



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JOSH STEIN  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

July 25, 2025

MEMORANDUM TO: Division Environmental and Construction Units

FROM: *MAT* Michael A. Turchy, ECAP Group Leader  
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Restoration of I-40 due to damage caused by Hurricane Helene in Haywood County, Division 14,  
**WBS: 18314.1044057**

Please find enclosed the following permits for this project:

Agency	Permit Type	Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Individual Permit, dated July 25, 2025.  This permit replaces the previously issued: 1. Nationwide Permit 6, 3 & 33 dated 2/27/2025 2. Modification dated 5/1/2025	December 31, 2035
NC Division of Water Resources Section 401 Water Quality Certification	Individual Water Quality Certification, dated July 24, 2025.  This certification replaces the previously issued: 1. Individual General Certification dated 2/24/2025 2. Modification dated 4/24/2025	with above 404 Individual Permit

Work is authorized by the above-referenced documents and must be accomplished in strict accordance with the permitted plans.

The Environmental Coordination and Permitting Group or the Division Environmental Office must be consulted if any deviation from the permit(s) or accompanying drawings is required.

404 Permit (USACE) - July 2025





DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT  
WRDA/TRANSPORATION OFFICE  
151 PATTON AVE, ROOM 151 PATTON AVE, ROOM 208  
ASHEVILLE NC 28801

July 25, 2025

Regulatory Program

Sent Via Email: [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)

Mr. Michael Turchy  
North Carolina Department of Transportation  
1000 Birch Ridge Drive  
Raleigh, NC 27610

Dear Mr. Turchy:

The U.S. Army Corps of Engineers (Corps) is pleased to enclose the Department of the Army permit to authorize impacts to waters of the US associated with the emergency and permanent repairs to I-40 roadway which was damaged during the Hurricane Helene storm event. Specific impacts include the permanent impact to 0.045 acre of wetlands, the permanent impact to 13,095 lf of stream channel (of which 1,381 is stream channel loss), the permanent loss of 0.025 acre of non-stream tributaries and the temporary impact to 18,192 lf of stream channel. An additional up to 2,540 lf of stream channel may be impacted due to the relocation of USFS Road 288 (Buzzard Roost Road) and potential indirect impact may occur to up to 3,016 lf streams located within the vicinity of the borrow pits due to reduction in drainage area and lowering of the water table. The permit should be made available at the construction site. Work may begin immediately but the Corps must be notified of:

- a. The date of commencement of the work,
- b. The dates of work suspensions and resumptions of work, if suspended over a week, and
- c. The date of final completion.

This information should be emailed to the Wilmington District WRDA Transportation Branch Division at [ncdot\\_reg@usace.army.mil](mailto:ncdot_reg@usace.army.mil). The Corps is also responsible for inspections to determine whether Permittees have strictly adhered to permit conditions. Other notable conditions:

- a. You must complete construction before **December 31, 2035**.

- b. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

Should you require any changes to the work authorized or obligated by this permit, it is the responsibility of the Permittee to submit a modification request to the WRDA Transportation Branch, WRDA . The Corps will evaluate the request and determine whether it is appropriate to modify the terms and conditions of the permit. The Permittee must obtain written approval of the requested modifications from the Corps prior to initiation of those changes.

If you have any questions concerning this correspondence, please contact Crystal Amschler, WRDA Project Manager of the WRDA at 828-526-6013, by mail at the above address, or by email at [crystal.c.amschler@usace.army.mil](mailto:crystal.c.amschler@usace.army.mil). Please take a moment to complete our customer satisfaction survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,

A handwritten signature in black ink that reads "M. Scott Jones". The signature is written in a cursive, flowing style.

M. Scott Jones, PWS  
WRDA / Transportation Branch Chief  
USACE - Wilmington District

Enclosures

# DEPARTMENT OF THE ARMY PERMIT

**Permittee:** Mr. Michael Turchy  
NC Department of Transportation  
1000 Birch Ridge Drive  
Raleigh, NC 27610

**Permit No:** SAW-2025-00194

**Issuing Office:** U.S. Army Engineer District, Wilmington

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:**

The project involves the emergency and permanent repairs to I-40 roadway, which was damaged during the Hurricane Helene storm event. Specific impacts include the permanent impact to 0.045 acre of wetlands, the permanent impact to 13,095 lf of stream channel (of which 1,381 is stream channel loss), the permanent loss of 0.025 acre of non-stream tributaries and the temporary impact to 18,192 lf of stream channel. An additional up to 2,540 lf of stream channel may be impacted due to the relocation of USFS Road 288 (Buzzard Roost Road) and potential indirect impact may occur to up to 3,016 lf streams located within the vicinity of the borrow pits due to reduction in drainage area and lowering of the water table. The work described above is to be completed in accordance with the 5 attachments affixed at the end of this permit instrument.

**Project Location:** The project is located on Interstate-40 (I-40) in the Pigeon River Gorge, from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) in Waterville, Haywood County, North Carolina

**Approximate Central Coordinates:** Latitude: 35.761470 North  
Longitude: -83.074670 West

## **Permit Conditions**

### **General Conditions:**

1. The time limit for completing the work authorized ends on December 31, 2035. If circumstances arise that require additional time to complete the authorized activity, submit your request for a time extension to this office with a description of those circumstances for consideration at least one month (30 days) before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

### **Special Conditions:**

1. **Work Limits:** All work authorized by this permit shall be performed in strict compliance with the attached permit plans, which are a part of this permit. The Permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached

permit plans must be approved by the U.S. Army Corps of Engineers prior to any active construction in waters or wetlands.

**2. Unauthorized Dredge or Fill:** Except as authorized by this permit or any U.S. Army Corps of Engineers approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and waste activities connected with this project. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.

**3. Permit Distribution:** The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, drawings and attachments shall be available at the project site during the construction and maintenance of this project.

**4. Pre-Construction Meeting:** The Permittee shall schedule and attend a preconstruction meeting between its representatives, the contractors' representatives, and the U.S. Army Corps of Engineers, WRDA Transportation Branch, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The Permittee shall provide the Corps with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The Permittee shall schedule the preconstruction meeting for a time frame when the Corps, NCDOT, and NCDWR Project Managers can attend. The Permittee shall invite the Corps, NCDOT, and NCDWR Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting. The thirty (30) day requirement can be waived with the concurrence of the Corps.

**5. Notification of Construction Commencement and Completion:** The Permittee shall notify the U.S. Army Corps of Engineers in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

**6. Reporting Address:** All reports, documentation, and correspondence required by the conditions of this permit shall be submitted to the following: U.S. Army Corps of Engineers, WRDA Transportation Branch, Attn: Crystal Amschler 151 Patton Avenue, Room 208 or Crystal.C.Amschler@usace.army.mil. The Permittee shall reference the following permit number, SAW-2025-00194, on all submittals.

**7. Permit Revocation:** The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-storm condition.

**8. Reporting Violations:** Violation of these permit conditions or violation of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act shall be reported to the Corps in writing and by telephone at: 828-526-6013 within 24 hours of the Permittee's discovery of the violation.

**9. Clean Fill:** The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, construction debris, metal and plastic products, and concrete block with exposed reinforcement bars. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source.

**10. Endangered Species Act:** This Department of the Army permit does not authorize you to take an endangered species, in particular the federally listed or proposed gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*, NLEB) and tricolored bat (*Perimyotis subflavus*), which is currently undergoing a status review. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service Biological Opinion (BO) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your permit. The U.S. Fish and Wildlife Service is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

**11. Culverts:**

1) Unless otherwise requested in the application and depicted on the approved permit plans, culverts greater than 48 inches in diameter shall be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert shall be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Culverts shall be designed and constructed in a manner that minimizes destabilization and head cutting.

2) Measures shall be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. 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 opening shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

3) The Permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The Permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the U.S. Army Corps of Engineers.

4) Culverts placed within wetlands must be installed in a manner that does not restrict the flows and circulation patterns of waters of the United States. Culverts placed across wetland fills purely for the purposes of equalizing surface water shall not be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

## **12. Sediment and Erosion Control:**

1) During the clearing phase of the project, heavy equipment shall not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.



2) No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit. This includes, but is not limited to, sediment control fences and other barriers intended to catch sediment losses.

3) The Permittee shall remove all sediment and erosion control measures placed in waters and/or wetlands, and shall restore natural grades on those areas, prior to project completion.

4) The Permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to ensure compliance with the appropriate turbidity water quality standard. Erosion and sediment control practices shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to ensure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project shall remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A, Article 4). Adequate sedimentation and erosion control measures shall be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures shall be inspected and maintained regularly, especially following rainfall events. All fill material shall be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

**13. Temporary Fills:** Within thirty (30) days of the date of completing the authorized work, the Permittee shall remove all temporary fills in waters of the United States and restore the affected areas to pre-construction contours and elevations. The affected areas shall be re-vegetated with native, non-invasive vegetation as necessary to minimize erosion and ensure site stability.

**14. Borrow and Waste:** To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent waters and wetlands, except as authorized by this permit, the Permittee shall require its contractors and/or agents to identify all areas to be used as borrow and/or waste sites associated with this project. The Permittee shall provide the U.S. Army Corps of Engineers with appropriate maps indicating the locations of proposed borrow and/or waste sites as soon as such information is available. The Permittee shall submit to the Corps site-specific information needed to ensure that borrow and/or waste sites comply with all applicable Federal requirements, to include compliance with the Endangered Species Act and the National Historic Preservation Act, such as surveys or correspondence with agencies



(e.g., the USFWS, the NC-HPO, etc.). The required information shall also include the location of all aquatic features, if any, out to a distance of 400 feet beyond the nearest boundary of the site. The Permittee shall not approve any borrow and/or waste sites before receiving written confirmation from the Corps that the proposed site meets all Federal requirements, whether or not waters of the U.S., including wetlands, are located in the proposed borrow and/or waste site. All delineations of aquatic sites on borrow and/or waste sites shall be verified by the U.S. Army Corps of Engineers and shown on the approved reclamation plans. The Permittee shall ensure that all borrow and/or waste sites comply with Special Condition 2 of this permit. Additionally, the Permittee shall produce and maintain documentation of all borrow and waste sites associated with this project. This documentation will include data regarding soils, vegetation, hydrology, any delineation(s) of aquatic sites, and any jurisdictional determinations made by the Corps to clearly demonstrate compliance with Special Condition 2. All information will be available to the U.S. Army Corps of Engineers upon request. The Permittee shall require its contractors to complete and execute reclamation plans for each borrow and/or waste site and provide written documentation that the reclamation plans have been implemented, and all work is completed. This documentation will be provided to the U.S. Army Corps of Engineers within 30 days of the completion of the reclamation work.

**15. Compensatory Mitigation:** In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.

**16. Other Mitigation measures and future modifications:**

- **Pigeon River and Pigeon River Valley mitigation plan:** NCDOT is currently developing an assessment and monitoring plan to ensure the impacts to the Pigeon River and valley are ultimately restored to pre-storm like conditions as much as practicable, and for use to assist in the determination of a successful restoration. This plan will be submitted for evaluation and approval by the U.S. Army Corps of Engineers (Corps) within 60 days of the start of retaining wall construction.
- **Mitigation plan for potential indirect impacts to streams adjacent to borrow pits:** NCDOT will conduct pre-impact stream assessments, data collection and monitoring throughout the project to document impacts to stream channels from the adjacent borrow pit work. Additionally, NCDOT, in conjunction with USFS and other resource agencies, will develop a Stream Assessment and Monitoring Plan and if it is determined that there has been a detrimental effect to these streams, NCDOT will submit a mitigation proposal to address these effects to the Corps for evaluation and approval within 60 days of the start of land-disturbing activities.

- **Haul Road impacts to Pigeon River:** NCDOT is currently developing an assessment and monitoring plan to ensure the impacts to the tributary and Pigeon River valley are ultimately restored to pre-storm like conditions as much as practicable, and for use to assist in the determination of a successful restoration. This plan will be submitted for evaluation and approval by the Corps within 60 days of the start of land-disturbing activities.
- **Stream impacts associated with Buzzard Road Relocation:** The borrow pit required for this project will also necessitate a relocation of a section of US Forest Service Road 288 (Buzzard Roost Road). The USFS is currently evaluating options for this relocation which have the least impact on Forest resources. At this time, it is proposed that existing Forest Service Roads (FS 453, and Hicks Branch Road) will be used to handle this relocation. However, these roads do not have pipes that carry the water under the road, and instead, water flows over the road requiring vehicles to ford the streams. Should these roads be selected as the route for FS 288, the USFS will request these roads be improved to the same standard as the existing FS Road 288, which will include piping the streams currently flowing over the road. As final decisions are made by the USFS, and design is refined, NCDOT will submit a permit modification, and include a mitigation plan as required, to request authorization for these impacts.

**17. Compliance Inspection:** A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the Corps.

**18. Prohibitions on Concrete:** The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the United States when it no longer poses a threat to aquatic organisms (concrete is set and cured).

**19. Discovery of Previously Unknown Remains and Artifacts:** If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you 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.

20. To protect the public along the river corridor during construction, NCDOT has placed, and will continue to maintain, two Warning signs at the only river put-in location: 35.733281, -83.025230.

21. Special conditions included in the February 27, 2025, and May 1, 2025, permit verifications under Nationwide permits (NWP) 6 (Survey Activities), 33 (Temporary Construction Access and Dewatering), and 3 (Maintenance), as applicable, are hereby incorporated as special conditions for this permit.

22. This permit authorizes impact to waters of the United States, associated with the emergency and permanent repairs to I-40 roadway which was damaged during the Hurricane Helene storm event. Due to the magnitude of damage along the five miles of I-40 and the varying nature of the repairs, it will not be practical to complete final design for the entire project prior to beginning construction. Final repairs to any component of the I-40 corridor project area shall not commence until: final design has been completed; the permittee has minimized impacts to waters and wetlands to the maximum extent practicable; and, the final design plans and compensatory mitigation plans, as applicable, have been approved by the Corps.

23. The permittee shall ensure that no more than 50% of river flow is constricted by the use of construction causeway(s) at any time.

24. The permittee shall ensure that any equipment that is placed on the causeways is removed when either of the following situations is forecasted or anticipated: (1) the water level will rise to a point where the equipment could be flooded (even during work days), and/or (2) the water level is expected to rise overnight, or over a non-work period of time, to a point where the equipment could be flooded.

25. NCDOT shall ensure that all river safety measures, submitted and described in the project record are fully implemented. The permittee shall additionally ensure that staff working in or adjacent to construction areas (1) are aware that river users may occasionally pass through the construction area, and (2) watch the area for river users. Halting construction activities when river users are observed in the construction area is recommended.

26. Upon completion of work that requires the causeways to be in the river, the permittee shall remove all readily detectible causeway material, to the extent practicable, while removing as little of the original riverbed as possible.

27. The permittee shall ensure that prior to construction on this project, signage is posted between the Buzzard's Roost Road (Forest Service Road 288) access area and Cotton Patch Landing recommending river users exit the river prior to the active construction area located immediately downstream and demarcating the start of the active work zone.

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

( ) Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



Digitally signed by Michael  
Turchy  
Reason: I-40 Permitting  
Date: 2025.07.25 12:10:11 -04'00'

7/25/2025

\_\_\_\_\_  
(PERMITTEE)

\_\_\_\_\_  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



\_\_\_\_\_, FOR

Brad A. Morgan, P.E.  
Colonel, U.S. Army  
District Commander

Date: 25 JUL 2025

**By Way of Condition 21 as found in the July 25, 2025 404 Individual permit, which indicates:**

21. Special conditions included in the February 27, 2025, and May 1, 2025, permit verifications under Nationwide permits (NWP) 6 (Survey Activities), 33 (Temporary Construction Access and Dewatering), and 3 (Maintenance), as applicable, are hereby incorporated as special conditions for this permit.

**Below are the conditions from the previous permits that are incorporated as special conditions for this permit:**

**February 27, 2025, 404 Permit - Project Specific Special Conditions:**

1. Impacts for the causeway was calculated based on fill placement within the post- Helene scour zone of the Pigeon River along the I-40 project area. Generally, the post-Helene scour zone as mapped exceeds the width of the Pigeon River at normal flow conditions. NCDOT stated that due to the river's natural flow path being widened by Hurricane Helene, actual causeway related impacts are anticipated to be significantly lower than the impacts shown in the permit drawings. In order to ensure that the Pigeon River is not unacceptably narrowed or constricted by the causeway installation, NCDOT will notify the Corps prior to any fill placement that would result in the width of the Pigeon River at normal flow conditions being reduced below 50% so that mitigative and/or design alternatives to lessen potential environmental effects from the restricted flow can be developed, reviewed, and approved prior to construction. Stream restoration, relocation, and / or permanent stabilization structures are not authorized at this time.

**May 1, 2025, 404 Permit - Project Specific Special Conditions:**

**2025 Modification Special Condition 1:**

- a. Material removed from the river will be directed and guided by a team of professional river restoration and hydraulic engineers.
- b. NCDOT will provide monthly reports on the quantities removed from the "scour zone."

**2025 Modification Special Condition 2:**

The crossing would be in place only for the purpose of obtaining geotechnical investigations, which is anticipated to be complete by July of this year.

- a. To ensure this crossing will not have long-term or permanent impacts to the river, NCDOT will use river restoration engineers and professionals (working on other sections of the river) to ensure proper and appropriate restoration of the Pigeon River once the temporary crossing is removed.

**2025 Modification Special Condition 3:**

This Department of the Army permit does not authorize you to take an endangered species, in particular the federally listed or proposed gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), tricolored bat (*Perimyotis subflavus*), and northern long-eared bat (*Myotis septentrionalis*, NLEB). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service Biological Opinion (BO) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your permit. The U.S. Fish and Wildlife Service is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

**Permitting Note: This condition has been accomplished.**

**2025 Modification Special Condition 4:**

The temporary river crossing design may be a hazard to boaters who may try to navigate the river during high flows. To mitigate this hazard, NCDOT will ensure posted signage warning of these hazards at the boater put in at this area.

**Permitting Note: This condition has been accomplished.**

401 Certification (NCDWR) - July 2025



JOSH STEIN  
Governor

D. REID WILSON  
Secretary

RICHARD E. ROGERS, JR.  
Director



July 24, 2025

NCDWR Project No. 20250109 v. 3  
Haywood County

North Carolina Department of Transportation  
Attn: Mr. Michael Turchy  
1000 Birch Ridge Drive  
Raleigh, North Carolina, 27699-1598

Delivered via email to: [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)

**Subject: Approval of 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS**

I-40 Eastbound Helene Restoration. NCDOT/State Project No. 18314.1044057  
Pigeon River [French Broad River Basin, 060101060305, FRB05]  
Federal Aid Project No. ER-24(381)

Dear Mr. Turchy:

Attached hereto is a copy of Certification No. WQC007538 issued to The North Carolina Department of Transportation (NCDOT) dated July 24, 2025. This Certification replaces the Certifications issued on February 24, 2025, and April 24, 2025. This approval is for the purpose and design described in your application. This project was reviewed and processed pursuant to *North Carolina Executive Order 320: Meeting Water System And Environmental Needs In Response To Hurricane Helene*.

This Water Quality Certification does not relieve the Permittee of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.

This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.

Upon the presentation of proper credentials, the Division of Water Resources (Division) may inspect the property.



North Carolina Department of Environmental Quality | Division of Water Resources  
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617  
919.707.9000

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

Non-compliance with or violation of the conditions herein set forth may result in revocation of this Water Quality Certification for the project and may also result in criminal and/or civil penalties.

If you are unable to comply with any of the conditions of this Water Quality Certification you must notify the Asheville Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the Asheville Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200] including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

This approval and its conditions are final and binding unless contested [G.S. 143-215.5]. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires Certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State Certification or coverage under a general Certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Resources. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

A party filing a Petition must serve a copy of the Petition on:

Dan Hirschman, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-1601

If the party filing the Petition is not the Permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S. 150B-23(a).

This letter completes the Division's review under Section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Amy Annino at 828-296-4668 or [Amy.Annino@deq.nc.gov](mailto:Amy.Annino@deq.nc.gov) if you have any questions or concerns.

Sincerely,

DocuSigned by:

*Paul Wojoski*

949D91BA53EF4E0...

Paul Wojoski, Chief  
Water Quality Permitting Section  
Division of Water Resources



Electronic copy only distribution:

Crystal Amschler, US Army Corps of Engineers, Asheville Field Office

Patrick Breedlove, PDEA Engineer, NCDOT Division 14

Holland Youngman, US Fish and Wildlife Service

Dave McHenry, NC Wildlife Resources Commission

Beth Harmon, Division of Mitigation Services

Kristi Lynn Carpenter, NCDWR

File Copy



## 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS

**THIS CERTIFICATION # WQC007538** is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to North Carolina's Regulations in 15 NCAC 02H .0500 and 15A NCAC 02B .0200, to Mr. Turchy and the North Carolina Department of Transportation who have authorization for the impacts listed below, as described within your application received by the N.C. Division of Water Resources (Division) on June 5, 2025 with additional information received on July 7, 2025, July 9, 2025, and July 15, 2025 and within the *Reasonable Period of Time* pursuant to 40 CFR Part 121.6. This Certification replaces the Certifications issued on February 24, 2025, and April 24, 2025

The State of North Carolina certifies that this activity will comply with water quality requirements and the applicable portions of Sections 301, 302, 303, 306, 307 of the Public Laws 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b)]:

### Stream Impacts in the French Broad River Basin

Permit Site / Plan Sheet	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Streambank Stabilization (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
Site 1 Plan Sheet 4	--	--	542	--	458	0
Site 1 Plan Sheet 5	--	--	916	--	430	0
Site 1 Plan Sheet 6	--	--	856	--	578	0
Site 2	--	--	--	--	11	0
Site 3	--	--	--	--	51	
Site 1 Plan Sheet 7	--	--	854	--	551	0
Site 6	--	--	--	--	50	0
Site 1 Plan Sheet 8	--	--	639	--	544	0
Site 1 Plan Sheet 9	--	--	1,050	--	646	0
Site 1 Plan Sheet 10	--	--	444	--	717	0
Site 8	--	50	--	--	--	0
Site 1 Plan Sheet 11	--	--	891	--	481	0
Site 1 Plan Sheet 12	--	--	838	--	653	0
Site 1 Plan Sheet 13	--	--	1,322	--	97	0
Site 12	--	--	--	--	13	0



Site 13	--	--	--	55	49	0
Site 1	--	--	275	--	1,229	0
Plan Sheet 14	--	--	--	79	50	0
Site 1	--	--	126	--	1,419	0
Plan Sheet 15	--	--	418	--	1,044	0
Site 15	--	--	--	--	10	0
Site 1	--	--	193	--	1,176	0
Plan Sheet 17	--	--	--	--	10	0
Site 16	--	--	--	--	491	0
Site 1	--	--	723	--	55	0
Plan Sheet 18	--	--	--	30	55	0
Site 18	--	--	--	30	55	0

Permit Site / Plan Sheet	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Streambank Stabilization (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
Site 1	--	--	448	--	756	0
Plan Sheet 19	--	--	--	62	50	0
Site 1	--	--	484	--	1,648	0
Plan Sheet 20	--	--	--	--	11	0
Plan Sheet 21	--	--	--	--	10	0
Site 1	--	--	208	--	1,142	0
Plan Sheet 21	--	--	353	--	849	0
Site 1	--	--	109	--	51	0
Plan Sheet 22	--	--	--	--	67	0
Plan Sheet 23	--	--	134	--	1,117	0
Site 1	--	--	--	67	67	0
Plan Sheet 24	--	--	--	--	66	0
Plan Sheet 25	--	--	--	--	38	0
Plan Sheet 27	--	--	--	--	45	0
Plan Sheet 28	--	--	--	--	63	0
Plan Sheet 29	--	--	--	--	268	0
Site 1A	--	--	--	--	960	960
Plan Sheet 32	--	--	--	--	121	0
Plan Sheet 33	--	--	--	244	--	244
Plan Sheet 34	--	--	--	517	--	517
Plan Sheet 35	48	--	--	--	--	0
Plan Sheet 36	--	--	--	170	--	170
Plan Sheet 37	48	50	11,823	1,224	18,142	1,891
<b>Total</b>	<b>48</b>	<b>50</b>	<b>11,823</b>	<b>1,224</b>	<b>18,142</b>	<b>1,891</b>

**Total Stream Impact: 19,464 linear feet**



### Wetland Impacts in the French Broad River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
31 - WA	0.038					0.038
32 - WA2	0.007					0.007
<b>Total</b>	<b>0.045</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.045</b>

**Total Wetland Impact: 0.045 acres**

This approval is only valid for the purpose and design that you submitted in your modified application received June 5, 2025, with additional information received on July 7, 2025, July 9, 2025, and July 15, 2025. This Certification replaces the Certification issued on February 24, 2025, and April 24, 2025. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one tenth of an acre or 300 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (c) For this approval to remain valid, you are required to comply with all the conditions listed below.

### CONDITIONS OF CERTIFICATION [15A NCAC 02H .0507(c)]:

#### Project Specific Conditions

1. The plans and specifications for this project are incorporated by reference as part of this Water Quality Certification. If you change your project, you must notify the Division, and you may be required to submit a new application package with the appropriate fee.

If the property is sold, the Permittee shall provide the new owner with a copy of this Water Quality Certification and all plans and specifications incorporated by reference. The Permittee may transfer this Water Quality Certification to the new owner by submitting a letter to the Division with the following statement: "At the time the property is transferred, the terms and conditions of this 401 Individual Water Quality Certification, including the responsibility to ensure compliance, are binding on the new owner(s) of the property." The letter shall be signed and dated by both the transferee and the new owner.

[15A NCAC 02H .0507(d)(2)]

2. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]
3. Compensatory mitigation for 1,891 linear feet of impact to perennial streams is required. The Division understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated June 5, 2025, that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the



DMS Mitigation Banking Instrument signed July 28, 2010. [15A NCAC 02H .0506(c); 15A NCAC 02H .0507(c)]

4. If the Permittee uses any accumulated river sediments or rock resulting from Hurricane Helene for the project, the work must be consistent with the Division's *Guidelines for Debris/Sediment Removal in NC Streams and Wetlands After a Natural Disaster/Catastrophic Event (Revised October 2024)*<sup>1</sup>. For any area from which accumulated river sediment or rock is borrowed, sufficient rock/cobble material must be left to keep the area stabilized and non-erosive after removal. [15A NCAC 02H .0506(b)]
5. Any material used for the temporary workpad / causeway and bank stabilization within the Pigeon River shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201]
6. The Division understands that the primary purpose of moving material within the Pigeon River is for the establishment of proper hydraulic capacity and will be limited to areas where the new thalweg needs to be shifted away from the causeway. For the area in which the river is being restored back to its pre-Helene location to re-establish a proper hydraulic width, the stream channel shall be substantially similar in width and water depth as it was pre-Helene. The channel shall be constructed such that the tie-in with the natural channel at each end shall ensure that upstream and downstream stream beds and stream banks are protected from erosion. The permittee shall provide on-site supervision of the relocation work by an appropriately trained individual. Visual monitoring of the relocated channel tie-in locations shall be conducted at a minimum of quarterly for the first year or two bankfull events (whichever is longer), to confirm the site remains stable. [15A NCAC 02H .0506(b)(1) and (2)]
7. River crossings in the Pigeon River with equipment shall be minimized in size and number. All reasonable steps must be taken to limit the amount of disturbance in the channel and to reduce turbidity during construction. The permittee will not be exempt from meeting stream standards as indicated in 15A NCAC 02B. [15A NCAC 02H .0502(a)(9), 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
8. The permittee shall submit a temporary impact restoration plan for the restoration of the temporary workpad / causeway and its associated impacts within the Pigeon River. The plan should identify the upland location where fill material removed from waters will be deposited. This Plan should include measures to protect water quality standards during project activities to remove temporary impacts / fill. Upon restoration of temporary impacts to wetlands and streams, the restored areas shall be monitored quarterly for at 2 years with photo documentation. The monitoring may be extended an additional 3 years if the restoration sites have not adequately recovered. This monitoring period may be modified with written concurrence from the Division.

<sup>1</sup> Available online: <https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2479204>





A Restoration Plan for these temporary impacts shall be submitted to the Division 30-days prior to the planned removal. The Restoration Plan must receive written approval from the Division. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]

9. All proposed and approved temporary fill and culverts associated with the temporary culvert crossing in the Pigeon River shall be removed, and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
  
10. The Division recognizes that changes to baseline conditions in the Pigeon River due to Duke Energy resuming normal power production has lowered the water level in the Pigeon River significantly, which has removed surface flow where the river traverses through fill material deposited from the adjacent I-40 fill slope. The primary purpose of removing fill material from the Pigeon River is to reestablish surface flow throughout the bypass reach. The stream channel shall be substantially similar in width and water depth as it was pre-Helene. The channel shall be constructed such that the tie-in with the natural channel at each end shall ensure that upstream and downstream stream beds and stream banks are protected from erosion. The permittee shall provide on-site supervision of the restoration work by an appropriately trained individual. Visual monitoring of the relocated channel tie-in locations shall be conducted at a minimum of quarterly for the first year or two bankfull events (whichever is longer), to confirm the site remains stable. [15A NCAC 02H .0506(b)(1) and (2)]
  
11. Prior to constructing the temporary Haul Road overtop streams SA1-SAA and SA1-SAB at Site 32 and 33, NCDOT shall install a protective synthetic membrane over the channel bed and banks to preserve existing bed material and form. Stream-side vegetation removal shall leave as much stump and root matter as practicable to preserve integrity of the existing stream banks and bed form. Due to the installation of the protective synthetic membrane on top of streams SA1-SAA and SA1-SAB, NCDWR will not require the burial of the two 60-inch culverts in the streambed at Sites 32 and 33. However, design and placement of the culverts and other structures shall be installed in such a manner that the original stream profiles are not altered (i.e., the depth of the channel must not be reduced by a widening of the streambed). Existing stream dimensions (including pattern and profile) are to be maintained above and below locations of each culvert. The structures shall be designed and installed in such a manner as to prevent headcutting of the stream. The applicant may be required to provide evidence that the equilibrium has been maintained if requested in writing by the NCDWR. [15A NCAC 02H.0506(b)(2)]
  
12. Prior to the disturbance of streams SA1-SAA and SA1-SAB for the construction of the Haul Road, NCDOT shall perform pre-impact stream data collection. Data collection shall include cross-sectional dimensions, planform pattern, longitudinal bed profile, and photographic documentation within assessment reaches to establish adequate stream reach data that will guide and inform stream restoration and assist in the determination of a successful restoration after the haul road has been removed.





All temporary impacts/fill to streams SA1-SAA and SA1-SAB for the temporary Haul Road shall be removed as soon as practicable but no later than one year after the haul road is no longer needed unless otherwise coordinated/approved. Following the removal of all temporary impacts/fill, streams SA1-SAA and SA1-SAB will be restored to pre-disturbance conditions as soon as practicable but no later than one year after the haul road has been removed unless otherwise coordinated/approved. A Restoration Plan to remove temporary fill/impacts from streams SA1-SAA and SA1-SAB shall be submitted to the Division no later than 30-days prior to the planned removal of the haul road and associated fill. The Division shall provide written approval of the Restoration Plan.

Upon restoration of streams SA1-SAA and SA1-SAB, NCDOT shall provide annual monitoring with photo documentation for a period of 5 years. This monitoring period may be modified with written concurrence from the Division. If the Division determines that there has been a loss of stream function, the Permittee shall submit a request to modification this 401 Certification to account for these indirect impacts. Additional stream loss may require mitigation per 15A NCAC 2H .0506. [15A NCAC 2B .0211 and 15A NCAC 2H .0506 (c)]

13. Streams SA1-SAA and SA1-SAB (located below the Borrow Pit) shall be monitored for surface flow by the Permittee to establish any loss of hydrologic function/flow and to determine if the streams continue to provide aquatic life propagation and biological integrity.

Existing conditions shall be documented prior to the commencement of any land disturbing activities to construct the Borrow Pit or the Haul Road. Existing conditions shall be documented within streams SA1-SAA and SA1-SAB below the Borrow Pit (Site 32 and 33) using the DWR Stream Identification Method, completion of NCSAM<sup>2</sup>, and photo documentation. Post construction monitoring shall not begin until all the areas draining to streams SA1-SAA and SA1-SAB have reached complete stabilization as defined by NCDEMLR. Post construction monitoring shall occur at a minimum of twice per year, at least 3 months apart, with one sampling event to occur between May and October each year for a period of 5 years. Annual reports of monitoring shall be submitted to the ARO Regional Office on December 31 of each year. This monitoring period may be modified with written concurrence from the Division.

If monitoring of stream flow indicates a reduction of flow throughout any portion of the channel by a reduction in DWR Stream Form total value of less than 85% of the existing score, or a reduction in NCSAM rating in any one category, then the Permittee shall submit a report to the Division which includes an analysis of hydrologic and aquatic function of the stream. If the Division determines that there has been a loss of stream function, the Permittee shall submit a request to modification this 401 Certification to account for these indirect impacts. Additional stream loss may require mitigation per 15A NCAC 2H .0506. [15A NCAC 2B .0211 and 15A NCAC 2H .0506]

14. Streams S1-SAB, S1-SAC, S1-SAA, and S1-SAH (located adjacent to the Borrow Pit) shall be monitored for surface flow by the Permittee to establish any loss of hydrologic function/flow and to determine if the stream continues to provide aquatic life propagation and biological integrity as required in North Carolina Administrative Code 15A NCAC 2B .0211(1).

