



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

September 23, 2026

MEMORANDUM TO: Division Environmental and Construction Units

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

SUBJECT: Environmental Permits for the Replacement of:
Culvert 58 over Mackey Creek on US 70 in McDowell, Division 13,
WBS DF18313.1059106.PR

Please find enclosed the following permits for this project:

Agency	Permit Type	Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Nationwide Permit 3 Action ID: SAW-2026-01269 Dated September 17, 2026	March 14, 2031
NC Division of Water Resources Section 401 Water Quality Certification	Water Quality Certification No. 8562 [3] Project ID: 20260894 Dated August 21, 2026	expires with above Permit

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

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

404 Permit (USACE)



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT
WRDA TRANSPORTATION BRANCH
69 DARLINGTON AVENUE
WILMINGTON NORTH CAROLINA 28403

September 17, 2026

Regulatory Division
SAW-2026-01269

Sent Via email: recrowther@ncdot.gov

NC Department of Transportation
Mr. Robert Crowther
345 Toot Hollow Road
Bryson City, NC 28713

Dear Mr. Crowther:

This letter is in response to the Pre-Construction Notification (PCN) you submitted to the Wilmington District, WRDA/Transportation Branch on July 13, 2026, for a Department of the Army Nationwide Permit (NWP) verification. This project has been assigned the file number SAW-2026-01269 and is known as the Bridge 58 replacement project. This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include the replacement of a septuple barrel box culvert critically damaged by Hurricane Helene with a new single-span 121-foot-long bridge and will result in the permanent impact to 0.17 acres of wetland, the permanent impact to 50 lf of stream channel and the temporary impact to 106 lf of stream channel. The project is located where US 70 West crosses Mackey Creek near the intersection of US 70 West and Burnette Road in McDowell County, North Carolina; 35.670139 °N Longitude: -82.114667 °W.

We have determined that the proposed work is authorized by NWP 3 pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C § 1344). The proposed work must be accomplished in strict accordance with the general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed plans. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 15, 2031, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked,

you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Project Specific Special Conditions:

- 1) This Department of the Army permit does not authorize you to take an endangered species, in particular the federally listed or proposed gray bat (*Myotis grisescens*), and northern long-eared bat (*Myotis septentrionalis*, NLEB). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service Biological Opinion (BO) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your permit. The U.S. Fish and Wildlife Service is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA
- 2) In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

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

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Crystal Amschler, Project Manager of the WRDA/Transportation Branch at 828-526-6013, by mail at the above address, or by email at crystal.c.amschler@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,

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

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

Enclosures

U.S. Army Corps of Engineers (USACE) CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.		Form Approved - OMB No. 0710-0003 Expires 2027-10-31
The Agency Disclosure Notice (ADN)		
The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.		
PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions. Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.		
Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Wilmington District, Regulatory Office. The certification can be submitted by email at crystal.c.amschler@usace.army.mil or by mail at the below address: U.S. Army Corps of Engineers Wilmington District Office Street Address: 151 Patton Ave Room 208 City: Asheville State: North Carolina Zip Code: 28801		
COMPLETED BY THE CORPS		
Corps Action Number: SAW-2026-01269 Permit Type: General Permit General Permit Number and Name (if applicable): Name of Permittee: NCDOT Project Name: Bridge 58 replacement project Project Location (physical address): located where US 70 West crosses Mackey Creek		
PERMITTEE'S CERTIFICATION		
Date Work Started: Date Work Completed: Enclose photographs showing the completed project (if available). I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.		
Name	Date	Signature

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

Permittee: NCDOT
Project Name: Br 58 replacement

Action ID: SAW-2026-01269
County: McDowell

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 to the U.S. Army Corps of Engineers (USACE) 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 must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not 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 bank ledger to the Permittee, the USACE Project Manager, and the Wilmington 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: 03050101, Catawba River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.17		

*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: 03050101, Catawba River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
		742		0.34		

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 USACE, 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: _____

Name of Sponsor's Authorized Representative: _____

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 USACE 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 USACE 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. 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 the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE 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 USACE 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 USACE, the Sponsor must obtain case-by-case approval from the USACE 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 USACE administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the USACE 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 USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).*** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Crystal Amschler
USACE Field Office: Asheville Regulatory Field Office
US Army Corps of Engineers
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

Email:

Crystal Amschler Digitally signed by Crystal Amschler
Date: 2026.09.17 12:01:35 -04'00'

USACE Project Manager Signature

Click here to enter a date.

Date of Signature

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

Page 2 of 2

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at <http://regulatory.usacesurvey.com/> to complete the survey online.

401

Certification (NCDWR)

JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director



August 21, 2026

DWR # 20260894
McDowell County

Mr. Michael A. Turchy, ECAP Group Leader
NC DOT Environmental Analysis Unit
1598 Mail Service Center
Raleigh NC 27699
maturchy@ncdot.gov

Subject: Certificate of Coverage Approval under Water Quality General Certification No.856
NCDOT Project: 18313.1059106.PR: Replace Culvert 580058 with Bridge on US 70
Location: Lat 35.670139, Long -82.114667

Dear Mr. Turchy:

This Certificate of Coverage approval is issued to the North Carolina Department of Transportation, dated August 21, 2026. This Certificate of Coverage authorizes work under General Certification No. 8562 for the impacts listed below and described in your application which was received by the N.C. Division of Water Resources (Division or DWR) with fee July 13, 2026. This certificate is for the purpose and design described in your application. **This approval requires you to follow all the conditions listed in the enclosed General Certification No. 8562.**

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

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

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



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

Type of Impact	Amount Approved Permanent	Amount Approved Temporary	Mitigation Amount Required
Perennial Streams			
2: Roadway & Stream Stabilization	6 linear feet	11 linear feet	0 feet
3: Temporary Dewatering	0 linear feet	95 linear feet	0 feet
4: Roadway & Stream Stabilization	44 linear feet	0 linear feet	0 feet
Totals:	50 linear feet	106 linear feet	0 feet
Riparian Wetlands			
1: Road: Permanent Fill	0.04 acres	0 acres	0.04 acres
1: Road: Mechanized Clearing	0.02 acres	0 acres	0.02 acres
2: Road: Permanent Fill	0.03 acres	0 acres	0.03 acres
2: Road: Mechanized Clearing	0.02 acres	0 acres	0.02 acres
4: Road: Permanent Fill	0.05 acres	0 acres	0.05 acres
4: Road: Mechanized Clearing	0.01 acres	0 acres	0.01 acres
Totals:	0.17 acres	0 acres	0.17 credits

Mitigation must be provided for the proposed impacts as specified in the table below. The attached Compensatory Mitigation Responsibility Transfer Form (Form) OR Forms (Forms) shall be completed and provided to the Division prior to *any* impacts occurring. If the Mitigation Provider specified on the attached Form(s) for the proposed impacts changes after issuance of this Certificate of Coverage, then the Permittee shall request a revised Compensatory Mitigation Responsibility Transfer Form from the Division prior to conducting any impacts.

	Compensatory Mitigation Required	River Basin & HUC Number
Riparian Wetland	0.17 acres (credits)	Catawba 03050101

Notice regarding the right to contest this 401 Water Quality Certification decision is attached to this letter.



This letter completes the Division's review under Section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Rob Ridings at rob.ridings@deq.nc.gov or 919-707-8786 if you have any questions or concerns.

Sincerely,

Signed by:
Faith Hardin
3185423002EA45E...

Faith Hardin, Supervisor
401 & Buffer Transportation Permitting Branch
Division of Water Resources, NCDEQ

Enclosures: Notice Regarding The Right To Contest A DWR 401 Water Quality Certification Decision
GC 8562

Electronic cc:

Lori Beckwith, USACE Asheville Regulatory Field Office (loretta.a.beckwith@usace.army.mil)

Robert Crowther, NCDOT ECAP (recrowther@ncdot.gov)

Mike Sanderson, NCDOT Division 13 Environmental Supervisor (jmsanderson@ncdot.gov)

Dave McHenry, NCWRC (david.mchenry@ncwildlife.gov)

Amy Annino, NCDWR Transportation Permitting (amy.annino@deq.nc.gov).

Beth Harmon, NC DMS (beth.harmon@deq.nc.gov)

DWR 401 & Buffer Permitting Branch Electronic file



**NOTICE REGARDING THE RIGHT TO CONTEST A DWR DECISION ON A 401 WATER QUALITY
CERTIFICATION AND/OR BUFFER AUTHORIZATION**

Right of Persons Aggrieved to File a Contested Case for the Decision on a 401 Water Quality Certification and/or Buffer Authorization:

The Division's decision is subject to review under NCGS 150B-23.

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

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

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

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

If the party filing the petition is a person aggrieved other than the recipient of the certificate (the "Permittee"), the party **must also** serve the Permittee in accordance with NCGS 150B-23(a).

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



JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director



COMPENSATORY MITIGATION RESPONSIBILITY TRANSFER FORM

August 21, 2026

Permittee: NC Department of Transportation

DWR Project #20260894

Project Name: Culvert 580058 on US 70

County: McDowell

The Division has received an acceptance letter from the NC Division of Mitigation Services (DMS) to satisfy the mitigation requirements set forth in the Certificate of Coverage for DWR Project #20260894 issued to North Carolina Department of Transportation, dated August 21, 2026 as provided in the table below.

