

Type I or II Categorical Exclusion Action Classification Form

TIP Project No.	BR-0060
WBS Element	67060.1.1
Federal Project No.	N/A

A. Project Description:

Structures Management Unit (SMU) Bridge Program Project BR-0060 includes replacing Bridge No. 000014, located on N.C. 87 over Cane Creek in Alamance County. The bridge lies south of the unincorporated community of Eli Whitney, NC and is surrounded by mostly open, wooded and agricultural properties, with sparse residential properties and few commercial properties.

The replacement structure will be a bridge approximately 230 feet long providing a minimum 36-foot clear deck width. The bridge will include two 12-foot lanes with 6-foot offsets on both sides. The bridge length is based on preliminary design information and is set by hydraulic requirements. The approach roadway will extend approximately 788 feet from the west end of the new bridge and 1,230 feet from the east end of the new bridge. The approaches will be widened to include a 24-foot pavement width providing two 12-foot lanes, 8-foot shoulders (2-foot paved) on both sides (13-foot shoulders where guardrail is included). The roadway will be designed as a Minor Arterial using Regional Tier guidelines with a 60mph design speed. See attached figures for reference.

The new bridge will be constructed in its existing location. Traffic will be detoured onsite and will utilize a detour bridge that will be constructed just north of the existing bridge.

See maps below for reference.

B. Description of Need and Purpose:

Estimated remaining life of bridge was 6 years according to the inspection conducted in 2016. Priority maintenance was issued during this inspection as well. The purpose of this project is to replace a structurally deficient bridge.

Bridge No. 000014 was built in 1929, was widened in 1969 and is considered structurally deficient with a substructure rating of 4 out of 9 by FHWA standards. There is notable cracking and spalling. The most recent bridge inspection for the structure was on 12/15/2020.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

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

E. Special Project Information:**Estimated Costs**

Type	Estimated Costs 2022
Construction Cost (65% Plans, Oct. 2022)	\$6,900,000
Right-of-Way	\$273,200
Utilities	\$138,000
Total	\$7,311,200

Roadway Traffic Data is as follows:

ADT 2023 = 3,000
 ADT 2043 = 3,300
 K = 10%
 D = 60%
 T = 7%
 TTST = 3%
 Dual = 4%
 V = 60 mph

The Functional Classification is a Minor Arterial – Regional Tier.

There are no anticipated design exceptions.

Alternative analysis (if any):

Alternative 1 was chosen for this project, placing the temporary on-site detour on the eastern side of the proposed alignment. This alternative had less stream impacts, less right-of-way to purchase, and lower overall cost.

Other alternatives considered were:

- a. An On-site detour (Alternative 2) on the west side was investigated but Cane Creek turns south and parallels the road on this side. The impacts to the creek were higher with a detour designed on this side of the road. The overall cost was higher, as was the needed right-of-way to purchase.
- b. This is an NC route, and a detour route would need to provide similar lane and shoulder widths. There is no suitable offsite detour available in this area, therefore the offsite detour option was not deemed feasible.

Public Involvement:

A project newsletter was sent on 07/05/2022 to 113 adjacent or nearby affected property owners on this project. Property owners were invited to comment. No comments have been received to date.

Outreach was made to the Catawba and Monacan Tribal Nations during the planning process. A response was received from the Catawba Nation stating, "*The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American*

archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.” We received no response from the Monacan Nation.

Water Resources:

Water resources in the study area drain into the Haw River which is part of the Cape Fear River Basin. Hydrologic Unit 03030002. Four potential jurisdictional streams were identified in the study area (see Stream Table below). North Carolina Stream Assessment Method (NCSAM) and Division of Water Resources (DWR) stream identification forms are included in a separate Jurisdictional Determination (JD) Package. The jurisdictional streams in the study area have been designated as warm water streams for the purposes of stream mitigation.

Streamside riparian zones within the study area are protected under provisions of the Jordan Lake Watershed Buffer Rule administered by NCDWR. The table below indicates which streams are subject to buffer rule protection.

Status of streams in the study area

Map ID	Length (ft.)	Classif.	Comp. Mitigation Required	River Basin Buffer Ruled?	NCDWR Index Number	Best Usage Classif.
Cane Creek	891	Perennial	Yes	Yes	16-28	WS-V; NSW
SA	244	Perennial	Yes	Yes	16-28	WS-V; NSW
SB	40	Ephemeral	No	No	16-28	WS-V; NSW
SC	192	Ephemeral	No	No	16-28	WS-V; NSW
Total	1,367					

Two jurisdictional wetlands were identified within the study area (see Wetland Table below). The location of these wetlands is shown in Figure 3. All wetlands in the study area drain into the Haw River which is part of the Cape Fear River Basin, U.S. Geological Survey (USGS) Hydrologic Unit 03030002. U.S. Army Corps of Engineers (USACE) wetland determination forms and North Carolina Wetland Assessment Method (NCWAM) forms for each site are included in a separate Preliminary Jurisdictional Determination (PJD) Package.

Characteristics of wetlands in the study area

Map ID	NCWAM Classification	Forested	NCWAM Rating	Hydrologic Classification	404/401 Or 401	Area (ac.) in Study Area
WA	Bottomland Hardwood Forest	No	Low	Riparian	404/401	0.1233
WB	Bottomland Hardwood Forest	Yes	Low	Riparian	404/401	0.0013
					Total	0.1246

There are no streams that have been designated as an Outstanding Resource Water (ORW). There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II)

within or within 1.0 mile downstream of the study area. The North Carolina 2022 Final 303(d) list of impaired waters does not identify any streams within the study area as an impaired water.

One surface water feature was identified in the study area (see table below). This pond is connected to Cane Creek by a non-jurisdictional ephemeral channel.

Surface waters in the study area

Surface Water	Map ID of Connection	Area (ac) in Study Area
Pond	PA	0.0287 acres

Findings from Natural Resources Technical Report:

The biological conclusion for Cape Fear Shiner is “May Affect, Not Likely to Adversely Affect (MA-NLAA), one of two federally listed species within the BR-0060 project study area per USFWS IPaC database and NOAA NMFS.

The biological conclusion is currently “Unresolved” for the Tricolored bat. Since the completion of the NRTR, the tricolored bat (*Perimyotis subflavus*) has been added as "Proposed Endangered" to the list of protected species for this project. Note: without the results of the surveys for Tricolored bat, it is not yet known if “formal concurrence” is required. NCDOT will ensure compliance with the Endangered Species Act for tricolored bat (and all protected species) for the project.

See Section G below.

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)				
<p>Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.</p> <ul style="list-style-type: none"> • <i>If any question 1-7 is checked “Yes” then NCDOT certification for FHWA approval is required.</i> • <i>If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.</i> 				
<u>PROJECT IMPACT THRESHOLDS</u> (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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.				
<u>Other Considerations</u>			Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):**Question 8 - Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Notropis mekistocholas</i>	Cape Fear shiner	E	Yes	MA-NLAA
<i>Perimyotis subflavus</i>	Tricolored bat	PE	Yes	Unresolved

¹ IPaC data checked on January 9, 2023

E - Endangered PE – Proposed Endangered

Cape Fear shiner

USFWS optimal survey window: April – June (tributaries); year-round (large rivers)

Biological Conclusion: May Affect – Not Likely to Adversely Affect

A fish survey was conducted on June 2, 2022, for the Cape Fear Shiner in Cane Creek. The Cape Fear Shiner was not collected during the survey, but several congeners were collected. Additionally, there are no reservoirs between the project study area and the closest EO of the species. Suitable habitat (i.e., riffle/run/pool sequences) is present within the surveyed section of Cane Creek for the Cape Fear Shiner. However, due to the absence of Water Willow beds and boulder substrates, the surveyed section of Cane Creek is considered marginally suitable habitat for the Cape Fear Shiner.

