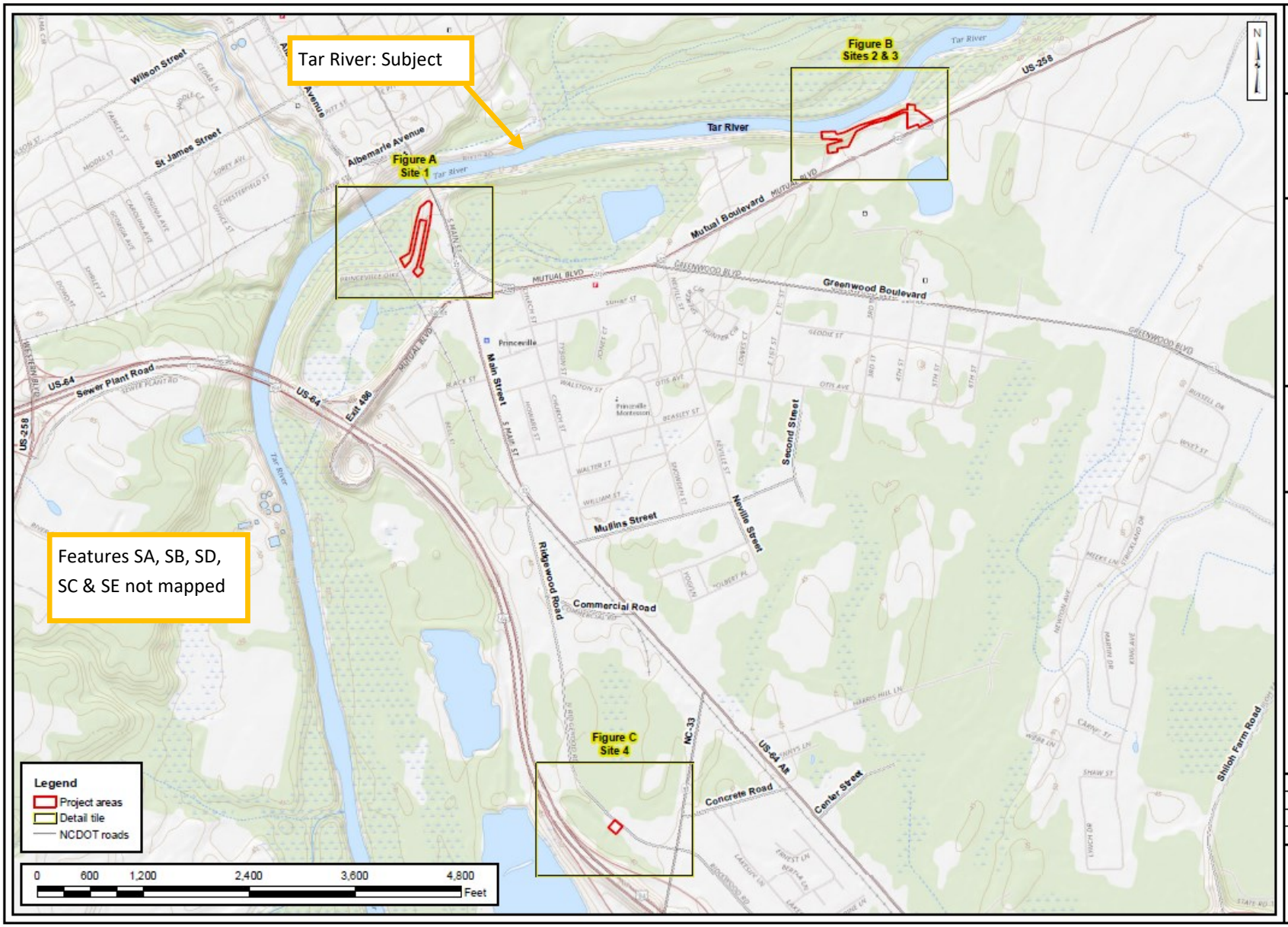
If you have questions regarding this determination, please feel free to contact Stephanie Goss at (919) 791-4256.

Sincerely,

DocuSigned by:
Scott Vinson
BCDA9D825D4A46D...

Scott Vinson, Regional Supervisor
Water Quality Regional Operations Section
Raleigh Regional Office
Division of Water Resources, NCDEQ

cc: RRO DWR File Copy/Laserfiche
Alexander Smith, Axiom Environmental, Inc. (via email)



Prepared for:

Sungate Design Group

Project:

