Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

December 4, 2023 Ver 4.3

*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2196924

A. Processing Information

If this is a courtesy copy, please fill in this with the submission date.

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund, electric generation projects located at an existing or former electric generating facility, or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? *

○ Yes ◉ No

Is this application for a project associated with emergency response/repairs from Hurricane Helene impacts to your project or property?

○ Yes ◉ No

Is this project connected with ARPA funding or S.L. 2023-134 (earmark)? *

○ ARPA ○ S.L. 2023-134 (earmark) ◉ No

County (or Counties) where the project is located: *

Cumberland

Is this a NCDMS Project *

○ Yes ◉ No

Click Yes, only if NCDMS is the applicant or co-applicant.

DO NOT CHECK YES, UNLESS YOU ARE DMS OR CO-APPLICANT.

Is this project a public transportation project? *

◉ Yes ○ No

This is any publicly funded by municipal,state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? *

◉ Yes ○ No

(NCDOT only) T.I.P. or state project number:

BP6.R018

WBS # *

BP6.R.018.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

☑ Section 404 Permit (wetlands, streams and waters, Clean Water Act)

☐ Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

Has this PCN previously been submitted? *

○ Yes

◉ No

1b. What type(s) of permit(s) do you wish to seek authorization? *

☑ Nationwide Permit (NWP)

☐ Regional General Permit (RGP)

☐ Standard (IP)

1c. Has the NWP or GP number been verified by the Corps? *

○ Yes ◉ No

Nationwide Permit (NWP) Number: 14 - Linear transportation

NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: *

check all that apply

- [ ] 401 Water Quality Certification - Regular
- [ ] 401 Water Quality Certification - Express
- [ ] Non-404 Jurisdictional General Permit
- [ ] Riparian Buffer Authorization
- [x] Individual 401 Water Quality Certification

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification: ○ Yes ◉ No

For the record only for Corps Permit: ○ Yes ◉ No

1f. Is this an after-the-fact permit application? *

○ Yes ◉ No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

◉ Yes ○ No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties? *

○ Yes ◉ No

1j. Is the project located in a designated trout watershed? *

○ Yes ◉ No

Link to trout information: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx

B. Applicant Information

1a. Who is the Primary Contact? *

Deanna Riffey

1b. Primary Contact Email: *

driffey@ncdot.com

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6151

1d. Who is applying for the permit? *

- [x] Owner
- [ ] Applicant (other than owner)

(Check all that apply)

1e. Is there an Agent/Consultant for this project? *

○ Yes ◉ No

2. Owner Information

2a. Name(s) on recorded deed: *

N/a

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

2d. Address *

Street Address

1000 Birch Ridge Road

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27610

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6000

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

maturchy@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

Replacement of Bridge on Magnolia Church Road (SR 1843) over Buck Creek

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Stedman

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

35.025268

ex: 34.208504

Longitude: *

-78.702686

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Buck Creek

3b. Water Resources Classification of nearest receiving water: *

C;Sw

Surface Water Lookup

3c. What river basin(s) is your project located in? *

Cape Fear

3d. Please provide the 12-digit HUC in which the project is located. *

030300060201

River Basin Lookup

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

Bridge 250150 was built in 1955. Bridge # is approximately 36 feet long timber beam bridge on timber piles and caps that is 24 feet wide and consists of 2 spans.

Land use in the project study area is combination of farm land and undeveloped natural areas. The project study area is rural and predominantly undeveloped.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

○ Yes ◉ No ○ Unknown

4f. List the total estimated acreage of all existing wetlands on the property:

1.66

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

215

4h. Explain the purpose of the proposed project: *

The current bridge is a 67 year old bridge is showing signs of timber decay, exposure of structure components and wearing of the concrete deck. It is consider to be functionally obsolete.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

The proposed replacement of Bridge 250150 over Buck Creek will be replaced on existing alignment. The proposed bridge will be a single span bridge that is 55-foot long, 21" prestressed concrete cored slab, with 10-foot lanes and 5'5" offsets.

Magnolia Church Road will be widened to two 10-foot lanes with 3-foot shoulders 148 feet from the north end of the new bridge and 148 feet from the south end of the new bridge.

Traffic will be detoured offsite during construction.

Standard road building equipment, such as trucks, bulldozers, and cranes will be used.

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

(●) Yes ( ) No ( ) Unknown

Comments:

See attached PJD package for verification.

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

(●) Preliminary ( ) Approved ( ) Not Verified ( ) Unknown ( ) N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Jason Hartshorn

Agency/Consultant Company: Kimley-Horn

Other:

5d. List the dates of the Corp jurisdiction determination or State determination if a determination was made by the Corps or DWR.

6. Future Project Plans

6a. Is this a phased project? *

( ) Yes (●) No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

☑ Wetlands ☑ Streams-tributaries ☐ Buffers
☐ Open Waters ☐ Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdicition * (?)	2g. Impact area *
1	Roadway Fill	P	Riverine Swamp Forest	WA	Yes	Both	0.017 (acres)
1	Roadway Fill	P	Riverine Swamp Forest	WD	Yes	Both	0.011 (acres)
1	Roadway Fill	T	Riverine Swamp Forest	WC	Yes	Both	0.001 (acres)
1	Roadway Fill	T	Riverine Swamp Forest	WD	Yes	Both	0.001 (acres)
1	Excavation	P	Riverine Swamp Forest	WA	Yes	Both	0.003 (acres)
1	Excavation	P	Riverine Swamp Forest	WC	Yes	Both	0.001 (acres)

2g. Total Temporary Wetland Impact

0.002

2g. Total Permanent Wetland Impact

0.032

2g. Total Wetland Impact

0.034

2i. Comments:

There will be 0.085 acres of hand clearing in wetlands. WA = 0.029 acres; WB = 0.010 acres; WC = 0.018; WD = 0.028 acres.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact * (?)	3b.Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type * (?)	3f. Type of Jurisdiction *	3g. S. width *	3h. Impact length *
S1	Roadway	Permanent	Fill	Buck Creek	Perennial	Both	15 Average (feet)	47 (linear feet)
S2	Roadway	Temporary	Fill	Buck Creek	Perennial	Both	15 Average (feet)	60 (linear feet)
S3	Bridge Abutment	Permanent	Rip Rap Fill	Buck Creek	Perennial	Both	15 Average (feet)	33 (linear feet)
S4	Bridge Abutment	Temporary	Fill	Buck Creek	Perennial	Both	15 Average (feet)	49 (linear feet)

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

80

3i. Total temporary stream impacts:

109

3i. Total stream and ditch impacts:

189

3j. Comments:

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

Stormwater design velocities entering jurisdictional features have been mitigated to be non-erosive (less than 2 fps).

Open shoulder sections were maximized to promote sheet flow from the roadway

Stormwater was designed to avoid direct discharge into jurisdictional features to the maximum extent possible

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

Steepening of roadway fill slopes within jurisdictional areas.

Diffuse flow provided at outlets that do not have a well defined outfall.

Traffic will be directed to an offsite detour.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

(●) Yes ( ) No

2c. If yes, mitigation is required by (check all that apply):

[ ] DWR [x] Corps

2d. If yes, which mitigation option(s) will be used for this project?

[ ] Mitigation bank [x] Payment to in-lieu fee program [ ] Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

◉ Yes ○ No

4b. Stream mitigation requested:

(linear feet)

80

4c. If using stream mitigation, what is the stream temperature:

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

0.032

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

○ Yes ◉ No

For a list of options to meet the diffuse flow requirements, click here.

If no, explain why:

Stormwater design velocities entering jurisdictional features have been mitigated to be non-erosive (less than 2 fps). NCDOT BMPs for bridge construction will be used.

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

◉ Yes ○ No

Comments:

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

◉ Yes ○ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

◉ Yes ○ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

◉ Yes ○ No

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

○ Yes ◉ No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

○ Yes ◉ No

3b. If you answered "no," provide a short narrative description.

Due to minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses or stimulate growth.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

○ Yes ◉ No ○ N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

(●) Yes ( ) No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

(●) Yes ( ) No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? *

( ) Yes (●) No ( ) Unknown

5e. Is this a DOT project located within Division's 1-8? *

(●) Yes ( ) No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

NC Natural Heritage Program database and USFWS IPaC (Information for planning and Consultation).

Section 7 ESA species information:
Surveys June 2022: Red-cockaded woodpecker (no habitat - no effect: no new survey required), American chaffseed (habitat; no American chaffseed found: no effect), Michaux's sumac (habitat; no Michaux's sumac found; no effect), rough-leaved loosestrife - (habitat; no rough-leaved loosestrife found).

Surveys March 2025: pondberry (habitat; no pondberry found; no effect).

Surveys to be updated May 2025: American chaffseed, Michaux's sumac and rough-leaved loosestrife. Surveys scheduled for May upon survey window opening dates by NCDOT Division 6.

Eric Alsmeyer was notified of species status and upcoming let date. Permit would be placed on hold until Section 7 is satisfied.

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

( ) Yes (●) No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

NOAA EFH Fish Mapper

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: http://gis.ncdcr.gov/hpoweb/

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

( ) Yes (●) No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

Historic Archictecture and Landscapes No Survey Required Form - February 23, 2022
No Archaeological Survey Required Form - March 7, 2022

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: https://msc.fema.gov/portal/search

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

( ) Yes (●) No

8c. What source(s) did you use to make the floodplain determination? *

FEMA Floodplain Mapping website.

Miscellaneous

Comments

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

Click the upload button or drag and drop files here to attach document

BP6.R018 Attachments.pdf 13.82MB

File must be PDF or KMZ

Signature

*

☑ By checking the box and signing below, I certify that:

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief'; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Jason Lee Dilday

Signature *

Date

4/21/2025

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

WBS Element: BP6.R018 **TIP/Proj No:** **County(ies):** Cumberland

General Project Information

WBS Element:	BP6.R018	**TIP Number:**		**Project Type:**	Bridge Replacement	**Date:**	4/2/2025
NCDOT Contact:	Galen Cail	**Contractor / Designer:**	Chris Smith, PE - RK&K				
Address:	1000 Birch Ridge Drive Raleigh, NC 27610		**Address:**	Forum 1 8601 Six Forks Road, Suite 700 Raleigh, NC 27615			
Phone:	(919)707-6711		**Phone:**	(919)878-9560			
Email:	gcail@ncdot.gov		**Email:**	csmith@rkk.com			
City/Town:	Stedman	**County(ies):**	Cumberland				
River Basin(s):	Cape Fear	**CAMA County?**	No				
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.066 mi.	**Surrounding Land Use:**	Wetland, Woods				
	Proposed Project			**Existing Site**			
Project Built-Upon Area (ac.)	0.2	ac.		0.2	ac.		
Typical Cross Section Description:	A typical cross section - 31 foot-wide will be used; which will include two 10-foot travel lanes with varying paved shoulders (2' and 5'-5").			The existing typical cross-section is 20-feet wide with two 10-foot travel lanes and varying unpaved shoulders.			
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	470	Year: 2026	Existing:	650	Year:	2022

General Project Narrative: (Description of Minimization of Water Quality Impacts)

BP6.R018 is a bridge replacement over Buck Creek on SR1843 (Magnolia Church Road) in Cumberland County. Wetlands and a jurisdictional stream are found within the limits of the project area. The jurisdictional stream, which hosts no water quality impairments, does provide suitable habitat for the American alligator, a T(S/A) species (Threatened due to similarity of appearance); however, no individuals were observed during NRTR investigations and NHP records indicate no known occurances within 1.0 mile of the project limits.

Design minimizations for wetlands and streams include:

1. Steepening or roadway fill slopes within jurisdictional areas.
2. Stormwater was designed to avoid direct discharge into jurisdictional features to the maximum extent possible.
3. Diffuse flow provided at outlets that do not have a well defined outfall.
4. Stormwater design velocities entering jurisdictional features have been mitigated to be non-erosive (less than 2 fps).
5. Open shoulder sections were maximized to promote sheet flow from the roadway.

