STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

DATE: April 28, 2022

MEMORANDUM TO: Mr. H.L. Cox, P.E.
Division 6 Engineer

DocuSigned by:
Mack C. Rivenbark III
AAAD1248B309416...

FROM: for Philip S. Harris, III, P.E., Unit Head
Environmental Analysis Unit

SUBJECT: Modified Environmental Permits for I-95 Widening. Cumberland, Harnett, and Johnston Counties. WBS No. 47532.1.1, **TIP No. I-5986A**.

Attached are the Modified U.S. Army Corps of Engineers Individual Permit and N.C. Division of Water Resources (NCDWR) Individual Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
https://xfer.services.ncdot.gov/pdea/PermIssued/

ec: w/o attachment (see website for attachments)

Mr. Ron Davenport, P.E. State Contract Officer
Mr. Greg Price, Division 6 Environmental Officer
Mr. Michael Penney, P.E., Design Build
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Byron Sanders, Jr., P.E., Utilities
Mr. Stephen Morgan, P.E., Hydraulics
Mr. Brian Hanks, P.E., Structures Management
Mr. Mark Staley, Roadside Environmental
Mr. Lamar Sylvester, P.E., State Construction Engineer
Mrs. Beth Harmon, NC Division of Mitigation Services

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

PROJECT COMMITMENTS

Cumberland, Harnett, and Johnston Counties
I-95 Widening
Federal Project No. NHP-0095(057)
WBS No. 47532.1.1
TIP No. I-5986

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Current status, changes, or additions to the project commitments as shown in the environmental document for the project are printed in *italic* font.

Division 6 Construction, Resident Engineer's Office – Offsite Detours and Lane Closures

In order to have time to adequately reroute school buses, NCDOT will contact Cumberland County Transportation Department at (910) 678-2581, Harnett County Schools Transportation at (910) 893-3270, and Johnston County Public Schools Transportation Services at (910) 934- 6031 at least one month prior to road closures in their respective jurisdictions.

This commitment will be addressed prior to all closures.

NCDOT will contact Cumberland County Emergency Services at (910) 321-6736, Cumberland County Sheriff's Office at (910) 323-1500, Cumberland County EMS at (910) 615-5600, Harnett County Emergency Services at (910) 893-7580, Harnett County EMS at (910) 893-7563, Harnett County Sheriff's Office at (910) 893-9111, Dunn Emergency Services at (910) 892-1211, Dunn Police Department at (910) 892-2399, Johnston County Emergency Services at (919) 989-5050, Johnston County Sheriff at (919) 989-5010, Benson Police Department at (919) 894-2091, Benson Fire Department at (919) 894-8990, NC State Highway Patrol Troop B at (910) 486-1058, and NC State Highway Patrol Troop C at (919) 733-3911 at least one month prior to road and lane closures in their respective jurisdictions to make the necessary temporary reassignments to primary response routes.

The commitment was initially addressed during the Pre-Construction Meeting and will continue to be addressed during construction through direct contact with the appropriate agencies and monthly project coordination meetings with the NCDOT Statewide Operations Center (STOC).

NCDOT will contact the Cumberland County Community Transportation Program at (910) 678-7600, HARTS at (910) 814-4019, and JCATS at (919) 202-5030 at least one month prior to road closures to make the necessary temporary reassignments to transit routes.

This commitment will be addressed prior to all closures.

Division 6 Construction, Resident Engineer's Office – Business and Agricultural Access

To the extent feasibly possible, NCDOT will maintain access to business and agricultural parcels during construction and communicate with property owners about changes in, or limitations to, property access.

> *The commitment was addressed during design and will continue to be adjusted during right of way acquisition and construction.*

Division 6 Construction, Resident Engineer's Office – Construction Noise

NCDOT will make all reasonable efforts to minimize construction noise exposure to sensitive receptors.

> *While construction noise is unavoidable and varies with a project's schedule, construction noise will be considered, especially near sensitive receptors, and adjustments made as needed during construction.*

Division 6 Construction, Resident Engineer's Office – Construction Plans

This project involves construction activities in, or adjacent to, FEMA-regulated stream(s). Therefore, NCDOT Division 6 staff shall submit sealed, as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built, as shown, in the construction plans, both horizontally and vertically.

> *This commitment will be implemented after construction of the project is completed.*

~~**Division 6 Construction, Resident Engineer's Office – Northern Long-eared Bat Compliance**~~

~~After project completion, the contract administrator for construction must submit the actual amount of tree clearing reported in tenths of acres. This information should be submitted at:~~ ~~**https://connect.ncdot.gov/site/construction/biosurveys/Lists/Northern%20Long%20Eared%20Bat/AllItems.aspx**~~

> *This commitment is no longer required due to changes in the Programmatic Biological Opinion (PBO). The total reported since the implementation of the PBO has equaled approximately 25% of the total incidental take.*

Division 4 District Engineer and Project Development Engineer – Temporary Occupancy of Highway Right of Way

The Division 4 District Engineer and Project Development Engineer will collaborate with the Town of Benson to update the Right-of-Way Encroachment Agreement for the Benson Dog Park.

This commitment is not applicable to section I-5986A.

Design-Build Team, Work Zone Traffic Control, and Division 6 Construction, Resident Engineer's Office – Traffic Management Plan

The Transportation Management Plan will include staggered closing of interchanges, advertisements of any closures and detour routes, and detour signage to mitigate construction related travel time and congestion impacts on emergency services.

This commitment was addressed during design with continued coordination during construction.

Roadway Design, Structure Design, Division 6 Project Manager, and Design-Build Team – Bicycle and Pedestrian Accommodations

A minimum of five-foot, paved shoulders will be provided on Cumberland County bridge #250154 (Wade-Stedman Road over I-95) to accommodate NC State Bike Route 5. Existing sidewalks will be replaced if disturbed. A minimum of four-foot, paved shoulders will be provided on all new overpass bridges.

Completed. These commitments were addressed during design with 8-foot shoulders provided on the proposed Wade Stedman Bridge and all other overpass structures.

Hydraulic Unit - Conditional and Final Letters of Map Revision

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of the project, with regard to applicability of the NCDOT Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Completed. This commitment was addressed during design.

~~Division 6 Division Planning Engineer~~ *Design-Build Unit* – Bicycle/Pedestrian Access During Construction

The ~~Project Planning Engineer~~ *Design-Build Unit* will coordinate with NCDOT Division of Bicycle and Pedestrian Transportation to evaluate the necessary level of bicycle/pedestrian accommodation during construction.

The Design-Build Unit will coordinate with NCDOT Division of Bicycle and Pedestrian Transportation prior to all roadway closures within the project limits.

Design-Build Team – Farmland Impacts

The Design-Build Team will reassess farmland impacts in Cumberland County based on their design.

This commitment will be addressed by the Design-Build Team once right-of-way plans are completed.

Division 6 Division Planning Engineer, Project Manager, and Design-Build Team – Farmland Impacts

If a new alignment outside of the project footprint in Harnett and Johnston counties is considered and selected, NCDOT will reassess farmland impacts.

This commitment is not applicable to section I-5986A.

Division 6 Project Manager Engineer, Right-of-Way Agent, and Resident Engineer's Office - Coordination with Other Projects

NCDOT will coordinate right-of-way, utilities, hydraulics, traffic control, permitting, and construction of I-5986 with NCDOT STIP projects I-5883, I-5877, and I-5878.

This commitment was implemented during design and is ongoing during construction.

NCDOT Noise and Air – Extension Area

NCDOT will perform noise measurements and analyses in the Extension Area between Exit 56 and a point 2,500 feet south of the Exit 55 bridge. NCDOT will update the traffic noise report with the findings.

Completed. This commitment was addressed during design.

Division 6 Division Environmental Officer and NCDOT Biological Surveys Group – Extension Area

NCDOT will perform wetland delineations and surveys for threatened and endangered species in the Extension Area between Exit 56 and a point located 2,500 feet south of the Exit 55 bridge. If resources are located, NCDOT will update permits and coordinate with state and federal agencies as appropriate.

Completed. This commitment was addressed during design.

NCDOT Biological Surveys Group and Division 6 Division Environmental Officer – Cape Fear Shiner

NCDOT will perform surveys for the Cape Fear shiner (*Notropis mekistocholas*) in the expanded study area near Exits 58, 61, and 65 during the appropriate survey window. If resources are located, NCDOT will coordinate with state and federal agencies as appropriate.

> *Completed. The NCDOT BioSurvey Group perform surveys of the expanded study area near Exits 58, 61, and 65 and found no streams to survey for the Cape Fear shiner.*

~~**NCDOT Biological Surveys Group and Division 6 Division Environmental Officer – Atlantic Pigtoe**~~

~~NCDOT will perform surveys for the Atlantic pigtoe (*Fusconaia masoni*) in the portion of the study area in Cape Fear River Basin. If resources are located, NCDOT will coordinate with state and federal agencies as appropriate.~~

> *This commitment was created in anticipation of a potential species listing, but is no longer required since the species has not been nor is it currently listed by U.S. Fish and Wildlife Service (USF&WS) as a Threatened or Endangered Species.*

Division 6 Division Environmental Officer – Stream and Wetland Mitigation

The Division Environmental Officer will coordinate with Beth Harmon, NC Department of Environmental Quality Division of Mitigation Services (DMS), at (919) 707-8420 to arrange for stream and wetland mitigation of project impacts.

> *Completed. This commitment was complied with prior to permitting. The North Carolina Division of Mitigation Services (DMS) (formerly NCEEP) has agreed to implement the mitigation for the project. DMS has indicated in a letter dated August 20, 2020 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the I-5986A Project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.*

Division 6 Division Environmental Officer – Buffer Mitigation

The Division Environmental Officer will coordinate with Beth Harmon, NC Department of Environmental Quality Division of Mitigation Services (DMS), at (919) 707-8420 to arrange for buffer mitigation of project impacts in Johnston County. NCDOT, in coordination with DMS, will prepare and submit a buffer mitigation plan to the Division of Water Resources prior to the approval of the water quality certification.

> *This commitment is not applicable to section I-5986A.*

Division 6 Project Manager and Right-of-Way Agent – Right-of-way Acquisition in Voluntary Agricultural Districts (VADs)

Prior to right-of-way acquisition, the NCDOT Project Manager will request that the Advisory Board hold a public hearing on the proposed condemnation of land within the Weeks Farms, Inc., VAD on Glen Eagle Road. The Project Manager will send the request to Lynn Lambert, 126 Alexander Drive, Suite 200, Lillington, NC 27546.

This commitment is not applicable to section I-5986A.

Division 6 Division Construction Engineer – Temporary Construction Easements in Voluntary Agricultural Districts (VADs)

The NCDOT Division Construction Engineer will ensure that any VAD lands converted to non-agricultural use as part of a temporary construction easement be returned to farmable condition by the project's completion.

This commitment is not applicable to section I-5986A.

Division 6 Division Construction Engineer, Right-of-Way Agent, NCDOT TPMU, FHWA, consultant – INFRA Grant quarterly reporting requirements

Infrastructure for Rebuilding America (INFRA) is a competitive grant program that is part of the Fixing America's Surface Transportation (FAST) Act. I-5986 is included in the program of projects for which NCDOT was awarded an INFRA Grant (I-95/US 70 (Future I-42) Innovative Technology and Rural Mobility Corridor Improvements). Quarterly reporting is required for all INFRA project components, regardless of funding type. Division 6 projects that are included in the INFRA program of projects include I-5986 A&B, I-5877, I-5878, I-5883, and I-5986C (ITS). At the time of the signing of this CE document, the term sheet and the INFRA reporting process are in development, guidance is forthcoming from FHWA. Division 6 should request a copy of the final term sheet from Jimmy Travis. Term sheet Item 12, Page 4 describes 'Quarterly Project Progress Reports'.

Completed. The INFRA Grant Term Sheets were executed by FHWA and NCDOT on July 11, 2019 and were distributed to all appropriated units of FHWA and NCDOT.

INFRA Contacts:
~~***NCDOT Transportation Program Management Unit (TPMU), Jimmy Travis, PE*** – INFRA term sheet contact for NCDOT jtravis@ncdot.gov, 919-707-6602~~
NCDOT Programs Management Office), Steven Hulsey, PE *– INFRA term sheet contact for NCDOT shulsey@ncdot.gov, 919-707-6634*
~~***FHWA Operations Engineer, Brad Hibbs, PE*** – INFRA reporting after NEPA is complete.~~

~~bradley.hibbs@dot.gov, 919-747-7006~~
FHWA Operations Engineer, Dale Privette, PE *– INFRA reporting after NEPA is complete. dale.privette@dot.gov, 919-747-7008*
~~***FHWA Planning & Environment Engineer, Kristina Solberg, PE*** – FHWA term sheet and INFRA reporting during NEPA phase, kristina.solberg@dot.gov, 919-747-7351~~
RS&H Transportation Engineer, Meredith Van Duyn, PE – consultant tasked by NCDOT management with gathering information from NCDOT Divisions 2 and 6 for the quarterly INFRA reporting. meredith.vanduyn@rsandh.com, 919-926-4102

COMMITMENTS FROM PERMITTING

Division 6 and Environmental Analysis Unit

USACE 404 Revised Condition #1

Work Limits: All work authorized by this permit shall be performed in strict compliance with the attached permit plans dated February 7, 2019, revised May 23, 2019, revised March 13, 2020, revised April 2 and April 8, 2020, revised August 20, 2020, revised December 28, 2020, and further revised February 1, 2022, all of 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.

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

April 07, 2022

Regulatory Division

Action ID. SAW-2018-02276
NC DOT TIP No.: I-5986 (A)
Corps Modification # 3

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head-PDEA
N.C. Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Harris:

Reference the Department of the Army (DA) permit issued on July 9, 2019, for the discharge of fill material into waters and wetlands adjacent to various creeks, and their tributaries in order to widen 26 miles of existing I-95 to an eight-lane median divided facility, on existing location from Murphy Road (exit 55) north to Interstate 40 (exit 81) in Cumberland, Harnett, and Johnston Counties, North Carolina. Reference is also made to your I-5986 A (I-95 widening from south of Murphy Road-Exit 55 to south of Bud Hawkins Road-Exit 70) permit modification request dated February 1, 2022. This modification request is based on completion of final bridge design over Reese Creek, and minor utility easement and right of way changes. The total revised permanent impacts associated with the I-5986 A portion of the I-5986 project are 13.144 acres of wetland, 1,799 linear feet of stream channel, and 0.139 acres of open water associated with permanent fill, excavation, mechanized land clearing. Temporary impacts total 2.81-acre wetland and 1,346 linear feet of stream channels.

I have determined that the proposed project modifications described above are not contrary to the public interest and are consistent with the 404 (B) (1) Guidelines and therefore, the DA permit is hereby modified for I-5986 A; with revised special conditions detailed below. The authorized work shall be completed in accordance with the attached revised drawings. All other conditions of the original permit remain applicable. The permit expiration date remains December 31, 2024.

Revised Special Conditions are as follows:

Revised condition #1. Work Limits: All work authorized by this permit shall be performed in strict compliance with the attached permit plans dated February 7, 2019, revised May 23, 2019, revised March 13, 2020, revised April 2 and April 8, 2020, revised August 20, 2020, revised December 28, 2020, and further revised February 1, 2022, all of 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.

Revised condition 9 (restated for clarity). Endangered Species Act: The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Biological Opinion (PBO) titled, "NCDOT Program Effects on the Northern Long-eared Bat in Divisions 1-8", dated November 6, 2020, contains agreed upon conservation measures for the NLEB. As noted in the PBO, applicability of these conservation measures varies depending on the location of the project. Your authorization under this Department of the Army permit is conditional upon your compliance with all applicable conservation measures in the PBO, which are incorporated by reference in this permit. Failure to comply with the applicable conservation measures would constitute non-compliance with your Department of the Army permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO, and with the ESA.

Revised condition #15. Mitigation: In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on each of the most recent versions of the attached Compensatory Mitigation Responsibility Transfer Forms (2 separate forms are attached). The requirements of these forms, including any special conditions listed on these forms, are hereby incorporated as special conditions of this permit.

This approved modification should be attached to the original permit and will be utilized for future compliance reviews of the project. If you have questions, please contact Liz Hair of the Wilmington Regulatory Field Office, at telephone (910) 251-4049 or by email at sarah.e.hair@usace.army.mil.

FOR THE DISTRICT ENGINEER

Monte Matthews

Date: 2022.04.07 07:25:04 -04'00'

Monte K. Matthews
NC DOT Team Leader
Wilmington Regulatory Division

Enclosures:

1) 401 Water Quality Certification Modification dated February 17, 2022
2) Wetland and Surface Water Impact Permit and Utility Drawings: I-5986 A submitted February 1, 2022
3) Mitigation Responsibility Transfer Forms (I 5986 A:1 and 2) dated April 5, 2022

Copies Furnished (electronic):
Ms. Amy Chapman, NCDEQ-DWR
Mr. Chris Rivenbark/Ms. Deanna Riffey, NCDOT
Mr. Jim Rerko/Mr. Greg Price NCDOT
Ms. Amanetta Somerville, EPA
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NC WRC
Ms. Beth Harmon, NC DMS

From: Hair, Sarah E CIV USARMY CESAW (USA)
To: Riffey, Deanna
Subject: [External] RE: I-5986A Temporary Stream Impacts Accounting Correction
Date: Friday, April 22, 2022 2:23:01 PM
Attachments: image001.png

Hi Deanna,
Yes, the information provided in your email is correct. Thank you for catching the mis-calculation and capturing our discussion resolving the matter.
Hope you have a great weekend,
Liz

From: Riffey, Deanna <driffey@ncdot.gov>
Sent: Monday, April 18, 2022 3:09 PM
To: Hair, Sarah E CIV USARMY CESAW (USA) <Sarah.E.Hair@usace.army.mil>
Subject: [Non-DoD Source] I-5986A Temporary Stream Impacts Accounting Correction

Good afternoon Liz,

Individual Permit Modification (Action ID SAW-2018-02276) was received on April 7, 2022 by NCDOT. The summary paragraph from the permit indicated that there will be 1,346 linear feet of temporary impacts for streams. Email correspondence between NCDOT and USACE from April 8th, 12th, and 13th determined that the temporary impacts for streams for I-5986A is 842 linear feet and not 1,346 linear feet.

This email serves as an accounting correction for record keeping for the temporary stream impacts. Please let me know if I have correctly captured our conversation.

Thank you for your time,

Deanna Riffey
Environmental Coordination & Permitting
Environmental Program Consultant
North Carolina Department of Transportation

919 707 6151 office
driffey@ncdot.gov

1598 Mail Service Center
Raleigh, NC 27699-1598

1020 Birch Ridge Drive
Raleigh, NC 27610

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NC DOT **Action ID:** SAW-2018-02276
Project Name: I-5986 A I-95 Widening (April 2022 modification) **County:** Cumberland

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:** 03030004, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1,143			**6.779**		**3.519**	

*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:** 03030004, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
2,286			**13.558**		**7.038**	

Mitigation Site Debited: **NC DMS**
(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Elizabeth Harmon — 04/08/2022
Signature of Sponsor's Authorized Representative **Date of Signature**

USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

This is Form 2 of 2 associated with I-5986 A for impacts within the 03030004 Cape Rear River Basin.
***I-5986 Section A was originally authorized by permit modification dated November 24, 2020 (permanent impacts requiring compensatory mitigation originally totaled 12.434-acre wetland and 1,299 linear feet of stream channel).**
****This modified form replaces the previous MRT Form dated November 24, 2020 associated with I-5986 A impacts within the 03030004 Cape Rear River Basin.**

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: Liz Hair
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403
Email: sarah.e.hair@usace.army.mil

Liz Hair

Wilmington District Project Manager Signature

April 5, 2022

Date of Signature

U.S. ARMY CORPS OF ENGINEERS

Wilmington District

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.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NC DOT **Action ID:** SAW-2018-02276
Project Name: I-5986 A I-95 Widening (April 2022 modification) **County:** Cumberland

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:** 03030006, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
237			**1.196**		**1.650**	

*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:** 03030006, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
474			**2.392**		**3.30**	

Mitigation Site Debited: **NC DMS**
(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Elizabeth Harmon — 04/08/2022
Signature of Sponsor's Authorized Representative **Date of Signature**

USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

This is Form 1 of 2 associated with I-5986 A for impacts within the 03030006 Cape Rear River Basin.
***I-5986 Section A was originally authorized by permit modification dated November 24, 2020 (permanent impacts requiring compensatory mitigation originally totaled 12.434-acre wetland and 1,299 linear feet of stream channel).**
****This modified form replaces the previous MRT Form dated November 24, 2020 associated with I-5986 A impacts within the 03030006 Cape Rear River Basin.**

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: Liz Hair
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403
Email: sarah.e.hair@usace.army.mil

Liz Hair

Wilmington District Project Manager Signature

April 5, 2022
Date of Signature

U.S. ARMY CORPS OF ENGINEERS

Wilmington District

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.

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

November 5, 2021

Mr. Philip S. Harris, III, P.E., CPM
Environment Analysis Unit Head
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES with ADDITIONAL CONDITIONS for Proposed improvements for the proposed widening of I-95 to eight lanes from South of SR 1832 (Exit 56) to South of SR 1811 (Exit 70) in Cumberland County, TIP I-5986A.
NCDWR Project No. 20190214 v.4

Dear Mr. Harris:

Attached hereto is a modification of Certification No. WQC004187 issued to The North Carolina Department of Transportation (NCDOT) dated May 30, 2019 and modified on November 6, 2020 and April 30, 2021.

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

Sincerely,
DocuSigned by:
Amy Chapman
9C9886312DCD474...
S. Daniel Smith, Director
Division of Water Resources

Attachments

Electronic copy only distribution:
Liz Hair, US Army Corps of Engineers, Wilmington Regulatory Field Office
Greg Price, Division 6 Environmental Officer
Chris Rivenbark, NC Department of Transportation
Amanetta Somerville, US Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
Hannah Sprinkle, NC Division of Water Resources Wilmington Regional Office
File Copy

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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to permanently impact an additional 0.704 acres of jurisdictional wetlands, 81 linear feet of streams in Cumberland County. The project shall be constructed pursuant to the revised modification request dated received October 19, 2021. The authorized impacts are as described below:

Wetland Impacts in the Cape Fear River Basin

Site 2	**Permanent Impacts (ac)**	**Fill (temporary) (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	0.002	0.038	0.04
Impacts approved with this modification	0.172	0.037	0.209
Difference	+.0.169	-0.001	**0.169 additional perm impacts**

Site 3	**Fill (ac)**	**Fill (temporary) (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	0.019	0.012	0.031
Impacts approved with this modification	0.186	0.062	0.248
Difference	+0.167	-0.050	**0.167 additional perm impacts**

Site 4	**Fill (ac)**	**Fill (temporary) (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	0.003	0.060	0.063
Impacts approved with this modification	0.006	0.058	0.064
Difference	+0.003	-0.002	**0.003 additional perm impacts**

Site 57	**Fill (ac)**	**Fill (temporary) (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	--	--	--
Impacts approved with this modification	0.365	0.066	0.431
Difference	+0.365	+0.066	**0.365 additional perm impacts**

0.704 acres of additional permanent wetland impacts

Open Water Impacts in the Cape Fear River Basin

Site 1	**Permanent (ac)**	**Temporary (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	0.001	0.002	0.003
Impacts approved with this modification	0.001	0.001	0.002
Difference	--	-0.001	----

Site 30 *new pond sites*	**Permanent (ac)**	**Temporary (ac)**	**Total Permanent Impact (ac)**
Impacts approved with the original certification	--	--	--
Impacts approved with this modification	0.139	0.104	0.243
Difference	+0.139	+0.104	**0.139 additional perm impacts**

0.139 acres of additional permanent open water impacts

Stream Impacts in the Cape Fear River Basin

Site 2	**Permanent (linear ft)**	**Temporary (linear ft)**	**Total Permanent Impact (linear ft)**
Impacts approved with the version 3 modification	19	60	85
Additional impacts approved with this modification	81	23	110
Total	+62	-37	**81 additional perm impacts**

Site 3	**Permanent (linear ft)**	**Temporary (linear ft)**	**Total Permanent Impact (linear ft)**
Impacts approved with the version 3 modification	--	--	--
Additional impacts approved with this modification	--	48	48
Total	--	+48	**----**

Site 4	**Permanent (linear ft)**	**Temporary (linear ft)**	**Total Permanent Impact (linear ft)**
Impacts approved with the version 3 modification	18	23	41
Additional impacts approved with this modification	18	24	42
Total	--	+1	----

Site 57 *new site*	**Permanent (linear ft)**	**Temporary (linear ft)**	**Total Permanent Impact (linear ft)**
Impacts approved with the version 3 modification	--	--	--
Additional impacts approved with this modification	--	78	78
Total	--	+78	----

81 linear feet of additional permanent stream impacts
(< 300 lf of impact, no mitigation required)

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

This approval is only valid for the purpose and design that you submitted in your modified application dated received October 19, 2021. Should your project change, you are required to notify NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional impacts, for this project (now or in the future) are required the applicant should contact NCDWR as a modification of this Certification may be required. For this approval to remain valid, you are required to comply with all the conditions listed below. In

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

Condition(s) of Certification:

1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions associated with the original Water Quality Certification dated May 30, 2019 and subsequent modifications still apply except where superseded by this certification.

2. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

3. The permittee shall ensure that final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 02H .0506(b)(2) and (c)(2)]

4. Compensatory mitigation for impacts to 0.704 ac Non-Riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated October 6, 2021, that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

5. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]

6. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]

7. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's permit NCS000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]

8. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)]

9. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)

10. A turbidity curtain will be installed in the stream if driving or drilling activities occur within the stream channel, on the stream bank, or within 5 feet of the top of bank, or during the removal of bents from an old bridge. This condition can be waived with prior approval from the NCDWR. [15A NCAC 02H .0506(b)(3)

11. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water. [15A NCAC 02H .0506(b)(3)

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

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 5th day of November, 2021

DIVISION OF WATER RESOURCES

DocuSigned by:
Amy Champman
9C9886312DCD474...

S. Daniel Smith
Director

WQC No. 004187

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

NCDWR Project No.: _____ **County:** _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

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

Applicant's Certification

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

Signature: _____ Date: _____

Agent's Certification

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

Signature: _____ Date:_____

Engineer's Certification

_____ Partial _____ Final

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

Signature _____ Registration No. _____
Date _____

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

February 17, 2022

Mr. Philip S. Harris, III, P.E., CPM
Environment Analysis Unit Head
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES with ADDITIONAL CONDITIONS for Proposed improvements for the proposed widening of I-95 to eight lanes from South of SR 1832 (Exit 56) to South of SR 1811 (Exit 70) in Cumberland County, TIP I-5986A.
NCDWR Project No. 20190214 v.5

Dear Mr. Harris:

Attached hereto is a modification of Certification No. WQC004187 issued to The North Carolina Department of Transportation (NCDOT) dated May 30, 2019 and modified on November 6, 2020, April 30, 2021 and November 5, 2021.

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

Sincerely,

DocuSigned by:
Amy Chapman
9C9886312DCD474...