Considering the survey results, the lack of impediments from the nearest EO, and the presence of marginally suitable habitat, it can be concluded that the completion of this project may affect but, is not likely to adversely affect the Cape Fear Shiner.

Tricolored bat

USFWS optimal survey window: Structure checks May 1-September 15

Biological Conclusion: Unresolved

A review of NCNHP records dated November 30, 2022 indicates no known occurrences within 1.0 mile of the study area.

Since the completion of the NRTR, the tricolored bat (*Perimyotis subflavus*) has been added as "Proposed Endangered" to the list of protected species for this project. NCDOT will ensure compliance with the Endangered Species Act for tricolored bat (and all protected species) for the project. Concurrence for this species will be resolved prior to permitting.

Question 10 - Riparian Buffer Rules

Streamside riparian zones within the study area are protected under provisions of the Jordan Lake Watershed Buffer administered by NCDWR. Potential impacts to protected stream buffers will be determined once a final alignment and design have been determined.

Question 16 - FEMA Floodplain

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

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

Question 30 – Farmlands

There will be no permanent conversion of farmlands for the temporary easement to accommodate the onsite detour. In conversation with NCDOT EAU, it was determined that a Preliminary Screening of Farmland Conversion Impacts (NRCS Form AD-1006) initiative is not needed.

H. Project Commitments:

NCDOT PROJECT COMMITMENTS

TIP Project No. **BR-0060**
Replace Bridge No. 000014 on NC 87 Over Cane Creek
Alamance County
Federal Aid Project No. N/A
WBS Element 67060.1.1

NCDOT Roadside Environmental and EAU - N.C. River Basin Buffer Rules

Streamside riparian zones within the study area are protected under provisions of the Jordan Lake Watershed Buffer administered by NCDWR. Potential impacts to protected stream buffers will be determined once a final alignment and design have been determined.

NCDOT EAU - ESA federally protected species within the Study Area

Cape Fear Shiner – Survey/screening information and a biological conclusion will be provided by the NCDOT Biological Surveys Group. Based on a data request from the NCNHP (NCNHDE-13595) received on December 31, 2020, there are no records of this species in the project area or within one mile of the project area. ***Post survey, the Biological Conclusion for the Cape Fear Shiner is May Affect – Not Likely to Adversely Affect.***

NCDOT Division 7 - N.C. Wildlife Resources Commission Contact

The N.C. Wildlife Resources Commission (NCWRC) requests that they be contacted by NCDOT prior to the implementation of this project regarding the potential for state list mussels to be present within the project study area. Travis Wilson, Eastern NCDOT Permit Coordinator with NCWRC, is the point of contact for this.

NCDOT Division 7 - FEMA

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

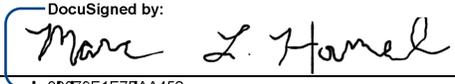
NCDOT Hydraulic Design Unit - FEMA

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

I. Categorical Exclusion Approval:

TIP Project No.	<u>BR-0060</u>
WBS Element	<u>67060.1.1</u>
Federal Project No.	<u>N/A</u>

Prepared By:

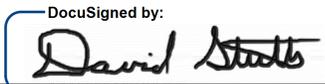
<u>3/9/2023</u>	
Date	<u>Marc L. Hamel</u> M&N Project Manager

Prepared For: NCDOT Structures Management Unit

Reviewed By:

<u>3/10/2023</u>	
Date	<u>John Jamison, Unit Head</u> NCDOT Environmental Policy Unit

- Approved**
 - If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.
- Certified**
 - If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
 - If classified as Type III Categorical Exclusion.

<u>3/9/2023</u>	
Date	<u>David Stutts, PE – PEF / Program Manager, SMU</u> North Carolina Department of Transportation

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

N/A

<u> </u>	<u>for John F. Sullivan, III, PE, Division Administrator</u> Federal Highway Administration
Date	

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).