	Compensatory Mitigation Required	River Basin & HUC Number
Riparian Wetland	0.17 acres (credits)	Catawba 03050101

The Permittee must provide a copy of this form to DMS, who will then sign the form to verify receipt of payment and the transfer of the mitigation responsibility. Once DMS has signed this form, it is the Permittee's responsibility to ensure that a signed copy of this form is submitted to DEQ.WR.401MRT@deq.nc.gov **before** conducting any of the authorized impacts.

The Division of Mitigation Services verifies that the mitigation requirements (credits) shown above will be debited using approved released or advance credits, and for all stream or wetland credits is in accordance with the signed/approved In-Lieu Fee Instrument dated July 28, 2010. By signing below, DMS is accepting full responsibility for the identified mitigation. **As a reminder to the Mitigation Provider, no more than 25 percent of the total mitigation required by Division can be met through preservation, unless requested and approved by the Division Director (15A NCAC 02H. 0506(c)(7)).**

Signature Authority Name (print): _____

Signature: _____ Date: _____



Permitted Drawings



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.02: Released April 23, 2024)

WBS Element: 18313.1059106.PR TIP/Proj No: 18313.1059106.PR County(ies): McDowell Page 1 of 3

General Project Information

WBS Element:		18313.1059106.PR		TIP Number:	18313.1059106.PR		Project Type:	Bridge Replacement		Date:	3/31/2026	
NCDOT Contact:		Joel M Davis				Contractor / Designer:		Jason Patskoski, PE				
	Address:	55 orange st Asheville, NC 28801					Address:	324 Blackwell St Suite 1200 Durham, NC 27701				
	Phone:	828-250-3360					Phone:	(919) 732-1300				
	Email:	jmdavis4@ncdot.gov					Email:	jason.patskoski@threeoaksengineering.com				
City/Town:		Marion				County(ies):		McDowell				
River Basin(s):		Catawba				CAMA County?		No				
Wetlands within Project Limits?		Yes										

Project Description

Project Length (lin. miles or feet):	0.28	Surrounding Land Use:	Urban/residential
		Proposed Project	Existing Site
Project Built-Up Area (ac.)	1.7 ac.		1.0 ac.
Typical Cross Section Description:	US-70 is a proposed two-lane road with 12-ft lanes and 6'8" paved shoulders. Portions of US-70 will include shoulder berm gutter. The proposed bridge along US-70 will be 43'-3" out-to-out and 40' clear roadway. There will be two lanes, each 12' wide, and 8' paved shoulders on both sides.		
	The existing US-70 was a 2-lane paved roadway. It had a clear roadway of 22.5'. The left and right shoulder was 1' wide and fully paved. There was guardrail on both sides of the roadway. The existing structure was a triple 11'x7' RCBC lengthened with a quadruple 9'x7' RCBC under US-70. The existing typical cross-section description was gathered from the 2024 bridge inspection report.		
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 8500	Year: 2026	Existing: 8500 Year: 2022

General Project Narrative: (Description of Minimization of Water Quality Impacts)	NCDOT Division 13 proposes to replace Culvert 580058 on US-70 over a jurisdictional stream (Mackey Creek) in McDowell County, North Carolina. The existing roadway and structure were damaged by Hurricane Helene. During project construction, minimization measures such as utilizing 2:1 fill slopes were implemented to avoid stream and wetland impacts, and wetlands were avoided to the greatest extent practicable. The existing grass lined ditches were retained to the greatest extent practicable to help promote infiltration, and rip rap toe protection was used where this was not feasible. Stream re-establishment was added to restore the channel and bank slopes after the existing culvert removal and minimize erosion. The proposed -L- crossing is a 121', single span 54" FIB bridge. To reduce erosion in the stream, rip rap stabilization was added along the proposed roadway fill slope on the Southwest side, and a vertical abutment was used on the Northeast side of the bridge, so it did not further encroach into the stream. Stream impacts are limited to installation of impervious dikes for installation of the vertical abutment and removal of the existing culvert. Rip Rap outlet pads were also used at pipe outlets when necessary to minimize erosion. Stillhouse Branch crosses the -Y- alignment through a 72" CMP and appears to cross under US 70. There is an area of flow from the existing roadway embankment at Wetland WA. The wetland and a portion of the stream are being filled, and during construction, it will be determined how to handle the flow under US 70. The fill slopes in the area of WA and stillhouse branch are a 2:1 and are minimizing wetland impacts as much as possible without causing more erosion. SC and SD both connect to WC and are not impacted except for the portion of WC that is being filled in. The fill slopes in the area of WC are a 2:1 and are minimizing wetland impacts as much as possible without causing more erosion. SB connects to Mackey creek and WB and is not impacted at all by the proposed alignment, but WB will be partially filled in. The fill slopes in the area of WB are a 2:1 and are minimizing wetland impacts as much as possible without causing more erosion. Due to the steep slope for an extended distance, rip-rap toe protection was also added to minimize erosion.
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North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element:	18313.1059106.PR	TIP/Proj No.:	18313.1059106.PR	County(ies):	Mcdowell	Page	2	of	3
General Project Information									
Waterbody Information									
Surface Water Body (1):	Mackey Creek			NCDWR Stream Index No.:	11-15-(3.5)				
NCDWR Surface Water Classification for Water Body			Primary Classification:	Class C					
			Supplemental Classification:	None					
Other Stream Classification:	None								
Impairments:	None								
Aquatic T&E Species?	No	Comments:							
NRTR Stream ID:	Mackey Creek			Buffer Rules in Effect:			N/A		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?			No		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)				
(If yes, provide justification in the General Project Narrative)									
Surface Water Body (2):	Stillhouse Branch			NCDWR Stream Index No.:	11-15-5				
NCDWR Surface Water Classification for Water Body			Primary Classification:	Class C					
			Supplemental Classification:	None					
Other Stream Classification:	None								
Impairments:	None								
Aquatic T&E Species?	No	Comments:							
NRTR Stream ID:	Stillhouse Branch			Buffer Rules in Effect:			N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?			N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)				
(If yes, provide justification in the General Project Narrative)									
Surface Water Body (3):	UT of Mackey Creek			NCDWR Stream Index No.:	11-15-(3.5)				
NCDWR Surface Water Classification for Water Body			Primary Classification:	Class C					
			Supplemental Classification:	None					
Other Stream Classification:	None								
Impairments:	None								
Aquatic T&E Species?	No	Comments:							
NRTR Stream ID:	SB			Buffer Rules in Effect:			N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?			N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)				
(If yes, provide justification in the General Project Narrative)									



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element: 18313.1059106.PR TIP No.: 18313.1059106.PR County(ies): McDowell Page 3 of 3

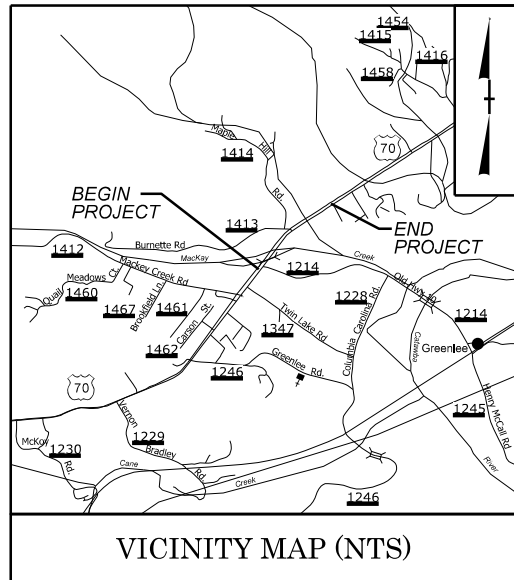
Additional Waterbody Information

Surface Water Body (4):	UT of Mackey Creek		NCDWR Stream Index No.:	11-15-(3.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SC		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (5):	UT of Mackey Creek		NCDWR Stream Index No.:	11-15-(3.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SD		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

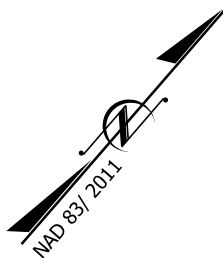
TIP PROJECT: 18313.1059106.PR

CONTRACT: C205064

See Sheet 1A For Index of Sheets



DESIGN RECOMMENDATION PLAN SET SUBMITTAL



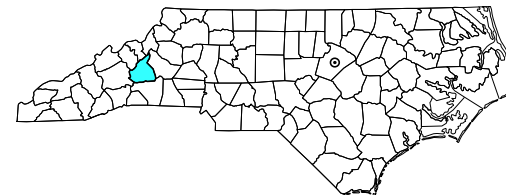
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

