STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

September 29, 2025

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

ATTN: NCDOT Coordinator

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

ATTN: NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 6 and 33, and corresponding Water Quality Certification 4260** under the Expedited Processing Provisions for Hurricane Helene Response for Geotechnical Survey Activities for the following bridges within the **19W South** Repair Project in Yancey County, Division 13:

- Bridge 72 on SR 1381 (Langford Branch Rd) over Cane River WBS ***18313.1100998.1.1***
- Bridge 34 on US-19 West over Cane River, WBS ***18313.1100998.1.1***
- Bridge 44 on US-19 West over Cane River, WBS ***18313.1100998.1.1***
- Bridge 55 on US-19 West over Cane River, WBS ***18313.1100998.1.1***
- Bridge TBD (connecting US-19 West and Little Creek Road) over Cane River
- Toe of Slope Areas along edges of Cane River

Dear NCDOT Coordinators:

The North Carolina Department of Transportation (NCDOT) proposes the replacement of the aforereferenced bridges as the result of damage caused by Hurricane Helene in late September 2024.

This application is for the in-water geotechnical investigations required for the design of the structures.

Notification Required:
A PCN is required due to the biological conclusion of May Affect, Not Likely to Adversely affect for the Appalachian Elktoe.

Lead Federal Agency:
FHWA the lead federal agency for this project.

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

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

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Impact/Boring Summary to Waters

Location	Impact Description	NWP 6 Impact
Bridge 72	The rebuilding of Bridges will require geotechnical investigations for bridge piers. Water will be used for rock coring. The use of drilling fluids is not anticipated.	6 Borings 1,920 square feet
Bridge 34		8 Borings 3,120 square feet
Bridge 44		4 Borings 3,300 square feet
Bridge 55		4 Borings 1,980 square feet
TBD (connecting US-19 West and Little Creek Road)	These borings will be performed using a rubber tired/track mounted drilling rig. This approach minimizes environmental impact and eliminates the need for temporary work platforms or barges. No dewatering or temporary fill is planned for in-water borings.	6 borings 3,000 square feet
Toe of Slope Areas along edges of River		33 borings 11,880 square feet
	Total Borings:	**61**
	Total Square Feet:	**25,200**
	Total Acres:	**0.579**

Endangered Species Act

Protected Species listed from IPaC as of the date of this application:

Common Name	Habitat Present	Survey Dates	Proposed Biological Conclusion	FWS Concurrence Remarks
Gray bat Northern long-eared bat Tricolored bat	Yes	n/a	May Affect-Likely to Adversely Affect	See Attached USFWS Concurrence
Appalachian elktoe	Yes	n/a	May Affect-Not Likely to Adversely Affect	See Attached USFWS Concurrence
Small whorled pogonia	Yes	6/11 & 12/2025	No Effect	n/a
Virgina spiraea	Yes	6/11 & 12/2025	No Effect	n/a
Bog turtle[1]	No	n/a	Not Required	n/a
Eastern hellbender P*	-	-	Not Required	n/a
Monarch butterfly P*	-	n/a	Not Required	n/a

1= Similarity of Appearance (Threatened); A species that is threatened due to similarity of appearance with another listed species and is listed for its protection.

P*= Proposed: Due to the recent listings of the tricolored bat, eastern hellbender and monarch butterfly within the proposed action area, NCDOT does not have complete information at this time. It is anticipated that construction will be complete by the timeframes proposed for full listing, should the species be formally listed.

Historic Resources
Information Attached

106 Topic	Findings
Historic Architecture	No effects to historic resources are anticipated as a result of this proposed action
Archaeology	No Survey Required

Tribal Coordination
Tribal Coordination Letters (included) were sent to the following:

Tribe	Letter Sent	Response Received
Cherokee Nation	3/25/2025	Yes/attached
Eastern Band of Cherokee Indians	3/25/2025	No
Muscogee (Creek) Nation	3/25/2025	No
United Keetoowah Band of Cherokee Indians	3/25/2025	No
Catawba Indian Nation	3/25/2025	No

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

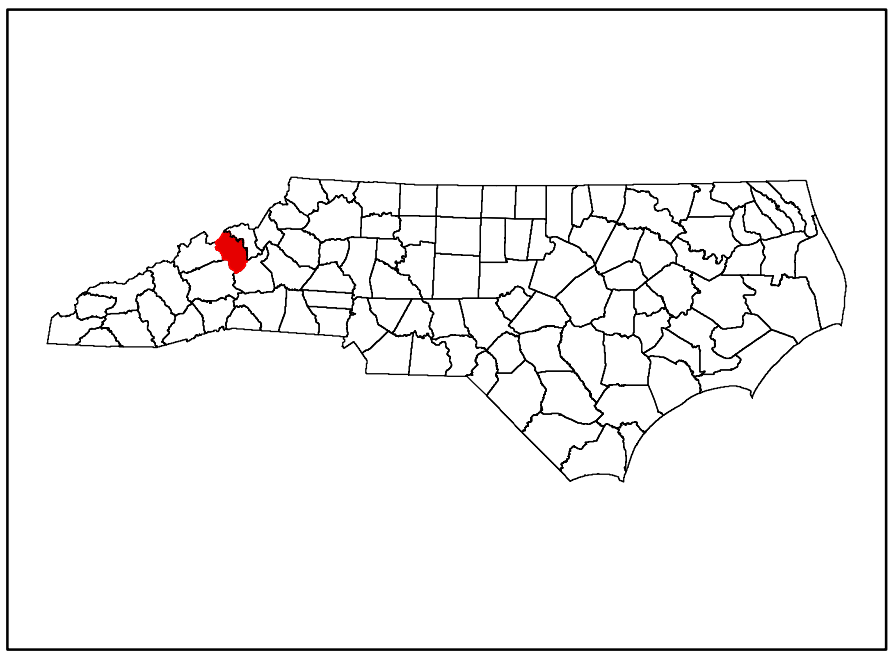
Sincerely,

Digitally signed by Michael Turchy

Michael A. Turchy
Environmental Coordination and Permitting Group Leader

ePCN

Permit Drawings



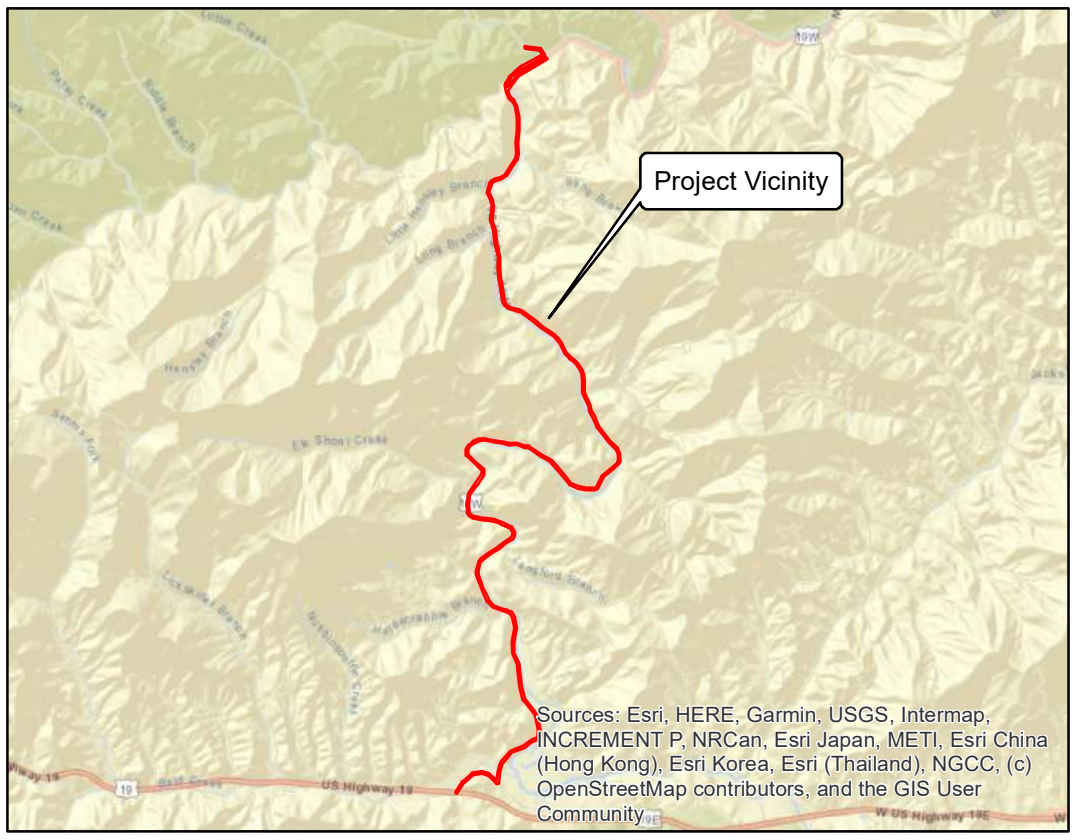
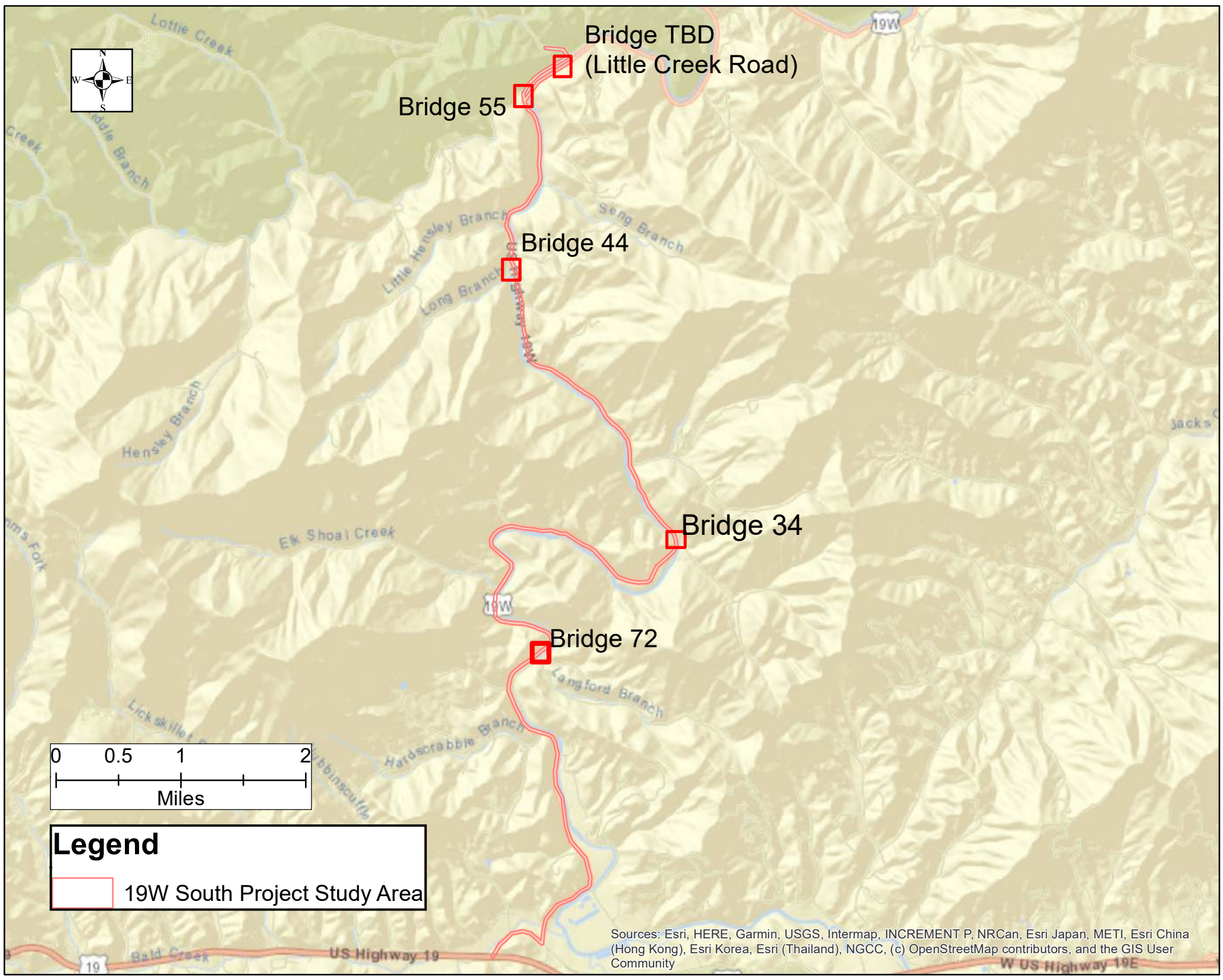
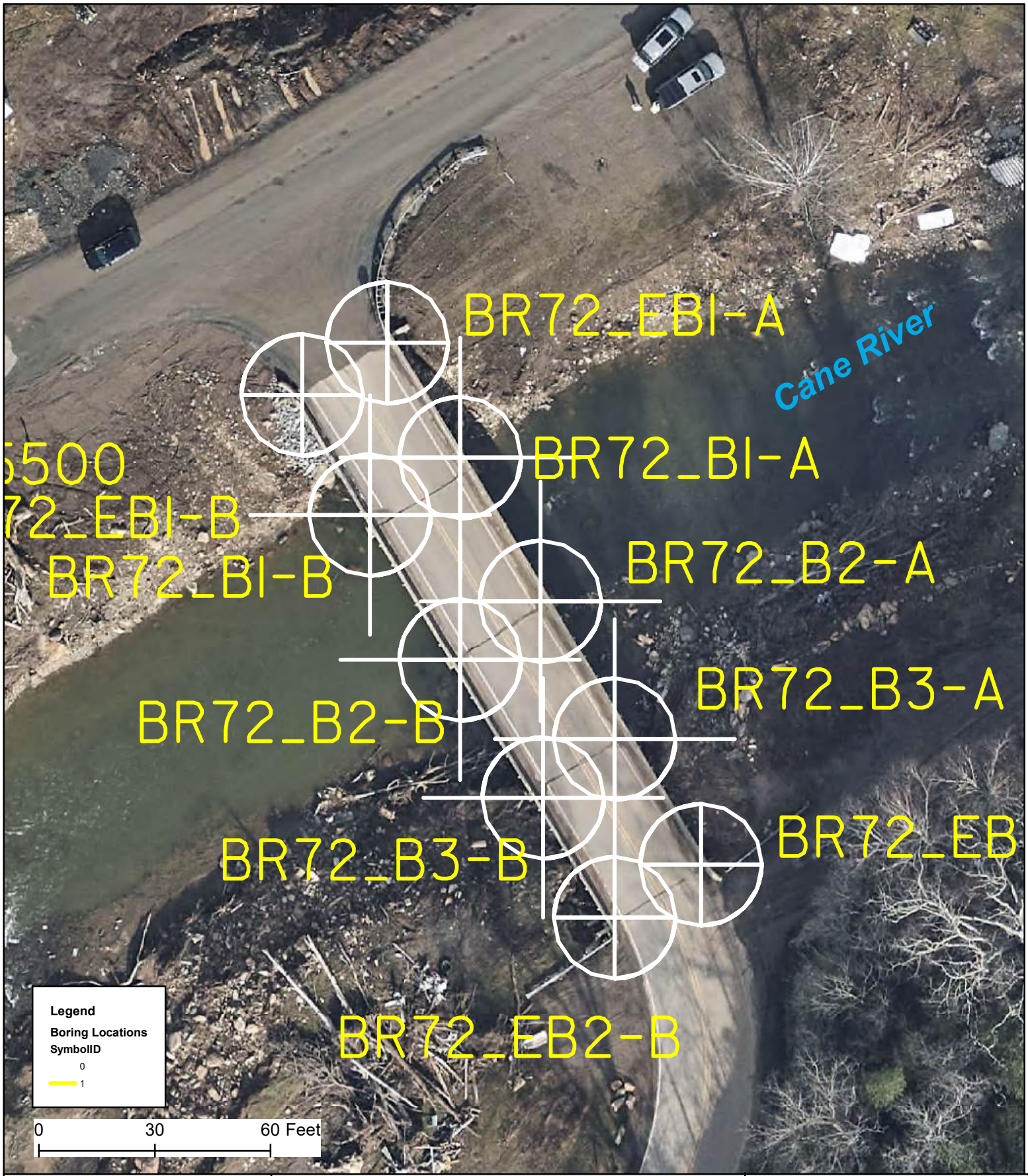


