

**Orange County
Bridge No. 46 on US 70 Bypass
over Eno River
Federal Aid Project No. BRSTP-0070(120)
WBS No. 40174.1.1
STIP No. B-4962**

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

4/26/17
DATE

Beverly G. Robinson

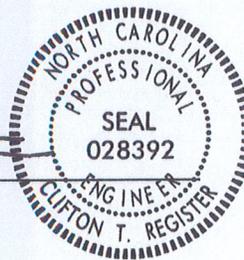
Beverly G. Robinson, CPM
Project Development Western Region Group Supervisor
Project Development & Environmental Analysis Unit

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**CATEGORICAL EXCLUSION
April 2017**

Documentation Prepared By
Thompson Gordon Shook Engineers

4-26-2017 Clifton T. Register
DATE Clifton T. Register, PE
Project Manager, TGS ENGINEERS



For the North Carolina Department of Transportation

4/26/17 Beverly D. Robinson
DATE Theresa Ellerby, CPM
Project Planning Engineer
Project Development & Environmental Analysis Unit

PROJECT COMMITMENTS

**Orange County
Bridge No. 46 on US 70 Bypass
Over Eno River
Federal Aid Project No. BRSTP-0070(120)
W.B.S. No. 40174.1.1
S.T.I.P. No. B-4962**

Division 7 Construction, Resident Engineer's Office – Park Coordination

In order to avoid impacts to a potential Section 6(f) property, North Carolina State Parks (919-707-9363), the National Park Service and Eno River State Park Superintendent (919-383-1686) should be contacted at least 90 days prior to construction.

Hydraulics Unit – FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of 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).

Division Construction - FEMA

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

Natural Environment Section - Mussels

NCDOT will consult with the US Fish and Wildlife Service regarding concurrence with the finding of "**May Affect Not Likely To Adversely Affect**" for the Dwarf Wedgemussel.

Hydraulics Unit, Natural Environment Section –Buffer Rules

The Neuse River Basin Rule applies to this project.

Roadway Design – Future Greenway

Allowance will be made for 25-foot bare earth on each side of the stream beneath the bridge.

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INTRODUCTION: Bridge No. 46 is included in the 2016-2025 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal “Categorical Exclusion”.

I. PURPOSE AND NEED STATEMENT

NCDOT Bridge Management Unit records indicate Bridge No. 46 has a sufficiency rating of 62.27 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to substructure condition of 4 out of 9 according to Federal Highway Administration (FHWA) standards.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. The bridge was constructed in 1941 and is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located just outside the town limits of Hillsborough in Orange County (see Figure 1). Development in the area is residential with active farmland.

US 70 Bypass is classified as a minor arterial in the Statewide Functional Classification System and it is not a National Highway System Route.

In the vicinity of the bridge, US 70 Bypass has a 22-foot pavement width with 6-foot shoulders, including 2-foot paved shoulders. The existing bridge is on a tangent. The roadway is situated approximately 46 feet above the river bed.

Bridge No. 46 is a five-span, two-lane structure that consists of reinforced concrete deck girders with an asphalt-wearing surface, concrete post and beam interior bents and concrete end bents. The existing bridge (see Figure 3) was constructed in 1941. The overall length of the structure is 238 feet. The clear roadway width is 33 feet 8 inches.

There are utilities attached to the existing structure and overhead power lines cross the western end of the bridge.

The 2018 traffic volume of 15,000 vehicles per day (VPD) is expected to increase to 19,000 VPD by the year 2035. The projected volume includes two percent truck-tractor semi-trailer (TTST) and three percent dual-tired vehicles (DT). The posted speed limit is 45 miles per hour in the project area. Fifteen to twenty school buses cross the bridge daily on their morning and afternoon routes.

There were nine accidents reported in the vicinity of Bridge No. 46 during a recent five-year period (January 2008 to December 2012). Five of the accidents involved rear ending a slow or stopped vehicle, three accidents involved animals and one accident involved a fixed object. None of the crashes were associated with the alignment or geometry of the bridge or its approach roadway.