MCDOWELL COUNTY

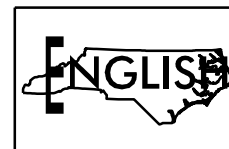
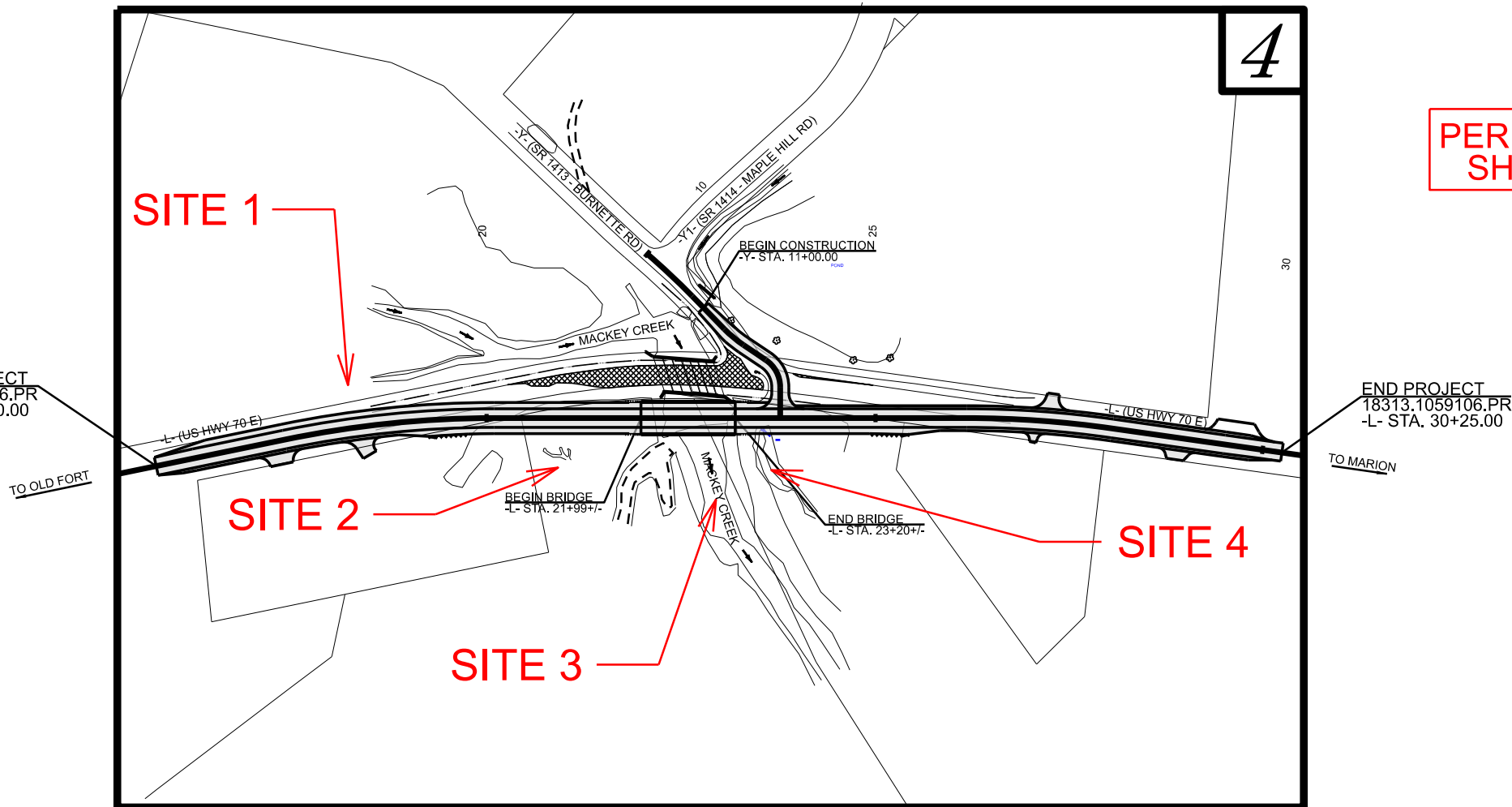
LOCATION: *REPLACEMENT OF CULVERT NO. 580058 ON US 70
EAST OVER MACKEY CREEK WITH A BRIDGE*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING, CULVERT
REMOVAL, & STRUCTURE*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	18313.1059106.PR	11	
STATE PROJ. NO.		F.A. PROJ. NO.	DESCRIPTION
18313.1059106.PR			PE
18313.1059106.PR			ROW / UTIL.
18313.1059106.PR			CONST.



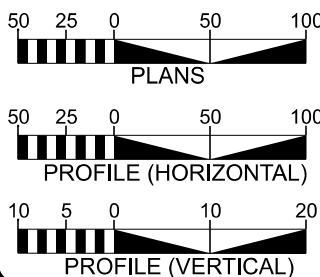
PERMIT DRAWING
SHEET 1 OF 12



PRELIMINARY PLANS
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CLEARING ON THIS PROJECT WILL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III - MODIFIED.
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

GRAPHIC SCALES



DESIGN DATA

ADT (PER RFP) = 8,500
V = 60 MPH

FUNC CLASS = MAJOR
COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT 18313.1059106.PR = 0.253 MILES
LENGTH OF STRUCTURE TIP PROJECT 18313.1059106.PR = 0.023 MILES
TOTAL LENGTH OF TIP PROJECT 18313.1059106.PR = 0.276 MILES

PLANS PREPARED BY:

VOLKERT
5430 Wade Park Blvd., Suite 410
Raleigh, NC 27609
Tel: 919-854-4244 Fax: 919-854-4385
NC License No. F-0785

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

MARCH 31, 2025

LETTING DATE:

MARCH 31, 2025

PLANS PREPARED FOR:

DIVISION OF HIGHWAYS
DIVISION 13
55 ORANGE STREET
ASHEVILLE, NC 28801

CHRISTOPHER H. LEE, PE
PROJECT ENGINEER

W. CRAIG PARKER, PE
PROJECT DESIGN ENGINEER

JOEL M. DAVIS

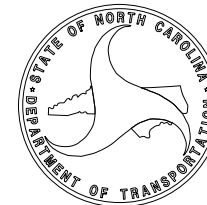
NC DOT CONTACT
DIV. 13 ASST. BRIDGE PROGRAM MANAGER

HYDRAULICS ENGINEER

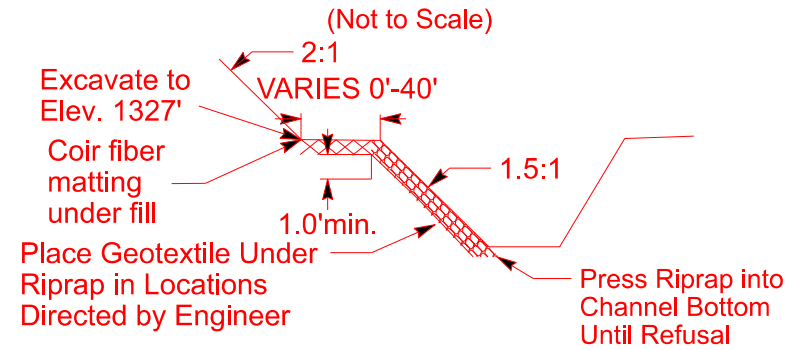
NC Firm License No. F-1334
324 Blackwell Street
Suite 1200
Durham, NC 27701
919-752-1300

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
P.E.