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

WBS Element:	BP6.R018	TIP/Proj No.:		County(ies):	Cumberland	Page	2	of	2

General Project Information

Waterbody Information

Surface Water Body (1):	Buck Creek		**NCDWR Stream Index No.:**	18-68-12-5-2		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Swamp Waters (Sw)			
Other Stream Classification:	None					
Impairments:	None					
Aquatic T&E Species?	No	Comments:				
NRTR Stream ID:	Buck Creek			**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	Yes	**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 (2):			**NCDWR Stream Index No.:**			
NCDWR Surface Water Classification for Water Body		**Primary Classification:**				
		Supplemental Classification:				
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:				**Buffer Rules in Effect:**		
Project Includes Bridge Spanning Water Body?		**Deck Drains Discharge Over Buffer?**		**Dissipator Pads Provided in Buffer?**		
Deck Drains Discharge Over Water Body?		(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)						

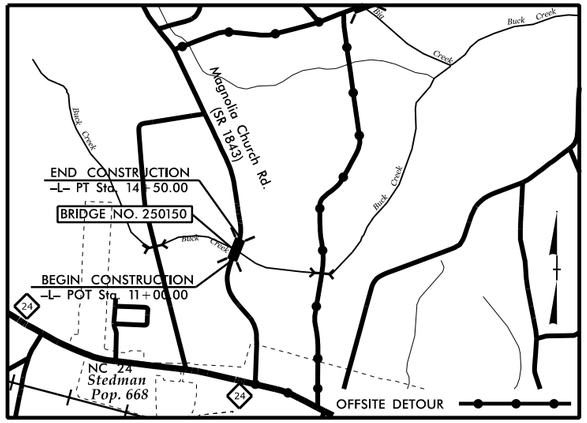
Surface Water Body (3):			**NCDWR Stream Index No.:**			
NCDWR Surface Water Classification for Water Body		**Primary Classification:**				
		Supplemental Classification:				
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:				**Buffer Rules in Effect:**		
Project Includes Bridge Spanning Water Body?		**Deck Drains Discharge Over Buffer?**		**Dissipator Pads Provided in Buffer?**		
Deck Drains Discharge Over Water Body?		(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)						

09/08/99

TIP PROJECT: BP6.R018

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

LOCATION: BRIDGE NO. 250150 OVER BUCK CREEK ON SR 1843 (MAGNOLIA CHURCH RD)

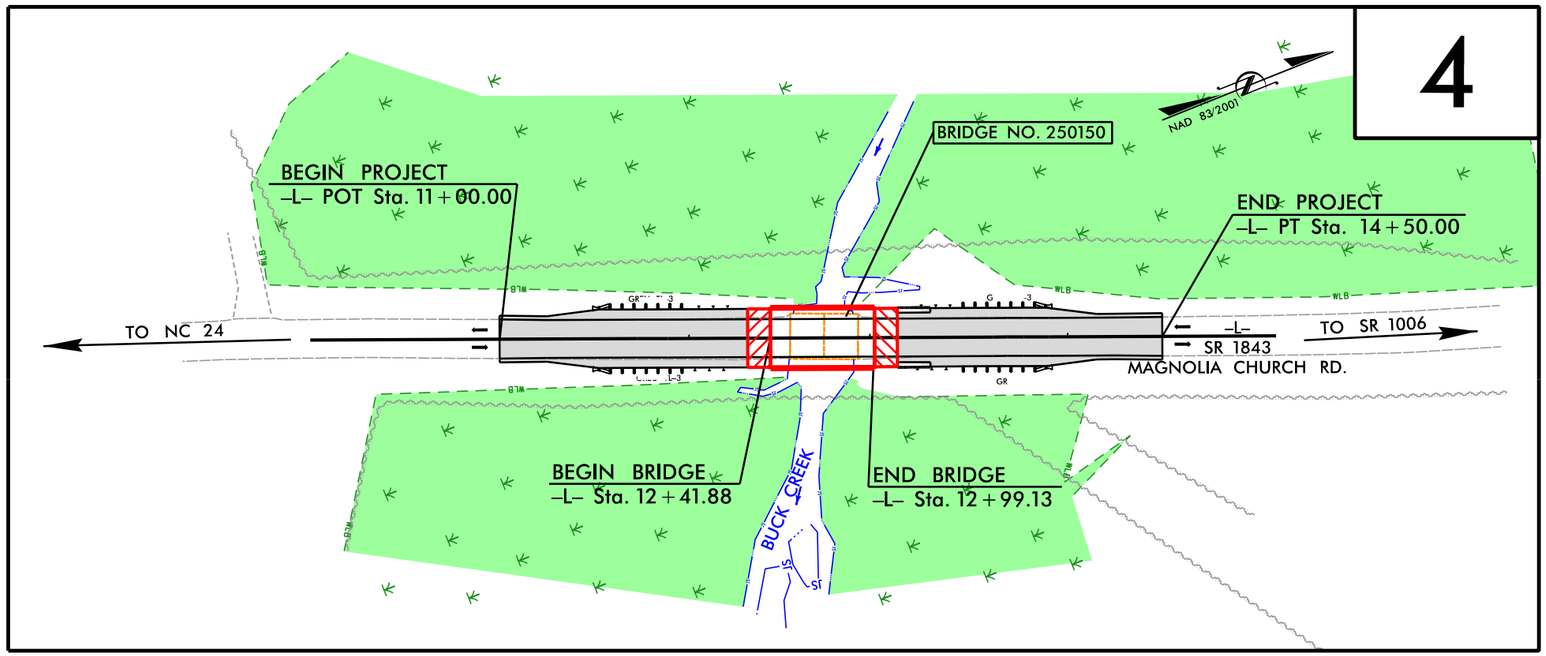
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES AND RESURFACING

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP6.R018	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
BP6.R018.1		PE
BP6.R018.2		R/W
BP6.R018.3		CONST.

PERMIT DRAWING
SHEET 1 OF 5



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

GRAPHIC SCALES

PLANS 20 0 20 40
PROFILE (HORIZONTAL) 20 0 20 40
PROFILE (VERTICAL) 5 2.5 0 5 10

DESIGN DATA

ADT 2026 = 470

K = N/A %
D = N/A %
T = 6 %
V = 50 MPH

FUNC CLASS =
RURAL LOCAL
SUB–REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT 250150 = 0.055 mi
LENGTH STRUCTURE PROJECT 250150 = 0.011 mi
TOTAL LENGTH PROJECT 250150 = 0.066 mi

RK&K
RUMMEL, KLEPPER & KAHL, LLP
8601 SIX FORKS ROAD, FORUM 1, SUITE 700
RALEIGH, NORTH CAROLINA 27615
NC LICENSE NO. F-0112
919-878-9560

FOR:
NCDOT DIVISION OF HIGHWAYS

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 2023

LETTING DATE:
JUNE 18, 2025

Mike Merritt, PE
PROJECT ENGINEER

Andrew Hefler
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 035636 ENGINEER CHRISTOPHER L. SMITH P.E.

SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT P.E.

SIGNATURE:

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

4/10/2025
R:\Hydraulics\PERMITS_Environmental\Drawings\250150_hyd_prm_wet_tsh.dgn
akeefer

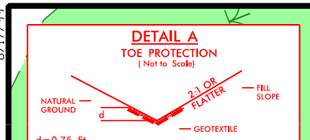
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
BP6.R018	04
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 035636 ENGINEER CHRISTOPHER L. SMITH

DETAIL A
TOE PROTECTION
(Not to Scale)



d=0.75 Ft.

Type of Liner= Class B Rip-Rap

FROM -L- STA. 11+60 TO STA. 12+31 (RT)
FROM -L- STA. 11+65 TO STA. 12+31 (LT)

EXCAVATION (FLOODPLAIN BENCH)

NAD 83/2011

FILL IN WETLAND	TEMPORARY FILL IN WETLAND
HAND CLEARING (NON-GRUBBING)	WETLAND EXCAVATION
SURFACE WATER IMPACTS	TEMPORARY SURFACE WATER IMPACTS

PERMIT DRAWING SHEET 2 OF 5

ENGLISH

BEGIN PROJECT
-L- POT Sta. 11+00.00

END PROJECT
-L- POT Sta. 14+50.00

-L- POT Sta. 10+00.00

-L- POT Sta. 15+10.00

WA WB WC WD

LAURA C. DAVIS
CECIL KELLY CULBRETH, SR.
RICHARD T. CULBRETH

LOIS HUBBARD FAMILY
LIMITED PARTNERSHIP

WOODS

BUCK CREEK

TOE PROTECTION CLASS B RIP RAP SEE DETAIL A

SLOPE PROTECTION CLASS II RIP RAP

1 TON CL B RIPRAP W/5 SY GEO FAB

MAGNOLIA CHURCH RD / SR 1843

20' PAVED ROADWAY

N 21° 34' 00.0" E

EXIST.

GREU TL-3

TYPE-III

20.0' (TYP)

TB2GIB-NSF

0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414 0415 0416 0417 0418 0419 0420 0421 0422 0423 0424 0425 0426 0427 0428 0429 0430 0431 0432 0433 0434 0435 0436 0437 0438 0439 0440 0441 0442 0443 0444 0445 0446 0447 0448 0449 0450 0451 0452 0453 0454 0455 0456 0457 0458 0459 0460 0461 0462 0463 0464 0465 0466 0467 0468 0469 0470 0471 0472 0473 0474 0475 0476 0477 0478 0479 0480 0481 0482 0483 0484 0485 0486 0487 0488 0489 0490 0491 0492 0493 0494 0495 0496 0497 0498 0499 0500 0501 0502 0503 0504 0505 0506 0507 0508 0509 0510 0511 0512 0513 0514 0515 0516 0517 0518 0519 0520 0521 0522 0523 0524 0525 0526 0527 0528 0529 0530 0531 0532 0533 0534 0535 0536 0537 0538 0539 0540 0541 0542 0543 0544 0545 0546 0547 0548 0549 0550 0551 0552 0553 0554 0555 0556 0557 0558 0559 0560 0561 0562 0563 0564 0565 0566 0567 0568 0569 0570 0571 0572 0573 0574 0575 0576 0577 0578 0579 0580 0581 0582 0583 0584 0585 0586 0587 0588 0589 0590 0591 0592 0593 0594 0595 0596 0597 0598 0599 0600 0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613 0614 0615 0616 0617 0618 0619 0620 0621 0622 0623 0624 0625 0626 0627 0628 0629 0630 0631 0632 0633 0634 0635 0636 0637 0638 0639 0640 0641 0642 0643 0644 0645 0646 0647 0648 0649 0650 0651 0652 0653 0654 0655 0656 0657 0658 0659 0660 0661 0662 0663 0664 0665 0666 0667 0668 0669 0670 0671 0672 0673 0674 0675 0676 0677 0678 0679 0680 0681 0682 0683 0684 0685 0686 0687 0688 0689 0690 0691 0692 0693 0694 0695 0696 0697 0698 0699 0700 0701 0702 0703 0704 0705 0706 0707 0708 0709 0710 0711 0712 0713 0714 0715 0716 0717 0718 0719 0720 0721 0722 0723 0724 0725 0726 0727 0728 0729 0730 0731 0732 0733 0734 0735 0736 0737 0738 0739 0740 0741 0742 0743 0744 0745 0746 0747 0748 0749 0750 0751 0752 0753 0754 0755 0756 0757 0758 0759 0760 0761 0762 0763 0764 0765 0766 0767 0768 0769 0770 0771 0772 0773 0774 0775 0776 0777 0778 0779 0780 0781 0782 0783 0784 0785 0786 0787 0788 0789 0790 0791 0792 0793 0794 0795 0796 0797 0798 0799 0800 0801 0802 0803 0804 0805 0806 0807 0808 0809 0810 0811 0812 0813 0814 0815 0816 0817 0818 0819 0820 0821 0822 0823 0824 0825 0826 0827 0828 0829 0830 0831 0832 0833 0834 0835 0836 0837 0838 0839 0840 0841 0842 0843 0844 0845 0846 0847 0848 0849 0850 0851 0852 0853 0854 0855 0856 0857 0858 0859 0860 0861 0862 0863 0864 0865 0866 0867 0868 0869 0870 0871 0872 0873 0874 0875 0876 0877 0878 0879 0880 0881 0882 0883 0884 0885 0886 0887 0888 0889 0890 0891 0892 0893 0894 0895 0896 0897 0898 0899 0900 0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915 0916 0917 0918 0919 0920 0921 0922 0923 0924 0925 0926 0927 0928 0929 0930 0931 0932 0933 0934 0935 0936 0937 0938 0939 0940 0941 0942 0943 0944 0945 0946 0947 0948 0949 0950 0951 0952 0953 0954 0955 0956 0957 0958 0959 0960 0961 0962 0963 0964 0965 0966 0967 0968 0969 0970 0971 0972 0973 0974 0975 0976 0977 0978 0979 0980 0981 0982 0983 0984 0985 0986 0987 0988 0989 0990 0991 0992 0993 0994 0995 0996 0997 0998 0999 1000

EXISTING R/W

WLB

FO

RETAIN 18" RCP

30' POWER LINE EASEMENT
NO DEED FOUND

SCALE 20 0 20 40

-L-

HORIZ. SCALE: 1=20'
VERT. SCALE: 1=4'

℄ BRIDGE STA. 12+70.50 -L-
PROP. 1@55'
21" PRESTRESSED CONCRETE CORED SLAB WITH 2.5' CAPS
SKEW 90°
ELEV. = 120.66'

PI = 12+42.00
EL = 120.75'
VC = 230'
K = 383
V = 80 MPH

BEGIN GRADE
-L- Sta.11+25.00
EL = 120.40'

TIE TO EXISTING
SEE MILLING DETAIL

BEGIN RESURFACING
-L- Sta.11+00.00
EL = 120.25'

PROPOSED GRADE

BEGIN BRIDGE
-L- Sta.12+41.88

(+)0.3000%

(-)0.3000%

END BRIDGE
-L- Sta.12+99.13

LOWEST LOW CHORD

EXISTING GROUND

END GRADE
-L- Sta.14+25.00
EL = 120.20'

TIE TO EXISTING
SEE MILLING DETAIL

END RESURFACING
-L- Sta.14+50.00
EL = 120.09'

Q100-YR=119.4'

Q25-YR=118.5'
(DESIGN)

Q_{NWS}
WSE. = 116.3'

1.5:1 SLOPE (TYP.)
NORMAL TO END CAP
CLASS II RIP RAP

3'-6"
KEY-IN
(TYP.)