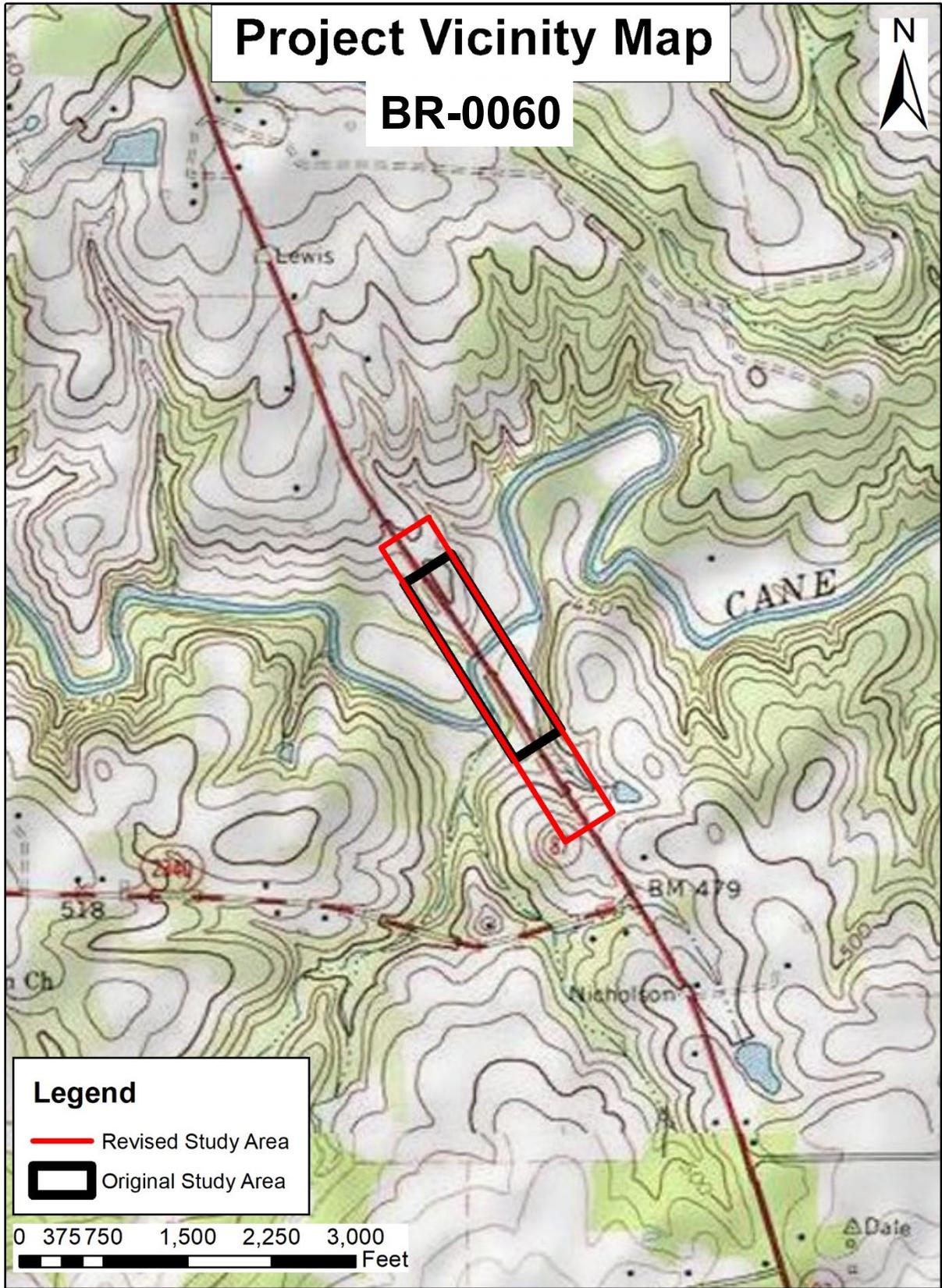


Figure 1: Vicinity Map

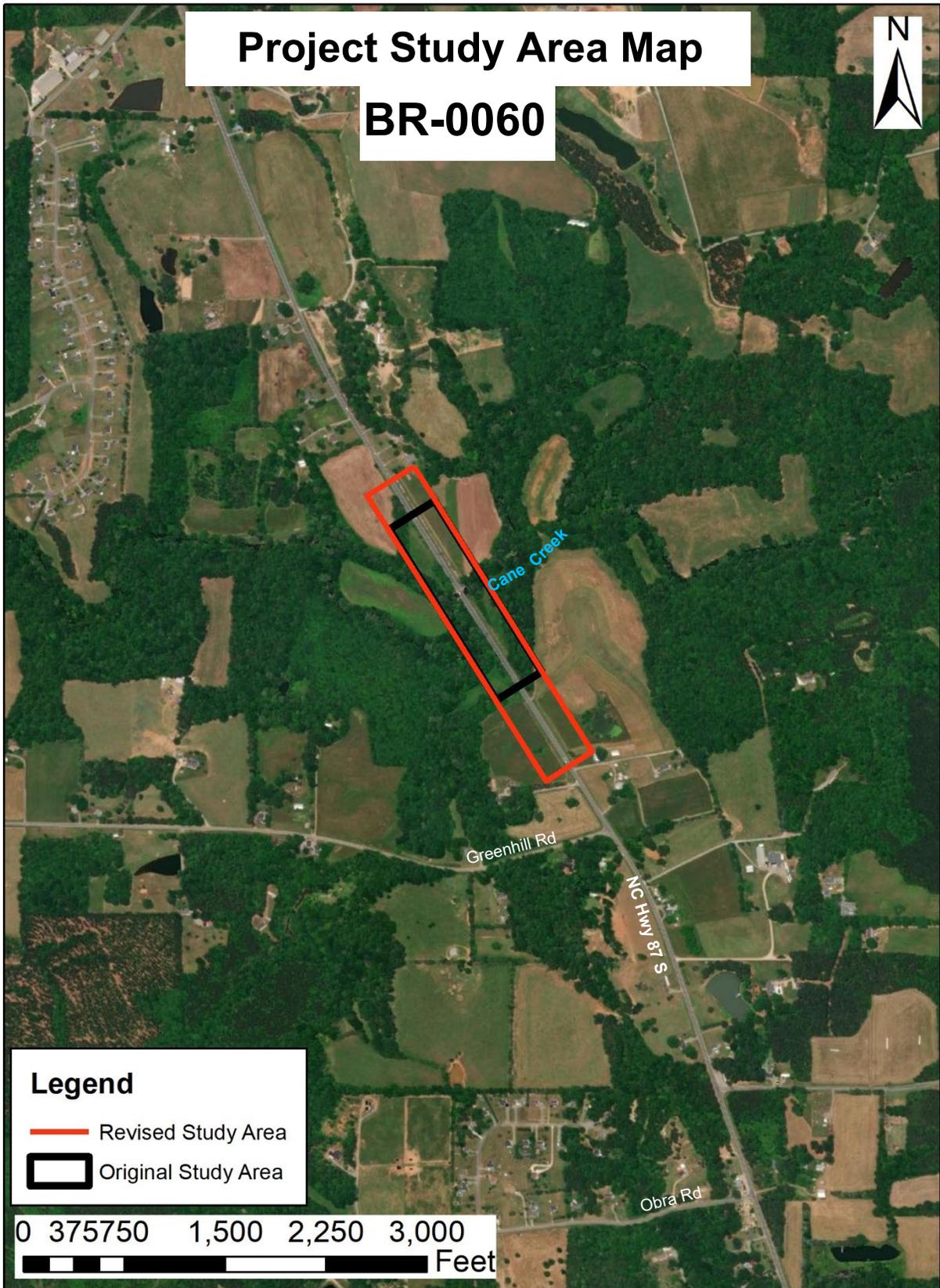


Figure 2: Project Study Area Map

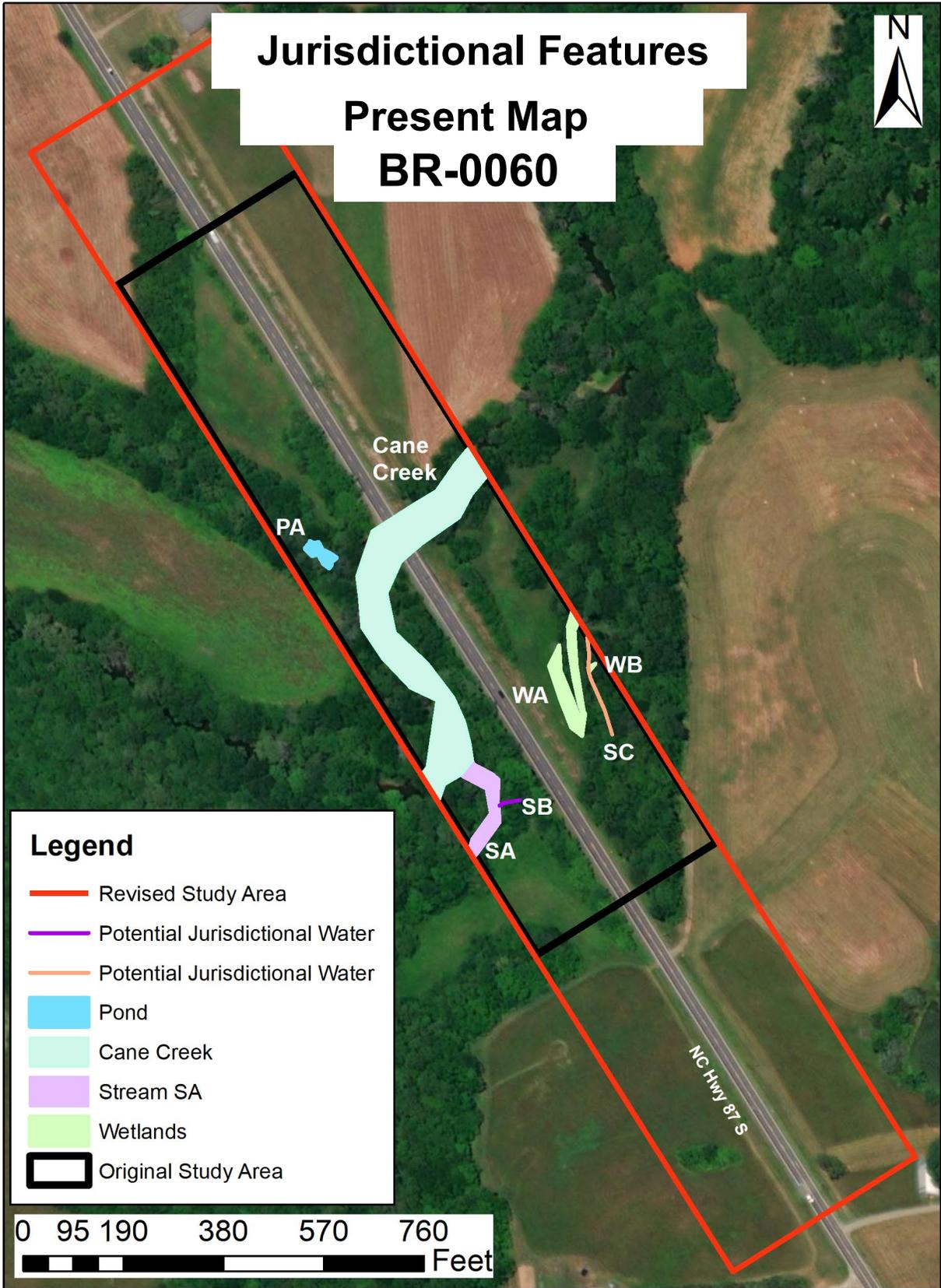
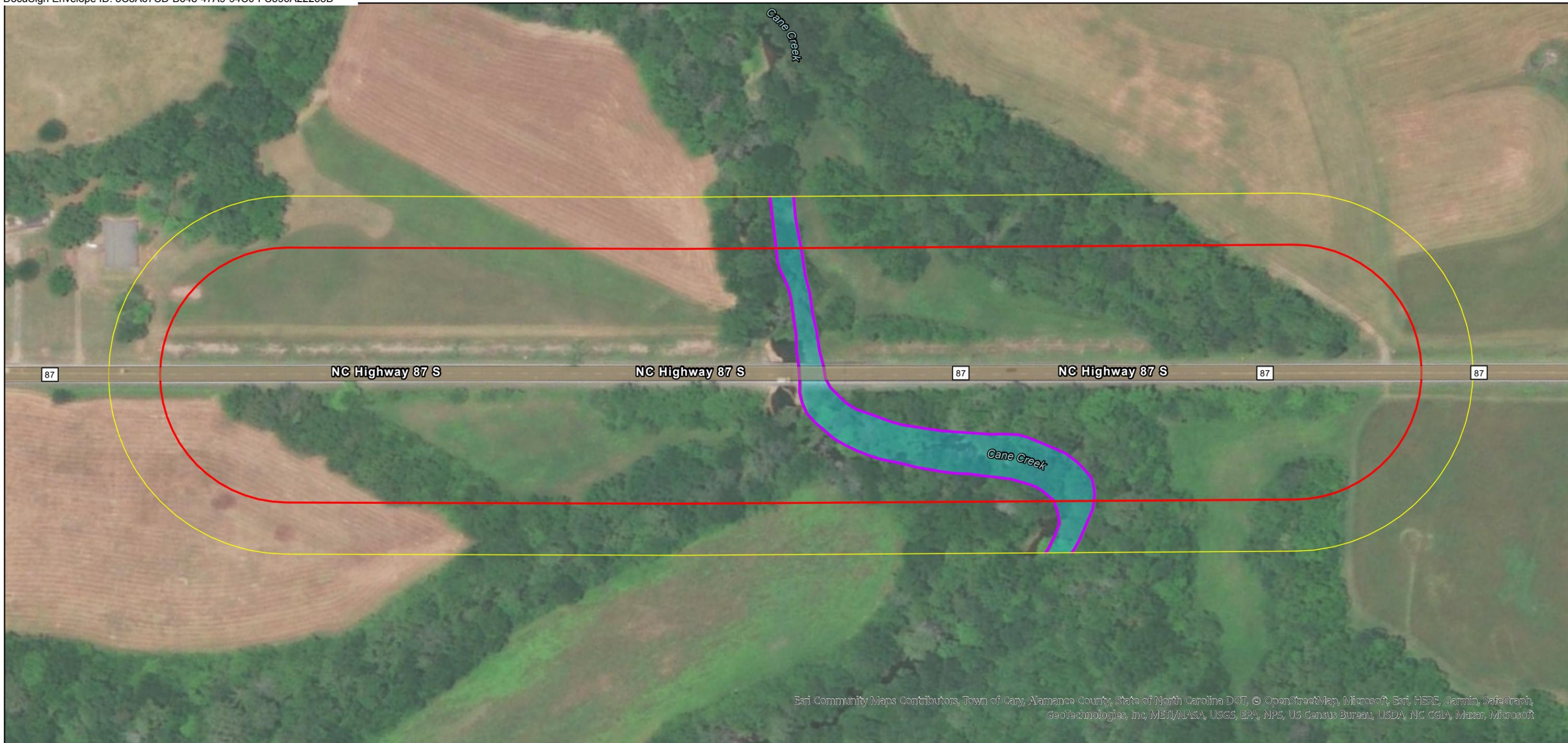