Existing conditions shall be documented prior to the commencement of any land disturbing

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<sup>2</sup> The North Carolina Stream Assessment Method (NC SAM). Available online at: <https://www.deq.nc.gov/about/divisions/water-resources/water-sciences/ecosystems-branch/wetland-information-projects>

activities to construct the Borrow Pit. Existing conditions shall be documented within streams S1-SAB, S1-SAC, S1-SAA, and S1-SAH where they border the Borrow Pit using the DWR Stream Identification Method<sup>3</sup>, completion of NCSAM, and photo documentation. Post construction monitoring shall not begin until all the areas draining to streams S1-SAB, S1-SAC, S1-SAA, and S1-SAH have reached complete stabilization as defined by NCDEMLR. Post construction monitoring shall occur at a minimum of twice per year, at least 3 months apart, with one sampling event to occur between May and October each year, for a period of 5 years. Annual reports of monitoring shall be submitted to the RO Regional Office on December 31 of each year. This monitoring period may be modified with written concurrence from the Division.

If monitoring of stream flow indicates a reduction of flow throughout any portion of the channel by a reduction in DWR Stream Form total value of less than 85% of the existing score, or a reduction in NCSAM rating in any one category, then the Permittee shall submit a report to the Division which includes an analysis of hydrologic and aquatic function of the stream. If the Division determines that there has been a loss of function in accordance with 15A NCAC 2B .0211(1) the Permittee shall submit a 401 modification request to the Division to include the indirect impacts. Additional stream loss may require mitigation per 15A NCAC 2H .0506. [15A NCAC 2B .0211(1), 15A NCAC 2H .0506]

15. Stormwater runoff from impervious surfaces associated with the Borrow Pit shall be addressed by one or more of the regulated programs: an approved Sediment and Erosion Control Plan, a NPDES stormwater permit, a NPDES wastewater permit, a Division approved Stormwater Management Plan. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
16. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
17. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water. [15A NCAC 02H .0506(b)(3)]
18. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. Jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)]
19. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS000250, please refer to the most recent version of the North Carolina Department of Transportation Stormwater Best Management Practices Toolbox manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
20. The post-construction removal of any temporary bridge structures must return the project site to

<sup>3</sup> Methodology for Identification of Intermittent and Perennial Streams and Their Origins Version 4.11

Effective Date: September 1, 2010. Available online:

<https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2583673&cr=1>



its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]

### General Conditions

1. If the Permittee becomes aware of any inability to comply with any of the conditions of this Water Quality Certification, they must notify the REGION Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the Permittee becomes aware of the circumstances. The Permittee may be required to submit a new application package with appropriate fee to initiate modification of this authorization, and/or to conduct corrective actions as determined by the Division. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
2. The permittee shall report to the DWR Asheville Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the Permittee became aware of the non-compliance circumstances. [15A NCAC 02H .0506(b)(3)]
3. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
4. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)]
5. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the approved impacts (including temporary impacts). [15A NCAC 02H .0506; 15A NCAC 02H .0507(c)]
6. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *North Carolina Department of Transportation Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor owned or leased borrow pits associated with the project. Sufficient



materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation and Pollution Control Act and the Mining Act of 1971. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c), 15A NCAC 02B .0200; 15A NCAC 02B .0231]

7. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in di-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c), 15A NCAC 02B .0200; 15A NCAC 02B .0231]
8. For all streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]
9. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
10. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
11. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
12. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
13. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping, and reporting requirements is required. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231]
14. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
15. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal,



State, and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231]

16. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231]
17. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams or wetlands shall be installed as outlined in the most recent edition of the North Carolina Sediment and Erosion Control Planning and Design Manual or the North Carolina Surface Mining Manual or the North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)]
18. All proposed and approved temporary fill and culverts shall be removed, and the impacted area shall be returned to natural conditions within sixty (60) calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)]
19. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
20. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
21. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
22. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
23. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
24. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
25. A copy of this Water Quality Certification shall be maintained on the construction site at all





times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)] {If applicant is a city or other non-dot project, delete "Division Engineer" and just say Onsite project Manager.}

26. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
27. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
28. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
29. Prior to operation of the facility/project, as-built drawings (which can be shown on an aerial or done as a survey) shall be submitted to the Asheville Regional Office. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(1) and (2)]
30. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0507]
31. Native riparian vegetation (i.e., herbaceous, trees, and shrubs native to your geographic region) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0506(b)(2)]
32. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506{b)(3) and (c)(3) and 15A NCAC 02B .0200]

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

This the 24th day of July 2025

DocuSigned by:

*Paul Wojoski*

949D91BA53EF4E0...

Paul Wojoski, Chief  
Water Quality Permitting Section  
Division of Water Resources

WQC No. 007538



**JOSH STEIN**  
Governor

**D. REID WILSON**  
Secretary

**RICHARD E. ROGERS, JR.**  
Director



**NCDWR Project No.:** \_\_\_\_\_ **County:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**Date of Issuance of 401 Water Quality Certification:** \_\_\_\_\_

### **Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

### ***Applicant's Certification***

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### ***Agent's Certification***

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### ***Engineer's Certification***

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_  
Date \_\_\_\_\_



# Permitted Drawings - July 2025



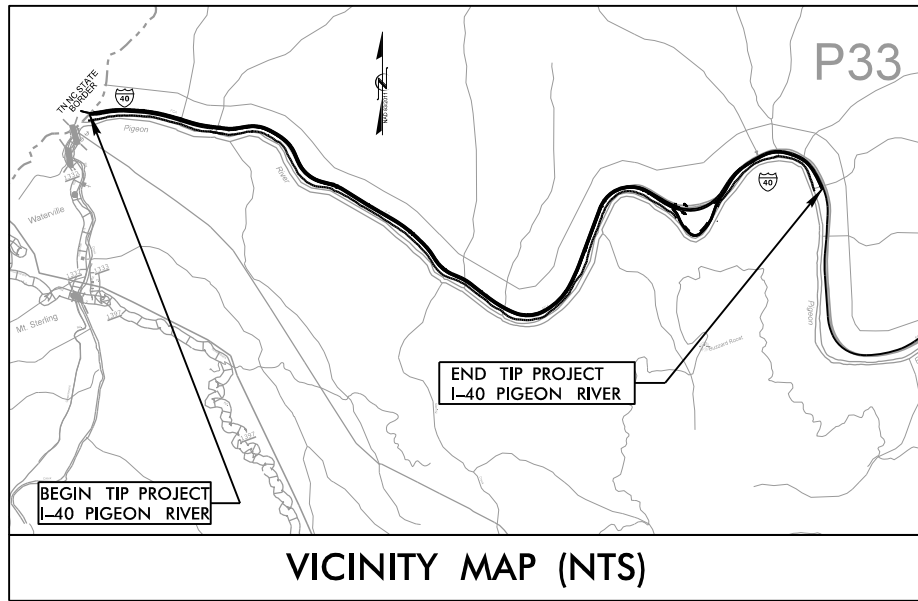
09/08/99

6/3/2025 c:\pwworking\rvrk\production\dms73276\I-40 Pigeon River\_hyd\_prm\_tsh.dgn wgregory

TIP PROJECT: I-40 PIGEON RIVER

CONTRACT: C#

See Sheet 1B for Symbology Sheet



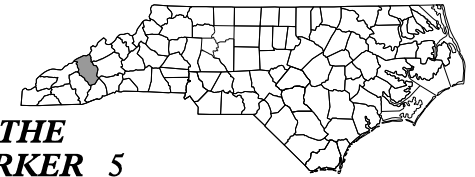
VICINITY MAP (NTS)

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**HAYWOOD COUNTY**

LOCATION: I-40 PIGEON RIVER GORGE EMERGENCY REPAIRS FROM THE  
TENNESSEE STATE LINE TO JUST WEST OF MILE MARKER 5

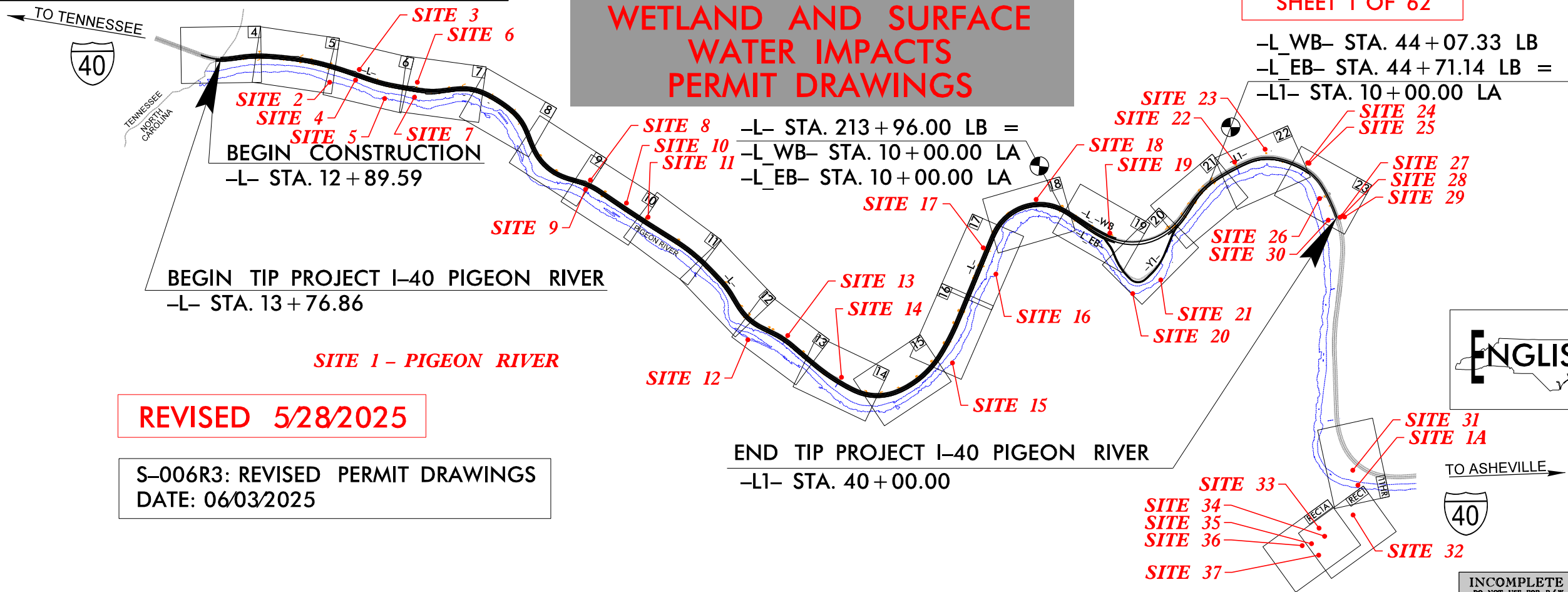
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, & RETAINING WALLS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-40 PIGEON RIVER	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
18314.1044057.PR01			



**WETLAND AND SURFACE  
WATER IMPACTS  
PERMIT DRAWINGS**

PERMIT DRAWING  
SHEET 1 OF 62

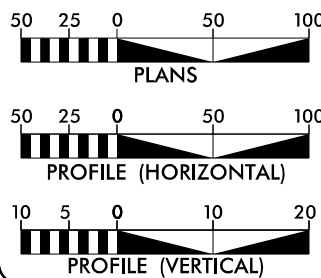


REVISED 5/28/2025

S-006R3: REVISED PERMIT DRAWINGS  
DATE: 06/03/2025

- NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III MODIFIED.
  2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
  3. THIS PROJECT IS NOT WITHIN MUNICIPAL LIMITS.
  4. DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMAL HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 26,500  
V = 55 MPH

FUNC CLASS: INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES  
LENGTH STRUCTURE TIP PROJECT I-40 PIGEON RIVER.....0.000 MILES  
TOTAL LENGTH TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES

NCDOT CONTACT

JOSH B. DEYTON, P.E.  
DIVISION CONSTRUCTION ENGINEER

PLANS PREPARED BY:

**RK&K** RUMMEL KLEPPER & KAHL, LLP  
8401 SIX FORKS ROAD, FLOOR 1, SUITE 700  
RALEIGH, NORTH CAROLINA 27615-3960  
NC LICENSE NO. F-0112

**wsp** 1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165

2024 STANDARD SPECIFICATIONS

LETTING DATE:  
MARCH XX, 2025

GREG GOINS, P.E.  
PROJECT ENGINEER

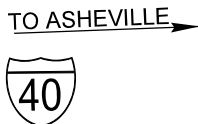
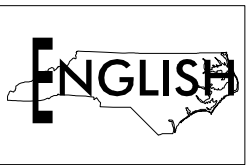
CATHY HOUSER, P.E.  
PROJECT DESIGN ENGINEER

HYDRAULICS  
ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY  
DESIGN  
ENGINEER

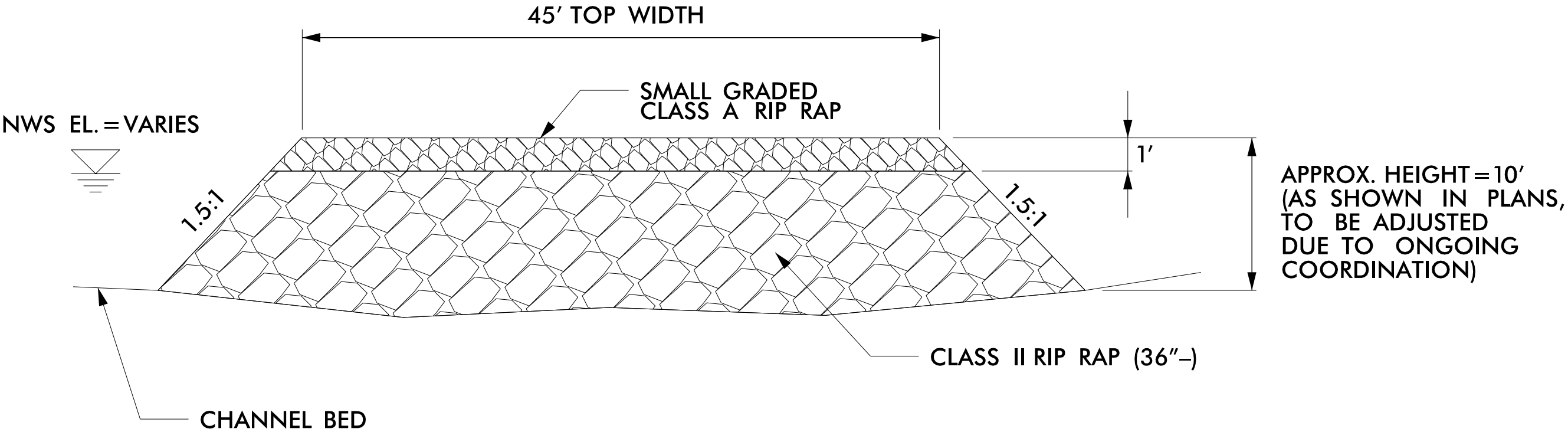
SIGNATURE: \_\_\_\_\_ P.E.



INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



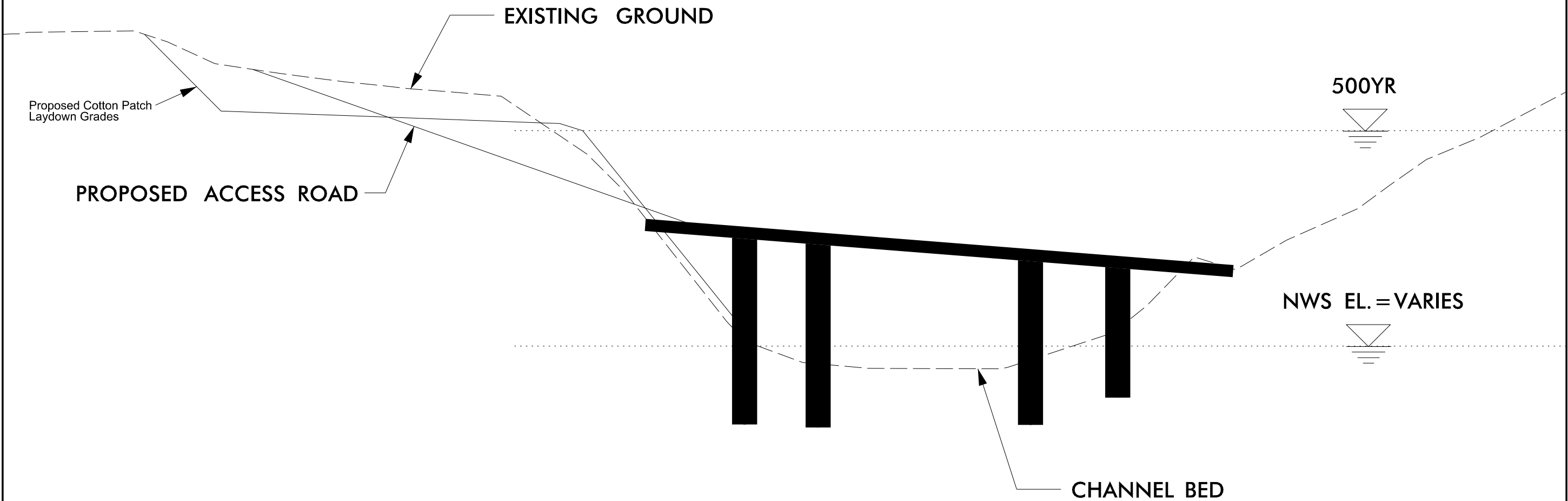
PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 2 OF 62			
REVISED 5/28/2025			



# TEMPORARY RIVER CROSSING DETAIL BORING SITE #1 ACCESS ROAD

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 3 OF 62	
REVISED 5/28/2025	

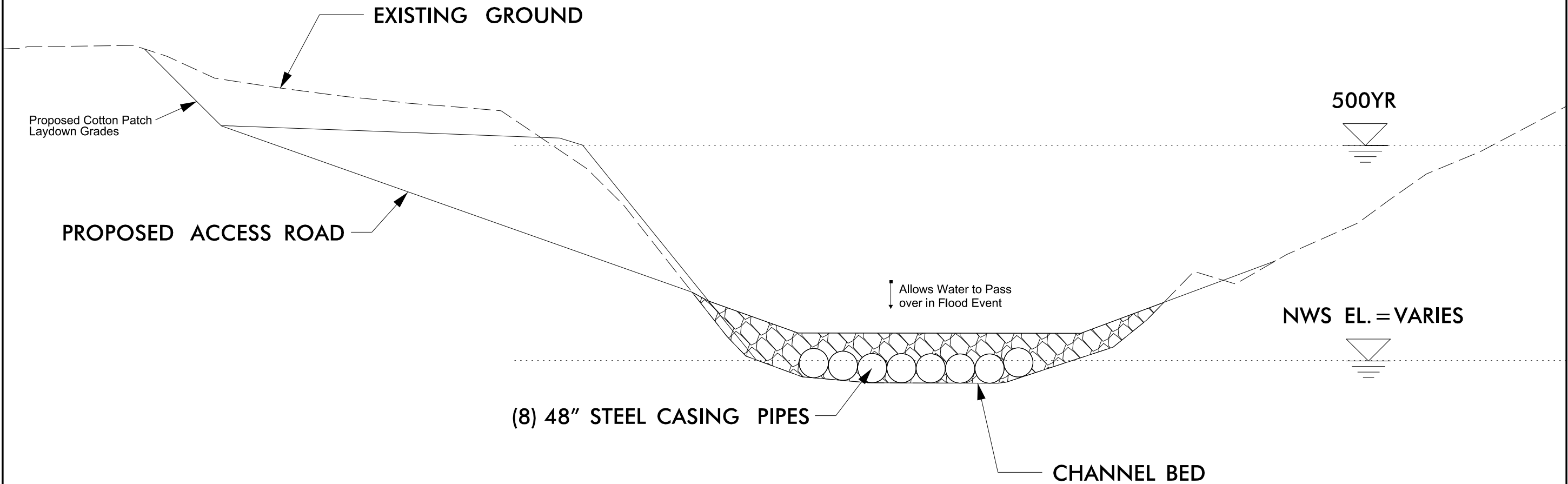


# TEMPORARY RIVER CROSSING DETAIL

## BORING SITE #1 ACCESS ROAD

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 4 OF 62	
REVISED 5/28/2025	



NOTES:  
MINIMUM COVER = 2'  
BACKFILL WITH CLASS 7

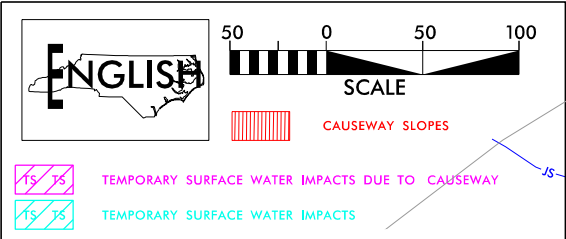
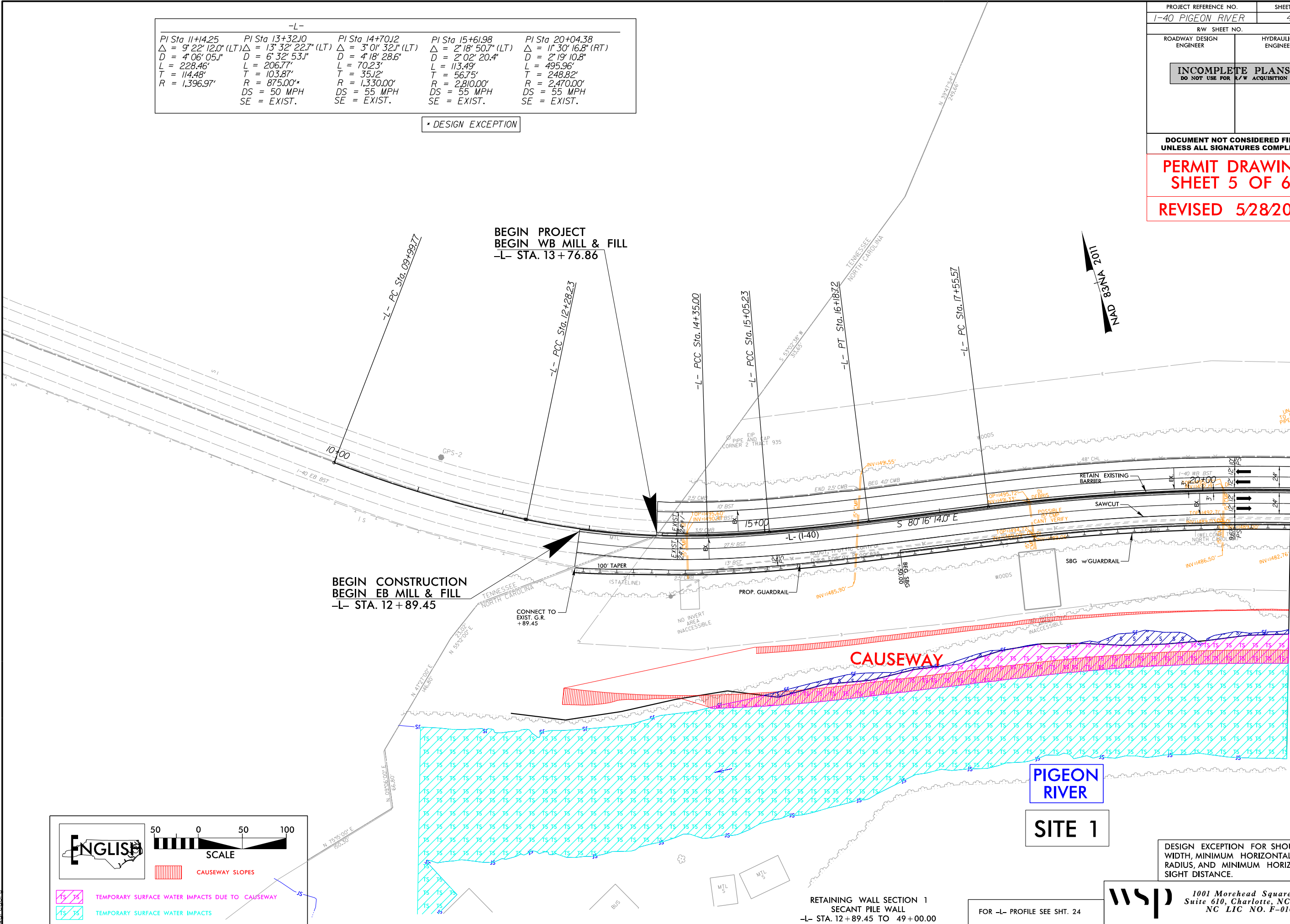
8/17/99

6/3/2025  
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-L-				
PI Sta 11+14.25	PI Sta 13+32.10	PI Sta 14+70.12	PI Sta 15+61.98	PI Sta 20+04.38
$\Delta = 9^{\circ} 22' 12.0"$ (LT)	$\Delta = 13^{\circ} 32' 22.7"$ (LT)	$\Delta = 3^{\circ} 01' 32.1"$ (LT)	$\Delta = 2^{\circ} 18' 50.7"$ (LT)	$\Delta = 11^{\circ} 30' 16.8"$ (RT)
D = 4' 06' 05.1"	D = 6' 32' 53.1"	D = 4' 18' 28.6"	D = 2' 02' 20.4"	D = 2' 19' 10.8"
L = 228.46'	L = 206.77'	L = 70.23'	L = 113.49'	L = 495.96'
T = 114.48'	T = 103.87'	T = 35.12'	T = 56.75'	T = 248.82'
R = 1,396.97'	R = 875.00'	R = 1,330.00'	R = 2,810.00'	R = 2,470.00'
DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

\* DESIGN EXCEPTION

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 5 OF 62		
REVISED 5/28/2025		



RETAINING WALL SECTION 1  
SECANT PILE WALL  
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 24

**wsp** 1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165

DESIGN EXCEPTION FOR SHOULDER  
WIDTH, MINIMUM HORIZONTAL CURVE  
RADIUS, AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

MATCHLINE -L- STA. 21+00 SEE SHEET 05



8/17/99

6/3/2025 c:\pwworking\k\production\dms73276\I-40 Pigeon River\_Hyd.prm\_psh\_4\_con.dgn

-L-				
PI Sta 11+14.25	PI Sta 13+32.10	PI Sta 14+70.12	PI Sta 15+61.98	PI Sta 20+04.38
$\Delta = 9^{\circ} 22' 12.0"$ (LT)	$\Delta = 13^{\circ} 32' 22.7"$ (LT)	$\Delta = 3^{\circ} 01' 32.1"$ (LT)	$\Delta = 2^{\circ} 18' 50.7"$ (LT)	$\Delta = 11^{\circ} 30' 16.8"$ (RT)
D = 4' 06' 05.1"	D = 6' 32' 53.1"	D = 4' 18' 28.6"	D = 2' 02' 20.4"	D = 2' 19' 10.8"
L = 228.46'	L = 206.77'	L = 70.23'	L = 113.49'	L = 495.96'
T = 114.48'	T = 103.87'	T = 35.12'	T = 56.75'	T = 248.82'
R = 1,396.97'	R = 875.00'	R = 1,330.00'	R = 2,810.00'	R = 2,470.00'
DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

\* DESIGN EXCEPTION

PROJECT REFERENCE NO.  
I-40 PIGEON RIVER

SHEET NO.  
4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

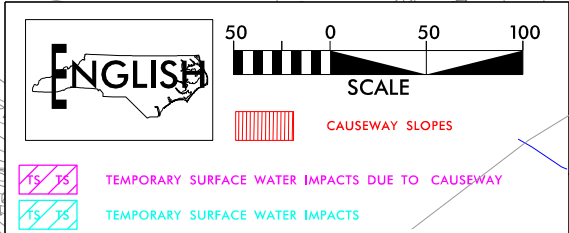
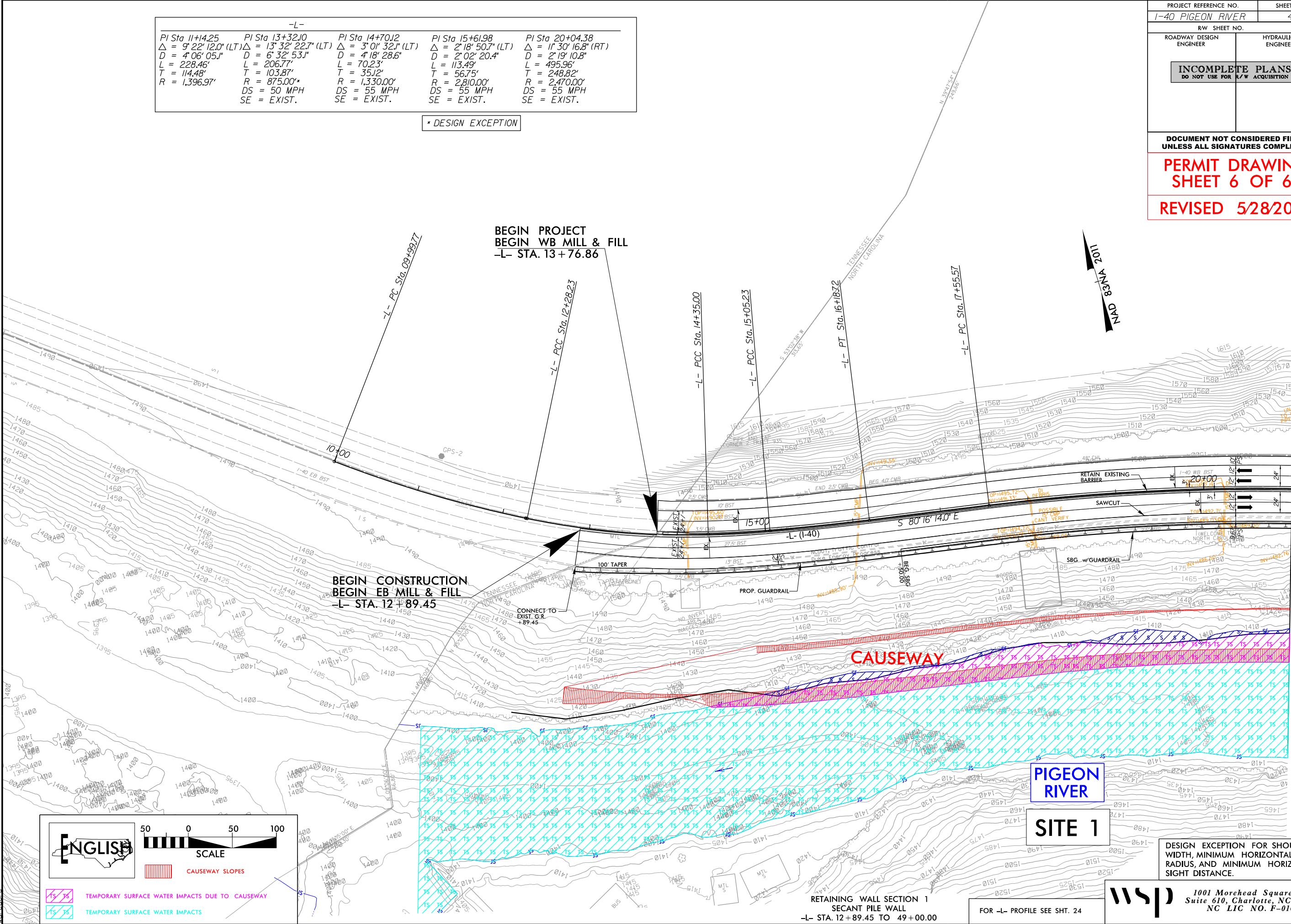
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 6 OF 62

REVISED 5/28/2025

MATCHLINE -L- STA. 21+00 SEE SHEET 05

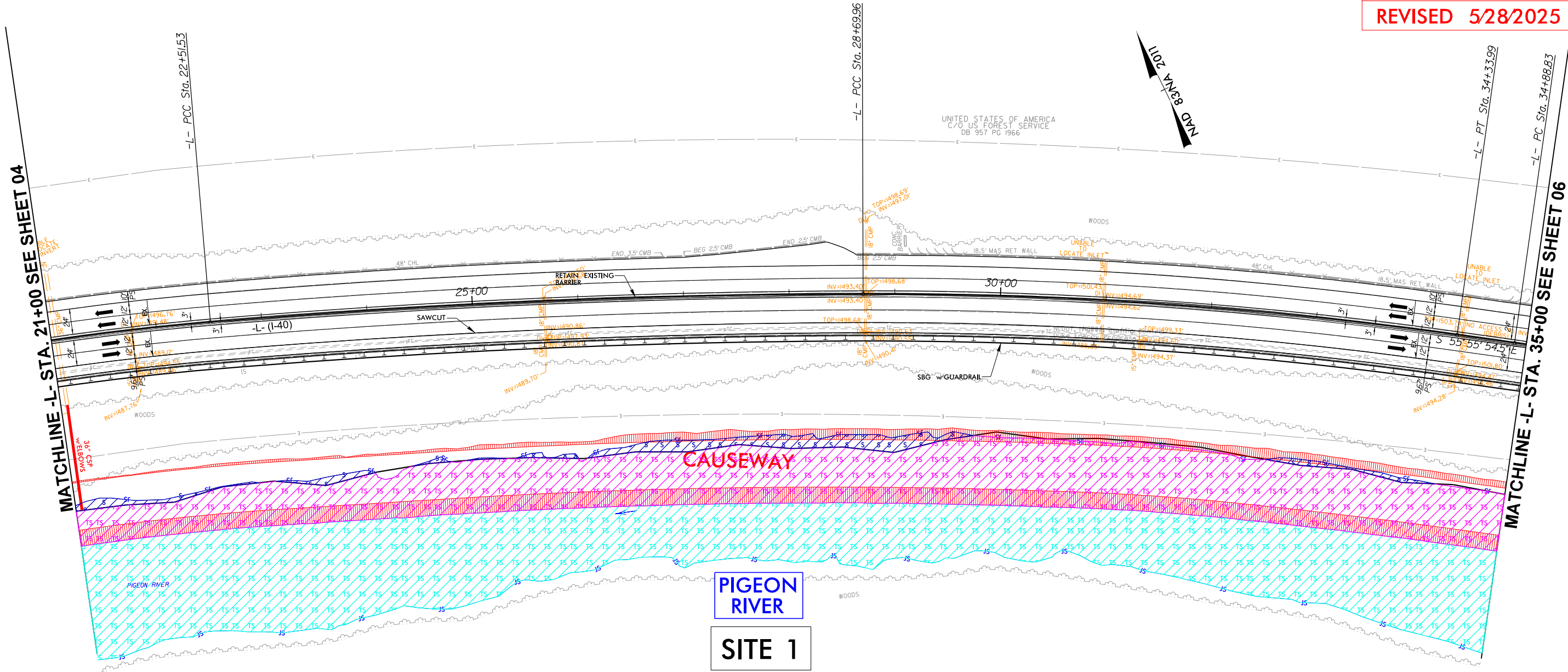


RETAINING WALL SECTION 1  
SECANT PILE WALL  
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 24

1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165

-L-			
PI Sta. 20+04.38 Δ = 11° 30' 16.8" (RT) D = 2° 19' 10.8" L = 495.96' T = 248.82' R = 2,470.00' DS = 55 MPH SE = EXIST.	PI Sta. 25+60.91 Δ = 4° 37' 54.5" (RT) D = 0° 44' 56.3" L = 618.43' T = 309.38' R = 7,650.00' DS = 55 MPH SE = EXIST.	PI Sta. 31+52.46 Δ = 8° 12' 08.2" (RT) D = 1° 27' 15.1" L = 564.04' T = 282.50' R = 3,940.00' DS = 55 MPH SE = EXIST.	PI Sta. 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.



PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 7 OF 62		
REVISED 5/28/2025		

ENGLISH

SCALE

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY  
TEMPORARY SURFACE WATER IMPACTS

CAUSEWAY SLOPES

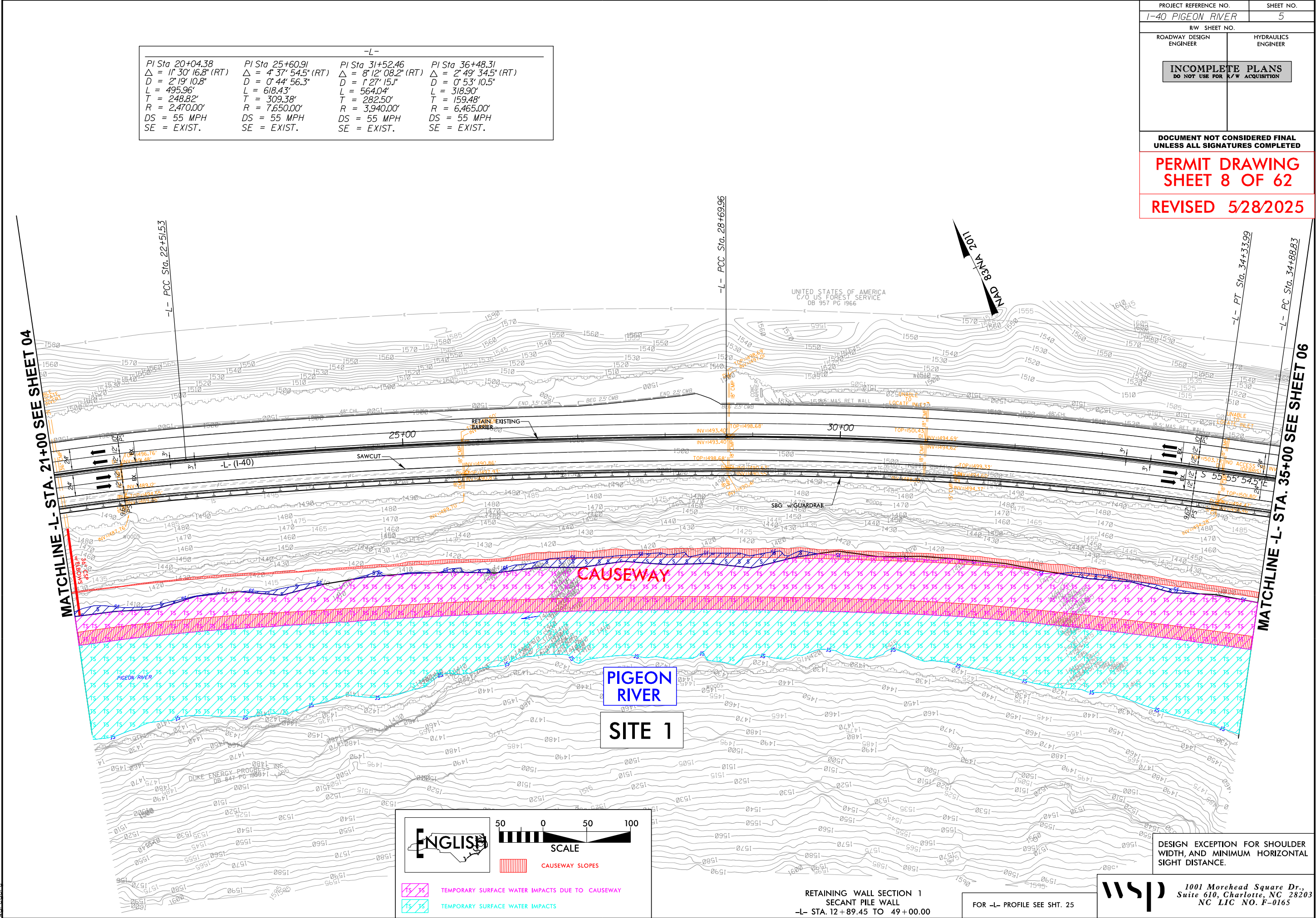
RETAINING WALL SECTION 1  
SECANT PILE WALL  
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 25

**wsp** 1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165

DESIGN EXCEPTION FOR SHOULDER  
WIDTH, AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.





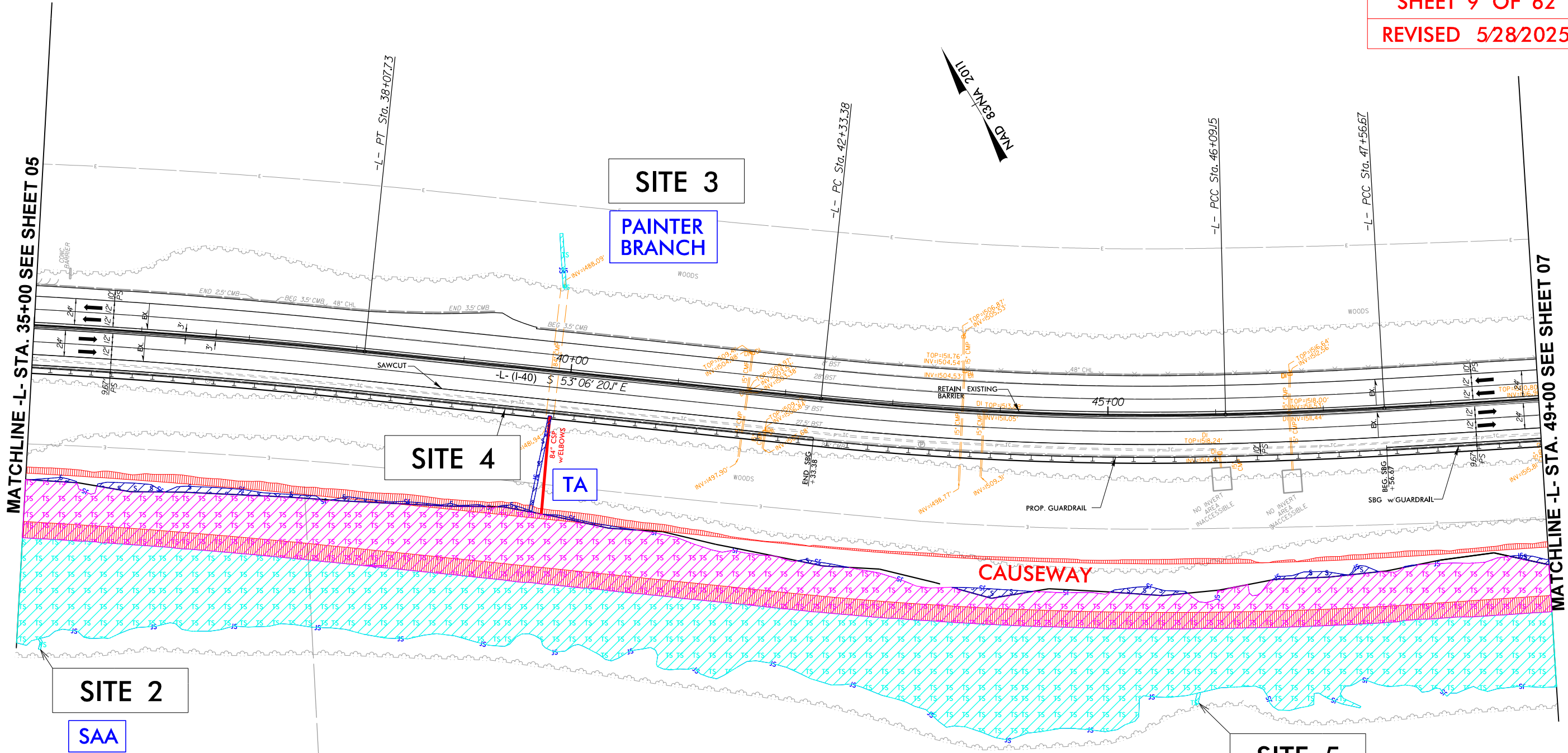
-L-			
PI Sta. 20+04.38 $\Delta = 11^{\circ} 30' 16.8''$ (RT) $D = 2^{\circ} 19' 10.8''$ $L = 495.96'$ $T = 248.82'$ $R = 2,470.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta. 25+60.91 $\Delta = 4^{\circ} 37' 54.5''$ (RT) $D = 0^{\circ} 44' 56.3''$ $L = 618.43'$ $T = 309.38'$ $R = 7,650.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta. 31+52.46 $\Delta = 8^{\circ} 12' 08.2''$ (RT) $D = 1^{\circ} 27' 15.1''$ $L = 564.04'$ $T = 282.50'$ $R = 3,940.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta. 36+48.31 $\Delta = 2^{\circ} 49' 34.5''$ (RT) $D = 0^{\circ} 53' 10.5''$ $L = 318.90'$ $T = 159.48'$ $R = 6,465.00'$ $DS = 55$ MPH $SE = EXIST.$

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 5
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 8 OF 62		
REVISED 5/28/2025		

8/17/99

6/3/2025  
c:\pwworking\vrkk\production\dms73276\I-40 Pigeon River\_Hyd.prm\_psh\_6.dgn  
10:58:04 AM

-L-			
PI Sta 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.	PI Sta 44+21.52 Δ = 7° 15' 41.5" (LT) D = 1° 55' 56.7" L = 375.78' T = 188.14' R = 2,965.00' DS = 55 MPH SE = EXIST.	PI Sta 46+82.92 Δ = 1° 53' 19.4" (LT) D = 1° 16' 49.3" L = 147.52' T = 73.77' R = 4,475.00' DS = 55 MPH SE = EXIST.	PI Sta 49+43.10 Δ = 0° 46' 47.4" (LT) D = 0° 12' 32.9" L = 372.86' T = 186.43' R = 27,395.00' DS = 55 MPH SE = EXIST.



PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 9 OF 62		
REVISED 5/28/2025		

ENGLISH

SCALE

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY  
TEMPORARY SURFACE WATER IMPACTS  
SURFACE WATER IMPACTS

CAUSEWAY SLOPES

PIGEON  
RIVER

SITE 1

RETAINING WALL SECTION 1  
SECANT PILE WALL  
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 26

1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165



6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_6.con.dgn 8/17/99

PROJECT REFERENCE NO.  
I-40 PIGEON RIVER

SHEET NO.  
6

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

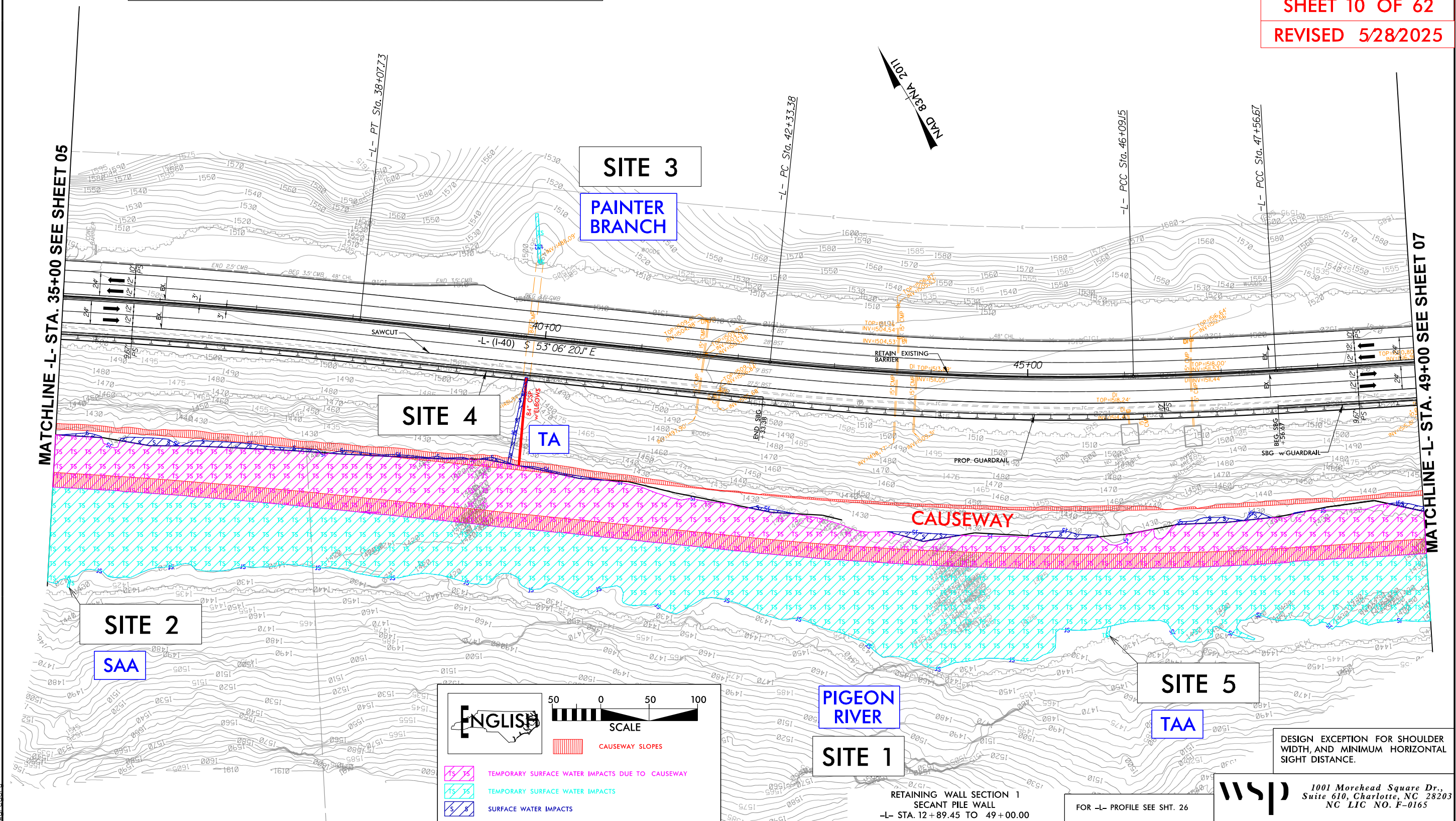
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 10 OF 62

REVISED 5/28/2025

-L-			
PI Sta 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.	PI Sta 44+21.52 Δ = 7° 15' 41.5" (LT) D = 1° 55' 56.7" L = 375.78' T = 188.14' R = 2,965.00' DS = 55 MPH SE = EXIST.	PI Sta 46+82.92 Δ = 1° 53' 19.4" (LT) D = 1° 16' 49.3" L = 147.52' T = 73.77' R = 4,475.00' DS = 55 MPH SE = EXIST.	PI Sta 49+43.10 Δ = 0° 46' 47.4" (LT) D = 0° 12' 32.9" L = 372.86' T = 186.43' R = 27,395.00' DS = 55 MPH SE = EXIST.

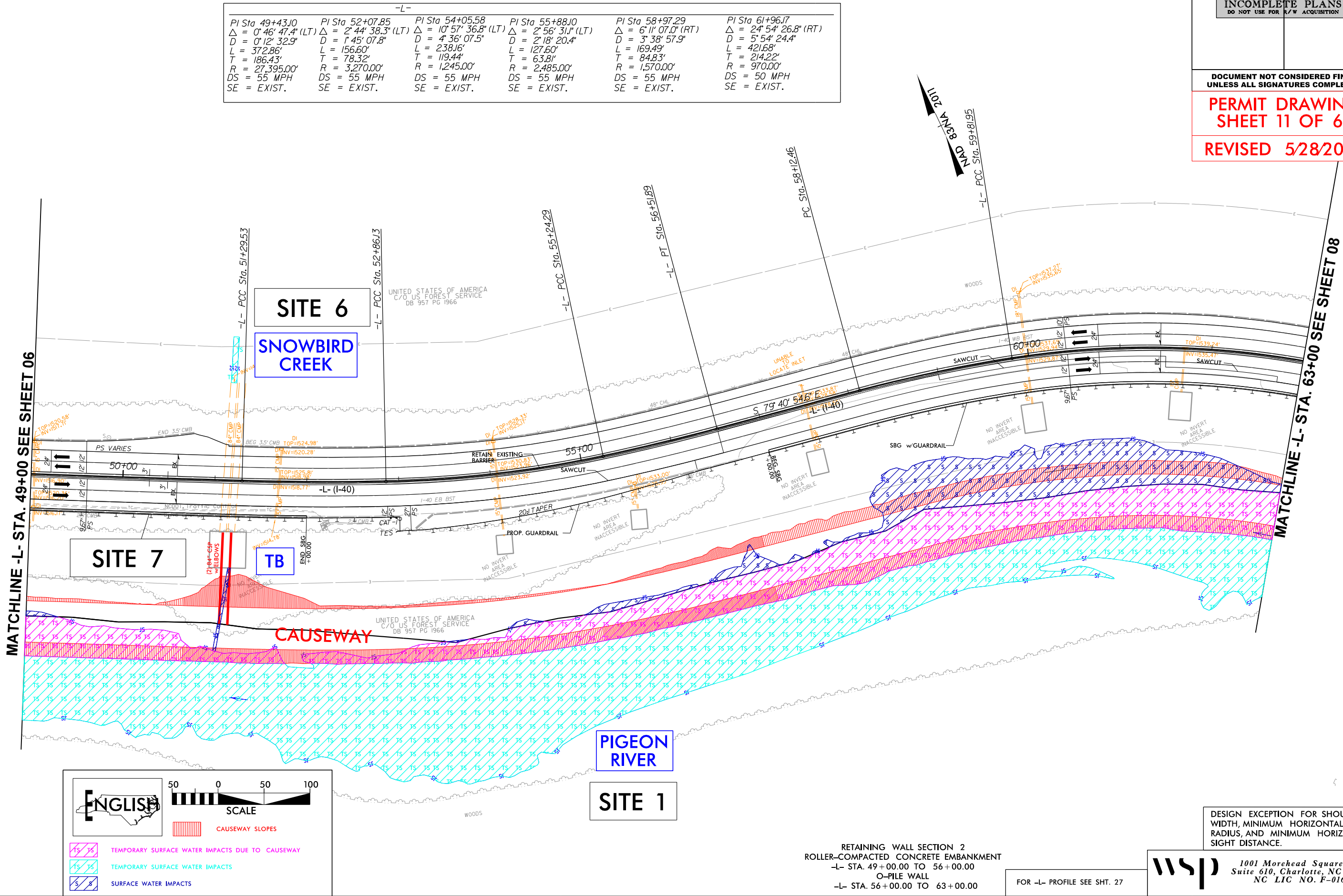


PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

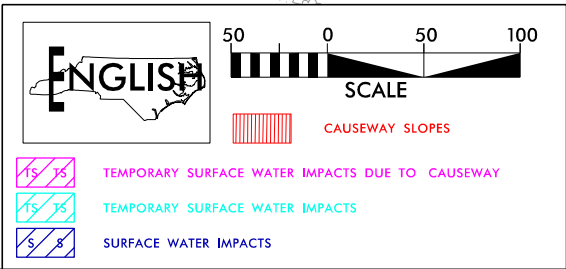
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 11 OF 62

REVISED 5/28/2025



-L-					
PI Sta 49+43.10	PI Sta 52+07.85	PI Sta 54+05.58	PI Sta 55+88.10	PI Sta 58+97.29	PI Sta 61+96.17
$\Delta = 0^\circ 46' 47.4''$ (LT)	$\Delta = 2^\circ 44' 38.3''$ (LT)	$\Delta = 10^\circ 57' 36.8''$ (LT)	$\Delta = 2^\circ 56' 31.1''$ (LT)	$\Delta = 6^\circ 11' 07.0''$ (RT)	$\Delta = 24^\circ 54' 26.8''$ (RT)
D = 0' 12' 32.9"	D = 1' 45' 07.8"	D = 4' 36' 07.5"	D = 2' 18' 20.4"	D = 3' 38' 57.9"	D = 5' 54' 24.4"
L = 372.86'	L = 156.60'	L = 238.16'	L = 127.60'	L = 169.49'	L = 421.68'
T = 186.43'	T = 78.32'	T = 119.44'	T = 63.81'	T = 84.83'	T = 214.22'
R = 27,395.00'	R = 3,270.00'	R = 1,245.00'	R = 2,485.00'	R = 1,570.00'	R = 970.00'
DS = 55 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH	DS = 50 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.



RETAINING WALL SECTION 2  
ROLLER-COMPACTED CONCRETE EMBANKMENT  
-L- STA. 49+00.00 TO 56+00.00  
O-PILE WALL  
-L- STA. 56+00.00 TO 63+00.00

FOR -L- PROFILE SEE SHT. 27

DESIGN EXCEPTION FOR SHOULDER  
WIDTH, MINIMUM HORIZONTAL CURVE  
RADIUS, AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

**wsp** 1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165



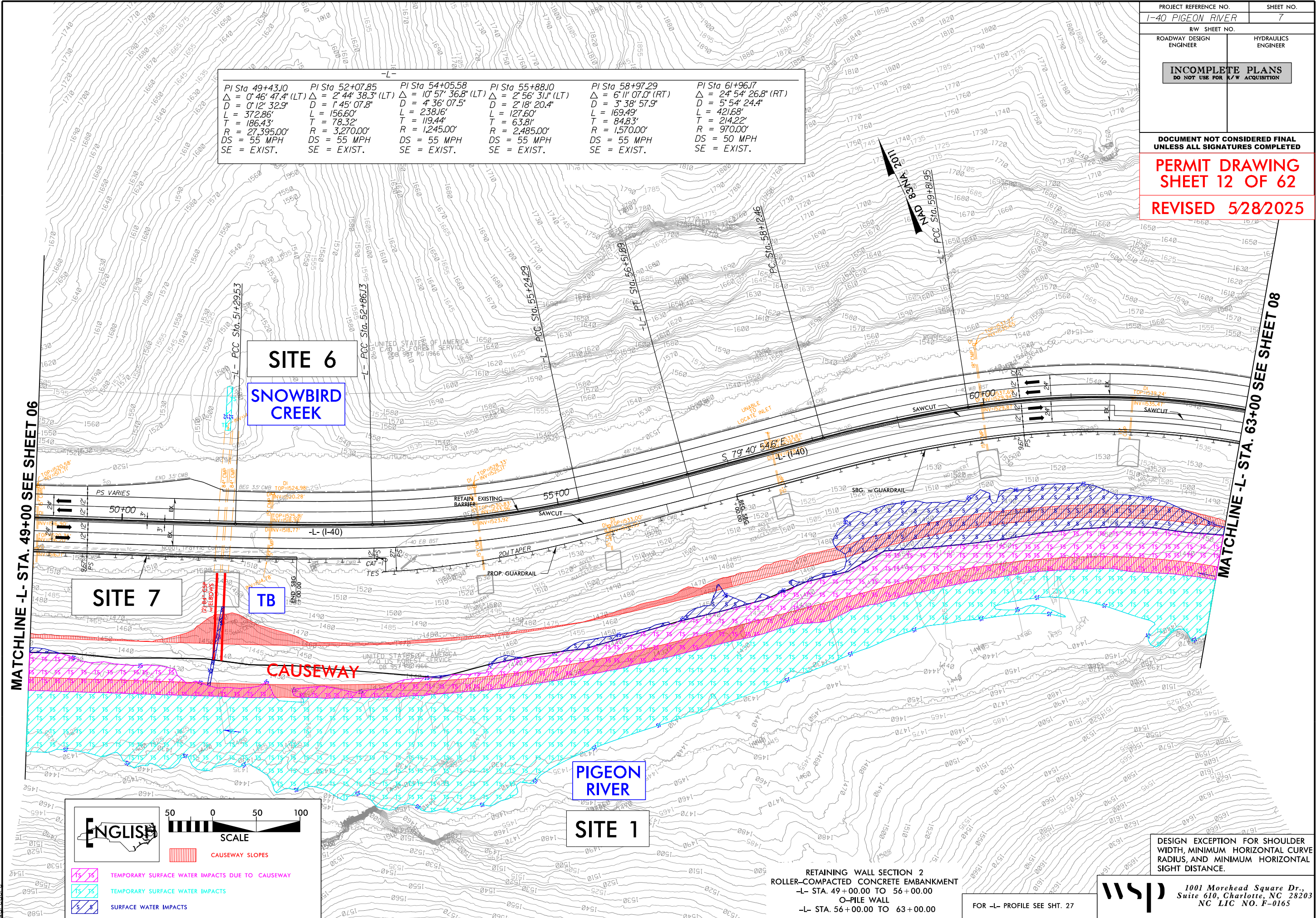
6/3/2025 c:\pwworking\k\production\dms73276\I-40 Pigeon River\_Hyd.prm\_psh\_7.con.dgn 8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER		7	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 12 OF 62

REVISED 5/28/2025



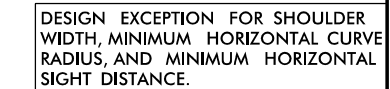
DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

**wsp** 1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203 NC LIC NO. F-0165

RETAINING WALL SECTION 2  
ROLLER-COMPACTED CONCRETE EMBANKMENT  
-L- STA. 49+00.00 TO 56+00.00  
O-PILE WALL  
-L- STA. 56+00.00 TO 63+00.00

FOR -L- PROFILE SEE SHT. 27



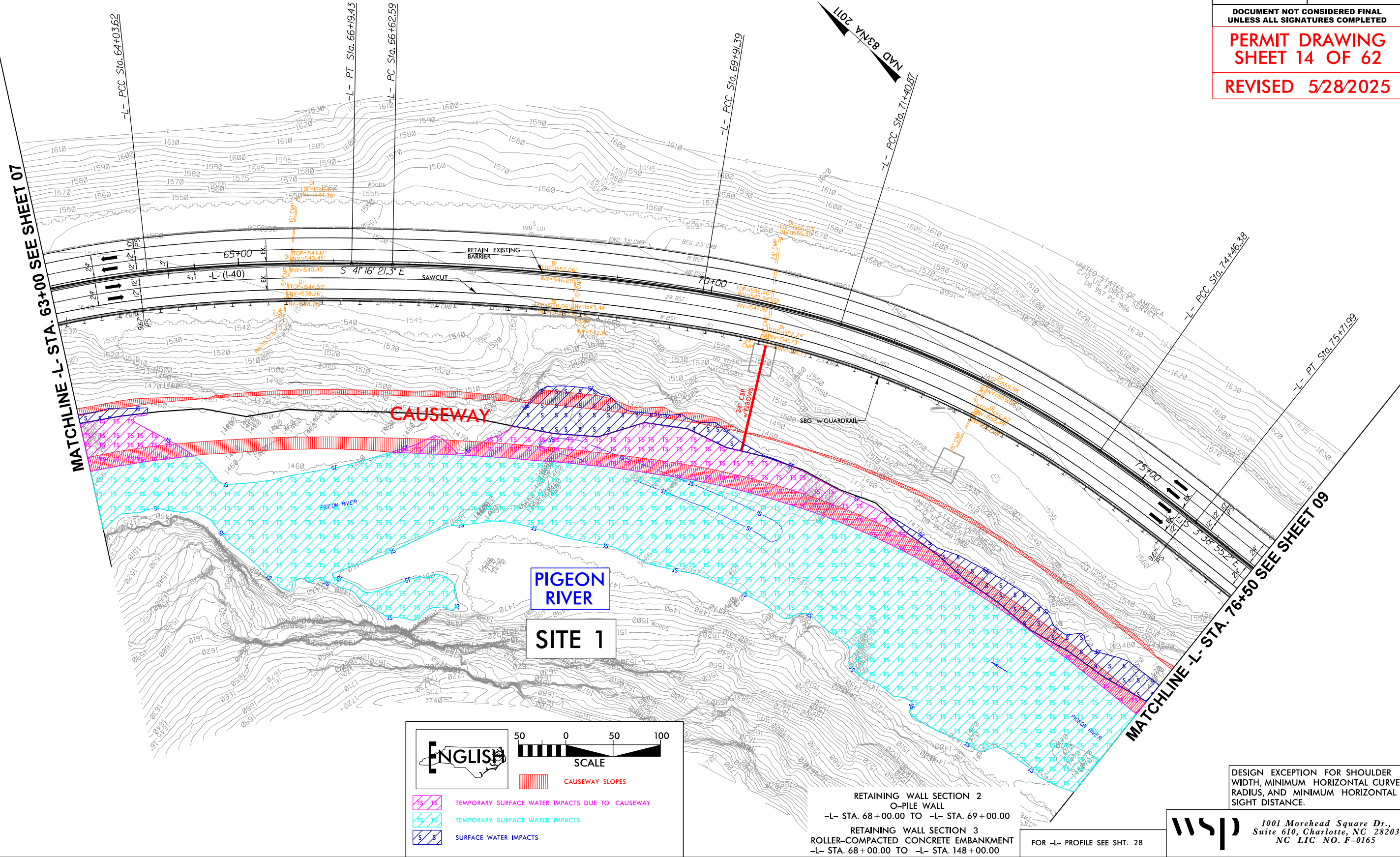




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6/3/2025  
c:\pwworking\vrkk\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_8.con.dgn  
10:58:04

PI Sta 61+96.17 Δ = 24° 54' 26.8" (RT) D = 5° 54' 24.4" L = 421.68' T = 214.22' R = 970.00' DS = 55 MPH SE = EXIST.	PI Sta 65+11.67 Δ = 7° 18' 59.3" (RT) D = 3° 23' 25.0" L = 215.81' T = 108.05' R = 1,690.00' DS = 55 MPH SE = EXIST.	PI Sta 68+27.26 Δ = 8° 03' 02.3" (RT) D = 2° 26' 54.7" L = 328.79' T = 164.67' R = 2,340.00' DS = 55 MPH SE = EXIST.	PI Sta 70+66.25 Δ = 8° 00' 16.8" (RT) D = 5° 21' 17.1" L = 149.49' T = 74.87' R = 1,070.00' DS = 55 MPH SE = EXIST.	PI Sta 72+94.86 Δ = 17° 46' 14.7" (RT) D = 5° 49' 00.6" L = 305.51' T = 153.99' R = 985.00' DS = 55 MPH SE = EXIST.	PI Sta 75+09.21 Δ = 3° 47' 52.4" (RT) D = 3° 01' 24.7" L = 125.61' T = 62.83' R = 1,895.00' DS = 55 MPH SE = EXIST.
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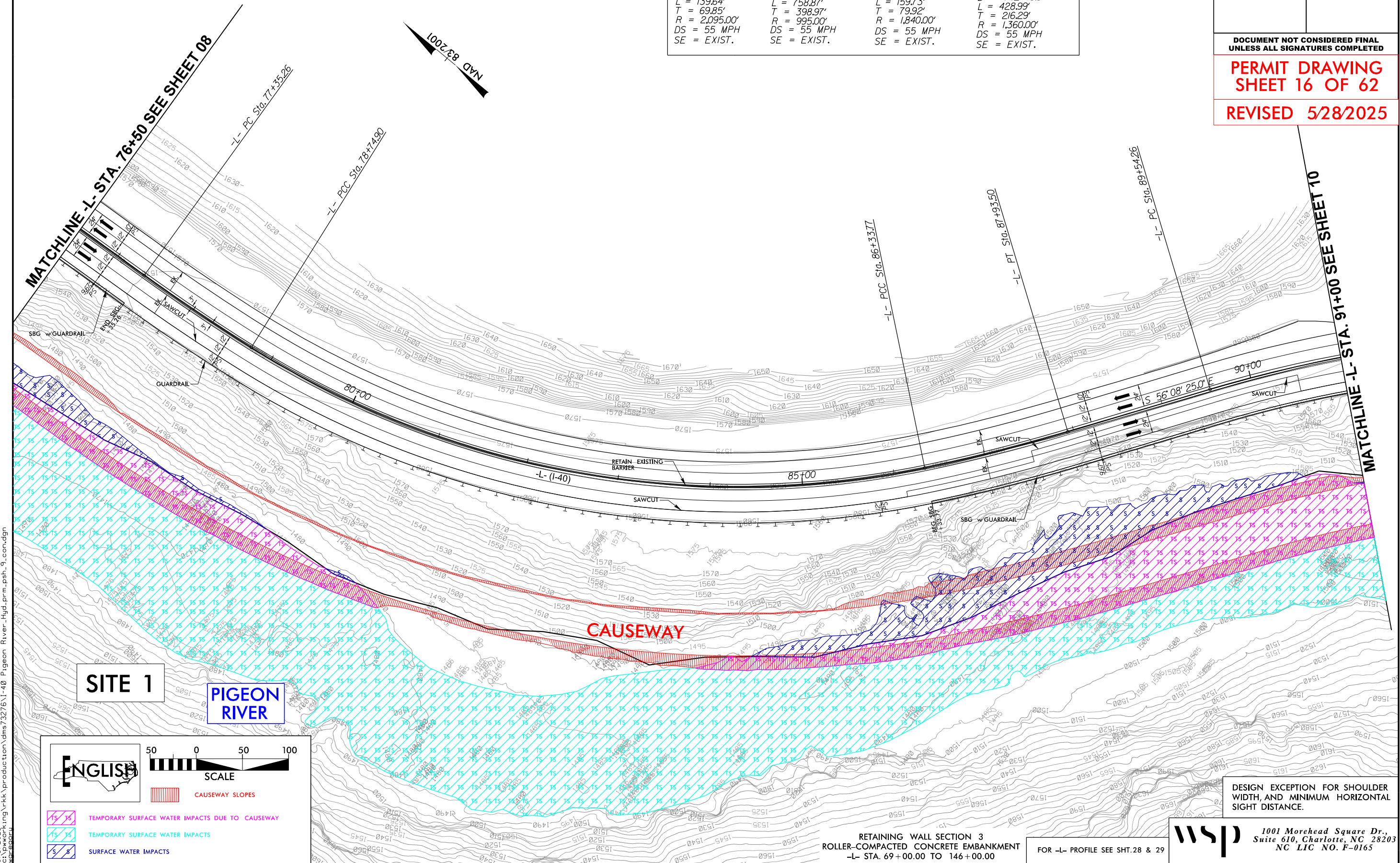


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PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 16 OF 62		
REVISED 5/28/2025		

-L-			
PI Sta 78+05.10 Δ = 3° 49' 08.4" (LT) D = 2° 44' 05.6" L = 139.64' T = 69.85' R = 2,095.00' DS = 55 MPH SE = EXIST.	PI Sta 82+73.86 Δ = 43° 41' 55.4" (LT) D = 5° 45' 30.1" L = 758.87' T = 398.97' R = 995.00' DS = 55 MPH SE = EXIST.	PI Sta 87+13.69 Δ = 4° 58' 26.0" (LT) D = 3° 06' 50.0" L = 159.73' T = 79.92' R = 1,840.00' DS = 55 MPH SE = EXIST.	PI Sta 91+70.55 Δ = 18° 04' 23.0" (RT) D = 4° 12' 46.5" L = 428.99' T = 216.29' R = 1,360.00' DS = 55 MPH SE = EXIST.



