



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

November 15, 2023

U. S. Army Corps of Engineers
Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587

NC Division of Water Resources
Transportation Permitting Branch
1617 Mail Service Center
Raleigh NC 27699-1617

ATTN: Mr. Eric Alsmeyer,
NCDOT Coordinator

Mr. Ryan Conchilla
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 14, and Section 401 Water Quality Certification** for the Proposed Replacement of Bridge No. 35 on NC 770 over the Mayo River in Rockingham County, Division 7, TIP No. BR-0093, Debit \$767 from WBS 67093.1.1.

Dear Sirs:

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge No. 35 on NC 770 over the Mayo River with a new bridge at the existing location. Traffic will be diverted to an off-site detour.

As a result of stabilizing banks under the new bridge and the use of a temporary work pad, there will be a total of 167 linear feet of permanent stream bank stabilization impacts, and 20 linear feet (0.18 ac) of temporary impacts. These impacts do not require permanent fill in the stream bed, therefore, under Section 404 of the Clean Water Act, do not constitute Loss of Waters of the U.S., and are not subject to compensatory mitigation.

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, Permit Drawings, Protected Species Info, Cultural Resource Documents, Draft Boater Safety Plan, and Minimum Criteria Determination Checklist (MCDC).

This project calls for a letting date of June 18, 2024.

A copy of this permit application has been posted on the NCDOT Website at:
<http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please contact Erin Cheely at ekcheely@ncdot.gov or (919) 707-6108.

Sincerely,


Michael A. Turchy

Environmental Coordination and Permitting Group Leader

cc: NCDOT Permit Application Standard Distribution List

Pre-Construction Notification



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits
(along with corresponding Water Quality Certifications)

October 2, 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

Pre-Filing Meeting Date Request was submitted on: *

6/30/2023

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 or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? *

☐ Yes ☒ No

Is this project connected with ARPA funding? *

☐ Yes ☒ No

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

Rockingham

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:

BR-0093

WBS # *

67093.1.1

(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
☐ Non-404 Jurisdictional General Permit
☐ Individual 401 Water Quality Certification

- ☐ 401 Water Quality Certification - Express
☐ Riparian Buffer Authorization

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? *

Erin Cheely

1b. Primary Contact Email: *

ekcheely@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6108

1d. Who is applying for the permit? *

☐ Owner
(Check all that apply)

☒ Applicant (other than owner)

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

☐ Yes ☒ No

2. Owner Information

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

NCDOT

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

2d. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6108

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

ekcheely@ncdot.gov

3. Applicant Information (if different from owner)

3a. Name: *

Erin Cheely

3b. Business Name:

(if applicable)

3c. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

USA

3d. Telephone Number: *

(919)707-6108

(xxx)xxx-xxxx

3e. Fax Number:

(xxx)xxx-xxxx

3f. Email Address: *

ekcheely@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

BR-0093 - Bridge 35 on NC 770 over the Mayo River

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Stoneville

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

Postal / Zip Code

State / Province / Region

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: *

36.471023

ex: 34.208504

Longitude: *

-79.950666

-77.796371

3. Surface Waters

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

Mayo River

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

WS-IV

[Surface Water Lookup](#)

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

Roanoke

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

030101030409

[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: *

The project is Maintained/Disturbed along the immediate roadside, but largely forested with scattered residential homes. The project vicinity is largely intact wooded tracts with occasional roads, driveways and open fields.

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:

0.02

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

(intermittent and perennial)

1,716

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

The purpose of the project is to address a deteriorating bridge. Bridge 780035 was built in 1965 and is reaching the end of its anticipated life span. It has a sufficiency rating of 60.1. The substructure, structural evaluation, and deck geometry ratings are all 4.

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

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 780035 on NC 770 over the Mayo River (STIP BR-0093) in Rockingham County. The bridge will be replaced onsite using an offsite detour for traffic. The proposed offsite detour for the replacement of bridge No. 780035 over the Mayo River on NC 770 will use US 220, US 220 Business, and Janet Road. Traffic traveling east on NC 770 will take Janet Road south for approximately 2.75 miles, then travel east on US 220 Business for approximately 1 mile, and then travel north on US 220 north for approximately 1.35 miles to reconnect with NC 770. Westbound traffic on NC 770 would take the same route in reverse by traveling south on US 220 for approximately 1.35 mile, west on US 220 Business for approximately 1 mile, and north on Janet Road for approximately 2.75 miles to reconnect with NC 770. Bridge No. 780035 is constructed of concrete, timber, and steel and should be possible to remove with no resulting debris based on standard demolition practices.

To limit ground disturbance activity and permanent impacts to park lands, Alternative 3, the replacement of Bridge No. 780035 in place while traffic uses an offsite detour, was selected. To accommodate bicycle traffic, 6-foot shoulders will be used along NC 770 and 5-foot rail offsets will be used on the bridge.

Construction activities include earth removal, hauling, grading, and paving. Standard road building equipment, such as trucks, bulldozer, backhoe, 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:

Only impacted resource is Mayo River.

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): Hal Bain, Gordon Marsh, Matt Martin

Agency/Consultant Company: RK&K

Other:

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

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 | Site 1 - Bridge | Permanent | Bank Stabilization | Mayo River | Perennial | Both | 150 Average (feet) | 167 (linear feet) |
| S2 | Site 1 - Bridge | Temporary | Bank Stabilization | Mayo River | Perennial | Both | 150 Average (feet) | 20 (linear feet) |
| S3 | Site 1 - Work Pad | Temporary | Rip Rap Fill | Mayo River | Perennial | Both | 150 Average (feet) | 0 (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:

167

3i. Total temporary stream impacts:

20

3i. Total stream and ditch impacts:

187

3j. Comments:

1) <0.01 acres of Permanent SW impacts for bridge interior bents at -L- 18+25 (~20 sq ft)

2) Temporary stream impact length for Temporary Work Pads listed as 0 ft b/c it's inside the footprint of the proposed Bank Stabilization.

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: *

The final project design avoids and minimizes impacts to streams to the greatest extent practicable. The bridge will be replaced at existing location. Traffic will be detoured off-site. No deck drains are proposed, therefore there will be no direct discharge into the Mayo River. Existing drainage pathways were utilized to the maximum extent practicable and the proposed maximizes shoulder section.

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

NCDOT's Best Management Practices (BMPs) for Construction and Maintenance Activities and Protection of Surface Waters will be adhered to. Stormwater runoff will flow to traffic bearing grated drop inlets and will outlet onto a Class I Rip-rap outlet pad at the toe of embankment in the floodplain of the Mayo River. Roadway side slopes were minimized and adequate ground cover was provided for energy dissipation. The temporary causeways will not block more than 50% of streamflow at one time.

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

2b. If this project DOES NOT require Compensatory Mitigation, explain why:

Impacts associated with the project are not considered a loss of water and therefore do not require mitigation.

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

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:

The project is located in the Roanoke River basin to which no buffer rules apply.

2. Stormwater Management Plan

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

☒ Yes ☐ No

Comments:

See attached stormwater management plan.

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.

The project would not likely influence the intensity of development activities as the replacement structure is similar in scope and size as the existing. Land use will continue to be guided by adopted zoning and land use plans. The project is generally consistent with local land use plans. Any additional development in the area would adhere to local stormwater rules.

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

5d. Is another Federal agency involved? *

☒ Yes ☐ No ☐ Unknown

What Federal Agency is involved?

USACE

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? *

The USFWS project list per IPaC, the North Carolina Natural Heritage Program data explorer (NHP), and existing PBO for Northern Long Eared Bat in Div 1-8 (rev. 2022) & Aquatics Survey Report.

The USACE is the lead federal agency for this state-funded project. A biological conclusion of May Affect - Not Likely to Adversely Affect is proposed for Roanoke Logperch and James Spiny mussel; surveys were performed on September 22, 2022. See attached aquatic survey report and IPaC resource list.

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? *

<https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-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/hpweb/>)

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? *

The State Historic Preservation Office (SHPO) Historic Properties Map, MCDC, and correspondence letters with SHPO (see attached) were used to make a determination. No historic properties or significant archaeological resources will be impacted by this project.

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

8b. If yes, explain how project meets FEMA requirements:

NCDOT's Hydraulics Unit will coordinate with FEMA and local authorities to ensure compliance with applicable floodplain management ordinances. Since this project involves construction on or adjacent to FEMA regulated streams, NCDOT Division 7 shall submit sealed as-built construction plans.

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

<https://msc.fema.gov/portal/search>

Miscellaneous

Comments

A draft boater safety plan is included in the attachments to protect recreational paddlers/boaters during construction.

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](#)

BR-0093 Rockingham November 15 2023.pdf

11.97MB

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: *

Erin K. Cheely

Signature *

Erin K. Cheely

Date

11/15/2023

Permit Drawings



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

WBS Element: 67093.1.1 TIP/Proj No: BR-0093 County(ies): Rockingham Page 1 of 2

General Project Information

| | | | | | | | | | | | | | | | | | |
|---------------------------------|----------|------------------|---|-------------|--|---------|--|------------------------|--|---------------------------------|--|---|--|-----------|--|--|--|
| WBS Element: | | 67093.1.1 | | TIP Number: | | BR-0093 | | Project Type: | | Bridge Replacement | | Date: | | 8/25/2023 | | | |
| NCDOT Contact: | | Sara Sherman, PE | | | | | | Contractor / Designer: | | TGS Engineers / Ben Henegar, PE | | | | | | | |
| | Address: | | 1000 Birch Ridge Drive Raleigh, NC 27610 | | | | | | | Address: | | 706 Hillsborough St. Suite 200 Raleigh, NC 27603 | | | | | |
| | Phone: | | (919) 707-6303 | | | | | | | Phone: | | (919) 773-8887 ext. 123 | | | | | |
| | Email: | | sisherman1@ncdot.gov | | | | | | | Email: | | bhenegar@tgsengineers.com | | | | | |
| City/Town: | | Stoneville, NC | | | | | | County(ies): | | Rockingham | | | | | | | |
| River Basin(s): | | Roanoke | | | | | | CAMA County? | | No | | | | | | | |
| Wetlands within Project Limits? | | No | | | | | | | | | | | | | | | |

Project Description

| | | | |
|--|---|-----------------------|--|
| Project Length (lin. miles or feet): | 0.170 miles | Surrounding Land Use: | State Park and Rural Residential |
| | | Proposed Project | Existing Site |
| Project Built-Up Area (ac.) | 0.73 | ac. | 0.52 |
| Typical Cross Section Description: | Two 12' wide paved travel lanes, two 5' to 6' wide paved shoulders, and 2' to 3' graded shoulders, and side slopes ranging from 4(H):1(V) to 2(H):1(V). | | Two 12' wide paved travel lanes, 6' graded shoulders, and side slopes ranging from 4(H):1(V) to 2(H):1(V). |
| Annual Avg Daily Traffic (veh/hr/day): | Design/Future: | 2,800 | Year: 2045 |
| | Existing: | 2,315 | Year: 2024 |

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

BR-0093 involves the replacement of bridge No. 780035 on NC 770 over Mayo River in Rockingham County, NC. The proposed 290' long by 37.3' wide three-span 54" Florida I-Beam bridge would replace the existing 271' long by 33.4' wide five-span 45" PPC Girder bridge. The proposed grade will be approximately 1' above the existing grade at the bridge.

The proposed bridge will have no direct discharge into Mayo River (no deck drains). Stormwater runoff from the proposed bridge will flow to traffic bearing grated drop inlets at the east end of the bridge and will outlet to the south onto a Class I Rip-Rap outlet pad at the toe of embankment in the floodplain of Mayo River.

Project minimum measures include:

- >Maximizing Shoulder Section.
- >Minimizing Roadway Side Slopes.
- >Providing Adequate Ground Cover.
- >Stabilizing Embankments and Drainage Ditches.
- >Providing Adequate Energy Dissipation.
- >Utilizing Natural Features and Drainage Pathways - Existing drainage pathways were utilized to the maximum extent practicable.
- >Minimizing direct discharges from bridges.