Figure 1
Vicinity Map

Priority Bridge Replacement Locations
19W South
Burnsville, Yancey County, NC

August, 2025





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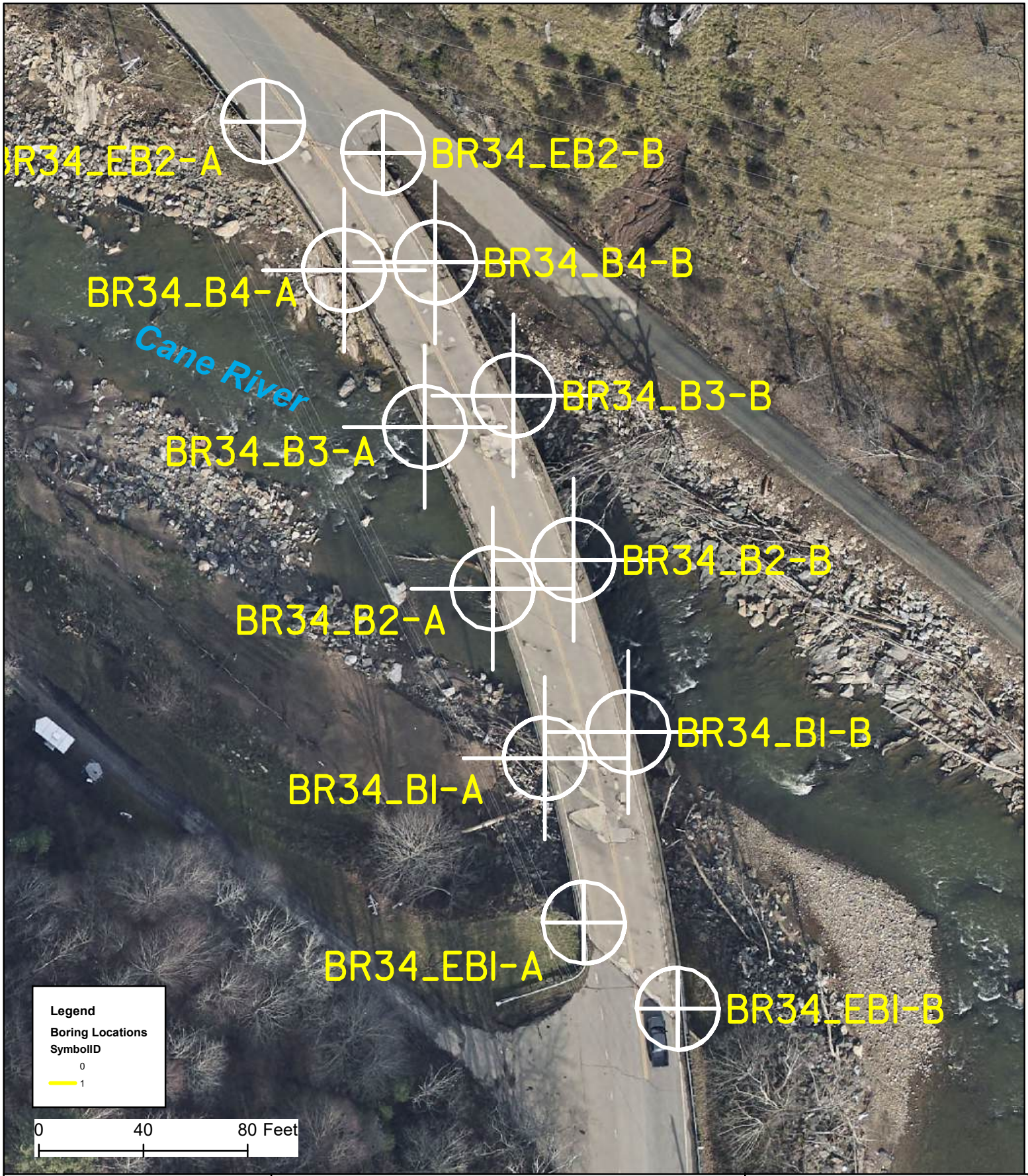
Sources:
NCDOT, NC OneMap, ESRI

August 2025

Helene Permanent Repairs
19W South Repair Project in
Yancey County, Division 13

Bridge 72 over Cane River
WBS 18313.1100998

GFT



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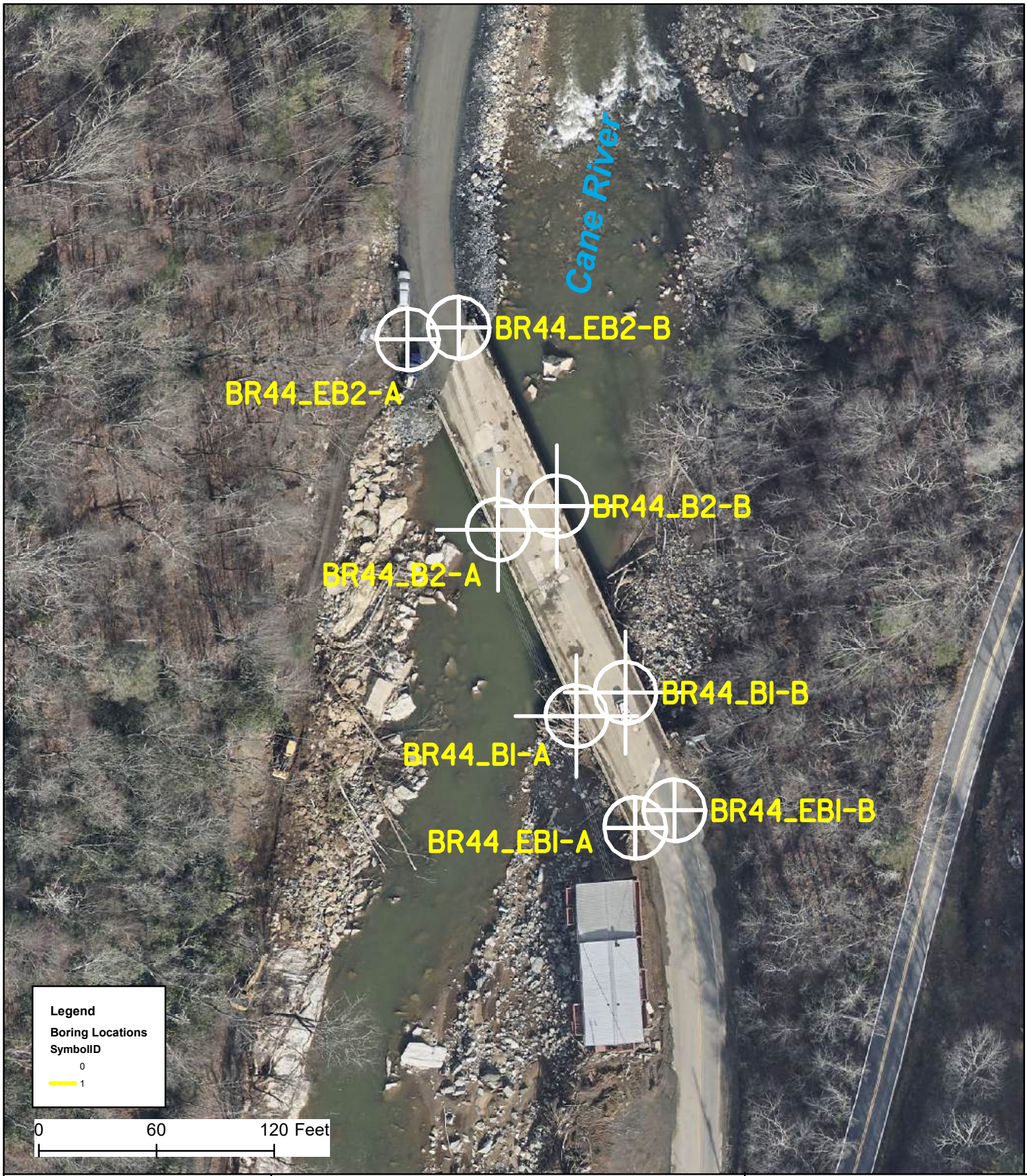
August 2025

Helene Permanent Repairs
19W South Repair Project in
Yancey County, Division 13

Bridge 34 over Cane River
WBS 18313.1100998

GFT



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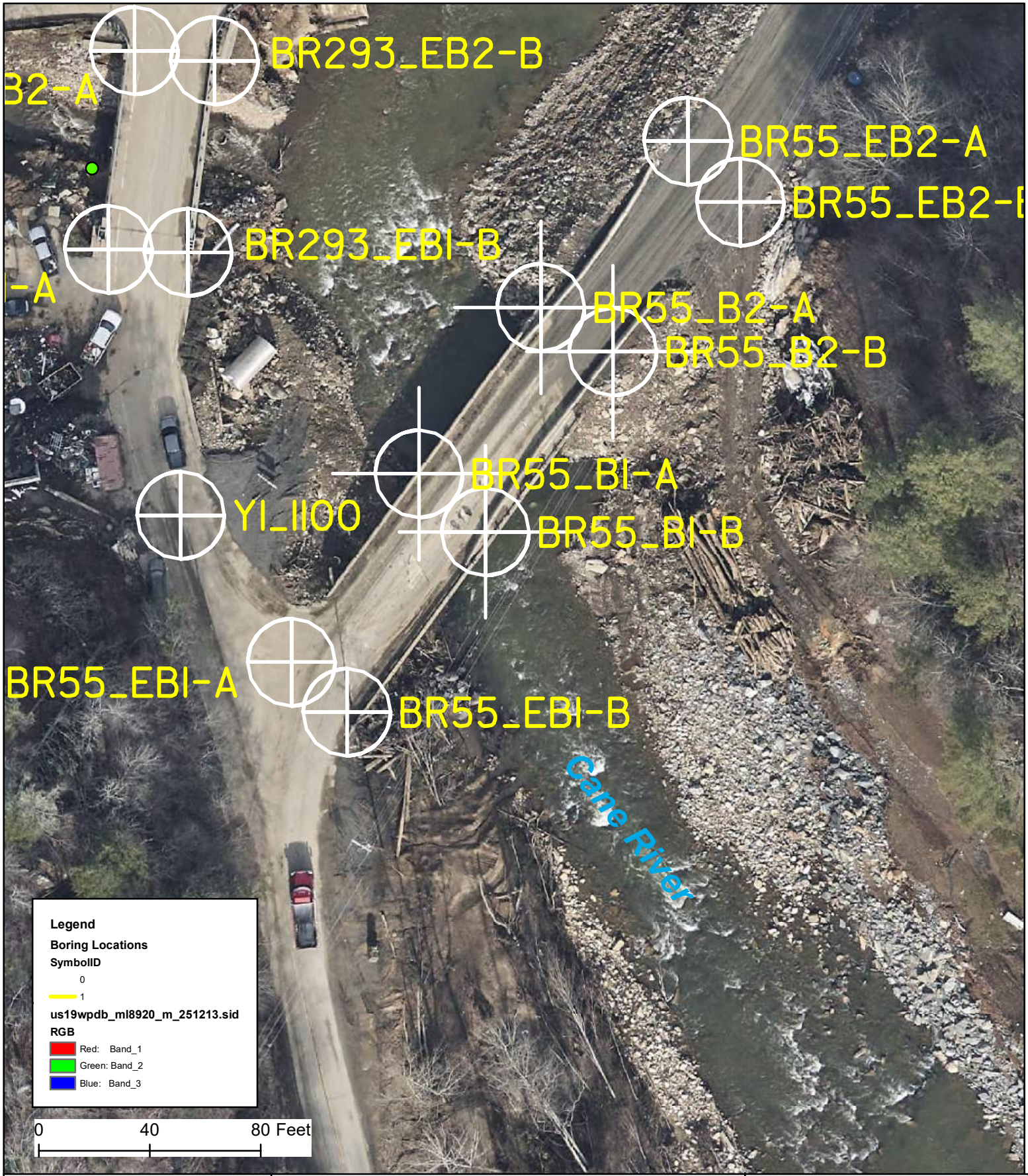
August 2025

Helene Permanent Repairs
19W South Repair Project in Yancey County, Division 13

Bridge 44 over Cane River
WBS 18313.1100998

GFT



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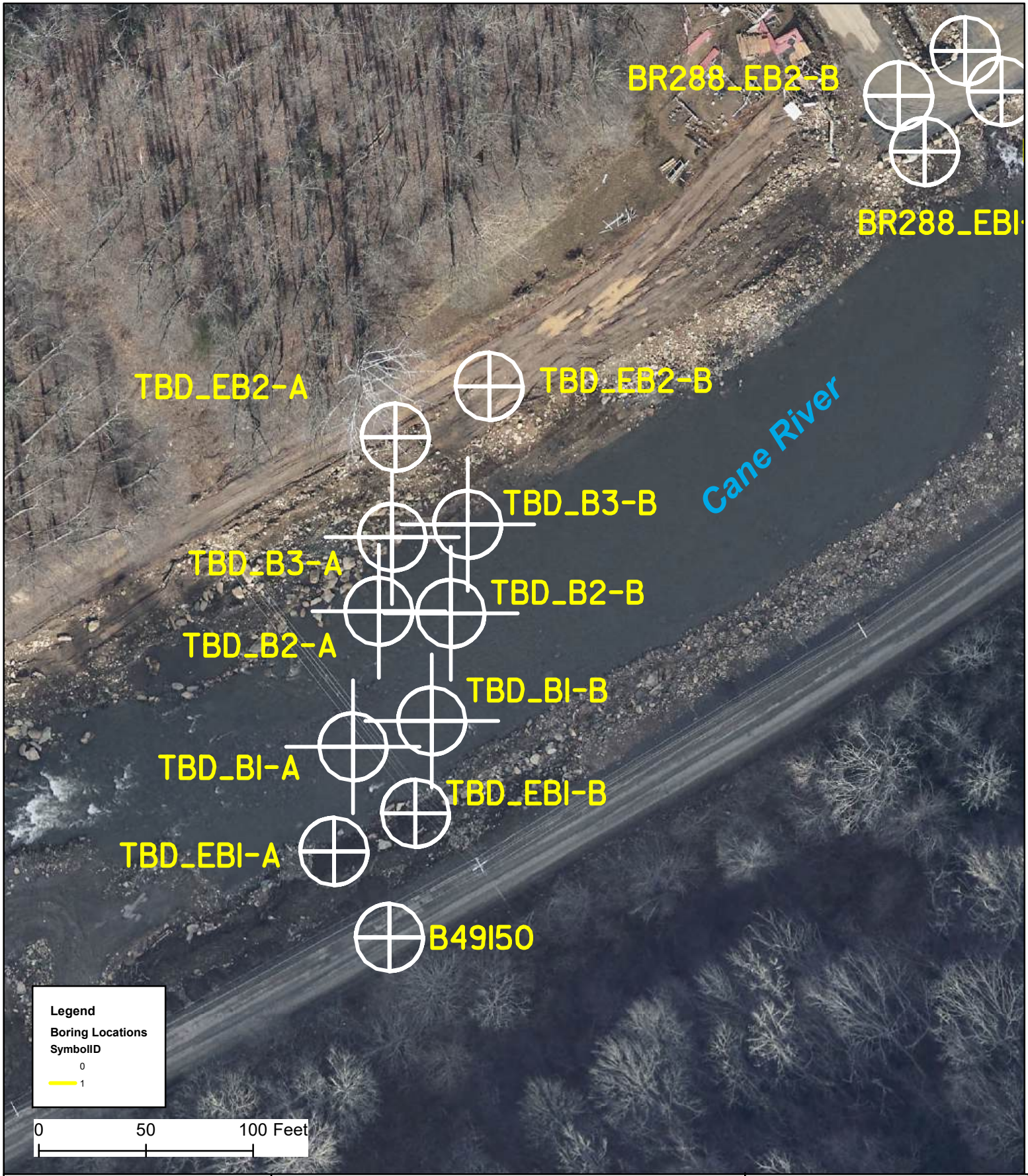
August 2025

Helene Permanent Repairs
19W South Repair Project in
Yancey County, Division 13

Bridge 55 over Cane River
WBS 18313.1100998

GFT



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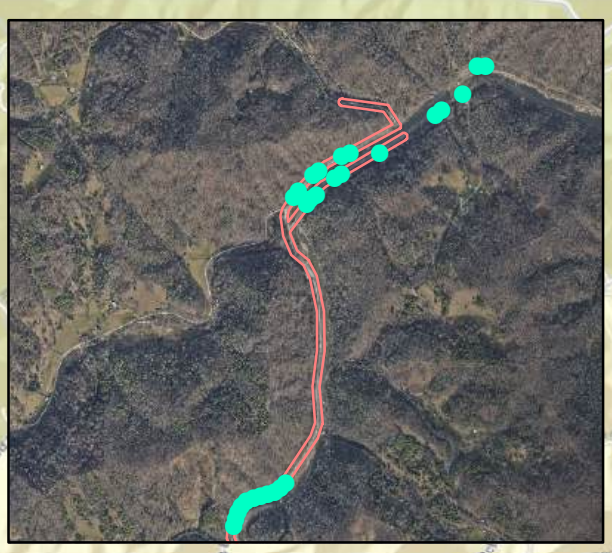
August 2025

Helene Permanent Repairs 19W South Repair Project in Yancey County, Division 13

TBD (Little Creek Rd) over Cane River
WBS 18313.1100998

GFT



Legend

- 19W South Project Study Area
- Toe of Slope In-Water Borings

Boring Locations

SymbolID

- 0
- 1

0 0.5 1 Miles

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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August 2025

Helene Permanent Repairs
19W South Repair Project in Yancey County, Division 13

Toe of Slope In-Water Boring Locations
WBS 18313.1100998

GFT

ESA Consultation

Biological and Conference Opinions and Informal Consultations – Batch Format

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

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

Prepared by:

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: 2025.09.26 08:25:00 -04'00'

Gary Peeples
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.
- **September 4, 2025:** NCDOT submitted batched request for informal and formal consultation to the Service.
- **September 8-10, 2025:** Service requested additional information from NCDOT and answers were provided.