ENGLISH

500 0 50 100

SCALE

TS TS

TS TS

S S

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

CAUSEWAY SLOPES

RETAINING WALL SECTION 3  
ROLLER-COMPACTED CONCRETE EMBANKMENT  
-L- STA. 69+00.00 TO 146+00.00  
FOR -L- PROFILE SEE SHT.28 & 29

wsj

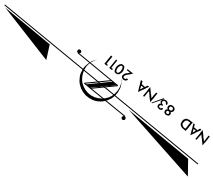
1001 Morehead Square Dr.,  
Suite 610, Charlotte, NC 28203  
NC LIC NO. F-0165

DESIGN EXCEPTION FOR SHOULDER  
WIDTH, AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

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6/3/2025  
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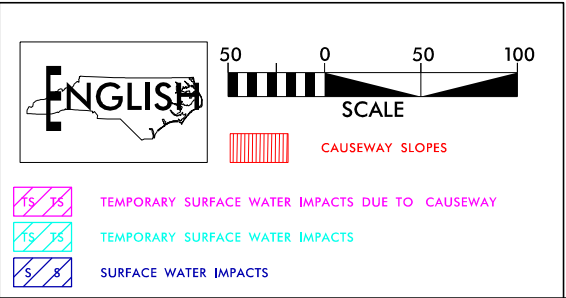
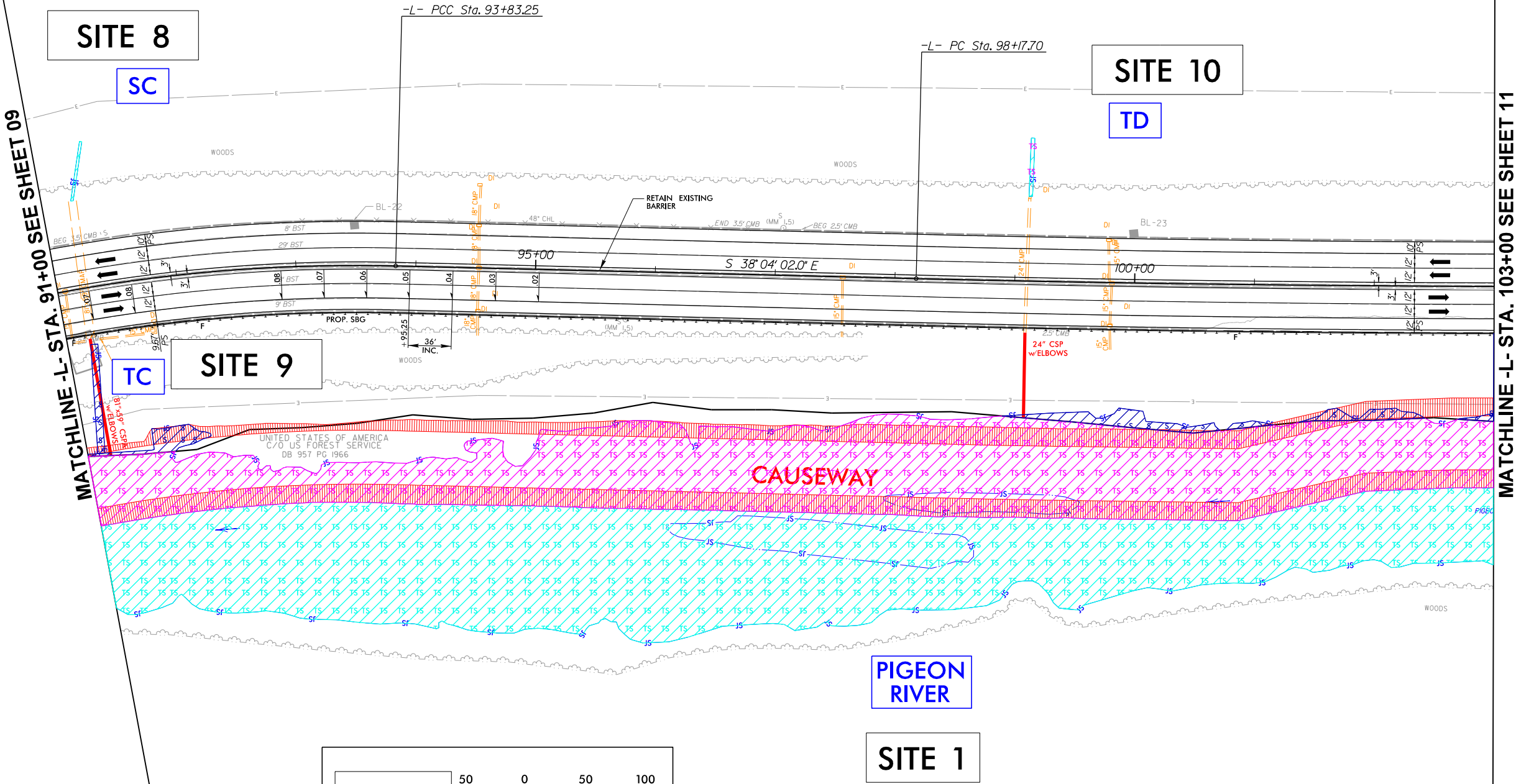
PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 10
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 17 OF 62		
REVISED 5/28/2025		



-L-

PI Sta 91+70.55 Δ = 18° 04' 23.0" (RT) D = 4' 12' 46.5" L = 428.99' T = 216.29' R = 1,360.00' DS = 55 MPH SE = EXIST.	PI Sta 102+11.63 Δ = 2° 02' 44.1" (LT) D = 0' 15' 34.8" L = 787.77' T = 393.93' R = 22,065.00' DS = 55 MPH SE = EXIST.
--	---

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DB 957 PG 1966



DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.  
FOR -L- LT- PROFILE SEE SHEET 30  
FOR -L- RT- PROFILE SEE SHEET 30

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PROJECT REFERENCE NO.  
1-40 PIGEON RIVER

SHEET NO.  
10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

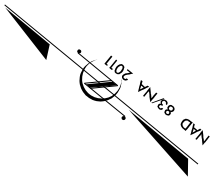
PERMIT DRAWING  
SHEET 18 OF 62

REVISED 5/28/2025

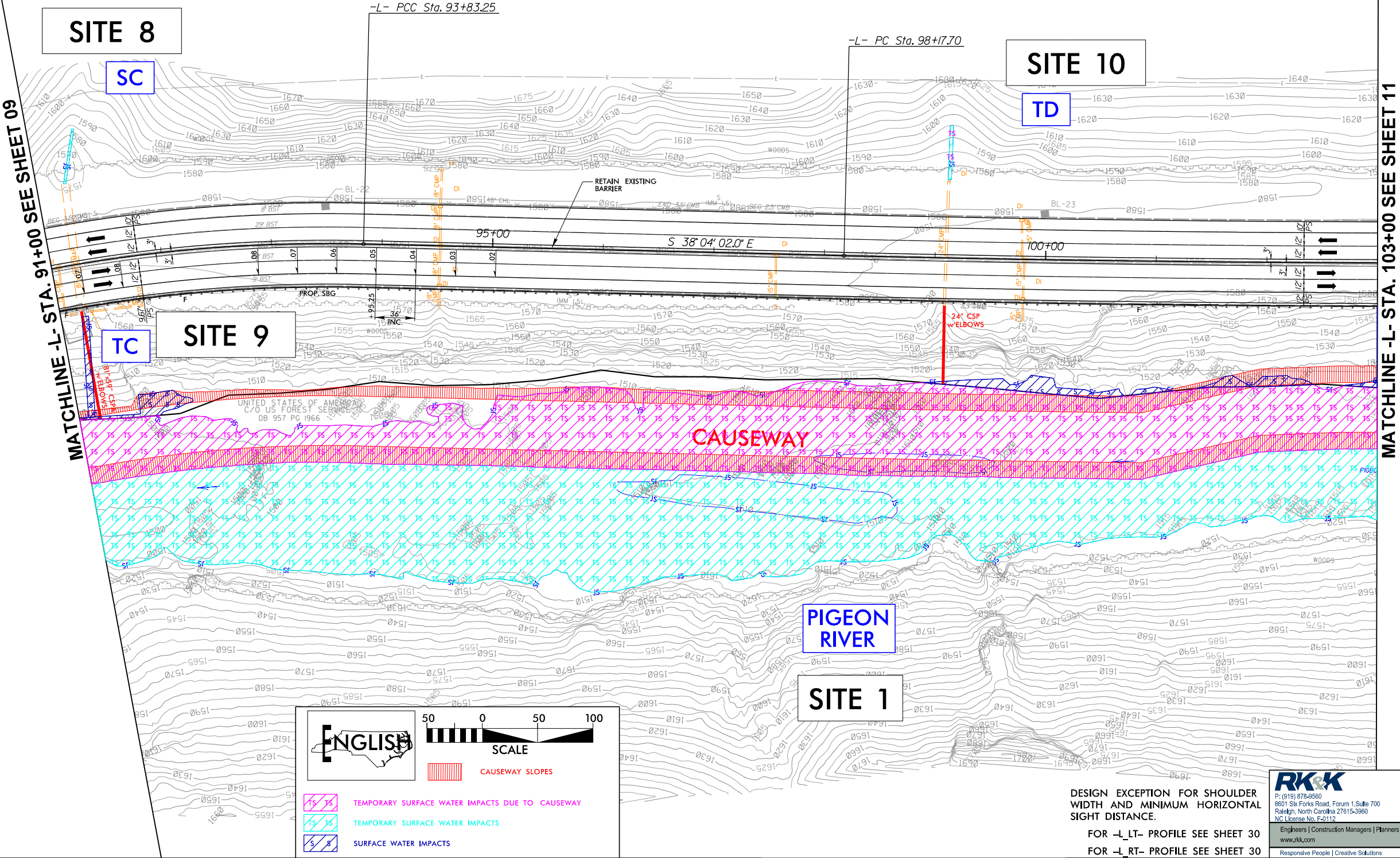
-L-

PI Sta 91+70.55  
Δ = 18° 04' 23.0" (RT)  
D = 4' 12' 46.5"  
L = 428.99'  
T = 216.29'  
R = 1,360.00'  
DS = 55 MPH  
SE = EXIST.

PI Sta 102+11.63  
Δ = 2° 02' 44.1" (LT)  
D = 0' 15' 34.8"  
L = 787.77'  
T = 393.93'  
R = 22,065.00'  
DS = 55 MPH  
SE = EXIST.



UNITED STATES OF AMERICA  
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DB 957 PG 1966



DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

FOR -L- LT- PROFILE SEE SHEET 30  
FOR -L- RT- PROFILE SEE SHEET 30

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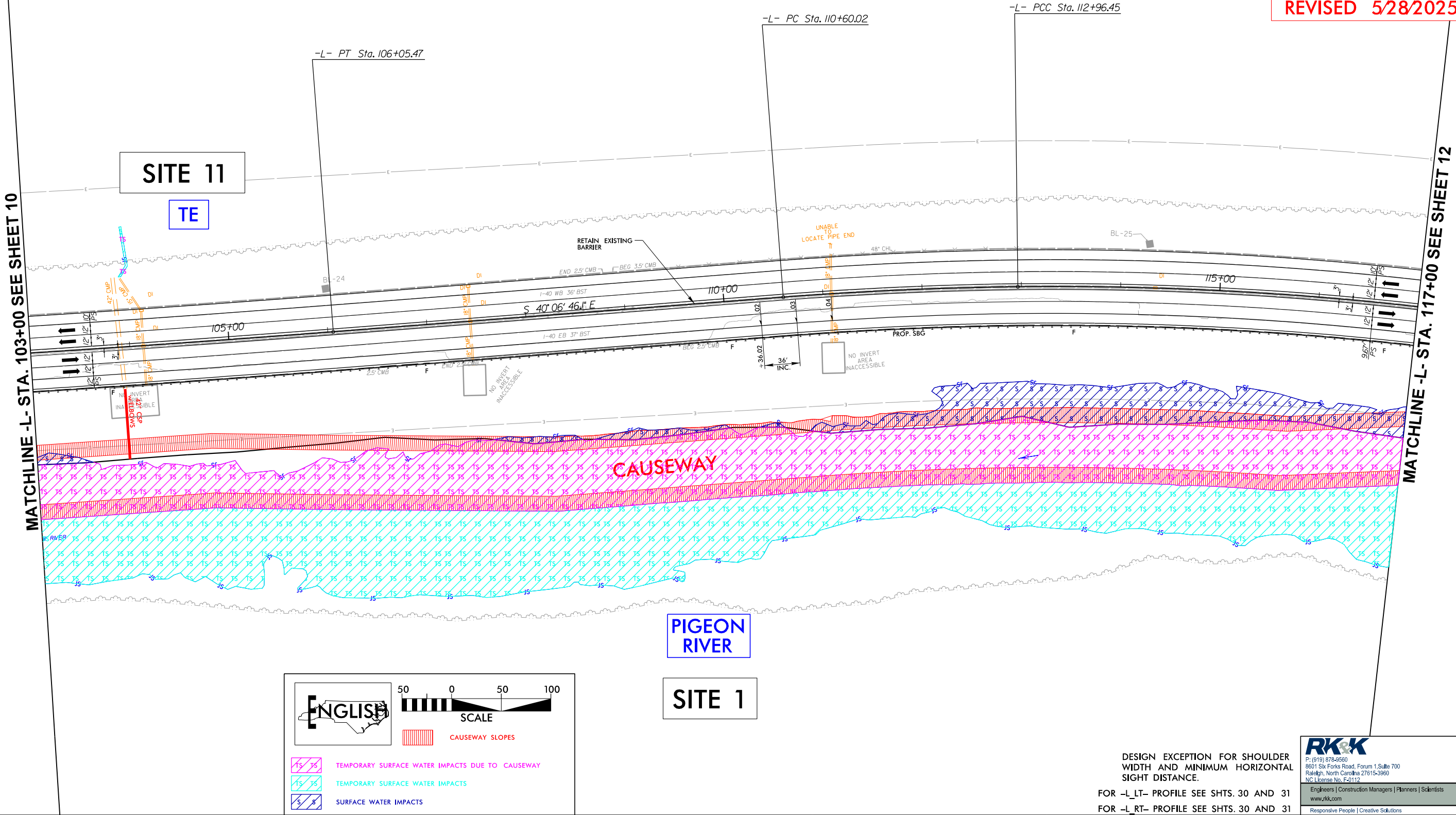
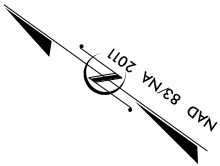
8/17/99

6/3/2025  
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PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. II
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 19 OF 62		
REVISED 5/28/2025		

-L-		
PI Sta 102+11.63	PI Sta 111+78.28	PI Sta 115+38.85
$\Delta = 2^{\circ}02'44.1''$ (LT)	$\Delta = 3^{\circ}45'08.8''$ (RT)	$\Delta = 8^{\circ}25'39.9''$ (RT)
D = 0'15" 34.8"	D = 1'35" 13.7"	D = 1'44" 29.4"
L = 787.77'	L = 236.43'	L = 483.93'
T = 393.93'	T = 118.26'	T = 242.40'
R = 22,065.00'	R = 3,610.00'	R = 3,290.00'
DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.

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DB 957 PG 1966



DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.  
FOR -L\_LT- PROFILE SEE SHTS. 30 AND 31  
FOR -L\_RT- PROFILE SEE SHTS. 30 AND 31

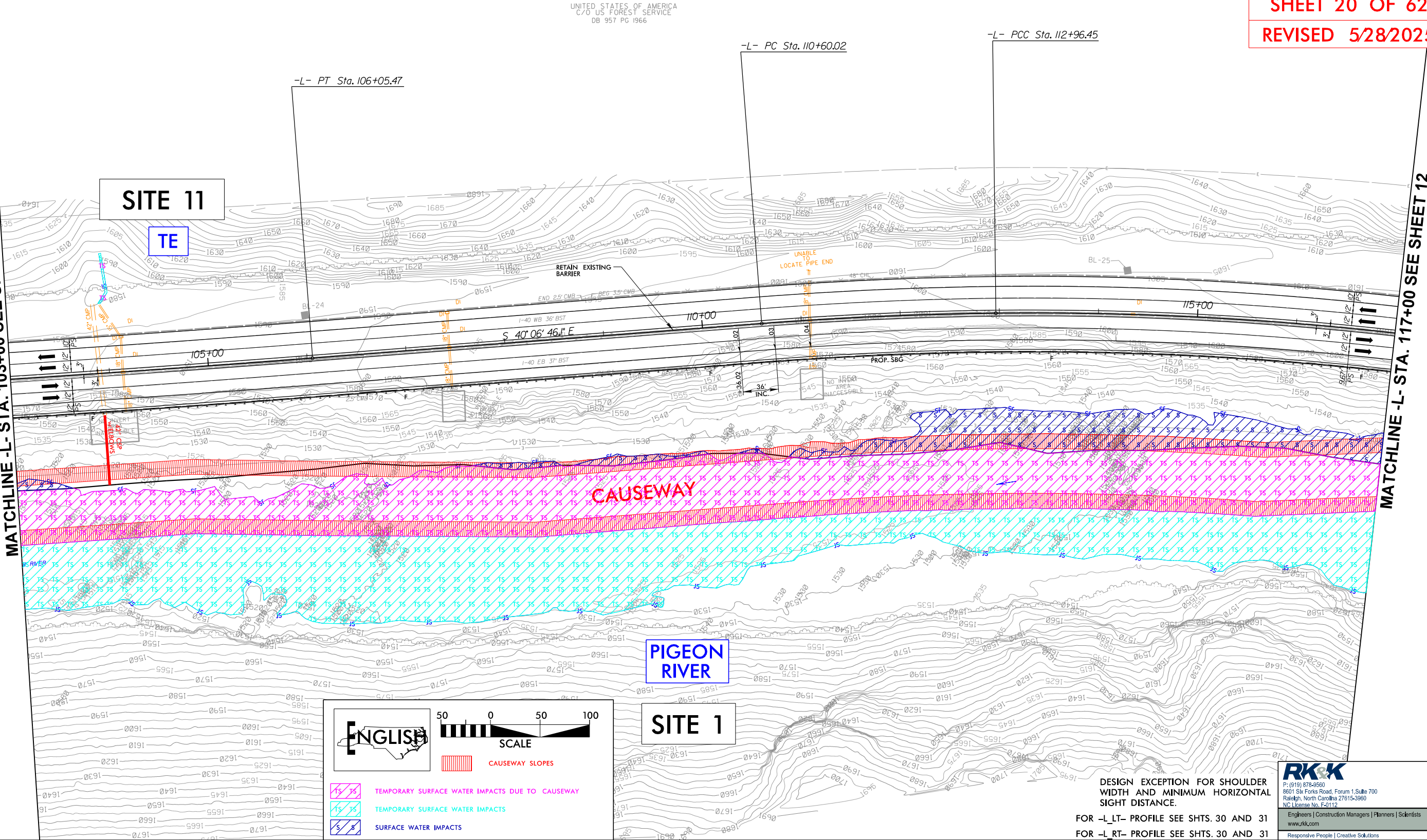
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6/3/2025  
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10:58:04

MATCHLINE -L- STA. 103+00 SEE SHEET 10



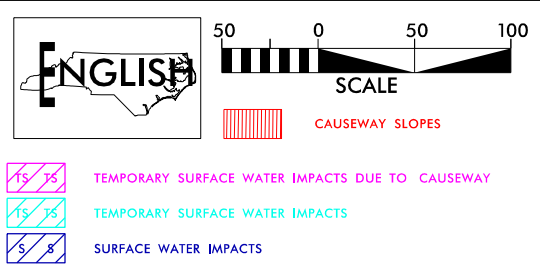
SITE 11

TE

CAUSEWAY

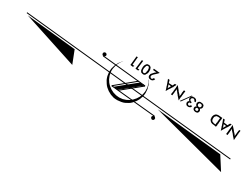
PIGEON RIVER

SITE 1



-L-		
PI Sta 102+11.63	PI Sta 111+78.28	PI Sta 115+38.85
$\Delta = 2^{\circ} 02' 44.1''$ (LT)	$\Delta = 3^{\circ} 45' 08.8''$ (RT)	$\Delta = 8^{\circ} 25' 39.9''$ (RT)
D = 0' 15' 34.8"	D = 1' 35' 13.7"	D = 1' 44' 29.4"
L = 787.77'	L = 236.43'	L = 483.93'
T = 393.93'	T = 118.26'	T = 242.40'
R = 22,065.00'	R = 3,610.00'	R = 3,290.00'
DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.

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C/O US FOREST SERVICE  
DB 957 PG 1966



PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 11	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 20 OF 62			
REVISED 5/28/2025			

DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.  
FOR -L- LT- PROFILE SEE SHTS. 30 AND 31  
FOR -L- RT- PROFILE SEE SHTS. 30 AND 31

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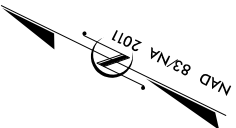
MATCHLINE -L- STA. 117+00 SEE SHEET 12

8/17/99

6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River\_Hyd\_prm\_psh\_12.dgn

PI Sta 115+38.85 Δ = 8° 25' 39.9" (RT) D = 1° 44' 29.4" L = 483.93' T = 242.40' R = 3,290.00' DS = 55 MPH SE = EXIST.	PI Sta 118+77.47 Δ = 1° 48' 37.0" (RT) D = 0° 55' 56.6" L = 194.15' T = 97.09' R = 6,145.00' DS = 55 MPH SE = EXIST.	PI Sta 120+90.46 Δ = 0° 41' 27.4" (RT) D = 0° 29' 32.0" L = 140.37' T = 70.19' R = 11,640.00' DS = 55 MPH SE = EXIST.	-L- PI Sta 122+04.09 Δ = 1° 40' 04.1" (RT) D = 1° 55' 10.0" L = 86.89' T = 43.45' R = 2,985.00' DS = 55 MPH SE = EXIST.	PI Sta 124+01.49 Δ = 10° 28' 19.3" (RT) D = 3° 24' 37.7" L = 307.06' T = 153.96' R = 1,680.00' DS = 55 MPH SE = EXIST.	PI Sta 128+09.73 Δ = 5° 14' 14.1" (LT) D = 3° 14' 46.4" L = 161.33' T = 80.72' R = 1,765.00' DS = 55 MPH SE = EXIST.	PI Sta 130+37.12 Δ = 16° 46' 59.2" (LT) D = 5° 45' 30.1" L = 291.46' T = 146.78' R = 995.00' DS = 55 MPH SE = EXIST.
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UNITED STATES OF AMERICA  
C/O US FOREST SERVICE  
DB 957 PG 1966



PROJECT REFERENCE NO.  
1-40 PIGEON RIVER

SHEET NO.  
12

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

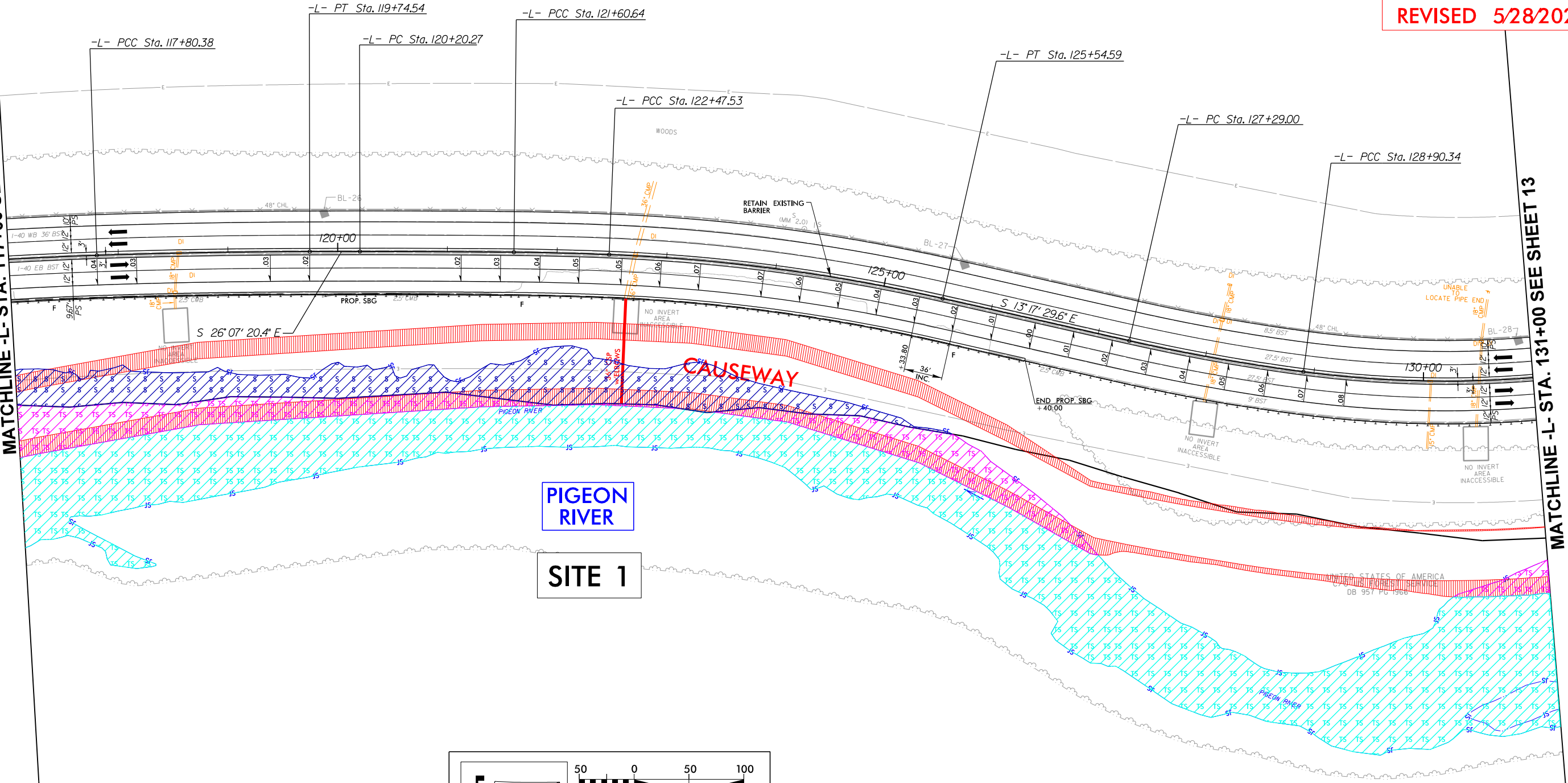
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 21 OF 62

REVISED 5/28/2025

MATCHLINE -L- STA. 117+00 SEE SHEET 11



MATCHLINE -L- STA. 131+00 SEE SHEET 13

ENGLISH

50 0 50 100  
SCALE

CAUSEWAY SLOPES

TS TS

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TS TS

TEMPORARY SURFACE WATER IMPACTS

TS TS

SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.  
FOR -L- LT- PROFILE SEE SHTS. 31 AND 32  
FOR -L- RT- PROFILE SEE SHTS. 31 AND 32

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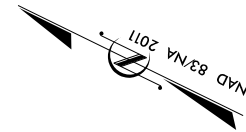
6/3/2025  
c:\pwworking\k\production\dms\3276\1-40 Pigeon River\_Hyd.prm\_psh\_12.con.dgn  
10:58:04

MATCHLINE -L- STA. 117+00 SEE SHEET 11

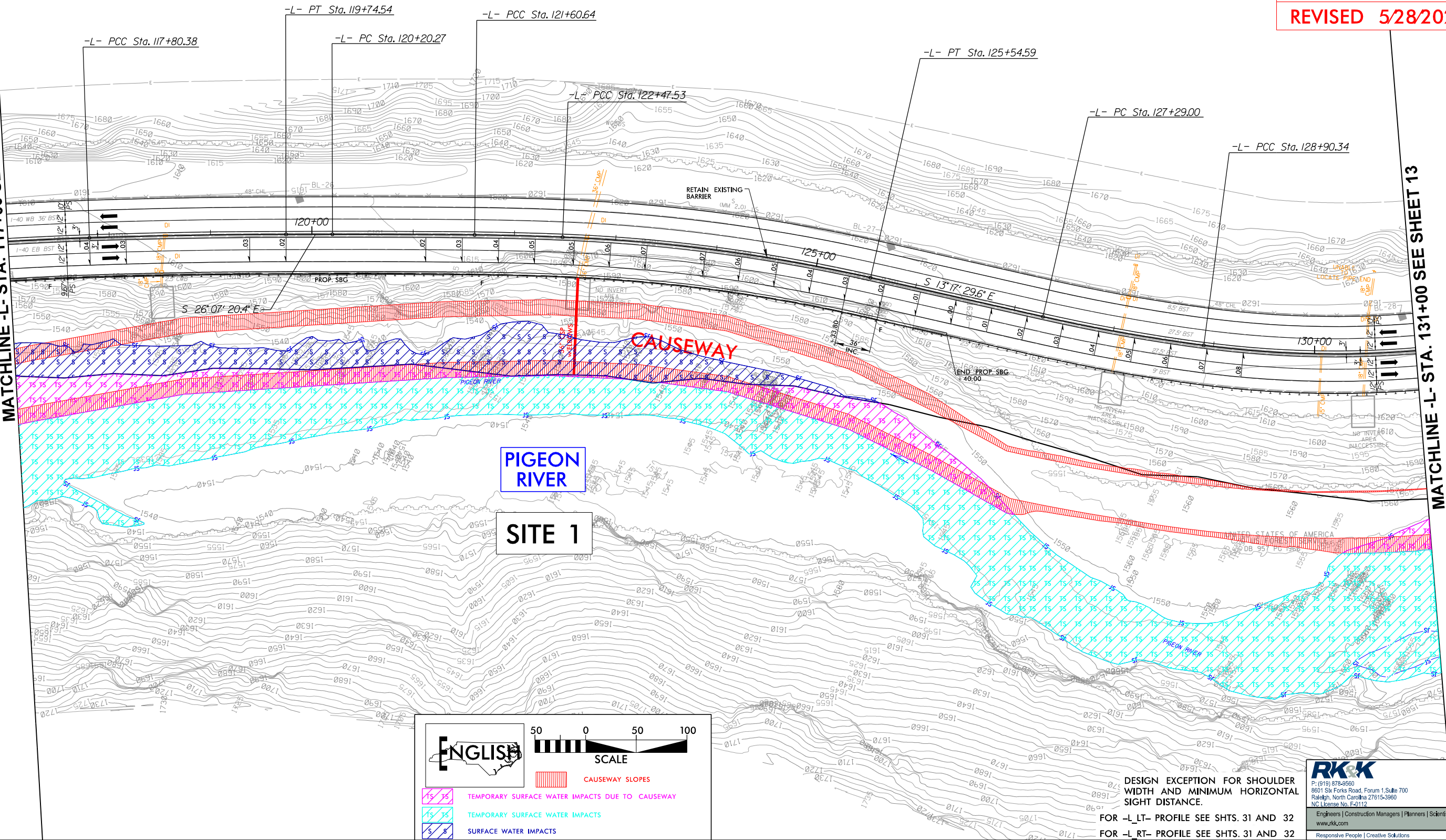
MATCHLINE -L- STA. 131+00 SEE SHEET 13

PI Sta 115+38.85 Δ = 8° 25' 39.9" (RT) D = 1° 44' 29.4" L = 483.93' T = 242.40' R = 3,290.00' DS = 55 MPH SE = EXIST.	PI Sta 118+77.47 Δ = 1° 48' 37.0" (RT) D = 0° 55' 56.6" L = 194.15' T = 97.09' R = 6,145.00' DS = 55 MPH SE = EXIST.	PI Sta 120+90.46 Δ = 0° 41' 27.4" (RT) D = 0° 29' 32.0" L = 140.37' T = 70.19' R = 11,640.00' DS = 55 MPH SE = EXIST.	PI Sta 122+04.09 Δ = 1° 40' 04.1" (RT) D = 1° 55' 10.0" L = 86.89' T = 43.45' R = 2,985.00' DS = 55 MPH SE = EXIST.	PI Sta 124+01.49 Δ = 10° 28' 19.3" (RT) D = 3° 24' 37.7" L = 307.06' T = 153.96' R = 1,680.00' DS = 55 MPH SE = EXIST.	PI Sta 128+09.73 Δ = 5° 14' 14.1" (LT) D = 3° 14' 46.4" L = 161.33' T = 80.72' R = 1,765.00' DS = 55 MPH SE = EXIST.	PI Sta 130+37.12 Δ = 16° 46' 59.2" (LT) D = 5° 45' 30.1" L = 291.46' T = 146.78' R = 995.00' DS = 55 MPH SE = EXIST.
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DB 957 PG 1966



