STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

February 17, 2026

U.S. Army Corps of Engineers
Water Resources Development Act (WRDA)
Transportation Permitting Branch

NC Division of Water Resources
Transportation Permitting Branch

ATTN: Ms. Lori Beckwith, NCDOT Coordinator

Ms. Amy Annino, NCDOT Coordinator

Subject: **Section 404 Regional General Permit 50 & 401 Individual Water Quality Certification** for permanent repairs/replacements of Bridge No. 990138 Bent Creek, Bridge Nos. 990124 and 990093 over the Cane River off of US 19W North from Bent Creek Road to Murphytown Road, north of Burnsville, Yancey County, Division 13, WBS 18313.1100999.

Dear NCDOT Coordinators:

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

Repairs/replacements of three bridges destroyed by Hurricane Helene off of US 19W North from Bent Creek Road to Murphytown Road, north of Burnsville, Yancey County. (Table 1, see figure 1)

Table 1. Proposed Permanent Bridge Replacement Locations

Bridge No.	NCDOT Road Number	River/Creek	Decimal degrees
990093	SR 1343 (Murphytown RD)	Cane River	36.02511 -82.32709
990124	SR 1413 (Bent Creek RD)	Cane River	36.01292 -82.38124
990138	SR 1413 (Bent Creek RD)	Bent Creek	36.01292 -82.38225

Approvals Requested:

404 Regional General Permit 50. Notification required due to use of RGP 50.

401 Individual Water Quality Certification. Notification required due Tr stream designation.

FHWA is the lead federal agency for this project.

General work description and impact summary:

Site 1 (Bent Creek) Bridge 138
Replace the pre-storm structure with a single span, 35-foot-long bridge and remove existing temporary crossing.
This project also includes returning Bent Creek to its approximate pre-storm location including pre-storm step pool morphology that provides long term stream channel stability and resiliency by a stream corridor with greater flow capacity.

Impact Category	Surface Waters: **Permanent Impacts**	Surface Waters: **Temporary Impacts**	Stream **Re-establishment**	Surface Waters: **Permanent Impacts**
Maintenance Exemption	--	--	633 lf 0.1 ac	Stream reestablishment to pre-Helene location.
Non-Notifying	--	--	--	--
404/401 Notification Required (Not After the Fact)	--	41 lf 0.006 ac	--	Temporary detour crossing for maintenance of traffic
	--	0.001 ac	--	Temporary impacts are necessary to tie the stream into the re-established section.
Notification Required (After the Fact)	--	--	--	--

Site 2 (Cane River) Bridge 124
Replace the pre-storm structure with a three span, 180-foot-long bridge and remove the existing temporary bridge.
The project includes reestablishment of the low-flow channel conditions with some minor bench reconstruction. This will provide conditions necessary for geomorphic and hydraulic stability of the stream channel through the reconstructed bridge.

Impact Category	Surface Waters: **Permanent Impacts**	Surface Waters: **Temporary Impacts**	Stream **Re-establishment**	**Permit Proposed / Impact Description**
Maintenance Exemption	--	--	730 lf 1.21 ac	Stream reestablishment to pre-Helene location.
Non-Notifying	--	--	--	--
404/401 Notification Required (Not After the Fact)	--	0.191 ac		Temporary impacts are necessary to tie the stream into the re-established section.
	--	48 lf 0.030 ac	--	Temporary causeway for bridge construction.
Notification Required (After the Fact)	--	--	--	--

Site 3 (Cane River, Bridge 93
Replace the pre-storm structure with a three span, 203-foot-long bridge and remove the existing temporary bridge.
The project includes relocating the bridge out of a bend and river thalweg that has shifted closer to Huntdale Road.
The new construction includes reestablishment of the low-flow channel conditions with some minor bench reconstruction. This will provide conditions necessary for geomorphic and hydraulic stability of the stream channel through the reconstructed bridge.

Impact Category	Surface Waters: **Permanent Impacts**	Surface Waters: **Temporary Impacts**	Stream **Re-establishment**	**Permit Proposed / Impact Description**
Maintenance Exemption	--	--	748 lf 1.680 ac	Stream reestablishment to pre-Helene location.
404/401 Notification Required (Not After the Fact)	--	0.419		Temporary impacts are necessary to tie the stream into the re-established section.
	157 lf 0.280 ac		--	Bridge Construction
	--	35 lf 0.074 ac	--	Temporary impact is required for the removal of the existing temporary emergency bridge.
Notification Required (Not After the Fact)	--	--	--	--

Category Totals	**Impact Category**	Surface Waters: **Permanent Impacts**	Surface Waters: **Temporary Impacts**	**Stream Re-establishment**
	Maintenance Exemption	--	--	**2,111 lf 2.99 acre**
	Non-Notifying	**--**	**--**	--
	Notification Required (Not After the Fact)	**157 lf 0.280 ac**	**124 lf 0.72 ac**	**--**
	Notification Required (After the Fact)	--	--	--

The information above is provided in accordance with the " US Army Corps of Engineers, Wilmington District' s Information for Hurricane Helene Recovery and Repair Work Conducted by the North Carolina Dept of Transportation in Waters of the US " dated February 10, 2025.

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	6/4/2025[4]	May Affect, Likely to Adversely Affect	Attached
Northern long-eared bat	Yes	6/4/2025[4]	May Affect, Likely to Adversely Affect	Attached
Appalachian elktoe	Yes	n/a	May Affect, Likely to Adversely Affect	Attached
Small whorled pogonia	Yes	6/4/2025	No Effect	n/a
Virginia spiraea	Yes	6/4/2025	No Effect	n/a
Bog turtle[2]	No	n/a	n/a	n/a
Monarch butterfly (Proposed)[3]	Unknown	n/a	n/a	n/a
Eastern Hellbender (Proposed)[3]	Unknown	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 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.
4 Bridge/structure survey only.

Historic Resources Summary (documentation included)

106 Topic	Findings	
Historic Architecture	There are no historic properties identified by NCDOT architectural historians in the vicinity of the three permanent replacement bridges. (Reference the attached January 2025 Effects Form that covers the entire US 19W North Project.)	
Archaeology	No Survey Required	
Tribal Coordination	**Tribe**	**Response**
Tribal Coordination Letters were sent to the following Tribes on March 25, 2025:	Catawba Indian Nation	4/24/2025
	Cherokee Nation	*No response received*
	Eastern Band of Cherokee Indians	*No response received*
	Muscogee (Creek) 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

Permit Drawings

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.02; Released April 23, 2024)

WBS Element:	DF1813.1100999.1.2	TIP/Proj No:	M-0572G	County(ies):	Yancey	Page	1	of	2

General Project Information

WBS Element:	DF1813.1100999.1.2	**TIP Number:**	M-0572G	**Project Type:**	Bridge Replacement	**Date:**	10/30/2025
NCDOT Contact:	Michael Turchy			**Contractor / Designer:**	JMT - Jeremy Koser		
	Address: NCDOT ECAP 1598 Mail Service Center, Raleigh, NC 27699-1598			**Address:**	40 Wight Ave Cockeysville,MD 21030		
	Phone: 919-707-6157			**Phone:**	410-316-2360		
	Email: maturchy@ncdot.gov			**Email:**	jkoser@jmt.com		
City/Town:	Green Mountain			**County(ies):**	Yancey		
River Basin(s):	French Broad			**CAMA County?**	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.114 Lin. Miles	**Surrounding Land Use:**	Rural mountainous (woods and some residential)

	Proposed Project		**Existing Site**	
Project Built-Upon Area (ac.)	0.7	ac.	0.8	ac.
Typical Cross Section Description:	MURPHYTOWN ROAD: 2 LANES @ 9' BENT CREEK RD: 2 LANES @ 9'		MURPHYTOWN ROAD: 2 LANES @ 9' BENT CREEK RD: 2 LANES @ 9'	
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	Year:	Existing:	Year:

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

The North Carolina Department of Transportation (NCDOT) has proposed the replacement of Bridge 990093 between Huntdale Road and Murphytown Road (SR 1343) in Yancey County, NC. Cane River is impacted by the project. Bridge 990093 is to be relocated and reconstructed. NCDOT "Best Management Practices for the Protection of Surface Waters" will be utilized throughout the life of the project. Erosion and sediment will be controlled through the specification, installation, and maintenance of most stringent erosion and sedimentation control methods. Existing drainage patterns will be maintained to the extent practicable. There is not a water supply watershed critical area located within 1.0 mile downstream of this project, therefore Hazardous Spill Basins are not required for this project.

The North Carolina Department of Transportation (NCDOT) has proposed the replacement of Bridges 990138 and 990124 between US-19W and Bent Creek Rd in Yancey County, NC. Cane River and Bent Creek are impacted by the project. Bridges 990124 and 990138 are to be reconstructed in the same location as the pre-Helene structures. NCDOT "Best Management Practices for the Protection of Surface Waters" will be utilized throughout the life of the project. Erosion and sediment will be controlled through the specification, installation, and maintenance of most stringent erosion and sedimentation control methods. Existing drainage patterns will be maintained to the extent practicable. There is not a water supply watershed critical area located within 1.0 mile downstream of this project, therefore Hazardous Spill Basins are not required for this project.

In September 2024, Hurricane Helene damaged a large portion of the US-19W, Huntdale Road, Murphytown Road, and Bent Creek Rd. The storm altered the Cane River and Bent Creek through stream migration, embankment scour, and sediment deposition. During the rebuilding of the corridor, parts of the stream are being realigned to protect the proposed road and replacement bridges. The stream is being designed to provide adequate bank full flow and prevent future scour issues along the corridor.

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.02; Released April 23, 2024)

WBS Element: DF1813.1100999.1.: **TIP/Proj No.:** M-0572G **County(ies):** Yancey

General Project Information

Waterbody Information

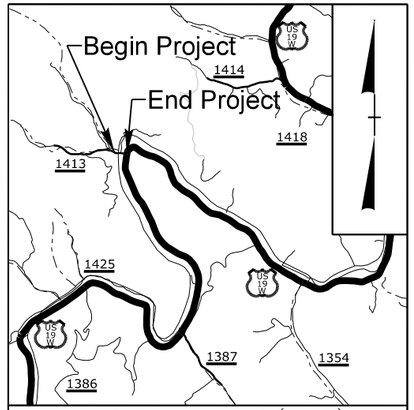
Surface Water Body (1):	Cane River		**NCDWR Stream Index No.:**	7-3-(13.7)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Trout Waters (Tr)			
Other Stream Classification:						
Impairments:	None					
Aquatic T&E Species?	Yes	Comments:	Appalachian Elktoe			
NRTR Stream ID:				**Buffer Rules in Effect:**	N/A	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	No	**Dissipator Pads Provided in Buffer?**		
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):	Bent Creek		**NCDWR Stream Index No.:**	7-3-37		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Trout Waters (Tr)			
Other Stream Classification:						
Impairments:	None					
Aquatic T&E Species?	Yes	Comments:	Appalachian Elktoe			
NRTR Stream ID:				**Buffer Rules in Effect:**		
Project Includes Bridge Spanning Water Body?	Yes	**Deck Drains Discharge Over Buffer?**	No	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
(If yes, provide justification in the General Project Narrative)						

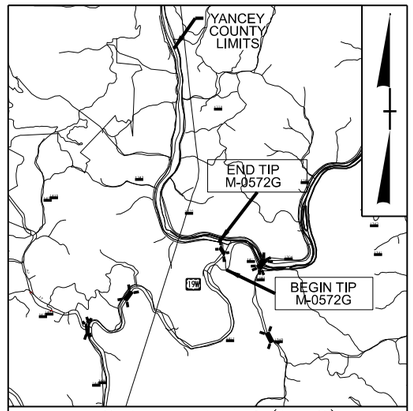
01/16/24

TIP PROJECT: M-0572G

CONTRACT:



VICINITY MAP (NTS)
BRIDGES 124 AND 138



VICINITY MAP (NTS)
BRIDGE 93

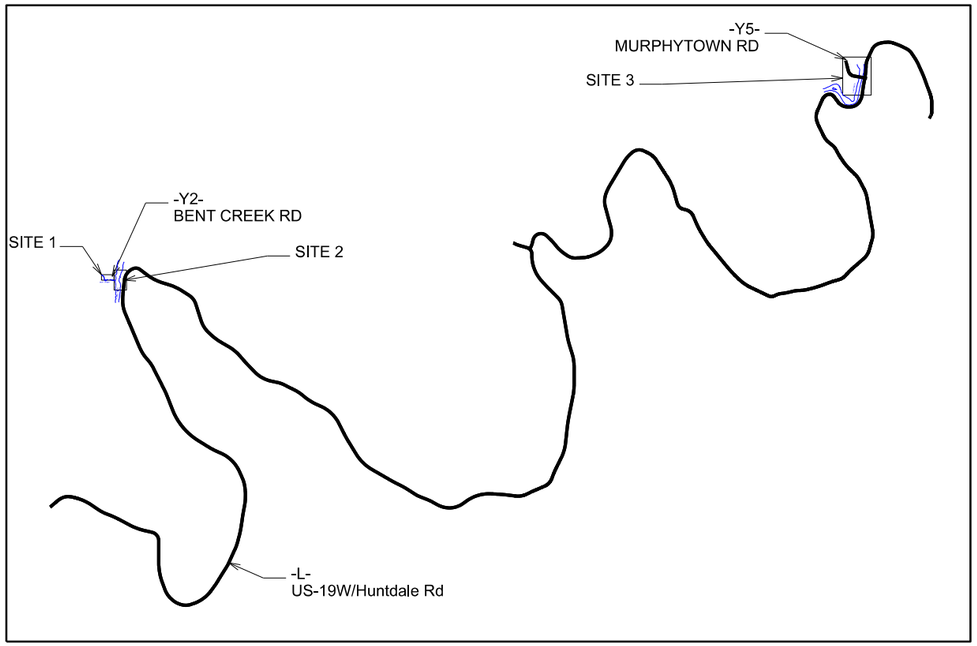
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

YANCEY COUNTY

LOCATION: *REPLACE BRIDGE NO. 990138 OVER BENT CREEK, 990124 AND 990093 OVER CANE RIVER*

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

WETLAND AND SURFACE WATER IMPACTS PERMIT



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

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
DF1813.1100999.1.2	ER24384	PE
		R/W, UTILITIES
		CONSTRUCTION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

PERMIT DRAWING
SHEET 1 OF 16

THIS PROJECT IS NOT WITHIN THE BOUNDARY OF ANY MUNICIPALITY
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUMMERS-TAYLOR SEMA | JMT
PDB PARTNERSHIP

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

GRAPHIC SCALES

20 10 0 20 40
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2027 =
ADT 2047 = <400
T = % *
V = 25 MPH

* TTST = % DUAL %
FUNC CLASS =
RURAL LOCAL
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT M-0572G = 4.205 MILES
LENGTH OF STRUCTURE TIP PROJECT M-0572G = 0.038 MILE
TOTAL LENGTH OF TIP PROJECT M-0572G = 4.243 MILES

Johnson, Mirmiran, & Thompson Inc.
2550 West Tyvola Road, Suite 120
Charlotte, NC, 28217
License No: C-3097

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE: _____

CHARLES YOUNG, PE, PMP
PROJECT ENGINEER

DAVID DAVES
PROJECT DESIGN ENGINEER

NCDOT CONTACT

HYDRAULICS ENGINEER

_____ P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

_____ P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

$$$-USER_NAME-$$$ - $$$-DATE-$$$

11/14/23

PRE-HELENE EDGE OF WATER

POST-HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

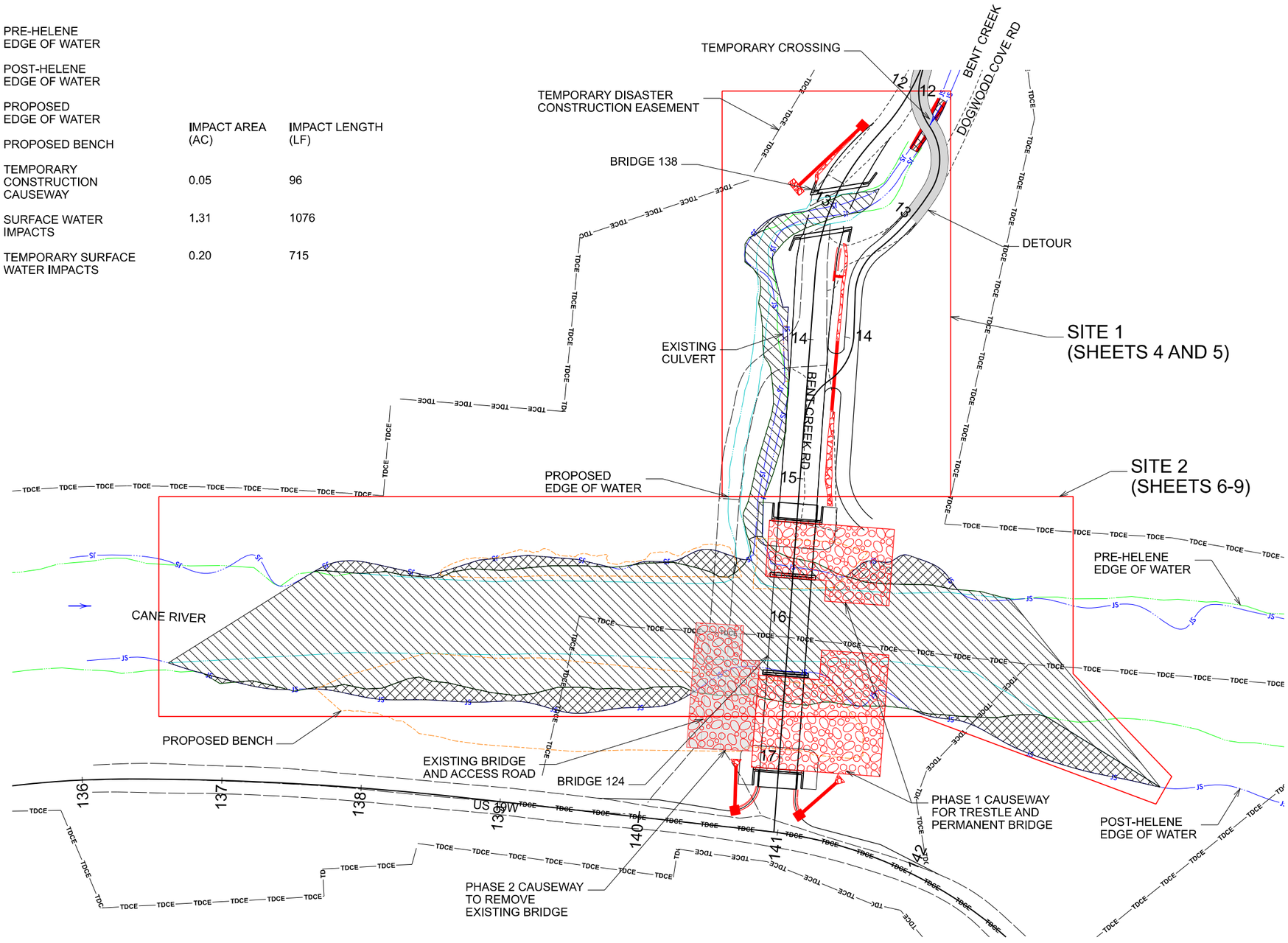
PROPOSED BENCH

TEMPORARY CONSTRUCTION CAUSEWAY

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
TEMPORARY CONSTRUCTION CAUSEWAY	0.05	96
SURFACE WATER IMPACTS	1.31	1076
TEMPORARY SURFACE WATER IMPACTS	0.20	715