Background

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

Projects

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

Table 1. Batched Consultation Projects – Crossing Structures

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

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

Informal Consultation

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

Table 2. Species NE and NLAA Determinations

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

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

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

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

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

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

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

Biological Opinion and Conference Opinion

1. Introduction

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

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

2. Proposed Action

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

2.1 Action Areas

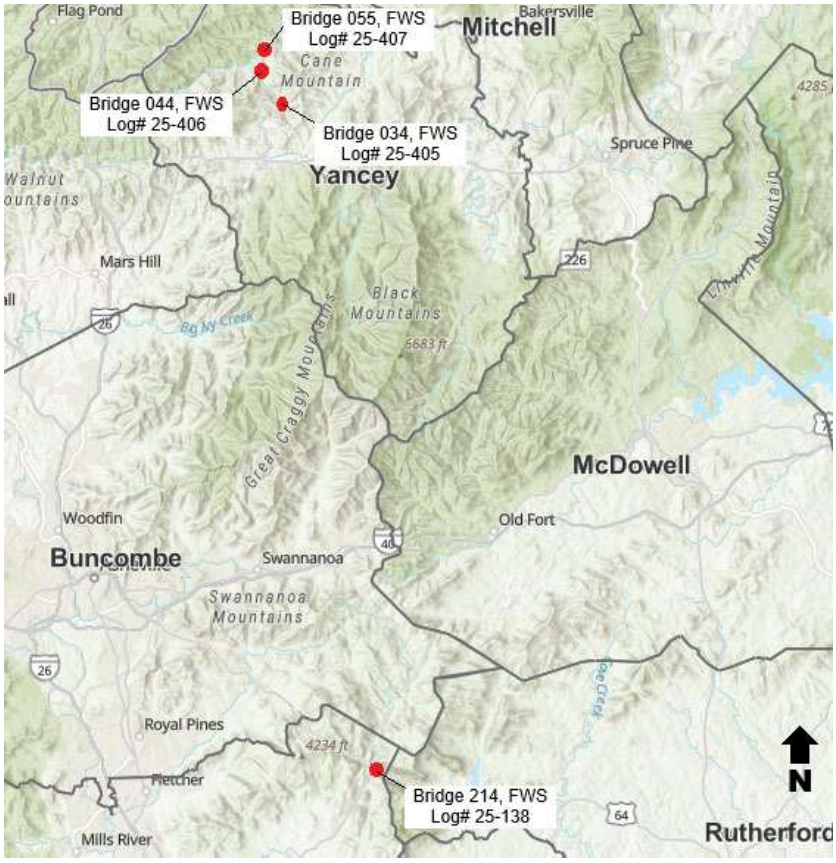
The project action areas are all areas of construction and include any portions of the project waterbodies, as indicated in Table 3, that may be affected by direct or indirect effects. The action areas are comprised of the:

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

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

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

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



2.2 Project Description

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

In-water impacts

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

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

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

2.3 Avoidance and Minimization and Conservation Measures

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

2.3.1 Avoidance and minimization measures (AMMs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2.3.2 Conservation Measures (CMs)

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

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

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

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

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

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

3. Status of the Species

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

3.1 Gray Bat

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

3.1.1 Description and Life History

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

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

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

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

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

3.1.2 Status and Distribution

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

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

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

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

3.1.3 Threats

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

3.2 Northern long-eared Bat

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

3.2.1 Description and Life History

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

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

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

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

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

3.2.2 Status and Distribution

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

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

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

3.2.3 Threats

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

3.3 Tricolored Bat

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

3.3.1 Description and Life History

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

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

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

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

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

3.3.2 Status and Distribution

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

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

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

3.3.3 Threats

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

4. Environmental Baseline

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

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

4.1 Listed and Proposed Bats Within the Action Areas

Structures

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

Trees

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

5. Effects of the Action

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

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

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

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

5.1.2 Effects Analysis for Bats

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

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

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

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

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

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

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

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

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

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

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

6. Conclusion and Jeopardy Determination

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

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

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

7. Incidental Take Statement

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

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

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

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

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

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

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

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

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

7.2 Reasonable and Prudent Measures

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

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

7.3 Terms and Conditions

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

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

8. Conservation Recommendations

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

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

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

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

9. Reinitiation Notice

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

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Archaeology

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:		*County:*	Yancey
WBS No:	49082.2.13	*Document:*	Federal Categorical Exclusion
Federal Aid No:		*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	**Nationwide**

Project Description:
In response to the aftermath of the late October 2024 floods caused by Hurricane Helene, NCDOT's Division 13 proposes to repair/restore various sections of US 19W, west and north of Burnsville, in Yancey County (Figures 1-2). Included in this project will be "Section 1" of US 19W from US 19E, west of Burnsville, north for approximately 16 kilometers (10 miles) to the intersection with SR 1386 (Piney Hill Rd.). Included in the project will also be repairs to two intersecting secondary roads located at the north end of the US 19W improvements, a 1.2-kilometer (0.8-mile) long section of SR 1411 (Little Creek Rd.), and a 1-kilometer (0.6-mile) long section of SR 1425 (Phillips Rd.).

All proposed activities, at this time, are anticipated to occur within the NCDOT's existing right of way (R/W) for all included roadways and structures (or at least where the existing R/W once was). For the US 19W corridor, the existing R/W looks to be about 18 meters (60 ft.) wide whereas the R/W along the two secondary roads appears to range between 6-18 meters (20-60 ft.) wide. Although Preliminary Design Plans are not available at this time, an Area of Potential Effects (A.P.E.)/study area was generated by buffer each road to its corresponding R/W width.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:
The review included an examination of topographic maps, aerial photographs, and information about previously recorded sites, previous archaeological surveys, and previous environmental reviews on the North Carolina Office of State Archaeology's (OSA) web-based GIS service. US 19W is oriented approximately north-south. SR 1411 (Little Creek Rd.) is oriented southwest-northeast in the south half, and southeast to northwest in the north half, but is considered north-south for this review. SR 1425 (Phillips Rd.) is oriented approximately east-west.

The topographic map (Bald Creek) shows US 19W is mostly located along the base of the ridge side slopes that enclose the Cane River valley. Most of the landforms in the study area are steeply-sloped ridge sides (Figures 3-9). There are several locations where US 19W crosses level land along the river, and these landforms can have some potential for prehistoric archaeological sites. However, these are mostly narrow sections of floodplain/terrace between the road (on the base of the ridge) and the river. In this region, narrow sections of floodplain in narrow valleys are often disturbed by regular flooding, the construction and maintenance of the road, roadside utilties and drainage structures, roadside parking and storage, and the construction of houses and service

buildings. US 19W does cross two sections of wider floodplain along the Cane River and Bald Creek at the south end. In this region, level, well drained floodplains/terraces near (but not alongside) streams in wider valleys can have a moderate to high potential for prehistoric archaeological sites.

The topographic maps (Chestoa; Bald Creek) show that SR 1411 and SR 1425 are located on steeply sloped landforms (Figure 10). The south end of SR 1411 is located at the base of the ridge on the north side of the Cane River, and the north half is in the narrow Little Creek valley. SR 1425 is located along the base of the ridge on the north side of the Cane River. Neither study area appears to include any level floodplain/terrace landforms.

The aerial photographs show that most of the land along US 19W is wooded (Figures 11-17). There are a few parts that are cleared residential yards or agricultural fields. The land along SR 1411 is mostly wooded (Figure 18). There area a few cleared residential yards and agricultural fields. The land along SR 1425 appears to be mostly occupied by residential yards.

The information on the OSA web-based GIS service shows no previously recorded archaeological sites in the study area. The study area is not within any areas that were included in previous archaeological surveys. The study area is not within the boundaries of any projects that have been reviewed by the State Historic Preservation Office (HPO). One project, the daylighting of an unnamed tributary to the Cane River (ER 24-0486), was reviewed on the west side of US 19W near the south end of the study area.

However, the NCDOT has reviewed several bridge replacement projects along US 19W that are not listed on the GIS service. These include four bridge replacements with study areas that included the US 19W study area. Bridge 55 on US 19W over the Cane River was reviewed in 2022 (PA 22-05-0015). The review recommended no archaeological survey (Smith 2022). Bridge 293 on SR 1411 over Bald Mountain Creek was reviewed in 2012 (PA 12-05-0046). The review recommended no archaeological survey (Smith 2012). Bridge 105 on SR 1411 over Little Creek was reviewed in 2009 (PA 09-11-0022). The review recommended no archaeological survey (Smith 2010). Bridge 134 on SR 1379 over the Cane River was reviewed in 2012 (PA 12-05-0047). The review recommended a survey which identified no archaeological sites (Smith 2012).

References Cited

Smith, Caleb
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2010 No Archaeological Survey Required form: Replace Bridge 105 on SR 1411 over Little Creek in Yancey County, North Carolina (PA09-11-0022). Form submitted on March 15, 2010. N.C. Department of Transportation, Raleigh.

2012a No Archaeological Survey Required form: Replace Bridge 293 on SR 1411 over Bald Mountain Creek in Yancey County, North Carolina (PA 12-05-0046). Form submitted on June 27, 2012. N.C. Department of Transportation, Raleigh.

2012b No Archaeological Survey Required form: Replace Bridge 134 on SR 1379 over the Cane River in Yancey County, North Carolina (PA 12-05-0047). Form submitted on November 7, 2012. N.C. Department of Transportation, Raleigh.

2022 No Archaeological Survey Required form: Replace Bridge 55 on US 19W over the Cane River in Yancey County, North Carolina (PA 22-05-0015). Form submitted on July 20, 2022. N.C. Department of Transportation, Raleigh.

(This project falls within a North Carolina County in which the following federally recognized tribes have expressed an interest: the Cherokee Nation; the Eastern Band of Cherokee Indians; the United Keetoowah Band of Cherokee Indians; the Catawba Indian Nation; the Muscogee (Creek) Indian 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:
This is a federally funded project and federal permits are required. As part of the project's submittal for cultural resources review, permanent or temporary easements will not be necessary, nor should additional R/W be required. Based on the size and shape of the study area, activities should not take place beyond what is or once was the existing R/W. There are some locations along the roads where the study areas appear to include landforms with some potential for archaeological sites. These "potential areas" are marked on the topographic maps in Figures 3-10. The nature of the proposed repairs and restoration work indicate there is a low potential for significant prehistoric and/or historic archaeological materials to be present wihin the study areas. The work should not impact anything that hasn't already been greatly disturbed by the infrastructure that was once there or by the flood waters caused by Hurricane Helene.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST: *NO ARCHAEOLOGY SURVEY REQUIRED*

Caleb Smith 12/29/2024

NCDOT ARCHAEOLOGIST II Date

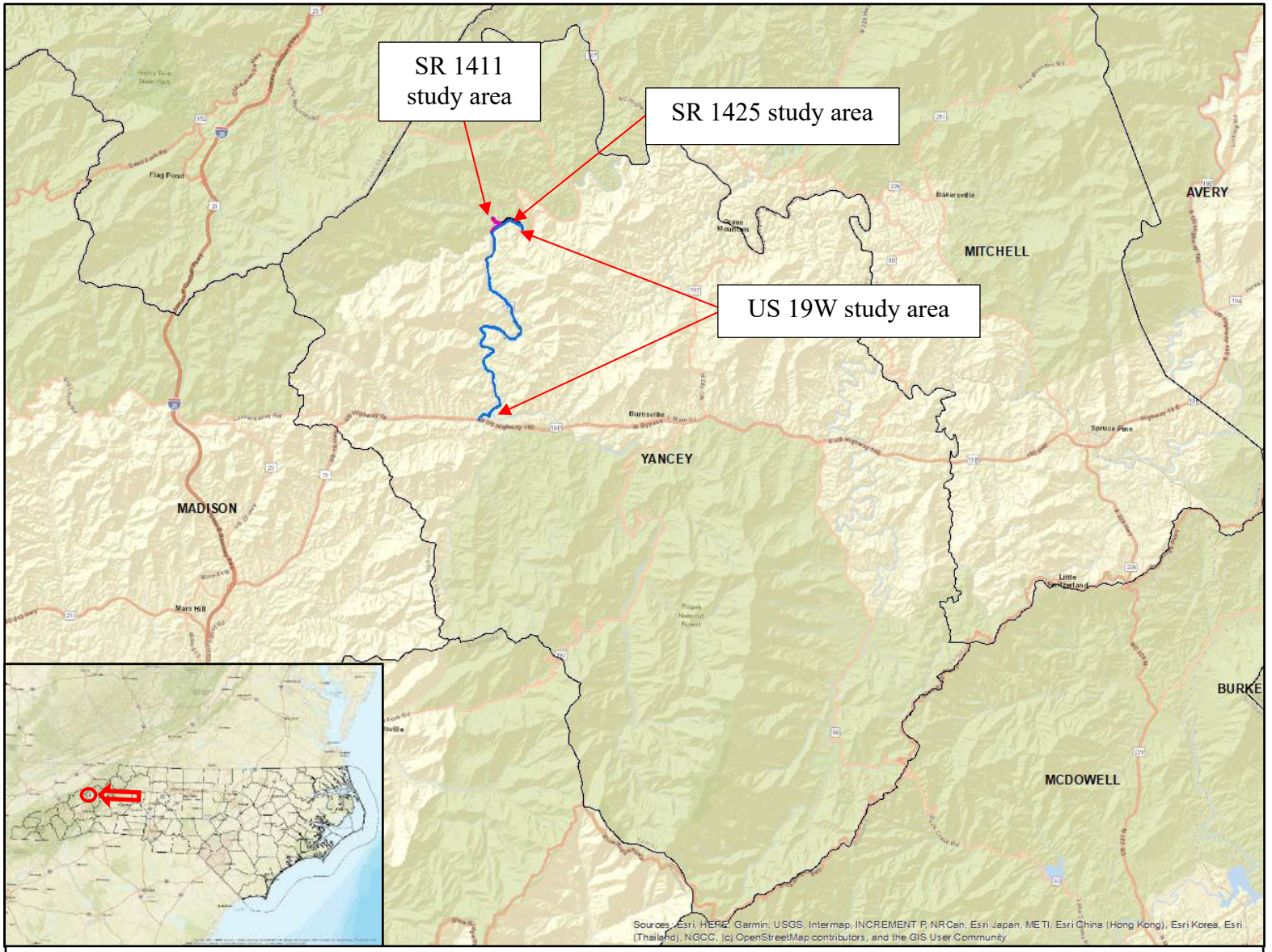


Figure 1: Location of the US 19W, SR 1411, and SR 1425 study areas in Yancey County, North Carolina.