This section of US 70 Bypass is not part of a designated bicycle route nor is it listed in the STIP as needing incidental bicycle accommodations. Sidewalks do not exist on the existing bridge. The Mountains-to-Sea Trail runs south along US 70 Bypass and west paralleling the Eno River.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a bridge approximately 265-foot long. The bridge length is based on preliminary design information and is set by hydraulic requirements. The bridge will be of sufficient width to provide for two 12-foot lanes with 4-foot offsets on each side. Bicycle safe rails will be installed. The roadway grade of the new structure will be approximately the same as the existing grade.

Bridge No. 46 is not located along a designated bicycle route; however, the project area has been designated as an “Area of Interest” for siting a portion of the Mountains-to-Sea Trail, and “Future Need” for the Eno River State Park by the North Carolina Division of Parks and Recreation. The multi-use trail is currently routed to go under the east side of the proposed bridge. The proposed bridge has sufficient vertical and horizontal clearance for the planned Trail.

The existing roadway will be widened to a 24-foot pavement width to provide two 12-foot lanes. Eight-foot shoulders will be provided on each side; four feet of which will be paved in accordance with the current NCDOT Design Policy (The shoulder will include three additional feet where guardrail is required). This roadway will be designed as a minor arterial.

B. Reasonable and Feasible Alternatives

Two alternatives for replacing Bridge No. 46 that were studied in detail are described below.

Alternate 1

Alternate 1 involves replacement of the structure along the existing roadway alignment. Improvements to the approach roadways will be required for a distance of approximately 250 feet to the northwest and 200 feet to the southeast of the new structure. This alternate will be designed using Regional Tier guidelines with a design speed of 50 miles per hour. Traffic will be detoured off-site (see Figure 1) during the construction period.

NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the off-site detour. The off-site detour for this project would include SR 1002 (Saint Mary's Road) and SR 1561 (Lawrence Road). The majority of traffic on the road is through traffic. The detour for the average road user would result in 4-minutes additional travel time (3-miles additional travel). Up to a 12-month duration of construction is expected on this project.

Per the Town of Hillsborough "this bridge is located in an area that carries a lot of commuting traffic daily with limited detour options. The identified possible detour creates a deviation of more than 3 miles for drivers. This route (US 70 By-pass) carries significant heavy truck traffic due in part to the truck prohibition through downtown Hillsborough. The route of Lawrence Road and St. Mary's Road is very rural on roads not intended to carry high volumes or heavy vehicles. Also, the proposed improvements for the roads along the detour route to support the additional traffic would require extensive utility relocations and a possible signal installation to allow for WB-40 truck left turns. For all of these reasons, the town supports a detour in place option."

Orange County Emergency Services has indicated that an off-site detour is not acceptable due to a 10-minute delay to a high-volume response area just north of the bridge. Orange County School Transportation has indicated that rerouting buses around this project will not be a problem.

Per the NCDOT Division 12 the roads on the proposed off-site detour are unacceptable without improvement. The proposed detour route would require extensive utility relocations, lane widening, shoulder widening, pavement resurfacing and a possible signal installation.

In view of the objections from The Town of Hillsborough, Orange County Emergency Services, and the required improvements an off-site detour is not preferred. NCDOT Division 7 concurs in these recommendations.

Alternate 2 (Preferred)

Alternate 2 involves replacement of the structure along the existing roadway alignment. A temporary detour structure located northeast of the existing bridge would serve as an on-site detour. Improvements to the approach roadways will be required for a distance of approximately 600 feet to the northwest and 525 feet to the southeast of the structure. This alternate will be designed using Regional Tier guidelines with a design speed of 50 miles per hour. The intersection of US 70 Bypass at SR 1706 (Riverside Drive) will be improved and approximately 100 feet of SR 1706 will be paved.

