STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

October 6, 2025

DANIEL H. JOHNSON
SECRETARY

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28805

ATTN: NCDOT Coordinator

NC Division of Water Resources
Transportation Permitting Branch
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211

NCDOT Coordinator

Subject: Application for:
Section 404 Nationwide Permit 3 & 401 Individual Water Quality Certification under the Expedited Processing Provisions for **Hurricane Helene Response** for the **Replacement of Bridge 214** over Rocky Broad River on US 64 in **Henderson County**, and **3 pipe replacements** on US 64/74A in **Rutherford County**,
Divisions 13 & 14, WBS 18313.1081015.

Dear NCDOT Coordinators:

The North Carolina Department of Transportation (NCDOT) proposes the following project as the result of damage caused by Hurricane Helene in September 2024:

- Replacement of Bridge 214 over Rocky Broad River.
- Three Pipe Repairs along US 74A

Approvals Requested:

404 Nationwide Permit 3: Notification required due to project's location in a Designated Trout Water with >0.008 acre of impacts (other than temporary dewatering).

401 Individual Certification: Required due to impacts greater than 40 linear feet.

FHWA is the lead federal agency for this project.

Brief Damage Summary and Current Temporary/ Emergency Structure:

The previous 165-foot long, three-span bridge suffered approach washout and severe damage.
Temporary, emergency repairs were made to the structure and it currently serves US 64.

Proposed Replacement:
A new three span, 180 foot-long bridge will replace the damaged bridge, in the same location as the previous bridge.
A temporary bridge will be installed just downstream and serve as the detour as the new bridge is re-constructed in-place.

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

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

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Avoidance and Minimization:
-The two interior bridge bents will be located outside of the Rocky Broad River.
-The proposed bridge will have no direct discharge into the stream.
-Stormwater runoff is discharged as far away from the stream and at the lowest velocities practicable.
-A temporary construction access bridge will be used for construction.
-Bank stabilization is proposed to stabilize the stream banks.
-A riprap free zone will exist under the bridge.

Proposed Activities in Streams:

Impact Site	Impact Category	Permanent Fill	Bank Stabilization	Temporary Impacts	Permit Proposed/ Impact Description
Site 1 Rocky Broad River	**Maintenance Exemption**	--	--	--	--
	Non-Notifying	--	--	--	--
	Notification Required (Not After the fact)	--	50 lf	--	**NWP 3:** Bank stabilization will be required to stabilize the banks.
		--	--	161* lf (0.32 ac)	**NWP 3:** Temporary work pads are required for the construction of the new bridge.
	Notification Required (After the fact)	--	--	--	--
	Site Total:	--	**50 lf**	**161* lf 0.32 ac**	*Temporary impacts are coincident to the bank stabilization impacts.

Impact Site	Impact Category	Permanent Fill	Bank Stabilization	Temporary Impacts	Permit Proposed/ Impact Description
Site 2 UT to Rocky Broad River	**Maintenance Exemption**	--	--	--	A 62 lf, 3x3 box culvert was damaged in Hurricane Helene. A new 62 foot long, 54" pipe will be installed in the same location.
	Non-Notifying	--	--	--	--
	Notification Required (Not After the fact)	--	--	129 lf (0.01 ac)	**NWP 3:** Temporary impacts are required for dewatering operations.
	Notification Required (After the fact)	--	--	--	--
	Site Total:	--	**--**	**129 lf 0.01 ac**	

Impact Site	Impact Category	Permanent Fill	Bank Stabilization	Temporary Impacts	Permit Proposed/ Impact Description
Site 3 **UT to Rocky Broad River**	**Maintenance Exemption**	--	--	--	The previous pipe was damaged by Hurricane Helene. A temporary 18" pipe was installed after the storm. A new 48 foot long, 36" reinforced concrete pipe will be installed in the same location, replacing the pipe of the same length.
	Non-Notifying	--	--	--	--
	Notification Required (Not After the fact)	--	--	108 lf (0.01 acre)	**NWP 3:** Temporary impacts are required for dewatering operations as well as to remove excess material that accumulated in front of the pipe during the storm.
	Notification Required (After the fact)	--	--	--	--
	Site Total:	--		**108 lf 0.01 ac**	

Impact Site	Impact Category	Permanent Fill	Bank Stabilization	Temporary Impacts	Permit Proposed/ Impact Description
Site 4 **UT to Rocky Broad River**	**Maintenance Exemption**	552 lf	--	--	Pre-Helene, this UT previously flowed through a closed system. During Helene, the system was destroyed, and the stream carved a path to the river. This stream will be returned to this repaired closed system.
	Non-Notifying	--	--	--	--
	Notification Required (Not After the fact)	--	--	38 lf (<0.01 ac)	**NWP 3:** Temporary impacts will be required to ensure a stable tie-in of the above described system.
	Notification Required (After the fact)	--	--	--	--
	Site Total:	552 lf	**--**	**38 lf (<0.01 ac)**	

Totals

	Impact Category	Permanent Fill	Bank Stabilization	Temporary Impacts	
	Maintenance Exemption	552 lf	--	--	
	Non-Notifying	--	--	--	
	Notification Required (Not After the fact)	--	50 lf	436 lf (0.035 ac)	
	Notification Required (After the fact)	--	--	--	

Endangered Species Act
Protected Species listed from IPaC[1] as of the date of this application:

Common Name	Habitat Present	Survey Dates	Proposed Biological Conclusion	FWS Concurrence Remarks
Gray bat	Yes	n/a	May Affect, Likely to Adversely Affect	Attached
Northern long-eared bat	Yes	n/a	May Affect, Likely to Adversely Affect	Attached
Tricolored bat	Yes	n/a	May Affect, Likely to Adversely Affect	Attached
Small whorled pogonia	No	5/14/2025	No Effect	n/a
White irisette	No	5/14/2025	No Effect	n/a
Rock gnome lichen	No	n/a	No Effect	n/a
Bog Turtle[2]	n/a	n/a	n/a	n/a
Monarch butterfly (Proposed)[3]	n/a	n/a	n/a	n/a

1 IPaC – Information for Planning and Consultation (US Fish and Wildlife Service)
2 Similarity of Appearance (Threatened); A species that is threatened due to similarity of appearance with another listed species and is listed for its protection.
3 Due to the recent listings of Eastern hellbender and monarch butterfly within the proposed action area, NCDOT does not have complete information at this time. It is anticipated that construction will be complete by the timeframes proposed for full listing, should the species be formally listed.

Historic Resources Summary (documentation included)

106 Topic	Findings	
Historic Architecture	Bat Cave Schoolhouse is approximately 336 feet from the southern approach to the US 64 bridge over the Rocky Broad River. On August 28, 2025, NC HPO and FHWA determined there would be No Adverse Effect from the proposed action on this resource. In Chimney Rock: There are no resources within approximately 1,200 feet of the proposed action area. The closest resource are the gates that are part of the Chimney Rock Park resource, which is being addressed under a separate proposed action.	
Archaeology	No Effect	
Tribal Coordination	**Tribe**	**Response**
Tribal Coordination Letters were sent to the following Tribes on July 8, 2025:	Catawba Indian Nation	No response received
	Eastern Band of Cherokee Indians	No response received
	Muscogee (Creek) Nation	No response received
	Cherokee Nation	No response received
	United Keetoowah Band of Cherokee Indians in Oklahoma	No response received

If you have any questions or need additional information, please contact Michael Turchy, at maturchy@ncdot.gov or (919) 707-6157.

Sincerely,

Digitally signed by Michael Turchy

Michael A. Turchy
Environmental Coordination and Permitting Group Leader

ePCN

Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

December 4, 2023 Ver 4.3

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

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

Below is a link to the online help file.

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

A. Processing Information

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

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

○ Yes ◉ No

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

◉ Yes ○ No

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

○ ARPA ○ S.L. 2023-134 (earmark) ◉ No

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

Rutherford

Henderson

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:

WBS # *

18313.1081015

(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: 03 - Maintenance

NWP Numbers (for multiple NWPS):

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

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

check all that apply

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

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

*

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

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

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

○ Yes ◉ No

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

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

○ Yes ◉ No

Acceptance Letter Attachment

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

FILE TYPE MUST BE PDF

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

○ Yes ◉ No

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

◉ Yes ○ No

You must submit a copy to the appropriate Wildlife Resources Commission Office.

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? *

NCDOT

1b. Primary Contact Email: *

maturchy@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6157

1d. Who is applying for the permit? *

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

(Check all that apply)

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

○ Yes ◉ No

2. Owner Information

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

NCDOT

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

Michael Turchy

2d. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27699

Country

US

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6157

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

maturchy@ncdot.gov

3. Applicant Information (if different from owner)

3a. Name: *

NCDOT

3b. Business Name:

(if applicable)

3c. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27699

Country

US

3d. Telephone Number: *

(919)707-6157

(xxx)xxx-xxxx

3e. Fax Number:

(xxx)xxx-xxxx

3f. Email Address: *

maturchy@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

Replacement of Bridge 214 over Rocky Broad River on US 64, and 3 pipe replacements on US 64/74A

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Chimney Rock

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

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

Latitude: *

35.45129

ex: 34.208504

Longitude: *

-82.28716

-77.796371

3. Surface Waters

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

Rocky Broad River

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

C; Tr

Surface Water Lookup

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

Broad

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

030501050302

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: *

Mixed residential and business in the Rocky Broad River valley, damaged by Hurricane Helene.

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

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

(intermittent and perennial)

1000

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

Re-establish the transportation facility damaged by Hurricane Helene.

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

see attached cover letter.

5. Jurisdictional Determinations

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

○ Yes ◉ No ○ Unknown

Comments:

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):

Agency/Consultant Company:

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	Bridge-Bank Stabilization	Permanent	Bank Stabilization	Rocky Broad River	Perennial	Both	55 Average (feet)	50 (linear feet)
S2	Bridge-Temp Construction Impacts	Permanent	Workpad/Causeway	Rocky Broad River	Perennial	Both	55 Average (feet)	161 (linear feet)
S3	54" RCP Replacement	Temporary	Dewatering	UT to Rocky Broad River	Perennial	Both	3 Average (feet)	129 (linear feet)
S4	36" RCP Replacement	Temporary	Dewatering	UT to Rocky Broad River	Perennial	Both	2 Average (feet)	108 (linear feet)
S5	42" CSP Restoration	Temporary	Bank Stabilization	Rocky Broad River	Perennial	Both	55 Average (feet)	38 (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:

211

3i. Total temporary stream impacts:

275

3i. Total stream and ditch impacts:

3j. Comments:

Bridge Impacts: Temporary impacts are coincidental to bank stabilization impacts.

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: *

see included cover letter.

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

see included cover letter

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:

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:

2. Stormwater Management Plan

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

◉ Yes ○ No

Comments:

G. Supplementary Information

1. Environmental Documentation

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

◉ Yes ○ No

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

◉ Yes ○ No

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

◉ Yes ○ No

2. Violations (DWR Requirement)

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

○ Yes ◉ No

3. Cumulative Impacts (DWR Requirement)

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

○ Yes ◉ No

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

4. Sewage Disposal (DWR Requirement)

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

○ Yes ○ No ◉ N/A

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

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

◉ Yes ○ No

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

◉ Yes ○ No

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

Asheville

5d. Is another Federal agency involved? *

◉ Yes ○ No ○ Unknown

What Federal Agency is involved?

FHWA

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

○ Yes ◉ No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? *

◉ Yes ○ No

5g. Does this project involve bridge maintenance or removal? *

◉ Yes ○ No

5g(1). If yes, have you inspected the bridge for signs of bat use such as staining, guano, bats, etc.? Representative photos of signs of bat use can be found in the NLEB SLOPES, Appendix F, pages 3-7.

○ Yes ◉ No

Link to the NLEB SLOPES document: http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf

If you answered "Yes" to 5g(1), did you discover any signs of bat use? *

○ Yes ○ No ◉ Unknown

***** If yes, please show the location of the bridge on the permit drawings/project plans.**

5h. Does this project involve the construction/installation of a wind turbine(s)? *

○ Yes ◉ No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? *

◉ Yes ○ No

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

see included USFWS Concurrence letter.

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? *

EFH Mapping

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

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

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

○ Yes ◉ No

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

See included Section 106 information.

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:

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

FEMA Mapping.

Miscellaneous

Comments

Direct link to full application package:
https://xfer.services.ncdot.gov/pdea/EnvironmentalPermits/Helene%20US%2074%20A%20Chimney%20Rock%20and%20Henderson%20Bridge%20214/2025-10-06%20Application%20Package.pdf

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

US 74 A Chimney Rock and Henderson Bridge 214 - 2025-10-06 Application Package.pdf 15.38MB

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: *

Michael Turchy

Signature *

Michael Turchy

Date

10/6/2025

Permit Drawings

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

(Version 3.02; Released April 23, 2024) — FOR NCDOT PROJECTS

WBS Element:	TIP/Proj No: 18313.1081015	County(ies): Henderson

General Project Information

WBS Element:		**TIP Number:**	18313.1081015	**Project Type:**	Bridge Replacement	**Date:**	10/6/2025
NCDOT Contact:	Malcolm Watson			**Contractor / Designer:**	STV Engineers, Inc		
Address:	1020 Birch Ridge Drive Room #16 Raleigh, NC 27610			**Address:**	2151 Hawkins St. Suite 1400 Charlotte, NC 28203		
Phone:	919-707-6614			**Phone:**	919-420-7660		
Email:	mcwatson@ncdot.gov			**Email:**	wjernigan@gfnet.com		
City/Town:	Bat Cave			**County(ies):**	Henderson		
River Basin(s):	Broad			**CAMA County?**	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	2.81	**Surrounding Land Use:**	Businesses	
	Proposed Project		**Existing Site**	
Project Built-Upon Area (ac.)	1.82ac [Site 1] 0.80 (prop roadway/bridge) + 0.14 (Temp. access road/bridge) + [Site 2-4] 0.88 ac.		1.3 ac.	
Typical Cross Section Description:	Proposed project is a 2-lane, 24' road with paved shoulder at the turn-in of the bridge on the north end		Existing site is a 2-lane, 22' temporary road and bridge with paved shoulder at the turn-in of the bridge on the north end	
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: -	Year: -	Existing: -	Year: -
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The purpose of this project is to replace Bridge #214 in Henderson County after Hurricane Helene. Roadway improvements were minimized to reduce impacts to maximum extent practicable. At Site 1, Deck drainage is conveyed through 2GIs and then through rip rap pads before discharging to the river. A pump-around operation will keep the streams live during installation of the proposed pipes at Sites 2 and 3. At Site 4, the stream was conveyed across the road through a closed drainage system prior to Hurricane Helene. Helene washed the system out, and formed a small draw which the stream now travels through before entering the Broad River. The proposed draianage plans restore pre-Helene conditions, conveying the stream through a closed system before returning to the Borad River.			