EXCAVATE TO 116' (TYP)

130 120 110 100

10+00 11+00 12+00 13+00 14+00 15+00

PROPOSED BRIDGE HYDRAULIC DATA

DRAINAGE AREA	= 5.36	SQ.MI.
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 680	CFS
DESIGN HW ELEVATION	= 118.5	FT
100 YEAR DISCHARGE	= 1030	CFS
100 YEAR HW ELEVATION	= 119.4	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 2200	CFS
OVERTOPPING ELEVATION	= 120.2	FT

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC Firm No. F-0672
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

4/10/2025
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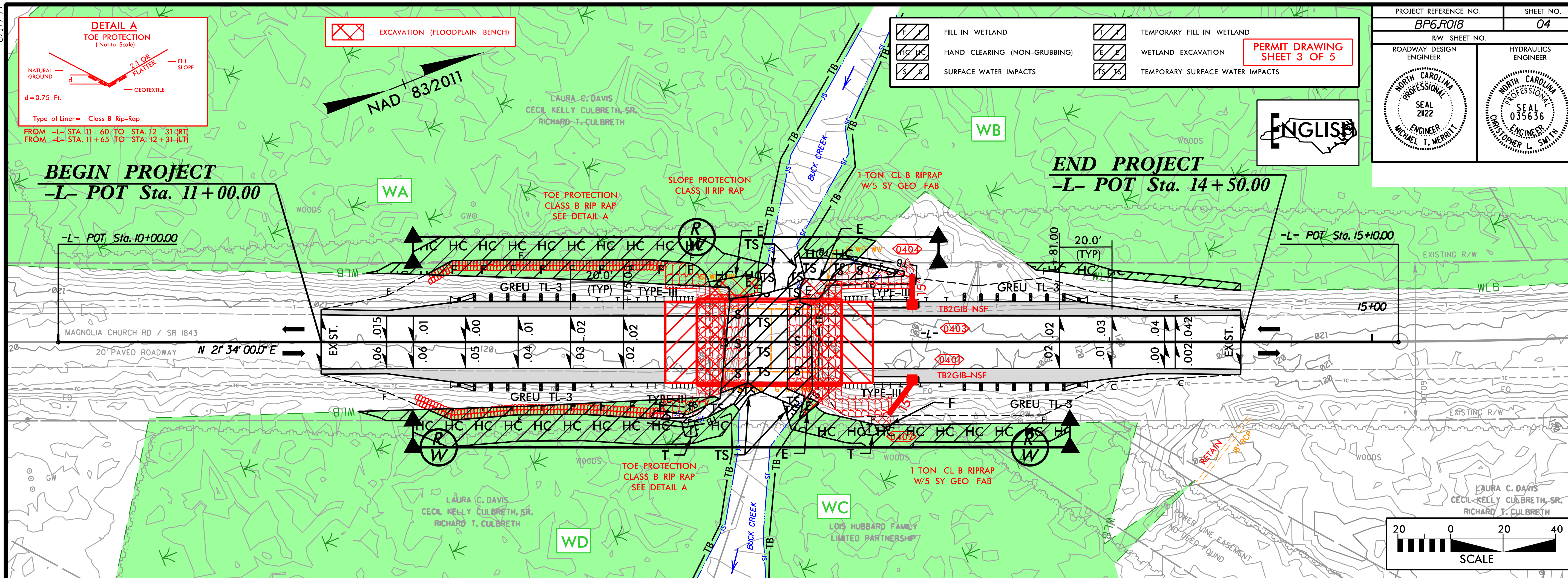
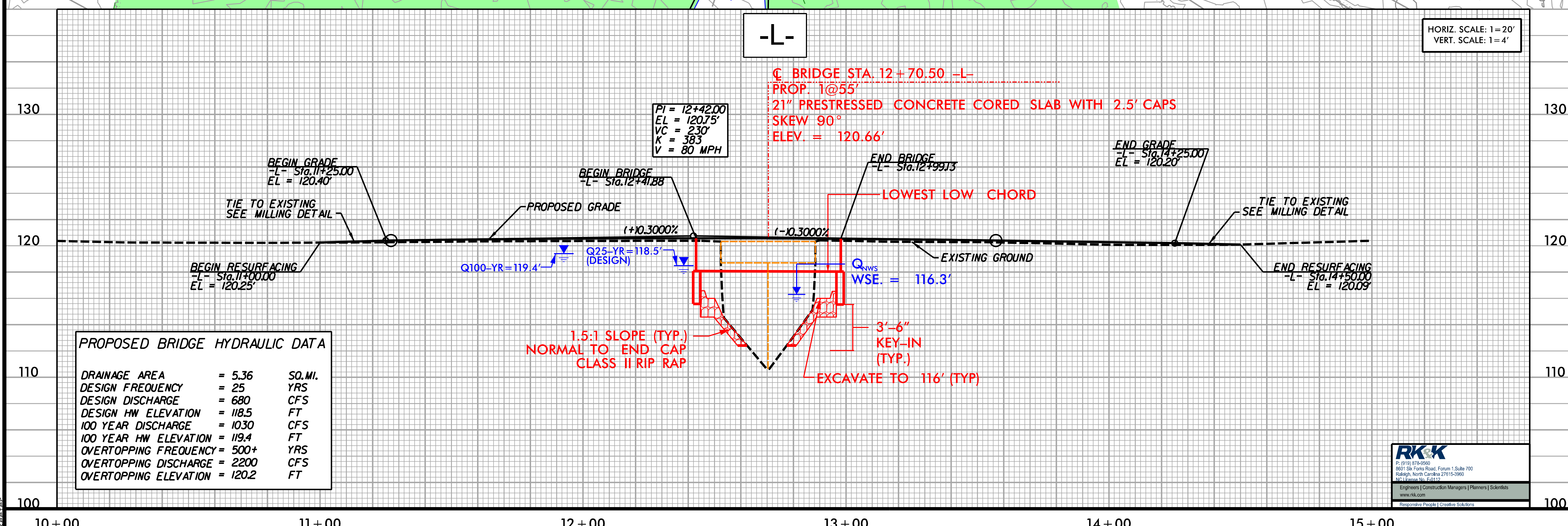


PROJECT REFERENCE NO.
BP6.R018
SHEET NO.
04
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PERMIT DRAWING
SHEET 3 OF 5
FILL IN WETLAND
HAND CLEARING (NON-GRUBBING)
SURFACE WATER IMPACTS
TEMPORARY FILL IN WETLAND
WETLAND EXCAVATION
TEMPORARY SURFACE WATER IMPACTS
EXCAVATION (FLOODPLAIN BENCH)
DETAIL A
TOE PROTECTION
(Not to Scale)
NATURAL GROUND
2:1 OR FLATTER
FILL SLOPE
GEOTEXTILE
d = 0.75 Ft.
Type of Liner = Class B Rip-Rap
FROM -L- STA. 11+60 TO STA. 12+31 (RT)
FROM -L- STA. 11+65 TO STA. 12+31 (LT)
NAD 83/2011
ENGLISH
BEGIN PROJECT
-L- POT Sta. 11+00.00
END PROJECT
-L- POT Sta. 14+50.00
-L- POT Sta. 10+00.00
-L- POT Sta. 15+10.00
WA
WB
WC
WD
LAURA C. DAVIS
CECIL KELLY CULBRETH, SR.
RICHARD T. CULBRETH
LOIS HUBBARD FAMILY LIMITED PARTNERSHIP
TOE PROTECTION
CLASS B RIP RAP
SEE DETAIL A
SLOPE PROTECTION
CLASS II RIP RAP
1 TON CL B RIPRAP
W/5 SY GEO FAB
BUCK CREEK
MAGNOLIA CHURCH RD / SR 1843
20' PAVED ROADWAY
N 21° 34' 00.0" E
GREU TL-3
TYPE-III
TB2GIB-NSF
20.0' (TYP)
EX. ST.
WOODS
EXISTING R/W
POWER LINE EASEMENT
NO DEED FOUND
SCALE



-L-
HORIZ. SCALE: 1 = 20'
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℄ BRIDGE STA. 12+70.50 -L-
PROP. 1@55'
21" PRESTRESSED CONCRETE CORED SLAB WITH 2.5' CAPS
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EL = 120.75'
VC = 230'
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V = 80 MPH
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-L- Sta. 11+25.00
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TIE TO EXISTING
SEE MILLING DETAIL
PROPOSED GRADE
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END BRIDGE
-L- Sta. 12+99.13
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-L- Sta. 14+25.00
EL = 120.20'
LOWEST LOW CHORD
(+)0.3000%
(-)0.3000%
EXISTING GROUND
Q100-YR = 119.4'
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-L- Sta. 11+00.00
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-L- Sta. 14+50.00
EL = 120.09'
1.5:1 SLOPE (TYP.)
NORMAL TO END CAP
CLASS II RIP RAP
3'-6"
KEY-IN
(TYP.)
EXCAVATE TO 116' (TYP)
130
120
110
100
10+00
11+00
12+00
13+00
14+00
15+00
RK&K

PROPOSED BRIDGE HYDRAULIC DATA

DRAINAGE AREA	=	5.36	SQ.MI.
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100 YEAR DISCHARGE	=	1030	CFS
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OVERTOPPING FREQUENCY	=	500+	YRS
OVERTOPPING DISCHARGE	=	2200	CFS
OVERTOPPING ELEVATION	=	120.2	FT

8/17/99

4/10/2025
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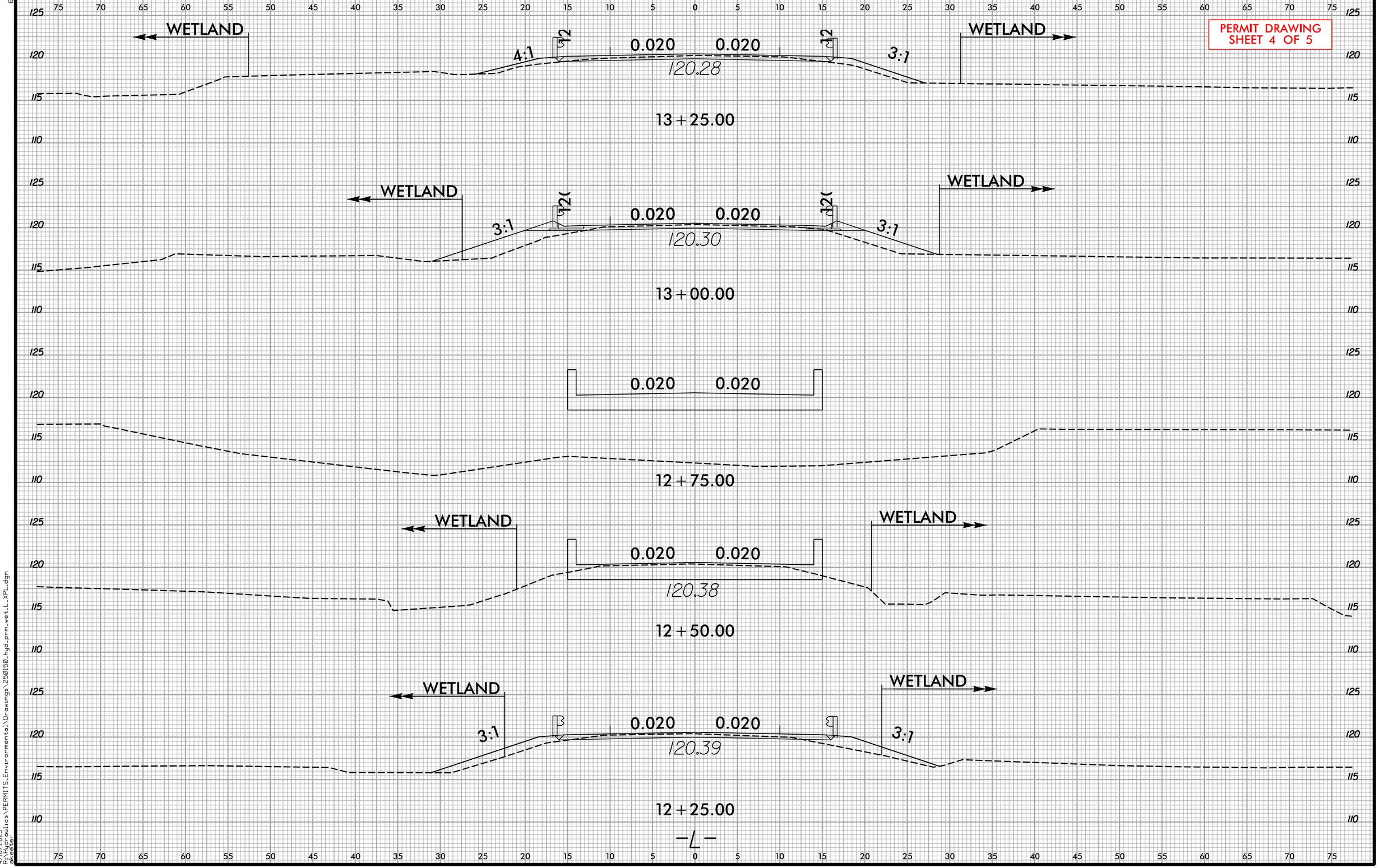
	BP6.R018	X-2