S. Daniel Smith, Director
Division of Water Resources

Attachments

Electronic copy only distribution:
- Liz Hair, US Army Corps of Engineers, Wilmington Regulatory Field Office
- Greg Price, Division 6 Environmental Officer
- Chris Rivenbark, NC Department of Transportation
- Amanetta Somerville, US Environmental Protection Agency
- Gary Jordan, US Fish and Wildlife Service
- Travis Wilson, NC Wildlife Resources Commission
- Beth Harmon, Division of Mitigation Services
- Hannah Sprinkle, NC Division of Water Resources Wilmington Regional Office
- File Copy

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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 0.651 acres of jurisdictional wetlands in Cumberland County. The project shall be constructed pursuant to the revised modification request dated received February 1, 2022. The authorized impacts are as described below:

Wetland Impacts in the Cape Fear River Basin

Site 15	**Fill (permanent) (ac)**	**Fill (temporary) (ac)**	**Total Impact (ac)**
Impacts approved with the original certification	0.391	0.071	0.462
Additional Impacts	---	0.132	**0.132**
Total impacts approved with this modification	0.391	0.203	0.594

0.132 acres of additional temporary impacts

Site 16	**Fill (permanent) (ac)**	**Fill (temporary) (ac)**	**Total Impact (ac)**
Impacts approved with the original certification	0.083	0.398	0.031
Additional Impacts	---	0.073	**0.073**
Impacts approved with this modification	0.083	0.471	0.248

0.073 acres of additional temporary impacts

Site 58 (*new site)	**Fill (permanent) (ac)**	**Fill (temporary) (ac)**	**Total Impact (ac)**
Impacts approved with the original certification	---	---	---
Additional Impacts	---	0.101	**0.101**
Impacts approved with this modification	---	0.101	0.101

0.101 acres of additional temporary impacts (new site)

Site 59 (*new site)	**Fill (permanent) (ac)**	**Fill (temporary) (ac)**	**Total Impact (ac)**
Impacts approved with the original certification	---	---	---
Additional Impacts	0.006	0.289	**0.295**
Impacts approved with this modification	0.006	0.289	0.295

0.289 acres of additional temporary impacts, 0.006 acres of permanent impacts

Site 60 (*new site)	**Fill (permanent) (ac)**	**Fill (temporary) (ac)**	**Total Impact (ac)**
Impacts approved with the original certification	---	---	---
Additional Impacts	---	0.050	**0.050**
Impacts approved with this modification	---	0.050	0.050

0.050 acres of additional temporary wetland impacts

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

This approval is only valid for the purpose and design that you submitted in your modified application dated received February 1, 2022. Should your project change, you are required to notify NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional impacts, for this project (now or in the future) are required the applicant should contact NCDWR as a modification of this Certification may be required. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions associated with the original Water Quality Certification dated May 30, 2019 and subsequent modifications still apply except where superseded by this certification.

2. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

3. The permittee shall ensure that final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 02H .0506(b)(2) and (c)(2)]

4. Compensatory mitigation for impacts to 0.006 ac Non-Riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated January 10, 2022, that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

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

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition

with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 17th day of February 2022

DIVISION OF WATER RESOURCES

DocuSigned by:
Amy Chapman
9C9886312DCD474...

S. Daniel Smith
Director

WQC No. 004187

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

NCDWR Project No.: _____ **County:** _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

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

Applicant's Certification

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

Signature: _____ Date: _____

Agent's Certification

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

Signature: _____ Date:_____

Engineer's Certification

_____ Partial _____ Final

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

Signature _____ Registration No. _____
Date _____

Submitted 2/1/2022

09/08/99

TIP PROJECT: I-5986A

CONTRACT: C204283

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheets 1C-1 Thru 1C-8, 1C-22 Thru 1C-25, 1C-28, RW02C-1 Thru RW02C-14, RW02C-28 Thru RW-02C-33, RW-2D-1 Thru RW-02D-2 For Survey Control Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

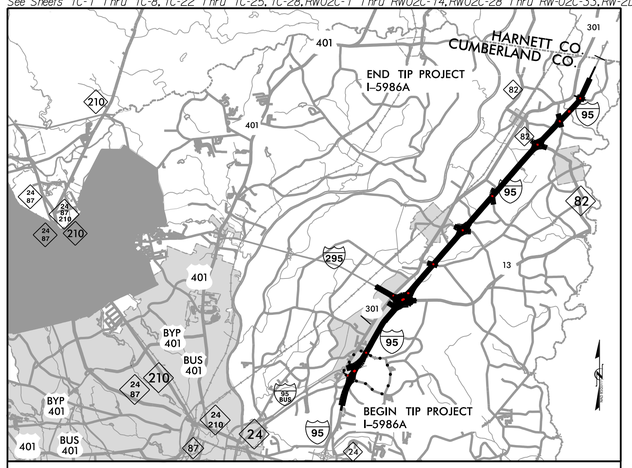
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986A	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47532.2.2	NHP-0095(057)	R/W
47532.3.2	NHP-0095(057)	PE, UTIL., CONST.

CUMBERLAND COUNTY

LOCATION: I-95 WIDENING FROM SOUTH OF SR 1832 (MURPHY ROAD- EXIT 55) TO SOUTH OF SR 1811 (BUD HAWKINS ROAD-EXIT 70)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, LIGHTING, SIGNING, ITS, CULVERTS & STRUCTURES



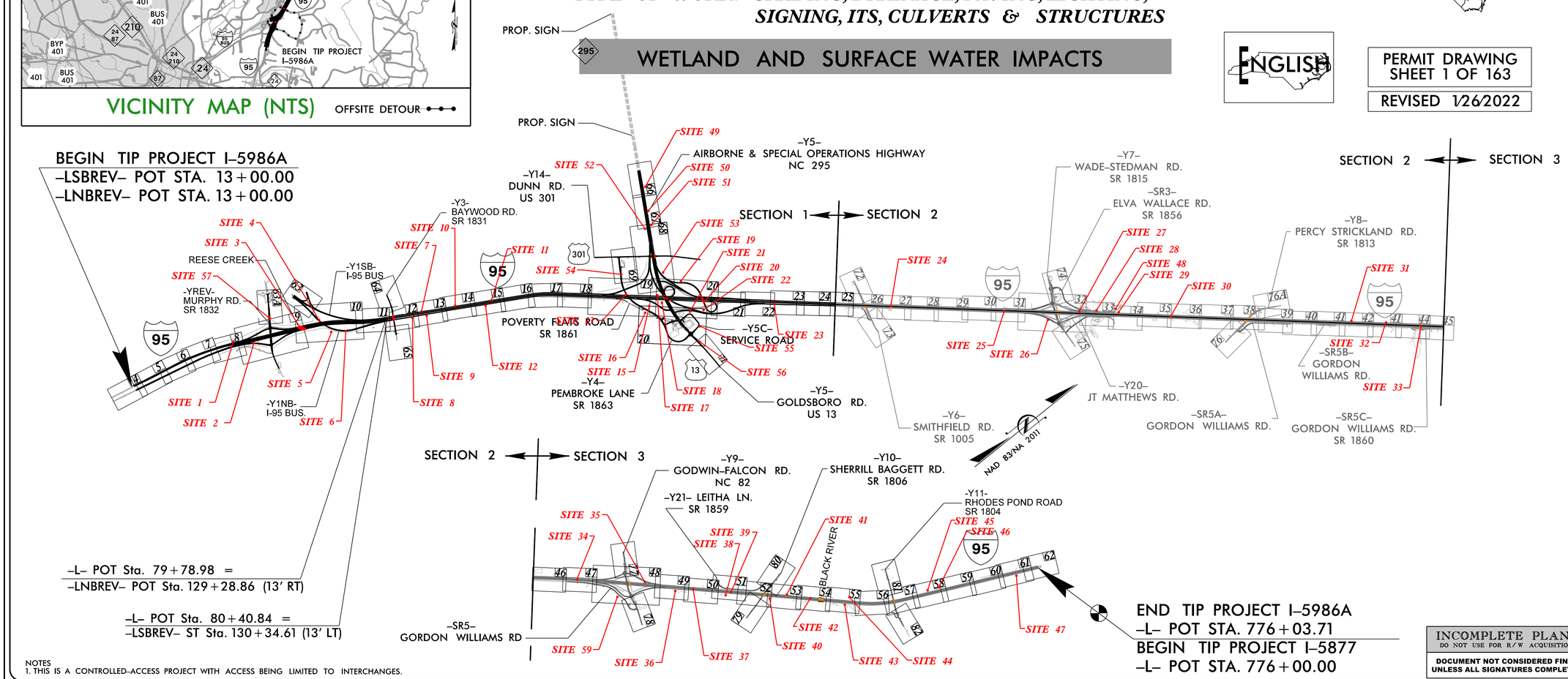
VICINITY MAP (NTS) OFFSITE DETOUR

ENGLISH

PERMIT DRAWING
SHEET 1 OF 163

REVISED 1/26/2022

WETLAND AND SURFACE WATER IMPACTS



NOTES
1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2018 = 56,700
ADT 2040 = 73,800
K = 55%
D = 7%
T = 18% *
V = 75 MPH

FUNC CLASS: INTERSTATE
* (TTST 13% + DUALS 5%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5986A.....15.331 MILES
LENGTH STRUCTURE TIP PROJECT I-5986A.....0.066 MILES
TOTAL LENGTH TIP PROJECT I-5986A.....15.397 MILES

NCDOT CONTACT

Michael Penney, PE
PROJECT ENGINEER - DESIGN-BUILD UNIT

PLANS PREPARED BY:

RK&K
RUMMEL, KLEPPER & KAHL, LLP
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RALEIGH, NORTH CAROLINA 27615-3960
NC LICENSE NO. F-0112

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2018 STANDARD SPECIFICATIONS

LETTING DATE:
AUGUST 20, 2019

Michael T. Merritt, PE
PROJECT ENGINEER

Anthony A. Houser, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

1/27/2022
R:\Hydraulics\PERMITS_Environmental\Drawings\Final\I-5986A_Hyd_TSH.dgn
aburke

Submitted 2/1/2022

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	2D-1

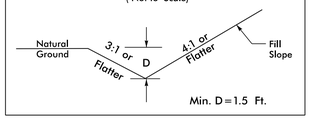
HYDRAULICS DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 2 OF 163

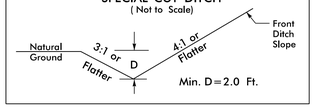
REVISED 1/26/2022

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



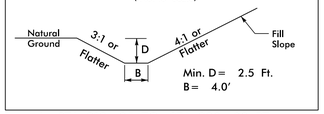
–L– STA. 210+50 TO STA. 212+25 RT
–Y5RPD– STA. 10+90 TO STA. 12+00 LT
–Y3– STA. 22+00 TO STA. 24+00 RT
–Y4– STA. 50+00 TO STA. 55+00 LT
–Y4– STA. 61+00 TO STA. 65+49 LT
–Y4A– STA. 10+54 TO STA. 13+50 RT
–Y5– STA. 65+00 TO STA. 68+00 RT
–Y5– STA. 85+50 TO STA. 86+50 LT
–Y5– STA. 85+00 TO STA. 89+00 RT
–Y5SPUR– STA. 19+49 TO STA. 22+03 LT
–SR5C_DET– STA. 12+70 TO STA. 13+10 RT
–SR5C_DET– STA. 15+00 TO STA. 16+32 RT
–YRPAREV– STA. 17+94 TO STA. 20+00 RT
–Y1NB– STA. 44+50 TO STA. 46+50 RT
–LSBREV_DET– STA. 22+41 TO STA. 22+91 RT
–LNBREV_DET– STA. 12+32 TO STA. 20+82 LT

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



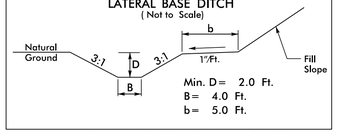
–L– STA. 103+00 TO STA. 107+72 LT
–L– STA. 138+50 TO STA. 186+00 RT
–L– STA. 232+00 TO STA. 239+00 LT
–L– STA. 256+00 TO STA. 269+00 LT
–L– STA. 232+50 TO STA. 241+50 RT
–L– STA. 245+00 TO STA. 249+00 RT
–Y5FLY– STA. 82+33 TO STA. 85+77 RT
–Y5SPURA– STA. 10+46 TO STA. 16+99 LT
–Y5RPA– STA. 36+85 TO STA. 37+50 LT
–Y5RPA– STA. 34+49 TO STA. 36+85 RT
–L– STA. 227+00 TO STA. 232+50 RT
–Y5LPD– STA. 12+79 TO STA. 14+50 LT
–Y5C– STA. 25+00 TO STA. 26+42 RT
–Y5C– STA. 24+50 TO STA. 25+92 LT
–L– STA. 221+58 TO STA. 232+00 LT
–LNBREV– STA. 50+73 TO STA. 54+69 LT
–YRPCREV– STA. 13+30 TO STA. 18+87 RT
–LNBREV– STA. 69+17 TO STA. 76+67 RT
–LSBREV– STA. 68+50 TO STA. 77+50 LT
–LNBREV– STA. 79+17 TO STA. 80+67 RT
–YRPAREV– STA. 15+74 TO STA. 17+30 RT
–LSBREV– STA. 79+50 TO STA. 82+15 LT
–Y1NB– STA. 46+50 TO STA. 59+00 RT
–Y1NB– STA. 45+20 TO STA. 48+00 LT
–LSBREV DET– STA. 22+91 TO STA. 26+92 RT
–LSBREV_DET– STA. 26+42 TO STA. 28+43 LT
–LNBREV_DET– STA. 75+85 TO STA. 83+86 LT, *3:1

DETAIL C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



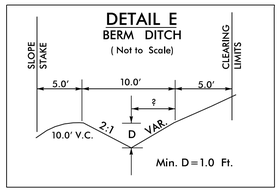
–L– STA. 212+25 TO STA. 220+00 RT
–L– STA. 208+50 TO STA. 215+00 LT
–Y5B– STA. 10+44 TO STA. 12+50 RT
–Y5FLY– STA. 66+80 TO STA. 70+00 LT
–Y5FLY– STA. 63+50 TO STA. 66+80 RT
–LSBREV– STA. 112+50 TO STA. 128+50 LT

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



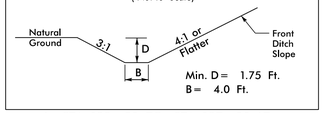
–L– STA. 90+50 TO STA. 100+28 RT
–L– STA. 162+00 TO STA. 165+50 LT
–L– STA. 247+00 TO STA. 251+50 LT
–L– STA. 252+00 TO STA. 256+00 LT
–L– STA. 253+00 TO STA. 255+00 RT
–Y5LPD– STA. 26+50 TO STA. 30+65 RT

DETAIL E
BERM DITCH
(Not to Scale)



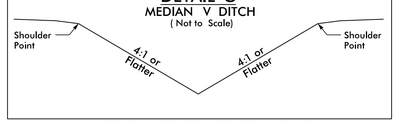
DETAIL NOT USED IN SECTION 1

DETAIL F
SPECIAL CUT BASE DITCH
(Not to Scale)



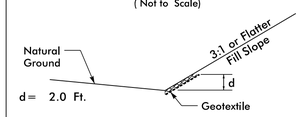
–L– STA. 132+50 TO STA. 137+00 LT
–L– STA. 159+00 TO STA. 162+00 LT
–L– STA. 165+50 TO STA. 167+00 LT
–L– STA. 223+11 TO STA. 226+23 RT
–L– STA. 239+00 TO STA. 247+00 LT
–L– STA. 255+00 TO STA. 269+00 RT
–Y5B– STA. 12+50 TO STA. 17+50 RT

DETAIL G
MEDIAN V DITCH
(Not to Scale)



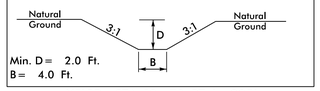
–L– STA. 215+00 TO STA. 217+50 LT
–Y5– STA. 83+50 TO STA. 85+50 LT
–Y5RPA– STA. 45+00 TO STA. 49+00 LT
–LNBREV– STA. 54+69 TO STA. 62+16 LT
–LNBREV– STA. 82+67 TO STA. 84+17 RT
–LSBREV– STA. 82+15 TO STA. 83+00 LT
–LSBREV– STA. 103+00 TO STA. 112+50 RT

DETAIL H
TOE PROTECTION
(Not to Scale)



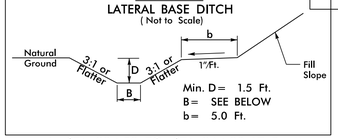
–L– STA. 121+50 TO STA. 127+90 RT
–L– STA. 186+71 TO STA. 187+92 LT
–L– STA. 198+60 TO STA. 203+00 RT
–L– STA. 199+36 TO STA. 202+57 LT
–Y4– STA. 40+82 TO STA. 43+12 LT
–Y4– STA. 40+38 TO STA. 41+90 RT
–Y5LPD– STA. 19+00 TO STA. 21+00 RT
–Y5LPD– STA. 20+21 TO STA. 24+50 LT
–Y5FLY– STA. 59+20 TO STA. 62+59 LT
–Y5RPD– STA. 15+00 TO STA. 24+34 RT
–Y5C– STA. 12+83 TO STA. 17+66 LT
–Y5C– STA. 12+64 TO STA. 17+88 RT
–Y5B– STA. 13+20 TO STA. 17+18 LT
–Y5RPC– STA. 13+37 TO STA. 21+33 RT
–Y5LPD– STA. 38+47 TO STA. 39+75 LT
–Y5LPD– STA. 37+76 TO STA. 39+18 RT
–Y5RPA– STA. 42+36 TO STA. 44+00 RT
–Y5– STA. 47+87 TO STA. 50+88 LT
–Y5– STA. 55+85 TO STA. 65+25 LT
–Y5– STA. 64+30 TO STA. 64+55 RT
–Y5– STA. 107+80 TO STA. 109+51 RT
–Y5LPD– STA. 44+31 TO STA. 48+12 RT
–YRPCREV– STA. 21+65 TO STA. 24+64 RT
–YREV– STA. 24+38 TO STA. 26+57 RT

DETAIL I
STANDARD BASE DITCH
(Not to Scale)



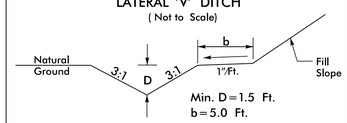
–Y5LPD– STA. 13+78 RT, L=285',
BEG. ELEV=131.67', END ELEV=130.90', S=0.3%

DETAIL J
LATERAL BASE DITCH
(Not to Scale)



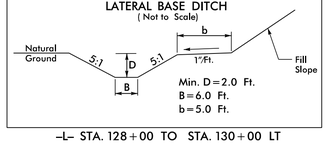
–L– STA. 90+50 TO STA. 94+00 LT, B=4'
–L– STA. 118+50 TO STA. 121+12 LT, B=4'
–L– STA. 130+00 TO STA. 132+50 LT, B=4'
–L– STA. 137+00 TO STA. 138+00 LT, B=4'
–L– STA. 138+50 TO STA. 147+00 LT, B=4'
–L– STA. 147+00 TO STA. 154+50 LT, B=4'
–LNBREV– STA. 80+67 TO STA. 82+67 RT, B=4.0'
–YREV– STA. 20+38 TO STA. 21+67 RT, B=4.0'

DETAIL K
LATERAL 'V' DITCH
(Not to Scale)



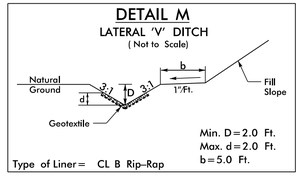
–L– STA. 89+00 TO STA. 90+50 RT
–L– STA. 112+50 TO STA. 113+81 RT
–L– STA. 129+00 TO STA. 131+50 RT
–L– STA. 138+00 TO STA. 138+50 LT
–L– STA. 154+50 TO STA. 158+87 LT
–L– STA. 249+00 TO STA. 253+00 RT
–Y5C– STA. 19+38 TO STA. 24+50 LT
–Y5– STA. 42+00 TO STA. 45+51 LT
–Y5– STA. 64+50 TO STA. 68+50 LT
–Y5– STA. 70+02 TO STA. 76+21 LT
–Y5– STA. 70+00 TO STA. 73+64 RT
–YRPDREV– STA. 15+68 TO STA. 18+50 RT

DETAIL L
LATERAL BASE DITCH
(Not to Scale)



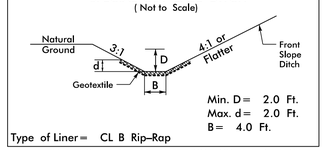
–L– STA. 128+00 TO STA. 130+00 LT

DETAIL M
LATERAL 'V' DITCH
(Not to Scale)



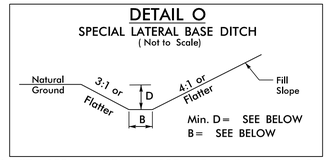
–Y5RPD– STA. 12+93 TO STA. 15+40 RT

DETAIL N
SPECIAL CUT BASE DITCH
(Not to Scale)



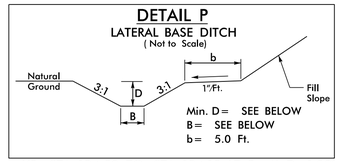
–L– STA. 107+72 TO STA. 109+00 LT, D=1.0'

DETAIL O
SPECIAL LATERAL BASE DITCH
(Not to Scale)



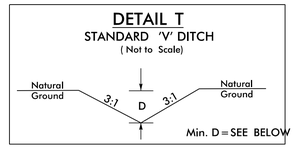
–L– STA. 192+74 TO STA. 195+45 LT, B=7', D=2.0'
–Y4– STA. 42+00 TO STA. 61+50 RT, B=4', D=3.5'
–Y4– STA. 61+50 TO STA. 64+64 RT, B=4', D=2.75'
–LSBREV– STA. 51+50 TO STA. 53+50 LT, B=11', D=1.75'

DETAIL P
LATERAL BASE DITCH
(Not to Scale)



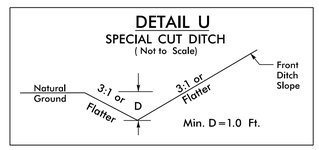
–Y3– STA. 18+50 TO STA. 19+15 LT, B=4', D=1.00'
–L– STA. 128+00 TO STA. 129+00 RT, B=4', D=1.00'
–Y5– STA. 65+00 TO STA. 68+50 LT, B=4', D=1.00'

DETAIL T
STANDARD 'V' DITCH
(Not to Scale)



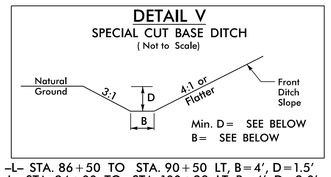
–Y5LPA– STA. 18+75, L=50', S=4.8%, D=1.0'
BEG. ELEV=144.45, END ELEV=142.05, M=3
–L– STA. 186+00 RT, L=200', S=0.3%, D=2.5'
BEG. ELEV=125.00, END ELEV=124.40'
–SR5C_DET– STA. 13+10 TO STA. 14+00, L=90', S=0.02%, D=1.0'
BEG. ELEV=140.43, END ELEV=140.41
–Y1NB– STA. 44+50, L=53', S=0.8%, D=1.5'
BEG. ELEV=119.98, END ELEV=119.56, M=3.5

DETAIL U
SPECIAL CUT DITCH
(Not to Scale)



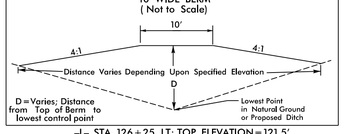
–L– STA. 102+12 TO STA. 103+00 LT
–L– STA. 111+00 TO STA. 112+50 RT
–L– STA. 113+81 TO STA. 118+50 LT
–L– STA. 131+50 TO STA. 132+50 RT
–L– STA. 169+00 TO STA. 173+00 LT
–L– STA. 232+50 TO STA. 241+50 RT

DETAIL V
SPECIAL CUT BASE DITCH
(Not to Scale)



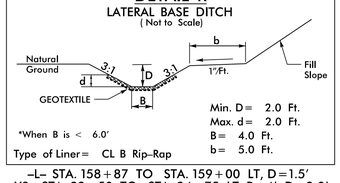
–L– STA. 86+50 TO STA. 90+50 LT, B=4', D=1.5'
–L– STA. 94+00 TO STA. 100+28 LT, B=4', D=2.0'
–L– STA. 100+28 TO STA. 102+12 LT, B=4', D=1.0'
–L– STA. 109+00 TO STA. 113+81 LT, B=4', D=1.5'
–L– STA. 195+45 TO STA. 199+55 LT, B=7', D=1.0'

DETAIL Q
10' WIDE BERM
(Not to Scale)



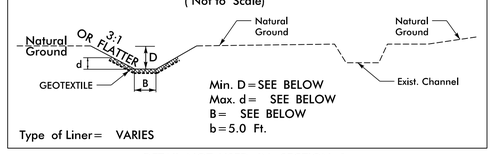
–L– STA. 126+25 LT; TOP ELEVATION=121.5'
–L– STA. 138+00 LT; TOP ELEVATION=128.5'
–L– STA. 154+50 LT; TOP ELEVATION=132.0'
–LSBREV– 97+00 TO 98+50 RT (TOP WIDTH VARIES), TOP ELEV=111.0'

DETAIL R
LATERAL BASE DITCH
(Not to Scale)



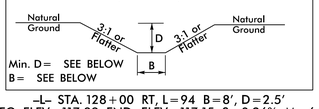
–L– STA. 158+87 TO STA. 159+00 LT, D=1.5'
–Y3– STA. 22+50 TO STA. 24+75 LT, B=4', D=2.0'

DETAIL S
CHANNEL CHANGE
(Not to Scale)



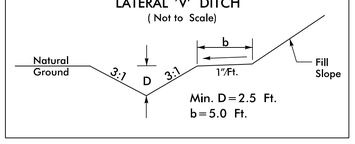
DETAIL NOT USED IN SECTION 1

DETAIL W
STANDARD BASE DITCH
(Not to Scale)



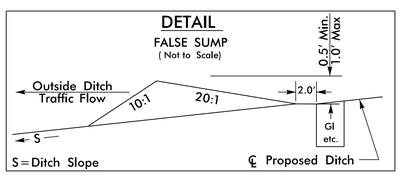
–L– STA. 128+00 RT, L=94 B=8', D=2.5'
BEG. ELEV=117.39 END ELEV=117.15, S=0.26%, M=6.0
–L– STA. 138+50 RT, L=41, B=6', D=2.0'
BEG. ELEV=122.78 END ELEV=122.45, S=0.80%, M=6.0
–L– STA. 113+81 RT, L=35, B=3', D=2.0'
BEG. ELEV=122.50 END ELEV=122.36, S=0.40%, M=3.0
–L– STA. 100+28 RT, L=22, B=6', D=2.5'
BEG. ELEV=121.50 END ELEV=121.43, S=0.33%, M=6.0
–L– STA. 107+72 RT, L= 70, B=3', D=2.0'
BEG. ELEV=120.09 END ELEV=120.30, S=0.30%, M=6.0
–L– STA. 121+12 RT, L=54', B=3', D=3.0'
BEG. ELEV=115.95 END ELEV=115.80, S=0.28%, M=5.5
–L– STA. 160+29 RT, L= 69, B=12', D=3.0',
BEG. ELEV=124.74 END ELEV=124.63, S=0.16%, M=3.0
–Y5– STA. 104+47 TO STA. 106+50 LT, B=10', D=2.25'
BEG. ELEV=126.60, END ELEV=127.08, S=0.24%, M=3.0
–L– STA. 215+50 LT, L=76', B=4', D=1.25'
BEG. ELEV–=127.55, END ELEV=127.30, S=0.33%, M=3.0
–LNBREV– STA. 107+10 TO STA. 107+71 RT, B=4', D=1.25'
BEG. ELEV=113.08, END ELEV=112.90, S=0.3%, M=3.0
–LNBREV– STA. 107+71 TO STA. 108+52 RT, B=4', D=1.0'
BEG. ELEV=112.90, END ELEV=115.18, S=2.9%, M=3.0

DETAIL X
LATERAL 'V' DITCH
(Not to Scale)

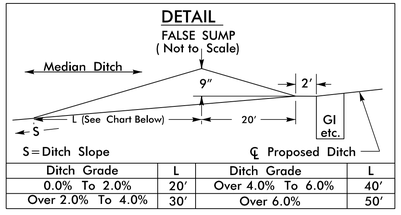


DETAIL NOT USED IN SECTION 1

DETAIL
FALSE SUMP
(Not to Scale)

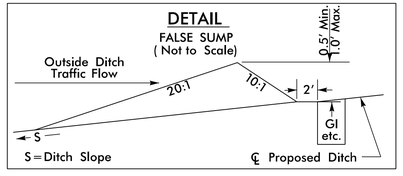


DETAIL
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL
FALSE SUMP
(Not to Scale)



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aburke

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	2D-2

HYDRAULICS DESIGN ENGINEER

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PERMIT DRAWING SHEET 3 OF 163

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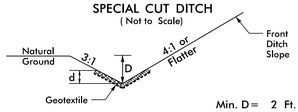
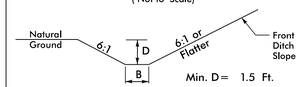
DETAIL Y
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 2 Ft.
Max. d = 2 Ft.
Type of Liner = CL B Rip-Rap

–LSBREV– STA. 128+50 TO STA. 129+50 LT

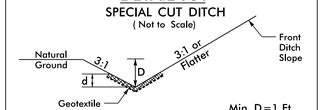
DETAIL Z
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 6 Ft.