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.02; Released April 23, 2024)

General Project Information

Waterbody Information

Surface Water Body (1):	Broad River		**NCDWR Stream Index No.:**	9-(1)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Trout Waters (Tr)			
Other Stream Classification:	None					
Impairments:	None					
Aquatic T&E Species?	No	Comments:				
NRTR Stream ID:	NA			**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)						

TIP PROJECT: 18313.1081015

CONTRACT: CXXXXXX

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	1813.1081015	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
18313.1081015	N/A	DESIGN-BUILD

HENDERSON/RUTHERFORD COUNTIES

VICINITY MAP N.T.S.

PERMIT DRAWING
SHEET 1 OF 8

LOCATION: US 74A FROM EAST OF US 64 IN BAT CAVE EAST OF SR 1300 (TERRACE DRIVE)

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

BEGIN TIP PROJECT 18313.1081015
BEGIN WORK PACKAGE 1 SEGMENT 1
-L- POC STA. 7+20.62

END CONSTRUCTION
-Y1- STA. 14+81.56

END WORK PACKAGE 1 SEGMENT 1
-L- STA. 14+50.00

BEGIN CONSTRUCTION
-Y2- POT STA. 10+89.08

BEGIN CONSTRUCTION
-DR4- STA. 9+92.27

BEGIN CONSTRUCTION
-WINERY_DR- STA. 10+26.54

BEGIN CONSTRUCTION
-DR3- STA. 10+00.00

END TIP PROJECT 18313.1081015
-L- POT STA. 144+23.39

END CONSTRUCTION
-L- STA. 144+23.39

END WORK PACKAGE 1 SEGMENT 2
-L- POT STA. 140+00.00

BEGIN WORK PACKAGE 1 SEGMENT 2
-L- POT STA. 129+30.00

WETLAND AND SURFACE WATER IMPACTS PERMIT

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NOTE:
-Y3- WILL BE INCLUDED IN FUTURE SUBMITTALS.

SHEETS 5 THRU 12 NOT INCLUDED IN PACKAGE 1

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2019 = xxxxxx
ADT 2045 = XXXXXX
K = X%
D = XX%
T = X%*
V = 40 MPH
* (TTST = X% + DUAL X%)
FUNC. CLASSIFICATION =
MINOR
ATERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT 18313.1081015 = 2.812 MILES
LENGTH STRUCTURE TIP PROJECT 18313.1081015 = xxxx MILES
TOTAL LENGTH OF TIP PROJECT 18313.1081015 = 2.812 MILES

NCDOT CONTACT: MALCOLM WATSON
NCDOT - ALTERNATE DELIVERY UNIT

PLANS PREPARED FOR THE NCDOT BY:

STV Engineers, Inc.
P: (704) 372-1885
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
NC License Number F-0991

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
__________, 2025

LETTING DATE:
__________, 2025

XXX
PROJECT ENGINEER

XXX
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: __________ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: __________ P.E.

PERMIT DRAWING
SHEET 2 OF 8

TS TS — TEMPORARY SURFACE WATER IMPACTS

S S — SURFACE WATER IMPACTS

Note:
Temporary Surface Water Impacts at Site 1 include all activities for bridge removal, temporary bridge installation, and proposed bridge construction. Activities for proposed bridge to include temporary work pads for interior bent construction.

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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NAD 83 1LA 2011

SR 1610

BEGIN PROJECT
-L- PC STA. 7+20.62
BEGIN WORK PACKAGE 1 SEGMENT 1
-L- PC STA. 7+20.62

-L- STA. 11+19.68 = HW
-Y1- STA. 10+00.00

-L- STA. 12+28.08 =
-Y1 DETOUR- STA. 10+00.00

SURFACE WATER IMPACTS

BEGIN BRIDGE
-Y1- POT STA. 10+23.99

END BRIDGE
-Y1- POC STA. 12+03.99

BEGIN BRIDGE
-Y1 DETOUR- POT STA. 10+67.98

END WORK PACKAGE 1 SEGMENT 1
-L- STA. 14+50.00

-Y1 DETOUR BRIDGE-
35' X 120'

END BRIDGE
-Y1 DETOUR- PC STA. 11+87.98

25' TEMPORARY ACCESS BRIDGE

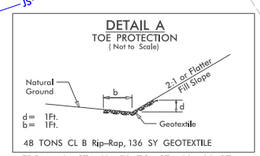
TEMPORARY BRIDGE ASSEMBLY AREA

SITE 1

BROAD RIVER

TOE PROTECTION SEE DETAIL A

DETAIL A
TOE PROTECTION
(Not to Scale)



48 TONS CL B Rip-Rap, 136 SY GEOTEXTILE
FROM -L- STA. 11+70 TO STA. 12+80 RT.

END CONSTRUCTION
-Y1- PT. STA. 14+81.56 =
-Y1 DETOUR- POT STA. 15+33.82

MATCHLINE
-L- STA. 17+50 SEE SHT. 5

-L-
PI Sta 8+00.52
△ = 32° 58' 13.6" (RT)
D = 21° 13' 14.4"
L = 155.37'
T = 79.90'
R = 270.00'

-L-
PI Sta 10+27.85
△ = 28° 48' 45.5" (LT)
D = 14° 19' 26.2"
L = 201.15'
T = 102.75'
R = 400.00'

-L-
PI Sta 13+27.18
△ = 19° 44' 20.8" (RT)
D = 12° 27' 20.2"
L = 158.48'
T = 80.03'
R = 460.00'

-L-
PI Sta 15+57.85
△ = 5° 07' 17.6" (LT)
D = 2° 45' 16.6"
L = 185.93'
T = 93.03'
R = 2,080.00'

-Y1-
PI Sta 13+43.28
△ = 30° 57' 27.8" (RT)
D = 10° 54' 48.5"
L = 283.66'
T = 145.39'
R = 525.00'

-Y1-
PI Sta 16+15.27
△ = 3° 51' 17.1" (RT)
D = 5° 12' 31.3"
L = 74.01'
T = 37.02'
R = 1,100.00'

-Y1 DETOUR-
PI Sta 13+04.78
△ = 55° 30' 11.3" (RT)
D = 37° 12' 18.2"
L = 149.18'
T = 81.03'
R = 154.00'

-Y1 DETOUR-
PI Sta 14+11.19
△ = 27° 54' 13.6" (LT)
D = 37° 12' 18.2"
L = 75.00'
T = 38.26'
R = 154.00'

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING
SHEET 3 OF 8

TS TS — TEMPORARY SURFACE WATER IMPACTS

S S — SURFACE WATER IMPACTS

Note:
Temporary Surface Water Impacts at Site 1 include all activities for bridge removal, temporary bridge installation, and proposed bridge construction. Activities for proposed bridge to include temporary work pads for interior bent construction.

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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NAD 83 1LA 2011

SR 1610

GRV BAT CAVE DR

-L- STA. 12+28.08=
-Y1 DETOUR- STA. 10+00.00

-L- STA. 11+19.58 ← HW
-Y1- STA. 10+00.00

BEGIN PROJECT
-L- PC STA. 7+20.62
BEGIN WORK PACKAGE 1 SEGMENT 1
-L- PC STA. 7+20.62

SURFACE WATER IMPACTS

BEGIN BRIDGE
-Y1- POT STA. 10+23.99

END BRIDGE
-Y1- POC STA. 12+03.99

BEGIN BRIDGE
-Y1 DETOUR- POT STA. 10+67.98

END WORK PACKAGE 1 SEGMENT 1
-L- STA. 14+50.00

-Y1 DETOUR BRIDGE-
35' X 120'

END BRIDGE
-Y1 DETOUR- PC STA. 11+87.98

25' TEMPORARY ACCESS BRIDGE

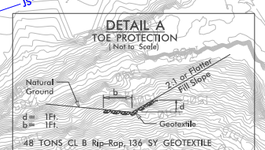
TEMPORARY BRIDGE ASSEMBLY AREA

SITE 1

BROAD RIVER

TOE PROTECTION SEE DETAIL A

DETAIL A
TOE PROTECTION
(Not to Scale)



48 TONS CL B Rip-Rap, 136 SY GEOTEXTILE
FROM -L- STA. 11+70 TO STA. 12+80 RT.

END CONSTRUCTION
-Y1- PT. STA. 14+81.56=
-Y1 DETOUR- POT STA. 15+33.82

MATCHLINE
-L- STA. 17+50 SEE SHT. 5

-L-
PI Sta 8+00.52
△ = 32° 58' 13.6" (RT)
D = 21° 13' 14.4"
L = 155.37'
T = 79.90'
R = 270.00'

-L-
PI Sta 10+27.85
△ = 28° 48' 45.5" (LT)
D = 14° 19' 26.2"
L = 201.15'
T = 102.75'
R = 400.00'

-L-
PI Sta 13+27.18
△ = 19° 44' 20.8" (RT)
D = 12° 27' 20.2"
L = 158.48'
T = 80.03'
R = 460.00'

-L-
PI Sta 15+57.85
△ = 5° 07' 17.6" (LT)
D = 2° 45' 16.6"
L = 185.93'
T = 93.03'
R = 2,080.00'

-Y1-
PI Sta 13+43.28
△ = 30° 57' 27.8" (RT)
D = 10° 54' 48.5"
L = 283.66'
T = 145.39'
R = 525.00'

-Y1-
PI Sta 16+15.27
△ = 3° 51' 17.1" (RT)
D = 5° 12' 31.3"
L = 74.01'
T = 37.02'
R = 1,100.00'

-Y1 DETOUR-
PI Sta 13+04.78
△ = 55° 30' 11.3" (RT)
D = 37° 12' 18.2"
L = 149.18'
T = 81.03'
R = 154.00'

-Y1 DETOUR-
PI Sta 14+11.19
△ = 27° 54' 13.6" (LT)
D = 37° 12' 18.2"
L = 75.00'
T = 38.26'
R = 154.00'

50' 0' 50' 100' 150'
GRAPHIC SCALE

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	13

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

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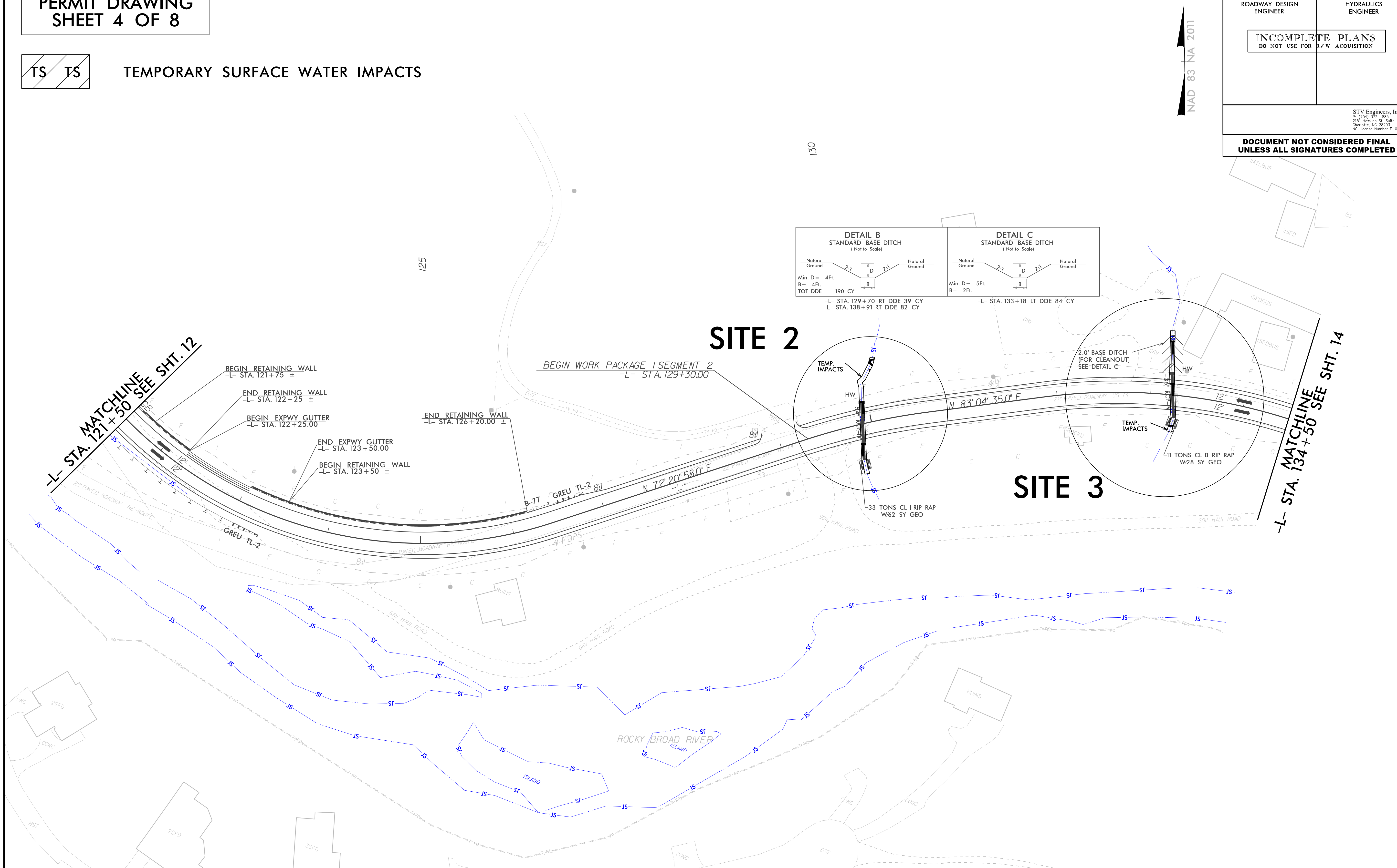
PERMIT DRAWING SHEET 4 OF 8

TS TS — TEMPORARY SURFACE WATER IMPACTS


NAD 83 NA 2011
DETAIL B
STANDARD BASE DITCH
(Not to Scale)
Natural Ground
Min. D = 4Ft.
B = 4Ft.
TOT DDE = 190 CY
-L- STA. 129+70 RT DDE 39 CY
-L- STA. 138+91 RT DDE 82 CY
DETAIL C
STANDARD BASE DITCH
(Not to Scale)
Min. D = 5Ft.
B = 2Ft.
-L- STA. 133+18 LT DDE 84 CY
SITE 2
SITE 3
TEMP. IMPACTS
HW
33 TONS CL I RIP RAP W/62 SY GEO
2.0' BASE DITCH (FOR CLEANOUT) SEE DETAIL C
11 TONS CL B RIP RAP W/28 SY GEO
MATCHLINE -L- STA. 121+50 SEE SHT. 12
MATCHLINE -L- STA. 134+50 SEE SHT. 14
BEGIN RETAINING WALL -L- STA. 121+75 ±
END RETAINING WALL -L- STA. 122+25 ±
BEGIN EXPWY GUTTER -L- STA. 122+25.00
END EXPWY GUTTER -L- STA. 123+50.00
BEGIN RETAINING WALL -L- STA. 123+50 ±
END RETAINING WALL -L- STA. 126+20.00 ±
BEGIN WORK PACKAGE I SEGMENT 2 -L- STA. 129+30.00
N 72° 20' 58.0" E
N 83° 04' 35.0" E
GREU TL-2
ROCKY BROAD RIVER
ISLAND
125
130

-L-	-L-	-L-
PI Sta 124+20.60	PI Sta 129+93.00	PI Sta 133+16.59
Δ = 65° 52' 27.6" (LT)	Δ = 10° 43' 37.0" (RT)	Δ = 24° 32' 00.1" (RT)
D = 12° 54' 16.0"	D = 7° 57' 27.9"	D = 9° 32' 57.5"
L = 510.48'	L = 134.80'	L = 256.91'
T = 287.65'	T = 67.60'	T = 130.46'
R = 444.00'	R = 720.00'	R = 600.00'

SEE SHEET PFL-05 FOR -L- PROFILE VIEW

GRAPHIC SCALE: 50' 0' 50' 100' 150'

PERMIT DRAWING
SHEET 5 OF 8

TS TS TEMPORARY SURFACE WATER IMPACTS

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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Charlotte, NC 28203
NC License Number F-0991

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UNLESS ALL SIGNATURES COMPLETED

NAD 83 NAVD 2011

SITE 2

SITE 3

DETAIL B
STANDARD BASE DITCH
(Not to Scale)

Natural Ground 2:1 D 2:1 Natural Ground
Min. D = 4Ft.
B = 4Ft.
TOT DDE = 190 CY

-L- STA. 129+70 RT DDE 39 CY
-L- STA. 138+91 RT DDE 82 CY

DETAIL C
STANDARD BASE DITCH
(Not to Scale)

Natural Ground 2:1 D 2:1 Natural Ground
Min. D = 5Ft.
B = 2Ft.