21-193:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

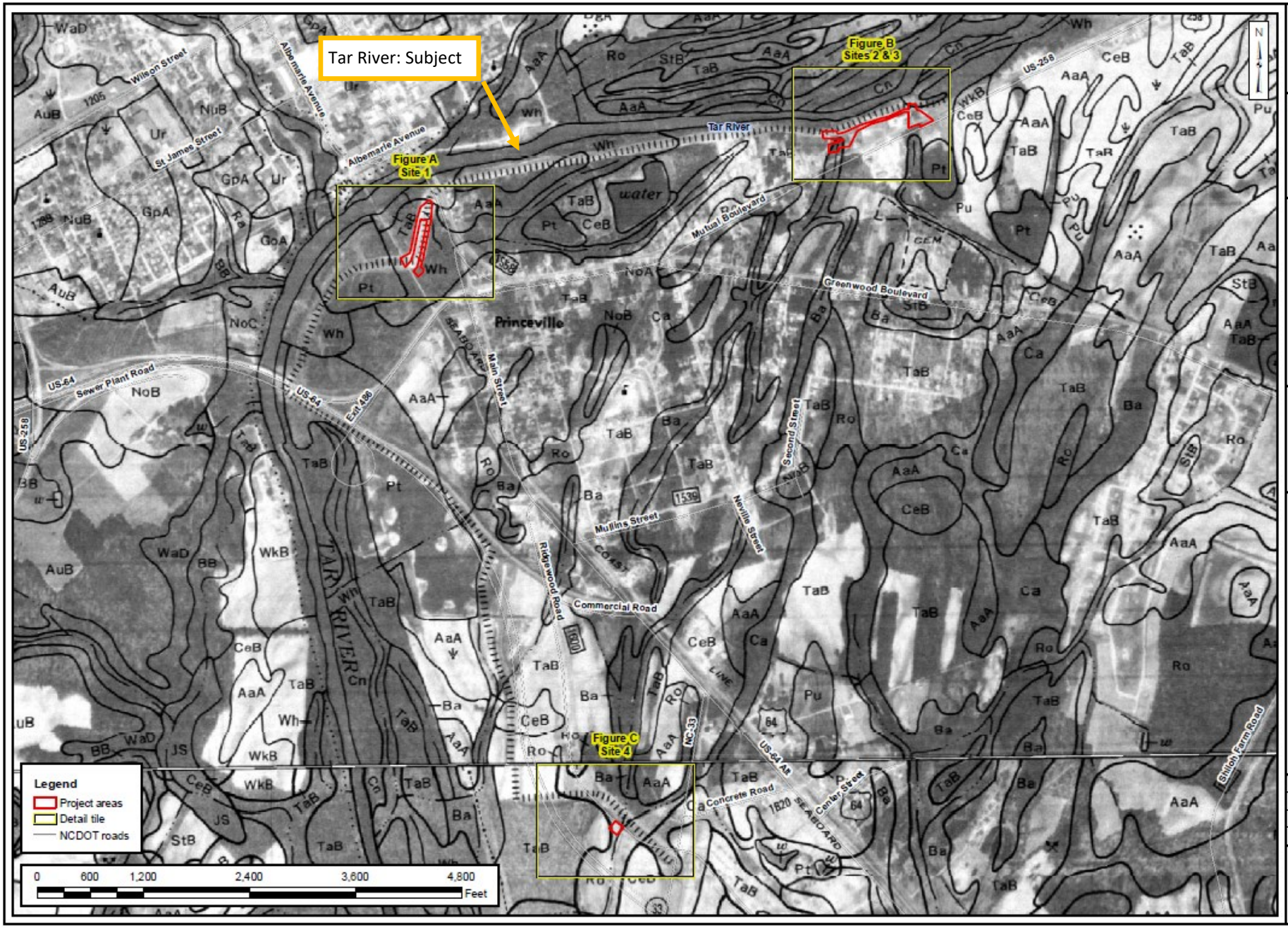
Site Locations on Topographic Mapping

Notes:

Background imagery source: Tarboro and Old Sparta, NC (2019) 7.5-minute topographic quadrangles provided by the U.S. Geological Survey (USGS).

Drawn by:	AEK
Date:	Apr. 2021
Scale:	1:12,000
Project No.:	20-029

FIGURE
2



Prepared for:

Sungate Design Group

Project:

21-193:

PRINCEVILLE FLOODGATES

Edgecombe County

Title:

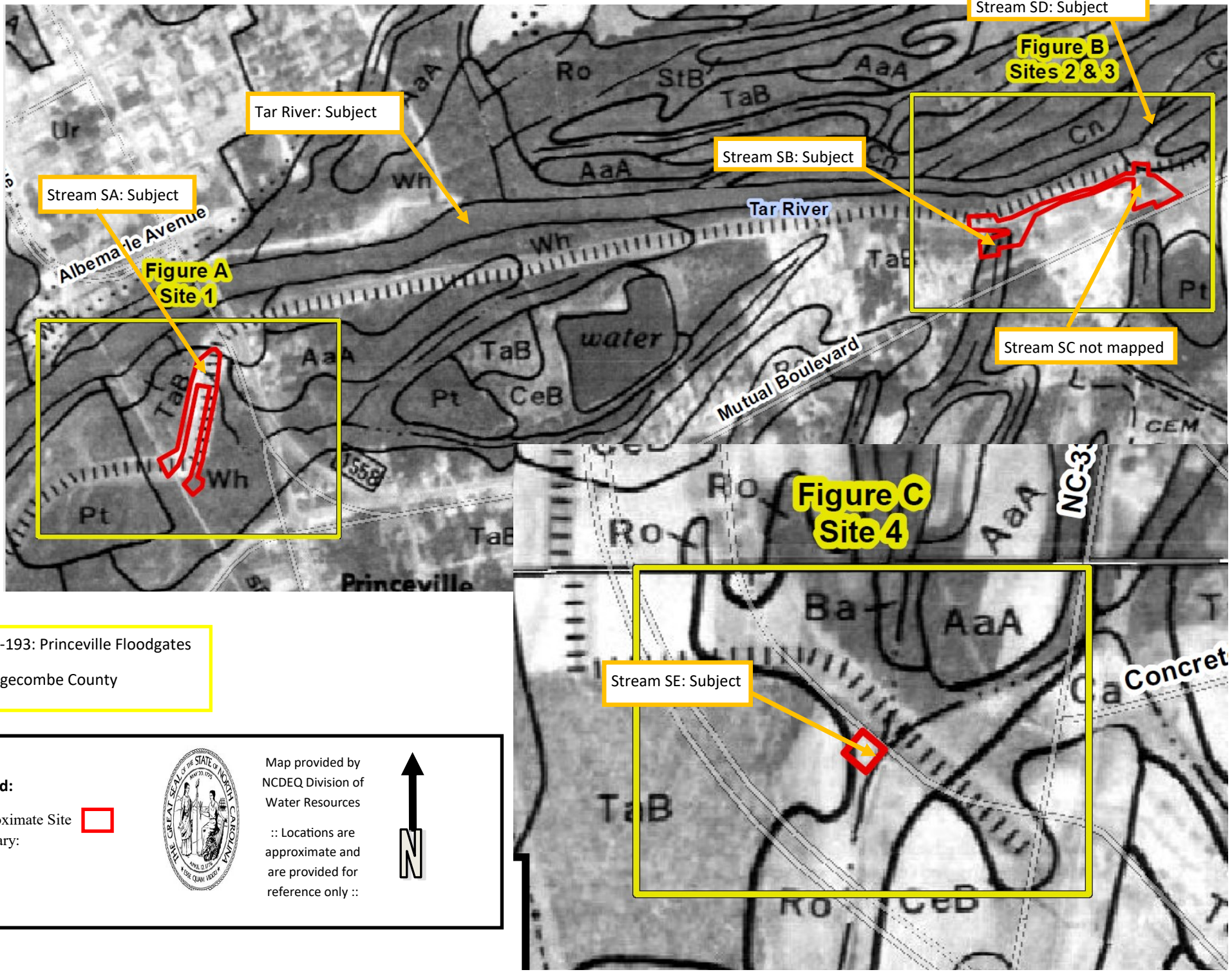
Site Locations on NRCS Soil Survey Mapping

