



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

September 4, 2025

MEMORANDUM TO: Division Environmental and Construction Units

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

SUBJECT: Environmental Permits for the Replacement of Bridge 14 on NC 87 over
Cane Creek in Alamance County, Division 7, **TIP: BR-0060.**

Please find enclosed the following permits for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit 50	May 25, 2030
NC Division of Water Resources Section 401 Water Quality Certification	Individual Certification No. 008041	May 25, 2030
NC Division of Water Resources Buffer Certification	Jordan Lake Water Supply Riparian Buffer Certification	August 22, 2030

Work is authorized by the above referenced permit provided it is 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) is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at:
https://xfer.services.ncdot.gov/pdea/PermIssued/_General_Conditions_and_Certifications/

The Project Commitments "Greensheet" is located on the Preconstruction SharePoint Dashboard at:
<https://connect.ncdot.gov/site/preconstruction>



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT
WRDA/TRANSPORTATION BRANCH
3331 HERITAGE TRADE DRIVE SUITE 105
WAKE FOREST NC 27587

August 26, 2025

Regulatory Program/Division
SAW-2025-01345

Sent Via Email: wabarrett@ncdot.gov

William A. Barrett
NCDOT, Div. of Highways
ECAP
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Barrett:

This letter is in response to the application you submitted to the Wilmington District, WRDA/Transportation Branch on July 8, 2025, for a Department of the Army general permit verification. This project has been assigned the file number SAW-2025-01345 and is known as TIP BR-0060; Bridge No. 14 over Cane Creek, on NC 87. This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include impacts to impacting 0.11 acre of wetlands and 44 linear feet of stream. The project area for this determination is illustrated on the enclosed site plans/maps. The project is located at Bridge No. 14 over Cane Creek, on NC 87, at Latitude 35.88454 and Longitude -79.29585; south of Saxapahaw, Alamance County, North Carolina.

We have determined that the proposed work is authorized by RGP 50 - Work associated with bridge construction, widening, replacement, and interchanges pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C § 1344). The proposed work must be accomplished in strict accordance with the enclosed general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed plans, 1) titled *BR-0060, ALAMANCE COUNTY, LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK*, Permit Drawings, Sheets 1 through 12 of 12, received on 7/8/2025, and 2) titled *BR-0060, UTILITIES BY OTHERS PLANS, ALAMANCE COUNTY, LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK*, Utility Wetland Impacts Drawings, Sheets 1 through 4 of 4, received on 7/8/2025. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised application must be submitted to this office for written approval before work is initiated. Any deviation from

the terms and conditions of the permit, or your submitted plans, may subject the permittee to enforcement action.

This verification is valid until May 25, 2030, unless the subject general permit(s) is suspended, revoked, or is modified prior to that date such that the activity no longer complies with the terms and conditions of the general permit.

Project Specific Special Conditions:

1. **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 authorization.
2. **NLEB:** The Wilmington District, Federal Highway Administration, U.S. Fish and Wildlife Service (USFWS), and the North Carolina Department of Transportation (NCDOT) have conducted programmatic Section 7(a)(2) consultation for the Northern long-eared bat (NLEB) for NCDOT projects located in Divisions 1-8. The result of this programmatic consultation is a Programmatic Biological Opinion (PBO) issued by the USFWS titled, "Programmatic Biological Opinion – Revised, NCDOT Program Effects on the Northern Long-eared Bat in Divisions 1-8", dated December 15, 2022. This PBO contains agreed upon conservation measures which would minimize take of NLEB. As noted in the PBO, applicability of these conservation measures varies depending on the location of the project. The USFWS has documented that no reasonable and prudent measures, nor terms and conditions, are necessary or appropriate to minimize the amount or extent of incidental take of NLEB caused by the Action; therefore, the incidental take statement does not provide reasonable and prudent measures for this species. Department of the Army (DA) authorization under general permit or standard permit (Individual Permit) is conditional upon the permittee's compliance with applicable, agreed upon conservations measures of the PBO, which is incorporated by reference in this verification letter. Failure to comply with the applicable conservation measures, where a take of the NLEB occurs, would constitute an unauthorized take by the permittee, and would also constitute permittee non-compliance with this verification letter. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO and the ESA. All PBOs can be found on our website at:
<https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>.

This general permit verification and any associated authorizations does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Eric Alsmeyer, Regulatory Project Manager of the WRDA/Transportation Branch at 919.817.1570, by mail at the above address, or by email at eric.c.alsmeyer@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

Enclosures

Cc (w/enclosures): Erin Cheely, NCDOT -ECAP (by email to ekchelly@ncdot.gov)

U.S. Army Corps of Engineers (USACE) CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.		Form Approved - OMB No. 0710-0003 Expires 2027-10-31
The Agency Disclosure Notice (ADN)		
<p>The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>		
<p>PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.</p> <p>Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.</p>		
<p>Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Wilmington District, Regulatory Office.</p> <p>The certification can be submitted by email at <u>eric.c.alsmeyer</u> <u>@usace.army.mil</u> or by mail at the below address:</p> <p style="margin-left: 100px;">U.S. Army Corps of Engineers, Wilmington District Raleigh Field Office Street Address: 3331 Heritage Trade Dr, Suite 105 City: Wake Forest State: NC Zip Code: 27587</p>		
COMPLETED BY THE CORPS		
<p>Corps Action Number: <u>SAW-2025-01345</u></p> <p>Permit Type: <u>General Permit</u></p> <p>General Permit Number and Name (<i>if applicable</i>): <u>RGP 50: Work associated with bridge construction, widening, replacement, and interchanges</u></p> <p>Name of Permittee: <u>NCDOT, Div. of Highways</u></p> <p>Project Name: <u>TIP BR-0060; Bridge No. 14 over Cane Creek, on NC 87</u></p> <p>Project Location (<i>physical address</i>): <u>Snow Camp, North Carolina</u></p>		
PERMITTEE'S CERTIFICATION		
<p>Date Work Started: _____</p> <p>Date Work Completed: _____</p> <p>Enclose photographs showing the completed project (<i>if available</i>).</p> <p>I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.</p>		
Name	Date	Signature

US Army Corps of Engineers – Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NCDOT, Div. of Highways

Project Name: TIP BR-0060; Bridge No. 14 over Cane Creek, on NC 87

Action ID: SAW-2025-01345

County: Alamance

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

Instructions to Sponsor: The Sponsor verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements

Permitted Impacts Requiring Mitigation*:

8-digit HUC and Basin: 03030002, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.08		

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03030002, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.16		

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the Wilmington District, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDMS

Name of Sponsor's Authorized Representative: Beth Harmon

Elizabeth Harmon

Signature of Sponsor's Authorized Representative

08/26/2025

Date of Signature

USACE Wilmington District – MRTF Page 2

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the District is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. When NCDMS provides mitigation for authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the District Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the District, the Sponsor must obtain case-by-case approval from the District Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Eric Alsmeyer
USACE Field Office: WRDA/Transportation Branch
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
Email: eric.c.alsmeyer@usace.army.mil



Wilmington District Project Manager Signature

August 26, 2025

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>

JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director



August 22, 2025

Mr. William Barrett
NCDOT - Environmental Coordination and Permitting (ECAP)
1598 Mail Service Center
Raleigh, NC 27699
wabarrett@ncdot.gov

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with
ADDITIONAL CONDITIONS for the proposed replacement of Bridge 14 on NC 87 over Cane
Creek, in Eli Whitney, Alamance County. NCDWR Project No. 20250885
NCDOT TIP: BR-0060. WBS# 67060.1.1

Dear Mr. Barrett,

Attached hereto is a copy of Certification No. 008041 issued to the NCDOT dated August 22, 2025.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Signed by:

Faith Hardin

3185423002EA45E...

Richard E. Rogers, Jr. Director
Division of Water Resources

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Erin Cheely, NCDOT
Beth Harmon, Division of Mitigation Services

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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 44 linear feet of jurisdictional streams and 0.098 acres of wetlands in Alamance County. The project shall be constructed pursuant to the application dated July 7, 2025, and additional information provided via email on August 20th, 2025. The authorized impacts are described below:

Stream Impacts in the Cape Fear River Basin

Site	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)
1-Bridge – Existing Pier Removal	0	44	44
Totals	0	44	44

Total Stream Impacts: 44 linear feet

Wetland Impacts in the Cape Fear River Basin

Site	Permanent Fill (ac)	Temporary Fill (ac)	Mechanized Clearing (ac)	Total Impact (ac)
1 – Detour - WA		0.021		0.021
2- Mechanized Clearing			0.025	0.025
2- Fill Slope	0.002			0.002
WU1- Mechanized Clearing			0.025	0.025
WU2- Mechanized Clearing			0.025	0.025
Totals	0.002	0.021	0.075	0.098

Total Wetland Impacts: 0.098 acres

Total Wetland Mitigation requested: 0.03 acres

***0.05 ac of the total wetland impacts are due to temporary access for utility relocations (sites WU1 and WU2).**

The application provides adequate assurance that the discharge of fill material into the waters of the Cape Fear River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application. Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner



must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7).

For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

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 may inspect the property.

Condition(s) of Certification:

Project Specific Conditions

1. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]
2. 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)]
3. 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 NCS0000250, 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)]
4. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)]
5. 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)]
6. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]
7. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]



8. Compensatory mitigation for impacts to 0.05 acres of wetlands in the Cape Fear River Basin is required in the CU 030300020505. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated July 1, 2025 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

General Conditions

1. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
2. 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)]
3. 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)]
4. 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)]
5. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
6. 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)]
7. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
8. 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)]
9. 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)]
10. Discharging hydroseed mixtures and washing out hydro seeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
11. 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]
12. 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)]



13. 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)]
14. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization 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]
15. 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.
16. 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)]
17. Upon completion of the project (including any impacts at associated borrow or waste sites), NCDOT project engineer (or appointee) shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
18. 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)]
19. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
20. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]
21. 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]
22. 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 *NCDOT 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.



23. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit. 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 Quality. Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. 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.

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 Quality. 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.

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) within sixty (60) calendar days. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

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 the 22nd day of August, 2025

DIVISION OF WATER RESOURCES

Signed by:

Faith Hardin

3185423002FA45E
Richard E. Rogers, Jr., Director

WQC No. 008041



JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director



NORTH CAROLINA
Environmental Quality

August 22, 2025

DWR # 20250885
Alamance County

Mr. William Barrett
Environmental Coordination and Permitting (ECAP)
NCDOT
1598 Mail Service Center
Raleigh, NC 27699
wabarrett@ncdot.gov

Subject: APPROVAL of JORDAN LAKE RIPARIAN BUFFER IMPACTS WITH ADDITIONAL CONDITIONS
NCDOT-Replacement of Bridge 14 on NC 87 over Cane Creek, Eli Whitney, Alamance County.
NCDOT TIP: BR-0060

Dear Mr. Barrett:

You have our approval for the impacts listed below for the purpose described in your application received by the Division of Water Resources (Division) July 7, 2025, and supporting information provided via email on August 20, 2025. These impacts are covered by the Jordan Lake Riparian Buffer Rules and the conditions listed below. Please note that you should get any other federal, state or local permits before proceeding with your project, including those required by (but not limited to) Clean Water Act Section 404 and/or 401 Authorizations, Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

The following impacts are hereby approved, provided that all of the Conditions listed below and all of the conditions of the Jordan Lake Riparian Buffer Rules are met. No other impacts are approved, including incidental impacts. [15A NCAC 02B .0267(11)].

Jordan Lake Water Supply Watershed Riparian Buffer Impacts

Site	Zone 1 Impact (sq ft)	Zone 1 Mitigable Impact (sq ft)		Zone 2 Impact (sq ft)	Zone 2 Mitigable Impact (sq ft)
1-Bridge- Allowable	10,858			7,644	
2-Parallel Impact		5,202			3,640
3-Parallel Impact		435			2,555
4-Aerial Utility Clearing (temporary)	1,953			1,300	
Totals	12,811	5,637		8,944	6,195

* n/a = Total for Site is less than 1/3 acre and 300 linear feet of impact, no mitigation required

Total Buffer Impact for Project: 33,587 square feet.

Total Buffer Mitigation Required: 11,832 square feet.

This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Authorization Certificate. If you change your project, you must notify the Division and you may be required to submit a new application package. If the property is sold, the new owner must be given a copy of this Authorization Certificate and is responsible for complying with all conditions. [15A NCAC 02B .0267(11)]

If you are unable to comply with any of the conditions below, you must notify the Raleigh 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 Raleigh Regional Office any noncompliance with the conditions of this Authorization Certificate and/or any violation of state regulated riparian buffer rules [15A NCAC 02B .0267]. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the applicant became aware of the circumstances.

Additional Conditions:

1. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this Certification. (15A NCAC 02B .0267)
2. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction. (15A NCAC 02B .0267)
3. Pursuant to 15A NCAC 2B .0267, sediment and erosion control devices shall not be placed in Zone 1 of any Jordan Lake Water Supply Watershed Riparian Buffer without prior approval by NCDWR. At this time, NCDWR has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised, and that discharge is released as diffuse flow.
4. Tall fescue shall not be used in the establishment of temporary or permanent groundcover within riparian areas. For the establishment of permanent herbaceous cover, erosion control matting shall be used in conjunction with an appropriate native seed mix on disturbed soils within the riparian area and on disturbed steep slopes with the following exception. Erosion control matting is not necessary if the area is contained by perimeter erosion control devices such as silt fence, temporary sediment ditches, basins, etc. Matting should be secured in place with staples, stakes, or wherever possible, live stakes of native trees. Erosion control matting placed in riparian areas shall not contain a nylon mesh grid, which can impinge and entrap small animals. For the establishment of temporary groundcover within riparian areas, hydroseeding along with wood or cellulose based hydro mulch applied from a fertilizer- and limestone-free tank is allowable at the appropriate rate in conjunction with the erosion control measures. Discharging hydroseed

mixtures and wood or cellulose mulch into surface waters is prohibited. Riparian areas are defined as a distance 25 feet landward from top of stream bank.

This approval and its conditions are final and binding unless contested. [G.S. 143-215.5]

This Authorization Certificate can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

One (1) copy of the Petition must also be served to the North Carolina Department of Environmental Quality:

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

This Authorization shall expire five (5) years from the date of this letter.

This letter completes the review of the Division under the Jordan Lake Water Supply Watershed Riparian Buffer Protection Rules as described in 15A NCAC 02B. 0267. Please contact Ryan Conchilla at Ryan.Conchilla@deq.nc.gov if you have any questions or concerns.

Sincerely,
Signed by:

Faith Hardin

3185423002EA45E...
Richard E. Rogers, Director
Division of Water Resources

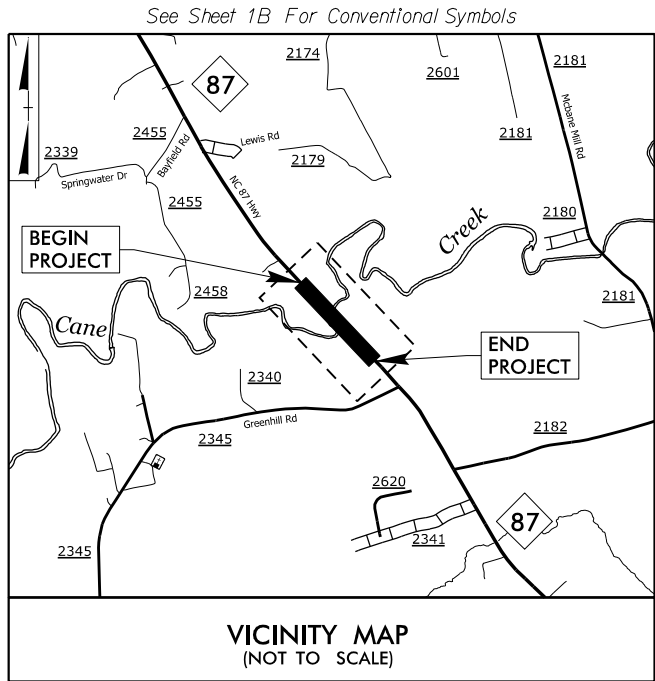
Cc:
Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Erin Cheely, NCDOT
Beth Harmon, Division of Mitigation Services

09/08/99

1/13/2025
Q:\RA\10011-108\BR-0060\Hydraulics\PERMITS_Environmental\WET_PSH\BR-0060_hyd_prm_wet_01.tsh.dgn
jadenport

TIP PROJECT: BR-0060

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALAMANCE COUNTY

LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK

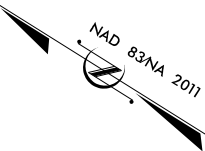
TYPE OF WORK: PAVING, GRADING, GUARDRAIL, DRAINAGE,
AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0060	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67060.1.1	N/A	PE	
67060.2.1	N/A	ROW/UTIL	

PERMIT DRAWING
SHEET 1 OF 12

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7/8/2025



BEGIN STATE TIP PROJECT BR-0060
-L- STA 12+16.55

BEGIN CONSTRUCTION
-L- STA 11+49.63

TO LEWIS RD

BEGIN BRIDGE
-L- STA 20+04.00

END BRIDGE
-L- STA 22+34.00

NC 87

-L- DETOUR-

SITE 1

SITE 2

END CONSTRUCTION
-L- STA 35+16.10

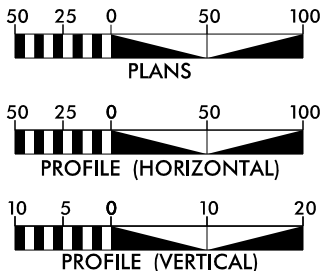
END STATE TIP PROJECT BR-0060
-L- STA 34+64.00

TO GREENHILL RD

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2023 = 3,000
ADT 2043 = 3,300
K = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
* TTST = 3% DUAL 4%
FUNC CLASS =
MINOR ARTERIAL-
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0060 = 0.382
LENGTH STRUCTURE TIP PROJECT BR-0060 = 0.044
TOTAL LENGTH TIP PROJECT BR-0060 = 0.426

Prepared for NCDOT in the Office of:

moftatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4625 VOICE (919) 781-4845 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 27, 2023

LETTING DATE:
SEPTEMBER 16, 2025

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

GRAY MODLIN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

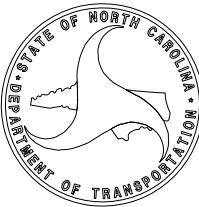
moftatt & nichol

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

moftatt & nichol

SIGNATURE: P.E.