-L- STA. 133+18 LT DDE 84 CY

MATCHLINE -L- STA. 121+50 SEE SHT. 12

BEGIN RETAINING WALL -L- STA. 121+75 ±

END RETAINING WALL -L- STA. 122+25 ±

BEGIN EXPWY GUTTER -L- STA. 122+25.00

END EXPWY GUTTER -L- STA. 123+50.00

BEGIN RETAINING WALL -L- STA. 123+50 ±

END RETAINING WALL -L- STA. 126+20.00 ±

BEGIN WORK PACKAGE 1 SEGMENT 2
-L- STA. 129+30.00

TEMP. IMPACTS

HW

33 TONS CL I RIP RAP W/62 SY GEO

2.0' BASE DITCH (FOR CLEANOUT) SEE DETAIL C

11 TONS CL B RIP RAP W/28 SY GEO

MATCHLINE -L- STA. 134+50 SEE SHT. 14

N 83° 04' 35.0" E

N 72° 20' 58.0" E

22' PAVED ROADWAY RE-ROUTE

GREU TL-2

B-77

ROCKY BROAD RIVER

ISLAND

SOIL HAUL ROAD

-L-	-L-	-L-
PI Sta 124+20.60	PI Sta 129+93.00	PI Sta 133+16.59
Δ = 65° 52' 27.6" (LT)	Δ = 10° 43' 37.0" (RT)	Δ = 24° 32' 00.1" (RT)
D = 12° 54' 16.0"	D = 7° 57' 27.9"	D = 9° 32' 57.5"
L = 510.48'	L = 134.80'	L = 256.91'
T = 287.65'	T = 67.60'	T = 130.46'
R = 444.00'	R = 720.00'	R = 600.00'

SEE SHEET PFL-05 FOR -L- PROFILE VIEW

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING
SHEET 6 OF 8

TS TS — TEMPORARY SURFACE WATER IMPACTS

S S — SURFACE WATER IMPACTS

Note:

The stream previously flowed through a closed system. During Hurricane Helene, the system was destroyed, so the stream carved its own path to the river. The stream is to be placed back into a closed system.

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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NAD 83 NA 2011

SITE 4

BEGIN CONSTRUCTION
-DR3- POT STA.10+35.00

BEGIN CONSTRUCTION
-WINERY_DR- POT STA.10+27.00

BEGIN CONSTRUCTION
-DR4- POT STA.10+25.00

-RABI- STA. 10+00.00=
-L- STA.141+23.61

BEGIN CONSTRUCTION
-Y2- STA.10+45.00

-RABI- STA. 11+21.82=
-Y2- STA.11+67.91

-RABI- STA. 10+80.93=
-L- STA.141+79.18

END PROJECT
-L- POT STA.144+23.39

MATCHLINE
-L- STA. 134+50 SEE SHT. 13

-L- STA.137+18.51=
-DR3- STA. 11+60.00

-L- STA.137+51.25=
-DR3- STA. 11+77.85

-L- STA.139+18.41=
-DR4- STA. 11+20.00

3 TONS CL B RIP RAP
W/11 SY GEO

3 TONS CL B RIP RAP
W/11 SY GEO

4.0' BASE DITCH
SEE DETAIL B

RIP RAP AT EMBANKMENT
SEE DETAIL C

20 TONS CL I RIP RAP
W/39 SY GEO

3 TONS CL B RIP RAP
W/11 SY GEO

TEMP. IMPACTS

END WORK PACKAGE I SEGMENT 2
-L- STA. 140+00.00

ROCKY BROAD RIVER

SOIL HAUL ROAD

STEEL I BEAM (BRIDGE STRUCTURE REMAINS)

NOTE:
-Y3- WILL BE INCLUDED IN FUTURE SUBMITTALS.

DETAIL B
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground
Min. D = 4Ft.
B = 4Ft.
TOT DDE = 190 CY

-L- STA. 129+70 RT DDE 39 CY
-L- STA. 129+77 LT DDE 66 CY
-L- STA. 138+91 RT DDE 82 CY

DETAIL C
RIP RAP AT EMBANKMENT
(Not to Scale)

Ditch Grade, 1.0' min., ≥10' min., 1.5', 6"
Place Geotextile Under Riprap In Locations Directed by Engineer
Press Riprap into Channel Bottom Until Refusal
Type of Liner = 25 TONS,CL 1 Rip-Rap, Keyed-In, 45 SY Geo

FROM STA. 132+82.76 TO STA. 139+04.26

50' 0' 50' 100' 150'
GRAPHIC SCALE

PERMIT DRAWING
SHEET 7 OF 8

TS TS — TEMPORARY SURFACE WATER IMPACTS

S S — SURFACE WATER IMPACTS

Note:

The stream previously flowed through a closed system. During Hurricane Helene, the system was destroyed, so the stream carved its own path to the river. The stream is to be placed back into a closed system.

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

NAD 83 NAVD 2011

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Charlotte, NC 28203
NC License Number F-0991

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SITE 4

BEGIN CONSTRUCTION -DR3- POT STA.10+35.00

BEGIN CONSTRUCTION -WINERY DR- POT STA.10+27.00

BEGIN CONSTRUCTION -DR4- POT STA.10+25.00

-RABI- STA.10+00.00= -L- STA.141+23.61

BEGIN CONSTRUCTION -Y2- STA.10+45.00

END PROJECT -L- POT STA.144+23.39

-RABI- STA.11+21.82= -Y2- STA.11+67.91

-RABI- STA.10+80.93= -L- STA.141+79.18

MATCHLINE -L- STA. 134+50 SEE SHT. 13

-L- STA.137+18.51= -DR3- STA.11+60.00

-L- STA.137+51.25= -DR- STA.11+77.85

-L- STA.139+18.41= -DR4- STA.11+20.00

END WORK PACKAGE I SEGMENT 2 -L- STA.140+00.00

3 TONS CL B RIP RAP W/11 SY GEO

4.0' BASE DITCH SEE DETAIL B

RIP RAP AT EMBANKMENT SEE DETAIL C

20 TONS CL I RIP RAP W/39 SY GEO

TEMP IMPACTS

TEMPORARY 24" HDPE

36" CSP

42" CSP

TB JB wMH

ROCKY BROAD RIVER

SOIL HAUL ROAD

STEEL I BEAM (BRIDGE STRUCTURE REMAINS)

NOTE: Y3- WILL BE INCLUDED IN FUTURE SUBMITTALS

DETAIL B
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 2:1 — D — 2:1 — Natural Ground — B

Min. D = 4Ft.
B = 4Ft.
TOT DDE = 190 CY

-L- STA. 129+70 RT DDE 39 CY
-L- STA. 129+77 LT DDE 66 CY
-L- STA. 138+91 RT DDE 82 CY

DETAIL C
RIP RAP AT EMBANKMENT
(Not to Scale)

Ditch Grade — 1.0 min — ≥10' min. — 1.5' — Place Geotextile Under Riprap in Locations Directed by Engineer — Press Riprap into Channel Bottom Until Refusal

Type of Liner = 25 TONS CL I Rip-Rap, Keyed-In, 45 SY Geo

FROM STA. 132+82.76 TO STA. 139+04.26

50' 0' 50' 100' 150'
GRAPHIC SCALE

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-Y1- 10+67 - 11+58	Prop. Bridge Construction/ Exist Bridge Removal (See Notes)						< 0.01	0.32	50	161	
2	-L- 129+75 - 130+00	54" RCP-IV							0.01		129	
3	-L- 133+14 - 133+32	36" RCP-IV							0.01		108	
4	-L- 138+20 - 142+75	36" CSP ; 36" RCP-III ; 42" CSP ; Rip Rap at Embankment (See Notes)						0.17	< 0.01	552	38	
TOTALS*:								0.18	0.35	602	436	0

*Rounded totals are sum of actual impacts

NOTES:

Site 1: 161' Length of temp. impacts includes 50' permanent impacts length

Site 4: Stream currently conveyed through draw which was created by Hurricane Helene;
Prior to Helene, stream was conveyed through a closed drainage system. Prop. Drainage to restore Pre-Helene conditions

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

10/06/2025
HENDERSON
18313.1081015

SHEET 8 OF 8

Revised 2018 Feb

ESA Consultation

Biological and Conference Opinions and Informal Consultations – Batch Format

Rehabilitate or Replace Multiple Crossing Structures Damaged or Destroyed by Tropical Storm Helene in Henderson and Yancey Counties, North Carolina

Service Log #25-405 through 25-407, 25-138

Prepared by:

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Consultation History

- **December 2, 2024**: Discussion between U.S. Fish and Wildlife Service (Service) and North Carolina Department of Transportation (NCDOT) regarding consultation batching processes and applicable avoidance and minimization and conservations measures for projects related to Tropical Storm (TS) Helene damage.
- **December 3-6, 2024**: Email correspondence between the Service and NCDOT discussing aspects of batching process and need for a virtual discussion.
- **December 11, 2024**: Virtual meeting between NCDOT and the Service to discuss batching process and avoidance and minimization and conservations measures.
- **December 30-31, 2024**: Service asked NCDOT questions about project impact estimates and NCDOT provided responses.
- **January 2, 2025**: Phone discussion between NCDOT and the Service regarding aquatic impact area estimates.
- **January 7, 2025**: NCDOT provided needed information on aquatic impact area estimates.
- **September 4, 2025:** NCDOT submitted batched request for informal and formal consultation to the Service.
- **September 8-10, 2025:** Service requested additional information from NCDOT and answers were provided.

Background

On September 27, 2024, TS Helene moved across a large swath of Western North Carolina (WNC). Extreme rainfall and high winds resulted in catastrophic damage across much of the region. Record flooding occurred throughout several watersheds, destroying thousands of transportation sites as well as homes and entire communities. Widespread landslides and timber fall contributed to the damage. In the wake of this disastrous event, the North Carolina Department of Transportation (NCDOT) is tasked with responding to, repairing, and [to the extent possible] replacing the transportation infrastructure destroyed by TS Helene. The following informal and formal consultations are presented in batched format to streamline and expedite review of one group of many similar projects. The format utilized in this consultation is intended for TS Helene-related projects and is tailored to the unique challenges and constraints precipitated by this event. Biological determinations presented below are based on the best available scientific data at the time of this document and incorporate the expertise of WNC's Service and partner resource agency biologists.

Projects

The table below represents the projects reviewed in this batch of TS Helene-related projects. Work will involve the rehabilitation and/or replacement of damaged or wholly destroyed crossing structures, which may include deck work only or may include minimal tree clearing, grading, demolition, and in-water construction. The current estimated timeline is for these projects to begin in 2025 and be completed by late 2026-early 2027. Additional description of the project-associated activities is provided in Section 2 of this document.

Table 1. Batched Consultation Projects – Crossing Structures

Structure Number	Waterbody	County	Location	Status	Service Log No.
990034	Cane River	Yancey	35.9528, -82.3762	Bridge damaged but remains	25-405
990044	Cane River	Yancey	35.9780, -82.3951	Bridge damaged but remains	25-406
990055	Cane River	Yancey	35.9939, -82.3934	Bridge damaged but remains	25-407
440214	Broad River	Henderson	35.4513, -82.2871	Bridge damaged in need of immediate replacement	*25-138

**Henderson County Bridge 214, Log # 25-138, was reviewed in a previous batched consultation, dated May 13, 2025. NCDOT requested reinitiation due to the inclusion of tree clearing associated with the proposed structure replacement. This consultation on the bridge serves to supersede and replace the original version.*

Informal Consultation

The NCDOT assessed each project location addressed in this document for the presence of suitable habitat for listed species and for the potential effects of project work on listed species with suitable habitat present. The following table outlines the project locations and associated "No Effect" (NE) and "May Affect, Not Likely to Adversely Affect" (NLAA) determinations, with supporting biological rationale.

Table 2. Species NE and NLAA Determinations

Structure Number	Waterbody	Service Log No.	NE and NLAA Species
990034	Cane River	25-405	**NLAA**: Appalachian elktoe (*Alasmidonta raveneliana*) **Rationale**: Suitable habitat present, work not expected to impact habitat or species. **NE**: Small whorled pogonia (*Isotria medeoloides*), Virginia spiraea (*Spiraea virginiana*) **Rationale**: Absence of suitable habitat
990044	Cane River	25-406	**NLAA**: Appalachian elktoe **Rationale**: Suitable habitat present, work not expected to impact habitat or species. **NE**: Small whorled pogonia, Virginia spiraea **Rationale**: Absence of suitable habitat
990055	Cane River	25-407	**NLAA**: Appalachian elktoe **Rationale**: Suitable habitat present, work not expected to impact habitat or species. **NE**: Small whorled pogonia, Virginia spiraea **Rationale**: Absence of suitable habitat
440214	Broad River	25-138	**NE**: Rock gnome lichen (*Gymnoderma lineare*), small whorled pogonia (*Isotria medeoloides*), white irisette (*Sisyrinchium dichotomum*) **Rationale**: Absence of suitable habitat

In instances where suitable habitat is absent from the action area, or where project actions would not result in impacts to suitable habitat within the action area, we agree that NE determinations are appropriate.

Yancey Bridges 034, 044, and 055 span the Cane River and Appalachian elktoe element occurrence locations. These structures will undergo repairs and resurfacing and NCDOT has committed to measures to avoid impacting the spanned waterbodies and Appalachian elktoe habitat therein. These measures are stated in the Conservation Measures section below and serve to support the NLAA determinations.