PERMIT DRAWING
SHEET 4 OF 5



4/10/2025
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okeeper

WETLAND AND SURFACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	11+17 to 12+70 -L- LT	Roadway Fill - WA	0.017		0.003		0.029					
	11+14 to 12+59 -L- RT	Roadway Fill - WD	0.011	0.001			0.028					
	** 12+25 to 12+67 -L- RT	Roadway Fill - Buck Creek						0.001	0.003	20	23	
	12+57 to 12+84 -L-	Buck Creek (Bridge)						0.014	0.015	33	49	
	** 12+78 to 13+26 -L- LT	Roadway Fill - Buck Creek						0.004	0.003	27	37	
	12+82 to 14+501 -L- LT	Roadway Fill - WB					0.010					
	12+76 to 13+90 -L- RT	Roadway Fill - WC		0.001	0.001		0.018					
TOTALS*:			**0.028**	**0.002**	**0.004**		**0.085**	**0.019**	**0.021**	**80**	**110**	

*Rounded totals are sum of actual impacts

NOTES:

** Lengths shown include overlap of both permanent and temporary SW impacts shown in the existing channel.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
April 2025
Cumberland County
BP6.R018

JOSH STEIN
Governor
D. REID WILSON
Secretary
MARC RECKTENWALD
Director

NORTH CAROLINA
Environmental Quality

April 16, 2025

Mr. Jamie Lancaster, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter: Replace Structure Number 250150 over Buck Creek on SR 1843 (Magnolia Church Road), Cumberland County, WBS BP6.R018.1

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the mitigation for the subject project. Based on the information supplied by you on April 15, 2025, the impacts are located in CU 03030006 of the Cape Fear River basin as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Cape Fear 03030006	0	0	80.000	0.030	0	0

*Some of the impacts may be proposed to be mitigated at various ratios. See permit application for details. DMS will provide the amount of stream and wetland mitigation included in the environmental permits.

The impacts and associated mitigation needs were not projected by the NCDOT in the 2025 impact data. NCDEQ – DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ – DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

Elizabeth Harmon

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Mr. Rob Ridings, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: SR 1843_Bridge 250150

Type I or II Categorical Exclusion Action Classification Form

WBS Element	**BP6.R018**
STIP Project No.	(N/A)
Federal Project No.	(N/A)

A. Project Description:

NCDOT proposes to replace Cumberland County Bridge No. 250150 (two-span, 36-foot, timber beam bridge on timber piles and caps) on SR 1843 (Magnolia Church Road) over Buck Creek. Bridge #150 will be replaced on existing alignment with a single-span, 55-foot, 21" prestressed concrete cored slab bridge with two, 10-foot lanes and 5'-5" offsets. The grade of the new structure will be approximately the same grade as the existing bridge. Magnolia Church Road will be widened to two, 10-foot lanes with 3-foot shoulders (2-foot paved), and construction will extend approximately 148 feet from the south end and 148 feet from the north end of the new bridge. The total project length is 350 feet. The roadway will be designed as a "rural local" using Sub-Regional Tier guidelines with a 50-mph design speed. Traffic will be detoured offsite during construction. The project location, study area, and offsite detour route are presented on Figures 1 through 3, and excerpts from the 25% Preliminary Design Plans are included as an attachment. Construction let is scheduled for December 2024.

B. Description of Need and Purpose (Timber Bridge is Deteriorated and Functionally Obsolete):

Need – Bridge #150 was constructed in 1955 and has a timber substructure and concrete deck. The bridge is 36 feet long with a 24-foot clear roadway width. The *Structure Safety Report (NCDOT, February 24, 2020)* identified exposed rebar, decay/section loss in timber beams, splits/delamination in timber beams and bents, decay in a timber joist, deep decay in a timber soldier pile, exposed tops of end bents, delaminations/spalls on the underside of the concrete deck, cracks in the wearing surface of the concrete deck, concrete curb spalling, and concrete rail spalling/cracking. Bridge #150 has a Sufficiency Rating of 49.10, a Structural Evaluation Rating of 3 (Critical), and has been determined to be Functionally Obsolete.

Purpose – The purpose of this proposed action is to replace the 67-year-old, functionally-obsolete bridge.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements: *[See the 25% Preliminary Design Plans (RK&K, July 29, 2022)]*

Type I(A) Categorical Exclusion Action #28: Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:

Proposed Improvements Within Existing Right of Way – The proposed improvements will be constructed within the existing right of way and temporary construction easements and will not require any relocations.

Jurisdictional Impacts and Permit Required – Kimley-Horn Associates staff conducted jurisdictional field surveys on March 30, 2022. Four wetlands (WA, WB, WC, and WD) totaling 1.66 acres of Riparian Riverine Swamp Forest were identified in the Study Area. Buck Creek, which is classified as C;Sw (Waters protected for aquatic life propagation, survival, and maintenance of biological integrity; and secondary contact recreation; Swamp Waters), is the only jurisdictional stream in the Study Area. Pending direction from the U.S. Army Corps of Engineers (USACE) and the NC Department of Environmental Quality Division of Water Resources (NCDWR), it is anticipated that a USACE Nationwide Permit 3 (Maintenance) is appropriate for the anticipated impacts to Buck Creek. A corresponding Section 401 Water Quality Certification will also be required from NCDWR. NCDOT will consult with USACE and NCDWR after completion of the final design plans to determine the required permits.

Protected Species – As of March 24, 2022, the *U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC)* data lists six federally-protected species for Cumberland County in the Study Area. Kimley-Horn Associates staff conducted presence/absence field surveys for habitat and species on March 30, 2022 and June 28, 2022 with the following findings.

- American alligator (habitat is present, but no known occurrences in or within one mile of the study area)
- American chaffseed (habitat is present, but individuals were not observed)
- Michaux's sumac (habitat is present, but individuals were not observed)
- Red-cockaded woodpecker (habitat is not present)
- Pondberry (habitat is present, but individuals were not observed)
- Rough-leaved loosestrife (habitat is present, but individuals were not observed)

Kimley-Horn Associates staff also reviewed 2020 color aerials of the study area and within a one-mile radius of the project limits in March 2022, and identified one water body large enough and sufficiently open to be considered potential feeding sources for Bald eagle. Kimley-Horn and Associates staff conducted a survey on March 30, 2022, and did not observe bald eagle nests or individuals in the project vicinity.

As presented in the *Natural Resources Technical Report (NCDOT, May 2022)* and in the *Survey for Threatened and Endangered Species Occurrences Along the Project Corridor (Kimley-Horn Associates, July 22, 2022)*, a biological conclusion of "No Effect" was made for all listed species with the exception of the Northern long-eared bat (NLEB) *(Myotis septentrionalis)*, which has a biological conclusion of "May Affect – Likely to Adversely Affect (MA-LAA)." See response to Question 8 in Section G below for additional information regarding NLEB.

Cultural Resources – NCDOT conducted screenings for Historic Architectural Resources and Archaeological Resources, and surveys are not required for this project. Copies of the *Historic Architecture and Landscapes No Survey Required Form* and the *No Archaeological Survey Required Form* are included as attachments.

STIP Projects in Vicinity

- BP6.R010 – This project, which is located approximately 0.5 mile east of Bridge #150, is the proposed replacement of Culvert No. 250029 over Buck Creek on SR 1850 (Wade-Stedman Road). Bridge #150 is programmed to be replaced before Culvert #29 to improve the offsite detour route for Culvert #29.

Offsite Detour – The offsite detour route (3.4 miles) will begin at the intersection of SR 1843 (Magnolia Church Road) and NC 24 (Clinton Road), then westward on NC 24 (Clinton Road) for 900 feet to the U-turn onto eastbound NC 24 (Clinton Road), then eastward to the intersection of NC 24 (Clinton Road) and SR 1850 (Wade-Stedman Road), then northward on SR 1850 (Wade-Stedman Road) to the intersection of SR 1850 (Wade-Stedman Road) and SR 1826 (Jake Road), and then westward to the intersection of SR 1826 (Jake Road) and SR 1843 (Magnolia Church Road).

School Bus Route – Ms. Ramona Coles, the TIMS/Routing Coordinator for Cumberland County Schools, noted that the school system has eight buses that make a total of 16 trips a day crossing Bridge #150.

Utilities Relocation – Overhead utility lines and fiber optic lines appear to be in conflict with the anticipated limits of construction activities and permanent utility easements might be required.

Traffic Volumes: 2014 ADT = 470 vpd; 2025 ADT = 940 vpd

Construction Cost Estimate: $ 800,000

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)

Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.

- *If any question 1-7 is checked "Yes" then NCDOT certification for FHWA approval is required.*
- *If any question 8-31 is checked "Yes" then additional information will be required for those questions in Section G.*

PROJECT IMPACT THRESHOLDS (FHWA signature required if any of the questions 1-7 are marked "Yes".)		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	☐	☑
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	☐	☑
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	☐	☑
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	☐	☑
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	☐	☑
6	Does the project require an Individual Section 4(f) approval?	☐	☑
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	☐	☑

If any question 8-31 is checked "Yes" then additional information will be required for those questions in Section G.

Other Considerations		Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	☑	☐
9	Is the project located in anadromous fish spawning waters?	☐	☑
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	☐	☑
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	☐	☑
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	☐	☑
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	☐	☑

Other Considerations for Type I and II Ground Disturbing Actions (continued)		Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	☐	☑
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	☐	☑
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	☐	☑
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	☐	☑
18	Does the project require a U.S. Coast Guard (USCG) permit?	☐	☑
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	☐	☑
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	☐	☑
21	Does the project impact federal lands (e.g., U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	☐	☑
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	☐	☑
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	☐	☑
24	Will maintenance of traffic cause substantial disruption?	☐	☑
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	☐	☑
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	☐	☑
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	☐	☑
28	Does the project include a *de minimis* or programmatic Section 4(f)?	☐	☑
29	Is the project considered a Type I under the NCDOT Noise Policy?	☐	☑
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	☐	☑
31	Are there other issues that arose during the project development process that affected the project decision?	☐	☑

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

Question 8 (Endangered Species Act Programmatic Agreement): The US Fish and Wildlife Service has revised the previous programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 currently known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect." The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Cumberland County, where BP6.R018 is located.

H. Project Commitments (9/26/2022):

NCDOT PROJECT COMMITMENTS

WBS Element BP6.R018
Bridge No. 250150 on SR 1843 (Magnolia Church Road) over Buck Creek
Cumberland County
STIP Project No. (N/A)
Federal Aid Project No. (N/A)

NCDOT Highway Division 6 Construction and Contractor (Replacement of Bridge No. 250150)
BP6.R018, which is located approximately 0.5 mile west of Culvert #250029, is the proposed replacement of Bridge No. 250150 over Buck Creek on SR 1843 (Magnolia Church Road). Bridge #150 is programmed to be replaced before the replacement of Culvert #29 to improve the offsite detour route for Culvert #29.