-LDET-

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Regulatory
7/8/2025


PERMIT DRAWING
SHEET 2 OF 12

SAPHRONIA B. NEWLIN

2 2Z

NAD 83 NA 2011

50' 0' 50'







GRAPHIC SCALE

PROJECT REFERENCE NO.	SHEET NO.
BR-0060	2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;">INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION</div>	
<div style="text-align: center;">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</div>	

4700 FALLS OF REUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
719/781-7424 FAX 719/781-4889 FAX
NC License NO: F-0105

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UNLESS ALL SIGNATURES COMPLETED**

 **moffatt & nichol**
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

	TEMPORARY SURFACE WATER IMPACTS
	TEMPORARY FILL IN WETLAND
	MECHANIZED CLEARING (GRUBBING)

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 35 PG 179
PB 64 PG 183

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 35 PG 179
PB 64 PG 183

-LDET-

DETOUR STRUCTURE HYDRAULIC DATA		
DESIGN DISCHARGE	= 5840	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 427.7	FT
BASE DISCHARGE	= 12700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 432.9	FT
OVERTOPPING DISCHARGE	= 17400	CFS
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING ELEVATION	= 434.6	FT

DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	- - - - -




MATCHLINE SHEET 2B-2
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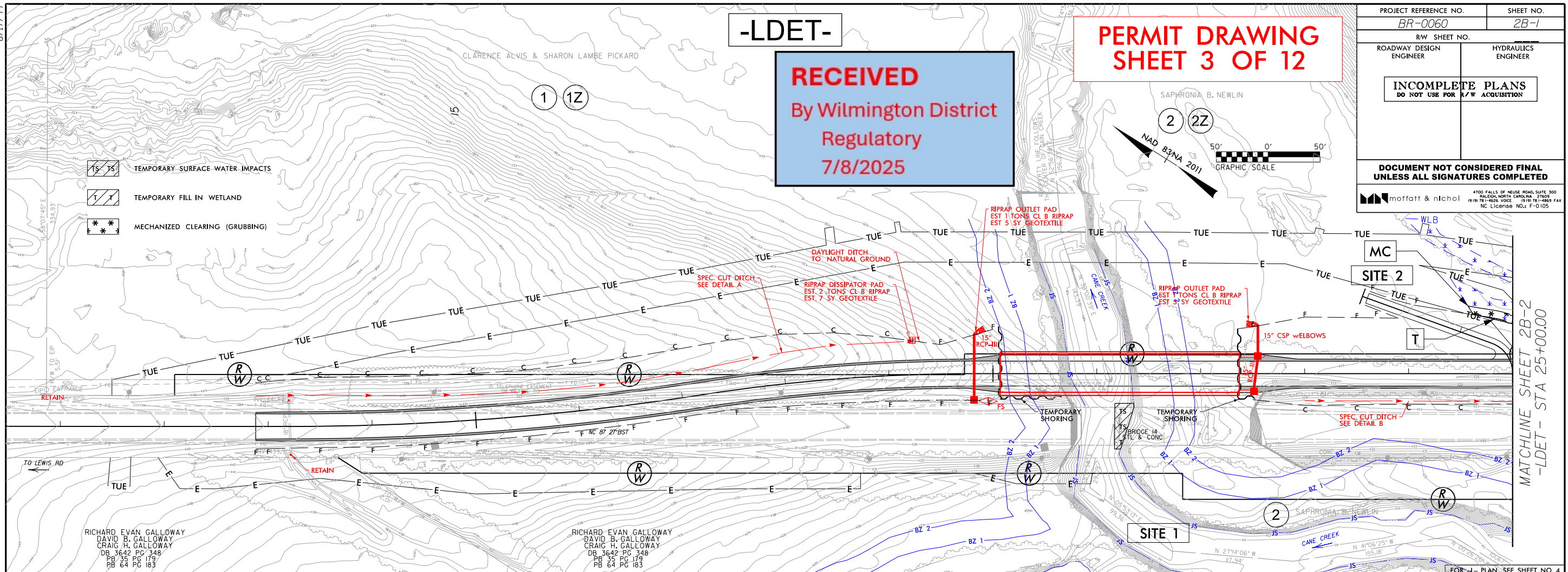
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PERMIT DRAWING
SHEET 3 OF 12

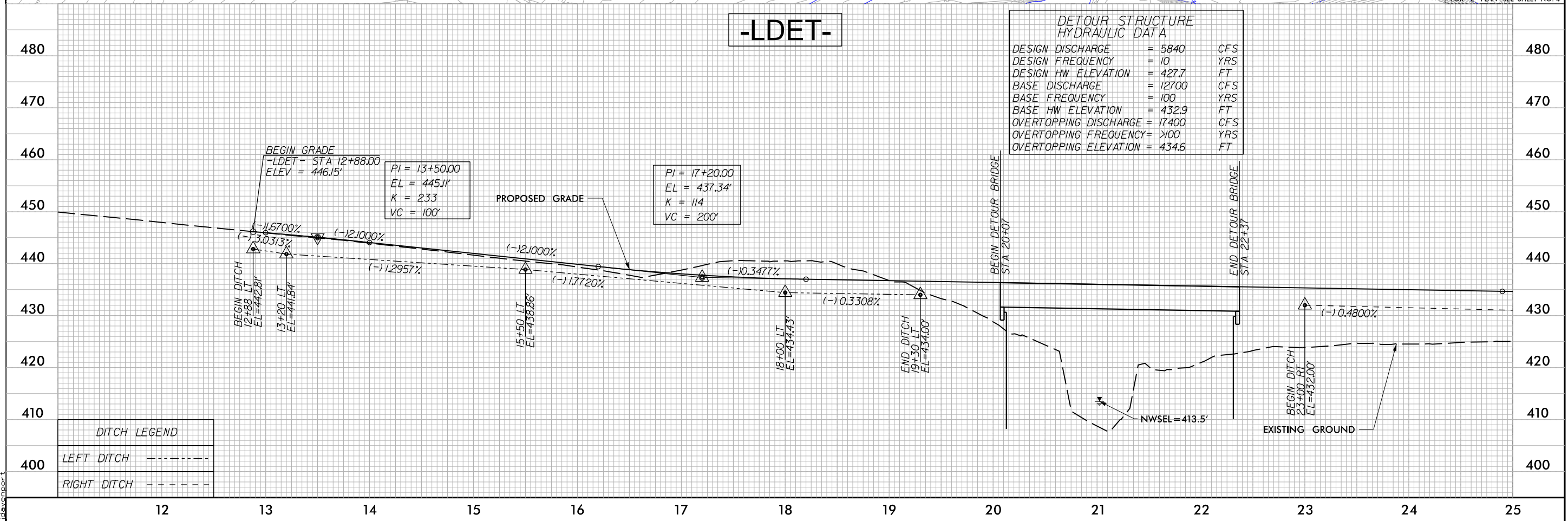
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Regulatory
7/8/2025

	TEMPORARY SURFACE WATER IMPACTS
	TEMPORARY FILL IN WETLAND
	MECHANIZED CLEARING (GRUBBING)



-LDET-

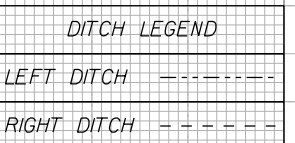
DETOUR STRUCTURE HYDRAULIC DATA		
DESIGN DISCHARGE	= 5840	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 427.7	FT
BASE DISCHARGE	= 12700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 432.9	FT
OVERTOPPING DISCHARGE	= 17400	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 434.6	FT



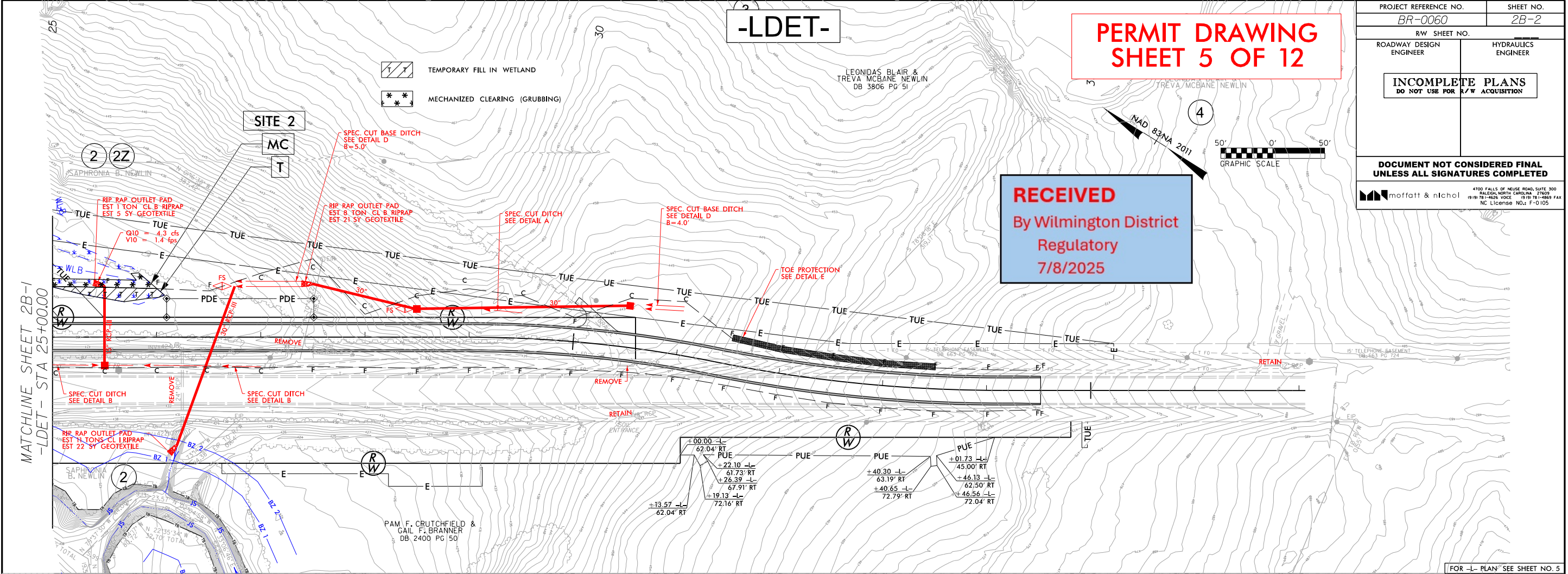
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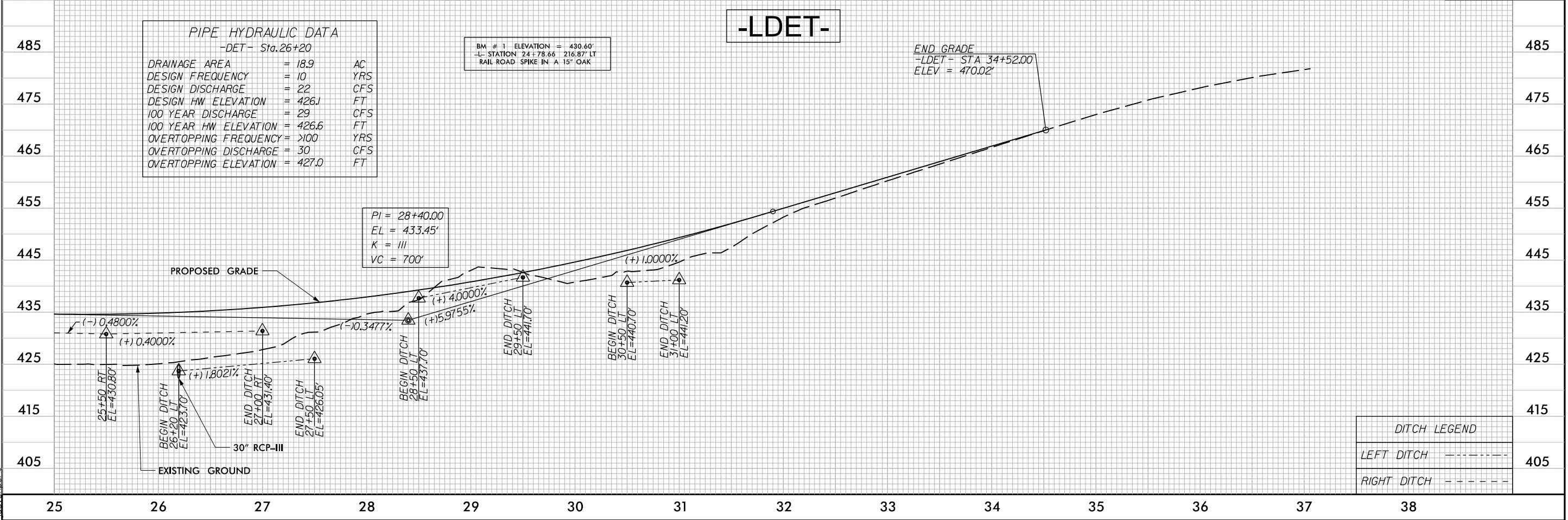
BM # 1 ELEVATION = 430.60'
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RAIL ROAD SPIKE IN A 15" OAK



