



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

May 14, 2026

MEMORANDUM TO: Division Environmental and Construction Units

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

SUBJECT: Environmental Permits for the proposed Widening of NC 24/27 from NC 740 in Albemarle in Stanly County to the Troy Bypass in Montgomery County, Divisions 8 & 10, **TIP Nos. R-2527, R-2530B, & B-4974.**

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 (RGP) 31 April 30, 2026 <ul style="list-style-type: none"> Original RGP (for Final R-2530B & B-4974, Preliminary R-2527), May 2, 2019 RGP Renewal, May 20, 2021 RGP Phased Mod (for Final R-2527), November 13, 2024 	May 25, 2030
NC Division of Water Resources Section 401 Water Quality Certification	Individual Certification No. 8839 April 20, 2026 <ul style="list-style-type: none"> Original Certification (for Final R-2530B & B-4974, Preliminary R-2527), April 3, 2019 Certification Renewal, June 8, 2021 Certification Mod (for Final R-2527), November 4, 2024 	May 25, 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
WILMINGTON REGULATORY OFFICE
69 DARLINGTON AVENUE
WILMINGTON NORTH CAROLINA 28403

April 30, 2026

Regulatory Program/Division
SAW-2008-02315

Sent Via Email: ekcheely@ncdot.gov

Erin Cheely
Environmental Coordination & Permitting, Western Team Lead
North Carolina Department of Transportation,
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Ms. Cheely:

This letter is in response to the re-verification application you submitted to the Wilmington District, WRDA/Transportation Branch on March 19, 2026 for a Department of the Army general permit re-verification. This project was assigned the file number SAW-2008-02315 and is known as R-2547 widening of NC 24/NC 27 from the Pee Dee River to the proposed Troy Bypass west of Troy in Montgomery County, North Carolina. This file number should be referenced in all correspondence concerning this project.

The R-2527 project is an 8.25-mile-long segment of NC 24/NC 27 and is the second and final phase of the NC 24/NC 27 widening project that spans both Stanly and Montgomery Counties. The entire NC 24/NC27 widening project includes the widening of a total of 14.6-mile-long segment of NC 24/NC 27 from the intersection of NC 740 and NC 24/NC 27 in Albemarle in Stanly County to Troy Bypass in Montgomery County. The recently completed first phase includes a 6.35-mile-long segment of NC 24/NC 27 that included both the R-2530B (road widening) and B-4979 (bridge maintenance) from the intersection of NC 24/NC 27 and NC 740 in Albemarle to NC 24/NC 27 bridge crossing of the Pee Dee River in Stanly County.

A review of the information provided indicates that the proposed work would include the second phase of this project to include widening of existing NC 24/NC 27 from a two-lane facility to a four-lane divided facility with a 46-foot depressed median from the Pee Dee River to the proposed Troy Bypass, west of Troy in Montgomery County. This project will include the permanent placement of fill/cut/structures in 0.63 acre of wetland, mechanical clearing of 0.37 acre of wetland, permanent placement of fill/structures/rock in 7,161 linear feet (lf) of streams, and the temporary placement of structures/materials in both 1,233 lf of streams and 0,01 acres of open water as part of the construction/dewatering activities associated with this project. The project area for this determination includes approximately 232 acres area as illustrated on the enclosed site plans/maps. The project/review area is located on and along an 8.25-mile-long segment of NC 24/NC 27 across several waterways including Pee Dee River, Rocky Creek,

Cattail Creek, Dumas Creek, Clark Creek, Lick Fork, Smith Branch and the unnamed tributaries to these waterways; from the NC 24/NC 27 crossing of the Pee Dee River to the intersection of NC 24/NC 27 and the Troy Bypass, at an approximate midpoint Latitude 35.313373 and Longitude -79.987111; near Troy, Montgomery County, North Carolina.

We have determined that the proposed work is authorized by Regional General Permit 31 (RGP-31) 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 "NCDOT R-2527, NC24-27 Widening, Montgomery County from NC 73 to Troy Bypass Sheets 1-91 of 91 and NCDOT R-2527 NC 24-27 Widening, Utilities Environmental Permit Plans, Montgomery County from NC 73 to Troy Bypass Sheets 1-5 of 5NCDOT R-2527, NC 24-27, From NC 73 to Troy Bypass, Grading, Paving Drainage, Structure, Culverts, and Railroad Trackwork, Montgomery County", Sheets 1-91 of 91 and NCDOT R-2527, Wetland and Surface Water Impacts, NC 24-27 From NC 73 to Troy Bypass, Utilities By Others, Montgomery County", Sheets 1-5 of 5. 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. 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 (Corps) prior to any active construction in waters or wetlands.

2. 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 and drawings shall be available at the project site during construction and maintenance of this project.

3. Pre-Construction Meeting: The Permittee shall schedule and attend a preconstruction meeting between its representatives, the contractor's representatives, and the U.S. Army Corps of Engineers-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-NCDOT Project Manager 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 timeframe when the Corps, NCDCM, and NCDWR Project Managers can attend. The Permittee shall invite the Corps, NCDCM, 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.

4. Sediment and Erosion Control:

a. 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.

b. 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.

c. 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.

d. 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.

5. Clean Fill: The Permittee shall use only clean fill material for this project. The fill material shall be free of items such as trash, construction debris, metal and plastic products, and concrete block with exposed metal 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.

6. Culverts:

a. 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.

b. Measures shall be included in the culvert 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 culvert or pipe 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.

c. 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.

d. 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.

7. Borrow and Waste Activities: For those projects that involve borrow and/or waste activities (note that if the borrow or waste area is also used for purposes/clients other than NCDOT, this condition will not apply to an NCDOT project) - 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 the RGP verification letter issued for a specific project, the permittee shall require its contractors and/or agents to identify all areas to be used as borrow and/or waste sites associated with an authorized project. The permittee shall provide the Corps 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 Corps and shown on the approved reclamation plans. The permittee shall ensure that all borrow and/or waste sites comply with the following: Except as authorized by this permit or any Corps 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. 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. All information will be available to the Corps 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 Corps within 30 days of the completion of the reclamation work.

8. Endangered Species Act: The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Conference Opinion (PCO) titled "NCDOT Program Effects on the

Tricolored Bat in Divisions 1-8”, dated November 20, 2023, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that are specified in the PCO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the PCO, 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 PCO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PCO, and with the ESA.

9. Utility Installation/Relocations:

a. Temporary Utility Impacts Restoration Measures: 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. In wetland areas where pipeline installation via trenching is authorized, wetland topsoil shall be segregated from the underlying subsoil, and the top 6 to 12 inches of the trench shall be backfilled with topsoil from the trench.

b. Cleared wetland areas shall be re-vegetated with a wetland seed mix or a mix of native woody species. Fescue grass or any invasive species such as *Lespedeza* spp., shall not be used within the wetland areas.

c. Prior to construction within any jurisdictional areas, the Permittee shall correctly install silt fencing (with or without safety fencing) parallel with the utility line corridor, on both sides of the jurisdictional crossing. This barrier is to serve both as an erosion control measure and a visual identifier of the limits of construction within any jurisdictional area. The Permittee shall maintain the fencing, at minimum, until the wetlands have re-vegetated and stabilized.

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 Stephen Brumagin, WRDA/ Transportation Branch Project Manager of the Charlotte Field Office at (704) 798-6471, by mail at the above address, or by email at Stephen.a.brumagin@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 style with a large, stylized "M" and "J".

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

Enclosures

Project plans
401 WQC

cc (w/enclosures):

Jeffrey Hemphill, NCDOT (via jhemphill@ncdot.gov)
Rex Badgett, NCDOT Div 8 (via jsbadgett@ncdot.gov)

Compliance Certification Form

File Number: SAW-2008-02315

County: Montgomery

Permittee: North Carolina Department of Transportation, attn: Erin Cheely

Project Name: R-2547 widening of NC 24/NC 27 from the Pee Dee River to the proposed Troy Bypass west of Troy in Montgomery County, North Carolina

Date Verification Issued: 4/30/2026

Project Manager: Stephen Brumagin

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification, and return it to the following address:

**US ARMY CORPS OF ENGINEERS
Wilmington District
Attn: Stephen Brumagin
Charlotte Field Office
8430 University Executive Park Drive Suite 615
Charlotte, NC 28262
or
Stephen.a.brumagin@usace.army.mil**

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying, or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work, and mitigation (if applicable), authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions.

Date Authorized Work Started: _____ **Completed:** _____

Describe any deviations from permit (attach drawing(s) depicting the deviations):

***Note: The description of any deviations on this form does not constitute approval by the Corps.**

Signature of Permittee

Date

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

Permittee: Michael Turchy

Action ID: SAW-2008-02315

Project Name: R-2547 widening of NC 24/NC 27 from the Pee Dee River to the proposed Troy Bypass west of Troy in Montgomery County, North Carolina

County: Montgomery

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: 03040104, Yadkin River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
7,161			1.0			

*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: 03040104, Yadkin River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
14,322			2.0			

Mitigation Site Debited: NCDMS

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

11/18/2024

Signature of Sponsor’s Authorized Representative

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:

NCDMS provided a letter dated September 12, 2024, indicating they would provide mitigation for 7,161 lf stream impacts and 1.0-acre wetland impacts.

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: Stephen Brumagin
USACE Field Office: Charlotte Field Office
US Army Corps of Engineers
8430 University Executive Park Drive
Charlotte
Email: Stephen.a.brumagin@usace.army.mil



Digitally signed by
BRUMAGIN.STEPHEN.A.1283520737
Date: 2024.11.13 08:40:59 -05'00'

Wilmington District Project Manager Signature

November 13, 2024

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>.



NORTH CAROLINA
Environmental Quality

April 20, 2026

JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director

DWR #20181416.V5
Stanly and Montgomery County

Ms. Erin Cheely
NCDOT ECAP – Western Team Lead
1598 Mail Service Center
Raleigh, NC 27699
ekcheely@ncdot.gov

Subject: Approval of Individual 401 Water Quality Re-Certification
Widening of NC 24-27, between Albermarle and the Troy Bypass
Stanly and Montgomery County, NC. USACE SAW-2008-02315
TIP No. R-2530B, B-4974, R-2527

Location: 35.30960, -80.07704

Dear Ms. Cheely:

Attached hereto is a copy of Certification No. WQC 8839 issued to NCDOT dated April 20, 2026. This approval is for the purpose and design described in your application. A 401 Water Quality Certification was previously issued for this project on November 4, 2024.

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.

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

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.

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.

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



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

Notice regarding the right to contest this 401 Water Quality Certification decision is provided below.

This letter completes the DWR's review under Section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Ryan Conchilla at 919-707-9111 or ryan.conchilla@deq.nc.gov if you have any questions or concerns.

Sincerely,

Signed by:

3185423002EA45E...

Faith Hardin, Supervisor
401 & Buffer Permitting Branch / RO

Electronic cc: Steve Brumagin, USACE Charlotte Regulatory Field Office
Rex Badgett, NCDOT Division 8
Beth Harmon, DMS
DWR 401 & Buffer Permitting Branch Electronic file



NOTICE REGARDING THE RIGHT TO CONTEST A DWR 401 WATER QUALITY CERTIFICATION DECISION

Right of Persons Aggrieved to File a Contested Case for the issuance of a 401 water quality certification: Pursuant to 15A NCAC 02H .0507(f), the Division's decision on a 401 water quality certification application is subject to review under NCGS 150B-23.

Rights of Persons Aggrieved to File a Contested Case: Pursuant to NCGS 150B, Article 3, a party or person aggrieved may commence a contested case by filing a petition under NCGS 150B-23 in the Office of Administrative Hearings within 60 days after the Division provides notice of its decision on a permit application, as provided in NCGS 150B-23(f). If no contested case is commenced within the required time, the Division's decision is final and is not subject to review.

General Filing Instructions: A petition for contested case hearing must be in the form of a written petition, conforming to NCGS 150B-23, and filed with the Office of Administrative Hearings, 1711 New Hope Church Road, Raleigh NC, 27609, along with a fee in an amount provided in NCGS 150B-23.2. A petition for contested case hearing form may be obtained upon request from the Office of Administrative Hearings or on its website at <https://www.oah.nc.gov/hearings-division/filing/hearing-forms>. Additional specific instructions for filing a petition are set forth at 26 NCAC Chapter 03.

Service Instructions: A party filing a contested case is required to serve a copy of the petition, by any means authorized under 26 NCAC 03 .0102, on the process agent for the Department of Environmental Quality:

Daniel Hirschman, General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

If the party filing the petition is a person aggrieved other than the permittee or permit applicant, the party **must also** serve the permittee in accordance with NCGS 150B-23(a).

Be aware that other rules or laws may apply to the filing of a petition for a contested case. Additional information is available at <https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case>. Please contact the Office of Administrative Hearings at (984) 236-1850 with all questions regarding the filing fee and/or the details of the filing process.



NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

CERTIFICATION #WQC008839 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 NCDOT, who have authorization for the impacts listed below, as described within your re-application received by the N.C. Division of Water Resources (DWR) on March 19, 2026.

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 Yadkin Pee-Dee River Basin

Site	Perm. Fill in Stream (linear ft)	Temp. Fill in Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
	Fill	Fill		
4	267	31	298	-
4A	8	57	65	-
5	195	46	241	-
6	74	0	74	-
7	129	16	145	-
7A	0	22	22	-
10	160	22	182	-
12	232	24	256	-
15	0	17	17	-
17	307	39	346	307
20	139	0	139	-
22	211	23	234	-
23	294	40	334	-
24	845	38	883	845



Site	Perm. Fill in Stream (linear ft)	Temp. Fill in Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
25	219	31	250	-
28	240	0	240	-
29	350	77	427	350
30	0	9	9	-
32	208	48	256	-
33	0	56	56	-
34	27	11	38	-
35	63	0	63	-
36	31	9	40	-
38	232	25	257	-
39	301	54	355	301
44	259	42	301	-
45	73	0	73	-
47	213	93	306	-
50	400	68	468	400
53	439	45	484	439
53A	559	97	656	559
54	328	106	434	328
57	13	53	66	-
59	345	34	413	345
Totals	7,161	1,233	8,394	3,874

Total Stream Impacts: 8,394 linear feet.



Wetland Impacts in the Yadkin Pee-Dee River Basin

Site	JD Site	Perm. Fill in wetlands (acres)	Excavation in Wetlands (acres)	Mechanized Clearing (acres)	Total Wetland Impact (acres)	Wetland Impacts Requiring Mitigation (acres)
1	WF	<0.01	-	<0.01	<0.01	<0.01
1A	WZZ	-	-	0.02	0.02	0.02
2	WYA	0.07	-	0.01	0.08	0.08
8	WH	<0.01	-	-	<0.01	<0.01
9	WJ	<0.01	-	<0.01	<0.03	<0.03
11	WR	0.03	-	0.03	0.03	0.03
13	WP	0.09	-	-	0.09	0.09
14	WM	<0.01	-	<0.01	<0.01	<0.01
16	WN	<0.01	-	<0.01	<0.01	<0.01
18	WV	-	--	0.02	0.02	0.02
19	WS	<0.01	-	0.03	0.03	0.03
21	WU	0.02	-	-	0.02	0.02
26	WT(N)	0.11	-	-	0.11	0.11
26	WT(S)	0.04	-	0.01	0.05	0.05
31	WU-2	0.10	-	0.03	0.13	0.13
35A	WYB	0.04	<0.01	0.02	0.06	0.06
35B	WYC	<0.01	-	<0.01	<0.01	<0.01
37	WZ-1	<0.01	-	<0.01	<0.01	<0.01
40	WKK	<0.01	-	<0.01	<0.01	<0.01
41	WMM	0.01	-	0.02	0.03	0.03



Site	JD Site	Perm. Fill in wetlands (acres)	Excavation in Wetlands (acres)	Mechanized Clearing (acres)	Total Wetland Impact (acres)	Wetland Impacts Requiring Mitigation (acres)
42	WLL	-	-	<0.01	<0.01	<0.01
45A	WYD	<0.01	-	-	<0.01	<0.01
46	WNN	-	-	<0.01	<0.01	<0.01
48	WHH	0.02	--	-	0.02	0.02
49	WFF	-	-	<0.01	<0.01	<0.01
49	WFF	<0.01	-	0.02	0.02	0.02
49	WFF	-	-	<0.01	<0.01	<0.01
49	WFF	-	<0.01	<0.01	<0.01	<0.01
51	WGG	<0.01	-	0.06	0.06	0.06
51	WGG	<0.01	-	-	<0.01	<0.01
52	WPP	<0.01	-	<0.01	<0.01	<0.01
52	WPP	<0.01	-	<0.01	<0.01	<0.01
55	WEE(N)	0.01	-	0.01	0.02	0.02
55	WEE(S)	0.02	-	0.01	0.03	0.03
58	WCC	0.02	-	-	0.02	0.02
60	WBB	<0.01	-	0.02	0.02	0.02
Totals		0.62	<0.01	0.37	0.99	0.99

Total Wetland Impacts: 0.99 acres



Open Water Impacts in the Yadkin Pee-Dee River Basin

Site	Pond Size (acres)	Total Impact (acres)
27- Pond F -Dewatering	1.5	<0.01
Totals	1.5	<0.01

This approval requires you to follow the conditions listed in the Certification below.

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

1. The plans and specifications for this project are incorporated by reference as part of this Water Quality Certification. Any final construction plans for a project must include or reference the application and plans submitted to the DWR. The Permittee must evaluate all other acquired permits to ensure that they are consistent with the plans submitted to the DWR, and all relative impacts are accounted for and shown on the final construction plans. Any modifications or additional impacts to streams and/or wetlands and/or waters within the project require the permittee to notify the DWR and may require submission of a new application package with the appropriate fee.
Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)

2. If the property is sold, the Permittee shall provide the new owner with a copy of this Certification and all plans and specifications incorporated by reference. The Permittee may transfer a 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. *Citation: 15A NCAC 02H .0507(d)(2).*

3. The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to: *Citation: 15A NCAC 02H .0502(e); 15A NCAC 02H .0507(c)*
 - a. Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this certificate;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this certificate;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this certificate; and



d. Sample or monitor at reasonable times, for the purposes of assuring certificate compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location

4. Mitigation for this Project was previously secured through the Division of Mitigation Services. DMS has indicated in a letter dated September 12, 2024, Compensatory mitigation for impacts to 1.01 acre of wetlands in the Yadkin Pee-Dee River Basin (CU Location 03030104) is required. Compensatory mitigation for impacts to 4,980 linear feet of streams in the Yadkin Pe-Dee River Basin is required.

Citation: 15A NCAC 02H .0506(c); 15A NCAC 02H .0507(c)

5. If the Permittee becomes aware of any inability to comply with any of the conditions of this Water Quality Certification, they must notify the Raleigh Regional Office within 24 hours (or the next business day if it is 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

6. The Permittee shall report to the Division Raleigh 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 it is a weekend or holiday) from the time the Permittee became aware of the non-compliance circumstances.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

7. 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).

Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

8. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

9. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North*



Carolina Sediment and Erosion Control Manual, or for linear transportation projects, the *North 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 Pollution Control Act and the Mining Act of 1971.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

10. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or the locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

11. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

12. 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

13. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC Department of Transportation Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water.



Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

14. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

For structures less than 72" in diameter/width, and topographic constraints indicate culvert slopes of greater than 2.5% culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g., rock ladders, cross-vanes, sills, baffles etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to the Division thirty (30) calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required, provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to the Division a minimum of thirty (30) calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then the Division shall be notified by phone or email within 24 hours of discovery.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)



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.

Citation: 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

17. 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.

Citation: 15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)

18. 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

19. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

20. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures.



Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201

21. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

22. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

23. In accordance with 143-215.85(b), the Permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.

Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

24. The Permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

25. The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this Certification 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 Water Quality Certification. A copy of this Water Quality Certification shall be available at the project site during the construction and maintenance of this project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

26. 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.



Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

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.

Upon completion of the proposed project, the applicant shall submit a Certificate of Completion and/or shall provide as-built documentation. Certificates of Completion and/or as-built documentation can be submitted via the DWR website: <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>.

This, the 20th day of April, 2026

Signed by:

Faith Hardin

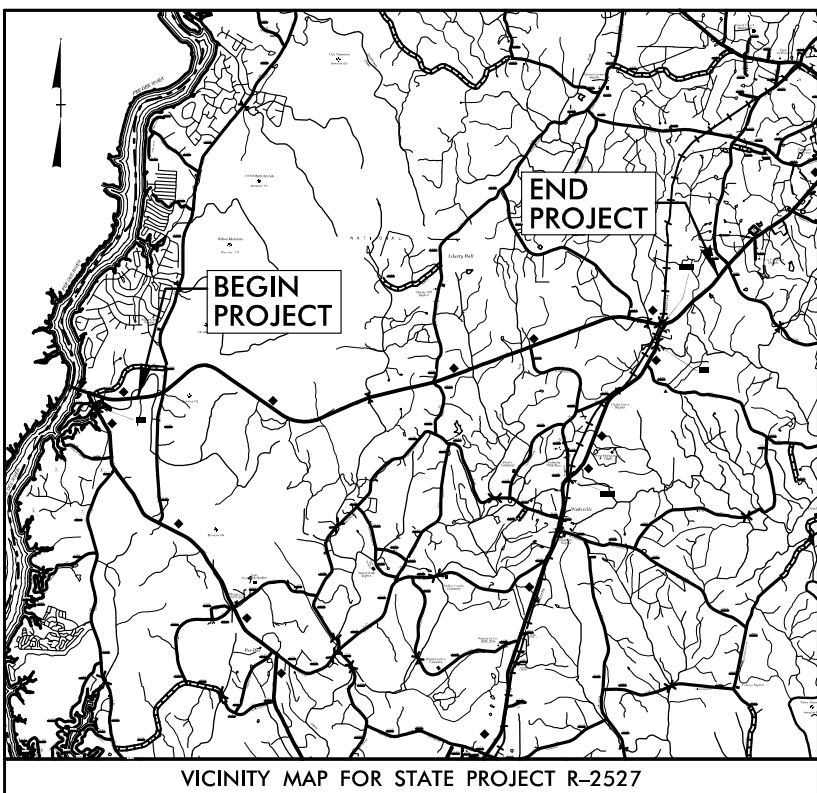
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Faith Hardin, Supervisor
401 & Buffer Permitting Branch / RO



09/28/99

TIP PROJECT: R-2527



VICINITY MAP FOR STATE PROJECT R-2527
See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY

LOCATION: NC 24-27 FROM NC 73 TO THE TROY BYPASS
TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE,
CULVERTS, AND RAILROAD TRACKWORK

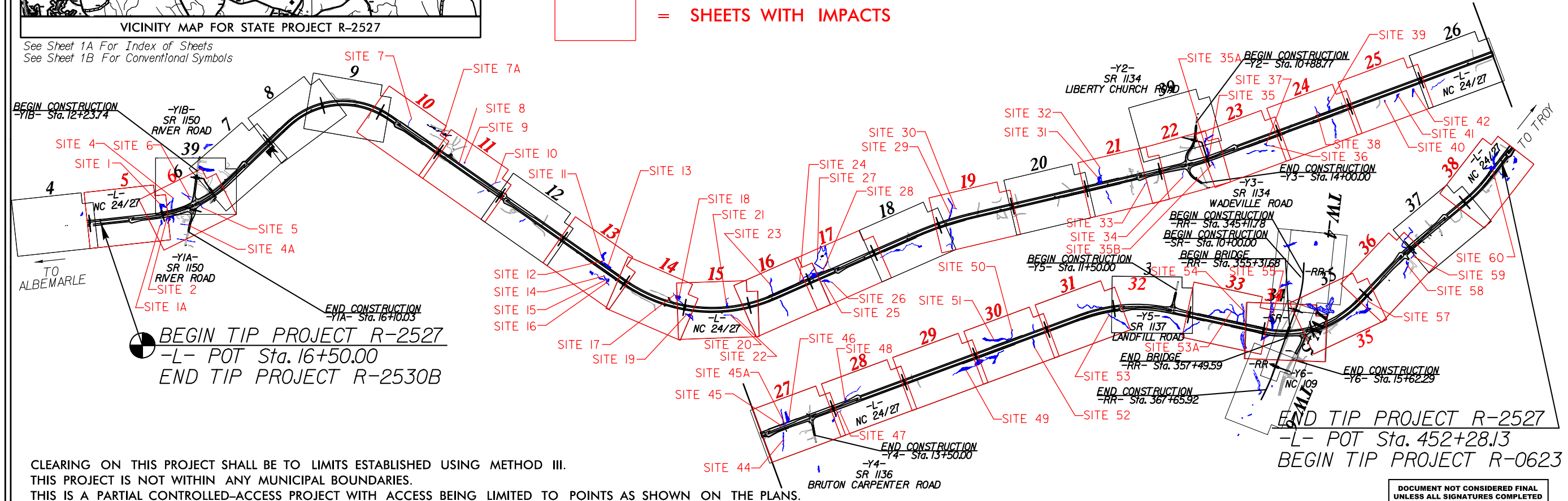
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2527	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35572.1.1	N/A	P.E.	
35572.2.1	N/A	RIGHT OF WAY	
35572.2.3	N/A	UTILITIES	

90% PLANS

PERMIT DRAWING
SHEET 1 OF 91

WETLAND AND SURFACE WATER IMPACTS PERMIT

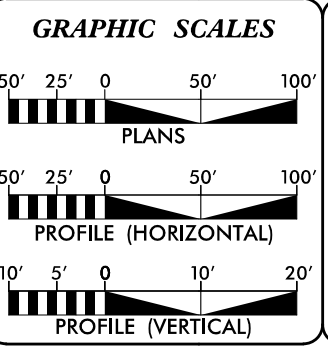
= SHEETS WITH IMPACTS



CLEARING ON THIS PROJECT SHALL BE TO LIMITS ESTABLISHED USING METHOD III.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2021 =	11,839
ADT 2041 =	14,535
K =	9%
D =	55%
T =	14% *
V =	60 MPH
* TTST =	8% DUAL 6%
FUNC CLASS =	RURAL MINOR ARTERIAL
REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2527	=	8.253 mi.
LENGTH STRUCTURES TIP PROJECT R-2527	=	0.000 mi.
TOTAL LENGTH TIP PROJECT R-2527	=	8.253 mi.

Prepared in the Offices of:

STEWART
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 27, 2019

LETTING DATE:
SEPTEMBER 15, 2026

ANDY YOUNG, PE
PROJECT ENGINEER

MICHAEL BURNS, PE
PROJECT DESIGN ENGINEER

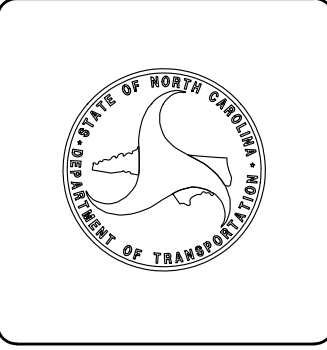
PAMELA R. WILLIAMS
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

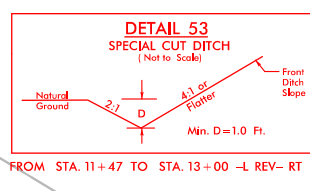
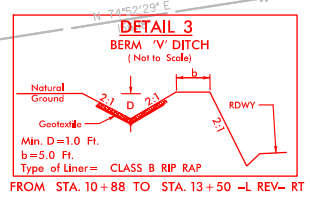
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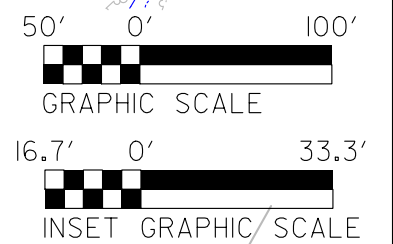
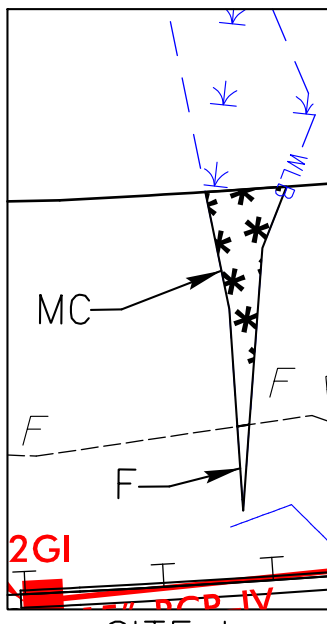
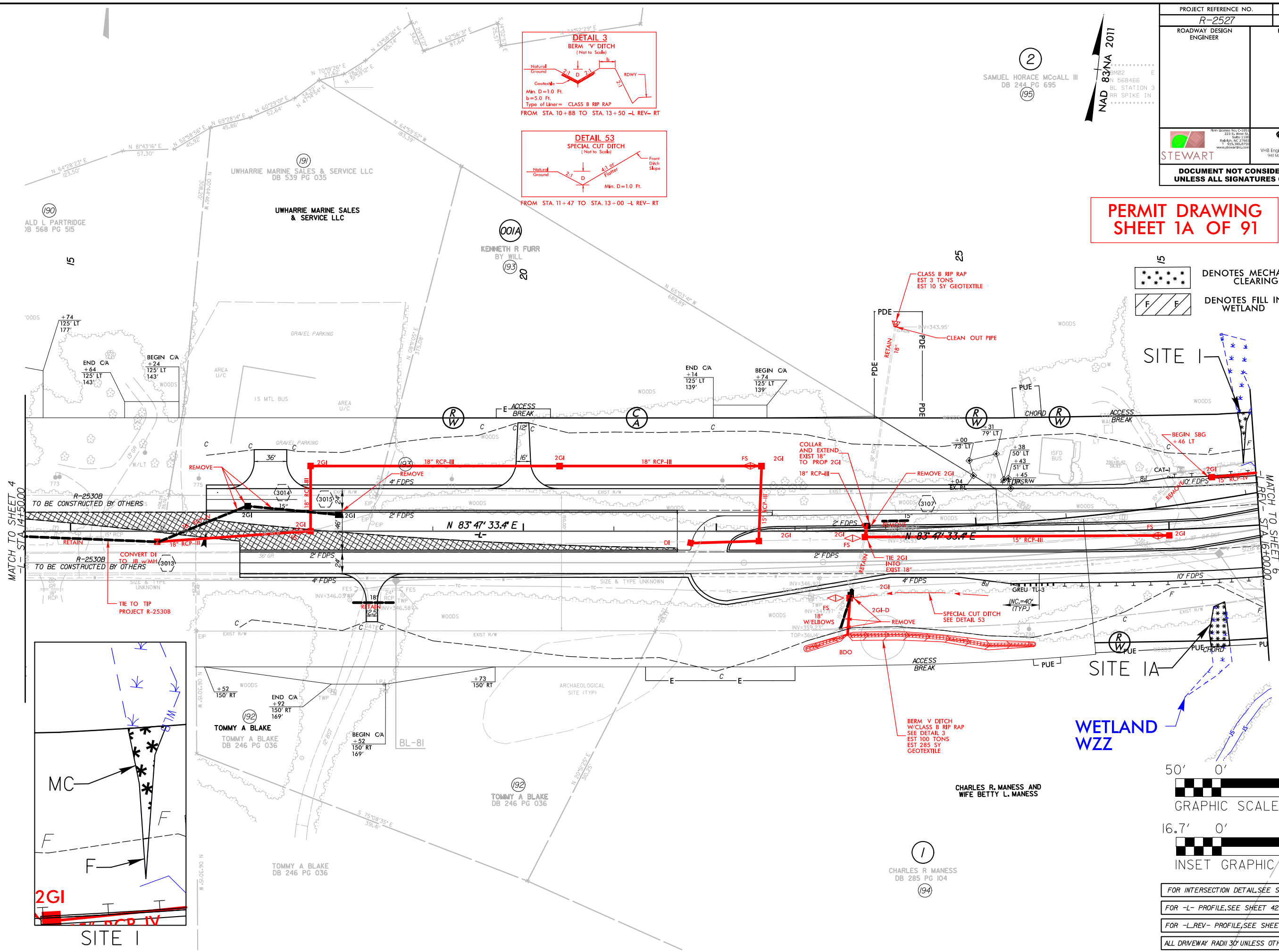
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PROJECT REFERENCE NO. R-2527	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SAMUEL HORACE MCCALL III DB 241 PG 695 NAD 83 NA 2011	
STEWART VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PERMIT DRAWING
SHEET 1A OF 91**



- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND

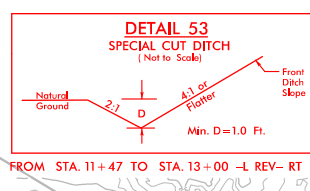
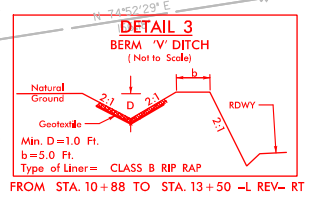


FOR INTERSECTION DETAIL, SEE SHEET 2B-1
 FOR -L- PROFILE, SEE SHEET 42
 FOR -L-REV- PROFILE, SEE SHEET 65
 ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

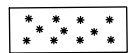

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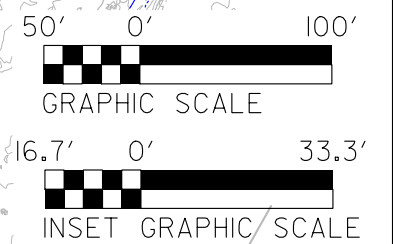
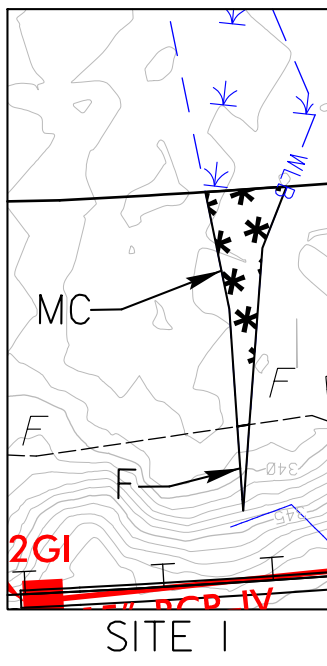
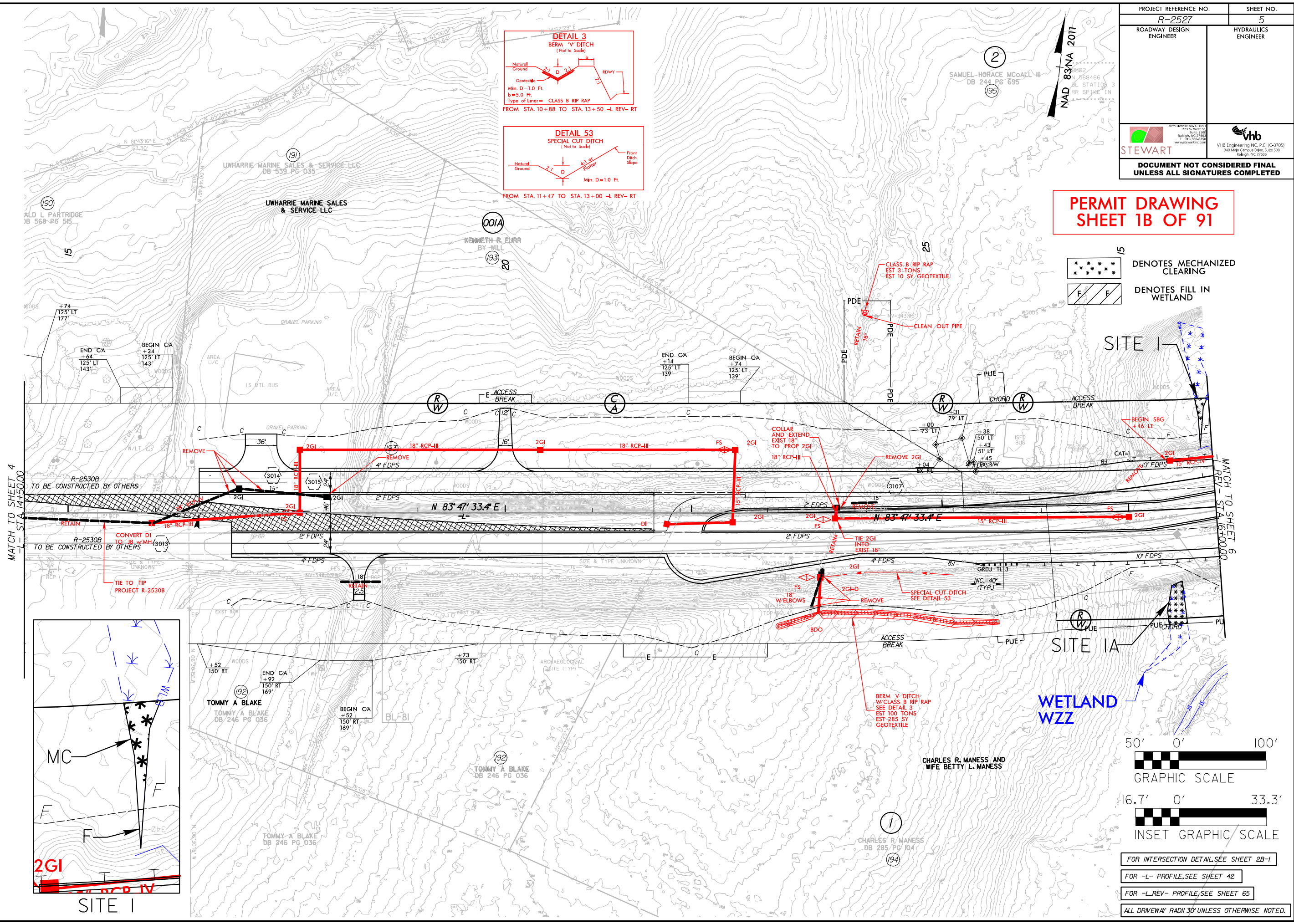
5/14/99

PROJECT REFERENCE NO. R-2527	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART	 vhb VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PERMIT DRAWING
SHEET 1B OF 91**

-  DENOTES MECHANIZED CLEARING
-  DENOTES FILL IN WETLAND



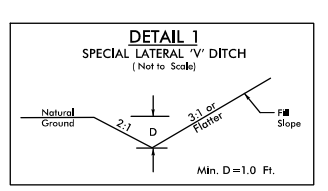
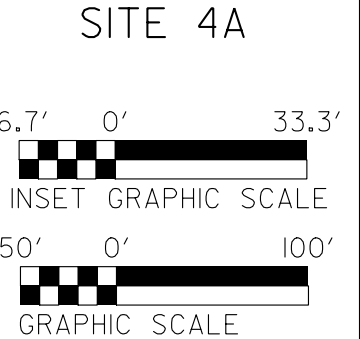
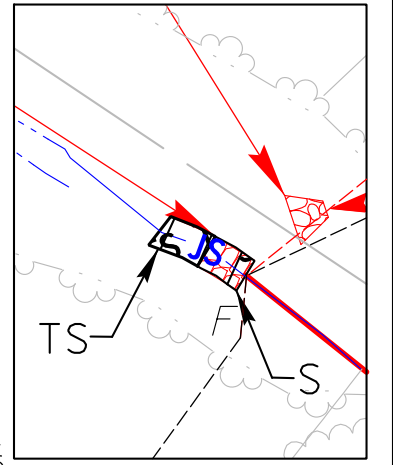
FOR INTERSECTION DETAIL, SEE SHEET 2B-1
 FOR -L- PROFILE, SEE SHEET 42
 FOR -L-REV- PROFILE, SEE SHEET 65
 ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

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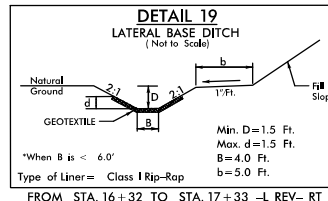
5/14/99

PROJECT REFERENCE NO. R-2527	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

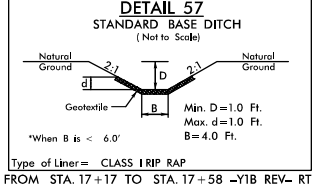
**PERMIT DRAWING
SHEET 2 OF 91**



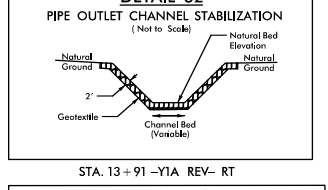
FROM STA. 11+50 TO STA. 13+92 -YIA REV- LT
FROM STA. 12+15 TO STA. 13+75 -YIA REV- RT



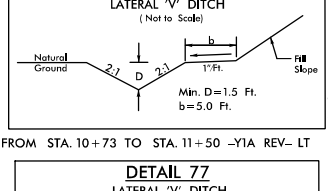
FROM STA. 16+32 TO STA. 17+33 -L REV- RT



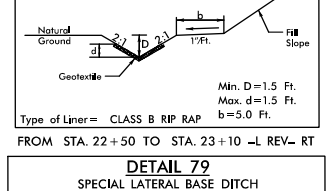
FROM STA. 17+17 TO STA. 17+58 -YIB REV- RT



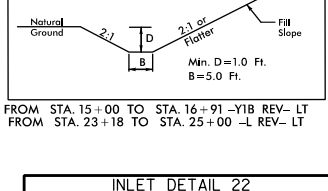
STA. 13+91 -YIA REV- RT



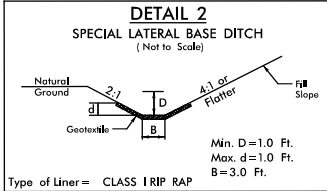
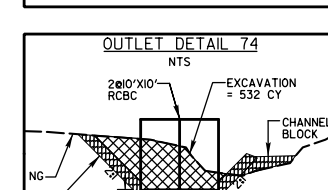
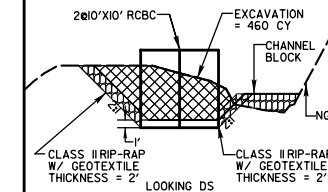
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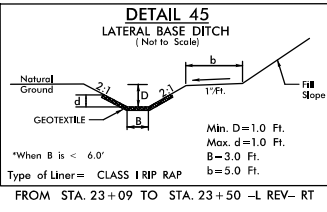
FROM STA. 22+50 TO STA. 23+10 -L REV- RT



FROM STA. 15+00 TO STA. 16+91 -YIB REV- LT
FROM STA. 23+18 TO STA. 25+00 -L REV- LT



FROM STA. 23+50 TO STA. 27+50 -L REV- RT



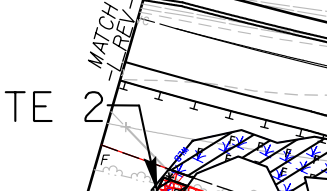
FROM STA. 23+09 TO STA. 23+50 -L REV- RT



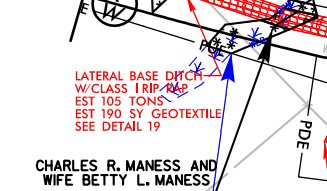
FROM STA. 17+17 TO STA. 17+58 -YIB REV- RT



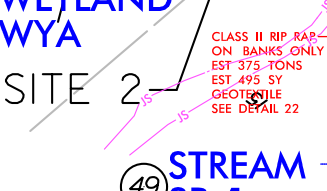
STA. 13+91 -YIA REV- RT



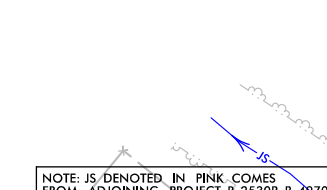
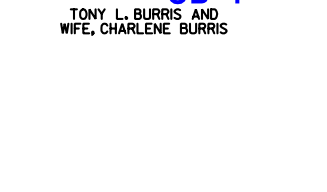
FROM STA. 10+73 TO STA. 11+50 -YIA REV- LT



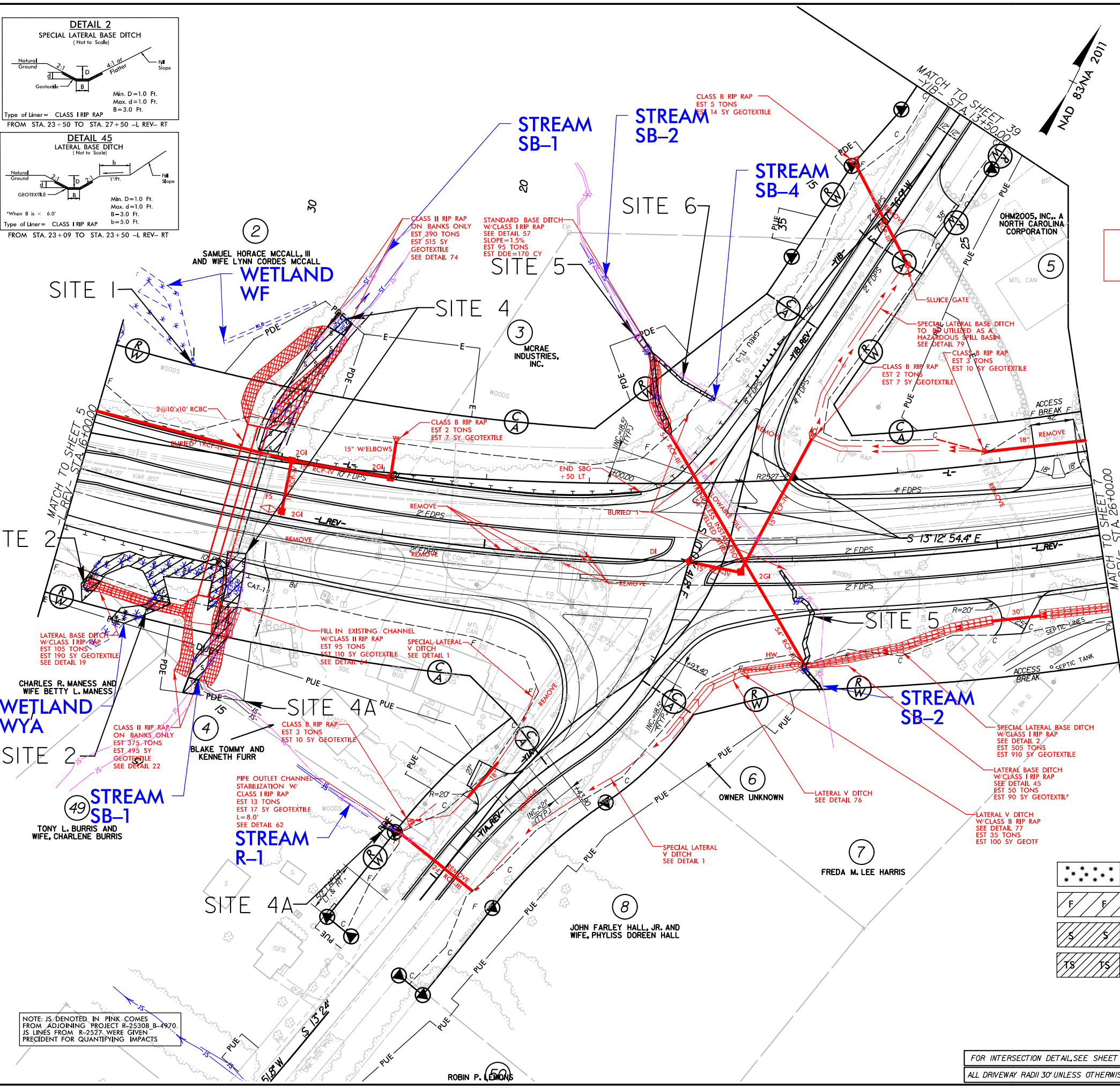
FROM STA. 22+50 TO STA. 23+10 -L REV- RT



FROM STA. 15+00 TO STA. 16+91 -YIB REV- LT
FROM STA. 23+18 TO STA. 25+00 -L REV- LT



NOTE: JS DENOTED IN PINK COMES FROM ADJOINING PROJECT R-2530B B-4970. JS LINES FROM R-2527 WERE GIVEN PRECEDENT FOR QUANTIFYING IMPACTS



- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

FOR INTERSECTION DETAIL, SEE SHEET 2B-2

FOR -L- PROFILE, SEE SHEET 42

FOR -YIA REV- PROFILE, SEE SHEET 58

FOR -YIB REV- PROFILE, SEE SHEET 58

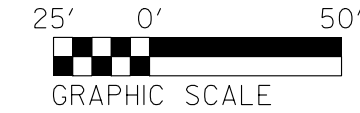
FOR -L REV- PROFILE, SEE SHEET 65

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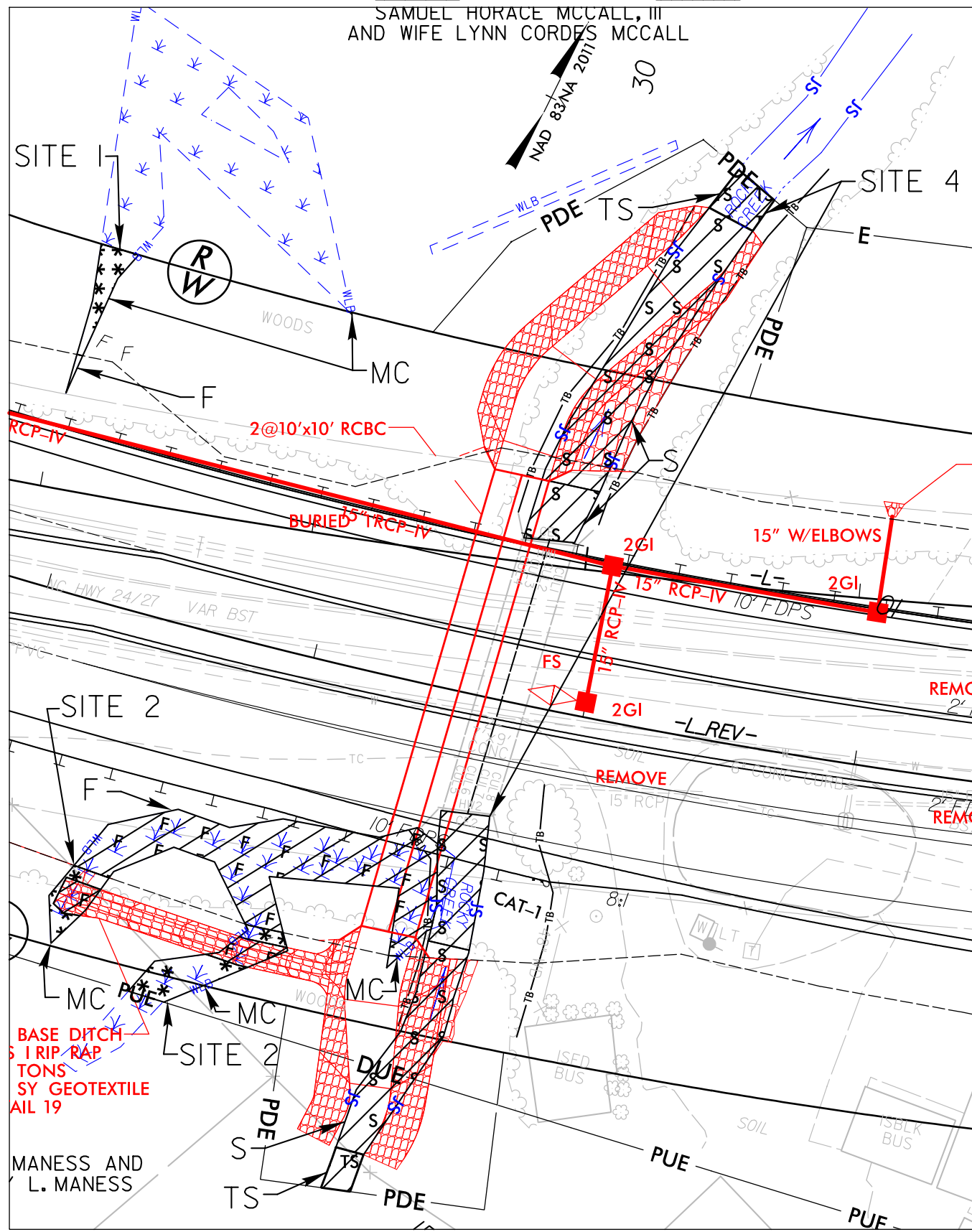
5/14/99

**PERMIT DRAWING
SHEET 3 OF 91**

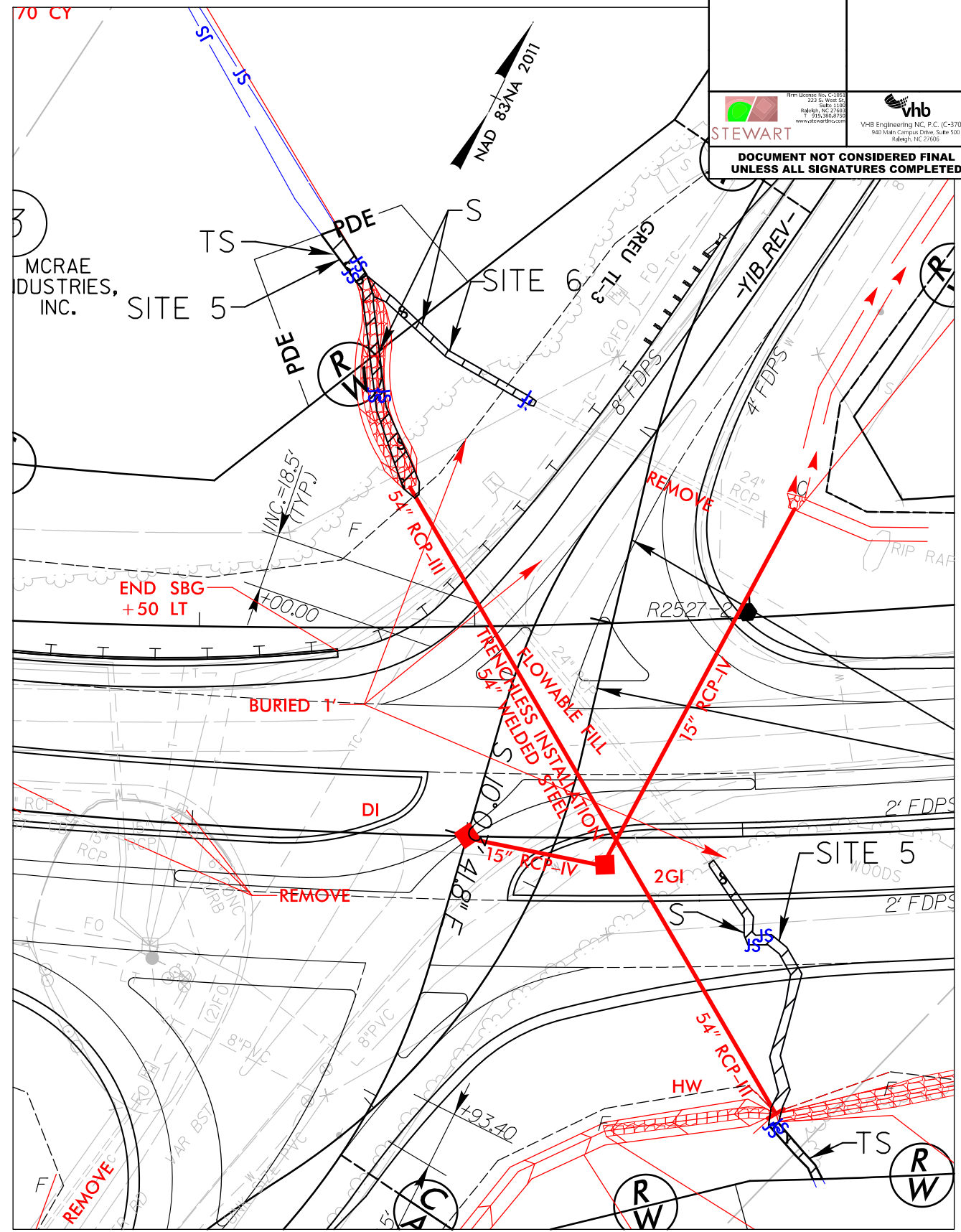
	DENOTES MECHANIZED CLEARING		DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND		DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SITES 1-4



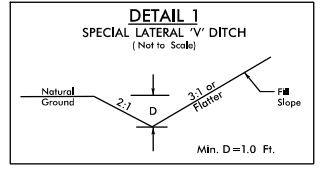
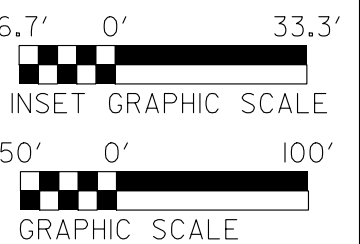
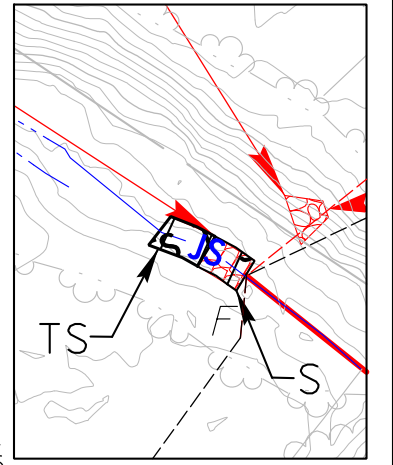
SITES 5-6

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5/14/99

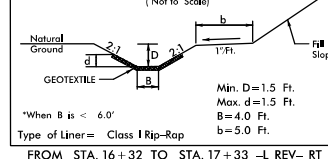
PROJECT REFERENCE NO. R-2527	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING SHEET 4 OF 91

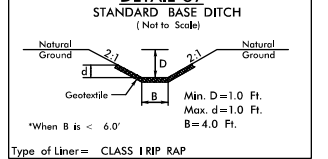


FROM STA. 11+50 TO STA. 13+92 -Y1A REV- LT

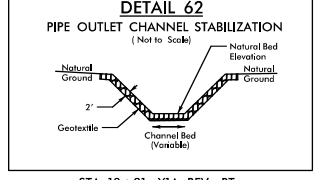
FROM STA. 12+15 TO STA. 13+75 -Y1A REV- RT



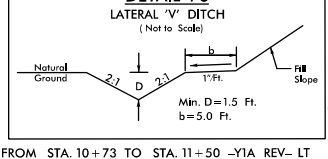
FROM STA. 16+32 TO STA. 17+33 -L REV- RT



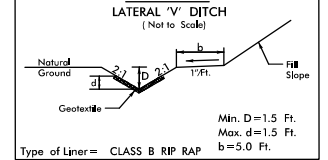
FROM STA. 17+17 TO STA. 17+58 -Y1B REV- RT



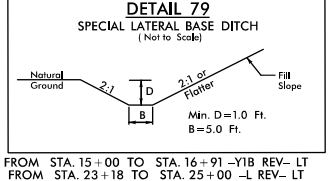
STA. 13+91 -Y1A REV- RT



FROM STA. 10+73 TO STA. 11+50 -Y1A REV- LT

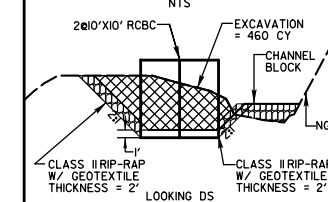


FROM STA. 22+50 TO STA. 23+10 -L REV- RT

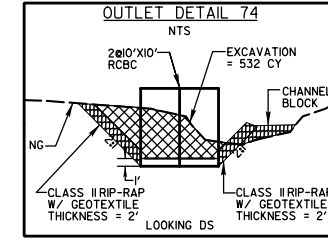


FROM STA. 15+00 TO STA. 16+91 -Y1B REV- LT

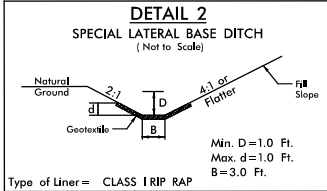
FROM STA. 23+18 TO STA. 25+00 -L REV- LT