PERMIT DRAWING
SHEET 2 OF 16

DESIGN DECISIONS

Bent Creek

Several design alternatives were evaluated to address storm impacts to the stream channel and facilitate reconstruction of Bent Creek Road, Dogwood Cove Road and Bridge 124 and 138. No action was considered, however dismissed as temporary / emergency roadway work impacted the pre-storm channel, including piping through a temporary culvert, all of which required removal to reconstruct the infrastructure. The initial alterative included relocating Bent Creek between Bent Creek Road and Dogwood Cove Road to simplify traffic control and construction sequencing considering the location of the existing temporary roadway and bridge over the Cane River and the desire to have the tributary connect to the Cane River downstream of the reconstructed bridge location to minimize future scour risk. Due to work area constraints, the presence of shallow bedrock along this alignment and the steep tie-in slope with the Cane River, an alternative was considered to relocate the stream back to its approximate pre-storm location. This alternative, as presented in the current plans, largely reestablishes the pre-storm step pool morphology and channel alignment to provide long-term stability of the channel and adjacent infrastructure including future resiliency as provided by a stream corridor with greater flow capacity.

Cane River

Several alternatives were considered to reconstruct the Cane River due to storm impacts to Bridge 124 and US19W. This included evaluating the Bridge 124 span arrangements, low chord elevation and roadway geometry to reconnect US19W with Bent Creek Road. No action was considered, however dismissed, as the river thalweg shifted closer to Bent Creek Road and much of the pre-storm floodplain bench / embankment areas along US19W had been eroded away due to the storm. An initial alternative included reestablishment of the pre-storm channel geometry through thalweg and bench reconstruction. However, in order to provide a more resilient river condition and minimize stream channel impacts, it was decided to focus on reestablishment of the low-flow channel conditions and only minor bench reconstruction. This will provide the conditions necessary for geomorphic and hydraulic stability through Bridge 124, continued post storm sediment transport adjustments and facilitate reconstruction of the US19W roadway embankment.

PLAN

0' 10' 40'
Scale: 1" = 40'

OVERALL PERMITTING IMPACTS

M-0572G
WPI 1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W AQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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REVISIONS

11/14/23

PRE-HELENE EDGE OF WATER

POST-HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

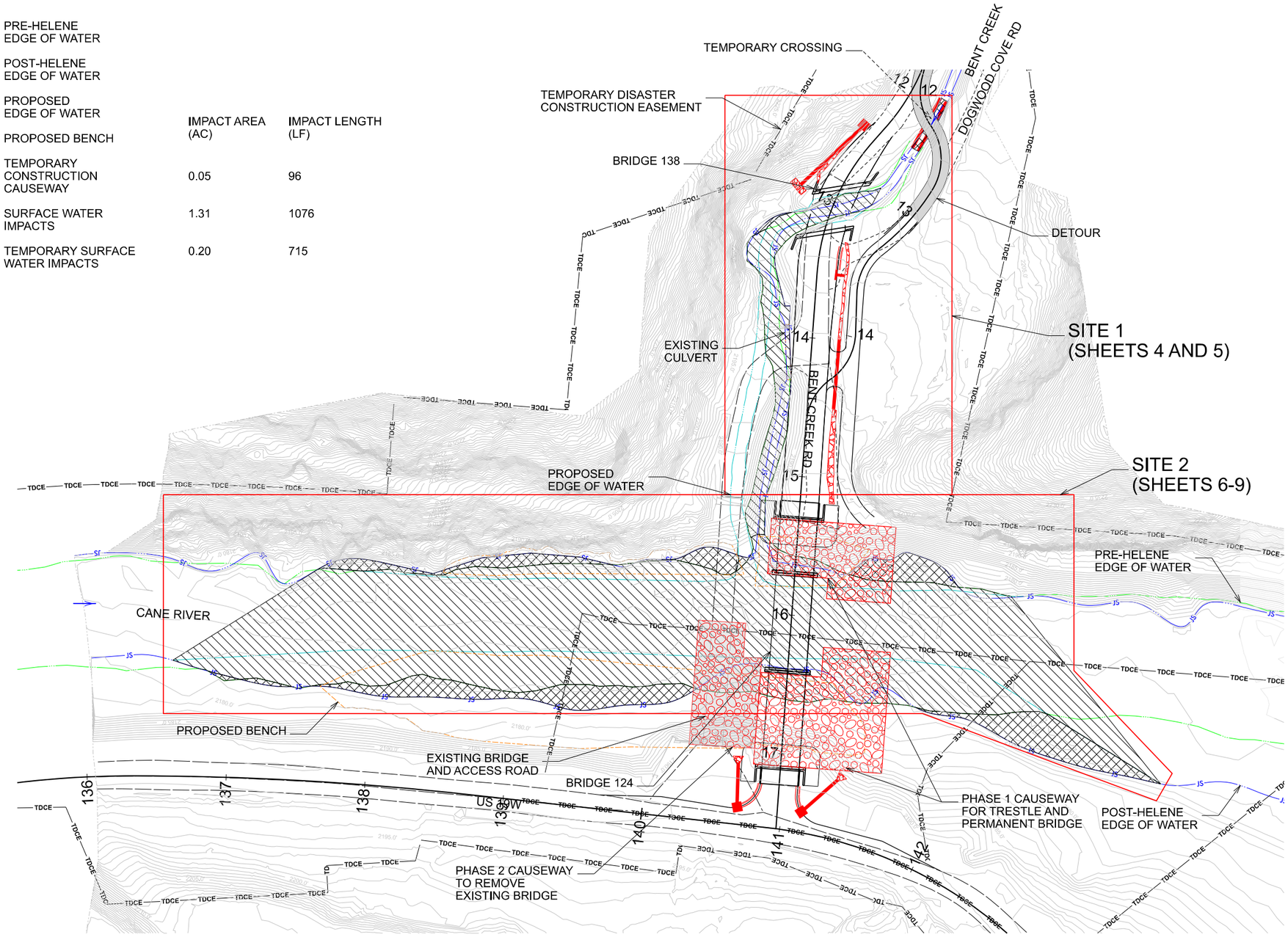
PROPOSED BENCH

TEMPORARY CONSTRUCTION CAUSEWAY

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
TEMPORARY CONSTRUCTION CAUSEWAY	0.05	96
SURFACE WATER IMPACTS	1.31	1076
TEMPORARY SURFACE WATER IMPACTS	0.20	715



PERMIT DRAWING
SHEET 3 OF 16

PLAN

0' 10' 40'
Scale: 1" = 40'

OVERALL PERMITTING IMPACTS

M-0572G
WPI 1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

ROADWAY DESIGN UNIT

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11/14/23

PRE-HELENE EDGE OF WATER

POST-HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

PROPOSED BENCH

TEMPORARY CONSTRUCTION CAUSEWAY

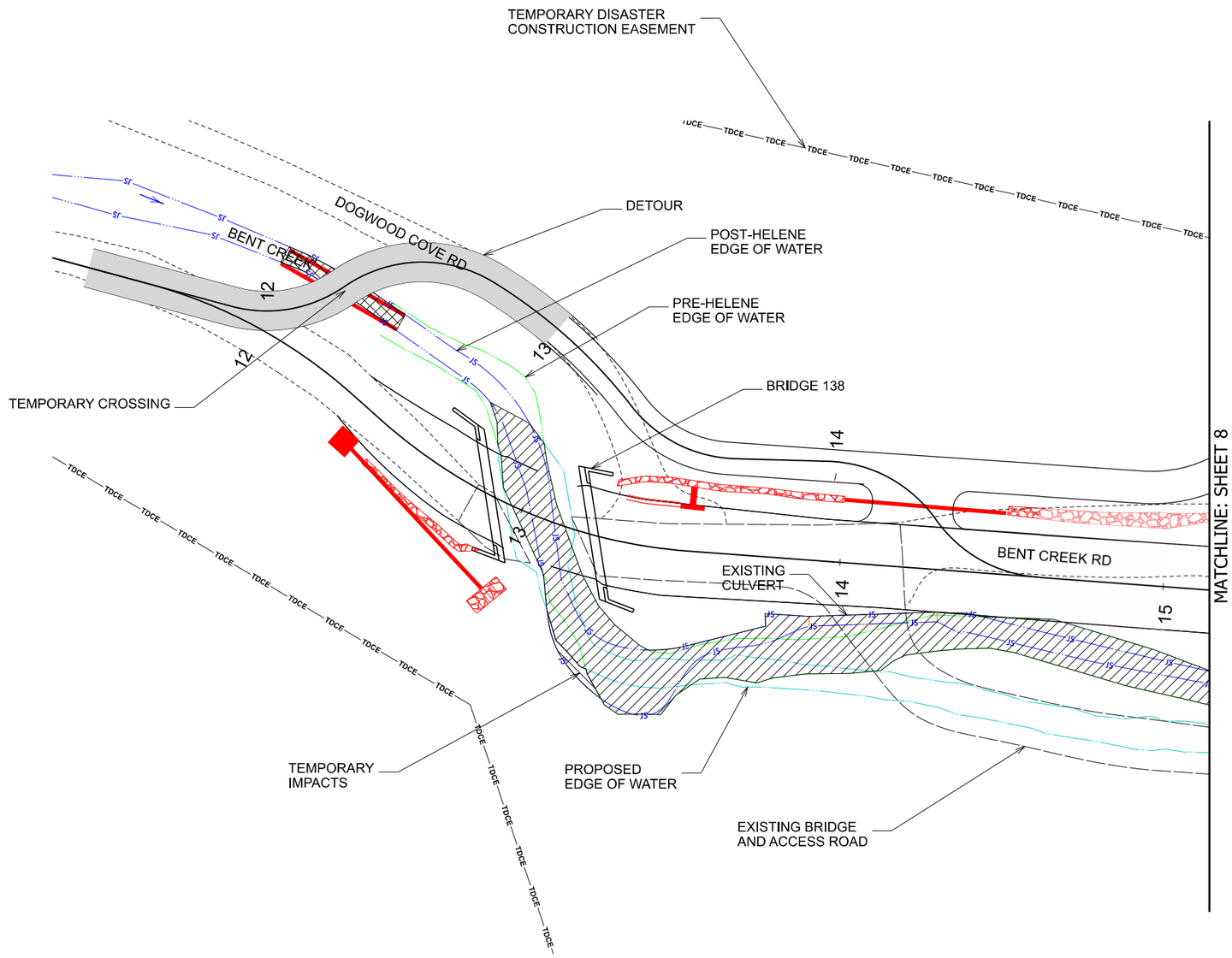
SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
SURFACE WATER IMPACTS	0.10	315
TEMPORARY SURFACE WATER IMPACTS	0.01	67

N

PERMIT DRAWING
SHEET 4 OF 16



PLAN

0' 10' 40'
Scale: 1"= 40'

SITE 1: BENT CREEK PERMITTING IMPACTS

M-0572G
WPI 1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

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ROADWAY DESIGN ENGINEER

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REVISIONS

11/14/23

PRE-HELENE EDGE OF WATER

POST-HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

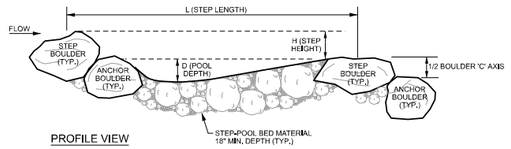
PROPOSED BENCH

TEMPORARY CONSTRUCTION CAUSEWAY

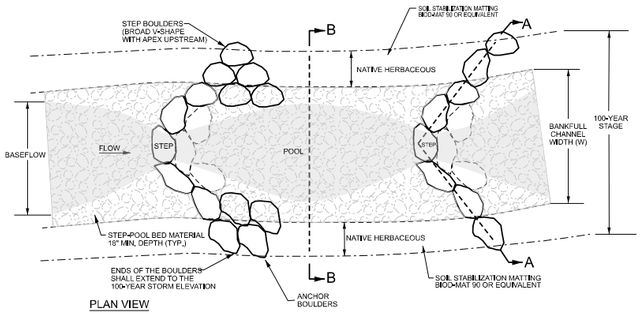
	IMPACT AREA (AC)	IMPACT LENGTH (LF)
SURFACE WATER IMPACTS	0.10	315
TEMPORARY SURFACE WATER IMPACTS	0.01	67

PERMIT DRAWING
SHEET 5 OF 16

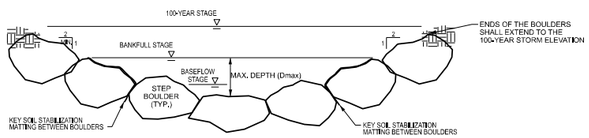
STEP-POOL DETAILS
N.T.S.



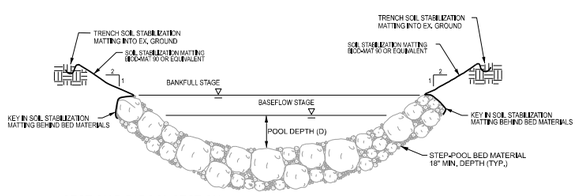
PROFILE VIEW



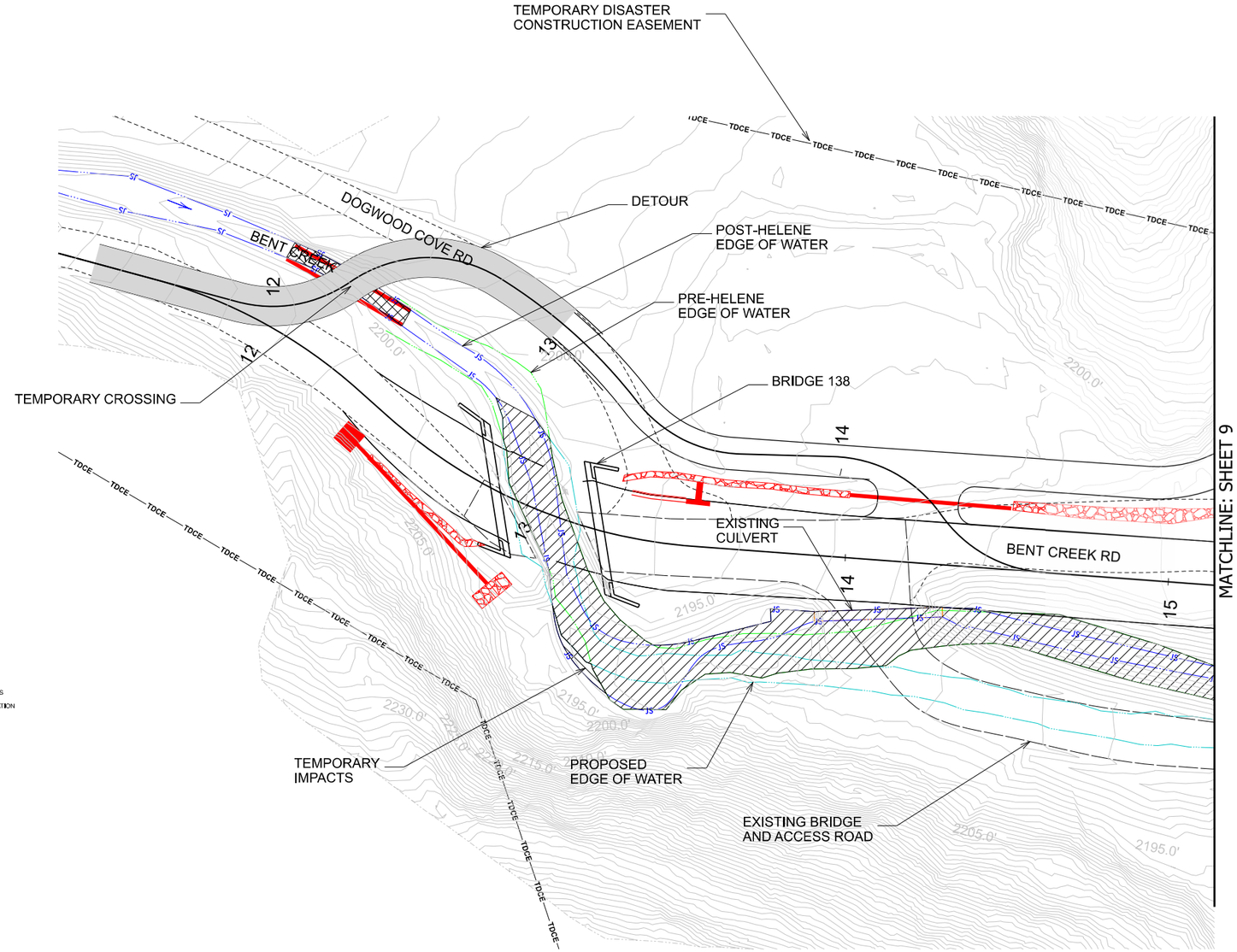
PLAN VIEW



SECTION A-A / STEP SECTION



SECTION B-B/ POOL SECTION



PLAN

0' 10' 40'
Scale: 1"= 40'