C. Alternatives Eliminated From Further Consideration

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by US 70 Bypass.

“Rehabilitation” of the old bridge is not practical due to its age and deteriorated condition. The bridge was originally constructed in 1941. There is spalling on the concrete pier caps and bridge piers, exposing steel reinforcement to the elements. There is considerable cracking on the concrete abutments and pier caps. The bridge is approaching the end of its useful life.

D. Preferred Alternative

Bridge No. 46 will be replaced at the existing location as shown by Alternative 2 in Figure 2. Although the cost and environmental impacts are higher than Alternate 1, concerns regarding public safety warrant the maintenance of traffic onsite.

NCDOT Division 7 concurs with the selection of Alternative 2 as the preferred alternative.

IV. ESTIMATED COSTS

The estimated costs, based on 2013 prices, are as follows:

	Alternative 1	Alternative 2 Preferred
Structure	\$ 848,000	\$ 848,000
Roadway Approaches	308,000	695,000
On-Site Detour Structure	- 0 -	560,000
Structure Removal	135,000	135,000
Misc. & Mob.	274,000	532,000
Eng. & Contingencies	235,000	430,000
Total Construction Cost	\$1,800,000	\$ 3,200,000
Right-of-way Costs	600,000	600,000
Right-of-way Utility Costs	12,000	23,000
Total Project Cost	\$ 2,412,000	\$ 3,823,000

An off-site detour was considered for Alternative 1. The proposed detour route would require lane widening, shoulder widening, extensive utility relocations, and a possible signal installation. The cost of these improvements would increase the cost of the Alternative 1 option. The comparison of Alternatives 1 and 2 cost may be comparable, however, Alternative 2 offers the best solution to replacing Bridge No. 46 over the Eno River.

V. NATURAL ENVIRONMENT

Natural resources were evaluated and documented in a Natural Resources Technical Report (NRTR) by NCDOT, dated April 2010. This section summarizes those evaluations as well as some updated/current information.

Water Resources

Water resources in the study area are part of the Neuse River Basin [United States Geological Survey (USGS) Hydrologic Unit 03020201]. Three streams were identified in the study area (Table 1). The location of these water resources are shown in Figure 3. The physical characteristics of these streams are provided in Table 2. None of the water resources in the study area or within 1.0 mile of the study area are designated as Outstanding Resources Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II). There are no designated anadromous fish waters, trout waters, Primary Nursery Areas or North Carolina 2010 Draft 303(d) impaired waters in the study area.

Table 1. Water Resources

Stream Name	Map ID	DWQ Index Number	Best Usage Classification
Eno River	Eno River	27-2-(7)	C NSW
UT to Eno River	SA	27-2-(7)	C NSW
UT to Eno River	SB	27-2-(7)	C NSW

Table 2. Physical Characteristics of Water Resources

Map ID	Bank Height (ft)	Bankful Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
Eno River	6	60-70	18-36	Co, Gr, Sa, Si	Moderate	Clear
SA	3	5	1-4	Br, Co, Gr, Sa, Si	Moderate	Clear
SB	3-4	6-8	4-8	Br, Bo, Co, Gr, Sa, Si	Moderate	Clear

Biotic Resources

Three terrestrial communities were identified in the study area. Table 3 summarizes the acreage of each type of biotic community in the study area.

Table 3. Biotic Resources

Community	Coverage (ac.)
Maintained-Disturbed	5.62
Floodplain Forest	0.12
Mixed Hardwood Forest	3.31
Total	9.05

Jurisdictional Topics

Surface Waters and Wetlands

No jurisdictional wetlands were identified with the study area.

Permits

A Nationwide Permit (NWP) No. 23 will likely be applicable. A NWP No. 33 may apply for temporary construction activities such as stream dewatering, work bridges, or temporary causeways. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification from the North Carolina Division of Water Resources will be needed.

Federally Protected Species

As of June 8, 2015, the US Fish and Wildlife Service (USFWS) lists three federally endangered species for Orange County (Table 4).