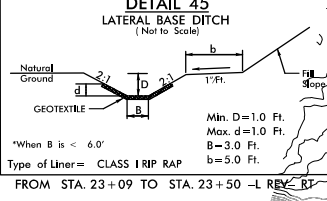
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LOOKING DS



FROM STA. 23+50 TO STA. 27+50 -L REV- RT



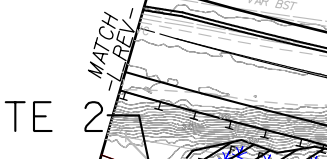
FROM STA. 23+09 TO STA. 23+50 -L REV- RT



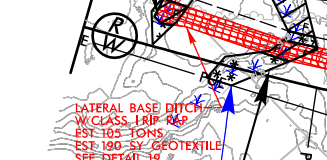
FROM STA. 23+09 TO STA. 23+50 -L REV- RT



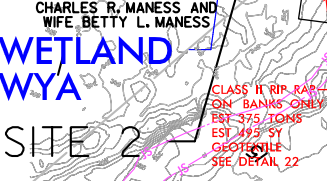
STA. 13+91 -Y1A REV- RT



FROM STA. 10+73 TO STA. 11+50 -Y1A REV- LT

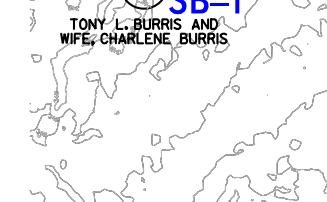


FROM STA. 22+50 TO STA. 23+10 -L REV- RT

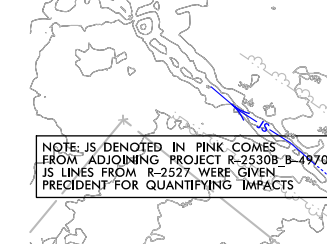


FROM STA. 15+00 TO STA. 16+91 -Y1B REV- LT

FROM STA. 23+18 TO STA. 25+00 -L REV- LT

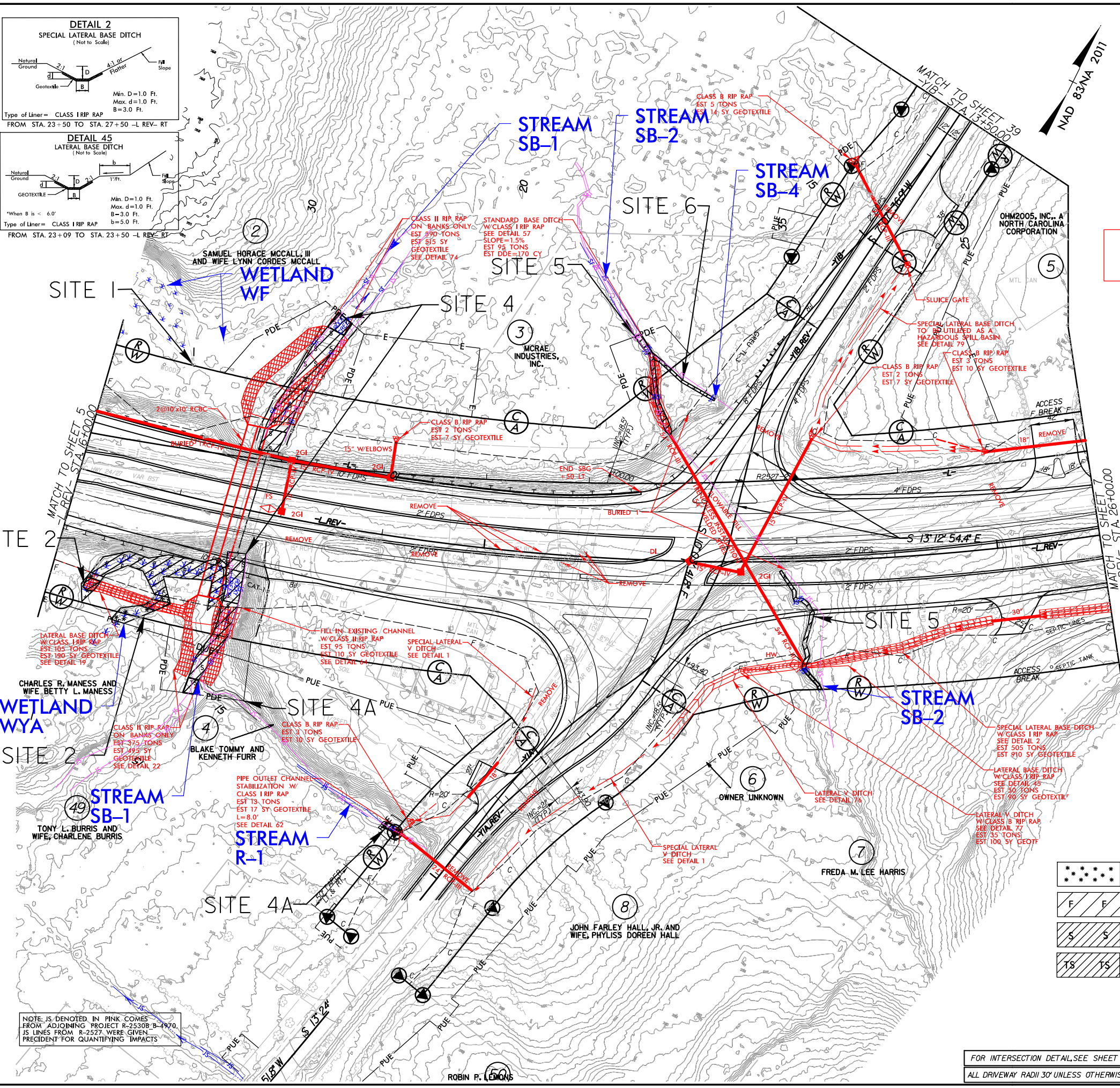


LOOKING DS



LOOKING DS

NOTE: IS DENOTED IN PINK COMES FROM ADJOINING PROJECT R-2530B-B-4970. IS LINES FROM R-2527 WERE GIVEN PRECEDENT FOR QUANTIFYING IMPACTS



- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

FOR INTERSECTION DETAIL, SEE SHEET 2B-2

FOR -L- PROFILE, SEE SHEET 42

FOR -Y1A REV- PROFILE, SEE SHEET 58

FOR -Y1B REV- PROFILE, SEE SHEET 58

FOR -L REV- PROFILE, SEE SHEET 65

FOR INTERSECTION DETAIL, SEE SHEET 2B-2

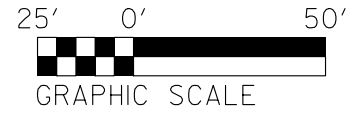
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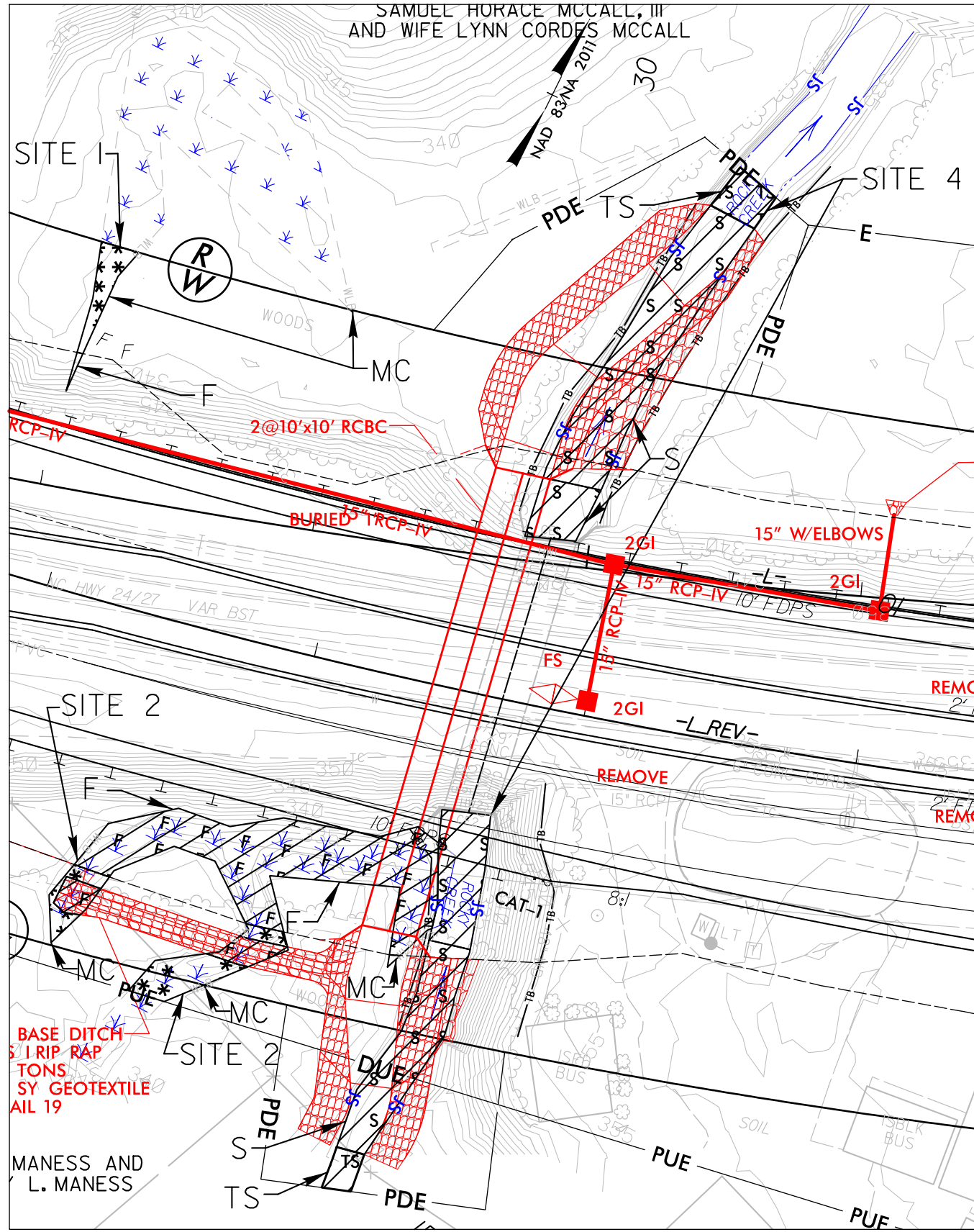
5/14/99

PERMIT DRAWING SHEET 5 OF 91

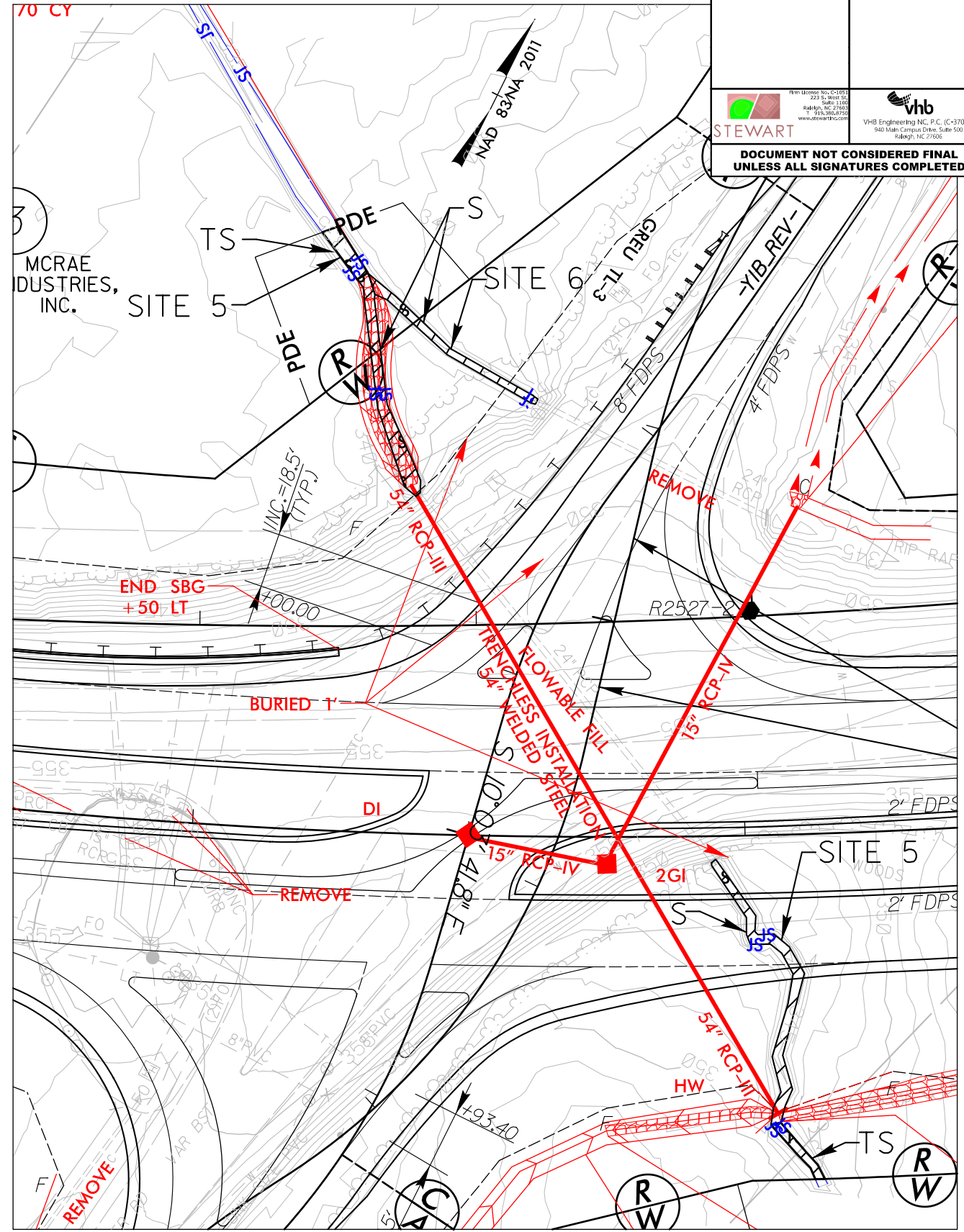
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	Vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	





SITES 1-4



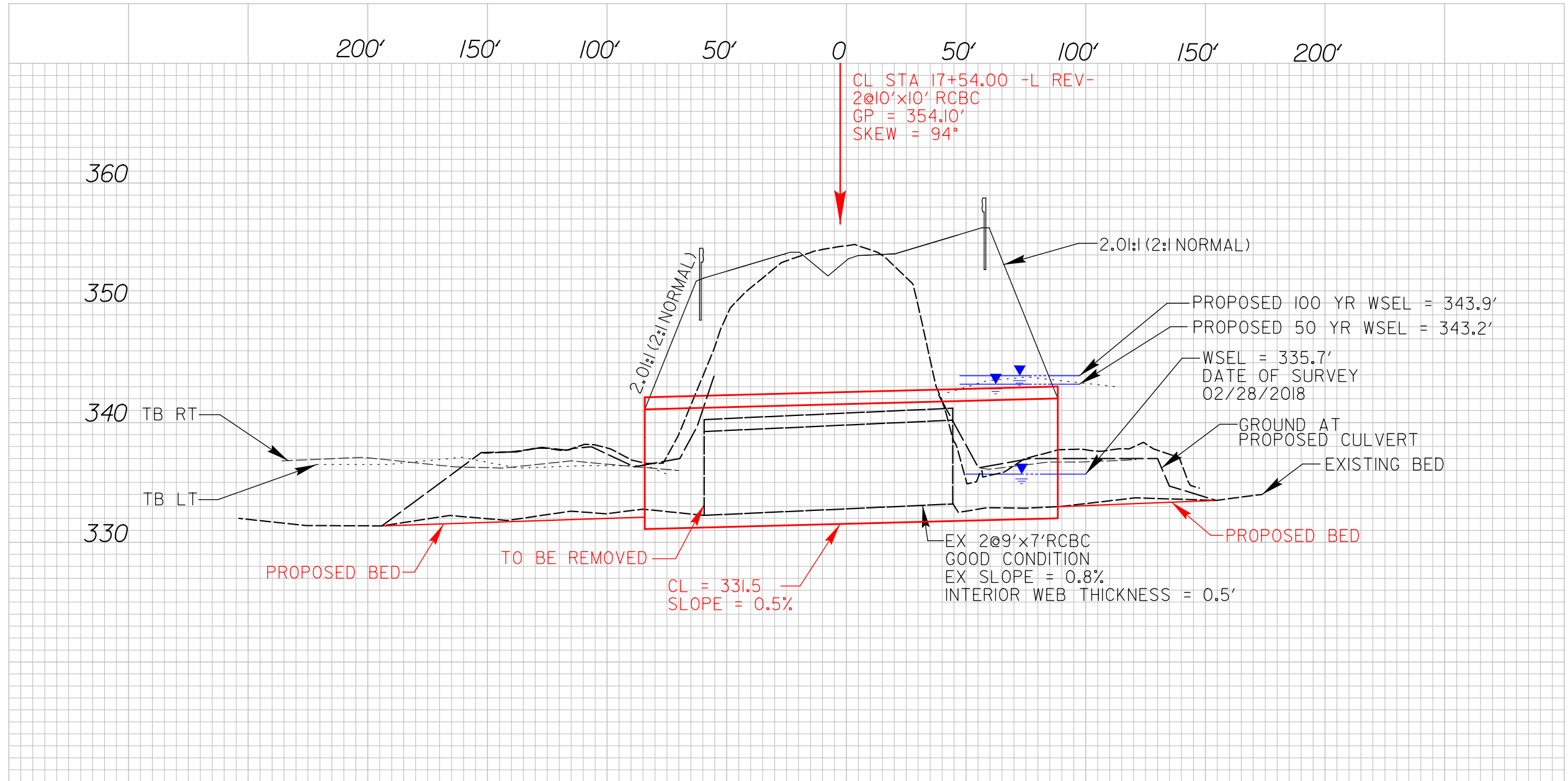
SITES 5-6

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PERMIT DRAWING
SHEET 6 OF 91

PROJECT REFERENCE NO.		SHEET NO.	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 Firm License No. CC-10753 233 S. West 1st St. Raleigh, NC 27603 P: 919.386.8700 www.stewartnc.com		 VHB Engineering NC, P.C. (C-3705) 940 Mark Campus Drive, Suite 500 Raleigh, NC 27606	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 4



REVISIONS

8/17/99

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8/23/99



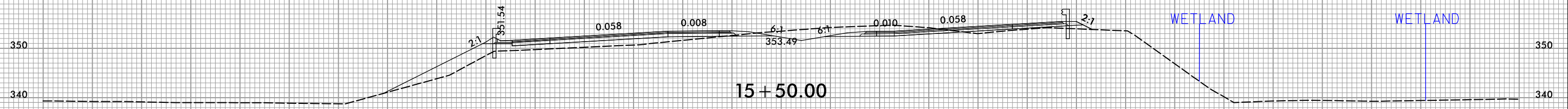
PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-8

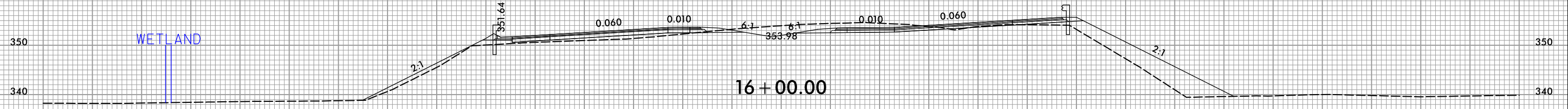
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PERMIT DRAWING
SHEET 7 OF 91

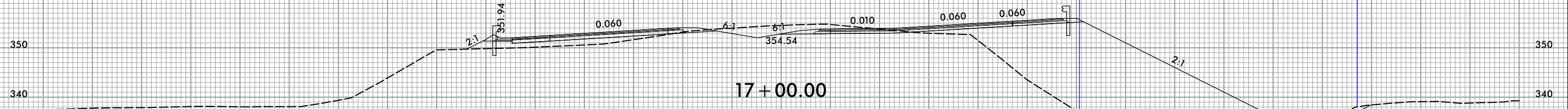
SITE 1A



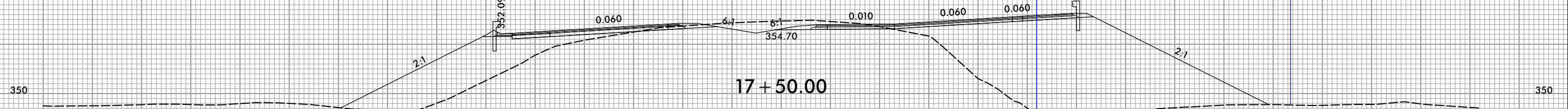
SITE 1



SITE 2



SITE 2



-L REV-

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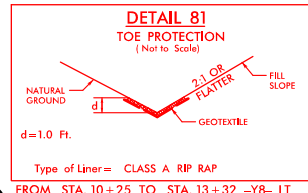
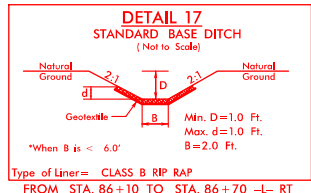
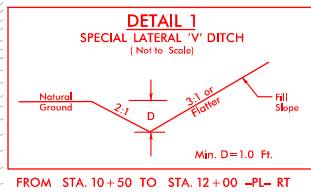
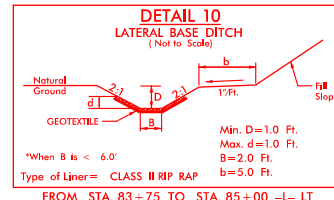
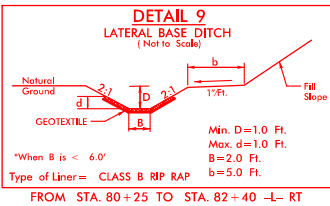
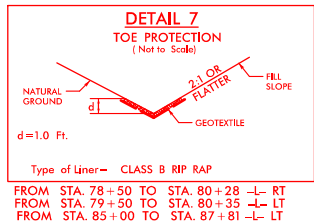
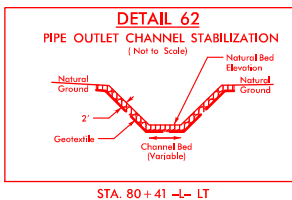
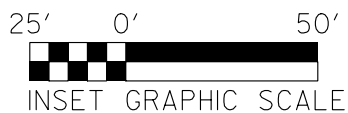
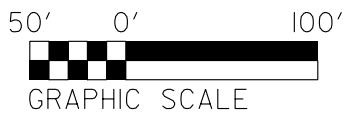
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5/14/99

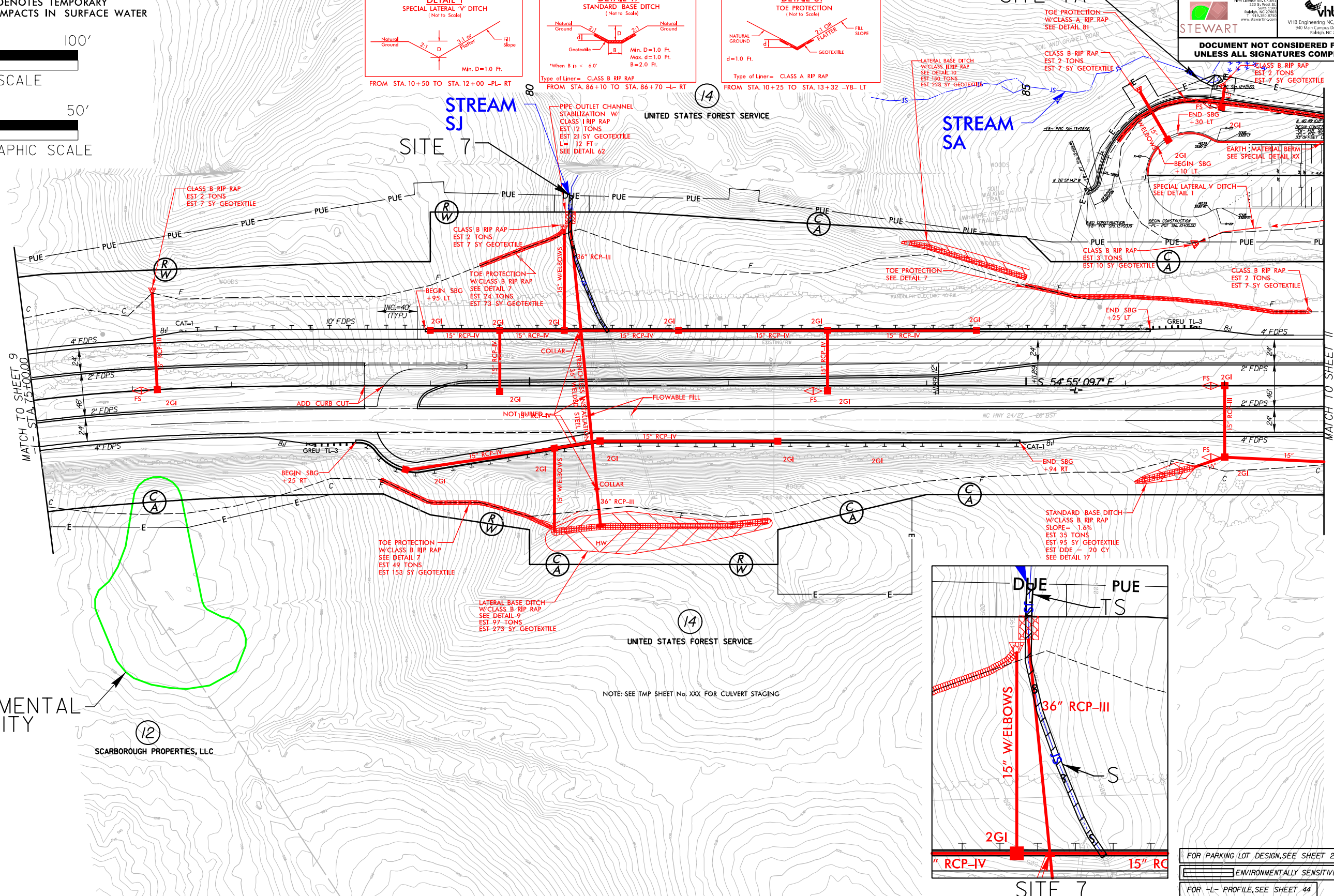
PERMIT DRAWING SHEET 9 OF 91

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SITE 7A



PROJECT REFERENCE NO. R-2527	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

FOR PARKING LOT DESIGN, SEE SHEET 2B-13

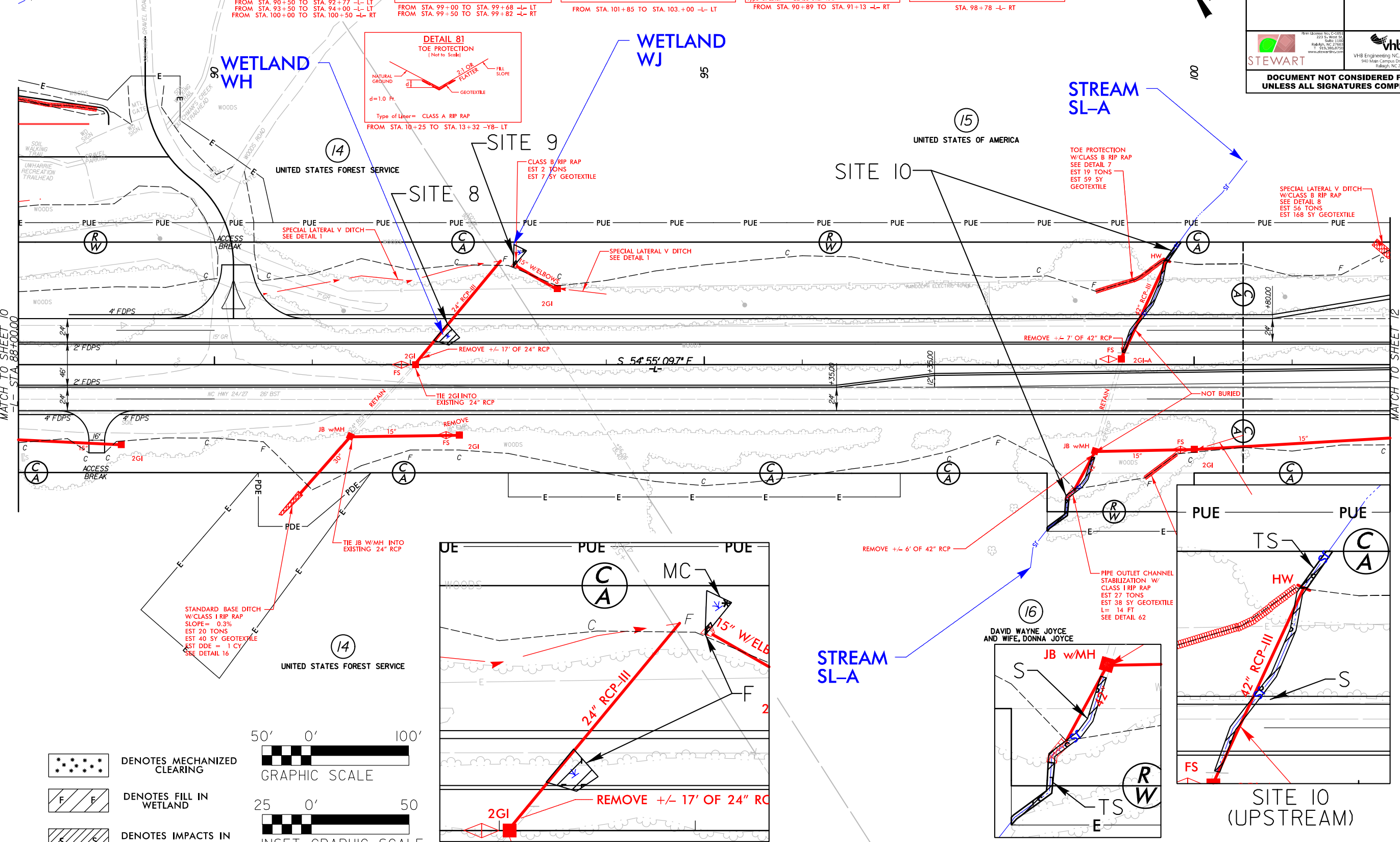
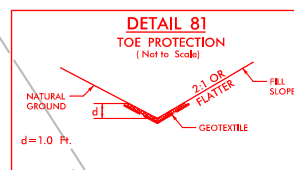
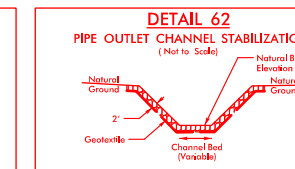
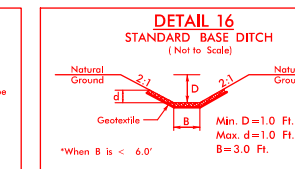
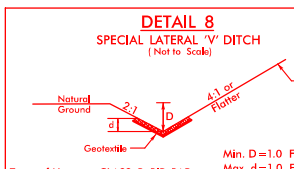
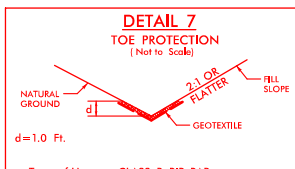
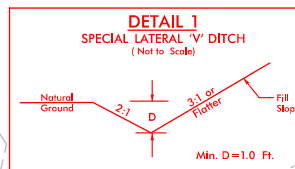
ENVIRONMENTALLY SENSITIVE AREA

FOR -L- PROFILE, SEE SHEET 44

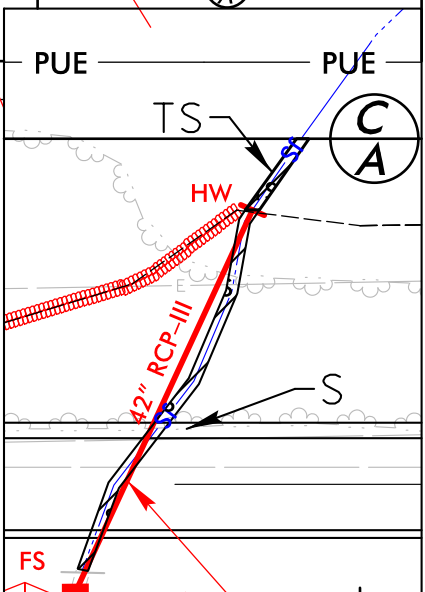
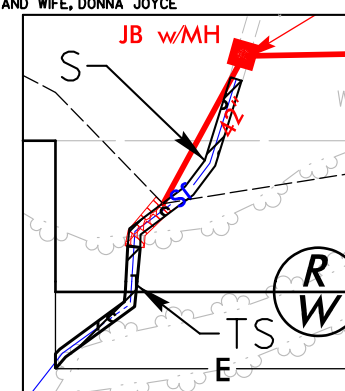
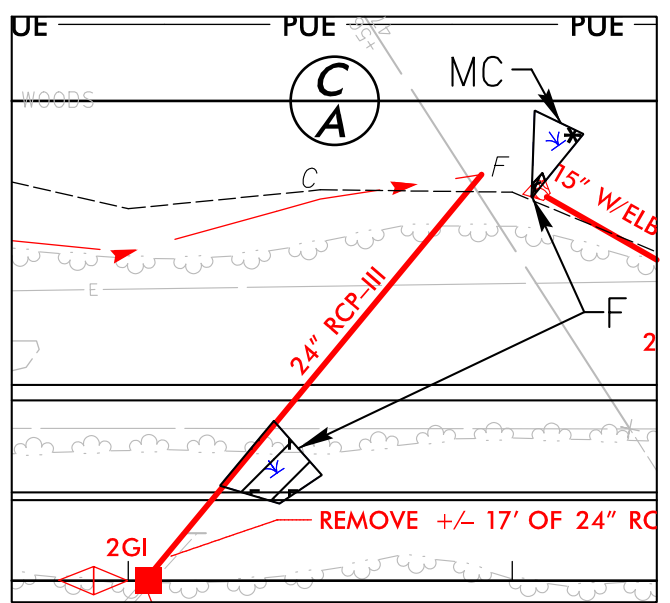
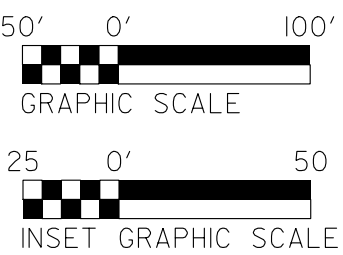
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**PERMIT DRAWING
SHEET 10 OF 91**





- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

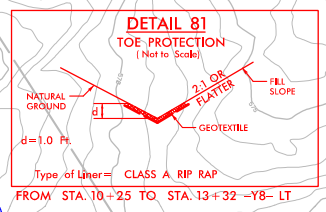
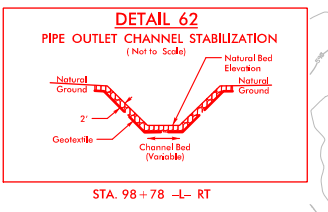
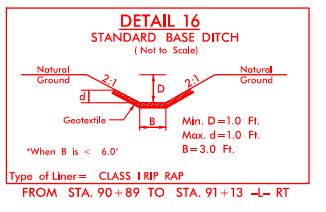
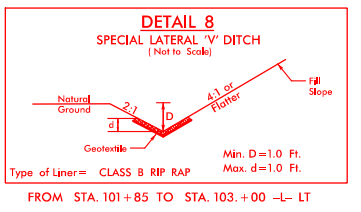
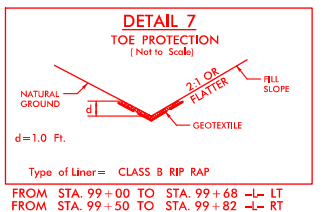
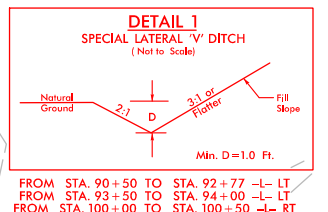


FOR INTERSECTION DETAIL, SEE SHEET 2B-3
 FOR PARKING LOT DESIGN, SEE SHEET 2B-13
 FOR -L- PROFILE, SEE SHEETS 44 & 45
 ALL DRIVEWAY RADI 30' UNLESS OTHERWISE NOTED.

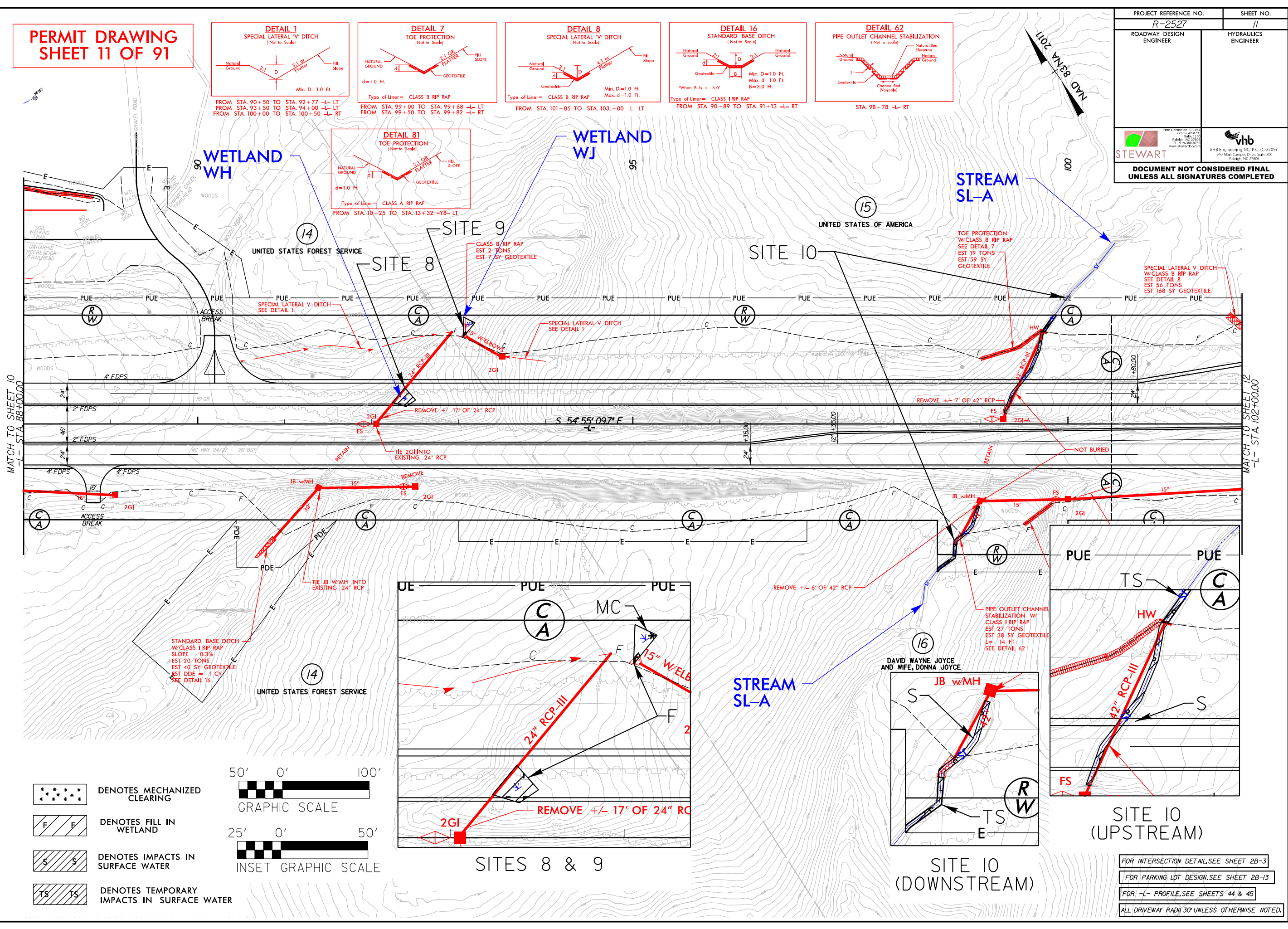
PROJECT REFERENCE NO. R-2527	SHEET NO. 11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	


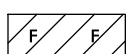
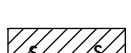

**PERMIT DRAWING
SHEET 11 OF 91**

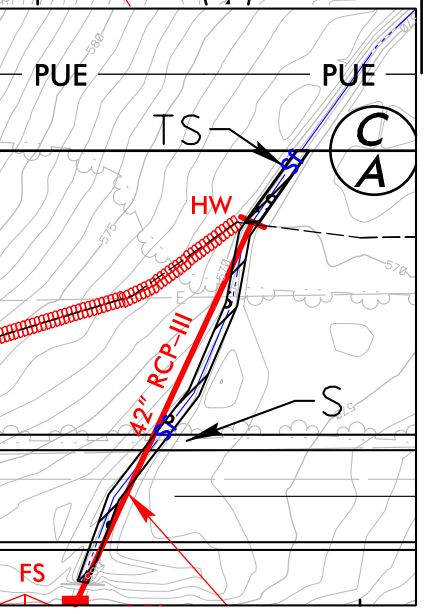
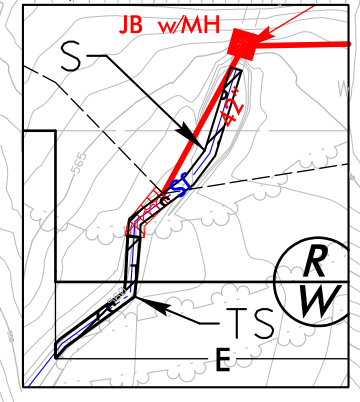
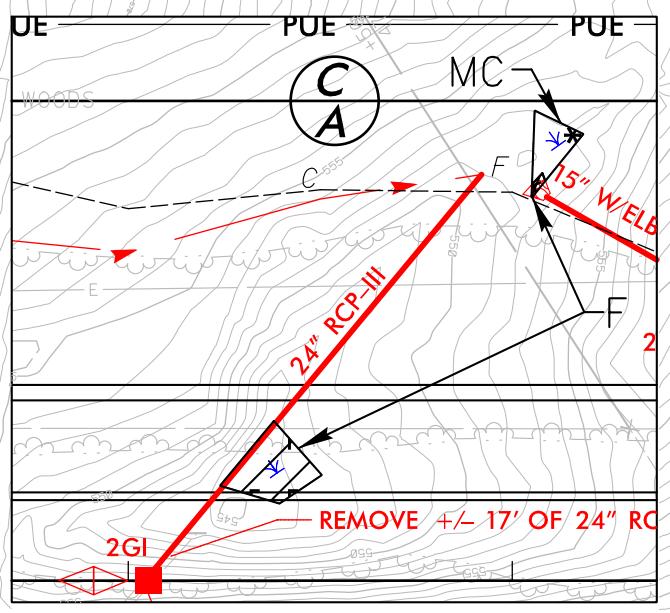
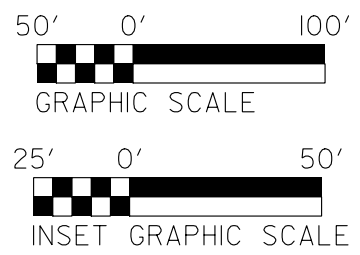
PROJECT REFERENCE NO. R-2527	SHEET NO. 11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART	 vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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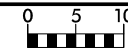


-  DENOTES MECHANIZED CLEARING
-  DENOTES FILL IN WETLAND
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



FOR INTERSECTION DETAIL, SEE SHEET 2B-3
FOR PARKING LOT DESIGN, SEE SHEET 2B-13
FOR -L- PROFILE, SEE SHEETS 44 & 45
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

8/23/99

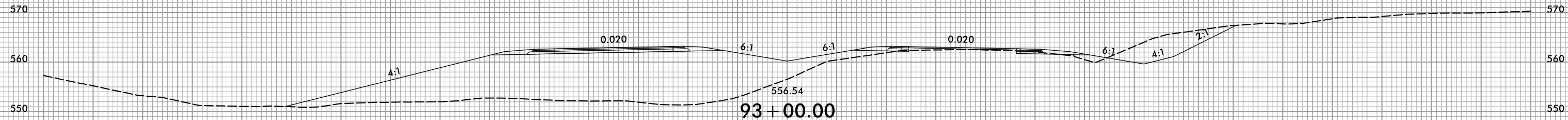
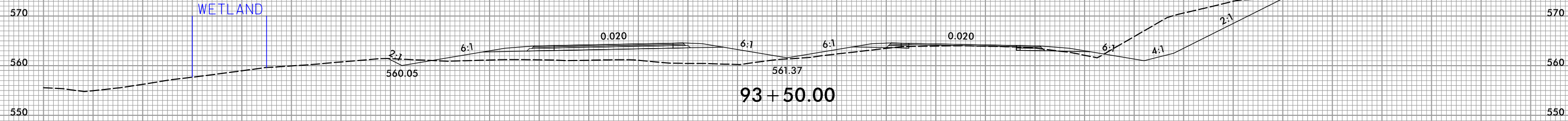


PROJ. REFERENCE NO.
R-2527

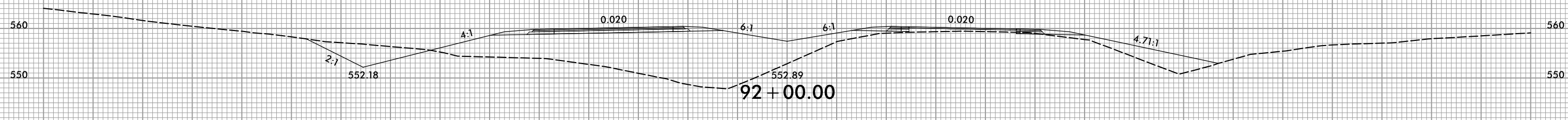
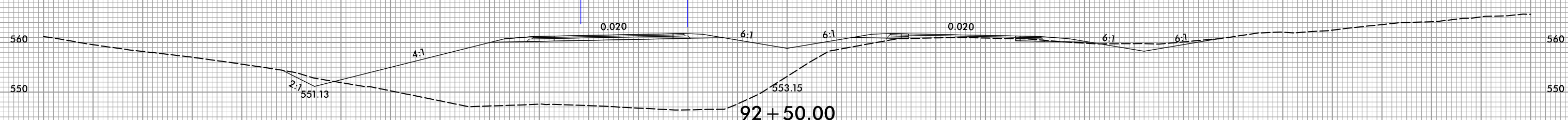
SHEET NO.
X-56

PERMIT DRAWING
SHEET 12 OF 91

SITE 9



SITE 8



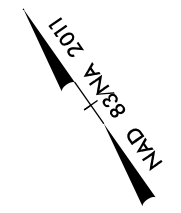
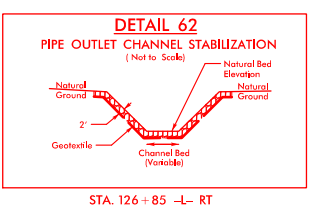
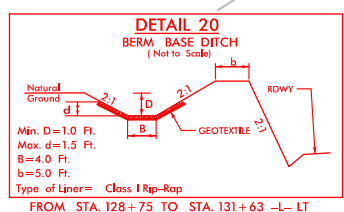
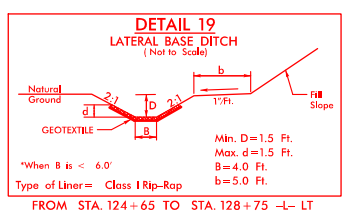
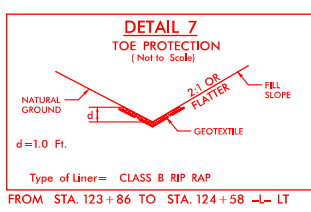
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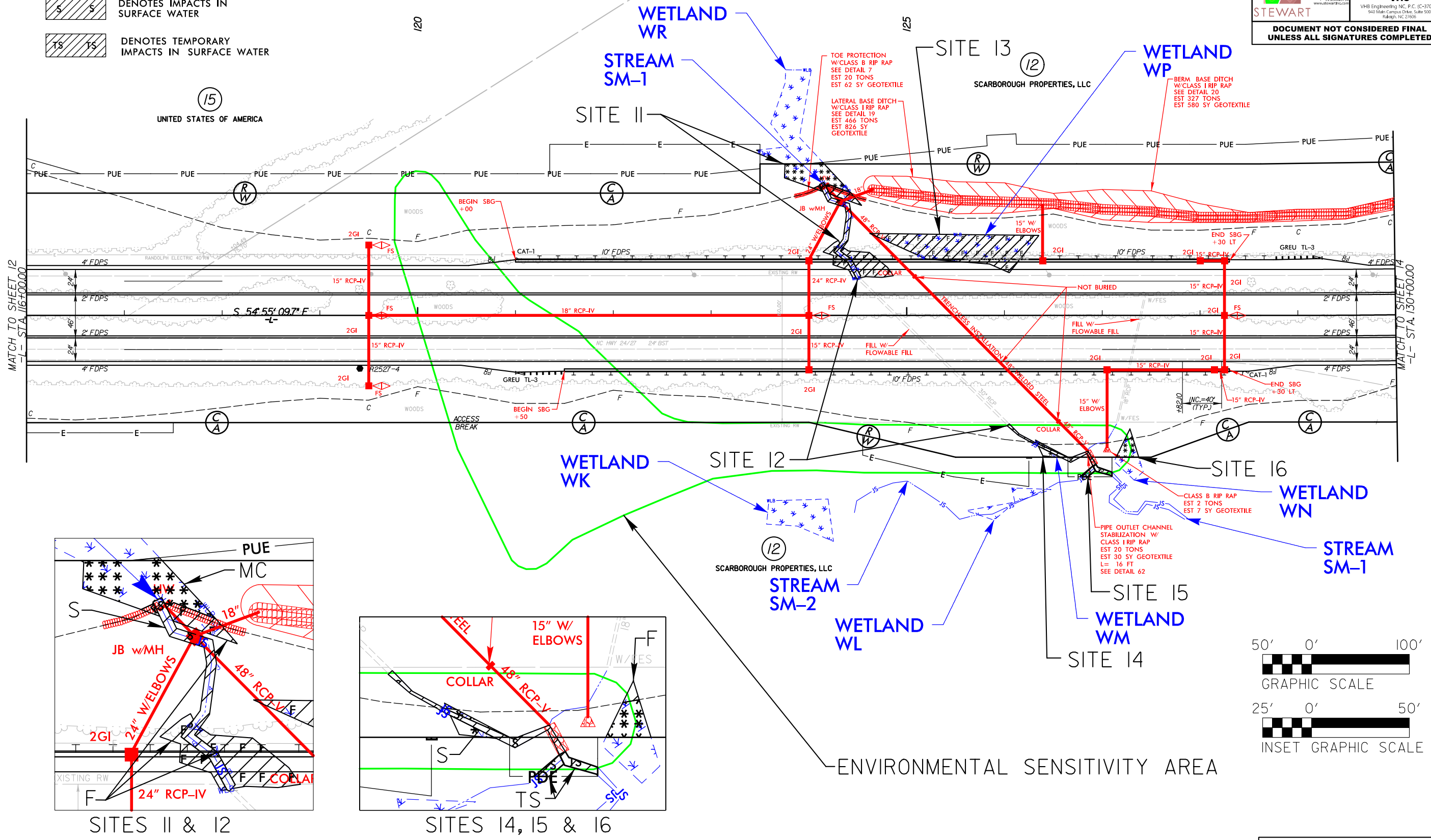
5/14/99

PERMIT DRAWING SHEET 13 OF 91

- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

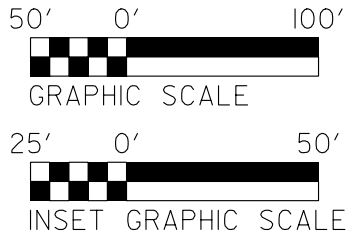
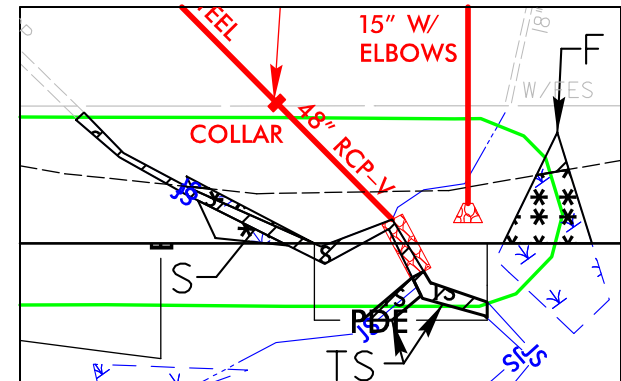
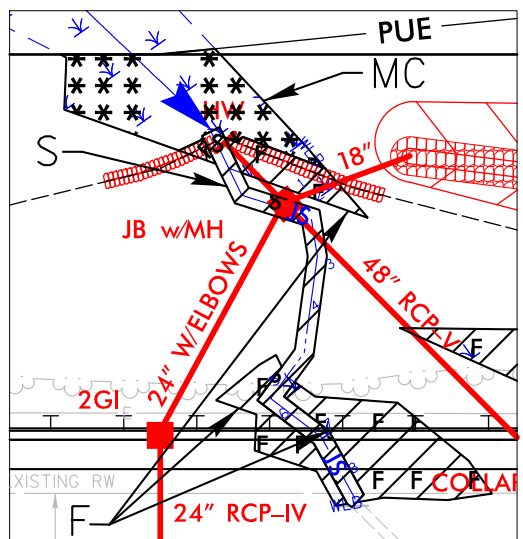


PROJECT REFERENCE NO. R-2527	SHEET NO. 13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCH TO SHEET 12
-L- STA. 116+00.00

MATCH TO SHEET 14
-L- STA. 130+00.00



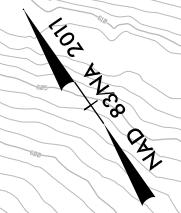
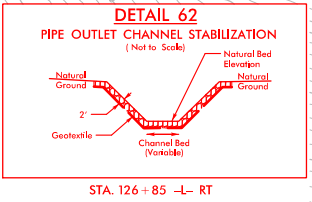
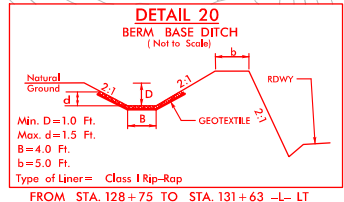
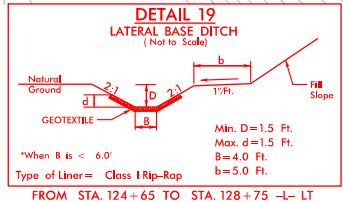
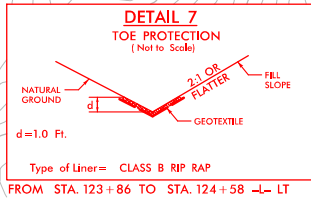
ENVIRONMENTALLY SENSITIVE AREA
FOR -L- PROFILE, SEE SHEETS 45 & 46

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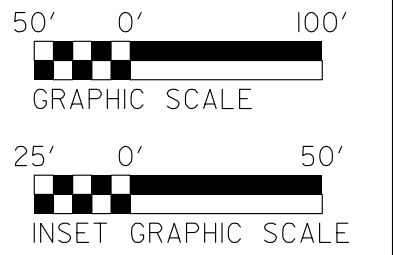
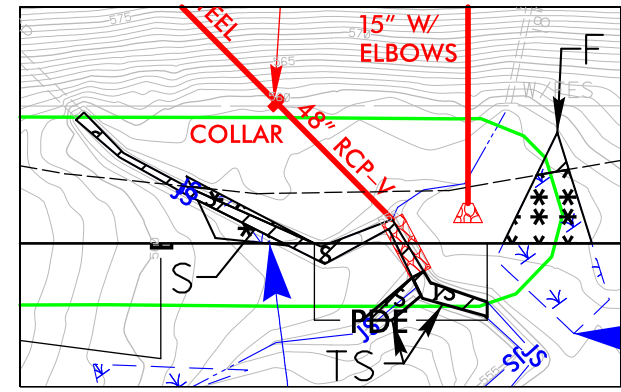
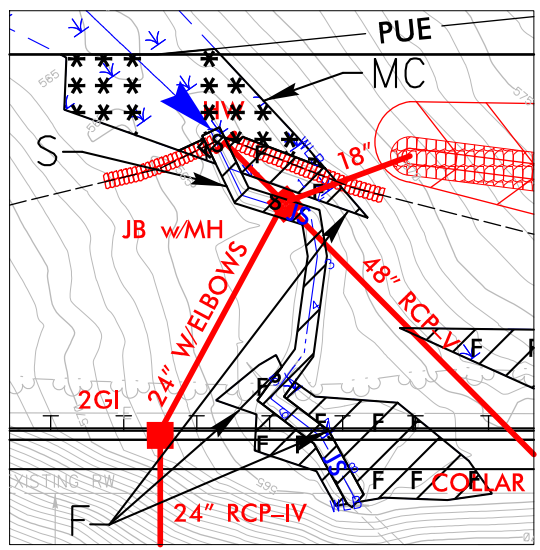
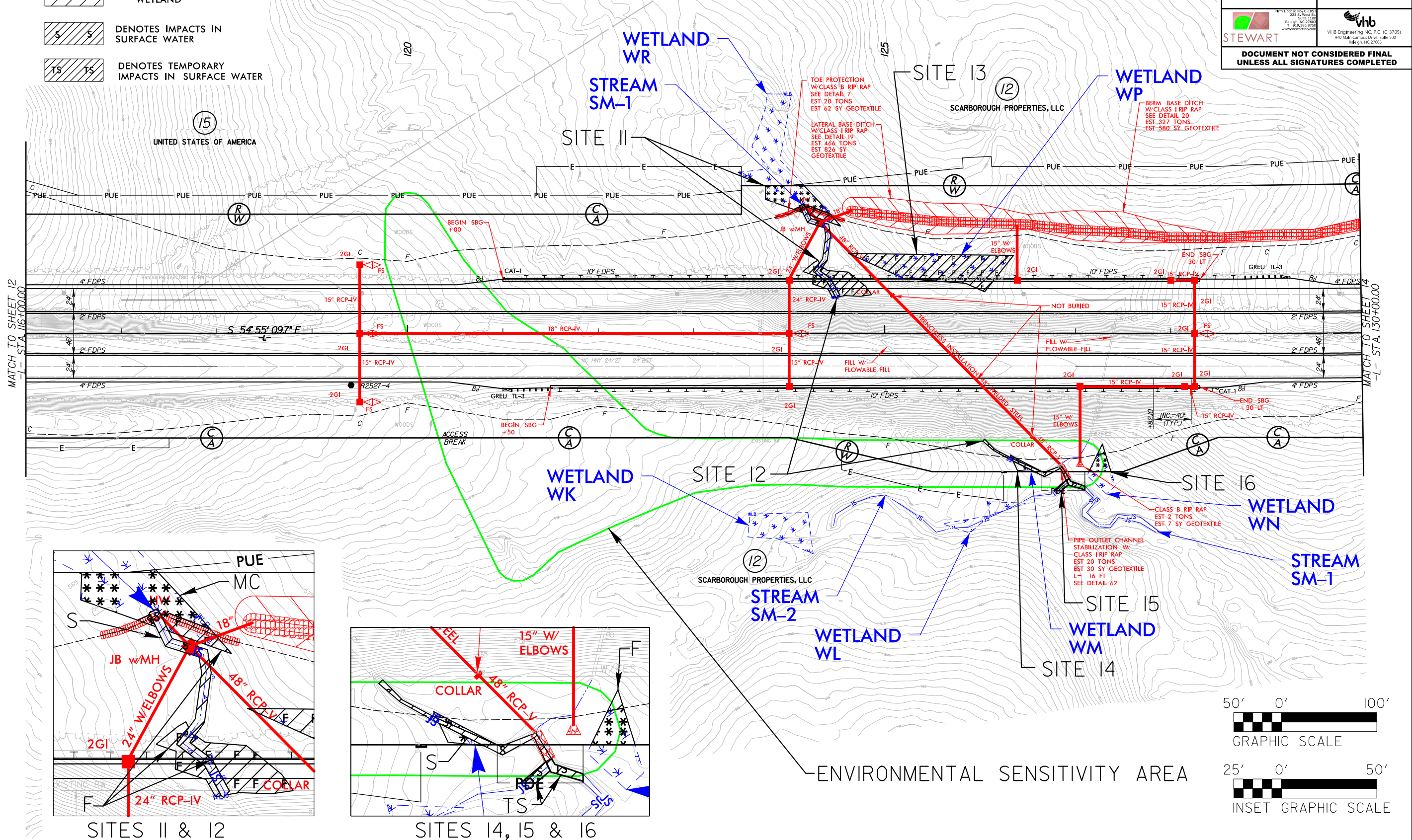
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**PERMIT DRAWING
 SHEET 14 OF 91**

- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



ENVIRONMENTALLY SENSITIVE AREA
 FOR -L- PROFILE, SEE SHEETS 45 & 46

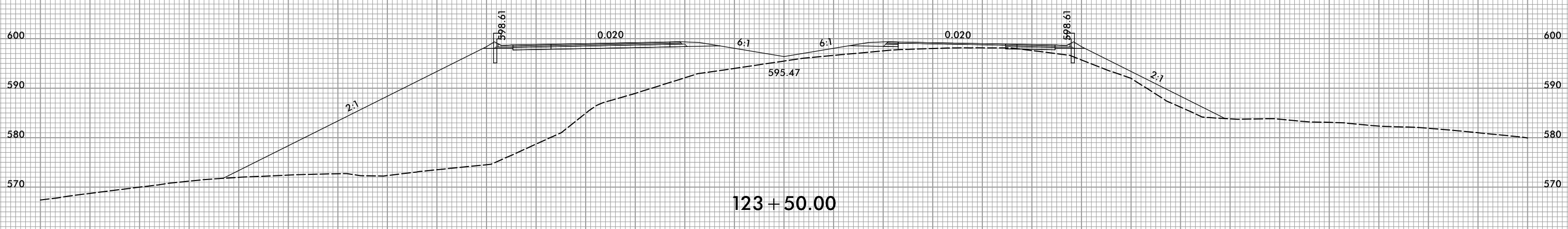
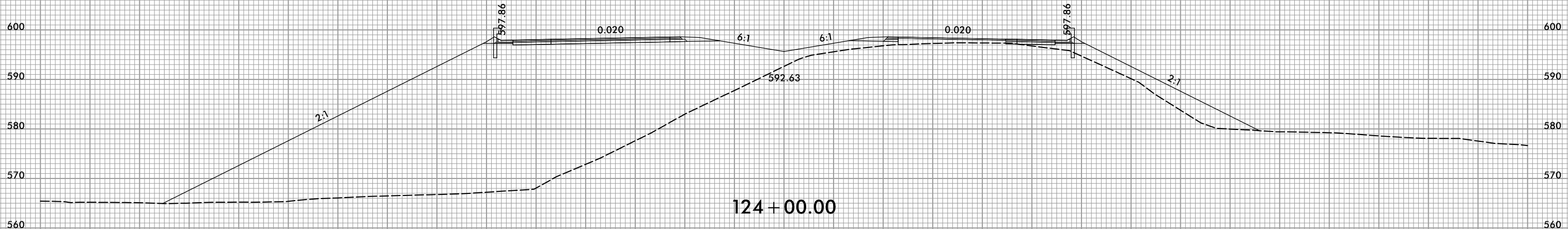
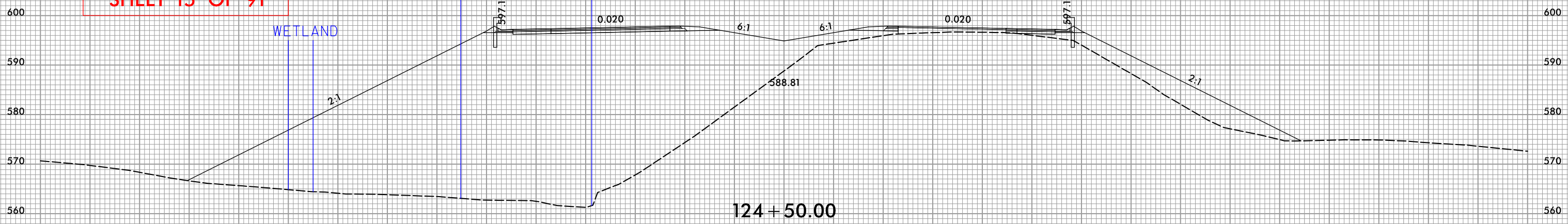


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PERMIT DRAWING
SHEET 15 OF 91

SITE II

WETLAND
WETLAND
WETLAND



8/23/99



PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-73

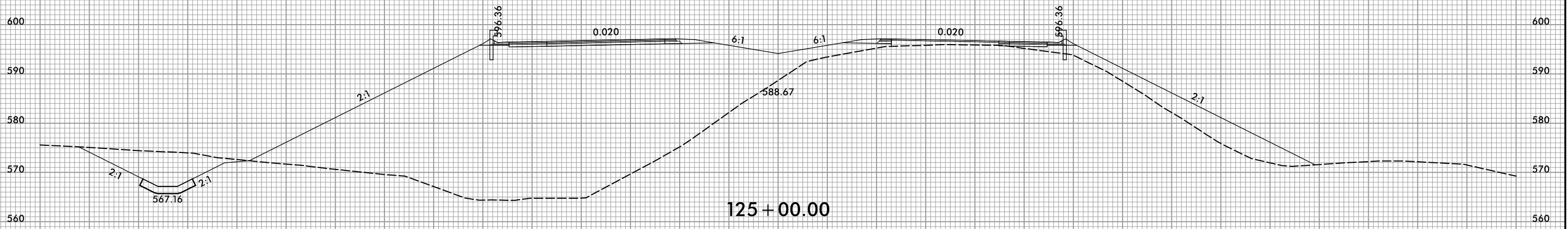
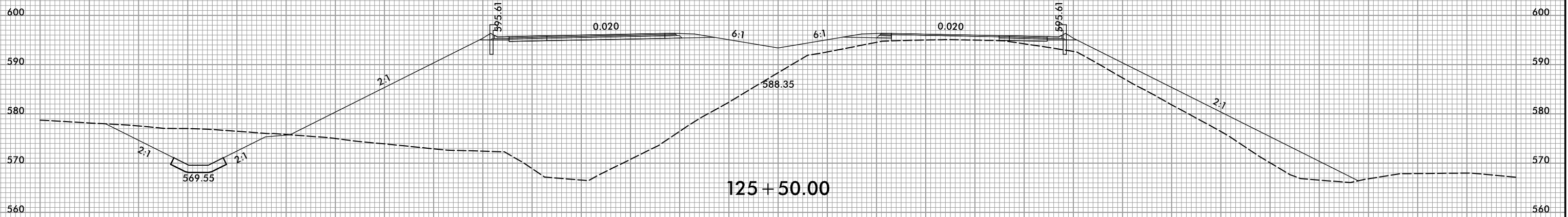
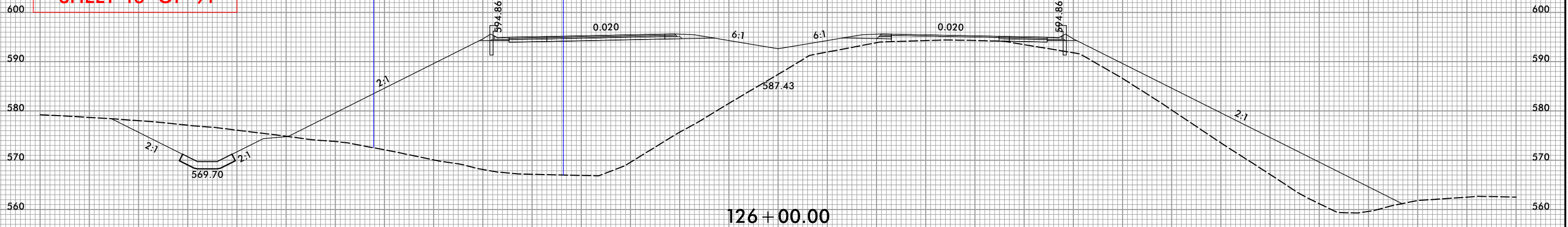
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PERMIT DRAWING
SHEET 16 OF 91

WETLAND

WETLAND

SITE 13



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8/23/99



PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-74

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PERMIT DRAWING
SHEET 17 OF 91

SITE 16

WETLAND
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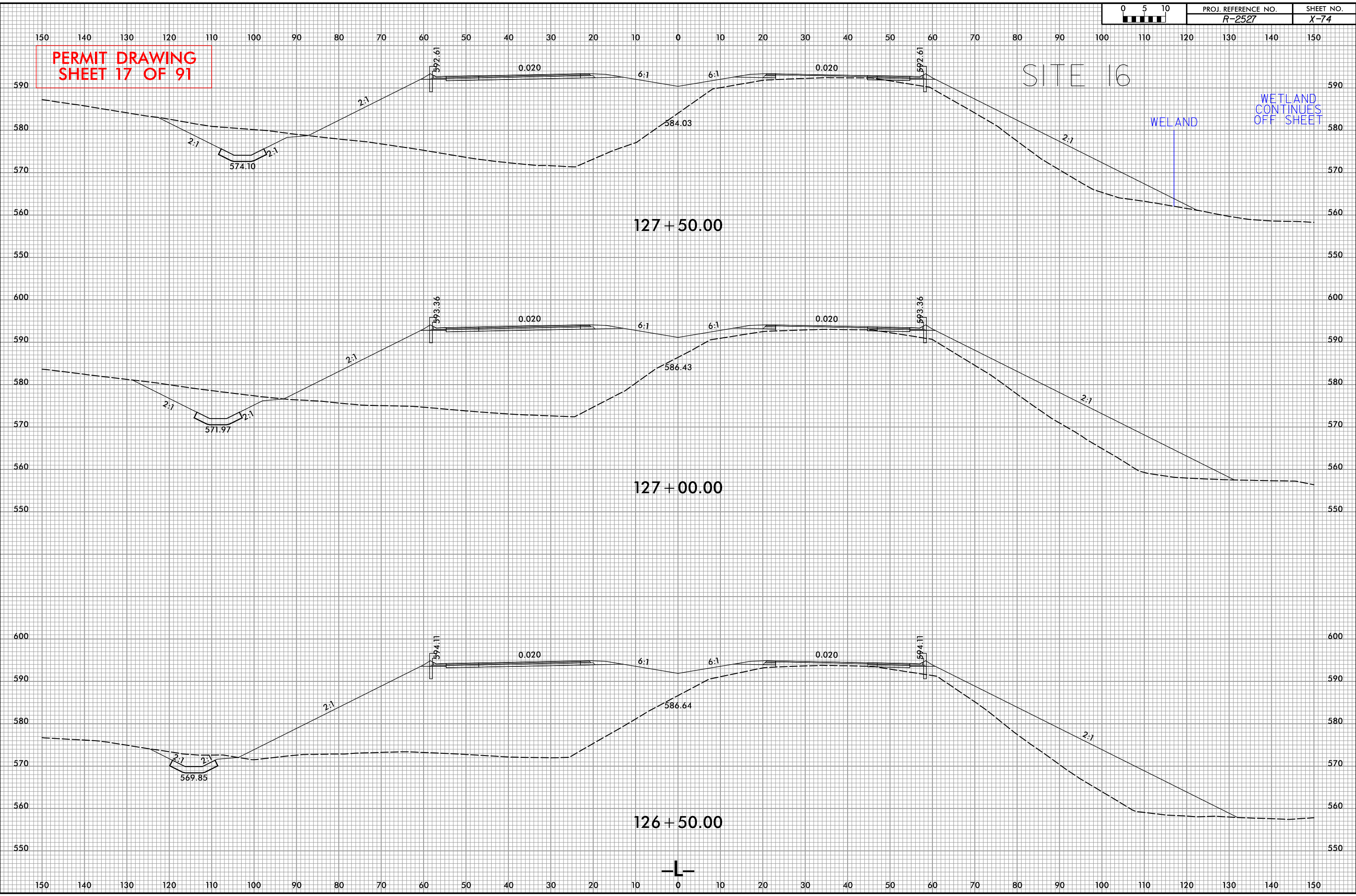
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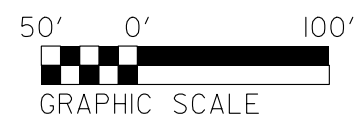


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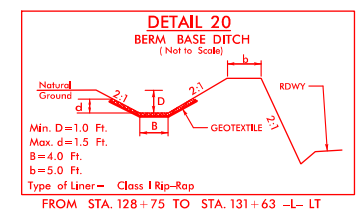
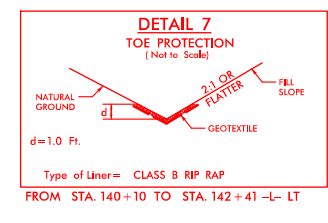


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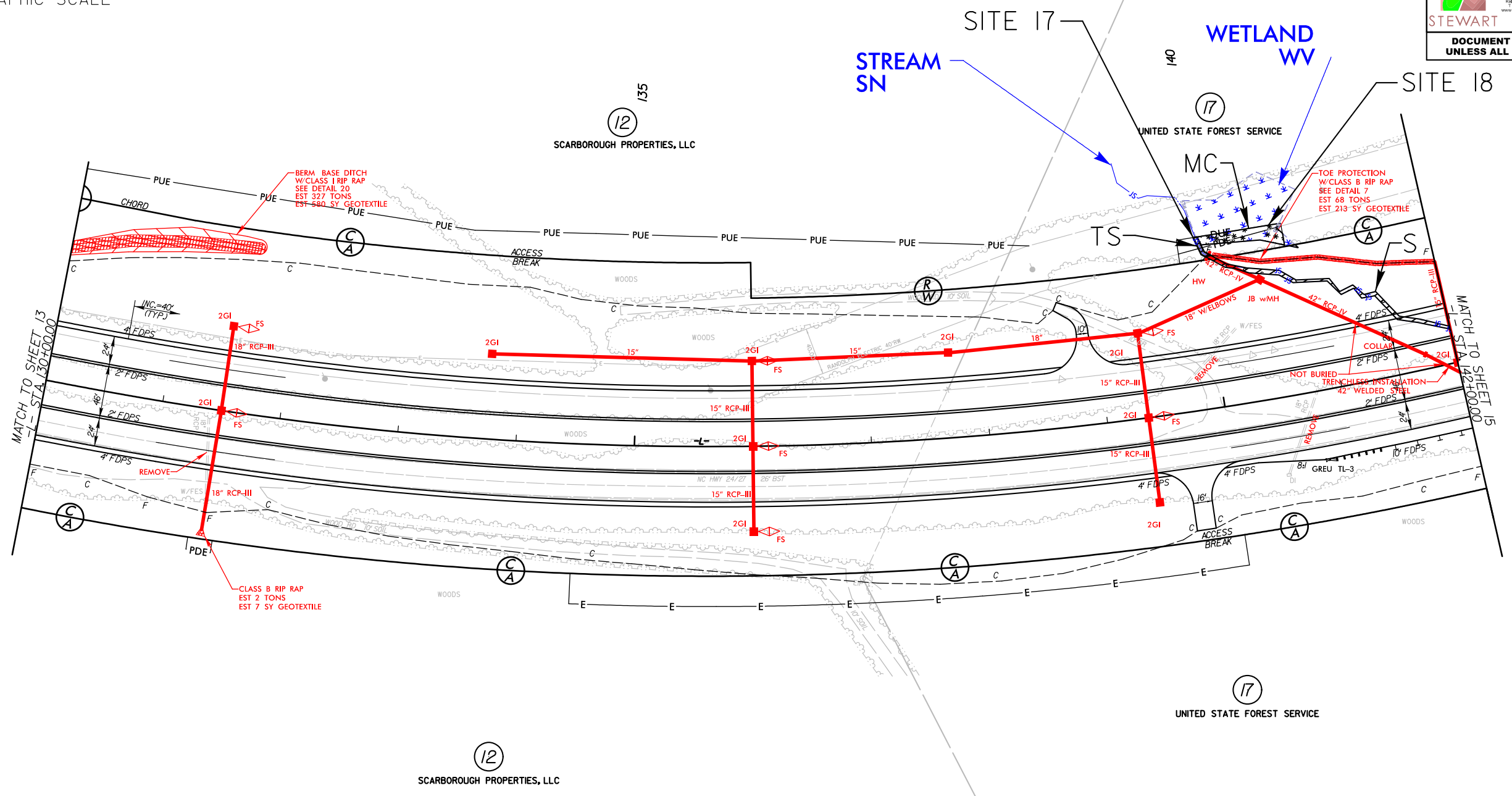
PERMIT DRAWING SHEET 18 OF 91



- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

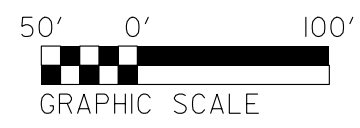


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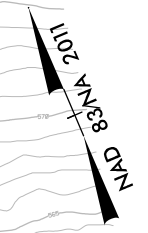
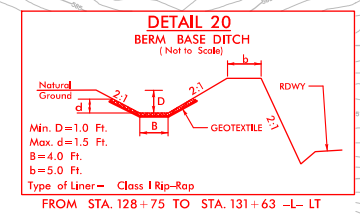
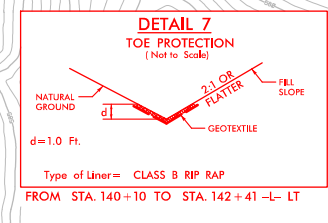
FOR -L- PROFILE, SEE SHEET 46
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

5/14/99

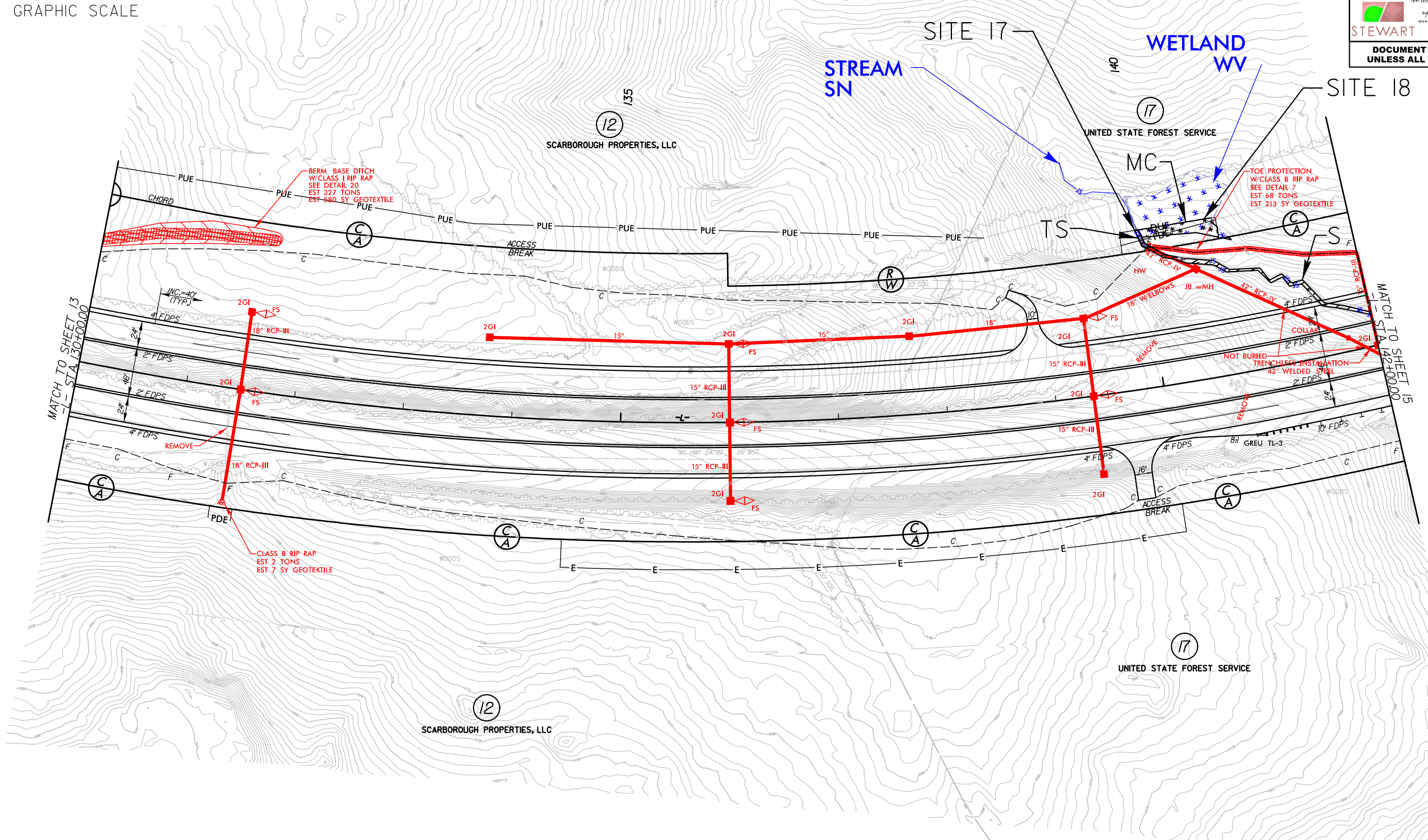
**PERMIT DRAWING
SHEET 19 OF 91**



- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART	 VHB Engineering NC, P.C. (C-3705) 940 Mike Campus Drive, Suite 500 Raleigh, NC 27606
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



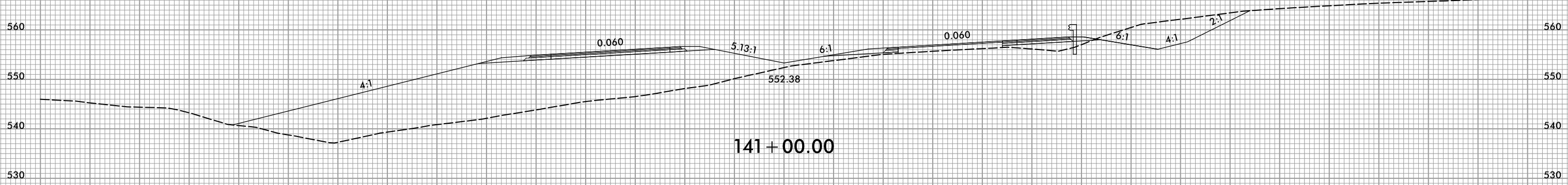
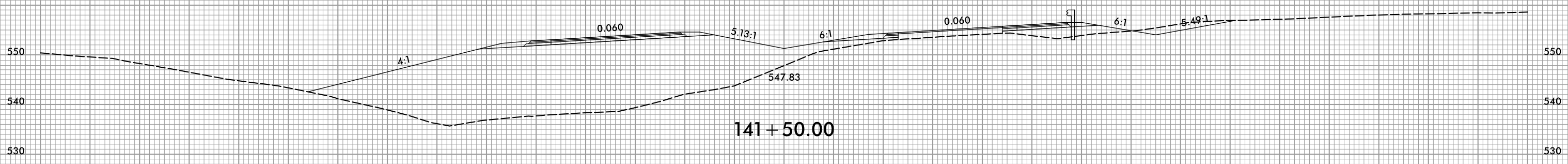
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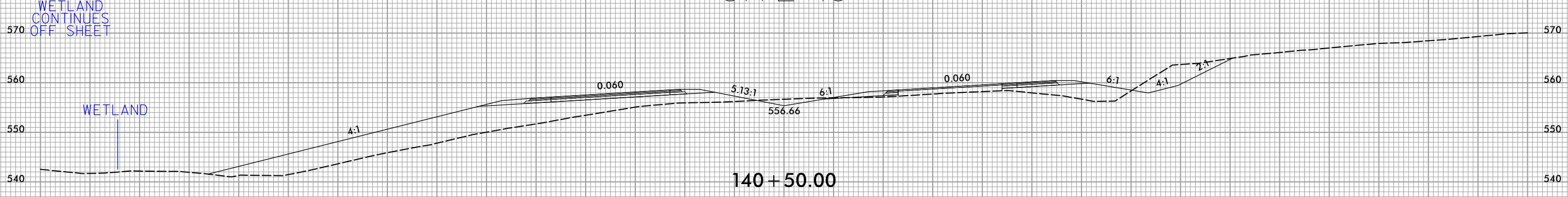


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PERMIT DRAWING
SHEET 20 OF 91



SITE 18



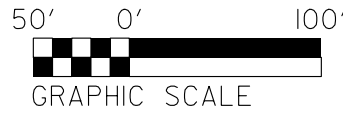
WETLAND
CONTINUES
OFF SHEET

WETLAND

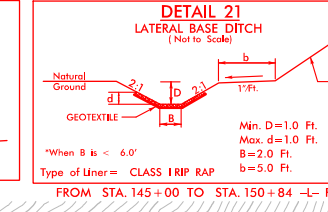
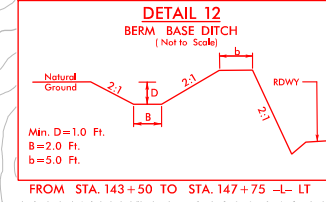
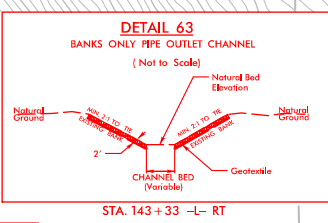
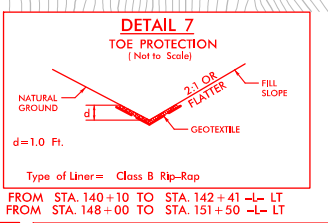
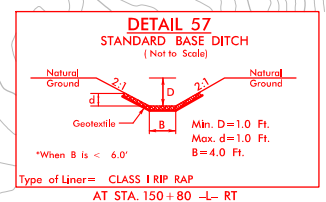


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PERMIT DRAWING SHEET 22 OF 91

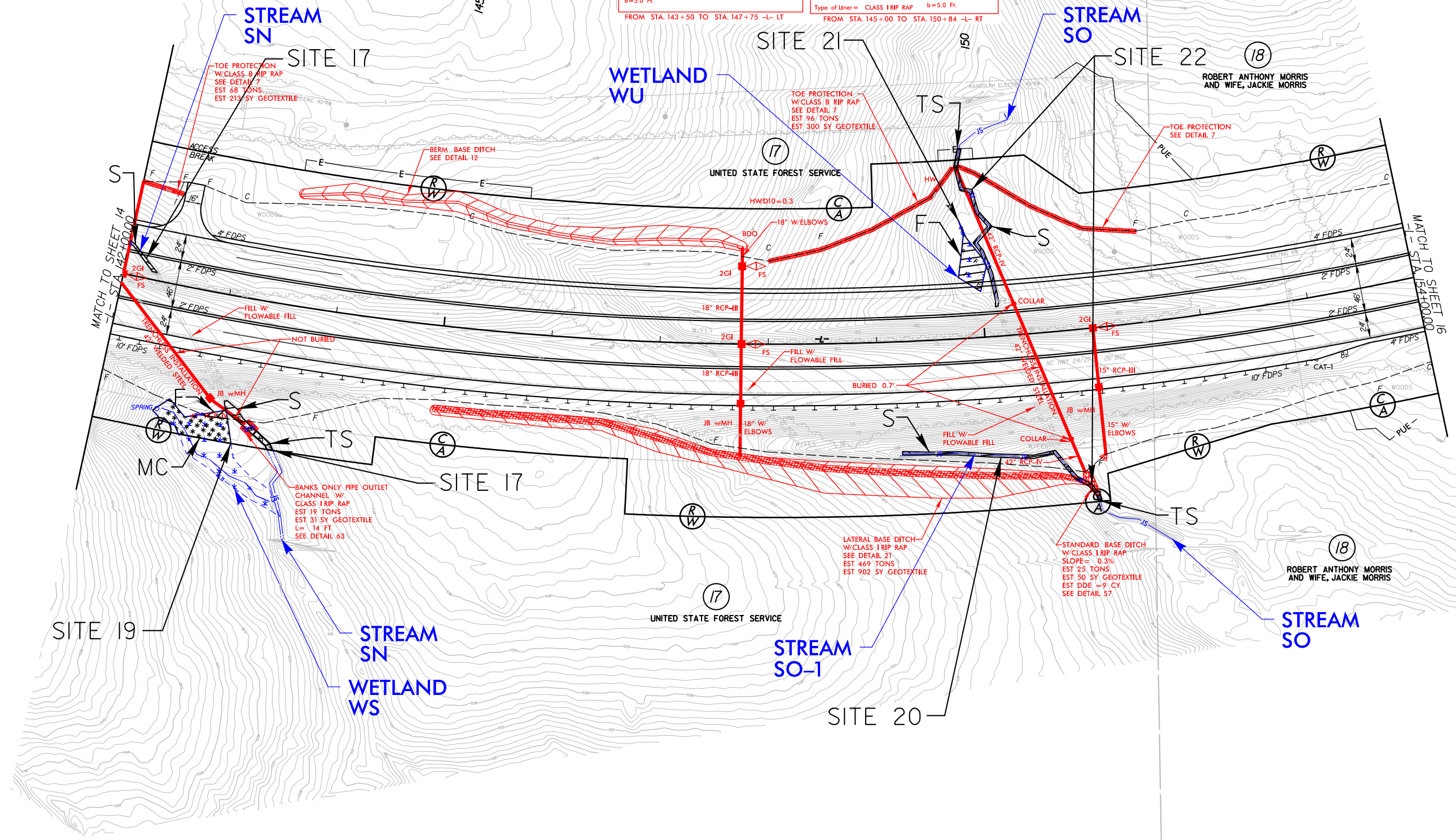


- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NAD 83NA 2011

PROJECT REFERENCE NO. R-2527	SHEET NO. 15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	Vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



4:42:58 PM
C:\Users\jacob\Documents\PERMITS_Environmental\Drawings\R2527_Hyd_PPM_PSH15_com.dgn

FOR -L- PROFILE, SEE SHEETS 46 & 47

8/23/99



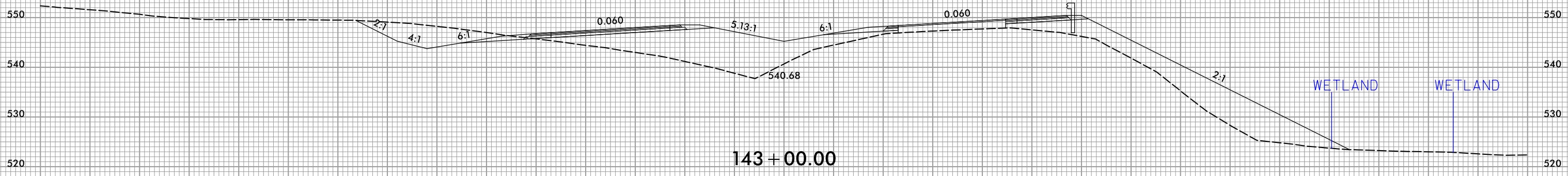
PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-84

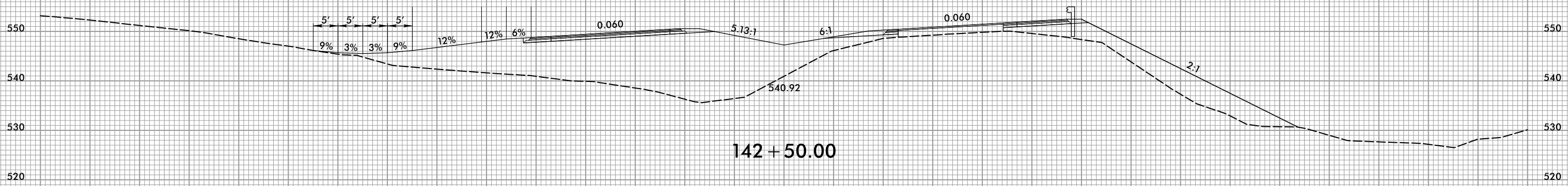
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PERMIT DRAWING
SHEET 23 OF 91

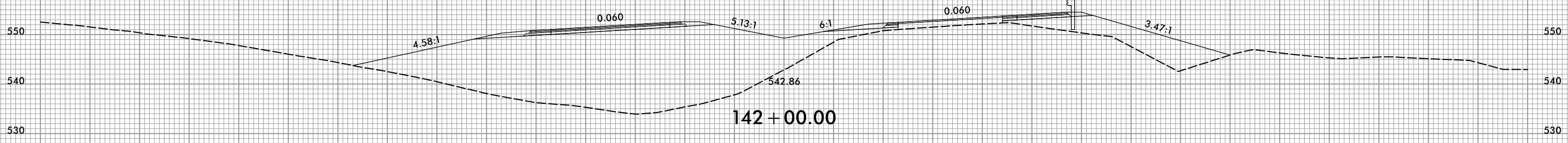
SITE 19



143 + 00.00



142 + 50.00

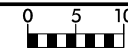


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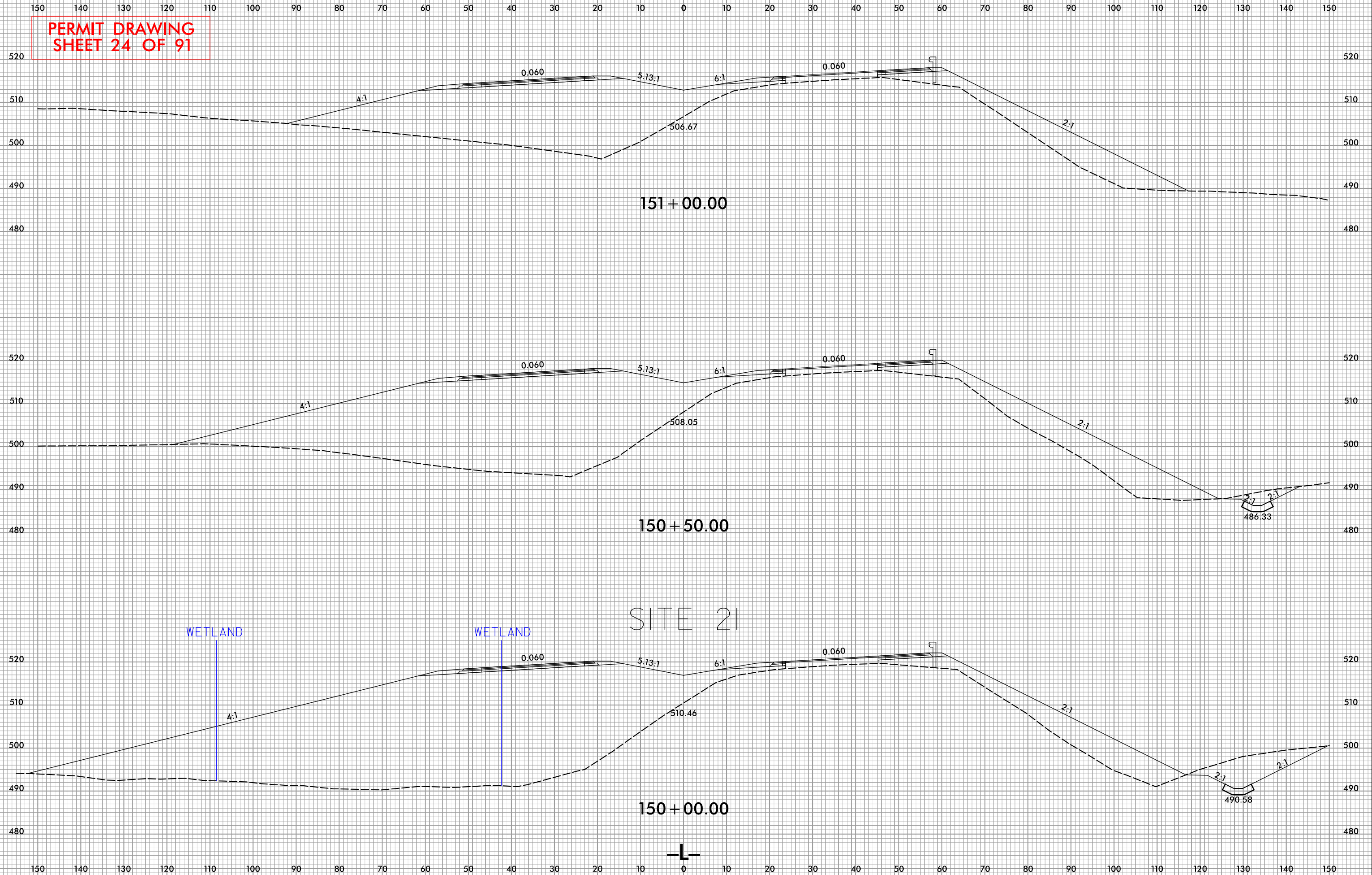
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Point

8/23/99



PROJ. REFERENCE NO.	SHEET NO.
R-2527	X-89

PERMIT DRAWING SHEET 24 OF 91



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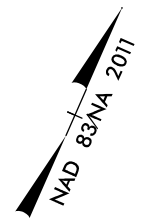
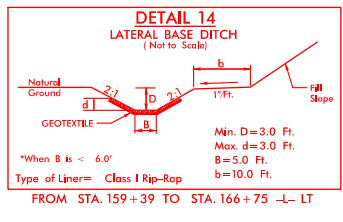
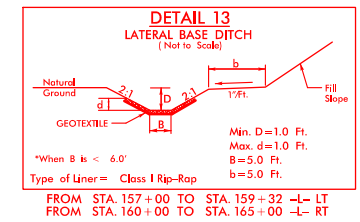
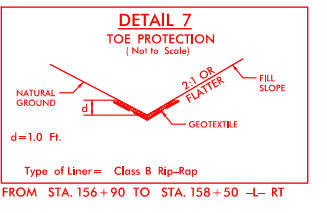
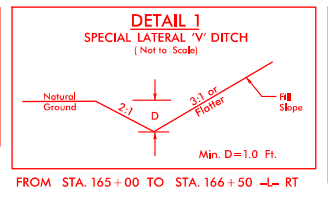
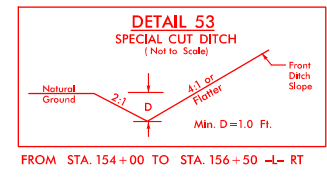
5/14/99

PERMIT DRAWING SHEET 25 OF 91

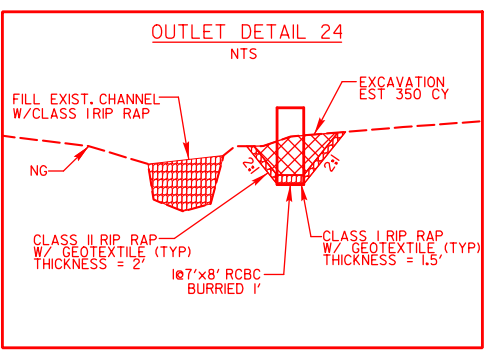
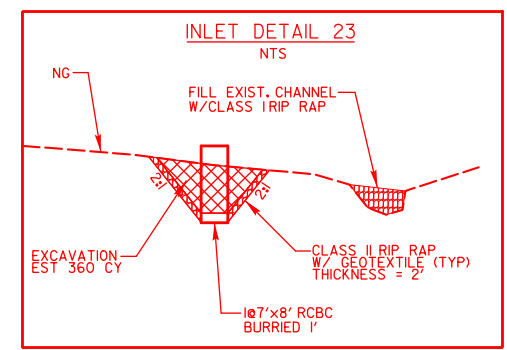
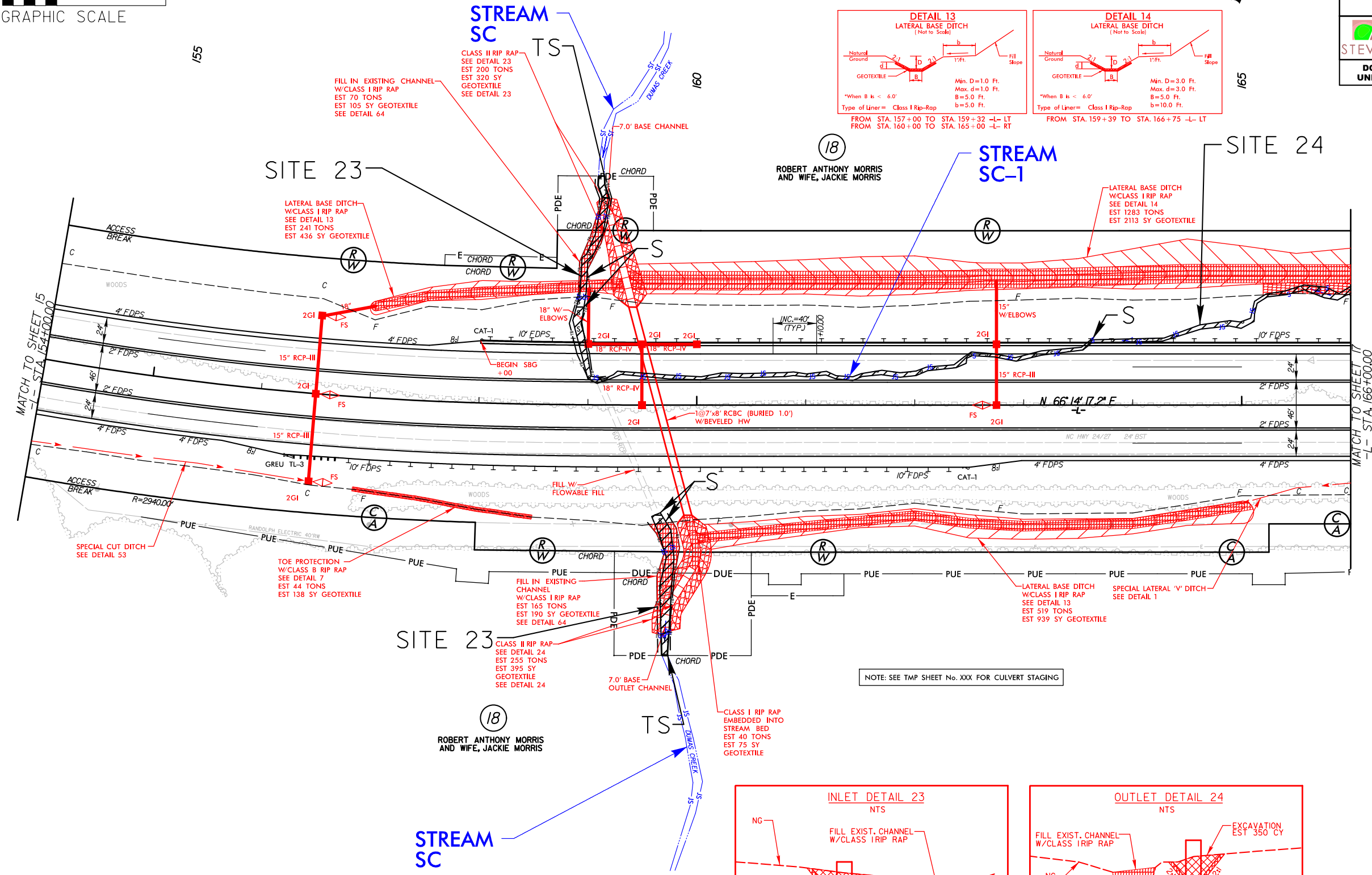


DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: SEE TMP SHEET No. XXX FOR CULVERT STAGING

FOR -L- PROFILE, SEE SHEET 47

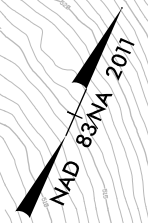
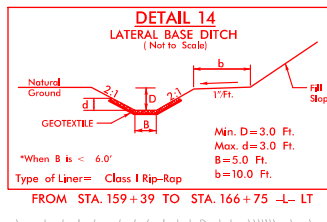
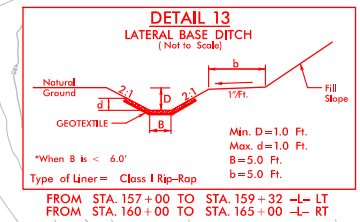
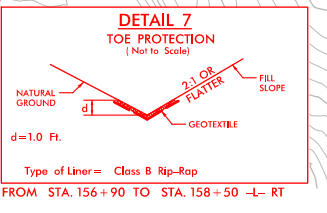
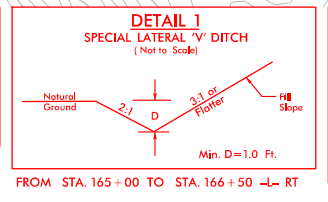
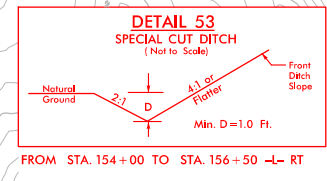
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5/14/99

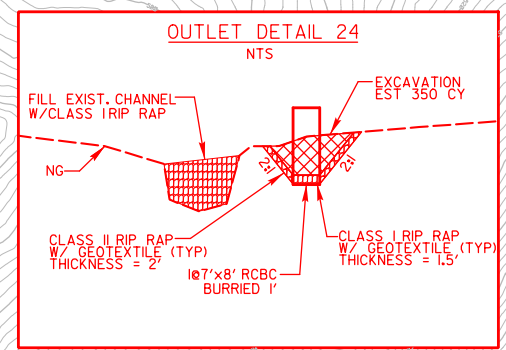
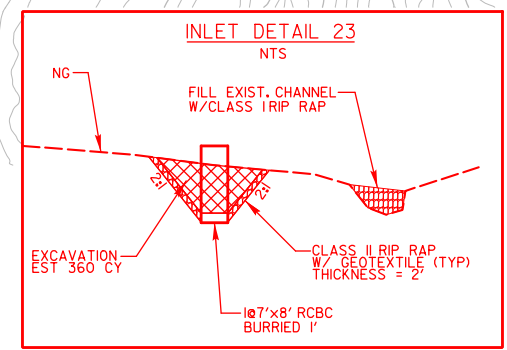
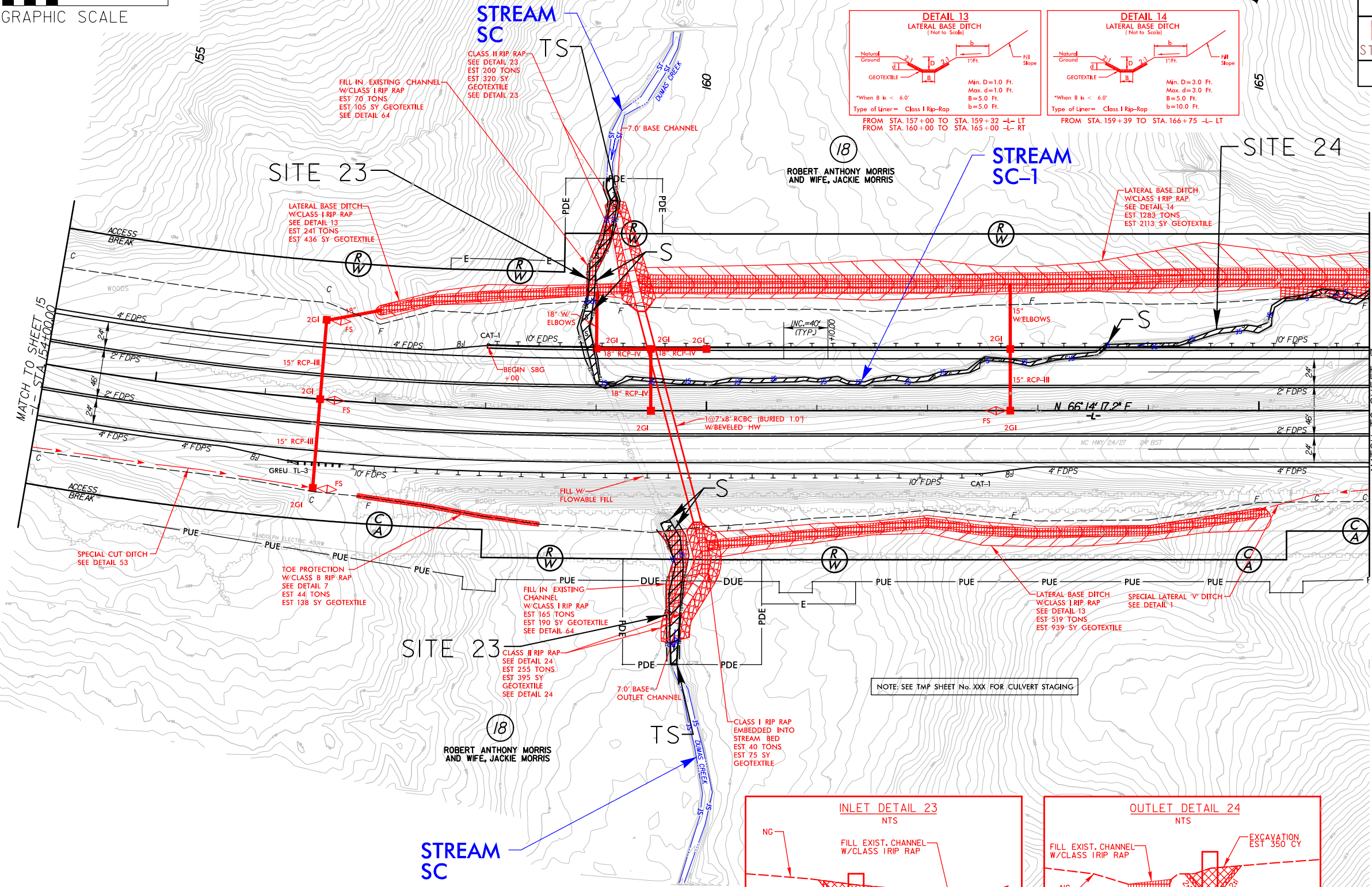
PERMIT DRAWING SHEET 26 OF 91



DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER





PROJECT REFERENCE NO. R-2527	SHEET NO. 16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



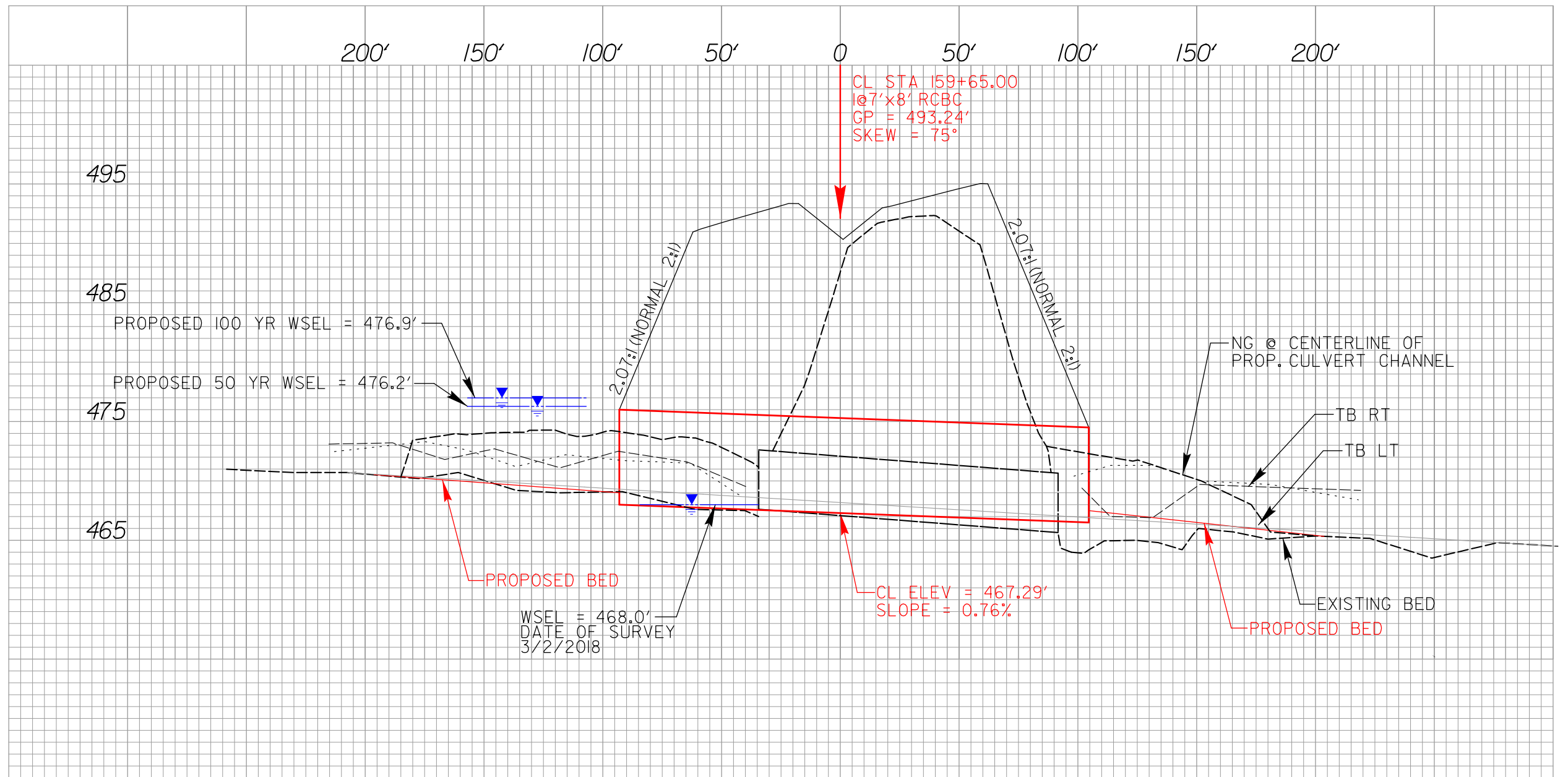
FOR -L- PROFILE, SEE SHEET 47

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PERMIT DRAWING
SHEET 27 OF 91

PROJECT REFERENCE NO. R-2527	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 Firm License No. C-1103 217 S. West St. Raleigh, NC 27603 T 919.386.6766 www.stewartinc.com	 VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITES 23 & 24



REVISIONS

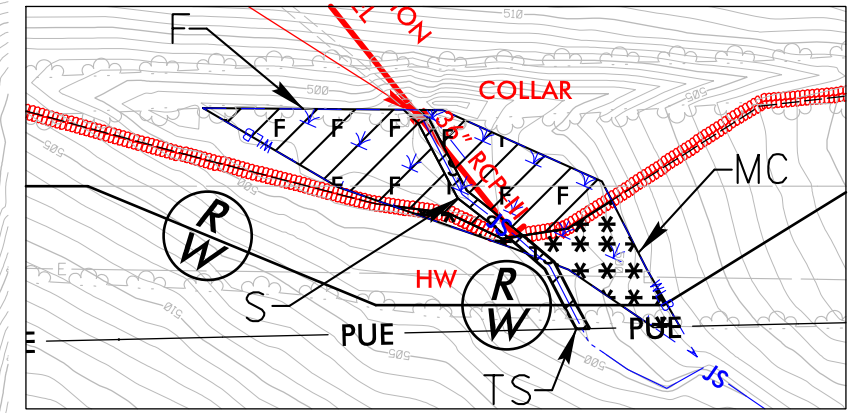
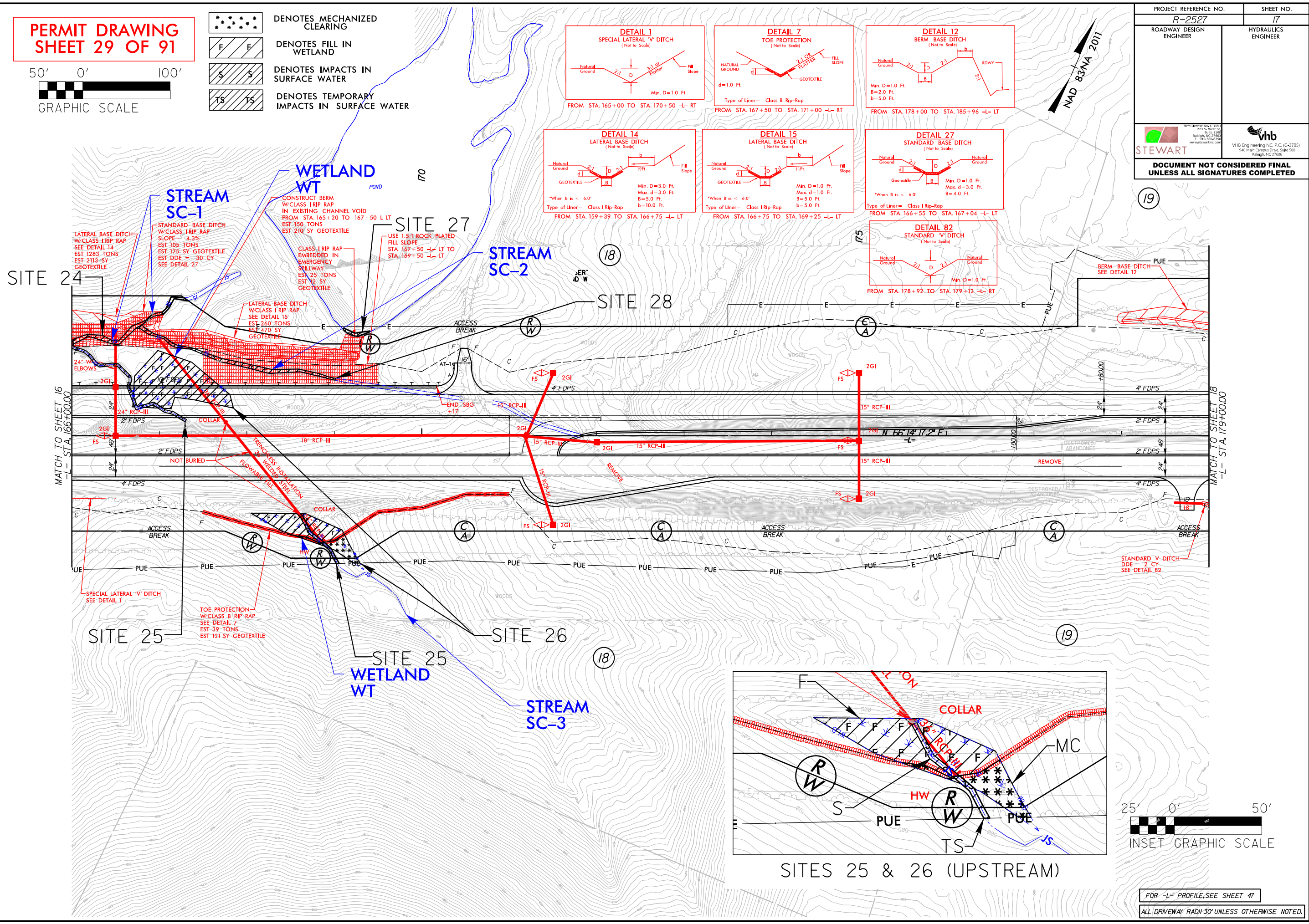
5/14/99
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PERMIT DRAWING SHEET 29 OF 91

50' 0' 100'
GRAPHIC SCALE

DENOTES MECHANIZED CLEARING
 DENOTES FILL IN WETLAND
 DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. **R-2527** SHEET NO. **17**
 ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER
 STUART VHB Engineering NC, P.C. (C-3705)
 140 Main Campus Drive, Suite 500 Raleigh, NC 27606
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

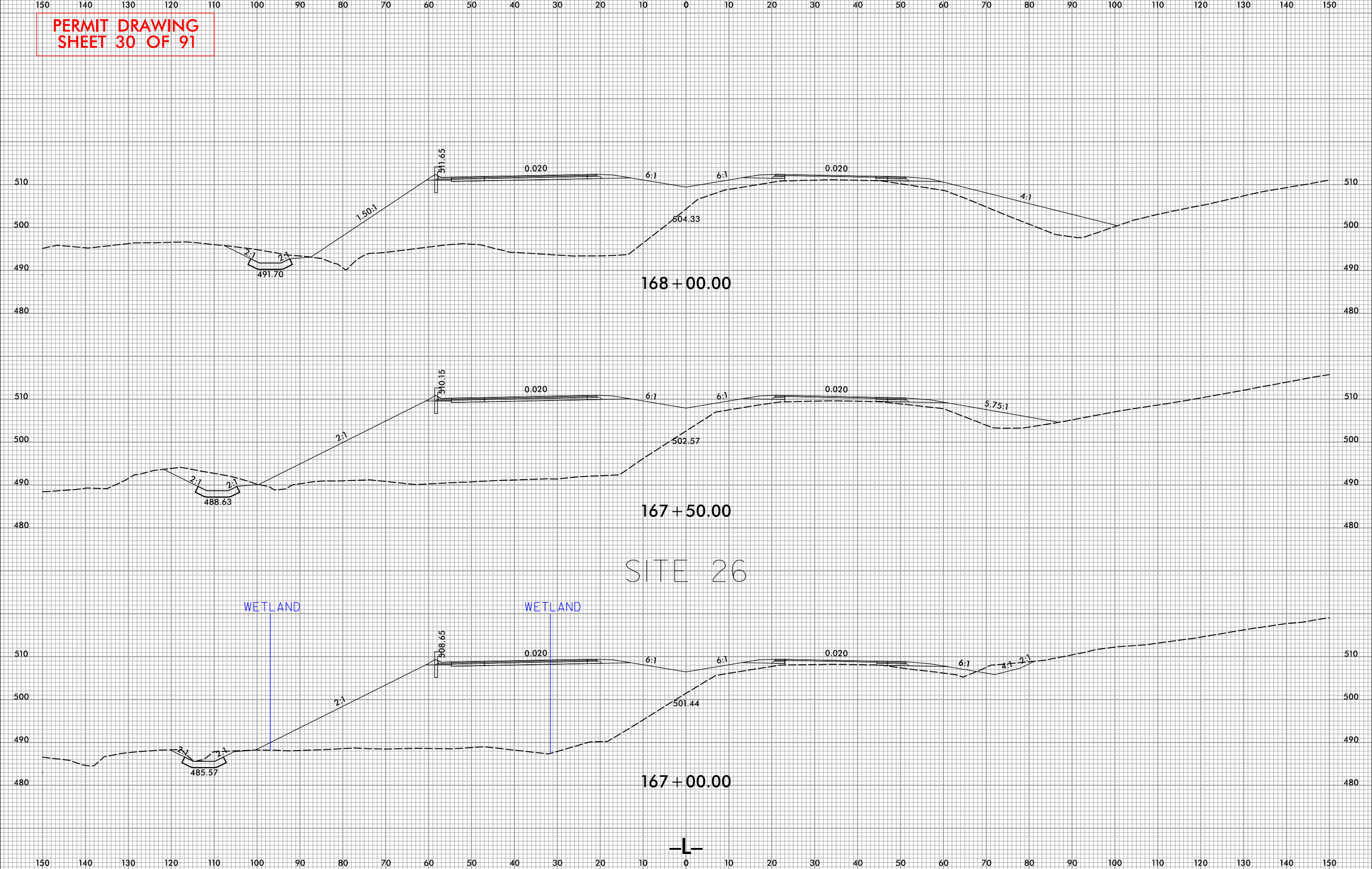


25' 0' 50'
INSET GRAPHIC SCALE

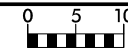
FOR '-L-' PROFILE, SEE SHEET 47
 ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.