SITE 1: BENT CREEK PERMITTING IMPACTS

M-0572G
WPI 1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W AQUISITION

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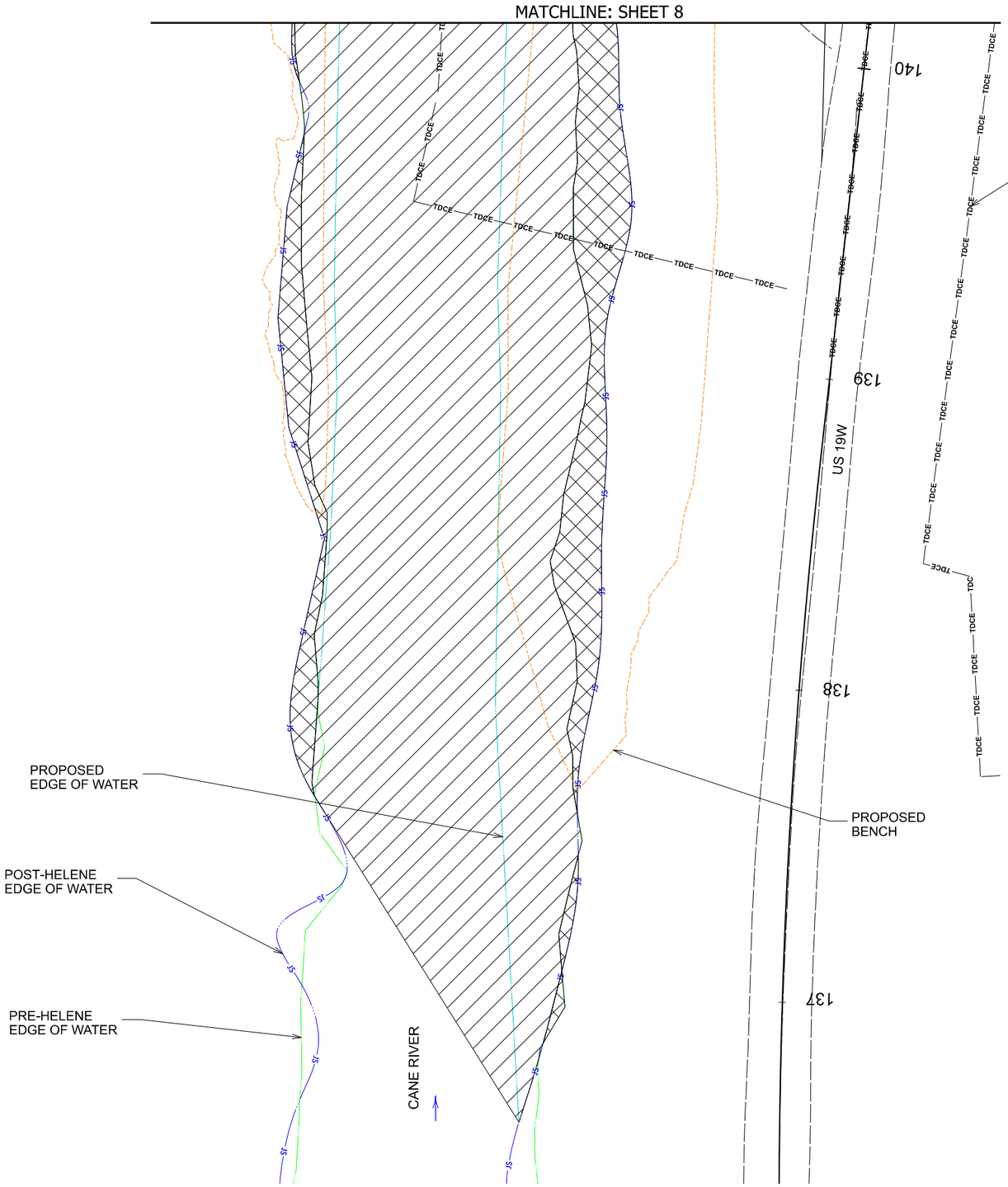
REVISIONS

11/14/23



PRE-HELENE EDGE OF WATER

POST-HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

PROPOSED BENCH

TEMPORARY CONSTRUCTION CAUSEWAY

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
SURFACE WATER IMPACTS	1.21	760
TEMPORARY SURFACE WATER IMPACTS	0.19	648

PERMIT DRAWING
SHEET 6 OF 16

PLAN

0' 10' 40'
Scale: 1" = 40'

SITE 2: CANE RIVER PERMITTING IMPACTS

M-0572G
WPI 1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W AQUISITION

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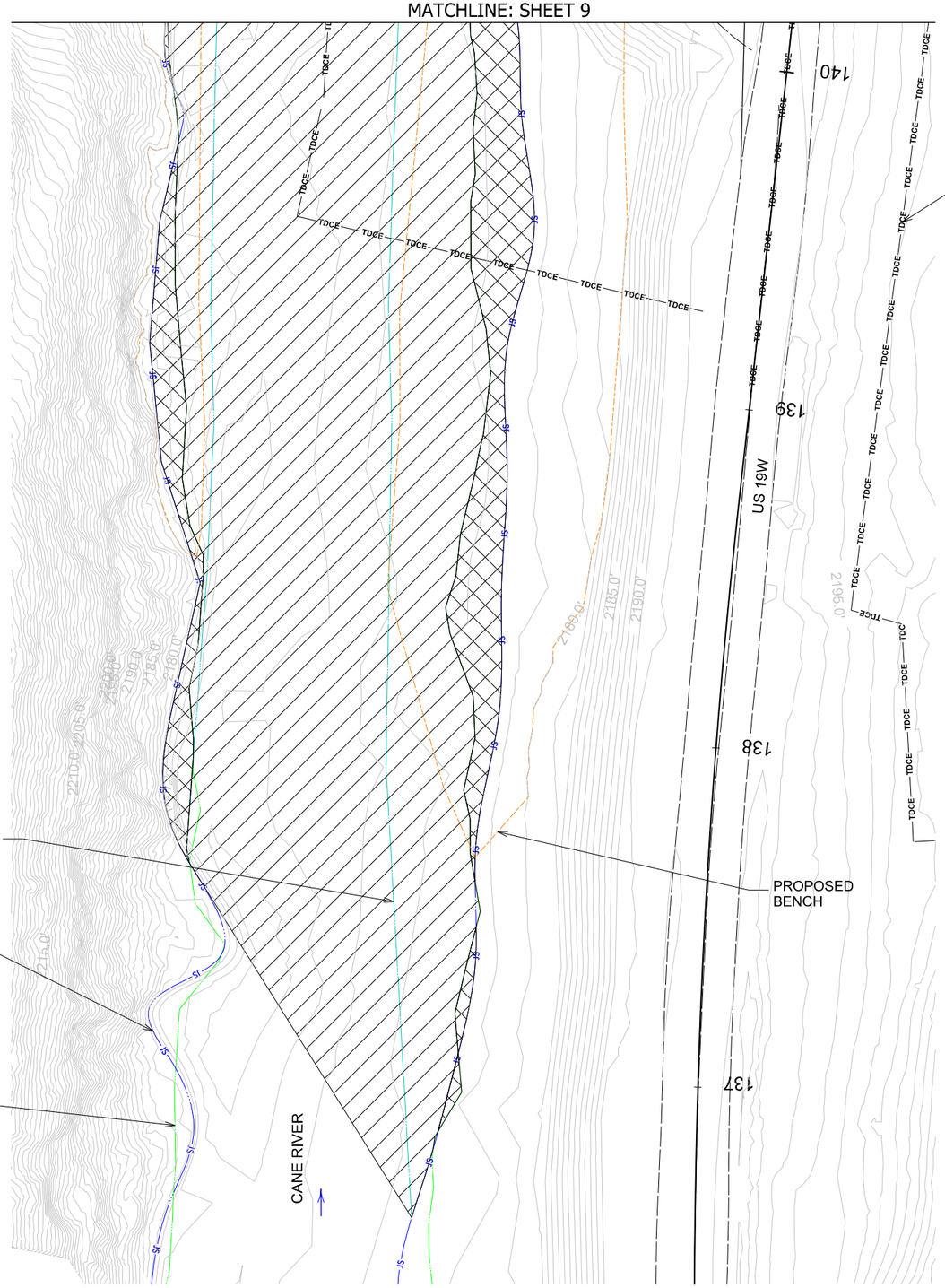
Johnson, Mirmiran, & Thompson, Inc.
2550 West Tyvola Road, Suite 120
Charlotte NC, 28217
License No: C-3097

SUMMERS-TAYLOR SEMA | JMT

REVISIONS

11/14/23



PERMIT DRAWING
SHEET 7 OF 16

		IMPACT AREA (AC)	IMPACT LENGTH (LF)
	PRE-HELENE EDGE OF WATER		
JS	POST-HELENE EDGE OF WATER		
	PROPOSED EDGE OF WATER		
	PROPOSED BENCH		
	TEMPORARY CONSTRUCTION CAUSEWAY		
	SURFACE WATER IMPACTS	1.21	760
	TEMPORARY SURFACE WATER IMPACTS	0.19	648

PLAN

0' 10' 40'
Scale: 1" = 40'

SITE 2: CANE RIVER PERMITTING IMPACTS

M-0572G
WPI 1

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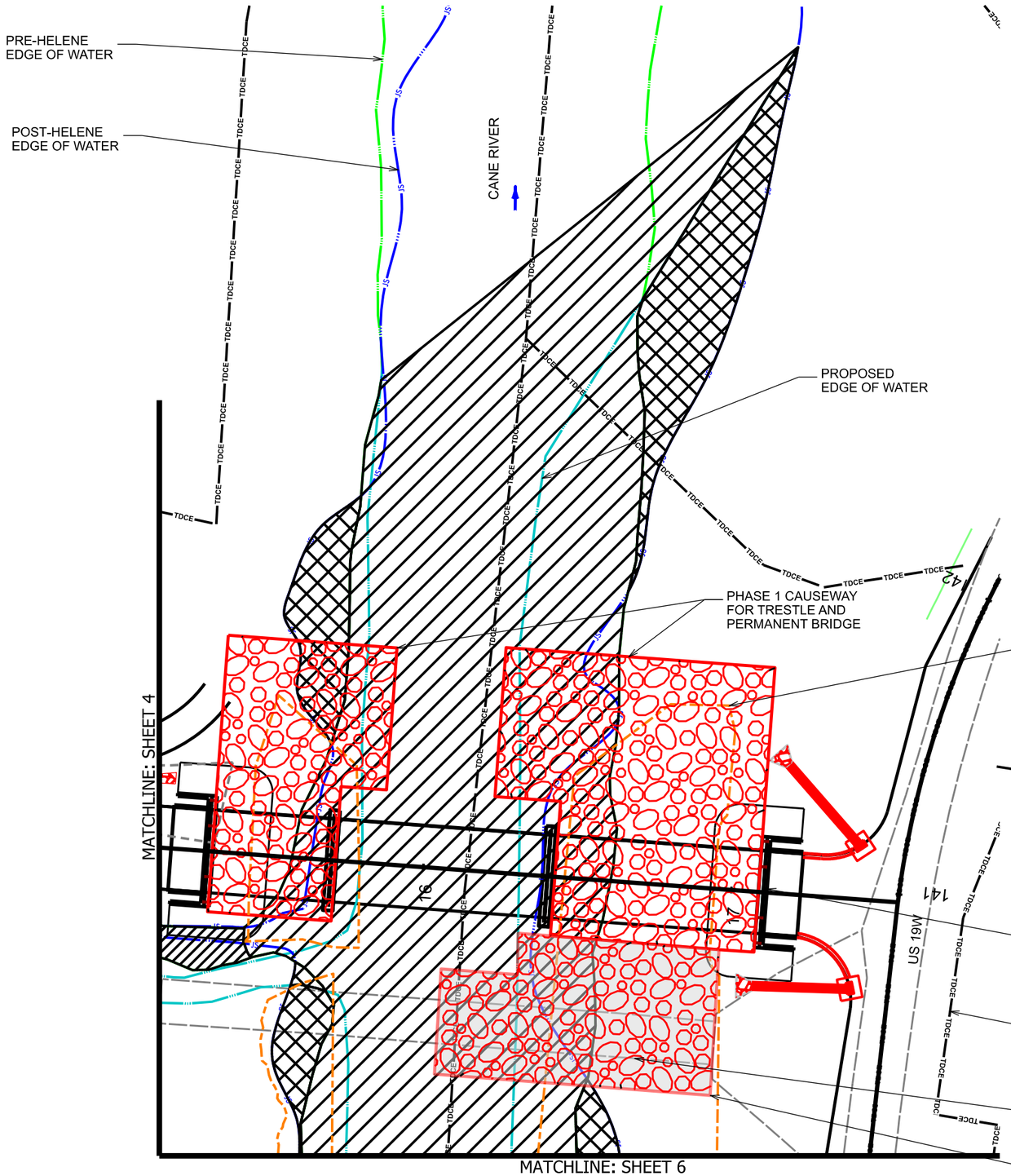
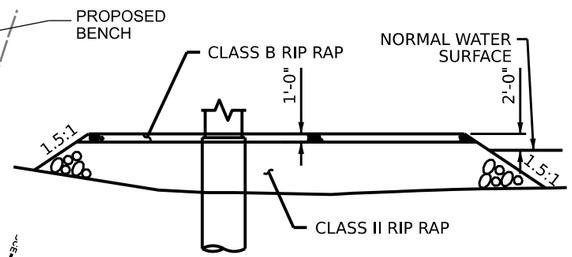


Construction Sequence for Bridge 124

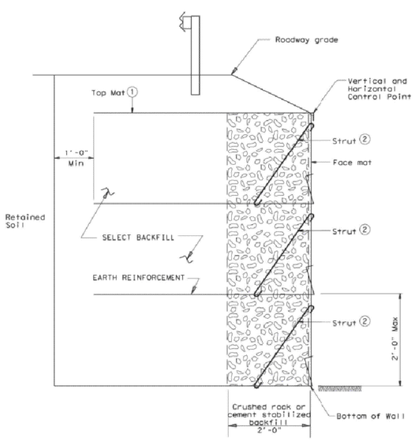
1. Perform stream re-establishment work within the bridge area to recenter the baseflow channel through the future proposed structure location.
2. Install Phase 1 Temporary Causeway / Wire Wall / Temporary Bridge. This temporary access is required for bridge construction and will block less than 50% of normal river flow through the work area. Velocity will temporarily increase through a small section of the work area however will dissipate quickly as flows expand into the unconfined downstream channel.
3. Complete new bridge construction.
4. Once new bridge is completed, remove Phase 1 Temporary Causeway / Wire Wall / Temporary Bridge.
5. Install Phase 2 Temporary Causeway. This temporary access is required to remove the Existing Temporary Bridge which was installed during emergency work operations after the storm.
6. Once the bridge is removed, remove Phase 2 Temporary Causeway.