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

WBS Element: 67093.1.1

TIP/Proj No.: BR-0093

County(ies): Rockingham

Page 2 of 2

General Project Information

Waterbody Information

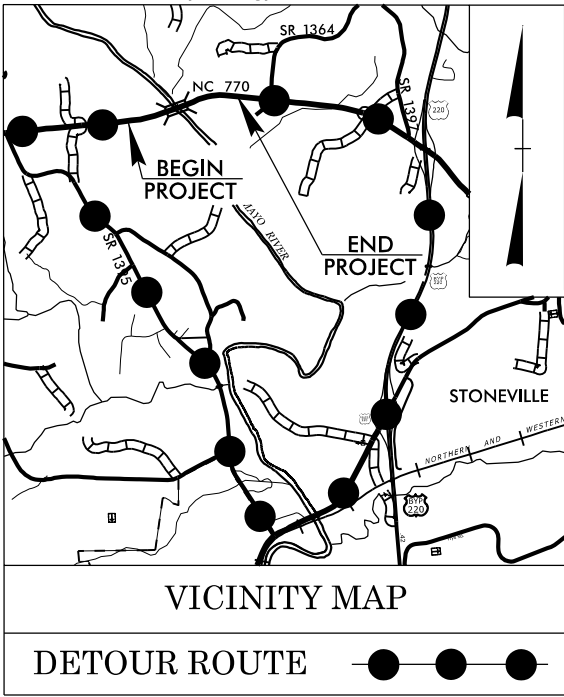
| | | | | | |
|--|------------------------------|--|-------------------------|--|----|
| Surface Water Body (1): | Mayo River | | NCDWR Stream Index No.: | 22-30-(5.5) | |
| NCDWR Surface Water Classification for Water Body | Primary Classification: | | Water Supply IV (WS-IV) | | |
| | Supplemental Classification: | | None | | |
| Other Stream Classification: | None | | | | |
| Impairments: | None | | | | |
| Aquatic T&E Species? | No | Comments: | | | |
| NRTR Stream ID: | Mayo River | | Buffer Rules in Effect: | N/A | |
| Project Includes Bridge Spanning Water Body? | Yes | Deck Drains Discharge Over Buffer? | No | Dissipator Pads Provided in Buffer? | No |
| Deck Drains Discharge Over Water Body? | No | (If yes, provide justification in the General Project Narrative) | | (If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative) | |
| (If yes, provide justification in the General Project Narrative) | | | | | |
| Surface Water Body (2): | | | 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) | | | | | |

09/08/09

TIP PROJECT: BR-0093

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Symbology Sheet

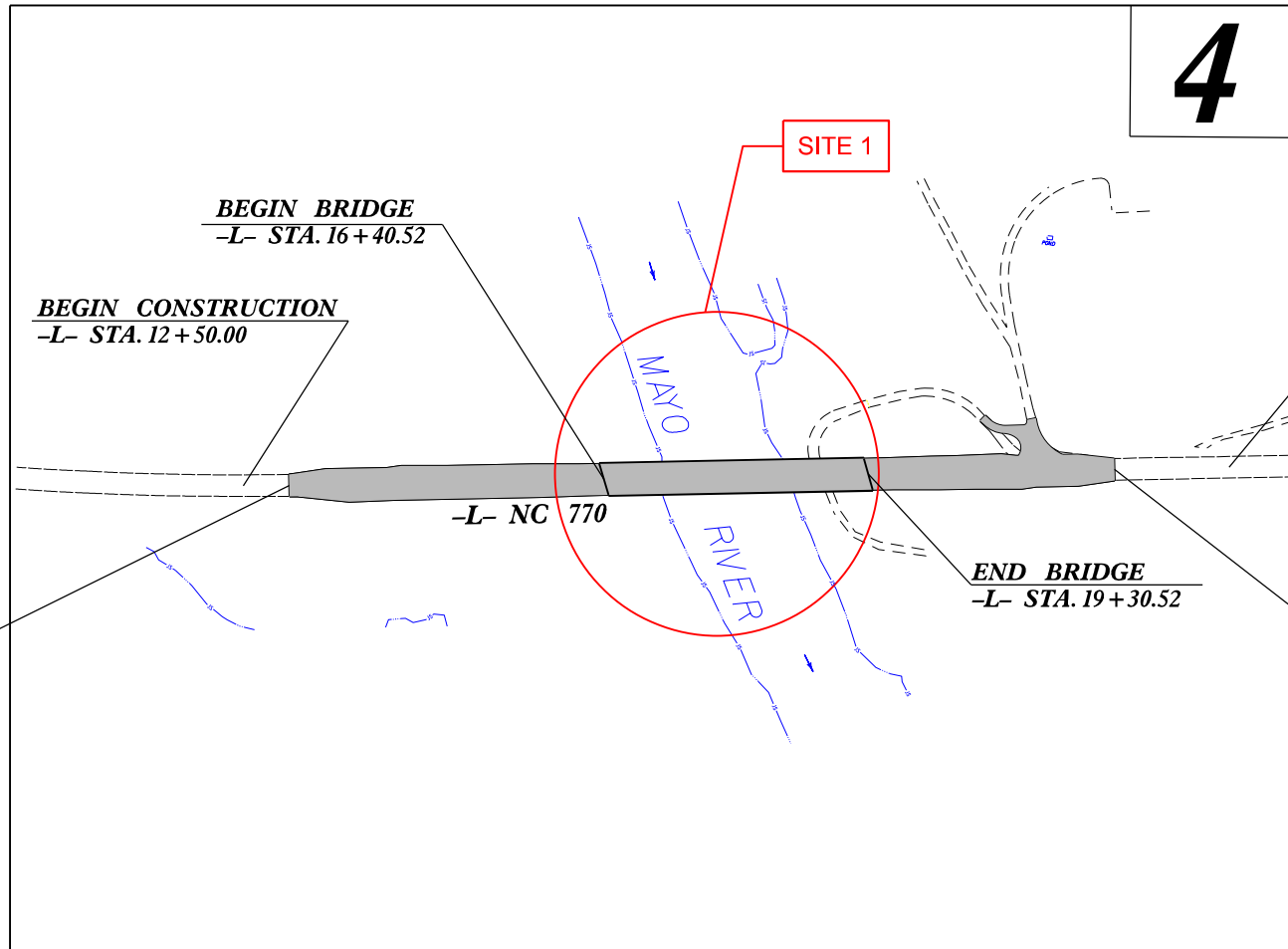


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY

LOCATION: *BRIDGE 780035 ON NC 770 OVER MAYO RIVER*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE AND STRUCTURE*

WETLAND AND SURFACE WATER IMPACTS PERMIT



| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | BR-0093 | 11 | |
| STATE PROJ. NO. | F. A. PROJ. NO. | DESCRIPTION | |
| 67093.1.1 | N/A | PE | |
| 67093.2.1 | N/A | UTIL/RW | |
| 67093.3.1 | N/A | CONST. | |
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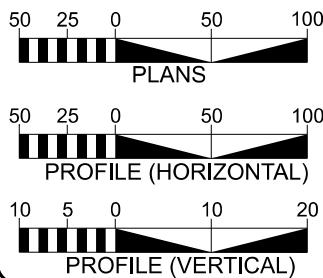
PERMIT DRAWING
SHEET 1 OF 5



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

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

GRAPHIC SCALES



DESIGN DATA

ADT 2024 = 2,315
ADT 2045 = 2,800
K = 9 %
D = 65 %
T = 10 % *
V = 60 MPH
* TTST 4% DUAL 6%
FUNC CLASS =
MAJOR COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0093 = 0.115 Mi.
LENGTH STRUCTURE TIP PROJECT BR-0093 = 0.055 Mi.
TOTAL LENGTH TIP PROJECT BR-0093 = 0.170 Mi.

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 14, 2023

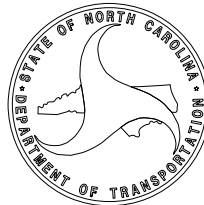
LETTING DATE:
JUNE 18, 2024

SARA SHERMAN, PE
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ROADWAY TEAM LEAD

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



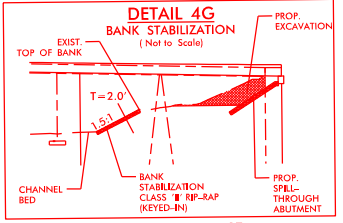
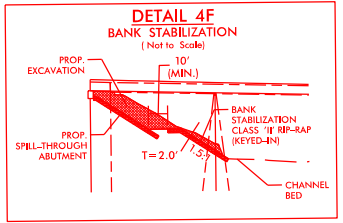
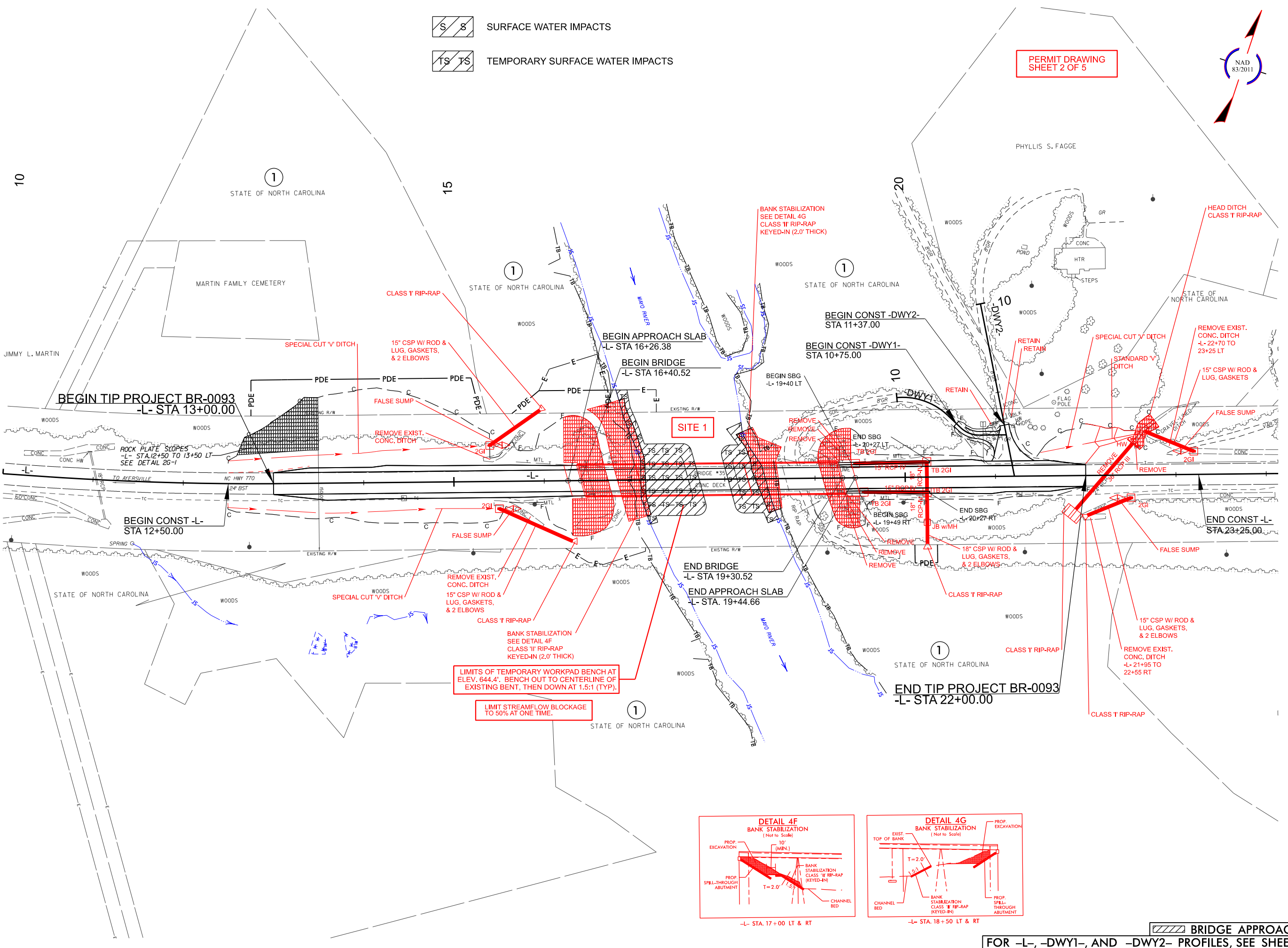
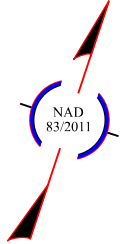