NCDOT Highway Division 6 Construction and Contractor (Offsite Detour)
The offsite detour route (3.4 miles) will begin at the intersection of SR 1843 (Magnolia Church Road) and NC 24 (Clinton Road), then westward on NC 24 (Clinton Road) for 900 feet to the U-turn onto eastbound NC 24 (Clinton Road), then eastward to the intersection of NC 24 (Clinton Road) and SR 1850 (Wade-Stedman Road), then northward on SR 1850 (Wade-Stedman Road) to the intersection of SR 1850 (Wade-Stedman Road) and SR 1826 (Jake Road), and then westward to the intersection of SR 1826 (Jake Road) and SR 1843 (Magnolia Church Road). The Contractor will erect signage and maintain traffic on the detour route.

NCDOT Highway Division 6 Construction and Contractor (School Bus Route)
Cumberland County Schools has eight buses that make a total of 16 trips a day crossing Bridge #150, and is requesting that detour signs be placed as early as possible to alert their bus drivers of a pending change to their route. The Contractor should be aware and exercise caution because school bus traffic and students will be present during construction.

NCDOT Highway Division 6 Construction and Contractor (Utilities Relocations) – Overhead utility lines and fiber optic lines appear to be in conflict with the anticipated limits of construction activities and permanent utility easements might be required.

I. Categorical Exclusion Approval:

WBS Element	**BP6.R018**
STIP Project No.	(N/A)
Federal Project No.	(N/A)

Prepared By:

9/27/2022
Date

DocuSigned by:
Mark Pierce
Mark Pierce, PE,
Rummel, Klepper & Kahl, LLP

Prepared For: NCDOT Highway Division 6

Reviewed By:

10/3/2022
Date

DocuSigned by:
Gregory W. Price
Greg Price, Division Environmental Officer
North Carolina Department of Transportation

☑ **Approved**

- If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.

☐ **Certified**

- If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
- If classified as Type III Categorical Exclusion.

10/9/2022
Date

DocuSigned by:
H. L. Cox
H.L. Cox, PE, Division Engineer
North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

(N/A)
Date

John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

Attachments: Figure 1: Site Vicinity Map
Figure 2: Study Area Map
Figure 3: USGS Quad Map
Cultural Resources Forms

FIGURE 1 - SITE VICINITY MAP

Bridge No. 250150 over Buck Creek on SR 1843 (Magnolia Church Rd.) Cumberland County, North Carolina

CREATED BY: JLB | DATE: 9/14/2022

Source: State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

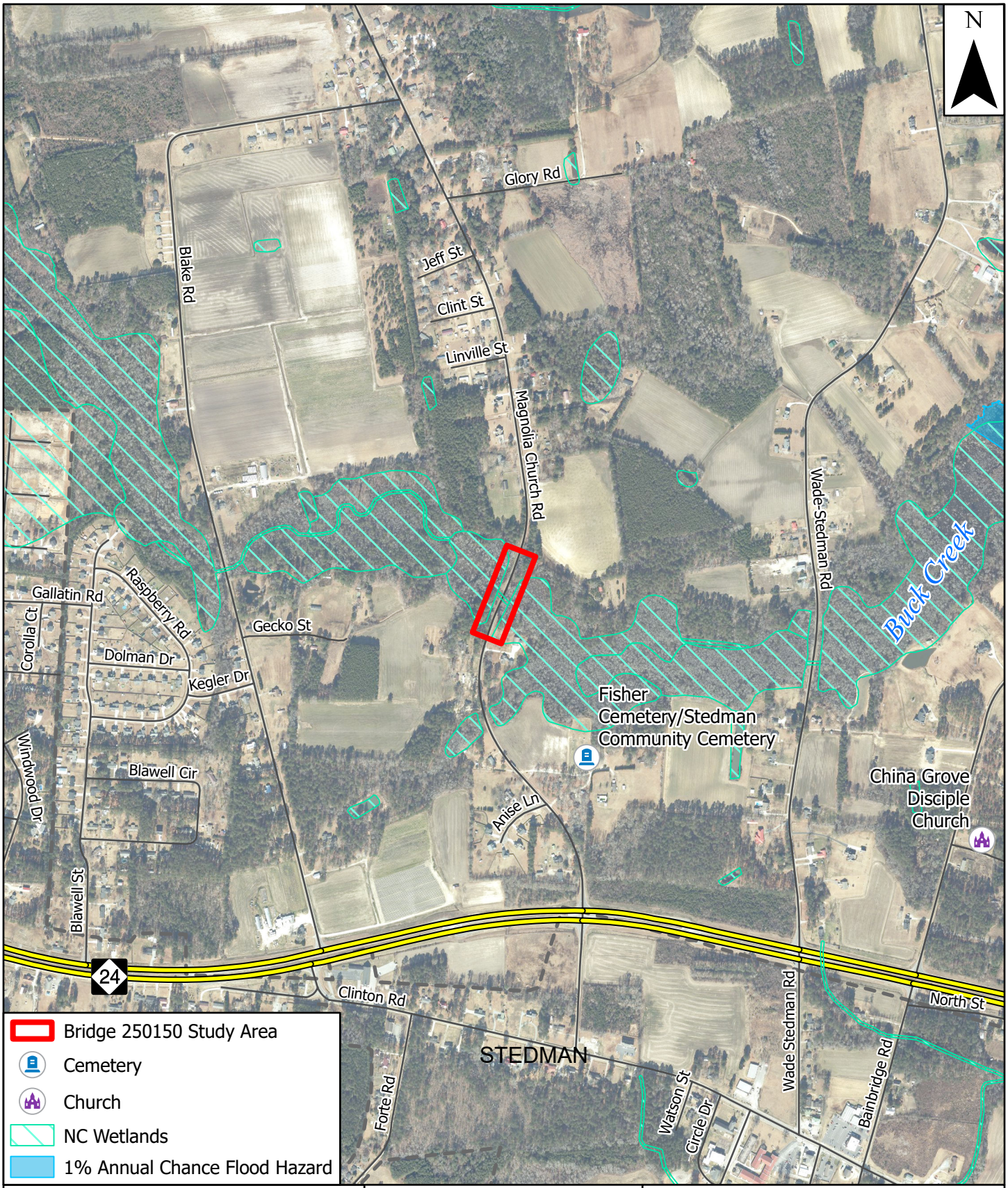


FIGURE 2 - STUDY AREA MAP

Bridge No. 250150 over Buck Creek on SR 1843 (Magnolia Church Rd.) Cumberland County, North Carolina

CREATED BY: JLB | DATE: 9/14/2022

Source: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board

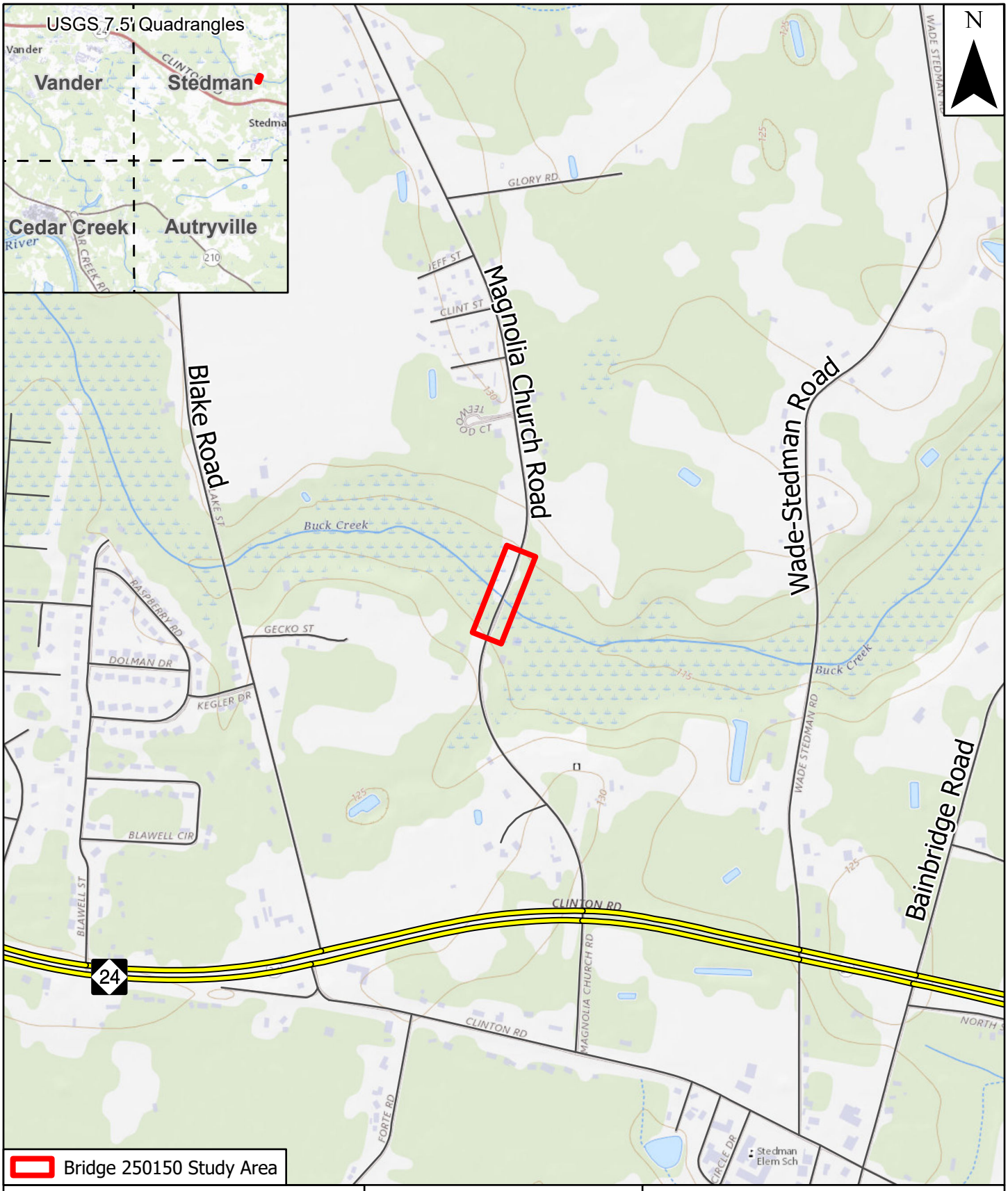


FIGURE 3 - USGS QUAD MAP

Bridge No. 250150 over Buck Creek on SR 1843 (Magnolia Church Rd.) Cumberland County, North Carolina

CREATED BY: JLB | DATE: 9/14/2022

Project Tracking No. (Internal Use)

22-02-0008

HISTORIC ARCHICTECTURE AND LANDSCAPES
NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	BP6-R018	***County***:	Cumberland
WBS No.:	BP6.R018.1	***Document Type***:	MCC
Fed. Aid No:		***Funding***:	☒ State ☐ Federal
Federal Permit(s):	☐ Yes ☒ No	***Permit Type(s)***:	USACE
Project Description: Replace Bridge No. 150 over Buck Creek on SR 1843 (Magnolia Church Rd).			

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:
Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on February 23, 2022. Based on this review there are no NR, DE, LL, SL, or SS in the Area of Potential Effects (APE). There are no structures over 50 years of age in the APE other than the bridge itself. Built in 1955, Cumberland County Bridge No. 150 does not exemplify any distinctive engineering or aesthetic type and is not eligible for the National Register of Historic Places. No Survey is required at this time.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area: Using HPO GIS website and county tax data provides reliable information regarding the structures in the APE. These combined utilities are considered valid for the purposes of determining the likelihood of historic resources being present.