PERMIT DRAWING
SHEET 8 OF 16

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
PRE-HELENE EDGE OF WATER		
POST-HELENE EDGE OF WATER		
PROPOSED EDGE OF WATER		
PROPOSED BENCH		
TEMPORARY CONSTRUCTION CAUSEWAY	0.05	96
SURFACE WATER IMPACTS	1.21	760
TEMPORARY SURFACE WATER IMPACTS	0.19	648



TEMPORARY CAUSEWAY
DETAIL



WIRE BASKET ABUTMENT
DETAIL

PLAN
0' 10' 40'
Scale: 1"= 40'

SITE 2: CANE RIVER
PERMITTING IMPACTS

M-0572G
WPI 1

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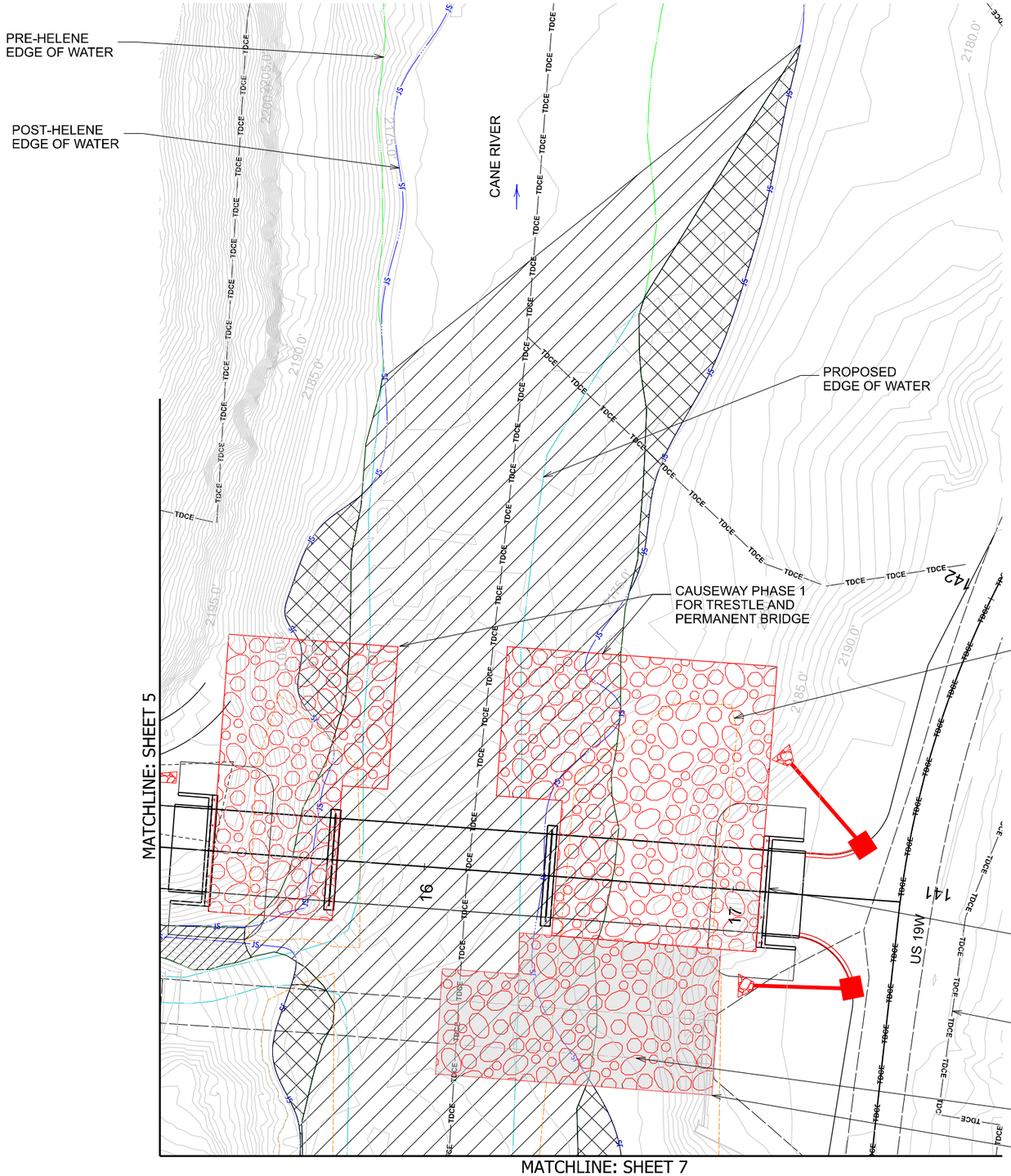

PERMIT DRAWING
SHEET 9 OF 16

		IMPACT AREA (AC)	IMPACT LENGTH (LF)
	PRE-HELENE EDGE OF WATER		
JS	POST-HELENE EDGE OF WATER		
	PROPOSED EDGE OF WATER		
	PROPOSED BENCH		
	TEMPORARY CONSTRUCTION CAUSEWAY	0.05	96
	SURFACE WATER IMPACTS	1.31	1076
	TEMPORARY SURFACE WATER IMPACTS	0.20	715

PLAN

0' 10' 40'
Scale: 1"= 40'

SITE 2: CANE RIVER PERMITTING IMPACTS

M-0572G
WPI | 1

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DEPARTMENT OF TRANSPORTATION
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REVISIONS

PERMIT DRAWING SHEET 10 OF 16

-Y2-

BEGIN GRADE 12+37.00
ELEV. = 2200.66

BEGIN BRIDGE 138 12+87+/-
END BRIDGE 138 13+25+/-

L = 50
K = 43

L = 142
K = 32

L = 60
K = 14

12+37.00 VPC 2200.66
12+87.00 VPT 2199.99
13+25.00 VPC 2199.71
13+55.00 VPI 2199.48
13+87.00 VPC 2197.90
12+62.00 VPI 2200.18
13+86.00 VPT 2197.99
14+58.00 VPI 2194.38
15+29.00 VPT 2194.02

(-)1.9200%
(-)0.7500%
(-)0.7500%
(-)0.7500%
(-)4.9544%
(-)4.9544%
(-)0.5000%
-Y2-
(-)0.5000%

PROPOSED GRADE
PROPOSED CHANNEL
PRE-STORM EXISTING GROUND LINE
POST-STORM EXISTING GROUND LINE

HYDRAULIC DATA

DESIGN DISCHARGE	= 400	C.F.S.
FREQUENCY OF DESIGN FLOOD	= 25	YRS.
DESIGN HIGH WATER ELEVATION	= XXXX.XX'	
DRAINAGE AREA	= 1.6	SQ. MI.
BASIC DISCHARGE (Q100)	= 620	C.F.S.
BASIC HIGH WATER ELEVATION	= XXXX.XX'	

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= XXX	C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= XX	YRS.
OVERTOPPING FLOOD ELEVATION	= XXXX.XX'	

*NOTE LOCATION OF OVERTOPPING

WS EL. Taken @ River Station ?

BEGIN BRIDGE 124 15+30+/-
END BRIDGE 124 17+10+/-

END GRADE 17+45.49
ELEV. = 2192.94

-3.5600%

DITCH LT.
STA. 15+66.66
EL. 2191.29'

DITCH LT.
STA. 15+25.00
EL. 2190.40'

40'
70'
70'

EXCAVATION EXTENTS (TYPICAL)

POST-STORM EXISTING GROUND LINE
09-30-25 SURVEY

HYDRAULIC DATA

DESIGN DISCHARGE	= 18800	C.F.S.
FREQUENCY OF DESIGN FLOOD	= 25	YRS.
DESIGN HIGH WATER ELEVATION	= XXXX.XX'	
DRAINAGE AREA	= 144	SQ. MI.
BASIC DISCHARGE (Q100)	= 28600	C.F.S.
BASIC HIGH WATER ELEVATION	= XXXX.XX'	

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= XXX	C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= XX	YRS.
OVERTOPPING FLOOD ELEVATION	= XXXX.XX'	

*NOTE LOCATION OF OVERTOPPING

WS EL. Taken @ River Station ?

2,199.89 2,195.92
2,197.28 2,194.83
2,194.30 2,191.97
2,193.67 2,175.53
2,193.17 2,188.15

FOR -Y2- PLAN, SEE SHEET 4

M-0572G
WPI 5
R/W SHEET NO.

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

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11/14/23

PERMIT DRAWING
SHEET 11 OF 16

Cane River

Several alternatives were considered to reconstruct the Cane River due to storm impacts to Bridge 93 and Murphytown Road. This included evaluating Bridge 93 span arrangement, low chord elevations and roadway geometry to reconnect Huntdale Road with Murphytown Road. Replacing the bridge at the pre–storm location was considered, however dismissed, as the original location of the bridge was directly in a stream bend and the river thalweg shifted closer to Huntdale Road. Also, most of the pre–storm floodplain bench/embankment areas along Huntdale Road were eroded away due to the storm. An initial alternative included re–establishment of the pre–storm channel geometry through thalweg and bench reconstruction. However, in order to provide a more resilient road and minimize stream channel impacts, it was decided to focus on reestablishment of the low–flow channel conditions and only minor bench reconstruction. This will provide the conditions necessary for geomorphic and hydraulic stability through Bridge 93, continued post–storm sediment transport adjustments and facilitate reconstruction of the Huntdale roadway embankment.

SITE 3

SEE SHEETS 13 AND 14

CONTRACTOR TO PROVIDE STABLE TRANSITION

BRIDGE CONSTRUCTION IMPACTS

	IMPACT AREA (AC)	IMPACT LENGTH (LF)
SURFACE WATER IMPACTS	1.937	950
TEMPORARY SURFACE WATER IMPACTS	0.493	687

PROPOSED CAUSEWAY
PROPOSED BENCH
PROPOSED VEGETATED TOE
ORIGINAL PREHELENE EDGE OF WATER
POST HELENE EDGE OF WATER
PROPOSED EDGE OF WATER

Scale: 1"= 125'

M-0572G
WP1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

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INCOMPLETE PLANS
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VIAS INFRASTRUCTURE
220 HORIZON DRIVE, SUITE 117
RALEIGH, NC 27615
PHONE (727) 214-7698
LICENCE NO P-2673
WWW.VIASINFRASTRUCTURE.COM

HYDRAULIC DESIGN PREPARED BY

Dewberry
9300 HARRIS CORNERS PKWY
SUITE 220
CHARLOTTE, NC 28269
PHONE: 704.509.9918
NC COA No. F-0929

REVISIONS

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PERMIT DRAWING
SHEET 12 OF 16

SITE 3

SEE SHEETS 13 AND 14

CONTRACTOR TO PROVIDE STABLE TRANSITION

BRIDGE CONSTRUCTION IMPACTS

HUNTDALE ROAD

MURPHYTOWN ROAD

CANE CREEK

END GRADE M-0572G (WP1)
-Y5A- POT STA 16+25.00

END PROJECT/MILLING M-0572G (WP1)
-Y5A- POT STA 16+62.50

-Y5A- PT 1 LT 4+10.48

-Y5A- PC 12+94.81

BEGIN CONSTRUCTION
-L1DET- POT 178+12.50

-Y5A- POT STA 10+50.00 =
-L1DET- POC 179+19.34

-Y5A- POB 10+00.00

BEGIN PROJECT M-0572G (WP1)
-Y5A- POT STA 10+61.00 =
-L1DET- POC 179+19.34 (11' LT)

END CONSTRUCTION
-L1DET- POC 180+95.46

POTENTIAL ROCK RECOVERY AREA
(±1.06 AC)

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

TEMPORARY CAUSEWAY

PROPOSED BENCH

PROPOSED VEGETATED TOE

ORIGINAL PREHELENE EDGE OF WATER

POST HELENE EDGE OF WATER

PROPOSED EDGE OF WATER

TEMPORARY CRASH CUSHION

TEMPORARY CRASH CUSHION TYPE III

CL. III RIP RAP Type 1 Dmin = 1.5 ft

TDCE

NAD83 (NSRS 2011)

0' 25' 125'
Scale: 1"= 125'

REVISIONS

M-0572G
WP1

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DEPARTMENT OF TRANSPORTATION
YANCEY COUNTY

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PERMIT DRAWING
SHEET 13 OF 16

SITE 3

SURFACE WATER IMPACTS
TEMPORARY SURFACE WATER IMPACTS
PROPOSED CAUSEWAY
PROPOSED BENCH
PROPOSED VEGETATED TOE
ORIGINAL PREHELENE EDGE OF WATER
POST HELENE EDGE OF WATER
PROPOSED EDGE OF WATER

ORIGINAL PREHELENE EDGE OF WATER

BEGIN CONSTRUCTION
-L1DET- POT 178+12.50

PROPOSED VEGETATED TOE

-Y5A- POT STA 10+50.00 =
-L1DET- POC 179+19.34

BEGIN PROJECT M-0572G (WP1)
-Y5A- POT STA 10+61.00 =
-L1DET- POC 179+19.34 (11' LT)

END CONSTRUCTION
-L1DET- POC 180+95.00

PROPOSED EDGE OF WATER

POST HELENE EDGE OF WATER

PROPOSED BENCH

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

END GRADE M-0572G (WP1)
-Y5A- POT STA 16+25.00

END PROJECT/MILLING
-Y5A- POT STA 16+62.5

TEMPORARY CRASH CUSHION

TYPE III

TEMPORARY CAUSEWAY

CL. "B" RIP RAP
1 Tons
5 Sq. Yds.

15" RCP III
TB 2GI

SBG

SREU-TL2

GROUTED CLASS II RIP RAP (SEE STRUCTURES PLANS)

CAME RIVER

MURPHYTOWN RD --18' BST

GPS-25

N14°56'01.8"W

-Y5A-

N14°56'01.8"W

L1DET

TDCE

PUE

BY 5:1

12.5' INC (TYP)

+11.50

CLASS B RIP RAP

NORMAL WATER SURFACE

1'-0"

2'-0"

1.5:1

CLASS II RIP RAP

TEMPORARY CAUSEWAY DETAIL

0' 6' 30'

Scale: 1"= 30'

M-0572G
WP1

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11/14/23

PERMIT DRAWING
SHEET 14 OF 16

ORIGINAL PREHELENE EDGE OF WATER

BEGIN CONSTRUCTION
-L1DET- POT 178+12.50

PROPOSED VEGETATED TOE

-Y5A- POT STA 10+50.00 =
-L1DET- POC 179+19.34

BEGIN PROJECT M-0572G (WP1)
-Y5A- POT STA 10+61.00 =
-L1DET- POC 179+19.34 (11' LT)

END CONSTRUCTION
-L1DET- POC 180+95.00

PROPOSED EDGE OF WATER

POST HELENE EDGE OF WATER

PROPOSED BENCH

SITE 3

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

TEMPORARY CAUSEWAY

CANE RIVER

177 178 179 180 181 182

L1DET

TEMPORARY CRASH CUSHION

TYPE III

TDCE

PUE

12.5' INC (TYP)

TB 2GI

04402

15" RCP III

04401

SREU-TL2

8:1

CL. "B" RIP RAP
1 Tons
5 Sq. Yds.

GROUTED CLASS I RIP RAP (SEE STRUCTURES PLANS)

N14°56'01.8"W -Y5A-

END GRADE M-0572G (WP1)
-Y5A- POT STA 16+25.00

END PROJECT/MILLING
-Y5A- POT STA 16+62.5

GPS-25

MURPHYTOWN RD -18' BST

EP BRG

SW DALLAS RD -20' BST

Construction Sequence for Bridge 93

1. Perform stream re-establishment work within the bridge area to recenter the baseflow channel through the future proposed structure location.

2.Install Temporary Causeway / Temporary Bridge. This temporary access is required for bridge construction and will block less than 50% of normal river flow through the work area. Velocity will temporarily increase through a small section of the work area however will dissipate quickly as flows expand into the unconfined downstream channel.

3. Complete new bridge construction.

4. Once new bridge is completed, remove Temporary Causeway / Temporary Bridge.

5. Remove the Existing Temporary Bridge which was installed during emergency work operations after the storm.

0' 6' 30'
Scale: 1"= 30'

M-0572G
WP1

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PERMIT DRAWING
SHEET 15 OF 16

STA -Y5A- 11+77.25
CL @ GP ELEV = 2054.63'; SKEW = 90°
200'-0" CONCRETE GIRDERS
1@55', 1@90', 1@55'

L = 150
K = 83

TEMPORARY BRIDGE
EXISTING PRE-HELENE BRIDGE
PROPOSED BRIDGE
PRE-HELENE GROUND
PROPOSED GROUND
POST-HELENE GROUND

-Y5A-
(-)2.1000%
(-)0.3000%

10+61.00
2057.42

14+55.00 VPC
2049.15

16+05.00 VPT
2047.35

15+30.00 VPI
2047.57

16+25.00
2047.29

2,084.92
2,057.42
2,056.60
2,034.49
2,054.50
2,033.27
2,052.40
2,043.99
2,050.30
2,048.39
2,048.32
2,047.55
2,047.36
2,047.17
2,047.29

10 +50 11 +50 12 +50 13 +50 14 +50 15 +50 16 +50 17

2080 2070 2060 2050 2040 2030 2020 2010

M-0572G
WP1

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PROJECT: M-0572G

WETLAND AND SURFACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Stream Re-Establishment (ft)
1	Y2 DET 12+08-12+40	Temporary Crossing							0.006		41	
1	Y2 12+70 - 15+45	Stream Realignment						0.100	0.001			633
2	L 136+40 - 142+90	Stream Realignment						1.210	0.191			730
2	L140+25-140+73	Temporary Causeway							0.030		48	
3	-SR 1417- 175+30 to 178+50, 180+07 to 184+35	Stream Realignment						1.680	0.419			748
3	-Y5A- 178+50 to 180+07	Bridge Construction						0.280		157		
3	L1 172+28 -172+65	Temp Murphytown Rd Bridge Removal							0.074		35	
TOTALS*:			**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.27**	**0.72**	**157**	**124**	**2111**

*Rounded totals are sum of actual impacts

NOTES:

Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
02-05-26
YANCEY
M-0572G
DF.1813.1100999.1.2
SHEET 16 OF 16

ESA Consultation

Biological Opinions and Informal Consultations – Batch Format

Replace Bridge 093, Bridge 124, and Bridge 138 Destroyed by Tropical Storm Helene in Yancey County, North Carolina

Service Log #25-195 through 25-197

Prepared by:

U.S. Fish and Wildlife Service
Asheville Ecological Services Office
160 Zillicoa Street
Asheville, North Carolina 28801

GARY PEEPLES Digitally signed by GARY PEEPLES
Date: 2025.08.01 08:32:11 -04'00'

Gary Peeples
Acting Field Supervisor
Asheville Ecological Services Field Office
Asheville, North Carolina

Table of Contents

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.
- **July 18, 2025**: NCDOT submitted batched request for informal and formal consultation to the Service.
- **July 22, 2025**: Service requested clarifying information on project impacts.
- **July 29, 2025**: NCDOT provided responses to Service's questions.

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 in several watersheds, destroying thousands of transportation sites as well as homes and entire communities. Widespread landslides and tree 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 replacement of damaged or wholly destroyed crossing structures, which may include minimal tree clearing, grading, demolition, and in-water geotechnical work and construction. Construction activities are anticipated to occur from 2025 to late 2026, though the exact schedule depends on many different factors. 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.
000093	Cane River	Yancey	36.0252, -82.3271	Bridge destroyed, no original structure remaining.	25-195
990124	Cane River	Yancey	36.0129, -82.3813	Bridge destroyed, no original structure remaining.	25-196
990138	Bent Creek	Yancey	36.0129, -82.3823	Bridge and approach roadway damaged and closed.	25-197

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 "May Affect, Not Likely to Adversely Affect" (NLAA) determinations.

Table 2. Species NE Determinations

Structure Number	Waterbody	Service Log No.	NLAA Species
000093	Cane River	25-195	**NLAA:** Gray bat (*Myotis grisescens*), small whorled pogonia (*Isotria medeoloides*), Virginia spiraea (*Spiraea virginiana*). **Rationale:** Gray bat = absence of suitable roosting habitat; Plants = negative botanical surveys.
990124	Cane River	25-196	**NLAA:** Gray bat, small whorled pogonia, Virginia spiraea. **Rationale:** Gray bat = absence of suitable roosting habitat; Plants = negative botanical surveys.
990138	Bent Creek	25-197	**NLAA:** Gray bat, small whorled pogonia, Virginia spiraea. **Rationale:** Gray bat = absence of suitable roosting habitat; Plants = negative botanical surveys.

We believe the requirements under section 7 of the Endangered Species Act (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.