**PERMIT DRAWING
SHEET 30 OF 91**



8/23/99

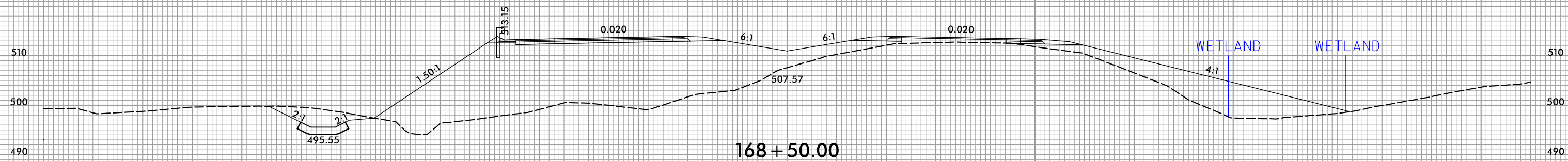
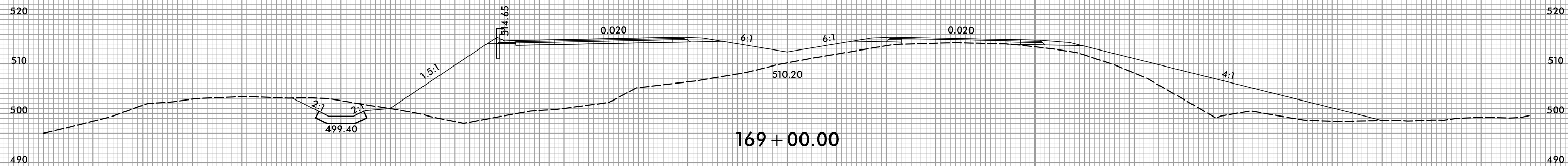
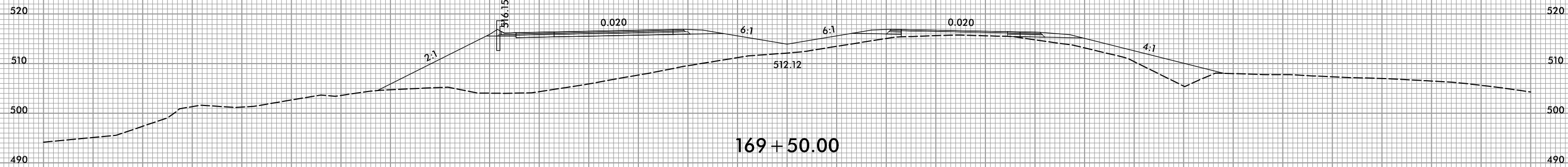


PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-100

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**PERMIT DRAWING
SHEET 31 OF 91**

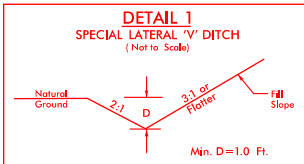


SITE 26

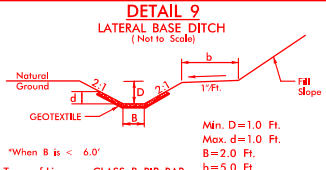


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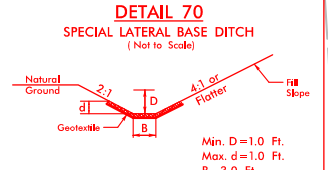
PERMIT DRAWING SHEET 32 OF 91



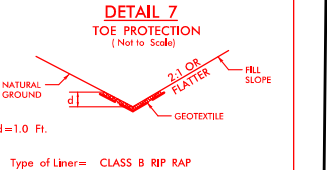
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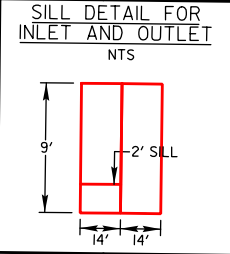
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FROM STA. 200 + 28 TO STA. 206 + 82 -L- LT



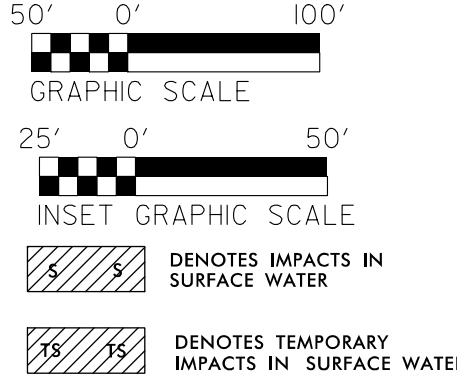
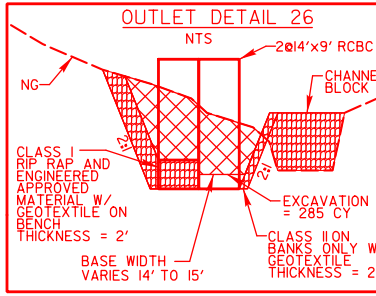
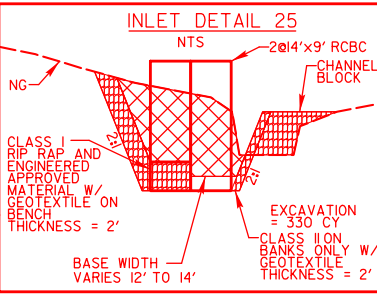
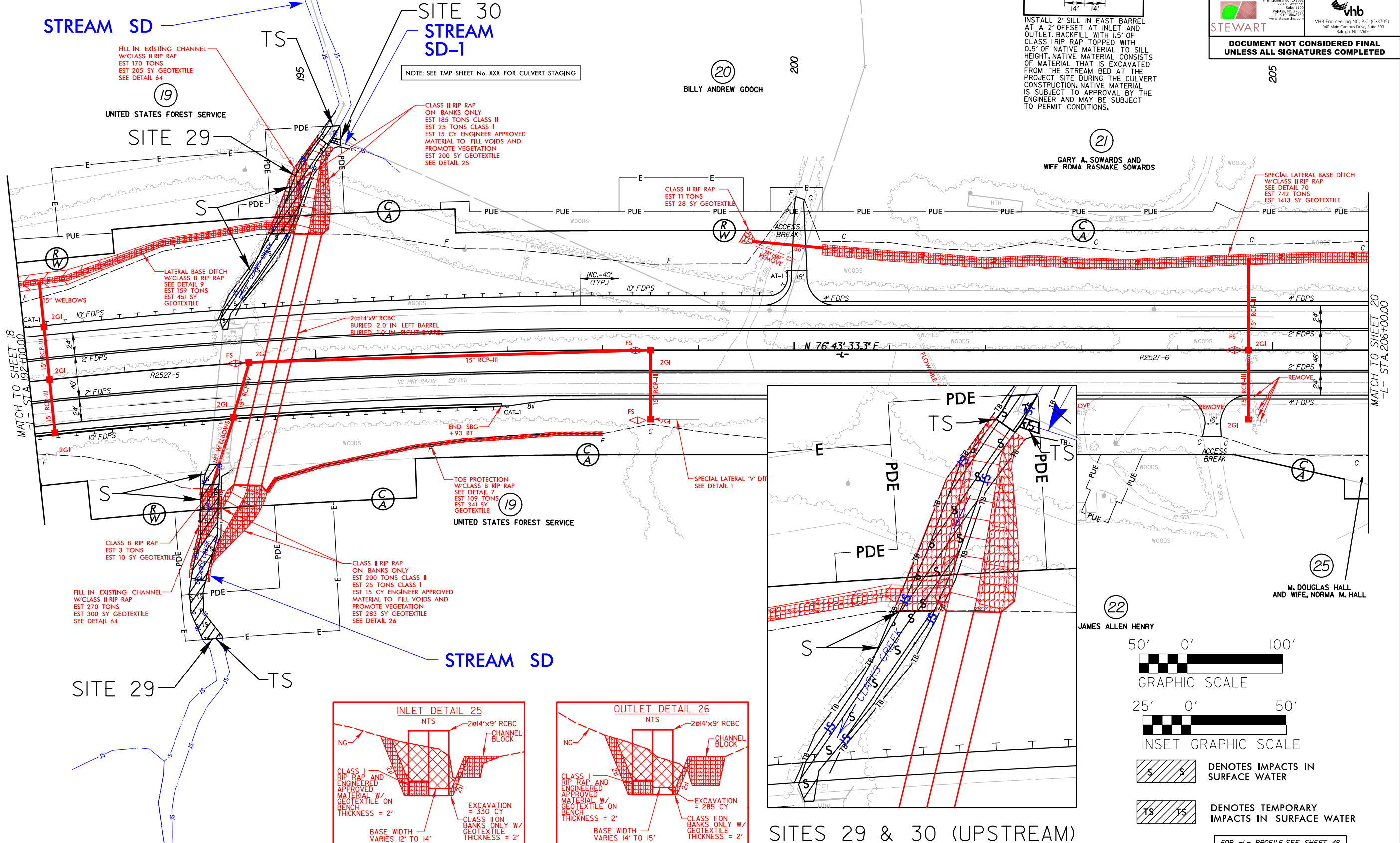
FROM STA. 194 + 03 TO STA. 198 + 00 -L- RT



INSTALL 2' SILL IN EAST BARREL AT A 2' OFFSET AT INLET AND OUTLET. BACKFILL WITH 1.5' OF CLASS II RIP RAP TOPPED WITH 0.5' OF NATIVE MATERIAL TO SILL HEIGHT. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING THE CULVERT CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.





PROJECT REFERENCE NO. R-2527		SHEET NO. 19	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 STEWART <small>1700 S. W. 10th St. Suite 200 Fayetteville, NC 27803 919-338-3300 www.stewartinc.com</small>		 vhb <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 300 Raleigh, NC 27606</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		205	

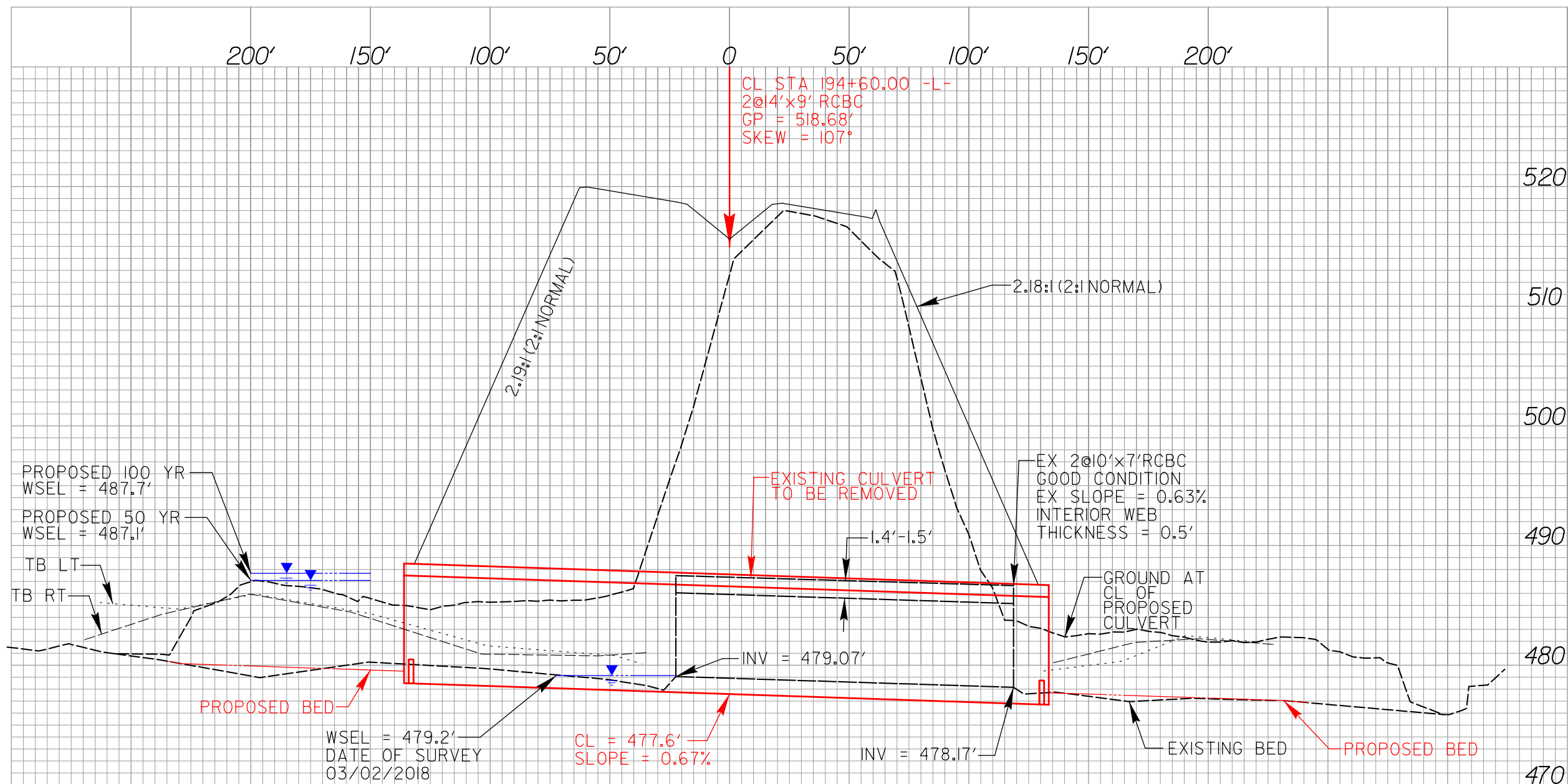


SITES 29 & 30 (UPSTREAM)

FOR -L- PROFILE, SEE SHEET 48
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 Firm License No. CC-1057 227 S. West St. Raleigh, NC 27603 T: 919.386.8764 www.stewartinc.com		 VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITES 29 & 30

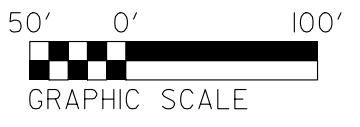


REVISIONS

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5/14/99
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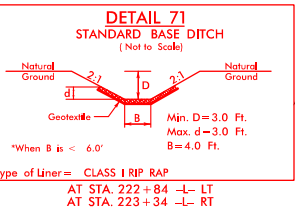
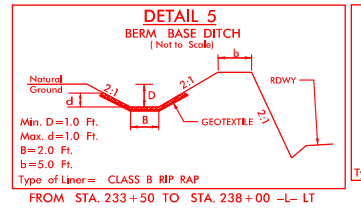
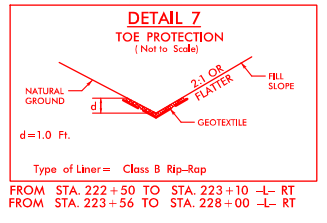
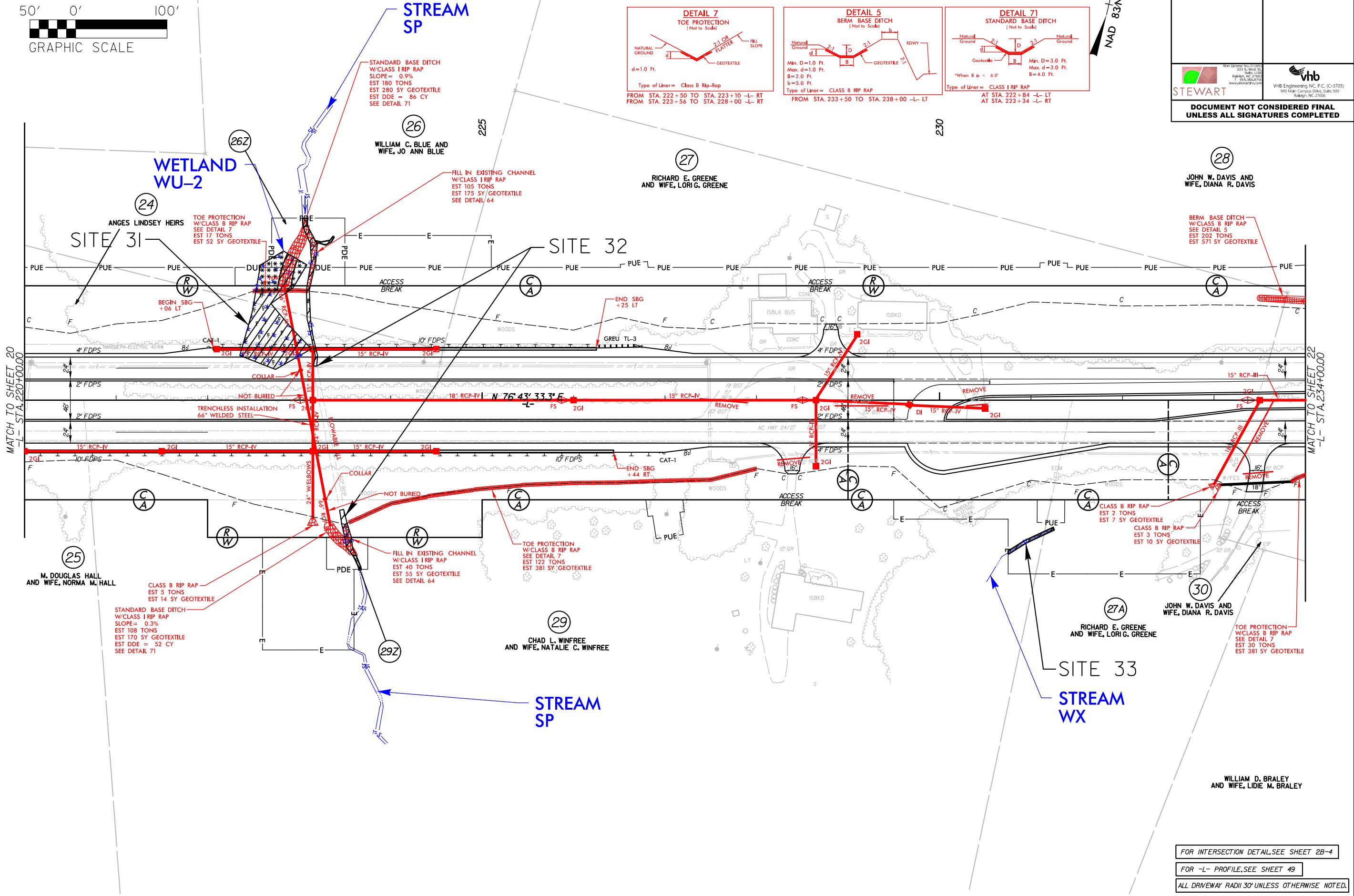
**PERMIT DRAWING
SHEET 35 OF 91**



- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

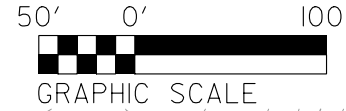


PROJECT REFERENCE NO. R-2527	SHEET NO. 21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



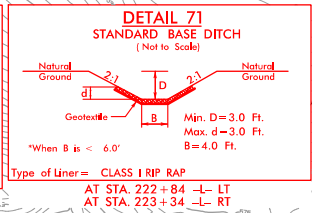
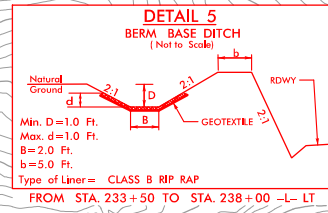
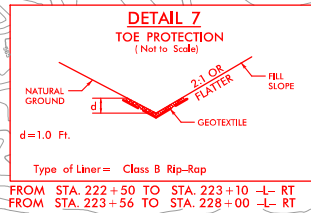
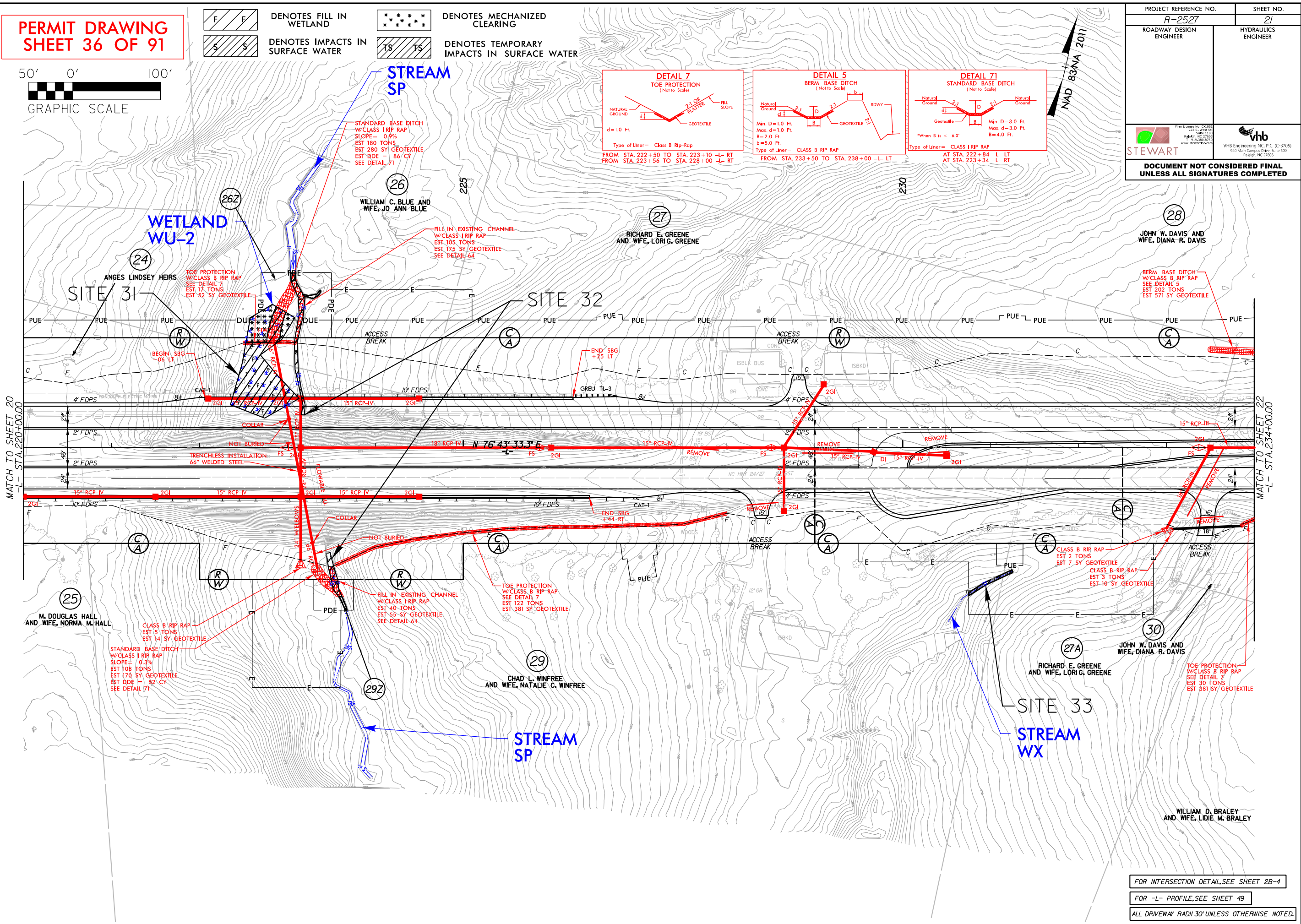
FOR INTERSECTION DETAIL, SEE SHEET 2B-4
 FOR -L- PROFILE, SEE SHEET 49
 ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

**PERMIT DRAWING
SHEET 36 OF 91**



	DENOTES FILL IN WETLAND		DENOTES MECHANIZED CLEARING
	DENOTES IMPACTS IN SURFACE WATER		DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. R-2527	SHEET NO. 21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NAD 83/NA 2011

MATCH TO SHEET 20
-L- STA. 220+00.00

MATCH TO SHEET 22
-L- STA. 234+00.00

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DATE: 11/11/11

FOR INTERSECTION DETAIL, SEE SHEET 28-4
FOR -L- PROFILE, SEE SHEET 49
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

8/23/99



PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-132

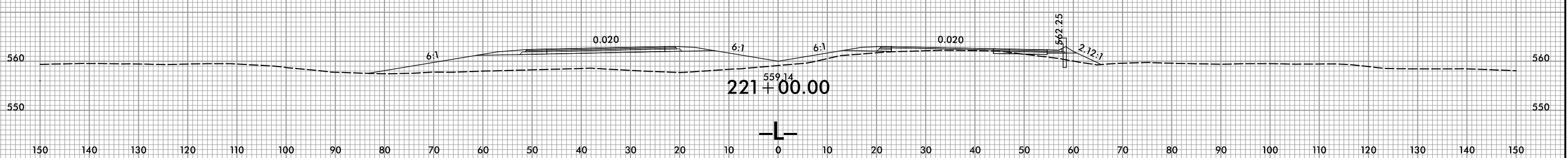
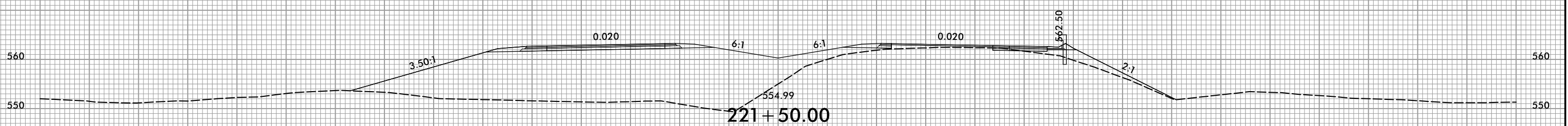
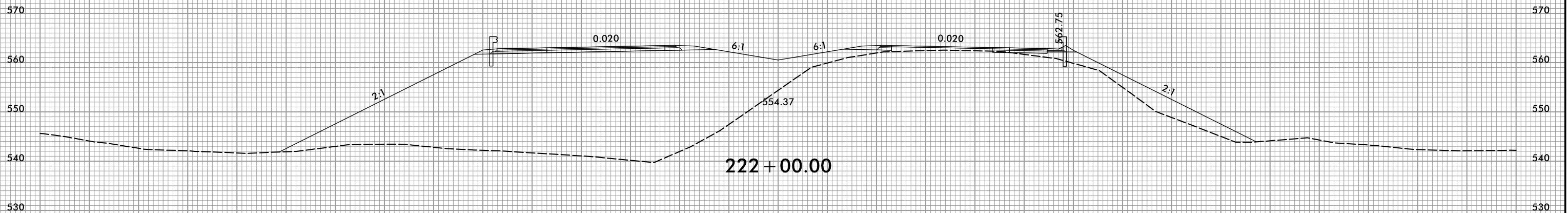
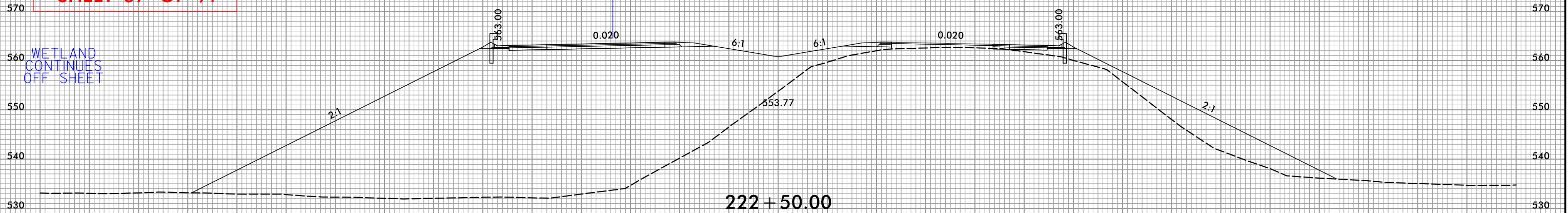
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PERMIT DRAWING
SHEET 37 OF 91

WETLAND

SITE 31

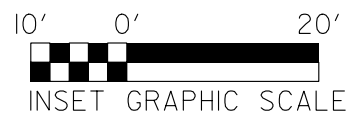
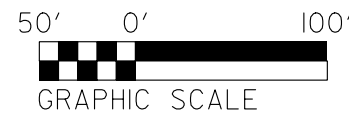
WETLAND
CONTINUES
OFF SHEET



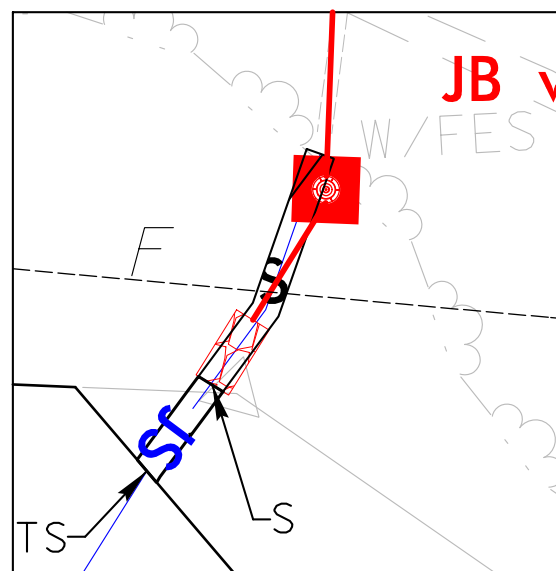
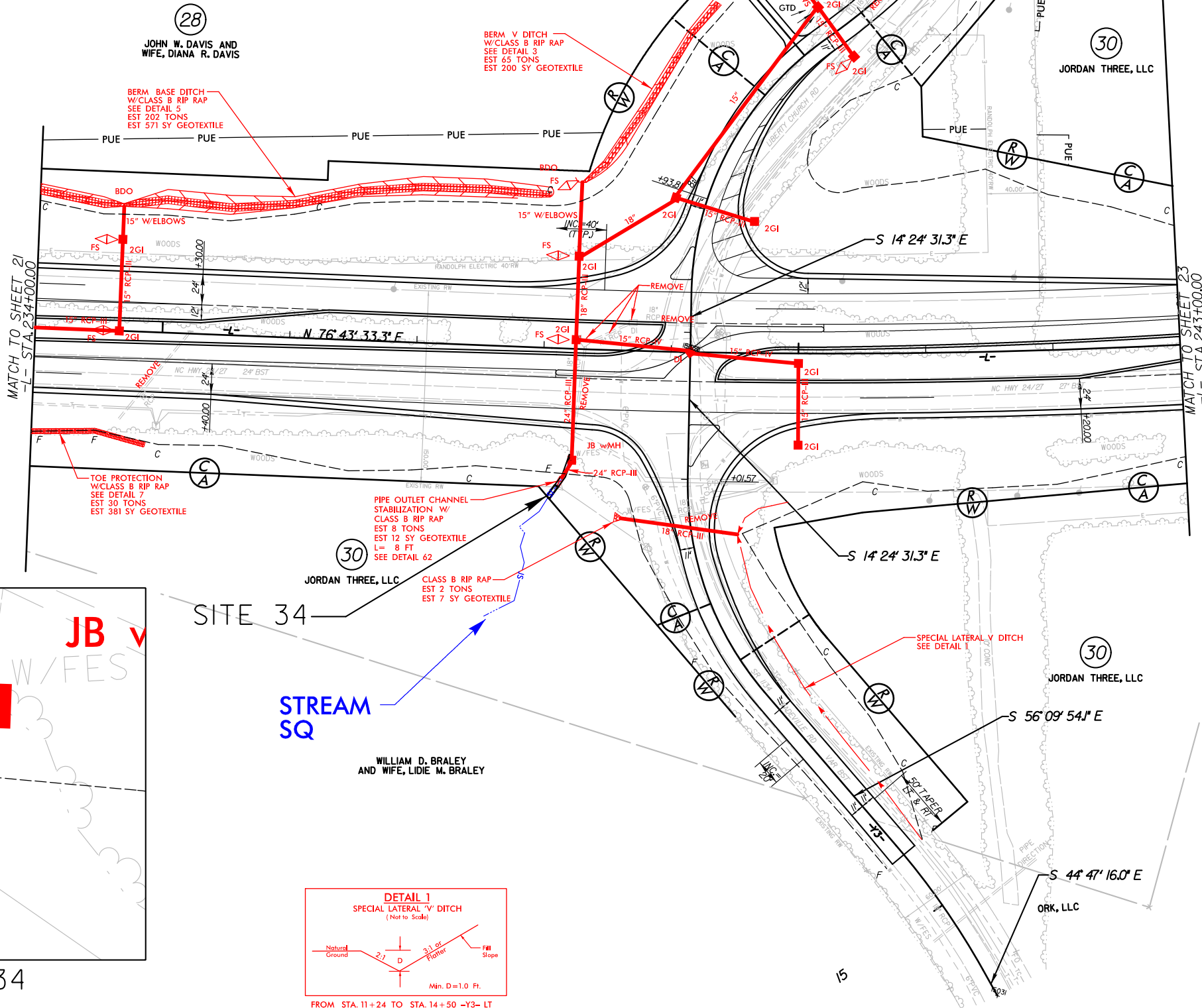
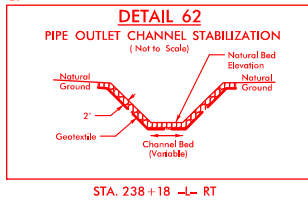
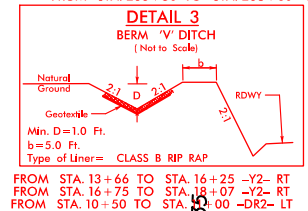
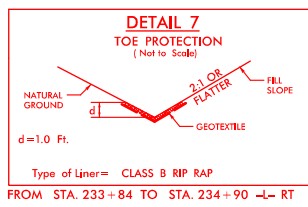
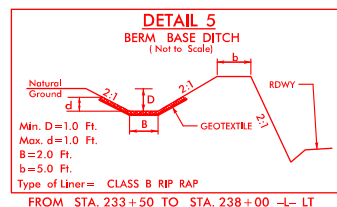
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5/14/99

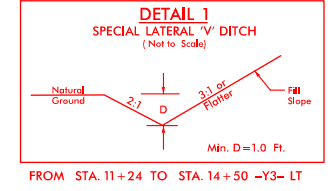
PERMIT DRAWING SHEET 38 OF 91



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SITE 34



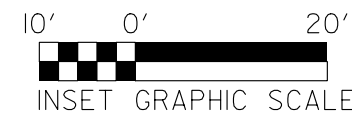
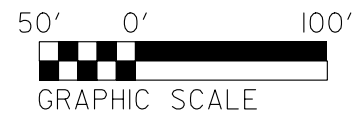
PROJECT REFERENCE NO. <i>R-2527</i>	SHEET NO. <i>22</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



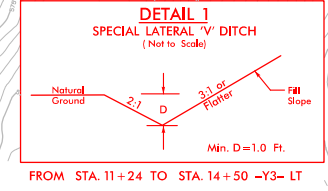
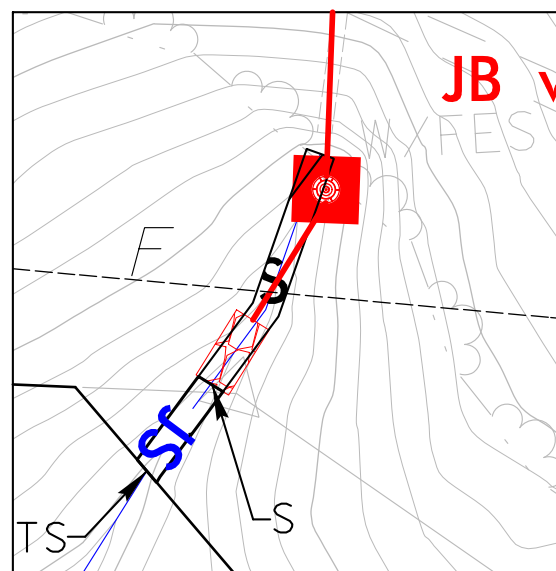
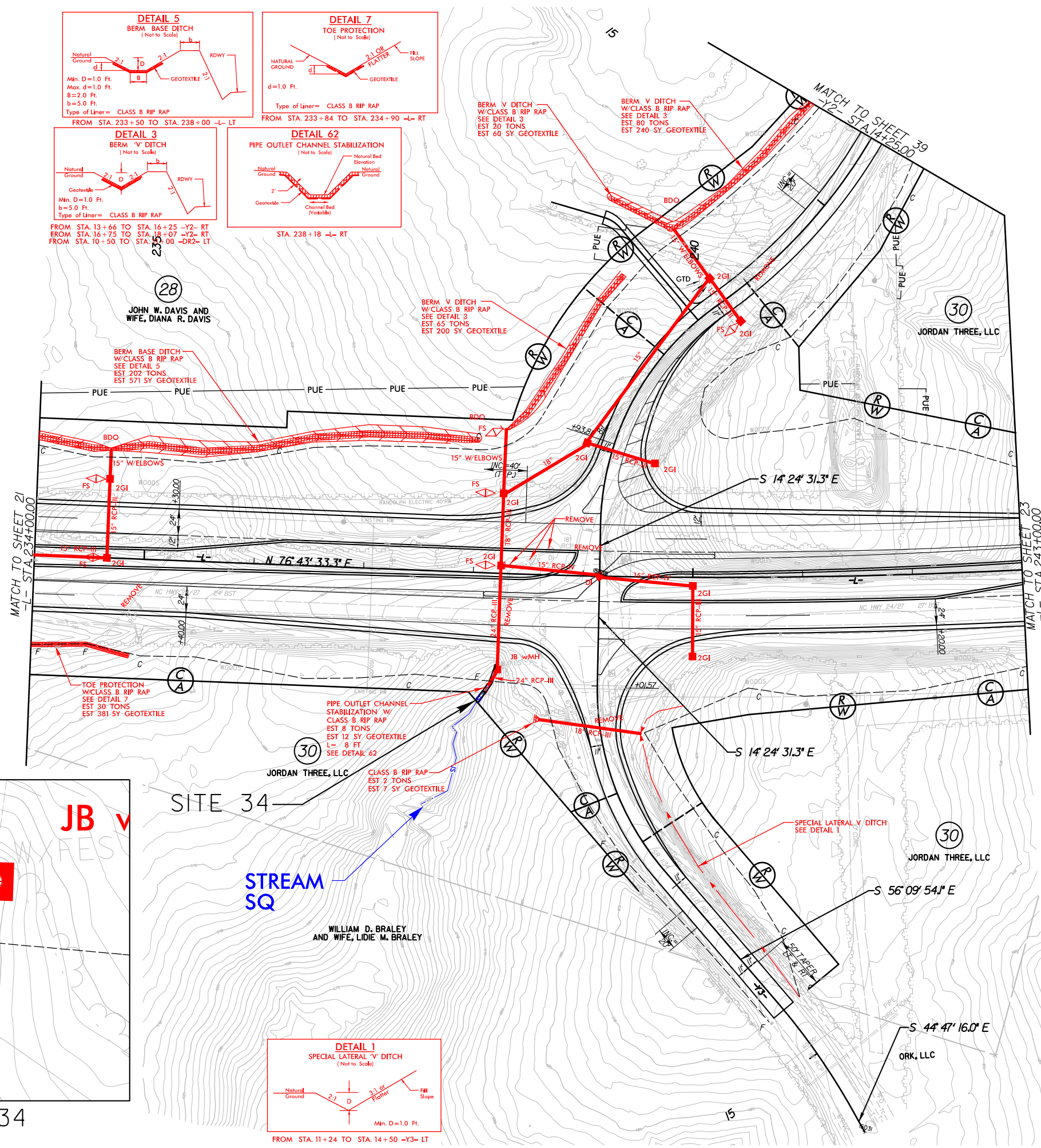
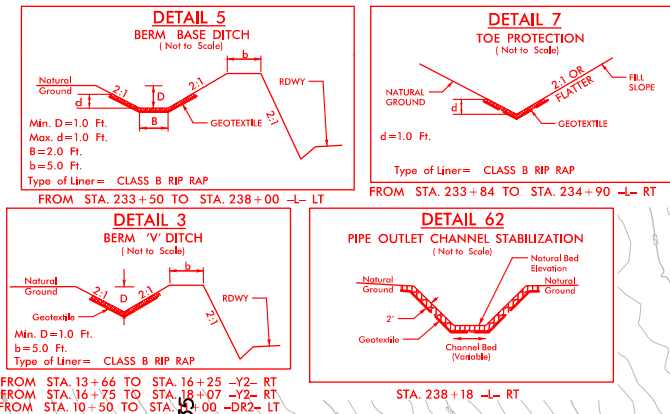
FOR INTERSECTION DETAIL, SEE SHEETS 2B-5
 FOR -L- PROFILE, SEE SHEETS 49 & 50
 FOR -Y2- PROFILE, SEE SHEET 59
 FOR -Y3- PROFILE, SEE SHEET 59

5/14/99

PERMIT DRAWING SHEET 39 OF 91



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NAD 83/NA 2011

PROJECT REFERENCE NO. R-2527	SHEET NO. 22
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p>STEWART</p> <p>9401 Campus Drive, Suite 500 Raleigh, NC 27606</p>	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	

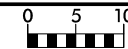
FOR INTERSECTION DETAIL, SEE SHEETS 2B-5

FOR -L- PROFILE, SEE SHEETS 49 & 50

FOR -Y2- PROFILE, SEE SHEET 59

FOR -Y3- PROFILE, SEE SHEET 59

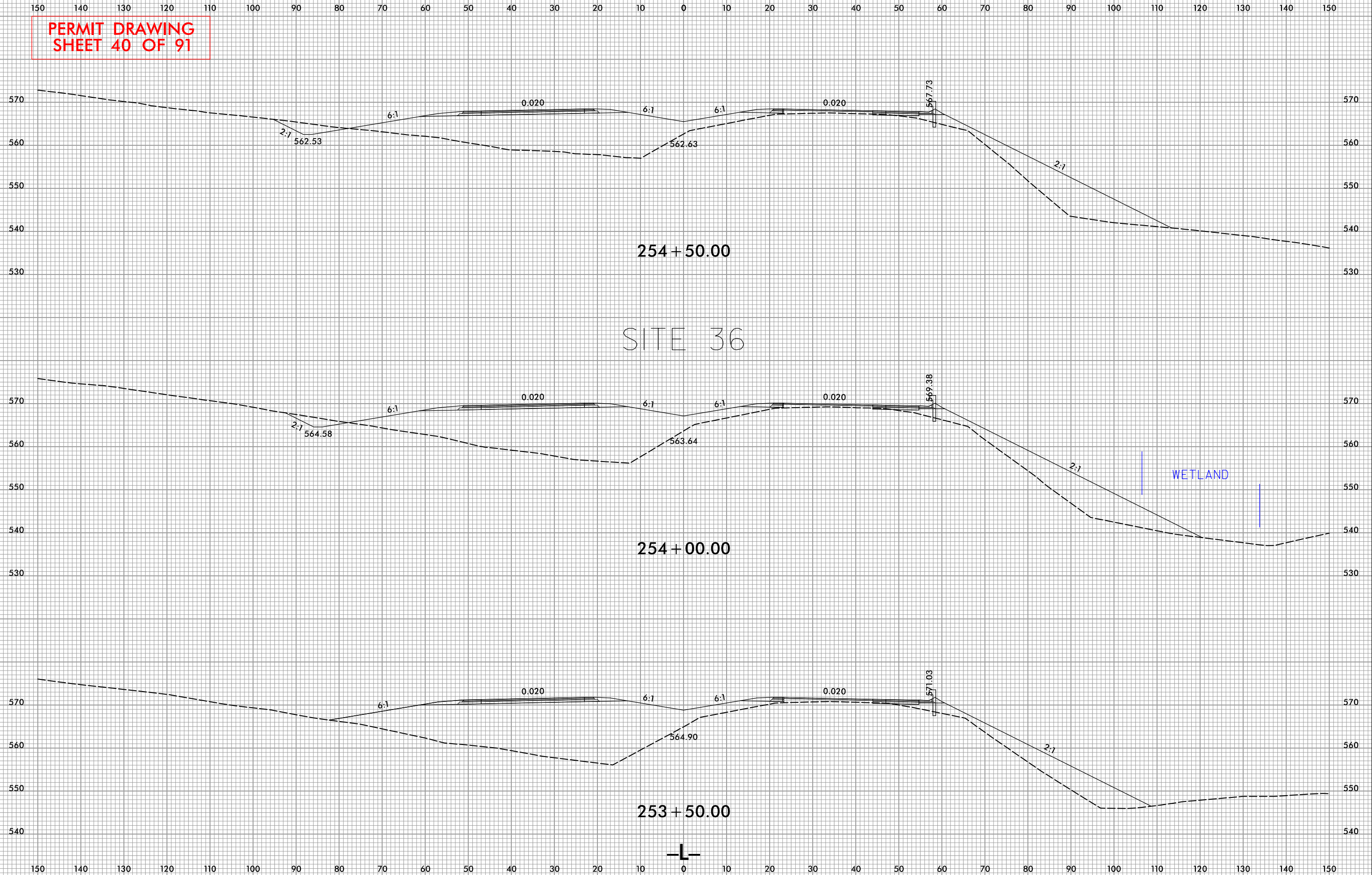
8/23/99



PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-154

PERMIT DRAWING
SHEET 40 OF 91

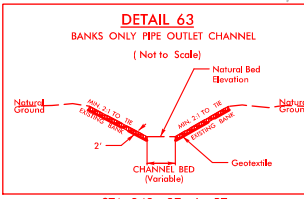
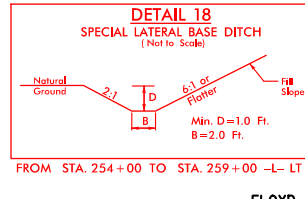
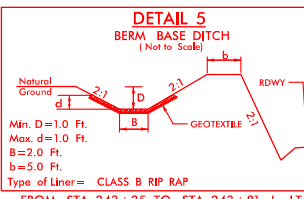
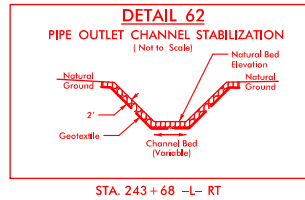
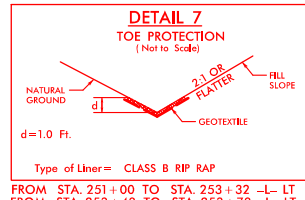
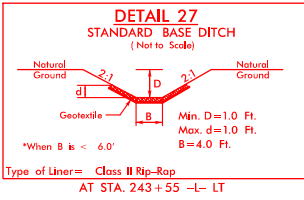


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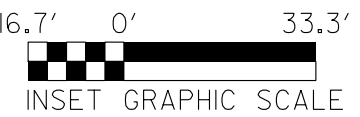
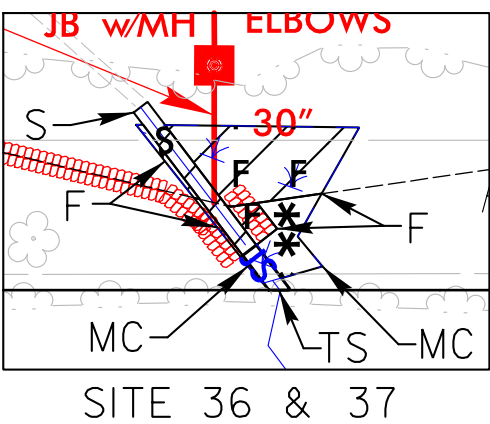
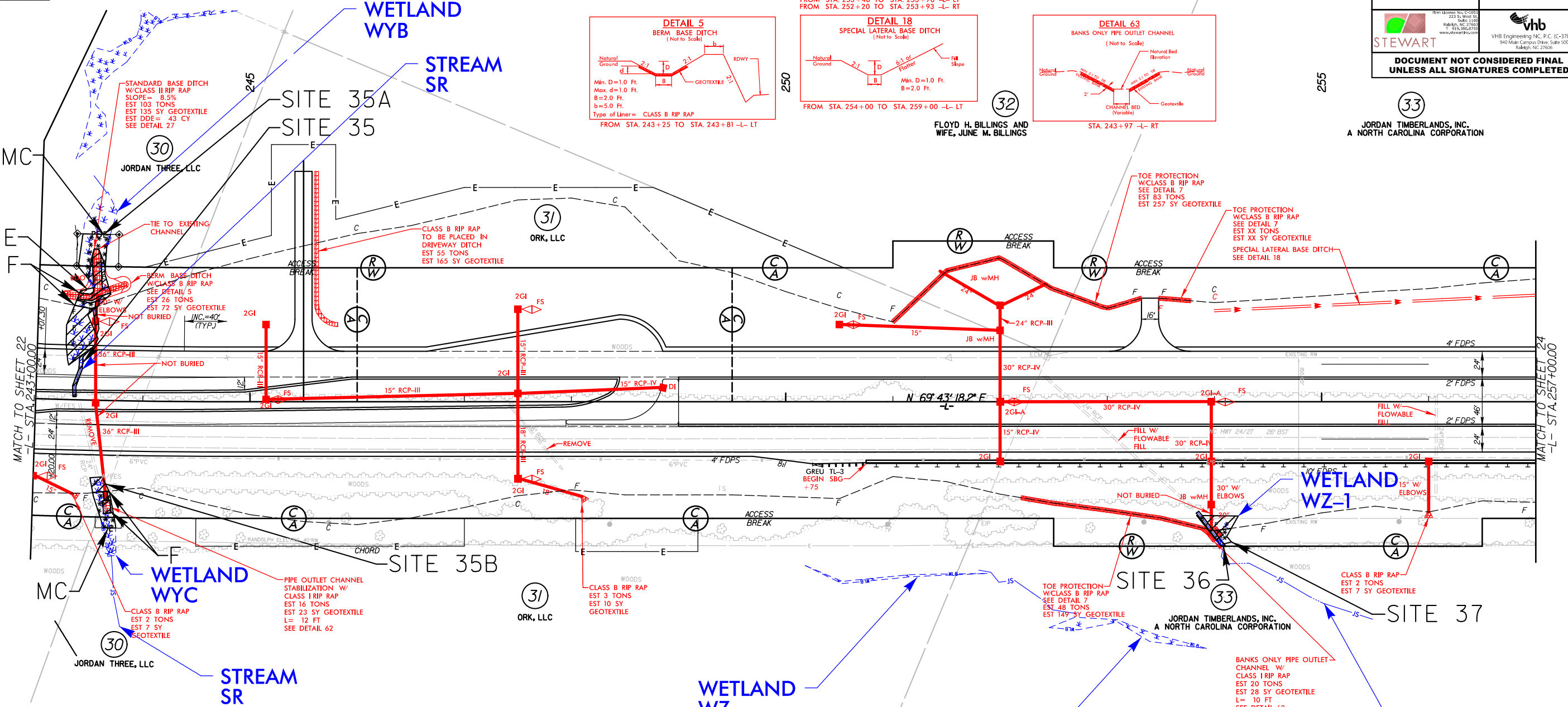
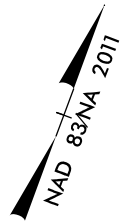
**PERMIT DRAWING
SHEET 41 OF 91**

F F DENOTES FILL IN WETLAND
E E WETLAND EXCAVATION

********* DENOTES MECHANIZED CLEARING
S S DENOTES IMPACTS IN SURFACE WATER
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR INTERSECTION DETAIL, SEE SHEET 2B-4
FOR -L- PROFILE, SEE SHEET 50

5/14/99
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8/23/99



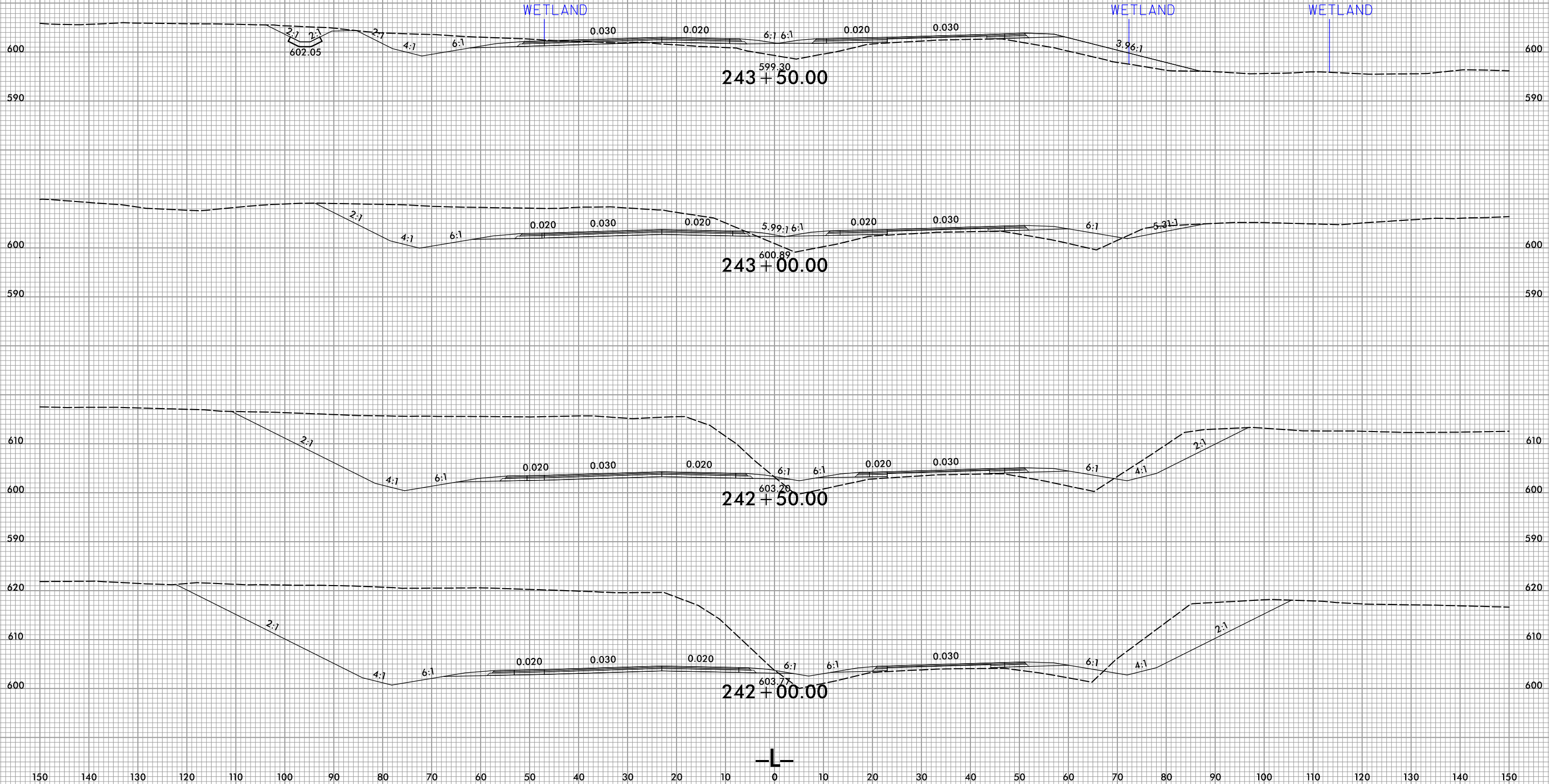
PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-143

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PERMIT DRAWING
SHEET 42A OF 91

SITE 35A & 35B



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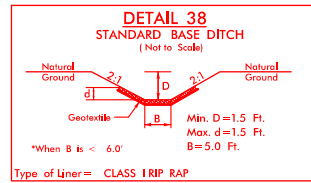
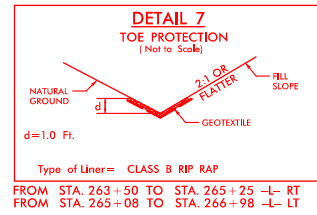
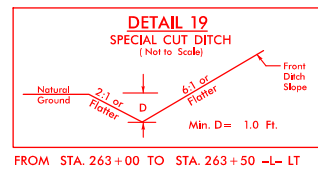
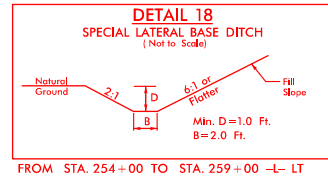


5/14/99

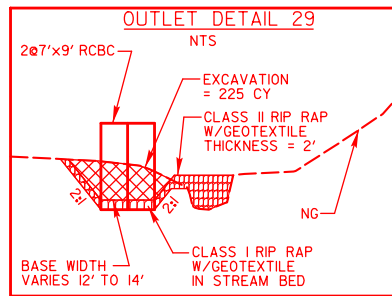
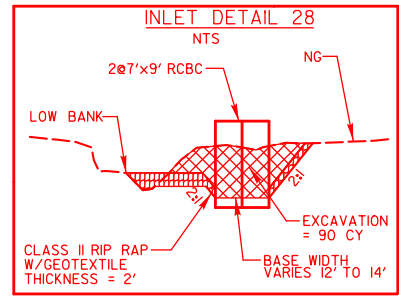
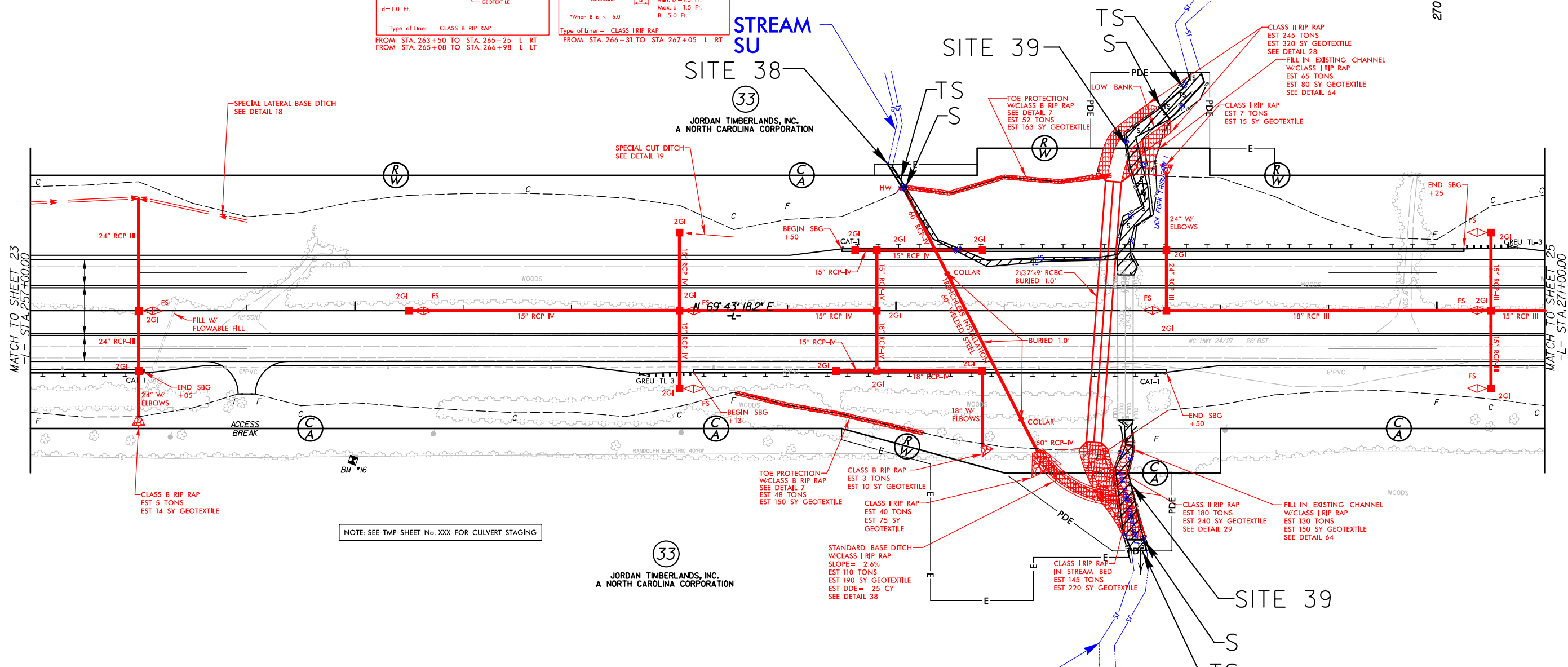
PERMIT DRAWING SHEET 43 OF 91



S DENOTES IMPACTS IN SURFACE WATER
TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

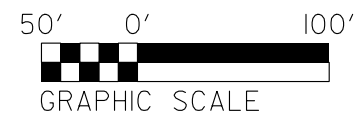


FOR -L- PROFILE, SEE SHEETS 50 & 51
ALL DRIVEWAY RADI 30' UNLESS OTHERWISE NOTED.