8/17/99



1/3/2025
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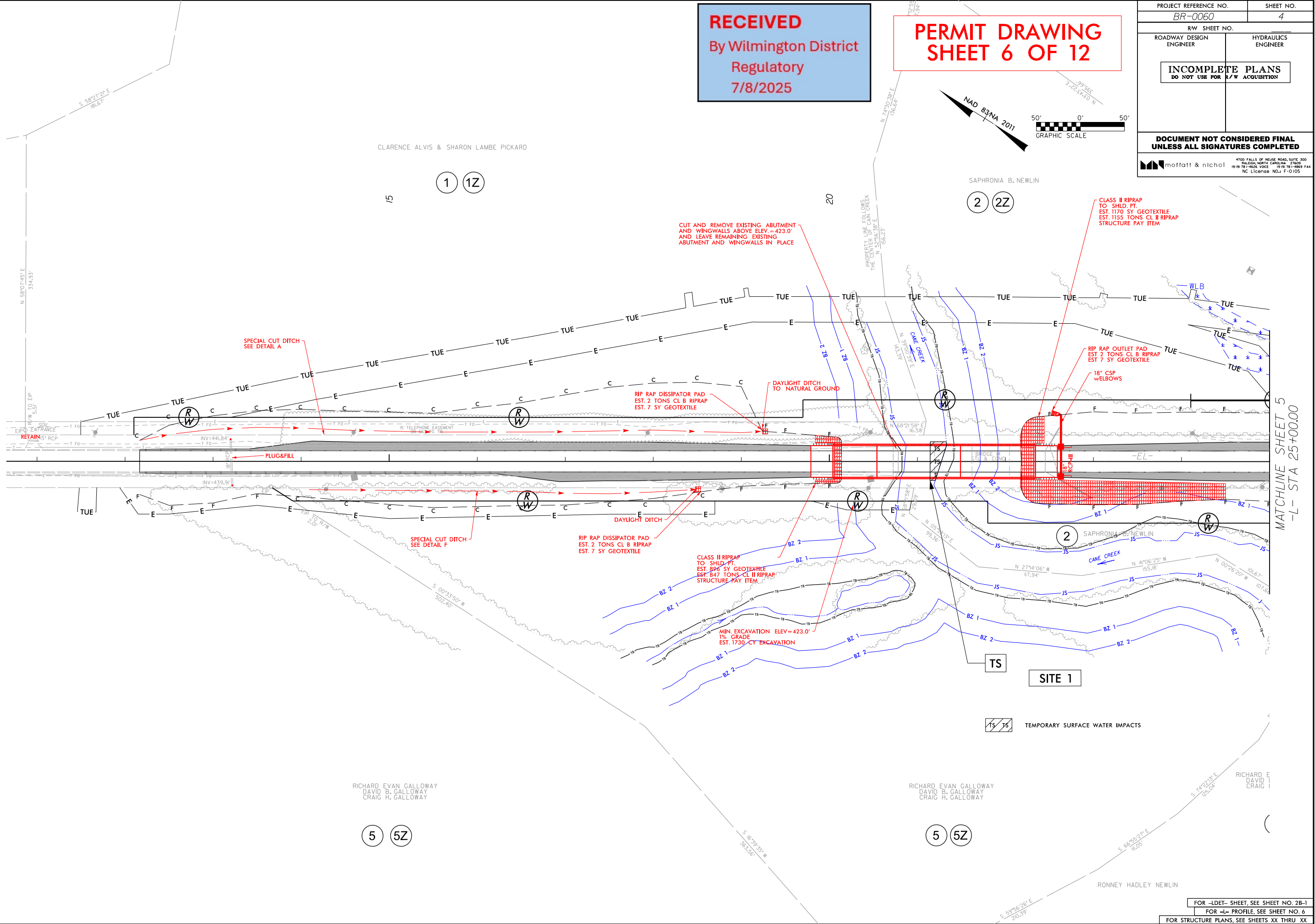
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1/3/2025
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7/8/2025

PERMIT DRAWING
SHEET 6 OF 12

PROJECT REFERENCE NO. <i>BR-0060</i>		SHEET NO. <i>4</i>	
RW SHEET NO. _____			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 10px; text-align: center;">INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License NO.: F-0105	



RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

RICHARD E
DAVID I
CRAIG I

RONNEY HADLEY NEWLIN


FOR -LDET- SHEET, SEE SHEET NO. 2B-1
FOR -L- PROFILE, SEE SHEET NO. 6
FOR STRUCTURE PLANS, SEE SHEETS XX THRU XX

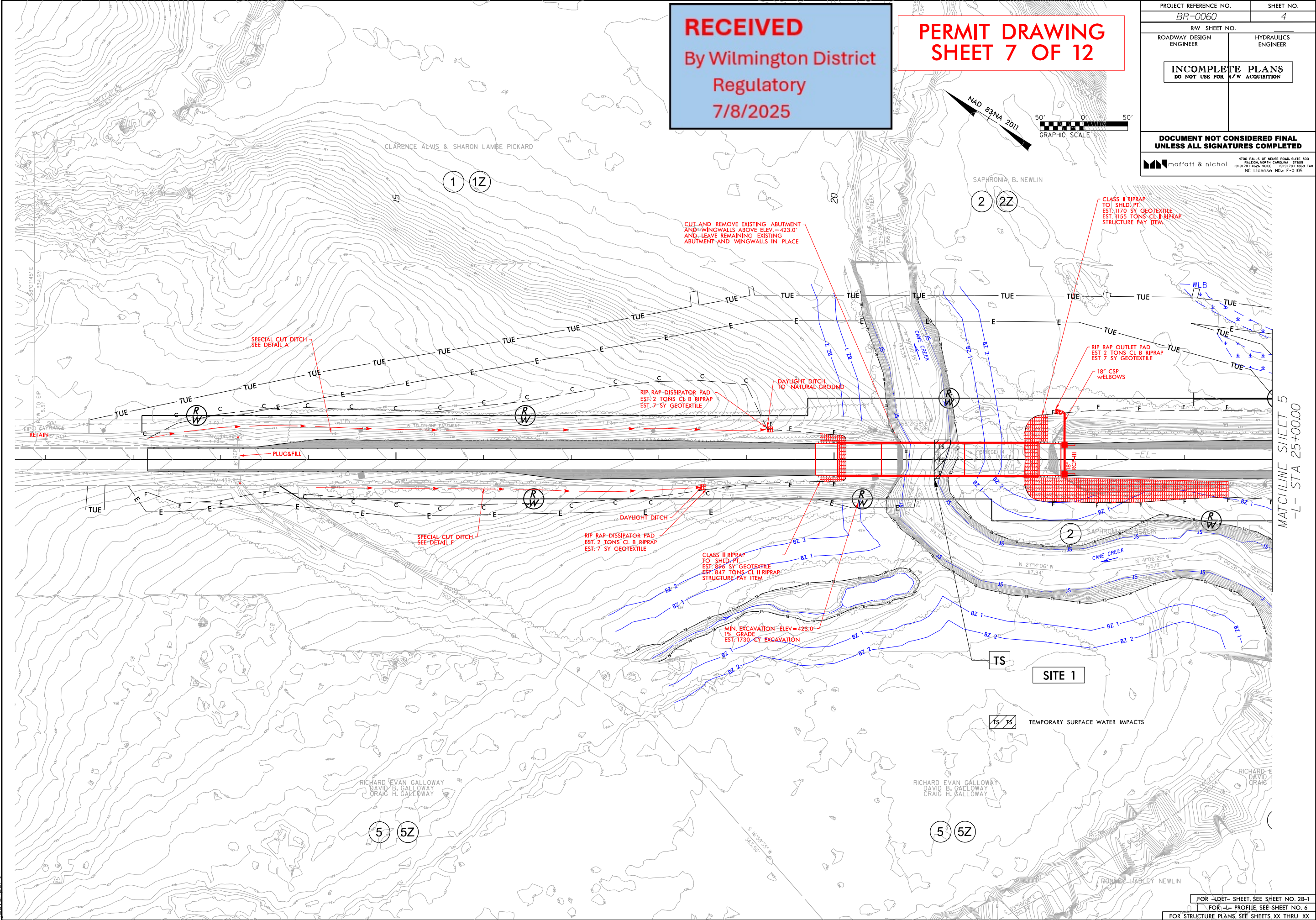
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1/3/2025
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Regulatory
7/8/2025