Table 4. Federally Protected Species Listed for Orange County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	MANLAA
<i>Echinacea laevigata</i>	Smooth coneflower	E	Yes	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	E	Yes	No Effect

Dwarf wedgemussel

Biological Conclusion: May Affect Not Likely To Adversely Affect

A survey for the Dwarf wedgemussel (DWM) was conducted on the project area on October 16, 2015. No DWM specimens were found during the survey; however, appropriate habitat is present. A review of NCNHP records on May 1, 2010 indicates no known occurrences of the federally protected dwarf wedgemussel within the project study area. Therefore, it is anticipated that project construction May Affect, Not Likely To Adversely Affect the Dwarf wedgemussel.

Michaux's sumac

Biological Conclusion: No Effect

Habitat in the form of forest edges, powerline corridors, and roadsides are present within the project area. A plant by plant survey for Michaux's sumac was conducted on June 22, 2009 by NCDOT biologists. Michaux's sumac was not found. A review of the NCNHP records on April 8, 2010 indicates no known Michaux's sumac occurrence within 1.0 mile of the project. Therefore, it is anticipated that project construction will have no effect on Michaux's sumac.

Smooth coneflower

Biological Conclusion: No Effect

Habitat in the form of forest edges, powerline corridors, and roadsides are present within the project area. A plant by plant survey for smooth coneflower was conducted by NCDOT biologists on June 22, 2009. No specimens were found. A review of the NCNHP records on April 8, 2010 indicates no known smooth coneflower occurrence within 1.0 mile of the project. Therefore, it is anticipated that project construction will have no effect on the smooth coneflower.

Northern Long-eared Bat

Although not listed for Orange County, the USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the USACE, and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Orange County.

Bald Eagle and Golden Eagle Protection Act

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, was performed on February 10, 2010. No water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the project study area and the area within 660 feet of the project limits was not conducted. A review of the NCNHP database on April 26, 2010 revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences, and minimal impact anticipated for this project, it has been determined that this project will not affect this species.

VI. HUMAN ENVIRONMENT

Section 106 Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation’s Regulations for Compliance with Section 106, codified at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

Historic Architecture

NCDOT – Human Environment Section, under the provisions of a Programmatic Agreement with FHWA, NCDOT, Historic Preservation Office (HPO), Office of State Archaeology (OSA) and the Advisory Council on Historic Preservation (effective July 1, 2009), reviewed the proposed project and determined that no surveys are required (see form dated February 23, 2010).

Archaeology

NCDOT – Human Environment Section, under the provisions of a Programmatic Agreement with FHWA, NCDOT, Historic Preservation Office (HPO), Office of State Archaeology (OSA) and the Advisory Council on Historic Preservation (effective July 1, 2009), reviewed the proposed project and determined that no surveys are required (see form dated February 8, 2010).

Community Impacts

No adverse impact on families or communities is anticipated. right-of-way acquisition will be limited. No relocations are expected with implementation of the proposed alternative.

The study area crosses a section of the Eno River State Park in the Land and Water Conservation boundary. The Eno River State Park is a potential protected public resource. The Eno River is on the National River Inventory with outstandingly remarkable values in scenery, recreation, geology and fish characteristics. The project is not expected to adversely affect the Eno River or the Eno River State Park.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from the construction of the project.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. There are soils classified as prime, unique, or having state or local importance in the vicinity of the project (see attached Preliminary Screening of Farmland Conversion Impacts Map). Therefore, the project will involve the direct conversion of farmland acreage within these classifications. A preliminary screening with the AD 1006 form resulted in a score of 20 points out of 160. A preliminary score of less than 60 cannot result in a notable impact on protected farmland soils.

The project will not have a disproportionately high and adverse human health and environmental effect on any minority or low-income population.