DETAIL NOT USED IN SECTION 1

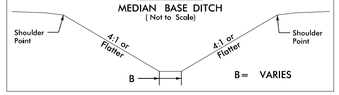
DETAIL AA
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 1 Ft.
Max. d = 1 Ft.
Type of Liner = CL B Rip-Rap

–Y5FLY– STA. 80+14.68 TO STA. 82+33.14

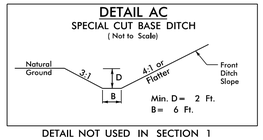
DETAIL AB
MEDIAN BASE DITCH
(Not to Scale)



B = VARIES

DETAIL NOT USED IN SECTION 1

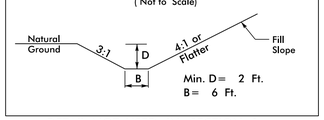
DETAIL AC
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D = 2 Ft.
B = 6 Ft.

DETAIL NOT USED IN SECTION 1

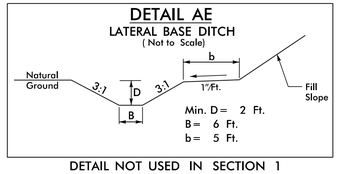
DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 2 Ft.
B = 6 Ft.

DETAIL NOT USED IN SECTION 1

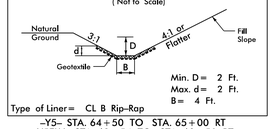
DETAIL AE
LATERAL BASE DITCH
(Not to Scale)



Min. D = 2 Ft.
B = 6 Ft.
b = 5 Ft.

DETAIL NOT USED IN SECTION 1

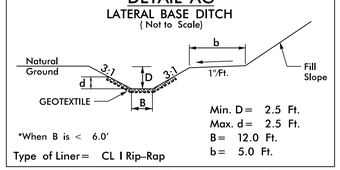
DETAIL AF
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 2 Ft.
Max. d = 2 Ft.
B = 4 Ft.
Type of Liner = CL B Rip-Rap

–Y5– STA. 64+50 TO STA. 65+00 RT
–Y5FLY– STA. 62+54 TO STA. 63+50 RT

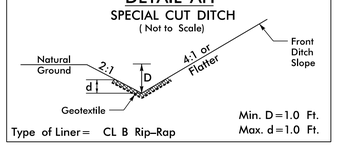
DETAIL AG
LATERAL BASE DITCH
(Not to Scale)



Min. D = 2.5 Ft.
Max. d = 2.5 Ft.
B = 12.0 Ft.
b = 5.0 Ft.
*When B is < 6.0'
Type of Liner = CL I Rip-Rap

DETAIL NOT USED IN SECTION 1

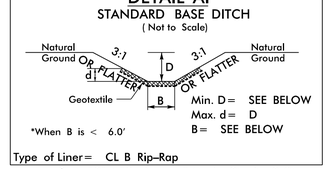
DETAIL AH
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
Type of Liner = CL B Rip-Rap

DETAIL NOT USED IN SECTION 1

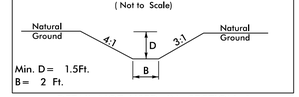
DETAIL AI
STANDARD BASE DITCH
(Not to Scale)



Min. D = SEE BELOW
Max. d = D
B = SEE BELOW
*When B is < 6.0'
Type of Liner = CL B Rip-Rap

–L– STA. 121+12 RT, L=54', B=3', D=3.0'
BEG. ELEV=115.95 END ELEV=115.80, S=0.28%, M=5.5
–Y1SB– STA. 18+56 TO 21+90 RT, L=334' B=4', D=2.5'
BEG. ELEV=119.34 END ELEV=115.4, S=1.2% M=3.0

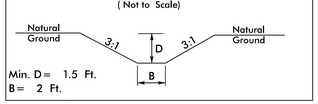
DETAIL AJ
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.5Ft.
B = 2 Ft.

DETAIL NOT USED IN SECTION 1

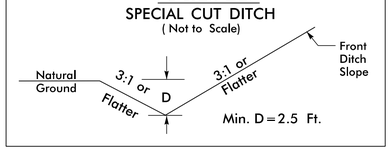
DETAIL AK
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.

DETAIL NOT USED IN SECTION 1

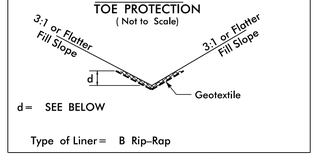
DETAIL AL
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 2.5 Ft.

DETAIL NOT USED IN SECTION 1

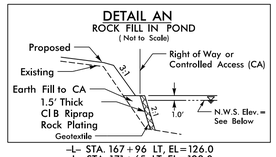
DETAIL AM
TOE PROTECTION
(Not to Scale)



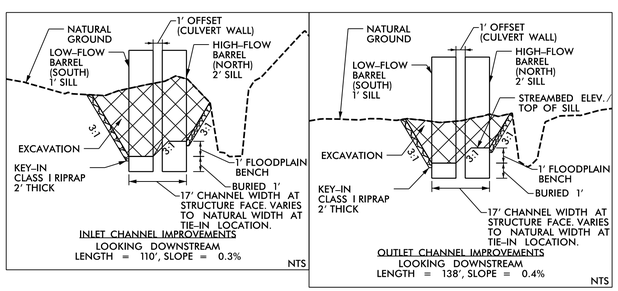
d = SEE BELOW
Type of Liner = B Rip-Rap

DETAIL NOT USED IN SECTION 1

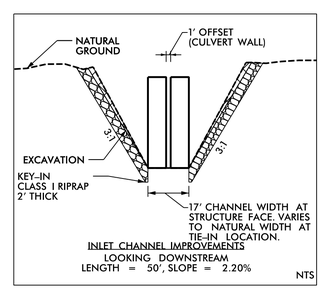
DETAIL AN
ROCK FILL IN POND
(Not to Scale)



–L– STA. 167+96 LT, EL=126.0
–L– STA. 171+65 LT, EL=128.0



CULVERT INLET AND OUTLET DETAILS
–L– STA 252+34.5



CULVERT INLET DETAIL
–Y5– STA 45+24

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SHEET 3A OF 163

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I-5986A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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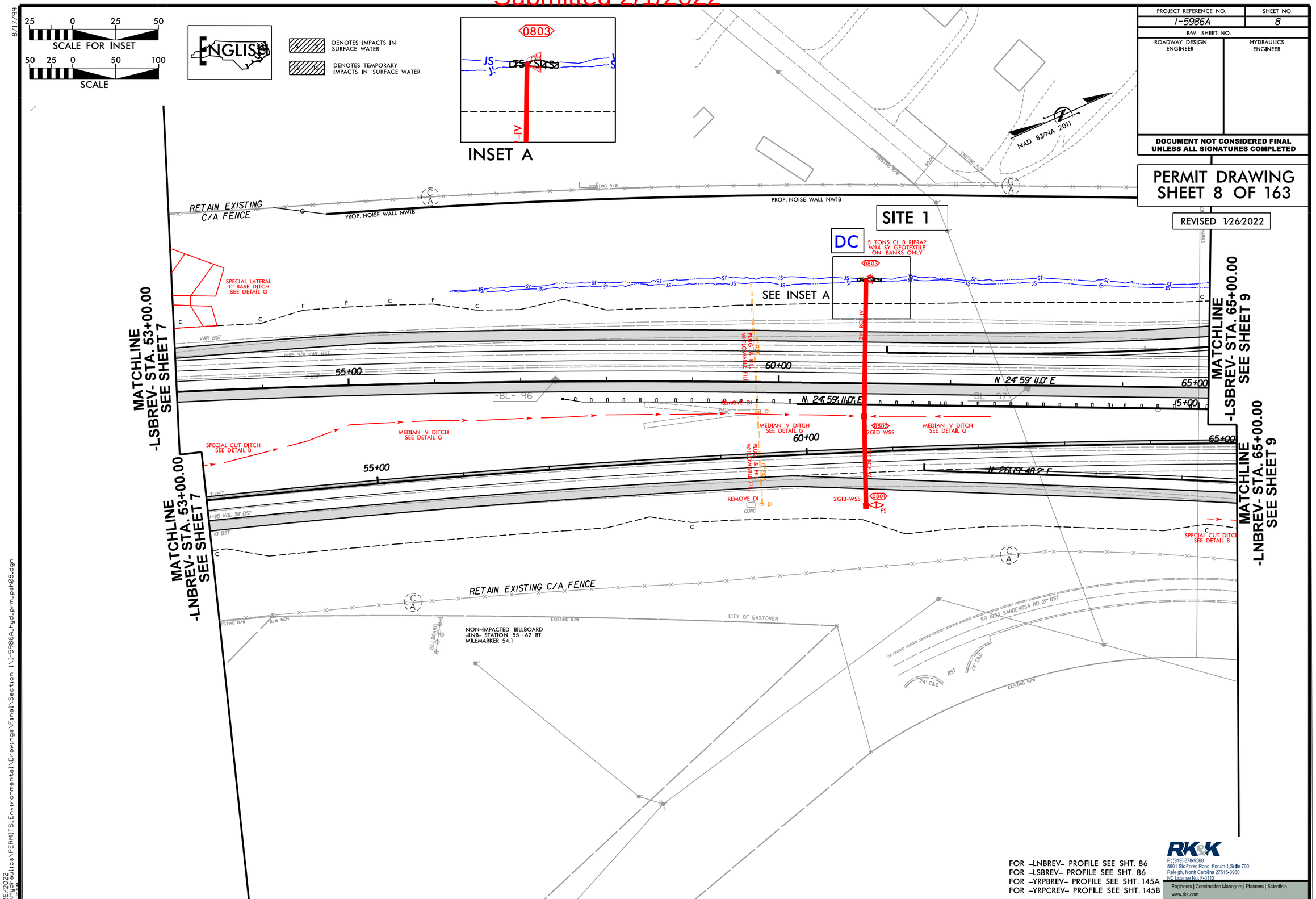
SCALE FOR INSET: 25 0 25 50

SCALE: 50 25 0 50 100

ENGLISH

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



FOR -LNBREV- PROFILE SEE SHT. 86
FOR -LSBREV- PROFILE SEE SHT. 86
FOR -YRPBREV- PROFILE SEE SHT. 145A
FOR -YRPCREV- PROFILE SEE SHT. 145B
FOR DITCH DETAILS SEE SHTS. 2D-1 THRU 2D-2

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I-5986A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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SHEET 9 OF 163

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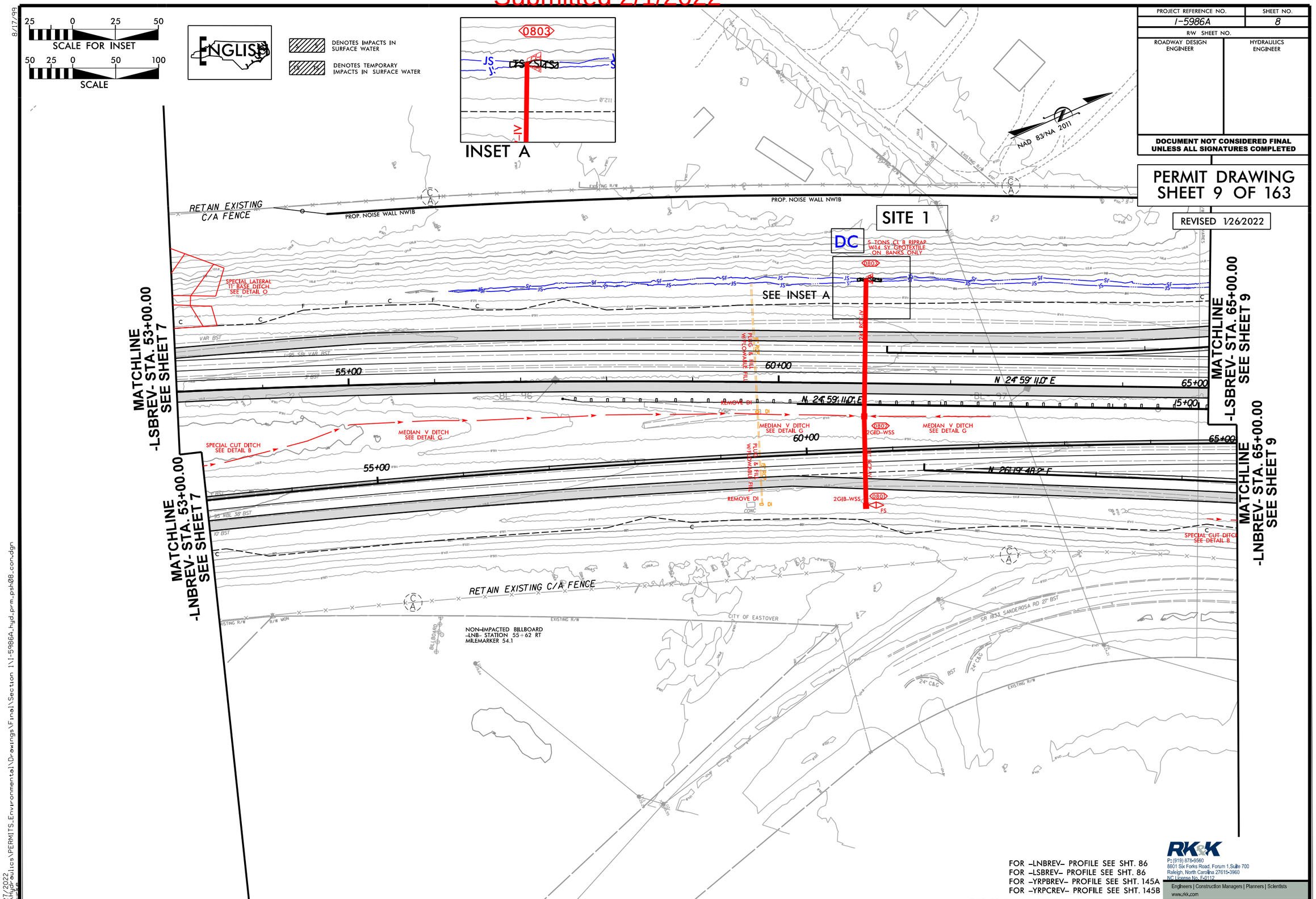
25 0 25 50
SCALE FOR INSET

50 25 0 50 100
SCALE

ENGLISH

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



FOR -LNBREV- PROFILE SEE SHT. 86
FOR -LSBREV- PROFILE SEE SHT. 86
FOR -YRPBREV- PROFILE SEE SHT. 145A
FOR -YRPCREV- PROFILE SEE SHT. 145B
FOR DITCH DETAILS SEE SHTS. 2D-1 THRU 2D-2

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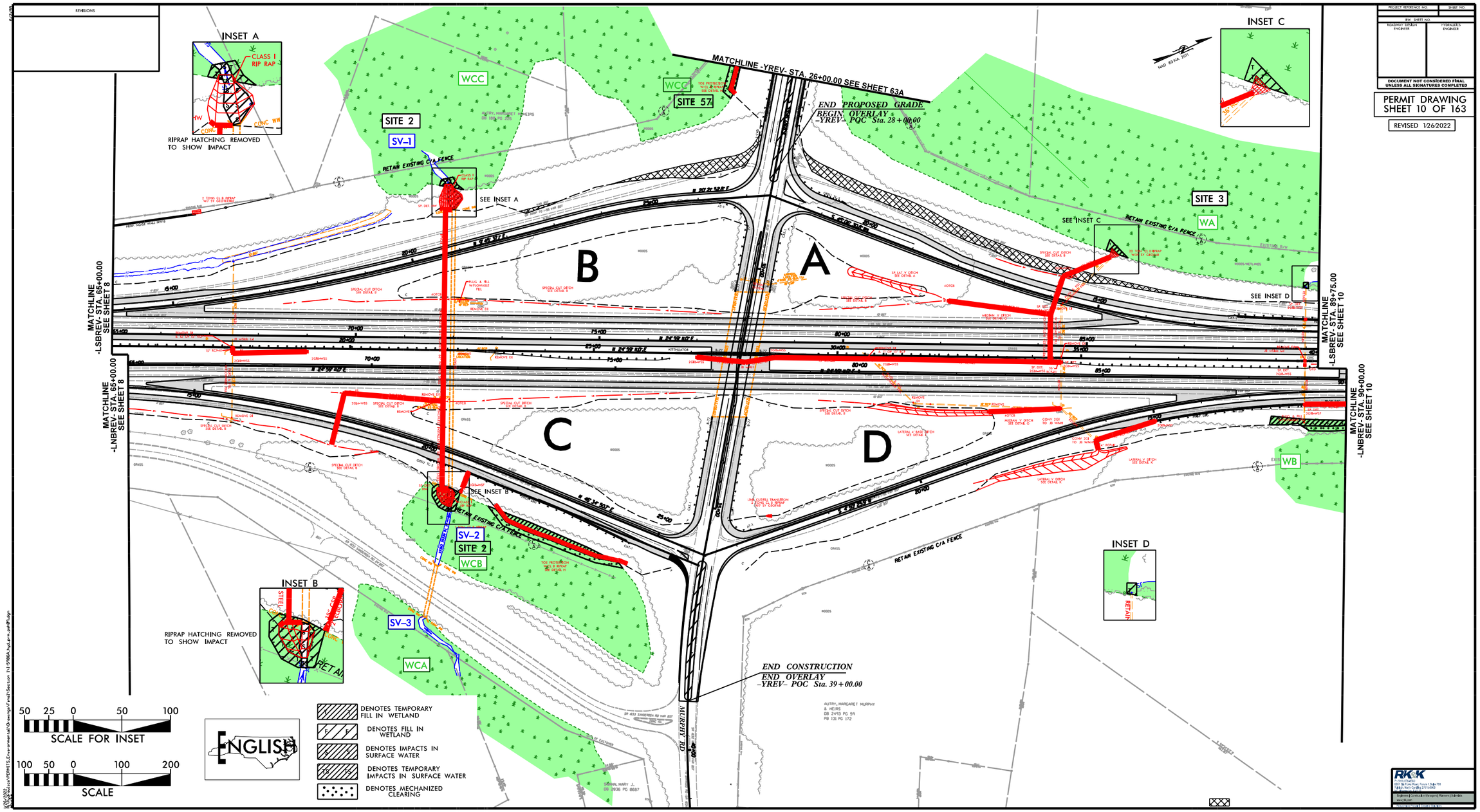

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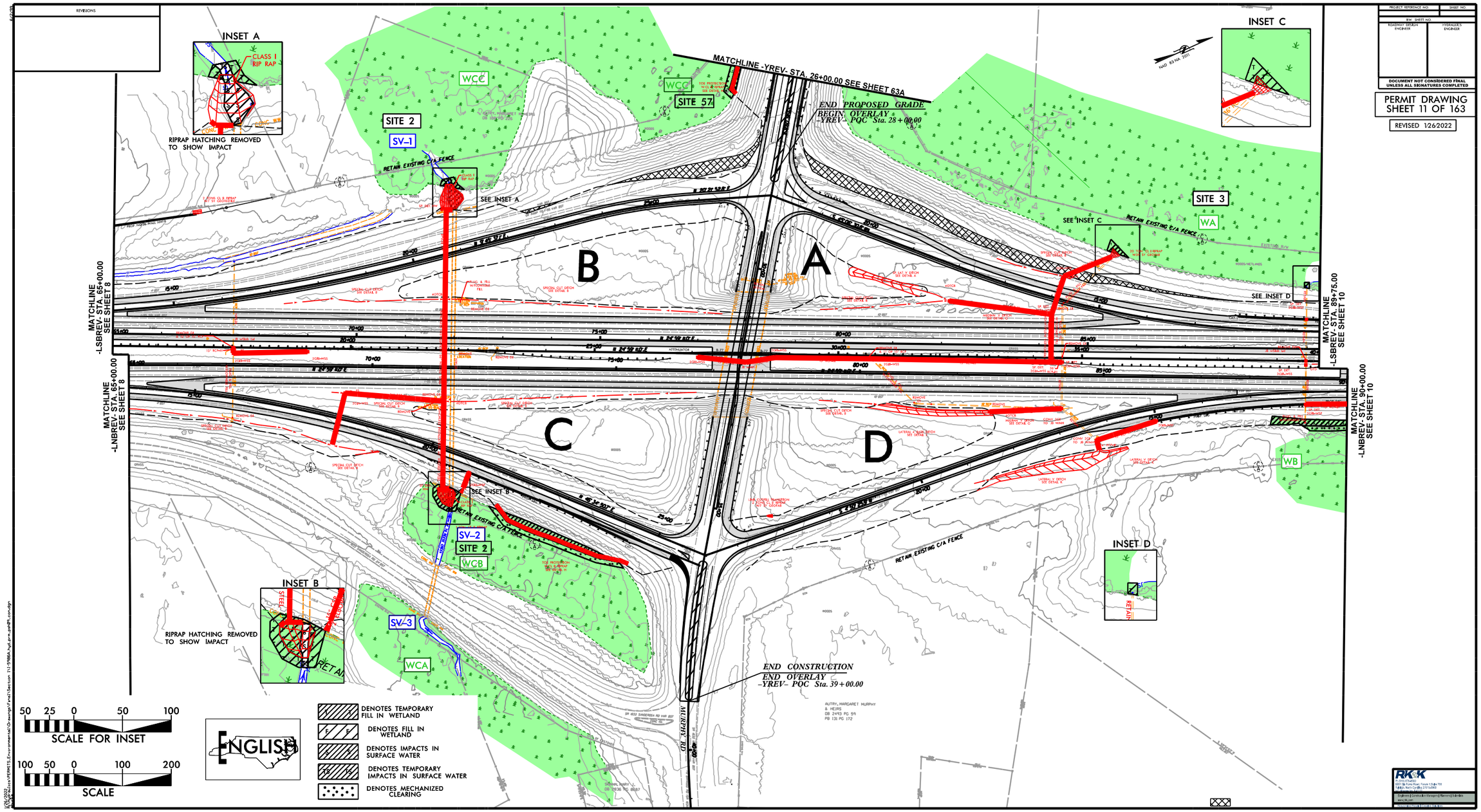

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE 2
–LSBREV– STA. 71+98

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SHEET 12 OF 163

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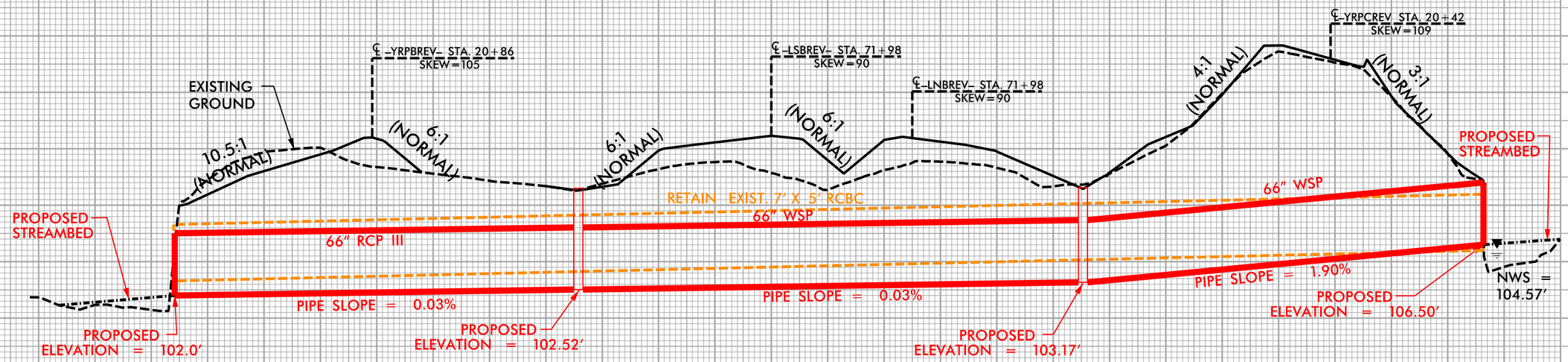

TRENCHLESS INSTALLATION 66" WELDED STEEL AND 66" RCP–III
(not buried)
(length=569')