Notes:

1. Background Imagery source: Soil Survey of Edgecombe County (1979), maps 18 and 19, provided by the Natural Resources Conservation Service (NRCS).

Drawn by:	AEK
Date:	Apr. 2021
Scale:	1:12,000
Project No.:	20-029

FIGURE 3



21-193: Princeville Floodgates

Edgecombe County

Legend:

-Approximate Site boundary:

Map provided by NCDEQ Division of Water Resources

:: Locations are approximate and are provided for reference only ::

N

APPENDIX 2

- **Early Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland**

- **Affidavit for Publication of Early Notice**

- **Distribution List to Interested Agencies, Groups and Individuals**

- **Early Notice Comments**

North Carolina Department of Public Safety
Office of Recovery and Resiliency

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

Laura H. Hogshead, Director

EARLY NOTICE AND PUBLIC REVIEW OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

PRINCEVILLE LEVEE FLOODGATE REPAIRS
FOUR LEVEE FLOODGATE CULVERT LOCATIONS ALONG THE TAR RIVER, PRINCEVILLE, EDGECOMBE COUNTY, NC 27886

December 8, 2022

To: All interested Agencies, Groups and Individuals

This is to give notice that the North Carolina Office of Recovery and Resiliency (NCORR) has received an application from the Town of Princeville to use U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) funding under 24 CFR 58 from the Infrastructure Recovery Program to implement the Princeville Levee Floodgate Repairs Project ("Proposed Activity"). NCORR is conducting an evaluation as required by Executive Orders 11988 and 11990 in accordance with HUD regulations (24 CFR Part 55) including identifying and evaluating practicable alternatives to locating the Proposed Activity in floodplain and wetlands and the Proposed Activity's potential impacts on these special areas. There are three primary purposes for this notice. First, people who may be affected by activities in floodplains and wetlands, and those who have an interest in the protection of the natural environment, should be given an opportunity to express their concerns and provide information about these areas. Commenters are encouraged to offer alternative locations outside of the floodplain and wetlands, alternative methods to serve the same project purpose, and methods to minimize and mitigate impacts. Second, adequate public notice is an important public education tool. The dissemination of information and request for public comment about floodplain and 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 floodplain and wetlands, it must inform those who may be put at greater or continued risk.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). During the Hurricane Matthew storm event, a large majority of the 2,357 citizens residing in the Town of Princeville were displaced by floodwaters due to the functional failure of the Princeville floodgates located along the U.S. Army Corps of Engineers (USACE) levee bordering the Tar River. Following the storm event, the Town of Princeville undertook to design construction upgrades and necessary repairs to critical flood control infrastructure so as to prevent flooding of the Town during future storm events. The Proposed Activity has been selected by the Town of Princeville

to assist its residents and community to be protected from future storm damage and flooding.

The Proposed Activity entails inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and constructing permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations. The existing levee segments of the proposed project were constructed in 1965 to 1967 by the USACE but are maintained by Edgecombe County. The four floodgate culvert locations include Site 1 (35.890816, -77.532662), Site 2 (35.894597, -77.516820), Site 3 (35.895364, -77.513700), and Site 4 (35.873450, -77.525434). The proposed floodgate inlet and outlet channel repairs include excavating and installing rip-rap channel linings consistent with the dimensions and extents shown in the original Princeville Levee construction plans, with some modifications to the rip-rap thickness and size to prevent rip rap loss during high flow events. The access roads consist of constructing 10-foot-wide gravel roads with 1-foot-wide shoulders and 3:1 side-slopes. The access roads constructed of fill material with a gravel, travel way will traverse up, over, and/or down the levee and connect to "stub-roads" that provide access to inlet and outlet channels at Sites 1, 2, and 3. Site 4 already has adequate access for proposed channel repairs and future inspection, maintenance and flood-fighting operations, therefore, no new access roads are proposed at Site 4.

The Proposed Activity will result in temporary impacts to 0.11 acres of 100-year floodplain, 0.027 acres of National Wetlands Inventory (NWI)-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub), 0.05 acres of stream, and 1.37 acres of floodway. The Proposed Activity will result in permanent impacts to 0.11 acres of 100-year floodplain, 0.007 acres of NWI-mapped and USACE verified delineated wetlands, 0.05 acres of stream, and 1.37 acres of floodway. These impacts will consist of excavation, fill and channel repair in the 100-year floodplain; hand clearing, fill and channel repair in wetlands; temporary dewatering and channel repair in stream; and excavation, fill and channel repair in FEMA-designated regulatory floodway. The Proposed Activity's levee floodgate repairs are allowed in floodway since it is classified as non-critical action, is a functionally dependent use that must necessarily be in close proximity to water (24 CFR §55.2(b)(6)), and is being processed under 24 CFR 55.20. Natural floodplains and wetlands provide flood risk reduction benefits by slowing runoff and storing flood water. In addition, floodplains and wetlands are beneficial by providing diverse wildlife habitat, flood and erosion control, surface water quality maintenance, groundwater recharge, and educational, scientific, cultural, and recreational opportunities. Wetlands have unique natural characteristics that play an integral role in the ecology of the watershed. The regulatory floodway refers to the channel of the Tar River and adjacent land areas that are reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in floodways to ensure that there are no increases in upstream flood elevations. A Floodplain Development Permit and no-rise certification for the Proposed Activity concluded that it will not increase base flood elevations within the FEMA floodplain According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. When levees fail, or are overtopped, the results can be catastrophic. Thus, the Proposed Activity is necessary to prevent future storm events from flooding the affected areas of the Town of Princeville.