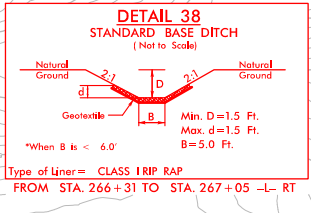
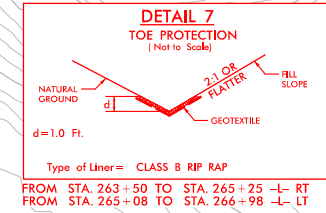
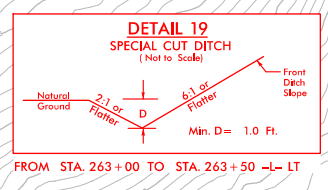
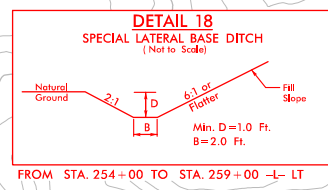
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05/14/99

5/14/99

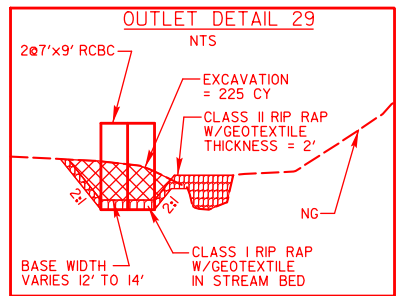
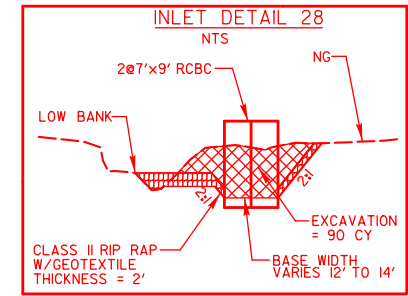
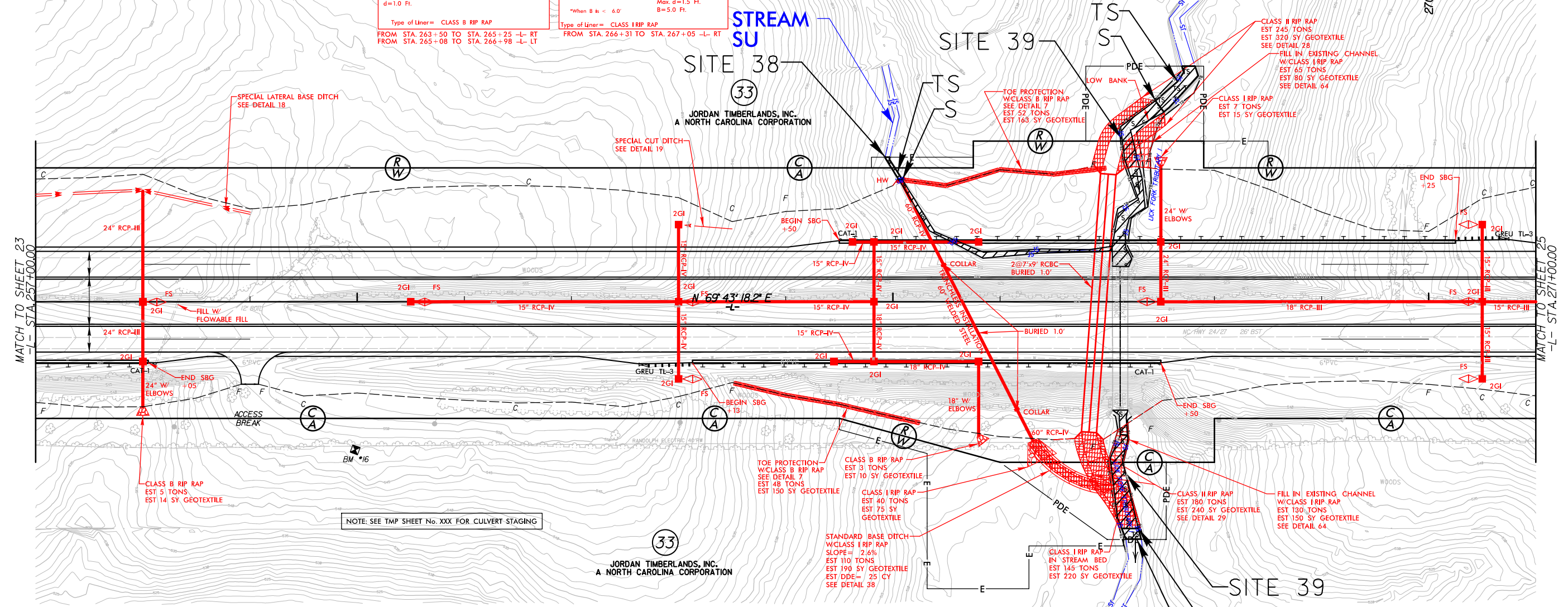
PERMIT DRAWING SHEET 44 OF 91



DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER





PROJECT REFERENCE NO. R-2527	SHEET NO. 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

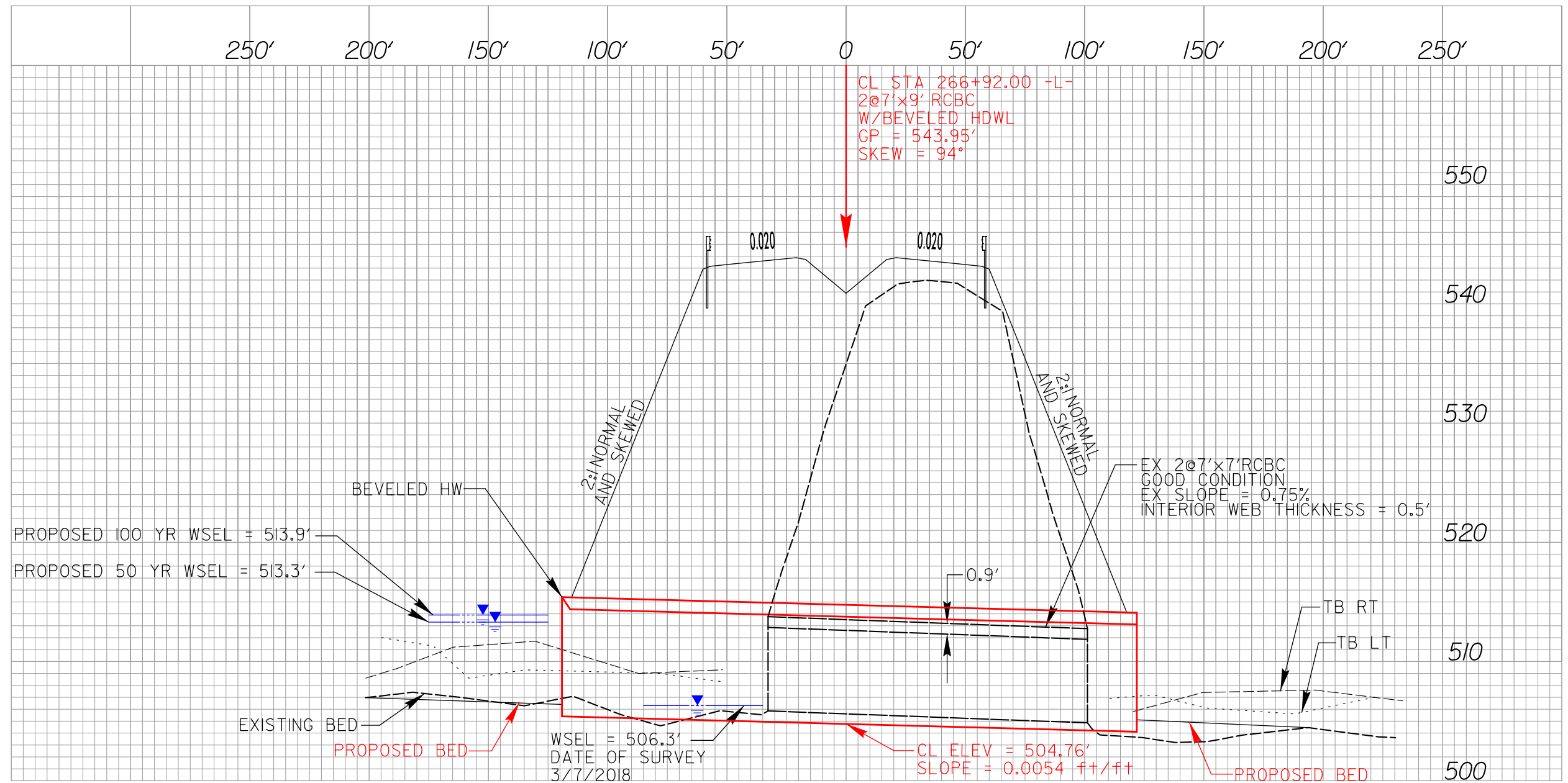


FOR -L- PROFILE, SEE SHEETS 50 & 51
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO. <i>R-2527</i>		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 Firm License No. C-1103 217 S. West St. Raleigh, NC 27603 P: 919.386.8766 www.stewartinc.com		 VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 39



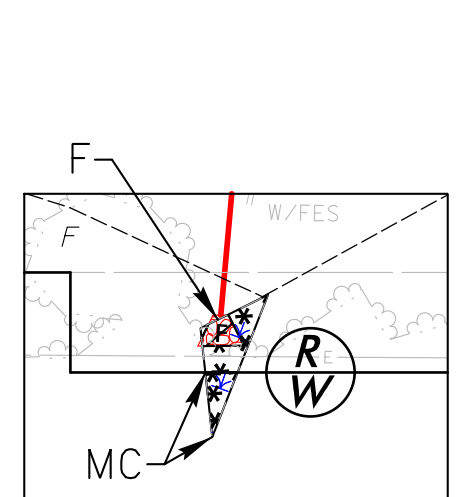
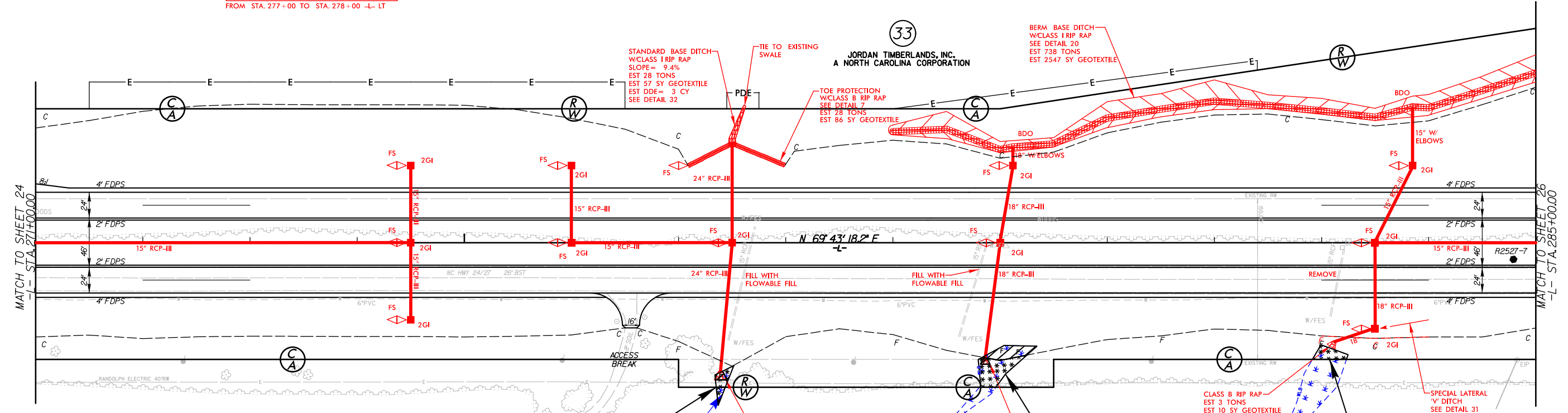
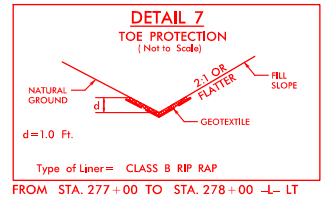
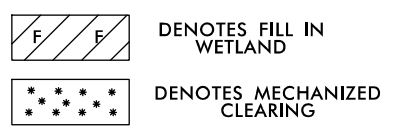
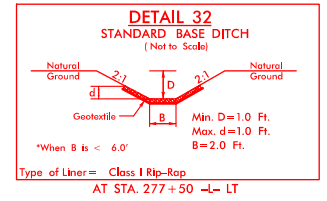
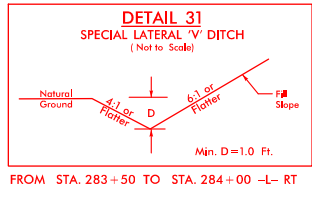
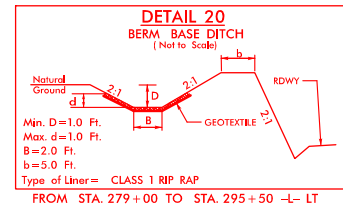
REVISIONS

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08/17/2018

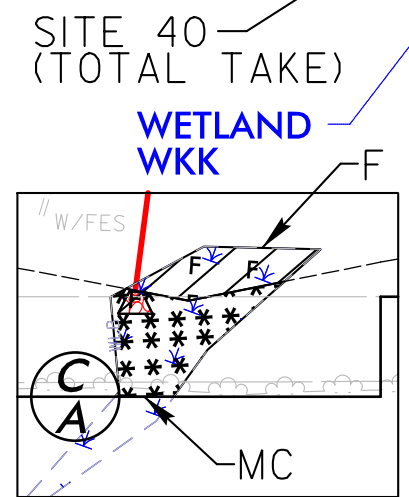
5/14/99

PERMIT DRAWING SHEET 46 OF 91

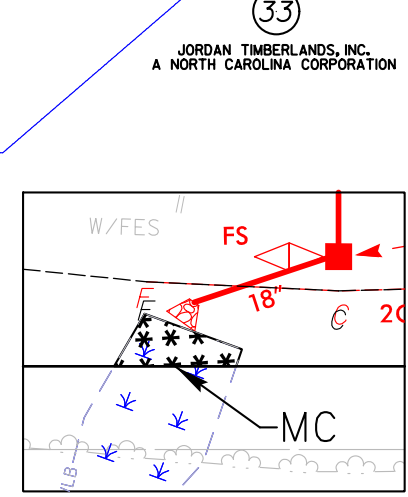
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



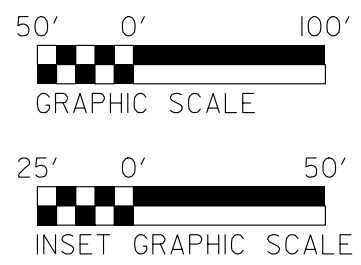
SITE 40
(TOTAL TAKE)



SITE 41



SITE 42





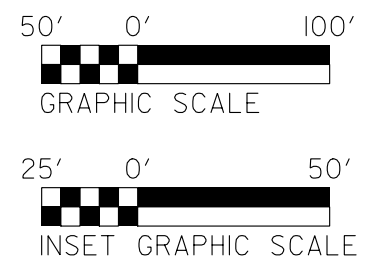
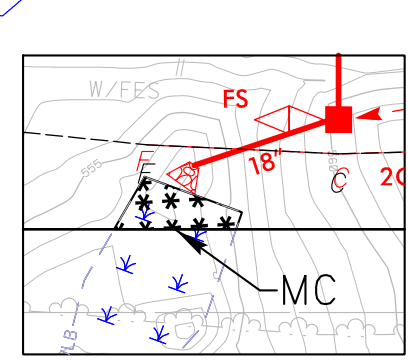
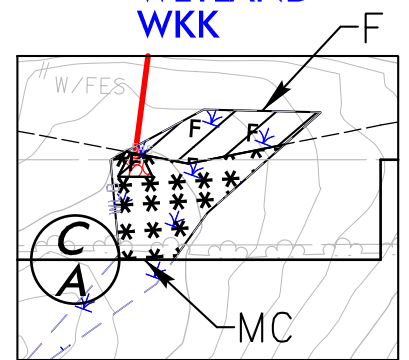
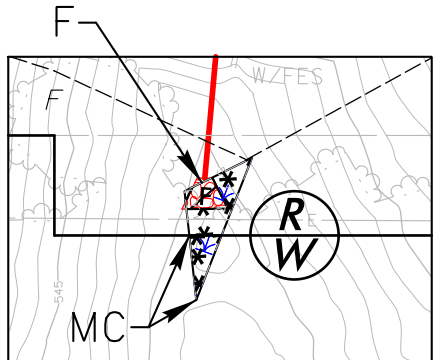
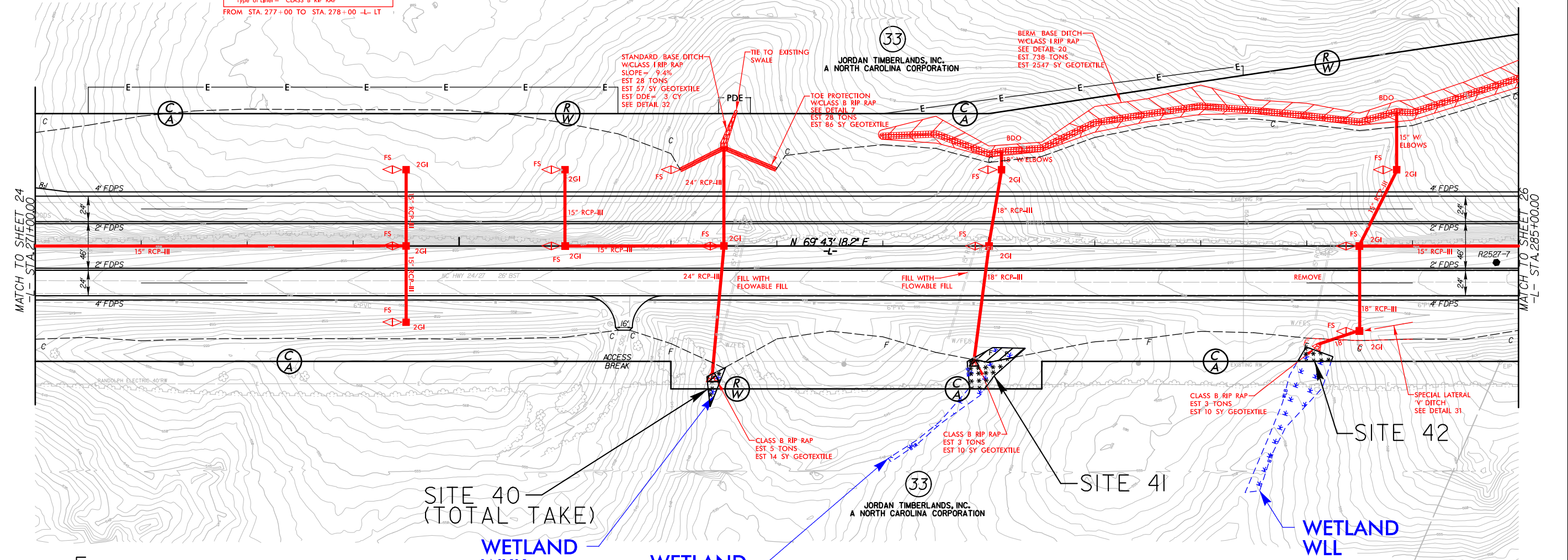
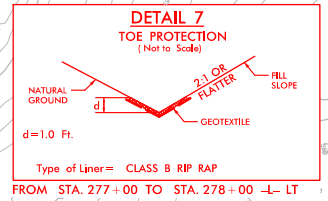
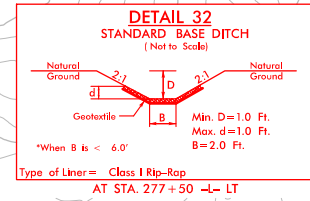
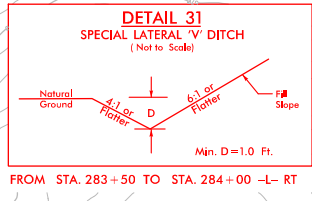
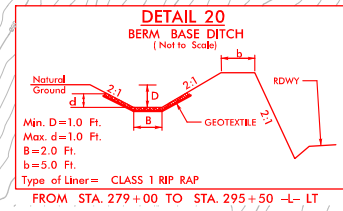
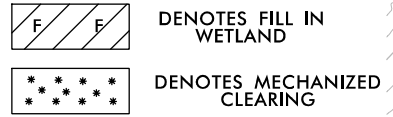
34
WILLIAM JAMES SKIDMORE

FOR -L- PROFILE, SEE SHEET 51
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

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**PERMIT DRAWING
SHEET 47 OF 91**

PROJECT REFERENCE NO. R-2527	SHEET NO. 25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 Stewart <small>10000 Old Highway 101, Suite 100 Raleigh, NC 27615 919-876-1100 www.stewartinc.com</small>	 VHB <small>VHB Engineering NC, P.C. (C-3705) 140 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



34
WILLIAM JAMES SKIDMORE

FOR -L- PROFILE, SEE SHEET 51
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

5/14/99
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PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-167

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**PERMIT DRAWING
SHEET 48 OF 91**

SITE 40

WETLAND
CONTINUES
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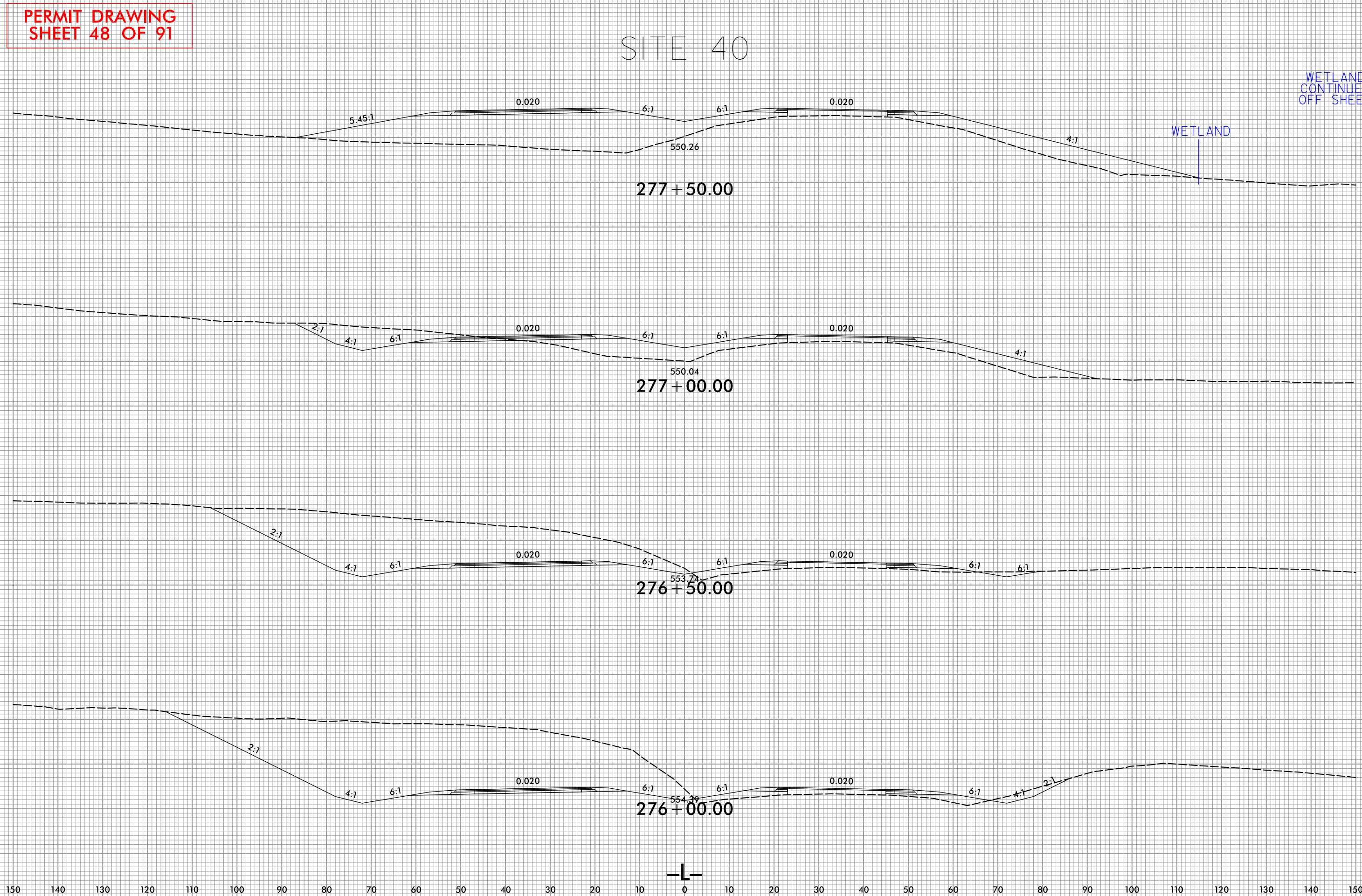
WETLAND

277 + 50.00

277 + 00.00

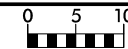
276 + 50.00

276 + 00.00



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8/23/99

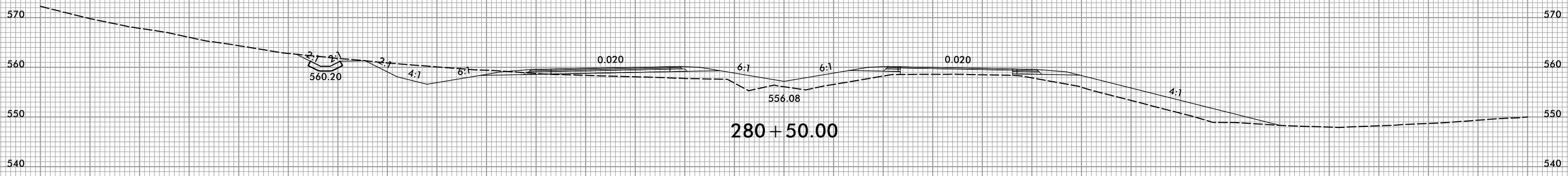


PROJ. REFERENCE NO.
R-2527

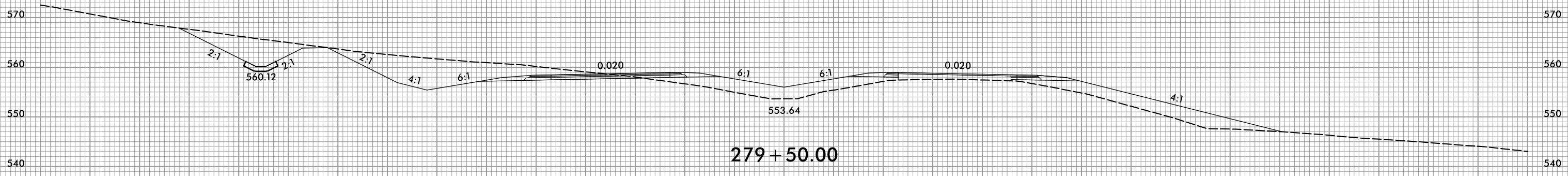
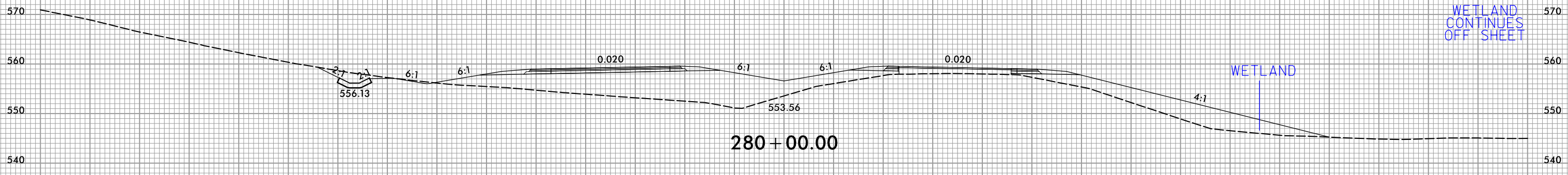
SHEET NO.
X-169

PERMIT DRAWING
SHEET 49 OF 91

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SITE 41



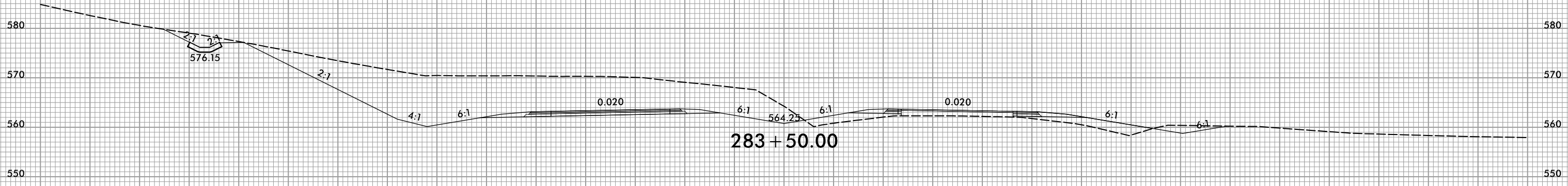
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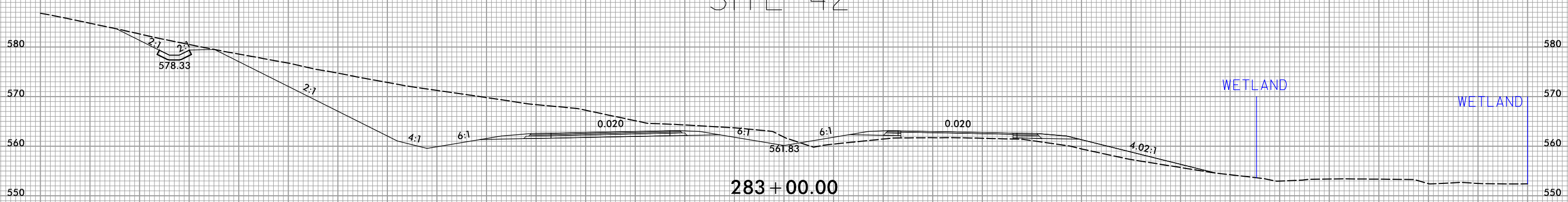


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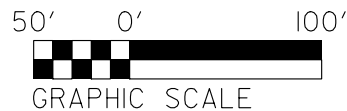
**PERMIT DRAWING
SHEET 50 OF 91**



SITE 42



**PERMIT DRAWING
SHEET 51 OF 91**



DENOTES FILL IN WETLAND

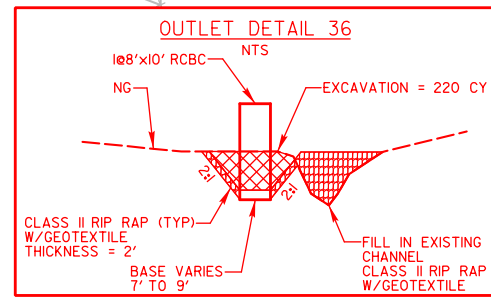
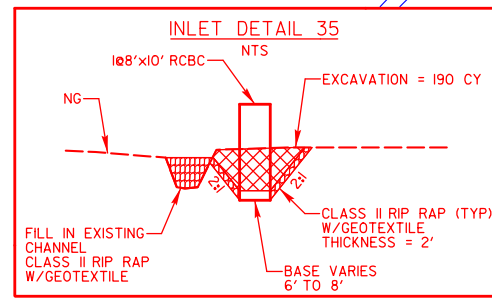
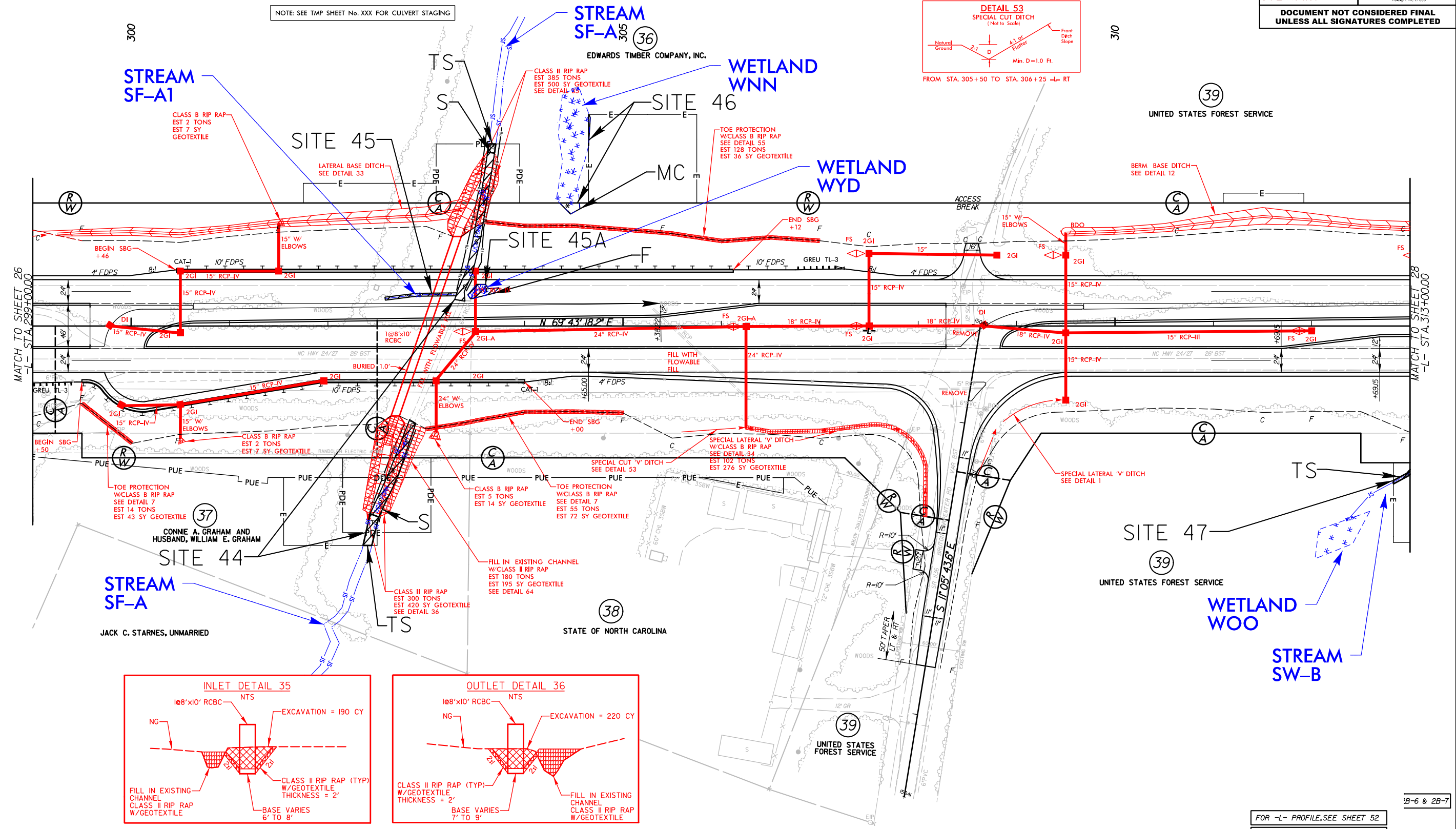
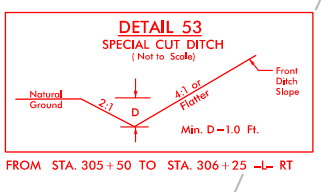
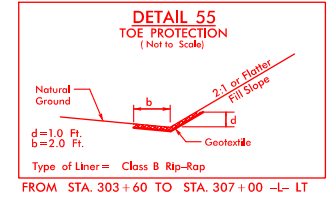
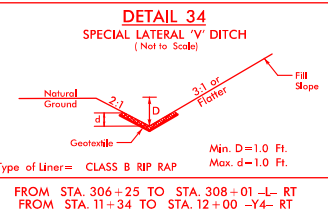
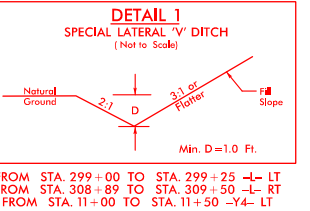
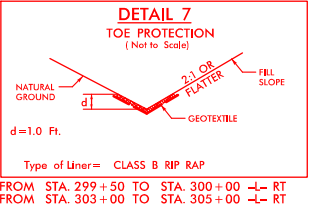
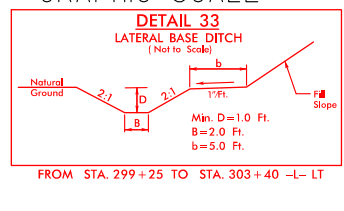
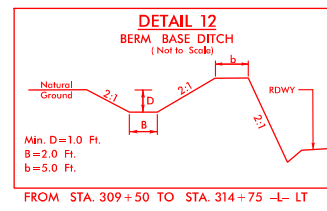
DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER





PROJECT REFERENCE NO. R-2527	SHEET NO. 27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR -L- PROFILE, SEE SHEET 52
FOR -Y4- PROFILE, SEE SHEET 60
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

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PERMIT DRAWING
SHEET 53 OF 91

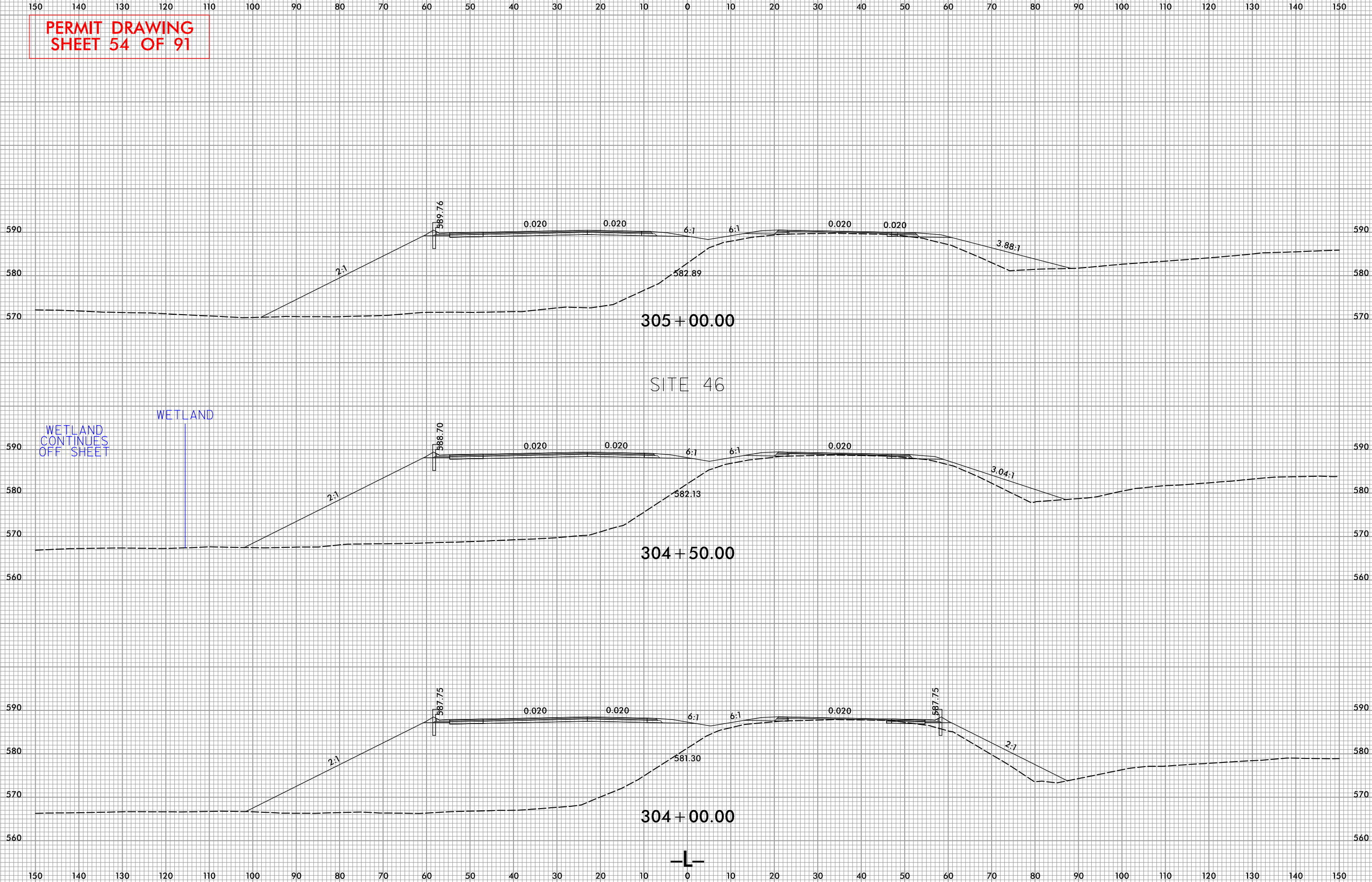
PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 <small>Firm License No. C-1103 217 S. West St. Raleigh, NC 27603 T 919.386.8766 www.stewartinc.com</small>		 <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITES 44, 45, & 46



REVISIONS

PERMIT DRAWING
SHEET 54 OF 91



8/23/99



PROJ. REFERENCE NO.
R-2527

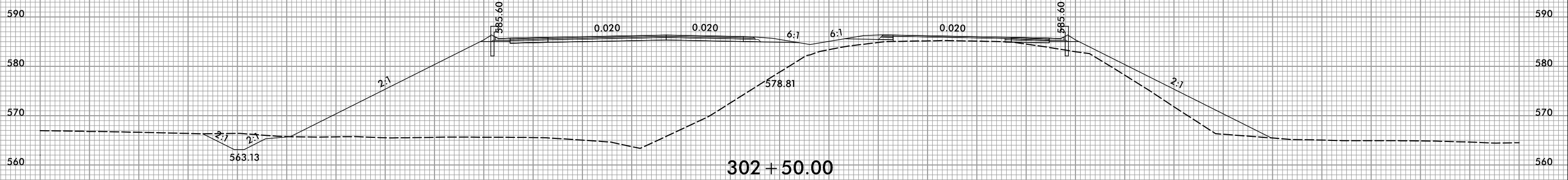
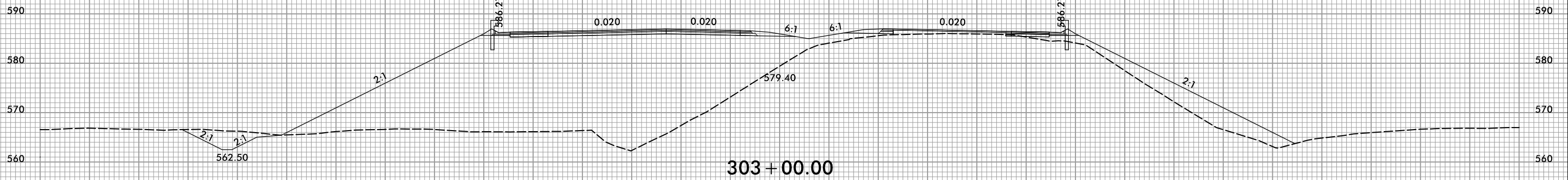
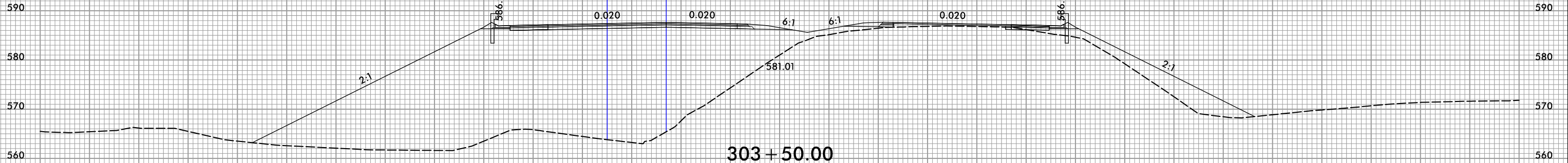
SHEET NO.
X-184

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PERMIT DRAWING
SHEET 54A OF 91

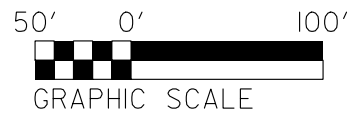
SITE 45A

WETLAND



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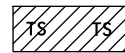
**PERMIT DRAWING
SHEET 55 OF 91**



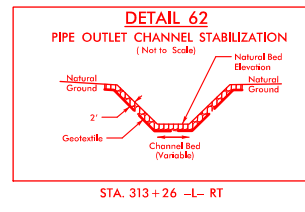
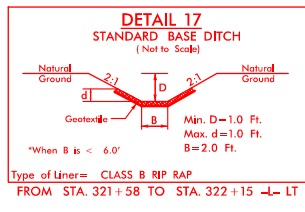
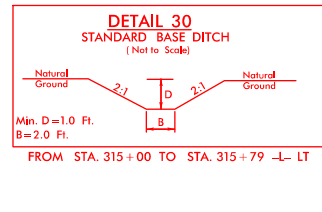
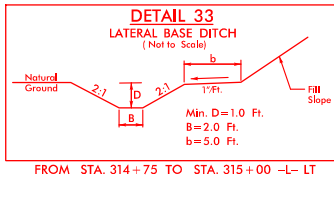
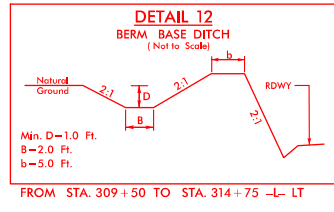
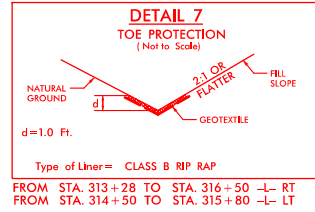
DENOTES FILL IN WETLAND



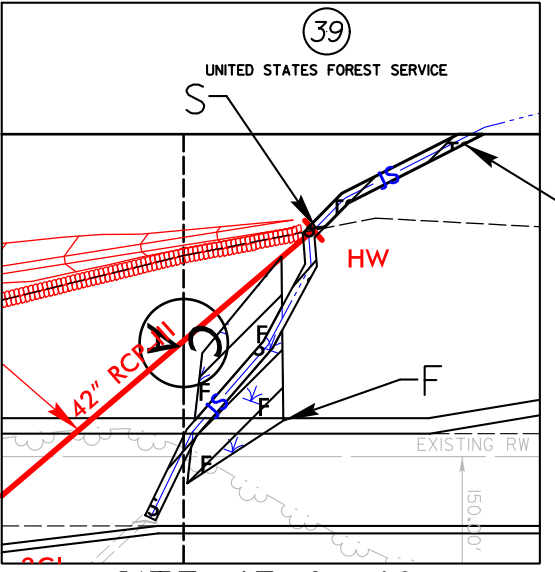
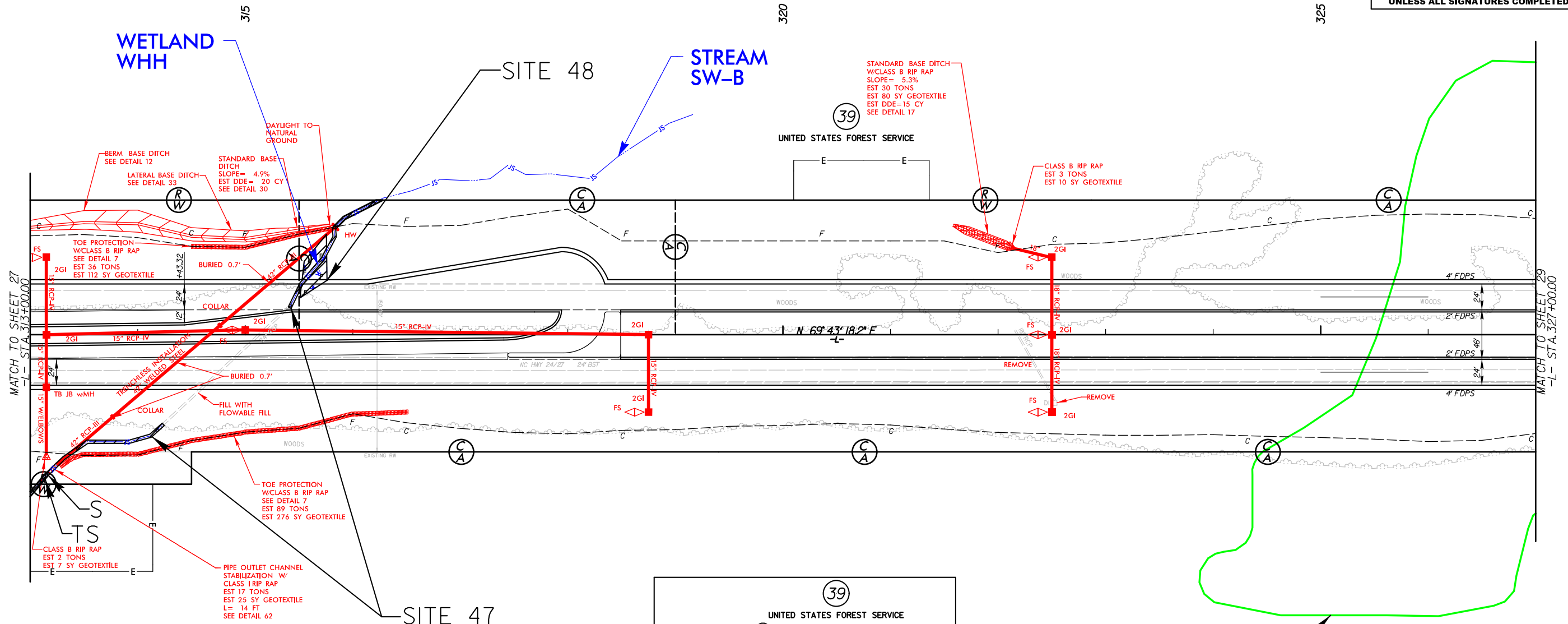
DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. <i>R-2527</i>	SHEET NO. 28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

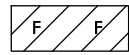
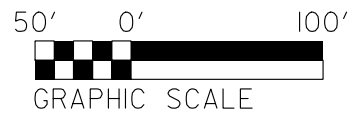


ENVIRONMENTAL SENSITIVITY AREA

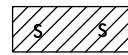
ENVIRONMENTALLY SENSITIVE AREA
FOR INTERSECTION DETAIL, SEE SHEET 28-6
FOR -L- PROFILE, SEE SHEETS 52 & 53

5/14/09
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**PERMIT DRAWING
SHEET 56 OF 91**



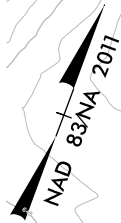
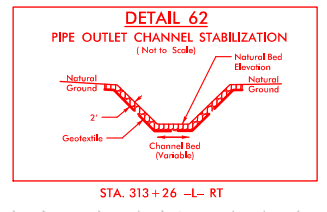
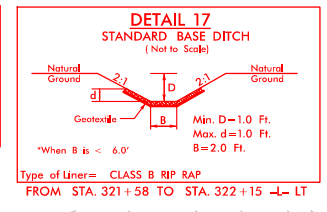
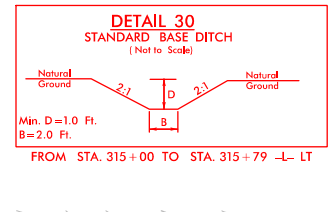
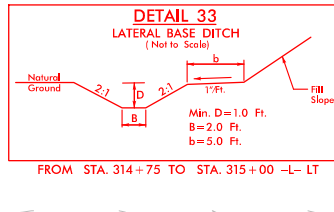
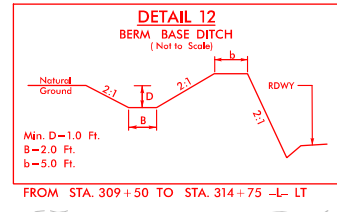
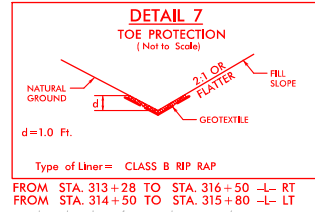
DENOTES FILL IN WETLAND