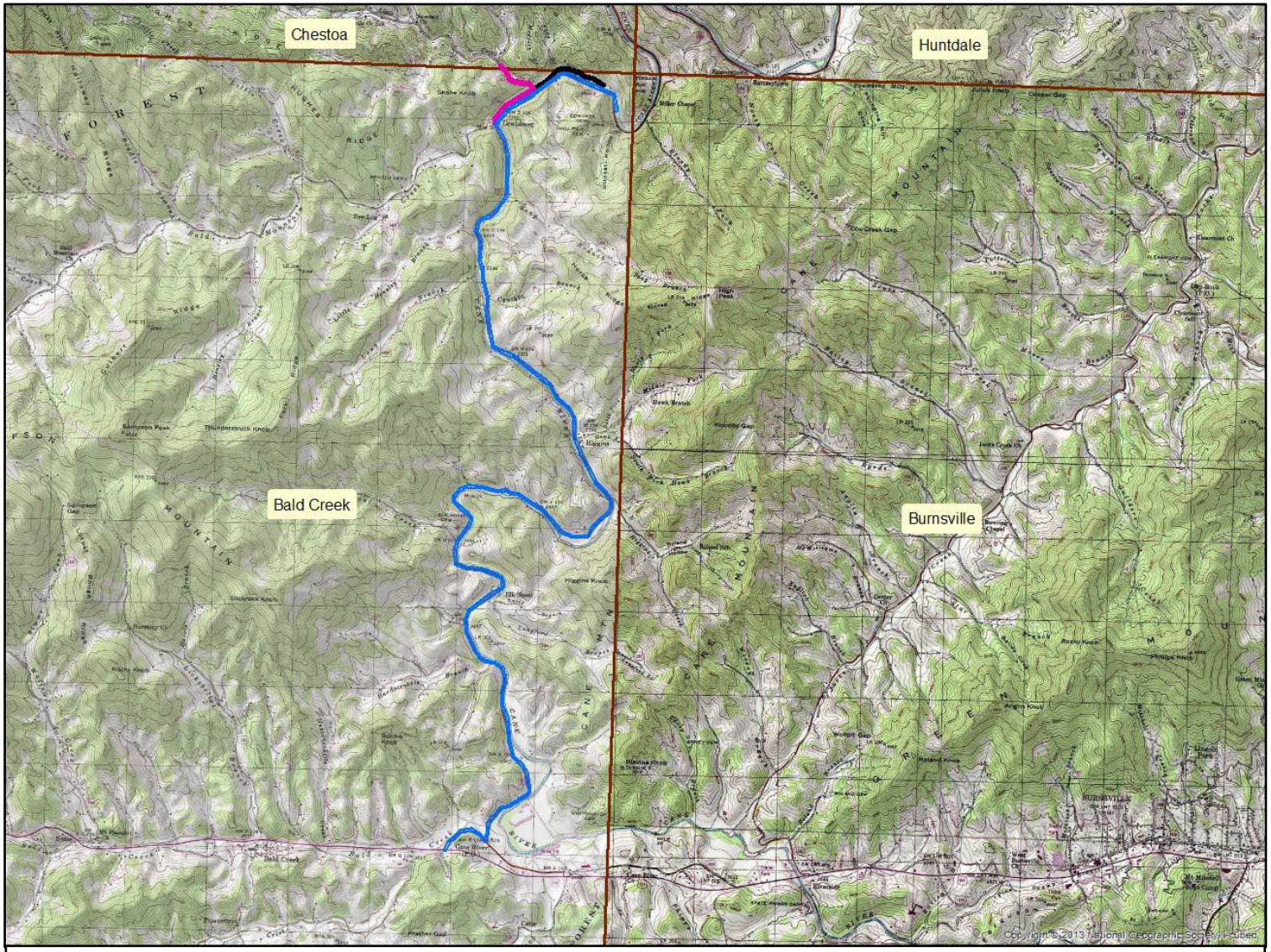


Figure 2: Location of the US 19W, SR 1411, and SR 1425 study areas on the *Chestoa, Huntdale, Bald Creek* and *Burnsville* topographic maps.

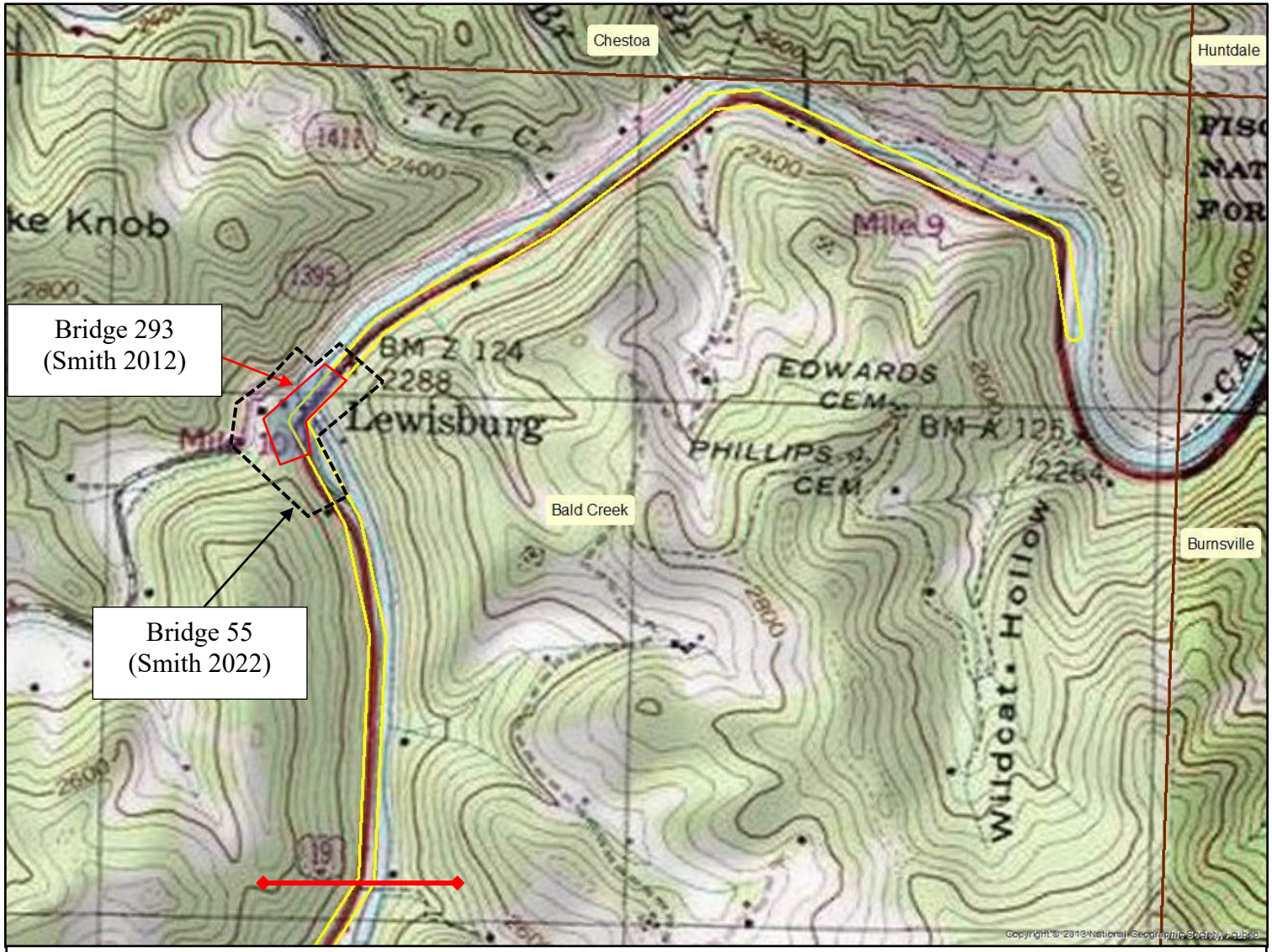


Figure 3: Topographic map of the north end of the study area showing previous archaeological review areas (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 1 of 7**).

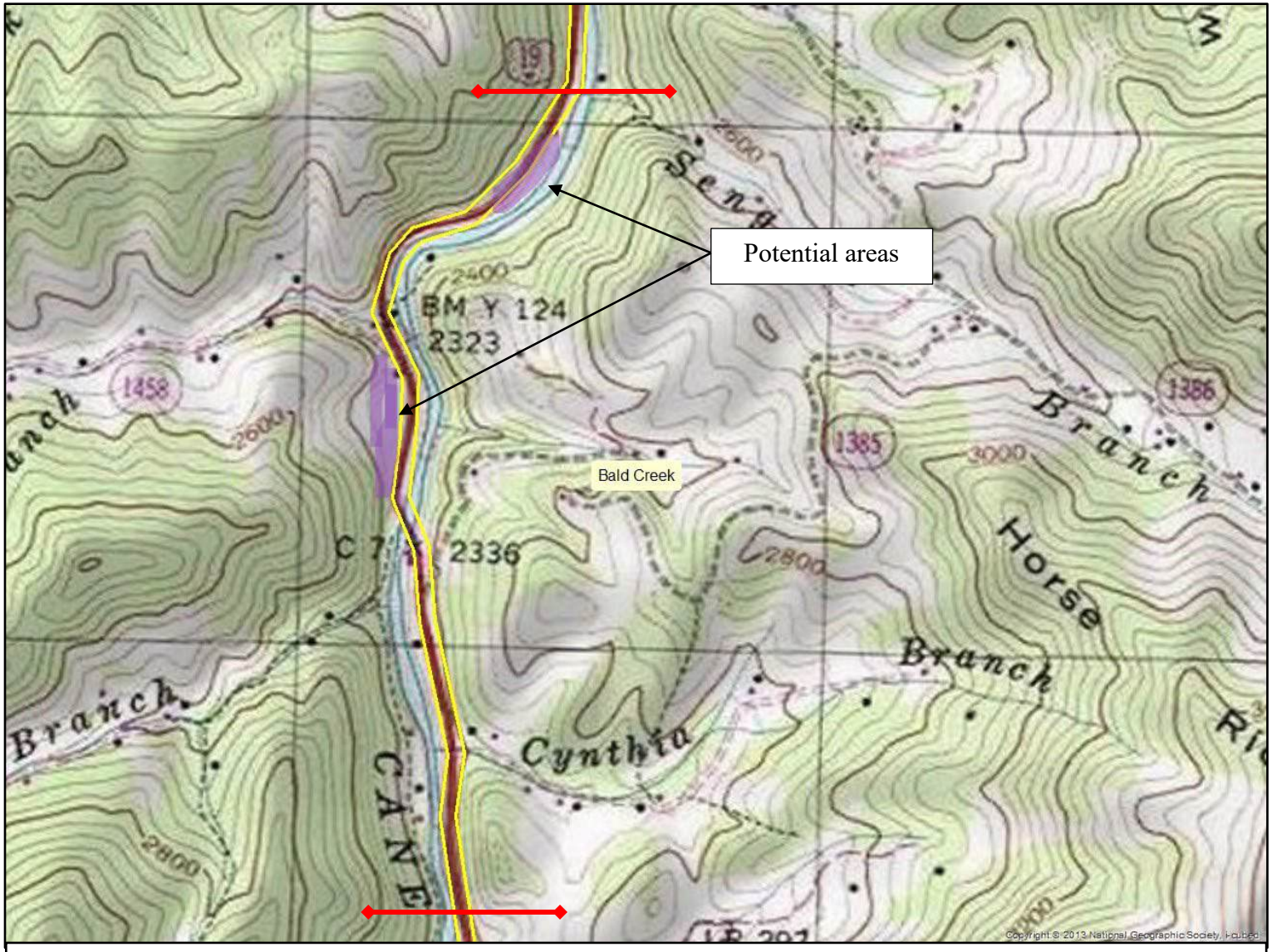


Figure 4: Topographic map of the study area (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 2 of 7**).

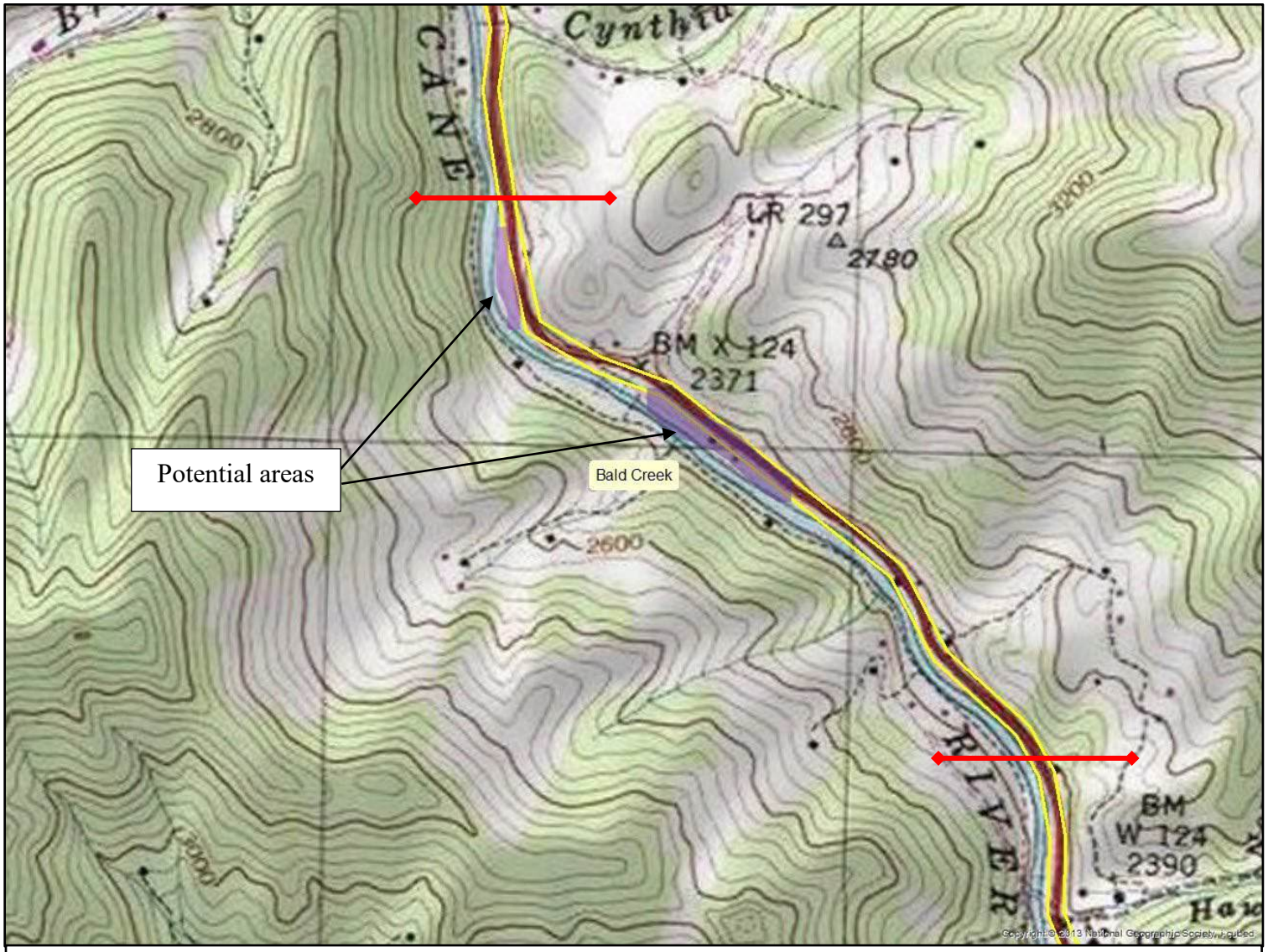


Figure 5: Topographic map of the study area (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 3 of 7**).