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SHEET 13 OF 163

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I-5986A	Reese X-21

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SHEET 14 OF 163

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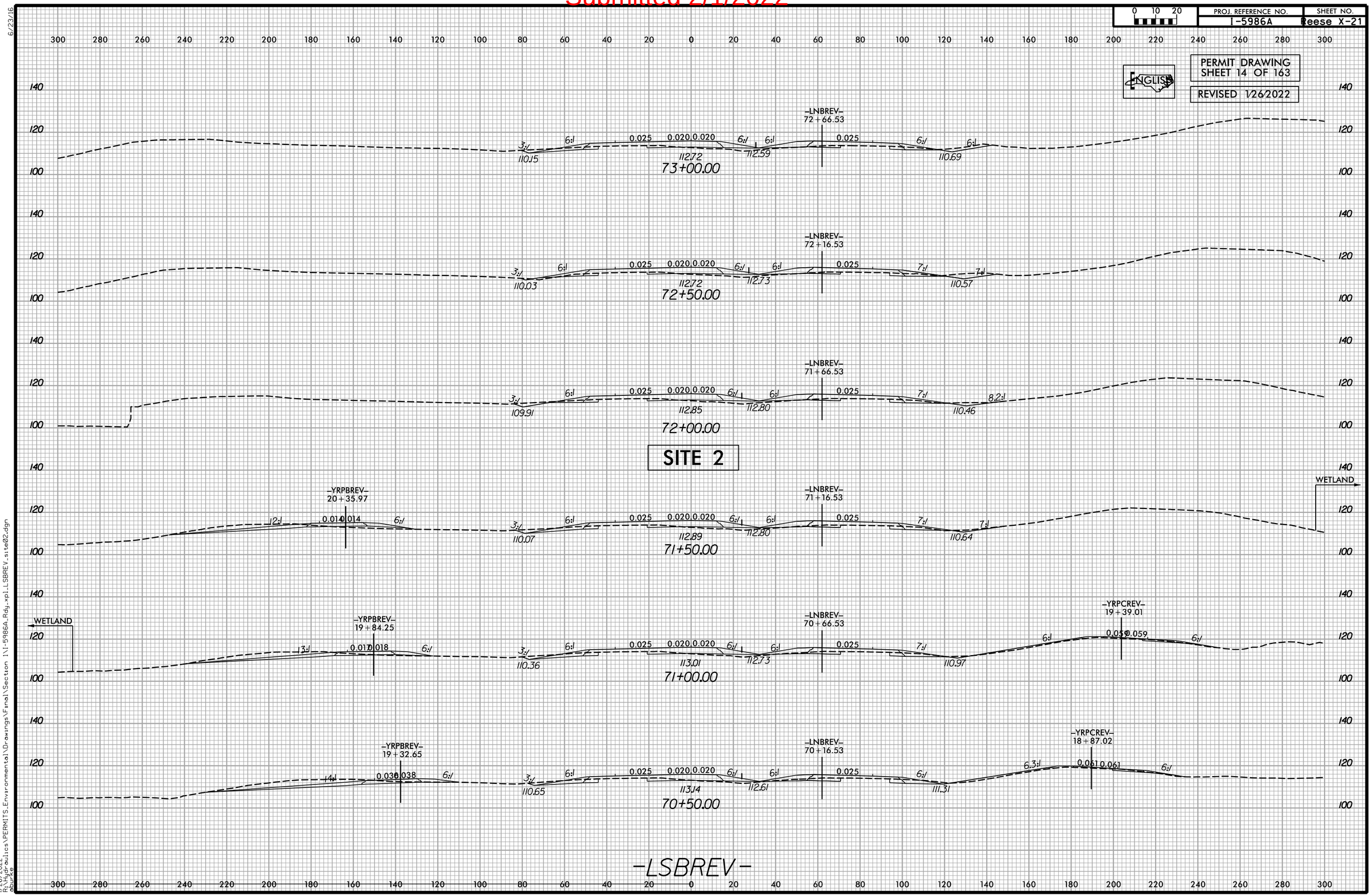

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chrisje

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6/23/16

0 10 20	PROJ. REFERENCE NO.	SHEET NO.
	I-5986A	Reese X-26

SITE 3

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SHEET 14A OF 163

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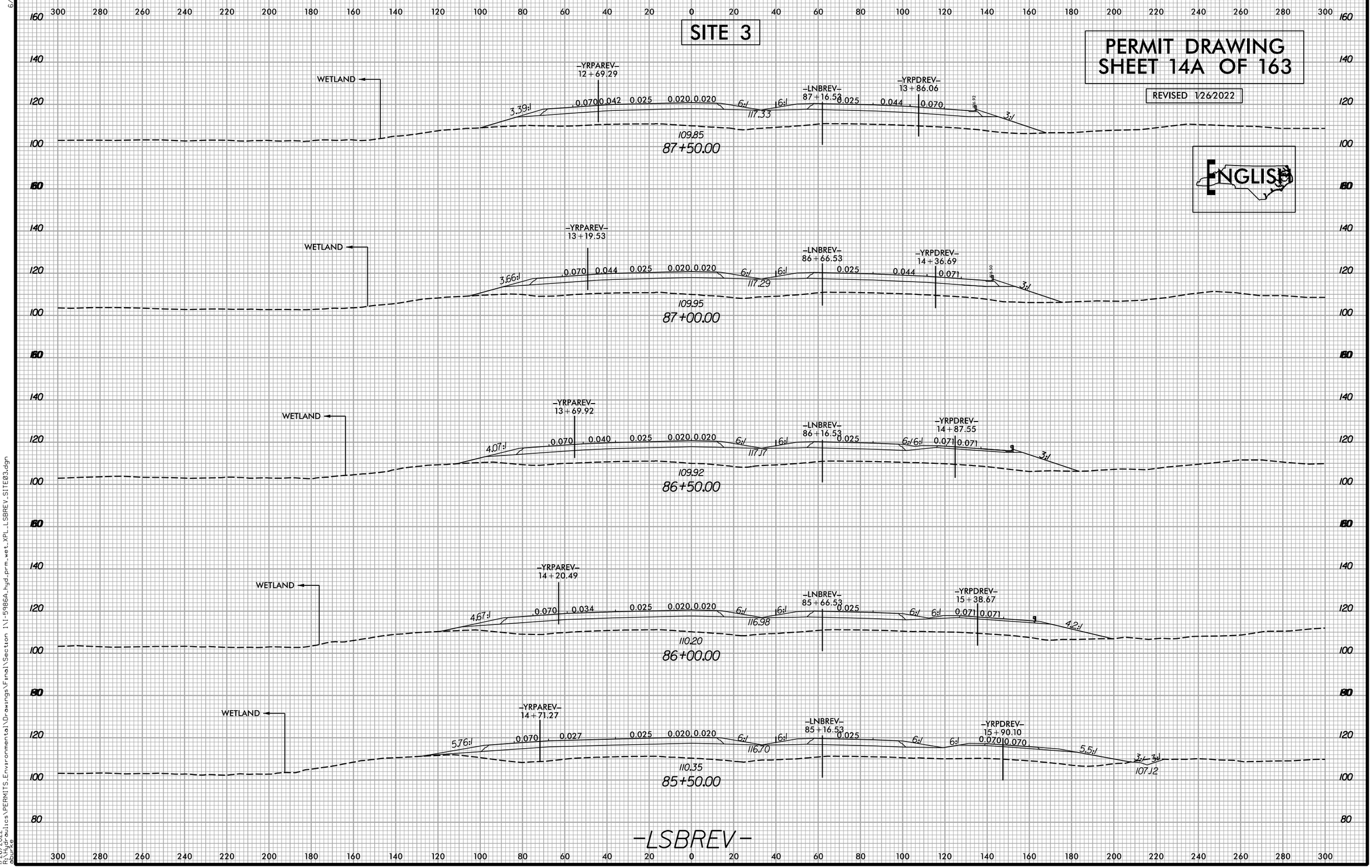
ENGLISH



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obunge

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0 10 20	PROJ. REFERENCE NO.	SHEET NO.
	I-5986A	Reese X-28

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SHEET 15 OF 163

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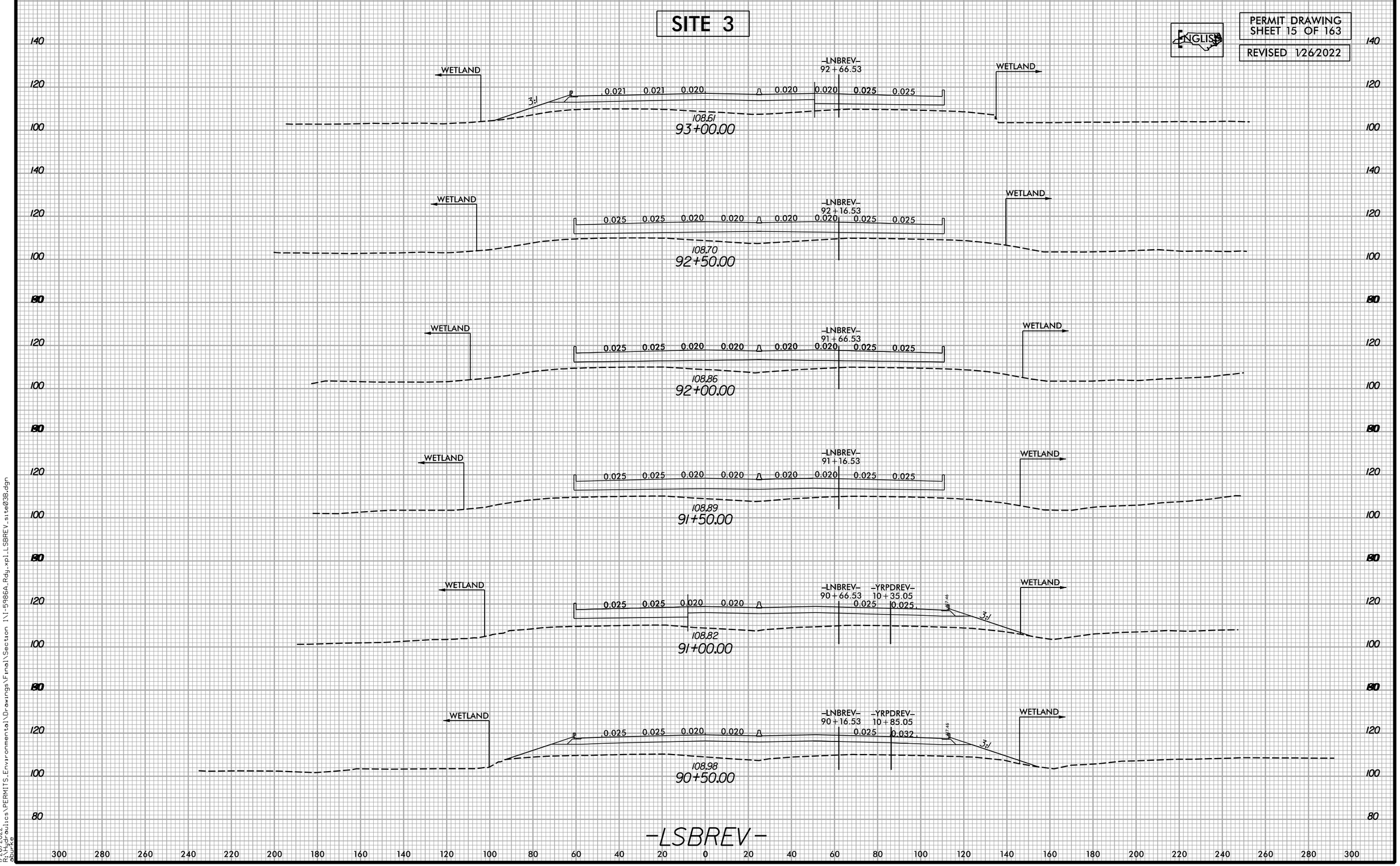
SITE 3



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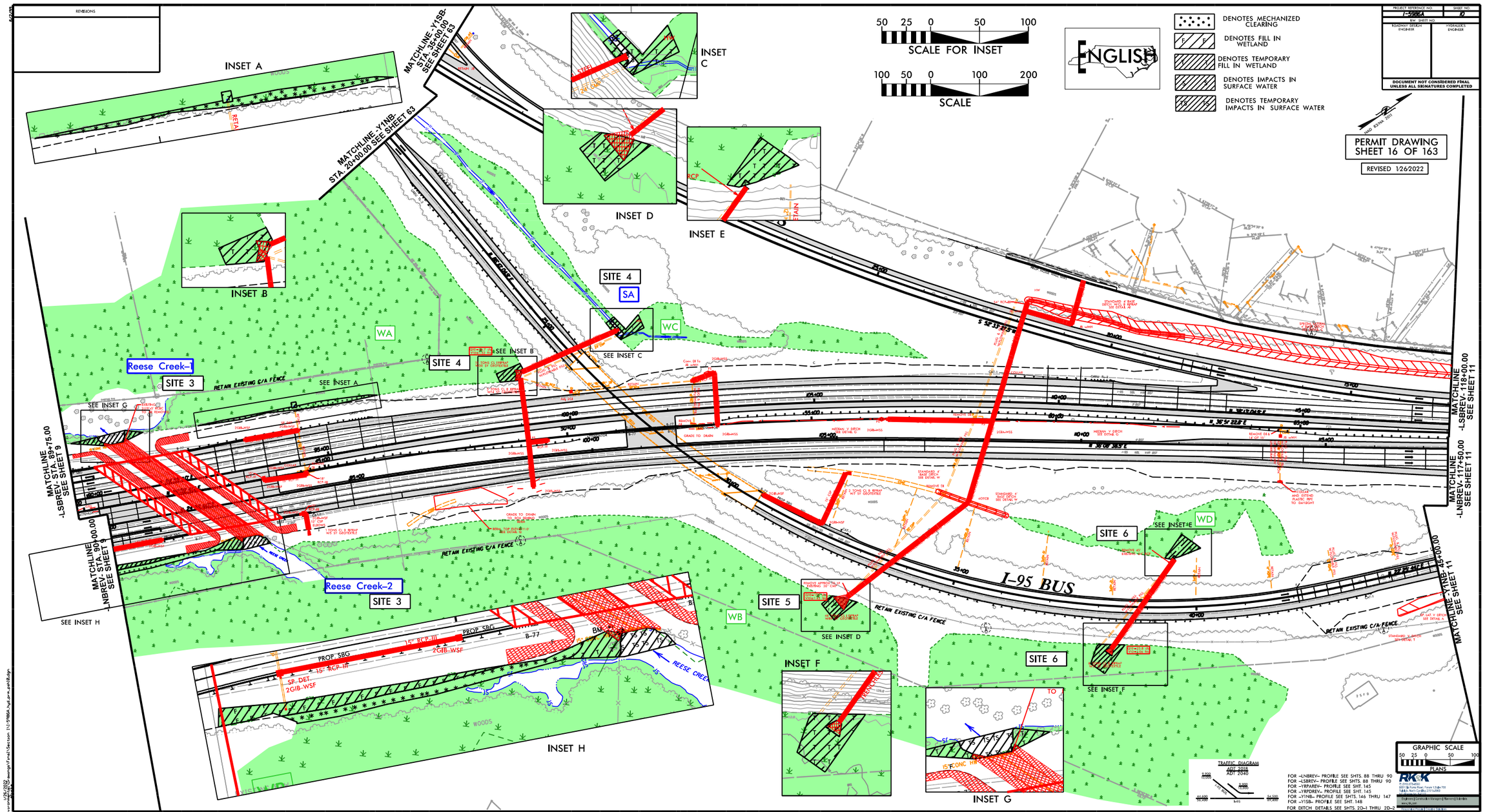

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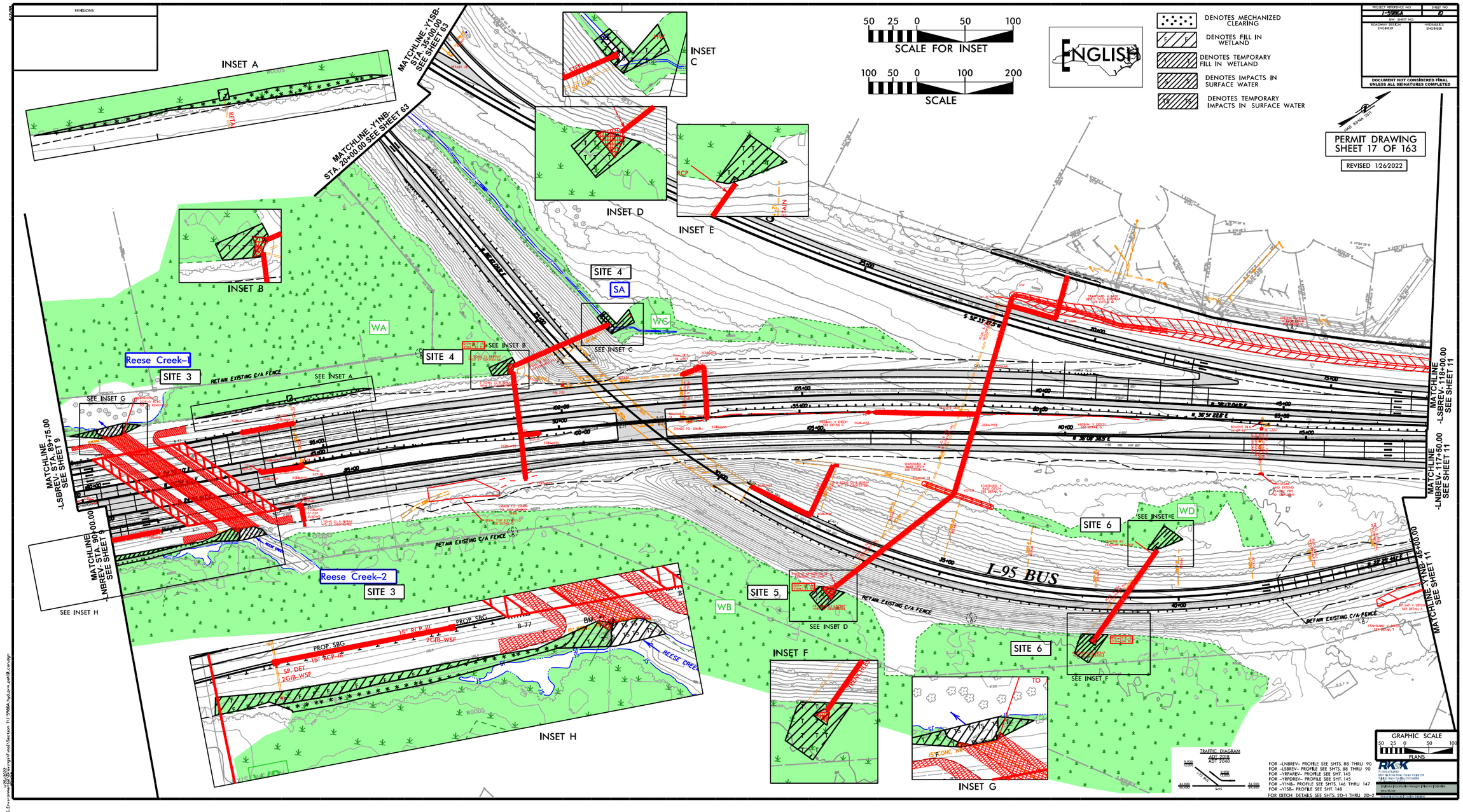

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	88
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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ENGLISH

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SHEET 17A OF 163

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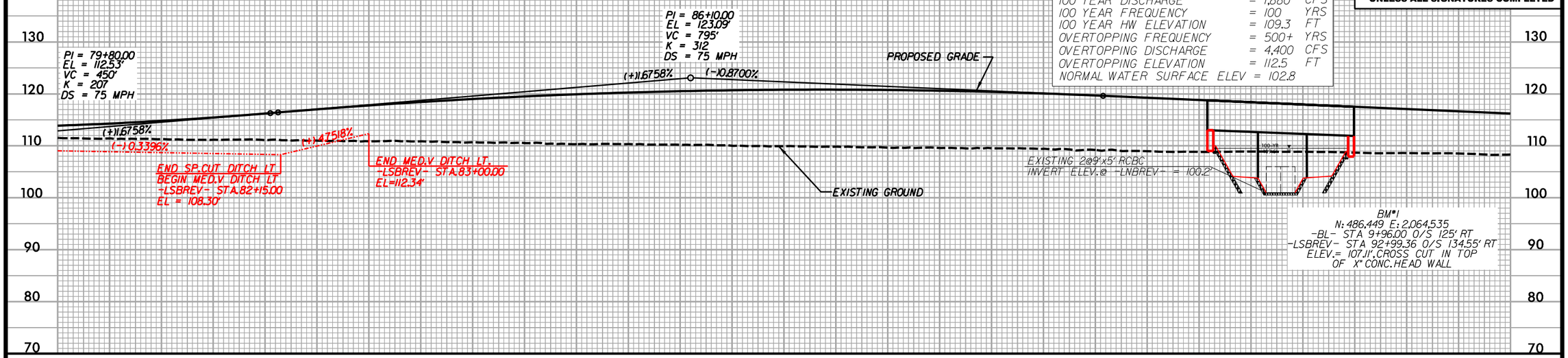
SITE 03

-LSBREV-

BRIDGE HYDRAULIC DATA
Sta. 91+75 -LSBREV-

DESIGN FREQUENCY	= 100	YRS
DESIGN DISCHARGE	= 1,880	CFS
DESIGN HW ELEVATION	= 109.3	FT
100 YEAR DISCHARGE	= 1,880	CFS
100 YEAR FREQUENCY	= 100	YRS
100 YEAR HW ELEVATION	= 109.3	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 4,400	CFS
OVERTOPPING ELEVATION	= 112.5	FT
NORMAL WATER SURFACE ELEV	= 102.8	

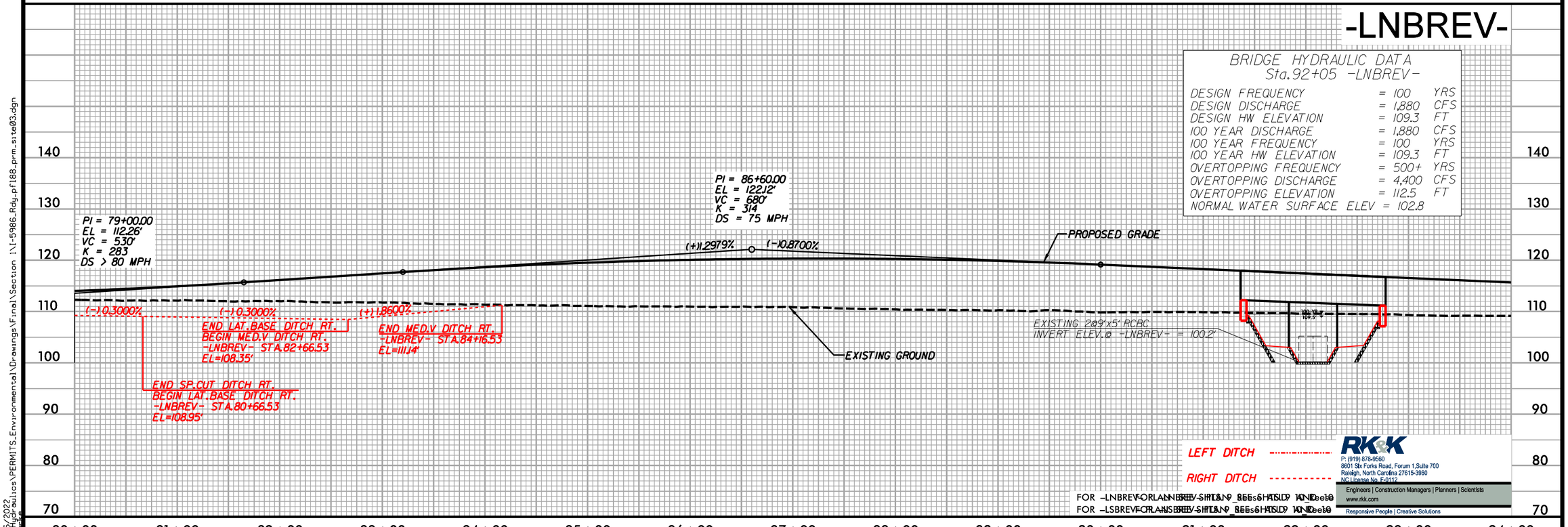


BM#1
N: 486,449 E: 2,064,535
-BL- STA 9+96.00 O/S 125' RT
-LSBREV- STA 92+99.36 O/S 134.55' RT
ELEV.= 107.11', CROSS CUT IN TOP
OF X" CONC. HEAD WALL

-LNBREV-

BRIDGE HYDRAULIC DATA
Sta. 92+05 -LNBREV-

DESIGN FREQUENCY	= 100	YRS
DESIGN DISCHARGE	= 1,880	CFS
DESIGN HW ELEVATION	= 109.3	FT
100 YEAR DISCHARGE	= 1,880	CFS
100 YEAR FREQUENCY	= 100	YRS
100 YEAR HW ELEVATION	= 109.3	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 4,400	CFS
OVERTOPPING ELEVATION	= 112.5	FT
NORMAL WATER SURFACE ELEV	= 102.8	



LEFT DITCH
RIGHT DITCH

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FOR -LNBREV- SEE SHTS. 9 & 10
FOR -LSBREV- SEE SHTS. 9 & 10

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1/26/2022
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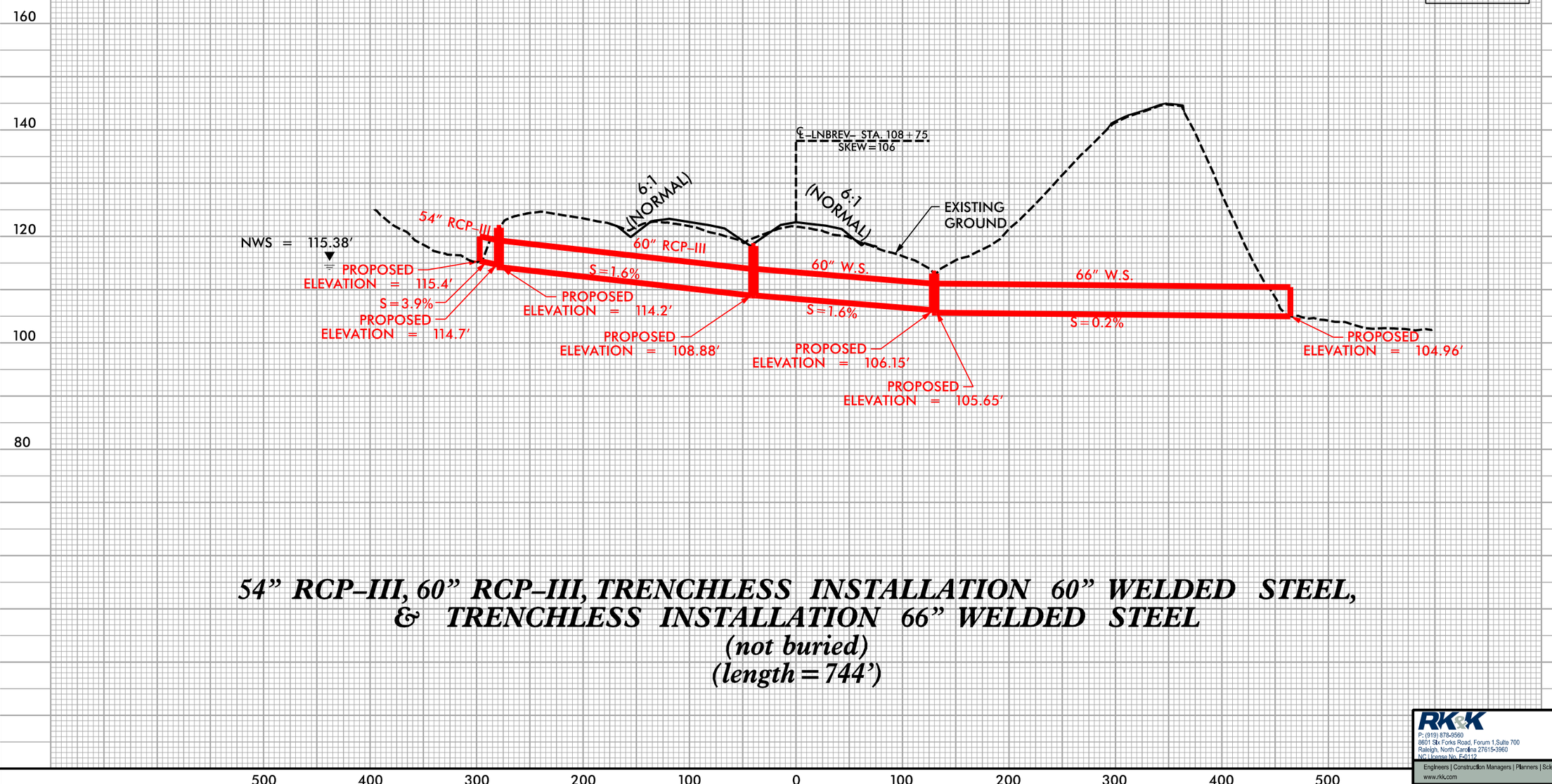
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE 5
–LNBREV– STA. 108 + 75