Figure 3: Jurisdictional Features Present Map



Esri Community Maps Contributors, Town of Cary, Alamance County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NC GGI, Maxar, Microsoft

Figure 4: NC ATLAS Screening Map

- ATLAS Screening Area
- Study Area BR-0060
- Bat Bridge Habitat - High Probability
- Water Supply-V: Nutrient Sensitive Water; 303(d) and 305(b): 4t: Category 4 Hg Only (2008 listing, Exceeding Criteria)
- NC Natural Heritage Natural Areas: Collective Rating: C3 (High), Representational Rating: R2 (Very High)



Complete Study Area:
 ATLAS IPaC Ranges: Cape Fear Shiner, Endangered Tricolored Bat, Proposed Endangered
 NC Jordan Lake Watershed Boundary
 NC_DEQ Major Basin: Cape Fear
 NC_DEQ Riparian Buffer Area: Jordan Lake Buffer
 NC - Jordan Lake Watershed Boundary

Other Information:
 Cane Creek - WS-V:NSW
 Water Supply-V - Waters protected as water supplies which are generally upstream and draining to Class WS-IV waters or waters used by industry to supply their employees with drinking water or as waters formerly used as water supply. These waters are also protected for Class C uses. More information is available on the Water Supply Watershed Protection Program Homepage. While not a classification, the designated area of a critical area associated with a water supply watershed is 1/2 mile and draining to a riverine or normal pool elevation of a reservoir. The protected area is generally 10 miles run of river, and for a reservoir, it is 5 miles and draining to normal pool elevation of the reservoir.
 NSW:Nutrient Sensitive waters

18-09-0004



ARCHAEOLOGICAL SURVEY REQUIRED FORM

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



PROJECT INFORMATION

Project No: **B-0060** County: **Alamance**
 WBS No: **67060.1.1** Document: **M C C**
 F.A. No: Funding: State Federal
 Federal Permit Required? Yes No Permit Type: **USACE tbd**

Project Description: NCDOT proposes construction of replacement bridge on NC 87 over Cane Creek in Alamance County between Saxapahaw and Pittsboro. Alternatives may include on-site detours or bridge construction adjacent to the existing route.

For purposes of this investigation, the archaeological Area of Potential Effects (APE) includes all areas and soils likely to be disturbed during the construction including right of way, cut and fill lines and easements. The working APE may be refined as designs are further developed. The project length is 1500 feet, or about 0.28 miles. The width is 400 feet, two hundred to either side of NC 87.

The project is state funded and but will be permitted by the USACE; thus Section 106 of the National Historic Preservation Act applies.

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: ***SURVEY REQUIRED***

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

USGS mapping and aerial photography was examined (see Figures 1 and 2). Most of the surrounding terrain is wooded or open agricultural land in a rural setting. The terrain dips down into the Cane Creek drainage with some likely artificially built-up soil to launch the bridge.

Archaeological background research shows that several archaeological sites have been recorded along the Haw River and Cane Creek drainages, many by UNC-CH as part of a larger research project. Of special interest for the review is the investigations of 31Am148 (also known as UNC-CH 31Am145), west of the bridge that was conducted by UNC-CH in the 1980s. Data recovery efforts included surface inspections of the freshly plowed field, mapping results of 3900 auger tests, and twelve 10x10 ft excavations blocks. The results suggested the Native American site represents a small occupation with some intact features in areas while other portions are eroded and/or more extensively plowed-disturbed. Mapped some six hundred feet away, it is unlikely that the site would be impacted by the bridge construction which is located overtop somewhat lower terrain with less likelihood for cultural horizons.

No cemeteries are present in close proximity to the bridge replacement project according to USGS mapping and the GIS database of cemeteries maintained by NCDOT Archaeologist, Paul Mohler.

While the project limits are somewhat confined, alternatives may include construction expansion adjacent to the current bridge. Undocumented archaeological sites may be present within the archaeological APE that were not recorded during previous investigations. There is potential for intact, significant archaeological resources, ones that might be eligible for listing on the National Register of Historic Places.