On December 13, 2024, eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*) was proposed for listing as endangered under the ESA. A species proposed for listing is one that the 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. NCDOT has chosen not to conference on eastern hellbender but will consider the species and coordinate with partner resource agencies as project actions move forward.

Biological Opinion

1. Introduction

A biological 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 proposed or listed as endangered or threatened; or result in the destruction or adverse modification of proposed or designated critical habitat.

This document transmits the Service's Opinion and is based on our review of the proposal to replace several crossing structures (Table 1) and the effects on the federally endangered Appalachian elktoe (*Alasmidonta raveneliana*) and northern long-eared bat (*Myotis septentrionalis*). 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 1, 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 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
000093	Cane River	25-195	36.0252, -82.3271	25-195	Plants: NLAA Bats: LAA Aquatics: LAA

990124	Cane River	25-196	36.0129, -82.3813	25-196	Plants: NLAA Bats: LAA Aquatics: LAA
990138	Bent Creek	25-197	36.0129, -82.3823	25-197	Plants: NLAA Bats: LAA Aquatics: LAA

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

2.2 Project Description

The widespread infrastructure failure of numerous NCDOT bridges and roadways due to TS Helene necessitates an expedited design build repair/replacement process and batched consultation response. Consequently, specific details regarding the proposed project designs in Tables 1-3 and associated action area impact details are not yet finalized. However, project activities and estimated impacts, based on the established practices of NCDOT's crossing structure replacement work, are available. At the time of this consultation, it is anticipated that most replacement bridges will be constructed using concrete box beam or cored slab designs, with the exception of smaller timber-decked bridges. The general and expected elements of these crossing structure replacement projects are described below. The current estimated timeline for completion of these projects is winter of 2026.

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 these projects 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; geotechnical borings and boring transportation equipment within the channel such as a barge or amphibious drill rig; bent removal and/or placement; and placement of stream-bank stabilization materials and/or retaining wall construction.

Tree Clearing, Access Roads, and Demolition

The maximum estimate for tree clearing per structure replacement location 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 but is assumed to occur during any time of year, including summer months. 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, with an assumption that these activities will occur during any time of year, including summer months.

2.3 Avoidance and Minimization and Conservation Measures

NCDOT will employ the following agency standards, guidelines, 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 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.

Aquatics- General AMMs will minimize impacts to listed aquatic species and **to the maximum extent possible** the following AMMs will be incorporated into project work – 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 [bents] to water resource, built to today's 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 aquatic species.

Aquatic AMM Deck Drains – Deck drains that empty directly to the waterbody below will not be implemented on 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.

Bats - General AMMs will minimize impacts to listed bats. **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 the 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 shieled 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.

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.

Aquatic CM: Aquatics Contribution - For individual bridge projects that are LAA aquatic species, the NCDOT will contribute $10,000 for each project structure to the N.C. Nongame Aquatic Species Fund.

Aquatic CM: Relocation - For projects that are LAA aquatic species, prior to project construction, aService Asheville Field Office NCDOT liaison and the NC Wildlife Resources Commission NCDOT liaison will be contacted to discuss the potential for aquatic species relocation, if applicable and practicable.

Bat CM - Tree Clearing Bat Fund Contribution: For individual bridge projects likely to adversely affect 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.

*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 as time of year clearing will occur is unknown. 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 is unknown, an assumed clearing acreage of 0.1 acre will be used based on estimates from previous clearing work at bridges (NCDOT 2015). The formula is calculated as follows:
$5,190 x 0.1 ac = 519 x 2 (critical life stage multiplier) = $1,038 contribution

3. Status of the Species

This section summarizes best available data about the biology and current condition of the Appalachian elktoe and northern long-eared bat 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 Appalachian Elktoe

Scientific Name: *Alasmidonta raveneliana*
Status: Endangered
Date of Listing: November 23, 1994
Critical Habitat: Designated in 2002

3.1.1 Description and Life History

The Appalachian elktoe is a freshwater mussel endemic to the Blue Ridge Physiographic Province of WNC. This species exists in several small populations in the Upper Tennessee River system of North Carolina and Tennessee, inhabiting relatively shallow medium-sized creeks and rivers with cool, well-oxygenated, and moderate- to fast-flowing water.

Lea (1834) described the Appalachian elktoe from the French Broad River (FBR) system in North Carolina. Its shell is thin but not fragile, oblong, and somewhat kidney-shaped, with a sharply rounded anterior margin and a broadly rounded posterior margin. The periostracum (outer shell) of the Appalachian elktoe varies in color from dark brown to yellowish-brown in color. Rays may be prominent in some individuals, usually on the posterior slope, and nearly obscure in other specimens. The reproductive cycle of the Appalachian elktoe is similar to that of other native freshwater mussels. Males release sperm into the water column, which is then taken in by the female through their siphons during feeding and respiration. Females retain the fertilized eggs in their gills until the larvae (glochidia) fully develop, after which they are released into the water and attach to appropriate species of fish hosts.Juveniles then detach from their fish host and sink to the stream bottom where they may continue to develop, provided suitable substrate and water conditions are present (Service 2002).

3.1.2 Status and Distribution

The Appalachian elktoe is known only from the mountain streams of WNC and eastern Tennessee. It is found in gravelly substrates often mixed with cobble and boulders, in cracks of bedrock, and in relatively silt-free, coarse sandy substrates (Service 1996).

Although the complete historic range of the Appalachian elktoe is unknown, available information suggests that the species once lived in most of the rivers and larger creeks of the upper Tennessee River system in North Carolina, with the possible exception of the Hiwassee and Watauga River systems. In Tennessee, the species is known only from its present range in the main stem of the Nolichucky River. At the time of listing, two known populations of the Appalachian elktoe existed: the Nolichucky River, including its tributaries (the Cane River and the North Toe River); and the Little Tennessee River and its tributaries. The record in the Cane River was represented by one specimen found just above its confluence with the North Toe River (Service 1996). Since listing, the Appalachian elktoe has been found in additional areas. These occurrences include extensions of the known ranges in the Nolichucky River (North Toe River, South Toe River, and Cane River) and the Little Tennessee River (Tuckasegee River and Cheoah River) as well as a rediscovery in the FBR basin (Pigeon River, Little River, Mills River, and the main stem of the FBR). Many of these newly discovered populations are relatively small in number and range.

The Appalachian elktoe has experienced declines in two populations across its range. A sudden die-off in the Little Tennessee River, (once considered the largest and most secure population), occurred from 2005 – 2015. Surveys in 2017, 2018 and 2019 produced very low numbers, indicating a remnant population only a tiny fraction of its previous size. The species has also declined in the lower portion of the Nolichucky River. Appalachian elktoe were once common in all three tributaries of the Nolichucky River: North Toe, South Toe, and Cane Rivers. In 2008, most of the Appalachian elktoe in the Cane River died off, coinciding with a failure at a wastewater treatment plant on the river. Beginning in 2013, the Appalachian elktoe population in the lower South Toe River declined steeply which coincided with a major highway construction project and only occurred downstream of receiving streams in the project footprint. Appalachian elktoe are still present in the North and South Toe Rivers, but at reduced densities. It appears the North Toe population is limited by urban runoff and mining effects to the river. The other populations of Appalachian elktoe appear to be stable (Tuckasegee, Cheoah, and Pigeon Rivers) or expanding (FBR). Prior to 2004, the FBR population appeared to be confined to two tributary streams (Little River and Mills River), but over the last few years the known range of Appalachian elktoe in the main stem of the FBR has expanded and it now appears to be well established, albeit at low density, over a broad area. At the time of this document, impacts to Appalachian elktoe from TS Helene in September of 2024 remain largely unknown. Extreme flooding and scour in many of the rivers occupied by the species is believed to have resulted in reduced abundance in several locations, while other areas likely lost fewer individuals.

3.1.3 Threats

The decline of the Appalachian elktoe throughout its historic range has been attributed to a variety of factors, including sedimentation, point and nonpoint-source pollution, and habitat modification (impoundments, channelization etc.). The low numbers of individuals and the restricted range of most of the surviving populations make them extremely vulnerable to extirpation from a single catastrophic event or activity. Catastrophic events may consist of natural events, such as flooding or drought, as well as human influenced events, such as toxic spills associated with highways or railroads.

Natural flooding events combined with alteration of watersheds can lead to large fluctuations in abundance observed in Appalachian elktoe populations. Record catastrophic flooding in the range of Appalachian elktoe occurred during TS Helene during late September 2024. Many areas inhabited by Appalachian elktoe were severely damaged by erosive flooding, bedload scour, and bank failures. Observations immediately after the flooding in October 2024 revealed that despite severe flooding,

certain portions of Appalachian elktoe occurrences in North Carolina, such as the upper Pigeon River, were relatively intact. Those observations indicate that the species is likely to remain in most of the affected areas, though individual numbers were likely greatly reduced in many inhabited locations. Portions of the FBR basin experienced catastrophic flooding in late summer 2021 due to the remnants of Tropical Storm Fred. The flooding likely resulted in loss of Appalachian elktoe individuals within populations in the hardest-hit portions of the Pigeon, Mills and French Broad Rivers.

Siltation resulting from improper erosion control of various types of land use, including agriculture, forestry, road construction, and development, has been recognized as a major contributing factor to the degradation of mussel populations (Service 1996). Siltation degrades substrate and water quality, increasing potential exposure to other pollutants, and direct smothering of mussels (Ellis 1936). The abrasive action of sediment on mussel shells has been shown to cause erosion of the outer shell, which allows acids to reach and corrode underlying layers (Harman 1974).

Sewage treatment effluent has been documented to significantly affect the diversity and abundance of mussel fauna (Goudreau *et al*. 1988). Goudreau *et al*. found that recovery of mussel populations might not occur for up to 2 river miles (3.22 kilometers) below points of chlorinated sewage effluent. Most of the water bodies where Appalachian elktoe still exist have relatively few point source discharges within the watershed and are rated as having "good" to "excellent" water quality by the North Carolina Division of Water Resources.

The introduction of exotic species, such as the Asian clam (*Corbicula fluminea*) and zebra mussel (*Dreissena polymorpha*), pose significant threats to native freshwater mussels. Competitive interactions for space, food, and oxygen between these species and native mussels, possibly at the juvenile stages (Neves and Widlak 1987) are the main concerns. At the time the Appalachian elktoe was listed, the Asian clam was not known from the stretch of the Little Tennessee River that it occupies; however, it has been observed in the Little Tennessee River in recent years and as mentioned earlier, may be a contributing factor to the decline of that population. When the Appalachian elktoe was listed, it was speculated that, due to its restricted distribution, it "may not be able to withstand vigorous competition" (Service 1996).

3.4 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

3.4.1 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. Along with trees, the species has also been documented roosting in 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 WNC

from 2000-2023, northern long-eared bats have been recorded roosting in WNC bridges at a usage rate of 0.2%, with use documented May through October (NCDOT 2023a). 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 similar to 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).

3.4.2 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 white-nose syndrome (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).

3.4.3 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.

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. 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 Appalachian Elktoe Within the Action Areas

Flooding and scour from TS Helene impacted all waterbodies included in this consultation. Bridge 124 and Bridge 093 are within designated critical habitat for Appalachian elktoe, and Bridge 138 is approximately 250 feet upstream from critical habitat. Post-storm in-water surveys have not been conducted at this time, given all the constraints already addressed, though discussions regarding site conditions as observed by the Service's Asheville Field Office aquatics recovery lead and/or aquatic biologists with NCWRC and NCDOT's Biological Surveys Group have occurred. The potential for individual Appalachian elktoe to still occur within the action areas remains. At the time of this consultation, those individual numbers are believed to be reduced from pre-Helene conditions but are not believed to be zero. One Appalachian elktoe within each action area is estimated based on pre-TS Helene estimates and anticipated storm losses.

4.2 Northern Long-eared Bat Within the Action Areas

Structures

Yancey County Bridges 093 and 124 were completely destroyed. Bridge 138 is a small timber bridge that was heavily damaged but portions of the structure remain in place. The remaining portions of the structure do not provide suitable bat roosting habitat. Therefore, potential presence of northern long-eared bat in crossing structures is not a concern for these projects.

Trees

Northern long-eared bats roost in trees during the warmer months. All projects involve tree clearing, but no project anticipates clearing more than 0.1 acres. Given the minimal amount of riparian vegetation and trees remaining within the action areas, it is unlikely that a high number of bats would be utilizing the

small amount of available habitat. Based on that rationale, an estimated one individual of northern long-eared 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 Appalachian Elktoe

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

Based on the description of the action and the species' biology, stressors to the Appalachian elktoe have been identified and are outlined below. The proximity of these actions will be within the waters occupied by Appalachian elktoe [within the action area] and duration of disturbance is expected during the construction phase of project work.

5.1.2 Effects Analysis

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

In-water Work

In-water work, such as the placement of causeways, geotechnical borings, demolition of remnant structures (if any), and placement of hard materials for new bents/structures or for bank stabilization, is likely to occur at the project locations. Installation of a temporary causeway may result in adverse effects to Appalachian elktoe and their fish host species due to the potential to bury individuals and harm fish host individuals or disrupt passage or other behavior while they are in place. Causeways also constrict river flows, which could potentially modify the hydrology and physical habitat conditions upstream and downstream of the respective fill areas. Rock causeway material may be washed away during extremely high flow events, which may kill, crush, or bury individuals, or otherwise degrade mussel habitat downstream of the footprint. Causeways increase the risk of stream bed and bank scour. The habitat downstream of causeways may experience higher velocities until removal. Temporary causeways may also act as physical and high-velocity barriers to fish movement. Demolition and construction may result in the loss of materials in the waterbody. While this isn't expected, given the implementation of BMPs, it is still possible. Materials that aren't effectively contained during demolition or construction could serve to crush or bury aquatic species. Similarly, the placement of hard materials within the waterbody may result in crushing or burying Appalachian elktoe.

Alteration of Flows and Channel Stability

The initial construction of a crossing structure is known to cause changes in the flow of the stream and corresponding erosive processes that can alter the adjacent habitat. Channel instability occurs when scour results in degradation or when sediment deposition leads to aggradation (Rosgen 1996). Since most structures are being replaced in the same locations, any alteration of flows and channel stability associated with the new structures are anticipated to be minor and localized. That said, altering the existing in-water structures has the potential to create flow instability which could impact downstream habitat.

Turbidity and Sedimentation
Increases in turbidity and sedimentation within the action area during geotechnical exploration, demolition, and construction are expected. This can occur from in-water work and from the erosion of bare soil in and surrounding the construction zone, especially during heavy rain events. Sediment accumulations of less than one inch have been shown to cause high mortality in most mussel species (Ellis 1936). Adverse effects to mussels resulting from the accumulation of sediments include smothering, disruption of feeding and breeding activity, alteration of habitat, or some combination. Sediment and erosion control (SEC) devices, when properly designed and maintained, are expected to greatly reduce influxes of turbidity; however, heavy rain events can exceed SEC capacity, resulting in sediment releases which degrade mussel habitat in the vicinity.

In summary, the in-water work, flow and channel stability alteration, and turbidity and sedimentation within the action areas are likely to adversely affect Appalachian elktoe and take is expected. Take may occur in the form of killing, wounding, or harming individuals of the species.

Accidental Spills
The inadvertent spill or discharge of toxic pollutants, such as diesel fuel, hydraulic oil, and uncured concrete into action area waterbodies could occur during geotechnical exploration, demolition, and construction activities and result in mortality of Appalachian elktoe. The type, timing, amount, and proximity to the river of any accidental spills would determine the magnitude of effect to Appalachian elktoe, but may result in death, disrupt feeding or reproductive behaviors, influence animals to expend energy relocating to more favorable habitats, or otherwise reduce fitness. Significant spills resulting from negligent operation are possible, but unlikely to occur. Adhering to measures outlined in the AMMs and CMs will minimize the potential for accidental spills to occur.

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).

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 Northern Long-eared Bat

5.2.1 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 northern long-eared 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 waterways, riparian zone, and any existing forested areas. Duration of disturbance is expected primarily during the construction phase of project work.

5.2.2 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 previous Bridge 093 and Bridge 124 structures are completely gone. While portions of timber Bridge 138 remain, it does not offer suitable bat roosting conditions. Therefore, there are no concerns regarding structure work, as previous structures are either wholly gone or are considered unsuitable.

Tree Removal
The removal of suitable roost trees, if conducted while northern long-eared 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. 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 in the form of harm.

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

If bats were utilizing structures or trees 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.

5.3 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 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 Appalachian elktoe and northern long-eared bat, the environmental baselines for the action areas, the effects analyses and cumulative effects, the Service's biological opinions are shared below.

6.1 Appalachian elktoe

It is the Service's biological opinion that the proposed actions are not likely to jeopardize the continued existence of the Appalachian elktoe. This opinion is based on the following factors: Effects of the actions occur as a result the planned repair or replacement of Yancey County Bridges 093, 124, and 138. The species occurs in approximately 162 river miles in WNC and Eastern Tennessee (as understood pre-Helene); thus, impacts are likely to be limited to about 0.2% of the range-wide occupied habitat. Crossing structure construction activities are likely to negatively affect Appalachian elktoe within the action areas, but the incorporated conservation measures are expected to reduce impacts, notably, relocation efforts that could remove and relocate individual mussels prior to work taking place. Designated critical habitat for this species is present at Yancey Bridge 093 and 124 locations. Based on knowledge of the action area and surrounding portions of the project waters, 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.