SURFACE WATER IMPACTS



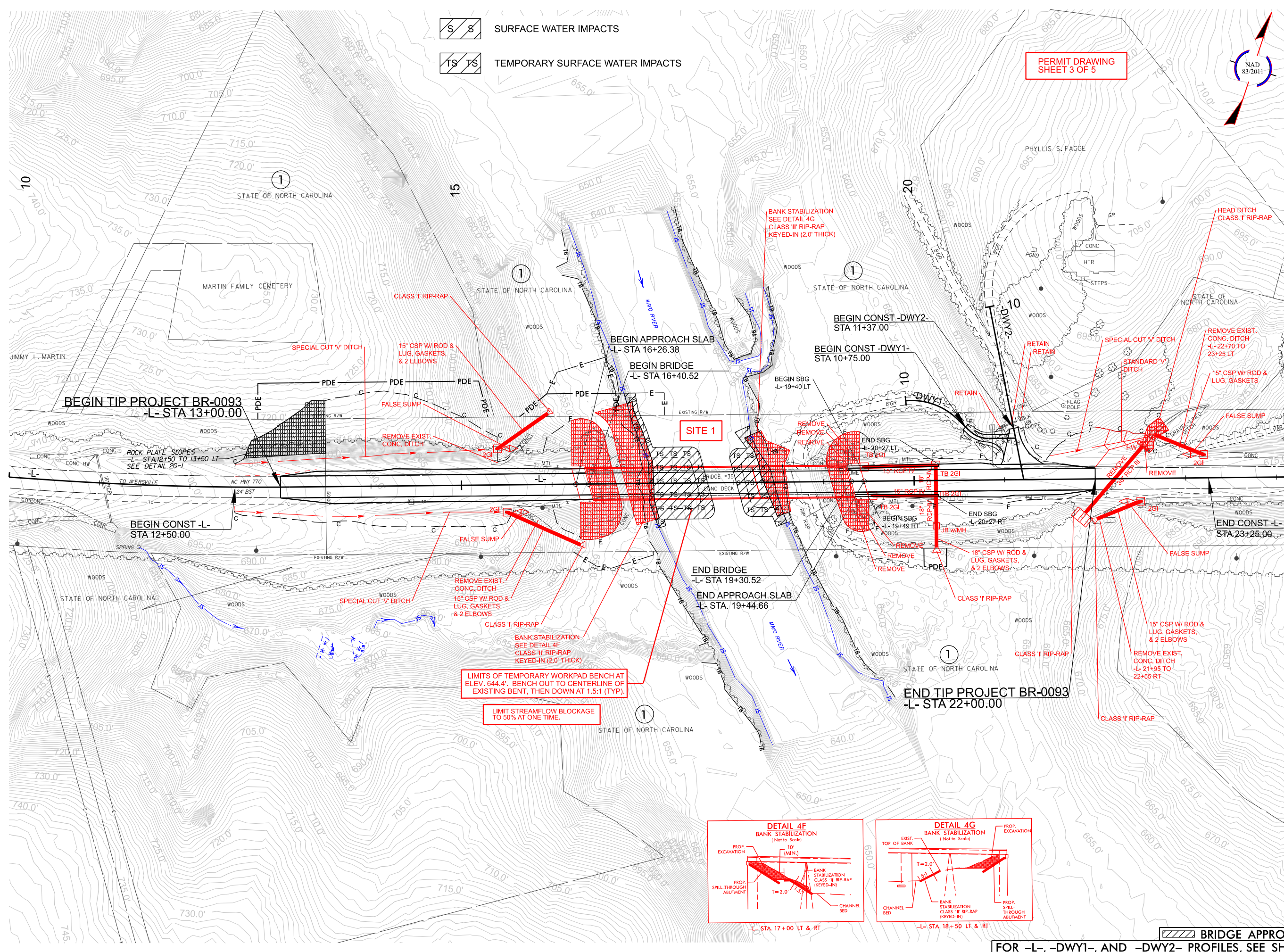
TEMPORARY SURFACE WATER IMPACTS


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SHEET 2 OF 5



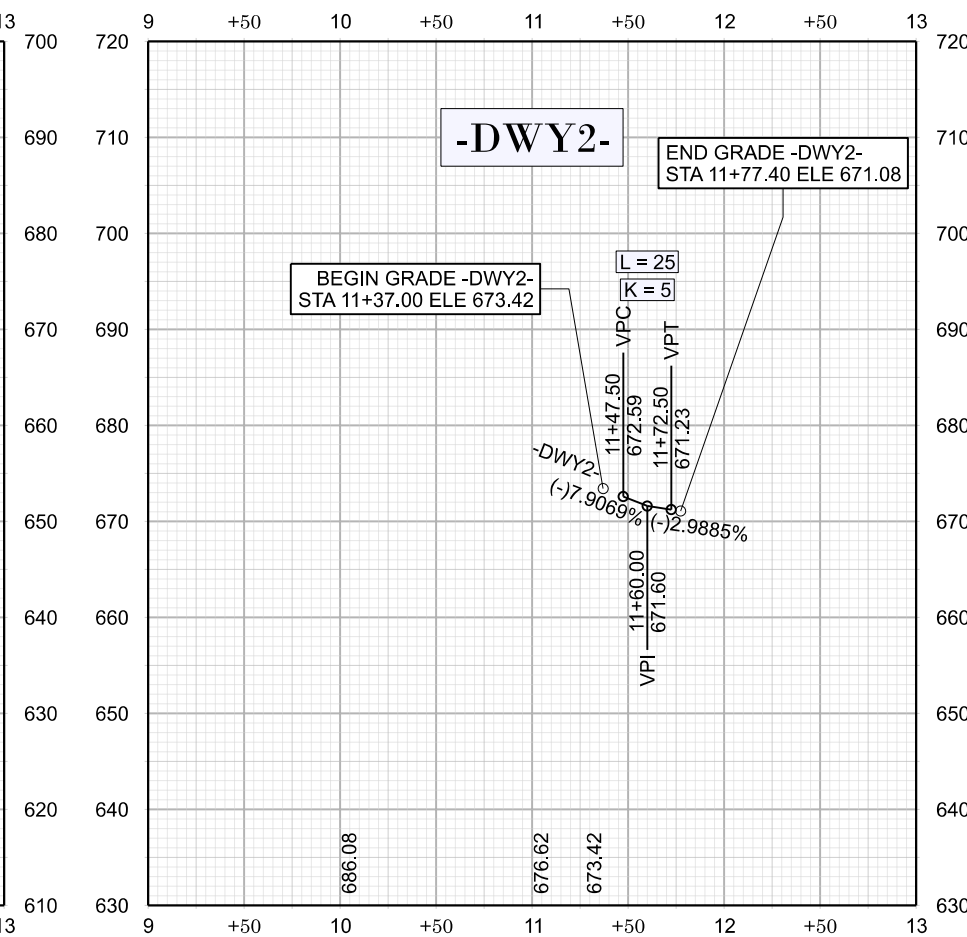
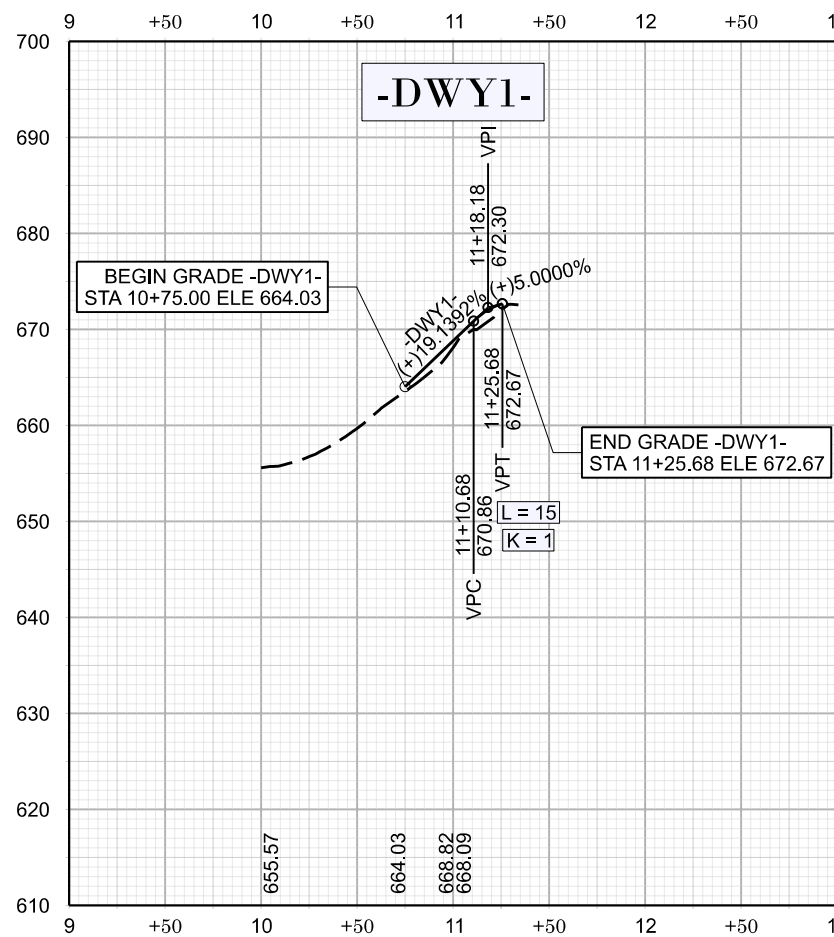
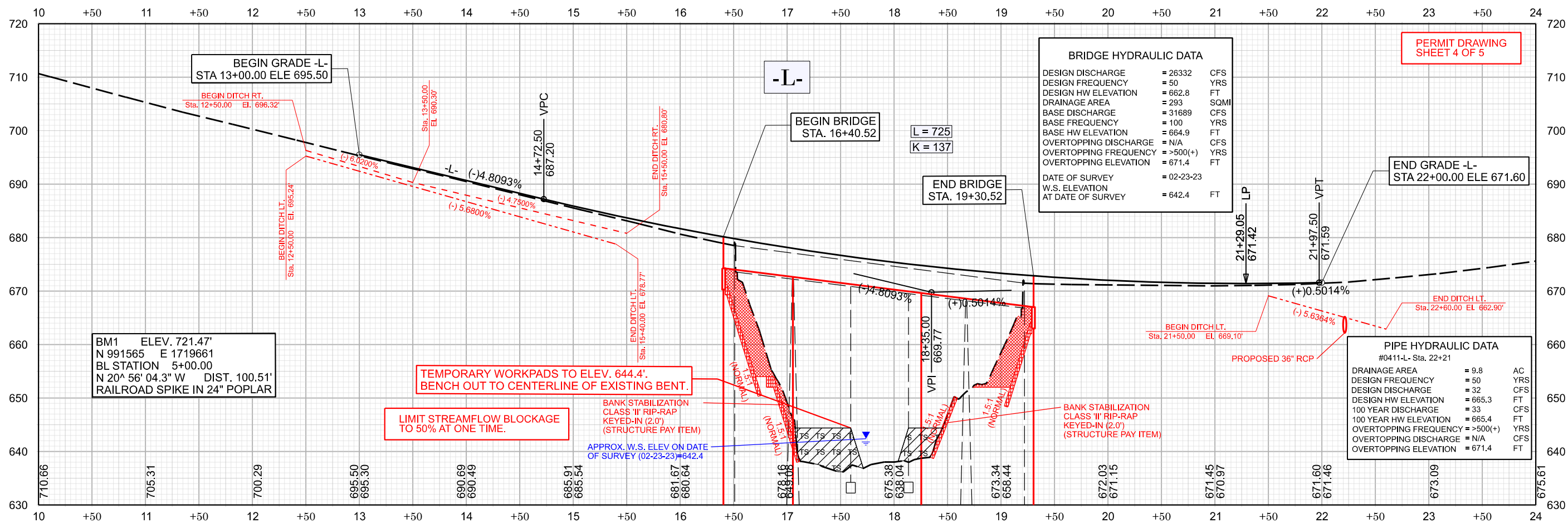
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FOR -L-, -DWY1-, AND -DWY2- PROFILES, SEE SHEET NO. 5



 BRIDGE APPROACH SLAB

FOR -L-, -DWY1-, AND -DWY2- PROFILES, SEE SHEET NO. 5



Protected Species/ Section 7

Aquatic Species Survey Report

Replace Bridge 780035
On NC 770 over the Mayo River
Rockingham County, North Carolina
TIP: BR-0093
WBS # 67093.1.1

Prepared For:



North Carolina Department of Transportation
Raleigh, North Carolina

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February 14, 2023

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Appendix A Figures:

Figure 1: Project Vicinity and Survey Location

Figure 2: NCNHP Element Occurrences

Figure 3: NPDES Dischargers and 303(d) Listed Streams

Appendix B: Qualifications of Contributors

1.0 Introduction

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge No. 780035 on NC 770 in Rockingham County, North Carolina (Appendix A, Figure 1). The bridge crosses the Mayo River, which is part of the Roanoke River Basin. The federally Endangered Roanoke Logperch (*Percina rex*) and James Spiny mussel (*Parvaspina collina*) are protected under the Endangered Species Act (ESA) and are listed by the United States Fish and Wildlife Service (USFWS) as potentially occurring in streams in Rockingham County. Furthermore, the USFWS Information for Planning and Consultation (IPaC) tool, accessed 11/20/22, lists these species as potentially occurring within the proposed study area.

A review of the North Carolina Natural Heritage Program (NCNHP) data explorer records, last updated October 4, 2022, indicates current element occurrences (EO) exist for James Spiny mussel and Roanoke Logperch (Figure 2) in the project vicinity. Table 1 below lists the closest EO to the study area for each species and provides information about each occurrence.

Table 1. NCNHP EO Data

| | James Spiny mussel | Roanoke Logperch |
|---------------------------|--------------------|-----------------------|
| EO ID | 17385 | 26357 |
| EO Distance to Study Area | In study area | 6.25 River Miles (RM) |
| Direction from Study Area | n/a | Downstream |
| First Observation | 8/23/2001 | 7/29/2008 |
| Last Observation | 9/15/2016 | 10/16/2019 |
| EO Location | Mayo River | Mayo River |

As part of the federal permitting process that requires an evaluation of potential project-related impacts to federally protected species, Dewberry Engineers Inc. (Dewberry) was contracted by NCDOT to conduct the freshwater fish and mussel surveys targeting James Spiny mussel and Roanoke Logperch.

2.0 Waters Impacted

The Mayo River is located in the Roanoke River Basin, in the Upper Dan River sub-basin (HUC # 03010103). The Mayo River flows approximately 9.6 River Miles (RM) downstream of the study area before emptying into the Dan River. There are two dams located between the study area and the closest EO for Roanoke Logperch. Both dams are historic textile mill dams that block upstream migration of Roanoke Logperch and were constructed at the beginning of the 20th century. The dams are about 2 miles apart from each other and are located outside of the town of Mayodan, approximately 4.5 and 6.5 RM downstream of the study area.

2.1 NPDES Dischargers

There are two dischargers permitted through the North Carolina Department of Environmental Quality (NCDEQ) located within a five-mile buffer of the study area (Figure 3). Mayodan Water Treatment Plant (WTP) (permit # NC0046302) is classified as a minor discharger that is located approximately 6.25 RM downstream of the study area and discharges into the Mayo River. And Mayodan Wastewater

Treatment Plant (WWTP) (permit # NC0021873) is classified as a major discharger that is located approximately 8 RM downstream of the study area and discharges into the Mayo River.

2.2 303(d) Classification

There are no streams within a five-mile buffer of the study area that are listed on the North Carolina Division of Water Resources (NCDWR) 2022 Final 303(d) list of impaired streams (Figure 3).

3.0 Target Species

3.1 James Spiny mussel (*Parvaspina collina*)

3.1.1 Description

The James Spiny mussel (*Parvaspina collina*) is a small freshwater mussel that rarely exceeds a length of 75 mm. Adults have a dark brown shell with prominent growth rings and occasionally, short spines on each valve (USFWS 1990). Young mussels have a shiny yellow shell with or without one to three spines. Small bumps or projections may indicate former spines on older individuals. The ventral posterior side of the shell exhibits “wrinkles” close to the hinge line (Kendig 2014).

3.1.2 Distribution and Habitat Requirements

Prior to its decline, the James Spiny mussel apparently lived throughout the James River above Richmond, in the Rivanna River, and in ecologically suitable areas in all the major upstream tributaries (Clarke and Neves 1984). Today the species is found in the upper James and Dan River basins. The species has declined rapidly during the past two decades and now exists only in small, headwater tributaries of the upper James River Basin in Virginia and West Virginia. In 2000, it was discovered in the Dan River Basin in North Carolina and Virginia (USFWS 2017). It is known to inhabit the Dan and Mayo rivers in the Roanoke River Basin in the Piedmont of North Carolina (Kendig 2014).

Suitable habitat for the James Spiny mussel includes free-flowing streams with slow to moderate flow regimes (USFWS 1990). The James Spiny mussel can be found in coarse sand, gravel and cobble mixed with small amounts of silt (Kendig 2014).