Noise & Air Quality

This project is an air quality neutral project in accordance with 40 CFR 93.126. It is not required to be included in the regional emissions analysis (if applicable) and project level CO or PM2.5 analyses are not required. This project will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. Therefore, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort

is exempt from analysis for MSATs. Any burning of vegetation shall be performed in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality compliance with 15 NCAC 2D.0520.

Noise levels may increase during project construction; however, these impacts are not expected to be substantial considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

This project has been determined to be a Type III Noise Project and therefore, no traffic noise analysis is required to meet the requirements of 23 CFR 772.

VII. GENERAL ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

An examination of local, state, and federal regulatory records by the GeoEnvironmental Section revealed no sites with a Recognized Environmental Concern (REC) within the project limits. RECs are most commonly underground storage tanks, dry cleaning solvents, landfills and hazardous waste disposal areas.

The proposed project is located within the Neuse River Basin and is subject to the North Carolina Division of Water Resources regulated riparian buffer rules for the Neuse River Basin.

Orange County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential.

VIII. COORDINATION & AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development: US Army Corps of Engineers, US Environmental Protection Agency, NC Department of Environment & Natural Resources, US Fish & Wildlife Service, NC Wildlife Resource Commission, NC Division of Parks & Recreation, NC State Historic Preservation Office, Orange

County Planning Department, Town of Hillsborough, Durham Chapel Hill Carrboro Metropolitan Planning Organization and the Eno River Association.

The **Town of Hillsborough** stated that the roads along the detour route are very rural roads not intended to carry high volumes or heavy vehicles and would require extensive utility relocations and a possible signal installation. The town supports a detour in place option. The town supports a design that facilitates pedestrian access under the bridge.

Response: The Preferred Alternate involves replacing the bridge in place and maintaining traffic on-site northeast of the existing bridge. The proposed bridge will have sufficient vertical and horizontal clearance under the bridge for the planned Mountains to Sea Trail.

The **Durham-Chapel Hill-Carrboro Metropolitan Planning Organization** requested a temporary bridge due to the extreme traffic volumes and lack of convenient detour options.

Response: The Preferred Alternate involves replacing the bridge in place and maintaining traffic on-site northeast of the existing bridge

The **N.C. Wildlife Resource Commission** stated that they recommend replacing this bridge with a bridge. Due to the high diversity of listed species at this site recommends that NCDOT follow the Design Standards for Sensitive Watersheds during the design and construction of this project.

Response: NCDOT will be replacing the existing structure with a new bridge.

The **Orange County Planning and Inspections Department** requested that the bridge replacement include bicycle facilities and safe access for pedestrians on US 70.

Response: The proposed bridge will have sufficient vertical and horizontal clearance under the bridge for the planned Mountains to Sea Trail. The proposed bridge will be widened to accommodate two 12-foot lanes with 4-foot shoulders. Bicycle safe rails will be installed.

There were no additional special concerns for this project.