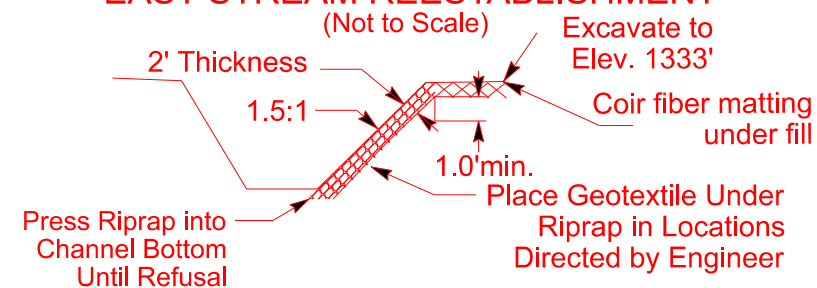
DETAIL 1 WEST STREAM REESTABLISHMENT



RIP RAP CL II = 121 TONS, GEOTEXTILE = 128 SY,
DDE = 696 CY, COIR FIBER MATTING = 241 SY

FROM -L- STA. 21+90.5 TO STA. 22+31.5 LT

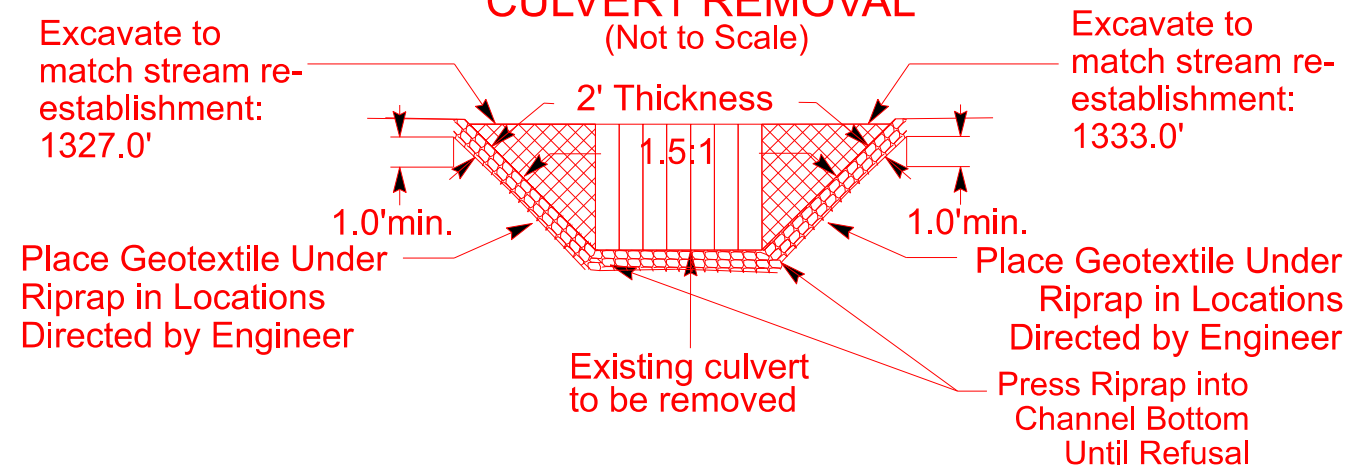
DETAIL 2 EAST STREAM REESTABLISHMENT



RIP RAP CL II = 90 TONS, GEOTEXTILE = 107 SY,
DDE = 98 CY, COIR FIBER MATTING = 177 SY

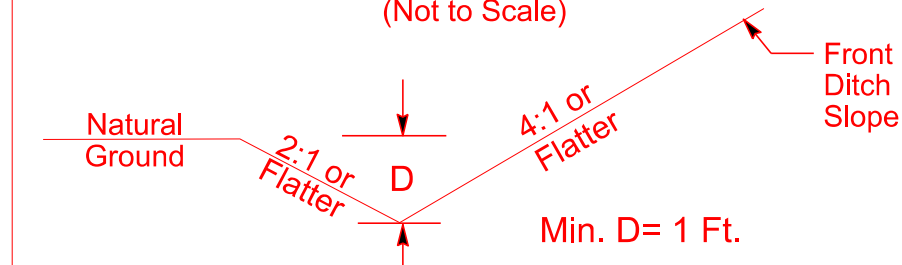
FROM -L- STA. 22+86.5 TO STA. 23+56 LT

DETAIL 5 CULVERT REMOVAL



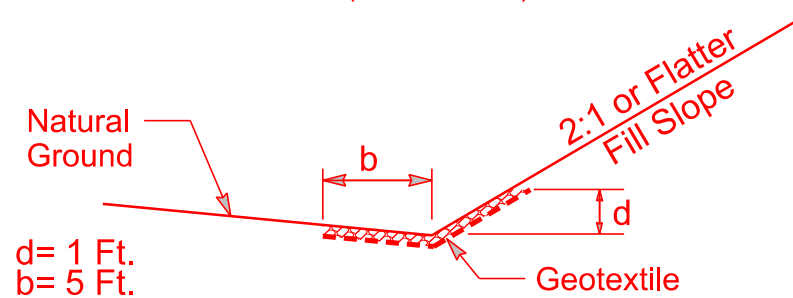
FROM -L- STA. 21+90.5 TO STA. 23+56

DETAIL 3 SPECIAL 'V' DITCH



FROM STA. 16+20 TO STA. 19+70 -L- RT.
FROM STA. 24+30 TO STA. 29+20 -L- LT.

DETAIL 4 TOE PROTECTION



Geotextile = 190 SY, CL I Rip-Rap = 90 TONS

FROM STA. 16+08 TO STA. 18+42 -L- (LT)

PERMIT DRAWING
SHEET 2 OF 12

18313.1059106.PR

2R01 3B-1

ROADWAY DESIGN
ENGINEER

VOLKERT

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HYDRAULIC DESIGN
ENGINEER

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224 Bladwell Street
Durham, NC 27701
919.732.1300

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STATE OF NORTH CAROLINA
MEADOWELL COUNTY

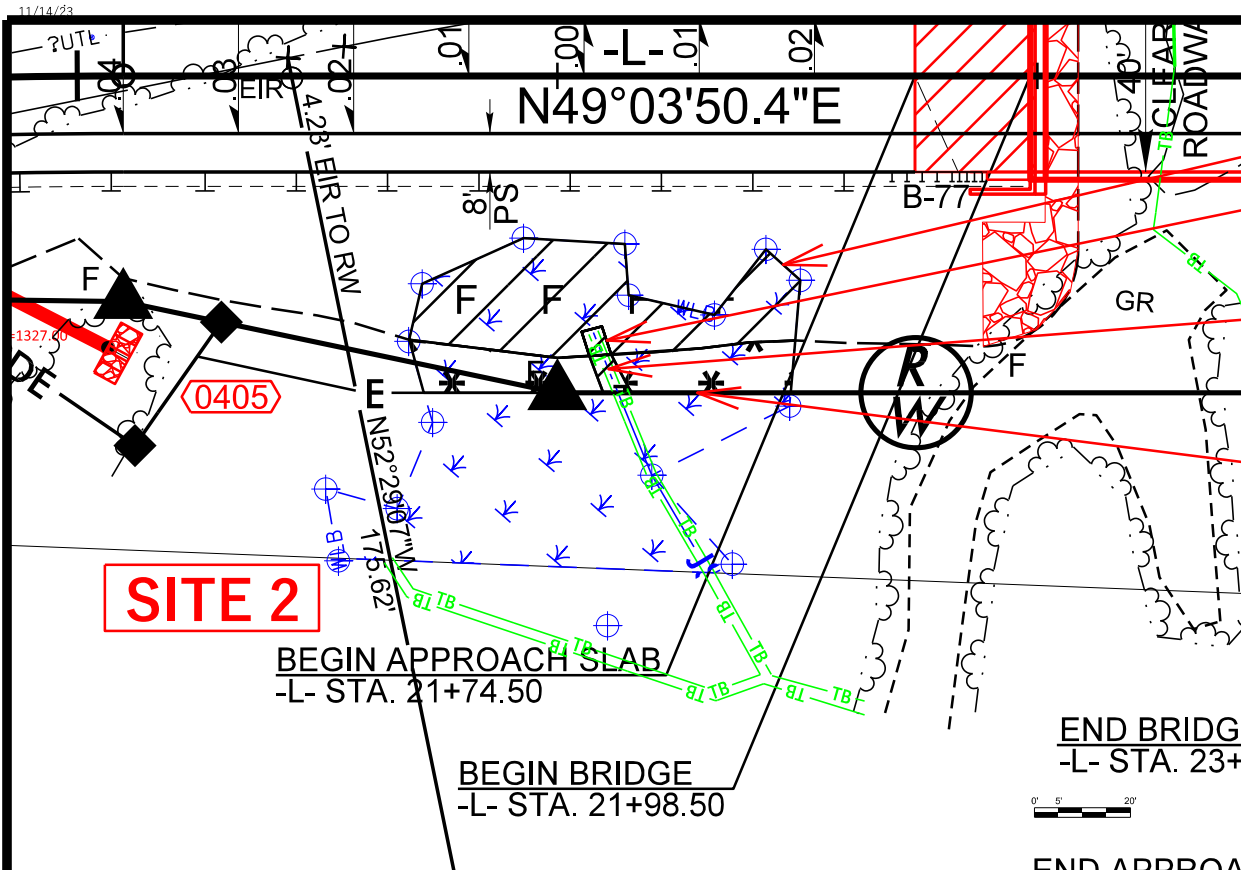


PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/F ACQUISITION



SEE SHEET 5 FOR -L- & -Y- PROFILES



WETLAND FILL
SURFACE WATER IMPACTS

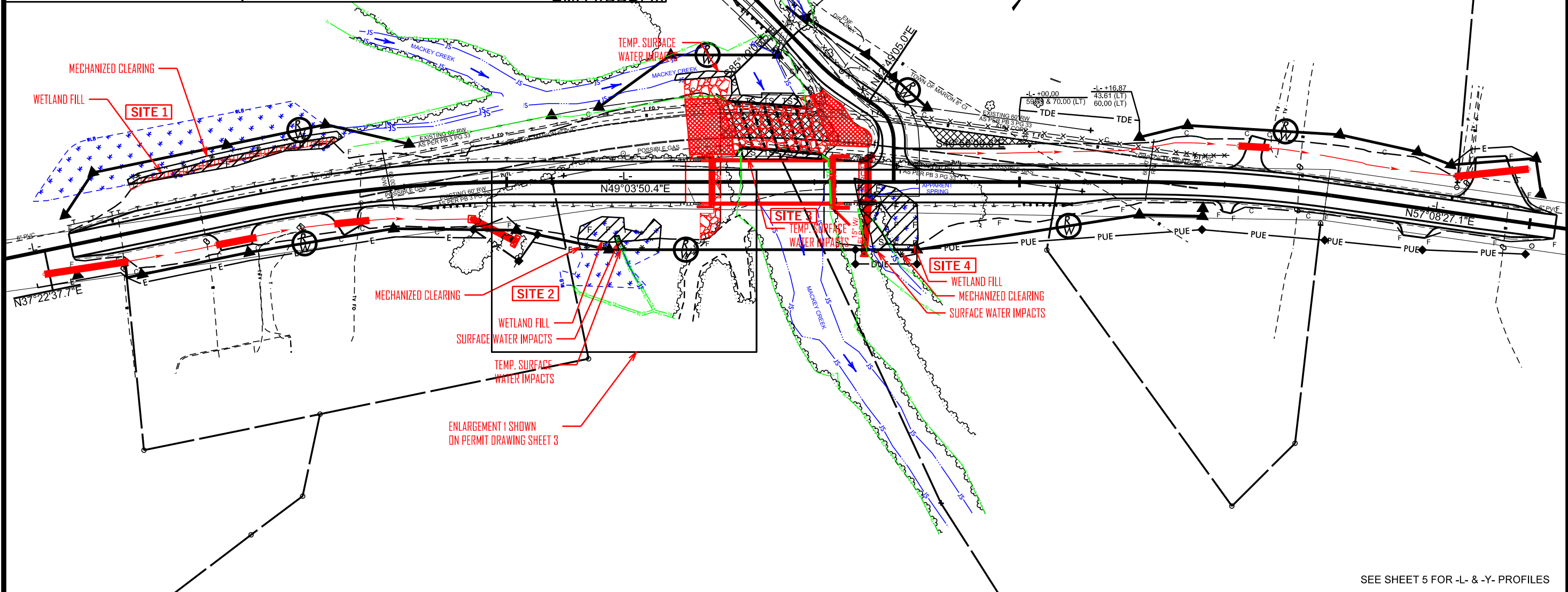
TEMPORARY SURFACE
WATER IMPACTS

MECHANIZED CLEARING

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

NOTE: THE APPARENT SPRING WILL BE INVESTIGATED DURING CONSTRUCTION AND DESIGNED ONCE THE SOURCE HAS BEEN CONFIRMED (SPRING, WATERLINE, SEEP, ETC)