Designated critical habitat for Appalachian elktoe is present at Yancey Bridge 034, 044, and 055 locations. Based on knowledge of the action area, surrounding portions of the project waters, and the proposed work assessed in this review, the projects will not result in adverse modification (that is, "…no direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of listed species" (50 CFR §402.02)) to Appalachian elktoe designated critical habitat.

We believe the requirements under section 7 of the ESA are fulfilled for the species addressed above in relation to the designated projects. However, obligations under section 7 of the ESA must be reconsidered if: (1) new information reveals impacts of this proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) this proposed action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the proposed action.

A species proposed for listing under the ESA is one that the Service or the National Marine Fisheries Service has determined, based on the best available scientific and commercial data may warrant listing as either endangered or threatened. This proposal is a formal step in the process of providing federal protection to species facing potential extinction across all or a significant portion of their range. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective, the protections set forth in the ESA will apply.

On December 13, 2024, eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*) was proposed for listing as endangered under the ESA. Information provided by NCDOT after the originally submitted consultation request for the subject projects indicates that NCDOT has chosen not to conference on eastern hellbender but will consider the species and coordinate with partner resource agencies if needed as project actions move forward.

Biological Opinion and Conference Opinion

1. Introduction

A biological and conference opinion (Opinion) is the document that states the opinion of the Service in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (ESA), as to whether a Federal action is likely to jeopardize the continued existence of species listed as endangered or threatened; or result in the destruction or adverse modification of designated critical habitat.

This document transmits the Service's biological and conference opinions (Opinion) and is based on our review of the proposal to rehabilitate and/or replace several crossing structures (Table 1) and their effects on the federally endangered gray bat (*Myotis grisescens*), federally endangered northern long-eared bat (*Myotis septentrionalis*), and federally proposed endangered tricolored bat (*Perimyotis subflavus*). This Opinion is based on information provided in the assessment submitted to the Service by the NCDOT, field investigations, correspondence between NCDOT and the Service, communications with experts on the affected species, and other sources of information as cited. The Federal Highway Administration is the lead Federal action agency for these projects, with consultation authority delegated to the NCDOT.

2. Proposed Action

As defined in the Service's section 7 regulations (50 CFR 402.02), "*action*" means "*all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas*." The "*action area*" is defined as "*all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action*." The direct and indirect effects of the actions and activities must be considered in conjunction with the effects of other past and present Federal, state, or private activities, as well as the cumulative effects of reasonably certain future state or private activities within the action areas.

2.1 Action Areas

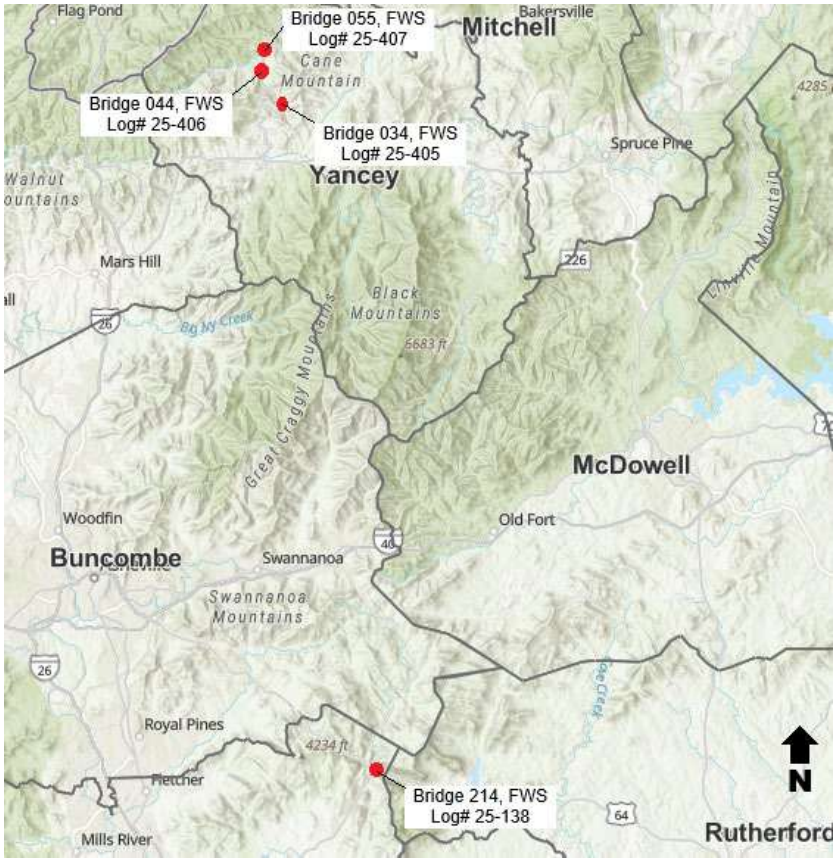
The project action areas are all areas of construction and include any portions of the project waterbodies, as indicated in Table 3, that may be affected by direct or indirect effects. The action areas are comprised of the:

1.) Project construction limits including all project related work such as tree-clearing and grading.
2.) Limits of sedimentation effect, anticipated to extend 100 meters (m) (328 feet (ft)) upstream from each bridge and 400 m (1,314 ft) downstream from each crossing structure [for which in-water work will occur] in each respective river.

Table 3. Projects that are likely to Adversely Affect (LAA) Listed Species

Structure Number	Waterbody	County	Location	Service Log No.	Taxa Determination
990034	Cane River	Yancey	35.9528, -82.3762	25-405	Plants: NE Bats: LAA Aquatics: NLAA
990044	Cane River	Yancey	35.9780, -82.3951	25-406	Plants: NE Bats: LAA Aquatics: NLAA
990055	Cane River	Yancey	35.9939, -82.3934	25-407	Plants: NE Bats: LAA Aquatics: NLAA
440214	Broad River	Henderson	35.4513, -82.2871	25-138	Plants: NE Bats: LAA

Figure 1. Projects that are Likely to Adversely Affect (LAA) Listed Species



2.2 Project Description

The details of the proposed project designs for each of the crossing structures in Table 1 are not yet known, given the mass response/repair/rebuild efforts for the hundreds of infrastructure failure projects due to TS Helene destruction. The scale of destruction from TS Helene, and associated response efforts, compel a batched consultation response, and the design-build process be expedited. Thus, exact designs and associated action area impact details are not known at the time of this review. However, project activities and estimated impacts, based on the "knowns" associated with NCDOT's crossing structure rehabilitation/replacement work, are available. At the time of this consultation, the expectation is that the majority of the replacement bridges will be concrete box beam or cored slab structures and the culvert structures will be the same or similar materials to those previously in place. The general and expected elements of these crossing structure replacement projects are described below. The current estimated timeline is for these projects to be carried out over the next two years.

In-water impacts

Considering the range in structure and waterbody sizes analyzed in this review, and basing amounts on past similarly-sized structure and waterbody NCDOT crossing structure projects in WNC, the estimate of combined temporary and permanent in-water impacts for projects [with in-water work] range from 0.01 – 0.35 acres (or 4,356 – 15,246 square feet) per structure. Some structure replacements will fall in the lower portion of that range of in-water impacts while some will fall in the higher range. These impacts may be in the form of work pad causeways, bent removal and/or placement, and placement of stream-bank stabilization materials.

Tree Clearing, Access Roads, and Demolition
The maximum estimate for tree clearing at structure replacement locations is 0.10 acre. That amount will likely be less at most locations, given the variability in site conditions and the extreme scour (and resulting loss of riparian vegetation) during TS Helene flooding. The season during which clearing will occur is not known for each location. Clearing and grading will occur to allow for access roads and general construction functionality.

Where damaged structures or portions of damaged structures remain in place, demolition will occur. The details of demolition activities and seasonality of demolition will vary by project.

2.3 Avoidance and Minimization and Conservation Measures

NCDOT will employ the following agency Standards, Guides, and Best Practices to avoid and minimize project mediated activities that could negatively impact listed/proposed species or their habitat.

2.3.1 Avoidance and minimization measures (AMMs)

General (regardless of species): The following General AMMs will be implemented on all projects to minimize impacts to listed/proposed species and habitat:

- General AMM1 - NCDOT will ensure that all operators, employees, and contractors working in areas of suitable habitat for federally listed/proposed species are aware of all NCDOT environmental commitments, including all applicable AMMs and all associated NCDOT guidance documents.

- General AMM2 - Best management practices (BMP) and sediment and erosion control (SEC) measures will be utilized to prevent non-point source pollution, control storm water runoff, and minimize sediment damage to avoid and reduce overall water quality degradation.

- General AMM3 - Areas of disturbance, such as tree clearing, grubbing, and grading, will be limited to the maximum extent possible.

Bats - The General AMMs will minimize impacts to listed and proposed bat species. **To the maximum extent possible**, the following AMMs will also be incorporated into project work – though implementation of all bat AMMs below cannot be guaranteed at the time of this consultation, given the scale, scope, and timeline constraints addressed previously.

- Bat AMM Noise - Percussive activities will occur only after tree clearing within the action area has been completed, helping to reduce the exposure of any tree-roosting bats within the action area to high decibel noise.

- Bat AMM Lighting - No new lighting will be added to the action area. Any lighting needed for night work will be directed at the work area and shielded from surrounding waters/landscape, only on when needed, no brighter than necessary, and blue light emissions will be limited.

- Bat AMM Riparian Planting - Disturbed riparian areas will be replanted with native, fast-growing tree and shrub species where feasible, with the understanding that plantings likely cannot be done in utility/drainage/construction easements.

Aquatics- The General AMMs above will minimize impacts to listed/proposed aquatic species. **To the maximum extent possible**, the following AMMs will also be incorporated into project work, as appropriate – though implementation of all aquatic AMMs below cannot be guaranteed at the time of this consultation, given the scale, scope, and timeline constraints addressed previously.

- Aquatic AMM Structure - Structure will be built in the same location as the previous structure, with minimal impact [such as in-water bents] to water resource, built to NCDOT's current improved highway and hydraulic standards.

- Aquatic AMM Equipment - Heavy machinery will not be utilized within the waterbody. Additionally, staging and storage areas for equipment and materials will be managed in such a way to ensure that potential spills and leaks do not have access to the waterbody.

- Aquatic AMM Temporary and Permanent Fill - Any temporary fill (i.e. causeways) or permanent (i.e. bents/piers) fill in excess of what was previously present will be avoided and minimized to the maximum extent possible.

- Aquatic AMM Abutments - Existing abutments will be completely removed unless removal results in destabilizing of banks or increases the adverse effect to listed/proposed aquatic species.

- Aquatic AMM Deck Drains - Deck drains that empty directly to the waterbody below will not be included in new bridge designs. Surface water drainage transport will be designed to incorporate improved treatment prior to drainage entering the waterbody.

- Aquatic AMM Erosion Control Matting - Coir fiber matting will be utilized instead of plastic or other synthetic matting.

- Aquatic AMM Resurfacing – All possible measures will be implemented to keep materials from entering the waterbody during repair work. Methods may include: employing a wet saw for concrete cuts, reducing dust, and a wet vacuum truck to remove the wet material generated by the wet saw prior to that material leaving the work area. In instances of deck holes, a containment system will be installed that seals the underside of the hole before the placement of concrete mix above.

2.3.2 Conservation Measures (CMs)

CMs represent actions, pledged in the project description, that the action agency will implement to further the recovery of the species under review. The beneficial effects of CMs are considered in making determinations of whether the projects will jeopardize the species under consideration in this document.

Bat CM - Tree Clearing Bat Fund Contribution: For individual bridge projects that are LAA bat species during tree removal, the NCDOT will contribute a payment* to the N.C. Nongame Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally protected bat species.

Bat CM - Structure Removal Bat Fund Contribution: For individual bridge projects that are LAA bat species during structure removal, the NCDOT will contribute a payment** to the N.C. Nongame

Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally listed bat species.

*Contributions made will be based on a 2:1 ratio multiplier specified for the non-volant pup season (May 15-July 31). This ratio offers the most protective coverage based on the current unknowns surrounding time-of-year clearing. The amount will be determined using the United States Department of Agriculture Farm Real Estate Value for North Carolina for 2024 ($5,190/acre).
https://www.nass.usda.gov/Publications/Todays_Reports/reports/land0824.pdf
If tree clearing amount is unknown, an assumed clearing acreage of 0.1 acre will be used based on estimates from previous clearing work at crossing structures (NCDOT 2015). The formula is calculated as follows:
$5,190 x 0.1 ac = 519 x 2 (critical life stage multiplier) = $1,038 contribution.

**Structures with documented bat use are generally larger than the average bridge, with a median size of 0.10 acre (length x width) (Service 2020b). Therefore 0.10 acre per crossing structure is used to calculate the amount of suitable bat habitat lost for projects involving structure impacts. However, the impacts to bats that may be displaced during structure demolition/construction are considered temporary in nature because the replacement structures are understood to provide adequate roosting habitat, as addressed in the project description. Additionally, the structures being analyzed here are all damaged and understood to provide reduced areas of suitable bat roosting habitat. Therefore, the 1.5:1 ratio multiplier was determined to be appropriate. If the structures are demolished between March 15 – November 15 (the period during which gray bats could be present on the landscape, which also encompasses the northern long-eared bat and tricolored bat active seasons) a structure-related payment will be made; if not, no structure-related payment will be made. The formula is calculated as follows: $5,190 x 0.1 ac = 519 x 1.5 (temporary impact multiplier) = $779 contribution/structure.

3. Status of the Species

This section summarizes best available data about the biology and current condition of the gray bat (*Myotis grisescens*), northern long-eared bat (*Myotis septentrionalis*), and tricolored bat (*Perimyotis subflavus*) throughout their ranges that are relevant to formulating an opinion about the actions. More in-depth species information such as species status assessments can be found at the species-specific pages at the Service's Environmental Conservation Online System (ECOS): ecos.fws.gov/ecp/

3.1 Gray Bat

Scientific Name: *Myotis grisescens*
Status: Endangered
Date of Listing: April 28, 1976
Critical Habitat: None designated

3.1.1 Description and Life History

The gray bat is a medium-sized insectivorous bat with an overall length of about 3.5 inches and a wingspan of 10 to 11 inches. As the name implies, gray bats have gray fur, but the hair often bleaches to reddish-brown by early summer. The gray bat largely occurs in limestone karst areas, meaning a landscape marked by caves, sinkholes, springs and other features, of the southeastern and midwestern United States.

Gray bats use caves year-round for roosting and hibernating. Seasonal occupancy of caves differs between summer roost and winter hibernacula, and gray bats are known to migrate more than 300 miles

between the two. While gray bats are predominantly found roosting in caves, they are known to roost in structures including buildings, bridges and culverts. Bats emerge from summer roosts early in the evening and forage along waterbodies adjacent to forested areas. The species has been documented traveling from a few miles to 20 or more miles between their day roosts and nightly foraging areas.