Floodplain maps based on the FEMA Flood Insurance Rate Maps (FIRMs), NWI wetlands maps, USACE Jurisdictional Determination (with classification codes), and supporting documentation are available for review at https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews. A full description of the Proposed Activity may also be reviewed in person during business hours at the Princeville Town Hall, 201 South Main Street, Princeville, NC 27886. A full description of the Proposed Activity may also be viewed in person, by appointment only, at: NCORR, 200 Park Offices Drive, Durham, NC 27709. Call (984) 833-5350 to make an appointment.

Written comments must be received by NCORR at the following address on or before December 23, 2022: Laura Hogshead, Director, NCORR, ATTN: Princeville Levee Floodgate Repairs, P.O. Box 110465, Durham, NC 27709. Comments may also be submitted by email to publiccomments@rebuild.nc.gov with "ATTN: Princeville Levee Floodgate Repairs Comments" in the subject line.

APG
Media of Eastern North Carolina

The Daily Reflector - The Daily Advance - The Rocky Mount Telegram
Bertie Ledger - Chowan Herald - Duplin Times - Farmville Enterprise - Perquimans Weekly
Standard Laconic - Tarboro Weekly - Times Leader - Williamston Enterprise
PO Box 1967, Greenville NC 27835
(252) 329-9500

PAID VIA
☐ Cash ☐ Credit Card
☐ Check # PAID
Date Paid

NC ORR
PO BOX 110465
DURHAM NC 27709

Copy Line: EARLY NOTICE PUBLIC REVIEW
Lines: 220
Total Price: $438.60

Account: 146799 Ticket: 435191

PUBLISHER'S AFFIDAVIT

NORTH CAROLINA
Nash County

Gwen Davis affirms that he/she is clerk of Rocky Mount Telegram, a newspaper published daily at Rocky Mount, North Carolina, and that the advertisement, a true copy of which is hereto attached, entitled EARLY NOTICE PUBLIC REVIEW was published in said Rocky Mount Telegram on the following dates:

Thursday, December 8, 2022

and that the said newspaper in which such notice, paper, document or legal advertisement was published, was at the time of each and every publication, a newspaper meeting all of the requirements and qualifications of Chapter 1, Section 597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Chapter 1, Section 597 of the General Statutes of North Carolina.

Gwen Davis

Affirmed and subscribed before me this 8th day of March 2023

Kimberly Goff Bandy
(Notary Public Signature)

Kimberly Goff Bandy
(Notary Public Printed Name)

My commission expires 02-22-2026

KIMBERLY GOFF BANDY
Notary Public, North Carolina
Nash County
My Commission Expires
February 22, 2026

EARLY NOTICE AND PUBLIC REVIEW OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

PRINCEVILLE LEVEE FLOODGATE REPAIRS
FOUR LEVEE FLOODGATE CULVERT LOCATIONS ALONG THE TAR RIVER, PRINCEVILLE, EDGECOMBE COUNTY, NC 27886
December 8, 2022

To: All interested Agencies, Groups and Individuals

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12/8/2022

EARLY NOTICE DISTRIBUTION LIST

PRINCEVILLE LEVEE FLOODGATE REPAIRS
FOUR LEVEE FLOODGATE CULVERT LOCATIONS ALONG THE TAR RIVER, PRINCEVILLE, EDGECOMBE COUNTY, NC 27886

Published in Rocky Mount Telegram on 12/8/22, comments end 12/23/22

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
FEMA ATTN: 11988	*Hard copies may also be mailed to* Attn: 11988/NEPA Reviewer (EHP) DHS/FEMA RIV 3003 Chamblee Tucker Road Atlanta, GA 30341	FEMA-R4EHP@fema.dhs.gov *with the subject line* **REVIEW REQUEST: 11988/NEPA**
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

NOAA Fisheries	Mr. Pace Wilber Branch Chief, Southeast Regional Office Habitat Conservation Division/Atlantic & Caribbean Branch PO Box 12559 Charleston, SC 29422-2559	pace.wilber@noaa.gov
USACE – Wilmington District	Billy Standridge – Edgecombe County USACE – Wilmington District 69 Darlington Avenue Wilmington, NC 28403 910-251-4595	billy.w.standridge@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
Tuscarora Nation	Chief Tom Jonathan Tuscarora Nation 5226 Walmore Road Lewiston, NY 14092 Ph: (716) 601-4737	Does not want Notice
Tuscarora Nation	Mr. Bryan Printup, THPO Tuscarora Nation 5226 Walmore Road Lewiston, NY 14092 Ph: (716) 264-6011	BPrintup@hetf.org Does not want future Notices
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
NC Wildlife Resource Commission	Ms. Maria T. Dunn, Coastal Coordinator NC Wildlife Resources Commission 943 Washington Sq. Mall Washington, NC 27889 office: 252-948-3916	maria.dunn@ncwildlife.org

LOCAL AGENCIES		
COUNTY	Eric Evans, County Manager Edgecombe County P.O. Box 10 Tarboro, NC 27886 (252) 641-7835	EricEvans@edgecombeco.com
COUNTY	Katina Braswell, Planning Director Edgecombe County Planning Department P.O. Box 10 Tarboro, NC 27886 (252) 641-7835	KatinaBraswell@edgecombeco.com
COUNTY	Fran Mungo Clerk to the Board Edgecombe County 201 St. Andrew St. Tarboro, NC 27886 (252) 641-7834	franmungo@edgecombeco.com
CITY	Dr. Glenda Knight Town Manager Princeville Town Hall 201 South Main Street Princeville, NC 27886 Phone: (252) 823-1057	gknight@townofprinceville.com
CITY	Ms. Jessica Rudd Town Clerk/ Administrative Assistant II Town of Princeville Princeville Town Hall 201 South Main Street Princeville, NC 27886 Phone: 252-823-1057	jrudd@townofprinceville.com