3.1.3 Threats to Species

As with all aquatic species, there are a multitude of natural and anthropogenic factors that threaten the long-term viability of the Atlantic Pigtoe. Invasive species such as the Asian Clam (*Corbicula fluminea*), the Flathead Catfish (*Pylodictis olivaris*), and Hydrilla (*Hydrilla verticillata*) can create competitive pressures on food resources and habitat availability. These species can decrease oxygen availability, cause ammonia spikes, alter benthic substrates, impact host fish communities, reduce stream flow, and increase sediment buildup (Belanger et al. 1991, Scheller 1997, NCANSMPC 2015, NCWRC 2015). Extinction and decline of North American unionid bivalves can be traced to impoundment and inundation of riffle habitat throughout the United States. The loss of obligate hosts, coupled with increased siltation, and various types of industrial and domestic pollution have resulted in the rapid decline of the unionid bivalve fauna in North America (Bogan 1993, NCWRC 2015). Dams, both manmade and natural (created by American Beavers, *Castor canadensis*), are a barrier to dispersal of

host fish and attached glochidia. Contaminants and water pollution are a significant threat to all aquatic species, especially mussels. Point source discharges from municipal wastewater that contains monochloramine and unionized ammonia compounds are acutely toxic to freshwater mussels and may be responsible for glochidial mortality that results in local extirpation of mussels (Goudreau et al. 1993, Gangloff et al. 2009, NCWRC 2015). Impervious areas in urbanized watersheds contribute to high water levels, even during short rainfall events, which can result in flash flooding. These high or flashy flow events contribute to increased sediment loads, turbidity throughout the water column, and stream bed movements that stress mussel populations (Gangloff et al. 2009, NCWRC 2015). Climate change, mining, hydraulic fracturing, natural gas pipelines, and other energy developments will bring additional stressors that need to be evaluated for mussels.

3.2 Roanoke Logperch (*Percina rex*)

3.2.1 Description

The Roanoke Logperch is a large darter, growing up to approximately 165 millimeter (mm) total length, with 8-11 vertical lateral blotches. It has dark green “work-like” markings interspersed between dorsal saddles, speckled fins with the first dorsal fin having an orange band, and a bulbous snout. The first dorsal fin has a narrow black margin, a broad yellowish to red-orange band, and a broad black base. While the second dorsal, caudal, and pectoral fins have black spots with yellowish wash (USFWS 1992).

3.2.2 Distribution and Habitat Requirements

This species is known to exist from portions of the Chowan and Roanoke River basins within the ridge and valley, Piedmont, and upper Coastal Plain, including recent collections in North Carolina in the Dan, Mayo, and Smith River watersheds. In North Carolina, the upstream range in the Dan and Mayo rivers is presumably impeded by dams. The original cause of significant population declines of this species is associated with habitat loss due to the impoundments of the Roanoke River Basin in the 1950s and 1960s (USFWS 1992).

The Roanoke Logperch occupies medium to large warm-water streams and rivers of moderate gradient with relatively silt free substrate. Habitat use varies with age, spawning condition, and seasonal temperature (Burkhead 1983). Males are associated with shallow riffles during the reproductive period, whereas females are common in deep runs over gravel and small cobble, which are the observed spawning areas (Burkhead 1983). Young and juveniles usually occupy slow runs and pools with clean sand bottoms. Winter habitat of all individuals is assumed to be under boulders in deep pools (USFWS 1992).

3.2.3 Threats to Species

Several ecological characteristics of the Roanoke Logperch make it particularly vulnerable to human impacts and alterations of stream environments. Some of these characteristics include its limited geographic distribution, need for loosely embedded gravel which is vulnerable to silt deposition, low population density, and its necessity for multiple habitats over its ontogeny (USFWS 2007). Some of the known and potential threats to Roanoke Logperch populations include large dams and reservoirs, siltation and habitat alteration and degradation from watershed urbanization, widespread sedimentation and siltation from agriculture and forestry, channelization projects, past and proposed

road building, toxic chemical spills and fish kills, loss of riparian vegetation and woody debris, small barriers to Logperch movement, and water withdrawals (USFWS 2007).

4.0 Fish Surveys

A freshwater fish survey was conducted in association with this project by Dewberry biologists Tom Fox (NCWRC Permit # 22-ES00543), John Merritt, Brett Feulner, and Anne Burroughs on September 22, 2022.

4.1 Stream Conditions

The Mayo River is a medium sized Piedmont river with an average channel width of 30 meters (m). The riverbanks were approximately 2.5 m high and were mostly stable with some undercutting. There was a wide riparian buffer zone present in the form of a naturally wooded landscape. The water was clear and shallow with depth ranging from 0.3 m to 1 m in deeper pools. Overall the habitat quality for Roanoke Logperch was low. The survey reach was dominated by transient, unconsolidated sand and silt with some gravel as the subdominant substrate. The thalweg and middle of channel was poor shifty sand habitat. The riffle near the bridge provided some stable gravel/sand mixture and some areas of deeper runs which were targeted with a seine. There was a low amount of woody debris, some sandbars present, and no American Beaver activity was observed.

4.2 Methodology

A survey of the Mayo River began 400 m downstream of the bridge crossing and ended 100 m upstream of the bridge. The stream was sampled using an Aquashock AP1 electric backpack shocker unit with dip nets and a seine. A combination of backpack electrofishing and seining techniques were used to sample all habitat types and flow regimes targeting Roanoke Logperch. A minimum of five sampling passes were made for each type of habitat encountered. Backpack electrofishing was used along each stream bank, with active seining used in deep pools and slow runs, and backpack electrofishing into a block seine used for shallow riffles. All individual fish were collected, temporarily held in a five-gallon bucket, identified, and immediately returned to the stream.

4.3 Fish Survey Results

A total of 976 seconds of electrofishing time was spent sampling within the survey reach, with 15 species of fish identified and a total of 303 individuals collected (Table 2). No Roanoke Logperch were collected during the survey.

Table 2. Fish Species Collected in the Mayo River

| Scientific Name | Common Name | No. Individuals | CPUE (#/hr) |
|------------------------------------|----------------------|-----------------|-------------|
| <i>Ameiurus brunneus</i> | Snail Bullhead | 1 | 3.7 |
| <i>Cyprinella analostana</i> | Satinfin Shiner | 15 | 55.6 |
| <i>Etheostoma podostemone</i> | Riverweed Darter | 1 | 3.7 |
| <i>Etheostoma vitreum</i> | Glassy Darter | 38 | 140.7 |
| <i>Hypentelium nigricans</i> | Northern Hogsucker | 3 | 11.1 |
| <i>Lepomis auritus</i> | Redbreast Sunfish | 6 | 22.2 |
| <i>Luxilus albeolus</i> | White Shiner | 17 | 63.0 |
| <i>Lythrurus ardens</i> | Rosefin Shiner | 143 | 529.6 |
| <i>Micropterus salmoides</i> | Largemouth Bass | 1 | 3.7 |
| <i>Moxostoma cervinum</i> | Blacktips Jumpfrocks | 2 | 7.4 |
| <i>Nocomis leptcephalus</i> | Bluehead Chub | 1 | 3.7 |
| <i>Notropis procne</i> | Swallowtail Shiner | 63 | 233.3 |
| <i>Noturus insignis</i> | Margined Madtom | 3 | 11.1 |
| <i>Percina nevisense</i> | Chainback Darter | 3 | 11.1 |
| <i>Percina roanoka</i> | Roanoke Darter | 6 | 22.2 |
| | | | |
| Total Number of Individuals | | 303 | |
| Total Number of Species | | 15 | |
| Electrofishing Seconds | | 976 | |

5.0 Freshwater Mussel Surveys

A freshwater mussel survey was conducted in association with this project by Dewberry biologists Tom Fox (NCWRC Permit # 22-ES00543), John Merritt, Brett Feulner and Anne Burroughs on September 21, 2022.

5.1 Stream Conditions

Surveys were conducted on consecutive days, so stream conditions were the same as described in section 4.1 of this report. The overall habitat quality for freshwater mussels was low. The survey reach was dominated by transient, unconsolidated sand and silt with some gravel as the subdominant substrate. The thalweg and middle of channel was poor shifty sand habitat with no mussels found. The riffle near the bridge provided some stable gravel/sand mixture however no mussels were found here. All mussels were found along the left descending bank in the compact clay substrate. There was a low amount of woody debris, some sandbars present, and no American Beaver activity was observed.

5.2 Methodology

A freshwater mussel survey of the Mayo River began 400 m downstream of the study area and ended 100 m upstream of the study area. Biologists spread out into survey lanes and worked from downstream to upstream, conducting a visual survey of the stream with snorkel and mask, as well as tactile search methods. All habitat types were searched, however more time and effort were spent concentrating on the stable habitats preferred by James Spiny mussel. All species of freshwater mollusks were identified to species and recorded.

5.3 Mussel Survey Results

A total of 16 person hours were spent surveying this reach using snorkel and mask for visual and tactile search methods. The invasive Asian clam and two species of freshwater mussels, totaling 32 live individuals were found (Table 3) but no James Spiny mussels were collected during the survey.

Table 3. Mussel species collected in the Mayo River

| Scientific Name | Common Name | No. Live | No. Shells | CPUE (#/hr) |
|------------------------------------|------------------|----------|------------|-------------|
| <i>Elliptio complanata</i> | Eastern Elliptio | 31 | 6 | 1.9 |
| <i>Villosa constricta</i> | Notched Rainbow | 1 | 0 | 0.06 |
| <i>Corbicula fluminea</i> | Asian Clam | abundant | | |
| | | | | |
| Total Number of Individuals | | 32 | | |
| Total Number of Species | | 2 | | |
| Search Time (person hours) | | 16 | | |

6.0 Discussion/Conclusions

The current James Spiny mussel EO starts at the NC/VA boarder, extends through the study area and continues for another 6.25 RM downstream of the study area, ending at the Washington Mills Dam. After a closer examination of this EO, it is apparent that this EO is past due to be updated. NCNHP EOs change their status from 'current' to 'historical' when an animal observation is over 20 years old (Judy Ratcliffe personal comm). The NCWRC PAWS Aquatics database (updated November 2022) shows records of James Spiny mussel records throughout this EO, however the closest 'current' record is located approximately 6.0 RM upstream of the study area and was found on 7/6/2022. The current EO extends approximately 11.5 RM downstream of the 2022 record, however all records located in this reach should be considered 'historical' as the most recent record is from 9/5/2002. The next time this EO gets updated I believe it will shrink in size and not incorporate the study area. No James Spiny mussels were found during the survey effort, however small pockets of potential habitat do exist, and other mussel species were found, thus, while unlikely, the presence of James Spiny mussel cannot be altogether ruled out. However, given the survey results, overall poor habitat quality, and age of the surrounding James Spiny mussel records this project May Affect but is not Likely to Adversely Affect the James Spiny mussel.

Recommended Biological Conclusion for James Spiny mussel: May Affect, Not Likely to Adversely Affect

Habitat in the survey area for Roanoke Logperch was poor quality. There was only a small portion near the bridge that had riffle habitat with gravel substrate. The majority of the survey reach was dominated by unconsolidated, transient sand with a layer of silt on top. The closest current EO is located 6.25 RM downstream of the study area, however there are two dams located between the EO and study area. The Avalon Dam and the Washington Mills Dam are both located near the town of Mayodan and block upstream migration of the Roanoke Logperch. The EO begins on the downstream side of the Washington Mills Dam and there are no records of Roanoke Logperch existing upstream of the dam. Given the poor habitat and existence of dams that block any potential migratory movement this project May Affect but is not likely to Adversely Affect the Roanoke Logperch.

Recommended Biological Conclusion for Roanoke Logperch: May Affect, Not likely to Adversely Affect

The USFWS is the regulating authority for Section 7 Biological Conclusions and as such, it is recommended that they be consulted regarding their concurrence with the finding of this document. The federal action agency, or its nonfederal designee (NCDOT) must render a biological conclusion for the species.



7.0 Literature Cited

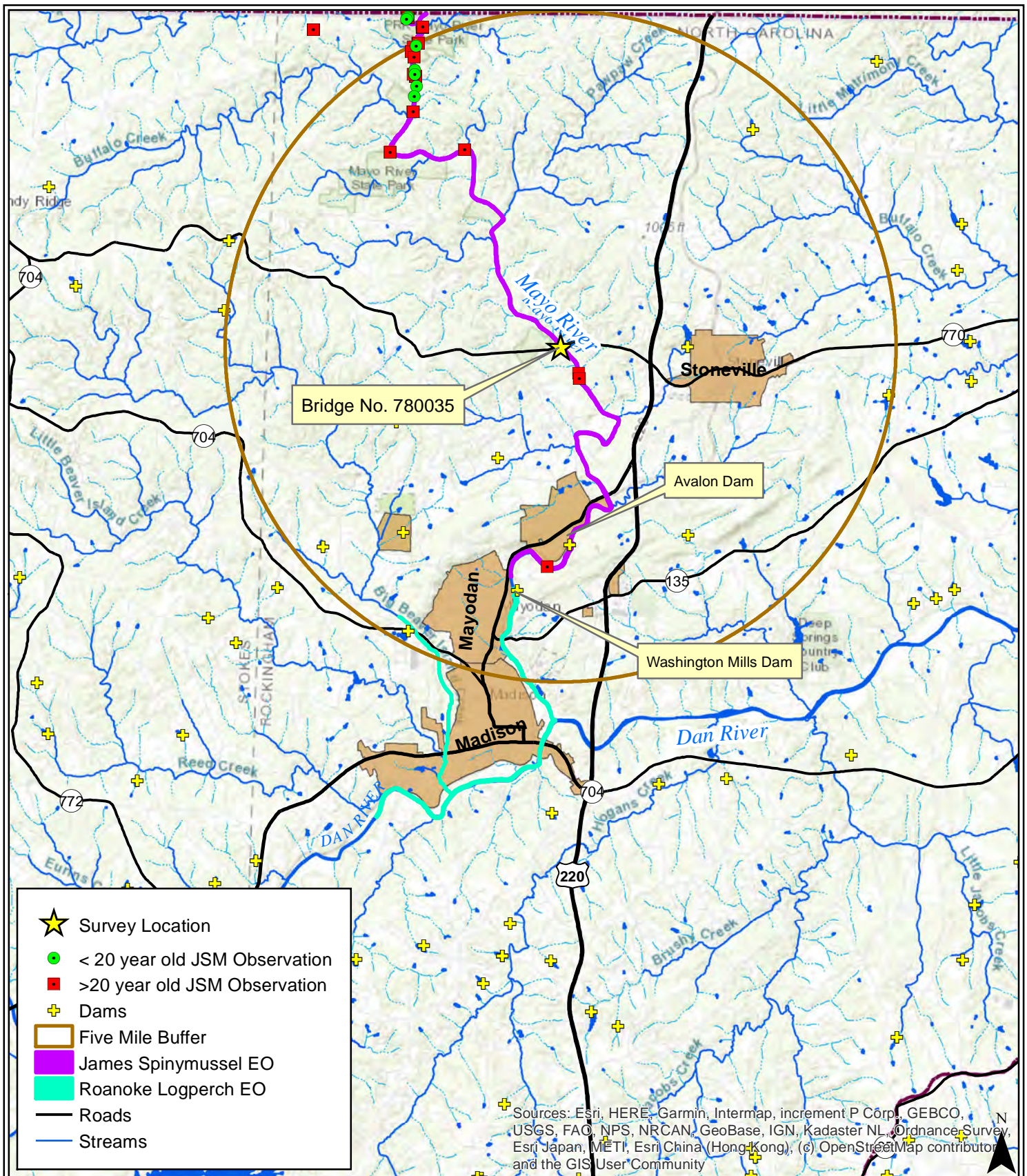
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Appendix A