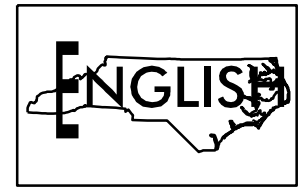
PERMIT DRAWING
SHEET 3 OF 12



18313.1059106.PR

2R01 04

ROADWAY DESIGN
ENGINEER



VOLKERT

2420 Wade Park Blvd., Suite 410
Raleigh, NC 27605
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NC License No. F-0765

HYDRAULIC DESIGN
ENGINEER

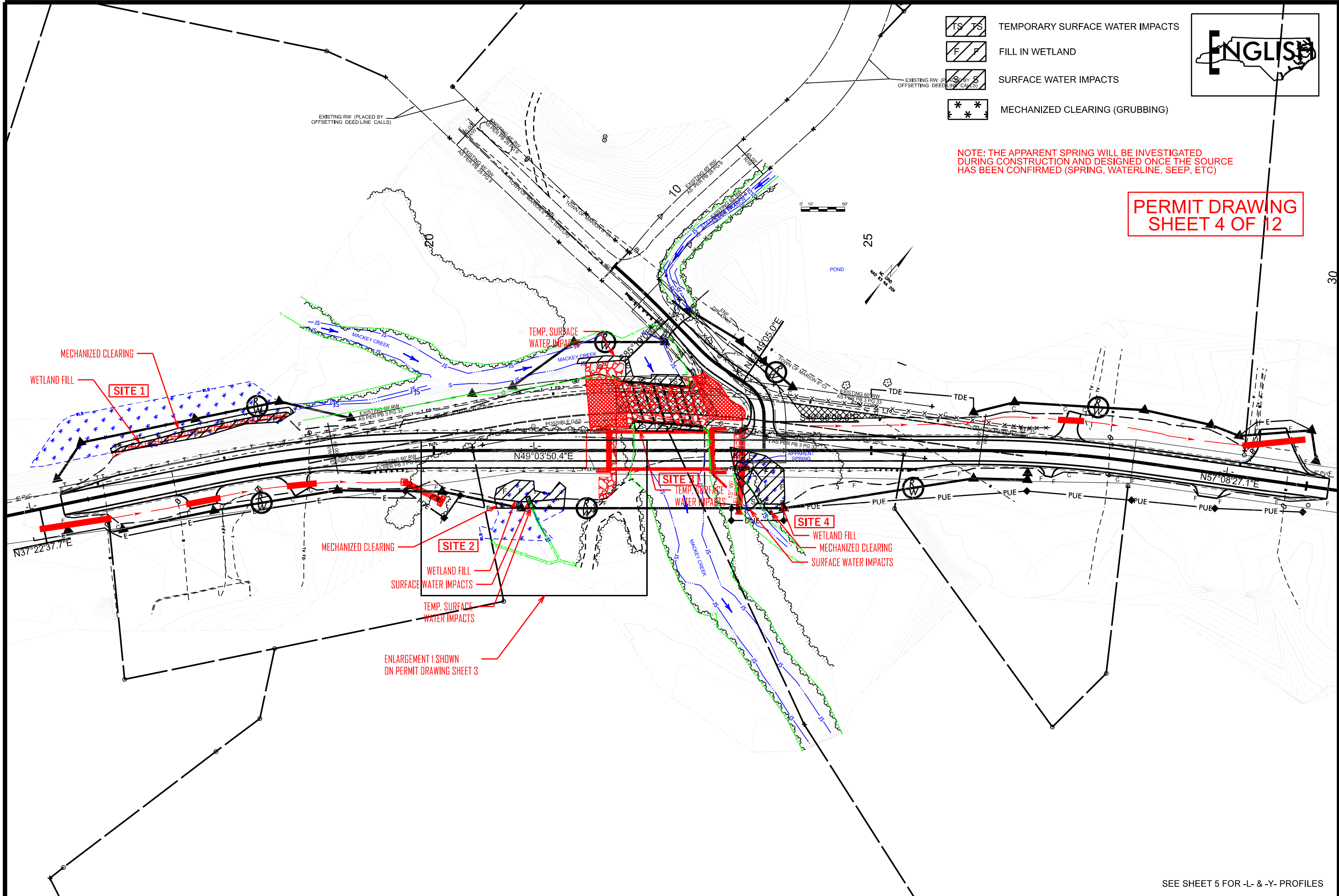
NC Firm License No. F-1334
224 Bladwell Street
Suite 1200
Durham, NC 27701
919.732.1300

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STATE OF NORTH CAROLINA
MEADOWELL COUNTY



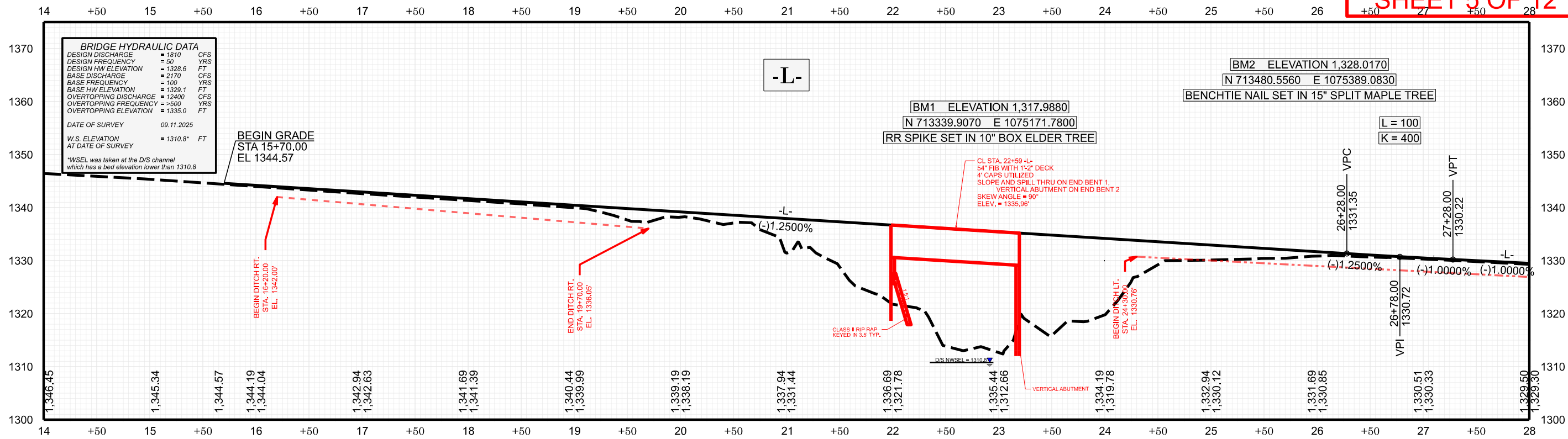
PRELIMINARY PLANS
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SEE SHEET 5 FOR -L- & -Y- PROFILES