Gievers, Andrea

From: Gievers, Andrea
Sent: Thursday, December 8, 2022 9:53 AM
To: Smith, Lenwood E
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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: Thursday, December 8, 2022 9:54 AM
To: FEMA-R4EHP@fema.dhs.gov
Subject: REVIEW REQUEST: 11988/NEPA - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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: Thursday, December 8, 2022 9:56 AM
To: Kajumba.ntale@epa.gov
Cc: blevins.john@epa.gov
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. A hard copy is also being sent to Mr. Blevin's office via Federal Express. 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: Thursday, December 8, 2022 9:58 AM
To: john_ellis@fws.gov
Cc: leigh_mann@fws.gov
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. *(There has been no project change, only educational information added to this notice.)* 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: Thursday, December 8, 2022 9:59 AM
To: Pace Wilber - NOAA Federal
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. *(There has been no project change, only educational information added to this notice.)* Thank you for your time and assistance.

Sincerely,

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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: Thursday, December 8, 2022 10:00 AM
To: billy.w.standridge@usace.army.mil
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. *(There has been no project change, only educational information added to this notice.)* 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: Thursday, December 8, 2022 10:01 AM
To: BPrintup@hetf.org
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

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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: Thursday, December 8, 2022 10:07 AM
To: Dunn, Maria T.
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

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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: Thursday, December 8, 2022 10:02 AM
To: State Clearinghouse
Cc: Best, Crystal
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. The last day of the comment period is December 23rd. 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: Thursday, December 8, 2022 10:03 AM
To: EricEvans@edgecombeco.com
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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: Thursday, December 8, 2022 10:03 AM
To: Katina Braswell
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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: Thursday, December 8, 2022 10:03 AM
To: franmungo@edgecombeco.com
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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: Thursday, December 8, 2022 10:04 AM
To: Glenda Knight
Cc: Blankenship, Bill
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

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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: Thursday, December 8, 2022 10:04 AM
To: jrudd@townofprinceville.com
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC
Attachments: NCORR Early Notice Princeville Levee FINAL 12.8.22.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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe County, NC. Please feel free to contact me if you have any questions. Thank you for your time and assistance.

Sincerely,

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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 8050 4421 7405

Form ID No. 0200

Sender's Copy

1 From *Please print and press hard.*

Date 12/8/22 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. Princeville EN

3 To

Recipient's Name Ms. Gracia Szczech Phone ( )

Company FEMA, Region 4

Address We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address 3003 Chamblee Tucker Rd

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

Rev. Date 1/12 • Part #167002 • ©2012 FedEx • PRINTED IN U.S.A. SRF

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 8050 4421 7390

Form ID No. 0200

Sender's Copy

1 From *Please print and press hard.*

Date 12/8/22 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. Princeville EN

3 To

Recipient's Name Mr. John Blevins Phone ( )

Company US EPA, Region 4

Address Lab Svcs & Applied Scienc Div We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

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

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- ☐ 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.

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- ☐ 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.

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☐ 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

Rev. Date 1/12 • Part #167002 • ©2012 FedEx • PRINTED IN U.S.A. SRF

Easy new Peel-and-Stick airbill. No pouch needed.
Apply airbill directly to your package. See directions on back.

Gievers, Andrea

From: Dean, Kenneth <Dean.William-Kenneth@epa.gov>
Sent: Friday, December 23, 2022 2:45 PM
To: NCORR Public Comments
Cc: Gievers, Andrea
Subject: [External] ATTN: Princeville Levee Floodgate Repairs Comments

Ms. Laura Hogshead, Director
North Carolina Office of Recovery and Resiliency
ATTN: Princeville Levee Floodgate Repairs
P.O. Box 110465,
Durham, NC 27709

RE: EPA Review of the Early Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland – Princeville Levee Floodgate Repairs, Four Levee Floodgate Culvert Locations along the Tar River, Princeville, Edgecombe, County, North Carolina

Dear Ms. Hogshead:

The U.S. Environmental Protection Agency (EPA) has reviewed the Early Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland (Notice), regarding the Princeville Levee Floodgate Repairs at four levee floodgate culvert locations along the Tar River. The North Carolina Office of Recovery and Resiliency (NCORR) has received an application from the Town of Princeville to use U.S. Department of Housing and Urban Development Community Development Block Grant – Disaster Recovery funding to implement the Princeville Levee Floodgate Repairs Project (i.e., the proposed activity).

During the Hurricane Matthew storm event (October 8, 2016), a large majority of the citizens residing in the Town of Princeville were displaced by floodwaters, due to the functional failure of the Princeville floodgates located along the U.S. Army Corps of Engineers levee bordering the Tar River. According to the Notice, the proposed activity is necessary to prevent future storm events from flooding the affected areas of the Town of Princeville. NCORR is conducting an evaluation of locating the proposed activity in a floodplain and wetlands and the potential impacts of the proposed activity on these special areas.

The proposed activity entails inlet and outlet channel repairs at four existing floodgate culverts along the levee and constructing permanent access roads to facilitate the repairs and provide access for future inspection, maintenance, and flood-fighting operations. The proposed floodgate inlet and outlet channel repairs include excavating and installing rip-rap channel linings. The access roads consist of constructing 10-foot-wide gravel roads with 1-foot-wide shoulders and 3:1 side-slopes. The access roads constructed of fill material with a gravel, travel way will traverse up, over, and/or down the levee and connect to “stubroads” that provide access to inlet and outlet channels at Sites 1, 2, and 3. Site 4 already has adequate access for proposed channel repairs and future inspection, maintenance, and flood-fighting operations.