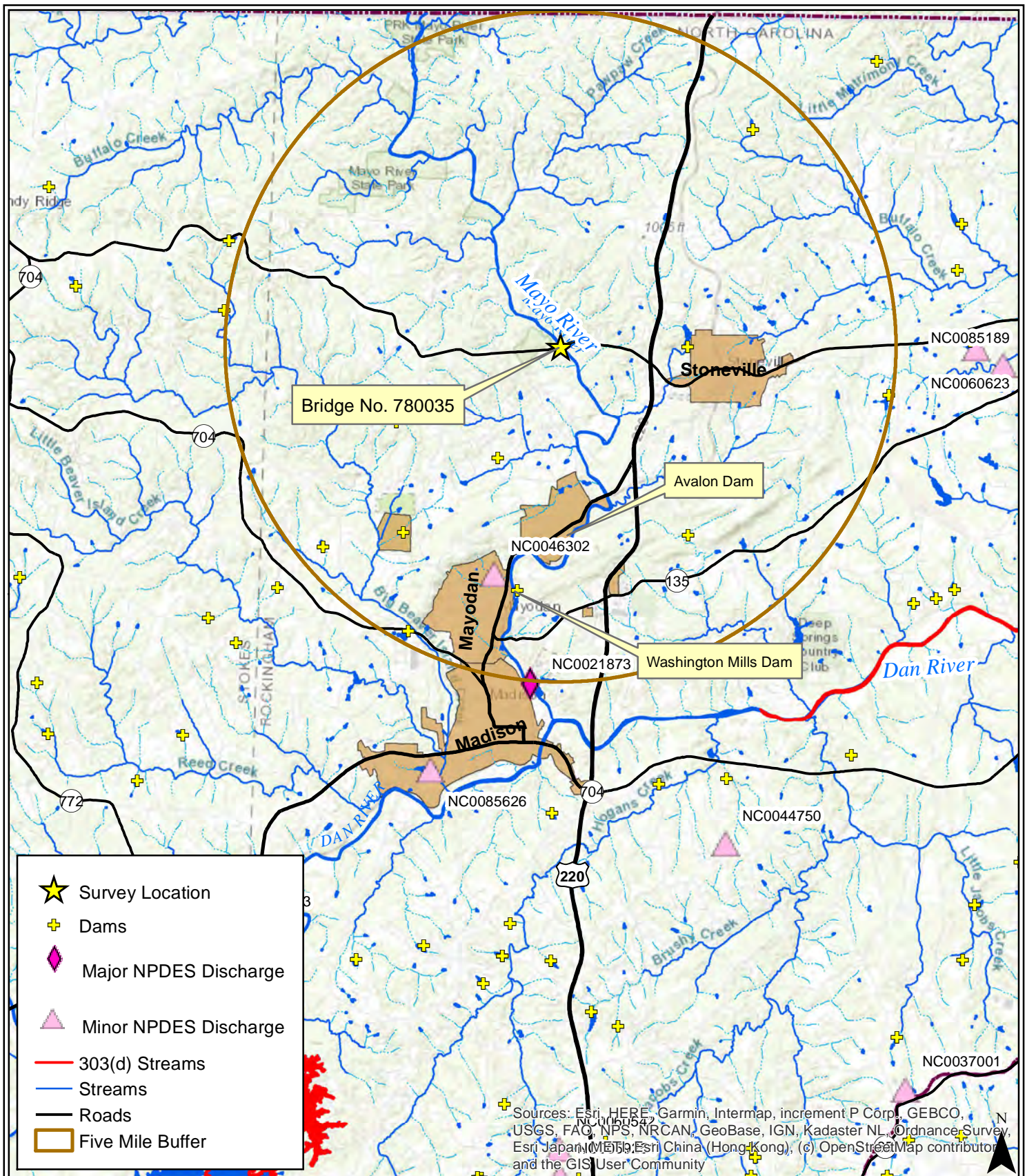
Figures





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| <p>Prepared By:</p>  | <p>Prepared For:</p>  | <p>Aquatic Species Surveys</p> <p>Replace Bridge No. 780035 Over the Mayo River WBS No. 67093.1.1 Vicinity Map and Survey Area</p> <p>Rockingham County, North Carolina</p> | <p>Date: February 14, 2023</p> <p>Scale: 0 35 70 Meters</p> <p>Job No: BR-0093</p> <p>Drawn By: TRF Checked By: JSM</p> | <p>Figure</p> <p>1</p> |
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| Prepared By: | Prepared For: | Aquatic Species Surveys Replace Bridge No. 780035 Over the Mayo River WBS No. 67093.1.1 NCNHP Element Occurrences Rockingham County, North Carolina | Date: February 14, 2023 Scale: 0 0.5 1 Miles Job No: BR-0093 Drawn By: TRF Checked By: JSM | Figure <h1>2</h1> |
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| Prepared By:  | Prepared For:  | Aquatic Species Surveys Replace Bridge No. 780035 Over the Mayo River WBS No. 67093.1.1 NPDES Dischargers and 303(d) Listed Streams Rockingham County, North Carolina | Date: February 14, 2023 Scale: 0 0.5 1 Miles Job No: BR-0093 Drawn By: TRF Checked By: JSM | Figure <div style="font-size: 48pt; text-align: center;">3</div> |
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Appendix B

Qualifications of Contributors

Principal Investigator: Tom Fox
Education: B.S. Biological Sciences, George Washington University, 2006
M.S. Fisheries, Wildlife, and Conservation Biology, NC State University, 2014
Experience: Senior Environmental Scientist, Dewberry Engineers Inc., 2021-present
Senior Biologist, NV5, 2018-2021
Aquatic Wildlife Diversity Biologist, NCWRC, 2014-2018
Responsibilities: T/E species survey and identification lead, document preparation

Investigator: John Merritt
Education: B.S. Biological Sciences and Environmental Science, Trine University, 1992
Experience: Senior Environmental Scientist, Dewberry Engineers Inc., 2020-present
Environmental Project Manager, NV5, 2018-2020
Environmental Scientist, RK&K, 2016-2018
Environmental Program Consultant, NCDOT, 2006-2016
Responsibilities: T/E species surveys, document QA/QC

Investigator: Anne Burroughs
Education: B.S. Biological Sciences, NC State University, 1992
Experience: Senior Environmental Scientists, Dewberry Engineers Inc., 2014-present
Environmental Scientist, URS Corporation, 2011-2014
Environmental Program Consultant, NCDOT, 2003-2011
Responsibilities: T/E species surveys

Investigator: Brett Feulner
Education: B.S. Forest Management, NC State University, 2001
G.C. Geographic Information Systems, NC State University, 2014
Experience: Senior Environmental Scientist, Dewberry Engineers Inc., 2018-present
Environmental Program Consultant, NCDOT, 2003-2018
Responsibilities: T/E species surveys, document QA/QC

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Rockingham County, North Carolina



Local office

Raleigh Ecological Services Field Office

☎ (919) 856-4520

📠 (919) 856-4556

MAILING ADDRESS

Post Office Box 33726

Raleigh, NC 27636-3726

PHYSICAL ADDRESS

551 Pylon Drive, Suite F

Raleigh, NC 27606-1487

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an *official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.*

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

| NAME | STATUS |
|---|---------------------|
| Tricolored Bat <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

Fishes

| NAME | STATUS |
|--|------------|
| Roanoke Logperch <i>Percina rex</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1134 | Endangered |

Clams

| NAME | STATUS |
|---|---------------------|
| Green Floater <i>Lasmigona subviridis</i> Wherever found There is proposed critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/7541 | Proposed Threatened |

James Spiny mussel *Parvaspina collina*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2212>

Insects

| NAME | STATUS |
|------|--------|
|------|--------|

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

| NAME | TYPE |
|------|------|
|------|------|

Green Floater *Lasmigona subviridis*

Proposed

<https://ecos.fws.gov/ecp/species/7541#crithab>

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|------|-----------------|
|------|-----------------|

Bald Eagle *Haliaeetus leucocephalus*

Breeds Sep 1 to Jul 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

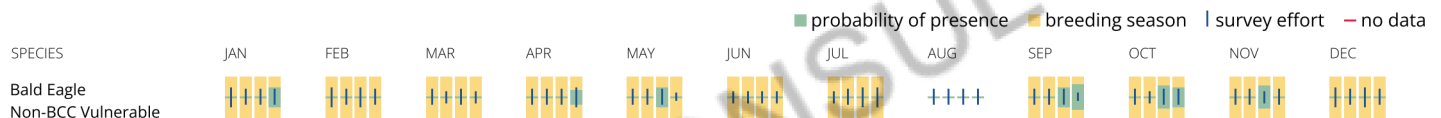
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|--|-------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Jul 31 |
| Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1A](#)

RIVERINE

[R2UBH](#)

[R4SBC](#)

[R5UBH](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Archaeology

18-09-0066



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT 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: **BR-0093** County: **Rockingham**
 WBS No: **67093.1.1** Document: **MCC**
 F.A. No: **na** Funding: ☒ State ☐ Federal

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

Project Description:

The North Carolina Department of Transportation (NCDOT) intends to replace Bridge No. 35 on NC 770 over the Mayo River. No preliminary designs were available at the time of the cultural resources review, but a study area was submitted with the request. This study area generally consists of a corridor roughly 2420 feet long and 375 feet wide. For the purposes of the archaeological investigations, this study area will be considered to be the area of potential effects (APE). Thus, the APE for the proposed project is estimated to encompass 22.3 acres (slightly over 9.02 hectares).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

- ☒ There are no National Register listed or eligible ARCHAEOLOGICAL SITES present within the project's area of potential effects. (Attach any notes or documents as needed)
- ☐ No subsurface archaeological investigations were required for this project.
- ☐ Subsurface investigations did not reveal the presence of any archaeological resources.
- ☒ Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- ☒ All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☒ Photos

Signed:

August 5, 2019

NCDOT ARCHAEOLOGIST

Date

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

On October 11, 2018, NCDOT archaeologist, Shane Petersen, recommended further archaeological investigation of the proposed APE based on topographic and soil mapping that suggested the possibility for microenvironmental conditions suitable for the preservation of archaeological deposits in some portions of the project area. Additionally, it was known that a cemetery was documented on the USGS mapping along the northern edge of the APE that would require documentation and assessment. An archaeological reconnaissance survey was recommended that would visually inspect all portions of the APE to determine which areas might retain a higher probability for archaeological site location. Those areas were then to be subjected to intensive subsurface investigation.

Prior to initiating the archaeological field investigations, researchers with Johnson, Mirmiran, and Thompson, Inc. (JMT), conducted background archaeological research at the North Carolina Office of State Archaeology in Raleigh (OSA). According to the records at OSA one archaeological site, 31RK193, a prehistoric site that was not considered to be eligible for inclusion on the National Register of Historic Places (NRHP), was located within a 1-mile radius of the proposed project.

The archaeological Survey for Bridge No. 35 in Rockingham County was undertaken as part of a series of investigations undertaken by archaeologists with JMT from May 24 – June 1, 2019. Shovel tests were excavated at intervals of 30 meters. Areas that exhibited disturbance, severe slope, inundation, or were marked during wetland delineations were not shovel tested. A significant portion of the APEs were not excavated due to steeply sloped landforms, areas of severe erosion and soil deflation, residential development, and low-lying wet areas. All areas not subjected to subsurface testing were visually inspected and pedestrian surveyed.

The following description of the results of the archaeological survey have been adapted from JMT's archaeological report (Minford 2019), which is on file with the Environmental Analysis Unit at NCDOT.