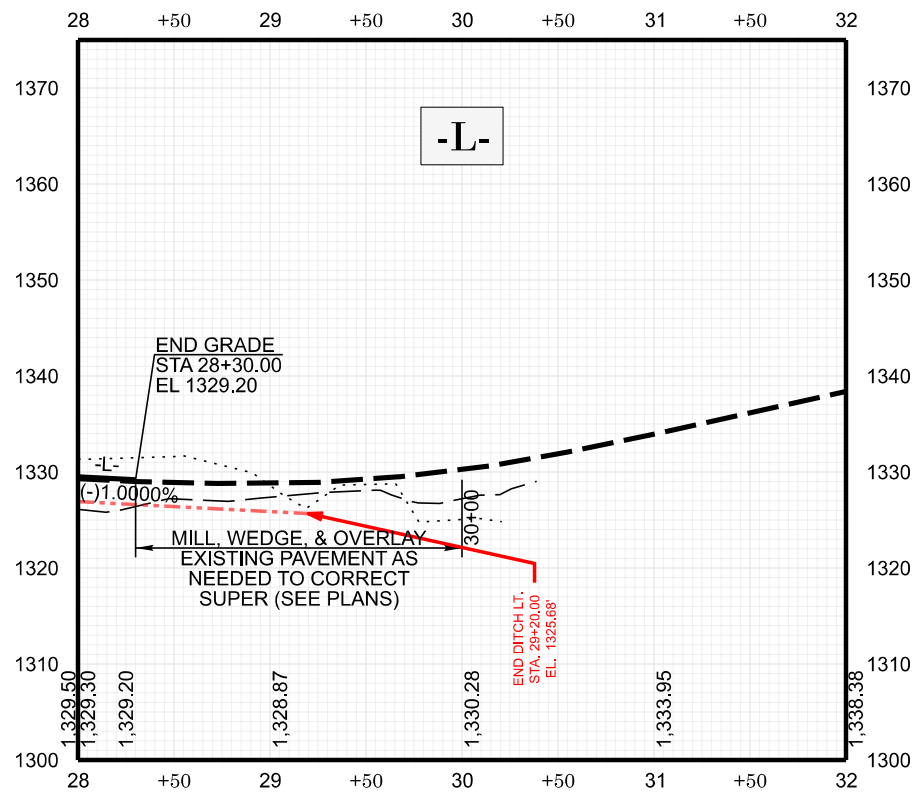


SEE SHEET 5 FOR -L- & -Y- PROFILES

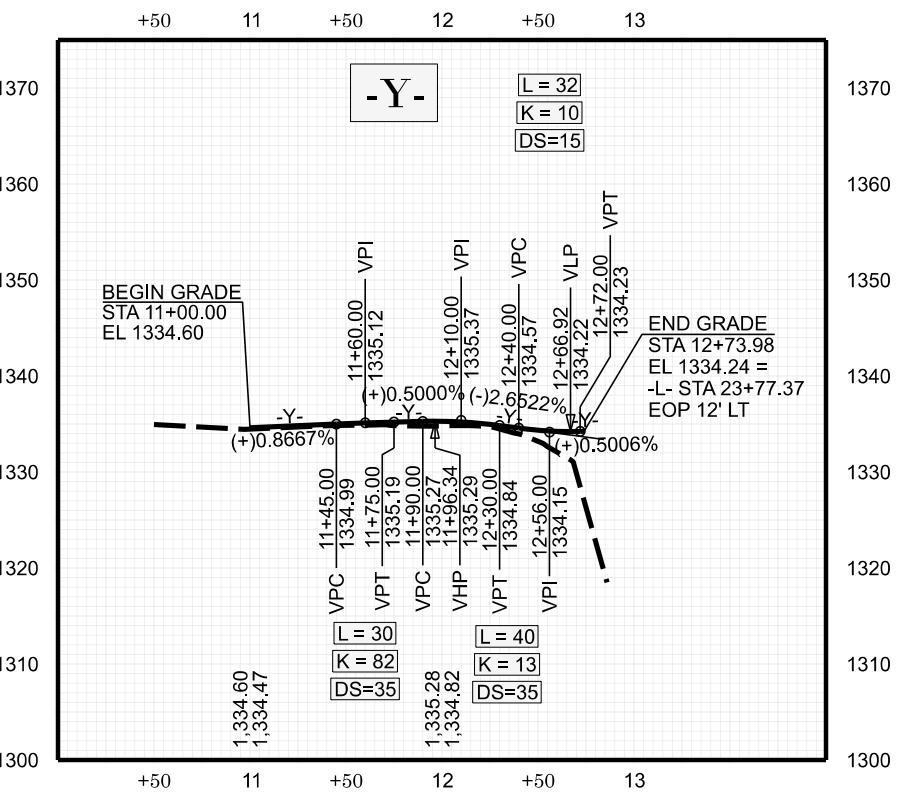
PERMIT DRAWING
SHEET 5 OF 12



SEE SHEET 4 FOR -L- PLAN

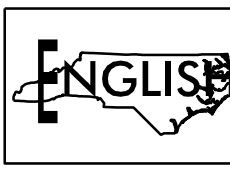


SEE SHEET 4 FOR -L- PLAN



SEE SHEET 4 FOR -Y- PLAN

DITCH LT - - - - -
DITCH RT - - - - -



1813.1059106.PR
2R01 05
ROADWAY DESIGN
ENGINEER

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Raleigh, NC 27605
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NC License No. F-0765

HYDRAULIC DESIGN
ENGINEER

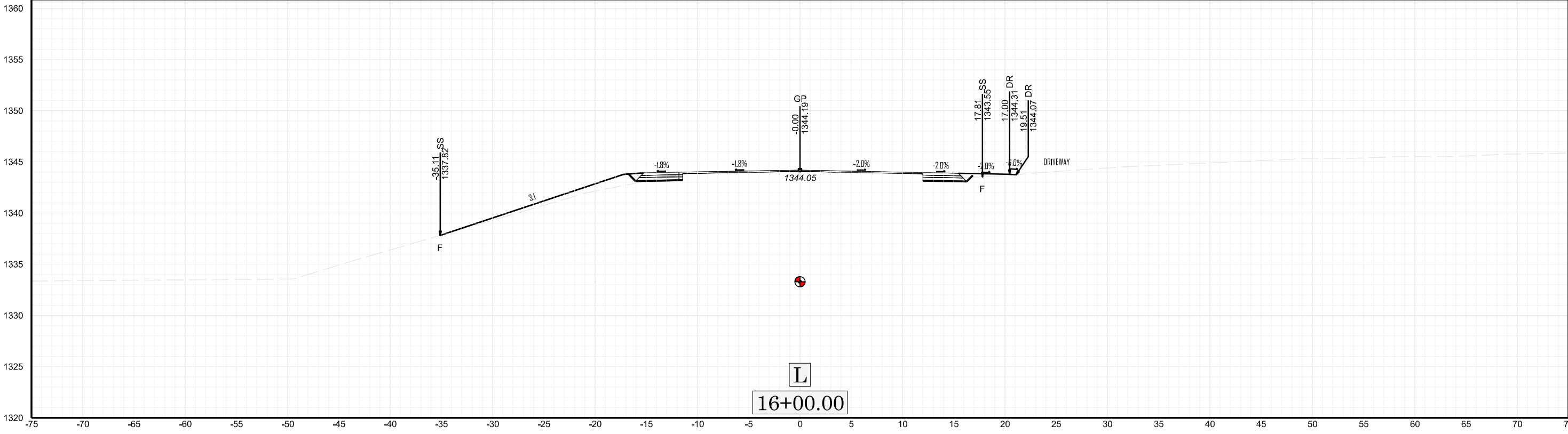
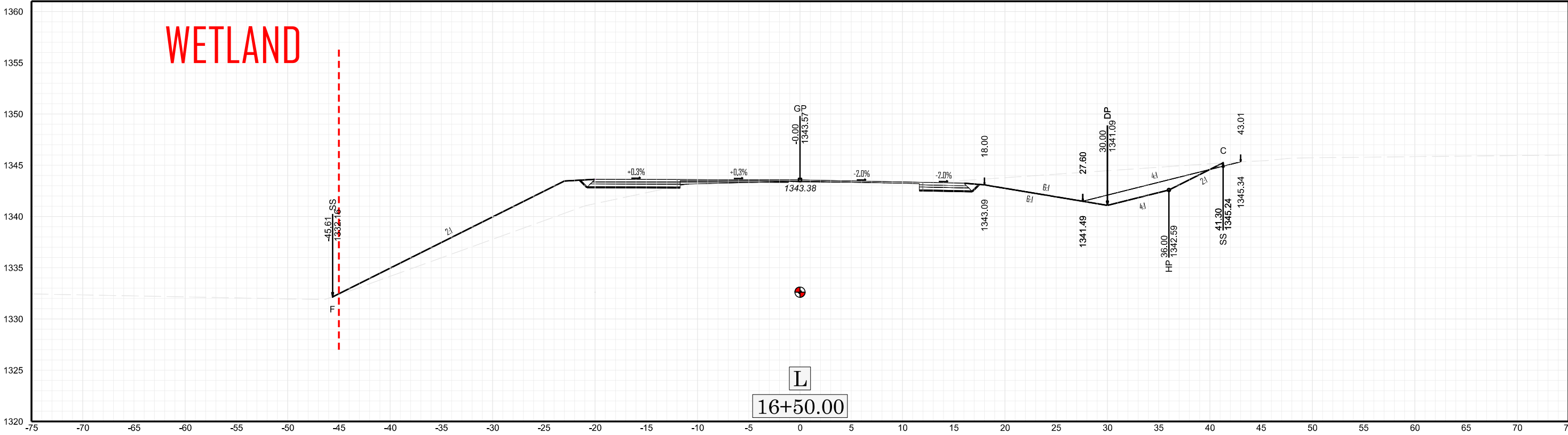
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919.732.1300