SUPPORT DOCUMENTATION

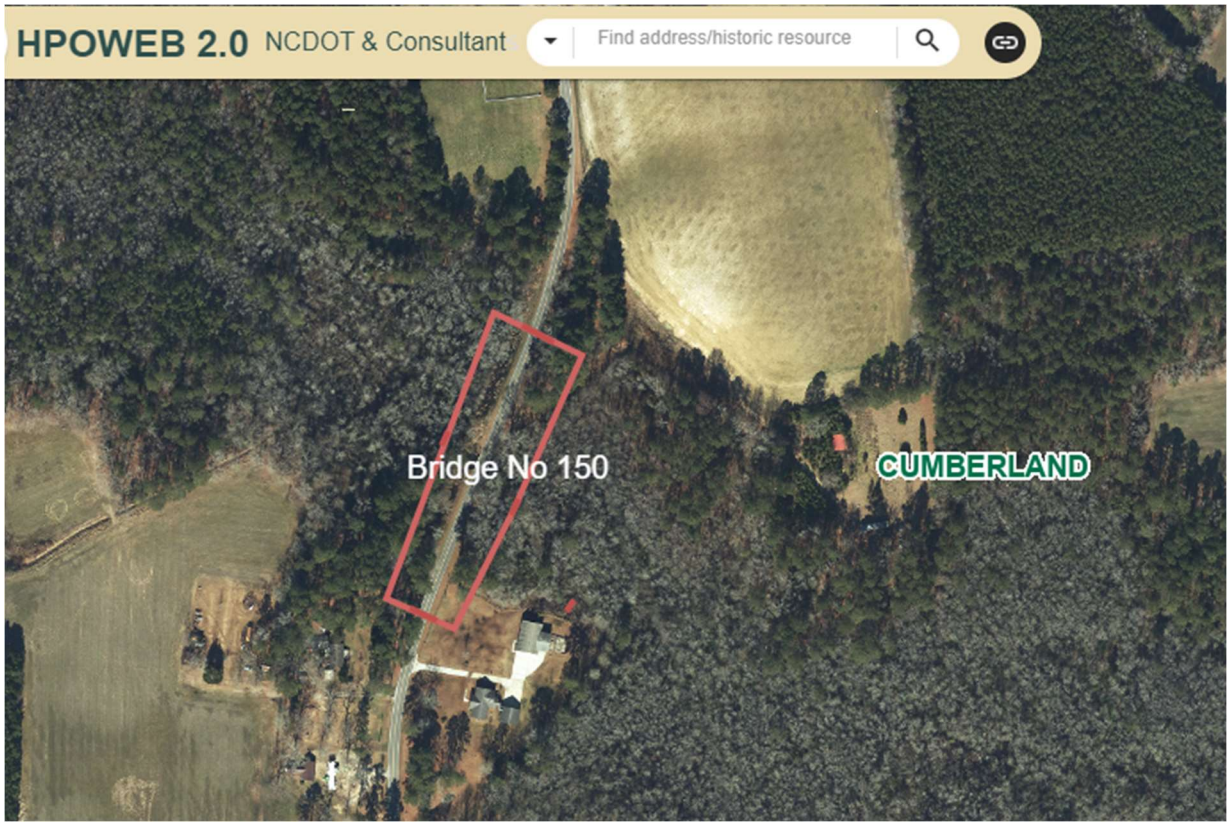
☒Map(s) ☐Previous Survey Info. ☒Photos ☐Correspondence ☐Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Shelby Reap **February 23, 2022**

NCDOT Architectural Historian Date



BR6-R018 APE

Bridge No 150

Project Tracking No.:

22-02-0008

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

Project No:	**B P 6-R018**	*County:*	**Cumberland**
WBS No:	**BP6.R018.1**	*Document:*	**M C C**
F.A. No:	**N / A**	*Funding:*	☒ State ☐ Federal

Federal Permit Required? ☒ Yes ☐ No *Permit Type:* **tbd**

Project Description: NCDOT proposes to replace Bridge No. 0150 on SR 1843, Magnolia Church Road, over Buck Creek in Cumberland County, NC. The improvements would construct a similar structure combination, culvert or new bridge on the same general alignment. For purposes of this review, the Area of Potential Effects (APE) includes all areas of construction, including new ROW and easements. Division and engineering staff intend to minimize new impacts and ROW, though some expansion for fill may occur. The length of the project along SR 1843 is expected to be about 600 feet (0.10 miles) with a width under 100 feet.

This project is state funded though will require USACE permitting, therefore this federal undertaking is reviewed under Section 106 of the Nation Historic Preservation Act at it relates to archaeology.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

NCDOT proposes to replace Br. No. 0150 in kind and generally at the same place and alignment. The general setting is a rural location, and the immediate surroundings include low, forested terrain, nearby residences and small agricultural fields. As a replacement project for an existing facility, the majority of the APE is considered disturbed by prior road and structure construction, a poor context for intact archaeological desposits. Further, an earlier alignment of the roadway further modified the immediate surrounding soils.

USGS mapping (Stedman) and aerial photography was studied (see Figures 1 and 2). Topography, contours and soil types were examined.

About 85 percent of the APE is defined as Johnston loam (JT), a swampy, poorly drained mucky loam with a water table close to the surface. The remaining soil type is Norfolk loamy sand (NoA), a well drained soil at the margin of the swamp at the northern limits of the project. The APE is adjacent to Goldsboro loamy sand (GoA) on the south, another better drained soil compared to that at the crossing. With an expected design that will require little or no new ROW and the majority of the APE being swampy soils generally unsuitable for occupation due to wetness and flooding, expectations based on soils and terrain suggest a low probability for the presence of intact, significant archaeological resources.

Streetview tools showed expected roadside ditches within the APE, part of the drainage efforts associated with the low laying soils present around the crossing. Standing water was present in the ditches. Evidence of a previous road configuration was noted. One example is the aerial power / telephone utility easement that runs diagonally through the northern half of the APE. The older roadbed is visible on either side of the road, appearing like driveways or breaks in the ditchline.

A review of historic maps found the 1922 Cumberland County Soils Map (MC.029.1922u) useful. The hundred year old map shows that there was a soil road approaching the APE from the south but stopped a distance short of the project area. No structures were mapped nearby the APE at that time. By 1938, the

road does appear on the Cumberland County highway map (MC.029.1938n) however in a different alignment near the crossing at Br. No. 150. Aerial photography from 1953 and county mapping (MC.029.1953n) shows the older alignement. An aerial dated from 1955 confirms the old alignment was still present at that time, just prior to the new alignment and bridge which was constructed later in 1955.

Data from the Office of State Archaeology was examined using ArcMap to reference any known archaeological surveys and sites. There are no previously recorded archaeological sites in the nearby vicinity. There are no archaeological reviews in the immediate vicinity, however, PA 22-02-0002 (SR 1850, Br. No. 0029) crosses Buck Creek about half a mile due east for which no survey was recommended. No known cemeteries are present.

This project falls within a North Carolina County in which the following federally recognized tribe has expressed an interest: the Catawba Indian Nation. We recommend that this documentation is forwarded to tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

Replacement of an existing bridge, pipe or culvert structure is proposed in kind. New impacts will be minimized, though easements may be expected adjacent to the crossing for fill or drainage, therefore a more generous APE has been considered. There are no recorded archaeological sites within the APE or nearby, including NRHP listed or eligible resources.

Soil types, topography and current conditions, which includes the existing roadway and swampy soils, do not indicate a high probability for intact archaeological sites within the limited APE. A previous roadway alignment crosses through the APE, further altering the adjacent soil stratigraphy. It is unlikely that significant archaeological remains would be present and impacted by the construction of the replacement structure. No archaeological survey is recommended. For archaeological review, this state funded undertaking with federal permitting should be considered compliant with Section 106.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED

3/07/2022

NCDOT ARCHAEOLOGIST Date

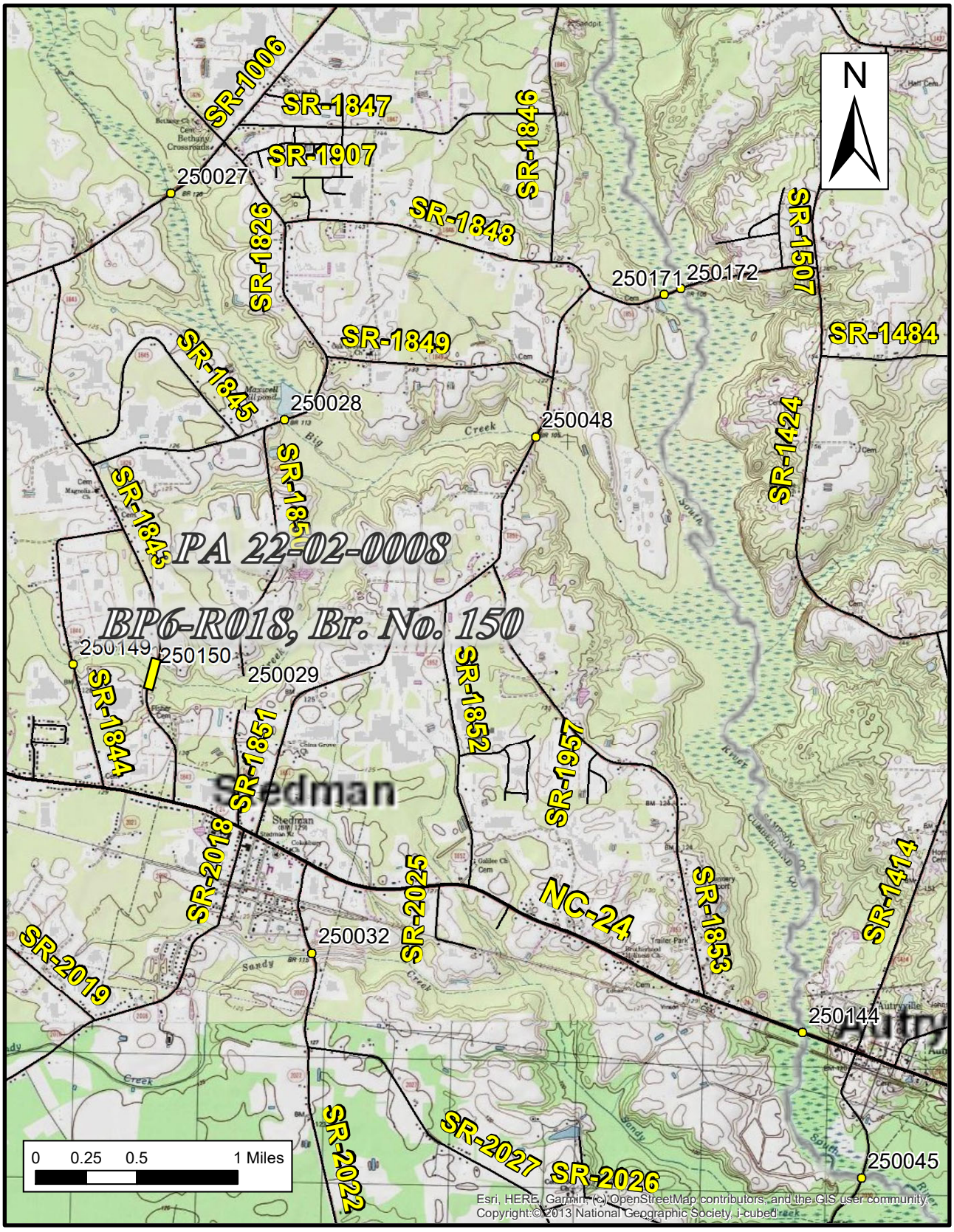


Figure 1. Vicinity of the proposed replacement of Br. No. 0150 on SR 1843 (Magnolia Church Road) over Buck Creek on USGS mapping (Stedman). The Area of Potential Effects (APE) is shown in yellow.