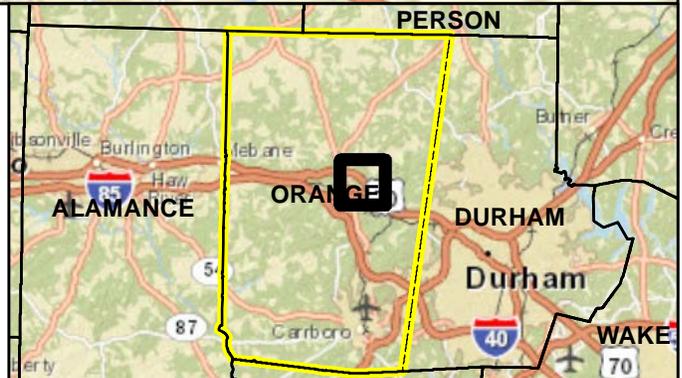
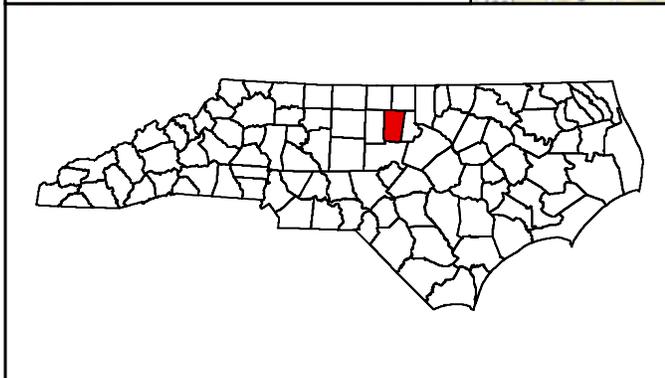
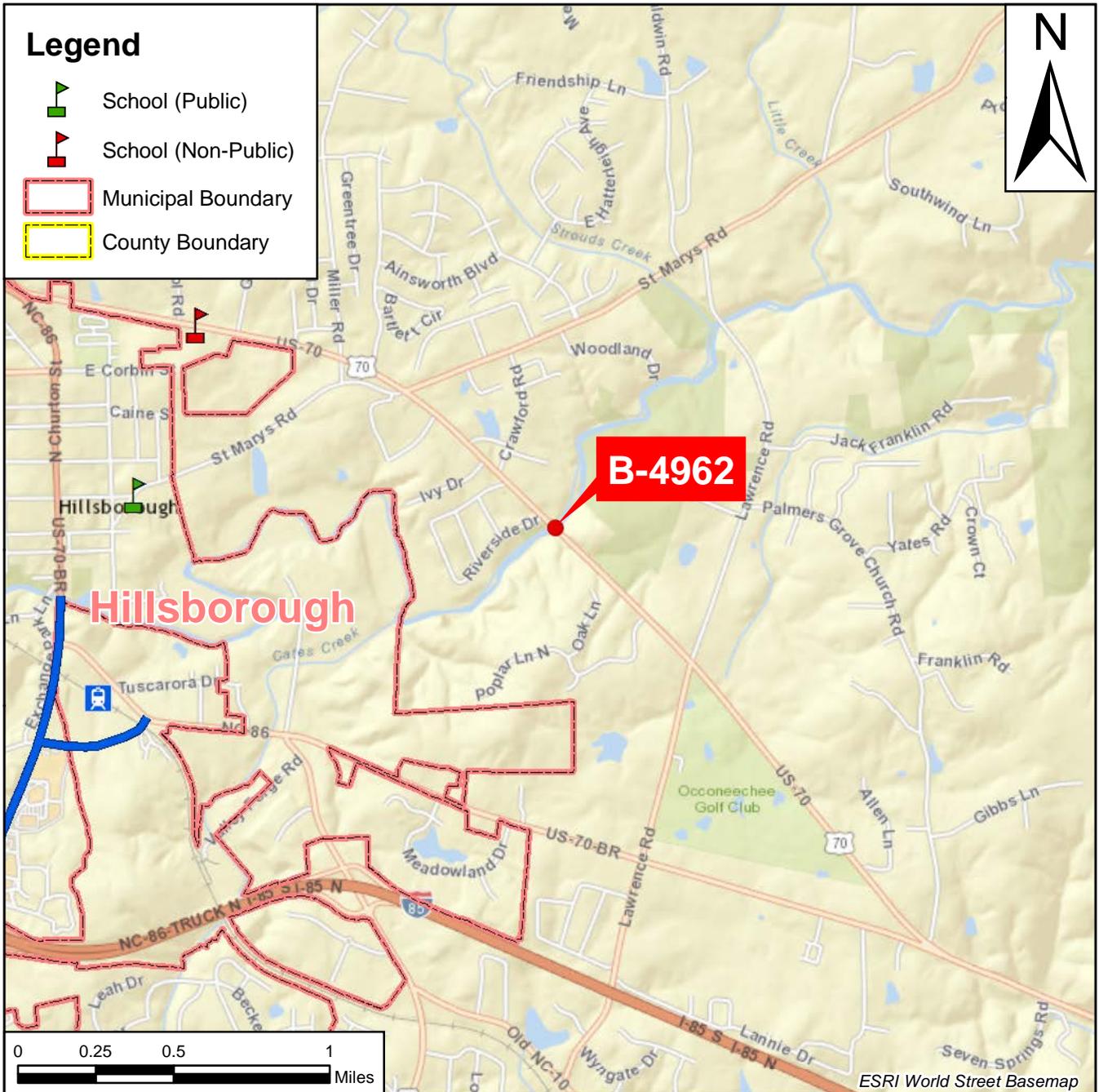
IX. PUBLIC INVOLVEMENT