PROJECT REFERENCE NO. <b>1-40 PIGEON RIVER</b>		SHEET NO. <b>12</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
<div>INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
<b>PERMIT DRAWING SHEET 22 OF 62</b>			
<b>REVISED 5/28/2025</b>			

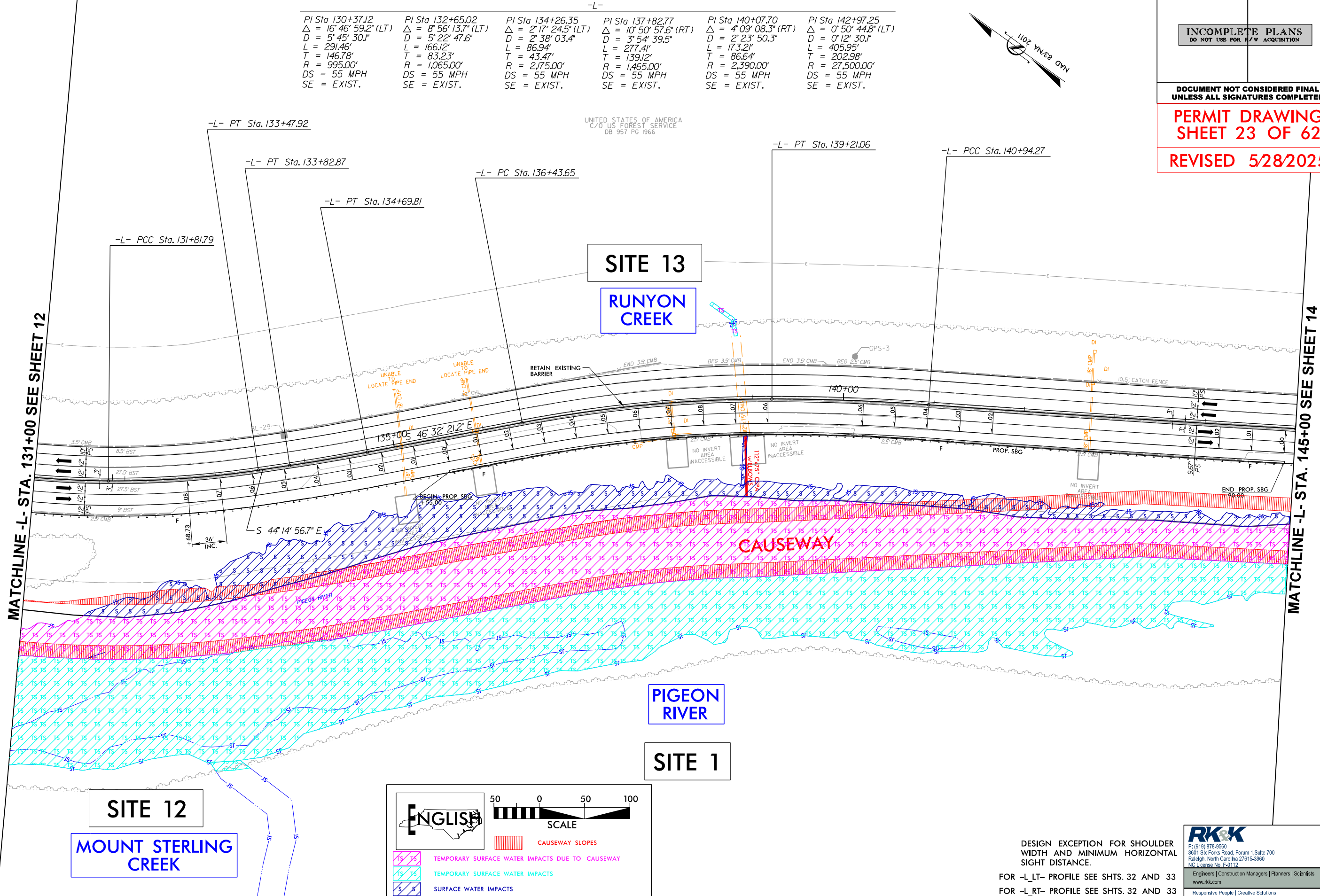




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6/3/2025  
c:\pwworking\k\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_13.dgn  
13-00000

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 13
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 23 OF 62		
REVISED 5/28/2025		



ENGLISH

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L- RT- PROFILE SEE SHTS. 32 AND 33

FOR -L- RT- PROFILE SEE SHTS. 32 AND 33

RK&K

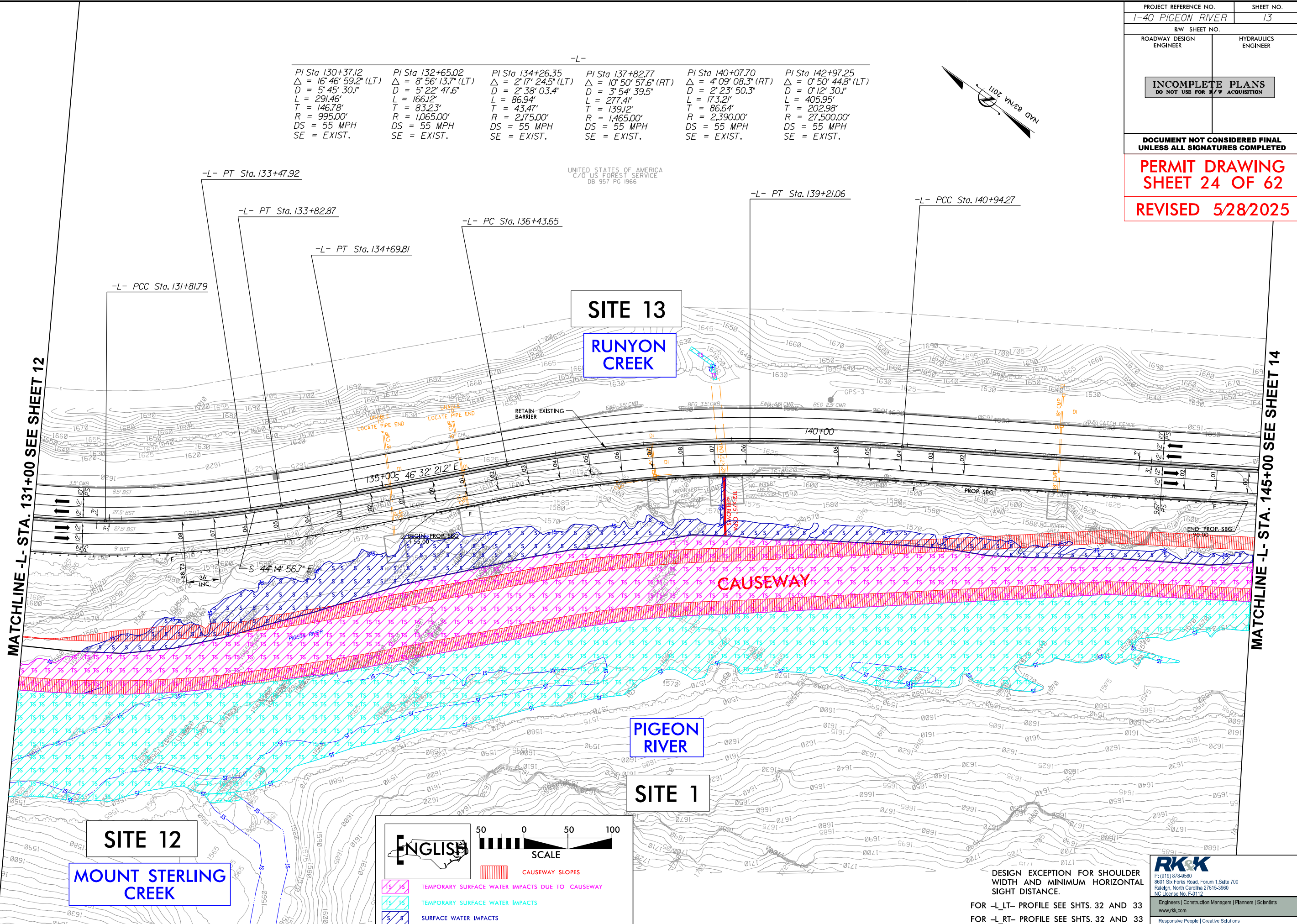
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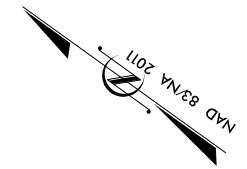
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6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_13.con.dgn 8/17/99



PI Sta 130+37.12 Δ = 16° 46' 59.2" (LT) D = 5' 45' 30.1" L = 291.46' T = 146.78' R = 995.00' DS = 55 MPH SE = EXIST.	PI Sta 132+65.02 Δ = 8° 56' 13.7" (LT) D = 5' 22' 47.6" L = 166.12' T = 83.23' R = 1,065.00' DS = 55 MPH SE = EXIST.	PI Sta 134+26.35 Δ = 2° 17' 24.5" (LT) D = 2' 38' 03.4" L = 86.94' T = 43.47' R = 2,175.00' DS = 55 MPH SE = EXIST.	PI Sta 137+82.77 Δ = 10° 50' 57.6" (RT) D = 3' 54' 39.5" L = 277.41' T = 139.12' R = 1,465.00' DS = 55 MPH SE = EXIST.	PI Sta 140+07.70 Δ = 4° 09' 08.3" (RT) D = 2' 23' 50.3" L = 173.21' T = 86.64' R = 2,390.00' DS = 55 MPH SE = EXIST.	PI Sta 142+97.25 Δ = 0° 50' 44.8" (LT) D = 0' 12' 30.1" L = 405.95' T = 202.98' R = 27,500.00' DS = 55 MPH SE = EXIST.
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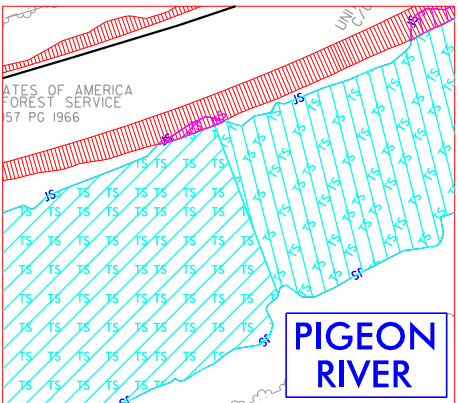
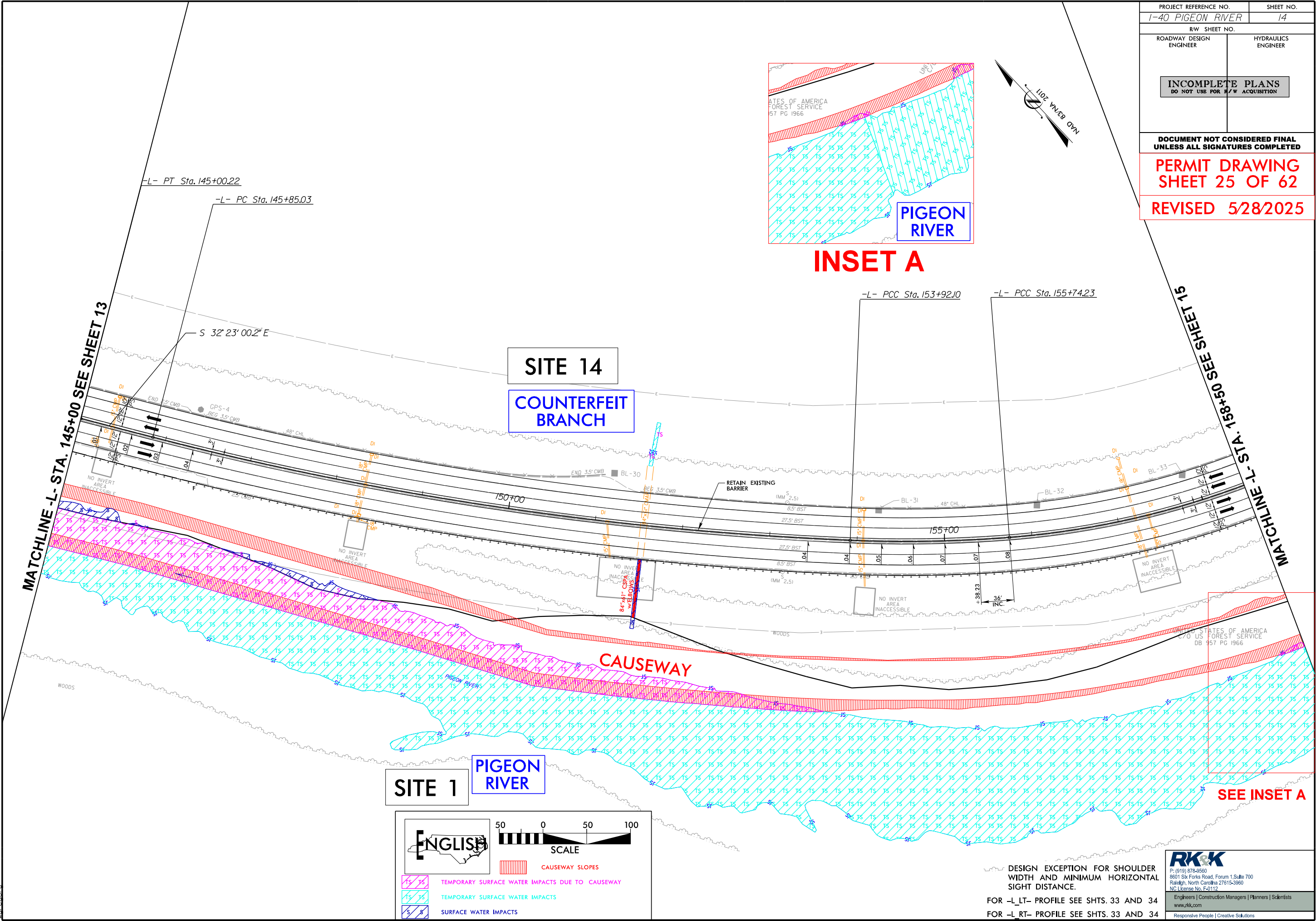
PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 13
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR F/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 24 OF 62		
REVISED 5/28/2025		

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6/3/2025  
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14-00000

PROJECT REFERENCE NO. <b>1-40 PIGEON RIVER</b>		SHEET NO. <b>14</b>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
<b>PERMIT DRAWING SHEET 25 OF 62</b>		
<b>REVISED 5/28/2025</b>		



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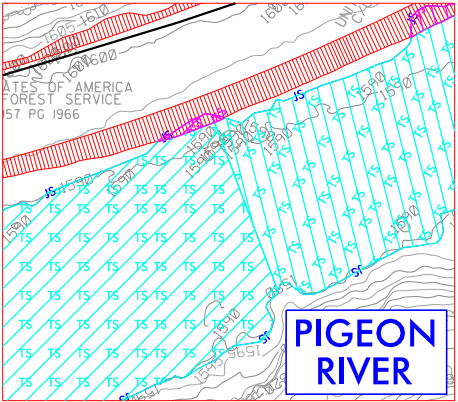
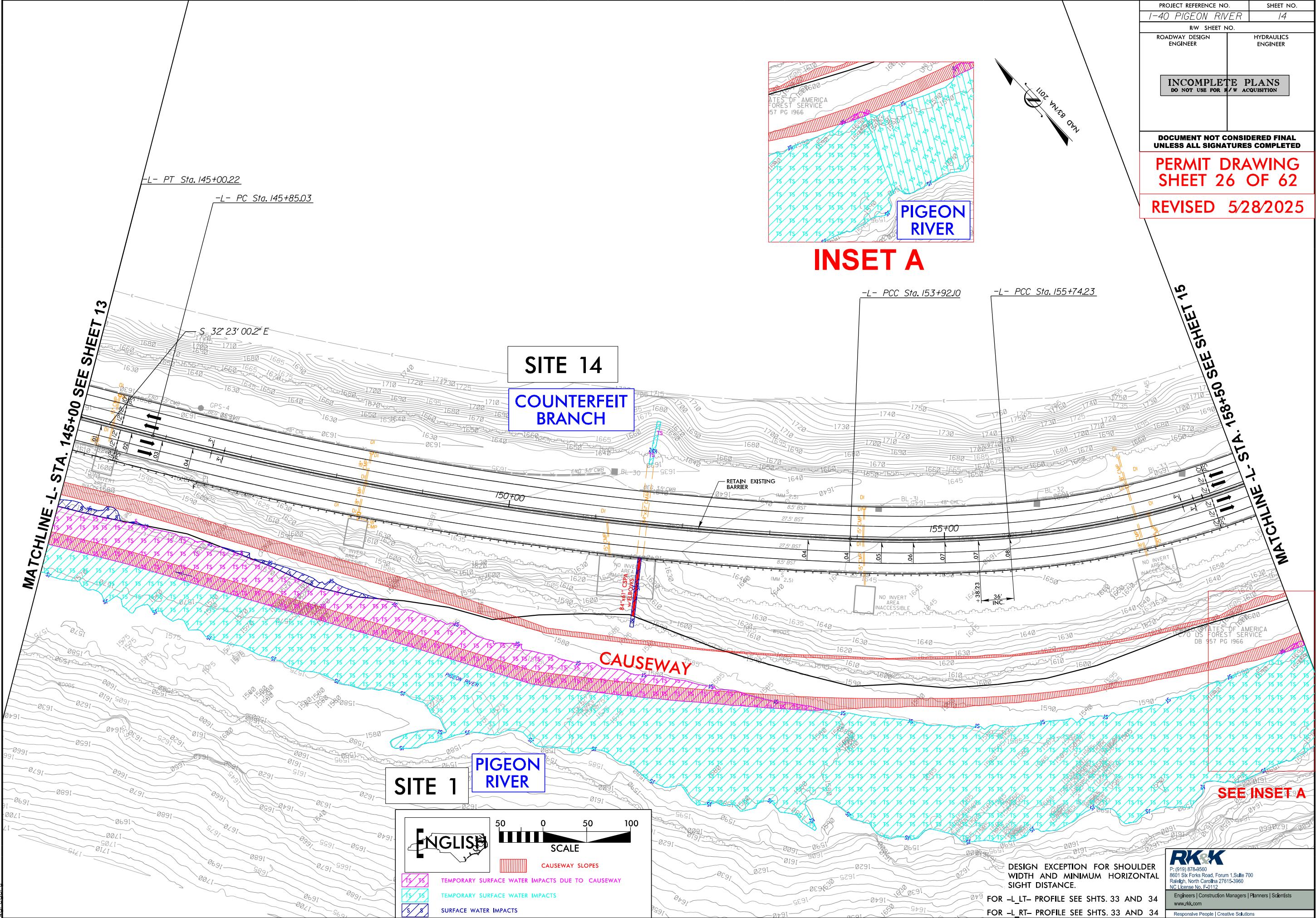
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PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 14
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 26 OF 62

REVISED 5/28/2025

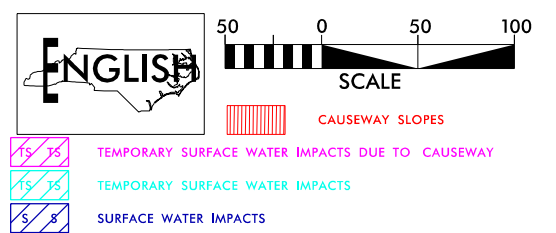


MATCHLINE -L- STA. 145+00 SEE SHEET 13

MATCHLINE -L- STA. 158+50 SEE SHEET 15

SITE 1  
PIGEON RIVER

SITE 14  
COUNTERFEIT BRANCH



DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

FOR -L- LT- PROFILE SEE SHTS. 33 AND 34  
FOR -L- RT- PROFILE SEE SHTS. 33 AND 34

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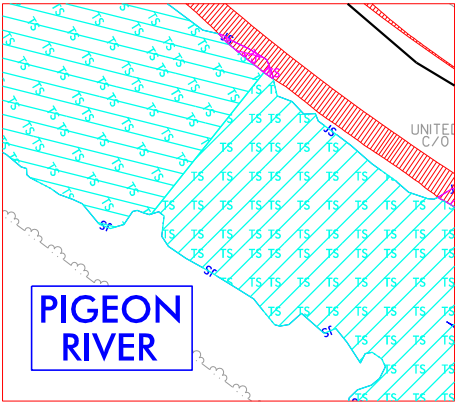
PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

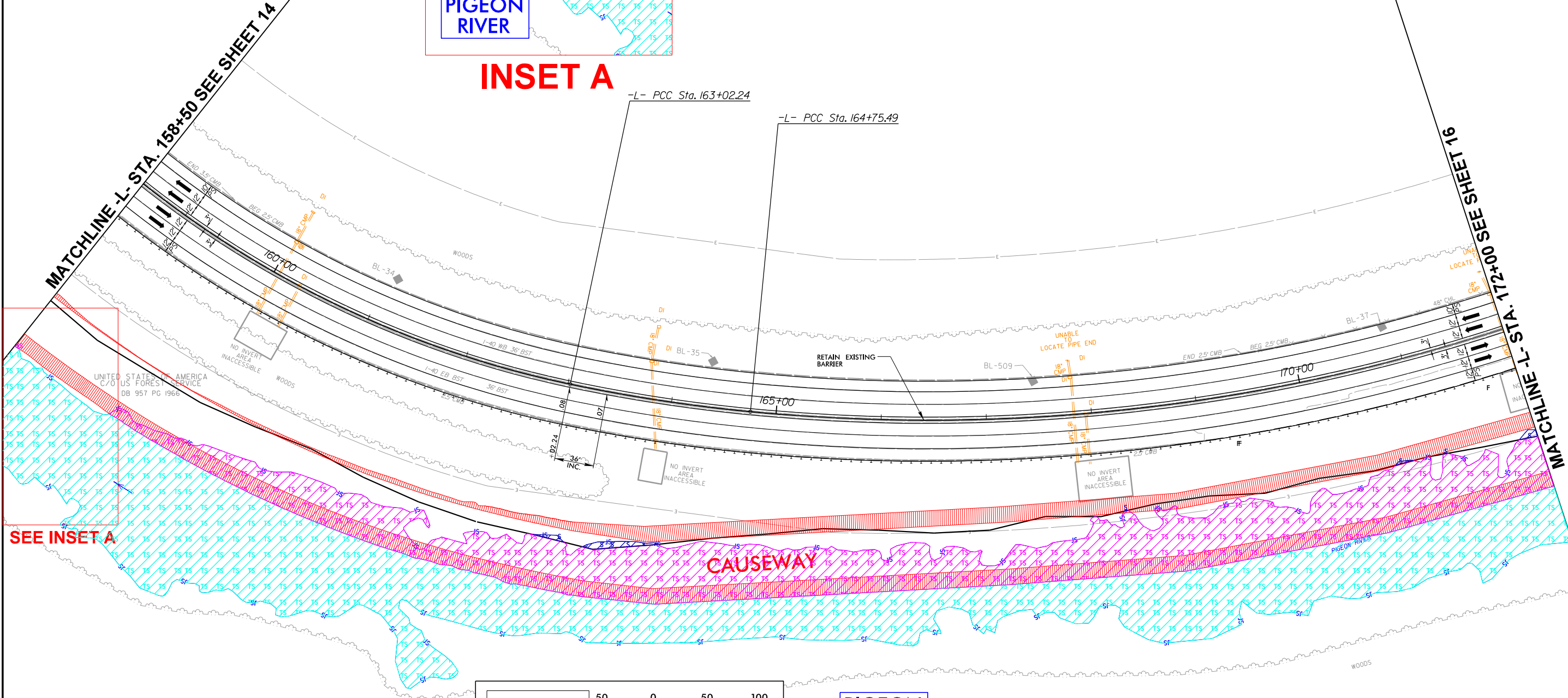
PERMIT DRAWING  
SHEET 27 OF 62

REVISED 5/28/2025

-L-		
PI Sta 159+56.15	PI Sta 163+88.95	PI Sta 169+51.35
$\Delta = 42^{\circ} 46' 52.9" (LT)$	$\Delta = 6^{\circ} 23' 00.8" (LT)$	$\Delta = 30^{\circ} 10' 39.1" (LT)$
$D = 5^{\circ} 52' 35.4"$	$D = 3^{\circ} 41' 04.6"$	$D = 3^{\circ} 14' 46.4"$
$L = 728.01'$	$L = 173.25'$	$L = 929.62'$
$T = 381.92'$	$T = 86.71'$	$T = 475.86'$
$R = 975.00'$	$R = 1,555.00'$	$R = 1,765.00'$
$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$
$SE = EXIST.$	$SE = EXIST.$	$SE = EXIST.$

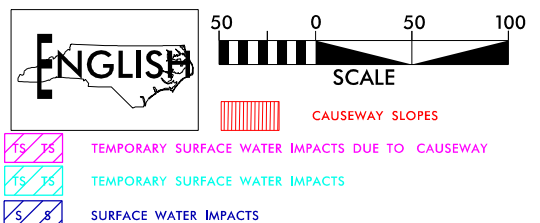


INSET A



SEE INSET A

CAUSEWAY



PIGEON RIVER

SITE 1

DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

FOR -L-RT- PROFILE SEE SHTS. 34 AND 35

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RRK-60001



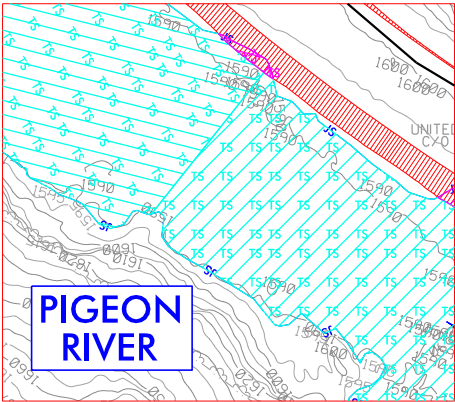
PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		15	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 28 OF 62

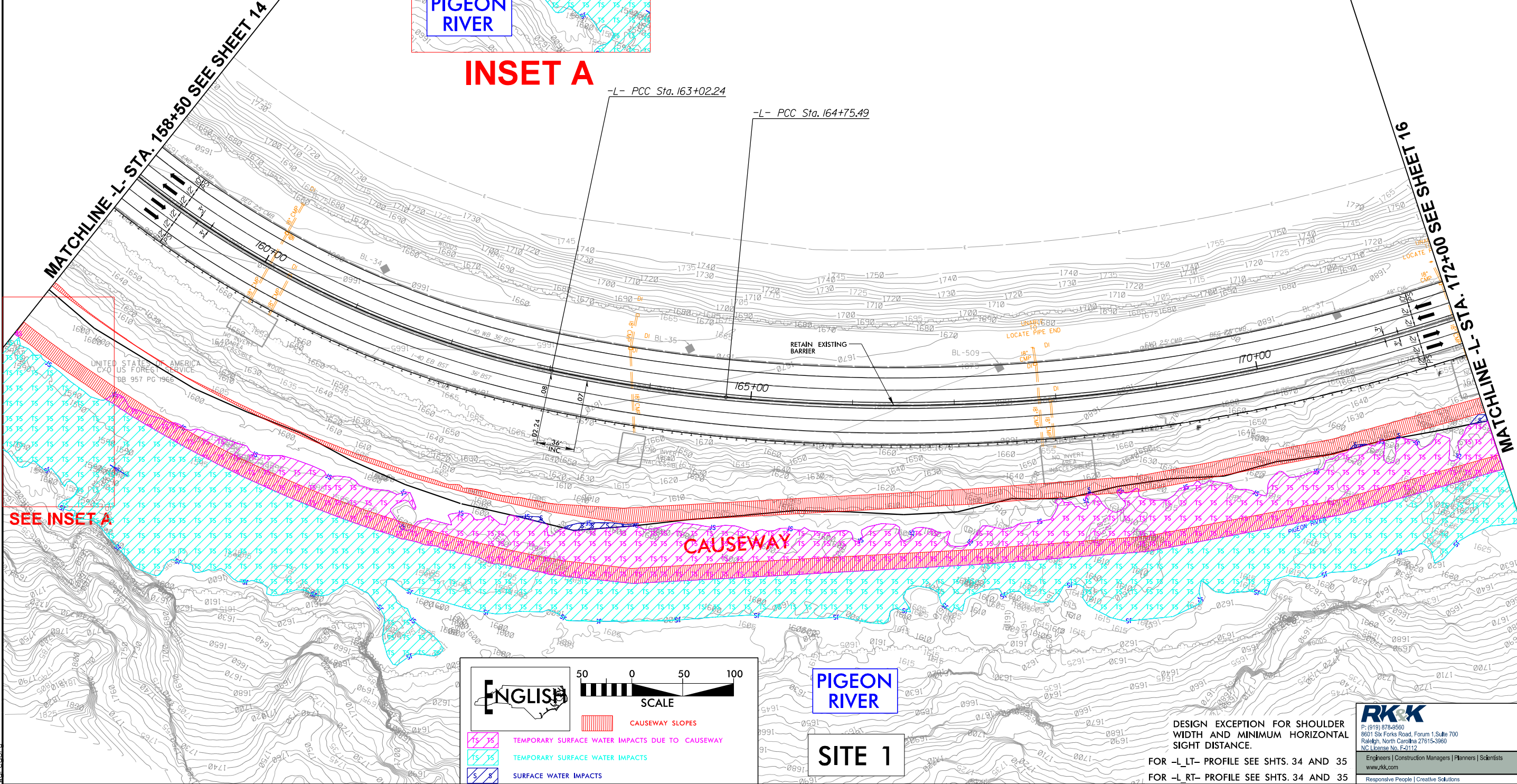
REVISED 5/28/2025

-L-		
PI Sta 159+56.15	PI Sta 163+88.95	PI Sta 169+51.35
$\Delta = 42^{\circ} 46' 52.9" (LT)$	$\Delta = 6^{\circ} 23' 00.8" (LT)$	$\Delta = 30^{\circ} 10' 39.1" (LT)$
$D = 5^{\circ} 52' 35.4"$	$D = 3^{\circ} 41' 04.6"$	$D = 3^{\circ} 14' 46.4"$
$L = 728.01'$	$L = 173.25'$	$L = 929.62'$
$T = 381.92'$	$T = 86.71'$	$T = 475.86'$
$R = 975.00'$	$R = 1,555.00'$	$R = 1,765.00'$
$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$
$SE = \text{EXIST.}$	$SE = \text{EXIST.}$	$SE = \text{EXIST.}$



INSET A

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DB 957 PG 1966

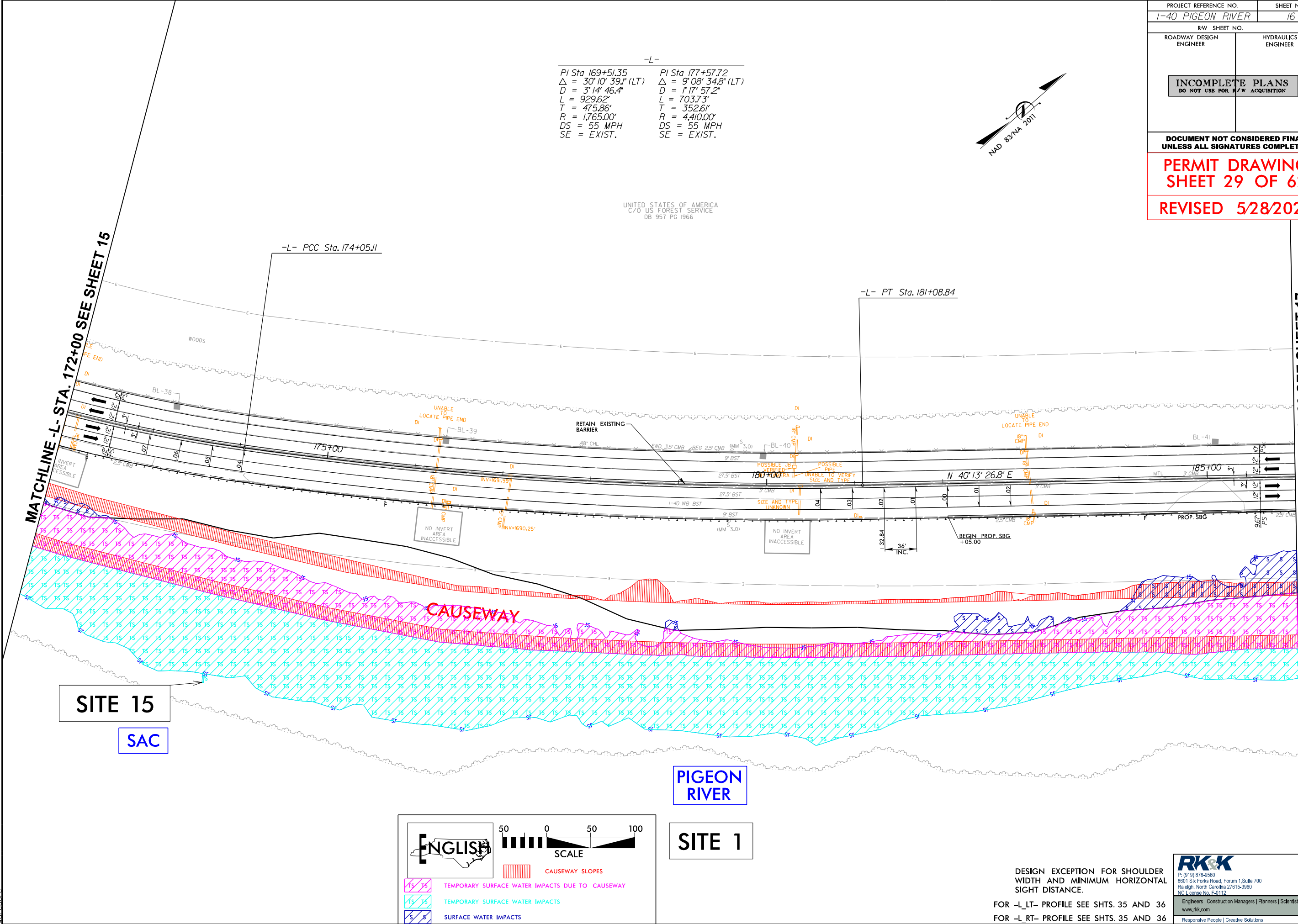


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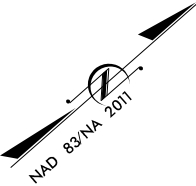
6/3/2025  
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16-88000



-L-

PI Sta 169+51.35	PI Sta 177+57.72
$\Delta = 30^{\circ} 10' 39.1''$ (LT)	$\Delta = 9^{\circ} 08' 34.8''$ (LT)
D = 3' 14' 46.4"	D = 1' 17' 57.2"
L = 929.62'	L = 703.73'
T = 475.86'	T = 352.61'
R = 1765.00'	R = 4410.00'
DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.