PERMIT DRAWING
SHEET 7 OF 12

PROJECT REFERENCE NO. <i>BR-0060</i>		SHEET NO. <i>4</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License NO: F-0105	



MATCHLINE SHEET 5
-L- STA 25+00.00

FOR -LDET- SHEET, SEE SHEET NO. 2B-1
FOR -L- PROFILE, SEE SHEET NO. 6
FOR STRUCTURE PLANS, SEE SHEETS XX THRU XX

REVISIONS

1/13/2025
Q:\NA\10011-108\BR-0060\Hydraulics\PERMITS\Environmental\WET_PSH\BR-0060_hyd_prm_wet_09_PSH05.CON.dgn

MATCHLINE SHEET 4
-/- STA 25+00.00

5 5Z

SAPHRON
B. NEWL

22

Pl Sta 12+39.48
 $\Delta = 90^{\circ} 00' 00.0''$ (RT)
 $D = 114^{\circ} 35' 29.6''$
 $L = 78.54'$
 $T = 50.00'$
 $R = 50.00'$

SITE

RIP RAP OUTLET PAD
EST 11 TONS CL I RIPRA
EST 22 SY GEOTEXTILE

SPEC. CUT BASE DITCH
SEE DETAIL G
B=4.0'
EST. 651 SY GEOTEXTILE
EST. 255 TONS CL B RIPRA

REMOVE 32 LF
30" RCP-III FROM
DETOUR PHASE

SPEC. CUT BASE
SEE DETAIL D
B=2.0'
EST. 149 SY GEOTEXTILE
EST. 76 TONS CL B RIPRAP

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Regulatory
7/8/2025

PERMIT DRAWING
SHEET 9 OF 12

50' 0' 50'


GRAPHIC SCALE

NAD 83 NA 2011

FILL IN WETLAND

PROJECT REFERENCE NO. <i>BR-0060</i>	SHEET NO. <i>5</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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<div style="text-align: center;">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</div>	

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4855 VOICE (919) 781-4868 FAX



moffatt & nichol
CONSULTING ENGINEERS

DETAIL H
WETLAND TOE PROTECTION
 (Not to Scale)

Natural Ground

d = 1.0 Ft.