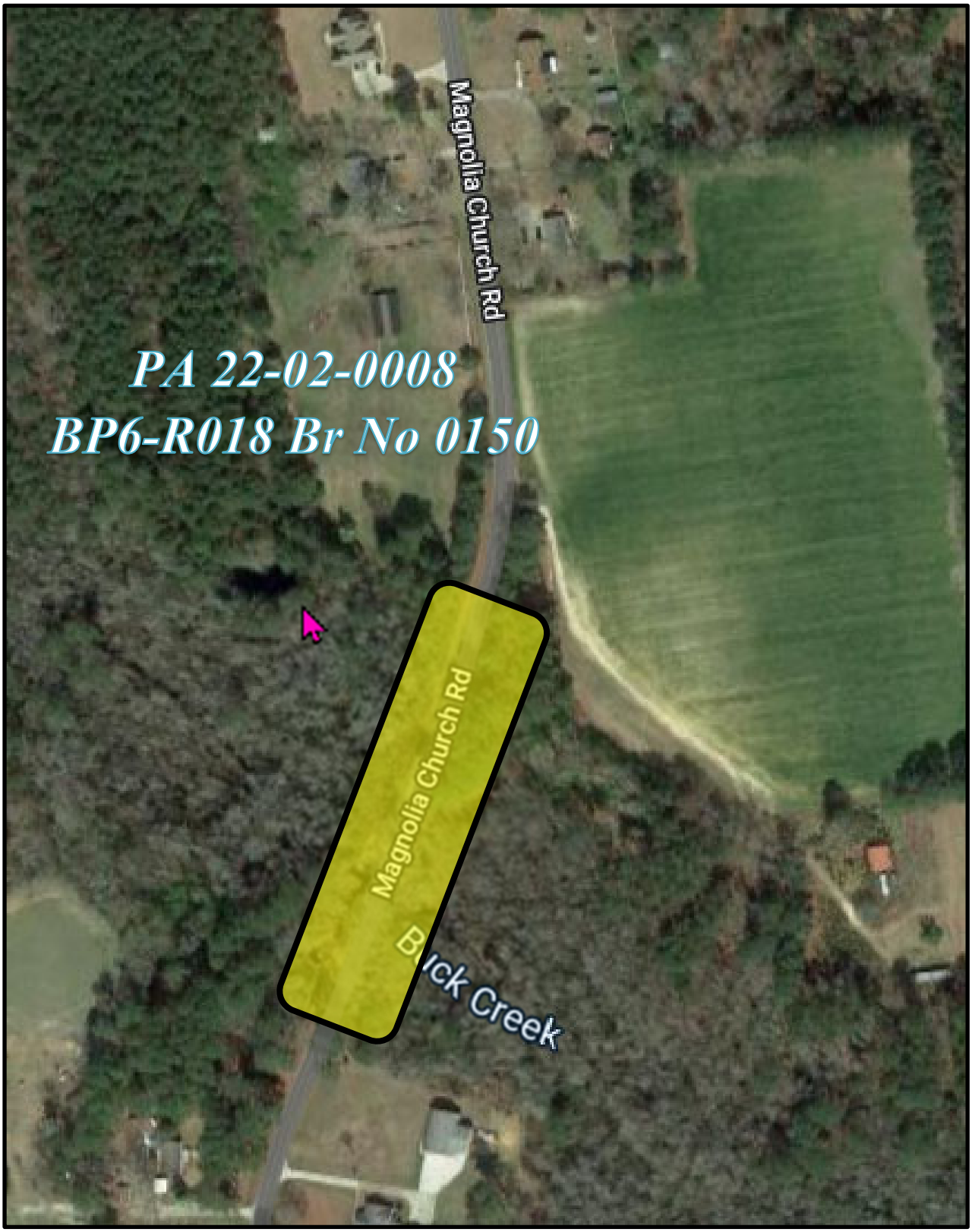


Figure 2. Aerial map at proposed replacement of Br. No. 0150 on SR 1843, Magnolia Church Road in Cumberland County. The Area of Potential Effects (APE) is shown in yellow. Much of the APE has already been modified by both a previous and the existing roadway and bridge facilities, creating a disturbed archaeological context. No NRHP listed or eligible sites are documented nearby.

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427

March 23, 2022

Attention: Adam Britt
NC Department of Transportation
588 Gillespie Street
Fayetteville, NC 28301

Re. THPO #	TCNS #	Project Description
2022-193-118		Replacement of Bridge 250150 over Buck Creek on SR 1843 in Cumberland Co. as project BP6.R018.1

Dear Mr. Britt,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2027-09-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that are or that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.
System of Record Notice (SORN): The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website:
http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, 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.

1. To (*District Name*):

2. I am requesting a JD on property located at (*Street Address*): Magnolia Church Road, Stedman, NC (see attached map).

City/Township/Parish: Stedman County: Cumberland State: North Carolina

Acreage of Parcel/Review Area for JD: 2.94

Section: Township: Range:

Latitude (*decimal degrees*): 35.025347 ° Longitude (*decimal degrees*): -78.702661 °

(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. ☐ I currently own this property. ☐ I plan to purchase this property.

☐ I am an agent/consultant acting on behalf of the requester.

☒ Other (*provide explanation*):

NCDOT

5. Reason for request: (*check as many as applicable*)

- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- [x] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- [ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- [ ] A Corps JD is required in order to obtain my local/state authorization.
- [ ] I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- [ ] I believe that the site may be comprised entirely of dry land.
- [ ] Other *(provide details below):*

6. Type of determination being requested:

- [ ] I am requesting an approved JD.
- [x] I am requesting a preliminary JD.
- [ ] I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- [ ] I am requesting a verification of an aquatic resources delineation but I am not requesting a JD.
- [ ] I am unclear as to which JD I would like to request and require additional information to inform my decision.

7. Typed or Printed Name: Deanna Riffey | Daytime Phone No.: 919-707-6151

Company Name: NCDOT | Email Address: driffey@ncdot.gov

Address: 1598 Mail Service Center
Raleigh, NC 27699-1598

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature: Deanna Riffey Digitally signed by Deanna Riffey Date: 2025.04.02 14:31:09 -04'00' | Date: 2025-04-02

U.S. Army Corps of Engineers (USACE)

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2027-09-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose This form is used by USACE staff in evaluating your request to determine whether there are any aquatic resources within the review area that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any resulting jurisdictional determination (JD), which may be made available to the public on the District's website and/or on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary; however, if information is not provided, the request for a JD cannot be evaluated nor can a PJD be issued.

The Agency Disclosure Notice (ADN)

The public reporting burden for this collection of information, 0710-0024, is estimated to average 25 minutes per response, including the 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.

SECTION I - BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:
Deanna Riffey
1598 Mail Service Center, Raleigh, NC 27699-1598

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION AND BACKGROUND INFORMATION:
(*USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES*)

State: North Carolina County/Parish/Borough: Cumberland City: Stedman

Center coordinates of site (*lat/long in degree decimal format*): Latitude: 35.025347 ° Longitude: -78.70266 °

Universal Transverse Mercator: 17

Name of nearest waterbody: Buck Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (*CHECK ALL THAT APPLY*):

☐ Office (*Desk*) Determination. Date:

☐ Field Determination

Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)
	Buck Creek	35.025364	-78.702664	215	Non-Wetland water	Section 404

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)
	WA	35.025047	-78.703028	0.54	Wetland	Section 404
	WB	35.025871	-78.702623	0.52	Wetland	Section 404
	WC	35.025459	-78.702369	0.22	Wetland	Section 404
	WD	35.024961	-78.702619	0.38	Wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD or no JD whatsoever, which do not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the USACE has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD or reliance on no JD whatsoever; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of USACE permit authorization based on a PJD or no JD whatsoever constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the USACE will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

F. SUPPORTING DATA. Data reviewed for PJD (*check all that apply)*

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:

Map: _____

☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

Rationale: _____

☐ Data sheets prepared by the USACE:

_____

☐ Corps navigable waters' study:

_____

☒ U.S. Geological Survey Hydrologic Atlas:

1:24,000 Stedman

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☐ U.S. Geological Survey map(s). Cite scale & quad name:

☒ USDA Natural Resources Conservation Service Soil Survey.

Citation: Cumberland County, 1984

☐ National Wetlands Inventory map(s).

Cite Name:

☐ State/Local Wetland Inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: _____. (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (*Name & Date*): NC Statewide Orthoimagery 2021

or ☐ Other (*Name & Date*):

☐ Previous determination(s). File no. and date of response letter:

☐ Other information (*please specify*):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the USACE and should not be relied upon for later jurisdictional determinations.

Name of Regulatory Staff Member Completing PJD	Date	Signature of Regulatory Staff Member Completing PJD
Name of Person Requesting PJD	**Date**	**Signatureof Person Requesting PJD *(REQUIRED, unless obtaining the Signature is Impracticable***
Deanna Riffey	4/2/2025	Deanna Riffey Digitally signed by Deanna Riffey Date: 2025.04.02 14:40:45 -04'00'