6.2 Northern Long-eared Bat

It is the Service's biological opinion that the proposed actions are not likely to jeopardize the continued existence of northern long-eared bat. This opinion is based on the following factors: Effects from these actions stem from the replacement of the following crossing structures and/or associated tree clearing: Yancey County Bridges 093, 124, and 138. These action areas comprise only a small amount of active season habitat within the overall range of the species. No changes in the long-term viability of northern long-eared bat are expected because, given the low numbers of the species which could be expected to occur at each crossing structure location (that is, an estimate of one northern long-eared bat per forested area within each action area), and the occurrence range-wide of northern long-eared bat in 37 states – only a miniscule percentage of the overall population may be affected. Tree clearing associated with crossing structure construction activities is likely to negatively affect northern long-eared 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 Appalachian Elktoe

The Service anticipates incidental take of the Appalachian elktoe may occur as a result of the geotechnical exploration activities and construction of Yancey County Bridges 093 and 124 and the demolition and construction activities of Yancey County Bridge 139. Specifically, take of the species may occur as a result of 1) riverbed disturbance in the form of bent removal, geotechnical investigation such as drilling and in-water drill rig equipment, and causeway construction, operation, and removal, 2) the resulting river instability, scour, sediment movement, and turbidity produced from those activities, and 3) geotechnical investigation and construction activities around the crossings. During these activities, individual mussels may be crushed; harmed by increases in turbidity and scour, sediment movement, or other water quality degradation; or dislocated because of physical changes in their habitat. These impacts are expected to occur primarily within the structure construction footprints, with the potential for more minor impacts to occur 100 meters upstream and 400 meters downstream of the current structure locations.

Incidental take of Appalachian elktoe is difficult to measure or detect given that 1) mussels are small, aquatic, cryptic, and generally difficult to observe, 2) finding dead or injured mussels during or following project implementation is unlikely, 3) some incidental take is in the form of non-lethal harm and not directly observable; and 4) losses may be masked by seasonal fluctuations in numbers or other causes. Given this, the estimated amount of riverbed disturbance in acres or square feet is used as a surrogate measure of take for this Opinion. Additionally, as discussed in the Environmental Baseline, no more than one Appalachian elktoe is estimated to be present within the construction footprint immediately surrounding the structures and, to the best of situational abilities, efforts will be made to relocate individuals if found prior to construction in an effort to reduce mortality.

Therefore, the incidental take permitted by the Opinion would be exceeded if either of the following occurs:

1. The construction footprint (placement of permanent fill, causeways, and associated actions) exceeds 0.35 acres (15,226 square feet) at any crossing structure construction location.
2. Take of greater than one Appalachian elktoe is observed.

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 Appalachian elktoe is expected to be in the form of harm, wounding, or death.

7.2 Amount of Take for Northern Long-eared Bat

The Service anticipates incidental take of northern long-eared may result from the tree clearing associated with construction of Yancey County Bridges 093, 124, and 138. Specifically, take may occur as a result of clearing suitable roost trees during times of year that the species 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 maximum estimated tree clearing is used as a surrogate measure of take for this Opinion. Additionally, as discussed in the Environmental Baseline, no more than 1 individual of northern long-

eared bat is estimated to be present within the action areas of each crossing structure.

Therefore, the incidental take permitted by the Opinion would be exceeded if tree clearing amount exceeds 0.10 acre at a single structure location for the crossing structures listed at the beginning of section 7.2.

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 northern long-eared bat is expected to be in the form of harm, wounding, or death.

7.3 Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take of Appalachian elktoe and northern long-eared 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.

7.4 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.

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 of in-water impacts, if LAA for Appalachian elktoe.
        ii. Acreage and dates of tree 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.

- **Eastern Hellbender**: Proximity to eastern hellbender occurrence records was noted for the structures addressed in this document. Ahead of work at these locations, coordinate with the NCWRC and the Service to survey for/relocate any hellbenders that may be within the action area and vulnerable to impacts from project work.
- **State Species of Concern**: Close proximity to several aquatic species with North Carolina designations was noted for these crossing structures. While these species are not currently afforded legal protection under the ESA, we recommend the most protective sediment and erosion control measures possible be used in waters occupied by these species, and we encourage you to coordinate any relocation efforts of such species with the 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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Tribal Coordination

From:	Clough, Karina A
To:	Elizabeth Toombs; russtown@ebci-nsn.gov; syerka@ebci-nsn.gov; Roger Cain; section106@muscogeenation.com
Cc:	Wilkerson, Matt T; Archual, Adam J.; Thomas, John T.; jmsanderson; Allen, Yates
Subject:	Tribal Coordination Request: US 19W North Project No. 18313.1100999
Date:	Tuesday, March 25, 2025 11:18:39 AM
Attachments:	NCDOT Proj. 999_Cherokee.pdf NCDOT Proj. 999_EBCI.pdf NCDOT Proj. 999_Muscogee.pdf NCDOT Proj. 999_UKBCI.pdf

Dear Sir/Madam,

This email is to request your review and comments on the proposed project to restore the Hurricane Helene-damaged section of US 19W, Huntsdale Road, and Murphytown Road along the Cane River, Nolichucky River, and the North Toe River in Yancey County. The repair area extends approximately 6 miles on US 19W from Piney Hill Road to Huntdale Road; approximately 2 mile of Will Higgins Road between its southern and north intersections with US 19W; approximately 4 miles of Huntdale Road from US 19W to the North Toe River Bridge; and approximately 2 miles of Murphytown Road from Huntdale Road to the end of state maintenance (Project No. 18313.1100999). This project also includes the replacement of seven bridges along the described roadway corridors. The Federal Highway Administration (FHWA) is the lead federal agency. Attached to this email is a letter requesting information about the project site.

With this email, NCDOT is requesting your consultation on the above project. Please review the attached information and provide comments within 30 days. If you have any questions regarding this request, do not hesitate to contact me.

This request for consultation is being sent to the following:

- Stephen Yerka (Eastern Band of Cherokee Indians (EBCI) Tribal Historic Preservation Office)
- Roger Cain (United Keetoowah Band of Cherokee Indians in Oklahoma (UKB) THPO)
- Muscogee (Creek)Nation
- Elizabeth Toombs (Cherokee Nation THPO)
- Wenonah George Haire (Catawba Indian Nation) – via mail

Sincerely,

Karina Clough
Division PDEA Engineer
Division 13
North Carolina Department of Transportation

828-250-3038 office
kaclough@ncdot.gov

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Chuck Hoskin Jr.
Principal Chief
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Bryan Warner
Deputy Principal Chief
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April 24, 2025

Karina Clough
North Carolina Department of Transportation
Division 13 Office
55 Orange Street
Asheville, NC 28801-2340

Re: 18313.1100999, US 19W North

Dear Karina Clough:

The Cherokee Nation (Nation) is in receipt of your correspondence about **18313.1100999**, and appreciates the opportunity to provide comment upon this project. This communication is intended for government-to-government consultation with a sovereign federally recognized Tribal Nation. Information received in consultation will be deemed confidential unless explicit consent is provided by the Nation.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (Office) reviewed this project, cross referenced the project's legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.

However, the Nation requests that the North Carolina Department of Transportation (NCDOT) halt all project activities immediately and re-contact our Office for further consultation if items of cultural significance are discovered during the course of this project. Additionally, the Nation requests that the NCDOT conduct appropriate inquiries with other pertinent Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer
Cherokee Nation Tribal Historic Preservation Office
elizabeth-toombs@cherokee.org
918.453.5389

Historic Architecture & Landscapes

24-11-0014

HISTORIC ARCHICTECTURE AND LANDSCAPES
EFFECTS REQUIRED FORM

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

PROJECT INFORMATION

Project No:	No TIP	***County***:	Yancey
WBS No.:	49082.2.13	***Document Type***:	CE
Fed. Aid No:	To Be Assigned	***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 13 proposes to repair/restore various sections of US 19 West from north of Lewisburg to the Nolichucky River/ North Toe River at the Yancey County and Mitchell County line.

Included in the proposed project will be three (3) intersecting secondary roads, which will be repaired/restored to their pre-existing conditions.

SR 1444 (Will Higgins Road)
SR 1417/SR 1304 (Huntdale Road)
SR 1343 (Murphytown Road)

Additionally, seven (7) bridges/structures require significant repair or replacement.

Yancey Bridge 124 on SR 1413 (Bent Creek Road) over Cane River (const. 1978)
Yancey Bridge 138 on SR 1413 (Bent Creek Road) over Bent Creek (const. 1963)
Yancey Bridge 178 on SR 1444 (Will Higgins Road) over Cane River (const. 1979)
Yancey Bridge 218 on SR 1444 (Will Higgins Road) over Big Creek (const. 1957)
Yancey Bridge 58 on US 19 W over Cane River (const. 1996)
Yancey Bridge 93 on SR 1343 (Murphytown Road) over Cane River (const. 1977)
Mitchell Bridge 143 on SR 1304 (Huntdale Road) over North Toe River (const. 2009)

All proposed activities, at this time, are anticipated to occur within NCDOT's existing ROW (or at least where the ROW once existed). For the US 19 West corridor, the existing ROW is approximately 60 feet wide whereas along the three (3) secondary roads, the existing ROW appears to range between 20 to 60 feet. As submitted, NCDOT's intent is to conduct all work within existing ROW and restore to previous function without the need for easements; however, deteriorating field conditions could require the acquisition of ROW or easements. Although Preliminary Design Plans are not available at this time, an Area of Potential Effects (APE) was generated to facilitate the environmental review, by buffering each road to its corresponding ROW width.

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

An NCDOT architectural historian reviewed the known historic properties in proximity to the APE using HPOWeb, Yancey County GIS, survey site files from the HPO Western Office, and NCDOT's 2023 Historic Bridge Inventory. The intent was to "flag" specific properties or districts that should be avoided or will require plan review with NCDOT and HPO to determine if they will have an effect on the property. In addition, the NCDOT architectural historian commits to visiting the APE in January 2025 to assess the condition of the known properties as some may have been damaged immediately after Hurricane Helene. The five (5) known historic properties are listed below and marked on the HPOWeb maps included in this form. None of the damaged bridges were previously determined eligible for the National Register as a part of NCDOT's current Historic Bridge Inventory.

1. YC0217 Phillips & Son Texaco Station (Determined Eligible, 2013) US 19 W
2. YC0171 Swinging Walk Bridge (surveyed only) Cane River
3. ML0053 Robert Griffith House (Study List, 1987) SR 1304
4. ML no ## Toe River Free Will Baptist Church (surveyed only) SR 1304
5. ML no ## Phin Peterson Store (surveyed only) SR 1304

SUPPORT DOCUMENTATION

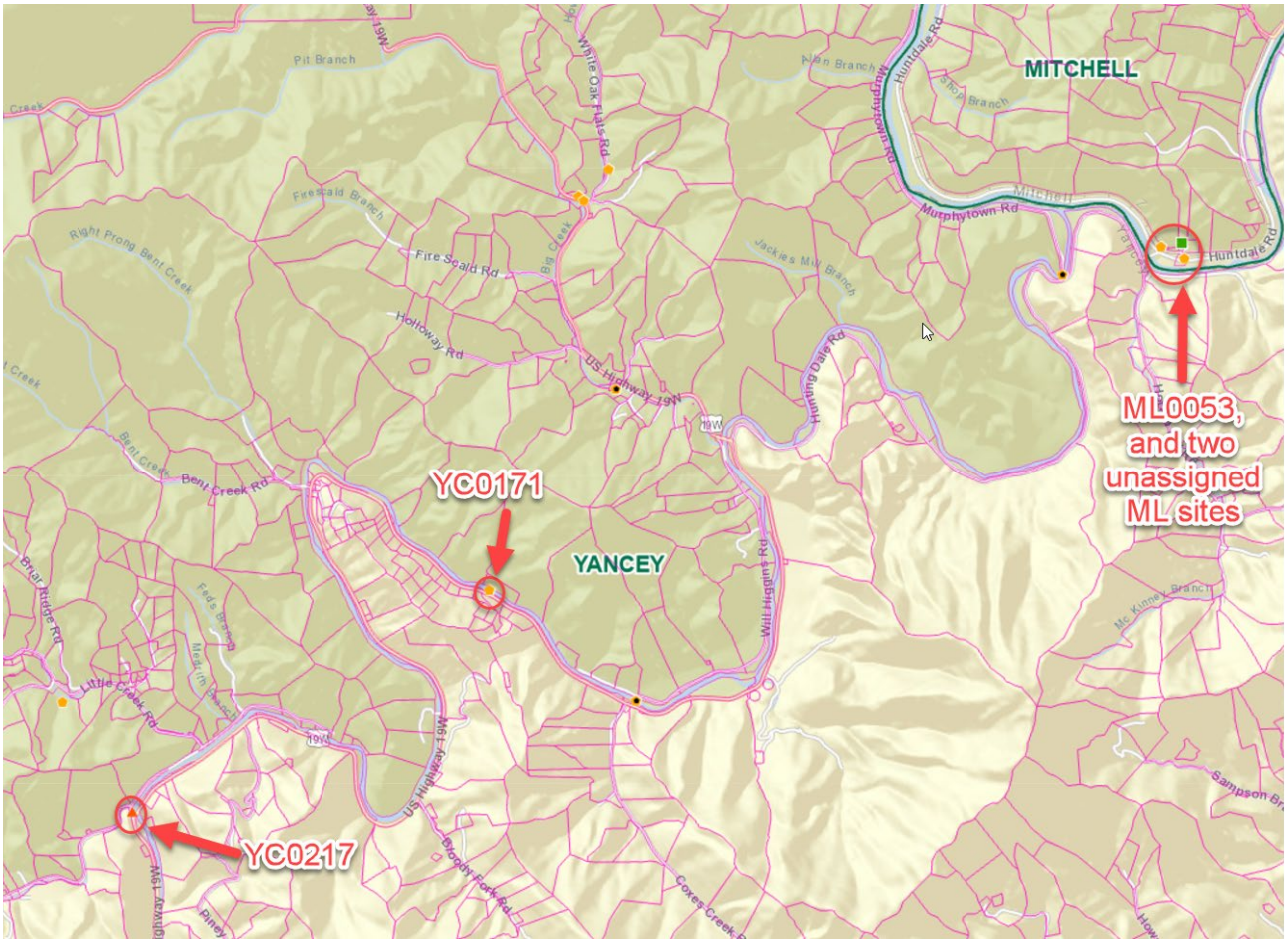
☒Map(s) ☐Previous Survey Info. ☐Photos ☐Correspondence ☐Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **EFFECTS REQUIRED**

Mary Pope Furr **1/2/2025**

NCDOT Architectural Historian Date



Known Historic Resources- source HPOWeb

Archaeology

Project Tracking No.

24-11-0014
Resubmit II

N O 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 Team.

PROJECT INFORMATION

Project No:	**Bridges 124 & 138**	*County:*	Yancey
WBS No:	PA-11-0014[ET]6899	*Document:*	Federal CE
Federal Aid No:		*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	**NWP 3 / NWP 14**

Project Description: The project involves the permanent replacements of Bridge 9900124 over the Cane River on SR 1413 (Bent Creek Road) and Bridge 9900138 over Bent Creek on SR 1413 in Yancey County, North Carolina. The permanent replacement bridge will be located in the approximate location of the original storm destroyed alignment. The archaeological APE subsumes the existing right-of-way and measures approximately 1.0 mile in length and 60 feet in width (existing right-of-way).

SUMMARY OF CULTURAL RESOURCES REVIEW

Permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Based on the submitted "request for cultural resources review" form, the project is federally funded and utilizing a Federal CE document type. As such, Section 106 of the National Historic Preservation Act will apply and the Federal Highway Administration (FHwA) will serve as the lead federal agency. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the project locale. The archaeological APE encompasses all areas of potential ground disturbing activity. Since the proposed replacement locations will utilize the existing alignments thereby minimizing impacts to the surrounding land surfaces.

Once an APE was outlined, a map review and site file search was conducted by staff at the Office of State Archaeology (OSA) on Tuesday, July 29, 2025. No NRHP eligible or any other archaeological sites are located within the APE or directly adjacent. Examination of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties employing resources available on the NCSHPO website is important in establishing the location of noteworthy historic occupations related to a perspective construction impact area. No properties with the potential for archaeological deposits were identified in the APE.

In addition, historic maps of Yancey County were appraised to identify former structure locations, land use patterns, cemeteries, or other confirmation of historic occupation in the project vicinity. Archaeological/historical reference materials were inspected as well. Based on cultural-historical

factors, the APE is considered to have a low potential for the documentation of archaeological resources.

Further, topographic, geologic, flood boundary, and NRCS soil survey maps were referenced to evaluate pedeological, geomorphological, hydrological, and other environmental determinants that may have resulted in past occupation at this location. Aerial and on-ground photographs (NCDOT Spatial Data Viewer) and the Google Street View map application (when amenable) were also examined/utilized for additional assessment of disturbances, both natural and human induced, which compromise the integrity of archaeological sites. In addition, aerial photographs taken post-Helene were inspected to determine the level of damage to the APE. Environmental/impact factors do not suggest a heightened potential for archaeological resource recovery.

(This project falls within a North Carolina County in 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 you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.)

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

The APE has been impacted, altered, and scoured by the flooding caused by Hurricane Helene. Any archaeological artifacts or features would have been eradicated by the flooding and redeposited within the river or downstream. Furthermore, the APE is somewhat disturbed by the US 19W and SR1413 ROW and those residential and commercial properties that border it. Those areas directly proximal to the project APE's have been classified as frequently flooded, sloping, and as rocky-bouldery outcrops. Prehistoric and historic occupation would not have used such landforms and been centered on well drained and relatively flat sections elsewhere.

The project APE is unlikely to contain significant, intact, and preserved archaeological deposits. As currently proposed as a federally funded project, no further consultation is advocated. A finding of "no archaeological survey required" is considered appropriate.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST: *NO ARCHAEOLOGY SURVEY REQUIRED*

Scott Halvorsen Scott Halvorsen 7/30/2025

NCDOT ARCHAEOLOGIST II Date

Project Tracking No.

24-11-0014
Resubmit

N O 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 Team.

PROJECT INFORMATION

Project No:	**Bridge 93**	*County:*	Yancey
WBS No:	PA-11-0014[ET]6898	*Document:*	Federal CE
Federal Aid No:		*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	**NWP 3 / NWP 14**

Project Description: The project involves the permanent replacement of Bridge 990093 over the Cane River on SR 1343 (Murphytown Road) in Yancey County, North Carolina. The current temporary bridge is located downstream, about 45 feet east of the pre-storm alignment. The permanent replacement bridge will be located approximately 300 feet downstream north of the pre-storm alignment. The archaeological APE subsumes the existing right-of-way and measures approximately 0.24 miles in length and 200 feet in width.