Adult bats mate upon arrival at the wintering caves in September or early October. Hibernation occurs in deep vertical caves in the winter, where colder temperatures are preferable. Gray bats require consistently cold temperatures to maintain hibernation and conserve energy in the winter months. The adult females will emerge from hibernation in late March or early April. At that time, the females who have mated will begin their pregnancy, dispersing to maternity caves. Males and juveniles emerge shortly after the females and disperse to bachelor caves. Gray bats are documented using bridges and culverts as roosting habitat during the spring, summer, and fall and show strong philopatry to their summer ranges and typically use the same roost sites year after year (Tuttle 1976; Martin 2007). Gray bats are most observed in bridges with concrete and their preferred roosting location is in the vertical expansion joints of a bridge deck above piers (NCDOT 2023a), though they can also roost in clogged deck drains and other sheltered areas on crossing structures. According to approximately 2,000 bridge surveys conducted throughout WNC from 2000 - 2023, gray bats have been recorded roosting in bridges at a usage rate of 3% (NCDOT 2023a), with bridge use observed in the covered area from March – November. Up to 1,000 individuals, including males and females, have been observed day-roosting throughout the summer in expansion joints between box beams at two separate bridges (Weber et al. 2020). Sporadic summer use of other concrete type bridges has also been noted for smaller numbers of day-roosting gray bats (NCDOT, 2023a). Gray bats have also been observed within culverts, most commonly of concrete material.

Gray bats primarily forage over open water bodies, such as rivers, streams, lakes, and reservoirs, and associated riparian areas (Tuttle 1976; LaVal et al. 1977; Weber et al. 2020). On a macroscale, gray bats feed in aquatic-based habitats where specific types of insect prey are abundant (Brack and LaVal 2006). Bats typically travel individually or in small groups that forage in an area for a short period before moving to another area. Studies suggest that gray bats visit multiple foraging areas during the night and travel frequently between these areas.

3.1.2 Status and Distribution

The primary range of gray bats is concentrated in the cave regions of Alabama, Arkansas, Kentucky, Missouri and Tennessee, though its overall range stretches from Virginia to Oklahoma, and Missouri to Alabama. WNC is on the eastern edge of the bat's range. In North Carolina, the gray bat is currently documented from 14 western counties and is possible in an additional 10 counties. Most gray bat occurrences in WNC are centered on the French Broad and Pigeon River watersheds. Gray bats are generally present in North Carolina from March 15 to November 15, when they leave for winter hibernacula. It is believed that many of the gray bats in North Carolina migrate to hibernacula in Tennessee, using the French Broad River as a commuting pathway. The closest active hibernaculum is near Newport, Tennessee (Weber et al. 2020), approximately 20 miles from the border with Haywood and Madison Counties in North Carolina.

Ellison et al. (2003) of the U.S. Geological Survey (USGS) statistically analyzed 1,879 observations of gray bats obtained from 334 roost locations in 14 south-central and southeastern states. They determined that 94.4% of the populations showed stable or increasing populations while 6% revealed a decreasing population. For populations where there was a downward population trend, decreases in population numbers were mostly attributed to continued problems with human disturbance. This increasing population trend has been reflected in the work of Sasse et al. (2007), Martin (2007), and again by Elliott

in 2008 in looking at high-priority caves. It is estimated that more than 95% of the species range-wide population hibernate in only 9 caves.

Emergence counts conducted by Indiana State University researchers at known roosts in WNC from 2018-2019 suggested there were at least 2,820 gray bats in the French Broad River basin (Weber et al. 2020). Due to 2024 flooding associated with TS Helene, these numbers may be significantly lower now, though at the time of this document, the impacts from Helene on imperiled species numbers are still unknown. Throughout WNC, there are 58 current element occurrences of the gray bat based on N.C. Natural Heritage Program, North Carolina Wildlife Resources Commission (NCWRC), and NCDOT records; most are from built structures (largely bridges). The number of gray bats found at each occurrence range from 1 to about 1,500 bats, with some roosts surveyed in the Weber et al. (2020) study hosting >1,000 gray bats during certain times of the season. The most recent winter population estimate of gray bats in the closest hibernaculum to the action area (Rattling Cave, near Newport TN) was 250,689 bats (TWRA 2019).

3.1.3 Threats

Cave disturbance and alteration, loss of forested habitat, pollution of waterways, and significant natural factors including those caused by climate change (flooding, freezing, and forest destruction) are threats to gray bats. Gray bats have been infected by the invasive fungus *Pseudogymnoascus destructans,* the causative agent of white-nose syndrome (WNS), a fungal disease contributing to the declines of several bat species in the U.S.; however, WNS is not considered a major threat to the species.

3.2 Northern long-eared Bat

Scientific Name: *Myotis septentrionalis*
Status: Endangered
Date of Listing: April 1, 2015 as Threatened; November 30, 2022 as Endangered
Critical Habitat: None designated

3.2.1 Description and Life History

The northern long-eared bat is a wide-ranging species, found in 37 states and eight provinces in North America. The species typically overwinters in caves and mines and spends the remainder of the year in forested habitats. As its name suggests, the northern long-eared bat is distinguished by its long ears, particularly as compared to other bats in the genus *Myotis*.

Northern long-eared bats are a forest bat species that roosts in a variety of forest types and structures. They are known to roost in trees and have also been documented using roost sites such as buildings, artificial roosts, and bridges. During the active season, northern long-eared bats typically roost singly or in maternity colonies underneath bark or more often in cavities or crevices of both live trees and snags (Service 2023). Males' and non-reproductive females' summer roost sites may also include cooler locations, such as caves and mines (Service 2023). According to approximately 2,000 bridge surveys conducted throughout western North Carolina from 2000 - 2023, northern long-eared bats have been recorded roosting in western North Carolina bridges at a usage rate of 0.2% (NCDOT 2023a) with use documented to occur from May - October. With one exception, all bridge roost records in North Carolina are associated with a water crossing. There are no records of northern long-eared bats roosting in culverts in North Carolina, though they have been documented using culverts in other states. Northern long-eared bats will overwinter in caves or mines and have been documented using railroad tunnels, storm sewers, and bunkers. Length of hibernation varies depending on location. They may hibernate singly or in small groups and can be found hibernating in open areas but typically prefer caves with deep crevices, cracks,

and bore holes that protect from drafts. They typically hibernate from September or October to March or April. More than 780 hibernacula have been documented within the northern long-eared bat range.

Prior to hibernation, between mid-August and mid-November, bat activity will increase during the evenings at the entrance of a hibernaculum (fall swarming). Suitable fall swarming habitat is like roosting, foraging, and commuting habitat selected during the summer and is most typically within 4-5 miles of a hibernaculum (Service 2023). Likewise, in the spring they emerge from and stage near hibernacula before moving to maternity areas typically in early April to mid-May; however, they may leave as early as March. Northern long-eared bats also roost in trees near hibernacula during spring staging, and Thalken et al. (2018) found that roost trees were situated within 1.2 miles (2km) of hibernacula during spring staging and the early maternity season. The species migrates relatively short distances between maternity areas and hibernacula.

Northern long-eared bats are more likely to forage under the canopy on forested hillsides and ridges (Nagorsen and Brigham 1993) rather than along riparian areas (Brack and Whitaker 2001; LaVal et al. 1977). Because of this, alternative water sources like seasonal woodland pools may be an important source of drinking water for these bats (rather than just streams and ponds; Francl 2008). Mature forests may be an important habitat type for foraging (Service 2015). Northern long-eared bats have a diverse diet including moths, beetles, flies, leafhoppers, caddisflies, and arachnids (Service 2020a), which they catch while in flight or by gleaning insects off vegetation (Ratcliffe and Dawson 2003).

3.2.2 Status and Distribution

The species' range includes all or portions of 37 eastern and mid-western states and the District of Columbia in the U.S. The northern long-eared bat's range also includes eight Canadian provinces. In WNC, the species range includes all or portions of 26 counties in the western portion of the state.

Prior to the emergence of WNS, northern long-eared bat was abundant and widespread throughout much of its range with 737 occupied hibernacula, a maximum count of 38,181 individuals and its range being spread across >1.2 billion acres in 29 states and 3 Canadian provinces. Numbers vary temporally and spatially, but abundance and occurrence on the landscape were stable (Cheng et al. 2022, p. 204; Wiens et al. 2022, p. 233). Currently, declining trends in abundance and occurrence are evident across much of northern long-eared bat's summer range. Range-wide summer occupancy declined by 80% from 2010–2019. Data collected from mobile acoustic transects found a 79% decline in range-wide relative abundance from 2009–2019 and summer mist-net captures declined by 43–77% compared to pre-WNS capture rates.

There are approximately 169 element occurrences for northern long-eared bat in NC, based on N.C. Natural Heritage Program records, 19 of which are considered historical. The number of bats found at each occurrence ranges from one to more than 80. There have been 22 documented hibernacula, all in caves or mines; however, northern long-eared bats have not been observed using hibernacula in North Carolina since 2014 (NCWRC personal communication September 2022). The Service estimates that there has been an occupancy drop of 85% and a 24% loss of winter colony sites across the Southeast Representation Unit (RPU) overall since 2006 when white-nose syndrome was first documented (Service 2022a).

3.2.3 Threats

The primary factor influencing the viability of the northern long-eared bat range-wide population is WNS. Other primary factors that influence the decline in northern long-eared bat numbers include wind energy mortality, effects from climate change, and habitat loss.

3.3 Tricolored Bat

Scientific Name: *Perimyotis subflavus*
Status: Proposed Endangered
Date of Proposed Listing: September 14, 2022
Critical Habitat: None proposed

3.3.1 Description and Life History

The tricolored bat is one of the smallest bats in North America. The once common species is wide-ranging across the eastern and central US and portions of southern Canada, Mexico and Central America. As its name suggests, the tricolored bat is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle and dark at the tip.

During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. Additionally, tricolored bats have been observed roosting among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roost structures, beneath porch roofs, bridges, concrete bunkers, and rarely within caves. Female tricolored bats form maternity colonies and switch roost trees regularly. Maternity colonies typically consist of one to several females and pups. They usually have twins in late spring or early summer, which are capable of flight in four weeks.

During the winter, across much of their range tricolored bats hibernate in caves and mines; although, in the southern United States, where caves are sparse, they often hibernate in culverts, as well as sometimes in tree cavities and abandoned water wells. In the southern US, hibernation length is shorter compared to northern portions of the range. Hibernating tricolored bats do not typically form large clusters; most commonly roost singly, but sometimes in pairs, or in small clusters of both sexes away from other bats (Service 2021). Tricolored bat hibernacula following population crashes from WNS generally host <100 individuals (Service 2021), though solitary hibernation can often occur with this species (Whitaker and Hamilton 1998).

Before entering hibernacula for the winter, tricolored bats demonstrate ‘swarming’ behavior. The peak swarming period for tricolored bats in much of WNC/eastern Tennessee generally starts in mid to late August and extends into November and is a sensitive period for bats. Suitable fall swarming habitat is like roosting, foraging, and commuting habitat selected during the summer. Spring staging is the time period between winter hibernation and spring migration to summer habitat (Service 2023). During this time, bats begin to gradually emerge from hibernation, exit the hibernacula to feed, but re-enter the same or alternative hibernacula to resume daily bouts of torpor (state of mental or physical inactivity). Tricolored bats also roost in trees near hibernacula during spring staging.

Tricolored bats are opportunistic feeders and consume small insects including caddisflies, moths, beetles, wasps, flying ants and flies. The species most commonly forages over waterways and along forest edges.

3.3.2 Status and Distribution

Tricolored bats have a very wide range that encompasses most of the eastern US from Canada to Florida and west to New Mexico (39 states). They can be found throughout North Carolina and are one of the most encountered cave-dwelling species seen in winter, albeit at much lower densities than prior to the arrival of WNS in the state.

There are 147 NC element occurrences of the tricolored bat based on N.C. Natural Heritage Program records, seven of which are considered historical. The number of bats found at each occurrence range from 1 to 3,000 bats. There have been 79 tricolored bat hibernacula documented, including caves (50), mines (22), root cellars (4), and culverts (3). According to approximately 2,000 bridge surveys conducted throughout western North Carolina from 2000 - 2023, tricolored bats have been recorded roosting in bridges at a usage rate of 1.3% (NCDOT 2023a). Tricolored bat bridge use has been documented to occur in western North Carolina from April – October (with one outlier record from 2013 citing February use). Approximately 900 culvert surveys have been conducted in western North Carolina from 2010 – 2023 (NCDOT 2023b) with year-round data coverage. Tricolored bats have been found using culverts in western North Carolina, again at a relatively low rate (0.8% observed use). Culvert use has been observed in western North Carolina from January – April.

For tricolored bats, the Service split the bat's range into three Representation Units (RPUs), two of which, the Northern and Southern RPUs, include the western and eastern halves of WNC, respectively. The Service estimates that, since 2006, the Northern RPU has experienced a 17% decline in summer occupancy and a 57% decline in the number of winter colonies, while the Southern RPU has experienced a 37% decline in summer occupancy and a 24% decline in the number of winter colonies (Service 2021).

3.3.3 Threats

WNS is the primary driver of the species' decline and is predicted to continue to be the primary influence into the future. Wind energy-related mortality is also considered a consequential driver to the bat's viability. Although habitat loss is considered pervasive across the species' range, severity has likely been low given historical abundance and spatial extent; however, as tricolored bat's spatial extent is projected to decline in the future (i.e., consolidation into fewer winter and summer colonies) negative impacts (e.g., loss of a hibernaculum or maternity colony) may be significant.

4. Environmental Baseline

The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process [50 CFR §402.02].

The project action areas contain the existing crossing structures and the roadway approaches, along with the existing utilities and surrounding riparian areas in which project work will occur, and are located in the Environmental Protection Agency Blue Ridge Ecoregion in WNC. Past impacts include the original construction and placement of the crossing structures within waterbodies to facilitate transportation in the surrounding locations. Because this document addresses several projects, more detailed information regarding other human activities at each location is not included for the purposes of this consultation review.

4.1 Listed and Proposed Bats Within the Action Areas

Structures

Portions of the damaged crossing structures remain in place; however, suitable structural roosting habitat on all structures is extensively reduced and degraded from pre-storm conditions. For gray bats, primary roost structures can support several hundred to over 1,000 individuals, but most structures with observed gray bat roosting in WNC contain only one to 10 individuals. The bridges or culverts that support higher numbers of gray bats are typically larger than average. The northern long-eared bats observed roosting on bridges in WNC is between 1 and 2 individuals at any given time. In more detail, Natural Heritage data shows 1 bridge roost location in Graham County, 1 in Madison, and 2 in Swain (all pre-WNS except 1 Swain County location). There are currently no culvert roosting records for northern long-eared bat in NC. Tricolored bats are known to roost on both bridges and culverts typically between 1-2 individuals per structure. Within the action areas of these damaged crossing structures, given the degraded and reduced roosting habitat available, and based on existing WNC data, it is estimated that one individual per species could be present within each structure at each crossing location.