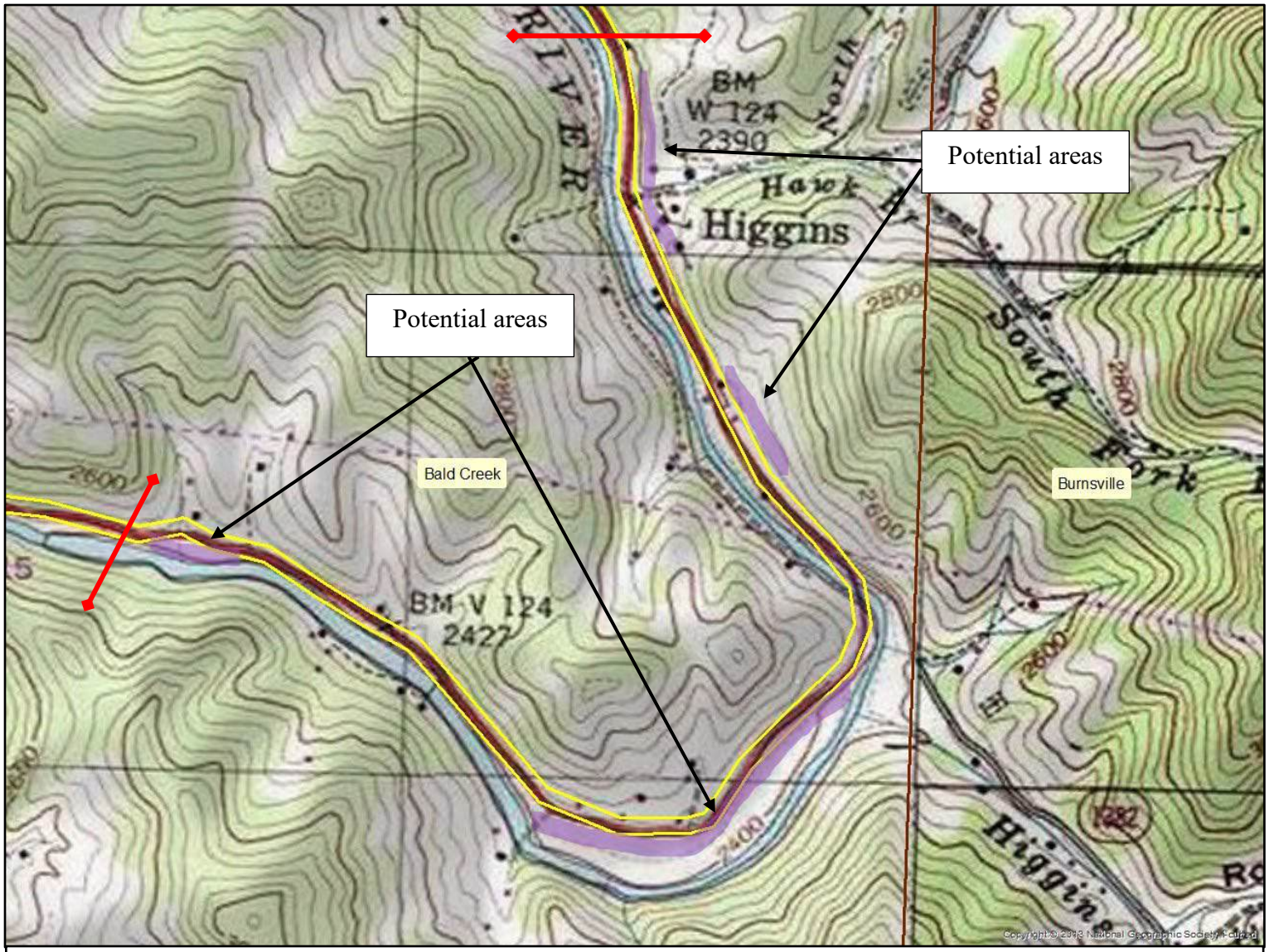


Figure 6: Topographic map of the study area (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 4 of 7**).

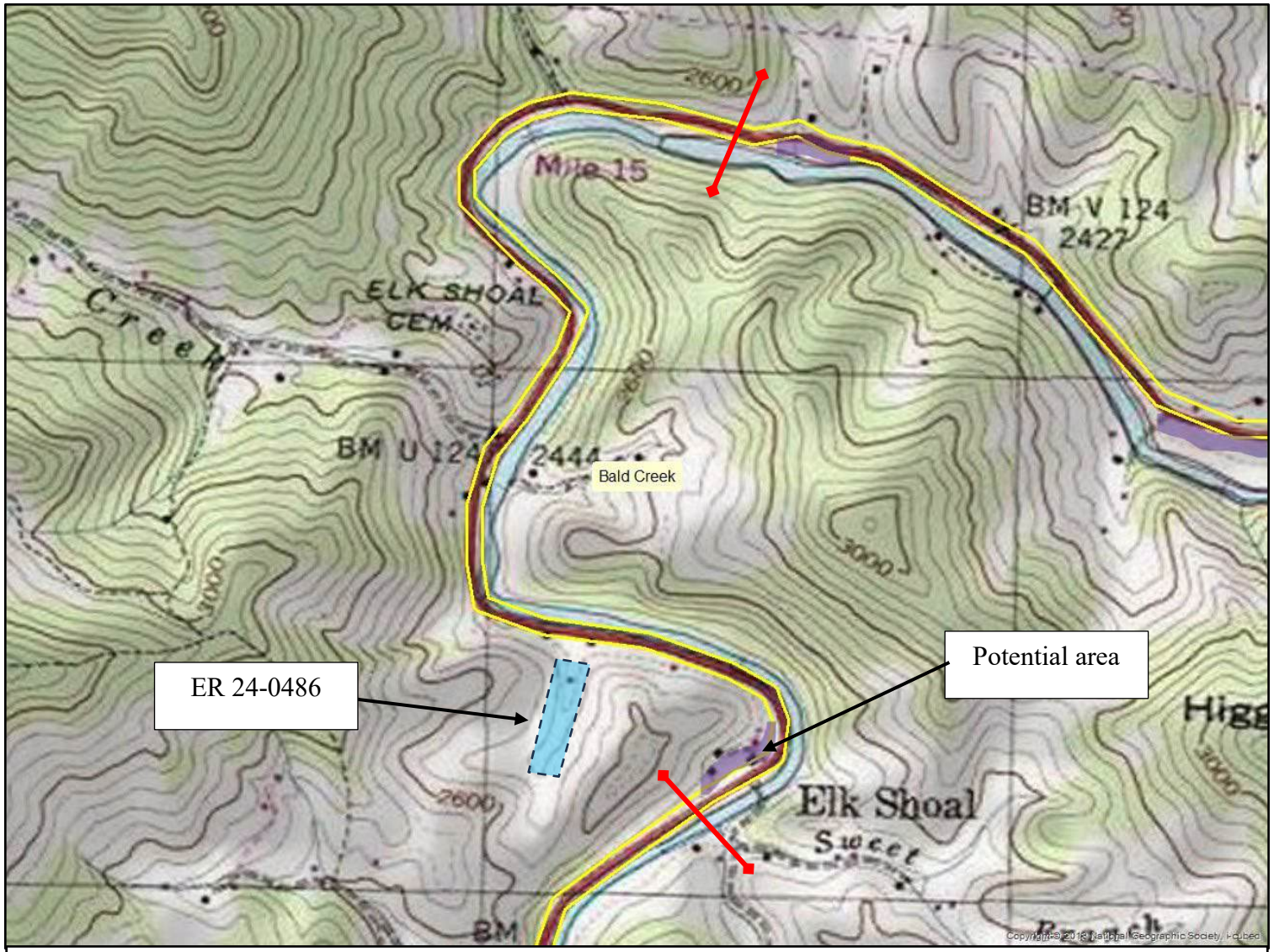


Figure 7: Topographic map of the study area showing an HPO-reviewed project (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 5 of 7**).

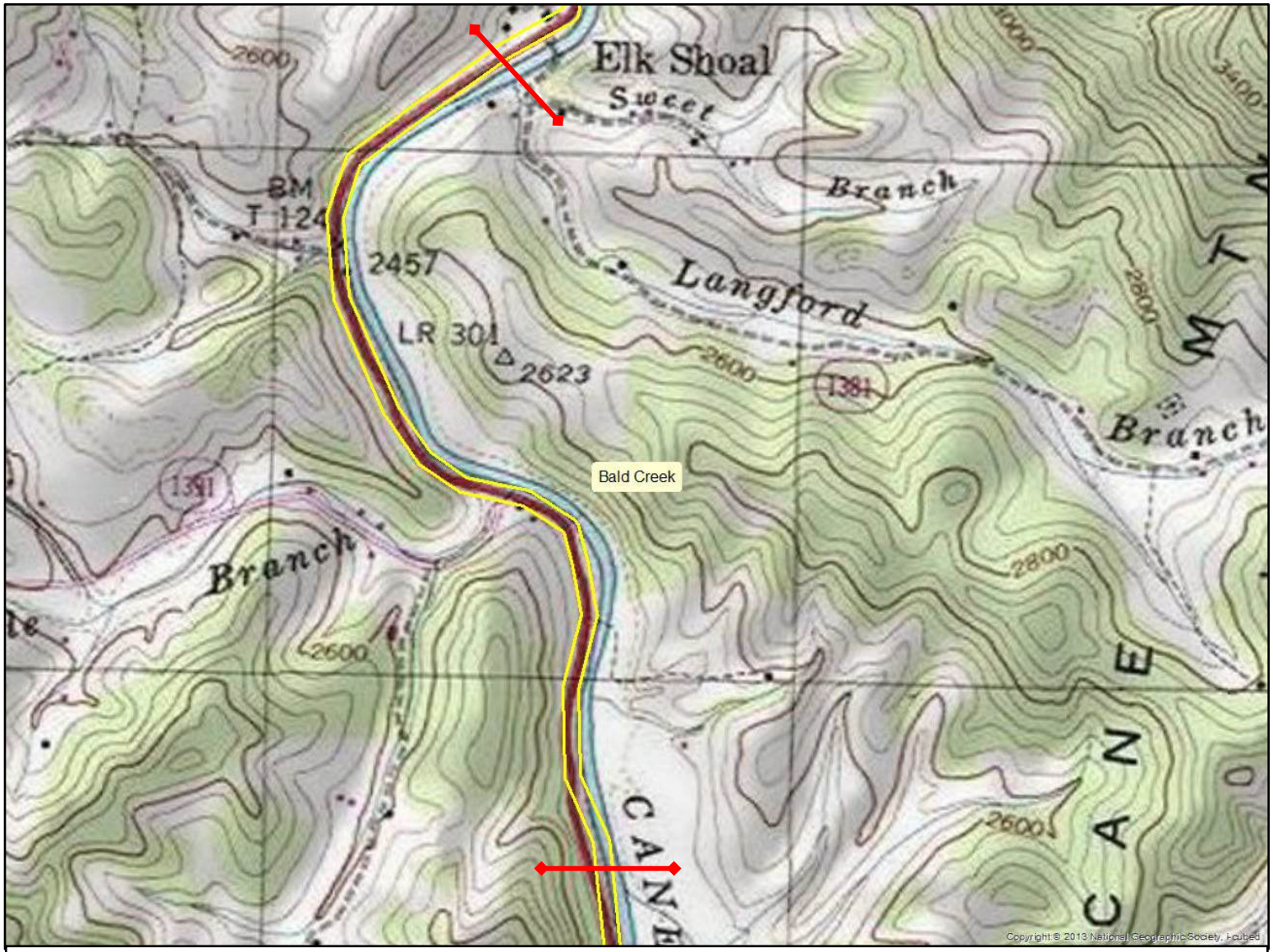


Figure 8: Topographic map of the study area (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 6 of 7**).

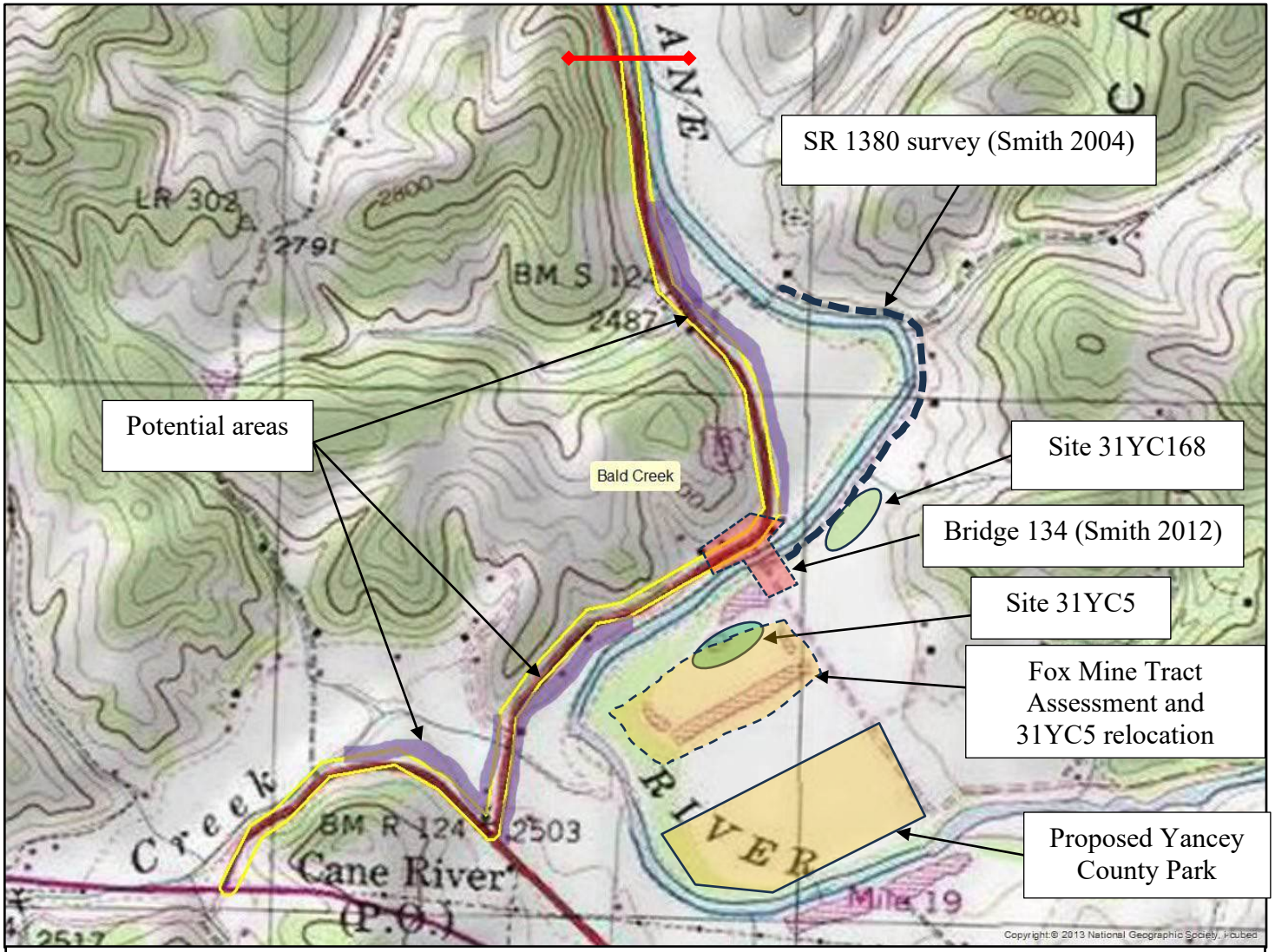


Figure 9: Topographic map of the south end of the study area showing previously recorded sites, previous archaeological survey, and HPO-reviewed projects (USGS *Bald Creek* 1:24,000-scale topographic map) (**map 7 of 7**).