2:1 or Flatter Fill Slope

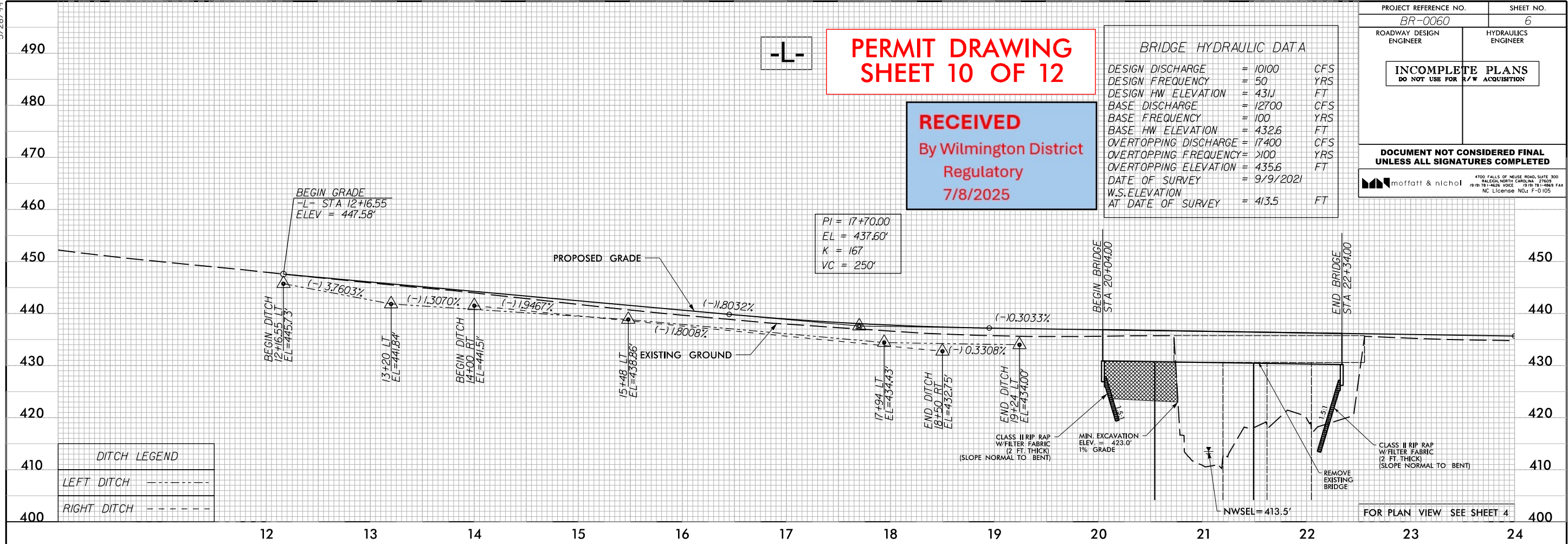
Geotextile

Type of Liner = C1B Rip-Rap

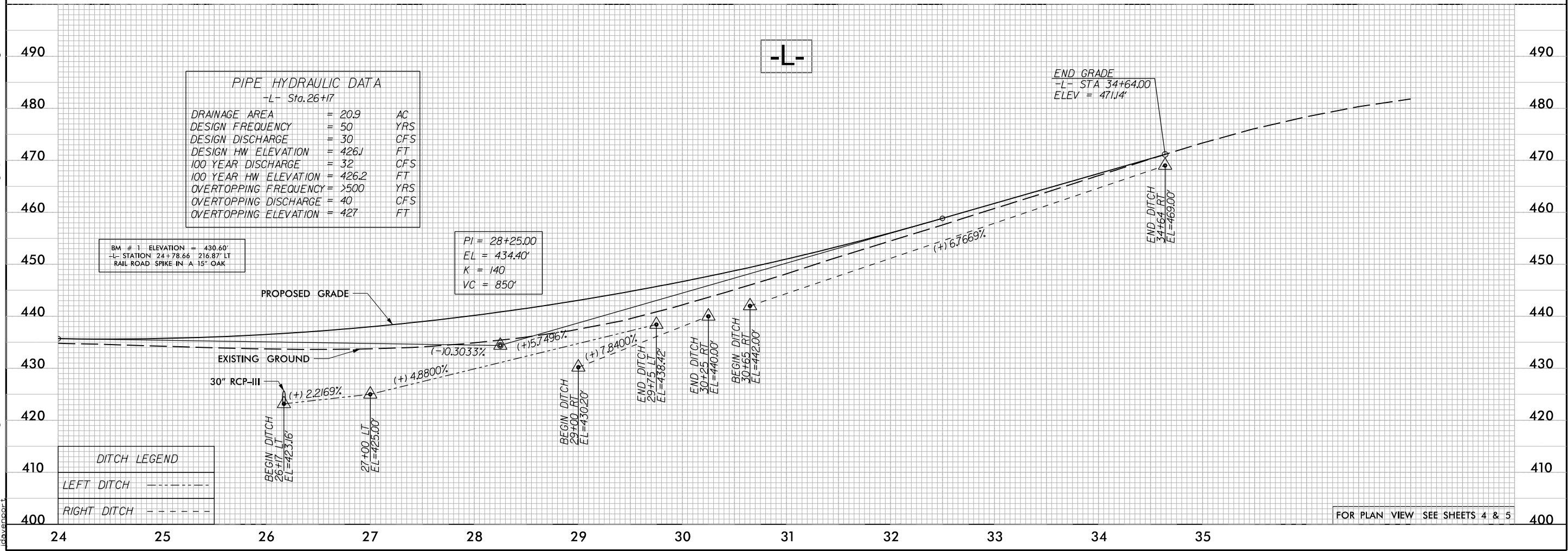
FROM STA. 25+57 LT TO STA. 26+06 LT

FOR -LDET- SHEET, SEE SHEET NO. 2B-2
FOR -L- PROFILE, SEE SHEET NO. 6

5/28/99



1/13/2025
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6/23/16

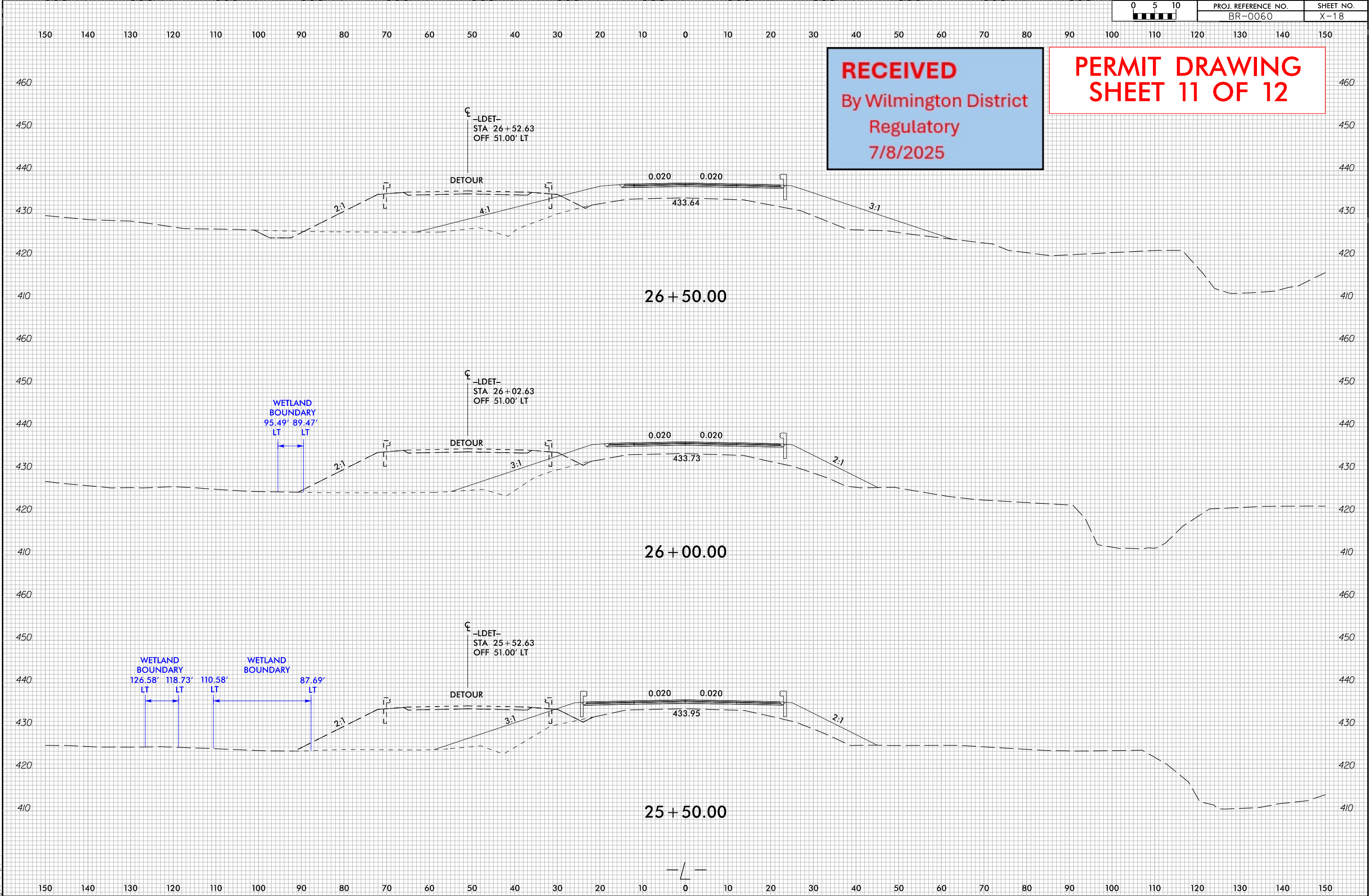
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develop



PROJ. REFERENCE NO.	SHEET NO.
BR-0060	X-18

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Regulatory
7/8/2025

PERMIT DRAWING
SHEET 11 OF 12



WETLAND AND SURFACE 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)
1	-L- 21+14 LT TO 21+34 LT	BRIDGE-EXISTING PIER REMOVAL							0.01		44	
2	-L- 24+57 LT TO 26+07 LT	FILL SLOPE-DETOUR & PROPOSED	< 0.01	0.02		0.03						
TOTALS*:			< 0.01	0.02		0.03			0.01	0	44	0

NOTES:

12

OF

12

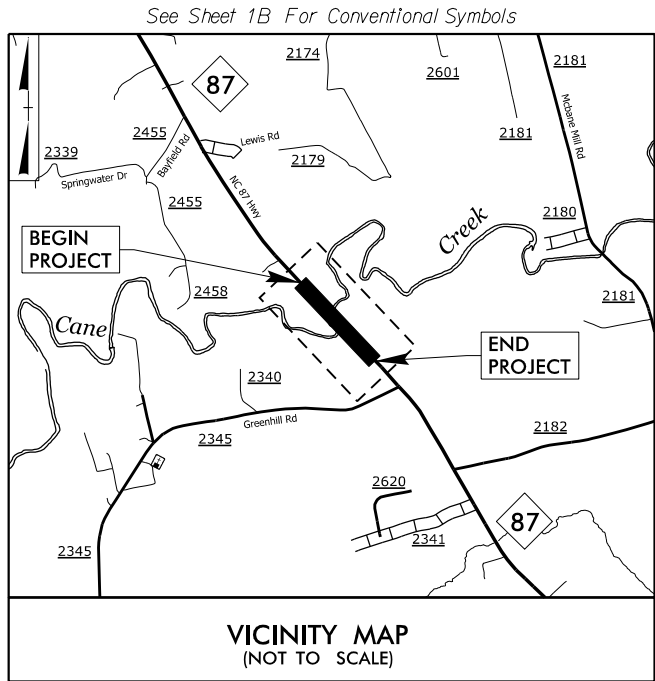
7/8/2025

09/08/99

I:\3\2025
0:\RA\10011-108\BR-0060\Hydraulics\PERMITS_Environmental\PSH_BUFF\BR-0060_hyd_prm_buf_01.tsh.dgn
tdavenport

TIP PROJECT: BR-0060

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALAMANCE COUNTY

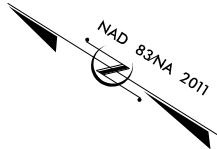
LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK

TYPE OF WORK: PAVING, GRADING, GUARDRAIL, DRAINAGE,
AND STRUCTURES

BUFFER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0060	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67060.1.1	N/A	PE	
67060.2.1	N/A	ROW/UTIL	

BUFFER DRAWING
SHEET 1 OF 5



BEGIN STATE TIP PROJECT BR-0060
-L- STA 12+16.55

BEGIN CONSTRUCTION
-L- STA 11+49.63

TO LEWIS RD

BEGIN BRIDGE
-L- STA 20+04.00

END BRIDGE
-L- STA 22+34.00

SITE 1

-L- DETOUR-

SITE 2

END CONSTRUCTION
-L- STA 35+16.10

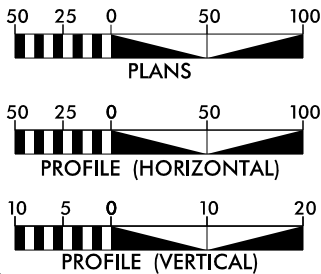
TO GREENHILL RD

END STATE TIP PROJECT BR-0060
-L- STA 34+64.00

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2023 = 3,000
ADT 2043 = 3,300
K = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
* TTST = 3% DUAL 4%
FUNC CLASS =
MINOR ARTERIAL-
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0060 = 0.382
LENGTH STRUCTURE TIP PROJECT BR-0060 = 0.044
TOTAL LENGTH TIP PROJECT BR-0060 = 0.426

Prepared for NCDOT in the Office of:

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4625 VOICE (919) 781-4845 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 27, 2023

LETTING DATE:
SEPTEMBER 16, 2025

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

GRAY MODLIN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

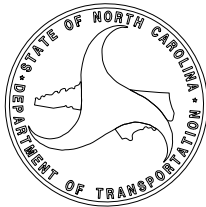
moffatt & nichol

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

moffatt & nichol

SIGNATURE: P.E.