According to the Early Notice, the proposed activity will result in temporary impacts to 0.11 acres of 100-year floodplain, 0.027 acres of wetlands, 0.05 acres of stream, and 1.37 acres of floodway. The proposed activity will result in permanent impacts to 0.11 acres of 100-year floodplain, 0.007 acres of wetlands, 0.05 acres of stream,

and 1.37 acres of floodway. These impacts will consist of excavation, fill and channel repair in the 100-year floodplain; hand clearing, fill and channel repair in wetlands; temporary dewatering and channel repair in stream; and excavation, fill and channel repair in the floodway.

Based on the EPA's review of the available information, the EPA has not identified any significant environmental impacts associated with the proposed activity and has no further comments. The EPA appreciates the opportunity to provide comments on the project. If you have any questions regarding our comments, please contact me by phone at (404) 562-9378, or by e-mail at dean.william-kenneth@epa.gov.

Wm. Kenneth Dean
Acting Chief, NEPA Section
Strategic Programs Office
Office of the Regional Administrator
U.S. Environmental Protection Agency, Region 4
61 Forsyth St., SW
Atlanta, GA 30303
Office: (404) 562-9378
Mobile: (678-628-2079

Gievers, Andrea

From: Dunn, Maria T.
Sent: Monday, December 19, 2022 7:21 AM
To: Gievers, Andrea
Subject: RE: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, NC

Good morning.

NCWRC has received the early notice and is familiar with the project. We have reviewed and commented as necessary on the project during the NC State Clearinghouse circulations as well as during appropriate state and federal regulatory permit application reviews. We have no further comment at this time.

Thank you for contacting our agency. Please do not hesitate if I can provide additional assistance.

Maria

Maria T. Dunn
Coastal Coordinator

NC Wildlife Resources Commission
943 Washington Sq. Mall
Washington, NC 27889
252-495-5554

www.ncwildlife.org

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Thursday, December 8, 2022 10:07 AM
To: Dunn, Maria T. <maria.dunn@ncwildlife.org>
Subject: Public Notice - Early Notice - Princeville Levee Floodgate Repairs, Princeville, 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 100-year Floodplain and Wetland* publishing December 8, 2022 for the NCORR Infrastructure Recovery Program's Princeville Levee Floodgate Repairs proposed project in the Town of Princeville, Edgecombe 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

Roy Cooper
Governor

Pamela B. Cashwell
Secretary

December 22, 2022

Andrea Gievers
Town of Princeville
c/o NC Department of Public Safety
Office of Recovery and Resiliency
Durham, NC 27709-

Re: SCH File # 23-E-4600-0103 Proposed project is for the inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations.

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

Control No.: 23-E-4600-0103

County.: EDGECOMBE

Date Received: 12/8/2022

Agency Response: 12/21/2022

Review Closed: 12/21/2022

JINTAO WEN
CLEARINGHOUSE COORDINATOR
DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: Town of Princeville

Project Desc.: Proposed project is for the inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 12/19/2022

Control No.: 23-E-4600-0103

County.: EDGECOMBE

Date Received: 12/8/2022

Agency Response: 12/21/2022

Review Closed: 12/21/2022

JEANNE STONE
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: Town of Princeville

Project Desc.: Proposed project is for the inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JEANNE STONE Date: 12/16/2022

Control No.: 23-E-4600-0103

County.: EDGECOMBE

Date Received: 12/8/2022

Agency Response: 12/21/2022

Review Closed: 12/21/2022

LYN HARDISON
CLEARINGHOUSE COORDINATOR
DEPT OF ENVIRONMENTAL QUALITY

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: Town of Princeville

Project Desc.: Proposed project is for the inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: LYN HARDISON Date: 12/22/2022

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: 23-0103
Environmental Assessment - Proposed project is for the inlet and outlet channel repairs at four (4) existing floodgate culverts along the levee and construct permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations.
Edgecombe County

Date: December 21, 2022

The Department of Environment Quality has reviewed the proposal for the referenced project. 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

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

MEMORANDUM

TO: Michael Scott, Division Director through Sharon Brinkley

FROM: Amanda Thompson, Environmental Senior Specialist - Solid Waste Section

DATE: December 14, 2022

SUBJECT: Review: SW 23-0103 – Edgecombe County (Environmental Assessment – Town of Princeville – Proposed project is for the inlet and outlet channel repairs at 4 existing floodgate culverts along the levee and construct permanent access roads.)

The Division of Waste Management, Solid Waste Section (Section) has reviewed the documents submitted for the subject project in Edgecombe County, NC. Based on the information provided in this document, the Section at this time does not see an adverse impact on the surrounding communities and likewise knows of no situations in the communities, which would affect this project.

For any planned or proposed projects, it is recommended that during any land clearing, demolition, and construction, the Town of Princeville 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 project that cannot be beneficially reused or recycled as described, may require disposal of at a solid waste management facility permitted by the Division. The Section strongly recommends that the Town of Princeville require all contractors to provide proof of proper disposal for all generated waste to permitted facilities.**

Permitted solid waste management facilities are listed on the Division of Waste Management, Solid Waste Section portal site at: https://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/solid-waste-management-annual-reports/solid-waste-permitted-facility-list
And the site locator tool at:
https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=7dd59be2750b40bebebfa49fc383f688

Questions regarding solid waste management for this project should be directed to Mr. John College, Environmental Senior Specialist, Solid Waste Section, at (919) 268-1524.

cc: John College, Environmental Senior Specialist

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Raleigh
Project Number: 23-0103 Due Date: 12/20/2022
County: Edgecombe

After review of this project, it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained 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 $100 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 04B .0125 – Buffers Zones for Trout Waters shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the twenty-five percent (25%) of the buffer zone nearest the land-disturbing activity, whichever is greater.		
☐	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: Raleigh
Project Number: 23-0103 Due Date: 12/20/2022
County: Edgecombe

	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 forms.	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: Raleigh
Project Number: 23-0103 Due Date: 12/20/2022
County: Edgecombe

Other Comments (attach additional pages as necessary, being certain to comment authority)

Division	Initials	No comment	Comments	Date Review
DAQ	SH	☐	See checked boxes above.	12/9/2022
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	SG	☐	See Checked boxes above	/ /
DEMLR (LQ & SW)	ISB	☐	See Checked Box	12/14/2022
DWM – UST		☐		/ /
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