SUMMARY OF CULTURAL RESOURCES REVIEW

Permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Based on the submitted "request for cultural resources review" form, the project is federally funded and utilizing a Federal CE document type. As such, Section 106 of the National Historic Preservation Act will apply and the Federal Highway Administration (FHwA) will serve as the lead federal agency. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the project locale. The archaeological APE encompasses all areas of potential ground disturbing activity.

Once an APE was outlined, a map review and site file search was conducted utilizing on-line resources provided to the NCDOT by the Office of State Archaeology (OSA) on Tuesday, July 29, 2025. No NRHP eligible or any other archaeological sites are located within the APE or directly adjacent.

Examination of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties employing resources available on the NCSHPO website is important in establishing the location of noteworthy historic occupations related to a perspective construction impact area. No properties with the potential for archaeological deposits were identified in the APE.

In addition, historic maps of Yancey County were appraised to identify former structure locations, land use patterns, cemeteries, or other confirmation of historic occupation in the project vicinity. Archaeological/historical reference materials were inspected as well. Based on cultural-historical

factors, the APE is considered to have a low potential for the documentation of archaeological resources.

Further, topographic, geologic, flood boundary, and NRCS soil survey maps were referenced to evaluate pedeological, geomorphological, hydrological, and other environmental determinants that may have resulted in past occupation at this location. Aerial and on-ground photographs (NCDOT Spatial Data Viewer) and the Google Street View map application (when amenable) were also examined/utilized for additional assessment of disturbances, both natural and human induced, which compromise the integrity of archaeological sites. In addition, aerial photographs taken post-Helene were inspected to determine the level of damage to the APE. Environmental/impact factors do not suggest a heightened potential for archaeological resource recovery.

(This project falls within a North Carolina County in 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 you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.)

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

The APE land surfaces have been heavily impacted, altered, and scoured by the flooding caused by Hurricane Helene. The occasionally flooded soil types that were mapped within the project area have been completely erased. Any archaeological artifacts or features would have been eradicated by the flooding and redeposited within the river or downstream. The project APE is unlikely to contain significant, intact, and preserved archaeological deposits. As currently proposed as a federally funded project, no further consultation is advocated. A finding of "no archaeological survey required" is considered appropriate.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST: *NO ARCHAEOLOGY SURVEY REQUIRED*

Scott Halvorsen Scott Halvorsen 7/30/2025

NCDOT ARCHAEOLOGIST II Date

NEPA Document

Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	**Helene Permanent Repairs US 19W North–Replace Bridges 990093, 990124, 990138**
WBS Element	18313.1100999
Federal Project No.	N/A

A. Project Description:

The proposed action includes the permanent replacement of three bridges destroyed by Hurricane Helene in Yancey County (Table 1; see Figures 1).

Table 1. Proposed Permanent Bridge Replacement Locations

Bridge No.	NCDOT Road Number	River/ Creek	Decimal degrees
990093	SR 1343 (Murphytown Road)	Cane River	36.02511, -82.32709
990124	SR 1413 (Bent Creek Road)	Cane River	36.01292, -82.38124
990138	SR 1413 (Bent Creek Road)	Bent Creek	36.01292, -82.38225

The SR 1343 (Murphytown Road) crossing of the Cane River is currently served by a temporary bridge located about 900 feet downstream (northeast) of the pre-storm alignment of Bridge 990093. The permanent replacement bridge will be located approximately 600 feet downstream of its pre-storm alignment. The existing temporary bridge will be used to maintain traffic during construction. Because the permanent replacement bridge is on new alignment, approximately 75 feet of additional new roadway will be required to tie into the existing Murphytown Road. Including the additional roadway, approximately 360 feet of roadway improvements on Murphytown Road are anticipated. The approximately 500-foot portion of existing Murphytown Road between the pre-storm Cane River crossing and the tie-in with the permanent replacement bridge will be abandoned, the pavement removed, and area revegetated. (See Figure 3.)

The SR 1413 (Bent Creek Road) crossing of the Cane River is currently served by a temporary bridge located about 30 feet upstream (south) of the pre-storm Bridge 990124 alignment. The permanent replacement bridge will be located back on its pre-storm alignment and the existing temporary bridge will be used to maintain traffic during construction.

The Bent Creek Road crossing of Bent Creek is about 200 feet west of Bridge 990124 and is currently served by a temporary bridge on the same alignment as the pre-storm Bridge 990138 alignment. The permanent replacement bridge will also be on the pre-storm alignment. A new temporary bridge will be located approximately 50 feet upstream (north) to maintain traffic during construction of the permanent replacement bridge.

The permanent replacement of Bridges 990124 and 990138 will include roadway work on Bent Creek Road and Dogwood Cove Road of approximately 300 feet and 150 feet, respectively.

Table 2 describes the proposed permanent bridge replacement structures. The permanent replacement bridges will meet current NCDOT design standards and will include improved hydraulic openings compared to the pre-storm bridges, in compliance with FEMA regulations. Existing bridge abutments will be replaced with concrete end bents and Bridges 990093 and 990124 will include new interior concrete bents. Streambank stabilization (e.g., stone rip rap) will be included upstream and

downstream of the permanent replacement bridge abutments. New prestressed concrete cored slab/box beam spans with asphalt overlays will finish the driving surfaces.

Table 2. Proposed Permanent Bridge Replacement Descriptions

Bridge No.	Pre-Storm Structure Description	Proposed Structure Description
990093	Constructed 1977; 30.5′x200′ three span steel open girder/beam reinforced concrete deck bridge; AADT (2000) 30 vpd.	Three span prestressed concrete box beam bridge 27′ x 203′. The bridge will include two 9-foot travel lanes, a 2-foot offset on one side and 3-foot 10-inch offset on the other, and 1-foot-7-inch-wide 32″ Alaska Rail.
990124	Constructed 1978; 30.3′x182′ four span prestressed concrete cored slab bridge; AADT (1996) 60 vpd	Three span prestressed concrete box beam bridge 30′x180′. The bridge will include two 9-foot lanes, a 2-foot 11-inch offset on the left lane, a 5-foot 11-inch offset on the right lane and 1-foot 7-inch wide 54″ two-bar metal rails.
990138	Constructed 1963; 21.8′x21′ one span timbered deck bridge; AADT (1996) 60 vpd	One span prestressed concrete cored slab bridge 30′x35′. The bridge will include two 9-foot lanes, 5-foot 2-inch offsets, and 1-foot 7-inch wide 54” two-bar metal rails.
Notes: AADT (annual average daily traffic) values were sourced from the most recent recurring 24-month Routine Structure Safety Reports for each bridge; vpd=vehicles per day.		

Minimal new permanent right-of-way and/or temporary easements will be required to complete the bridge replacements. Following construction of the permanent replacement bridges, the temporary bridges and temporary approach roadways will be removed and those areas re-vegetated as appropriate.

B. Description of Need and Purpose:

These bridge replacements are needed due to the floodwaters of Hurricane Helene destroying these structures, stranding citizens and preventing the passage of goods and services to the area. The purpose of the proposed action is to permanently replace Yancey County Bridges 990093, 990124, and 990138 and restore connectivity to the area.

C. Categorical Exclusion Action Classification:

Type I(B) - Ground Disturbing Action

D. Proposed Improvements:

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.

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:

Natural Environment

Table 3 summarizes the presence and expected impacts to NC Natural Heritage Program (NHP) Natural Areas by the proposed action. The French Broad River (FBR)/Cane River Aquatic Habitat is listed as a Natural Area by the NCNHP located within one mile of each of the three permanent replacement bridges. Temporary fill impacts to the Cane River Aquatic Habitat are anticipated to result from the proposed construction of Bridges 990093 and 990124 because of dewatering associated with construction of interior bents, demolition of temporary bridge abutments, construction of permanent bridge abutments, and riverbank stabilization activities within the Cane River.

Table 3. NC Natural Heritage Program Natural Areas

Bridge No.	River/Creek	Natural Area	Impact within limits of Natural Area
990093	Cane River	Cane River Aquatic Habitat	Yes
990124	Cane River	Cane River Aquatic Habitat	Yes
990138	Bent Creek	Cane River Aquatic Habitat	No*
*Bent Creek is a tributary of Cane River but not within limits of Cane River Aquatic Habitat area			

Table 4 summarizes the NC Division of Water Resources (DWR) surface water classifications for the streams in the proposed action areas. The Cane River intersects Bridges 990093 and 990124 and parallels US 19W and portions of Murphytown Road. Bent Creek intersects Bridge 990138 and parallels Bent Creek Road.

Table 4. NCDWR Surface Water Classifications

Bridge No.	Stream Name	NCDWR Index No.	Best Usage Classification	JD Classification	Compensatory Mitigation Required
990093	Cane River	7-3-(13.7)	C;Tr*	Perennial	Yes
990124	Cane River	7-3-(13.7)	C;Tr*	Perennial	Yes
990138	Bent Creek	7-3-37	C;Tr*	Perennial	Yes

Threatened & Endangered Species

Table 5 summarizes the threatened and endangered species for each proposed permanent bridge replacement. As of September 30, 2025, there are eight listed or proposed species in the proposed study area for Bridges 990093, 990124, and 990138 under the Endangered Species Act (ESA) according to the US Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) database. USFWS identifies the Cane River as Critical Habitat for the Appalachian elktoe.

USFWS issued a Biological Opinion (BO) for the proposed action on August 1, 2025. The biological conclusions included in Table 5 are consistent with the BO (see project file).

Table 5. Threatened & Endangered Species (IPaC September 30, 2025)

Bridge Nos.	Scientific Name	Common Name	Federal Status	Biological Conclusion
990093 990124 990138	*Myotis grisescens*	Gray bat	E	MANLAA
	Myotis septentrionalis	Northern long-eared bat	E	MALAA
	Alasmidonta raveneliana	Appalachian elktoe	E	MALAA
	Isotria medeoloides	Small whorled pogonia	T	MANLAA
	Spiraea virginiana	Virginia spiraea	T	
	Glyptemys muhlenbergii	Bog turtle	SAT	Not Required
	Cryptobranchus alleganiensis	Eastern hellbender	PE	
	Danaus plexippus	Monarch butterfly	PT	

PE–Proposed Endangered, T–Threatened, SAT–Threatened based on Similarity of Appearance, PT–Proposed Threatened, E–Endangered, MALAA–May Affect Likely to Adversely Affect, MANLAA–May Affect Not Likely to Adversely Affect

Eastern Hellbender

The Eastern hellbender was proposed for federal listing under the 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 did 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. Federal action agencies may initiate consultation with the 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's opinion as a biological opinion—provided no relevant new information has emerged and no substantial changes to the proposed action have occurred.

Monarch Butterfly

The monarch butterfly was proposed for federal listing under the 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 did 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. Federal action agencies may initiate consultation with the 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's opinion as a biological opinion—provided no relevant new information has emerged and no substantial changes to the proposed action have occurred.

Cultural Resources

NCDOT and 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 March 25, 2025. The Cherokee Nation replied on April 24, 2025. (See project file.)

There are no historic properties identified by NCDOT architectural historians in the vicinity of the three permanent replacement bridges. (Reference the January 2025 Effects Form in the project file that covers the entire US 19W North Project.)

NCDOT archaeologists determined that no archaeological survey is required for the permanent replacement bridges because the project area of potential effects (APE) is unlikely to contain significant, intact, and preserved archaeological deposits. (Reference July 2025 No Archaeological Survey Required forms in the project file.)

Public and Stakeholder Involvement

NCDOT hosted a Local Officials' Information Meeting and Public Meeting for four Hurricane Helene Repair Projects in Yancey and Mitchell Counties, including this project action, on March 31, 2025, at

the Burnsville Town Center. Eight local officials and 162 individuals signed in at the two meetings. The meetings introduced local officials and the public to the repair projects. Detailed designs were not presented and NCDOT indicated designs would be presented at a future public meeting. There was no formal comment period, but comments were encouraged. Twenty-six comments were received as of March 31, 2025, via the project website and in-person at the meeting. Comments focused on stormwater runoff, private roads and bridges repairs, and emergency access to property.

NCDOT mailed 110 postcard notifications to property owners and current residents in the area of the proposed permanent bridges and culvert replacements in October 2025. The postcard encourages recipients to visit the project website to view current designs and construction information.

NCDOT circulated Start of Study Notification to agency representatives on March 10, 2025. Responses were received from Yancey County, the NC Wildlife Resources Commission (WRC), NC Natural Heritage Program (NCNHP), NC Division of Water Resources (DWR), NC Department of Natural and Cultural Resources (DNCR) Division of Land and Water Stewardship, US Environmental Protection Agency (EPA), and US Fish and Wildlife Service (FWS). Responses are included in the project file.

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.

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: IPaC Review for Bridge 990093, IPaC Review for Bridges 990124 & 990138, Sept. 2025; Draft NRTR, July 2025; USFWS BO & Informal Consultation, August 2025)	☒	☐
2	Does the project result in effects subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)? (Source: IPaC Review for Bridge 990093, IPaC Review for Bridges 990124 & 990138, Sept. 2025; Draft NRTR, July 2025; USFWS BO & Informal Consultation, August 2025)	☐	☒
3	Does the project generate substantial controversy or public opposition, regarding human and/or natural environment concerns, following appropriate public involvement? (Source: Start of Study, March 2025)	☐	☒
4	[redacted]		
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition? (Source: N/A)	☐	☒
6	Does the project require an Individual Section 4(f) approval? (Source: ATLAS Screening, April 2025)	☐	☒
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)? (Source: No Archaeological Survey Required Form for Bridge 990093, July 2025, No Archaeological Survey Required Form for Bridges 990124 & 990138, July 2025 ; Historic Architecture Coordination ongoing)	☐	☒
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. (Source: IPaC Review for Bridge 990093, IPaC Review for Bridges 990124 & 990138, Sept. 2025; Draft NRTR, July 2025; USFWS BO & Informal Consultation, August 2025)	☐	☒
9	Is the project located in anadromous fish spawning waters? (Source: NC Marine Fisheries Commission, 2025)	☐	☒
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)? (Source: ATLAS Screening, April 2025; 2022 North Carolina 303(d) List))	☐	☒

11	Does the project impact waters of the United States in any of the designated mountain trout streams? (Source: ATLAS Screening, April 2025; NCWRC Scoping Letter, March 2025; Draft NRTR, July 2025)	☒	☐
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit? (Source: N/A)	☐	☒
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility? (Source: ATLAS Screening, April 2025)	☐	☒
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. (Source: No Archaeological Survey Required Form for Bridge 990093, July 2025, No Archaeological Survey Required Form for Bridges 990124 & 990138, July 2025 ; Historic Architecture Coordination ongoing)	☐	☒
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.? (Source: Phase I, April 2025)	☐	☒
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? (Source: NC FRIS, May 2025)	☒	☐
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)? (Source: ATLAS Screening, April 2025)	☐	☒
18	Does the project require a U.S. Coast Guard (USCG) permit? (Source: ATLAS Screening, April 2025)	☐	☒
19	Does the project involve Coastal Barrier Resources Act (CBRA) resources? (Source: ATLAS Screening, April 2025)	☐	☒
20	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River? (Source: ATLAS Screening, April 2025)	☐	☒
21	Does the project impact federal lands (e.g., U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands? (Source: ATLAS Screening, April 2025)	☐	☒
22	Does the project involve any changes in access control to the interstate (modification or construction of an interchange)? (Source: N/A)	☐	☒
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness? (Source: DIST, Dec. 2024)	☐	☒
24	Will maintenance of traffic or detours cause substantial disruption? (Source: DIST, Dec. 2024)	☐	☒
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: N/A)	☐	☒
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? (Source: ATLAS Screening, April 2025)	☐	☒
27	Does the project involve Federal Emergency Management Agency (FEMA) buy out properties under the Hazard Mitigation Grant Program (HMGP)? (Source: ATLAS Screening, April 2025)	☐	☒
28	Does the project "use" Section 4(f) property, and/or result in a *de minimis* determination? (Source: ATLAS Screening, April 2025)	☐	☒
29	Is the project considered a Type I under the NCDOT Noise Policy? (Source: N/A)	☐	☒
30	Does the project impact VAD-enrolled property, or prime or important farmland soil, as defined by the Farmland Protection Policy Act (FPPA)? (Source: DIST, Dec. 2024)	☐	☒

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 1: USFWS issued a Biological and Conference Opinions (B/CO) for the proposed action on August 1, 2025 (see project file). The B/CO requested "General Avoidance and Minimization Measures" (AMM) for all referenced ESA species located in Bridges 990093, 990124, and 990138 action areas (refer to Table 5). The USFWS determined the proposed action will result in a "May Affect Likely to Adversely Affect" (MALAA) for the Northern longed-eared bat and Appalachian elktoe. Conservation Measures include contribution to a USFWS-approved fund for the support of the recovery of federally protected species.

Question 11: The NCWRC (March 20, 2025) noted that the Cane River in the project area is a cool-water habitat that was severely degraded and aggraded by floodwater from Hurricane Helene. Habitat in this part of the river is not suitable for trout populations year-round. The trout moratorium for this season is waived for Bridges 990093, 990124, and 990138. (See project file.)

Question 16: Yancey County is a participant in the Federal Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The three bridge replacement projects are within a Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway have been established. The Cane River and Bent Creek are FEMA mapped streams studied by the North Carolina Floodplain Mapping Program (NC FMP) by Limited Detail methods. These projects involve construction activities on or adjacent to FEMA-regulated streams(s).

H. Categorical Exclusion Approval:

STIP Project No.	**Helene Permanent Repairs US 19W North–Replace Bridges 990093, 990124, 990138**
WBS Element	18313.1100999
Federal Project No.	N/A

Prepared By:

10/15/2025
Date

Signed by: John Thomas C88EE754538174398...
John Thomas
GFT

Prepared For: Highway Division 13

Reviewed By:

10/15/2025
Date

Signed by: Marissa Cox 78DFB8F950D342E...
Marissa Cox, EPU, Western Regional 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.