**BUFFER DRAWING
SHEET 2 OF 5**

NAD 83 NA 2011

SAPHRONIA B. NEWLIN

2 2Z

SITE 1

SITE 1

SITE 1

SITE 1

SITE 2

SITE 2

MATCHLINE SHEET 5
-L- STA 25+00.00

CLARENCE ALVIS & SHARON LAMBE PICKARD

① ①Z

15

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

5 5Z

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

5 5Z

RICHARD E
DAVID I
CRAIG I

RONNEY HADLEY NEWLIN

FOR -LDET- SHEET, SEE SHEET NO. 2B-1

FOR -L- PROFILE, SEE SHEET NO. 6

STRUCTURE PLANS, SEE SHEETS XX THRU XX

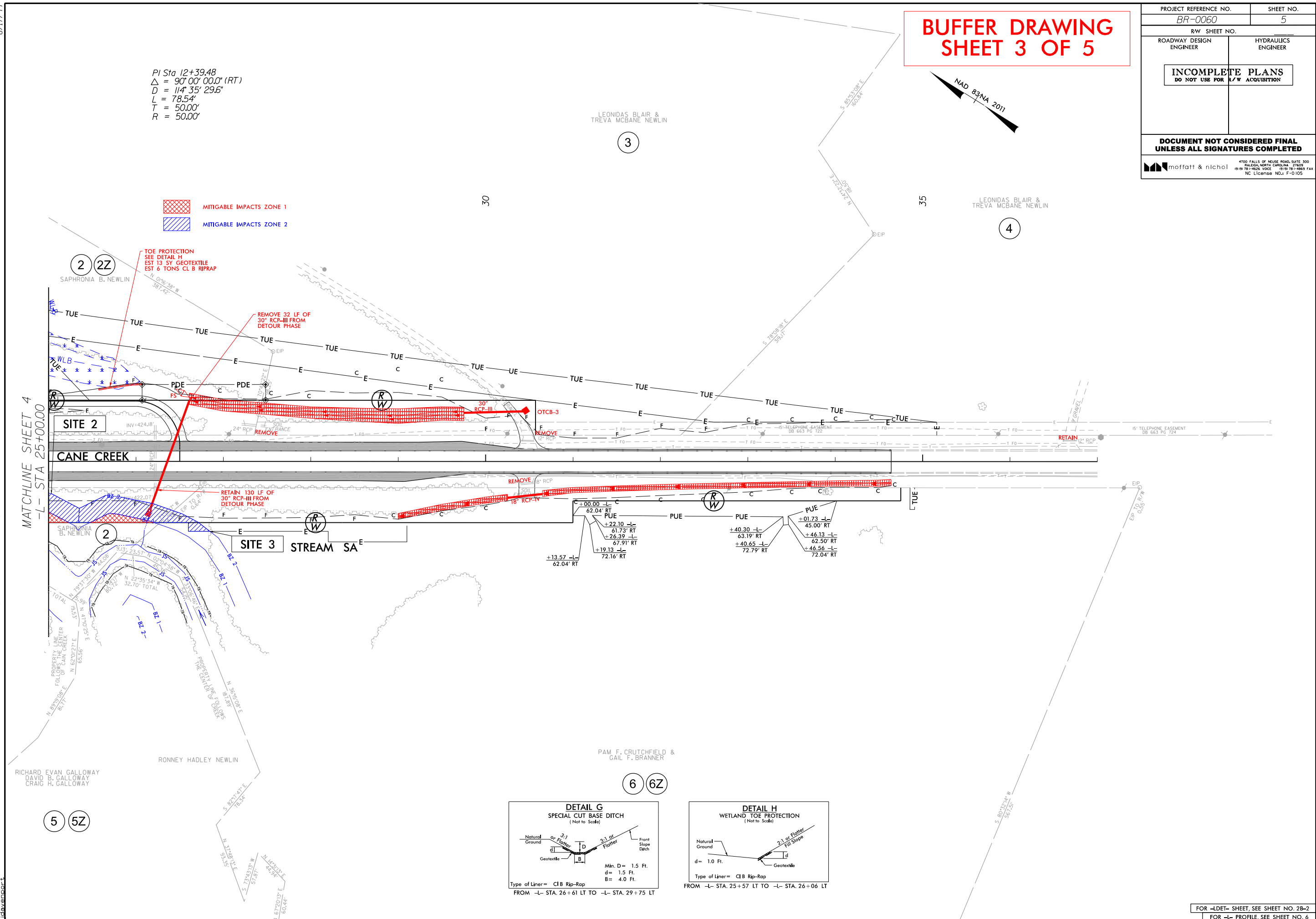
8/17/99

1/3/2025
O:\RA\10011-108\BR-0060\Hydraulics\PERMITS-Environmental\PSH_BUFF\BR-0060_hyd.prm.buf_04_PSH04.dgn
devanport

1/13/2025
Q:\RA\1001
idavenpor

8/17/99

L:\3\2025\01\108\BR-0060\Hydrolics\PERMITS\Environmental\PSH_BUFF\BR-0060_hyd.prm.buf.05.PSH05.dgn



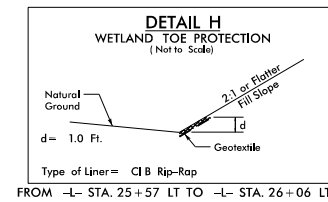
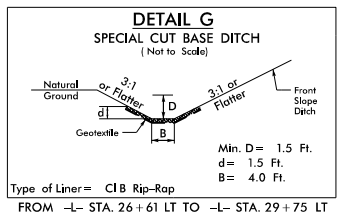
PI Sta 12+39.48
 $\Delta = 90^{\circ} 00' 00.0''$ (RT)
 $D = 114^{\circ} 35' 29.6''$
 $L = 78.54'$
 $T = 50.00'$
 $R = 50.00'$

MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

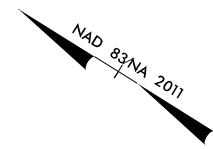
TOE PROTECTION
SEE DETAIL H
EST 13 SY GEOTEXTILE
EST 6 TONS CL B RIPRAP


REMOVE 32 LF OF
30" RCP-III FROM
DETOUR PHASE

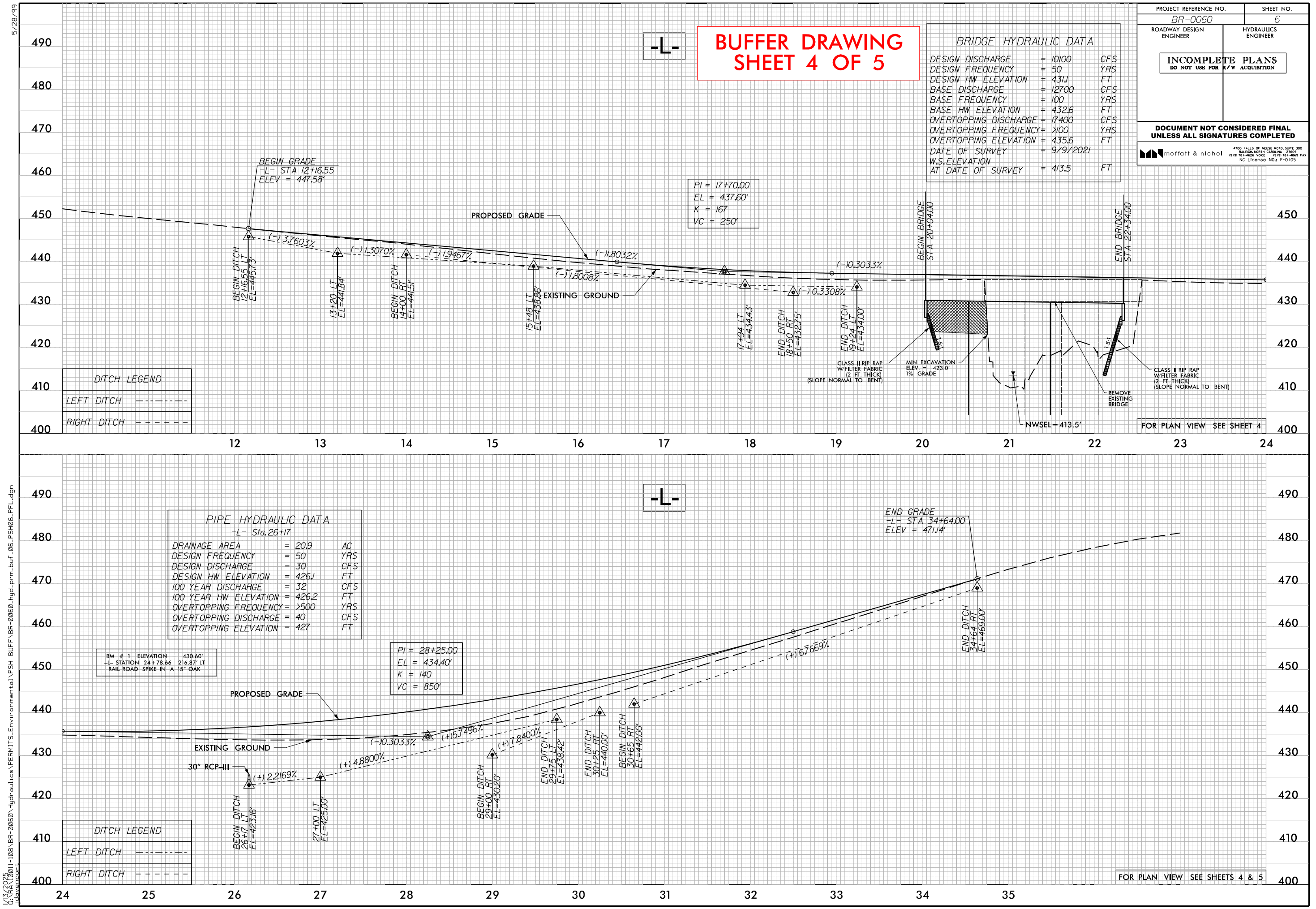
RETAIN 130 LF OF
30" RCP-III FROM
DETOUR PHASE



BUFFER DRAWING SHEET 3 OF 5



PROJECT REFERENCE NO. <i>BR-0060</i>		SHEET NO. <i>5</i>	
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			
 moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 DALLAS, NORTH CAROLINA 75039 (972) 781-4626 VOICE (972) 781-4669 FAX NC License No.: F-0105	