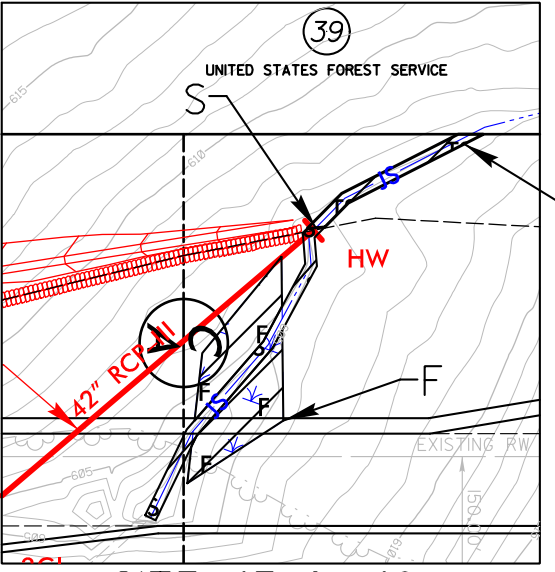
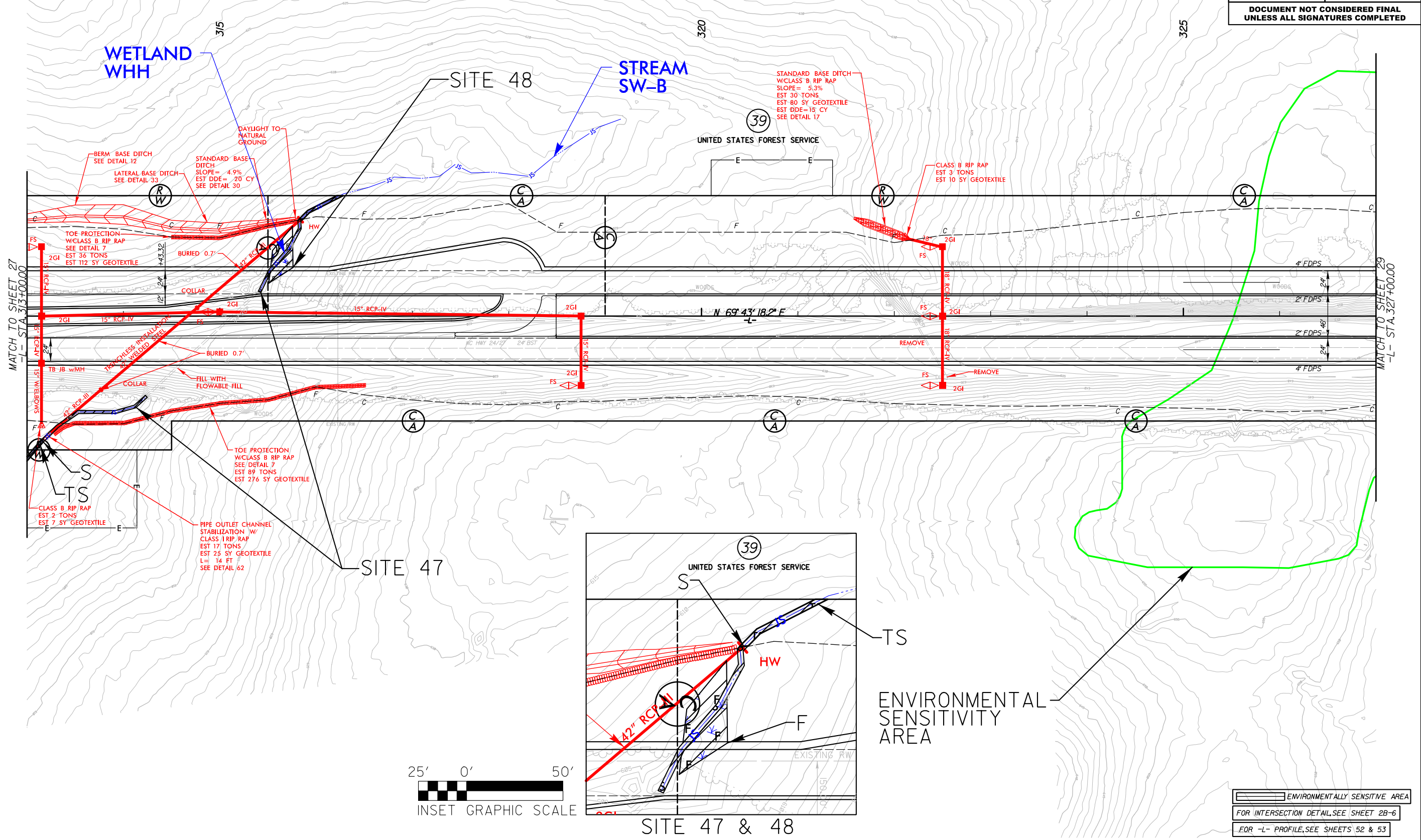
DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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PROJ. REFERENCE NO.
R-2527

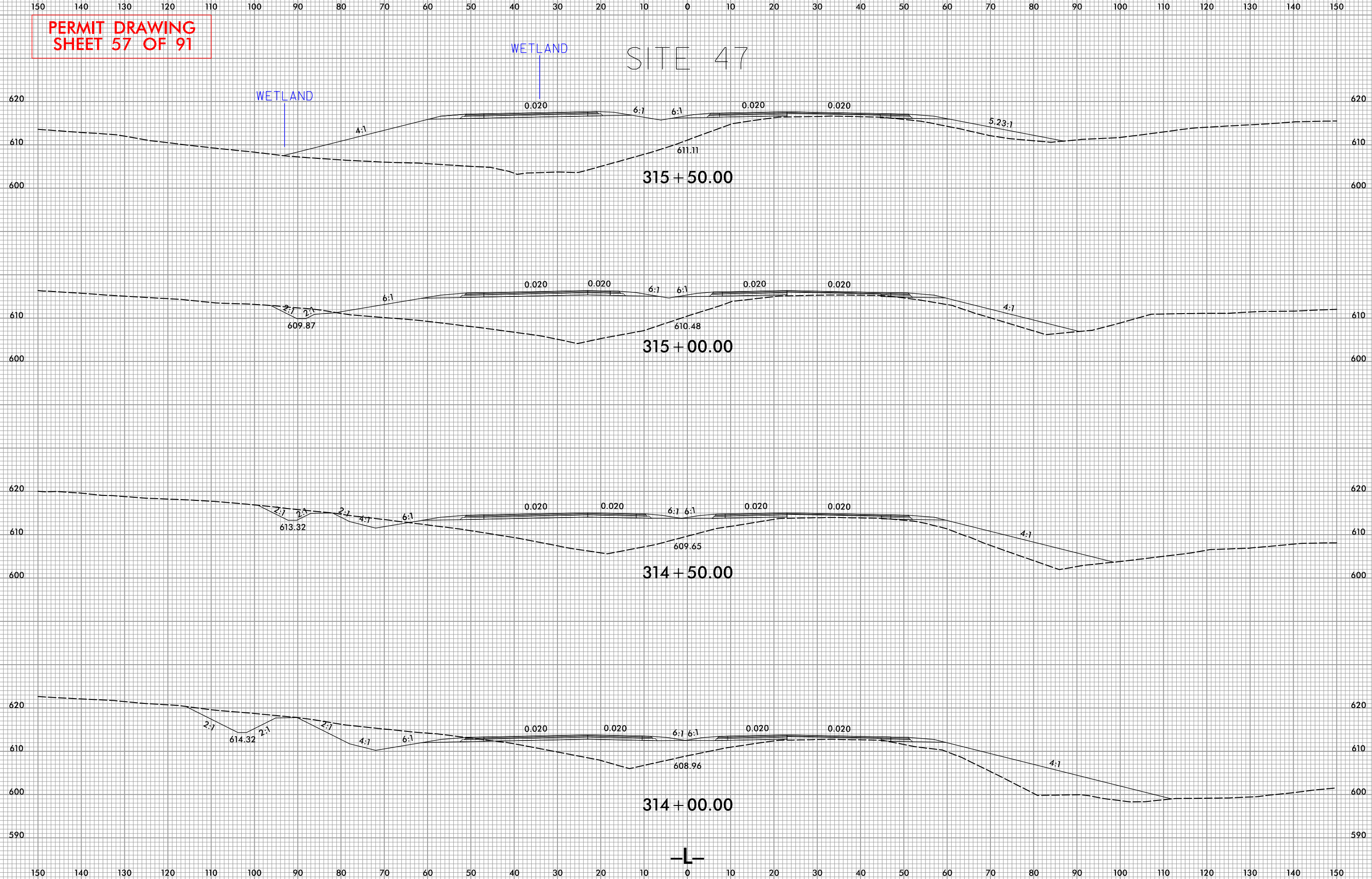
SHEET NO.
X-190

PERMIT DRAWING
SHEET 57 OF 91

WETLAND

SITE 47

WETLAND

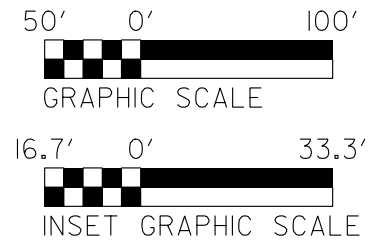
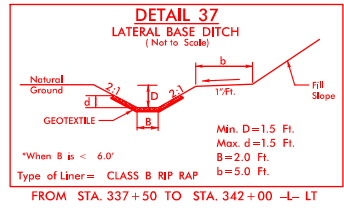
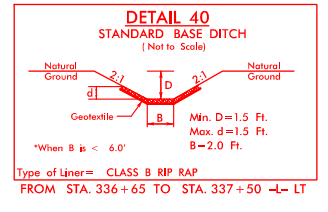
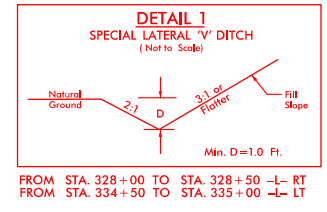


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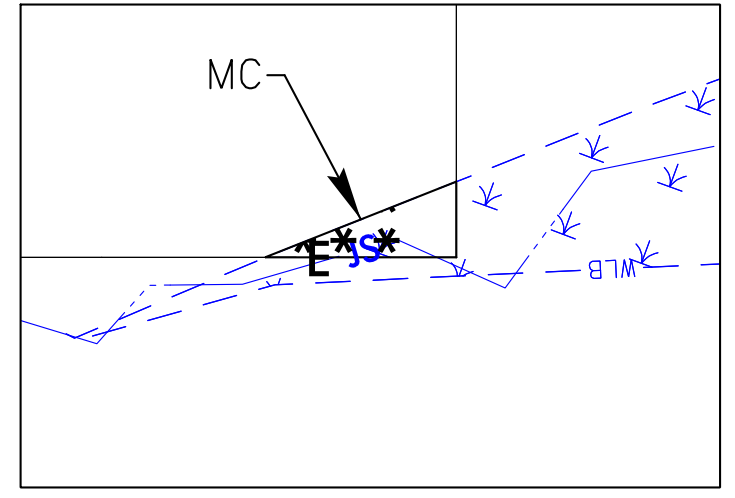
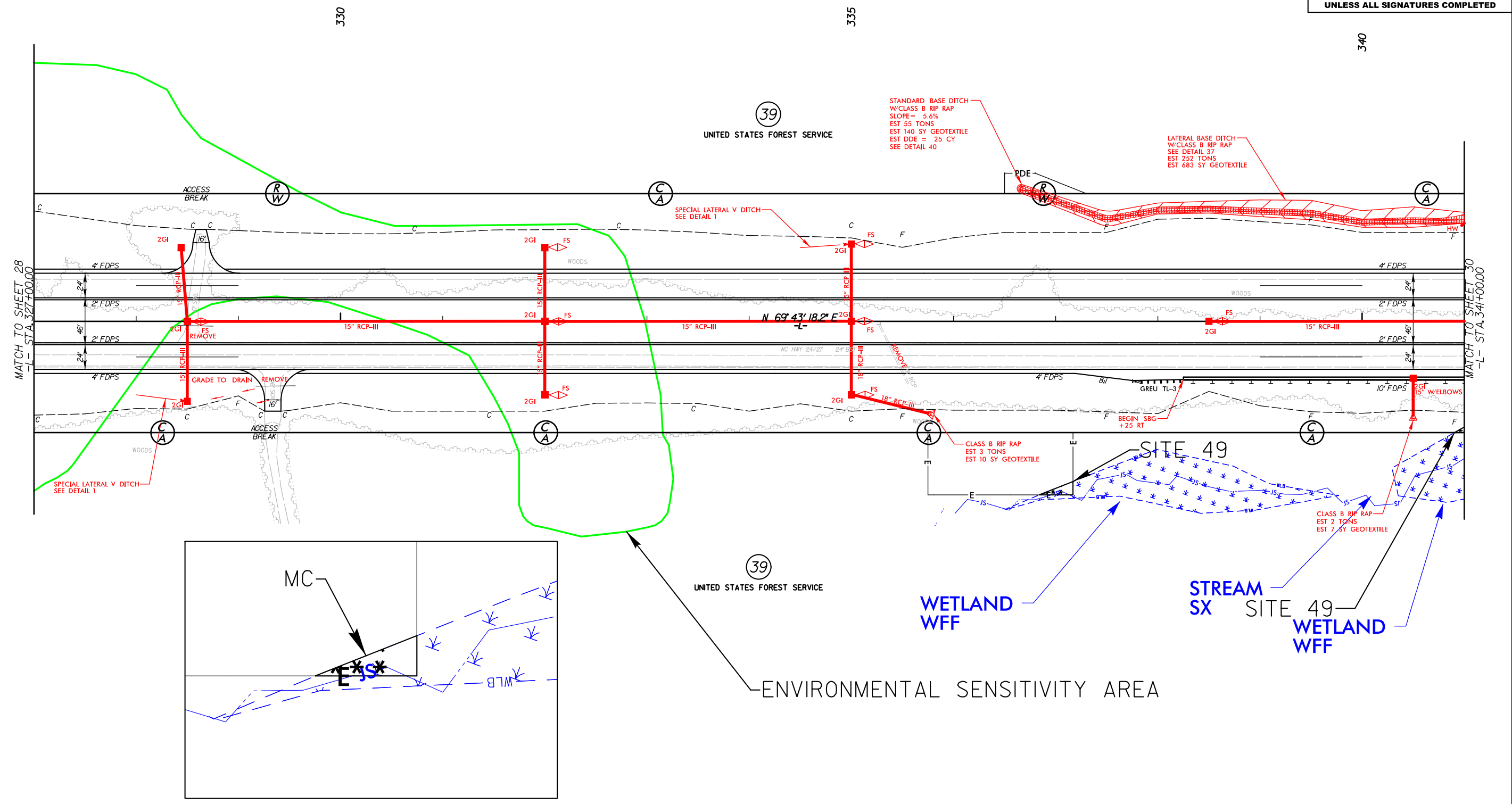
5/14/99

PERMIT DRAWING SHEET 58 OF 91

DENOTES MECHANIZED CLEARING



PROJECT REFERENCE NO. R-2527	SHEET NO. 29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



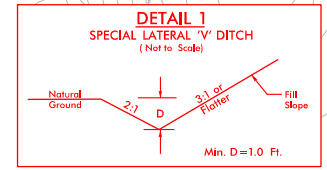
ENVIRONMENTALLY SENSITIVE AREA
FOR -L- PROFILE, SEE SHEET 53
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

R:\Hydro\Projects\PERMITS_Environmental\Drawings\R2527_Hyd_PPM_PSH29.dgn

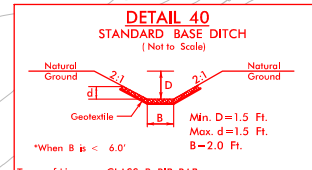
5/14/99

PERMIT DRAWING SHEET 59 OF 91

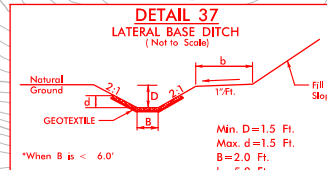
***** DENOTES MECHANIZED CLEARING



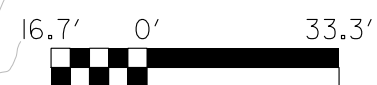
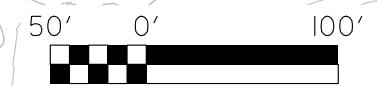
FROM STA. 328+00 TO STA. 328+50 -L- RT
FROM STA. 334+50 TO STA. 335+00 -L- LT



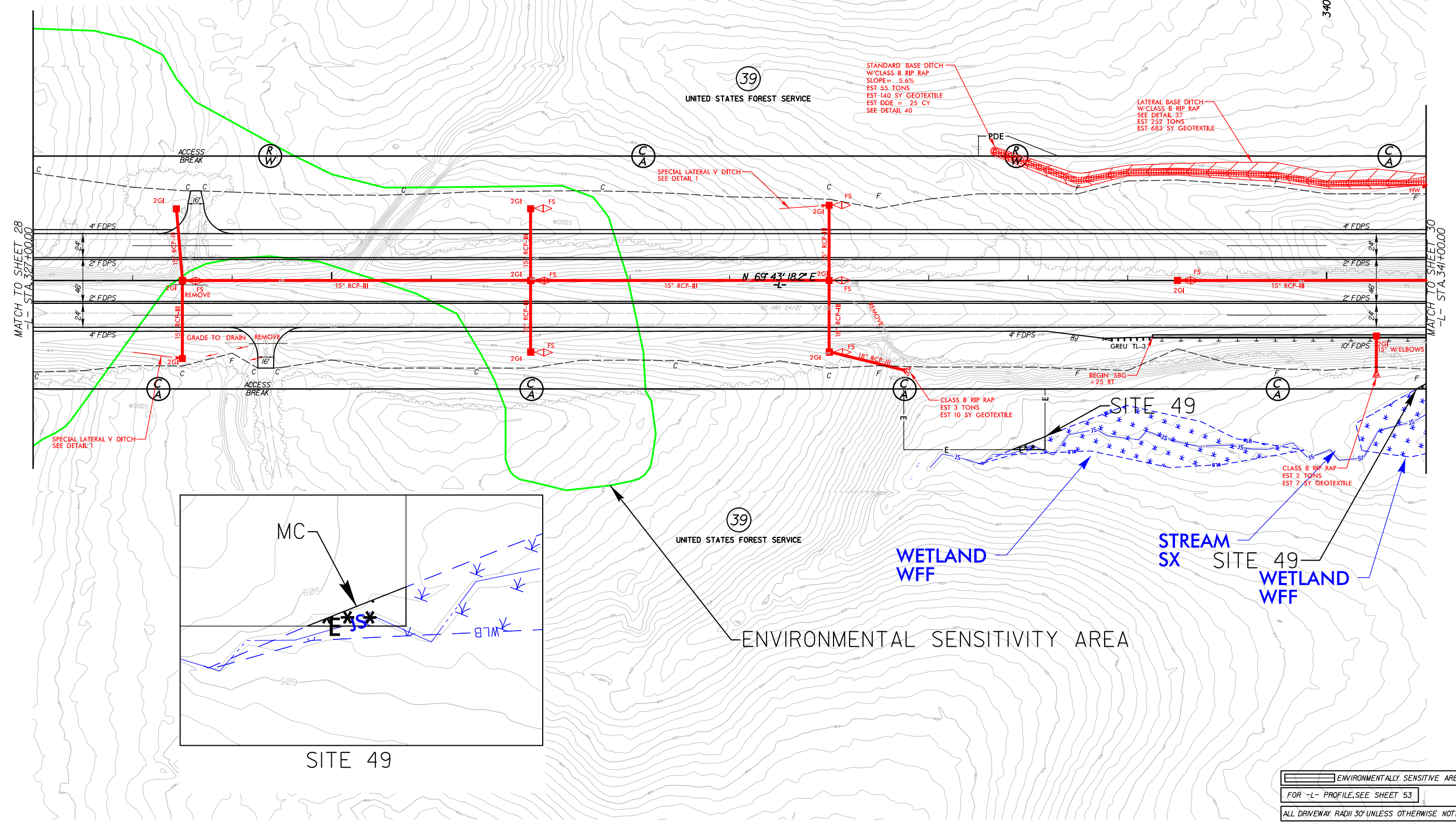
*When B is < 6.0'
Type of Liner= CLASS B RIP RAP
FROM STA. 336+65 TO STA. 337+50 -L- LT



*When B is < 6.0'
Type of Liner= CLASS B RIP RAP
FROM STA. 337+50 TO STA. 342+00 -L- LT

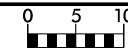


PROJECT REFERENCE NO. R-2527	SHEET NO. 29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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8/23/99

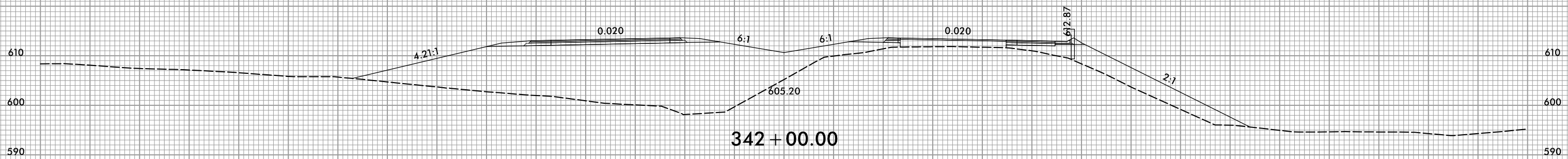


PROJ. REFERENCE NO.
R-2527

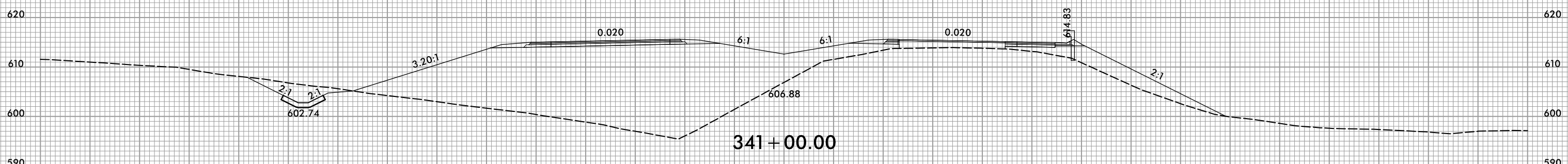
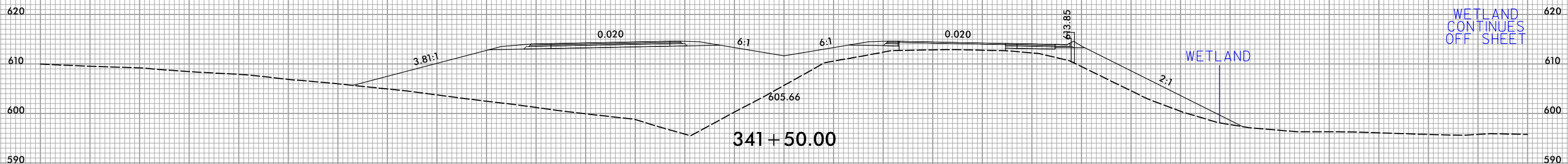
SHEET NO.
X-203

PERMIT DRAWING
SHEET 60 OF 91

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SITE 49



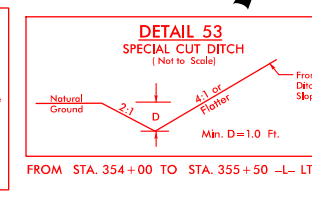
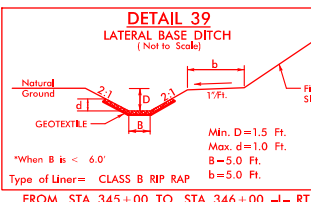
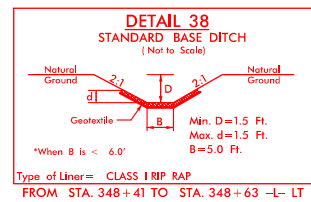
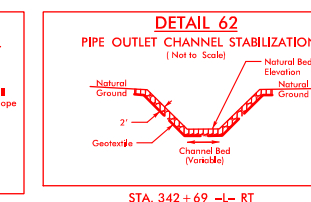
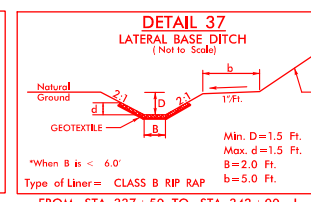
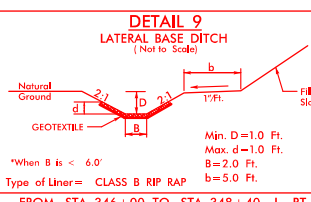
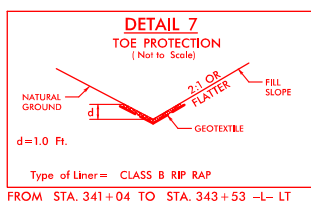
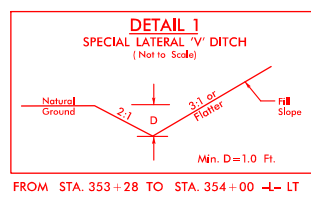
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gover.cbe

5/14/99

PERMIT DRAWING SHEET 61 OF 91

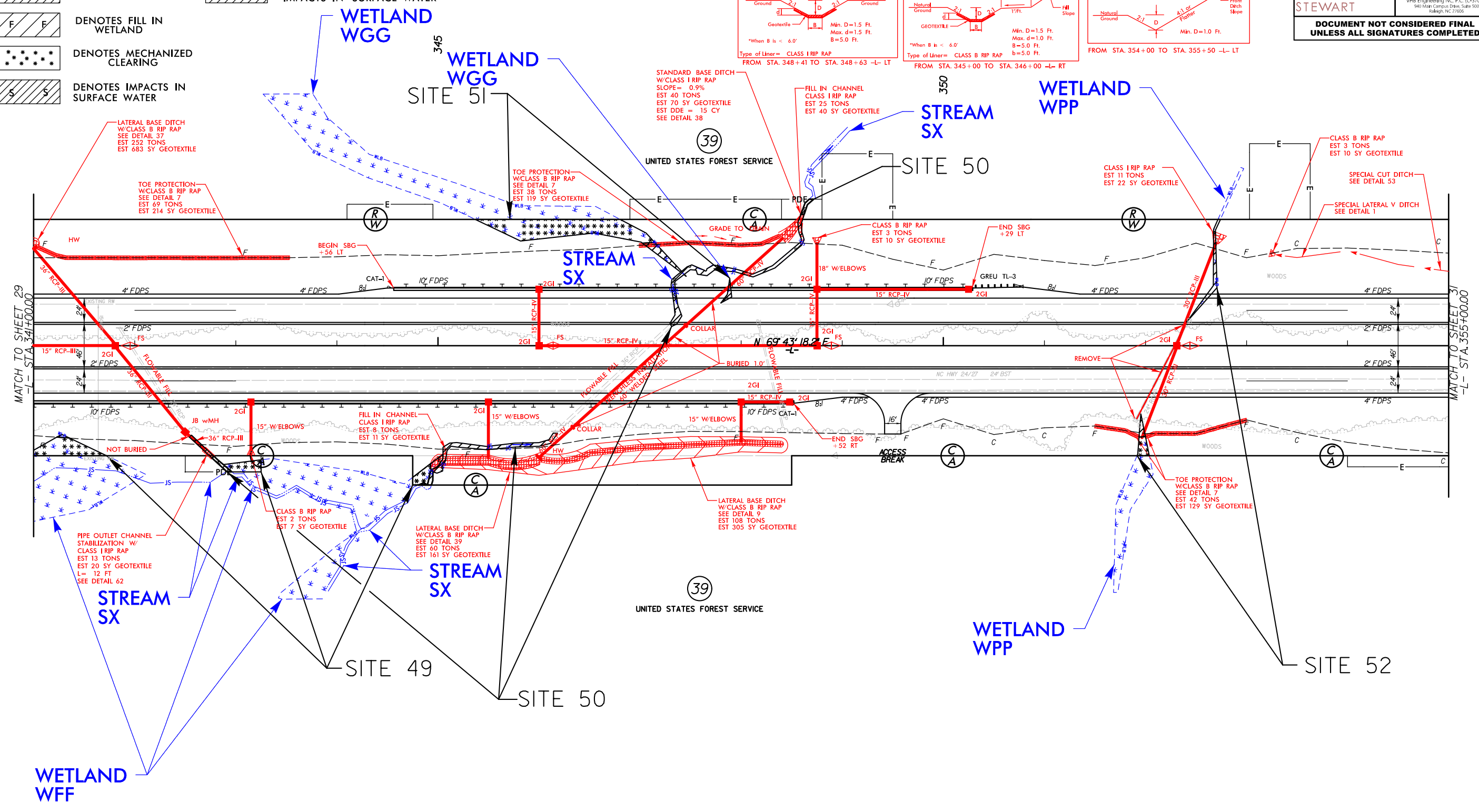


- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER





NAD 83/NA 2011

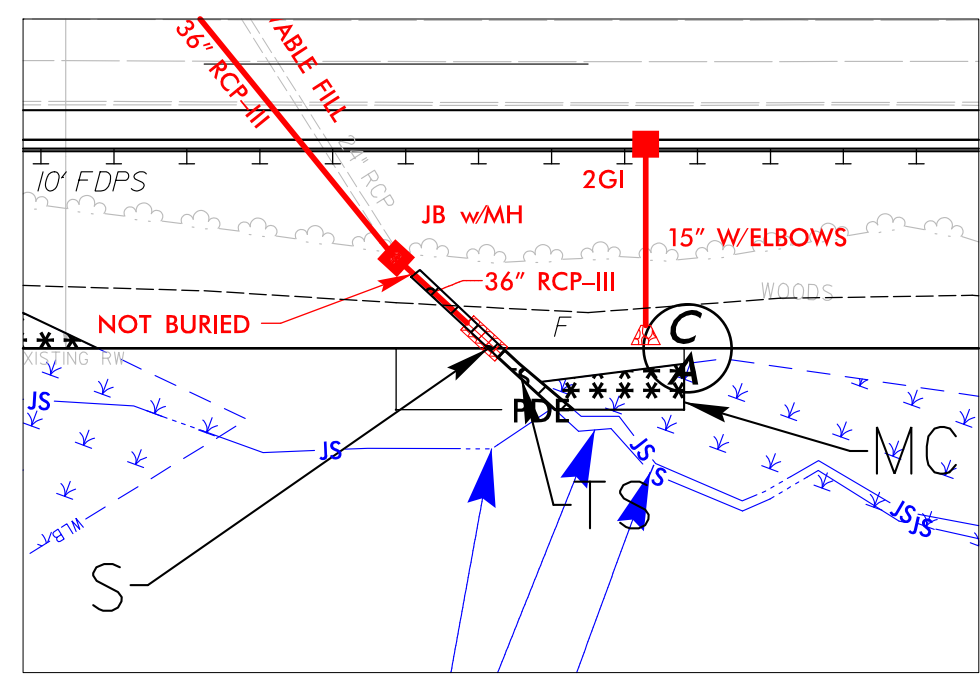
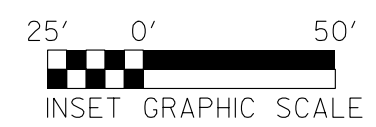
PROJECT REFERENCE NO. R-2527	SHEET NO. 30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



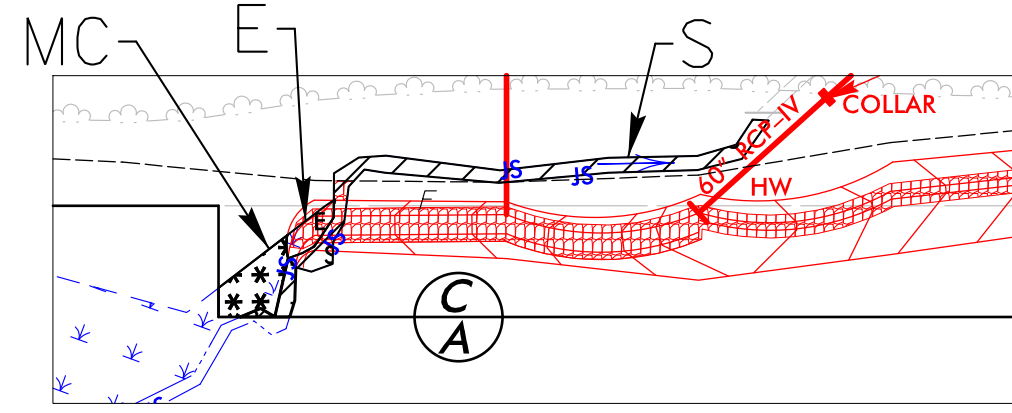
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**PERMIT DRAWING
SHEET 62 OF 91**

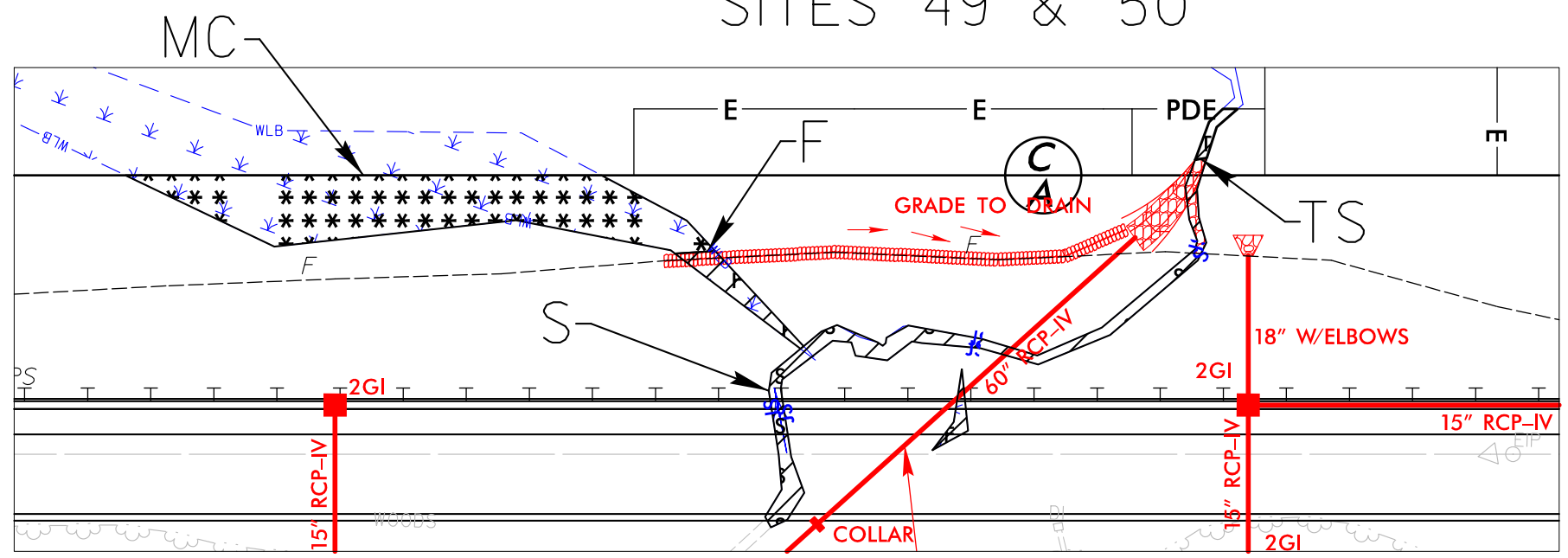
PROJECT REFERENCE NO. <i>R-2527</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART <small>1900 S. West St. Raleigh, NC 27603 919.386.1000 www.stewartinc.com</small>	 VHB Engineering NC, P.C. (C-3705) <small>940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



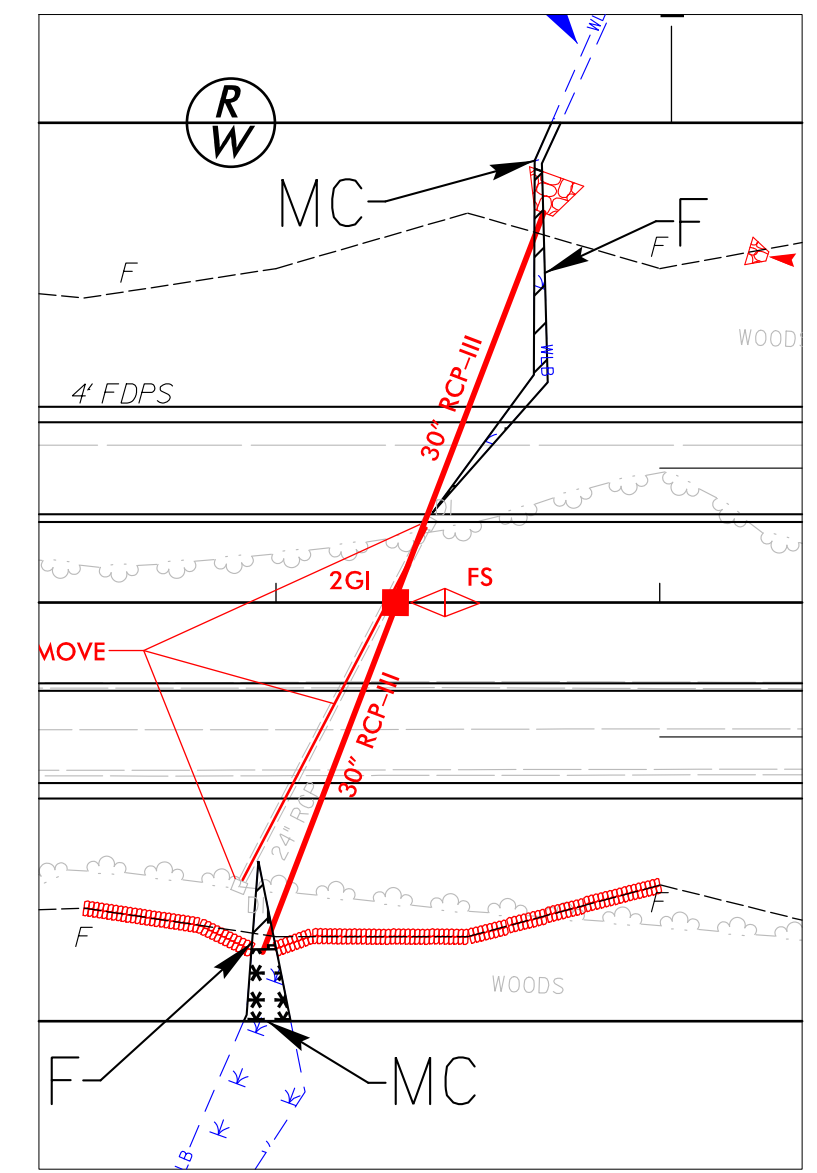
SITES 49 & 50



SITES 49 & 50



SITES 50 & 51



SITE 52

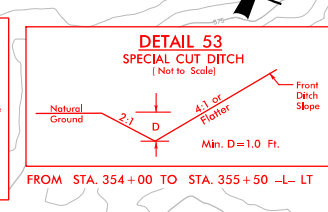
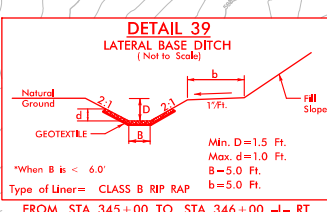
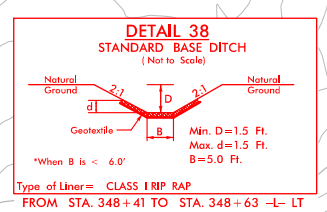
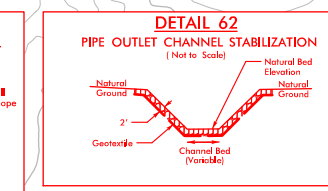
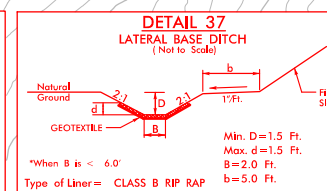
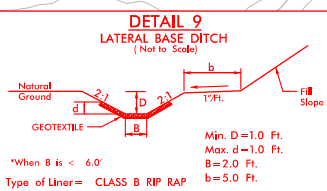
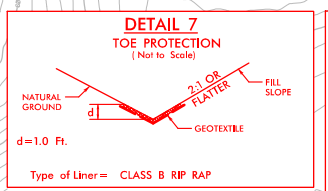
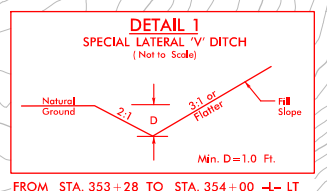
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5/14/99

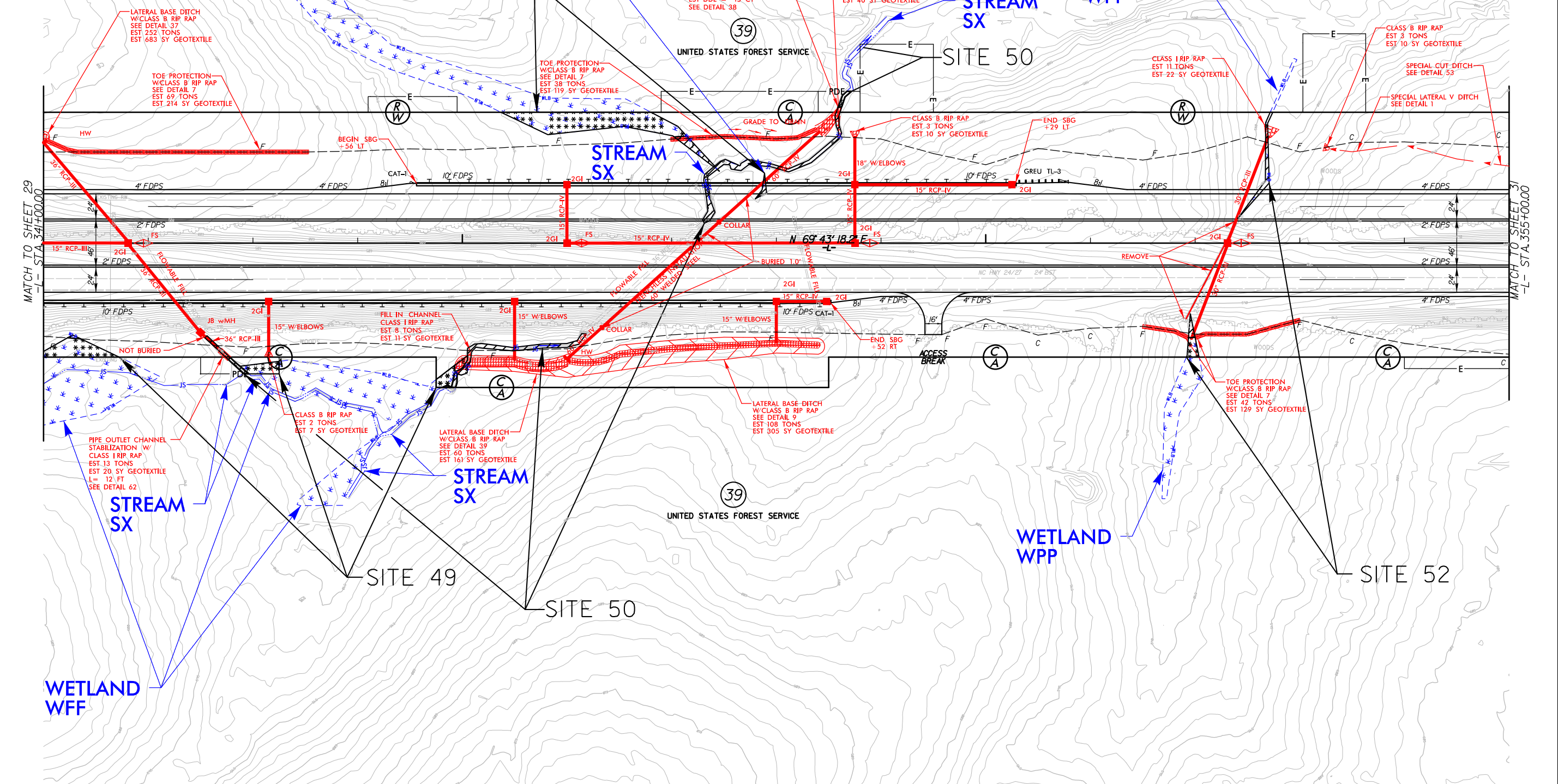
PERMIT DRAWING SHEET 63 OF 91



- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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FOR -L- PROFILE, SEE SHEETS 53 & 54

8/23/99

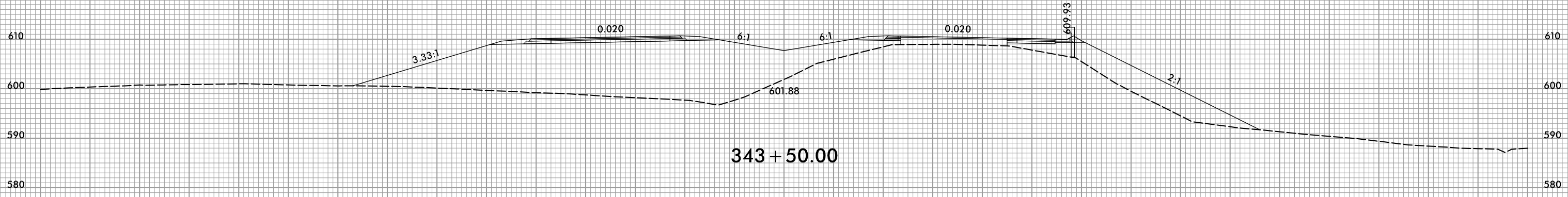


PROJ. REFERENCE NO.
R-2527

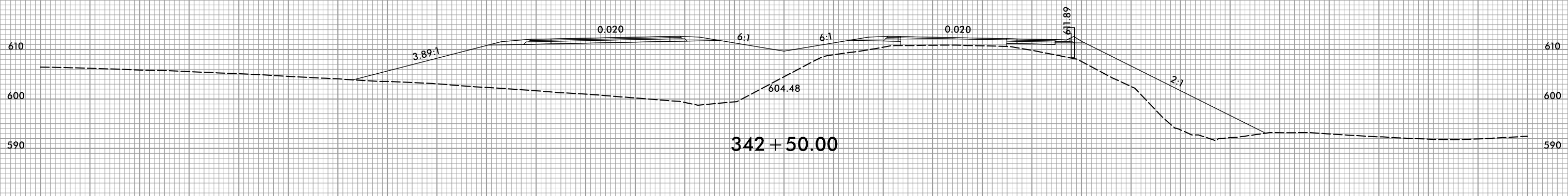
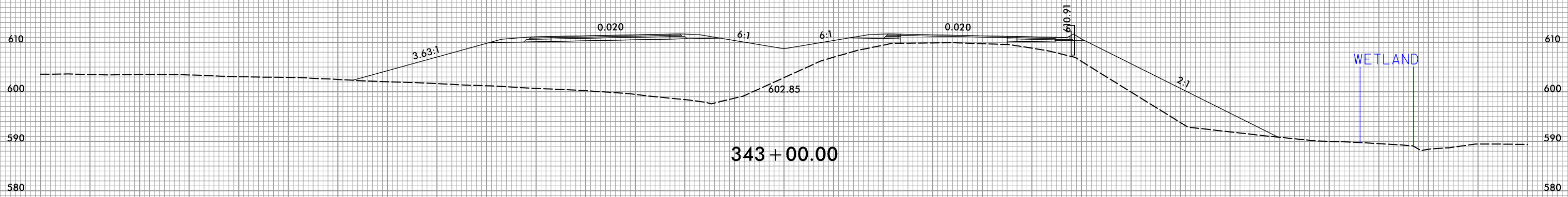
SHEET NO.
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**PERMIT DRAWING
SHEET 65 OF 91**



SITE 49



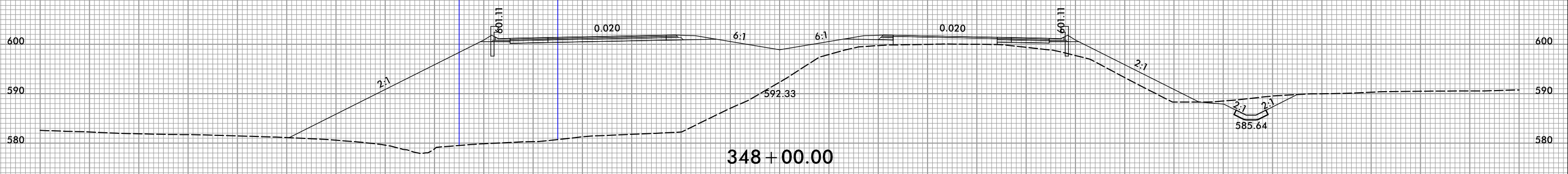
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PERMIT DRAWING SHEET 66 OF 91

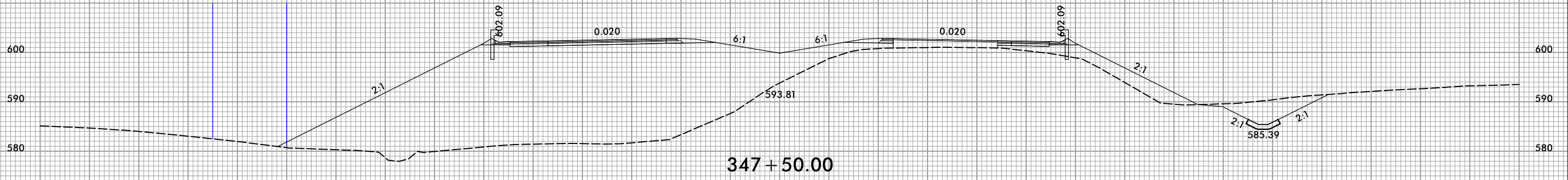
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WETLAND WETLAND

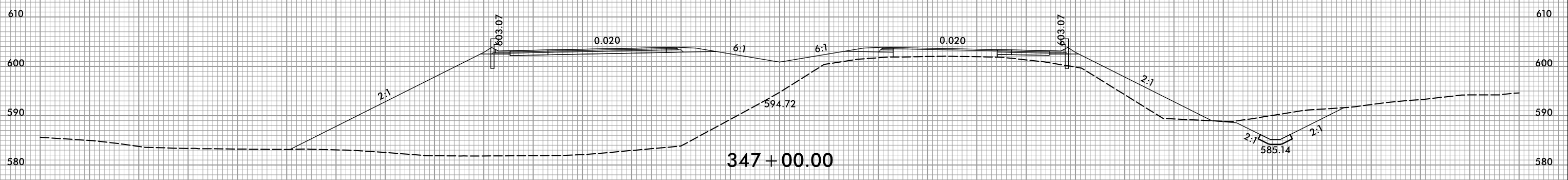


SITE 51

WETLAND WETLAND



SITE 51



8/23/99



PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-209

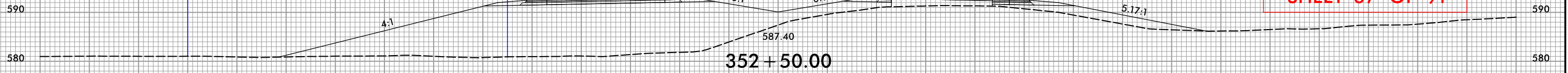
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WETLAND

WETLAND

SITE 52

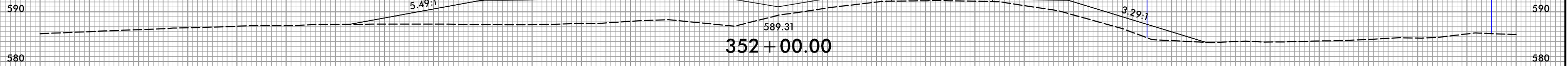
PERMIT DRAWING
SHEET 67 OF 91



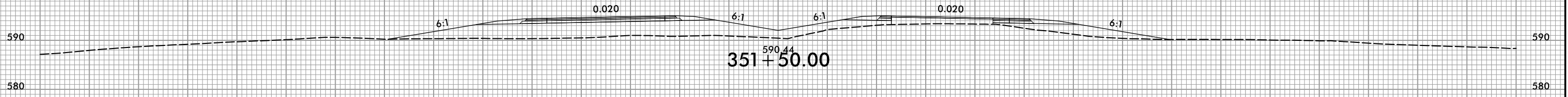
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WETLAND

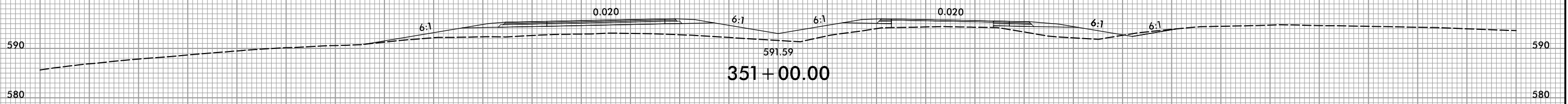
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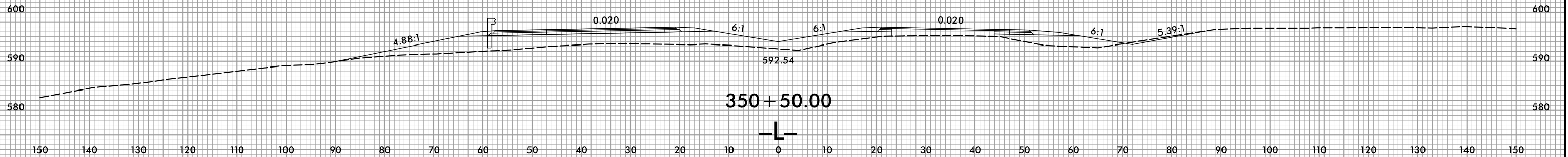
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351+00.00



350+50.00



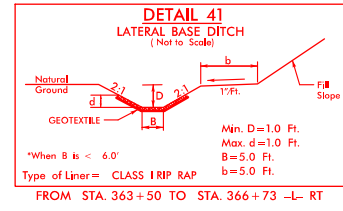
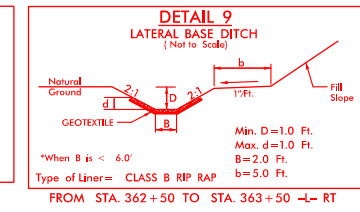
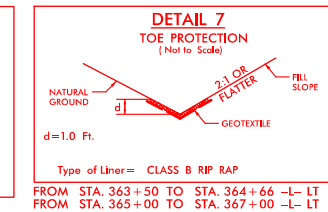
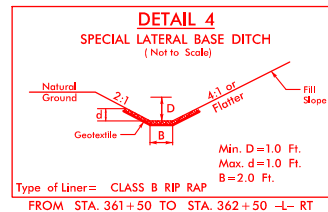
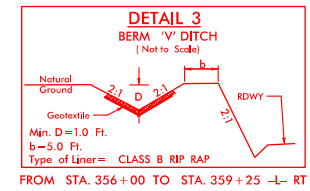
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5/14/99

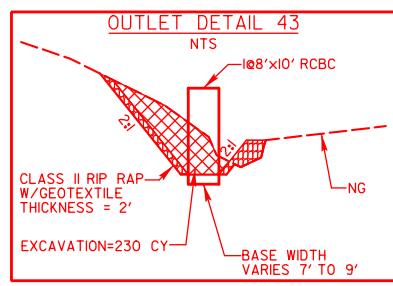
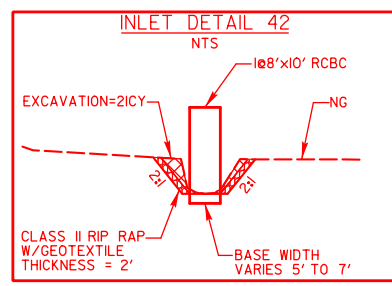
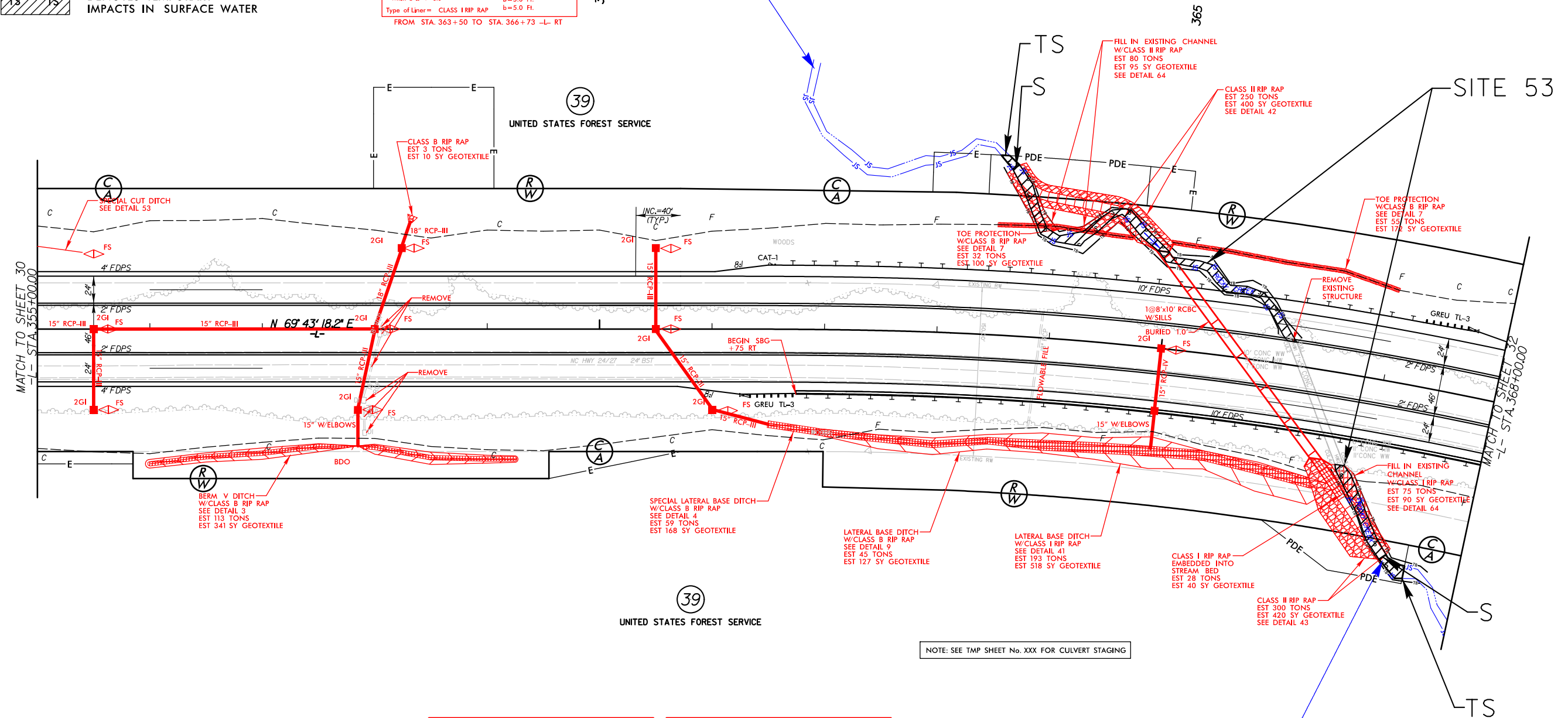
PERMIT DRAWING SHEET 68 OF 91



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: SEE TMP SHEET No. XXX FOR CULVERT STAGING