18-09-0004

An archaeological survey including a complete surface inspection and areas of limited subsurface testing, if warranted, is recommended for this project under Section 106 to identify any significant archaeological sites which may be eligible for listing on the National Register of Historic Places within the APE. We can complete these investigations using one of the Archaeology Group's on-call firms or if Division 7 would like to manage and complete the survey they can use a NCDOT prequalified archaeologist under contract with one of the Division's on-call firms. We can provide a scope of work for the Division to use, but we do need to know within seven days which path the Division plans to follow. All products produced by the Division's consultant will need to be submitted to the Archaeology Group for review, acceptance, and submittal to the Office of State Archaeology as per the Programmatic Agreement. We would be happy to discuss this approach with you.

Please note that the project falls within a county, Alamance, in which the Catawba Indian Nation has expressed interest. We suggest that the Division contact all federal agencies involved with the project to determine their individual Tribal Consultation requirements.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST – SURVEY REQUIRED



NCDOT ARCHAEOLOGIST

9/19/2019

Date

tbd

Proposed fieldwork completion date



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT FORM**



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

PROJECT INFORMATION

Project No: **B-0060** *County:* Alamance
WBS No: 67060.1.1 *Document:* MCC
F.A. No: *Funding:* State Federal

Federal Permit Required? Yes No *Permit Type:* USACE tbd

Project Description: NCDOT proposes construction of a replacement bridge on NC 87 over Cane Creek in Alamance County between Saxapahaw and Pittsboro (see Figure 1). Alternatives may include an on-site detour or bridge construction adjacent to the existing route.

For purposes of this investigation, the archaeological Area of Potential Effects (APE) includes all areas and soils likely to be disturbed during the construction, including up to the limits of any new right of way, cut and fill lines, and easements, permanent or temporary. The original project length for the cultural resources screening was 1500 feet, 0.28 miles, roughly centered on the current bridge. The width is 400 feet, two hundred to either side of NC 87 which allows coverage and a buffer for multiple designs. For the survey, preliminary mapping of alternatives was then available therefore the APE was revised to include additional, tapered length on both ends for a total of 2300 feet, 0.44 miles (see Figure 2).

The project is state funded though will require a permit by the USACE, thus Section 106 of the National Historic Preservation Act applies for this federal undertaking.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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

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

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

The undertaking was reviewed for archaeology and determined to require a survey to determine if there may be impacts to significant archaeological remains under Section 106 of the National Historic Preservation Act (see PA 18-09-0004 Archaeological Survey Required Form dated 9/19/2019). The decision notes relatively close proximity to archaeological site 31Am148, also known as the Guthrie Site UNC-CH 31Am145, west of the bridge on the opposite side of the adjacent agricultural field about 600 feet from the roadway and bridge, UNC-CH conducted extensive testing

at this site in the 1980s which included twelve large excavation blocks and 3900 auger tests. The site form, report and personal communication with the lead Archaeologist suggest that the site did not extend to the east across the field and into the project APE. Proximity to 31Am138 rather than the environmental context, the recommendation to conduct a survey of higher probability landforms for archaeological sites was made for this project, especially because it may have impacts beyond the original roadway and bridge construction. See the survey required form for more details.

Soils, topographic and LIDAR mapping were examined prior to fieldwork to identify landforms with greater probability to contain archaeological sites, especially significant, intact resources. Areas of lower probability were also noted. The APE was transferred to field GPS equipment which was used to navigate and plan subsurface testing, and also to record and map specific locations and results.

Archaeological testing of the APE was conducted on April 28, 2021 by NCDOT Archaeologists Brian Overton and Shane C. Petersen. A total of eleven shovel test pits were fully excavated and screened (1/4 inch) on the well drained, upland, grassy landform north of the bridge with a concentration of effort east of NC 87. The cut for the roadway and other landscape modification, including a possible unpaved old or farm road, was evident during fieldwork. The west side of the roadway was included in the subsurface methodology (see Figure 3), too, but was much narrower, modified and also heavily eroded with saprolitic soils present.

For this project, all of the STPs were placed along transects parallel to NC 87 at an interval of 30 meters in grassy fields. Cuts and modifications to the landform were apparent inside the APE especially the northeast quadrant. The typical soil profile recorded from all of the shovel test pits showed a shallow A horizon with weak, recent topsoil development. This zone was about 5 to 10 cm in depth with 2.5 YR 4/6, 5/6 and 5/8, 5 YR 4/6 and 5/6, or 10 YR 5/6 clay loams, if present. The subsoil was encountered quickly past a depth of 5 to 12 cmbs, a clay which was sometimes saprolitic, as noted on all of the northwest quadrant near STPs 9, 10 and 11.

Three of the eleven shovel test pits yielded a total of six artifacts. STP 4 was the first positive test followed by 15 m radials STP 7 and 8 resulted. This resulted in documentation of archaeological site 31Am464 (see Figure 4), a lithic scatter of Native American origin. A heavily eroded landform, STP 4 was only dug to a depth of 10 cm of 2.5 YR 5/8 clay loam soil. Other shovel test pits along the planned intervals of this transect were negative, containing similar stratigraphy and no other cultural materials. The site boundary was established using a combination of negative shovel test pits, the NC 87 road cut to the west and downsloping terrain to the east and south. The artifacts are described below.

Archaeological site 31Am464 was identified during excavation of three positive shovel test pits on an extensively eroded hilltop overlooking Cane Creek. Erosion at the site, which had patches gravelly soil where no grass was growing, was evident on the ground surface.

STP 4, one of the 30-m interval units in the northeastern transect, contained one artifact, a chipped stone project point or knife fragment, specifically the tip. The raw material is metavolcanic stone. While the tip lacks the diagnostic information that a cspp/k base provides, the size suggests it represents the Archaic period. Two radial tests at 15-m, STP 7 to the east just before the topography drops in that direction, and STP 8 to the north, yielded metavolcanic and quartz debitage consisting of interior flakes or shatter. In total six artifacts were identified, one cspp/k tip and five pieces of debitage. The Office of State Archaeology assigned the following accession number: 2021.0126.

This low density site has a small number of artifacts in a heavily eroded context. None of the lithic artifacts were diagnostic, though one probably is a fragment of an Archaic cspp/k. No ceramics were recovered. No cultural features were identified in the thin, grassy topsoil or subsoil below. Lacking diagnostic or abundant artifacts, features or other data, 31Am464 is not likely to contain significant, new information about Native American activities and lifeways. The site is recommended as not eligible for listing on the National Register of Historic Places.

Pedestrian survey north of Cane Creek within the APE confirmed the modified topography that resulted from construction of the highway and bridge, also ditching and the natural and migrating stream channel present north of Cane Creek. More low, frequently flooded soils were present south of Cane Creek, especially southeast of the bridge where water was pooling on top of or near the surface of the ground. As expected, these lower, often wet, areas demonstrated and confirmed a lowered probability to contain archaeological remains, especially significant, intact deposits.

The southern limits of the project gradually climb from the low bottoms and had been noted as a possible location for subsurface testing. However, visual inspection and selective soil probes and turning over the A horizon with a shovel showed more eroded soils on a sloped hillside. A relatively level landform more suitable to contain an archaeological site was not present until and beyond the far limits of the APE to the south. Noting the sloped landform and heavily eroded context, no shovel test pits were excavated towards the southern end of the APE.

As expected, the Guthrie Site, 31Am148 (also noted as 31Am145), was not encountered during the archaeological investigation. The mapped location and site plan of the excavation place the site outside of the APE about six hundred feet to the west.

In summary, the entire APE was subjected to a pedestrian inspection to look for surface artifacts and above ground features like walls, cellars or cemeteries; none were observed. The hill tops and side slopes were visibly eroded with bare subsoil exposed in spots. The lower elevations contained characteristically wet soils, or were sloped or modified for drainage and the highway bridge. Eleven shovel test pits were excavated and screened on the relatively level northern upland within the APE. One of the shovel test pits on the transect northeast of the bridge contained a cspp/k tip in a very eroded context. Nearby, two of the radial tests yielded a small number of lithic debitage. The site is now registered with the Office of State Archaeology as 31Am464. A low density lithic site lacking diagnostic artifacts on an eroded landform, the site is not recommended as eligible for listing on the National Register of Historic Places. Site 31Am464 may be directly impacted by proposed plans or avoided depending on the selected alternative, on-site temporary detours and construction approach.