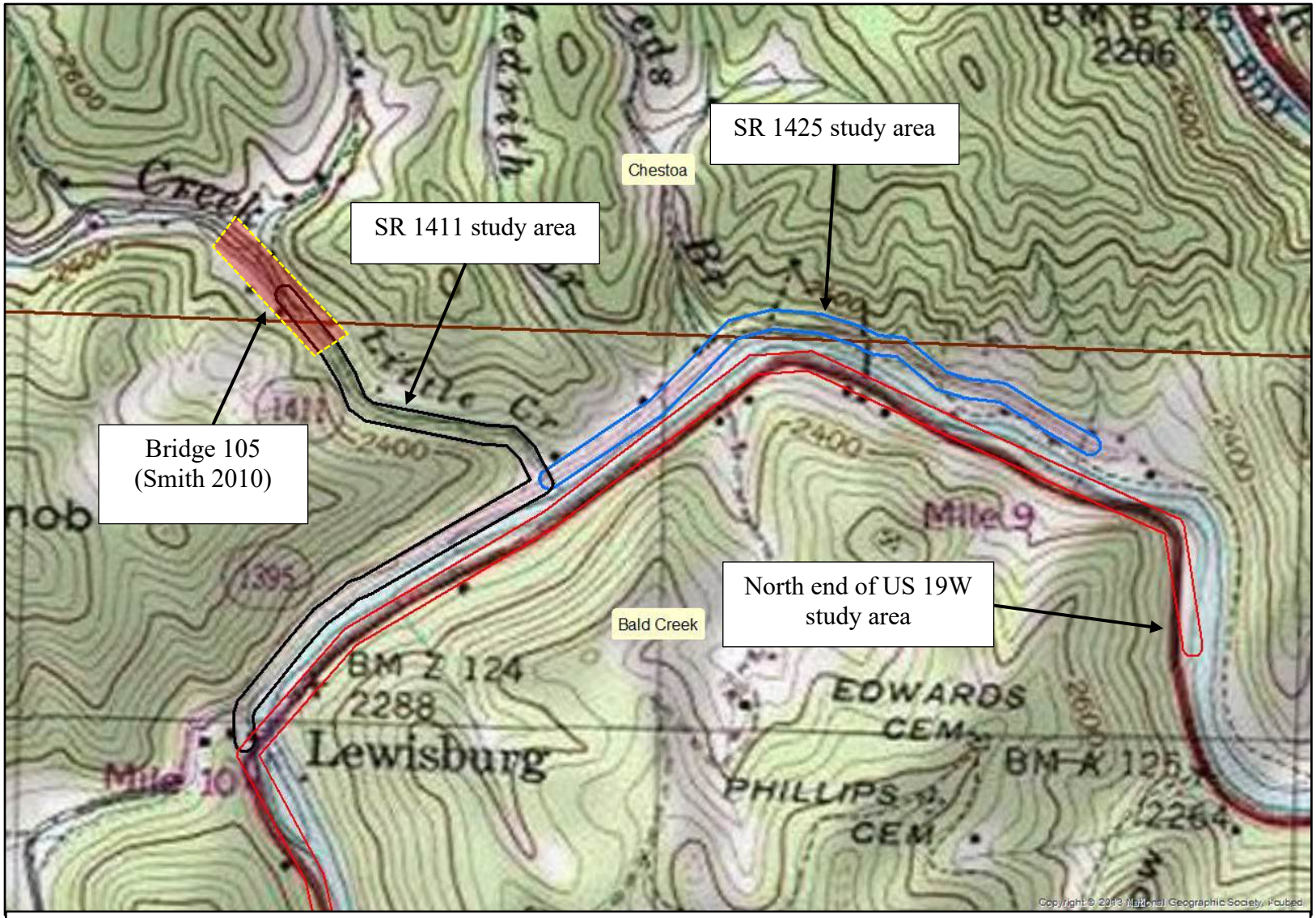


Figure 10: Topographic map of the SR 1411 and the SR 1425 study areas and previous archaeological review (USGS *Bald Creek* and Chestoa 1:24,000-scale topographic maps).

Figure 11: Aerial photograph of the north end of the study area (**1 of 7**).

Figure 12: Aerial photograph of the study area (**2 of 7**).

Figure 13: Aerial photograph of the study area (**3 of 7**).

Figure 14: Aerial photograph of the study area (**4 of 7**).

Figure 15: Aerial photograph of the study area (**5 of 7**).

Figure 16: Aerial photograph of the study area (**6 of 7**).

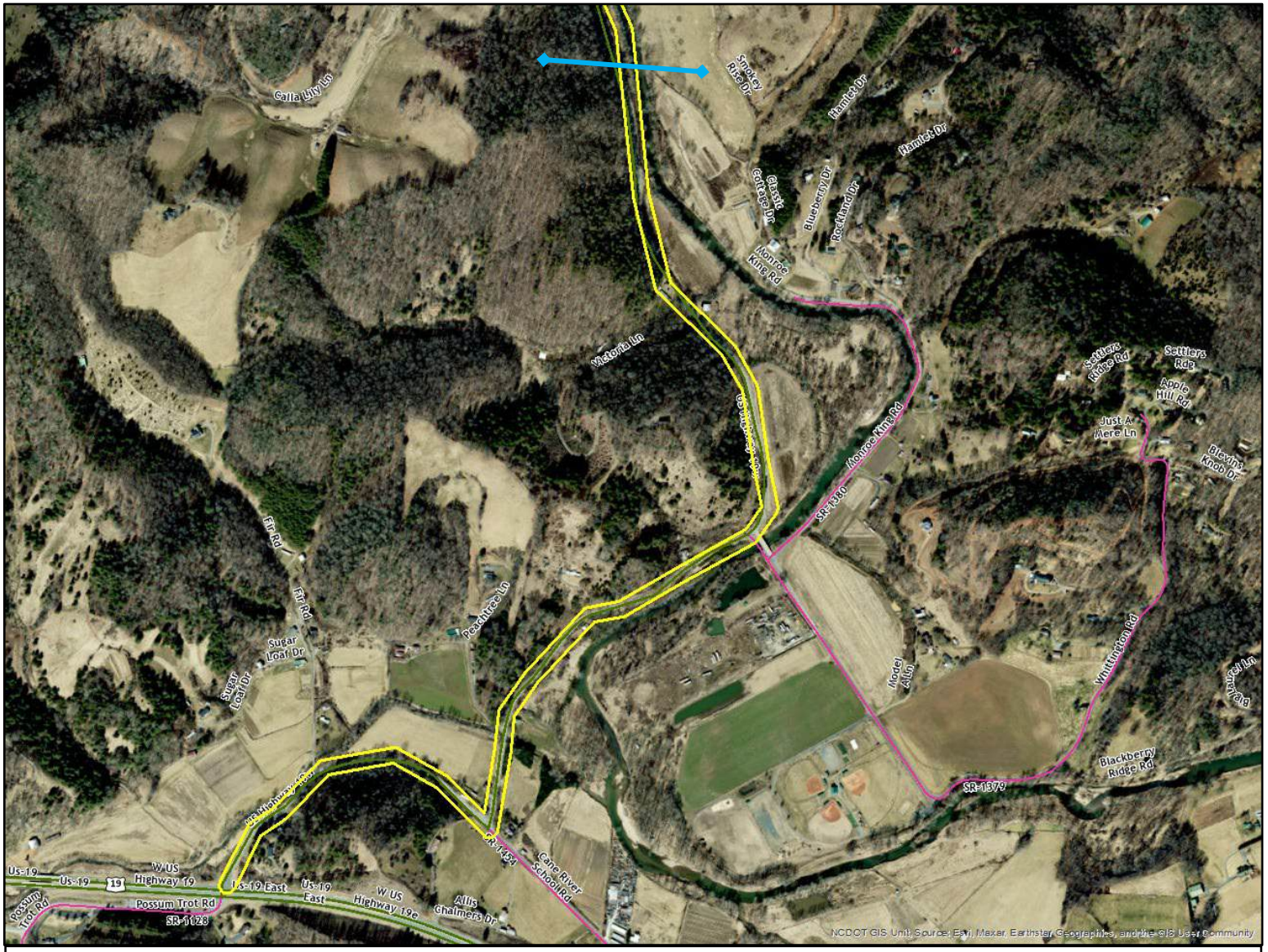


Figure 17: Aerial photograph of the south end of the study area (**7 of 7**).

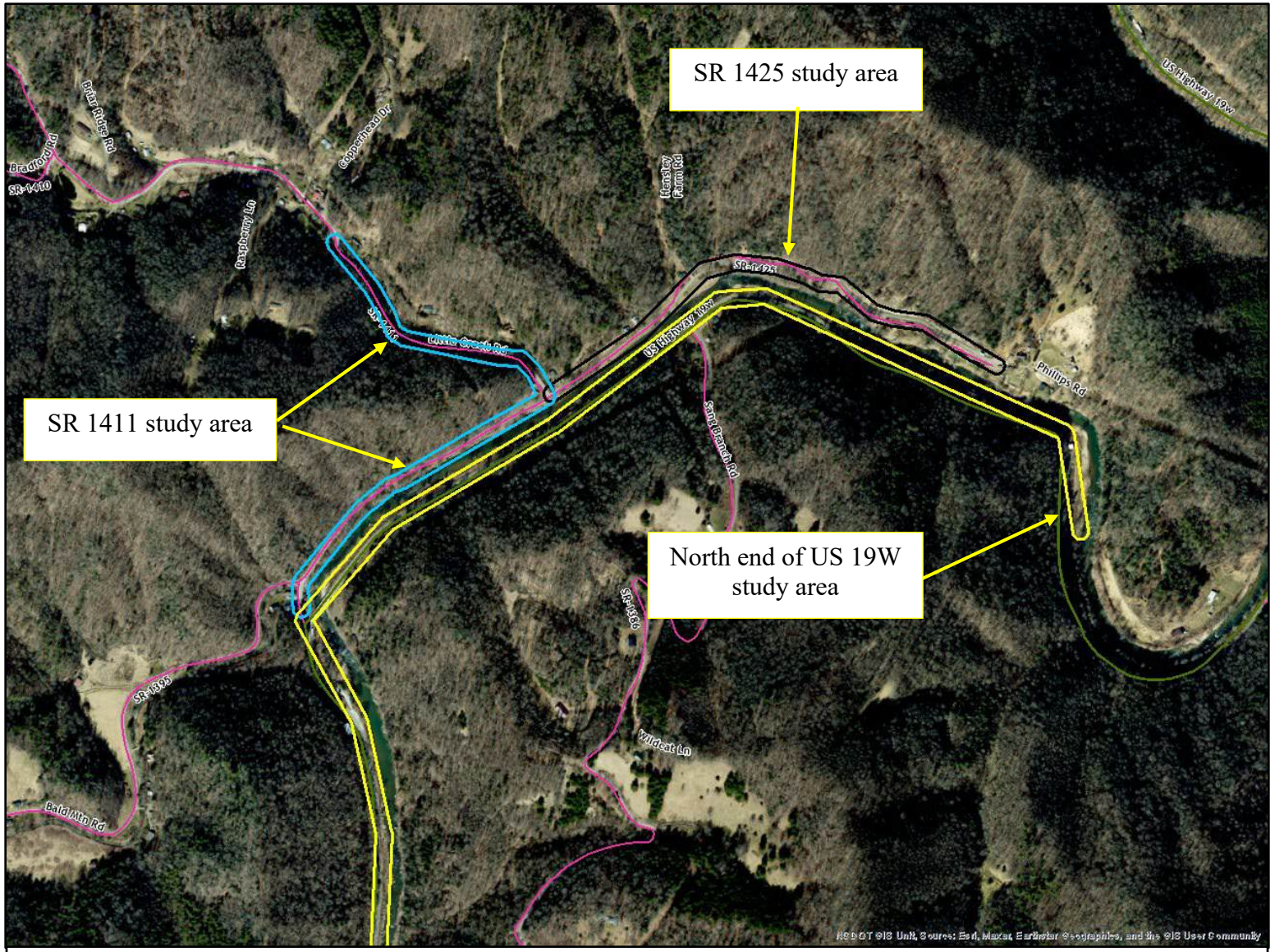


Figure 18: Aerial photograph of the SR 1411 and SR 1425 study areas.

Historic Architecture & Landscapes

24-11-0015

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 US 19 at SR 1454 (Cane River School Road) north to Lewisburg.

Included in the proposed project will be two (2) intersecting secondary roads, which will be repaired/restored to their pre-existing conditions.

SR 1411 (Little Creek Road)
SR 1425 (Phillips Road)

Additionally, ten (10) bridges/structures require significant repair or replacement.

Yancey Bridge 12 on US 19 W over Bald Creek (constr. 1940)
Yancey Bridge 134 on SR 1379 over Cane River (constr. 2014)
Yancey Bridge 73 on SR 1391 over Hardscrabble Branch (constr. 1961)
Yancey Bridge 72 on SR 1381 over Cane River (constr. 1978)
Yancey Bridge 34 on US 19 W over Cane River (constr. 1971)
Yancey Bridge 44 on US 19 W over Cane River (constr. 1971)
Yancey Bridge 55 on US 19 W over Cane River (constr. 1971)
Yancey Bridge 293 on SR 1411 over Bald Mountain Creek (constr. 2015)
Yancey Bridge 105 on SR 1411 over Little Creek (constr. 1951)
Yancey Bridge 288 on SR 1425 over Little Creek (constr. 1963)

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 two (2) 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 seven (7) 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. YC0151 Wilkes Hensley House (Determined Eligible, 2000) US 19 & US 19W
2. YC0026 Clark Cousens House (surveyed only) SR 1388 & US 19W
3. YC0108 Bethel Presbyterian Church (surveyed only) SR 1383 & US 19W
4. YC0049 Isaac Higgins House (surveyed only) SR 1383 & US 19W
5. YC0107,0109,0110 Markel School (surveyed only) SR 1383 & US 19W
6. YC0217 Phillips & Son Texaco Station (Determined Eligible, 2013) US 19 W & SR 1395
7. YC0069 House (surveyed only) SR 1411

SUPPORT DOCUMENTATION

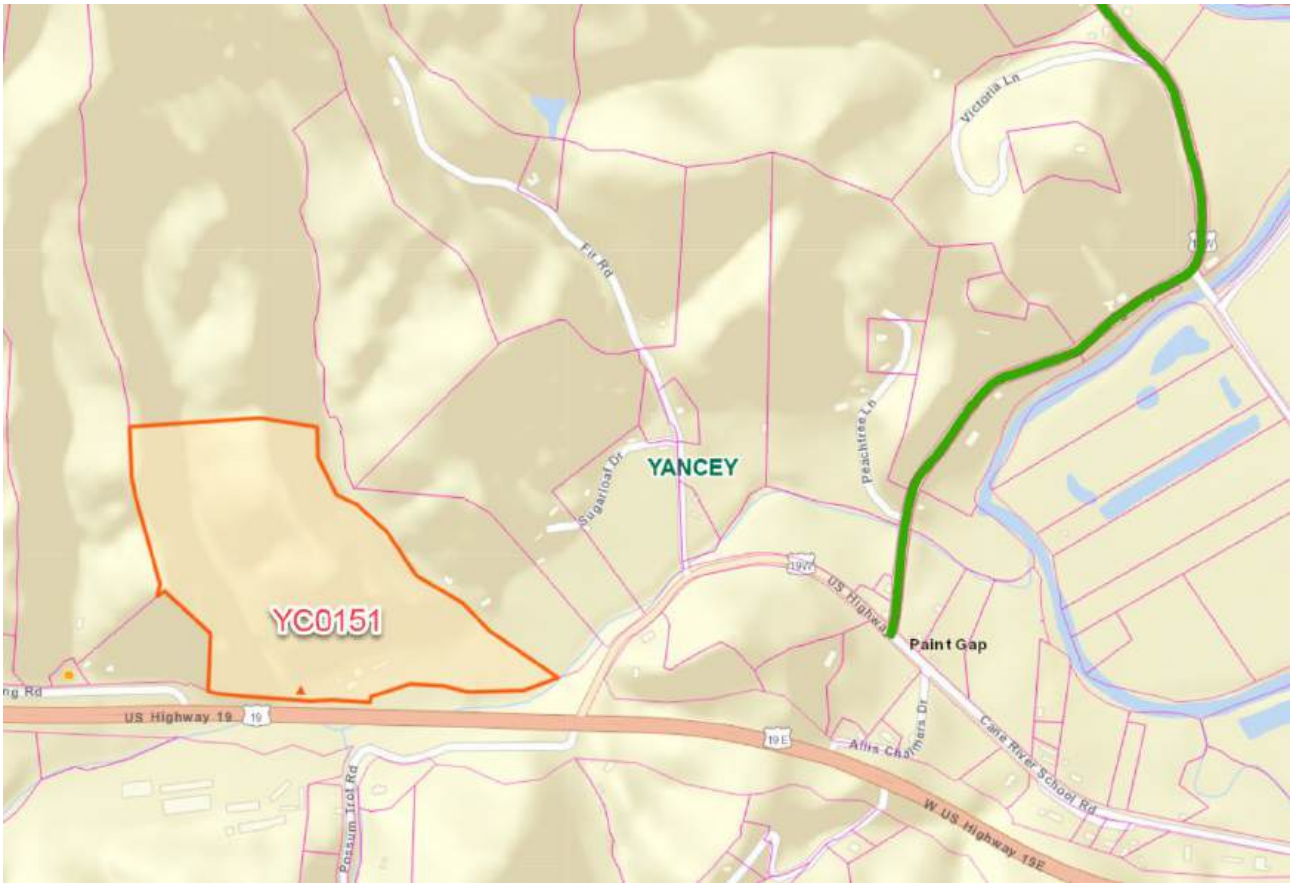
☒Map(s) ☐Previous Survey Info. ☐Photos ☐Correspondence ☐Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