PERMIT DRAWING
SHEET 18 OF 163

REVISED 1/26/2022

ENGLISH



54" RCP–III, 60" RCP–III, TRENCHLESS INSTALLATION 60" WELDED STEEL, & TRENCHLESS INSTALLATION 66" WELDED STEEL

(not buried)

(length = 744')

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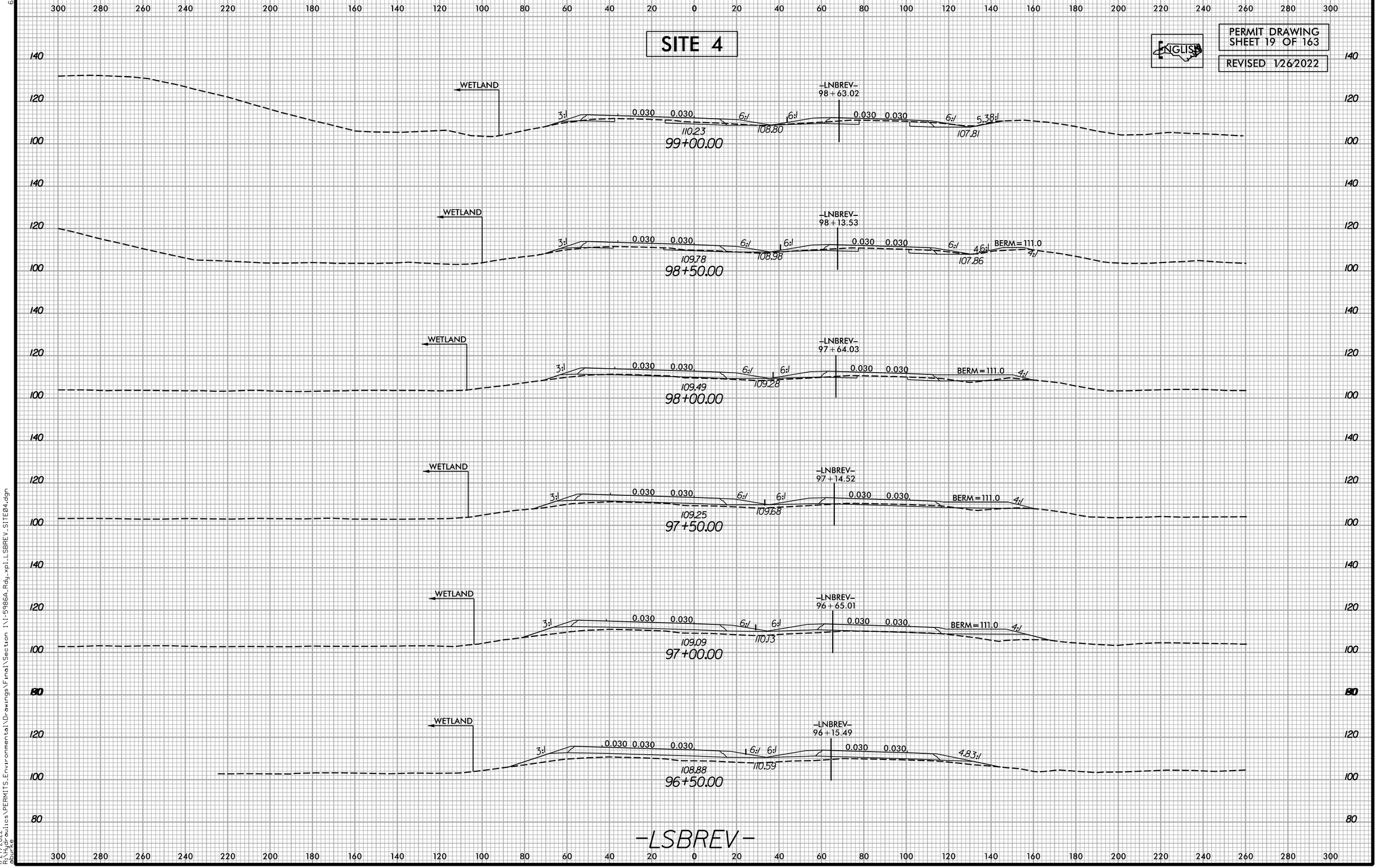
0 10 20	PROJ. REFERENCE NO.	SHEET NO.
	I-5986A	S1 X-36

SITE 4

PERMIT DRAWING
SHEET 19 OF 163

REVISED 1/26/2022



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obuckle

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 20 OF 163

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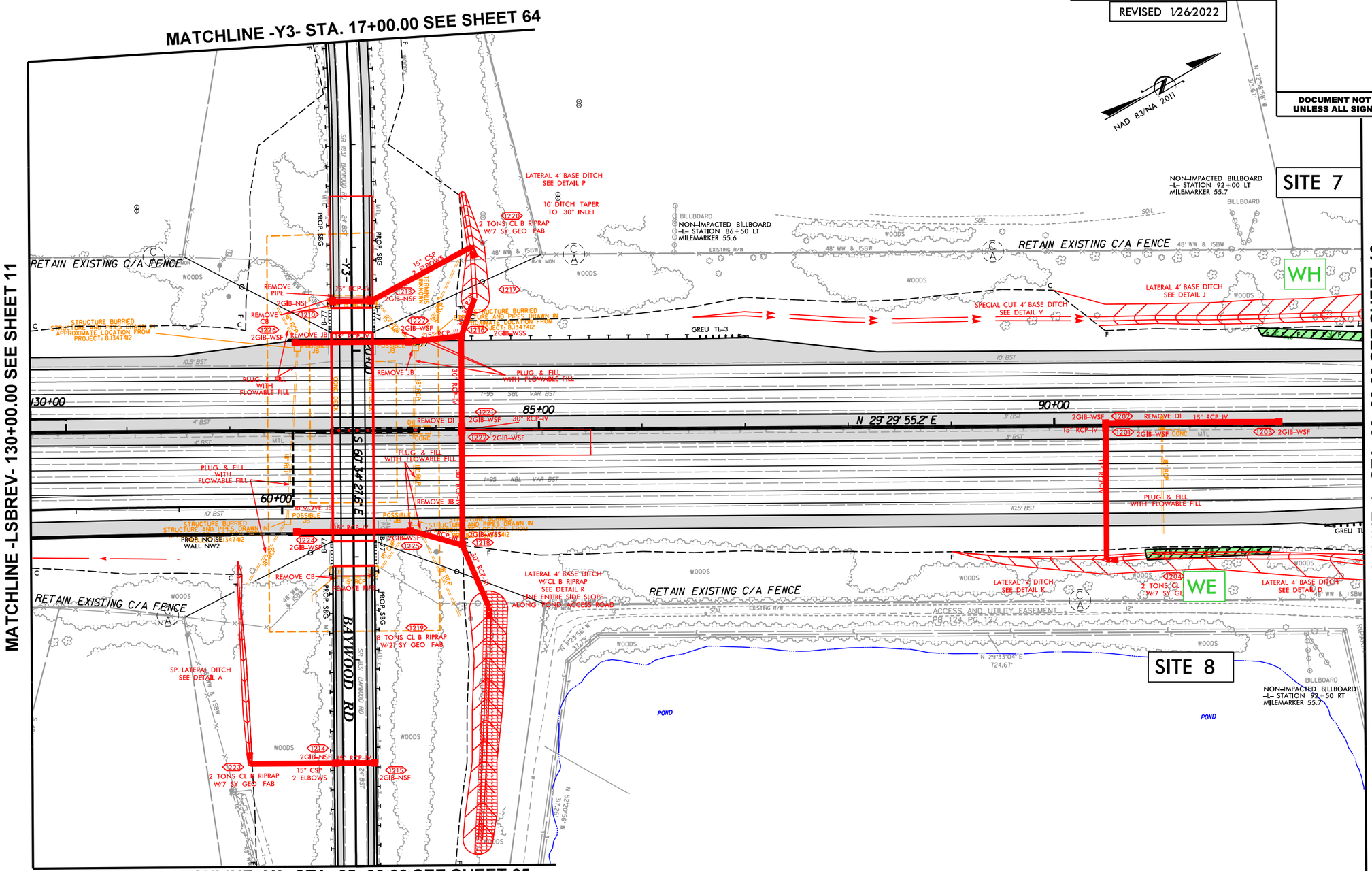

50 25 0 50 100
SCALE

ENGLISH

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

FOR –LSBREV– PROFILE SEE SHT. 91
FOR –LLT SEC1– PROFILE SEE SHT. 92
FOR –LRT SEC1– PROFILE SEE SHT. 92
FOR –Y1NB– PROFILE SEE SHT. 147
FOR –Y3– PROFILE SEE SHT. 149
FOR DITCH DETAILS SEE SHTS. 2D–1 THRU 2D–2

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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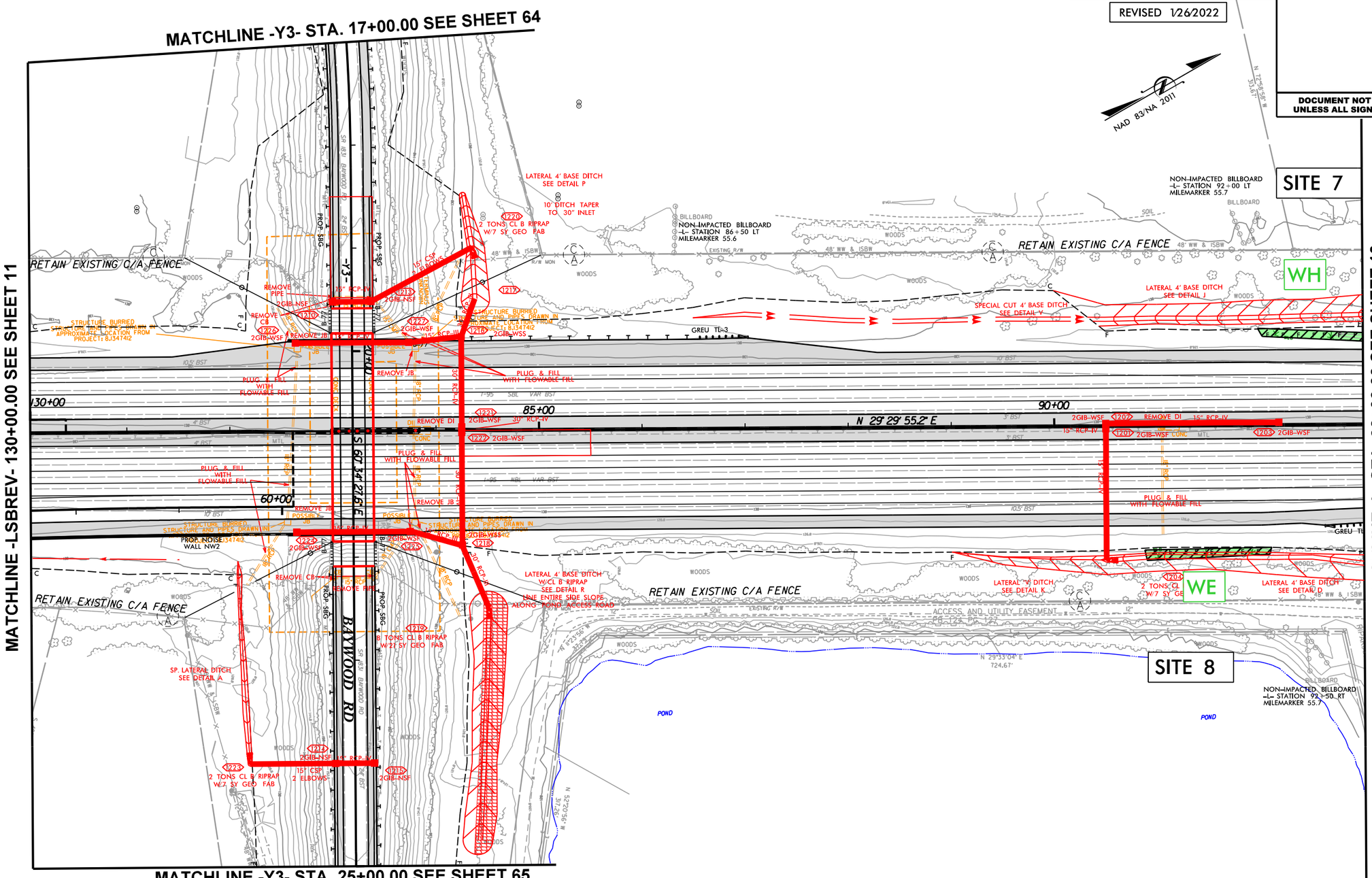
PERMIT DRAWING SHEET 21 OF 163

REVISED 1/26/2022



50 25 0 50 100
SCALE

ENGLISH

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

FOR –LSBREV– PROFILE SEE SHT. 91
FOR –LLT SEC1– PROFILE SEE SHT. 92
FOR –LRT SEC1– PROFILE SEE SHT. 92
FOR –Y1NB– PROFILE SEE SHT. 147
FOR –Y3– PROFILE SEE SHT. 149
FOR DITCH DETAILS SEE SHTS. 2D–1 THRU 2D–2

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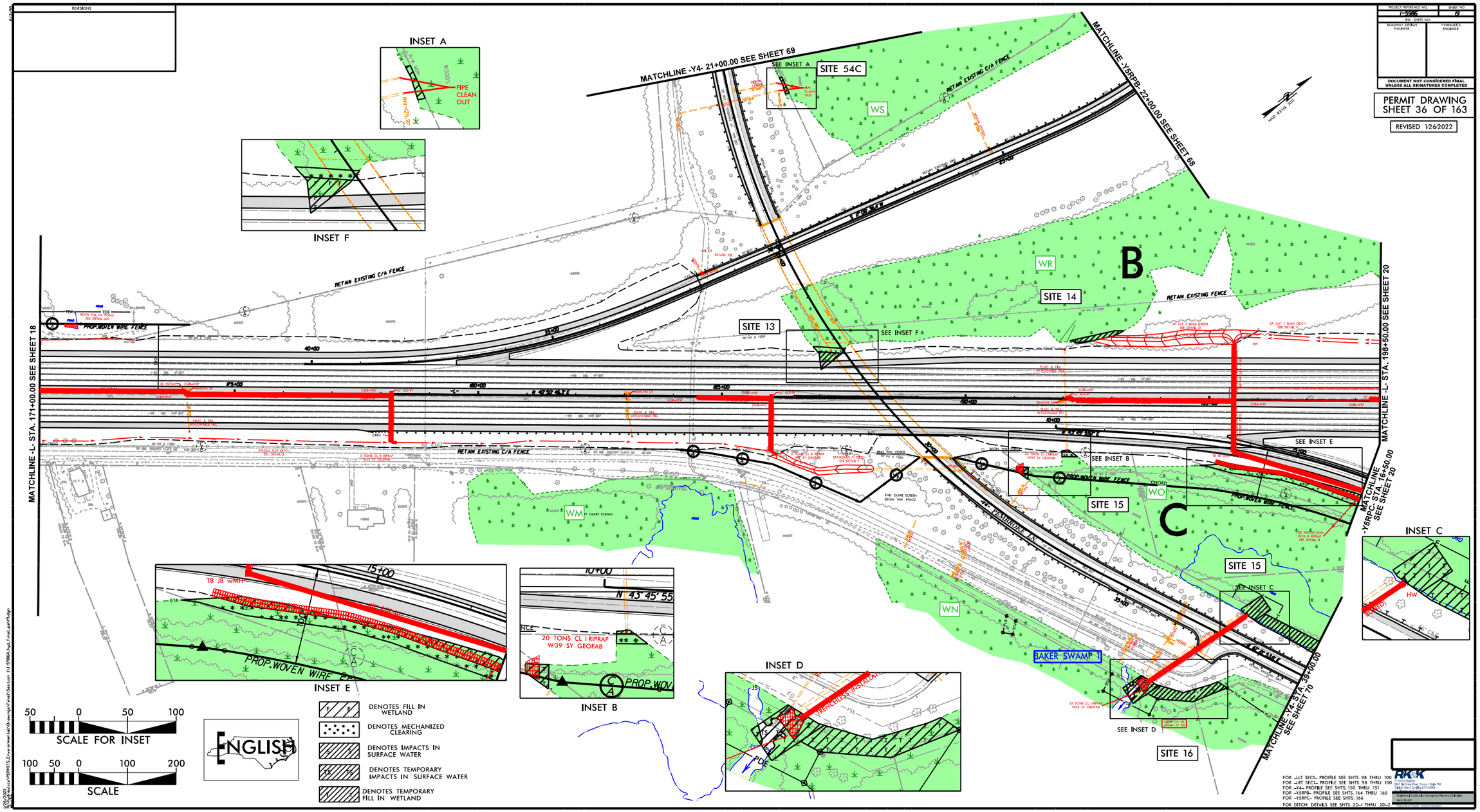
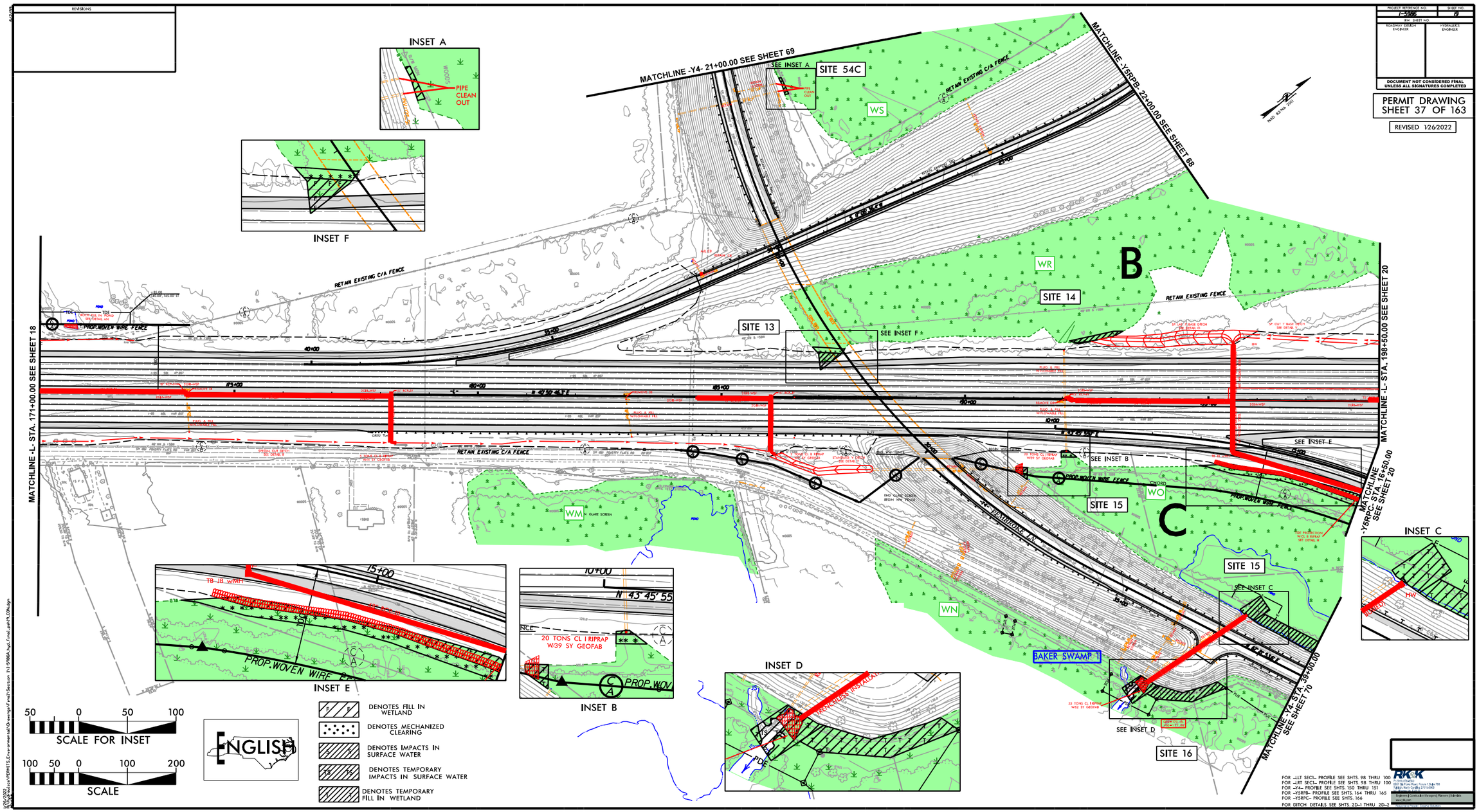


Submitted 2/1/2022



Submitted 2/1/2022

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 79 OF 163

REVISED 1/26/2022

50 25 0 50 100
SCALE

ENGLISH

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/NA 2011

MATCHLINE -L- STA. 428+00.00 SEE SHEET 35

MATCHLINE -L- STA. 442+00.00 SEE SHEET 37

SITE 30

WAL

PROP.WOVEN WIRE FENCE

SP. LAT BASE DITCH SEE DETAIL C

REMOVE EXISTING FENCE

PH

ROCK FILL IN POND SEE DETAIL AN

POND

SP. CUT BASE DITCH SEE DETAIL F

WAK

PLUG & FILL W/FLOWABLE FILL

REMOVE 10' OF 24" RCP

REMOVE 10' OF 18" RCP

REMOVE DI

2GIA-WSF

2GIB-WSF

24" RCP-IV

18" RCP-IV

15" RCP-IV

CONC PAVED DITCH

430+00

435+00

440+00

N 40° 50' 03.2" E

I-95 SBL 37' BST

I-95 NBL 37' BST

SEE DETAIL H

SP. CUT BASE DITCH SEE DETAIL Z

WAI

WAJ

PI

Q10=33.8 cfs
V10=2.00 ft/s

FOR -LLT_SEC2- PROFILE SEE SHTS. 117 THRU 118
FOR -LRT_SEC2- PROFILE SEE SHTS. 117 THRU 118
FOR DITCH DETAILS SEE SHTS. 2D-3 THRU 2D-4

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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PERMIT DRAWING SHEET 80 OF 163

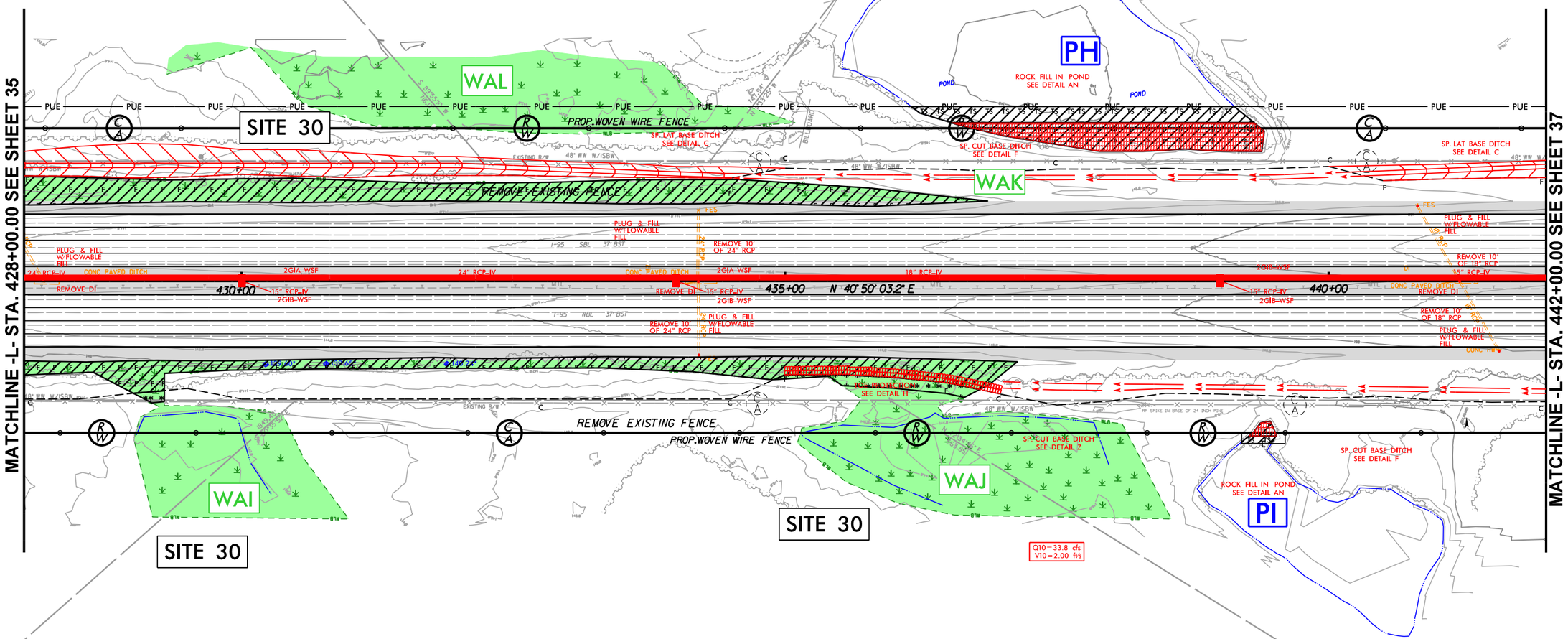
REVISED 1/26/2022

50 25 0 50 100
SCALE

ENGLISH

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/NA 2011



FOR –LLT_SEC2– PROFILE SEE SHTS. 117 THRU 118
FOR –LRT_SEC2– PROFILE SEE SHTS. 117 THRU 118
FOR DITCH DETAILS SEE SHTS. 2D–3 THRU 2D–4

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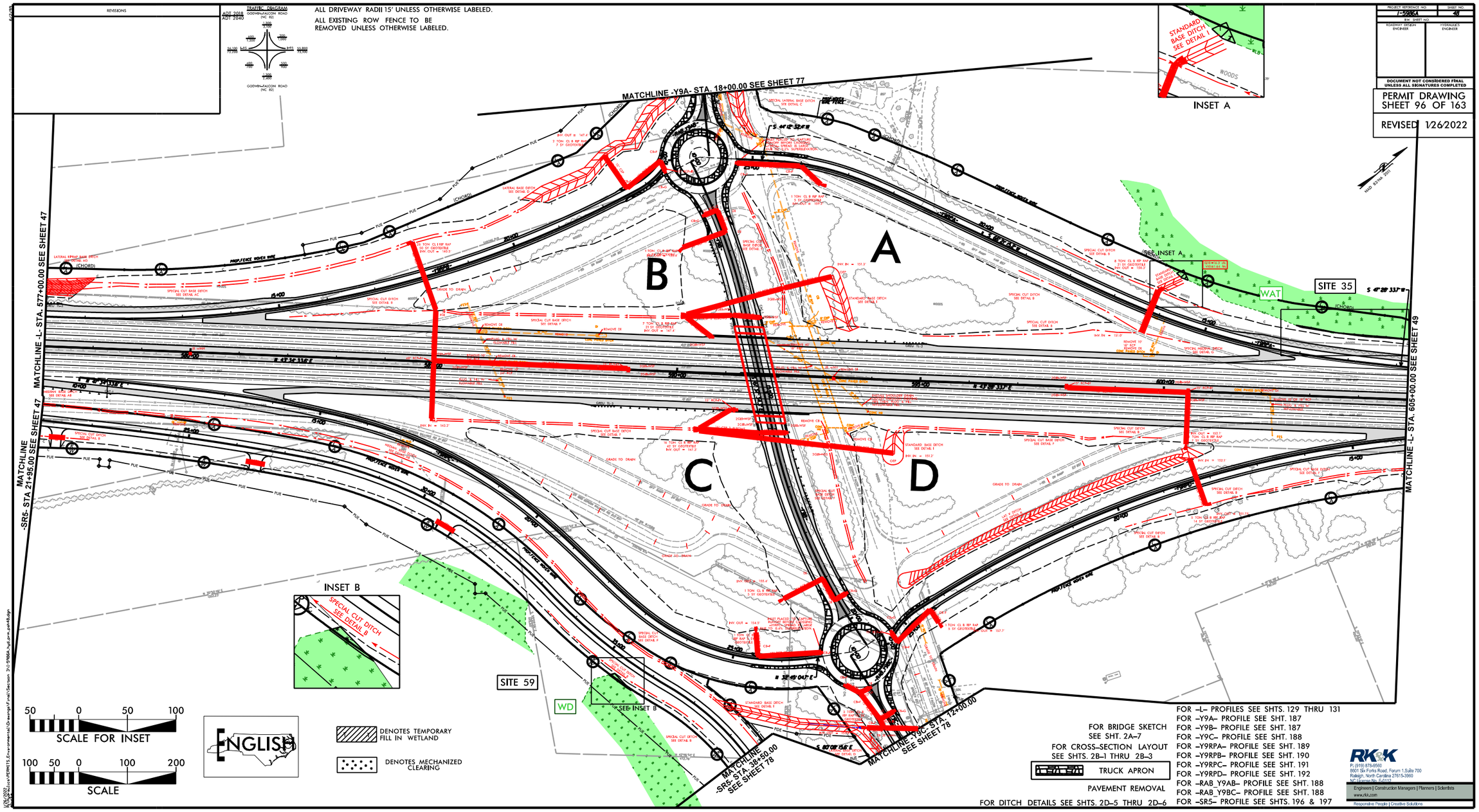
REVISIONS

TRAFFIC DIAGRAM
ADT 2018
ADT 2040
GOODNIGHT FALCON ROAD (NC 82)

ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

ALL EXISTING ROW FENCE TO BE REMOVED UNLESS OTHERWISE LABELED.