(This project falls within a North Carolina County in which the following federally recognized tribes have expressed an interest: the Catawba 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.)

SUPPORT DOCUMENTATION

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

Other:

Signed:

BRIAN P. OVERTON

7/9/2021

NCDOT ARCHAEOLOGIST

Date

18-09-0004



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

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

PROJECT INFORMATION

Project No:	BR-0060	County:	Alamance
WBS No.:	67060.1.1	Document Type:	MCC
Fed. Aid No:		Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	USACE
Project Description: Replace Bridge No. 14 on NC 87 over Cane Creek			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: n/a

Description of review activities, results, and conclusions:

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on October 3, 2018. A search of Alamance County Tax Parcel Data did not reveal any properties over fifty years of age. There is a property south of the project area which dates from 1890. If the project area extends farther south, please resubmit for further review. No historic properties will be affected by this project.

SUPPORT DOCUMENTATION

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

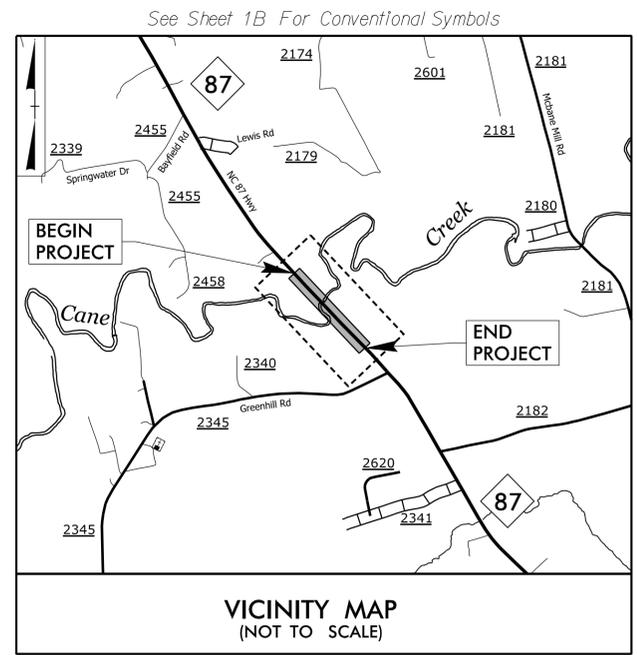
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TIP PROJECT: BR-0060

CONTRACT:

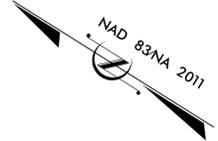
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ALAMANCE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0060	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67060.1.1	NA	PE	

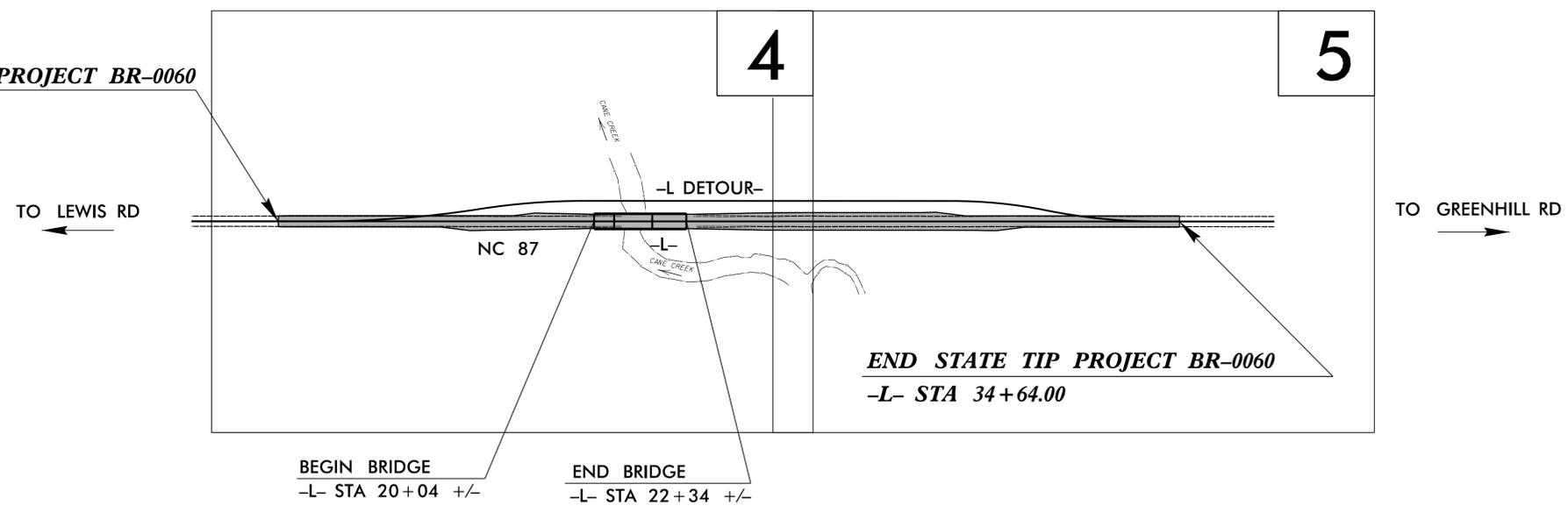


LOCATION: REPLACE BRIDGE 00014 ON NC 87 OVER CANE CREEK
TYPE OF WORK: PAVING, GRADING, GUARDRAIL, DRAINAGE, AND STRUCTURES

FIELD INSPECTION PLANS



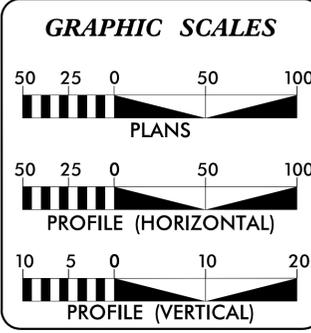
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-L- STA 12+16.55



END STATE TIP PROJECT BR-0060
-L- STA 34+64.00

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

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



DESIGN DATA

ADT 2023 =	3,000
ADT 2043 =	3,300
K =	10 %
D =	60 %
T =	7 % *
V =	60 MPH
* TTST =	3% DUAL 4%
FUNC CLASS =	MINOR ARTERIAL-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0060	=	0.382
LENGTH STRUCTURE TIP PROJECT BR-0060	=	0.044
TOTAL LENGTH TIP PROJECT BR-0060	=	0.426

Prepared for NCDOT in the Office of:

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 31, 2023

LETTING DATE:
DECEMBER 13, 2023

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

GRAY MODLIN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

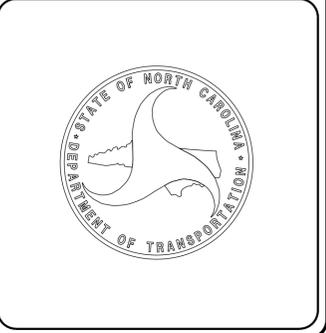
moffatt & nichol

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

moffatt & nichol

SIGNATURE: _____ P.E.