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DB 957 PG 1966



PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 29 OF 62			
REVISED 5/28/2025			

MATCHLINE -L- STA. 172+00 SEE SHEET 15

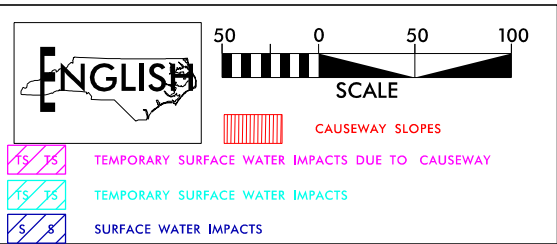
MATCHLINE -L- STA. 186+00 SEE SHEET 17

SITE 15

SAC

PIGEON RIVER

SITE 1

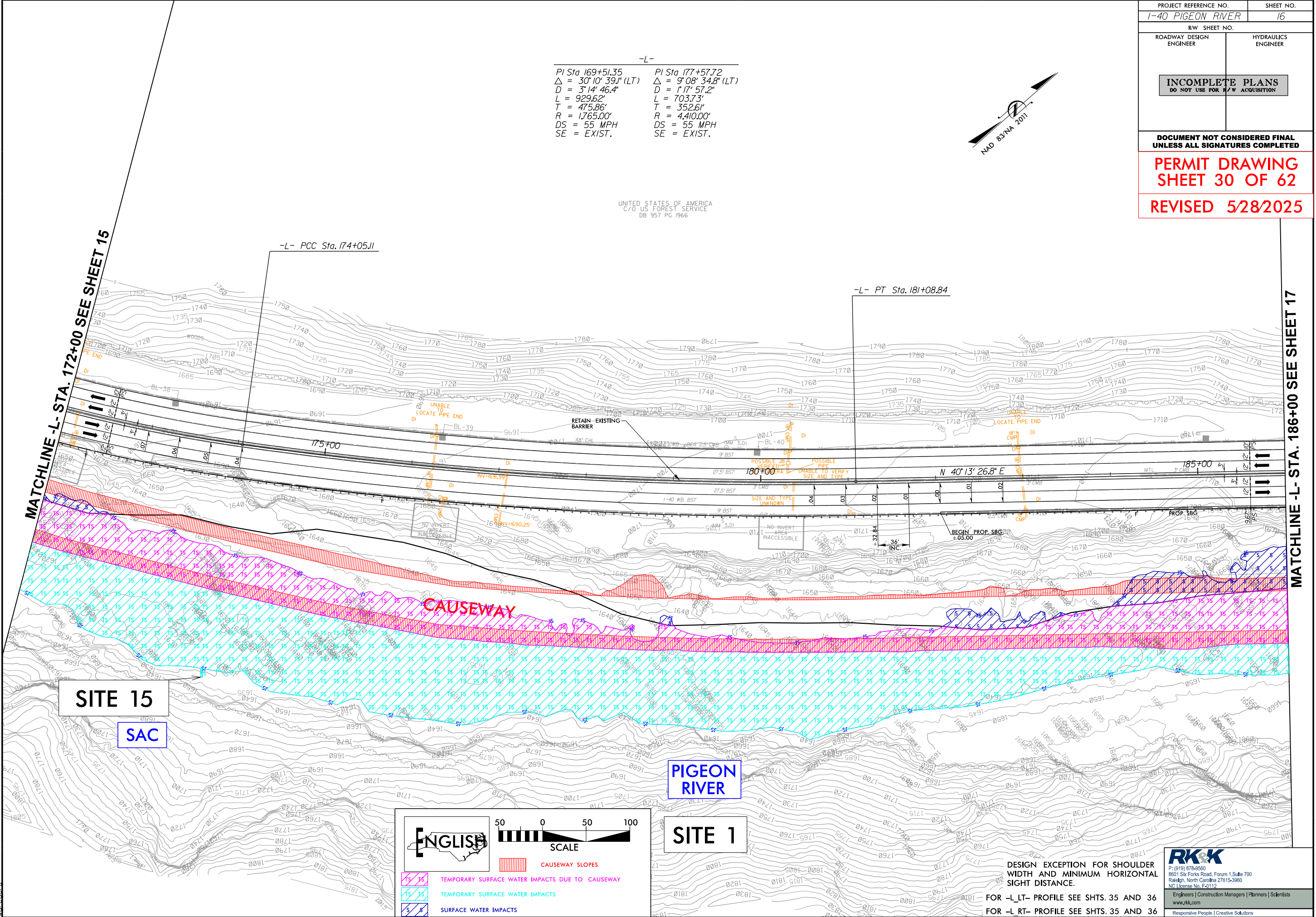


DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.  
FOR -L- LT- PROFILE SEE SHTS. 35 AND 36  
FOR -L- RT- PROFILE SEE SHTS. 35 AND 36

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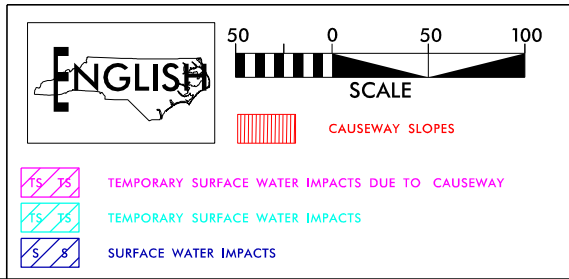
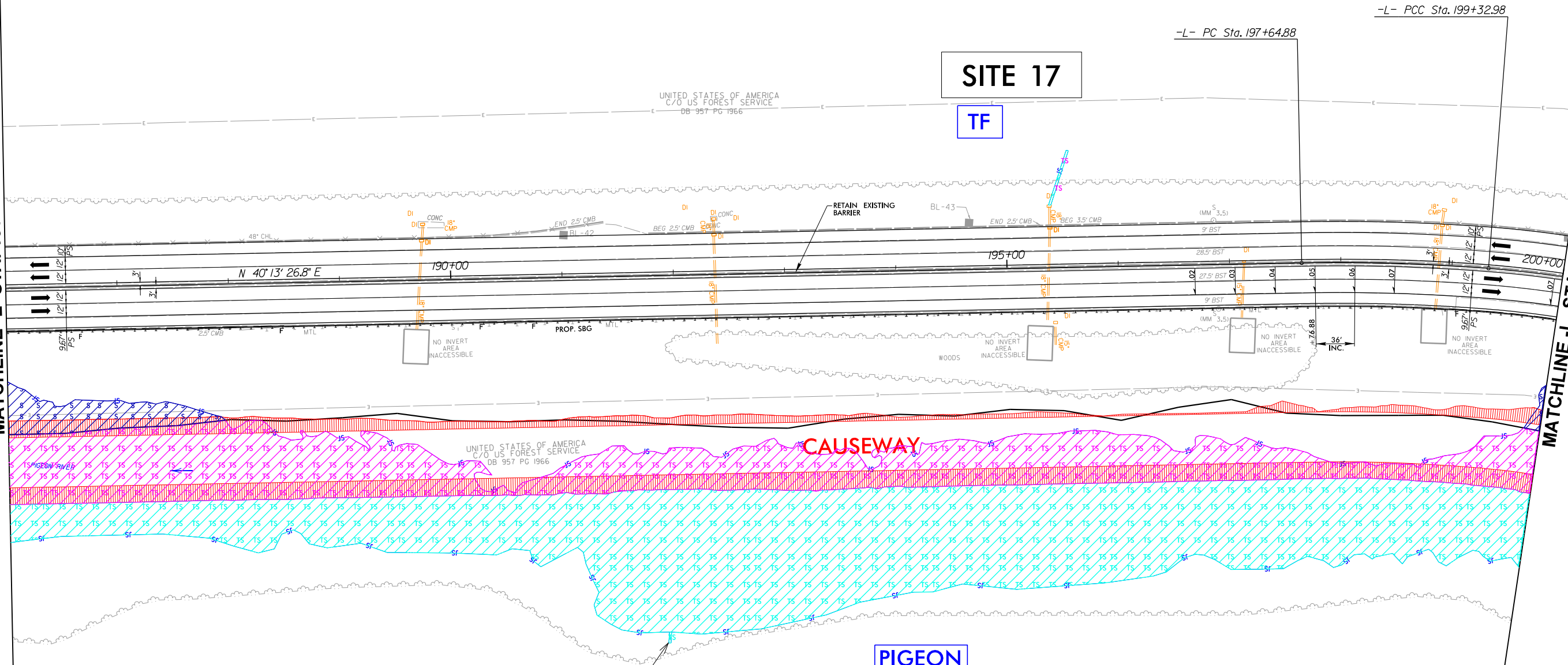




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6/3/2025  
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10:48:00

MATCHLINE -L- STA. 186+00 SEE SHEET 16



SITE 16  
PUNCHEON  
CAMP BRANCH

PIGEON  
RIVER  
SITE 1

-L-  
PI Sta 198+49.00  
 $\Delta = 5^\circ 31' 10.3''$  (RT)  
D = 3' 17' 00.3"  
L = 168.10'  
T = 84.12'  
R = 1,745.00'  
DS = 55 MPH  
SE = EXIST.  
PI Sta 201+76.75  
 $\Delta = 28^\circ 55' 44.0''$  (RT)  
D = 6' 03' 47.0"  
L = 477.13'  
T = 243.77'  
R = 945.00' \*  
DS = 50 MPH  
SE = EXIST.  
\* DESIGN EXCEPTION

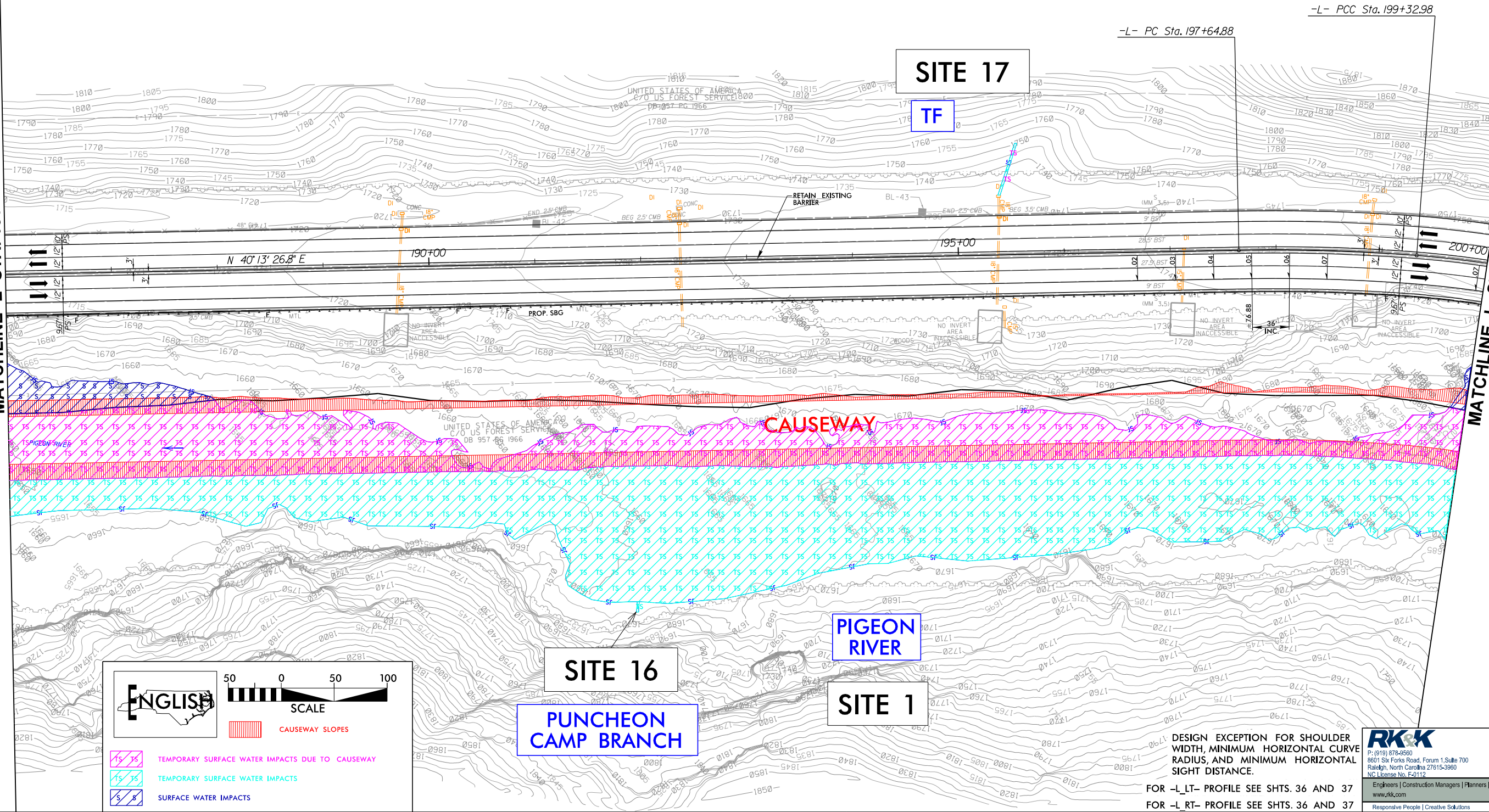


PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 17
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 31 OF 62		
REVISED 5/28/2025		

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.  
FOR -L- LT- PROFILE SEE SHTS. 36 AND 37  
FOR -L- RT- PROFILE SEE SHTS. 36 AND 37

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MATCHLINE -L- STA. 186+00 SEE SHEET 16



-L-  
PI Sta 198+49.00  
 $\Delta = 5^\circ 31' 10.3''$  (RT)  
 $D = 3^\circ 17' 00.3''$   
 $L = 168.10'$   
 $T = 84.12'$   
 $R = 1,745.00'$   
 $DS = 55$  MPH  
 $SE = EXIST.$

PI Sta 201+76.75  
 $\Delta = 28^\circ 55' 44.0''$  (RT)  
 $D = 6^\circ 03' 47.0''$   
 $L = 477.13'$   
 $T = 243.77'$   
 $R = 945.00' *$   
 $DS = 50$  MPH  
 $SE = EXIST.$   
\* DESIGN EXCEPTION



PROJECT REFERENCE NO.		SHEET NO.
1-40 PIGEON RIVER		17
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 32 OF 62		
REVISED 5/28/2025		



8/17/99

6/3/2025  
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18-00000

-L-			-L_WB-	-L_EB-
PI Sta 201+76.75	PI Sta 208+12.58	PI Sta 212+83.67	PI Sta 10+87.39	PI Sta 10+99.04
$\Delta = 28^{\circ}55'44.0"$ (RT)	$\Delta = 46^{\circ}34'41.4"$ (RT)	$\Delta = 13^{\circ}59'05.8"$ (RT)	$\Delta = 5^{\circ}15'59.8"$ (RT)	$\Delta = 7^{\circ}50'31.8"$ (RT)
D = 6'03'47.0"	D = 6'07'40.4"	D = 6'11'38.9"	D = 3'00'56.0"	D = 3'57'54.4"
L = 477.13'	L = 760.10'	L = 225.78'	L = 174.65'	L = 197.78'
T = 243.77'	T = 402.46'	T = 113.45'	T = 87.39'	T = 99.04'
R = 945.00' *	R = 935.00' *	R = 925.00' *	R = 1,900.00'	R = 1,445.00'
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

\* DESIGN EXCEPTION

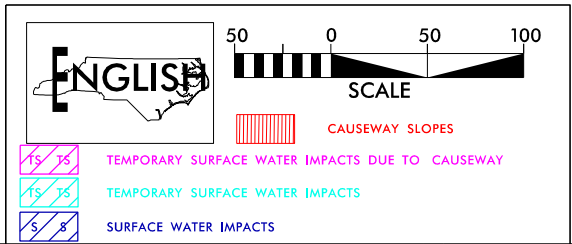
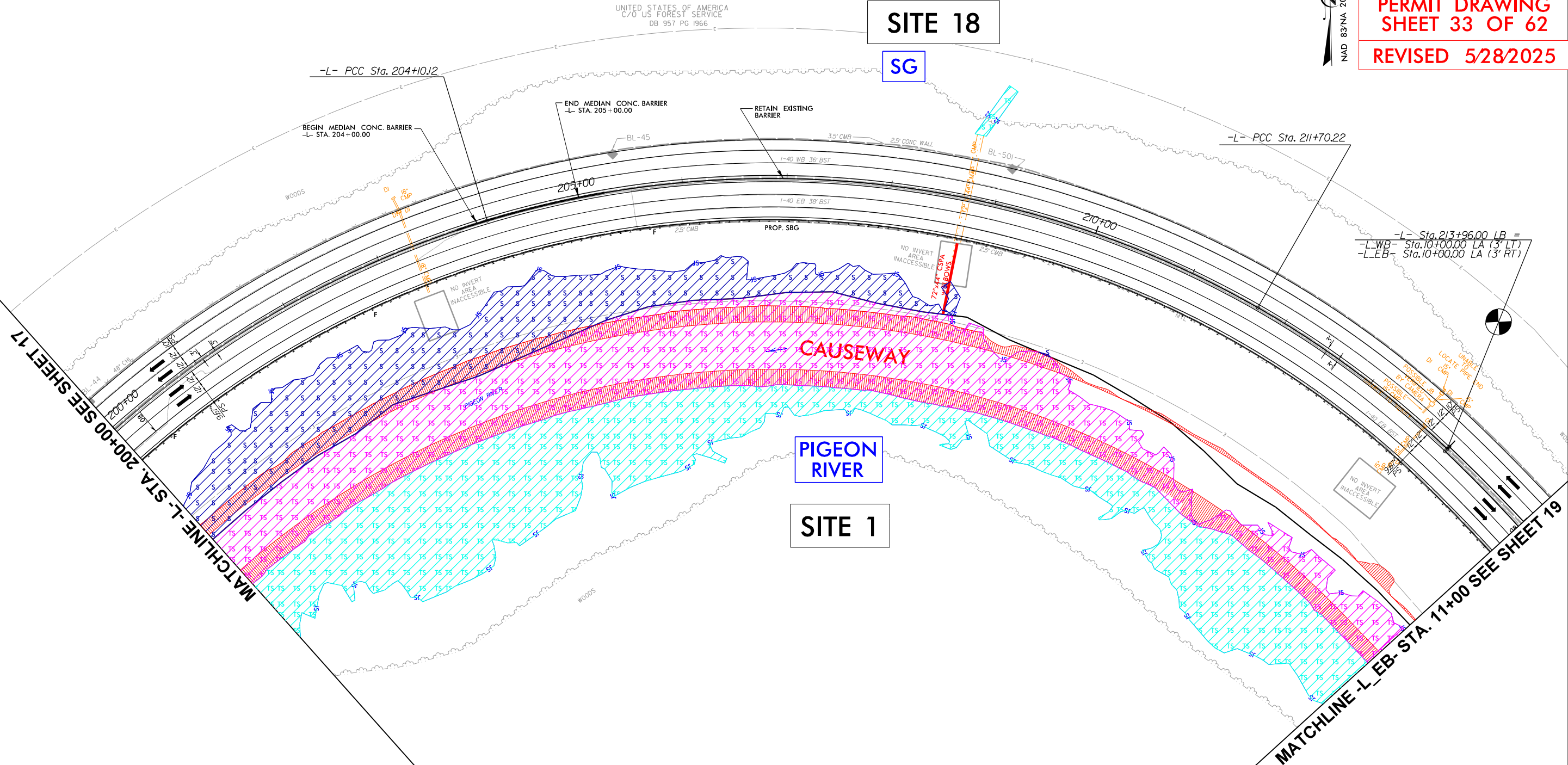
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SITE 18

SG

NAD 83/NA 2011

PROJECT REFERENCE NO.		SHEET NO.
1-40 PIGEON RIVER		18
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 33 OF 62		
REVISED 5/28/2025		



DESIGN EXCEPTION FOR SHOULDER  
WIDTH, MINIMUM HORIZONTAL CURVE  
RADIUS, AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

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FOR -L\_WB- PROFILE SEE SHEET 39  
FOR -L\_EB- PROFILE SEE SHEET 39  
FOR -L\_LT- PROFILE SEE SHTS. 37 AND 38  
FOR -L\_RT- PROFILE SEE SHTS. 37 AND 38



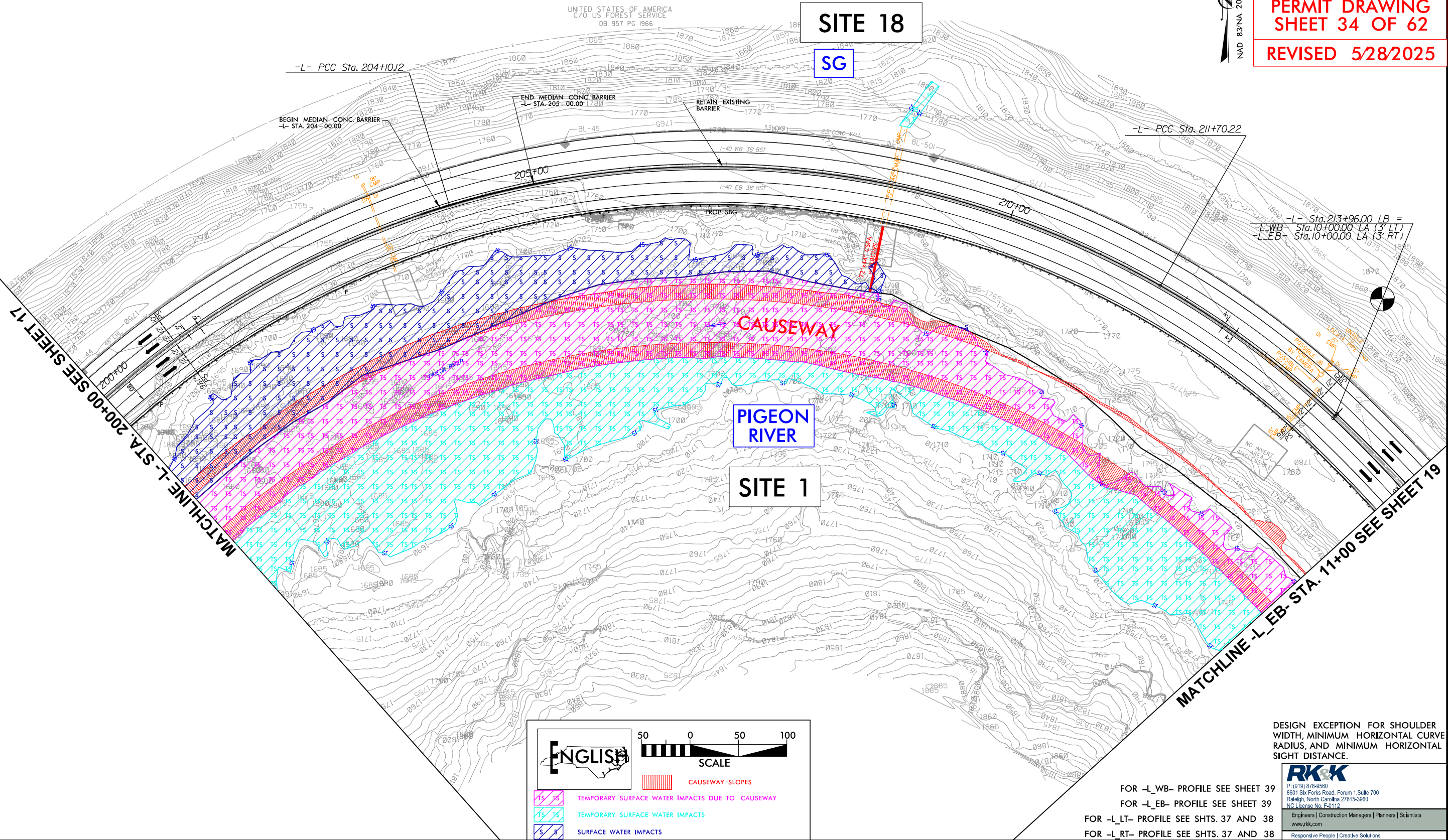
8/17/99

6/3/2025  
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18-00000

-L-			-L_WB-	-L_EB-
PI Sta 201+76.75	PI Sta 208+12.58	PI Sta 212+83.67	PI Sta 10+87.39	PI Sta 10+99.04
$\Delta = 28^{\circ}55'44.0"$ (RT)	$\Delta = 46^{\circ}34'41.4"$ (RT)	$\Delta = 13^{\circ}59'05.8"$ (RT)	$\Delta = 5^{\circ}15'59.8"$ (RT)	$\Delta = 7^{\circ}50'31.8"$ (RT)
D = 6'03'47.0"	D = 6'07'40.4"	D = 6'11'38.9"	D = 3'00'56.0"	D = 3'57'54.4"
L = 477.13'	L = 760.10'	L = 225.78'	L = 174.65'	L = 197.78'
T = 243.77'	T = 402.46'	T = 113.45'	T = 87.39'	T = 99.04'
R = 945.00' *	R = 935.00' *	R = 925.00' *	R = 1,900.00'	R = 1,445.00'
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

\* DESIGN EXCEPTION

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 18
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 34 OF 62		
REVISED 5/28/2025		

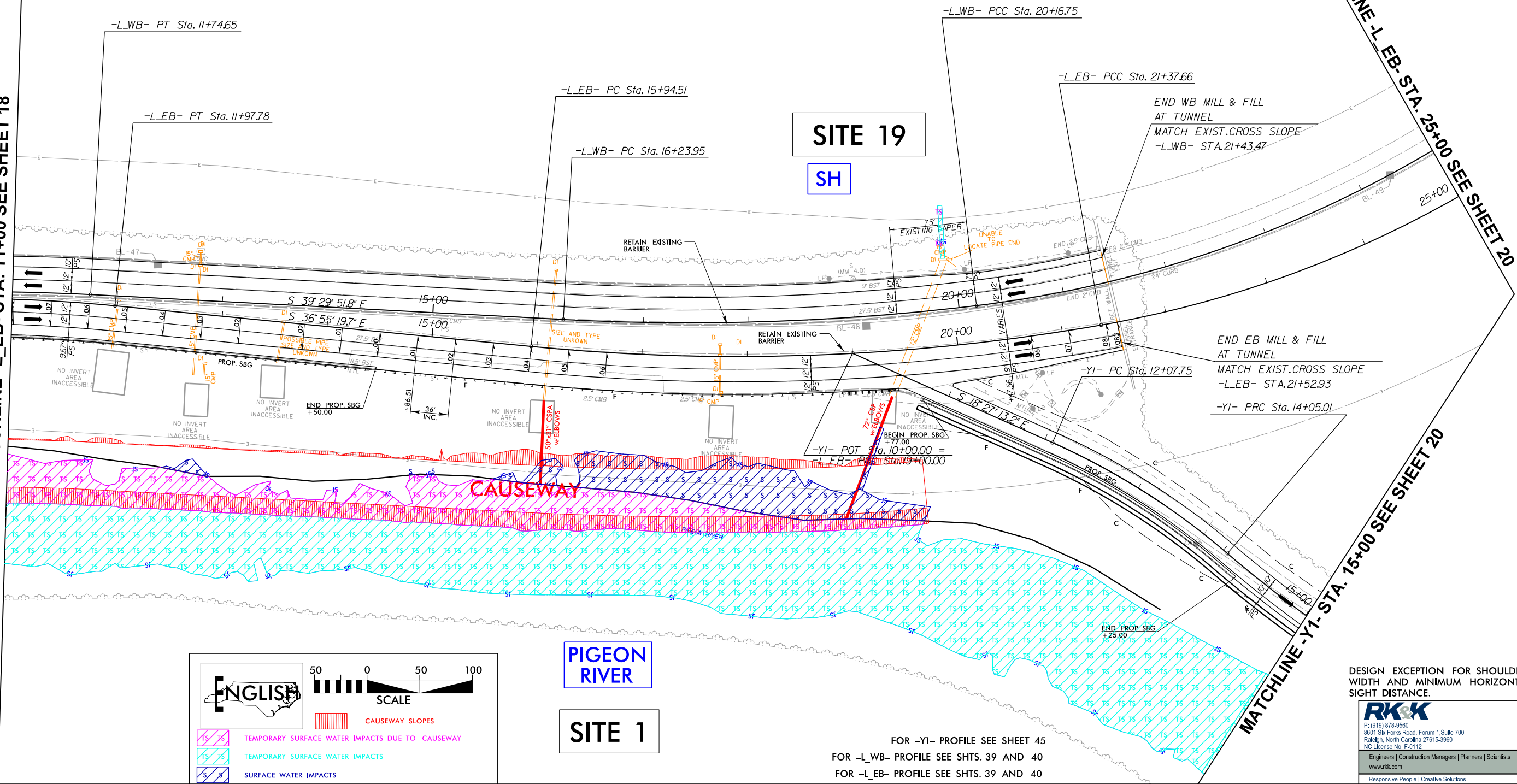




8/17/99

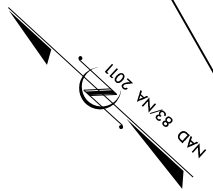
6/3/2025  
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19-EB-001.dwg

MATCHLINE -L\_EB- STA. 11+00 SEE SHEET 18



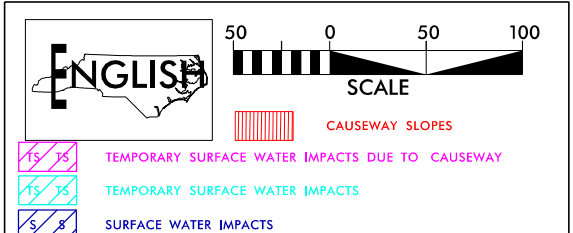
-L_WB-			-L_EB-		
PI Sta 10+87.39 Δ = 5' 15' 59.8" (RT) D = 3' 00' 56.0" L = 174.65' T = 87.39' R = 1,900.00' DS = 55 MPH SE = EXIST.	PI Sta 18+20.84 Δ = 9' 52' 15.8" (LT) D = 2' 30' 46.7" L = 392.80' T = 196.89' R = 2,280.00' DS = 55 MPH SE = EXIST.	PI Sta 27+54.98 Δ = 67' 29' 30.5" (LT) D = 5' 11' 06.5" L = 1,301.64' T = 738.22' R = 1,105.00' DS = 55 MPH SE = EXIST.	PI Sta 10+99.04 Δ = 7' 50' 31.8" (RT) D = 3' 57' 54.4" L = 197.78' T = 99.04' R = 1,445.00' DS = 55 MPH SE = EXIST.	PI Sta 18+67.75 Δ = 15' 28' 57.7" (LT) D = 2' 51' 01.9" L = 543.15' T = 273.24' R = 2,010.00' DS = 55 MPH SE = EXIST.	PI Sta 27+03.05 Δ = 56' 36' 04.5" (LT) D = 5' 27' 24.3" L = 1,037.27' T = 565.38' R = 1,050.00' DS = 55 MPH SE = EXIST.
-YI-					
PI Sta 12+68.89 Δ = 10' 16' 31.4" (RT) D = 8' 25' 33.1" L = 121.95' T = 61.14' R = 680.00' DS = 20 MPH SE = EXIST.	PI Sta 15+54.79 Δ = 7' 58' 12.3" (LT) D = 4' 35' 01.2" L = 173.88' T = 87.08' R = 1,250.00' DS = 20 MPH SE = EXIST.				