FOR BRIDGE SKETCH SEE SHT. 2A–7

FOR CROSS–SECTION LAYOUT SEE SHTS. 2B–1 THRU 2B–3

TRUCK APRON

PAVEMENT REMOVAL

FOR DITCH DETAILS SEE SHTS. 2D–5 THRU 2D–6

FOR –L– PROFILES SEE SHTS. 129 THRU 131
FOR –Y9A– PROFILE SEE SHT. 187
FOR –Y9B– PROFILE SEE SHT. 187
FOR –Y9C– PROFILE SEE SHT. 188
FOR –Y9RPA– PROFILE SEE SHT. 189
FOR –Y9RPB– PROFILE SEE SHT. 190
FOR –Y9RPC– PROFILE SEE SHT. 191
FOR –Y9RPD– PROFILE SEE SHT. 192
FOR –RAB_Y9AB– PROFILE SEE SHT. 188
FOR –RAB_Y9BC– PROFILE SEE SHT. 188
FOR –SR5– PROFILE SEE SHTS. 196 & 197

PROJECT REFERENCE NO.	SHEET NO.
P-5986A	48
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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SHEET 96 OF 163

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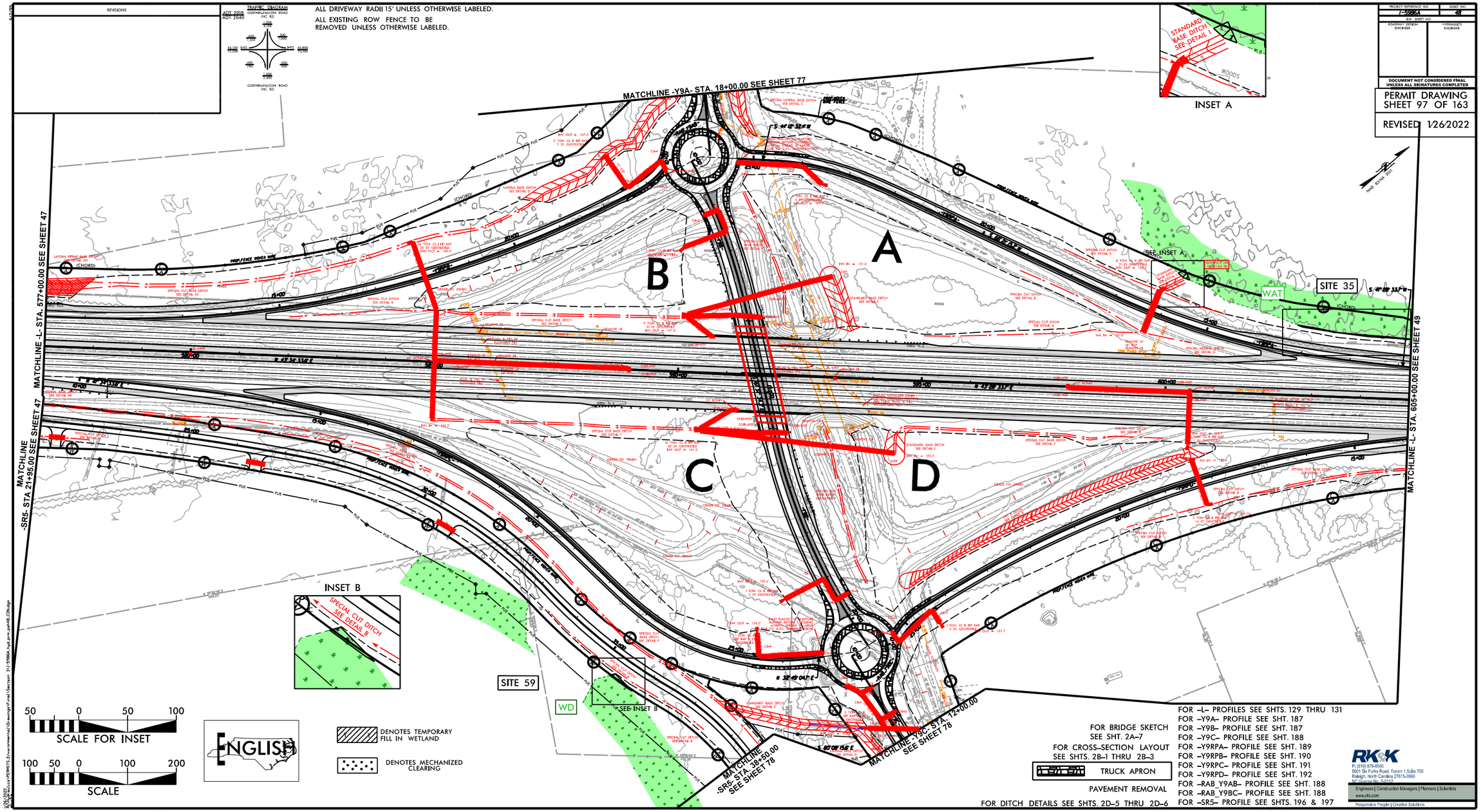
REVISIONS

TRAFFIC DIAGRAM
ADT 2018
ADT 2040
GOODNIGHT-FALCON ROAD (NC 82)

ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

ALL EXISTING ROW FENCE TO BE REMOVED UNLESS OTHERWISE LABELED.



PROJECT REFERENCE NO.	SHEET NO.
I-5986A	48
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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SHEET 97 OF 163

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FOR BRIDGE SKETCH SEE SHT. 2A–7

FOR CROSS–SECTION LAYOUT SEE SHTS. 2B–1 THRU 2B–3

TRUCK APRON

PAVEMENT REMOVAL

FOR DITCH DETAILS SEE SHTS. 2D–5 THRU 2D–6

FOR –L– PROFILES SEE SHTS. 129 THRU 131
FOR –Y9A– PROFILE SEE SHT. 187
FOR –Y9B– PROFILE SEE SHT. 187
FOR –Y9C– PROFILE SEE SHT. 188
FOR –Y9RPA– PROFILE SEE SHT. 189
FOR –Y9RPB– PROFILE SEE SHT. 190
FOR –Y9RPC– PROFILE SEE SHT. 191
FOR –Y9RPD– PROFILE SEE SHT. 192
FOR –RAB_Y9AB– PROFILE SEE SHT. 188
FOR –RAB_Y9BC– PROFILE SEE SHT. 188
FOR –SR5– PROFILE SEE SHTS. 196 & 197

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PROJ. REFERENCE NO.	SHEET NO.
I-5986A SECTION 3	X-113

ENGLISH

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SHEET 98A OF 163

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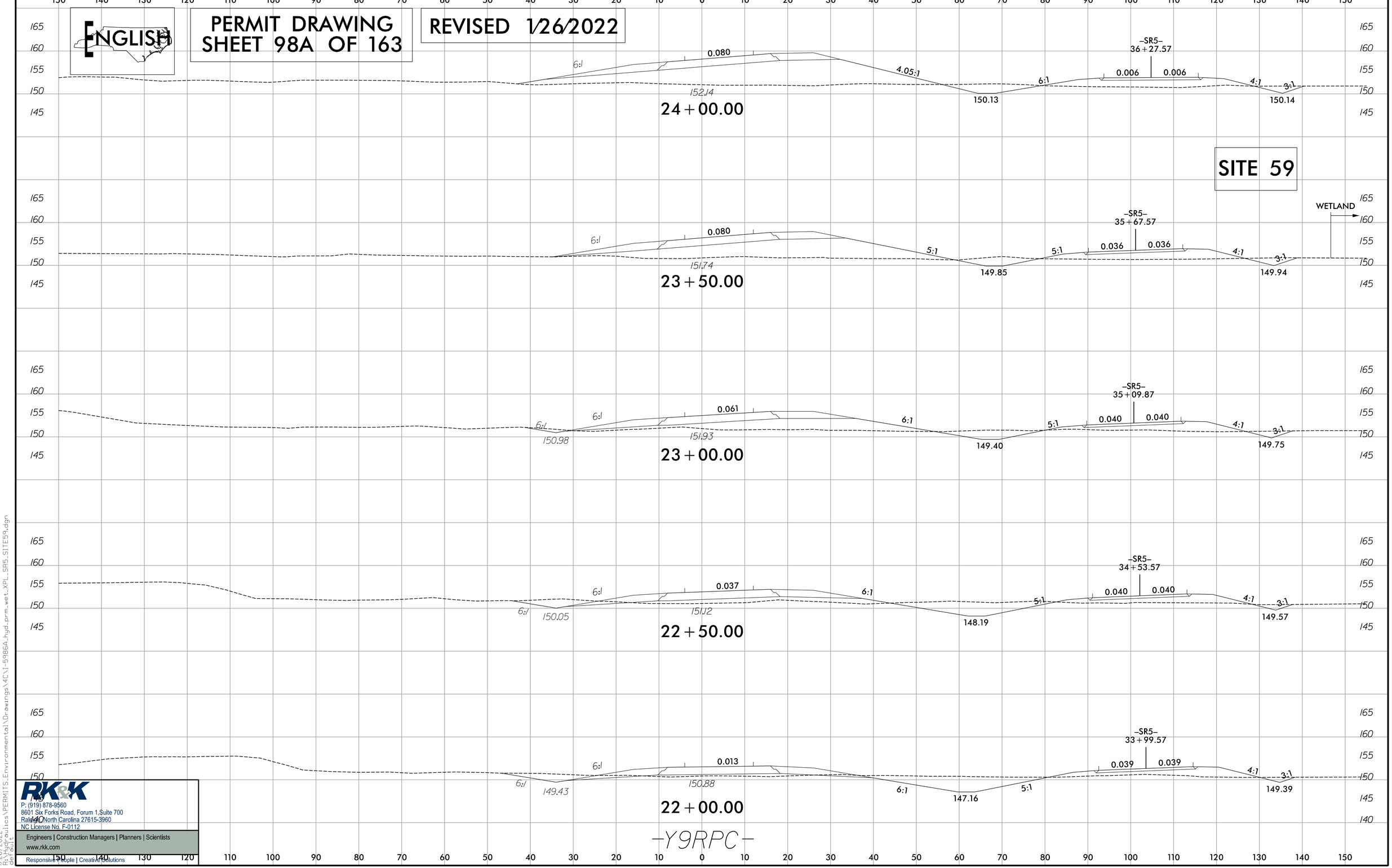

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	63A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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SHEET 134A OF 163

REVISED 1/26/2022

25 0 25 50
SCALE FOR INSET

50 25 0 50 100
SCALE

ENGLISH

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

NAD 83/NA 2011

MATCHLINE -YREV- STA. 26+00.00 SEE SHEET 9

RANK DEV INC
DB 9845 PG 703
PB 122 PG 193

BREWER, RANDY V
DB 10254 PG 388
PB 137 PG 112

EARTH PETROLEUM CORP
DB 6258 PG 173
PB 113 PG 11

BIJU, MINI; PATEL, MAMTA
DB 10032 PG 849
PB 130 PG 190

BIJU, MINI; PATEL, MAMTA
DB 8972 PG 661
PB 130 PG 190

MWMP INVESTMENTS LLC
DB 5038 PG 426

SR 1838 DUNN RD VAR BST

SR 1832 MURPHY RD VAR BST

INSET A

INSET B

500' MEDIAN TAPER

WA

SITE 57

WCC

SITE 57

SEE INSET A

SEE INSET B

RETAIN EXISTING C/A FENCE

1 TONS CL B RIPRAP
W/5 SY GEOFAB

2GIB-NSF

15" RCP-III

GREU TL-3

REMOVE

RETAIN

15" CSP
2 ELBOWS

2 TONS CL B RIPRAP
W/7 SY GEOFAB

LATERAL 4' BASE DITCH
SEE DETAIL J

Q10=7.94 cfs
V10=1.82 fps

Q10=10.30 cfs
V10=0.82 fps

TOE PROTECTION
W/CL B RIPRAP
SEE DETAIL H

EXISTING
2@9'x5' RCBC
TO BE REMOVED

1 TON CL B RIPRAP
W/5 SY GEOFAB

TYPE III

15+00

20+00

25+00

+00.00

S 55°16'09.8"

FOR -YREV- PROFILE SEE SHT. 144

FOR DITCH DETAILS SEE SHTS. 2D-1 THRU 2D-2

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	63A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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SCALE FOR INSET 25 0 25 50

SCALE 50 25 0 50 100

ENGLISH

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES TEMPORARY FILL IN WETLAND

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/NA 2011

PERMIT DRAWING
SHEET 134B OF 163

REVISED 1/26/2022

MATCHLINE -YREV- STA. 26+00.00 SEE SHEET 9

RANK DEV INC
DB 9845 PG 703
PB 122 PG 193

BREWER, RANDY V
DB 10254 PG 388
PB 137 PG 112

INSET A

500' MEDIAN TAPER

WA

SITE 57

SEE INSET A

RETAIN EXISTING C/A FENCE

1 TONS CL B RIPRAP W/5 SY GEOFAB

2GIB-NSF

15" RCP-III

GREU TL-3

15+00

20+00

25+00

TYPE III

REMOVE

RETAIN

15" CSP 2 ELBOWS

2 TONS CL B RIPRAP W/7 SY GEOFAB

LATERAL 4' BASE DITCH SEE DETAIL 1

Q10=7.94 cfs
V10=1.32 ft/s

Q10=10.30 cfs
V10=0.82 ft/s

ROCK PROTECTION W/CL B RIPRAP SEE DETAIL H

SEE INSET B

EXISTING 2@9'x5' RCBC TO BE REMOVED

1 TON CL B RIPRAP W/5 SY GEOFAB

WCC

SITE 57

EARTH PETROLEUM CORP
DB 6258 PG 173
PB 113 PG 11

BIJU, MINI; PATEL, MAMTA
DB 10032 PG 849
PB 130 PG 190

BIJU, MINI; PATEL, MAMTA
DB 8972 PG 661
PB 130 PG 190

MWMP INVESTMENTS LLC
DB 5038 PG 406

15" CSP
2 ELBOWS

Q10=10.30 cfs
V10=0.82 ft/s

ROCK PROTECTION W/CL B RIPRAP SEE DETAIL H

94 cfs
82 ft/s

INSET B

FOR –YREV– PROFILE SEE SHT. 144

FOR DITCH DETAILS SEE SHTS. 2D–1 THRU 2D–2

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PROJECT REFERENCE NO.	SHEET NO.
I-5986A	144
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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-YREV-

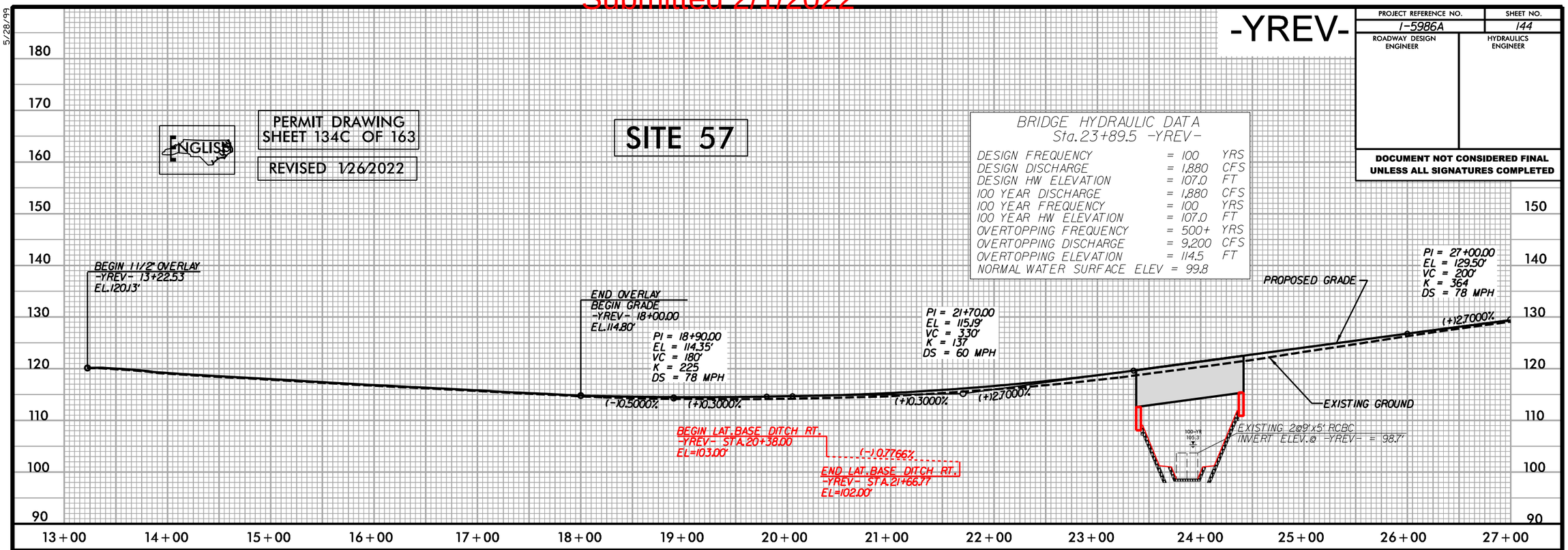
PERMIT DRAWING
SHEET 134C OF 163

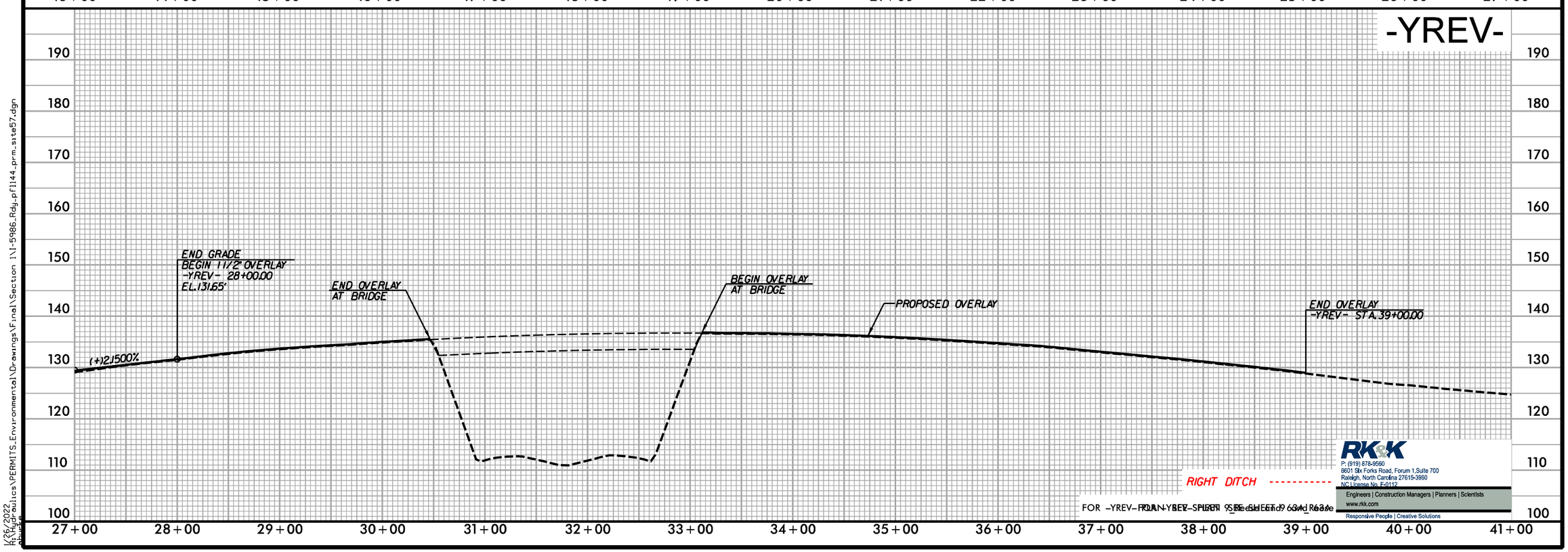
REVISED 1/26/2022

SITE 57

BRIDGE HYDRAULIC DATA
Sta. 23+89.5 -YREV-

DESIGN FREQUENCY	= 100	YRS
DESIGN DISCHARGE	= 1,880	CFS
DESIGN HW ELEVATION	= 107.0	FT
100 YEAR DISCHARGE	= 1,880	CFS
100 YEAR FREQUENCY	= 100	YRS
100 YEAR HW ELEVATION	= 107.0	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 9,200	CFS
OVERTOPPING ELEVATION	= 114.5	FT
NORMAL WATER SURFACE ELEV	= 99.8	





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FOR -YREV- PLAN SHEET SEE SHEET 9 63 of 163

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PROJ. REFERENCE NO.	SHEET NO.
I-5986A	S1 X-283

SITE 57

PERMIT DRAWING
SHEET 134D OF 163

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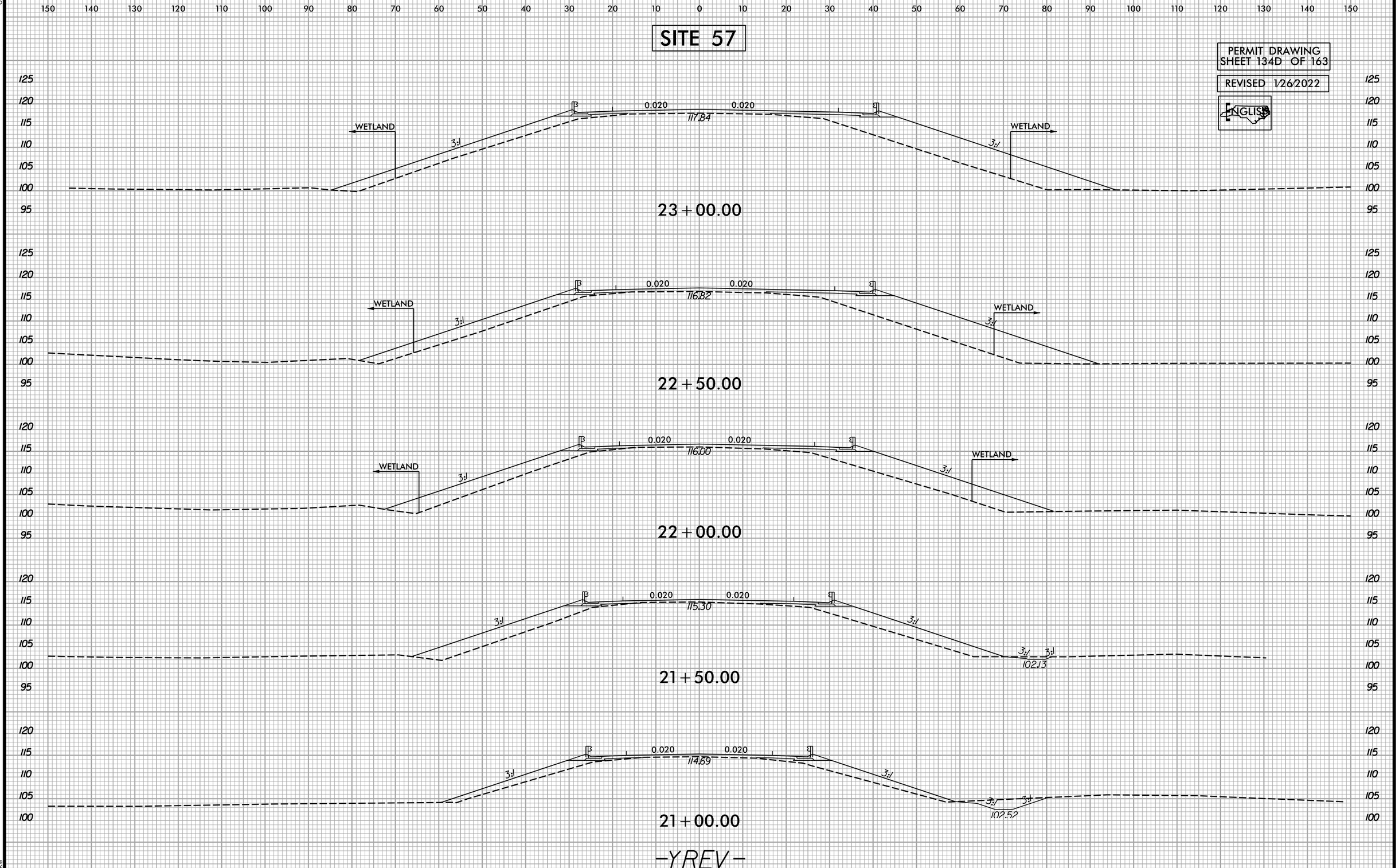