10/15/2025
Date

Signed by: CA084B4A0412432...
John Jamison, PWS, EPU HEAD
North Carolina Department of Transportation

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

10/15/2025
Date

Signed by: Seth Wilcher 9967A500F8714F0...
for Yolonda K. Jordan, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS

Helene Permanent Repairs US 19W North-Replace Bridges 990093, 990124, 990138
County: Yancey
WBS: 18313.1100999.1.3

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division Office - Construction in FEMA Floodplain

This project involves construction activities on or adjacent to FEMA-regulated stream(s) and needs to comply with the Disaster Specific Guidance (DSG) on the Repair/Replacement of Publicly Owned Roads and Bridges in Special Flood Hazard Areas (SFHAs) for the Ongoing Tropical Storm Helene Recovery . Therefore, the Division shall: (1) construct all vertical and horizontal elements within the floodplain as designed; and (2) consult with the Hydraulics Unit of any planned deviation of these elements within the floodplain prior to commencing any such changes; and (3) submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction; and (4) submit post-construction Hydraulic modeling and SFC package to the Hydraulics Unit upon completion of project construction.

Division Environmental Staff - ESA Section 7 Consultation - Avoidance and Minimization (AMM) for Bridges 990093, 990124, and 990138

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

- General AMM1-NCDOT will ensure 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.

General AMMs will minimize impacts to listed bats. 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 in the B/CO:

- Bat AMM Noise-Percussive activities will occur only after the 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.

General AMMs will minimize impacts to listed aquatic species and to the maximum extent possible the following AMMs will be incorporated into project work, though implementation of all aquatic AMMs below cannot be guaranteed at the time of this consultation, given the scale, scope, and timeline constraints addressed in the B/CO:

- Aquatic AMM Structure–To the maximum extent possible, structure will be built in the same location as the previous structure, with minimal impact [bents] to water resource, built to today's 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 implemented on 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.

Division Environmental Staff - ESA Section 7 Consultation - Conservation Measures for Bridges 990093, 990124, and 990138

Conservation Measures (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.

- Aquatic CM: Aquatics Contribution-For individual bridge projects that are MALAA aquatic species, the NCDOT will contribute $10,000 for each project structure to the N.C. Nongame Aquatic Species Fund.
- Aquatic CM: Relocation-For projects that are MALAA species, prior to project construction, the FWS Asheville Field Office NCDOT liaison and the NC Wildlife Resources Commission NCDOT liaison will be contacted to discuss the potential for aquatic species relocation, if applicable and practicable.
- Bat CM: Tree Clearing Bat Fund Contributions-For individual bridge projects likely to adversely affect bat species during tree removal, the NCDOT will contribute a payment to the N.C. Nongame Terrestrial Species Fund (or other FWS-approved fund) in support of the recovery of federally protected species.

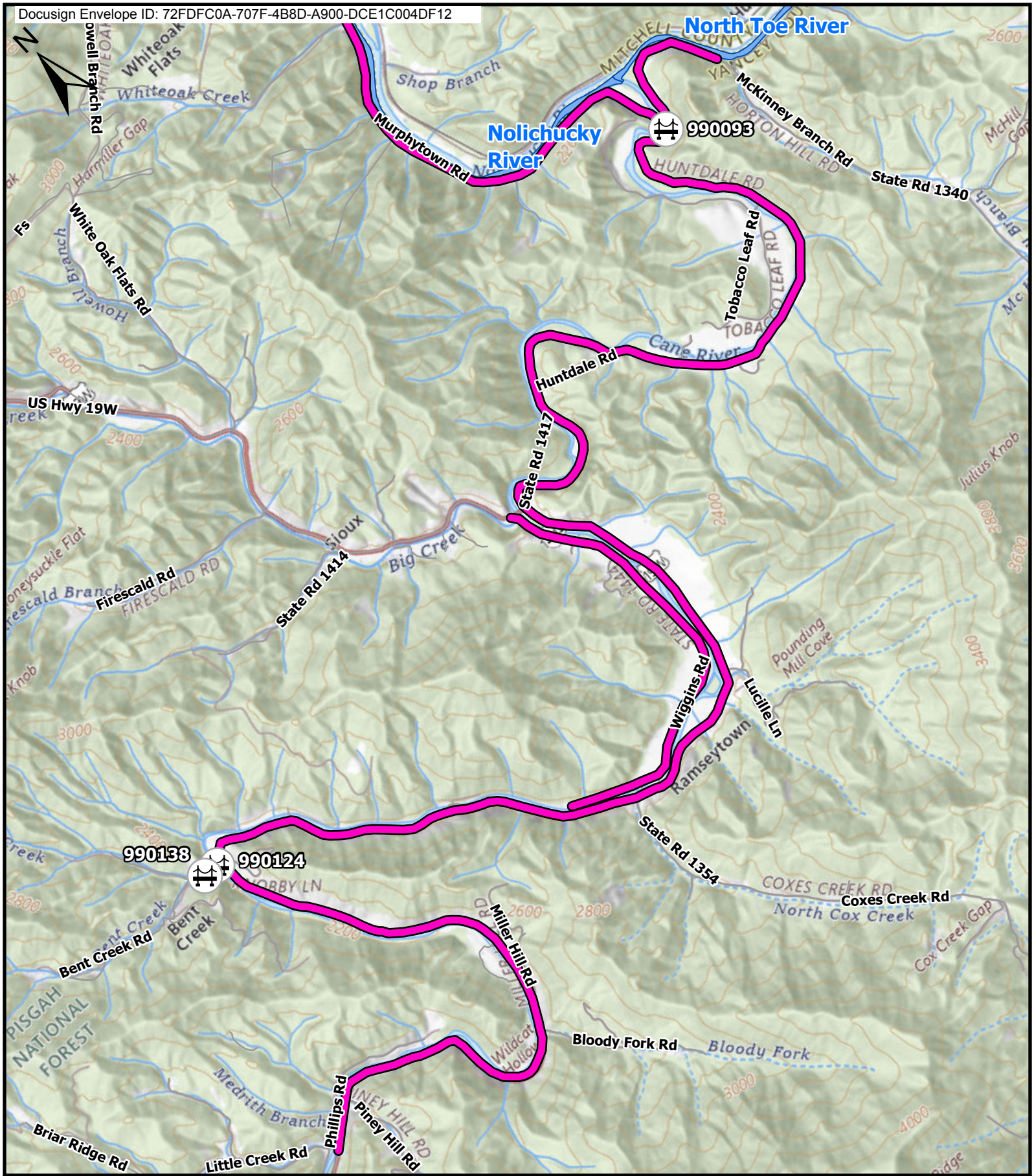
COMMITMENTS FROM PERMITTING

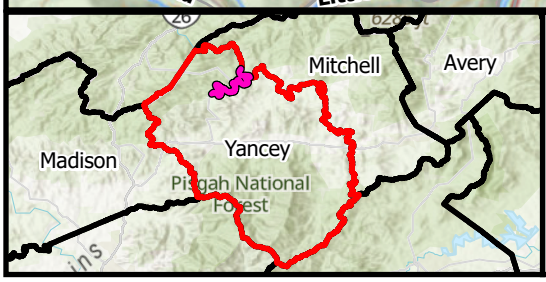
No permitting commitments developed to date.

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

Helene Permanent Repairs US 19W North-Replace Bridges 990093, 990124, 990138

18313.1100999.1.3
Last Modified Date: 10/10/2025





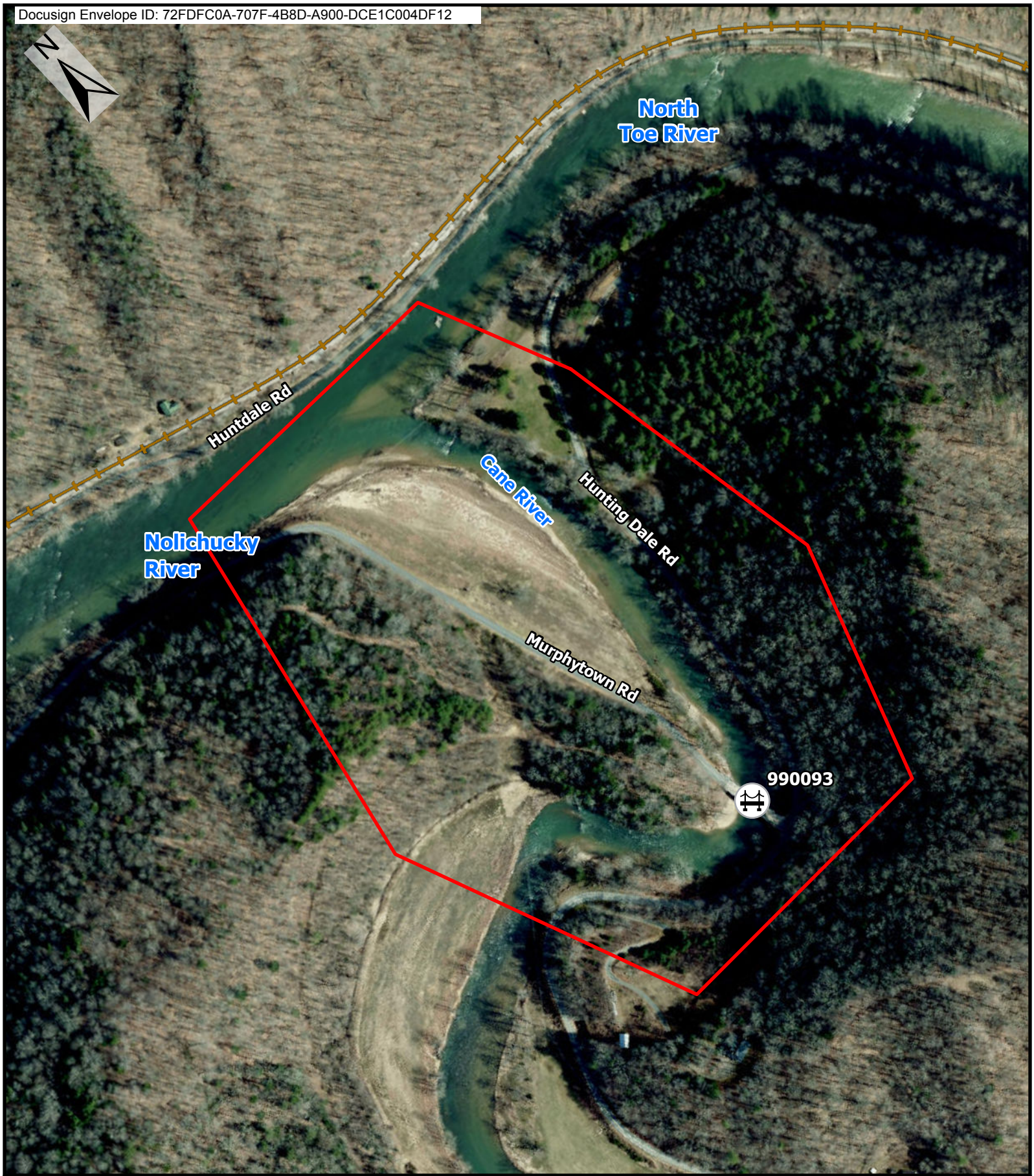
Project Limits

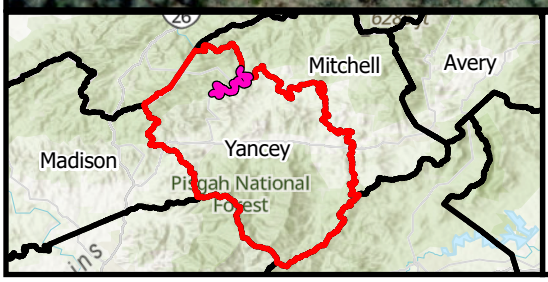
Proposed Bridge Replacement

0 1,000 2,000 Feet

0 0.25 0.5 Miles

Figure 1. Project Location Map
NCDOT Project No. 18313.1100999
Repairs to U.S. 19W North:
Replace Bridges 990093, 990124, and 990138
Yancey County





Proposed Bridge Replacement

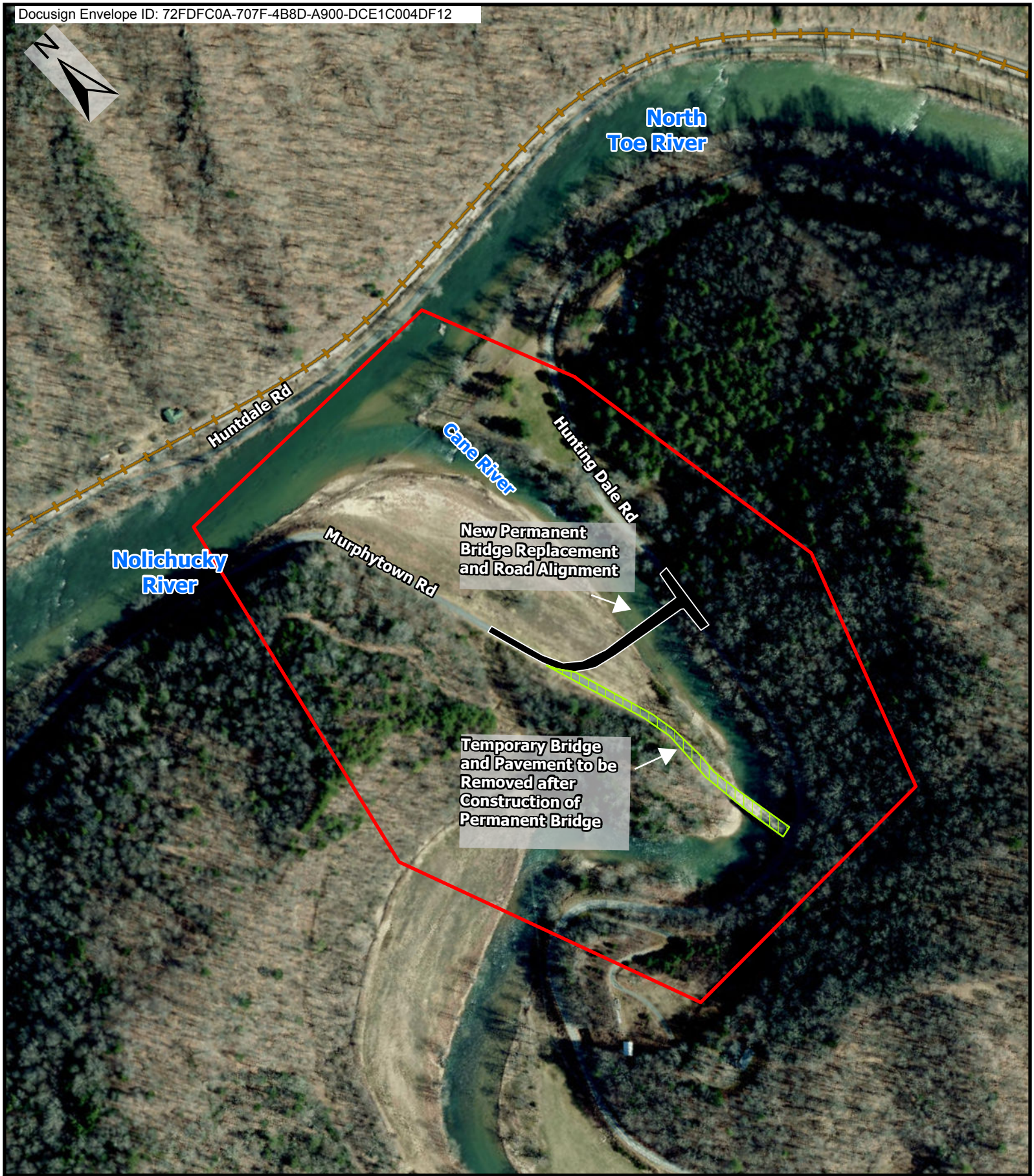
Proposed Action Area

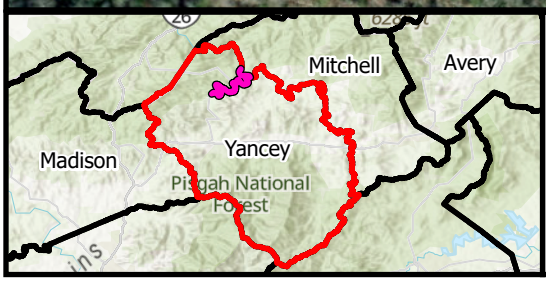
0 230 460 Feet

0 0.04 0.07 Miles

Figure 2. Project Study Area Map
NCDOT Project No. 18313.1100999
Repairs to U.S. 19W North:
Replace Bridge 990093
Yancey County

Aerial Image: September 6, 2025





Proposed Action Area

Proposed Permanent Alignment

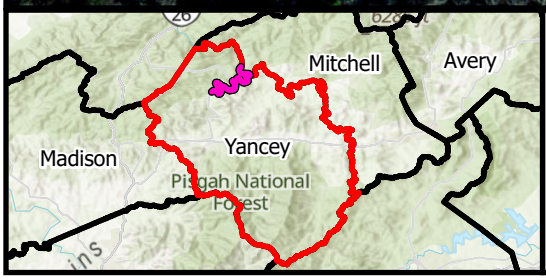
Bridge/Pavement Removal

0 230 460 Feet

0 0.04 0.07 Miles

Figure 3. Proposed Permanent Repair Map
NCDOT Project No. 18313.1100999
Repairs to U.S. 19W North:
Replace Bridge 990093
Yancey County

Aerial Image: September 6, 2025



Proposed Bridge Replacement

Proposed Action Area

0 90 180 Feet

0 0.01 0.03 Miles

Figure 4. Project Study Area Map
NCDOT Project No. 18313.1100999
Repairs to U.S. 19W North:
Replace Bridge 9900124 & 990138
Yancey County

Aerial Image: September 6, 2025