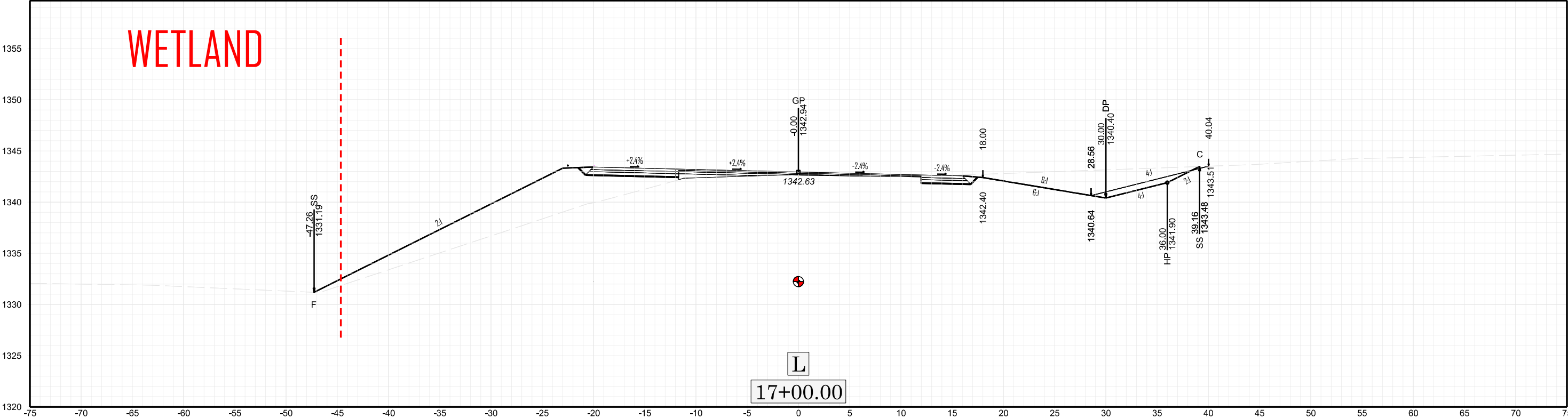
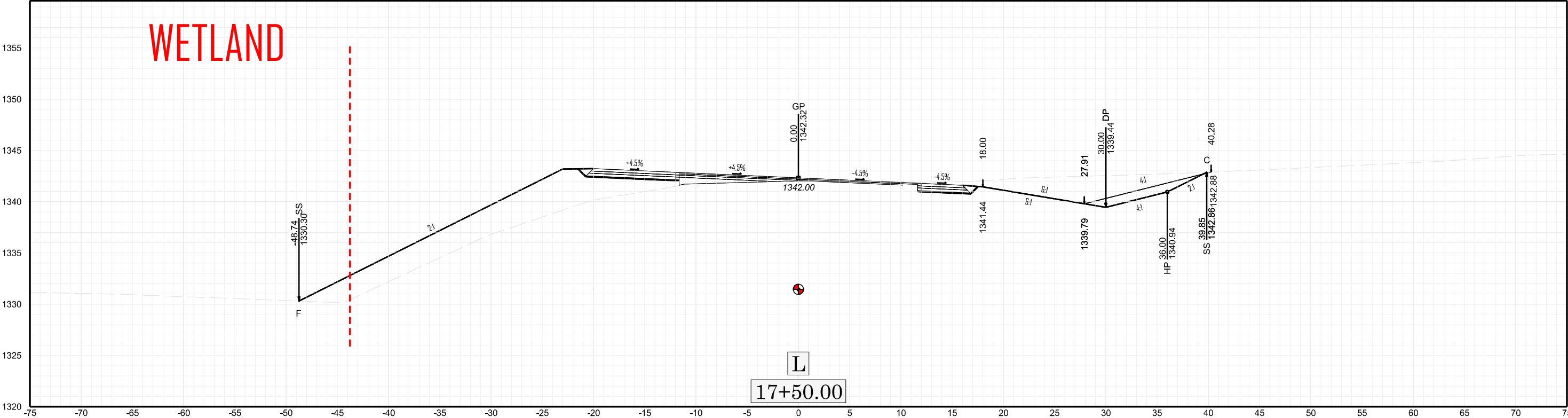
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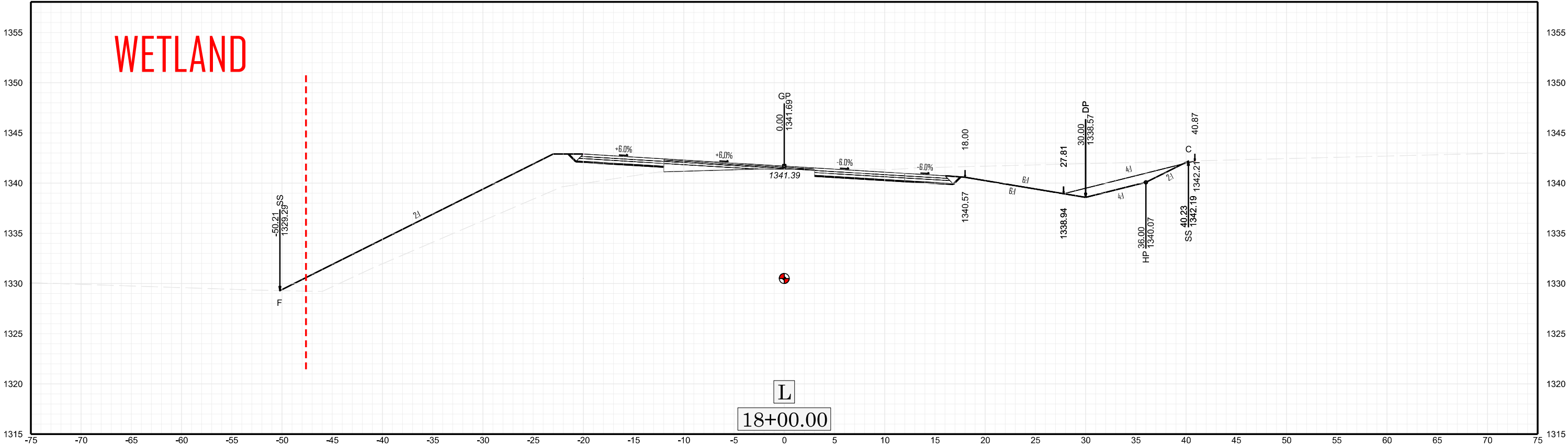
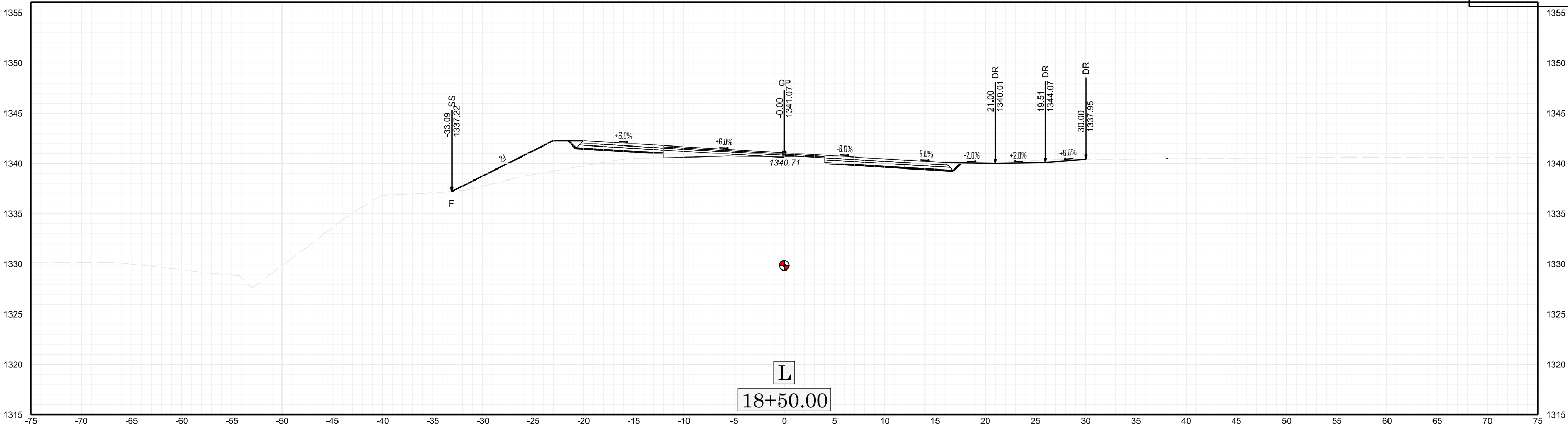
STATE OF NORTH CAROLINA
McDOWELL COUNTY