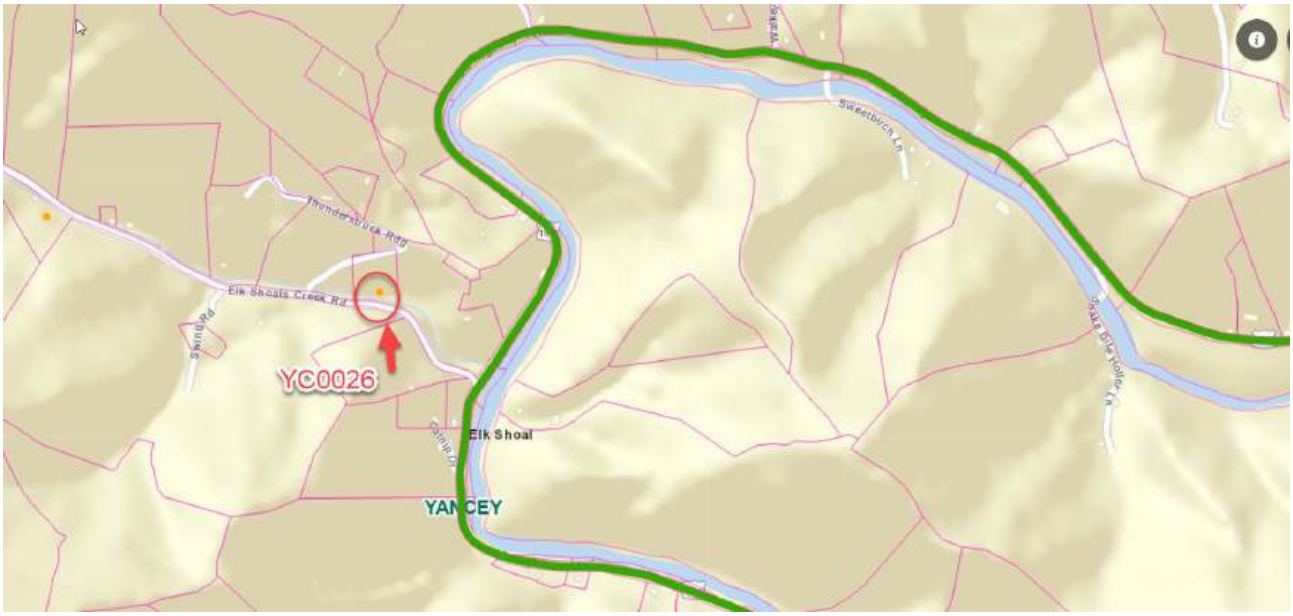
Historic Architecture and Landscapes -- **EFFECTS REQUIRED**

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

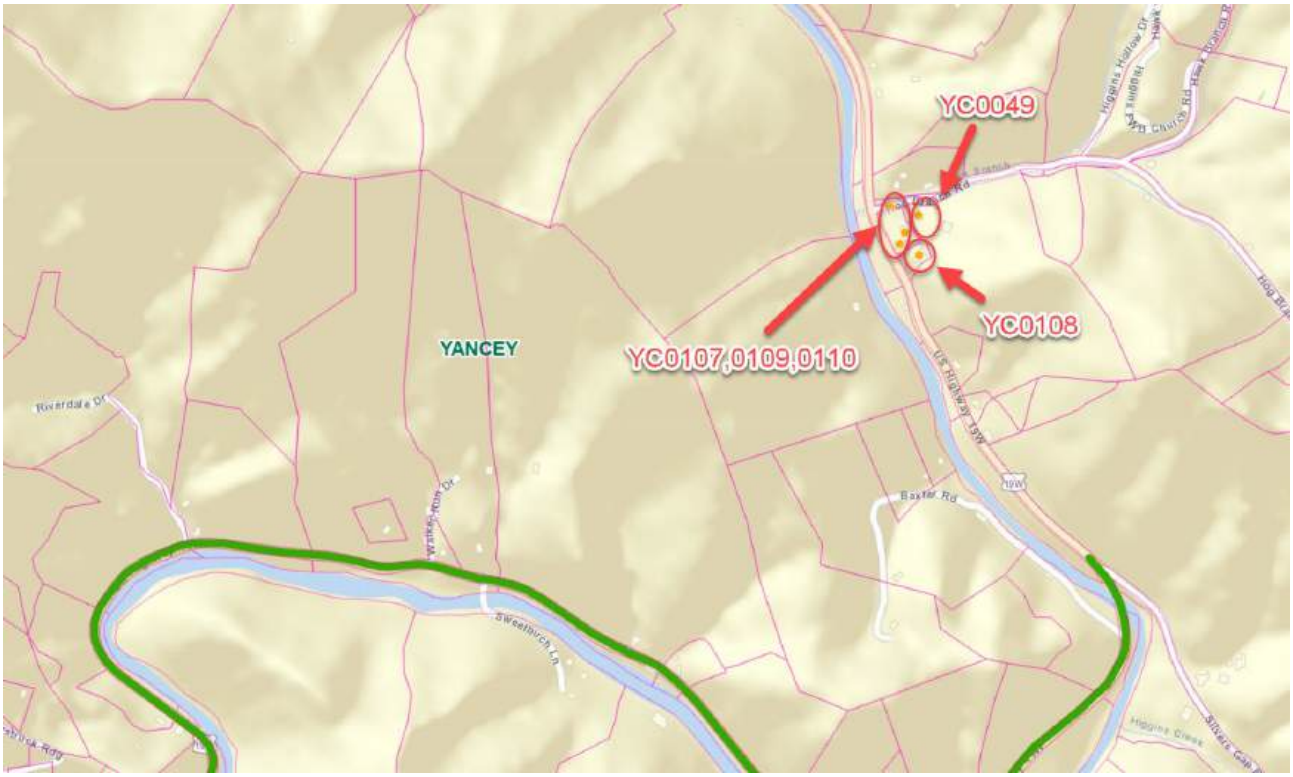
NCDOT Architectural Historian Date



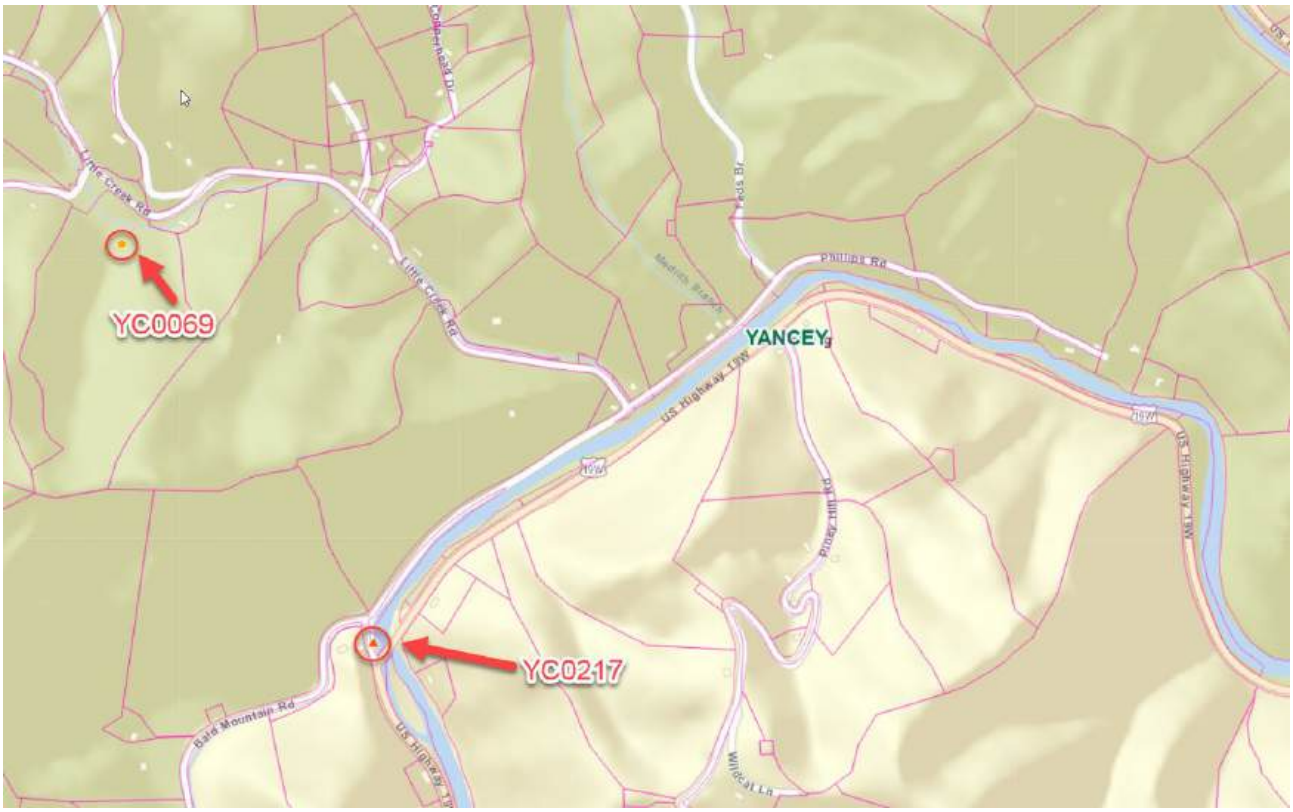
Known Historic Resources- source HPOWeb



Known Historic Resources- source HPOWeb



Known Historic Resources- source HPOWeb



Known Historic Resources- source HPOWeb

Tribal Coordination

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CHEROKEE NATION®
P.O. Box 948 • Tahlequah, OK 74465-0948
918-453-5000 • www.cherokee.org

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: 18313.1100998, US 19W South

Dear Karina Clough:

The Cherokee Nation (Nation) is in receipt of your correspondence about **18313.1100998**, 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

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

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 South Project No. 18313.1100998
Date:	Tuesday, March 25, 2025 11:14:59 AM
Attachments:	NCDOT Proj. 998_Cherokee.pdf NCDOT Proj. 998_EBCI.pdf NCDOT Proj. 998_Muscogee.pdf NCDOT Proj. 998_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 along the Cane River in Yancey County. The repair area extends approximately 10 miles on US 19W from Cane River School Road to Piney Hill Road as well as approximately 1 mile of Little Creek Road northwest of US 19W and approximately 1 mile of Phillips Road northeast of Little Creek Road (Project No. 18313.1100998). This project also includes the replacement of ten 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

NEPA Document

Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	**Hurricane Helene Repairs to US 19W South**
WBS Element	18313.1100998
Federal Project No.	N/A

A. Project Description:

The proposed action includes the initial emergency repairs to approximately 10 miles of US 19W from Cane River School Road (SR 1454) to Piney Hill Road (SR 1386) and approximately 2 miles of secondary roads, including about 1 mile of Little Creek Road (SR 1411) and 1 mile of Phillips Road (SR 1425) in Yancey County. Ten bridges will be repaired or replaced by this project. Also included in this action are geotechnical investigations and other engineering investigations needed to continue the emergency reconstruction and finalize the design of the permanent repairs.

In the immediate aftermath of the storm, NCDOT reestablished connectivity within the project area to facilitate access for property owners, emergency vehicles, utility companies, and other necessary services. NCDOT utilized available resources and recovered materials that were quickly accessible, often from within the adjacent waterway, to rebuild roadways on their pre-storm alignments as closely as possible.

The Little Creek Road bridge (Bridge No. 990293) over Bald Mountain Creek was destroyed by the storm. Approximately 0.5 mile of Little Creek Road between Bridge No. 990293 and the Phillips Road intersection on the northwest side of the Cane River was also destroyed. To reestablish connectivity to Little Creek Road residents, NCDOT installed a temporary causeway across the Cane River near the Piney Hill Road intersection with US 19W.

Geotechnical investigations will include high ground and in-water borings as necessary to inform roadway embankment and slope repair design and construction. Roadway borings will be collected from the existing roadway and completed before side slope borings are scheduled because sufficient information may be gained from the roadway boring. Toe of slope borings may require access through the water depending on the location. Geotechnical borings may also be required at the ten bridge bent locations (see project location map for bridge locations). Access to in-water borings will occur from vehicles traversing from the riverbank and into the river. No dewatering or temporary fill is planned for in-water borings.

B. Description of Need and Purpose:

The need for the proposed action is for emergency repairs to the slopes, pavement, and other infrastructure associated with US 19W South as well as geotechnical investigations to develop designs for the permanent repairs for the corridor.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

Type I actions:

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.

24. Localized geotechnical and other investigation to provide information for preliminary design and for environmental analyses and permitting purposes, such as drilling test bores for soil sampling; archeological investigations for archeology resources assessment or similar survey; and wetland surveys.

E. Special Project Information:

Natural Environment
Elk Shoal Creek Headwaters and French Broad River (FBR)/Cane River Aquatic Habitat are listed as Natural Areas by the Natural Heritage Program (NHP). The NC NHP Natural Areas are terrestrial and aquatic areas that are of special biodiversity significance and indicate action areas for the conservation of North Carolina biodiversity. No impacts to Elk Shoal Creek Headwaters, which is located about 1 mile west of the project, are anticipated with the proposed project. Temporary impacts to the FBR/Cane River Aquatic Habitat are anticipated to result from the proposed action because of temporary geotechnical investigation activities within the Cane River. (See project file.)

The Cane River, which runs adjacent to the proposed project limits on US 19W South and adjacent secondary roads, is listed as Class C; Tr (Trout) by North Carolina Division of Water Resources (DWR).

The Draft NRTR (May 2025) identifies one headwater forest wetland on the east side of US 19W north of Hog Branch Road. No impacts are anticipated from the proposed action.

Threatened & Endangered Species
As of March 2025, there are ten listed or proposed species under the Endangered Species Act (ESA) jurisdiction within the vicinity project according to the US Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) database. USFWS identified the main stem of the Cane River as critical habitat for Appalachian elktoe. (See project file.)

Table 1. Federally Protected Species

Scientific Name	Common Name	Federal Status	Biological Conclusion
Perimyotis subflavus	Tricolored bat	PE	Not required
Myotis septentrionalis	Northern long-eared bat	E	Unresolved
Myotis grisenscens	Gray bat	E	Unresolved
Glyptemys muhlenbergii	Bog turtle	SAT	Not required
Cryptobranchus alleganiensis	Eastern hellbender	PE	Not required
Alasmidonta raveneliana	Appalachian elktoe	E	Unresolved
Danaus plexippus	Monarch butterfly	PT	Not required
Isotria medeoloides	Small whorled pogonia	T	Unresolved
Sisyrinchium dichotomum	White irisette	E	Unresolved

Gymnoderma lineare	Rock gnome lichen	E	No Effect
PE – Proposed Endangered, T – Threatened, SAT - Threatened based on Similarity of Appearance, PT – Proposed Threatened, E- Endangered			

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 do not receive formal ESA protections. However, federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species. 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 USFWS may adopt the conference opinion as a biological opinion—provided no significant 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 do not receive formal ESA protections. However, federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species. 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 USFWS may adopt the conference opinion as a biological opinion—provided no significant new information has emerged and no substantial changes to the proposed action have occurred.

Cultural Resources

NCDOT/FHWA initiated tribal coordination with the Catawba Indian Nation, the Cherokee Nation, the Eastern Band of Cherokee Indians, the Muscogee (Creek) Nation, and the United Keetoowah Band of Cherokee Indians on March 25, 2025. The Cherokee Nation replied on April 24, 2025 (see project file).

NCDOT/FHWA and the NC Historic Preservation Office are in coordination regarding this project. No effects to historic resources are anticipated as a result of this proposed action.