The study area for Bridge No. 35 measures 738m in length and 114m wide along NC 770 over Mayo River. A total of 13 shovel test locations were investigated, of which, one was not excavated, and the rest were negative (Figure 17). Portions of the APE were not shovel tested due predominately to severe slope, a disturbed transmission corridor, or low-lying wet areas. A large portion of the APE contained either severe slope or disturbance from the transmission line corridor (approximately 9.5 acres), contained residences (approximately 3.6 acres), or was low lying and wet (approximately 2.5 acres) (Figure 18). One cemetery was identified (31RK271) on the edge of the northwestern quadrant. Shovel tests throughout the APE were shallow, with either eroding bedrock or subsoil just beneath the surface. A typical shovel test profile (Figure 19) consisted of the following:

Stratum I (0-20cm): 10YR 4/3 brown silty loam
Stratum II (20-): Eroding bedrock

31RK271

| | |
|-------------------------|--|
| Field Site Number | FS-4 |
| UTM East: | 593838.5 |
| UTM North: | 4036721.8 |
| Elevation: | 700 feet amsl |
| USGS Quadrangle (7.5'): | Mayodan |
| Component: | Historic |
| Site Type: | Late Nineteenth to Present Century Cemetery |
| Soil(s): | Fairview-Poplar Forest complex, 8 – 15 percent slopes, moderately eroded |

| | |
|----------------------|--------------------------------|
| Site Size: | 47 meters E/W by 35 meters N/S |
| NRHP Recommendation: | Not eligible |

Site 31RK271 a historic cemetery referred to in this report as the Joyce-Martin Family Cemetery, dates from the late nineteenth century and is still in use today (Figures 20 and 21). Its boundary was defined by grave markers and depressions. The cemetery is primarily located outside the APE on a ridgetop; however, the southern edge of its boundary overlaps with the APE's northern boundary. No shovel tests were excavated within the cemetery boundary or within 30 meters of the boundary. The goal of the survey for this portion of the APE was to make a general assessment of the cemetery and complete cemetery site forms.

The cemetery contained a number of graves that were marked with headstones. The newer portion of the cemetery, based on headstone dates, was well maintained, while the older area of the cemetery was covered in ivy and tree debris. This area contained the older grave markers, as well as a number of depressions without noticeable markers. In total, there appeared to be approximately 30 graves (marked n=15, unmarked n=15). The cemetery included members of the Joyce and Martin Families, with observed date ranges from 1877 through 2010. Census research for the identified names indicated that those interred in the cemetery are white. Members of the Joyce Family buried in the Joyce-Martin Family Cemetery include Mary D., Joseph G., and John H. Joyce, who were the children of P.H. and Harriet Joyce. According to the 1880 U.S. Census, P.H. (Pleasant H.) Joyce was a 31-year-old farmer living in Madison, North Carolina with his wife and children. Members of the Martin Family interred in the Joyce-Martin Family Cemetery include Pearley C. Martin (1888-1972). According to the 1930 U.S. Census, Pearley was a farmer living in Madison, North Carolina with his wife, Emma Ruth King and their three children.

The boundary for 31RK271 was drawn based on the noticeable grave markers, depressions, and the extent of the ivy-covered area. The cemetery appears to be bound by the landform to the north, east, and south. A 50-foot buffer was also drawn around this boundary to ensure avoidance. Avoidance of the area is recommended during all construction activities, if this is not possible, a more detailed cemetery survey may be required to document all the burials and/or initiate procedures under NC G.S. 65-106 or NC G.S. 70.

Site 31RK271 is a late nineteenth to twentieth century (1870 – present) family cemetery. It is recommended as not eligible for listing on the NRHP under Criteria A, B, C, or D and does not meet Criterion Consideration D. No further work is recommended in regard to the Section 106 assessment of the resource; however, avoidance of the cemetery, including a 50-ft delineation buffer, is recommended. If avoidance is not possible, further consultation will be required to determine if NC G.S. 65-106 or NC G. S. 70, which outlines the process for the documentation and removal of the entire resource shall be followed.

References Cited:

Minford, L. and C. Herrnstadt

2019 *Phase I Archaeological Survey, Proposed Replacement of Bridge Nos. 1, 7, & 61 in Caswell County; and Bridge Nos. 35, 170, 176, 178, & 183 in Rockingham County.* Ms. on file, Environmental Analysis Unit, North Carolina Department of Transportation, Raleigh.



Aerial photograph with 2-foot contours depicting the APE for the proposed replacement of Bridge No. 35 on NC 770 over the Mayo River; note the locations of subsurface tests (yellow dots); archaeological site/cemetery 31RK271 boundary (orange hatched area); and proposed cemetery boundary (blue lines).

"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT"
 form for the Amended Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.



Photograph of interments at 31RK271 facing east (Minford and Herrnstadt 2019: 54).



Photograph of the cemetery at 31RK271 facing southeast (Minford and Herrnstadt 2019: 55).

Historic Architecture and Landscapes

18-09-0066



HISTORIC ARCHITECTURE 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: | BR-0093 | County: | Rockingham |
| WBS No.: | 67093.1.1 | Document Type: | MCC |
| Fed. Aid No: | N/A | Funding: | <input checked="" type="checkbox"/> State <input type="checkbox"/> Federal |
| Federal Permit(s): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Permit Type(s): | USACE |
| Project Description: Replace Bridge No. 35 on NC 770 over Mayo River. | | | |

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on September 20, 2018. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is defined on the following maps and follows the boundary of the Study Area. The area was visually surveyed through aerial imagery, Google Maps Street View, and Tax Parcel information. The structures within the APE consist of mobile homes and manufactured houses. Bridge No. 35 is not eligible for National Register listing. There are no National Register listed or eligible properties and no survey is required. If design plans change, additional review will be required.

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:

HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Rockingham County survey, Rockingham County GIS/Tax information, and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

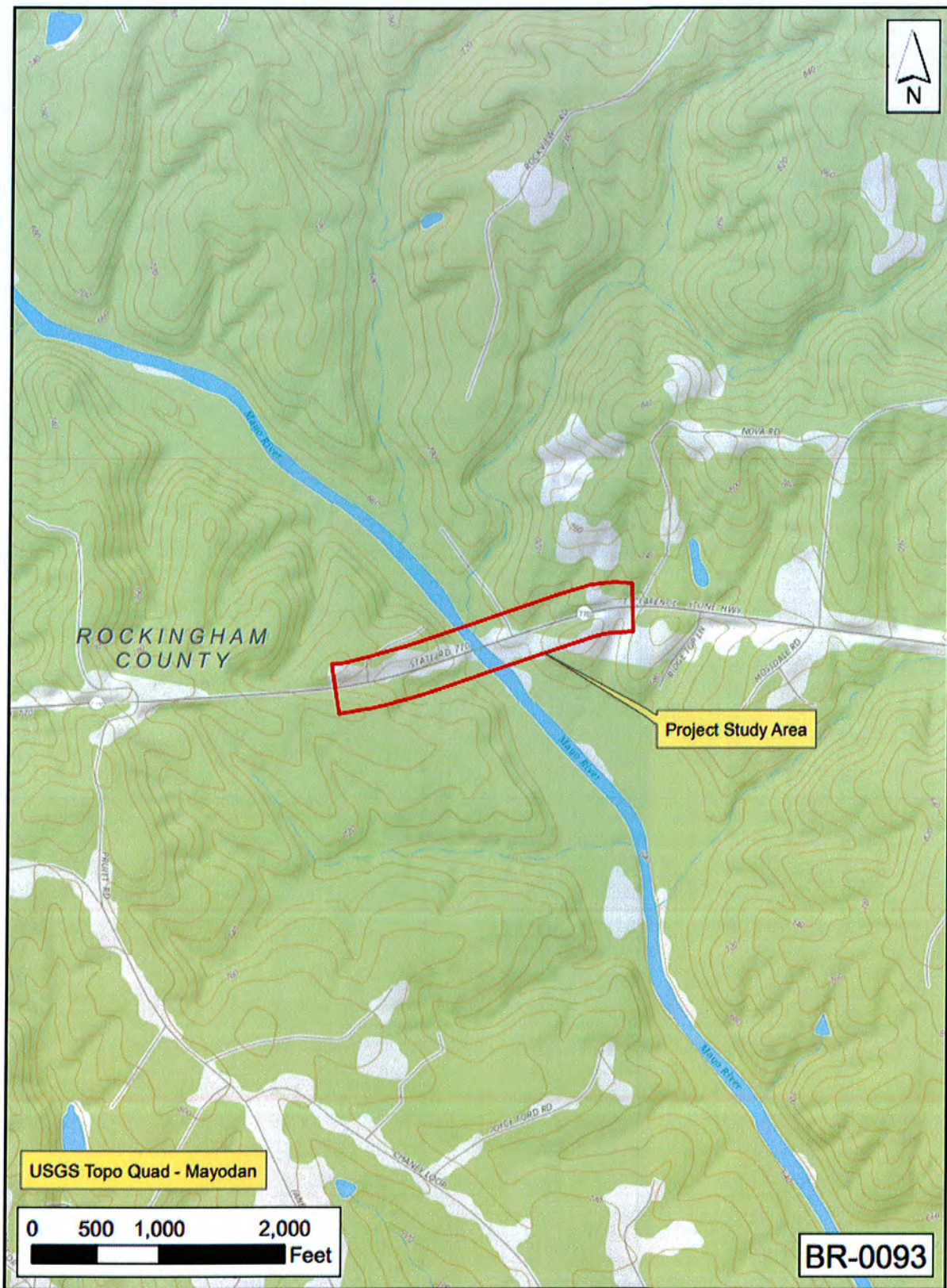
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

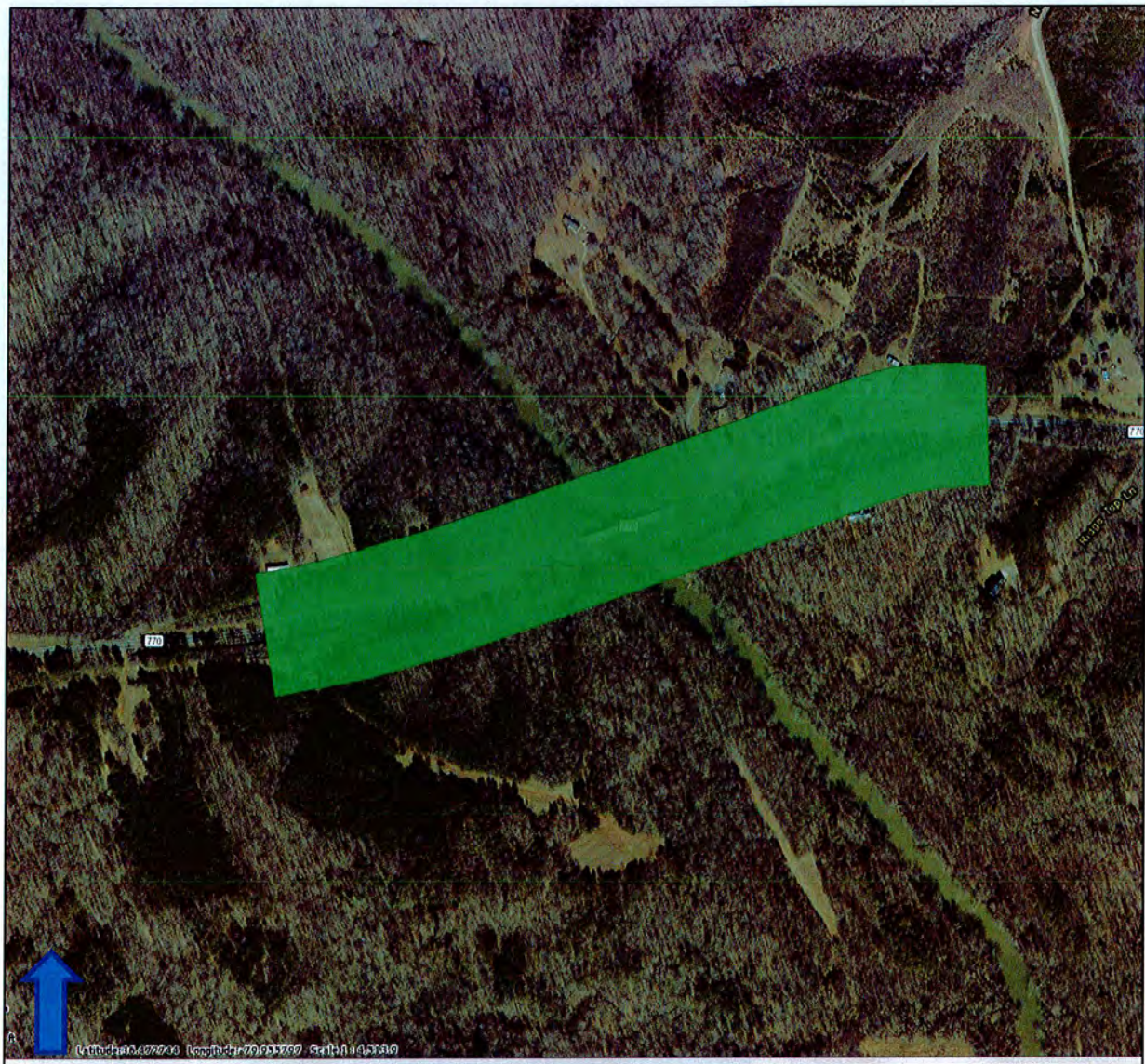
Kate Husel

NCDOT Architectural Historian

9/20/2018

Date



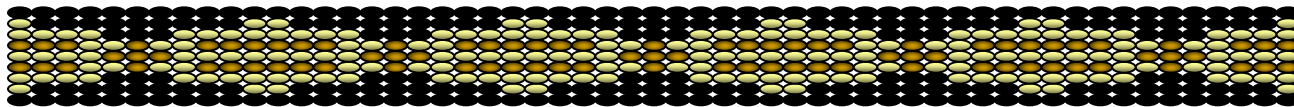


State Historic Preservation Office GIS.

Tribal Coordination

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

Office 803-328-2427
Fax 803-328-5791



February 14, 2022

Attention: Kristy Alford
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699

| | | |
|-------------|--------|---|
| Re. THPO # | TCNS # | Project Description |
| 2022-193-70 | | Replace the following bridges – 780035, 780069, 780170 and 780176 |

Dear Ms. Alford,

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,

Wenonah G. Haire
Tribal Historic Preservation Officer

From: [Kaleigh Pollak](#)
To: [Attaluri, Radha](#); [Wilkerson, Matt T](#)
Cc: [Tribal Office](#); David.E.Bailey2@usace.army.mil
Subject: [External] RE: Tribal Coordination Letter_BR-0093, BR-0094, BR-0095 & BR-0096
Date: Thursday, January 27, 2022 9:15:18 AM
Attachments: [image002.jpg](#)
[image003.png](#)

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Good Morning,

Thank you for contacting us regarding the proposed project.