APPENDIX 3

- **FONSI/ NOI-RROF/ Final Notice**
- **Affidavit for Publication of Final Notice (To be added later)**
- **Distribution List to Interested Agencies, Groups and Individuals**
- **Final Notice Comments and Response, if applicable (To be added later)**

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 EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

PRINCEVILLE LEVEE FLOODGATE REPAIRS
FOUR LEVEE FLOODGATE CULVERT LOCATIONS ALONG THE TAR RIVER, PRINCEVILLE, EDGECOMBE COUNTY, NC 27886

April 20, 2023

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 Explanation of a Proposed Activity in a Floodplain and 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 $850,658.00 for the Princeville Levee Floodgate Repairs Project ("Proposed Activity") on approximately 7.7 acres at four floodgate culvert locations: Site 1 (35.890816, -77.532662), Site 2 (35.894597, -77.516820), Site 3 (35.895364, -77.513700), and Site 4 (35.873450, -77.525434). The Proposed Activity is anticipated to have a total cost of $850,658.00. The Proposed Activity entails inlet and outlet channel repairs at four existing floodgate culverts along the levee and constructing permanent access roads to facilitate said repairs and provide access for future inspection, maintenance, and flood-fighting operations. These existing levee segments were constructed in 1965 to 1967 by the U.S. Army Corps of Engineers (USACE) but are maintained by Edgecombe County. The proposed floodgate inlet and outlet channel repairs

include excavating and installing rip-rap channel linings consistent with the dimensions and extents shown in the original Princeville Levee construction plans, with some modifications to the rip-rap thickness and size to prevent rip rap loss during high flow events. The access roads consist of constructing 10-foot-wide gravel roads with 1-foot-wide shoulders and 3:1 side-slopes. The access roads constructed of fill material with a gravel, travel way will traverse up, over, and/or down the levee and connect to "stub-roads" that provide access to inlet and outlet channels at Sites 1, 2, and 3. Site 4 already has adequate access for proposed channel repairs and future inspection, maintenance and flood-fighting operations, therefore, no new access roads are proposed at Site 4.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). During the Hurricane Matthew storm event, a large majority of the 2,357 citizens residing in the Town of Princeville were displaced by floodwaters in part due to the functional failure of the Princeville floodgates located along the USACE levee bordering the Tar River. During the Hurricane Matthew storm event, the floodgate structures were submerged underwater for at least five days resulting in weakness and more erosion around already worn structures, and damaged floodgate hinges. County staff temporarily repaired two broken hinges by welding. The proposed repairs are intended to restore the existing structures to their former as-built condition. The Town of Princeville undertook to design construction upgrades and necessary repairs to critical flood control infrastructure so as to prevent flooding of the Town during future storm events. The Town of Princeville has selected the Proposed Activity to assist its residents and community to be protected from future storm damage and flooding.

PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

NCORR has conducted an evaluation as required by Executive Orders (EO) 11988 and 11990, in accordance with HUD regulations at 24 CFR 55 Subpart C Procedures for Making Determinations on Floodplain Management and Wetlands Protection. The Proposed Activity will result in temporary impacts to 0.11 acres of 100-year floodplain, 0.027 acres of National Wetlands Inventory (NWI)-mapped and USACE verified delineated wetlands (freshwater palustrine forested and scrub-shrub), 0.05 acres of stream, and 1.37 acres of floodway. The Proposed Activity will result in permanent impacts to 0.11 acres of 100-year floodplain, 0.007 acres of NWI-mapped and USACE verified delineated wetlands, 0.05 acres of stream, and 1.37 acres of floodway. These impacts will consist of excavation, fill and channel repair in the 100-year floodplain; hand clearing, fill and channel repair in wetlands; temporary dewatering and channel repair in stream; and excavation, fill and channel repair in FEMA-designated regulatory floodway. The Proposed Activity's levee floodgate repairs are allowed in floodway since it is classified as non-critical action, is a functionally dependent use that must necessarily be in close proximity to water (24 CFR §55.2(b)(6)), and is being processed under 24 CFR 55.20. The regulatory floodway refers to the channel of the Tar River and adjacent land areas that are reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in floodways to ensure that there are no increases in upstream flood elevations. A Floodplain Development Permit and no-rise certification for the Proposed Activity were obtained and concluded that it will not increase base flood elevations within the FEMA floodplain. According to FEMA, the purpose of a levee is to keep the course of rivers from changing and to protect against flooding of the area adjoining the river. Levees are

designed to reduce flood risk from flooding events; however, they do not eliminate the risk entirely. Levees can and do deteriorate over time and must be maintained to retain their effectiveness. When levees fail, or are overtopped, the results can be catastrophic. Thus, the Proposed Activity is necessary to prevent future storm events from flooding the affected areas of the Town of Princeville.

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 Proposed Activity involves repairing floodgates at an existing levee and constructing access roads. The Proposed Activity must be performed at the existing floodgates, and project designs have been completed in accordance with agency input to minimize impacts to the floodplain, wetlands, environment and community. The main alternative is the "No Action" Alternative which is not considered feasible since Princeville has been historically subjected to devastating flooding and storm damage, and action is critically necessary to protect the residents and community from future storm events. One concern with the "No Action" Alternative is the potential decertification of the levee by FEMA which would result in virtually the whole town being mapped as 100-year floodplain and subsequent requirement for the costly elevation of structures and flood insurance for homeowners according to the Princeville Recovery Plan. These natural floodplains and wetlands provide flood risk reduction benefits by slowing runoff and storing flood water. In addition, the floodplains and wetlands are beneficial by providing diverse wildlife habitat, flood and erosion control, surface water quality maintenance, groundwater recharge, and educational, scientific, cultural, and recreational opportunities. Wetlands have unique natural characteristics that play an integral role in the ecology of the watershed. Overall, the functions and values associated with the impacted wetland are limited due to small acreage, low diversity, and man-made influences, however, some wildlife habitat, flood flow protection, and water quality functions exist.