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MATCHLINE -L\_EB- STA. 25+00 SEE SHEET 20

MATCHLINE -YI- STA. 15+00 SEE SHEET 20



PIGEON RIVER

SITE 1

FOR -YI- PROFILE SEE SHEET 45  
FOR -L\_WB- PROFILE SEE SHTS. 39 AND 40  
FOR -L\_EB- PROFILE SEE SHTS. 39 AND 40

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

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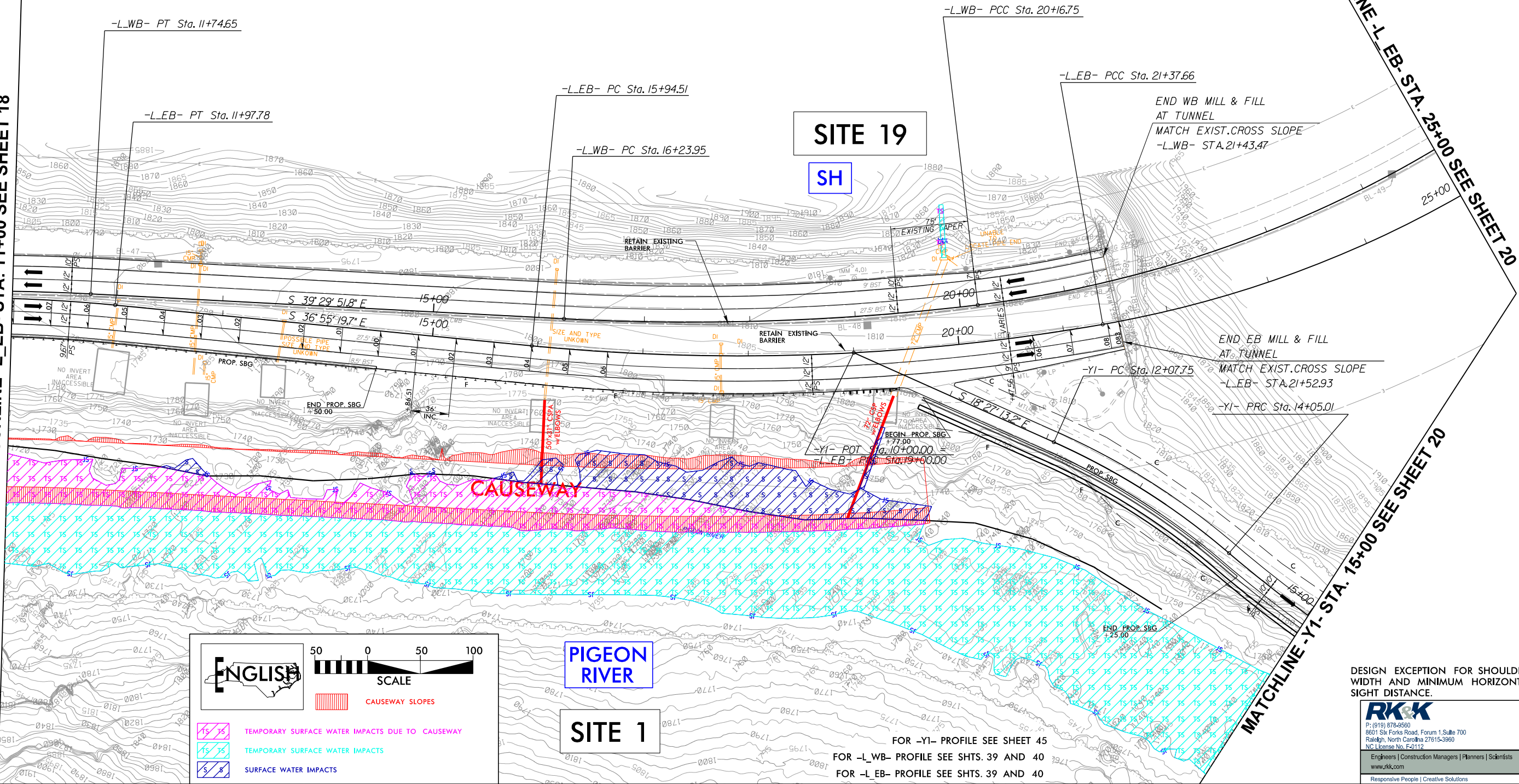
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 35 OF 62

REVISED 5/28/2025

PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 19
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

MATCHLINE -L\_EB- STA. 11+00 SEE SHEET 18



-L_WB-		
PI Sta 10+87.39 Δ = 5'15" 59.8" (RT) D = 3'00" 56.0" L = 174.65' T = 87.39' R = 1,900.00' DS = 55 MPH SE = EXIST.	PI Sta 18+20.84 Δ = 9'52" 15.8" (LT) D = 2'30" 46.7" L = 392.80' T = 196.89' R = 2,280.00' DS = 55 MPH SE = EXIST.	PI Sta 27+54.98 Δ = 67" 29' 30.5" (LT) D = 5'11" 06.5" L = 1,301.64' T = 738.22' R = 1,050.00' DS = 55 MPH SE = EXIST.

-YI-	
PI Sta 12+68.89 Δ = 10'16" 31.4" (RT) D = 8'25" 33.1" L = 121.95' T = 61.14' R = 680.00' DS = 20 MPH SE = EXIST.	PI Sta 15+54.79 Δ = 7'58" 12.3" (LT) D = 4'35" 01.2" L = 173.88' T = 87.08' R = 1,250.00' DS = 20 MPH SE = EXIST.

-L_EB-		
PI Sta 10+99.04 Δ = 7'50" 31.8" (RT) D = 3'57" 54.4" L = 197.78' T = 99.04' R = 1,445.00' DS = 55 MPH SE = EXIST.	PI Sta 18+67.75 Δ = 15'28" 57.7" (LT) D = 2'51" 01.9" L = 543.15' T = 273.24' R = 2,010.00' DS = 55 MPH SE = EXIST.	PI Sta 27+03.05 Δ = 56'36" 04.5" (LT) D = 5'27" 24.3" L = 1,037.27' T = 565.38' R = 1,050.00' DS = 55 MPH SE = EXIST.

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PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 19
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 36 OF 62

REVISED 5/28/2025

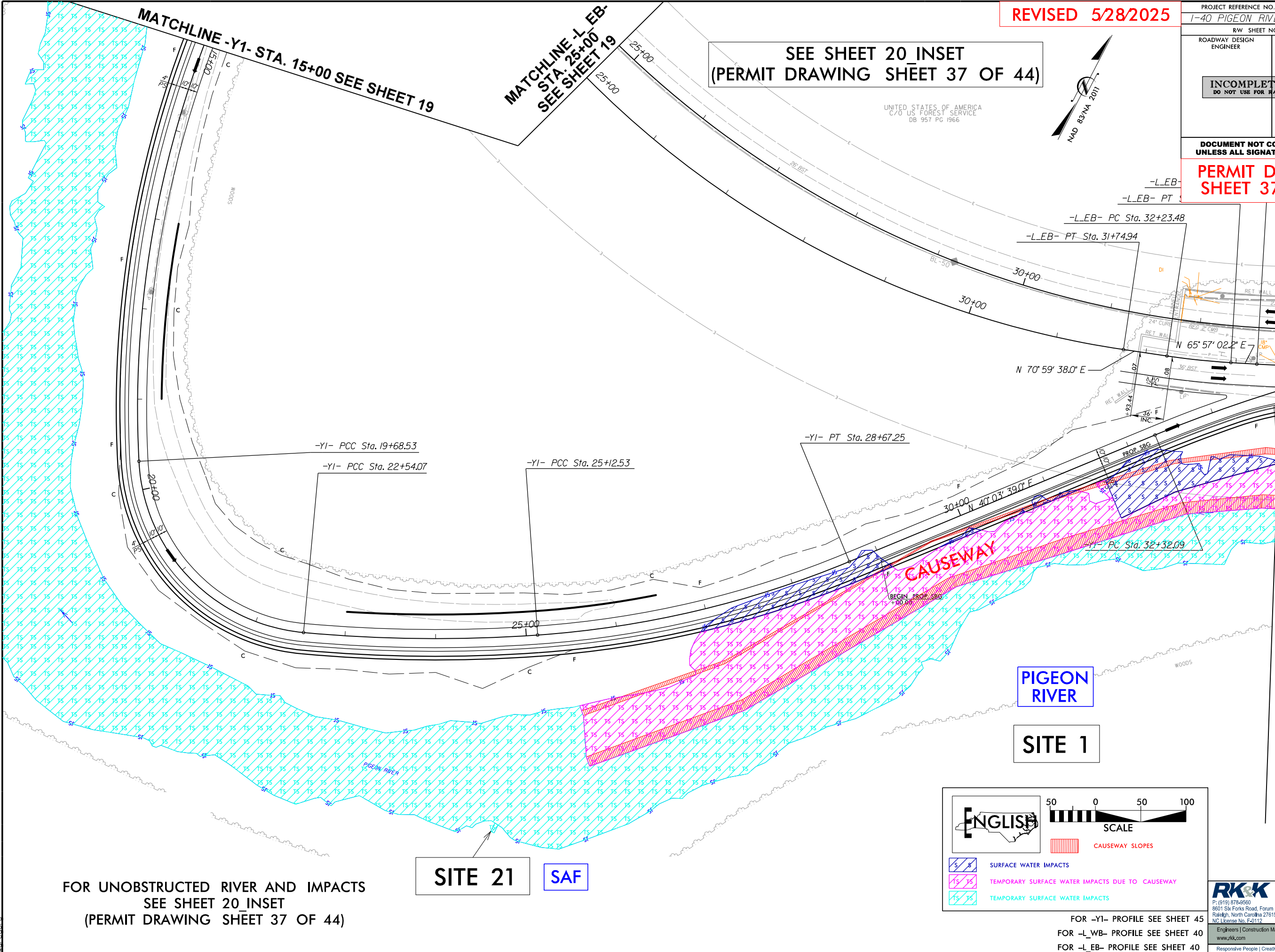
DESIGN EXCEPTION FOR SHOULDER  
WIDTH AND MINIMUM HORIZONTAL  
SIGHT DISTANCE.

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6/3/2025  
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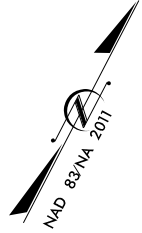


MATCHLINE -Y1- STA. 15+00 SEE SHEET 19

MATCHLINE -L\_EB- STA. 25+00 SEE SHEET 19

SEE SHEET 20 INSET  
(PERMIT DRAWING SHEET 37 OF 44)

REVISED 5/28/2025



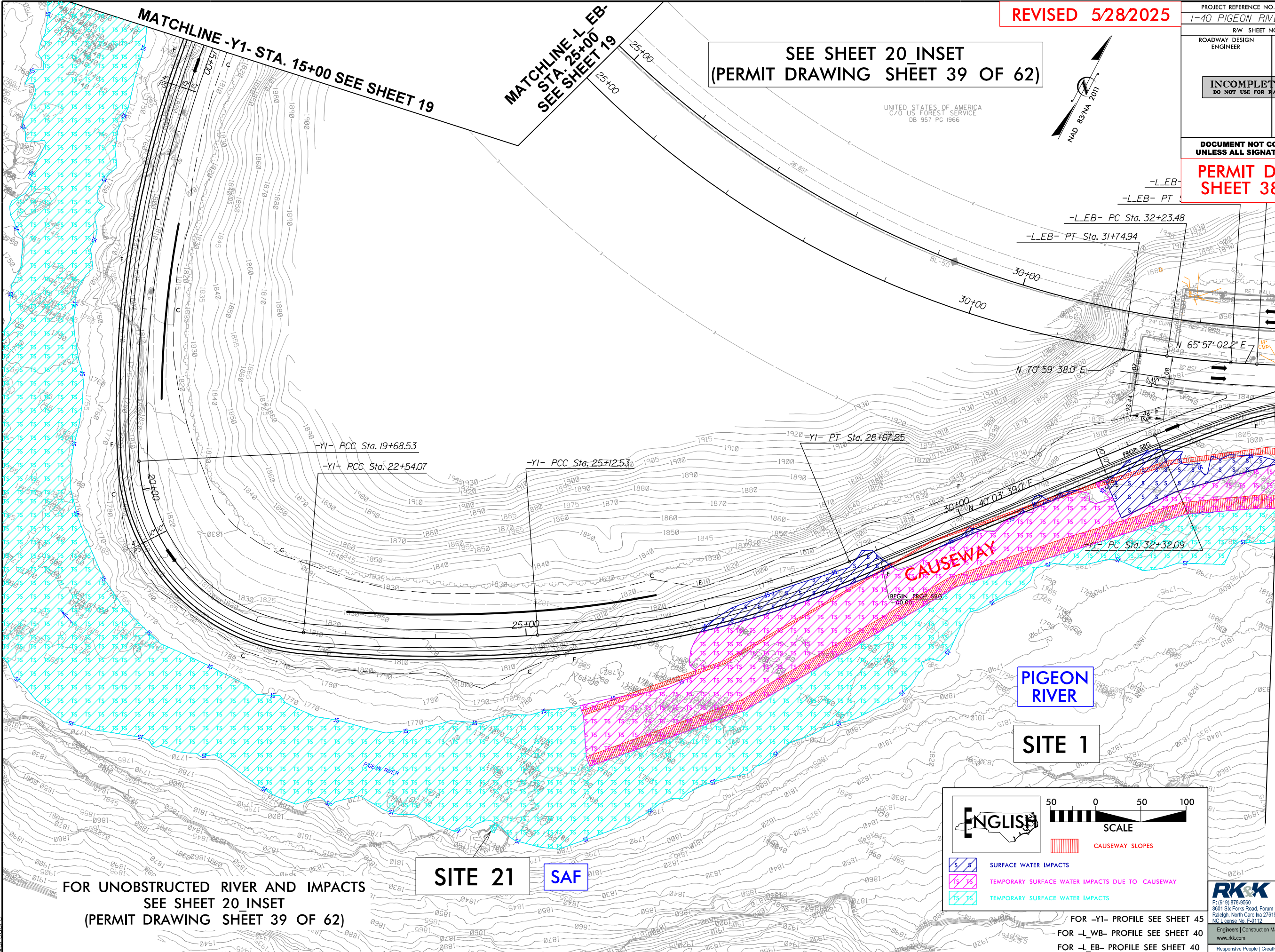
PROJECT REFERENCE NO.		SHEET NO.	
-40 PIGEON RIVER		20	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING  
SHEET 37 OF 62

MATCHLINE -L\_EB- STA. 33+50 SEE SHEET 21



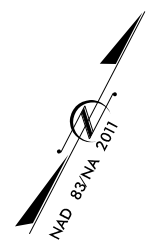
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REVISED 5/28/2025

SEE SHEET 20 INSET  
(PERMIT DRAWING SHEET 39 OF 62)

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PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		20	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 38 OF 62

FOR UNOBSTRUCTED RIVER AND IMPACTS  
SEE SHEET 20 INSET  
(PERMIT DRAWING SHEET 39 OF 62)

SITE 21 SAF

FOR -YI- PROFILE SEE SHEET 45  
FOR -L\_WB- PROFILE SEE SHEET 40  
FOR -L\_EB- PROFILE SEE SHEET 40

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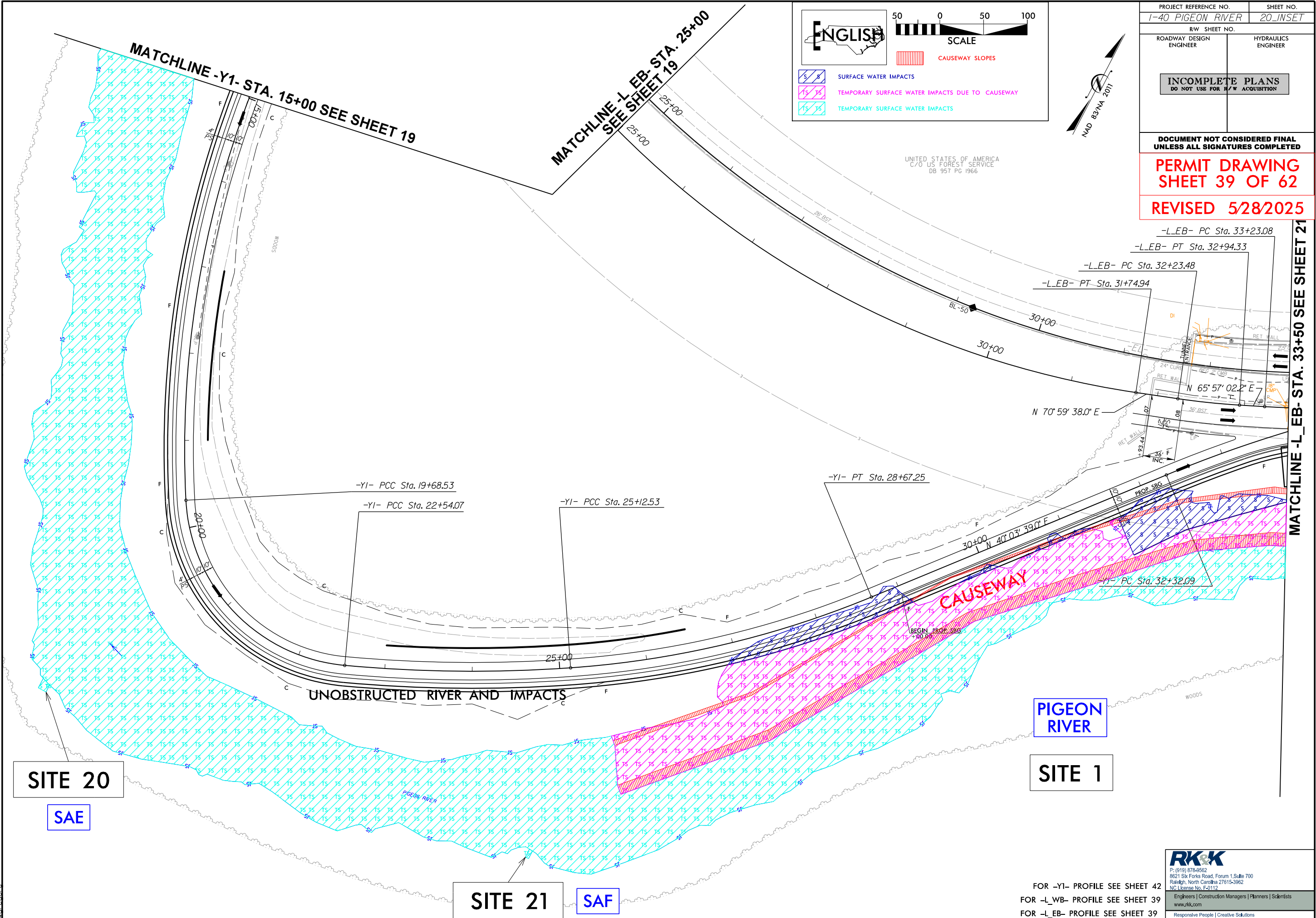
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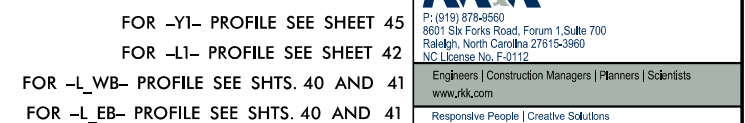
MATCHLINE -L\_EB- STA. 33+50 SEE SHEET 21



8/17/99

6/3/2025  
c:\pwworking\rkk\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_20\_inset.dgn  
RKK











8/17/99

6/3/2025  
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10:58:00 AM

MATCHLINE -L1- STA. 13+50 SEE SHEET 21

SITE 22  
SKIFFLEY CREEK

-LI- PT Sta. 14+98.34

-LI- PC Sta. 15+60.96

-LI- PCC Sta. 18+02.60

PI Sta 14+11.50 $\Delta = 2^{\circ}13'53.1''$ (RT) $D = 1^{\circ}17'04.8''$ $L = 173.70'$ $T = 86.86'$ $R = 4,460.00'$ $DS = 55$ MPH $SE =$ EXIST.	PI Sta 16+81.88 $\Delta = 5^{\circ}49'01.4''$ (RT) $D = 2^{\circ}24'26.6''$ $L = 241.63'$ $T = 120.92'$ $R = 2,380.00'$ $DS = 55$ MPH $SE =$ EXIST.	PI Sta 20+71.35 $\Delta = 3^{\circ}45'03.5''$ (RT) $D = 6^{\circ}03'47.0''$ $L = 523.68'$ $T = 268.75'$ $R = 945.00'$ $DS = 50$ MPH $SE =$ EXIST.	-LI- PI Sta 24+50.19 $\Delta = 10^{\circ}02'40.3''$ (RT) $D = 4^{\circ}03'48.7''$ $L = 247.19'$ $T = 123.10'$ $R = 1,410.00'$ $DS = 55$ MPH $SE =$ EXIST.	PI Sta 27+68.61 $\Delta = 9^{\circ}45'39.0''$ (RT) $D = 4^{\circ}00'24.1''$ $L = 283.73'$ $T = 122.10'$ $R = 1,430.00'$ $DS = 55$ MPH $SE =$ EXIST.
---	--	--	---	--

\* DESIGN EXCEPTION

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SITE 23  
GROUNDHOG CREEK

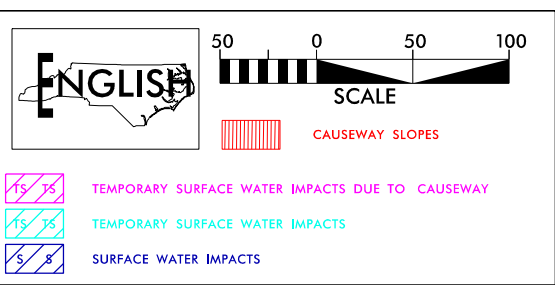
-LI- PC Sta. 23+26.28

-LI- PC Sta. 26+26.27

-LI- PT Sta. 25+73.46

PIGEON RIVER

SITE 1



FOR -L1- PROFILE SEE SHEET 41

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 22	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 42 OF 62			
REVISED 5/28/2025			



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6/3/2025  
c:\pwworking\rkk\production\dms73276\1-40 Pigeon River\_Hyd\_prm\_psh\_22\_con.dgn  
04:58:04

MATCHLINE -L1- STA. 13+50 SEE SHEET 21

SITE 22  
SKIFFLEY CREEK

-LI-				
PI Sta 14+11.50 Δ = 2°13'53" (RT) D = 1°17'04.8" L = 173.70' T = 86.86' R = 4,460.00' DS = 55 MPH SE = EXIST.	PI Sta 16+81.88 Δ = 5°49'01.4" (RT) D = 2°24'26.6" L = 241.63' T = 120.92' R = 2,380.00' DS = 55 MPH SE = EXIST.	PI Sta 20+71.35 Δ = 3°45'03.5" (RT) D = 6°03'47.0" L = 523.68' T = 268.75' R = 945.00' * DS = 50 MPH SE = EXIST.	PI Sta 24+50.19 Δ = 10°02'40.3" (RT) D = 4°03'48.7" L = 247.19' T = 123.91' R = 1,410.00' DS = 55 MPH SE = EXIST.	PI Sta 27+68.61 Δ = 9°45'39.0" (RT) D = 4°00'24.1" L = 283.73' T = 122.10' R = 1,430.00' DS = 55 MPH SE = EXIST.

\* DESIGN EXCEPTION

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SITE 23  
GROUNDHOG CREEK

CAUSEWAY

PIGEON RIVER

SITE 1

MATCHLINE -L1- STA. 27+00 SEE SHEET 23

ENGLISH

50 0 50 100

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL  
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PERMIT DRAWING  
SHEET 43 OF 62

REVISED 5/28/2025



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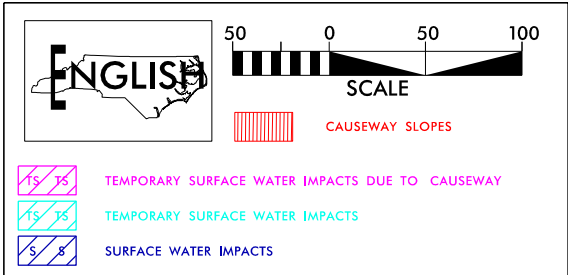
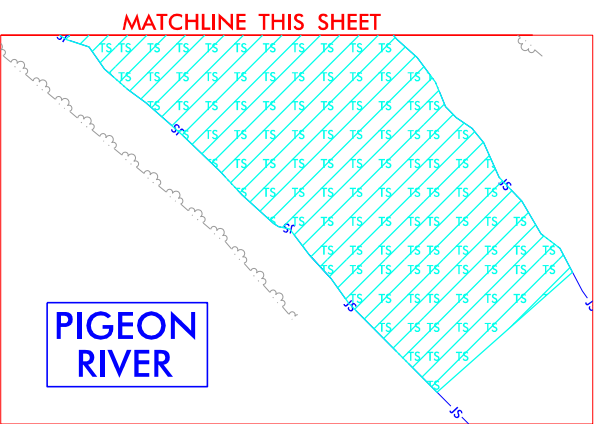
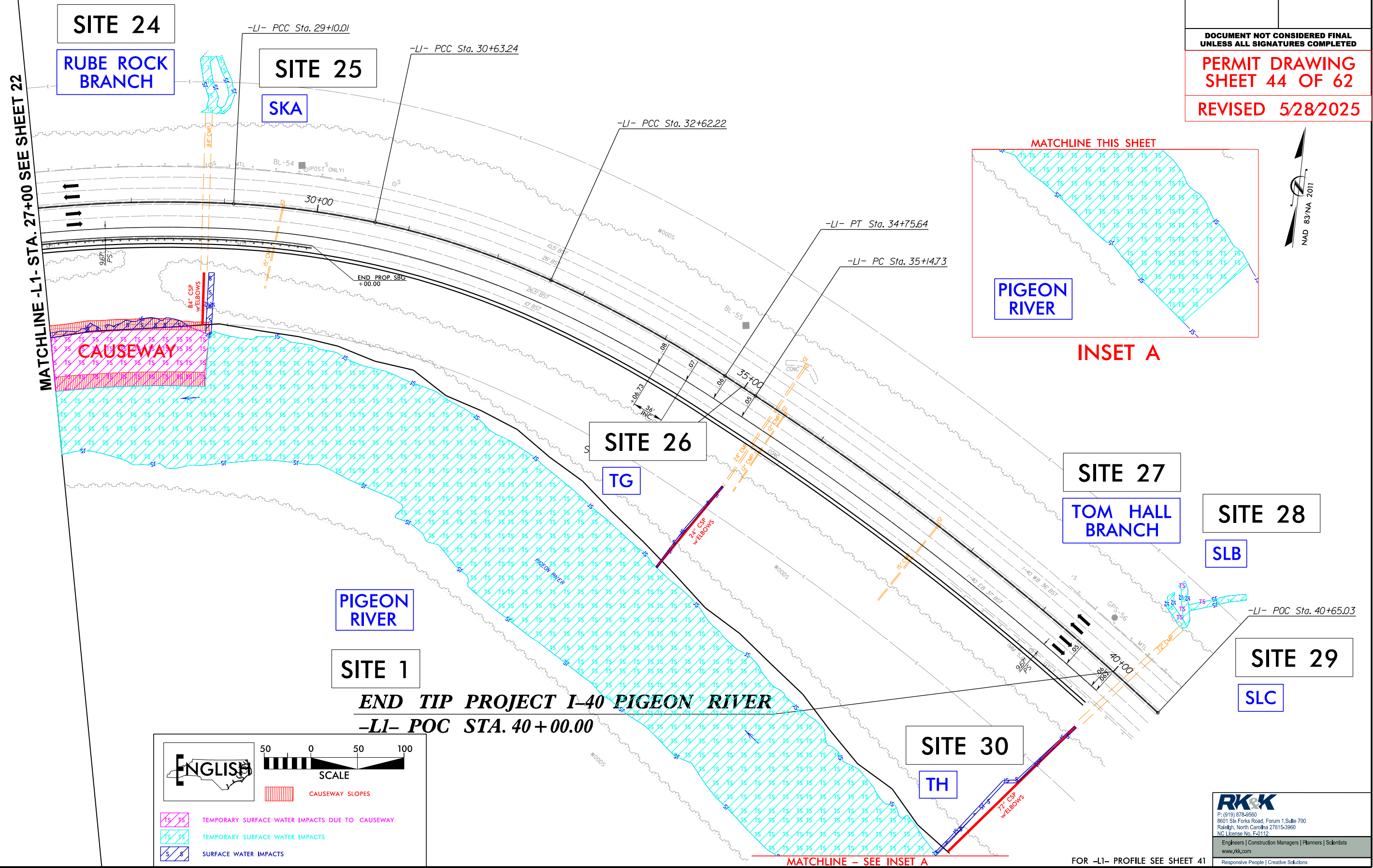
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FOR -L1- PROFILE SEE SHEET 41



6/3/2025 c:\pwworking\rkk\production\dms73276\1-40 Pigeon River\_Hyd.prm\_psh\_23.dgn 8/17/99

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 23
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 44 OF 62		
REVISED 5/28/2025		

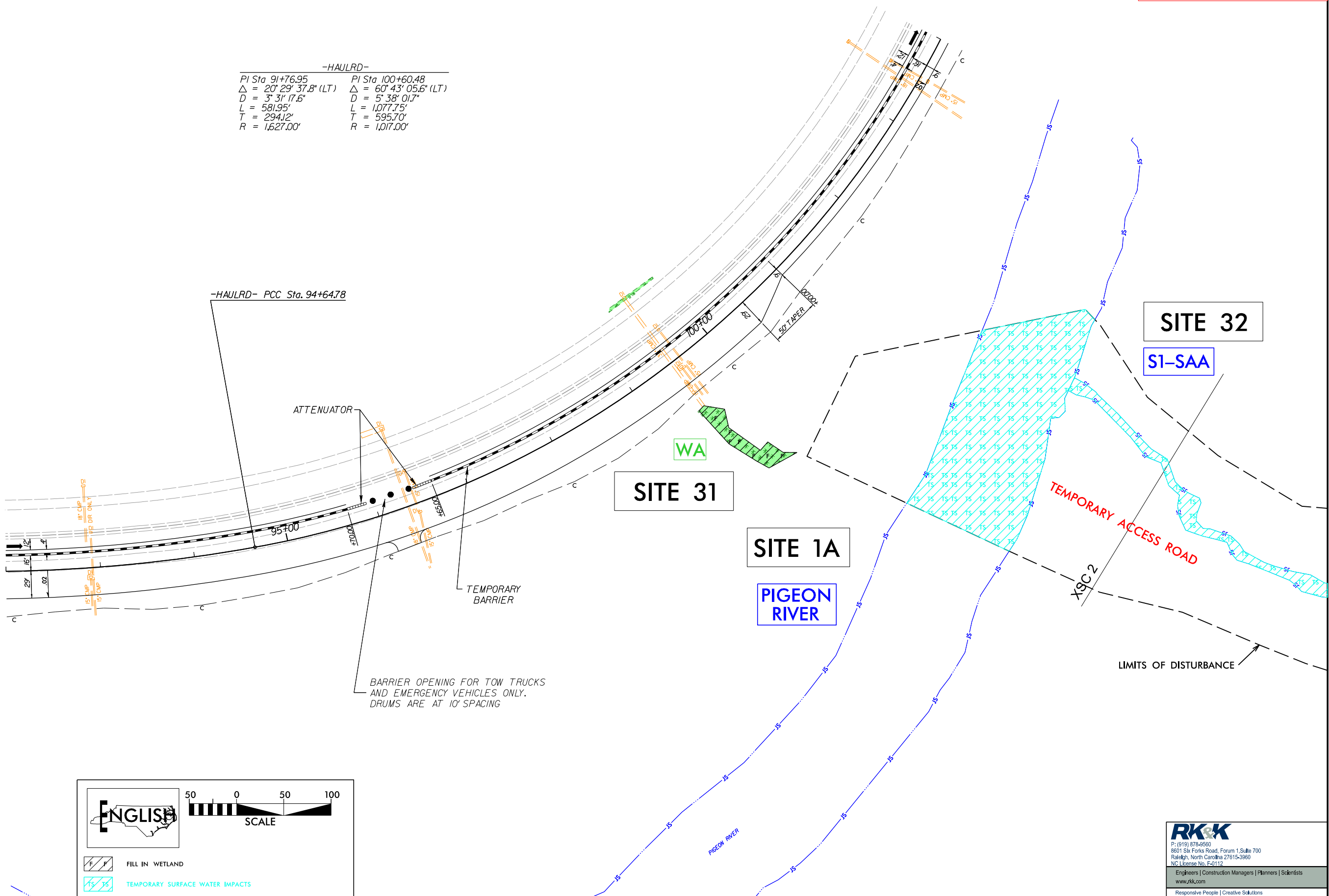


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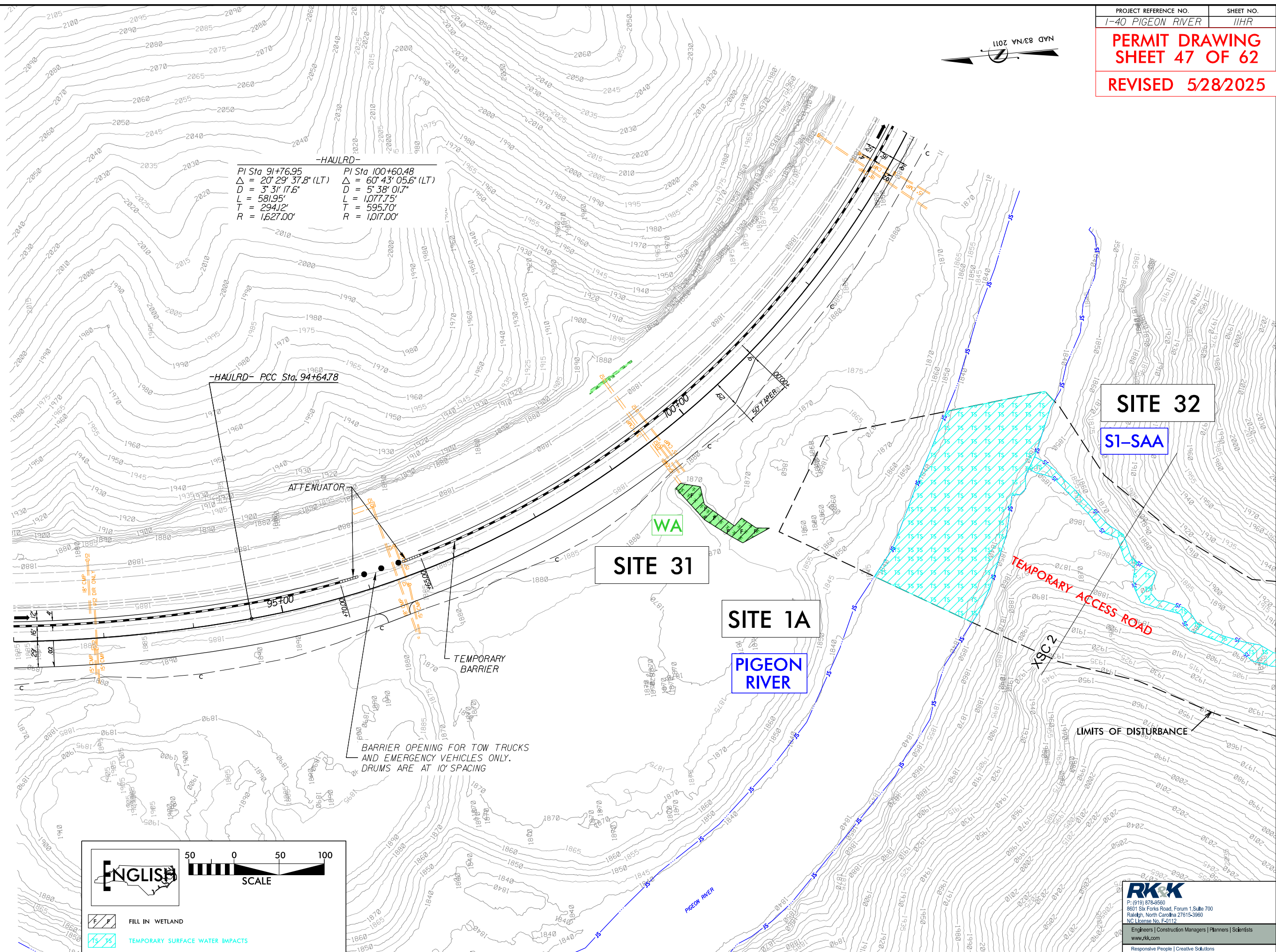