The Monacan Indian Nation is a federally recognized sovereign tribe, headquartered on Bear Mountain in Amherst County. Citizens of the Nation are descended from Virginia and North Carolina Eastern Siouan cultural and linguistic groups, and our ancestral territory includes Virginia west of the fall line of the rivers, sections of southeastern West Virginia, and portions of northern North Carolina. At this time, the active Monacan consultation areas include:

Virginia: Albemarle, Alleghany, Amherst, Appomattox, Augusta, Bath, Bedford, Bland, Buchanan, Buckingham, Campbell, Carroll, Charlotte, Clarke, Craig, Culpepper, Cumberland, Dickenson, Floyd, Fluvanna, Franklin, Frederick, Giles, Goochland, Grayson, Greene, Halifax, Henry, Highland, Lee, Loudoun, Louisa, Madison, Mecklenburg, Montgomery, Nelson, Orange, Page, Patrick, Pittsylvania, Powhatan, Prince Edward, Pulaski, Rappahannock, Roanoke, Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Tazewell, Warren, Washington, Wise, and Wythe Counties, and all contiguous cities.

West Virginia: Greenbrier, Mercer, Monroe, Pendleton, Pocahontas, and Summers Counties.

North Carolina: Alamance, Caswell, Granville, Orange, Person, Rockingham, Vance, and Warren Counties.

At this time, the Nation does not wish to actively participate in this consultation project, because:

| | |
|---|--|
| | This project is outside our ancestral territory |
| X | The project's impacts are anticipated to be minimal |
| | The project is more closely related to _____, which should be contacted to participate in consultation |
| | The tribal office does not currently have the capacity to participate in this project |
| | Other: |

However, the Nation requests to be contacted if:

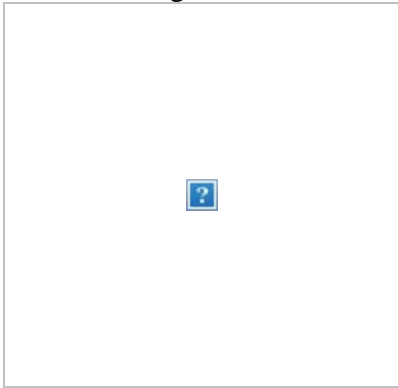
- Sites associated with native history may be impacted by this project;
- Adverse effects associated with this project are identified;
- Human remains are encountered during this project;
- Unanticipated native cultural remains are encountered during this project;
- Other tribes consulting on this project cease consultation; or

The project size or scope becomes larger or more potentially destructive than currently described.

Please do not make any assumptions about future consultation interests based on this decision, as priorities and information may change. We request that you send any future consultation communications in electronic form to Consultation@MonacanNation.com. We appreciate your outreach to the Monacan Indian Nation and look forward to working with you in the future.

Thank you,

Kaleigh Pollak
Program Manager
Monacan Indian Nation
O: (434) 363-4864
C: (434) 473-1029
111 Highview Drive
Madison Heights, VA 24572



NOTICE OF CONFIDENTIALITY

This e-mail message and its attachments (if any) are intended solely for the use of the addressee hereof. In addition, this message and the attachments (if any) may contain information that is confidential, privileged and exempt from disclosure under applicable law. Unless you are the addressee (or authorized to receive for the addressee), you are prohibited from reading, disclosing, reproducing, distributing, disseminating or otherwise using this transmission. Delivery of this message to any person other than the intended recipient is not intended to waive any right or privilege. If you have received this message in error, please promptly notify the sender by reply e-mail and immediately delete this message from your system. Thank you.

From: Tribal Office <TribalOffice@monacannation.com>

Sent: Friday, January 7, 2022 8:40 AM

To: Kaleigh Pollak <Kaleigh@monacannation.com>

Subject: FW: Tribal Coordination Letter_BR-0093, BR-0094, BR-0095 & BR-0096

From: Attaluri, Radha <rattaluri@ncdot.gov>

Sent: Friday, January 7, 2022 8:36 AM

To: Tribal Office <TribalOffice@monacannation.com>

Cc: Wilkerson, Matt T <mtwilkerson@ncdot.gov>; David.E.Bailey2@usace.army.mil

Subject: Tribal Coordination Letter_BR-0093, BR-0094, BR-0095 & BR-0096

Ms. Pollak,

The North Carolina Department of Transportation (NCDOT) is proposing to replace the following bridges in Rockingham County:

- 780035, carrying NC 770 over the Mayo River (Figure 1) at coordinates 36.47102222, -79.95066667
- 780069, carrying NC 770 over US 220 (Figure 2) at coordinates 36.467388, -79.926630
- 780170, carrying SR 1360 (Smith Road) over US 220 (Figure 3) at coordinates 36.5021833, -79.92144167
- 780176, carrying SR 1700 (Fisher Hill Road) over NC 14/NC 87 (Figure 4) at coordinates 36.53196944, -79.77825833

Attached please find the coordination letter, project study area maps and summary of archaeological findings forms from NCDOT Historic Archaeology group for your reference.

Please feel free to contact Kristy Alford (kalford@ncdot.gov) at (919) 707-6531, or me if you have any questions or need additional information.

Thanks
Radha

Radha Attaluri
Project Manager, Project Management Unit
North Carolina Department of Transportation

919 707 6038 office
rattaluri@ncdot.gov

1000 Birch Ridge Drive (Delivery)
Raleigh, NC 27610

1582 Mail Service Center (Mail)
Raleigh, NC 27699-1582



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North Carolina Public Records Law and may be disclosed to third parties.*

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

Draft Boater Safety Plan

BR-0093 REPLACEMENT OF BRIDGE NO. 35
NC 770 OVER MAYO RIVER
ROCKINGHAM COUNTY

BOATER SAFETY PLAN
DURING CONSTRUCTION OF BRIDGE NO. 35
January 2024



BOATER SAFETY PLAN

The intent of the Boater Safety Plan is to inform the NC Wildlife Resources Commission (NCWRC)-Enforcement, Rockingham County Emergency Management, Mayo River State Park officials, Dan River Association program coordinator, construction workers and the public of boater safety during construction of Bridge No. 35.

The North Carolina Department of Transportation (NCDOT) Division 7 proposes to replace Bridge No. 35 on NC 770 over the Mayo River. Replacement of Bridge No. 35 will occur on the existing alignment with an offsite detour for vehicle traffic during construction. The offsite detour includes US 220, US 220 Business, and Janet Road. Public access under Bridge No. 35 will not be closed for the duration of construction activities.

Inform Stakeholders and the Public of Ongoing Construction Activities

NCDOT will contact the following local emergency services at least one month prior to road closure:

- Rockingham County Emergency Management – (336) 634-3017 Director Rodney Cates or Jay Brooks

NCDOT will contact the following local agencies to help notify the public of constraints/restrictions to boating on Mayo River:

- Mayo River State Park – Superintendent Sam Koch (336) 427-2530
- NCWRC – Enforcement – Hunter Purde (336) 932-5258
- Dan River Association – NC Program Coordinator (919) 864-6909

The construction contractor (here within “contractor”) must provide signage at the bridge project and at the Anglin Mill river access point upriver of the bridge to inform boaters of impacts to waterway access under Bridge No. 35. Signage must be displayed for a minimum of two (2) weeks prior to start of construction (this included the demolition of the existing bridge). Signage will include information about the project, contractor, NCWRC-Enforcement, Mayo River State Park, and Rockingham County Emergency management. Applicable postal addresses and telephone numbers will be included to accommodate written and verbal public inquiries, report of damage, report of concerns, and general comments. A map showing the location of the Anglin Mill river access point, relative to the project, is included in the Appendix.

BOATER SAFETY PLAN DURING CONSTRUCTION OF BRIDGE NO. 35

NCDOT will develop an erosion control and sedimentation plan as part of the design. The erosion control and sedimentation plan will include provisions for construction entrances and temporary rock causeways, which will limit public access to the project area. The contractor must adhere to the erosion and sedimentation control plan.

Construction entrances are considered part of the project and addressed in the contractor's erosion and sedimentation control plan. Construction equipment and workers will access Bridge No. 35 from the shoreline and temporary rock causeways. The contractor will ensure that Mayo River shorelines and adjacent properties are not disturbed or damaged due to construction activities.

The contractor must provide barriers that are signed, marked, and illuminated consistent with Uniform Waterway Marking System and in accordance with NCDOT guidelines and standards.:

The contractor must follow specifications and procedures included in design plans regarding lead containing paint removal and disposal, asbestos assessment, and asbestos containing material removal and disposal. The contractor must perform the removal of the existing bridge so as not to allow debris to fall into the water.

Continue Public Preparation of Required Safety Equipment

The public is encouraged to observe the following NCWRC safety regulations to avoid conflicts between public use of the river and construction activities:

- All recreational vessels must have one Type I, II, or III Personal Floatation Device (PFD) approved by the USCG and of appropriate size for each person aboard.
- All recreational vessels 16 feet in length and over must have one Type I, II, or III PFD of appropriate size for each person aboard, and in addition, one throwable Type IV PFD (ring buoy or buoyant cushion).
- Vessels less than 40 feet in length, while not required to have a horn or whistles and bells, should be provided with some means of making an efficient sound signal.
- Vessels operating at night (no personal watercrafts) are required to display navigation lights between sunset and sunrise.
- Vessels of 10 horsepower or less may carry from one-half hour after sunset to one-half hour before sunrise a white light in the stern or have on board a hand flashlight in good working condition which shall be ready at hand and shall be temporarily displayed in sufficient time to prevent collision.
- Vessels under oars and sailboats less than 23 feet in length may display navigation lights or have ready at hand an electric torch or lighted lantern shining a white light which shall be exhibited in sufficient time to prevent collision.

Supplement Safety Procedures to Include Construction Activity Awareness

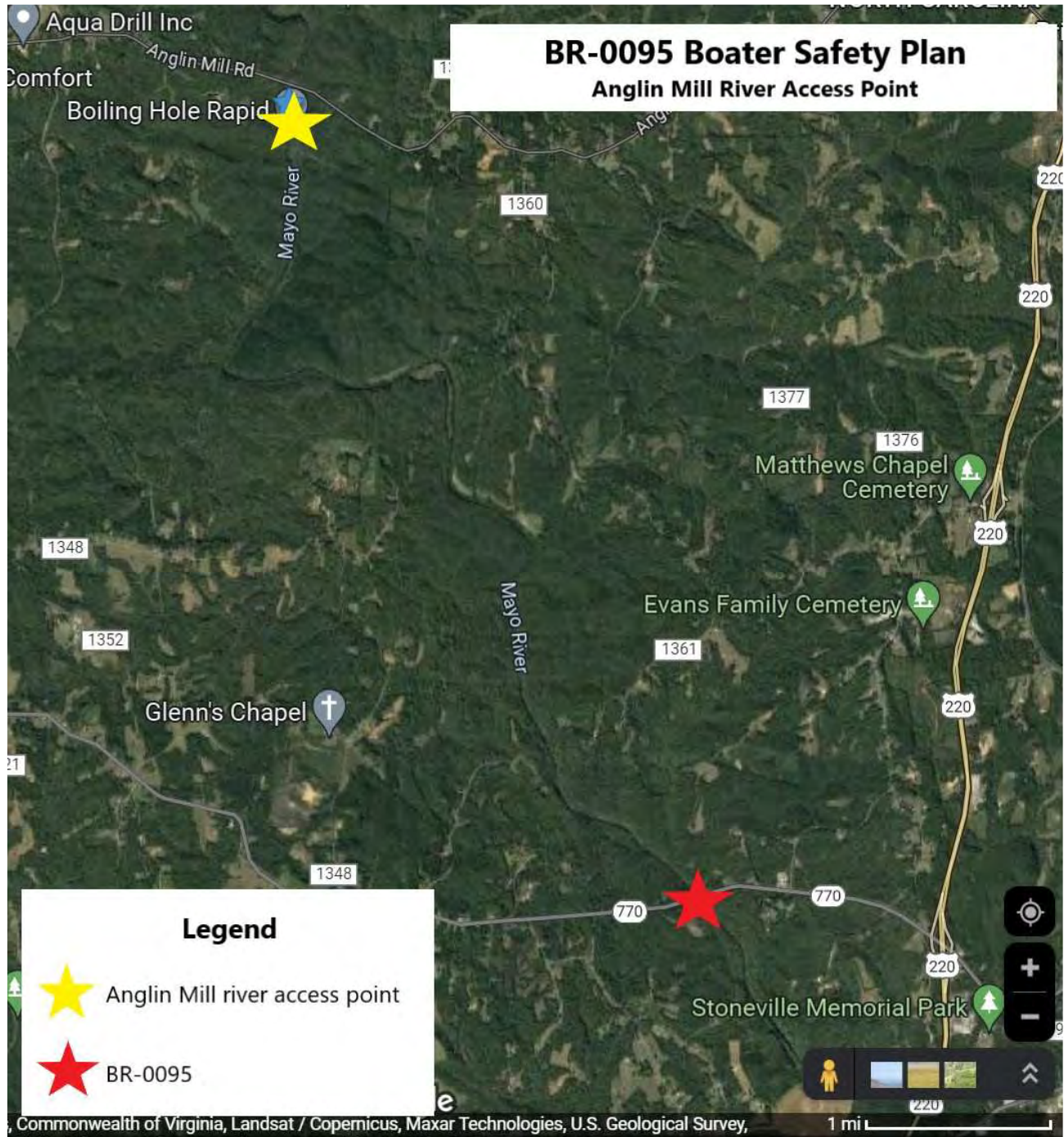
The Boater Safety Plan During Construction of Bridge No. 35 provides additional safety procedures for operation of recreational on the Mayo River.