Public and Stakeholder Involvement

NCDOT hosted a Local Officials' Information Meeting (LOIM) and a Public Meeting for four Hurricane Helene Repair Projects in Yancey and Mitchell Counties, including this project, 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 permanent 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 circulated Start of Study Notification to agency representatives on March 10, 2025. Responses were received from NC Wildlife Resources Commission (NCWRC), NC Division of Water Resources (DWR), NC Department of Natural and Cultural Resources (DNCR) Division of 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: Draft NRTR, June 2025)	☒	☐
2	Does the project result in effects subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)? (Source: Draft NRTR, June 2025)	☐	☒
3	Does the project generate substantial controversy or public opposition, regarding human and/or natural environment concerns, following appropriate public involvement? (Source: N/A])	☐	☒
4			
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: NCDOT 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, Dec. 2024; Historic Architecture Coordination, April 2025)	☐	☒
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: Draft NRTR, June 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: NCDOT 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: NCDOT ATLAS Screening, April 2025; NCWRC Scoping Letter, March 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: NCDOT 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 Dec. 29, 2024; Historic Architecture Coordination, April 2025)	☐	☒
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.? (Source: Phase 1 Report, 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, 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: NCDOT ATLAS Screening, April 2025)	☐	☒
18	Does the project require a U.S. Coast Guard (USCG) permit? (Source: NCDOT ATLAS Screening, April 2025)	☐	☒
19	Does the project involve Coastal Barrier Resources Act (CBRA) resources? (Source: NCDOT ATLAS Screening, April 2025)	☐	☒
20	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River? (Source: NCDOT ATLAS Screening, April 2025)	☐	☒
21	Does the project impact federal lands (e.g., U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands? (Source: NCDOT 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: Direct and Indirect Screening Tool, Dec. 2024)	☐	☒
24	Will maintenance of traffic or detours cause substantial disruption? (Source: N/A)	☐	☒
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: NCDOT ATLAS Screening, April 2025)	☐	☒
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)? (Source: NCDOT ATLAS Screening, April 2025)	☐	☒
28	Does the project "use" Section 4(f) property, and/or result in a *de minimis* determination? (Source: NCDOT 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: Direct and Indirect Screening Tool, 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.')

Questions 1 & 8: Section 7 Coordination between NCDOT, FHWA and USFWS is ongoing. Repair and reconstruction activities are currently being considered under formal consultation with USFWS.

Question 11: The NCWRC (March 18, 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 should not apply to the repair work.

H. Categorical Exclusion Approval:

STIP Project No.	**Hurricane Helene Repairs to US 19W South**
WBS Element	18313.1100998
Federal Project No.	N/A

Prepared By:

6/29/2025
Date

DocuSigned by:
Adam Archual
1B895B5A16D241C...
Adam Archual
GFT

Prepared For: Chris Deyton, PE, Highway Division 13

Reviewed By:

7/2/2025
Date

Signed by:
Marissa Cox
78BFB0F95DD342E...
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.

7/2/2025
Date

Signed by:
CA084B4A6412432...
John Jamison, EPU, Unit Head
North Carolina Department of Transportation

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

7/2/2025
Date

DocuSigned by:
E932DEEC5B6249F...
for Yolonda K. Jordan, Division Administrator
Federal Highway Administration

I. Project Commitments (attach as Green Sheet to CE Form):

NCDOT PROJECT COMMITMENTS

STIP Project No. **Hurricane Helene Repairs to US 19W South**
Yancey County
Federal Aid Project No. N/A
WBS Element 18313.1100998

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

None

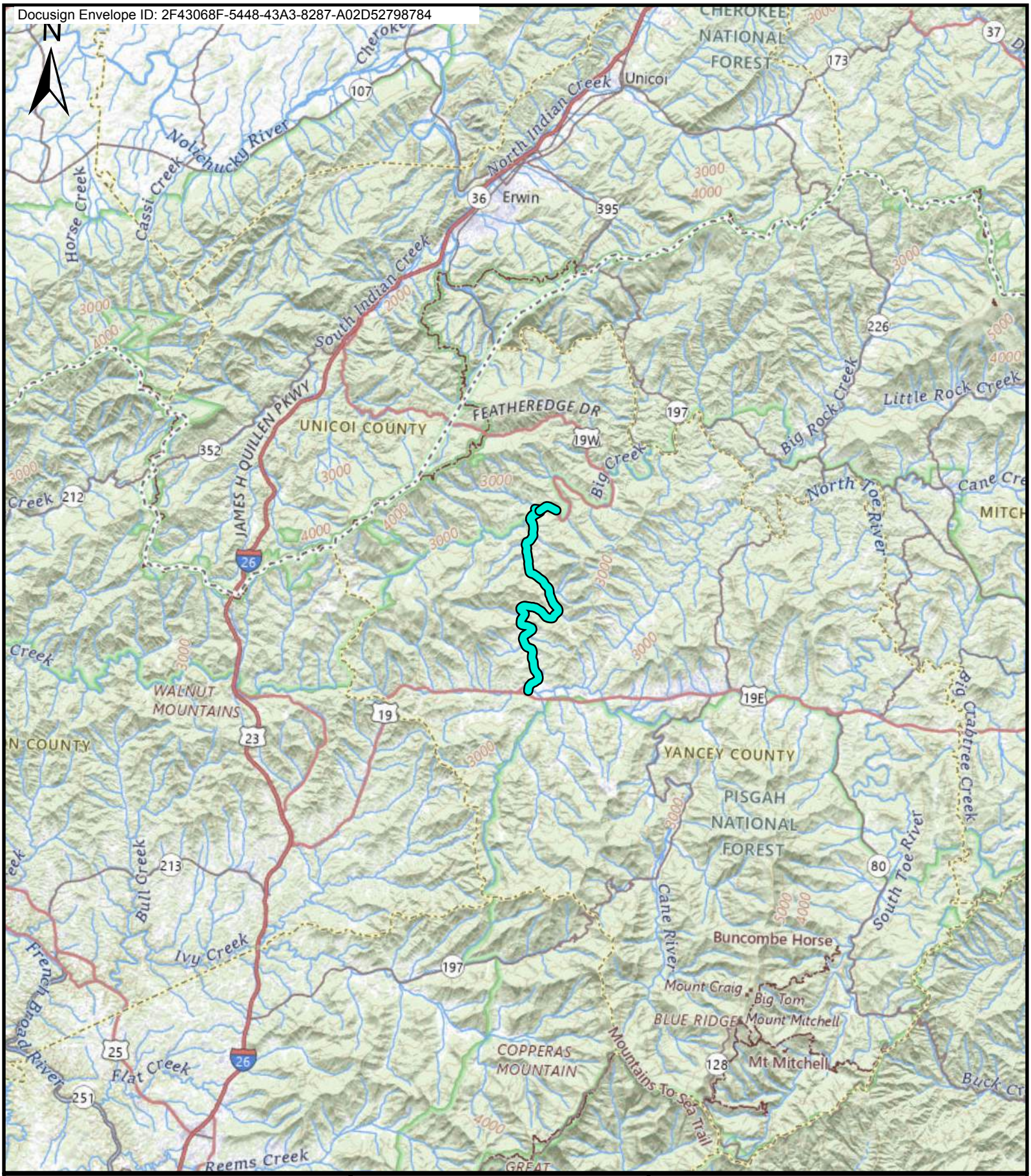
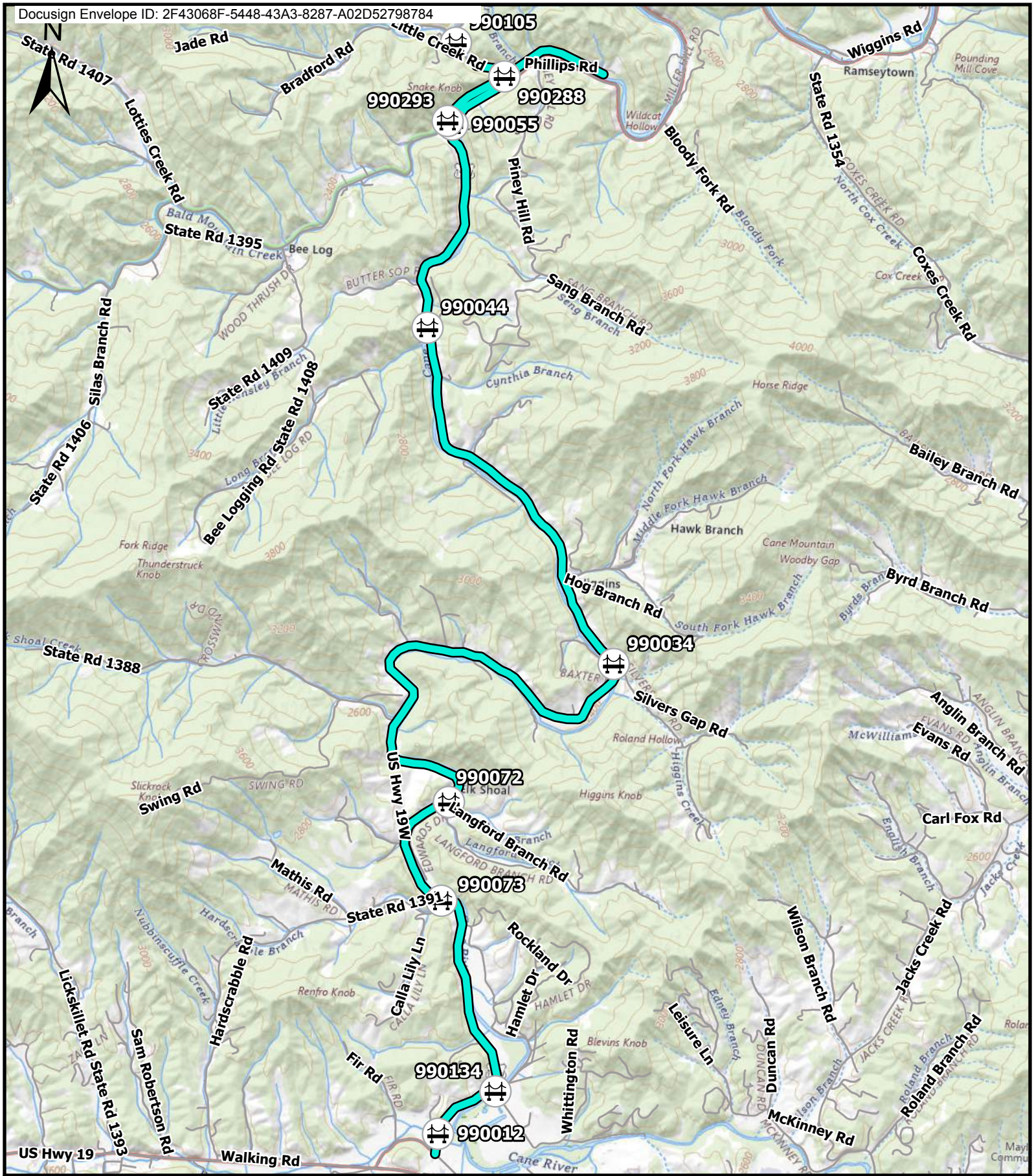
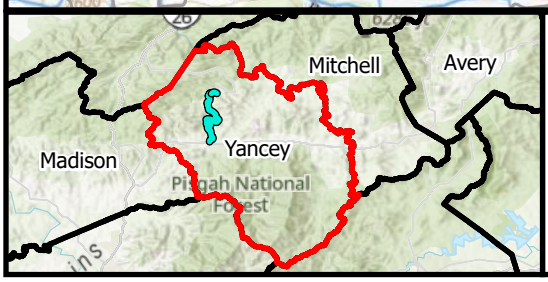


Figure 1. Project Vicinity Map
NCDOT Project No. 18313.1100998
Repairs to U.S. 19W South:
Cane River School Rd (S.R. 1454) to Piney Hill Rd (S.R. 1386)
Yancey County





Project Limits

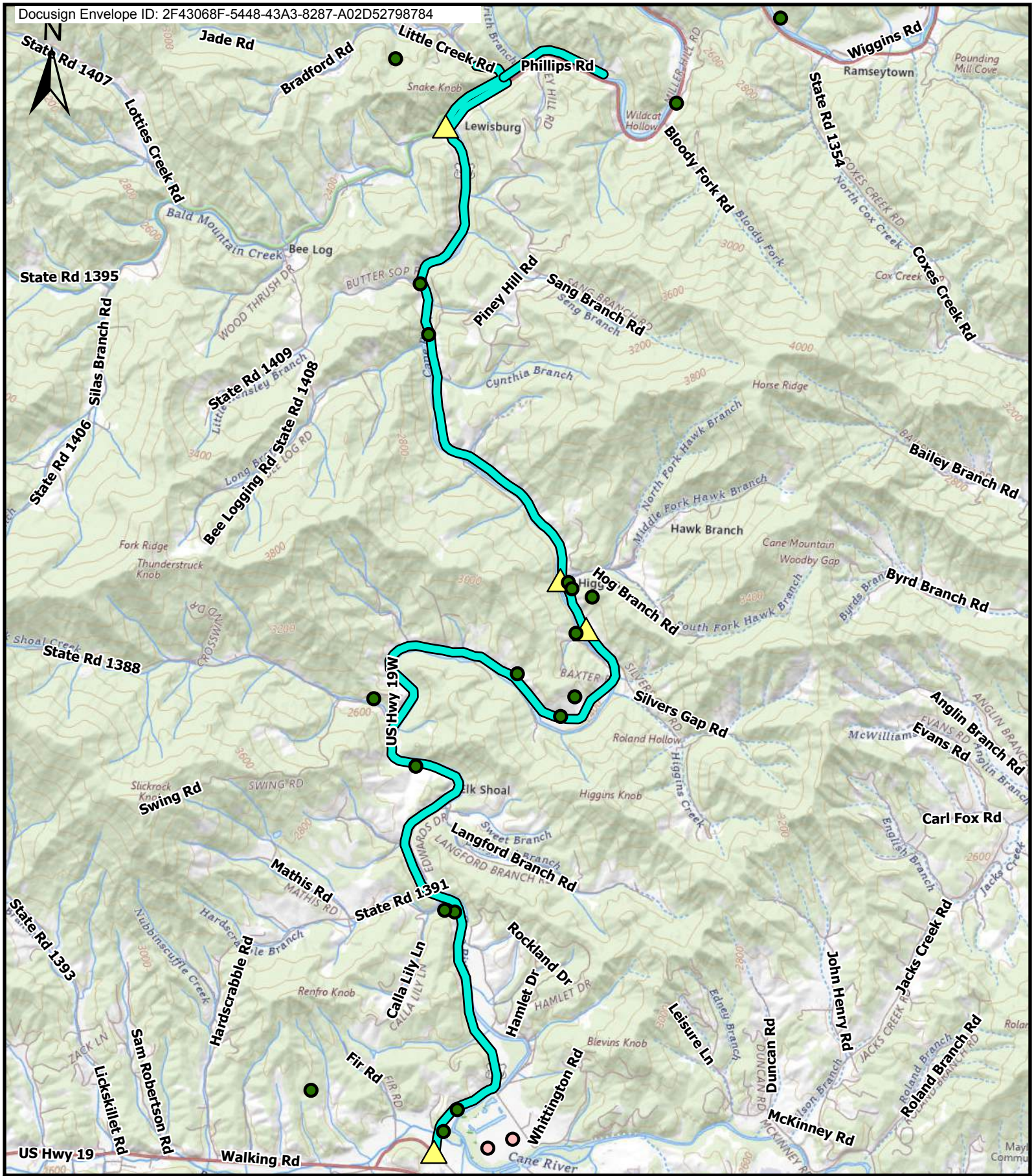
Bridge for Proposed Repair/ Replacement

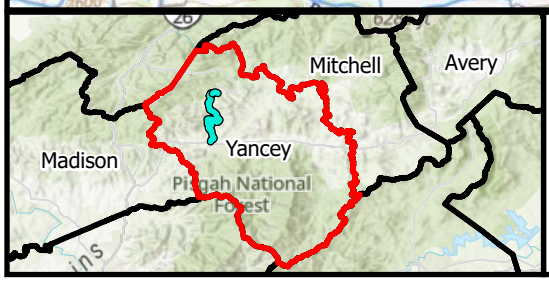
Rivers & Streams

0 2,500 5,000 Feet

0 0.5 1 Miles

Figure 2. Project Location Map
NCDOT Project No. 18313.1100998
Repairs to U.S. 19W South:
Cane River School Rd (S.R. 1454) to Piney Hill Rd (S.R. 1386)
Yancey County





Geoenvironmental Sites of Concern
Parks/Conservation Land
Potential Historic Resources
Project Limits
Rivers & Streams

0 2,500 5,000 Feet

0 0.5 1 Miles

Figure 3. Environmental Features Map
NCDOT Project No. 18313.1100998
Repairs to U.S. 19W South:
Cane River School Rd (S.R. 1454) to Piney Hill Rd (S.R. 1386)
Yancey County