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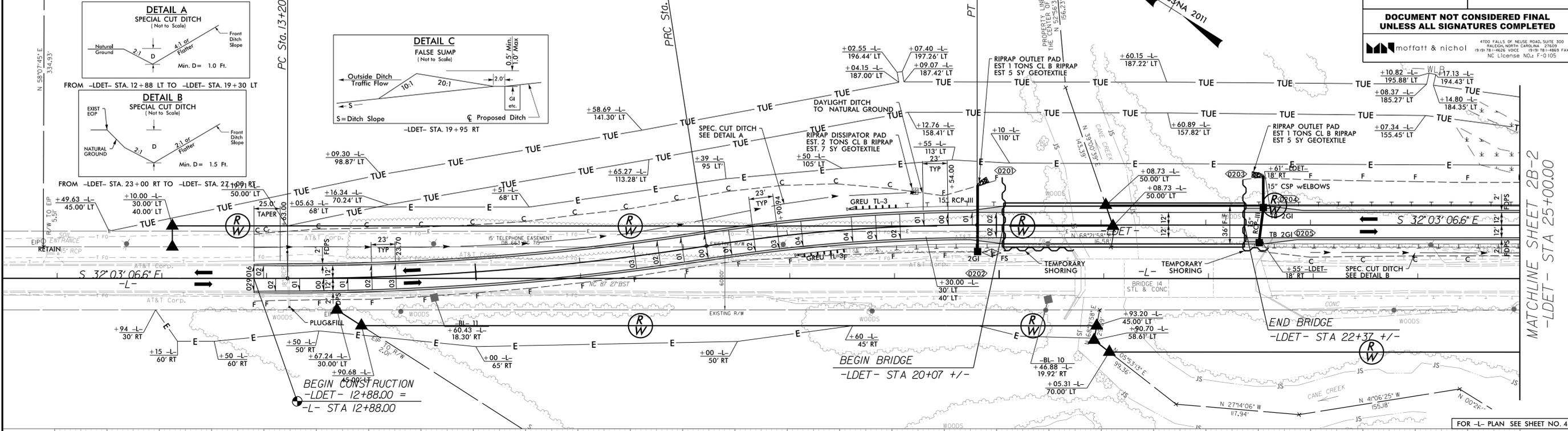
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 $L = 401.78'$ $L = 259.61'$
 $T = 201.29'$ $T = 130.06'$
 $R = 2,600.00'$ $R = 1,680.00'$
 $DS = 45 MPH$ $DS = 45 MPH$
 $Runoff = 69'$ $Runoff = 92'$
 $SE = 03$ $SE = 04$

CLARENCE ALVIS & SHARON LAMBE PICKARD
 DB 1292 PG 110
 PB 63 PG 140

-LDET-

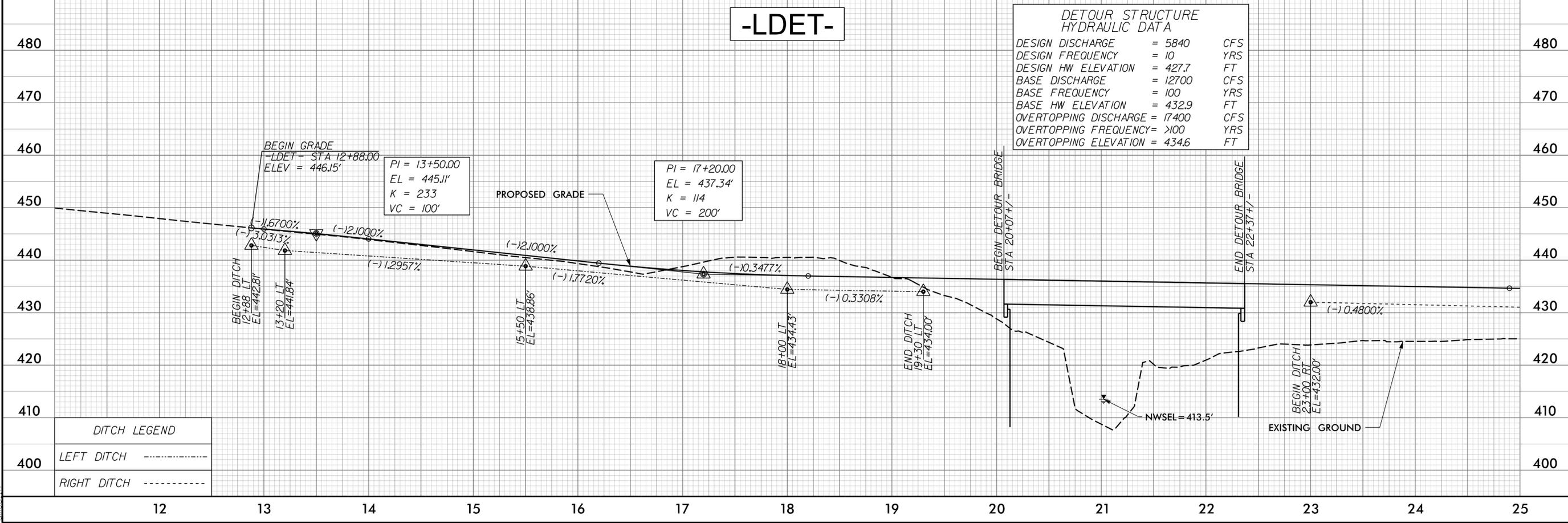
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RW SHEET NO.	
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INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-LDET-

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DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 427.7	FT
BASE DISCHARGE	= 12700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 432.9	FT
OVERTOPPING DISCHARGE	= 17400	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 434.6	FT



DITCH LEGEND

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RIGHT DITCH	-----

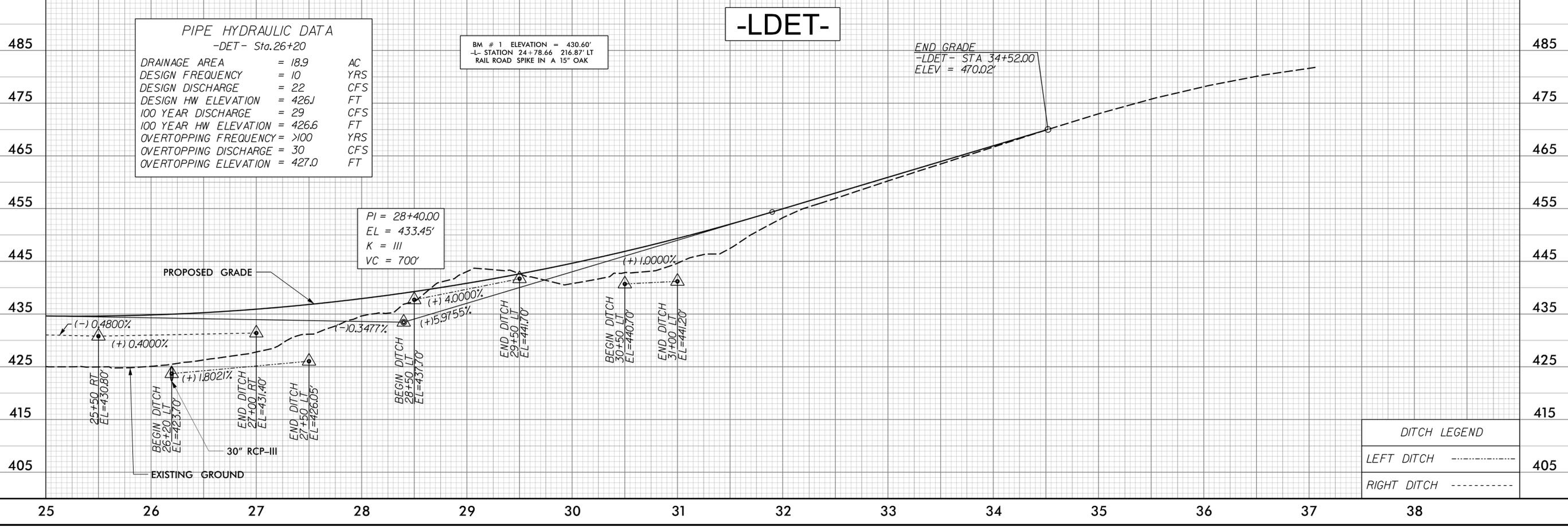
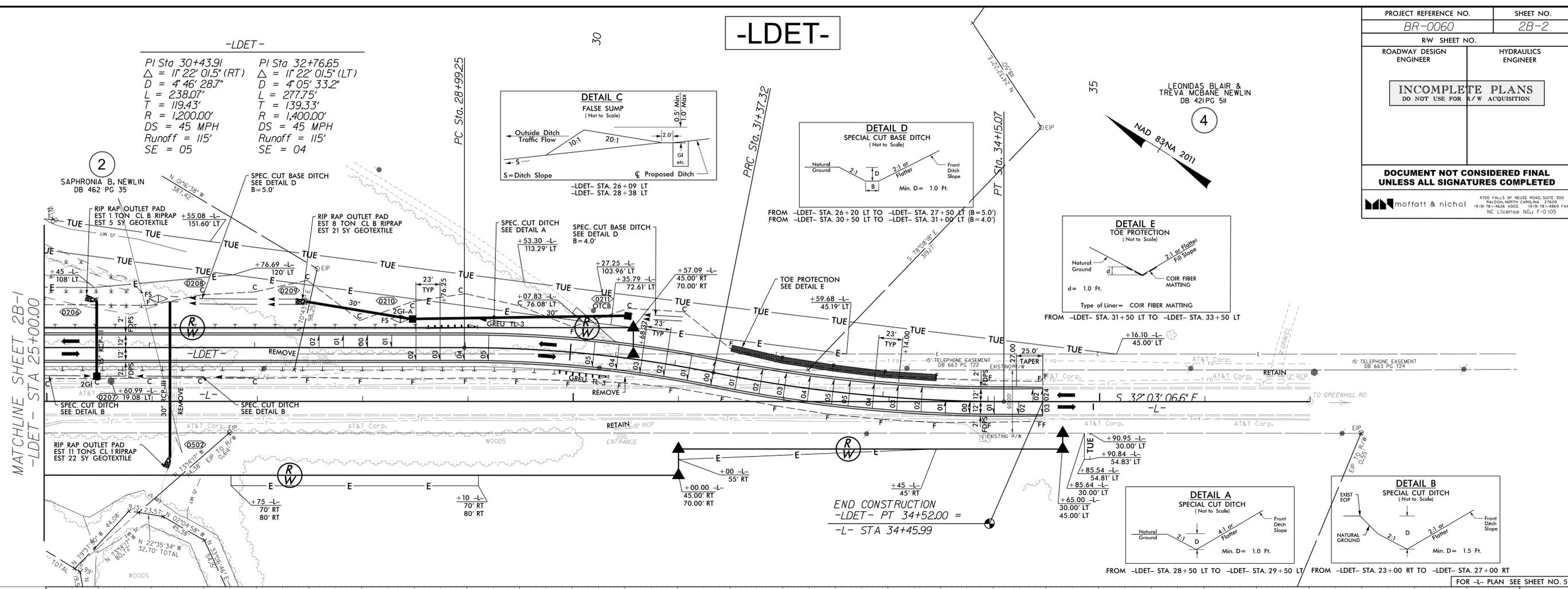
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FOR -L- PLAN SEE SHEET NO. 4