STREAM SY-A

FOR -L- PROFILE, SEE SHEET 54

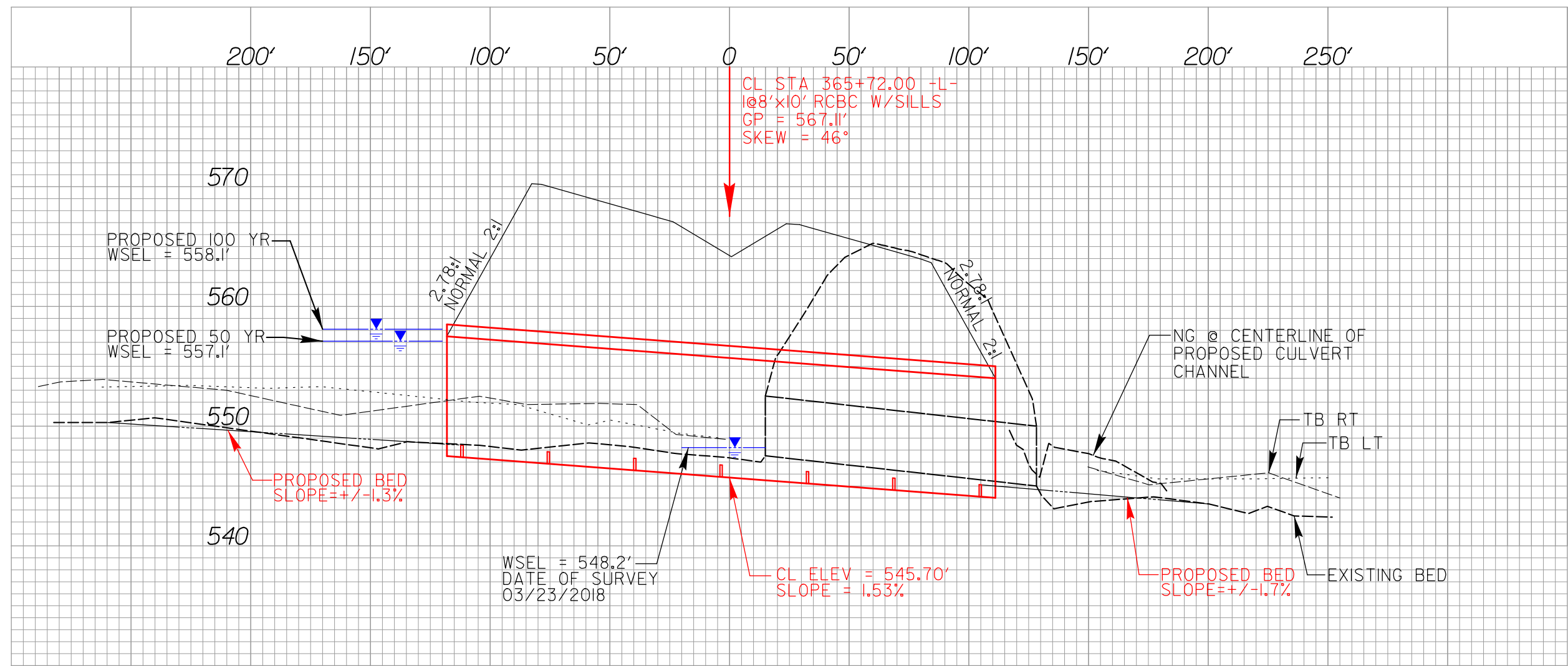
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8/17/99

PERMIT DRAWING
SHEET 70 OF 91

PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 <small>Firm License No. C-1101 217 S. West St. Raleigh, NC 27603 T 919.386.8766 www.stewartinc.com</small>		 <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 53

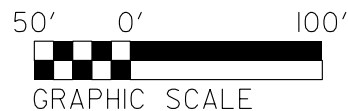


REVISIONS

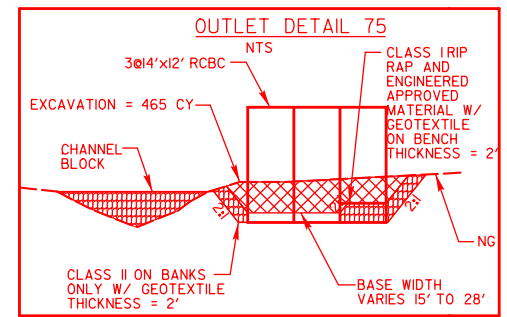
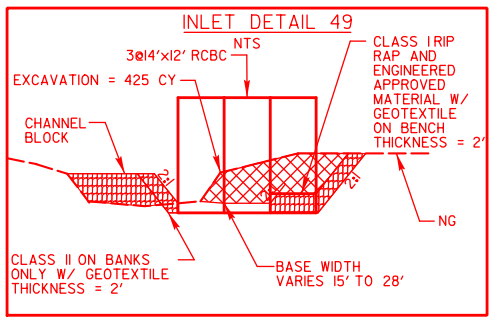
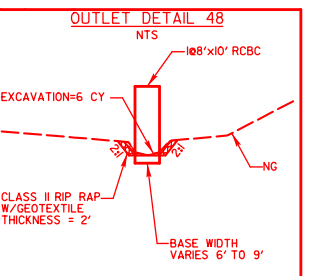
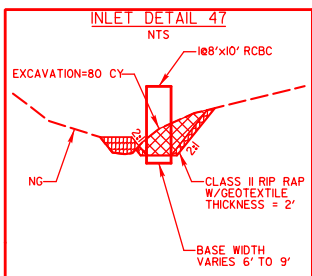
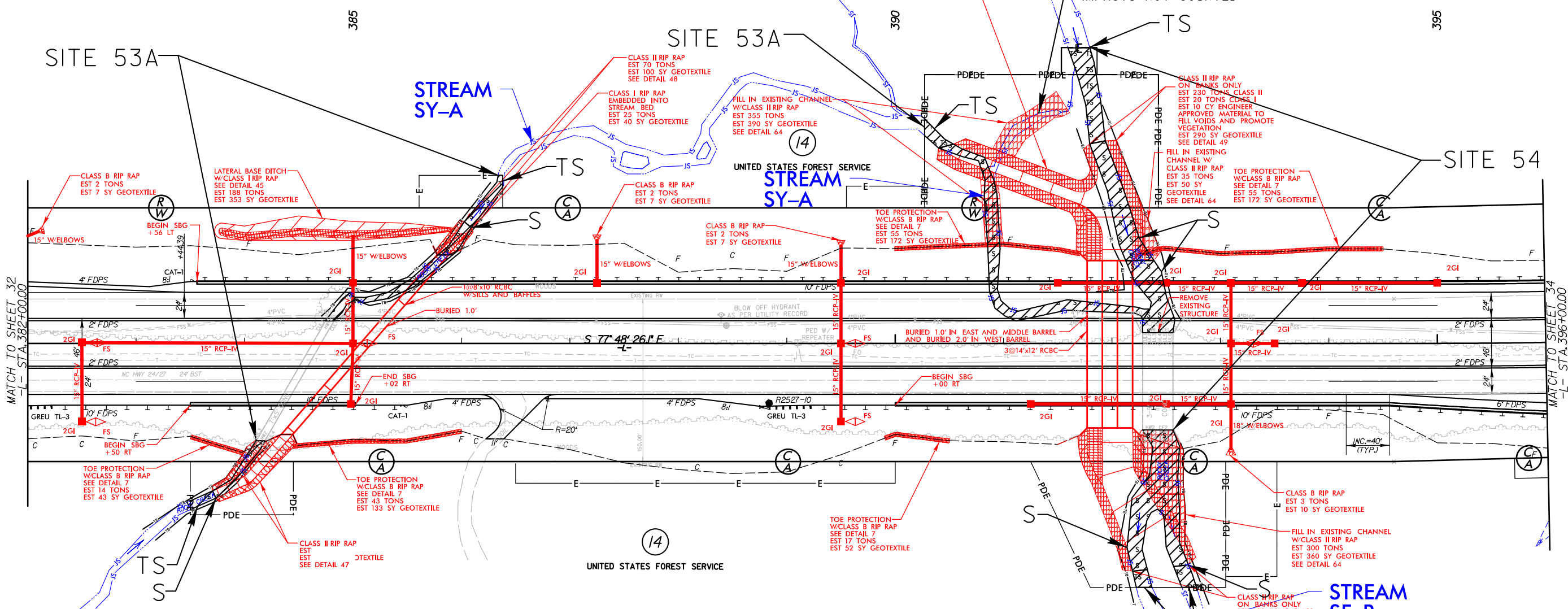
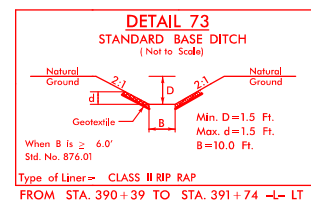
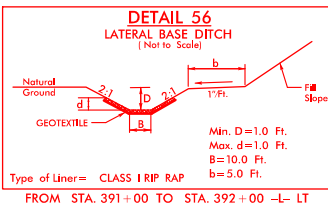
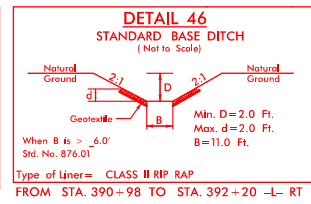
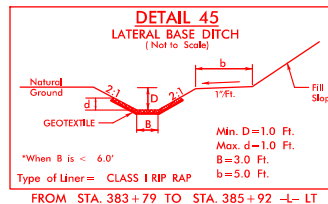
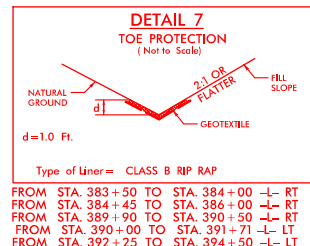
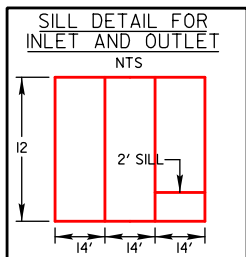
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03/23/2018

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PERMIT DRAWING SHEET 71 OF 91

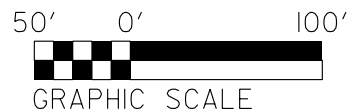


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

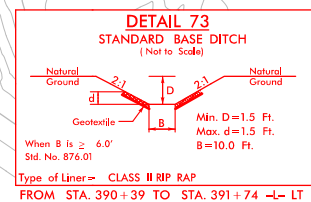
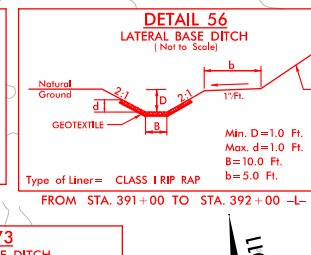
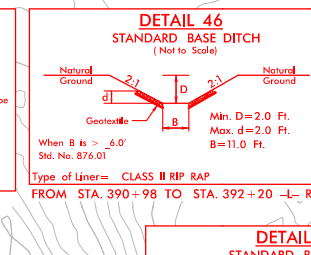
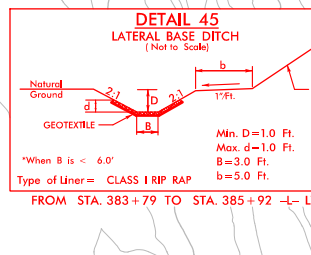
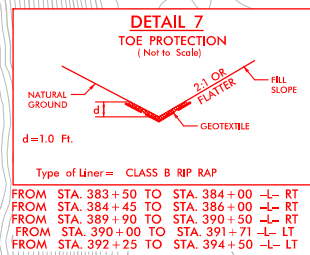
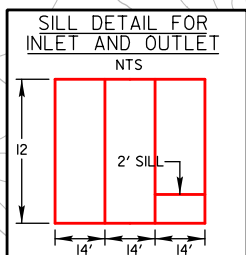


FOR -L- PROFILE, SEE SHEET 55

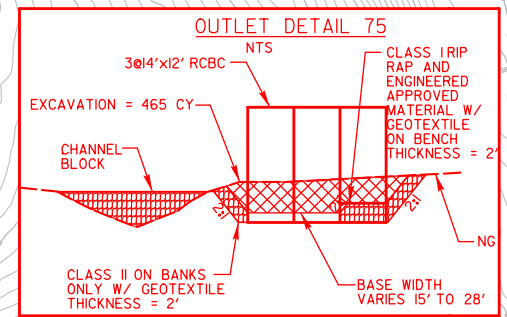
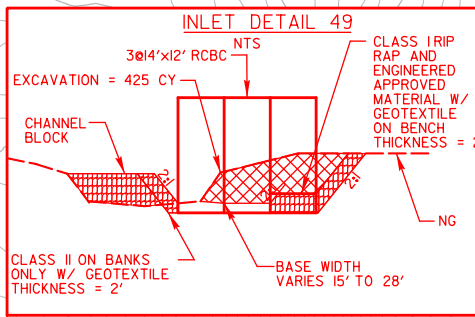
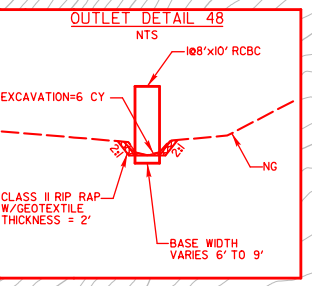
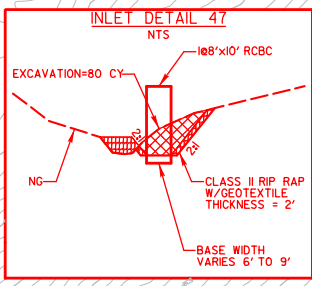
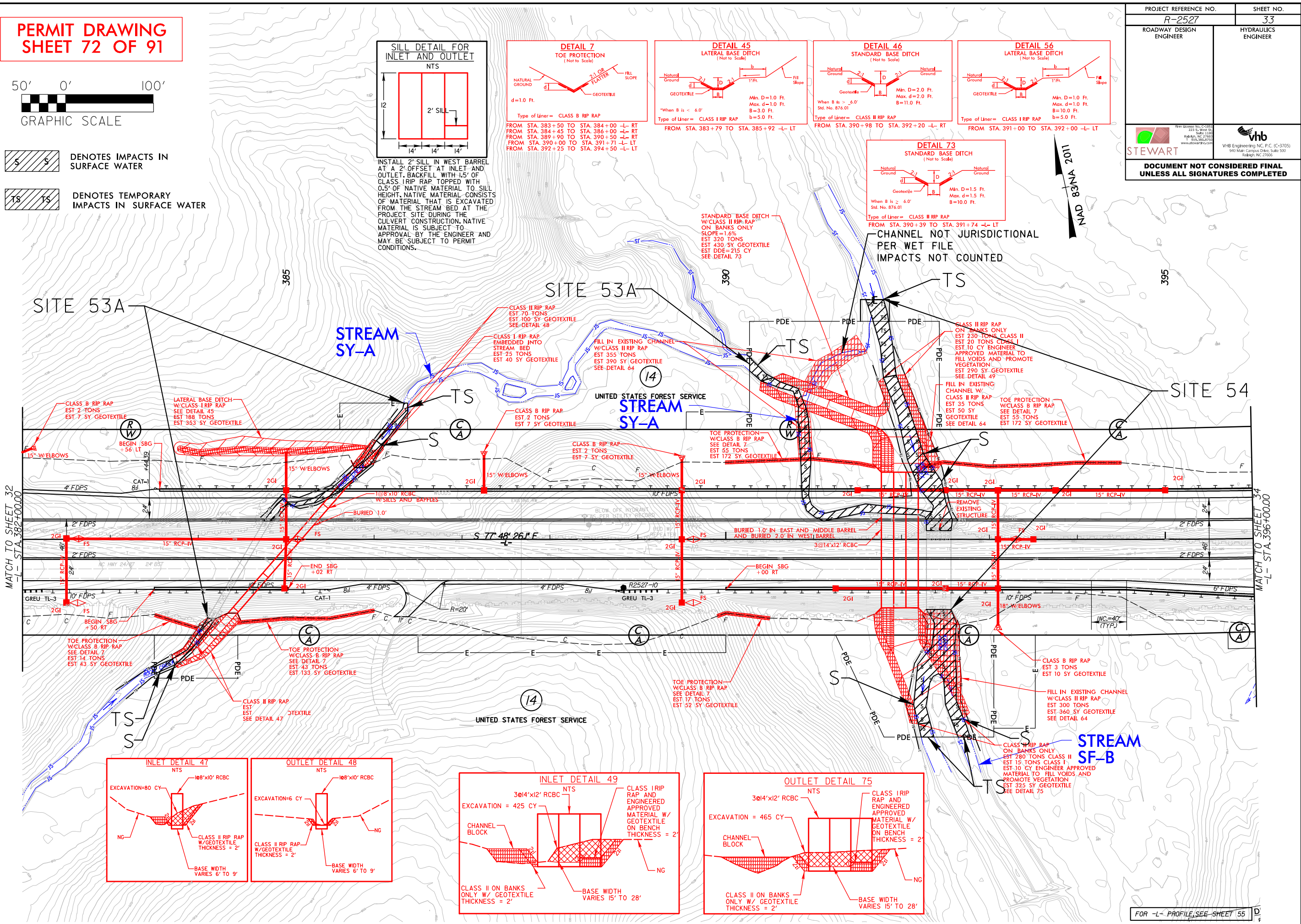
**PERMIT DRAWING
SHEET 72 OF 91**



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER





PROJECT REFERENCE NO. R-2527	SHEET NO. 33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

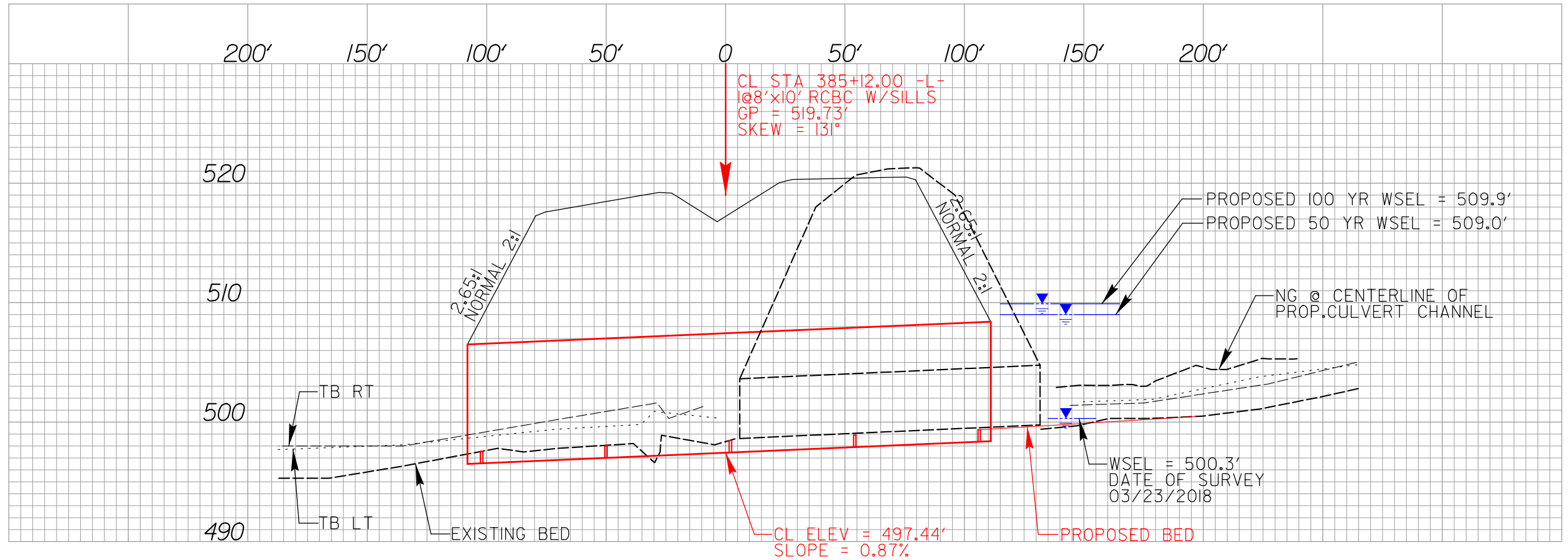


FOR -L- PROFILE, SEE SHEET 55

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PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 <small>Firm License No. C-1101 217 S. West St. Raleigh, NC 27603 T 919.386.8766 www.stewartinc.com</small>		 <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



SITE 53A



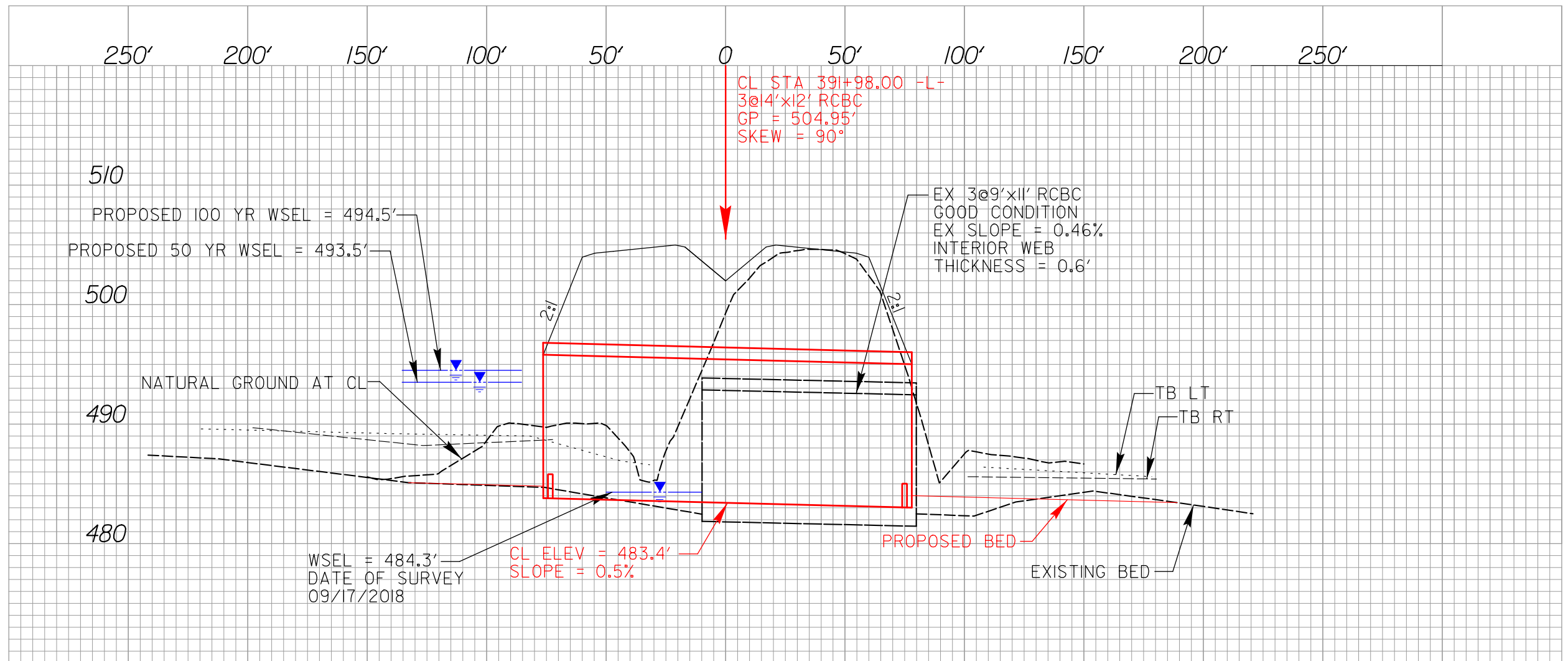
REVISIONS

8/17/99

PERMIT DRAWING
SHEET 74 OF 91

PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 <small>Firm License No. C-1103 217 S. West St. Raleigh, NC 27603 T 919.386.8766 www.stewartinc.com</small>		 <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27605</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 54



REVISIONS

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5/14/99

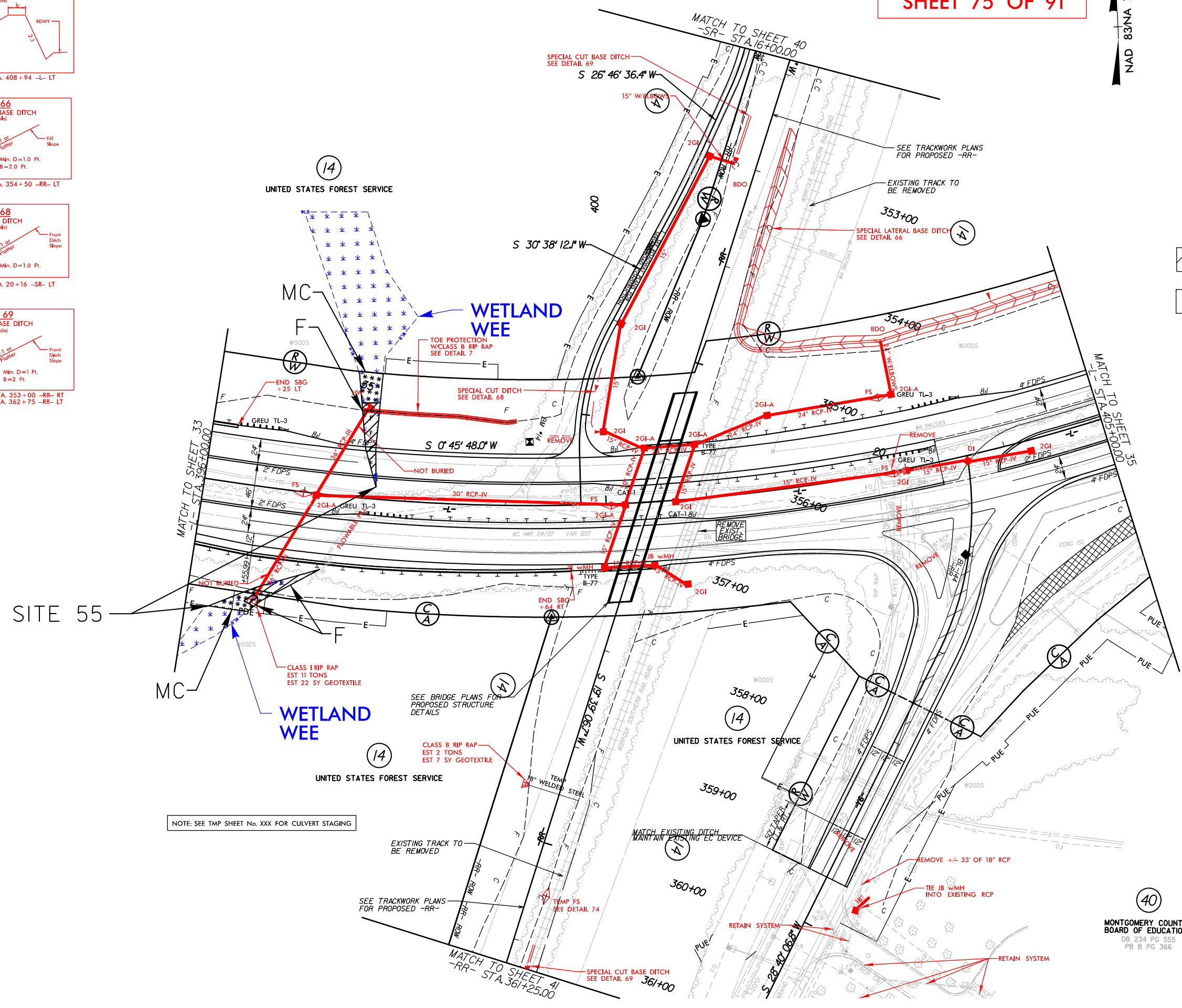
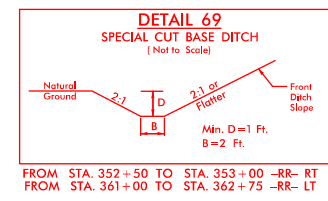
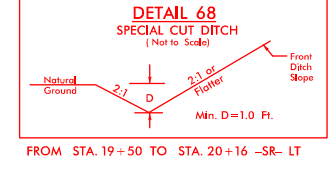
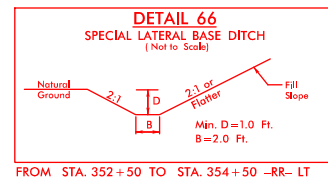
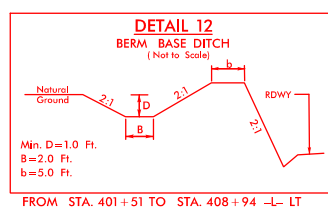
PERMIT DRAWING SHEET 75 OF 91



PROJECT REFERENCE NO. R-2527	SHEET NO. 34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART	 VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



NOTE: SEE TMP SHEET No. XXX FOR CULVERT STAGING

40
MONTGOMERY COUNTY
BOARD OF EDUCATION
DB 234 PG 553
PB 6 PG 366

- FOR INTERSECTION DETAIL, SEE SHEET 28-10
- FOR -L- PROFILE, SEE SHEETS 55 & 56
- FOR -Y6- PROFILE, SEE SHEET 61
- FOR -SR- PROFILE, SEE SHEET 62

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5/14/99

PERMIT DRAWING SHEET 76 OF 91

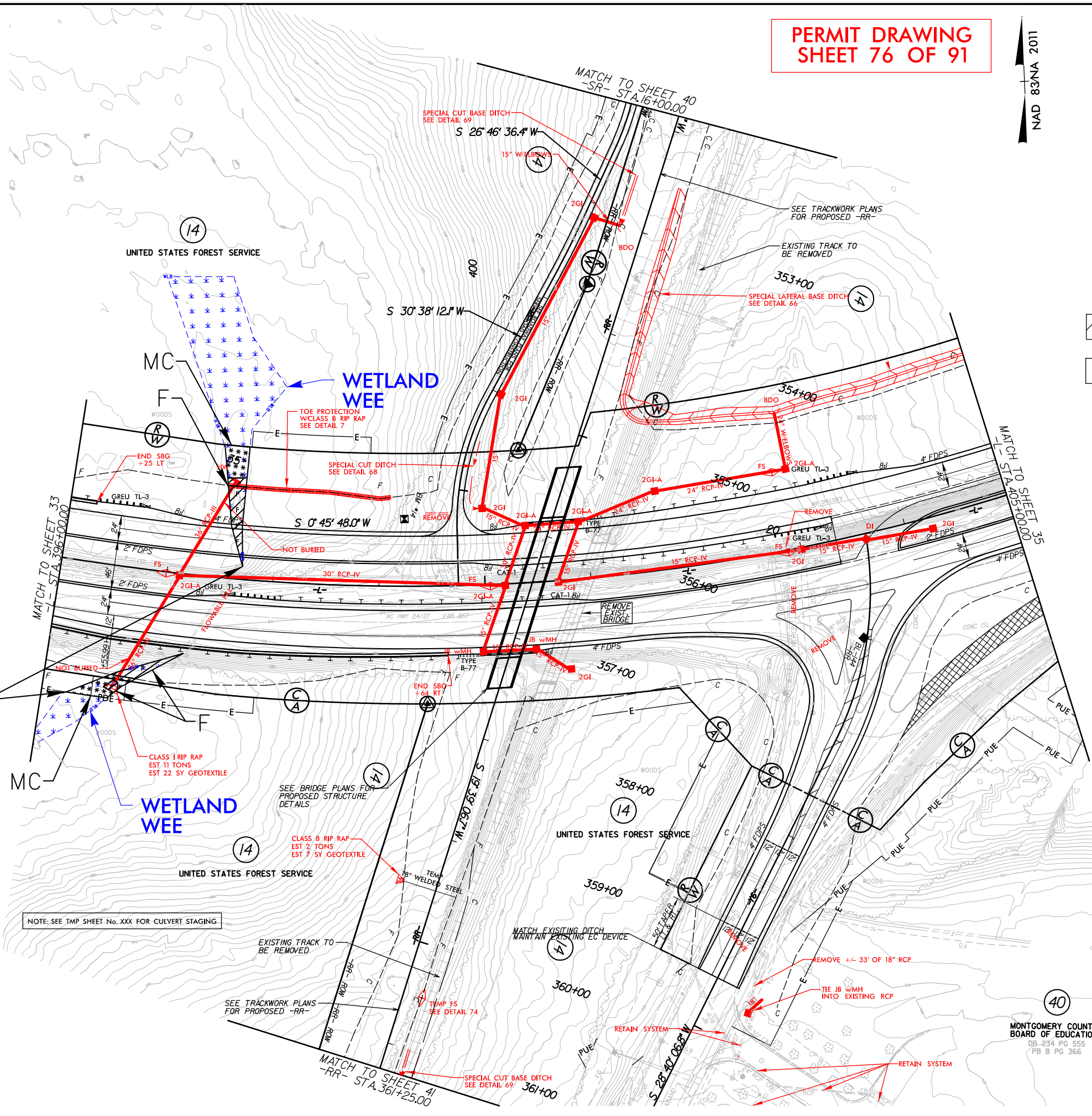
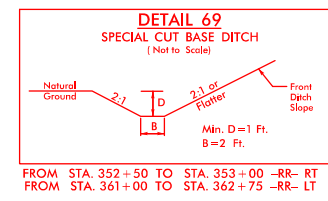
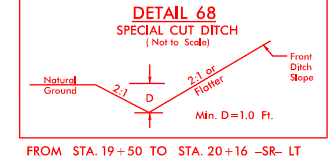
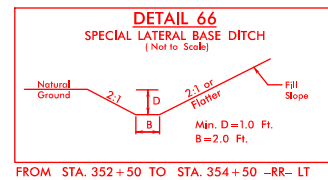
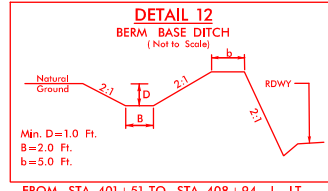


PROJECT REFERENCE NO. R-2527	SHEET NO. 34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



SITE 55

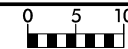
NOTE: SEE TMP SHEET No. XXX FOR CULVERT STAGING

MONTGOMERY COUNTY BOARD OF EDUCATION
138-234 PG 553
PB 6 PG 366

- FOR INTERSECTION DETAIL, SEE SHEET 28-10
- FOR -L- PROFILE, SEE SHEETS 55 & 56
- FOR -Y6- PROFILE, SEE SHEET 61
- FOR -SR- PROFILE, SEE SHEET 62

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8/23/99

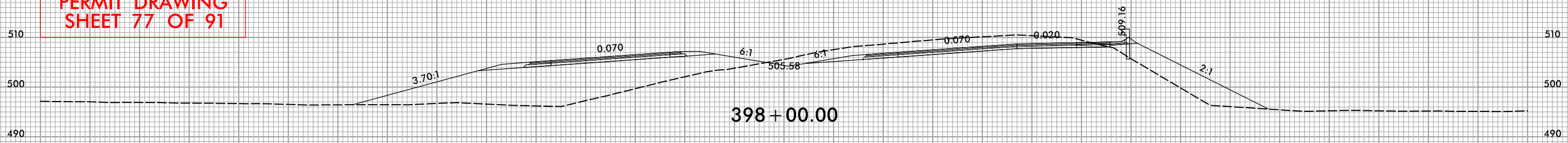


PROJ. REFERENCE NO.
R-2527

SHEET NO.
X-234

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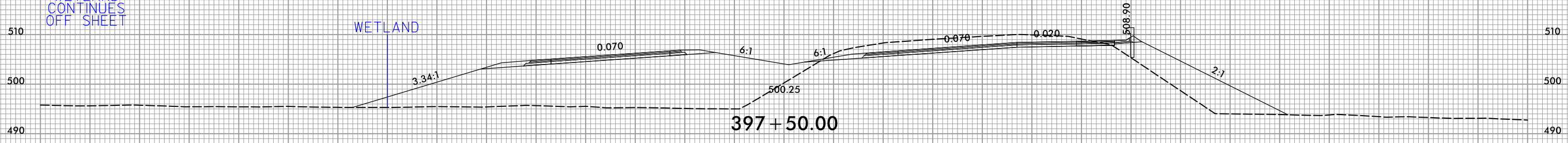
PERMIT DRAWING
SHEET 77 OF 91



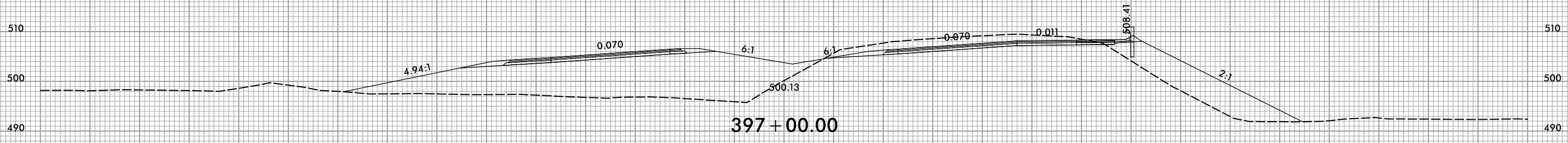
SITE 55

WETLAND
CONTINUES
OFF SHEET

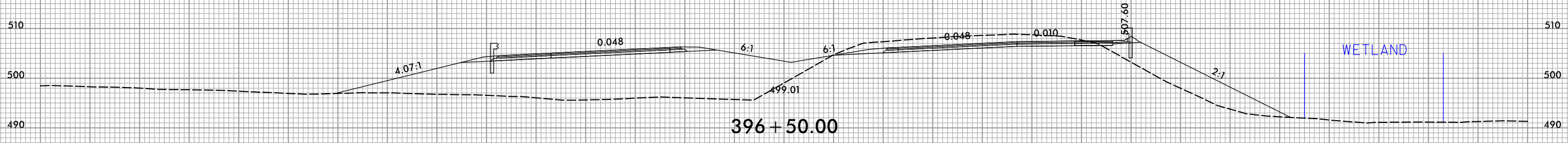
WETLAND



SITE 55



SITE 55



WETLAND

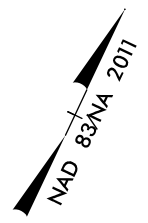


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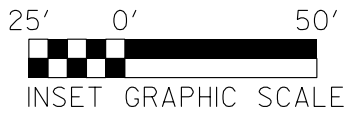
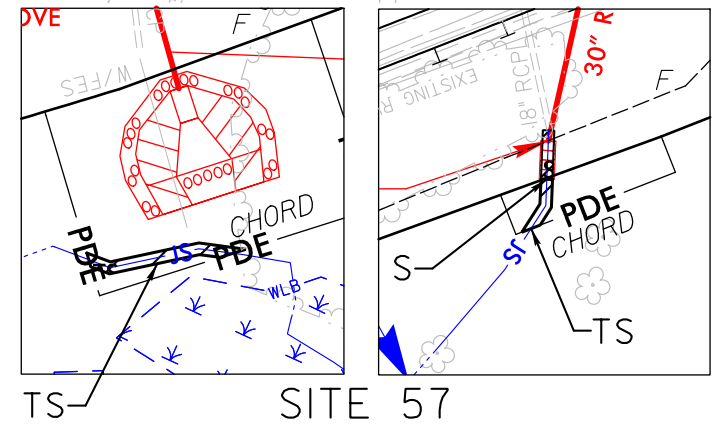
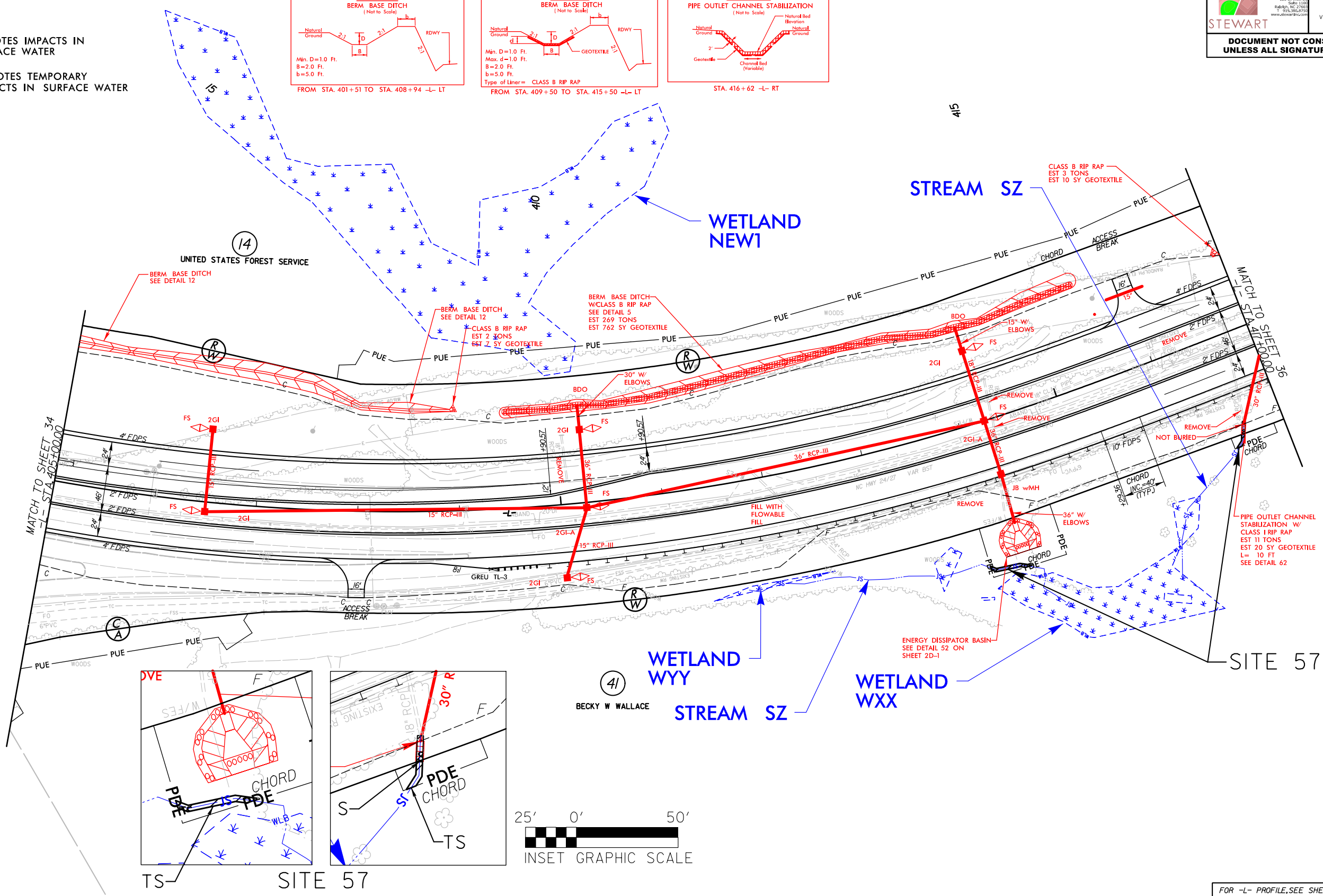
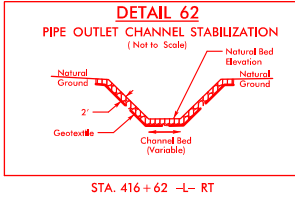
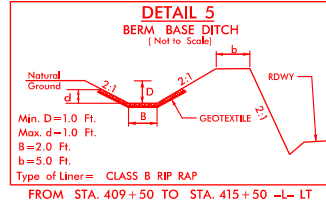
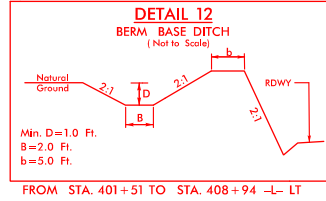
5/14/99

PERMIT DRAWING SHEET 78 OF 91



PROJECT REFERENCE NO. R-2527	SHEET NO. 35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<small>STEWART 1900 North Campus Drive, Suite 100 Raleigh, NC 27606 www.stewartinc.com</small>	
<small>VHB Engineering NC, P.C. (C-3705) 940 North Campus Drive, Suite 100 Raleigh, NC 27606</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

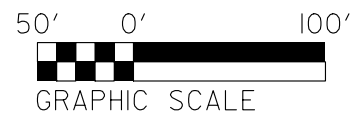


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FOR -L- PROFILE, SEE SHEET 56
ALL DRIVEWAY RADI 30' UNLESS OTHERWISE NOTED.

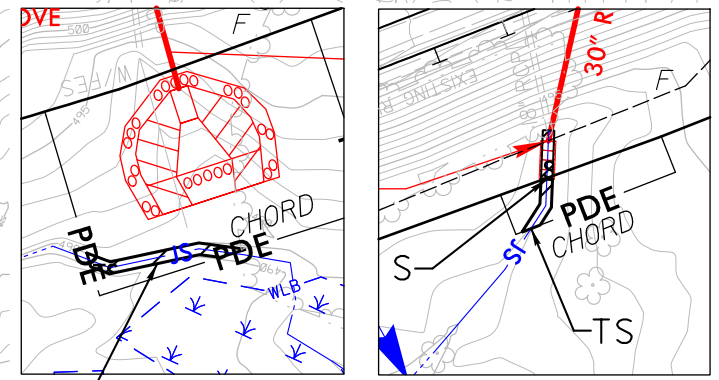
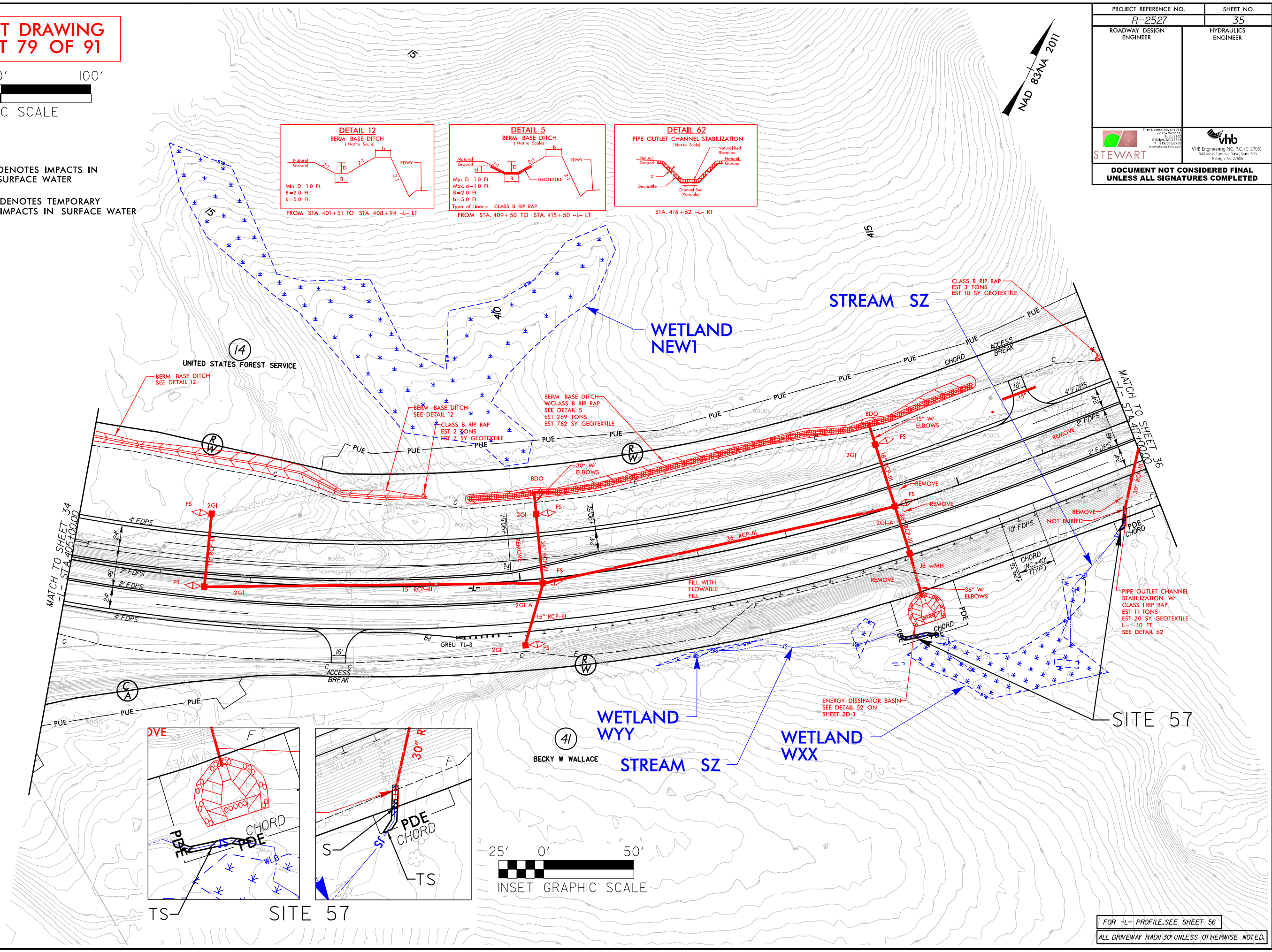
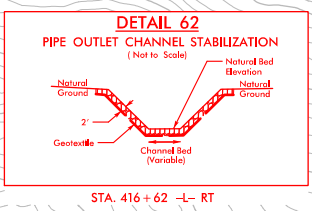
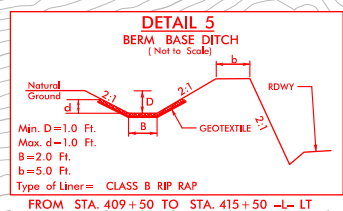
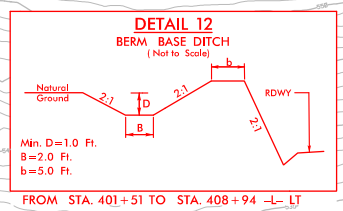
5/14/99

PERMIT DRAWING SHEET 79 OF 91



PROJECT REFERENCE NO. R-2527	SHEET NO. 35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

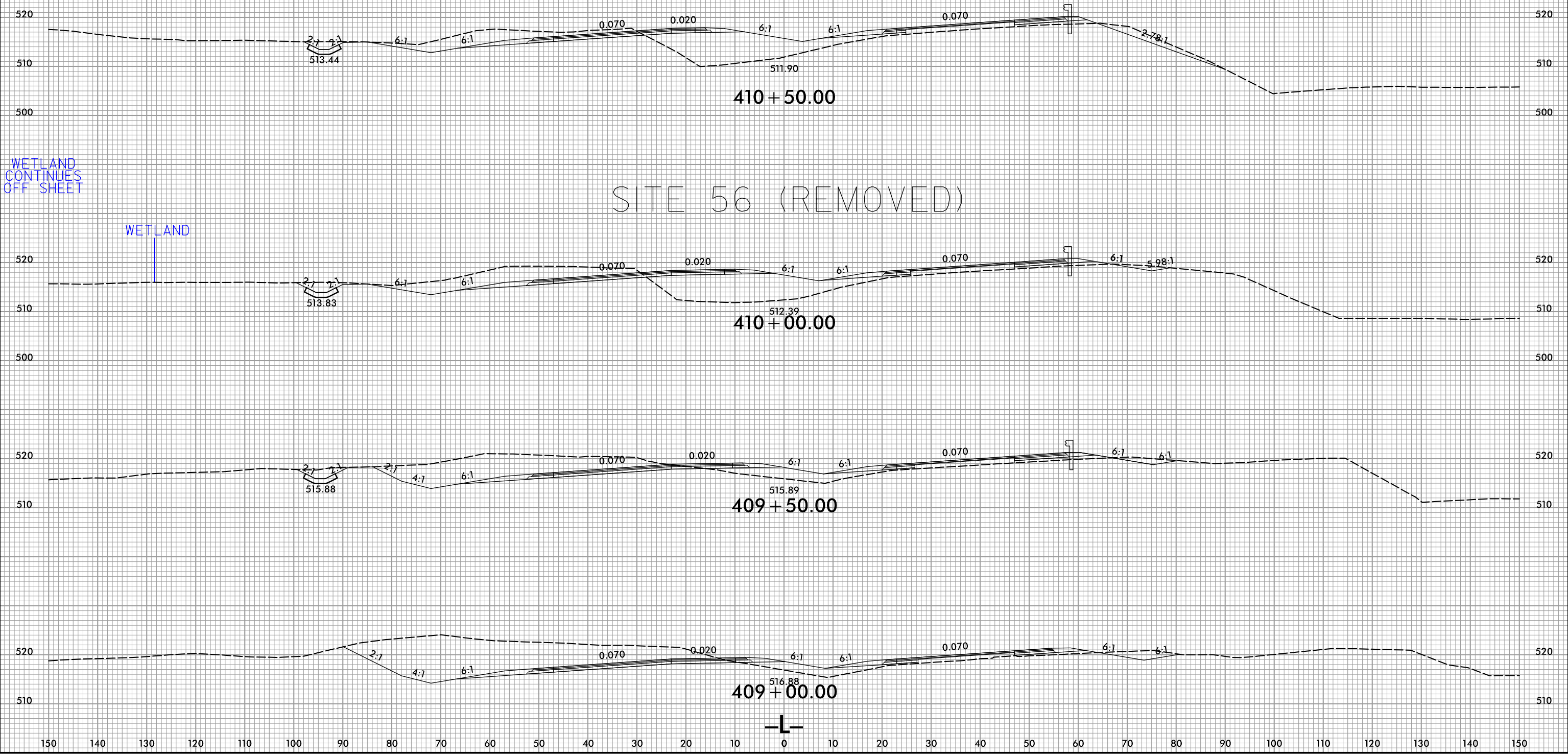


FOR -L- PROFILE, SEE SHEET 56
ALL DRIVEWAY RADI 30' UNLESS OTHERWISE NOTED.