A letter was sent on February 4, 2013 by Project Development and Environmental Analysis Unit to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

There is not substantial controversy on social, economic, or environmental grounds concerning the project.

X. CONCLUSION

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project. The project is therefore considered to be a federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.



	County: ORANGE	
	Div: 7	STIP B-4962
	WBS: 40174.1.1	
	Date: 11-5-2015	

VICINITY MAP
 REPLACE BRIDGE NO. 46 ON US 70 BYPASS
 OVER ENO RIVER
 ORANGE COUNTY
 STIP B-4962

FIGURE
1

Legend

- NCDOT Bridge/Culvert Location
- Managed Areas**
- Dedicated Nature Preserve
- Conservation Easement
- State Ownership
- Local Road
- Hydro Line
- Tax Parcels



**NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
DIVISION OF
HIGHWAYS
PROJECT
DEVELOPMENT
AND
ENVIRONMENTAL
ANALYSIS UNIT**

PRELIMINARY
INFORMATION
SUBJECT TO CHANGE

AERIAL MAP

REPLACE BRIDGE 46
OVER ENO RIVER
ORANGE COUNTY
STIP B-4962

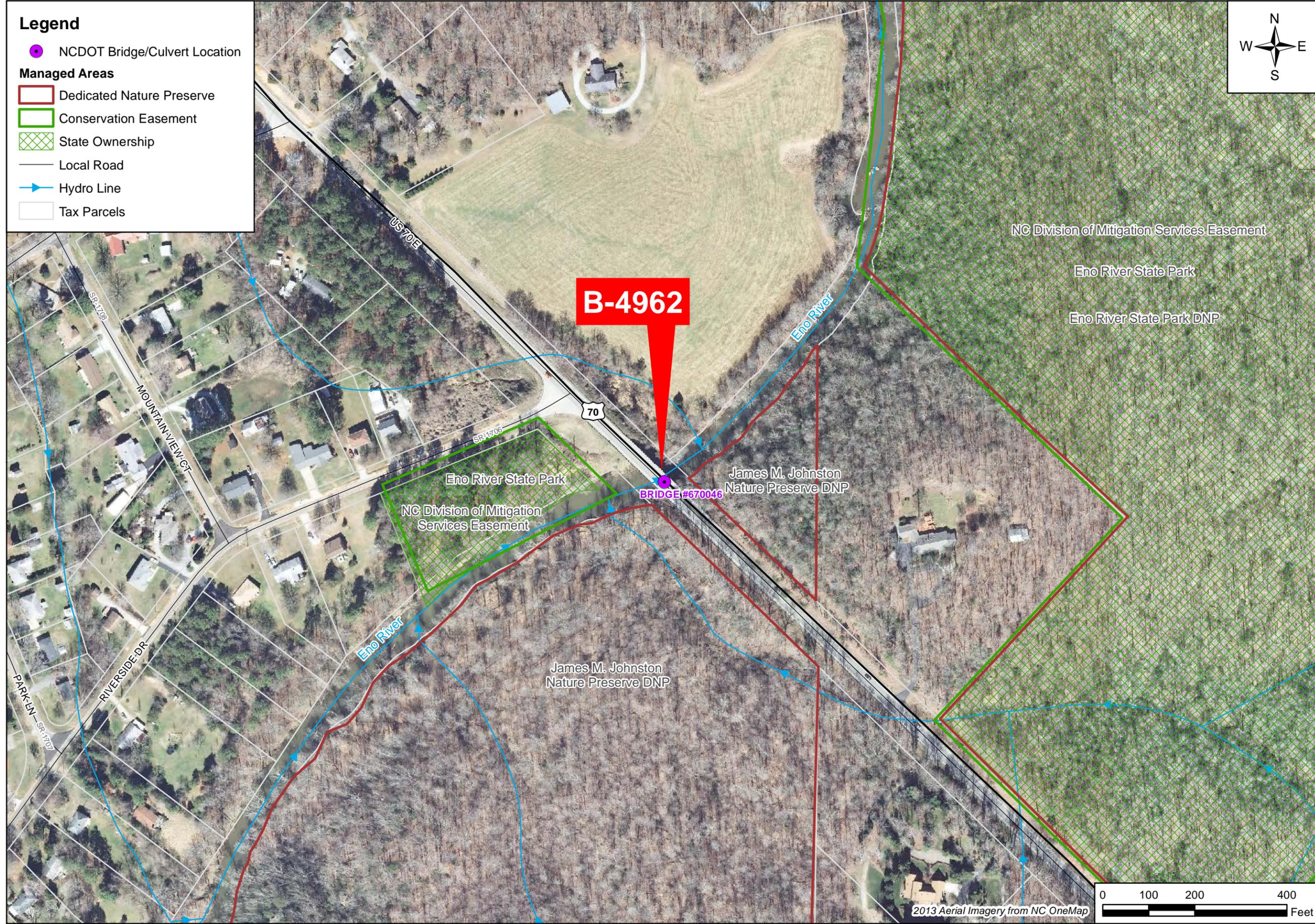
County:
ORANGE

Div: 7	STIP# B-4962
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WBS:
40174.1.1

Date:
11-5-2015

**FIGURE
2**



2013 Aerial Imagery from NC OneMap

10-02-0001

NO SURVEY REQUIRED FORM**PROJECT INFORMATION**

Project No: B-4962 *County:* Orange
WBS No: 40174 *Document:* CE/PCE
F.A. No: BRSTP-0070(120) *Funding:* State Federal

Federal (USACE) Permit Required? Yes No *Permit Type:*

Project Description:

Replace Bridge No. 46 over the Eno River on US 70 BYP