The Proposed Activity will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. The following permits will be obtained, if applicable, prior to commencing work: USACE Clean Water Act (CWA) Section 404 Nationwide Permit #3 (Maintenance), USACE CWA Section 408 Permit, NC DWR CWA Section 401 Water Quality Certification, NC DWR Tar-Neuse River Riparian Buffer Authorization, NC DEMLR Erosion and Sediment Control Permit, NPDES Construction Stormwater Permit (NCG010000), Floodplain Development Permit and no-rise certification. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction. Thus, the Proposed Activity and site locations are the most suitable, feasible options selected by the Town of Princeville after a lengthy process to assist its residents and community to be protected from future storm events; the "No Action" alternative would not effectively address Princeville's flooding; and mitigation measures include erosion and sedimentation controls, permit conditions, a project design that minimizes impacts, and native plants used in site restoration.

Since the action will include modification of floodplain and new construction in wetland, EOs 11988 and 11990 require that the Proposed Activity not be supported if there are practicable alternatives to floodplain and wetland impacts. NCORR has reevaluated the alternatives to modification of floodplain and new construction in wetland, and has determined that it has no practicable alternative. The 8-step process has been further documented in the EO 11988

Floodplain Management and EO 11990 Protection of Wetlands Determination which is available for viewing and copying as described below in Public Review.

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains and wetlands and those who have an interest in the protection of the natural environment are given 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 floodplains and 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 floodplains and 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 Project 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 11988 Floodplain Management 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 27709. 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 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 Floodplain and 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 May 5, 2023 at publiccomments@rebuild.nc.gov. Written comments may also be submitted by mail, in the proper format, to be received on or before May 5, 2023, and addressed to: Laura Hogshead, Director, NCORR, ATTN: Princeville Levee Floodgate Repairs, P.O. Box 110465, Durham, NC 27709. All comments must be received on or before May 5, 2023 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 May 8, 2023, 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
April 20, 2023

Media of East Carolina
Key West Citizen - Florida Free Press - Paradise
The Daily Reflector - The Daily Advance - The Rocky Mount Telegram
Bertie Ledger - Chowan Herald - Duplin Times - Farmville Enterprise - Perquimans Weekly
Standard Laconic - Tarboro Weekly - Times Leader - Williamston Enterprise
PO Box 1967 Greenville NC 27835 - (252) 329-9500

Proof to be replaced with Affidavit after publication

Date: April 18, 2023

- CLASSIFIED AD PROOF -

Thank you for advertising with us! This is the proof of your ad scheduled to run on the dates indicated below. If changes are needed, please contact Kim Bandy by phone at (252) 329-9522 or email at kbandy@apgenc.com.

CUSTOMER INFORMATION

Account #:	146799
Name:	NC ORR
Address:	PO BOX 110465 DURHAM NC 27709
Telephone:	(984) 297-6244
Email:	sarah.crump@ncdps.gov

AD INFORMATION

Ad ID:	444082
Run Dates:	04/20/23 to 04/20/23
Total Cost:	$880.40
# of Inserts:	2
# of Lines:	455
Ad Class:	42
Account Rep:	Kim Bandy
Phone #:	(252) 329-9505
Email:	customercare@apgenc.com

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PRINCEVILLE LEVEE FLOODGATE REPAIRS
FOUR LEVEE FLOODGATE CULVERT LOCATIONS ALONG THE TAR RIVER, PRINCEVILLE, EDGECOMBE COUNTY, NC 27886

Published in Rocky Mount Telegram on 4/20/23, comments end 5/5/23

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
FEMA ATTN: 11988	*Hard copies may also be mailed to* Attn: 11988/NEPA Reviewer (EHP) DHS/FEMA RIV 3003 Chamblee Tucker Road Atlanta, GA 30341	FEMA-R4EHP@fema.dhs.gov *with the subject line* **REVIEW REQUEST: 11988/NEPA**
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

NOAA Fisheries	Mr. Pace Wilber Branch Chief, Southeast Regional Office Habitat Conservation Division/Atlantic & Caribbean Branch PO Box 12559 Charleston, SC 29422-2559	pace.wilber@noaa.gov
USACE – Wilmington District	Billy Standridge – Edgecombe County USACE – Wilmington District 69 Darlington Avenue Wilmington, NC 28403 910-251-4595	billy.w.standridge@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
Tuscarora Nation	Chief Tom Jonathan Tuscarora Nation 5226 Walmore Road Lewiston, NY 14092 Ph: (716) 601-4737	Does not want Notice
Tuscarora Nation	Mr. Bryan Printup, THPO Tuscarora Nation 5226 Walmore Road Lewiston, NY 14092 Ph: (716) 264-6011	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
NC Wildlife Resource Commission	Ms. Maria T. Dunn, Coastal Coordinator NC Wildlife Resources Commission 943 Washington Sq. Mall Washington, NC 27889 office: 252-948-3916	maria.dunn@ncwildlife.org

LOCAL AGENCIES		
COUNTY	Eric Evans, County Manager Edgecombe County P.O. Box 10 Tarboro, NC 27886 (252) 641-7835	EricEvans@edgecombeco.com
COUNTY	Katina Braswell, Planning Director Edgecombe County Planning Department P.O. Box 10 Tarboro, NC 27886 (252) 641-7835	KatinaBraswell@edgecombeco.com
COUNTY	Fran Mungo Clerk to the Board Edgecombe County 201 St. Andrew St. Tarboro, NC 27886 (252) 641-7834	franmungo@edgecombeco.com
CITY	Dr. Glenda Knight Town Manager Princeville Town Hall 201 South Main Street Princeville, NC 27886 Phone: (252) 823-1057	gknight@townofprinceville.com
CITY	Ms. Jessica Rudd Town Clerk/ Administrative Assistant II Town of Princeville Princeville Town Hall 201 South Main Street Princeville, NC 27886 Phone: 252-823-1057	jrudd@townofprinceville.com