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 5/14/99

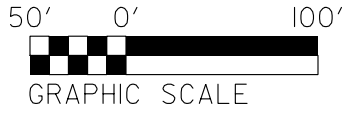
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PERMIT DRAWING
SHEET 80 OF 91

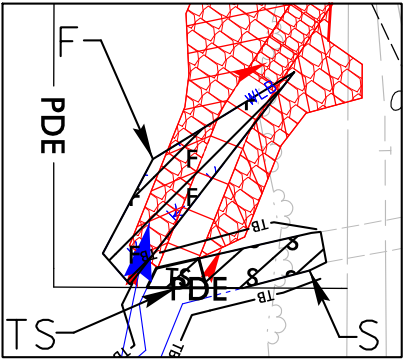
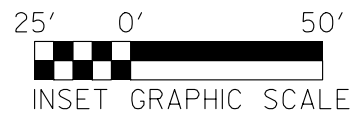


5/14/99

PERMIT DRAWING SHEET 81 OF 91

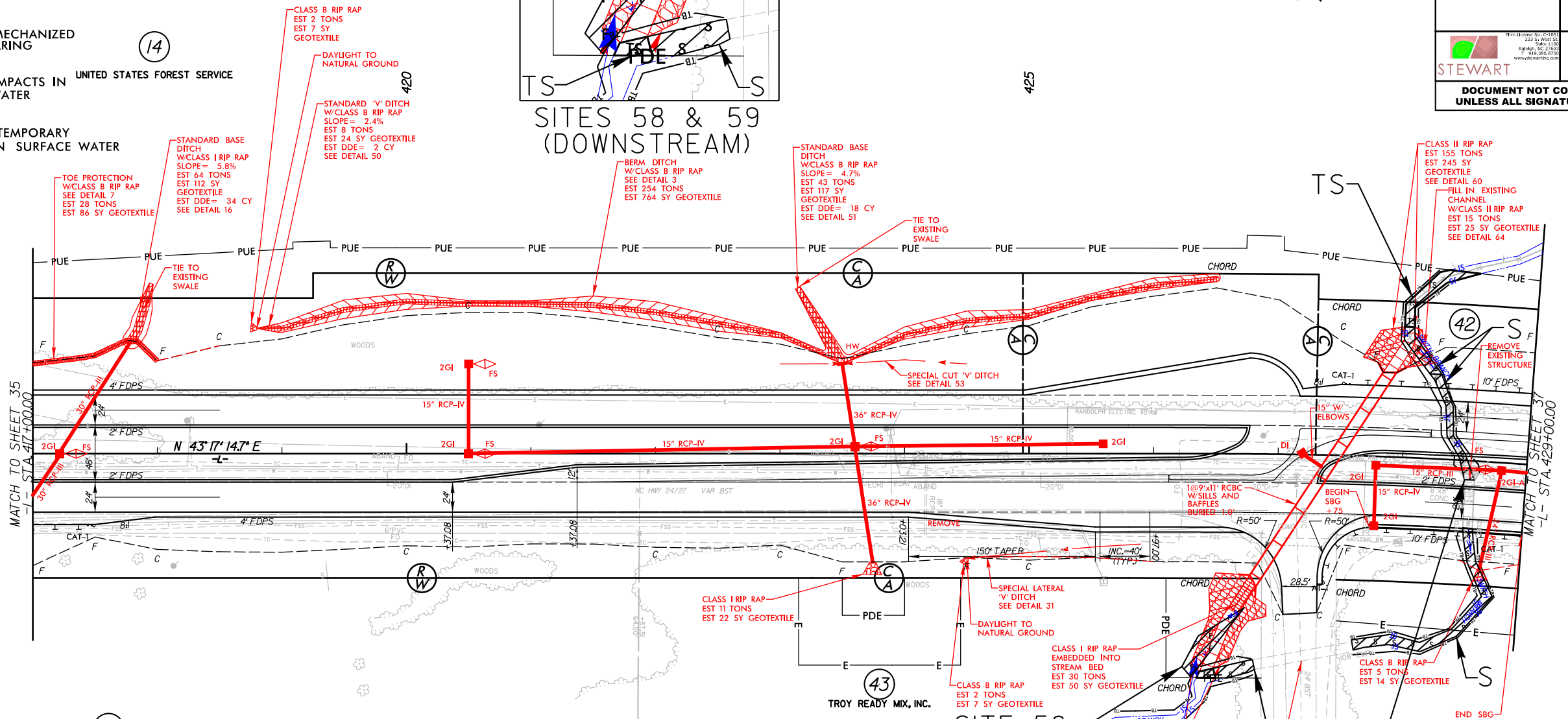


- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITES 58 & 59 (DOWNSTREAM)



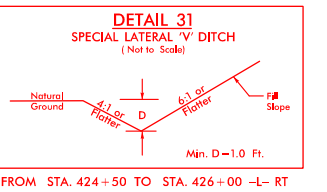
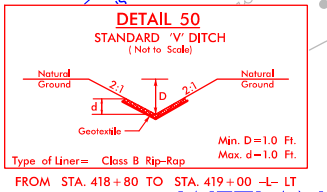
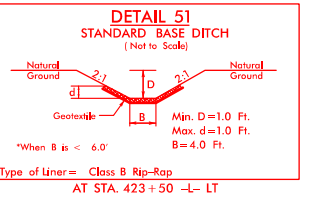
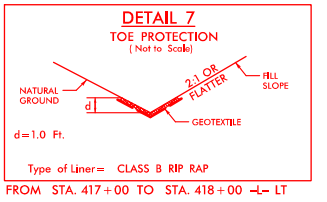
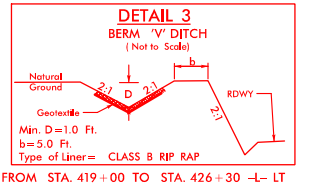
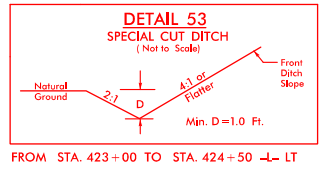
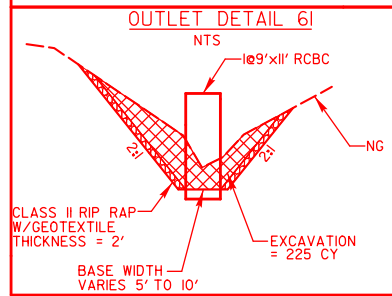
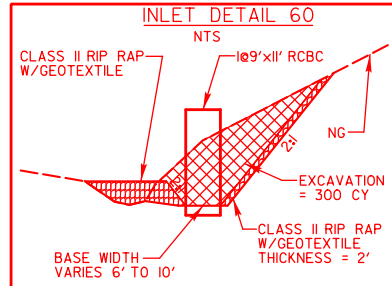
41 BECKY W WALLACE

NOTE: SEE TAMP SHEET No. XXX FOR CULVERT STAGING

STREAM SY-B

WETLAND WCC

44 MCRAE INDUSTRIES, INC. SITE 59

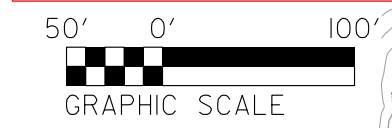


FOR INTERSECTION DETAIL, SEE SHEET 2B-II
FOR -L- PROFILE, SEE SHEET 56

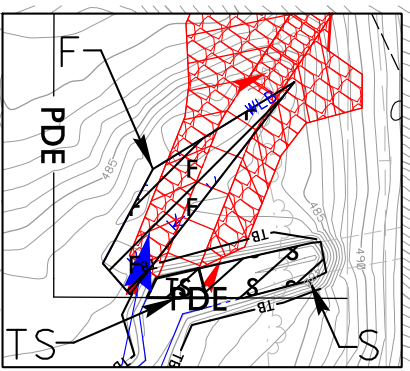
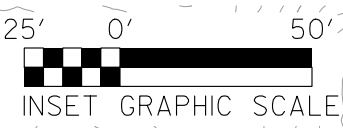
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5/14/99

PERMIT DRAWING SHEET 82 OF 91

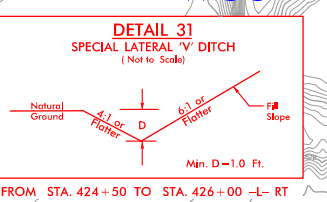
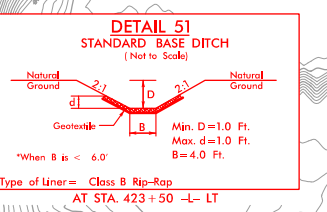
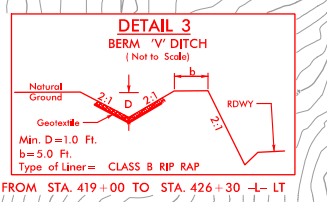
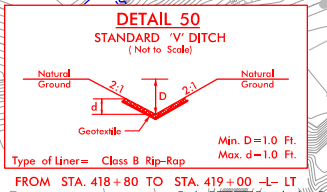
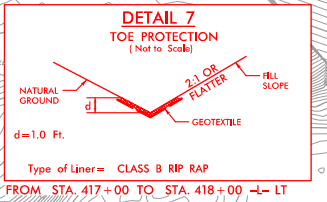
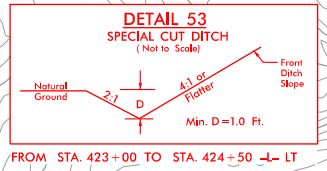
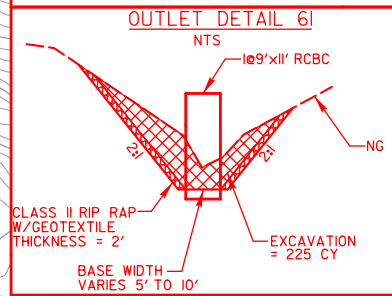
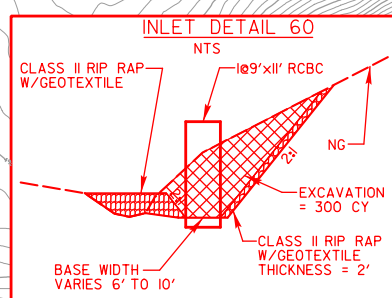
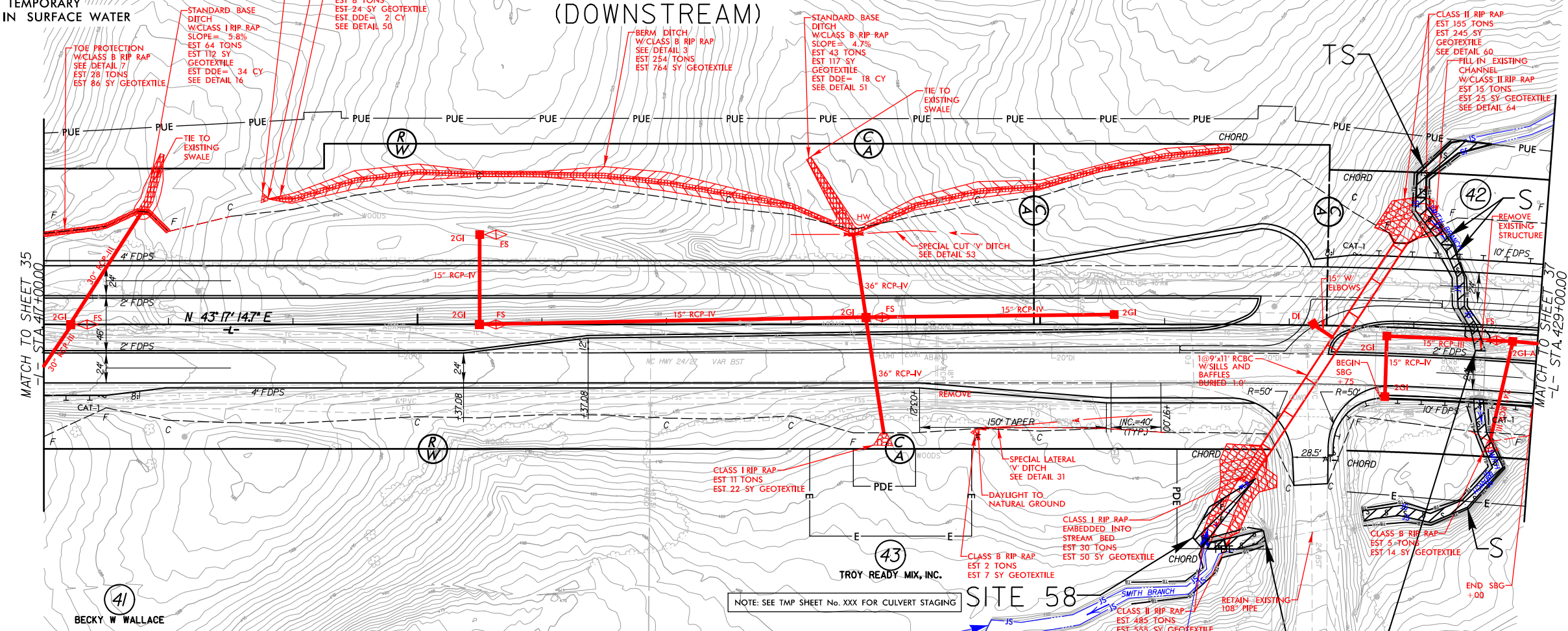


- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. R-2527	SHEET NO. 36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITES 58 & 59 (DOWNSTREAM)



NOTE: SEE TWP SHEET No. XXX FOR CULVERT STAGING

STREAM SY-B

WETLAND WCC



SEE PLAN SHEET 2B-12 FOR TEMP. ACCESS TO CONCRETE PLANT DURING CONSTRUCTION

44
MCRAE INDUSTRIES, INC.

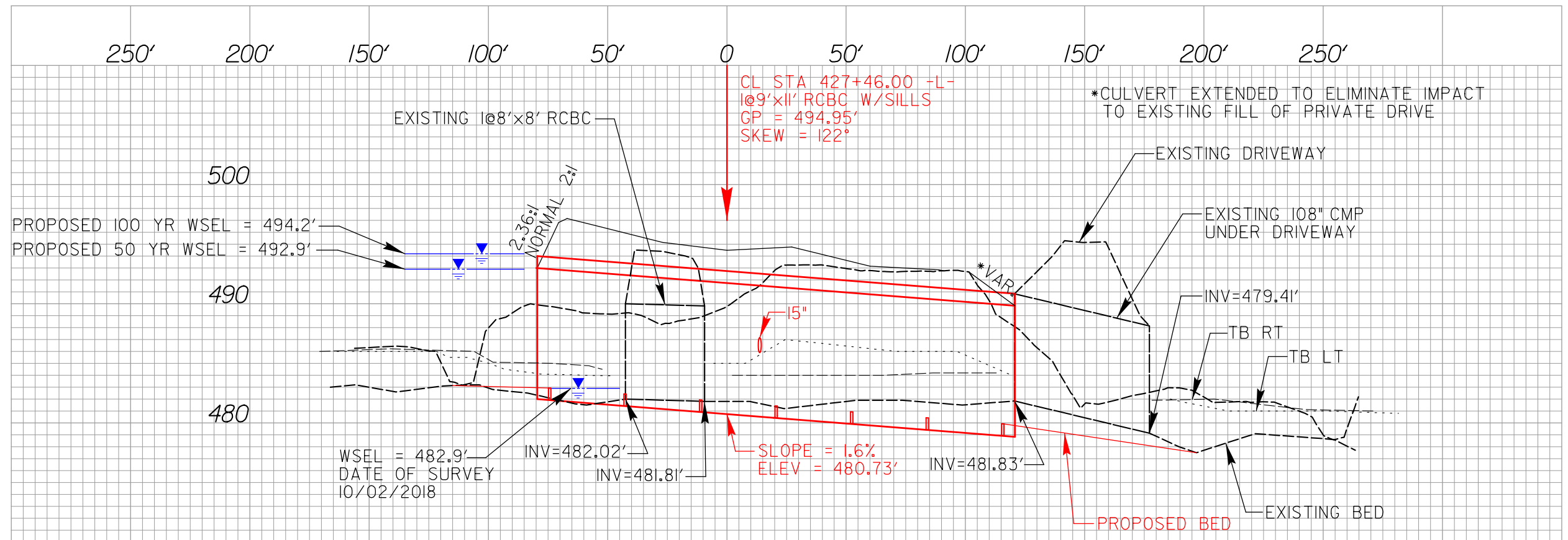
FOR INTERSECTION DETAIL, SEE SHEET 2B-II
FOR -L- PROFILE, SEE SHEET 56

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PERMIT DRAWING
SHEET 83 OF 91

PROJECT REFERENCE NO. R-2527		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 Firm License No. 14-1101 217 S. West St. Raleigh, NC 27603 T 919.386.8768 www.stewartinc.com		 VHB Engineering, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITES 58 & 59



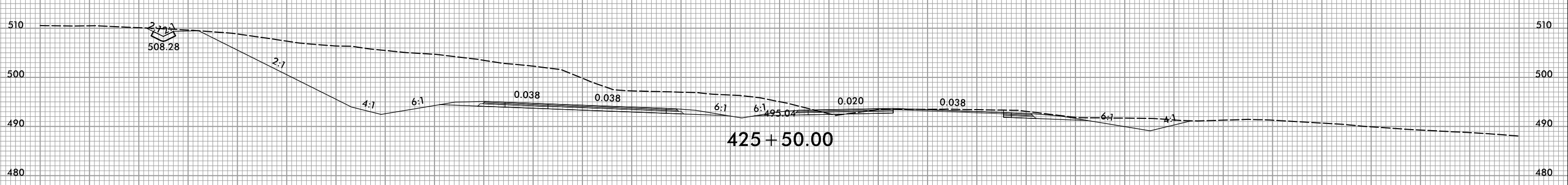
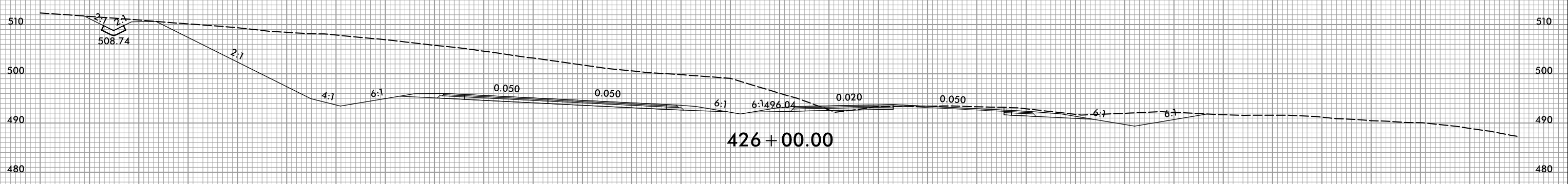
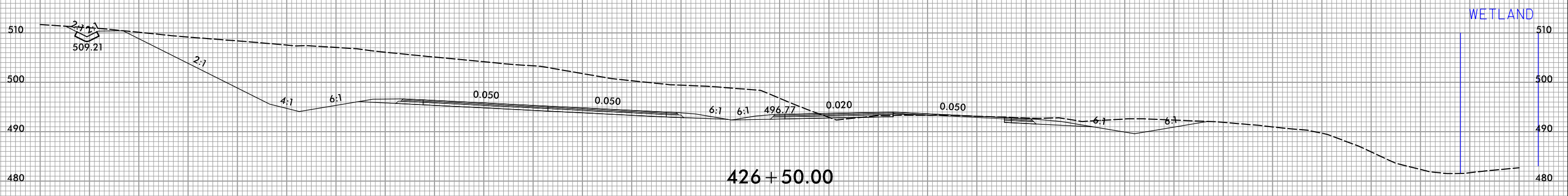
REVISIONS



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PERMIT DRAWING
SHEET 84 OF 91

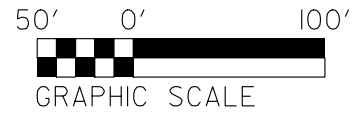
SITE 58



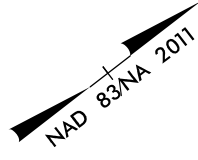
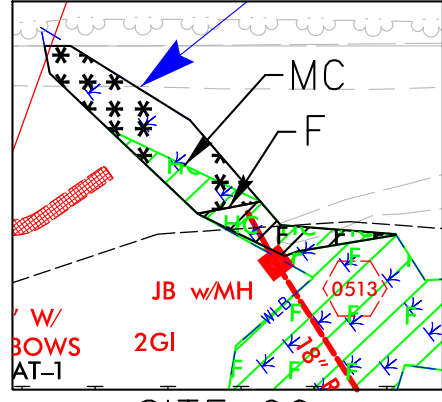
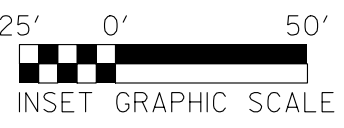
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5/14/99

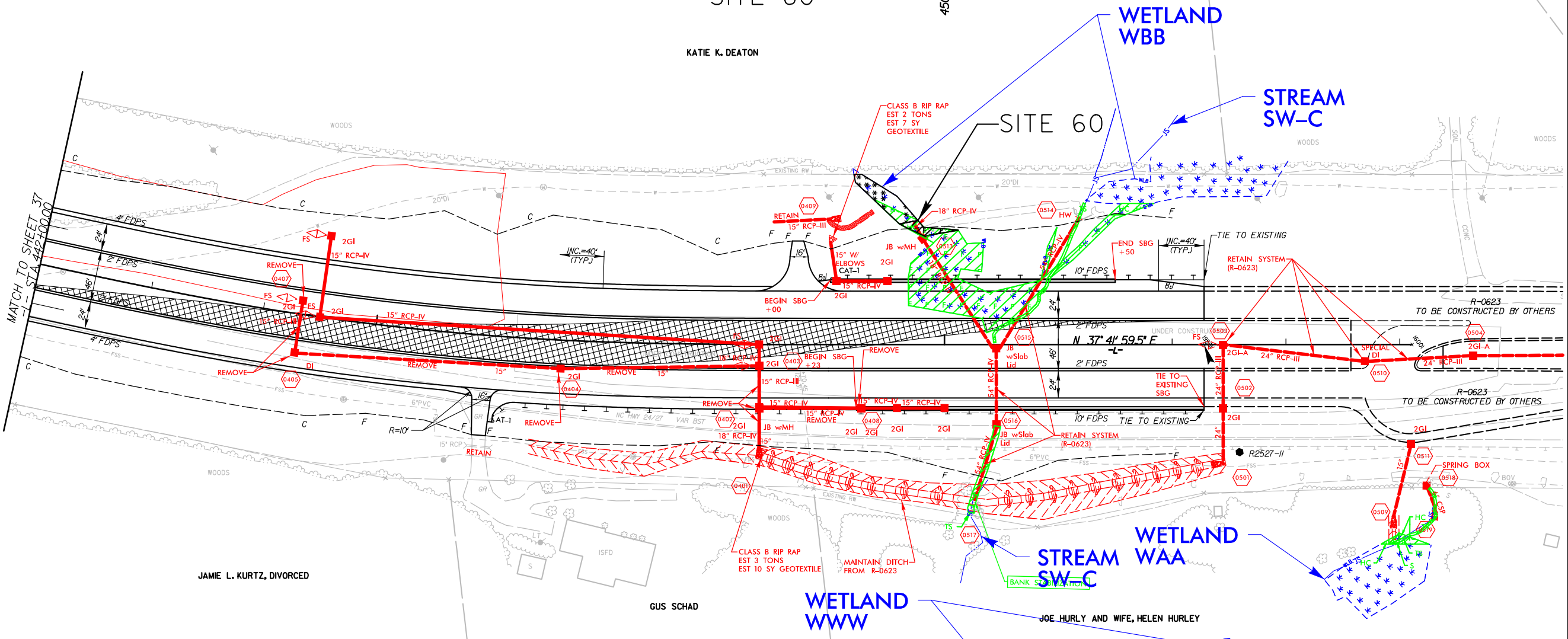
PERMIT DRAWING SHEET 84A OF 91



- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- PERMITTED IN PROJECT R-0623



PROJECT REFERENCE NO. R-2527	SHEET NO. 38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR -L- PROFILE, SEE SHEET 57
ALL DRIVEWAY RADII 30' UNLESS OTHERWISE NOTED.

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 5/14/99

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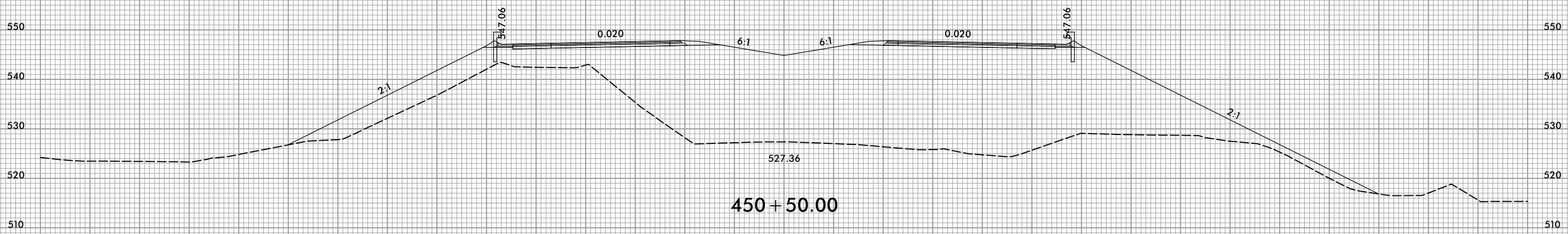
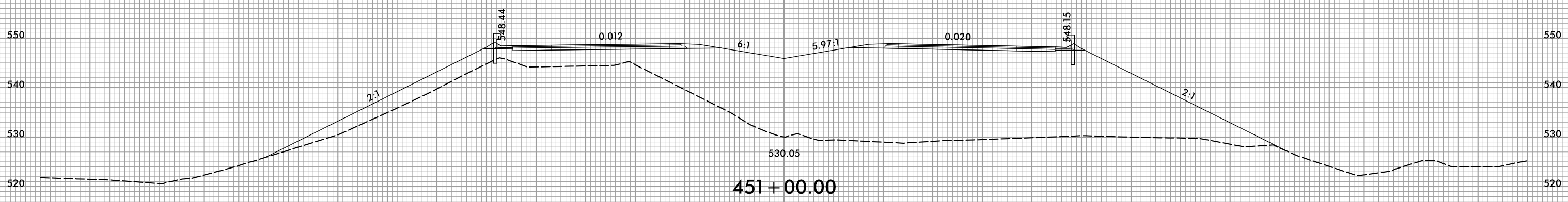


PROJ. REFERENCE NO.
R-2527

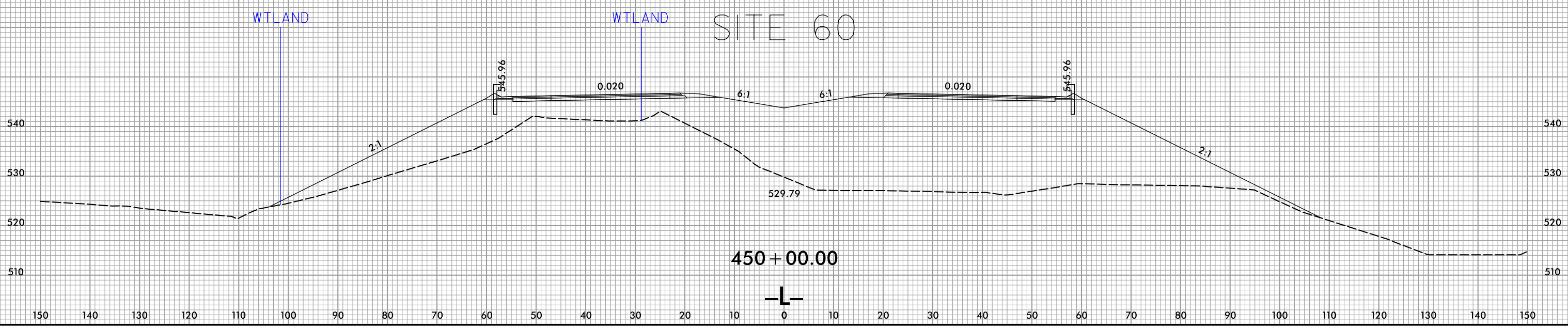
SHEET NO.
X-261

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PERMIT DRAWING
SHEET 84C OF 91



SITE 60



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gover.c

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	28+03/29+02 -L- LT	Fill; Mechanized Clearing	< 0.01			< 0.01						
1A	27+38/27+57 -L- RT	Mechanized Clearing				0.02						
2	28+24/29+60 -L- RT	Fill; Mechanized Clearing	0.07			0.01						
2A	28+68/29+08 -L- RT	Channel Improvements										
4	29+37/29+76 -L- RT	Channel Improvements						0.03	< 0.01	84	15	
4	29+60 -L- RT/30+02 -L- LT	2 @ 10' x 10' RCBC						0.03		70		
4	29+80/30+55 -L- LT	Channel Improvements						0.05	< 0.01	113	16	
4A	31+25/31+42 -L- RT	Channel Improvements						< 0.01	< 0.01	8	9	
4A	29+49/29+92 -L- RT	Channel Improvements							< 0.01		48	
5	33+44/33+80 -L- LT	54" WS & Channel Improvements						< 0.01	< 0.01	83	20	
5	34+81/35+15 -L- RT	54" Welded Steel						< 0.01	< 0.01	112	26	
6	33+64/34+24 -L- LT	Channel Improvements						< 0.01		74		
7	80+40/80+80 -L- LT	36" RCP-III						< 0.01	< 0.01	129	16	
7A	86+75/86+98	15" Alt Pipe EC							< 0.01		22	
8	92+24/92+50 -L- LT	24" RCP-III; Fill	< 0.01									
9	93+05/93+19 -L- LT	15" w/ Elbows	< 0.01			< 0.01						
10	98+50/98+99 -L- RT	42" RCP-III						< 0.01	< 0.01	54	10	
10	99+26/100+01 -L- LT	42" RCP-III						< 0.01	< 0.01	106	12	
TOTALS*:			0.08	0.00	0.00	0.04	0.00	0.15	0.03	833	194	0

*Rounded totals are sum of actual impacts

NOTES:

Site 2A & 3 has been removed

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 7/12/2024
 MONTGOMERY
 R-2527
 355721.1.1

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)
11	123+75/124+86 -L- LT	Fill	0.03			0.03						
12	124+11/124+53 -L- LT	48" RCP-IV						< 0.01		123		
12	126+03/127+17 -L- RT	48" RCP-IV						0.01	< 0.01	109	24	
13	124+63/126+35 -L- LT	Fill	0.09									
14	126+32/126+65 -L- RT	Fill; Mechanized Clearing	< 0.01			< 0.01						
15	126+78/126+93 -L- RT	48" RCP-IV							< 0.01		17	
16	127+14/127+37 -L- RT	Fill; Mechanized Clearing	< 0.01			< 0.01						
17	139+95/142+31 -L- LT	42" RCP-IV						0.02	< 0.01	264	20	
17	143+12/143+62 -L- RT	42" RCP-IV						< 0.01	< 0.01	43	19	
18	139+99/140+86 -L- LT	Mechanized Clearing				0.02						
19	142+51/143+25 -L- RT	Fill; Mechanized Clearing	< 0.01			0.03						
20	149+20/150+54 -L- RT	Fill						< 0.01		139		
21	149+49/150+06 -L- LT	Fill	0.02									
TOTALS*:			0.14			0.08		0.05	< 0.01	678	80	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 7/12/2024
 MONTGOMERY
 R-2527
 355721.1.1
 SHEET 86 OF 91

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)
22	149+81/150+15 -L- LT	42" RCP-IV						0.01	< 0.01	152	17	
22	150+53/150+93 -L- RT	42" RCP-IV						< 0.01	< 0.01	59	6	
23	158+89/159+19 -L- LT	Channel Improvements						0.01	< 0.01	105	20	
23	158+85 -L- LT/159+67 -L- RT	1 @ 7' x 8' RCBC						0.01		78		
23	159+59/159+79 -L- RT	Channel Improvements						0.02	<0.01	111	20	
24	159+11/167+33 -L- LT	Ditch Excavation; Fill						0.07	< 0.01	845	38	
25	166+00/167+31 -L- LT	Fill						0.01		180		
25	168+61/169+06 -L- RT	36" RCP-III						< 0.01	< 0.01	39	31	
26	166+70/167+85 -L- LT	Fill	0.11									
26	168+05/169+29 -L- RT	Fill; Mechanized Clearing	0.04			0.01						
27	169+07/169+53 -L- LT	Pond Spillway Stabilization							< 0.01		34	
28	166+73/171+82 -L- LT	Ditch Excavation; Fill						0.02		240		
29	193+48/193+92 -L- RT	Channel Improvements						0.04	0.02	100	54	
29	193+81 -L- RT/194+26 -L- LT	2 @ 14' x 9' RCBC						0.04		137		
29	194+03/195+36 -L- LT	Channel Improvements						0.04	< 0.01	113	23	
30	195+27/195+36 -L- LT	Channel Improvements							< 0.01		9	
TOTALS*:			0.15			0.01		0.28	0.04	2159	252	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 7/12/2024
 MONTGOMERY
 R-2527
 355721.1.1
 SHEET 87 OF 91

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)
31	222+35/223+13 -L- LT	Fill; Mechanized Clearing	0.10			0.03						
32	223+04/223+38 -L- LT	66" RCP-IV						0.01	< 0.01	155	32	
32	223+44/223+68 -L- RT	66" RCP-IV						< 0.01	< 0.01	53	16	
33	230+75/231+26 -L- RT	EC Basin/ Const. Access							< 0.01		56	
34	238+07/238+26 -L- RT	24" RCP-III						< 0.01	< 0.01	27	11	
35	243+34/243+58 -L- LT	30" w/ Elbows; 36" RCP-III						< 0.01		63		
35A	243+27/243+68	30" w/ Elbows; 36" RCP-III	0.04		< 0.01	0.02						
35B	243+52/243+77 -L- RT	36" RCP-III	< 0.01			< 0.01						
36	253+83/254+10 -L- RT	30" w/ Elbows						< 0.01	< 0.01	31	9	
37	253+84/254+22 -L- RT	Fill	< 0.01			< 0.01						
38	264+93/267+04 -L- LT	60" RCP-IV; Fill						0.02	< 0.01	232	25	
39	267+03/267+32 -L- RT	Channel Improvements						0.03	< 0.01	91	11	
39	67+05 -L- RT/267+35 -L- L	2 @ 7' x 9' RCBC						0.03		122		
39	267+12/267+85 -L- LT	Channel Improvements						0.02	0.01	88	43	
40	277+34/277+52 -L- RT	24" RCP-III	< 0.01			< 0.01						
TOTALS*:			0.15		< 0.01	0.06		0.12	0.03	862	203	0

*Rounded totals are sum of actual impacts

NOTES:
Site 40 represents a total take of Wetland WKK.

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 MONTGOMERY
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 355721.1.1
 SHEET 88 OF 91

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)
41	279+80/280+34 -L- RT	18" RCP-III; Fill	0.01			0.02						
42	282+92/283+225 -L- RT	18" Pipe				< 0.01						
44	302+39/302+89 -L- RT	Channel Improvements						0.02	< 0.01	104	33	
44	303+29/303+56 -L- LT	1 @ 8' x 10' RCBC						0.01		69		
44	302+36/302+89 -L- LT	Channel Improvements						0.01	< 0.01	86	9	
45	302+58/303+31 -L- LT	Fill						< 0.01		73		
45A	303+42/303+74 -L- LT	Fill	< 0.01									
46	304+36/304+56 -L- LT	Mechanized Clearing				< 0.01						
47	312+83/314+25 -L- RT	42" Welded Steel						< 0.01	< 0.01	124	45	
47	315+40/316+28 -L- LT	42" Welded Steel						< 0.01	< 0.01	89	48	
48	315+51/315+76 -L- LT	Fill	0.02									
49	336+84/337+17 -L RT	Easement				< 0.01						
49	340+90/341+72 -L- RT	Fill	< 0.01			0.02						
49	342+88/343+25 -L- RT	Easement				< 0.01						
49	344+75/345+05 -L- RT	Ditch Excavation			< 0.01	< 0.01						
TOTALS*:			0.03		< 0.01	0.06		0.07	0.01	545	135	0

*Rounded totals are sum of actual impacts

NOTES:

Site 43 has been removed.

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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)
50	342+54/342+96 -L- RT	36" RCP-III						< 0.01	< 0.01	30	24	
50	344+81/346+18 -L- RT	60" RCP-IV						0.01	< 0.01	143	26	
50	347+30/348+72 -L- LT	60" RCP-IV						0.02	< 0.01	227	18	
51	345+37/347+40 -L- LT	60" RCP-IV	< 0.01			0.06						
51	347+80/347+91 -L- LT	60" RCP-IV	< 0.01									
52	351+92/352+04 -L- RT	30" RCP-III	< 0.01			< 0.01						
52	352+41/352+74 -L- LT	30" RCP-III	< 0.01			< 0.01						
53	363+49/364+98 -L- LT	Channel Improvements						0.03	< 0.01	193	16	
53	364+88/366+19 -L- LT	1 @ 8' x 10' RCBC						0.02		152		
53	366+70/367+50 -L- RT	Channel Improvements						0.02	< 0.01	94	29	
53A	383+50/384+19 -L- RT	Channel Improvements						< 0.01	< 0.01	70	26	
53A	384+11 -L- RT/385+92 -L- LT	1 @ 8' x 10' RCBC						0.02		129		
53A	385+78/386+38 -L- LT	Channel Improvements						< 0.01	< 0.01	39	54	
53A	390+27/392+35 -L- LT	Channel Improvements						0.06	< 0.01	321	17	
TOTALS*:			0.01			0.06		0.21	0.03	1398	210	0

*Rounded totals are sum of actual impacts

NOTES:

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 DIVISION OF HIGHWAYS
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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)
54	391+60/392+58 -L- LT	Channel Improvements						0.04	0.03	113	91	
54	92+28 -L- LT/392+56 -L- R	3 @ 14' x 12' RCBC						0.04		76		
54	392+14/392+62 -L- RT	Channel Improvements						0.09	0.01	139	15	
55	396+23/397+23 -L- RT	36 RCP-III; Fill	0.01			0.01						
55	397+42/397+71 -L- LT	36 RCP-III; Fill	0.02			0.01						
57	413+90/414+27 -L- RT	Dissipator Basin							< 0.01		39	
57	416+67/416+64 -L- RT	30" RCP-III						< 0.01	< 0.01	13	14	
58	426+23/426+74 -L- RT	1 @ 9' x 11' RCBC	0.02									
59	426+35/426+82 -L- RT	Channel Improvements						< 0.01	< 0.01	33	17	
59	427+63/428+79 -L- RT	1 @ 9' x 11' RCBC						0.04		279		
59	427+98/428+54 -L- LT	Channel Improvements						0.02	0.01	33	17	
60	449+21/450+12 -L- LT	18 RCP-IV; Fill	< 0.01			0.02						
SHEET 85 TOTALS*			0.08			0.04		0.15	0.03	833	194	
SHEET 86 TOTALS*			0.14			0.08		0.05	< 0.01	678	80	
SHEET 87 TOTALS*			0.15			0.01		0.28	0.04	2159	252	
SHEET 88 TOTALS*			0.15		< 0.01	0.06		0.12	0.03	862	203	
SHEET 89 TOTALS*			0.03		< 0.01	0.06		0.07	0.01	545	135	
SHEET 90 TOTALS*			0.01			0.06		0.21	0.03	1398	210	
SHEET 91 TOTALS*			0.05			0.05		0.24	0.06	686	193	
PROJECT TOTALS*:			0.62		< 0.01	0.37		1.11	0.21	7161	1267	

*Rounded totals are sum of actual impacts

NOTES:

Additional impacts on Sheet 38 covered under R-0623 permits.
Site 56 has been removed.

Utility Impacts are addressed on attached Utility Permit Drawings

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R-2527
355721.1.1

09/08/99

TIP PROJECT: R-2527

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

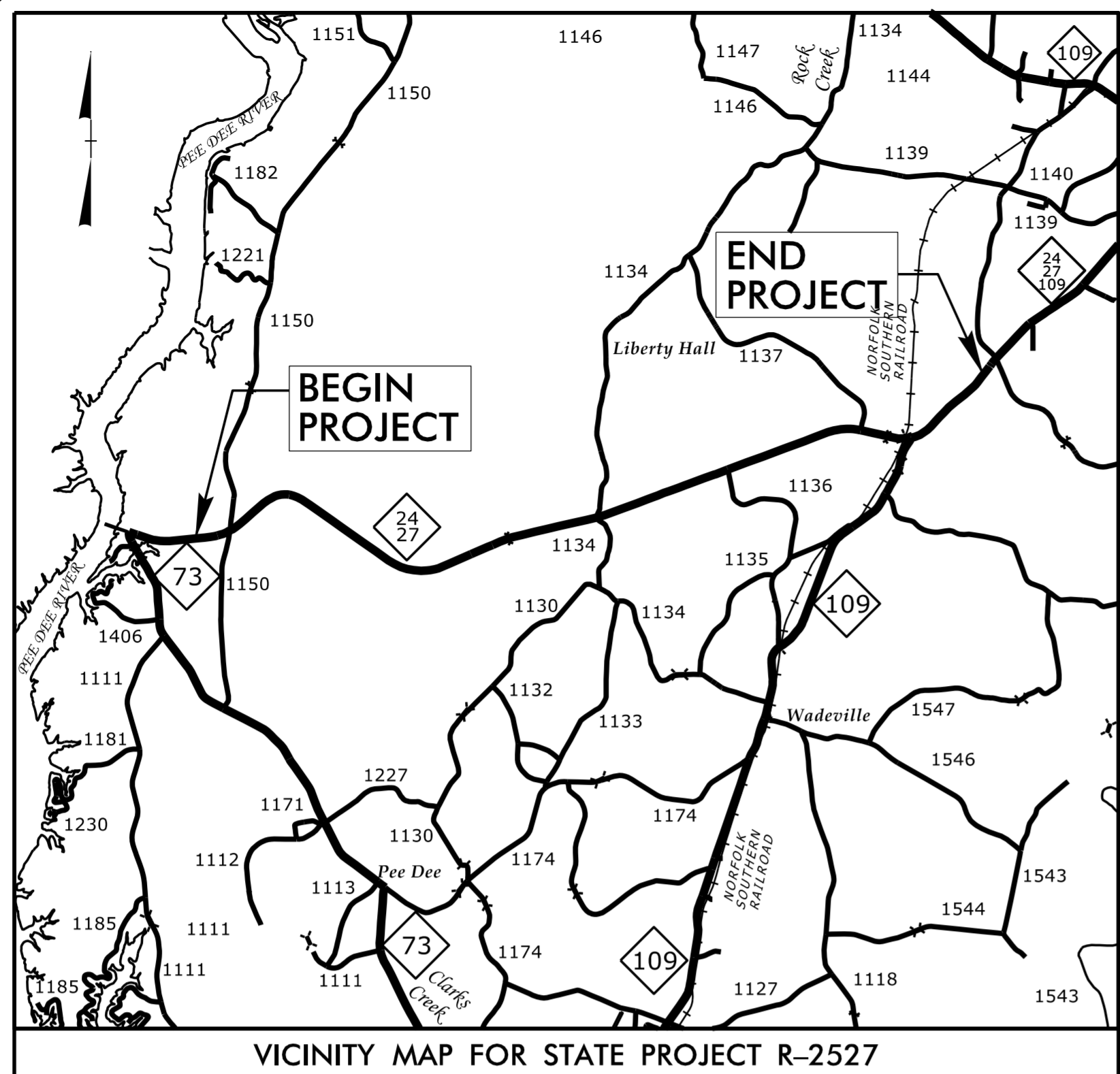
T.I.P. NO.	SHEET NO.
R-2527	UE-1

UTILITIES ENVIRONMENTAL PERMIT PLANS MONTGOMERY COUNTY

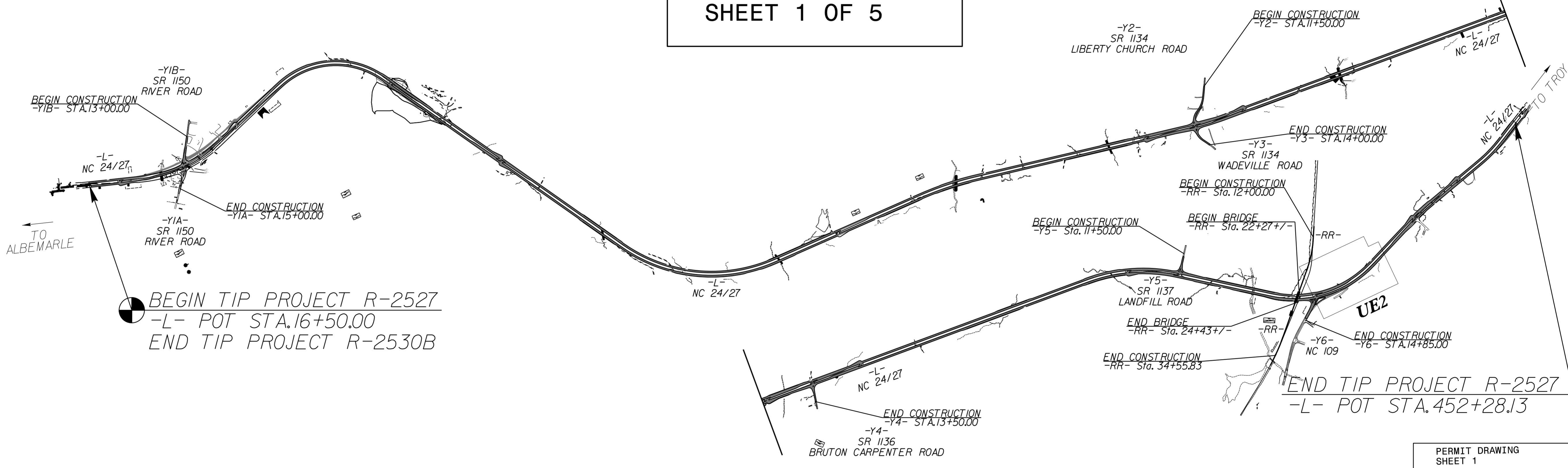
WETLAND AND SURFACE WATER IMPACTS

LOCATION: NC 24-27 FROM NC 73 TO THE TROY BYPASS

TYPE OF WORK: UTILITIES BY OTHERS

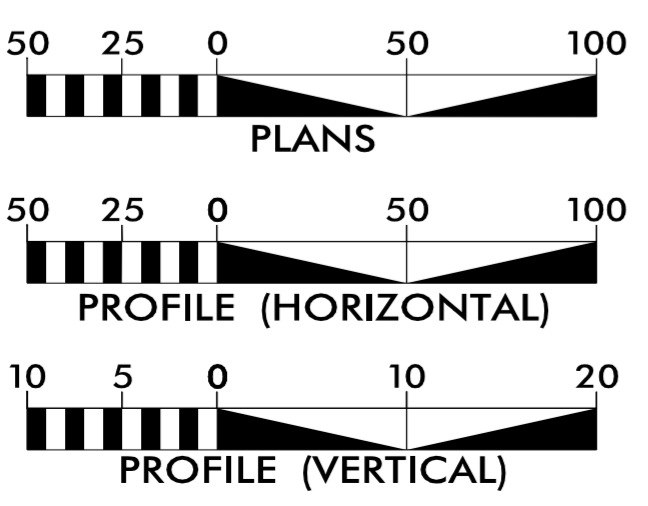


PERMIT DRAWING
SHEET 1 OF 5



PERMIT DRAWING
SHEET 1

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2 THRU UO-30	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

- (A) POWER - RANDOLPH EMC
- (B) TELEPHONE - CENTURYLINK
- (C) COMMUNICATIONS - SPECTRUM

PREPARED IN THE OFFICE OF:



PENNONI ASSOCIATES INC.
5430 WADE PARK BLVD., SUITE 106,
RALEIGH, NC 27607 PHONE: 919.929.1173
FAX: 919.493.6548 NC LICENSE #F-1267

ERIC TWEED, PE PROJECT UTILITY COORDINATOR



DIVISION OF HIGHWAYS
UTILITIES UNIT
1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

- ALI KOUCHEKI, PE REGIONAL UTILITIES ENGINEER
- TRAVIS MORGAN, PE DIV. 8 UTILITIES ENGINEER
- TRENT CAVINESS DIV. 8 UTILITIES COORDINATOR
- DAYTON MARTIN REG. UTILITIES COORDINATOR

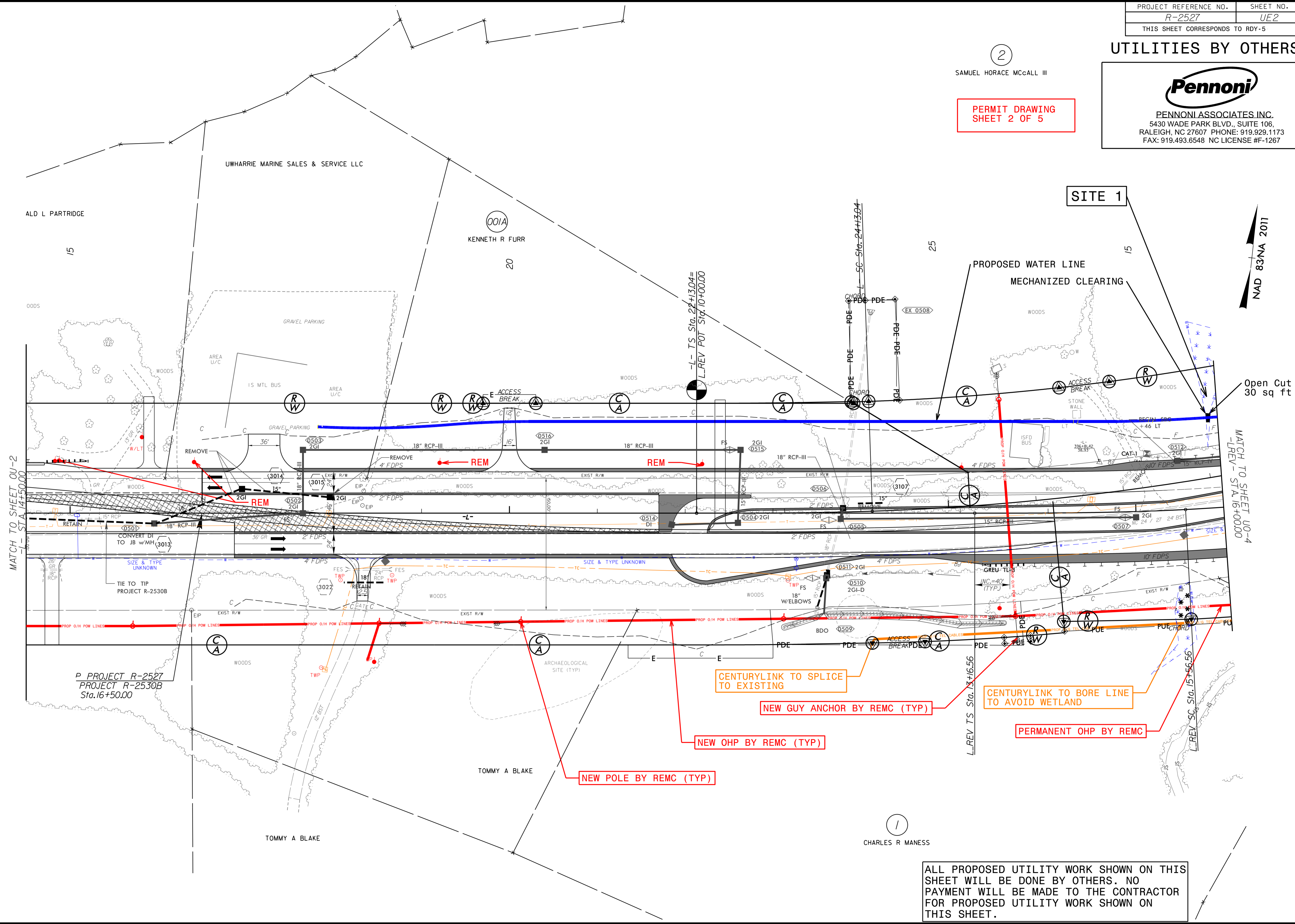
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UTILITIES BY OTHERS

2
SAMUEL HORACE MCCALL III

PERMIT DRAWING
SHEET 2 OF 5

Pennoni
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NAD 83NA 2011

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

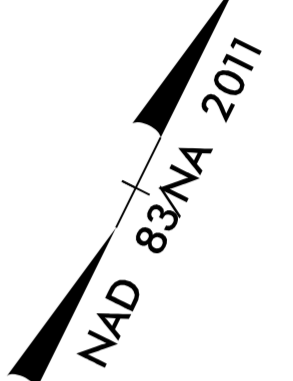
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UTILITIES BY OTHERS

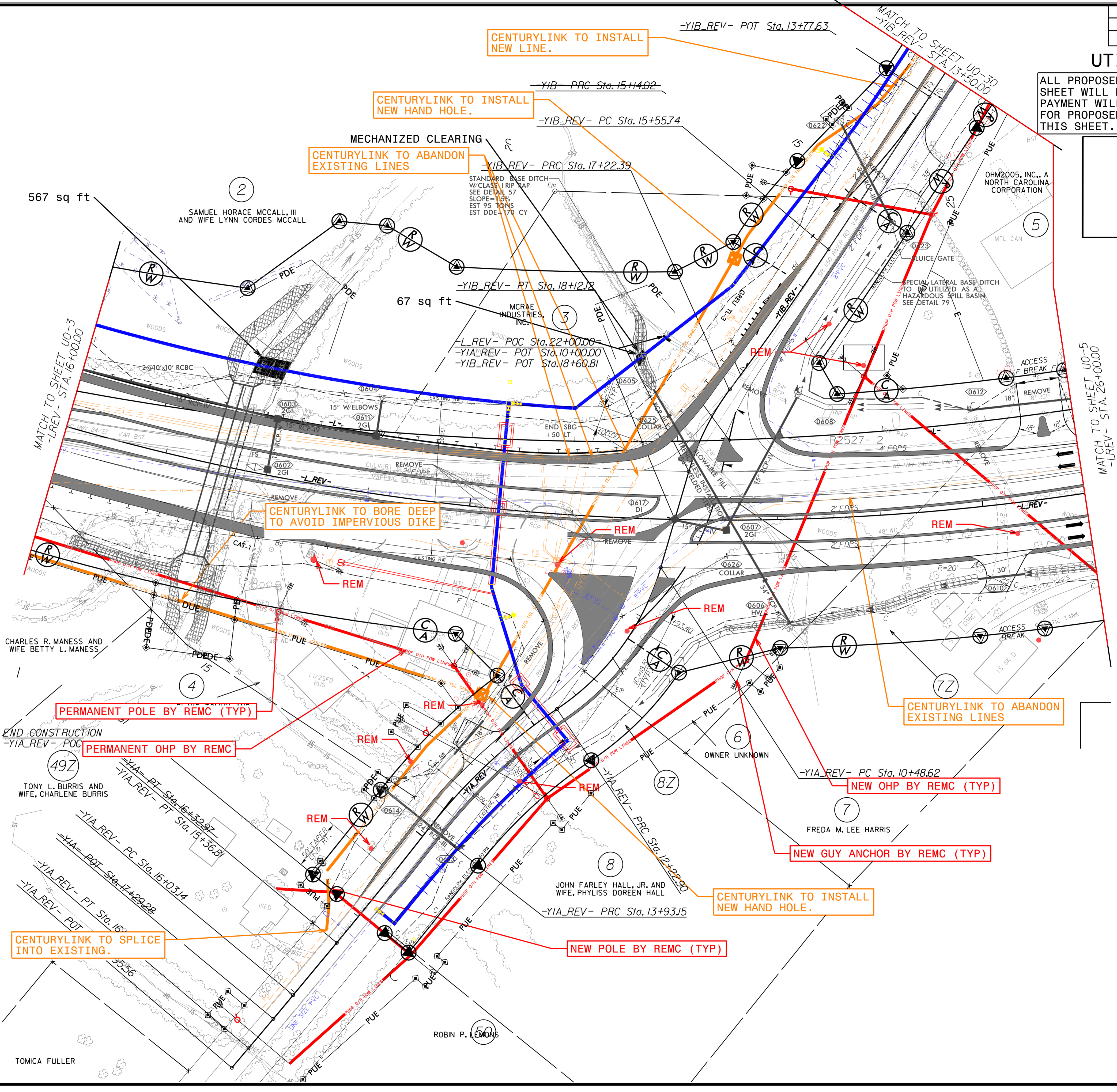
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PERMIT DRAWING
 SHEET 3 OF 5



CENTURYLINK TO INSTALL NEW LINE.

CENTURYLINK TO INSTALL NEW HAND HOLE.

CENTURYLINK TO ABANDON EXISTING LINES

CENTURYLINK TO BORE DEEP TO AVOID IMPERVIOUS DIKE

PERMANENT POLE BY REMC (TYP)

PERMANENT OHP BY REMC

CENTURYLINK TO ABANDON EXISTING LINES

NEW OHP BY REMC (TYP)

NEW GUY ANCHOR BY REMC (TYP)

CENTURYLINK TO INSTALL NEW HAND HOLE.

NEW POLE BY REMC (TYP)

CENTURYLINK TO SPLICE INTO EXISTING.

5/14/2024

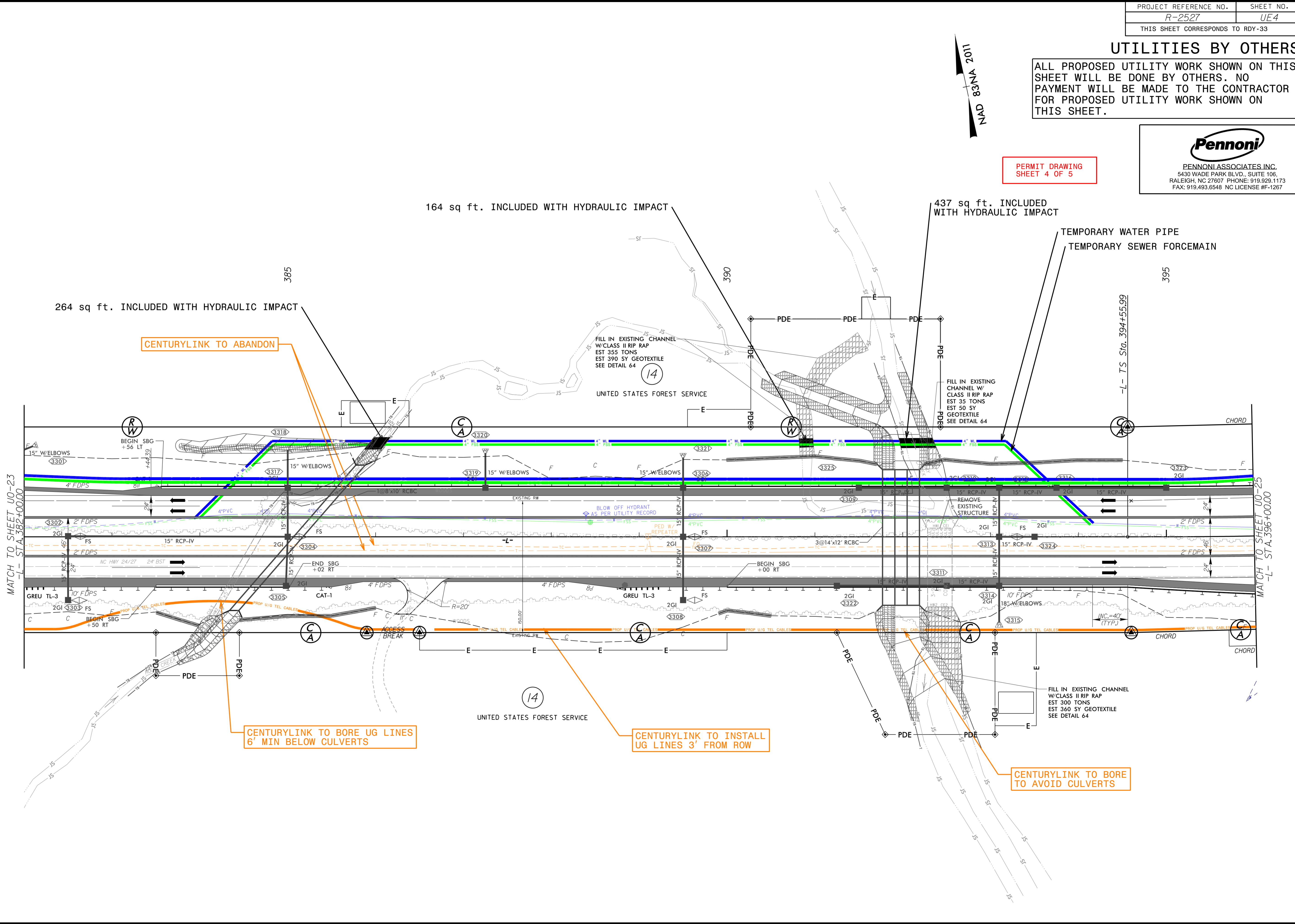
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UTILITIES BY OTHERS

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PERMIT DRAWING
SHEET 4 OF 5

Pennoni
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NAD 83 NA 2011

MATCH TO SHEET UO-23
-L- STA. 382+00.00

MATCH TO SHEET UO-25
-L- STA. 396+00.00

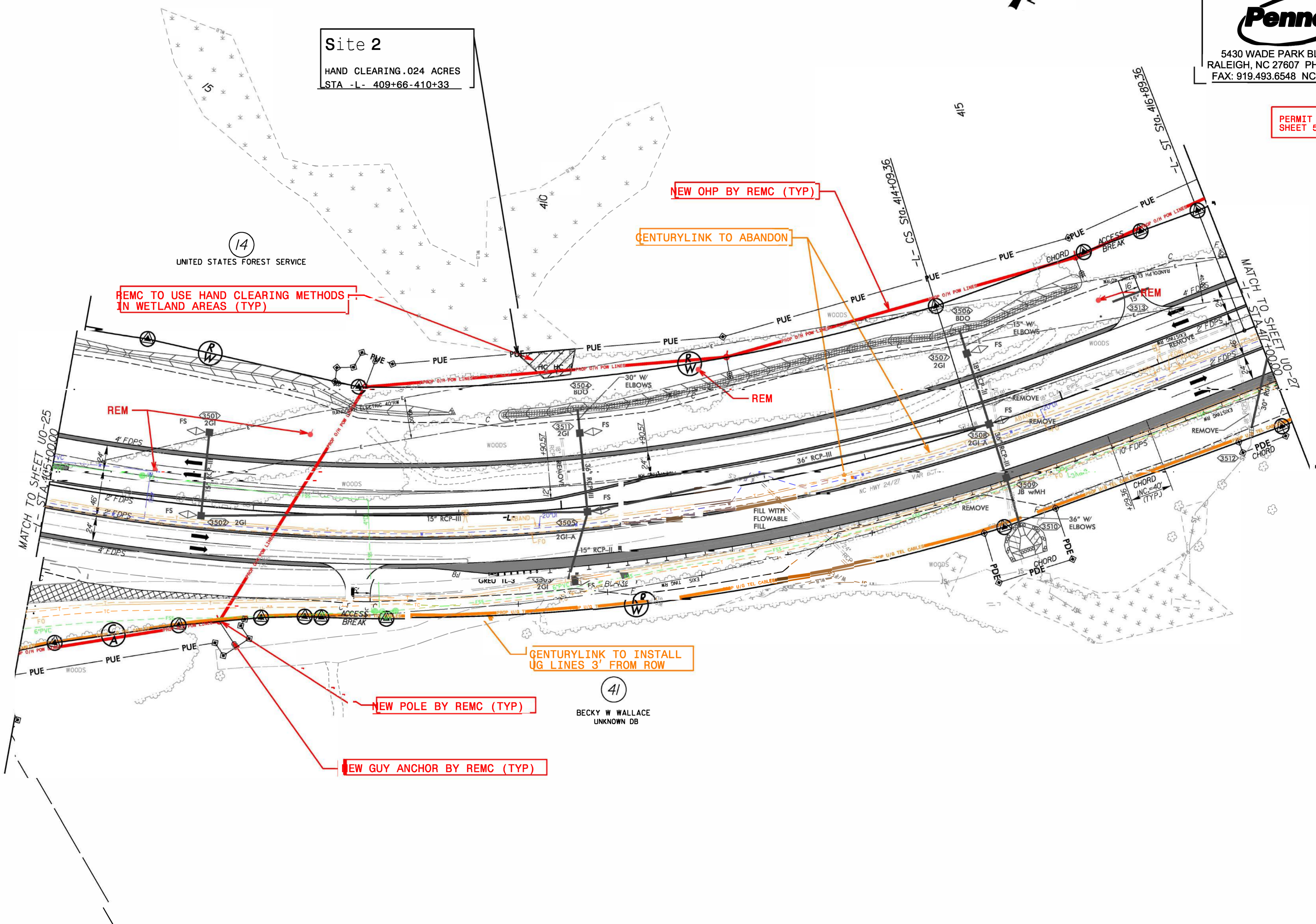
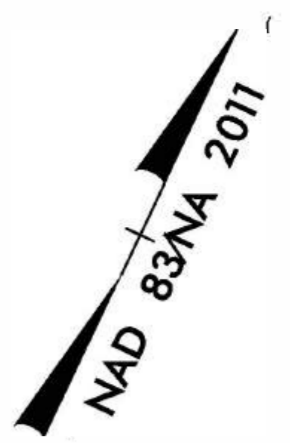
UTILITIES BY OTHERS

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5430 WADE PARK BLVD., SUITE 106,
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PERMIT DRAWING
SHEET 5 OF 5



5/14/99
5/9/2024
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SEE PLAN FOR LEGEND