BOATER SAFETY PLAN DURING CONSTRUCTION OF BRIDGE NO. 35

- Obey local and state boating laws.
- Alcohol is prohibited in all USACE recreation areas.
- Smoking is prohibited in USACE facilities (restrooms and shower houses).
- Possession of loaded firearms, ammunition, loaded projectile firing devices, bows and arrows, crossbows, or other weapons is prohibited in USACE recreation areas outside of federal and state authorized shooting ranges and hunting sites.
- Observe navigational “rules of the road” as required by North Carolina law.
- Do not operate a personal watercraft between sunset and sunrise.
- Do not operate vessels or personal water crafts under the influence of alcohol or drugs.
- Do not operate vessels at speeds prohibited by local and State boating laws, or excessive speeds which endangers persons or property.
- Do not operate vessels in a reckless or negligent manner so as to endanger the life, limb or property of any person.
- Observe placards displayed at boat launch loading areas informing boaters of impacts to waterway access under Bridge No. 35.
- Observe signs and markings in place around the construction area.
- Stay 25 feet away from temporary rock causeways around the construction area.

The Boater Safety Plan During Construction of Bridge No. 35 will be coordinated with Mayo River State Park staff and the Dan River Association. This plan takes effect two (2) weeks prior to the start of construction and will terminate at the end of construction.

APPENDIX



NEPA/SEPA Document

NCDOT MINIMUM CRITERIA DETERMINATION CHECKLIST

The following questions provide direction in determining when the Department is required to prepare [SEPA](#) environmental documents for state-funded construction and maintenance activities. Answer questions for Parts A through C by checking either “Yes” or “No”. Complete Part D of the checklist when NCDOT’s [Minimum Criteria Rule](#) categories #8, 12(i) or #15 are used.

TIP Project No.: BR-0093

State Project No.: 67093.1.1

Project Location: Rockingham County, North Carolina

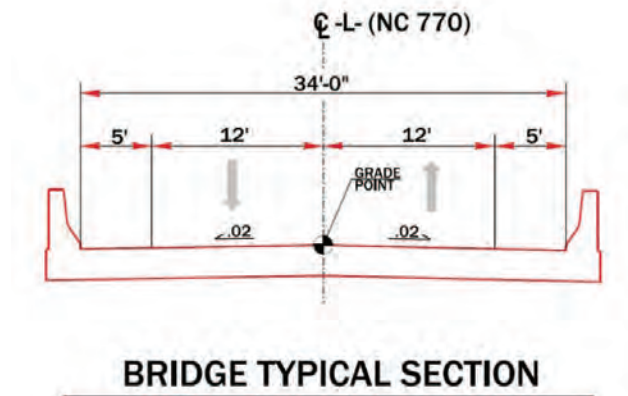
Project Description: Replace Bridge No. 780035 on NC 770 over the Mayo River (STIP BR-0093) in Rockingham County. The bridge will be replaced onsite using an offsite detour for traffic (see attached Figure).

Anticipated Permit or Consultation Requirements: Nationwide Permit and 401 Certification

Special Project Information:

Design Conditions:

| | |
|-------------------|---|
| Traffic | Current – 2,315 VPD, Year 2045– 2,800 VPD |
| Truck Portion | TTST – 4%, Dual – 6% |
| Functional Class | Major Collector Regional Tier |
| Design Speed | 60 MPH |
| Design exceptions | No design exceptions required |



Bridge Demolition:

Bridge No. 780035 is constructed of concrete, timber, and steel and should be possible to remove with no resulting debris based on standard demolition practices.

Alternatives Discussion:

In addition to “No-Build” and “Rehabilitation” options, four alternatives were considered for the replacement of Bridge No. 780035 over the Mayo River: three with the intent of using an onsite detour and one with the intent of using an offsite detour.

No-Build – The No-Build alternative would result in eventually closing the bridge as its condition continues to deteriorate.

Rehabilitation – Rehabilitation would only provide a temporary solution for this structurally deficient bridge. Bridge No. 780035 was constructed in 1965. Rehabilitation of deteriorated components of the bridge would effectively constitute replacing the bridge.

Alternate 1 - Alternative 1 proposes replacement of the bridge to the north of the existing bridge on a new alignment while traffic uses the existing bridge during construction. Additional right-of-way is needed to build the new bridge and maintain the facility after construction.

Cost Estimate: Construction \$5,200,000 | \$ Utilities \$123,500

Alternative 2 - Alternative 2 proposes replacement of the bridge in place while traffic uses a temporary bridge to the north of the existing bridge as an onsite detour. Temporary construction easement, a small amount of permanent easement, and additional construction time is needed to construct the detour, replace the bridge, remove the detour, and maintain the facility after construction is complete.

Cost Estimate: Construction \$4,850,000 | Utilities \$123,500

Alternate 3 - Alternative 3 proposes replacement of the bridge in place while traffic uses an offsite detour during construction, which would require resurfacing a 2.75-mile section of the detour route. Some temporary construction easement and a small amount of permanent easement is needed to replace the bridge, complete resurfacing, and maintain the facility after construction is complete.

Cost Estimate: Construction \$2,650,000 | Utilities \$71,000 | Resurfacing \$1,030,000

Alternate 4 - Alternative 4 proposes replacement of the bridge to the south of the existing bridge on a new alignment while traffic uses the existing bridge during construction. Additional right-of-way, permanent easements, and utilities relocation time will be needed to relocate utilities, build the new bridge, and maintain the facility after construction is complete.

Cost Estimate: Construction \$5,400,000 | Utilities \$398,500

Alternative Selection:

All four alternatives will have impacts to the Mayo River State Park and require coordination with the NC Division of Parks and Recreation. To limit ground disturbance activity and permanent impacts to park lands, Alternative 3, the replacement of Bridge No. 780035 in place while traffic uses an offsite detour, was selected.

Offsite Detour:

The proposed offsite detour for the replacement of bridge No. 780035 over the Mayo River on NC 770 will use US 220, US 220 Business, and Janet Road. Traffic traveling east on NC 770 will take Janet Road south for approximately 2.75 miles, then travel east on US 220 Business for approximately 1 mile, and then travel north on US 220 north for approximately 1.35 miles to reconnect with NC 770. Westbound traffic on NC 770 would take the same route in reverse by traveling south on US 220 for approximately 1.35 mile, west on US 220 Business for approximately 1 mile, and north on Janet Road for approximately 2.75 miles to reconnect with NC 770.

Estimated Costs:

The estimated costs of the proposed project are as follows:

| | |
|--------------------|---------------------------|
| Utilities | \$71,000 |
| Right of Way | \$610,000 |
| Construction | \$2,800,000 |
| <u>Resurfacing</u> | <u>\$1,030,000</u> |
| Total Cost | \$4,511,000 |

Bicycle and Pedestrian Accommodation:

There are two designated bike routes on NC 770 along the project corridor: NC Bike Route 4 and Rockingham County Bike Route 1. To accommodate bicycle traffic, 6-foot shoulders will be used along NC 770 and 5-foot rail offsets will be used on the bridge.

Public Involvement:

Landowner letters were sent in May of 2019 to property owners adjacent to the project. No responses or correspondence were received concerning the proposed project.

Native American Indian Tribe Protocols

There are two Native American Indian Tribes that identify Rockingham County as an area of interest and want to be notified of NCDOT's projects: the Catawba and Monacan Tribes. Per NCDOT's Tribal Coordination Protocols, NCDOT notified and requested comments from the Catawba Indian Nation and the Monacan Indian Nation in memos dated January 6, 2022.

The Monacan Indian Nation replied on January 27, 2022, indicating that they "do not wish to actively participate in this consultation project, because the project's impacts are anticipated to be minimal."

The Catawba Indian Nation replied on February 14, 2022, indicating that "the Catawba have no immediate concerns with regard to traditional cultural properties, sacred site or Native American archaeological sites within the boundaries of the proposed project areas."

Representatives from the Rockingham County School Transportation Department prefer alternate 3 and concluded that the proposed offsite detour would not be an issue, but since there is an elementary school passenger that needs to be picked up close to the bridge replacement site, NCDOT should ensure that an area sufficient for school buses to turn around is provided at the east end of the NC 770 road closure.

Coordination with Rockingham County Emergency Services Director Rodney Cates concluded that alternate 3 was the preferred alternative and the proposed offsite detour would be a low impact for all first responders (LE, EMS, Fire and Rescue).

NC State Parks

Coordination with NC State Parks representatives began in February 2022 and addressed access and potential impacts to the Mayo River State Park. It was conveyed by NCDOT representatives that a minimal amount of additional right-of-way will likely be needed to safely replace the structure and maintain the facility after construction is complete. NC State Parks representatives are agreeable to additional right-of-way needs but want to ensure we do not impede existing driveway and path

connections to NC 770. Mapping and final surveys show two driveway connections to westbound NC 770 extremely close to one another approximately 220' east of the existing bridge. The driveway closest to the existing bridge is used primarily by State Park vehicles and occasional canoers to access the Mayo River. Research by the State Parks Property Office concluded the driveway furthest from the bridge is a joint use access between NC State Parks and a private property owner. NCDOT pointed out that since NC 770 is part of a designated bike route, the new bridge will have 5' rail offsets to facilitate bicycle traffic, which will create sight distance issues for vehicles entering and exiting the driveway closest to the existing bridge. To help resolve this issue, NCDOT will evaluate designing a wider single driveway connection to westbound NC 770 with all paths being connected to this access. NC State Parks is agreeable to maintaining access at a wider single driveway connection to facilitate safer ingress and egress.

NCDOT informed NC State Parks that Janet Road is being resurfaced to facilitate the offsite detour. A 0.5-mile section runs adjacent to the Mayo River State Park near the intersections of US 220 Business. No additional right-of-way needed is anticipated to complete resurfacing.

PART A: MINIMUM CRITERIA

Item 1 to be completed by the Project Manager.

1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is not required?

YES

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NO

☐

If the answer to number 1 is "no", then the project does not qualify as a minimum criteria project. A state Environmental Assessment is required.

If yes, under which category?

(26) Implementation of any project which qualifies as a "categorical exclusion" under the National Environmental Policy Act by one of the Agencies of the U.S. Department of Transportation

If either category #8, #12(i) or #15 is used complete Part D of this checklist.

PART B: MINIMUM CRITERIA EXCEPTIONS

Items 2 – 4 to be completed by the Project Manager.

2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts? *The proposed project will only replace the function of the existing bridge.*
3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment? *The proposed project will only replace the function of the existing bridge*
4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department?

YES

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NO

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Item 5-8 to be completed by Division Environmental Officer.

5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value?
6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list?
7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts?
8. Is the proposed activity expected to have a significant adverse effect on

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long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats?

If any questions 2 through 8 are answered “yes”, the proposed project may not qualify as a Minimum Criteria project. A state Environmental Assessment (EA) may be required. For assistance, contact the Environmental Policy Unit at (919) 707-6253 or EPU@ncdot.gov.

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Items 9- 12 to be completed by Division Environmental Officer.

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action located in an Area of Environmental Concern, as defined in the coastal Area Management Act? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Items 13 – 15 to be completed by the Project Manager.

- | | | |
|--|--------------------------|-------------------------------------|
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|-------------------------------------|

Cultural Resources

- | | | |
|--|-------------------------------------|-------------------------------------|
| 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas? <i>It was conveyed by NCDOT representatives that a minimal amount of additional right-of-way will likely be needed to safely replace the structure and maintain the facility after construction is complete.</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Questions in Part “C” are designed to assist the Project Manager and the Division Environmental Officer in determining whether a permit or consultation with a state or federal resource agency may be required. If any questions in Part “C” are answered “yes”, follow the appropriate permitting procedures prior to beginning project construction.

PART D:(To be completed when either category #8, 12(i) or #15 of the rules are used.)

Items 16- 22 to be completed by Division Environmental Officer.

16. Project length: 0.106 Mi.
17. Right of Way width: _____
18. Project completion date: _____
19. Total acres of newly disturbed ground surface: TBD
20. Total acres of wetland impacts: 0
21. Total linear feet of stream impacts: 0
22. Project purpose: bridge replacement

Reviewed by:


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Manager, Environmental Policy Unit

Date: 6/8/23

updated 10/5/23 with
revised green sheet

PROJECT COMMITMENTS

Replace Bridge 35 on NC 770 over Mayo River

T.I.P Number:BR-0093

Rockingham

Federal Aid Number:

WBS:67093.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division Office - NC State Parks Coordination

Prior to letting, NCDOT will coordinate with NC State Parks to determine canoe access and anticipated river usage during construction.

Roadway Design, Project Management (PMU/SMU/Division) - Rockingham County Schools Transportation

NCDOT shall make reasonable accommodations during the final design to provide means for buses and other large vehicles to safely turn around at each end of the NC 770 road closure, and those provisions shall not impede Rockingham County Schools' ability to service passengers. The design will incorporate temporary turnaround locations and these locations will be coordinated with the school system's transportation staff.

Fulfilled on 10/05/2023

Division Office - Rockingham County Schools Transportation

NCDOT shall make reasonable accommodations during construction to provide means for buses and other large vehicles to safely turn around at each end of the NC 770 road closure, and those provisions shall not impede Rockingham County Schools' ability to service passengers.

EAU – ECAP - USACE and NC State Parks Coordination

Prior to applying for a 404 permit and acquiring land from State Parks, NCDOT will coordinate with the USACE and State Parks to see if a river safety plan is needed. If one is needed, EPU and PMU will coordinate with EAU and Structures to ensure one is prepared.

Division Office - State Parks River Access and Driveway

Throughout construction, NCDOT will maintain the existing driveway connection to NC 770 approximately 220' northeast of the existing bridge in order to provide access to the private residence as well as the river access path.

COMMITMENTS FROM PERMITTING

No commitments developed during project permitting.

*******END OF PROJECT COMMITMENTS*******

Replace Bridge 35 on NC 770 over Mayo River

67093.1.1