Trees

Gray bats are not considered "tree-roosting" species. While individuals have been observed utilizing trees in rare occasions, they are generally considered a cave/structure-specific roosting species; therefore, no gray bats are expected to be roosting in trees within the action areas. Northern long-eared bats and tricolored bats roost in trees during the warmer months. Tree clearing is not anticipated for the Yancey County bridges reviewed in this batched consultation. Henderson Bridge 214 is expected to involve tree clearing, with estimates of clearing no more than 0.1 acres. Given the minimal amount of riparian vegetation and trees remaining within the action areas, it is unlikely that high number of bats would be utilizing the small amount of available habitat. Based on that rationale, 1 individual per species (of northern long-eared bat or tricolored bat) could be present in trees within the action area per crossing structure location.

5. Effects of the Action

Under section 7(a)(2) of the ESA, "effects of the action" refers to the consequences, both direct and indirect, of an action on the species or critical habitat. The effects of the proposed action are added to the environmental baseline to determine the future baseline, which serves as the basis for the determination in this Opinion. Should the effects of the Federal action result in a situation that would jeopardize the continued existence of the species, we may propose reasonable and prudent alternatives that the Federal agency can take to avoid a violation of section 7(a)(2).

5.1 Gray Bat, Northern Long-eared Bat, and Tricolored Bat

5.1.1 Proximity of the Action, Nature of the Effect, and Disturbance Duration for Bats

Based on the description of the action and the species' biology, stressors to gray bat, northern long-eared bat, and tricolored bat have been identified and are shared below. The proximity of these actions will be within the entire action area of each project, including the structures, waterways, riparian zone, and any existing forested areas. Duration of disturbance is expected primarily during the construction phase of project work.

5.1.2 Effects Analysis for Bats

Replacement structures: Due to the constraints associated with the TS Helene response, such as the high volume of projects and timeline unknowns, the exact designs of replacement crossing structures are not

known at the time of this document. However, according to information provided by NCDOT, most replacement bridge structures are expected to be either cored slab or box beam bridges. Such precast concrete bridges may provide suitable bat roosting habitat depending on factors such as spacing between beams/girders, arrangement above any bents, and other design elements that could result in potential roosting crevices. Generally, concrete is a favorable material for roosting due to its thermal stability.

Direct Impacts – Direct effects are caused by the action and occur at the same time and place (50 CFR 402.02).

Structure Work
The repair or demolition of remaining portions of structures, if conducted while bats are present, could result in causing bats to flush, which would expose them to risk of predation and would cause increased energy expenditure and create the need for bats to find alternative roost locations. It could also result in physical wounding or death. High-decibel percussive noises associated with demolition or construction may cause nearby roosting bats to flush, exposing them to harm and increased energy expenditure. Additionally, while adults may be able to flush, any non-volant pups present would be left behind with mortality as the likely outcome. In summary, these activities, should they occur while bats are present, are likely to adversely affect gray bat, northern long-eared bat, and tricolored bat in the form of harm.

Tree Removal
The removal of suitable roost trees, if conducted while northern long-eared bats, or tricolored bats are present, could result in causing bats to flush, which would expose them to risk of predation, would cause increased energy expenditure, and create the need for bats to find alternative roost locations. It could also result in physical wounding or death. Given the presence of alternative forested habitat near the action areas, bats could likely find trees for roosting. Harm would be expected in the increased exposure to predation from flushing and from the potential for wounding or killing when trees are felled. Additionally, while adults may be able to flush, any non-volant pups would be left behind and would likely perish. In summary, these activities, should they occur while bats are present, are likely to adversely affect northern long-eared bat and tricolored bat in the form of harm.

Indirect Impacts – Indirect effects are defined as those that are caused by the proposed action and are later in time but are still reasonably certain to occur (50 CFR 402.02).

If bats were utilizing structures or trees (when considering northern long-eared bat and tricolored bat) within the action areas as roost sites prior to demolition/clearing/construction and return to those roost sites to find the habitat gone or altered, the bats may then have to expend extra energy in finding alternative roosting areas. While this could occur, it is considered unlikely to result in adverse effects given that replacement structures are expected to offer suitable roosting features, and alternative forested habitat is available near the action areas.

Operational Effects
Because these projects are limited to the replacement of damaged or destroyed crossing structures and their approaches, which will not result in changes to traffic volumes, any operational effects above the existing baseline conditions are not expected to occur; or, if they do occur, are expected to be minimal.

5.2 Cumulative Effects
Cumulative effects are defined as "those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to

consultation" (50 CFR 402.02). Future federal actions unrelated to the proposed action are not considered because they require separate consultation pursuant to Section 7 of the ESA.

These structure repairs and replacements are not expected to induce land development or substantially change the function of the roadways. Any potential effects are anticipated to be localized and consistent with baseline land use patterns. Many private landowners and local governments are recovering from TS Helene and rebuilding homes/businesses and infrastructure. Therefore, there will likely be increased construction in WNC Counties for an undefined period of time. Some of this work will be conducted during seasons when bats are active on the landscape, potentially increasing exposure to construction-related stressors. However, other effects from these private actions cannot be determined at this time.

6. Conclusion and Jeopardy Determination

After reviewing the current status of gray bat, northern long-eared bat, and tricolored bat, the environmental baselines for the action areas, the effects analyses and cumulative effects, the Service's biological and conference opinions are shared below.

6.1 Gray Bat, Northern Long-eared Bat, and Tricolored Bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the ESA. As a result, NCDOT requested a conference for the tricolored bat as the projects may be on-going after the effective date of any final listing rule, if one is published. It is the Service's biological and conference opinion that the proposed actions are not likely to jeopardize the continued existence of gray bat, northern long-eared bat, or tricolored bat. This opinion is based on the following factors: Effects of the actions occur as a result the planned repair of Yancey County bridges 034, 044, and 055 and replacement of Henderson County bridge 214. These action areas comprise only a small amount of active season habitat within the overall ranges of these species. No changes in the long-term viability of gray bat, northern long-eared bat, or tricolored bat are expected because, given the low numbers of each species which could be expected to occur at each crossing structure location (that is, an estimate of 1 individual per species per structure and an estimate of 1 northern long-eared bat and 1 tricolored bat per forested area within the Henderson bridge 214 action area), and the occurrence range-wide of each species – gray bat in 14 states, northern long-eared bat in 37 states, and tricolored bat in 39 states as well as in portions of other North and Central American countries – only a miniscule percentage of those overall populations may be affected. Crossing structure construction activities are likely to negatively affect gray bat, northern long-eared bat, and tricolored bat within the action areas, but the incorporated conservation measures are expected to reduce impacts.

7. Incidental Take Statement

Section 9 of the Endangered Species ESA and Federal regulations pursuant to section 4(d) of the Endangered Species Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take "*means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct*" (16 U.S.C §1532). Harm is further defined by the Service as "*an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering*" (50 CFR 17.3). Incidental taking "*means any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity*" (50 CFR 17.3). Harass is defined by the Service as "*an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding,*

feeding or sheltering" (50 CFR 17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered to be prohibited under the Endangered Species Act, provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

7.1 Amount of Take for Gray Bat, Northern Long-eared Bat, and Tricolored Bat

The Service anticipates incidental take of gray, northern long-eared, and tricolored bats may result from the repair or demolition (if applicable) and construction of crossing structures 034, 044, 055 (Yancey County) and 214 (Henderson County). Specifically, take of these species may occur as a result of flushing, wounding, or direct mortality during demolition activities (if applicable); or, at Henderson County structure 214, for northern long-eared bat and tricolored bat, take may occur as a result of clearing suitable roost trees during times of year that these bats could be tree-roosting within the action area, which may similarly result in flushing, wounding, or direct mortality during clearing activities.

Incidental take of bats is difficult to measure or detect given that 1) the animals are small, cryptic, and generally difficult to observe, 2) finding dead or injured bats during or following project implementation is unlikely, and 3) some incidental take is in the form of non-lethal harm and not directly observable. Given this, the 1) maximum estimated tree clearing (for northern long-eared bat and tricolored bat only) and 2) number of structures replaced, are used as surrogate measures of take for this Opinion. Additionally, as discussed in the Environmental Baseline, no more than one individual of gray bat or two individuals of northern long-eared bat or tricolored bat (given structure and tree roosting) are estimated to be present within the action areas of each crossing structure.

Therefore, the incidental take permitted by the Opinion would be exceeded if:

1. Tree clearing amount exceeds 0.10 acre at a single structure location for Henderson County Bridge 214.*
2. Any more than one structure is repaired/demolished/replaced per crossing structure, as listed at the beginning of section 7.2.

**For northern long-eared bat and tricolored bat only*

Exceedance of take as defined above will represent new information that was not considered in this Opinion and shall result in reinitiation of this consultation. The incidental take of gray bat, northern long-eared bat, and tricolored bat is expected to be in the form of harm, wounding, or death.

7.2 Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take of gray bat, northern long-eared bat, and tricolored bat. These non-discretionary measures reduce the level of take associated with project activities and include only actions that occur within the action area.

1. NCDOT shall ensure that the contractor(s) understands and follows the measures listed in the "Conservation Measures", "Reasonable and Prudent Measures," and "Terms and Conditions" sections of this Opinion.
2. NCDOT shall minimize the area of disturbance within the action areas to only the area necessary for the safe and successful implementation of the proposed actions.
3. NCDOT shall monitor and document any take numbers and the surrogate measures of take and report those to the Service in a batched format.

7.3 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Applicant must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and/or monitoring requirements. When incidental take is anticipated, the terms and conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). These terms and conditions are nondiscretionary. If this conference opinion is adopted as a biological opinion following a listing or designation, these terms and conditions will be non-discretionary.

1. NCDOT shall adhere to all measures as listed in the Avoidance and Minimization and Conservation Measures section as summarized in this Opinion.
2. The NCDOT will immediately inform the Service if the amount or extent of incidental take in the incidental take statement is exceeded.
3. When incidental take is anticipated, the Terms and Conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). In order to monitor the impact of incidental take, the NDOT must report the action impacts on the species to the Service according to the following:
    a. The NCDOT will submit a report each year not later than September 30 identifying, per individual project (via Service Log # and NCDOT identifiers), the following for the preceding calendar year ending December 31:
        i. Acreage and dates of tree removal (if any), if LAA for bats (excepting gray bat).
        ii. Dates of structure repair/removal (if any), if LAA for bats.
        iii. List of implemented AMMs and BMPs [as listed in Section 2.3].

8. Conservation Recommendations

Section 7(a)(l) of the Endangered Species ESA directs Federal agencies to use their authorities to further the purposes of the Endangered Species ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- **Species of Concern**: Henderson County bridge 214 location shows element occurrence of crevice salamander (*Plethodon longicrus*), a NC state species of special concern. Additionally, element occurrence for hickory nut gorge green salamander (*Aneides caryaensis*, HNGGS) is present approximately 475 feet upstream from the project location. HNGGS is a NC state endangered species and is also under review for federal listing at this time. Yancey County bridge 055 has element occurrence record of eastern small-footed bat *(Myotis leibii leibii*), a NC state species of special concern. While these species are not currently afforded legal protection under the ESA, we recommend the most protective work plans for avoiding and minimizing impacts to the species and the habitat that supports them; and we encourage NCDOT to coordinate any such efforts with the Service and with NCWRC.
- **Refueling and Materials Storage**: Refuel construction equipment outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and protected with secondary containment. Store hazardous materials, fuel, lubricating oils, or other chemicals outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater).
- **Provide Terrestrial Wildlife Passage**: Where riparian corridors suitable for wildlife movement occur adjacent to a project, a spanning structure that also spans a portion of the floodplain and provides or maintains a riprap-free level path underneath for wildlife passage would provide a safer

roadway and facilitate wildlife passage. A 10-foot strip may be ideal, though smaller widths can also be beneficial. Alternatively, a “wildlife path” can be constructed with a top-dressing of finer stone (such as smaller aggregate or on-site alluvial material) to fill riprap voids if full bank plating is required. If a multi-barrel culvert is used, the low flow barrel(s) should accommodate the entire stream width and the other barrel should have sills to the floodplain level and be back-filled to provide dry, riprap-free wildlife passage and well as periodic floodwater passage.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

9. Reinitiation Notice

This concludes formal consultation on the action(s) outlined in the consultation request dated December 12, 2024. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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Archaeology

Project Tracking No.:

25-01-0033

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:	**Br. No. 214**	*County:*	**Henderson**
WBS No:	**18314.1045042**	*Document:*	**CE**
F.A. No:	**tbd**	*Funding:*	☐ State ☒ Federal

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

Project Description:

NCDOT proposes to reconstruct Bridge No. 214 on US 64, Chimney Rock Road, over the Broad River in eastern Henderson County near Bat Cave. This bridge was damaged by Hurricane Helene related flooding in late 2024. This urgent repair for the bridge was previously included within the boundaries considered for PA 24-11-0012, the reestablishment of the US 64/US 74 route destroyed by Hurricane Helene which parallels the Broad River from Bat Cave to Chimney Rock in Henderson and Rutherford Counties. No survey was recommended for that larger project due the lack of known archaeological sites and the extensive reforming of the landscape following the flooding. Federal funding and USACE coordination are both expected for this project. Section 106 of the National Historic Preservation Act applies for this expedited federal undertaking.

For the Archaeological Area of Potential Effects (APE), this investigation considers all areas of potential earth disturbing activities, including all the current and any proposed new ROW. While there were no design plans available at the time of this review, the bridge is expected to be built at the same location and alignment. The APE length end to end is about 380 feet (0.07 miles). The APE width, allowing for restructuring the possibly compromised landform or shifts in alignment, is 110 feet.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

Note, this APE falls completely within a previously reviewed, larger project covering restoration of the US 64/US 74Alt highway and associated crossings. No archaeological survey was recommended for that undertaking due in large part to the extensive earthmoving that occurred during the Hurricane Helene floods which washed away portions of the terrain and roadways, and redeposited fresh, high-energy alluvium. The information below is drawn from PA 24-11-0012 for repairs to the highway from Chimney Rock to Bat Cave (No Archaeological Survey Required Form dated 12/30/2024).

The Broad River valley was strongly affected by Hurricane/Tropical Storm Helen in late September 2024. Severe flooding, characterized by massive quantities and rapid flow, raised and surpassed the established banks of the Broad River, tributaries, and drainages. The rushing water expanded and reformed channels, obliterating portions of the highway, bridges, and removed vulnerable buildings from the landscape. New deposits are now present, consisting of debris, boulders, and alluvium originating upstream and from the mountain slopes. The volume and extent of changes caused by the flooding created a new landscape with large areas filled in with flood deposits. The APE for Bridge No. 214 is now surrounded by freshly modified terrain. Combined with 20th century grading and construction of the transportation network through the valley, the recent flooding and erosion leaves little chance for intact soils containing cultural materials and living horizons in situ, a poor archaeological context.