RIPARIAN BUFFER IMPACTS SUMMARY

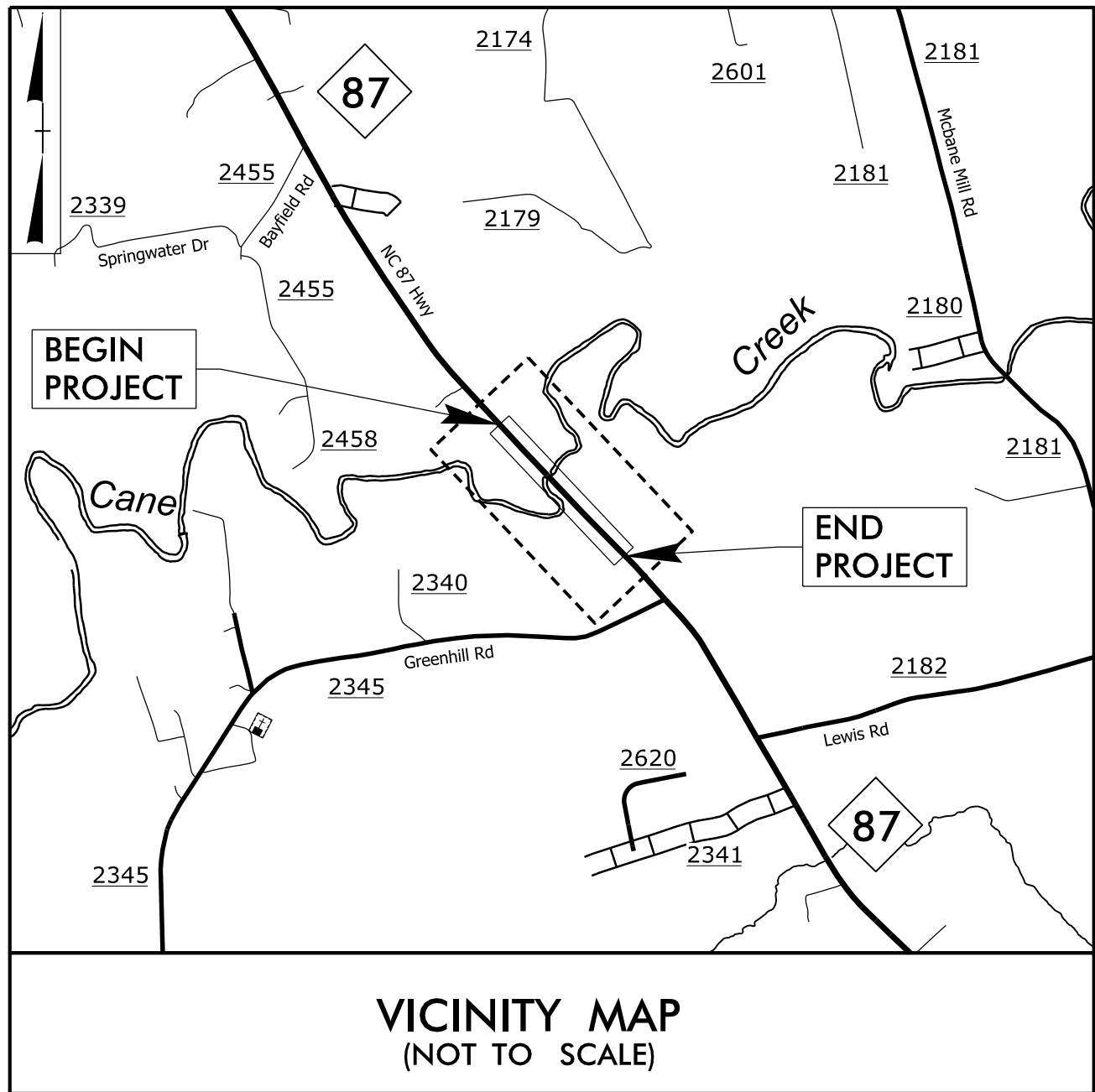
[illegible]

NOTES:
SITE 1 & 2 - CANE CREEK
SITE 3 - STREAM SA

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
01-13-2025
ALAMANCE
BR-0060
67060.1.1

24-JUN-2025 10:47 P:\2019\190020\NCDOT Files\BR-0060\Utilities\Engineering\UB0\Proj\BR-0060_ut_tsh_U001_UWL_psh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: BR-0060



VICINITY MAP
(NOT TO SCALE)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

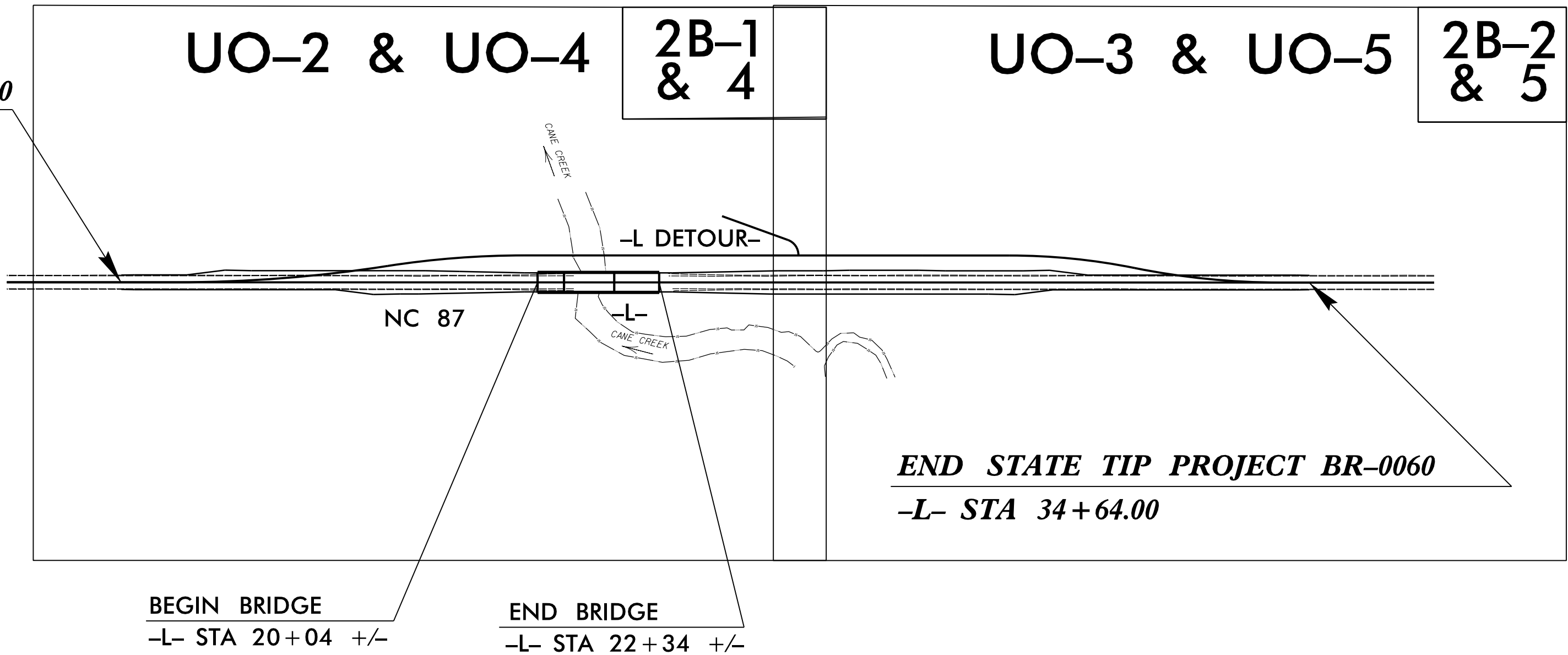
UTILITIES BY OTHERS PLANS
ALAMANCE COUNTY

LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK

UTILITY WETLAND IMPACTS

BEGIN STATE TIP PROJECT BR-0060
-L- STA 12+16.55

TO LEWIS RD

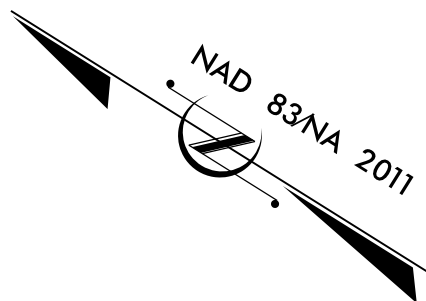


TO GREENHILL RD

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET IS DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

UTILITY WETLAND
IMPACTS DRAWING
SHEET 1 OF 4

RECEIVED
By Wilmington District
Regulatory
7/8/2025



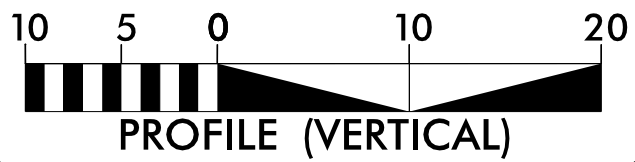
GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2 - UO-5	UO PLAN SHEETS

UTILITIES OWNERS WITH CONFLICTS

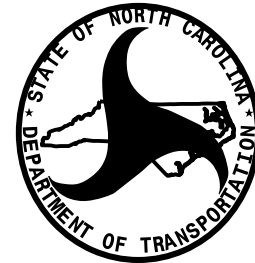
- A) POWER (DISTRIBUTION) - DUKE ENERGY
B) COMMUNICATIONS - AT&T
C) COMMUNICATIONS - CHARTERS/SPECTRUM

PREPARED IN THE OFFICE OF:

DAVIS • MARTIN • POWELL
ENGINEERS & SURVEYORS
6415 OLD PLANK RD., HIGH POINT, NC 27265
PHONE: (336)886-4921 FAX: (336)886-4458
WWW.DMP-INC.COM LICENSE: F-0245



Kelly Hayes, PE, PLS UTILITY PROJECT MANAGER
Kyle Stalls PROJECT UTILITY COORDINATOR



DIVISION OF HIGHWAYS
UTILITIES UNIT
1535 MAIL SERVICE CENTER
RALEIGH, NC 27699-1535
PHONE (919) 707-6690
FAX (919) 250-4151

Amy York CENTRAL UTILITIES MANAGER
Ali Kouchehi, PE REGIONAL UTILITIES ENGINEER
Dayton Martin REGIONAL UTILITY COORDINATOR
O'Hara Parker SENIOR UTILITY COORDINATOR

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)
WU1	-L- 24+00 LT TO 25+15 LT	Temporary Aerial Utility Poles, lines				0.02						
		and Guy Anchors										
WU2	-L- 24+50 LT TO 26+10 LT	Temporary Access				0.02						
TOTALS*:						0.05				0	0	0

*Rounded totals are sum of actual impacts

NOTES:

RECEIVED
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Regulatory
7/8/2025

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
6-26-2025
ALAMANCE
BR-0060