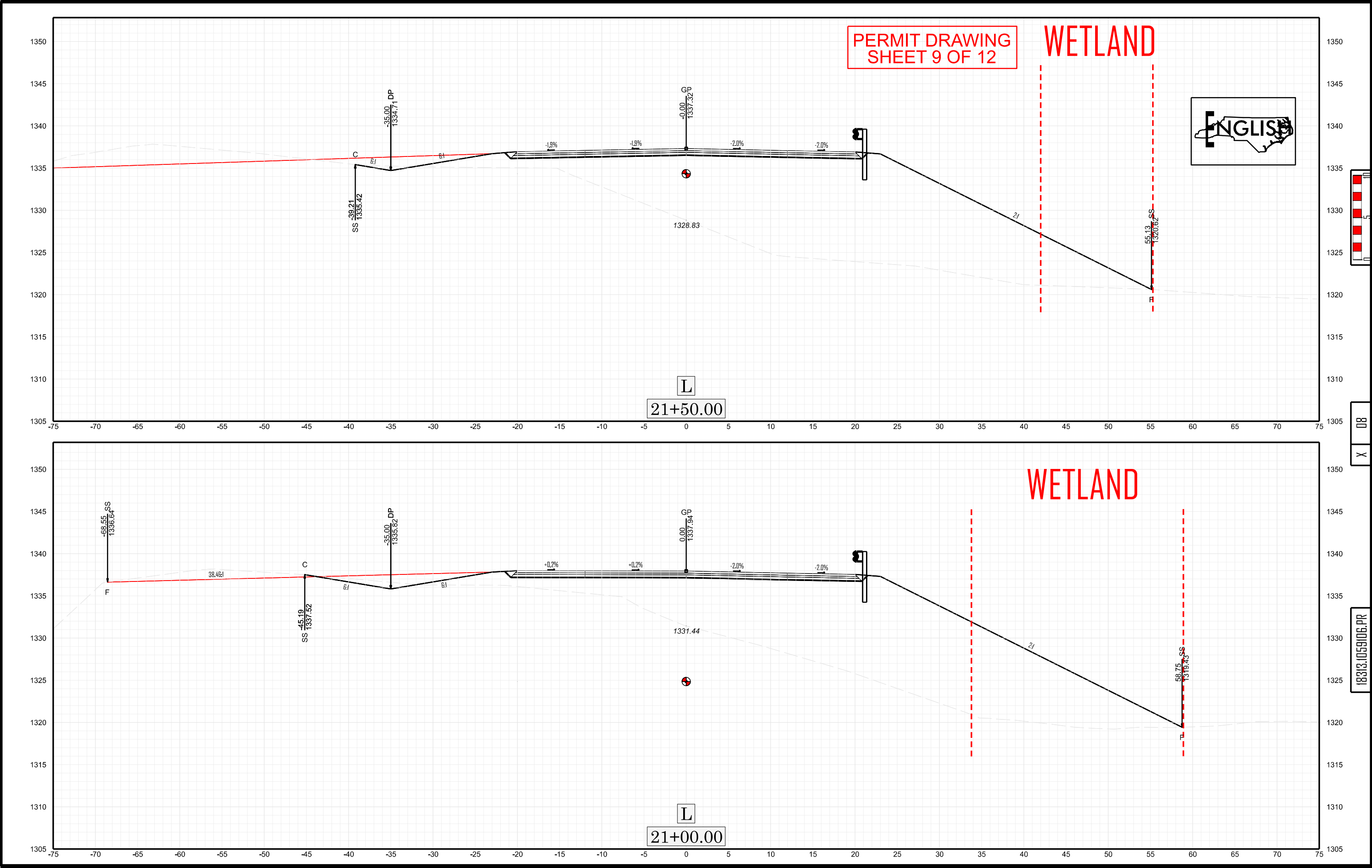
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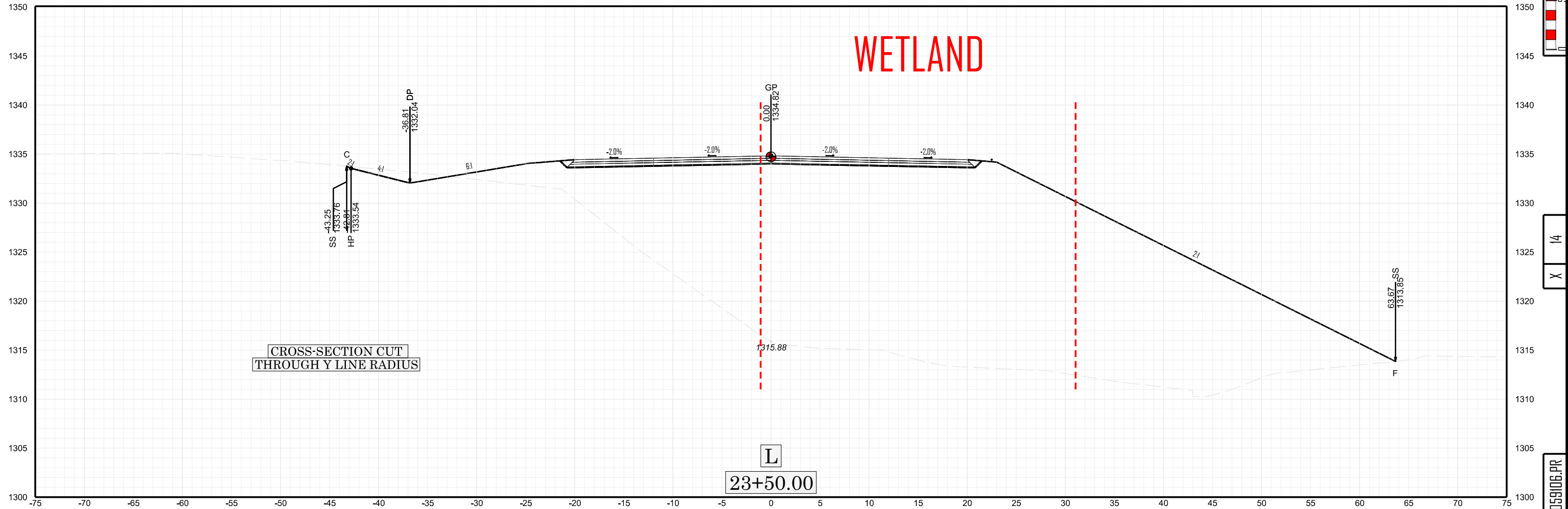
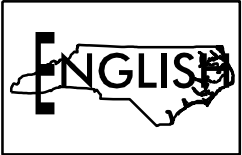
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

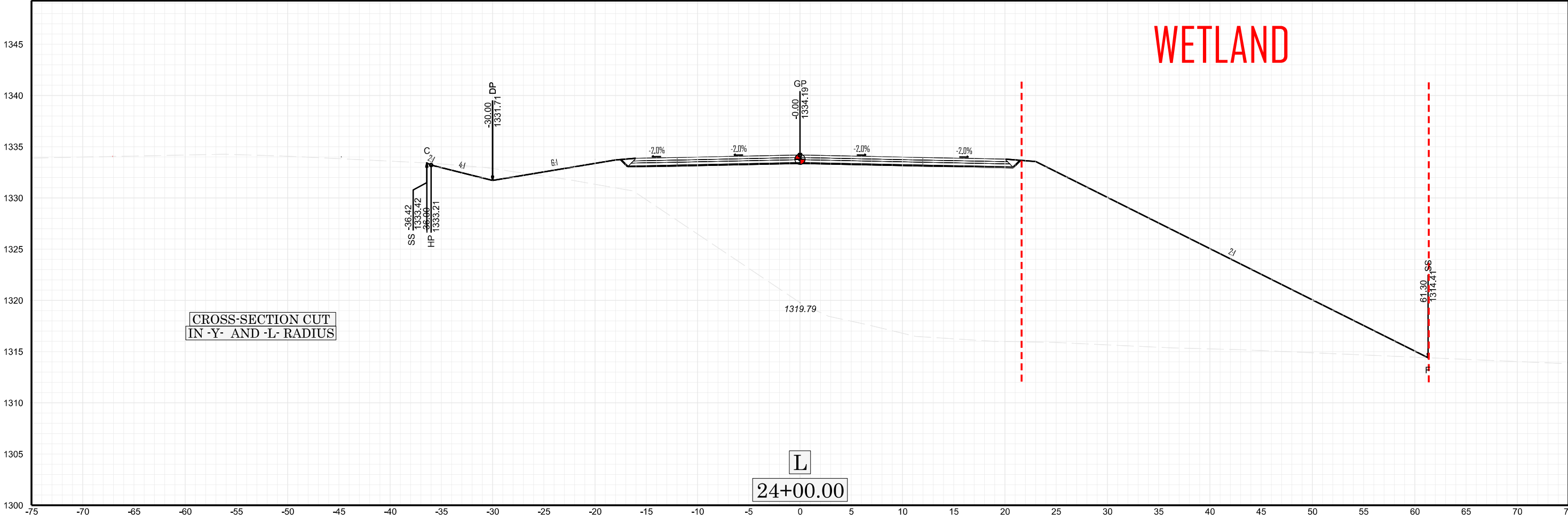
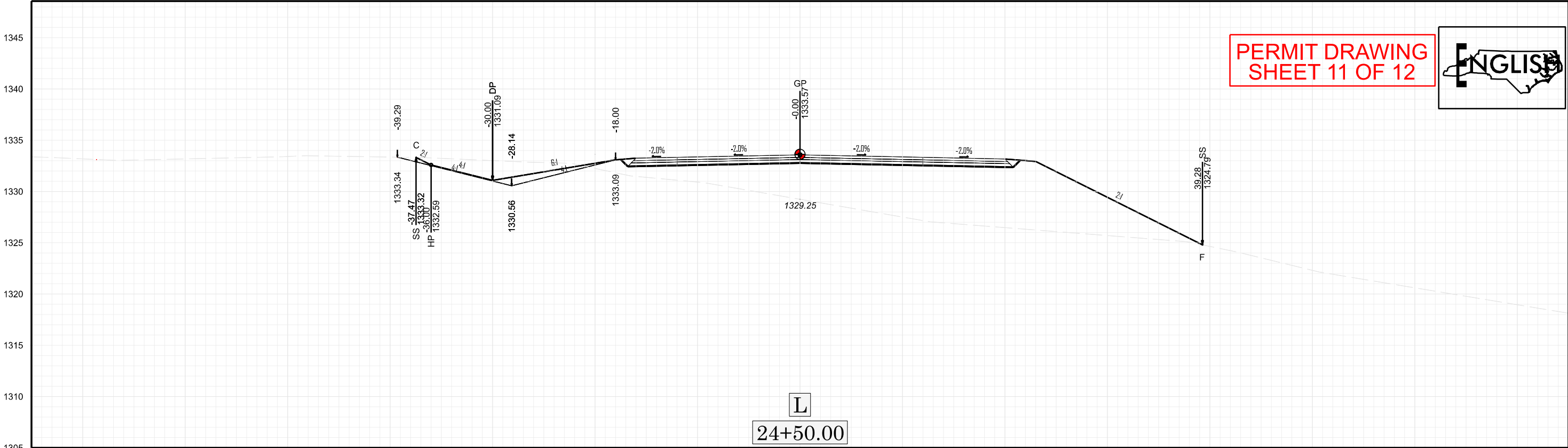












WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	16+08 to 18+46 -L-	Toe Protection/Roadway SS	0.04			0.02						
2	20+69 to 21+50 -L-	Roadway SS	0.03			0.02		< 0.01	< 0.01	6	11	
3	21+64 to 23+07 -L-	Impervious Dike							0.04		95	
4	23+38 to 24+01 -L-	Roadway SS	0.05			< 0.01		< 0.01		44		
TOTALS*:			0.12			0.05		< 0.01	0.04	50	106	0

NOTES:

No impacts are shown for the hydraulic design for the spring/seep at Site 4. The design will be handled during construction.

SHEET 12 OF 12