There are no recorded archaeological sites within, adjacent or in the nearby vicinity of the APE. Approximately 0.9 miles (4800 feet) to the south, straddling Reedy Patch Creek, is the Native American site 31Hn68, an area that NC OSA/HPO is reviewing as an emergency disaster debris site (ER 24-2275). Approximately a mile and a half (7,800 feet) east and outside of the valley bottom on a ridge spur is the Native American archaeological site, 31Rf177, overlooking the Broad River. Another emergency use site, a borrow location, is 0.9 miles (4800 feet) to the east which was recently surveyed (ER 24-2608), finding no archaeological sites. There are no known cemeteries known or likely to be present within the APE. Southwest of the bridge is the Bat Cave Baptist Church Cemetery 550 feet (0.10 miles) away. That formal cemetery will not be affected.

This bridge falls within the larger archaeological review for required repairs of the US 64/US 74alt highway between Bat Cave and Chimney Rock. Helene flooding is responsible for major alterations including large scale erosion and soil/rock redeposition. Construction of the highway and bridges, like the subject Br. No. 214, and other twentieth century development has graded usable land along the Broad River. Further, a large volume of riverbank has been scoured and new alluvium deposited, most recently by Helene flood waters, but also in 1916 when the mountains endured an earlier damaging flood event of similar scale. The probability to encounter and affect undocumented, intact, and significant archaeological sites within the APE is low. No archaeological survey is required.

This project falls within North Carolina Counties which the following federally recognized tribes have expressed an interest: the Catawba Indian Nation, the Cherokee Nation, the Eastern Band of Cherokee Indians, the United Keetoowah Band of Cherokee Indians, and the Muscogee (Creek) Nation. We recommend that this documentation is forwarded to tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED

2/18/2025

NCDOT ARCHAEOLOGIST Date

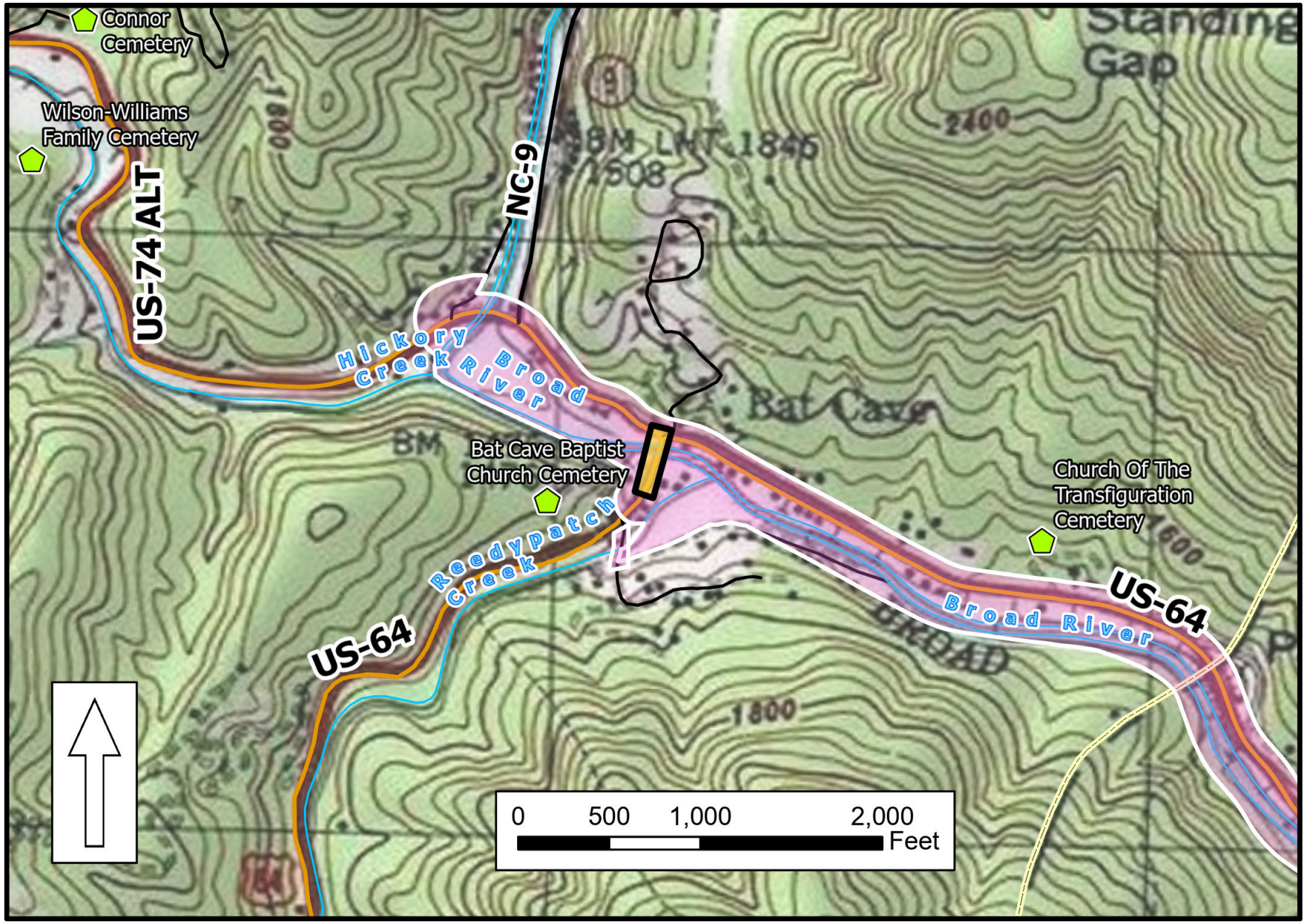


Figure 1. USGS mapping showing the topography and terrain surrounding Br. No. 214 (Bat Cave). The approximate APE is shaded yellow with a black outline. The larger review area for restoration of US 64 /US 74 Alt included this crossing in its buffered boundary (pink).

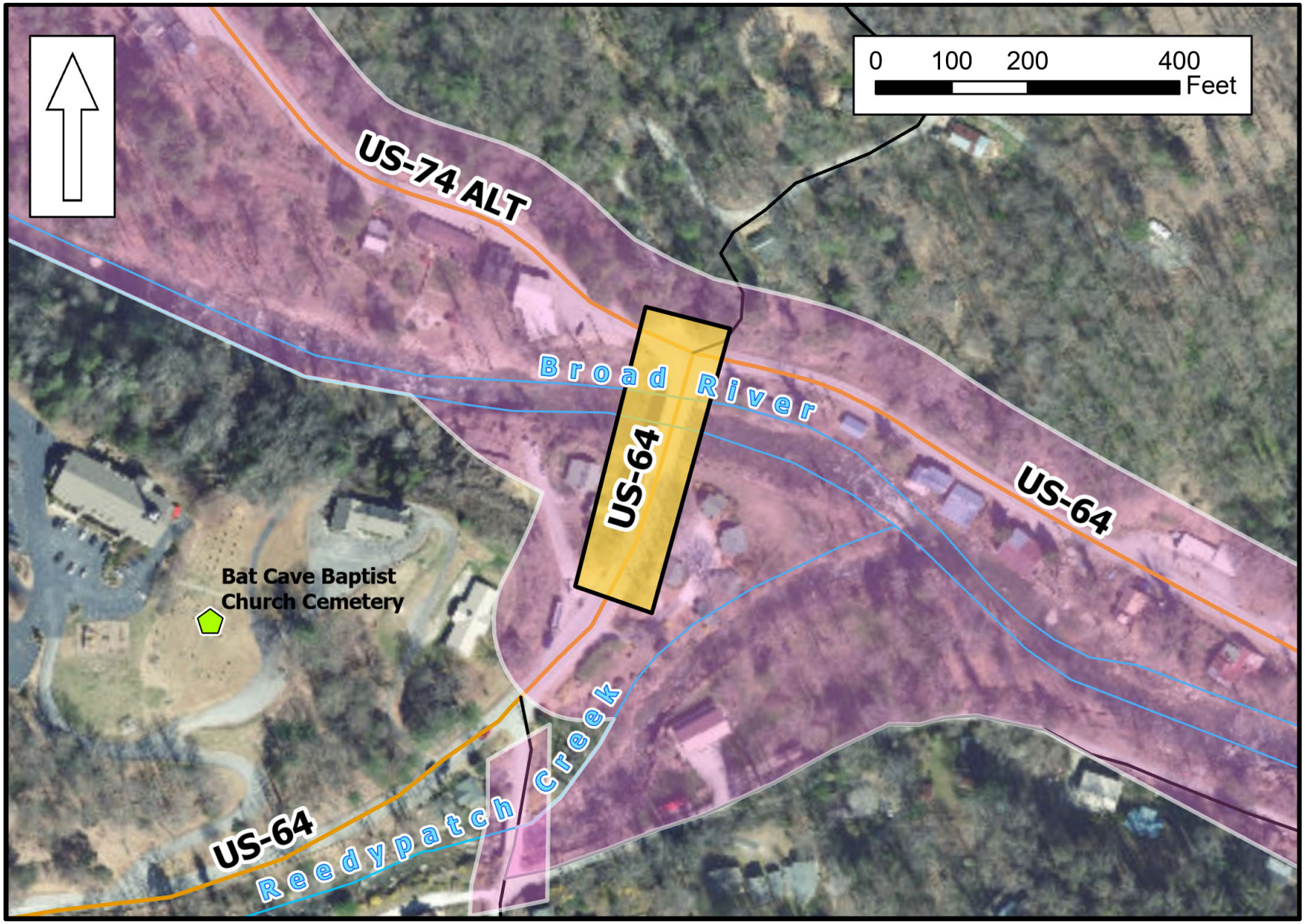


Figure 2. Aerial photography showing the setting for Br. No. 214. The approximate APE is shaded yellow with a black outline. The earlier studied area for restoration of the US 64/US 74 Alt highway is much larger (pink with a white outline) and includes the current APE.

Historic Architecture & Landscapes

HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS 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:	No TIP	***County***:	Henderson
WBS No.:	18313.1081015	***Document Type***:	Federal CE
Fed. Aid No:		***Funding***:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE

Project Description:

In response to the aftermath of Hurricane Helene, NCDOT's Division 14 proposes to repair Bridge 214 on US 64 @ NC 9 in Bat Cave. The extreme volume of flooding deposited new terrain and damaged the 1957 structure. Additionally, there is a separate project to repair US74Alt/NC 9/US 64 Gerton Highway which has been assigned as PA 24-11-0012.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusion

An NCDOT architectural historian reviewed the known historic properties in proximity to the APE using HPOWeb, Henderson a County GIS, survey site files from the HPO Western Office, and NCDOT's 2023 Historic Bridge Inventory. In addition, the NCDOT architectural historian visited the APE in March 2025 to assess the condition of the known properties. Two properties were assessed for eligibility: HN1088 Bat Cave Baptist Church and HN1089 (former) Bat Cave Schoolhouse. Only the schoolhouse was recommended eligible and the HPO concurred. The damaged bridge was previously determined not eligible for the National Register as a part of NCDOT's current Historic Bridge Inventory.

ASSESSMENT OF EFFECTS

Property Name:	(former) Bat Cave Schoolhouse	***Status***:	DE Criteria A & C
Survey Site No.:	HN1089	***PIN***:	0623-04-7944

Effects

☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect

Explanation of Effects Determination: US 64 (Bridge 214) will be replaced on its existing alignment using a temporary traffic detour bridge downstream (east) of the existing bridge. A temporary work bridge between the existing bridge location and temporary detour bridge will be erected. Once Bridge 214 is replaced the two (2) temporary bridges will be removed. Bridge 214 will be replaced with a two-span, 180-foot-long bridge with Texas classic rail and sidewalk on both sides. Guardrail will be installed on the bridge approaches but will not prevent access to the properties. The project will not require temporary easements, permanent drainage easements, or ROW from the historic property boundary.

List of Environmental Commitments:

A temporary fence will be erected along the west side of US 64 to protect the schoolhouse during construction and prevent staging activities on this property.

HN1089 (former) Bat Cave Schoolhouse- March 2025

SUPPORT DOCUMENTATION

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

none

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

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

DocuSigned by:
Mary Pope Furr
ED3110443890489...

09/30/2025

NCDOT Architectural Historian — Date

Signed by:
Renee Gledhill-Earley
C26A1556A275464...

09/29/2025

State Historic Preservation Office Representative — Date

Signed by:
Seth Wilcher
9967A500F8714F0...

09/29/2025

Federal Agency Representative — Date

PROJECT REFERENCE NO.	SHEET NO.
CRPDB	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

WRIGHT BROTHERS | stv
STV Engineers, Inc.
P: (704) 372-1565
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BEGIN PROJECT
-L- PC STA. 7+20.62
BEGIN WORK PACKAGE / SEGMENT 1
-L- PC STA. 7+20.62

-L- STA. 11+19.68=
-Y1- STA. 10+00.00

BEGIN BRIDGE
-Y1- POT STA. 10+23.99

ROCKY BROAD RIVER

END BRIDGE
-Y1- POC STA. 12+03.99

BAT CAVE BAPTIST CHURCH

END CONSTRUCTION
-Y1- PT STA. 14+81.56=
-Y1 DETOUR- POT STA. 15+33.82
S 41° 08' 29.7" W

SCHOOL HOUSE

RETAINING WALL

-L- STA. 12+28.08=
-Y1 DETOUR- STA. 10+00.00

BEGIN BRIDGE
-Y1 DETOUR- POT STA. 10+67.61

END BRIDGE
-Y1 DETOUR- PC STA. 11+79.57

END WOR
-L- STA

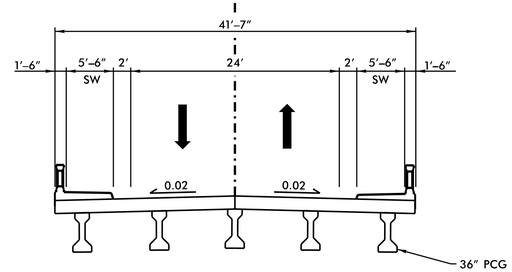
ROCKY BROAD RIVER

LEGEND

Historical Property Boundary

Existing Property Boundary

℄ –Y1– (US 64) CHIMNEY ROCK RD



BRIDGE TYPICAL NO. 1

NEPA Document

Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	**US 74A – Chimney Rock, Hurricane Helene Repairs**
WBS Element	WBS Element Number (e.g. 12345.1.1)
Federal Project No.	Federal Aid Number

A. Project Description:

The proposed action facilitates the reconstruction of approximately 1,360 feet of US 74A west of and ending at Terrace Drive in Chimney Rock, as part of permanent repairs to US 74A. The US 74A Chimney Rock, Hurricane Helene Repair project extends from just west of the US 64 bridge and US 64/ US 74A/ NC 9 intersection in Bat Cave, Henderson County to east of the US 74A/ Terrace Drive intersection in Chimney Rock, Rutherford County. The US 64, Chimney Rock Park Road, and Southside Drive bridges will also be replaced as part of this project.