[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

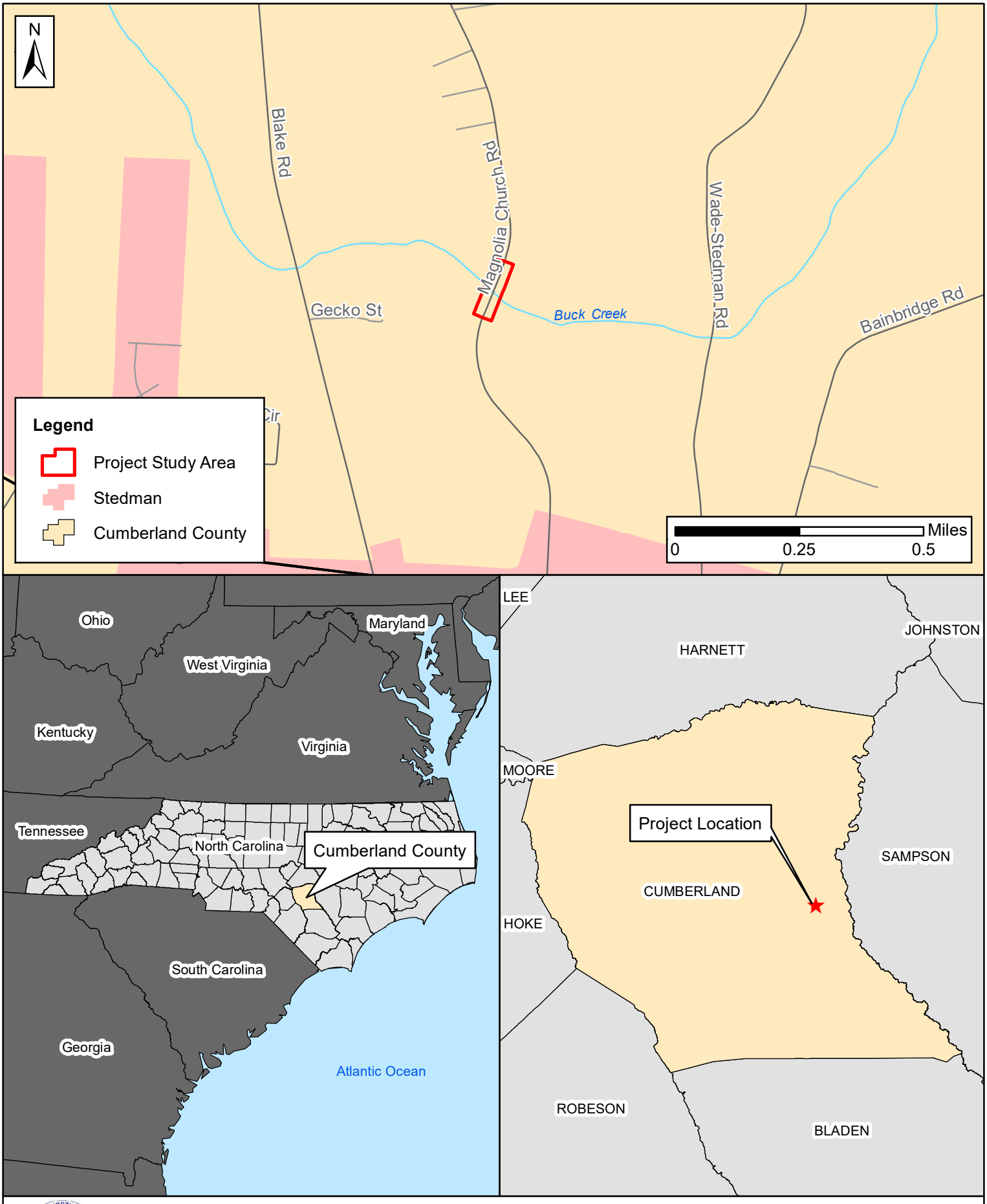


Figure 1: Vicinity Map
WBS# BP6.R018
Cumberland County, NC
April 2022

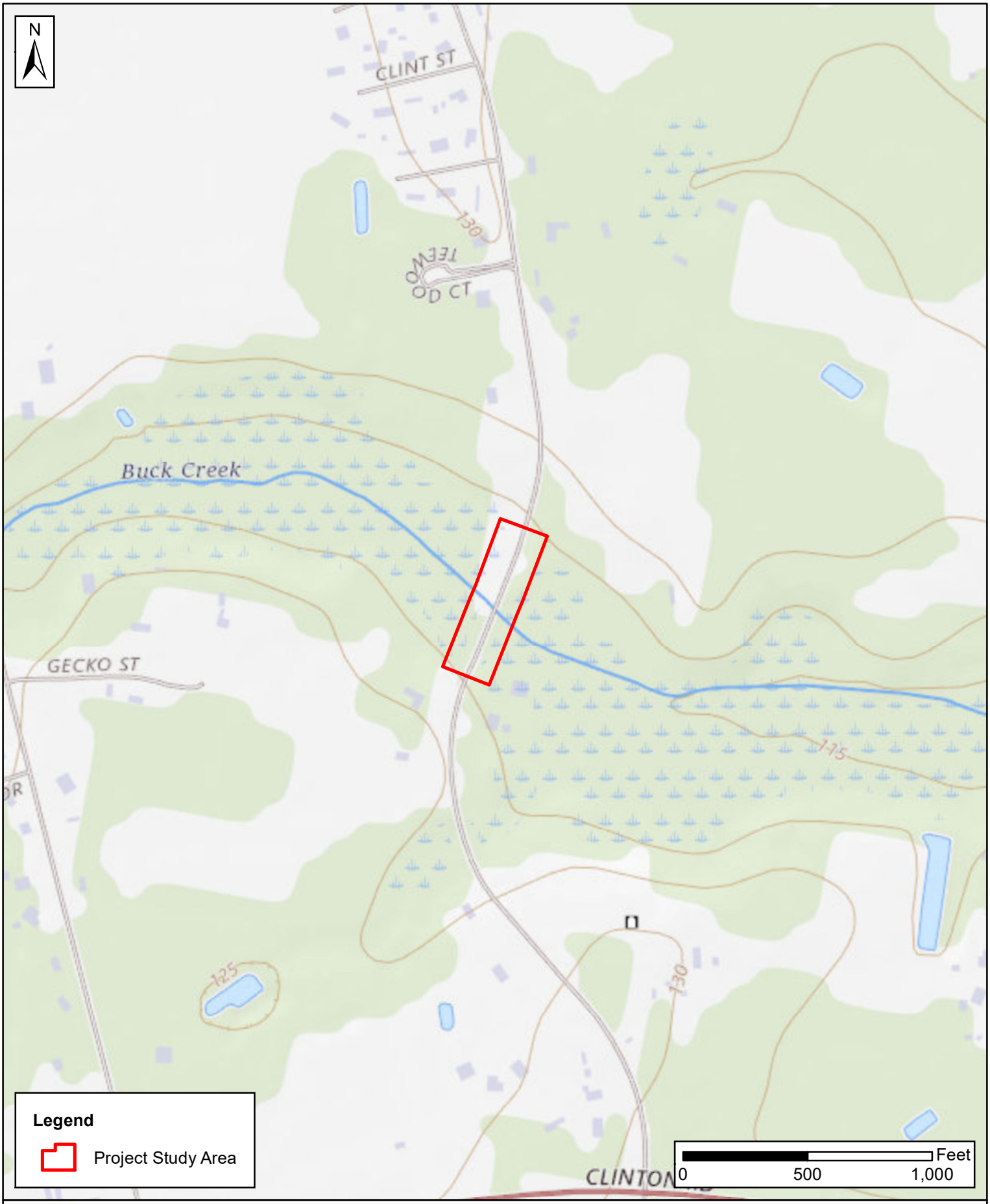
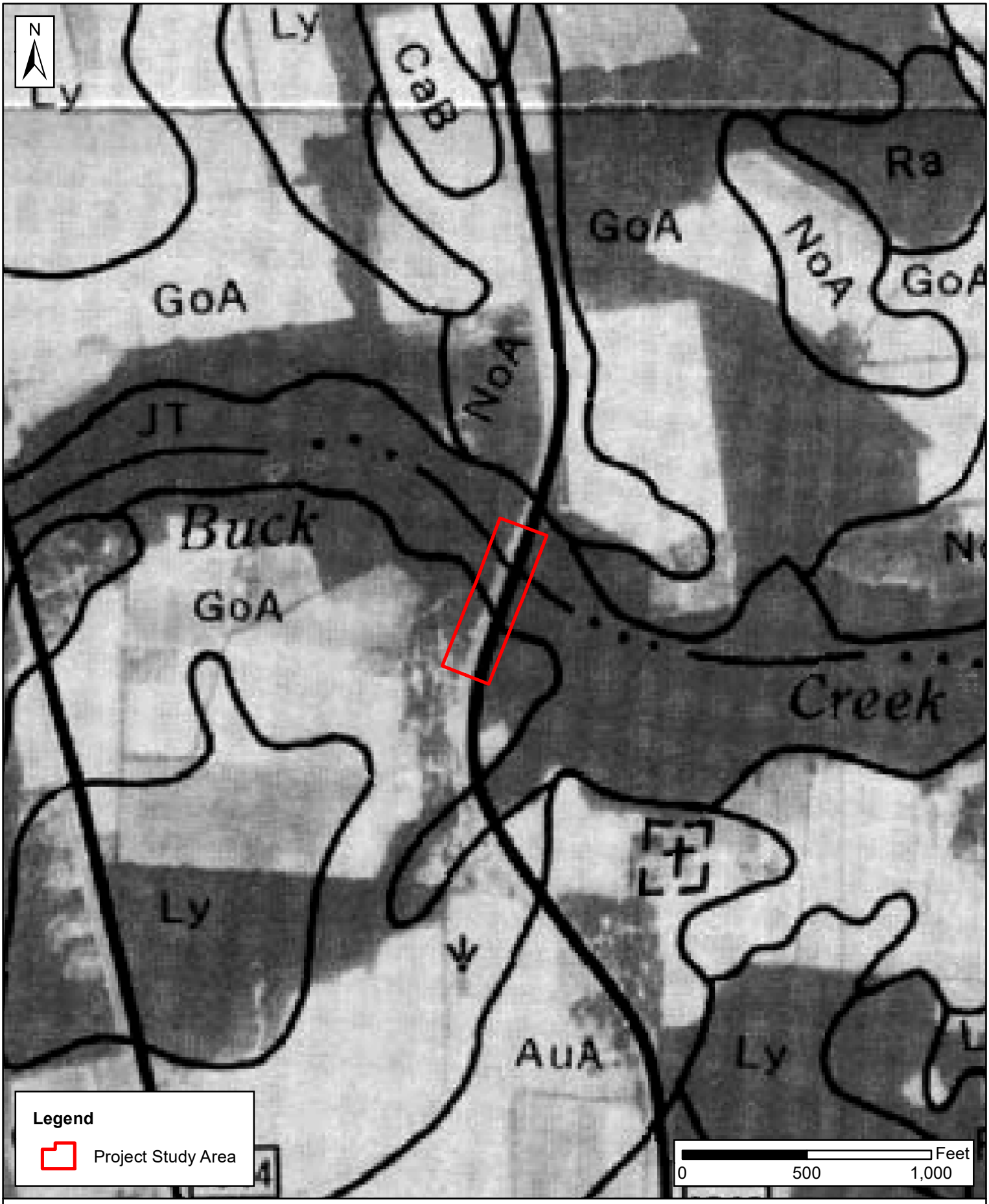


Figure 2: USGS Topographic Map
WBS# BP6.R018
Cumberland County, NC
April 2022

Figure 3: Jurisdictional Features Map
WBS# BP6.R018
Cumberland County, NC
April 2022



Kimley»Horn

Figure 4: NRCS Soil Survey Map
WBS# BP6.R018
Cumberland County, NC
April 2022

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: WBS# BP6.R018 City/County: Stedman/Cumberland County Sampling Date: 3/30/2022

Applicant/Owner: NCDOT State: NC Sampling Point: WA/WB/WC/WD- UP

Investigator(s): J. Hartshorn and M. Richards (Kimley-Horn) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Fill Slope Local relief (concave, convex, none): Convex Slope (%): <1%

Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 35.024728 Long: -78.703002 Datum: NAD 83

Soil Map Unit Name: JT - Johnson loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The representative upland data point for wetlands WA, WB, WC, and WD was taken on the maintained fill slope of Magnolia Church Road, approximately 10 feet from and 3 feet higher in elevation than wetland WC.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary or secondary hydrology indicators were observed.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WA/WB/WC/WD- UP

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	30	Yes	FAC
2. *Acer rubrum*	30	Yes	FAC
3. *Liquidambar styraciflua*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	70	=Total Cover	
50% of total cover: 35		20% of total cover: 14	
Sapling/Shrub Stratum (Plot size: 30')			
1. *Liquidambar styraciflua*	5	Yes	FAC
2. *Acer rubrum*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover: 2	
Herb Stratum (Plot size: 30')			
1. *Digitaria sp.*	20	Yes	FAC
2. *Festuca sp.*	10	Yes	FAC
3. *Carduus sp.*	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	=Total Cover	
50% of total cover: 20		20% of total cover: 8	
Woody Vine Stratum (Plot size: 30')			
1. *Lonicera japonica*	5	Yes	FACU
2. *Smilax laurifolia*	5	Yes	FACW
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover: 2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)
Data point location is within maintained roadway right-of-way.

SOIL

Sampling Point: WA/WB/WC/WD- UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/4	100					Loamy/Clayey	
2-24	10YR 5/6	50	10YR 4/3	50			Loamy/Clayey	Fill slope - split matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No saturation or water table was observed within 30 inches of the soil surface.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: WBS# BP6.R018 City/County: Stedman/Cumberland County Sampling Date: 3/30/2022

Applicant/Owner: NCDOT State: NC Sampling Point: WA/WB/WC/WD- WET

Investigator(s): J. Hartshorn and M. Richards (Kimley-Horn) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Riverine Swamp Local relief (concave, convex, none): Concave Slope (%): <1%

Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 35.024727 Long: -78.703178 Datum: NAD 83

Soil Map Unit Name: JT - Johnson loam NWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Wetlands WA, WB, WC, and WD are contigous riverine swamp wetlands abutting Buck Creek that are bounded by moderate topography and the fillslope of Magnolia Church Road. The representative wetland data point for wetlands WA, WB, WC, and WD was taken within wetland WA, approximately 20 feet from the boundary. Buck Creek is beaver impounded upstream of the project area, however, hydrology was still present throughout wetlands WA, WB, WC, and WD. Large pockets of standing water, buttressed trees, and cypress knees were observed throughout the wetlands.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Drainage patterns, drift deposits, water stained leaves, and crayfish burrows were observed throughout wetlands WA, WB, WC, and WD. Large areas of ponded surface water were observed throughout wetlands WA, WB, WC, and WD, but were not observed at the representative wetland data point location. Saturation and water table were observed at 10 inches below the soil surface at the wetland data point location.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WA/WB/WC/WD- WET

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	50	Yes	FAC
2. *Acer rubrum*	10	No	FAC
3. *Liquidambar styraciflua*	10	No	FAC
4. *Liriodendron tulipifera*	10	No	FACU
5.			
6.			
7.			
8.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Sapling/Shrub Stratum (Plot size: 30')			
1. *Liquidambar styraciflua*	10	Yes	FAC
2. *Persea borbonia*	10	Yes	FACW
3. *Ilex opaca*	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Herb Stratum (Plot size: 30')			
1. *Arundinaria gigantea*	60	Yes	FACW
2. *Woodwardia areolata*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	=Total Cover	
50% of total cover: 35		20% of total cover:	14
Woody Vine Stratum (Plot size: 30')			
1. *Wisteria floribunda*	5	Yes	UPL
2. *Smilax laurifolia*	5	Yes	FACW
3. *Smilax rotundifolia*	5	Yes	FAC
4.			
5.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover:	3

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: WA/WB/WC/WD- WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Loamy/Clayey	
10-12	10YR 3/1	100	10YR 4/3	50			Loamy/Clayey	
12-24	10YR 5/1	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- X Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Saturation and water table were observed at 10 inches below the soil surface at the wetland data point location. The wetland was underlain by dark organic soils and pockets of standing water throughout at the wetland data point location.

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 5.0

Wetland Site Name	Wetland WA/WB/WC/WD	Date	3/30/2022
Wetland Type	Riverine Swamp Forest	Assessor Name/Organization	Richards/Kimley-Horn

Notes on Field Assessment Form (Y/N)	YES
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	NO
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO
Assessment area experiences overbank flooding during normal rainfall conditions (Y/N)	YES
Assessment area is on a coastal island (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**HIGH**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Soluble Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**HIGH**
	Landscape Patch Structure	Condition	**HIGH**
	Vegetation Composition	Condition	**HIGH**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**HIGH**
Water Quality	Condition	**HIGH**
	Condition/Opportunity	**HIGH**
	Opportunity Presence? (Y/N)	**YES**
Habitat	Condition	**HIGH**

Overall Wetland Rating **HIGH**

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
Buck Creek	NORTH CAROLINA	R2		Linear	215	FOOT	DELIN.PJD-404	35.02536400	-78.70266400	
WA	NORTH CAROLINA	PFO		Area	0.54	ACRE	DELIN.PJD-404	35.02504700	-78.70302800	
WB	NORTH CAROLINA	PFO		Area	0.52	ACRE	DELIN.PJD-404	35.02587100	-78.70262300	
WC	NORTH CAROLINA	PFO		Area	0.22	ACRE	DELIN.PJD-404	35.02545900	-78.70236900	
WD	NORTH CAROLINA	PFO		Area	0.38	ACRE	DELIN.PJD-404	35.02496100	-78.70261900	