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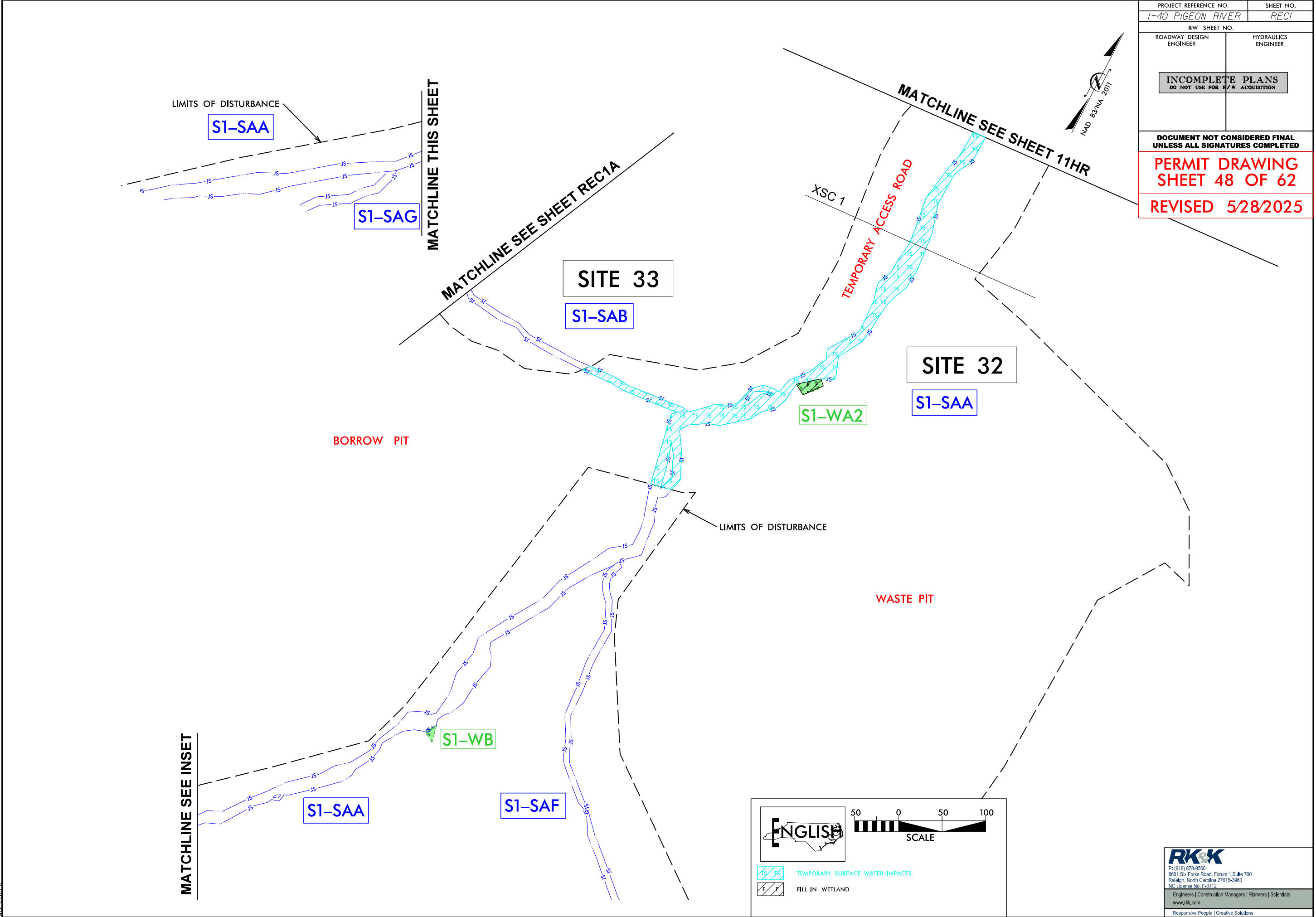


-HAULRD-	
PI Sta 91+76.95	PI Sta 100+60.48
$\Delta = 20^{\circ} 29' 37.8''$ (LT)	$\Delta = 60^{\circ} 43' 05.6''$ (LT)
$D = 3^{\circ} 31' 17.6''$	$D = 5^{\circ} 38' 01.7''$
$L = 581.95'$	$L = 1,077.75'$
$T = 294.12'$	$T = 595.70'$
$R = 1,627.00'$	$R = 1,017.00'$









PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	REC1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

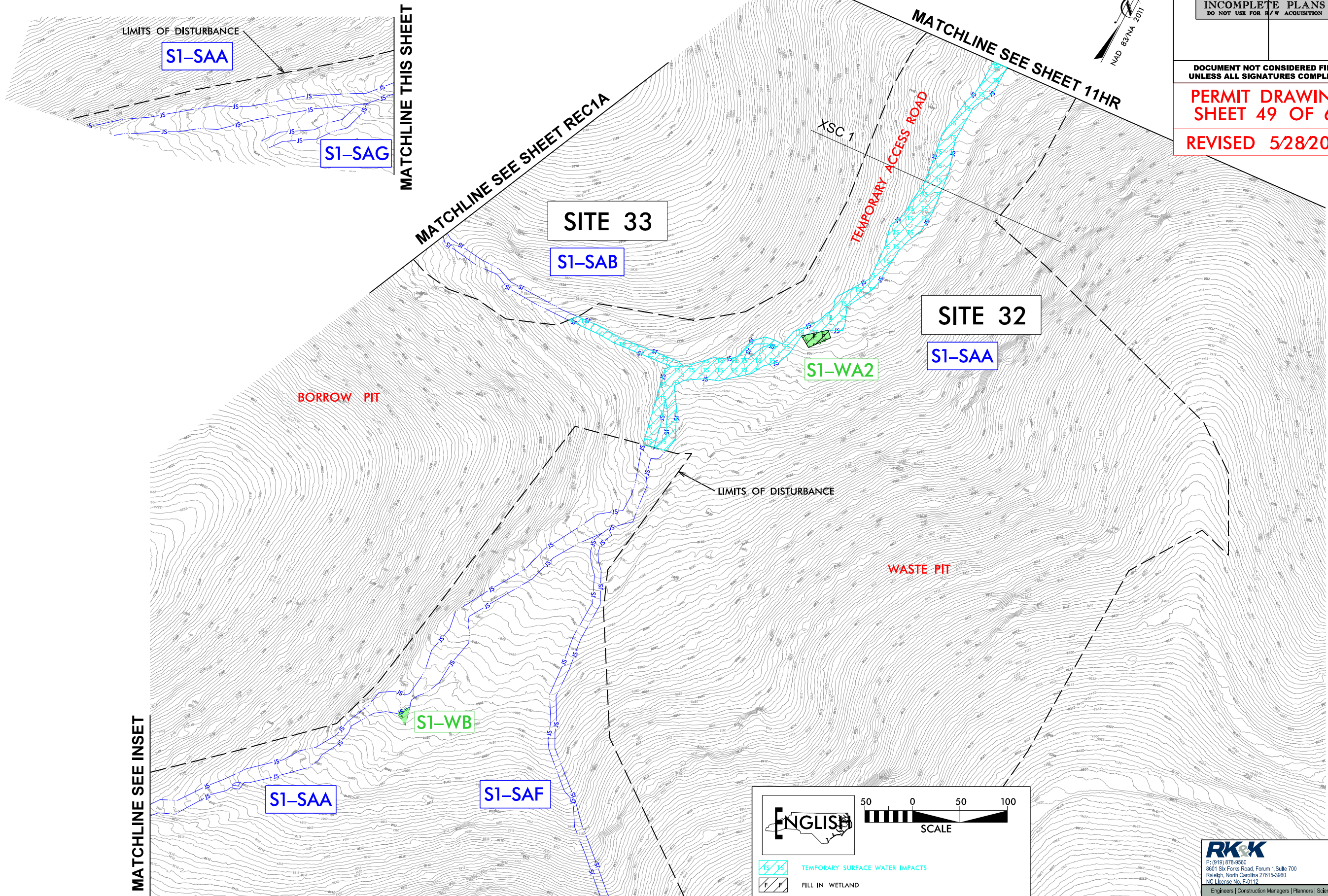
DOCUMENT NOT CONSIDERED FINAL  
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PERMIT DRAWING  
SHEET 48 OF 62

REVISED 5/28/2025

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PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		REC1	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 49 OF 62			
REVISED 5/28/2025			

ENGLISH

SCALE

TEMPORARY SURFACE WATER IMPACTS

FILL IN WETLAND

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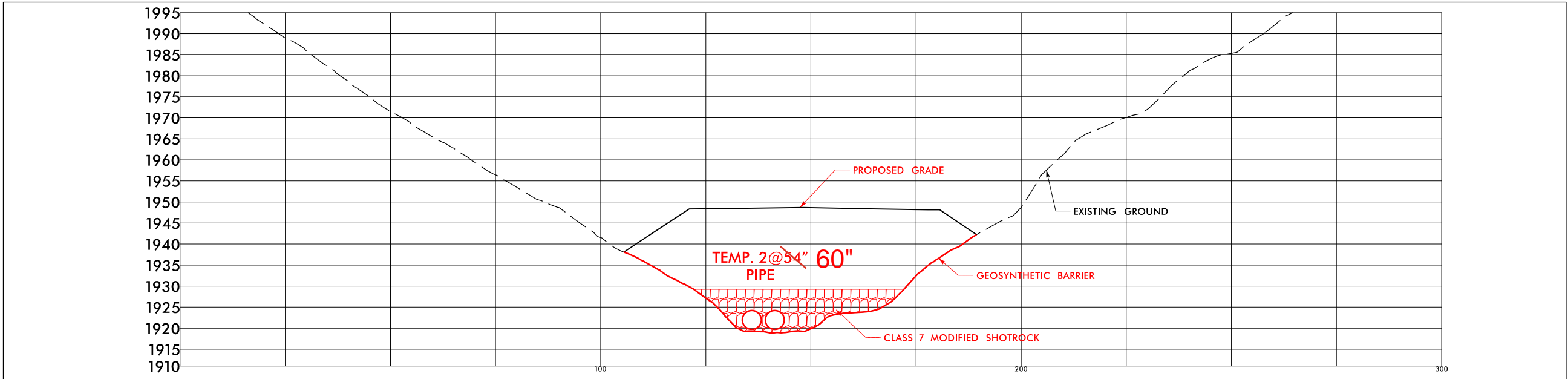


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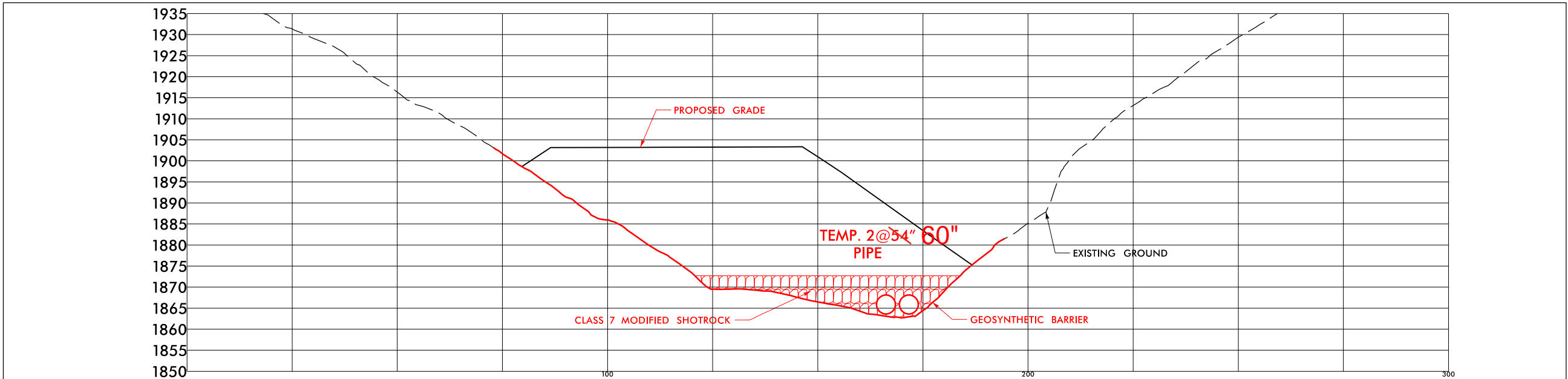
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X-REC1

PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	X-REC1

PERMIT DRAWING  
SHEET 50 OF 62  
Revised 7/15/2025



CROSS SECTION 1



CROSS SECTION 2

SCALE: N.T.S

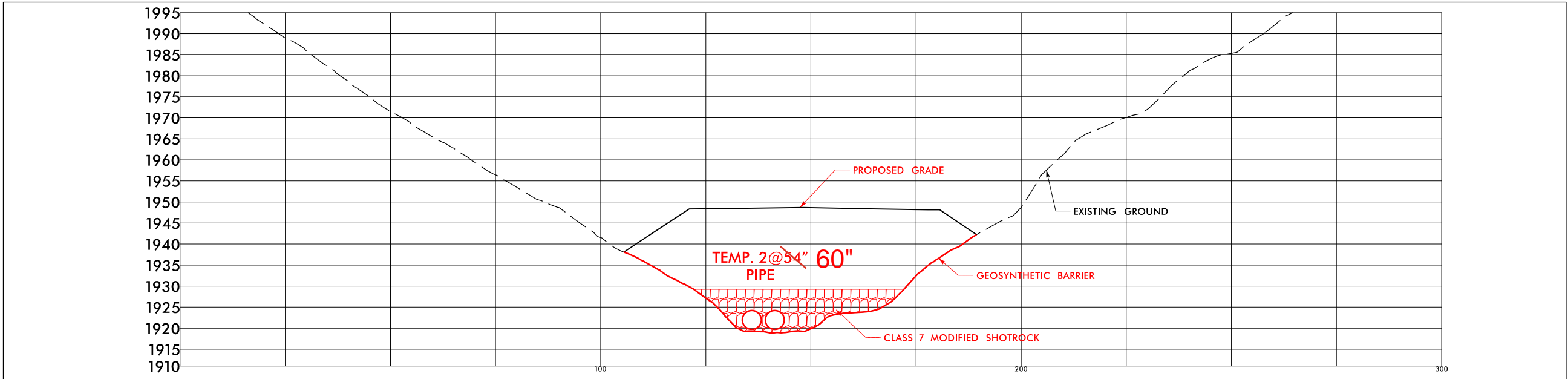


8/17/99

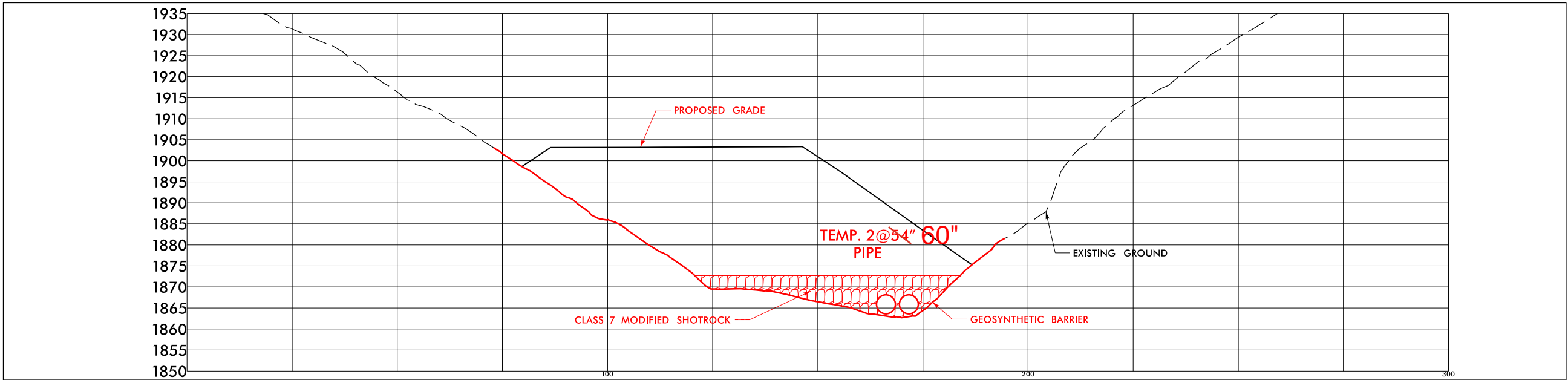
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X-REC1

PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	X-REC1

PERMIT DRAWING  
SHEET 50 OF 62  
Revised 7/15/2025



CROSS SECTION 1



CROSS SECTION 2

SCALE: N.T.S

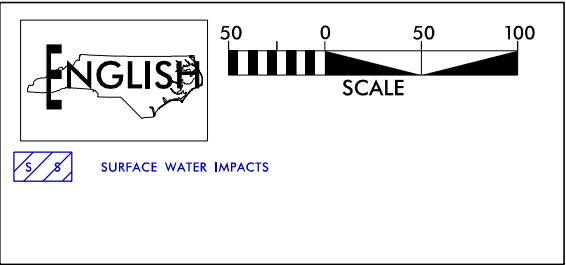
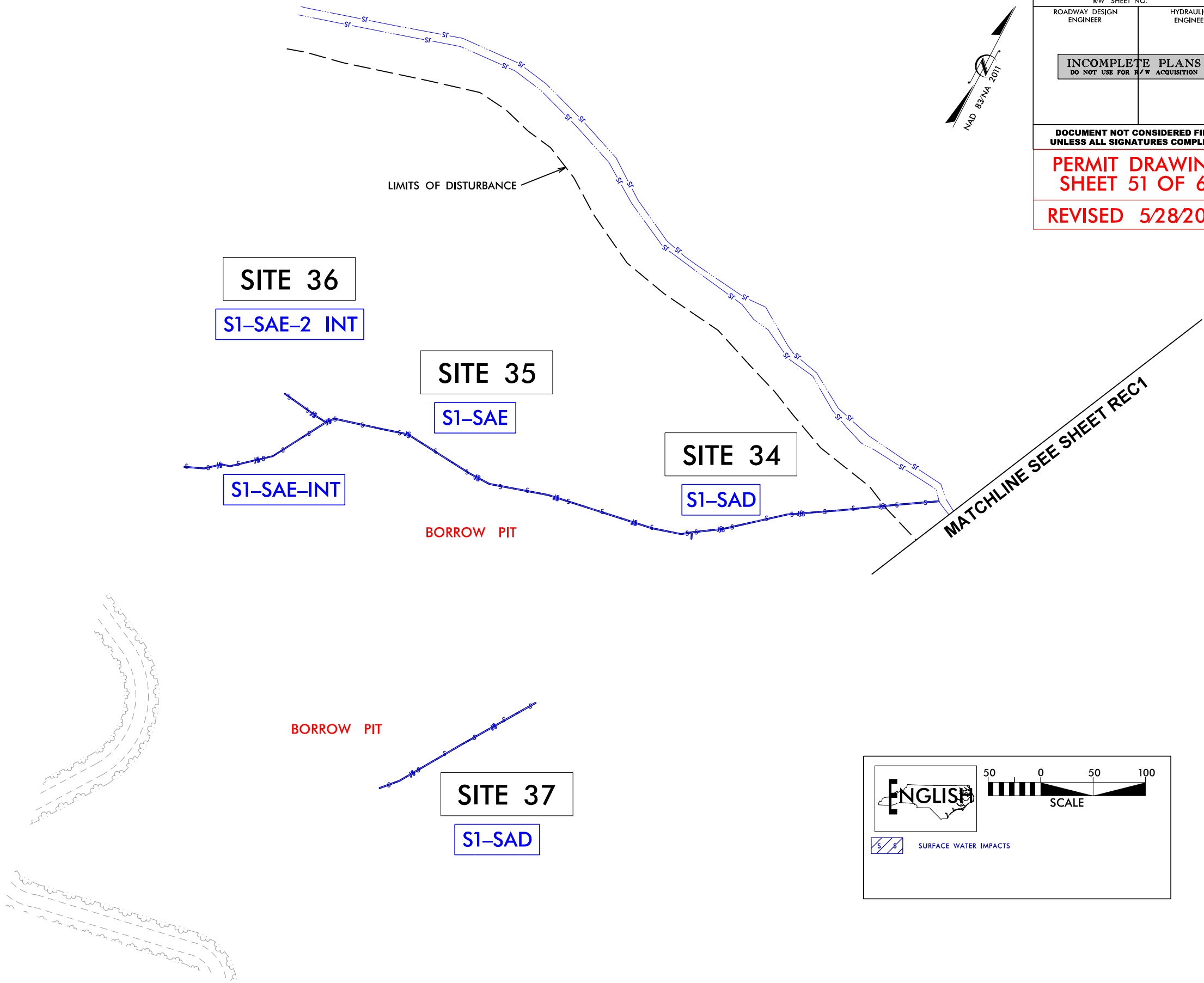


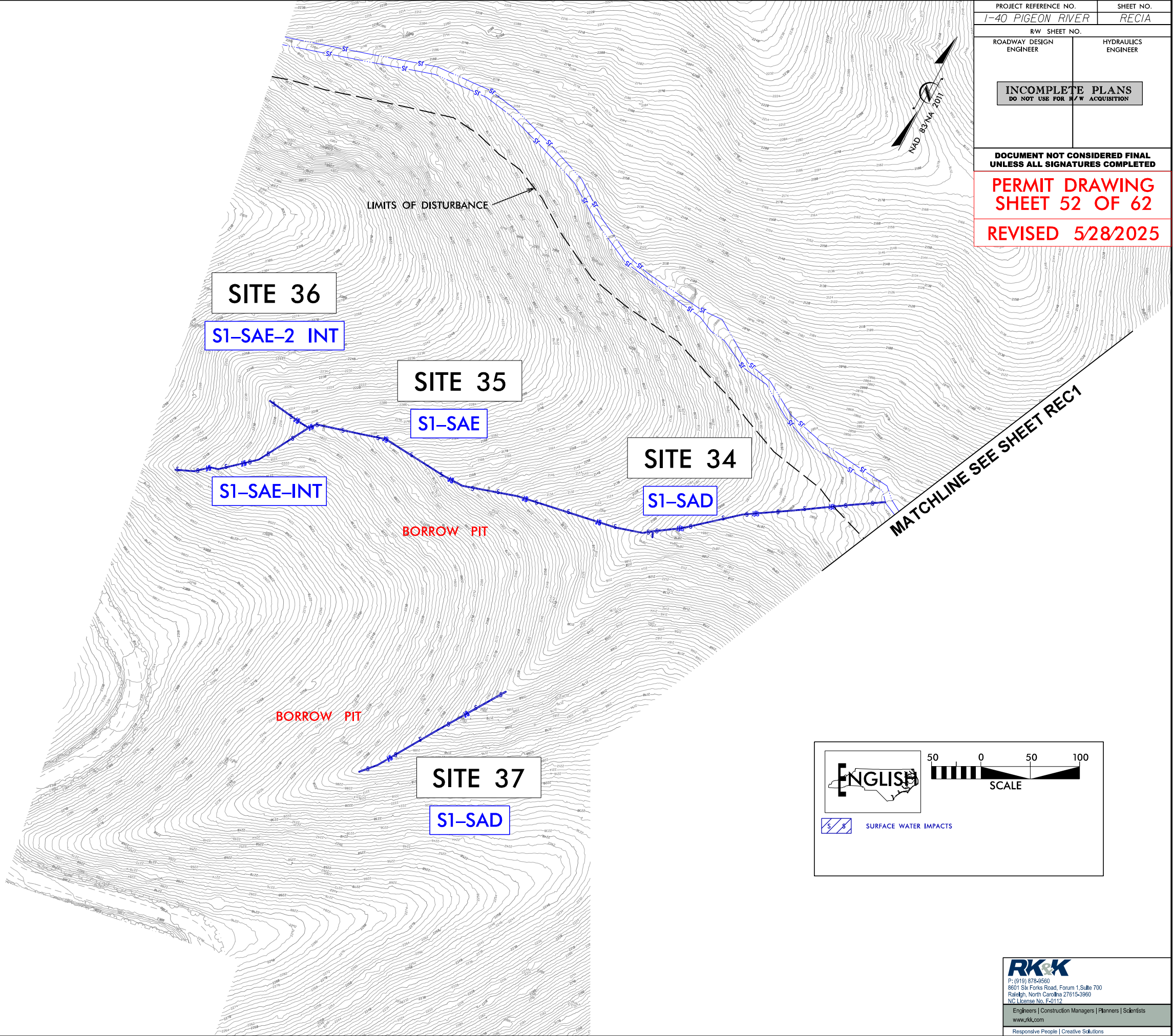
PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	REC1A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 51 OF 62

REVISED 5/28/2025









**DRAWING IS FOR REFERENCE ONLY  
SEE DRAWINGS 46-52 FOR IMPACTS**

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PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
		<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>	
PERMIT DRAWING SHEET 54 OF 62			
REVISED 5/28/2025			

PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
PERMIT DRAWING SHEET 55 OF 62			
REVISED 5/28/2025			

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PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
PERMIT DRAWING SHEET 56 OF 62			
REVISED 5/28/2025			

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WETLAND AND SURACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Causeway						0.067	0.357	542	458	
1 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Non-Causeway							2.773			
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Causeway						0.125	1.587	916	430	
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Non-Causeway							2.183			
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Causeway						0.064	1.554	856	578	
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Non-Causeway							2.286			
2	-L- Sta. 35+24 RT	SAA; Non-Causeway							0.001		11	
3	-L- Sta. 39+82 LT	Painter Branch; 84" CMP							0.004		51	
4	-L- Sta. 39+83 RT	TA; 84" CMP; Wall						0.006				
5	-L- Sta. 45+79 RT	TAA; Non-Causeway							0.001			
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Causeway; Wall						0.509	1.064	854	551	
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Non-Causeway							2.367			
6	-L- Sta. 51+19 LT	Snowbird Creek; (2) 84" CMP							0.007		50	
7	-L- Sta. 51+11 RT	TB; (2) 84" CMP						0.006				
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	0.777	14.184	3168	2129	0
<div> <div>NOTES: PR: Pigeon River</div> <div> <div>REVISED MAY 28, 2025</div> <div> <div>NC DEPARTMENT OF TRANSPORTATION</div> <div>DIVISION OF HIGHWAYS</div> <div>DECEMBER 17, 2024</div> <div>HAYWOOD COUNTY</div> <div>I-40 PIGEON RIVER</div> </div> </div> </div>												
Revised 2018 Feb								SHEET	57	OF	62	

WETLAND AND SURACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Causeway; Wall						0.301	0.556	639	544	
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Non-Causeway							2.633			
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Causeway; Wall						0.531	1.061	1050	646	
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Non-Causeway							3.725			
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Causeway; Wall						0.068	1.665	444	717	
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Non-Causeway							2.156			
8	-L- Sta. 91+32 LT	SC; 81"x59" CMAP							0.002		50	
9	-L- Sta. 91+19 RT	TC; 81"x59" CMAP; Wall						0.013				
10	-L- Sta. 99+12 LT	TD; 24" CMP							0.003			
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR; Causeway; Wall						0.434	1.860	891	481	
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR, Non-Causeway							1.915			
11	-L- 104+00 LT	TE; 42" CMP							0.002			
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Causeway; Wall						0.519	0.449	838	653	
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Non-Causeway							2.030			
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.866	18.057	3862	3091	0
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Revised 2018 Feb								SHEET	58	OF	62	



WETLAND AND SURFACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Causeway; Wall						0.733	2.113	1322	97	
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Non-Causeway							2.772			
12	-L- Sta. 132+85 RT	Mount Sterling Creek; Non-Causeway							0.008		13	
13	-L- Sta. 138+88	Runyon Creek; 112"x75" CMAP; Wall						0.005	0.005	55	49	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Causeway; Wall						0.038	0.714	275	1229	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Non-Causeway							3.085			
14	-L- 151+56	Counterfeit Branch; 84"x61" CMAP; Wall						0.007	0.005	79	50	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Causeway; Wall						0.013	1.310	126	1419	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Non-Causeway							2.220			
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Causeway; Wall						0.195	1.180	418	1044	
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Non-Causeway							2.461			
15	-L- Sta. 173+96 RT	SAC; Non-Causeway							0.001		10	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Causeway; Wall						0.113	1.278	193	1176	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Non-Causeway							2.277			
16	-L- 191+91 RT	Puncheon Camp Branch; Non-Causeway							0.001		10	
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.104	19.430	2468	5097	0
NOTES: PR: Pigeon River									REVISED MAY 28, 2025			
									NC DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DECEMBER 17, 2024 HAYWOOD COUNTY I-40 PIGEON RIVER			
Revised 2018 Feb									SHEET	59	OF	62

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	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)
17	-L- Sta. 195+45 LT	TF; 18" CMP							0.002			
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Causeway; Wall						0.853	1.668	723	491	
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Non-Causeway							1.572			
18	-L- Sta. 208+73	SG; 72"x44" CMAP; Wall						0.007	0.013	30	55	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Causeway; Wall						0.271	0.581	448	756	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Non-Causeway							2.088			
19	-L_EB- Sta. 19+61	SH; 72" CMP; Wall						0.006	0.005	62	50	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Causeway; Wall						0.242	1.043	484	1648	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Non-Causeway							4.157			
20	-Y1- 20+69 RT	SAE; Non-Causeway							0.002		11	
21	-Y1- 24+57 RT	SAF; Non-Causeway							0.001		10	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Causeway; Wall						0.040	0.821	208	1142	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Non-Causeway							2.484			
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Causeway; Wall						0.081	1.047	353	849	
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Non-Causeway							2.523			
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.500	18.007	2308	5012	0

NOTES:  
PR: Pigeon River

REVISED MAY 28, 2025

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DECEMBER 17, 2024  
HAYWOOD COUNTY  
I-40 PIGEON RIVER

WETLAND AND SURFACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
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22	-L1- Sta. 15+40	Skiffley Creek; 96" CMP; Wall						0.020	0.009	109	51	
23	-L1- Sta. 21+31 LT	Groundhog Creek; (3) 84" CMP							0.050		67	
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Causeway: Wall						0.022	0.231	134	1117	
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Non-Causeway							3.491			
24	-L1- Sta. 28+80	Rube Rock Branch; 84" CMP; Wall						0.009	0.016	67	67	
25	-L1- Sta. 29+00 LT	SKA; 84" CMP							0.009		66	
26	-L1- Sta. 35+32 RT	TG; 24" CMP						0.005				
27	-L1- Sta. 40+08 LT	Tom Hall Branch; 72" CMP							0.007		38	
28	-L1- Sta. 40+11 LT	SLB; 72" CMP							0.007		45	
29	-L1- Sta. 40+32 LT	SLC; 72" CMP							0.009		63	
30	-L1- Sta. 36+96 RT	TH; 72" CMP; Wall							0.014			
1A	-HAULRD- Sta. 100+66 to 102+39	PR; Temp. Access Road Crossing							0.607		268	
31	Cotton Patch	WA; Staging Area	0.038									
SHEET TOTALS:			0.038	0.000	0.000	0.000	0.000	0.056	4.450	310	1782	0

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REVISED MAY 28, 2025

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DECEMBER 17, 2024  
HAYWOOD COUNTY  
I-40 PIGEON RIVER

SHEET 61 OF 62

Revised 2018 Feb



WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	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)
32	Borrow Site #1	S1-SAA, S1-WA2; Temp. Access Road	0.007						0.326		960	
33	Borrow Site #1	SAB; Temp. Access Road							0.021		121	
34	Borrow Site #1	S1-SAD; Borrow Pit						0.006		244		
35	Borrow Site #1	S1-SAE/S1-SAE-INT; Borrow Pit						0.012		517		
36	Borrow Site #1	S1-SAE12 INT; Borrow Pit						0.001		48		
37	Borrow Site #1	S1-SAD; Borrow Pit						0.004		170		
SHEET TOTALS:			0.007	0.000	0.000	0.000	0.000	0.023	0.347	979	1081	0
PROJECT TOTALS:			0.045	0.000	0.000	0.000	0.000	5.326	74.475	13095	18192	0

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DECEMBER 17, 2024  
HAYWOOD COUNTY  
I-40 PIGEON RIVER

SHEET62OF62