8/17/99

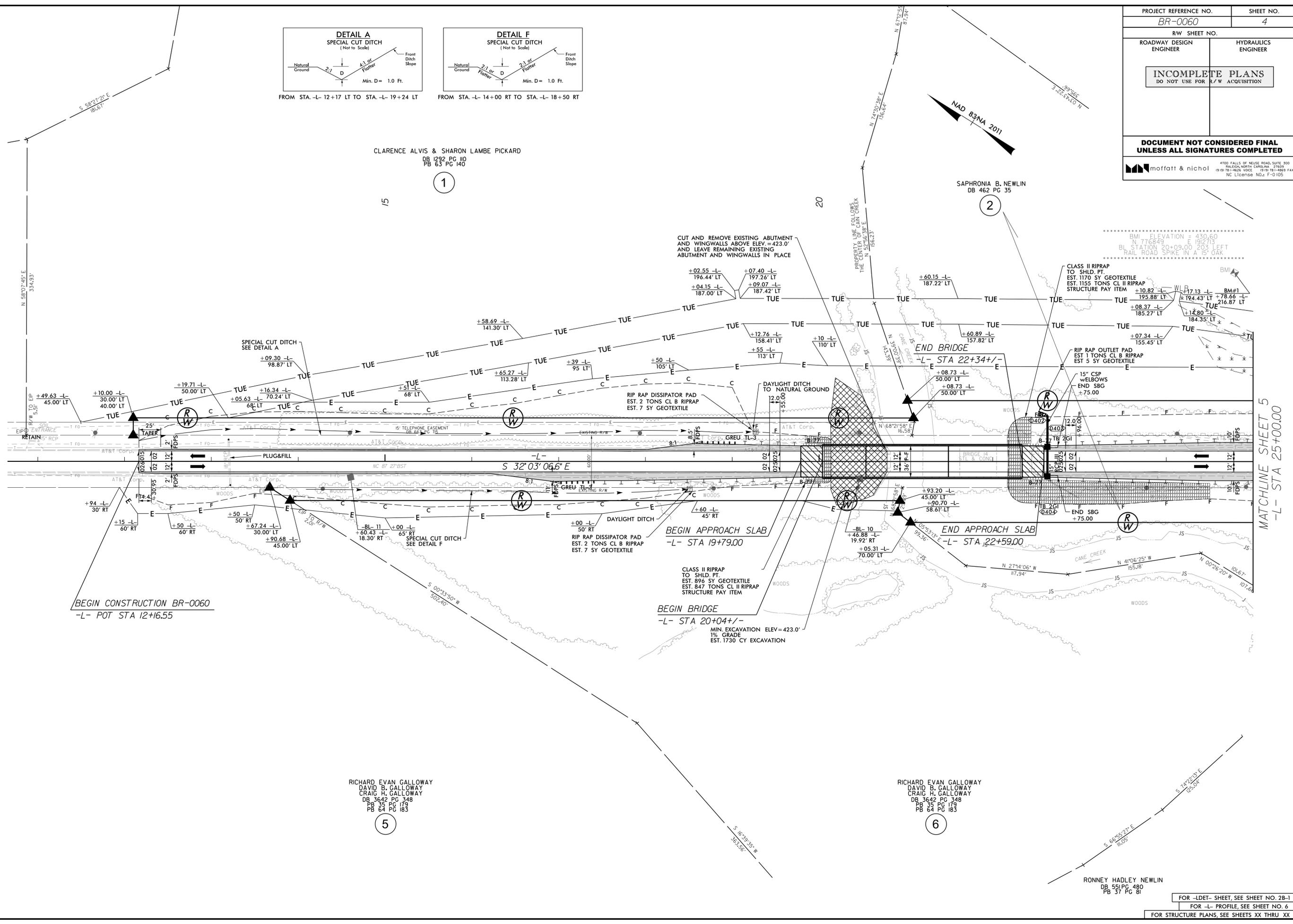
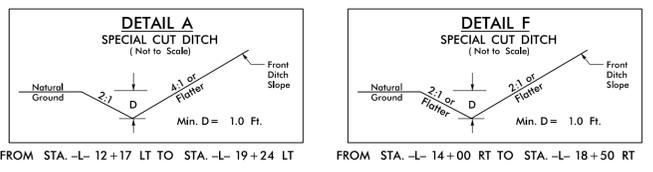
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RW SHEET NO.	
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC License No. F-0105	



CLARENCE ALVIS & SHARON LAMBE PICKARD
DB 1292 PG 110
PB 63 PG 140

SAPHRONIA B. NEWLIN
DB 462 PG 35

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 25 PG 179
PB 64 PG 183

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 25 PG 179
PB 64 PG 183

RONNEY HADLEY NEWLIN
DB 551 PG 480
PB 37 PG 81

FOR -LDET- SHEET, SEE SHEET NO. 2B-1
FOR -L- PROFILE, SEE SHEET NO. 6
FOR STRUCTURE PLANS, SEE SHEETS XX THRU XX

MATCHLINE SHEET 5
-L- STA 25+00.00

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