B. Description of Need and Purpose:

The need for the proposed action is to permanently reconstruct US 74A west of Terrace Drive in Chimney Rock, Rutherford County. The purpose of the project is to repair and reconstruct US 74A, which was severely damaged or destroyed by the Broad River as a result of Hurricane Helene.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

26. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (including parking, weaving, turning, and climbing lanes), if the action meets the constraints listed in 23 CFR 771.117(e)(1-6).

9. The following actions for transportation facilities damaged by an incident resulting in an emergency declared by the Governor of the State and concurred in by the Secretary, or a disaster or emergency declared by the President pursuant to the Robert T. Stafford Act (42 U.S.C. 5121):

a) Emergency repairs under 23 U.S.C. 125; and

b) The repair, reconstruction, restoration, retrofitting, or replacement of any road, highway, bridge, tunnel, or transit facility (such as a ferry dock or bus transfer station), including ancillary transportation facilities (such as pedestrian/bicycle paths and bike lanes), that is in operation or under construction when damaged and the action:

i) Occurs within the existing right-of-way and in a manner that substantially conforms to the preexisting design, function, and location as the original (which may include upgrades to meet existing codes and standards as well as upgrades warranted to address conditions that have changed since the original construction); and

ii) Is commenced within a 2-year period beginning on the date of the declaration.

E. Special Project Information:

NCDOT conducted a desktop GIS analysis for potential natural and human environment features in April 2025. The project study area is defined as a 50-foot buffer upslope, generally North, and the Broad River, generally South, of the original US 74A alignment and includes 50 feet to either side of Southside Drive from the centerline and all of Chimney Rock State Park. The proposed action area is slope stake limits plus 40 feet.

Prior to Hurricane Helene, NCDOT only had a maintenance easement from edge of pavement (EOP) to EOP; however, to repair and reconstruct US 74A, NCDOT will acquire right of way and easement, as appropriate, for US 74A in the project area.

Natural Resources

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was reviewed August 2025. Table 1 includes the species that USFWS lists as federally protected with potential to be found within the project study area as of this date:

Table 1. Federally Protected Species

Scientific Name	Common Name	Federal Status[1]	Biological Conclusion
Myotis grisescens	Gray Bat	E	No Effect
Myotis sodalis	Indiana Bat	E	No Effect
Myotis septentrionalis	Northern Long-eared Bat	E	No Effect
Perimyotis subflavus	Tricolored Bat	PE	N/A
Glyptemys muhlenbergii	Bog Turtle	SAT	N/A
Danaus plexippus	Monarch Butterfly	PT	N/A
Isotria medeoloides	Small Whorled Pogonia	T	No Effect
Sisyrinchium dichotomum	White Irisette	E	No Effect
Gymnoderma lineare	Rock Gnome Lichen	E	No Effect

[1] E - Endangered; PE – Proposed Endangered; SAT - Similarity of Appearance (Threatened); PT - Proposed Threatened; T – Threatened;

The Monarch Butterfly was proposed for federal listing under the Endangered Species Act (ESA) in December 2024. However, no regulatory protections will take effect until the listing is finalized, which is anticipated in late 2025 or early 2026. Until that time, proposed species do not receive formal ESA protections. However, federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species which would result in an ESA Section 9 violation. These agencies may initiate consultation with the U.S. Fish and Wildlife Service (USFWS) to obtain a conference opinion. If and when the listing is finalized, and at the agency's request, the Service may adopt the conference opinion as a biological opinion—provided no relevant new information has emerged and no substantial changes to the proposed action have occurred.

Cultural Resources

The project was reviewed by an NCDOT Archaeologist and a finding of No Effect was determined. NCDOT Historic Architecture is reviewing resources within the project study area to determine eligibility for listing on the National Register of Historic Places. However, there are no resources within the proposed action area. The closest resource is the gates that are part of the Chimney Rock Park resource, which is being addressed under a separate proposed action.

Public and Stakeholder Involvement

NCDOT held a public meeting on February 26, 2025, from 5 – 7 PM at Lake Lure Classical Academy. There were 205 attendees present at the first public meeting. The public comment period began February 26th and extended through March 12, 2025. Initial comments received are focused on southside drive, design recommendations, information requests, and preferred bridge alternatives.

NCDOT circulated Start of Study Notification to agency representatives on January 15, 2025. Responses were received from NC Wildlife Resources Commission (NCWRC), NC Division of Water Resources (DWR), NC Department of Natural and Cultural Resources (DNCR) Division of Parks and Recreation, and US Fish and Wildlife Service (FWS). Responses are included in the project file.

NCDOT/FHWA initiated tribal coordination with the Catawba Indian Nation, the Cherokee Nation, the Eastern Band of Cherokee Indians, the Muscogee (Creek) Nation, and the United Keetoowah Band of Cherokee Indians on January 6, 2025. No responses have been received to date.

F. Project Impact Criteria Checklists:

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

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

- If any question 1-7 is checked "Yes" then NCDOT certification for FHWA approval is required.
- If any question 1-30 is checked "Yes" then additional information will be required for those questions in Section G.

Source documents should be cited for each question as appropriate. If no source is needed or available, denote as "n/a". Please note that some "no" answers should have a corresponding email/memo/report cited for that NCDOT discipline. Project reports or memos/emails should be linked to their location on the project's Precon site; other publications (e.g. the STIP) can be linked directly. Example: (Source: NCDOT HE-0001 NRTR [HE-0001_NRTR.pdf, 2022])

PROJECT IMPACT THRESHOLDS (FHWA signature required if any of the questions 1-7 are marked "Yes.")		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) in which a "likely to adversely affect determination" has been made? (Source: correspondence with T. Stanton])	☐	☒
2	Does the project result in effects subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	☐	☒
3	Does the project generate substantial controversy or public opposition, regarding human and/or natural environment concerns, following appropriate public involvement? (Source: Public Meeting, February 2025)	☐	☒
4	[redacted]		
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	☐	☒
6	Does the project require an Individual Section 4(f) approval?	☐	☒
7	Does the project result in adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or result in an adverse effect on a National Historic Landmark (NHL)?	☐	☒
Other Considerations		Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or resolved utilizing a Section 7 programmatic agreement? Include in Section G any utilization of a Section 7 Programmatic Agreement.	☐	☒
9	Is the project located in anadromous fish spawning waters?	☐	☒
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	☐	☒
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	☐	☒

12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	☐	☒
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	☐	☒
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects findings other than a No Effect, including archaeological remains? No matter the effect finding, list any commitments (conditions) in Section I made in association with the effect finding detailed in Section G.	☐	☒
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	☐	☒
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	☒	☐
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	☐	☒
18	Does the project require a U.S. Coast Guard (USCG) permit?	☐	☒
19	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	☐	☒
20	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River?	☐	☒
21	Does the project impact federal lands (e.g., U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	☐	☒
22	Does the project involve any changes in access control to the interstate (modification or construction of an interchange)?	☐	☒
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	☐	☒
24	Will maintenance of traffic or detours cause substantial disruption?	☐	☒
25	Is the project inconsistent with the NCDOT's federally approved 4-year STIP or NCDOT's BMIP, and where applicable, the Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP)? (Source: Not a STIP project)	☐	☒
26	Does the project require the acquisition of lands under the protection of the Land and Water Conservation Fund, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, Dedicated Nature Preserves, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	☐	☒
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	☒	☐
28	Does the project "use" Section 4(f) property, and/or result in a *de minimis* determination?	☐	☒
29	Is the project considered a Type I under the NCDOT Noise Policy?	☐	☒
30	Does the project impact VAD-enrolled property, or prime or important farmland soil, as defined by the Farmland Protection Policy Act (FPPA)?	☐	☒

G. Additional documentation as required from Section F; documentation should address the context and intensity (or severity) of the impact. (Required for all questions marked 'Yes.')

Question 16:
This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally

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

Question 27: Seven property owners within the proposed action area have requested property acquisitions under the Hazard Mitigation Grant Program (HMGP), also known as buy-outs. FEMA is accepting application requests through March 2026. Since the project is intended to deliver post-disaster restoration of the transportation network, there may be conflicts with properties that could be part of the HMGP. NCDOT is actively trying to avoid these potential HMGP parcels, but complete avoidance is unlikely. The HMGP is continuing to accept buyout applications, so NCDOT does not have a full inventory of which properties could be part of the HMGP.

H. Categorical Exclusion Approval:

STIP Project No.	**US 74A – Chimney Rock, Hurricane Helene Repairs**
WBS Element	WBS Element Number (e.g. 12345.1.1)
Federal Project No.	Federal Aid Number

Prepared By:

8/26/2025 — DocuSigned by: Kat Bukowy — 03045D0255E1A4A0...

Date — Kat Bukowy, AICP
HNTB

Prepared For: Nathan Moneyham, P.E.

Reviewed By:

8/26/2025 — DocuSigned by: Marissa Cox — A47BC39EA6B347E...

Date — Marissa Cox, EPU, Western Team Lead
North Carolina Department of Transportation

☑ **Approved**
- If NO grey boxes are checked in Section F, NCDOT approves the Type I or Type II Categorical Exclusion.

☐ **Certified**
- If ANY grey boxes are checked in Section F, NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.

8/26/2025 — Signed by: [signature] — CA024B4A6412432...

Date — John Jamison, EPU, Unit Head
North Carolina Department of Transportation

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

N/A

Date *for* Yolonda K. Jordan, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VIII of the NCDOT-FHWA CE Programmatic Agreement for more details). Upload final documentation to ATLAS workbench and add commitments to the green sheet and Commitments dashboard.

PROJECT COMMITMENTS

Hurricane Helene Repairs to US 74A Chimney Rock
From west of US 64 (Chimney Rock Road) / US 74A / NC 9 (Gerton Highway) intersection, Henderson County, to US 74A / NC 9 / US 64 (Main Street) in Chimney Rock, Rutherford County, including the replacement of the US 64 bridge in Bat Cave and replacement of the Chimney Rock Park Road and Southside Drive bridges in Chimney Rock
County: Henderson and Rutherford
WBS: 18313.1081015

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division Office, Right of Way - TDCE Transaction - Conditional No Adverse Effect
The acquisition of TDCE from up to nine (9) historic properties located adjacent to the US 74A - Chimney Rock corridor. On June 4, 2025, FHWA, SHPO, USACE, and NCDOT determined that this proposed action will not adversely affect historic resources with the following conditions:

- Determinations of eligibility will be prepared for these historic resources according to the 2020 Section 106 Programmatic Agreement; and
- FHWA, SHPO, USACE, and NCDOT will review permanent repair designs to determine potential effects to these historic properties when design plans and limits of disturbance are complete.

This determination is applicable to the TDCE transaction only.

COMMITMENTS FROM PERMITTING

No permitting commitments developed to date.

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

Hurricane Helene Repairs to US 74A Chimney Rock
18313.1081015
Last Modified Date: 07/09/2025

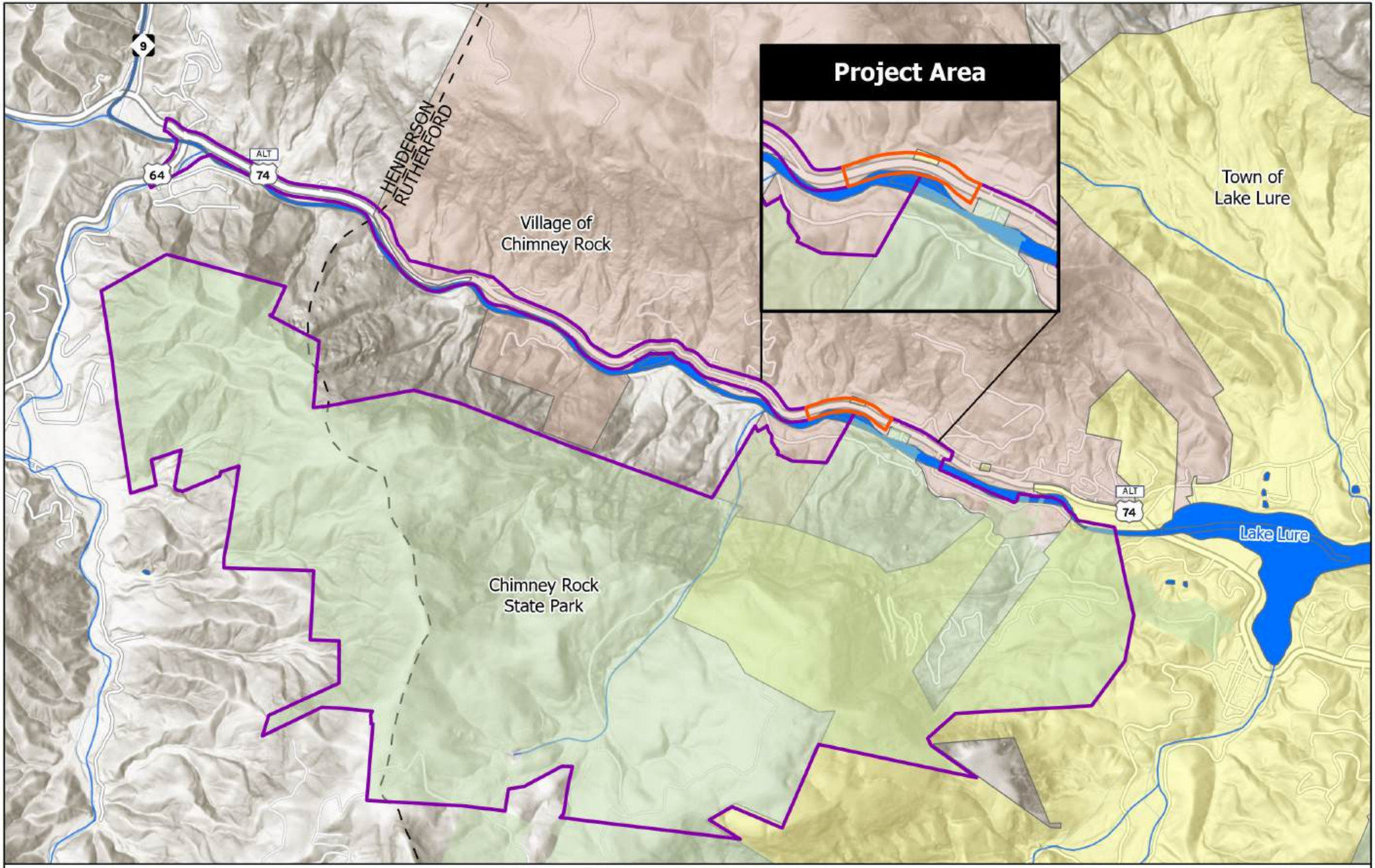


Figure 1.
Study Area Map
with Project Area Inset
Hurricane Helene Repair Project
Henderson & Rutherford Counties
Chimney Rock, NC

Source: NCDOT, Esri ArcGIS Basemap, HNTB, 2025.

Legend

- Study Area
- Proposed Action Area

N

0 500 1,000

Feet

Figure 2.
Proposed Action Area Aerial
Hurricane Helene Repair Project
Rutherford County
Chimney Rock, NC

Source: NCDOT, Esri ArcGIS Basemap, HNTB, 2025.