-YREV-

6/23/16

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REVISIONS

50 0 50 100
SCALE FOR INSET

100 0 100 200
SCALE

ENGLISH

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES TEMPORARY FILL IN WETLAND

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	70
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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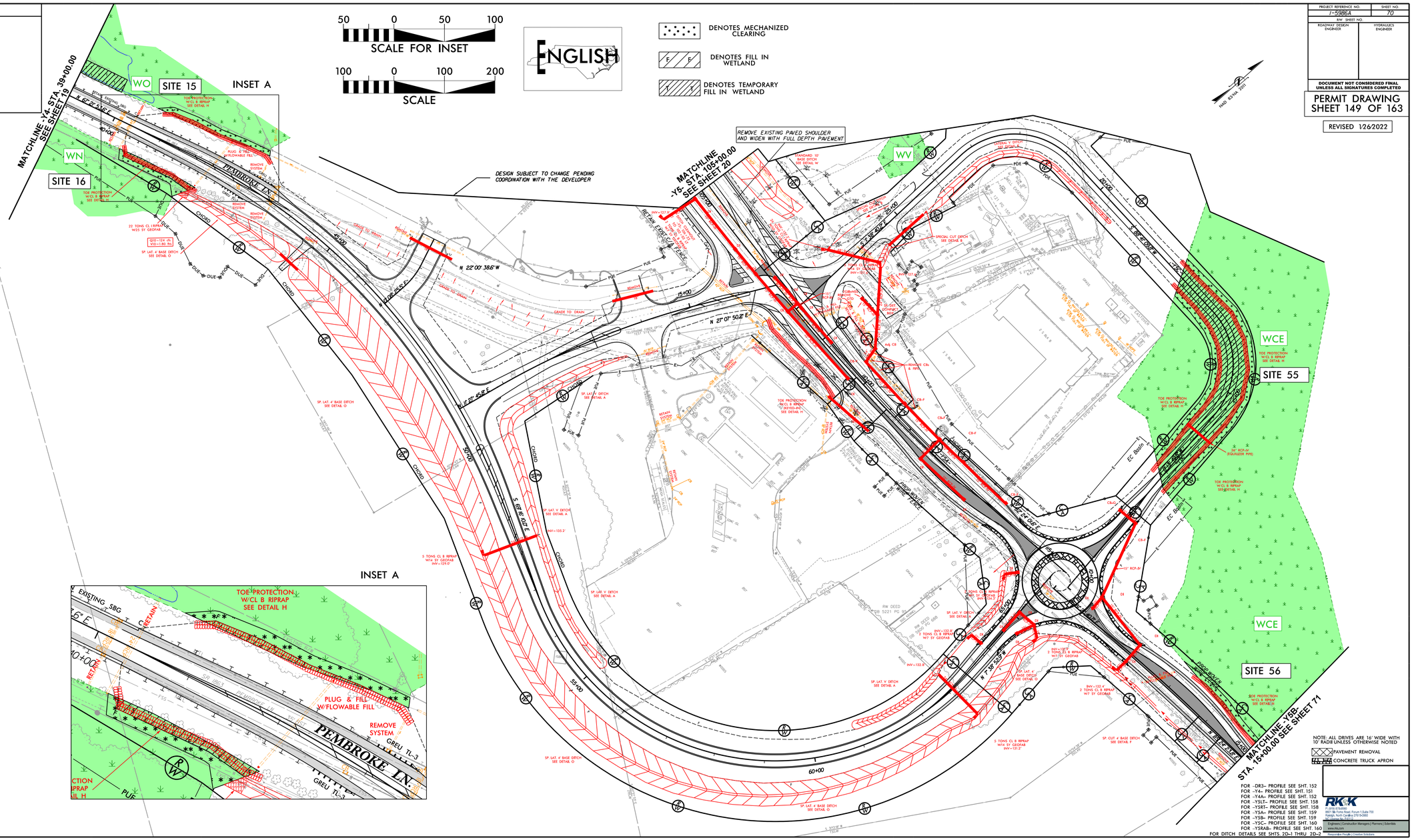
SHEET 149 OF 163

REVISED 1/26/2022



Submitted 2/1/2022

REVISIONS

50 0 50 100
SCALE FOR INSET

100 0 100 200
SCALE

ENGLISH

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES TEMPORARY FILL IN WETLAND

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	70
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 150 OF 163

REVISED 1/26/2022

MATCHLINE -Y4- STA. 39+00.00 SEE SHEET 19

MATCHLINE -Y6- STA. 105+00.00 SEE SHEET 20

MATCHLINE -Y5B- STA. 19+00.00 SEE SHEET 71

WO SITE 15

WN SITE 16

WV

WCE SITE 55

WCE SITE 56

INSET A

DESIGN SUBJECT TO CHANGE PENDING COORDINATION WITH THE DEVELOPER

REMOVE EXISTING PAVED SHOULDER AND WIDEN WITH FULL DEPTH PAVEMENT

PEMBROKE LN.

TOE PROTECTION W/CL B RIPRAP SEE DETAIL H

PLUG & FILL W/FLOWABLE FILL

REMOVE SYSTEM

EXISTING SBG

NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

PAVEMENT REMOVAL

CONCRETE TRUCK APRON

FOR -DR3- PROFILE SEE SHT. 152
FOR -Y4A- PROFILE SEE SHT. 151
FOR -Y4A- PROFILE SEE SHT. 152
FOR -Y5LT- PROFILE SEE SHT. 158
FOR -Y5RT- PROFILE SEE SHT. 158
FOR -Y5A- PROFILE SEE SHT. 159
FOR -Y5B- PROFILE SEE SHT. 159
FOR -Y5C- PROFILE SEE SHT. 160
FOR -Y5RAB- PROFILE SEE SHT. 160
FOR DITCH DETAILS SEE SHTS. 2D-1 THRU 2D-2

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1 Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Passionate People | Creative Solutions

CITY OF EASTOVER

10/26/2022

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-LSBREV- 61+00 LT	Bank Stabilization: DC						0.001	0.001	8	20	
2	-LSBREV- 71+80 LT	Headwall, 66" RCP: SV-1, WCC	0.001	0.009				0.022	0.003	52	13	
	-LNBREV- 71+47 RT	Headwall, 66" WSP: SV-2, WCB	0.017	0.028				0.006	0.001	35	10	
	-YRPCREV- 22+50 RT	Roadway Fill: WCB	0.086			0.068						
3	-LSBREV- 89+48 LT	Pipe clean out: WA		0.003								
	-LSBREV- 94+48 LT	Pipe clean out, Roadway Fill: WA	0.001	0.003		0.048						
	-LNBREV- 90+00 RT	Roadway Fill: WB	0.067			0.066						
	-LSBREV- 90+77 LT/RT	RCBC Removal: WA, WB, Reese Creek	0.003	0.044					0.048		48	
	-LSBREV- 85+48 LT	42" RCP: WA	0.001	0.012								
4	-LSBREV- 99+00 LT	36" WSP: WA	0.005	0.025								
	-LSBREV- 101+10 LT	36" WSP: WC, SA	0.001	0.033				0.004	0.003	18	24	
5	-YINB- 33+00 RT	66" WSP: WB	0.009	0.034								
6	-YINB- 39+39 LT	30" WSP: WD	0.001	0.039								
	-YINB- 38+02 RT	30" WSP: WB	0.004	0.050								
7	-L- 92+02 - 100+05 LT	Roadway Fill: WH	0.231									
8	-L- 90+87 - 91+10 RT	Ditch: WE			0.024							
TOTALS:			**0.427**	**0.280**	**0.024**	**0.182**	**0.000**	**0.033**	**0.056**	**113**	**115**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
9	-L- 94+37 - 100+20 RT	Roadway Fill, Ditch: WF	0.135		0.021							
	-L- 100+28 RT	2 @ 36" RCP: SB						0.011	0.001	63	10	
10	-L- 108+26 - 114+34 LT	Roadway Fill: WI	0.076									
11	-L- 118+98 - 133+53 LT	Roadway Fill: WJ	0.531			0.045						
12	-L- 121+32 - 127+67 RT	Roadway Fill, Ditches: WL	0.204	0.066	0.020	0.143						
13	-L- 186+79 - 187+53 LT	Roadway Fill: WR	0.020			0.013						
14	-L- 192+15 - 193+26 LT	Ditch: WR		0.021		0.001						
15	-L- 190+05 RT	42" RCP: WO	0.004			0.006						
	-L- 192+05 RT	Roadway Fill: WO	0.001			0.006						
	-Y5RPC- 13+02 - 21+32 RT	Roadway Fill, 66" RCP: Baker Swamp 2, WO	0.136	0.034		0.165		0.018		60		
	-Y4- 37+50 LT	54" WSP: WO	0.001	0.169								
	-Y4- 40+69 to 43+01 LT	Prop Roadway Fill: WO	0.019			0.053						
TOTALS:			**1.127**	**0.290**	**0.041**	**0.432**	**0.000**	**0.029**	**0.001**	**123**	**10**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
16	-Y4- 36+25 RT	54" WSP: Baker Swamp 1, WN Structure Stabilization	0.006	0.098				0.004	0.013	15	34	
	-Y4- 40+32 to 42+06 RT	Roadway Fill: WN	0.035			0.042						
17	-L- 199+16 - 200+49 LT	Prop Roadway Fill - WQ	0.057			0.072						
	-L- 201+67 LT	Rip Rap Outlet Pad - WQ	0.002	0.009								
18	-L- 198+56 - 203+59 RT	Roadway Fill, 60" RCP, 66" RCP: Baker Swamp 3, WP	0.106	0.002		0.066		0.010	0.006	23	13	
	-Y5- 99+16 LT	66" WSP: Baker Swamp 3, WP Structure Stabilization	0.001	0.004				0.007	0.012	22	28	
19	-Y5LPD- 37+73 - 40+14 LT & RT	Roadway Fill: WCG*	0.857									
20	-Y5LPD- 22+86 - 24+53 LT & RT	Roadway Fill: WX	0.402			0.034						
21	-Y5RPD- 14+97 - 18+86 RT	Roadway Fill: WV	0.225			0.020						
22	-Y5FLY- 57+08 - 62+55 LT & RT & -Y5LPD- 18+96 - 21+42 LT & RT	Roadway Fill: WW**	2.663			0.176						
23	-L- 252+34	2 @ 8'x8' RCBC: SC-1, SC-2						0.063	0.006	270	38	
TOTALS:			**4.354**	**0.113**	**0.000**	**0.410**	**0.000**	**0.084**	**0.037**	**330**	**113**	**0**

REVISED 1/26/2022

NOTES:

* Site 19: Area shown in impact table is a total take. Actual impact area is 0.772 acres.

** Site 22: Area shown in impact table is a total take inside -Y5LPD-. Actual impact area is 2.610 acres.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
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Revised 2018 Feb

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
24	-L- 304+15	3 @ 10'x8' RCBC, Roadway Fill, Ditch: SD-1, SD-2, WZ, WY	0.056	0.047	0.089	0.080		0.128	0.058	197	26	
	-L- 302+20 RT	Roadway Fill, Ditch: WY		0.004		0.002						
	-L- 306+80 LT	Ditch: WZ		0.010								
	-L- 307+30 RT	Ditch: WY		0.005								
25	-L- 355+00	10'x7' RCBC: SE-1, SE-2, WAB		0.002	0.003			0.017	0.003	135	25	
	-L- 357+75 RT	Ditch: WAB		0.008								
26	-Y7RPC- 17+51 - 24+28 Lt & RT	Roadway Fill: WAC	0.654	0.017		0.151						
27	-Y7RPA 16+97 RT - -L- 392+99 LT	Roadway Fill: WAF	0.284									
28	-SR3 - 34+13 - 35+87 LT	Roadway Fill: WAG	0.047	0.005		0.039						
29	-L- 405+65 LT	2 @ 48" RCP, Ditch: WAH		0.009	0.027							
30	-L- 422+50	12'x6' RCBC: SF, WAK, WAI	0.008	0.074	0.090			0.030	0.003	103	8	
	-L- 422+46 - 437+14 RT	Roadway Fill, Ditch: WAI	0.488		0.012	0.037						
	-L- 422+85 - 436+87 LT	Roadway Fill: WAK	0.624			0.015						
	-L- 425+50 LT	Ditch: WAK		0.014								
	-L- 436+72 - 439+41 LT	Rock Fill: PH						0.134	0.100			
	-L- 439+44 RT	Rock Fill: PI						0.005	0.004			
TOTALS:			**2.161**	**0.195**	**0.221**	**0.324**	**0.000**	**0.314**	**0.168**	**435**	**59**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
31	-L- 508+50 - 509+37 LT	Roadway Fill: WAM	0.042			0.019						
32	-L- 522+79 - 528+68 LT	Roadway Fill: WAN	0.081			0.080						
33	-L- 540+45	8'x8' Culvert: SG-1, SG-2, SG-3, WAP, WAQ		0.010				0.051	0.011	211	99	
34	-L- 574+64	10'x7' RCBC: SH-1, SH-2		0.025		0.002		0.031	0.004	174	30	
35	-L- 602+70 - 606+71 LT	Prop Roadway Fill: WAT	0.016			0.044						
	-Y9RPA- 15+85 RT	Ditch: WAT		0.005								
36	-L- 618+01 - 618+41 RT	Ditch: WAU				0.007						
37	-L- 622+64 to 626+94 LT	72" RCP, Roadway Fill: SI-1, SI-2, WAW, WAV	0.225	0.029		0.137		0.003	0.003	26	20	
		Structure Stabilization: SI-1						0.003		25		
38	-L- 640+26 to 640+69 RT	Ditch: WAX		0.006								
TOTALS:			**0.364**	**0.075**	**0.000**	**0.289**	**0.000**	**0.088**	**0.018**	**436**	**149**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
39	-L- 642+88	7'x7' RCBC: SJ-1, SJ-2						0.025	0.008	101	40	
40	-L- 660+20 RT	2 @ 30" RCP: WAY	0.001	0.001								
41	-L- 667+00 LT	Ditch: WAZ		0.011								
42	-L- 669+88 - 684+49 LT & RT	Bridge: Black River, WAZ *	0.385	0.020	0.043	0.207	0.038	0.003	0.266	16	246	
43	-L- 692+28 - 694+59 RT	Roadway Fill: WAZ	0.090			0.053						
44	-L- 695+05 LT	Ditch: WAZ		0.006								
45	-L- 731+00 LT	Roadway Cut: WBB				0.017						
46	-L- 735+80 LT	2 @ 42" RCP: WBC	0.004		0.002	0.028						
47	-L- 766+40	72" RCP: SK-1, SK-2						0.063	0.007	180	24	
48	-L- 403+25 LT	Plug & Fill Exist. 18" RCP: WAG		0.002								
TOTALS:			**0.480**	**0.040**	**0.045**	**0.305**	**0.038**	**0.091**	**0.281**	**297**	**310**	**0**

REVISED 1/26/2022

NOTES:

* Black River bridge bents

- 2 sets of interior bents in the water
- 23 piles per bent
- 20" diameter piles= 2.2sqft permanent surface water impact per pile
- **Total: 101.2sqft permanent surface water impact (included in the Site 42 number above)**

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
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I-5986A / I-5877

Revised 2018 Feb

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
49	-Y5- 45+24 LT	2 @ 8'x8' RCBC Ext: SY-2						0.009		15		
		Bank Stabilization						0.029	0.005	50	8	
50	-Y5- 51+81 - 56+63 LT	Roadway Fill: WCJ	0.011			0.043						
51	-Y5- 60+52 - 65+24 LT	Roadway Fill: WCI	0.114			0.109						
52	-Y5- 64+45 RT	Ditch: WT	0.002	0.006								
53	-Y5RPA- 44+43 - 54+38 LT	Roadway Fill: WU	0.267			0.108						
54A	-Y4- 16+88 LT	Pipe clean out: WS		0.008								
54B	-Y4- 19+00 LT	Pipe clean out: WS		0.005								
54C	-Y4- 21+67 LT	Pipe clean out: WS		0.005								
55	-Y5C- 12+74 - 17+83 LT & RT	Roadway Fill: WCE	0.635			0.220						
56	-Y5B- 12+86 - 16+54 LT	Roadway Fill: WCE	0.013			0.065						
57	-YREV- 24+05 LT/RT	Roadway Fill: WA, WCC, Reese Creek	0.226	0.066		0.139			0.045		78	
59	-SR5- 35+25 - 35+75 RT	Roadway Fill: WD				0.006						
TOTALS:			**1.268**	**0.090**	**0.000**	**0.690**	**0.000**	**0.038**	**0.050**	**65**	**86**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

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WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
TOTALS for 156:			**0.427**	**0.280**	**0.024**	**0.182**	**0.000**	**0.033**	**0.056**	**113**	**115**	**0**
TOTALS for 157:			**1.127**	**0.290**	**0.041**	**0.432**	**0.000**	**0.029**	**0.001**	**123**	**10**	**0**
TOTALS for 158:			**4.354**	**0.113**	**0.000**	**0.410**	**0.000**	**0.084**	**0.037**	**330**	**113**	**0**
TOTALS for 159:			**2.161**	**0.195**	**0.221**	**0.324**	**0.000**	**0.314**	**0.168**	**435**	**59**	**0**
TOTALS for 160:			**0.364**	**0.075**	**0.000**	**0.289**	**0.000**	**0.088**	**0.018**	**436**	**149**	**0**
TOTALS for 161:			**0.480**	**0.040**	**0.045**	**0.305**	**0.038**	**0.091**	**0.281**	**297**	**310**	**0**
TOTALS for 162:			**1.268**	**0.090**	**0.000**	**0.690**	**0.000**	**0.038**	**0.050**	**65**	**86**	**0**
GRAND TOTAL FOR PROJECT:			**10.181**	**1.083**	**0.331**	**2.632**	**0.038**	**0.677**	**0.611**	**1799**	**842**	**0**

REVISED 1/26/2022

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

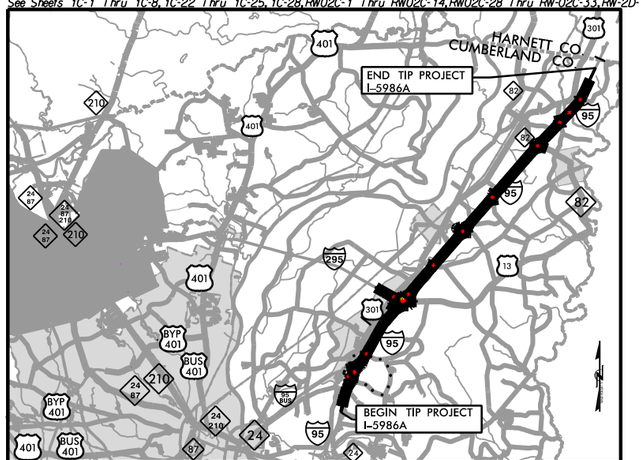
Submitted 2/1/2022

09/08/99

TIP PROJECT: I-5986A

CONTRACT: C204283

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheets 1C-1 Thru 1C-8, 1C-22 Thru 1C-25, 1C-28, RW02C-1 Thru RW02C-14, RW02C-28 Thru RW-02C-33, RW-2D-1 Thru RW-02D-2 For Survey Control Sheets



VICINITY MAP (NTS) OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986A	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
47532.2.2	NHP-0095(057)	R/W
47532.3.2	NHP-0095(057)	PE, UTIL., CONST.

CUMBERLAND COUNTY

LOCATION: I-95 WIDENING FROM SOUTH OF SR 1832 (MURPHY ROAD- EXIT 55) TO SOUTH OF SR 1811 (BUD HAWKINS ROAD-EXIT 70)

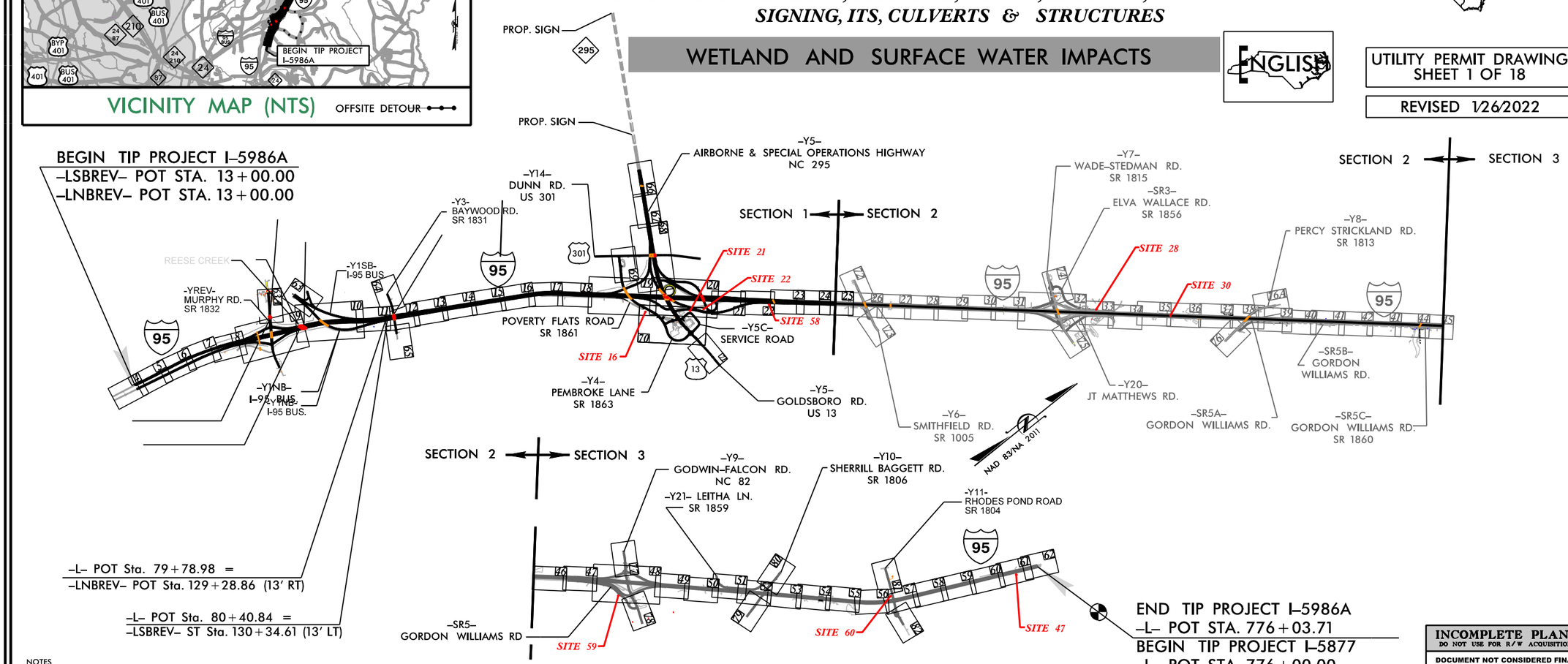
TYPE OF WORK: GRADING, DRAINAGE, PAVING, LIGHTING, SIGNING, ITS, CULVERTS & STRUCTURES

WETLAND AND SURFACE WATER IMPACTS

ENGLISH

UTILITY PERMIT DRAWING
SHEET 1 OF 18

REVISED 1/26/2022



NOTES
1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2018 = 56,700
ADT 2040 = 73,800
K = 55%
D = 7%
T = 18% *
V = 75 MPH

FUNC CLASS: INTERSTATE
* (TTST 13% + DUALS 5%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5986A.....15.331 MILES
LENGTH STRUCTURE TIP PROJECT I-5986A.....0.066 MILES
TOTAL LENGTH TIP PROJECT I-5986A.....15.397 MILES

NCDOT CONTACT

Michael Penney, PE
PROJECT ENGINEER - DESIGN-BUILD UNIT

PLANS PREPARED BY:

RK&K
RUMMEL, KLEPPER & KAHL, LLP
8601 SIX FORKS ROAD, FORUM 1, SUITE 700
RALEIGH, NORTH CAROLINA 27615-3960
NC LICENSE NO. F-0112

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2018 STANDARD SPECIFICATIONS

LETTING DATE:
AUGUST 20, 2019

Michael T. Merritt, PE
PROJECT ENGINEER

Anthony A. Houser, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

This document originally issued and sealed by Matthew L. Cook 27434 on 10-25-21. This medium shall not be considered a certified document.

P.E.

SIGNATURE:

ROADWAY DESIGN ENGINEER

This document originally issued and sealed by Anthony A. Houser 18494 on 10-26-21. This medium shall not be considered a certified document.

P.E.

SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

1/27/2022
R:\Hydraulics\PERMITS_Environmental\Drawings\Utilities\I-5986A_Hyd_UTL_TSH.dgn
aburke

Submitted 2/1/2022

UTILITY PERMIT DRAWING
SHEET 5A OF 18

REVISED 1/26/2022

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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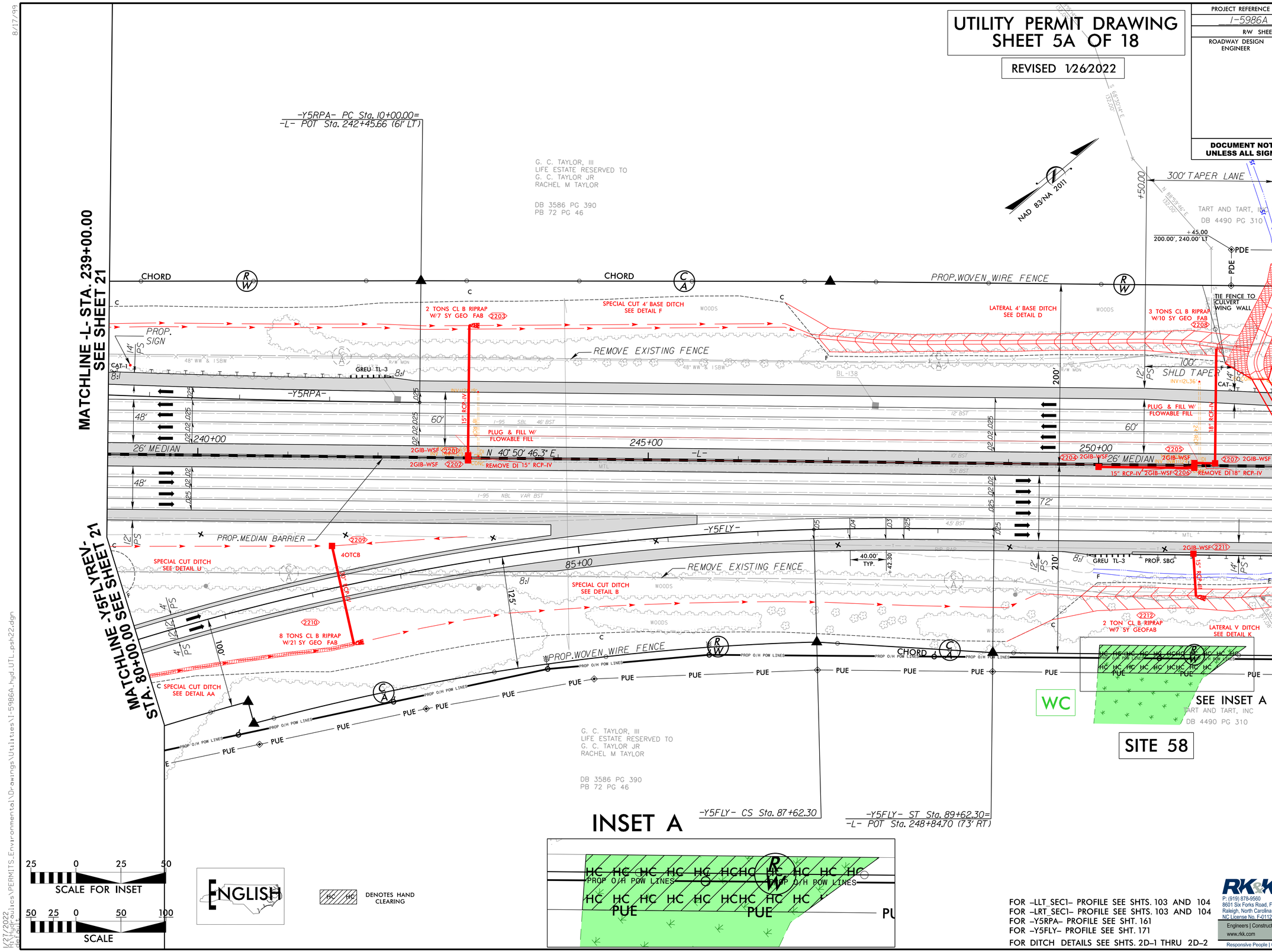

FOR –LLT_SEC1– PROFILE SEE SHTS. 103 AND 104
FOR –LRT_SEC1– PROFILE SEE SHTS. 103 AND 104
FOR –Y5RPA– PROFILE SEE SHT. 161
FOR –Y5FLY– PROFILE SEE SHT. 171
FOR DITCH DETAILS SEE SHTS. 2D–1 THRU 2D–2

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Submitted 2/1/2022

UTILITY PERMIT DRAWING
SHEET 5B OF 18

REVISED 1/26/2022

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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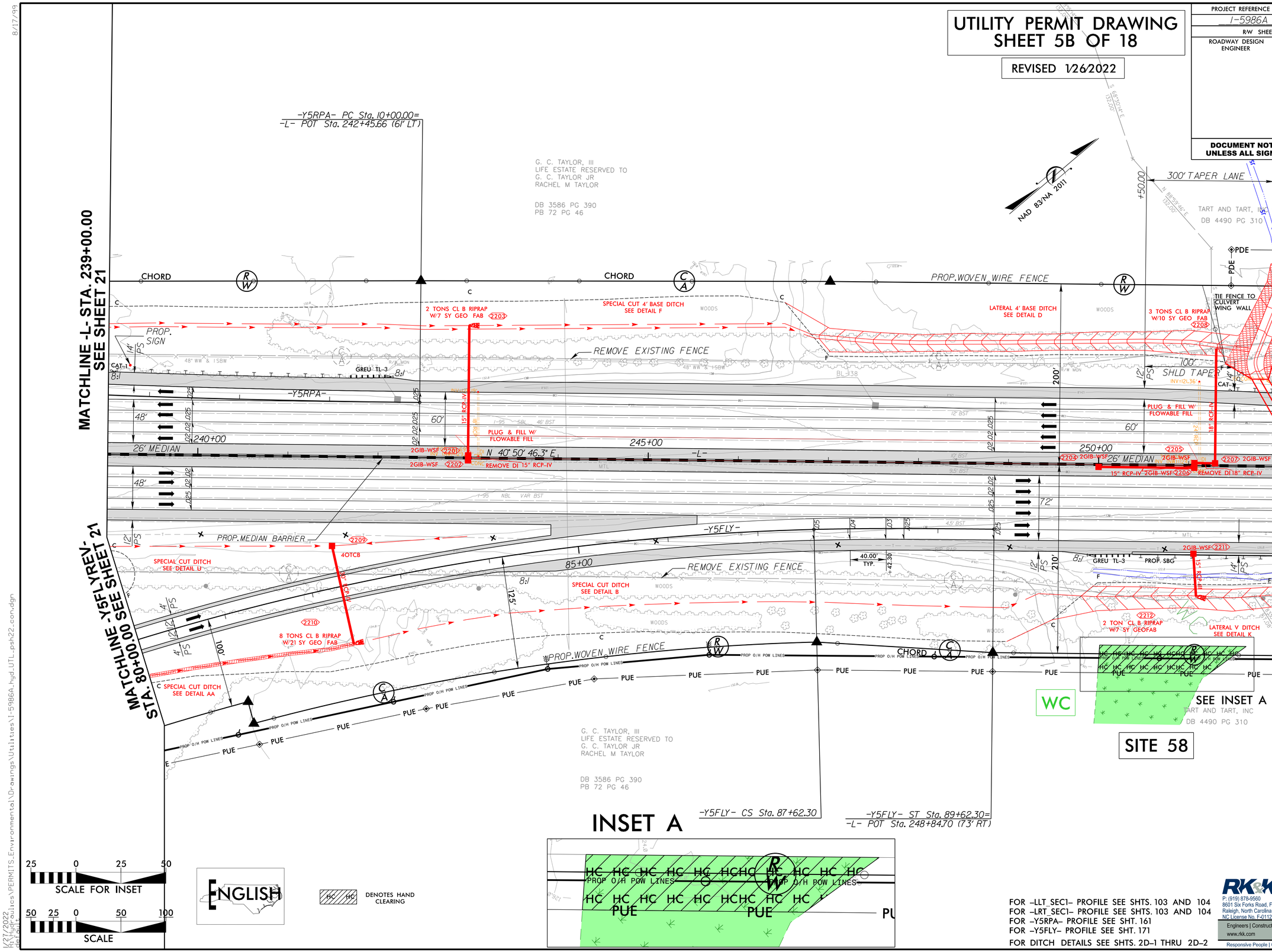

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Submitted 2/1/2022

REVISIONS

TRAFFIC DIAGRAM
ADT 2018
ADT 2040
GOODWIN-FALCON ROAD (NC 82)

ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

ALL EXISTING ROW FENCE TO BE REMOVED UNLESS OTHERWISE LABELED.

SCALE FOR INSET

SCALE

ENGLISH

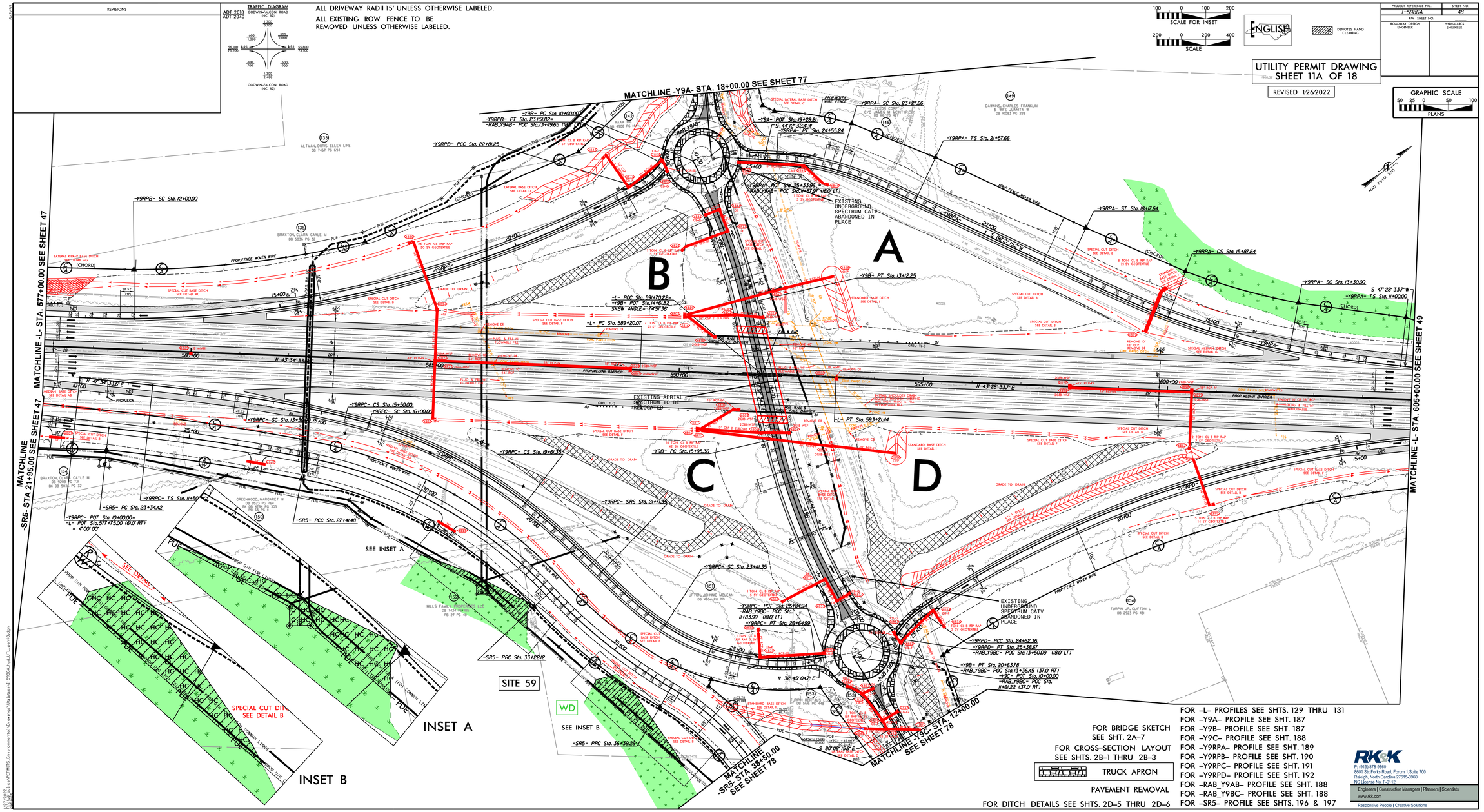
DENOTES HAND CLEARING

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	48
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

UTILITY PERMIT DRAWING
SHEET 11A OF 18

REVISED 1/26/2022

GRAPHIC SCALE
PLANS



FOR BRIDGE SKETCH SEE SHT. 2A–7

FOR CROSS–SECTION LAYOUT SEE SHTS. 2B–1 THRU 2B–3

TRUCK APRON

PAVEMENT REMOVAL

FOR DITCH DETAILS SEE SHTS. 2D–5 THRU 2D–6

FOR –L– PROFILES SEE SHTS. 129 THRU 131
FOR –Y9A– PROFILE SEE SHT. 187
FOR –Y9B– PROFILE SEE SHT. 187
FOR –Y9C– PROFILE SEE SHT. 188
FOR –Y9RPA– PROFILE SEE SHT. 189
FOR –Y9RPB– PROFILE SEE SHT. 190
FOR –Y9RPC– PROFILE SEE SHT. 191
FOR –Y9RPD– PROFILE SEE SHT. 192
FOR –RAB_Y9AB– PROFILE SEE SHT. 188
FOR –RAB_Y9BC– PROFILE SEE SHT. 188
FOR –SR5– PROFILE SEE SHTS. 196 & 197

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REVISIONS

TRAFFIC DIAGRAM
ADT 2018
ADT 2040
GOODWIN-FALCON ROAD (NC 82)
3,300 / 2,100
400 / 1,300
200 / 1,000
L-95
56,100 / 73,200
55,800 / 73,100
400 / 700
200 / 900
3,300 / 2,400
GOODWIN-FALCON ROAD (NC 82)

ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

ALL EXISTING ROW FENCE TO BE REMOVED UNLESS OTHERWISE LABELED.

SCALE FOR INSET 100 0 100 200
SCALE 200 0 200 400

ENGLISH

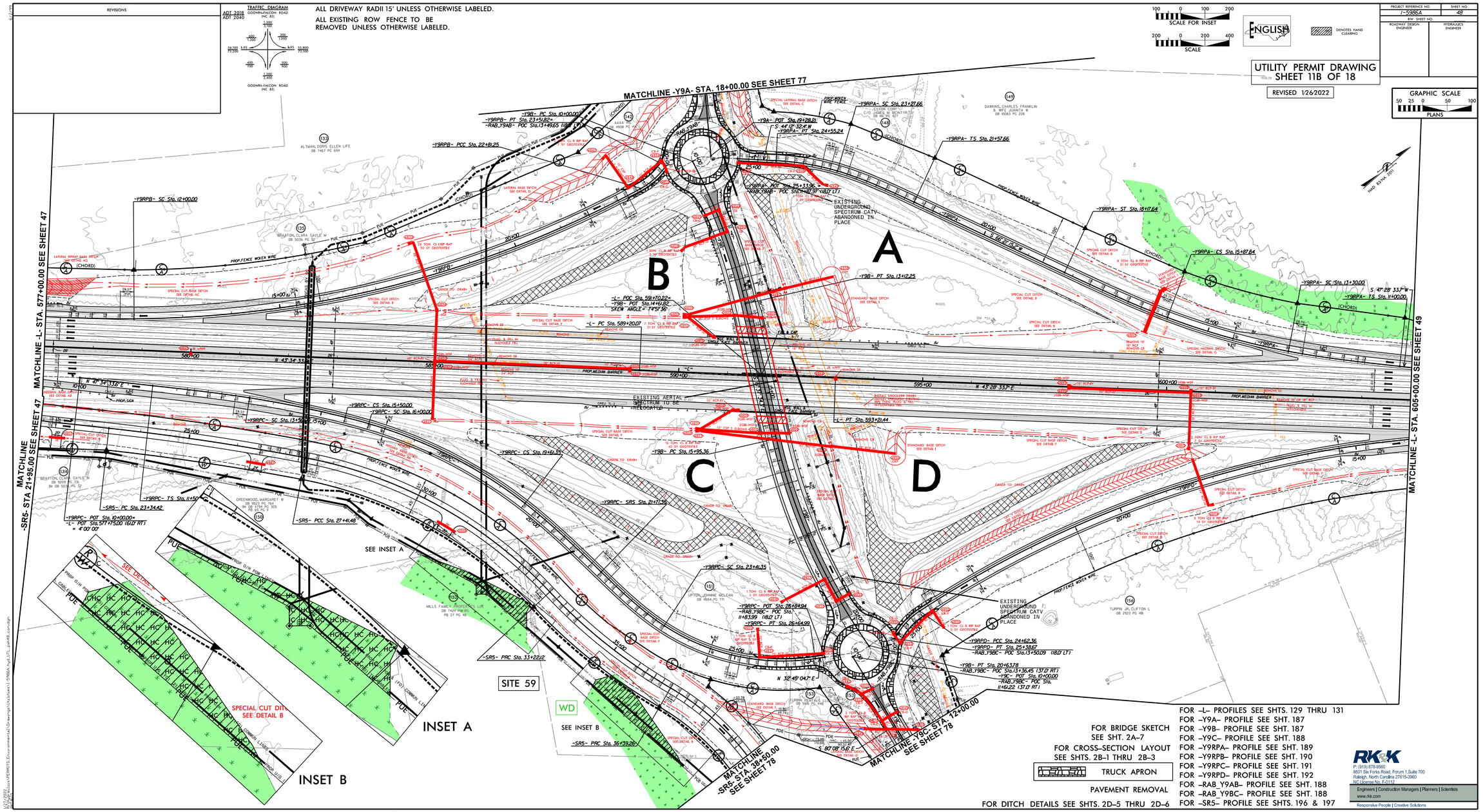
DENOTES HAND CLEARING

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	48
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

UTILITY PERMIT DRAWING
SHEET 11B OF 18

REVISED 1/26/2022

GRAPHIC SCALE
50 25 0 50 100
PLANS



FOR BRIDGE SKETCH SEE SHT. 2A–7
FOR CROSS–SECTION LAYOUT SEE SHTS. 2B–1 THRU 2B–3

TRUCK APRON

PAVEMENT REMOVAL

FOR DITCH DETAILS SEE SHTS. 2D–5 THRU 2D–6

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FOR –Y9RPB– PROFILE SEE SHT. 190
FOR –Y9RPC– PROFILE SEE SHT. 191
FOR –Y9RPD– PROFILE SEE SHT. 192
FOR –RAB_Y9AB– PROFILE SEE SHT. 188
FOR –RAB_Y9BC– PROFILE SEE SHT. 188
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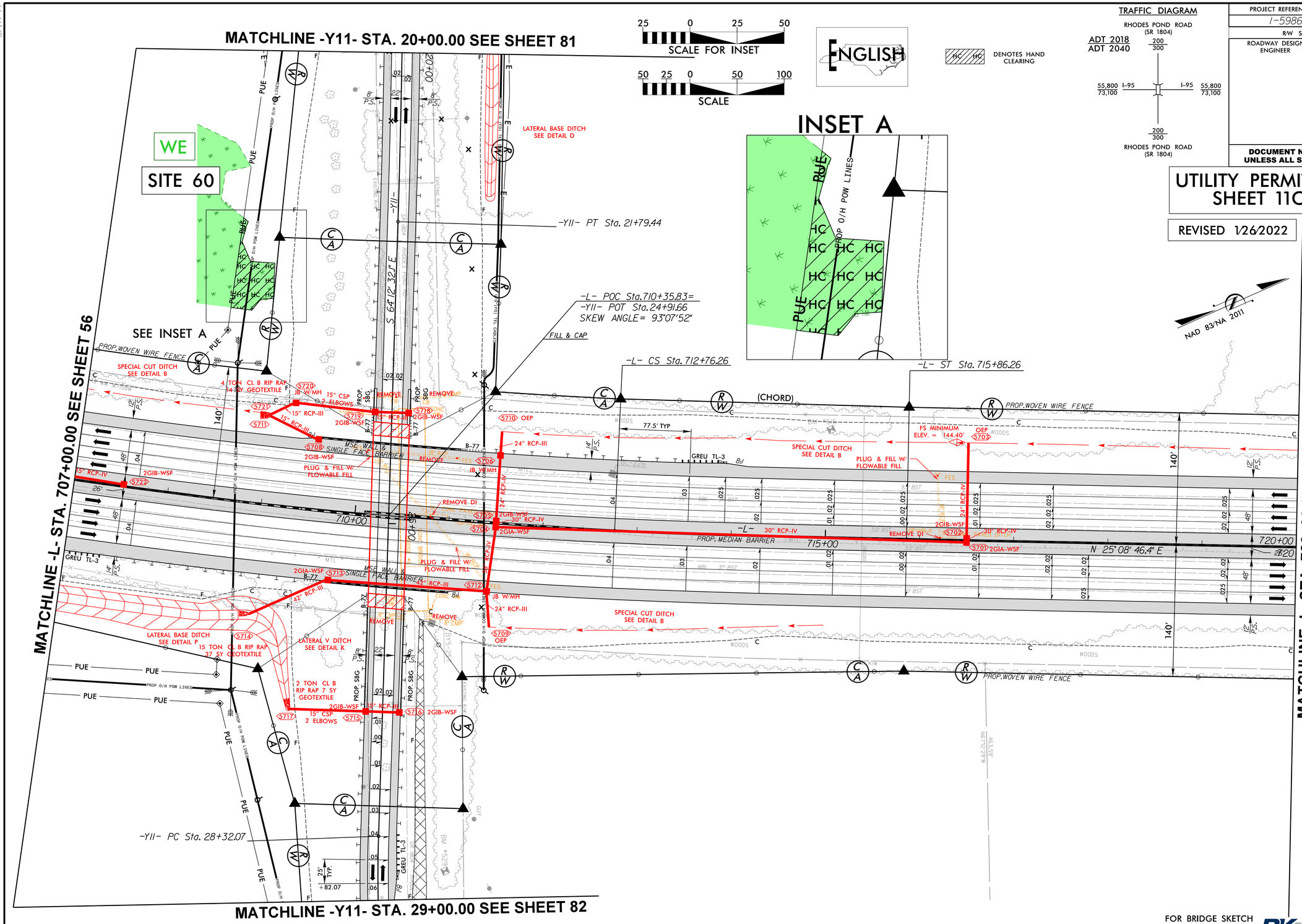

TRAFFIC DIAGRAM

RHODES POND ROAD (SR 1804)

ADT 2018 200/300
ADT 2040

55,800 73,100 I-95 I-95 55,800 73,100

200/300

RHODES POND ROAD (SR 1804)

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	57
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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UTILITY PERMIT DRAWING SHEET 11C OF 18

REVISED 1/26/2022

FOR BRIDGE SKETCH SEE SHT. 2A-8

PAVEMENT REMOVAL

FOR -L- PROFILES SEE SHTS. 138 & 139
FOR -Y11- PROFILE SEE SHT. 194
FOR DITCH DETAILS SEE SHTS. 2D-5 THRU 2D-6

ALL EXISTING ROW FENCE TO BE REMOVED UNLESS OTHERWISE LABELED.

ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

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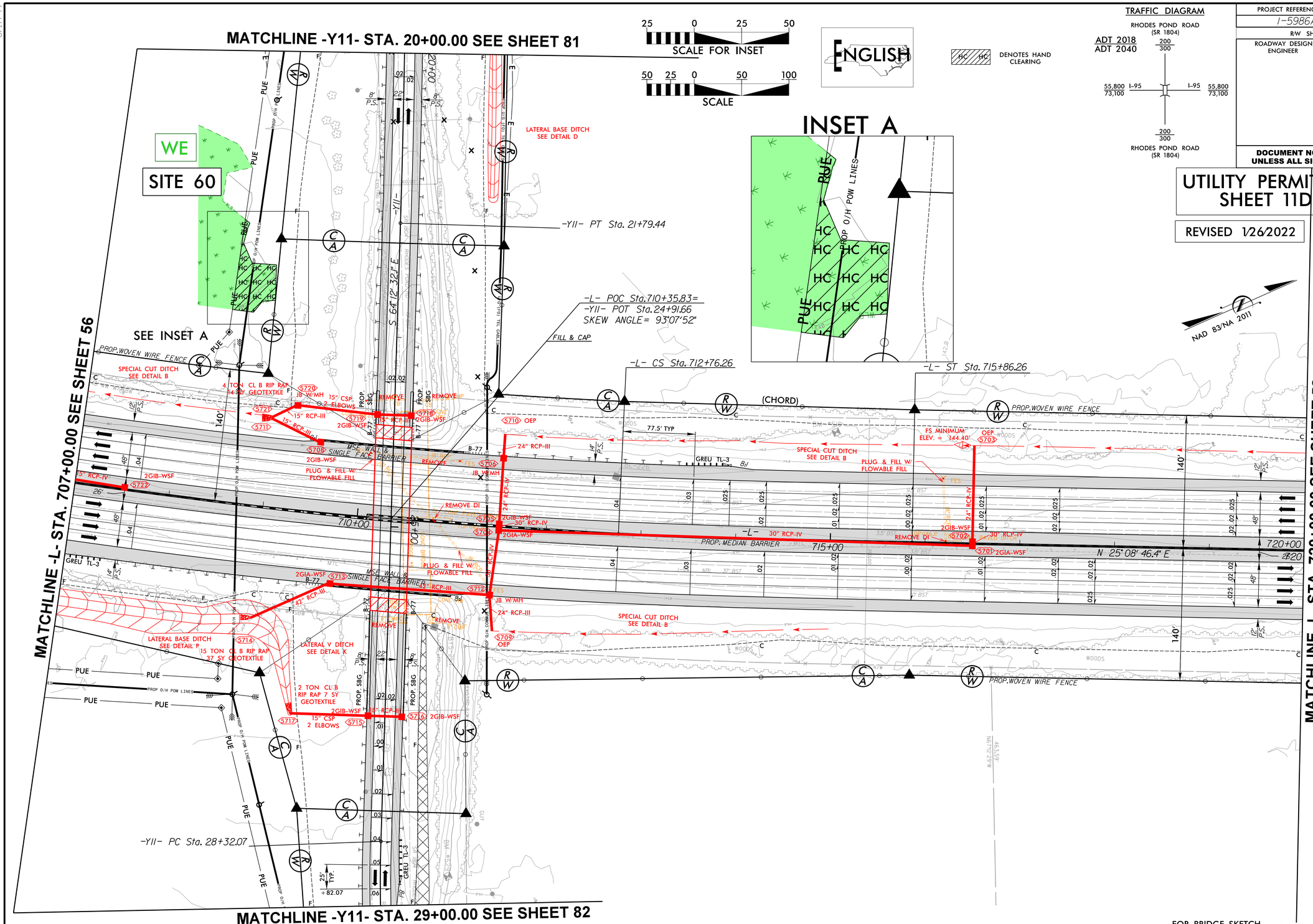

TRAFFIC DIAGRAM

RHODES POND ROAD (SR 1804)

ADT 2018
ADT 2040

200/300

55,800/73,100 I-95 — I-95 55,800/73,100

200/300

RHODES POND ROAD (SR 1804)

HC HC DENOTES HAND CLEARING

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	57
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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UTILITY PERMIT DRAWING SHEET 11D OF 18

REVISED 1/26/2022

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ALL DRIVEWAY RADII 15' UNLESS OTHERWISE LABELED.

FOR BRIDGE SKETCH SEE SHT. 2A-8

PAVEMENT REMOVAL

FOR -L- PROFILES SEE SHTS. 138 & 139
FOR -Y11- PROFILE SEE SHT. 194
FOR DITCH DETAILS SEE SHTS. 2D-5 THRU 2D-6

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default

Submitted 2/1/2022

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
16	-Y4- 32+97 - 33+91 RT & - Y4- 37+51 - 41+72 RT	Overhead power: WN*					0.373					
21	-Y5C- 23+55 - 24+62 RT	Overhead power: WV					0.072					
22	-Y5FLY- 60+09 - 62+54 RT	Overhead power: WW					0.204					
28	-L- 395+04 - 398+40 LT	Overhead power: WAG*					0.224					
30	-L- 424+05 - 426+04 LT	Overhead power: WAK*					0.058					
	-L- 430+62 - 435+09 LT	Overhead power: WAL*					0.196					
47	-L- 759+32 - 776+24 RT	Overhead power: WBD					0.092					
		Overhead power: WBE*					0.048					
58	-L- 250+03 - 251+64 RT	Overhead power: WC					0.101					
59	-SR5- 30+53 - 37+69 RT	Overhead power, UG telephone, waterline: WD					0.289					
60	-Y11- 21+84 - 22+78 RT	Overhead power: WE					0.050					
TOTALS*:			**0.000**	**0.000**	**0.000**	**0.000**	**1.707**	**0.00**	**0.00**	**0**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

* Denotes proposed 2' diameter power pole will be used at 3.1sqft per pole, permanent fill in wetlands

Site 16: 4 poles= 12.4sqft

Site 28: 1 pole= 3.1sqft

Site 30: 2 poles= 6.2sqft

Site 47: 1 pole= 3.1sqft

Total= 25sqft permanent fill in wetlands

REVISED 1/26/2022

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/21/2020
Cumberland / Harnett Counties
I-5986A / I-5877

Revised 2018 Feb