SUMMARY OF CULTURAL RESOURCES REVIEW*Brief description of review activities, results of review, and conclusions:*

Review of HPO quad maps, historic designations roster, and indexes was undertaken on 23 February 2010. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects. The CRS also reviewed the Orange County GIS website and concluded that properties in the APE date from the 1950s to the present. Google Maps Streetview was utilized and based on this, it was concluded that the houses over fifty years of age in the APE are ranch houses and do not possess the necessary characteristics to qualify for listing in the National Register of Historic Places.

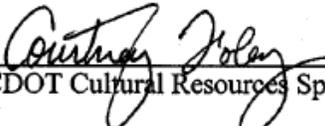
According to the NCDOT Bridge Survey, Orange County Bridge No. 46 is a 1941 tee beam bridge. This bridge is a later example of the most common pre-1961 bridge type in the state. As such, it is not eligible for National Register listing.

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

The Orange County Survey was updated in 1993 and is considered valid for the purposes of determining the likelihood of historic resources being present. Orange County GIS and Google Maps Streetview show the oldest properties in the APE to be ranch houses dating from the 1950s.

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL

NO SURVEY REQUIRED – Historic Architecture


 NCDOT Cultural Resources Specialist

23 FEBRUARY 2010
 Date

10-02-0001

NO SURVEY REQUIRED FORM**PROJECT INFORMATION**

Project No: B-4962 *County:* Orange
WBS No: 40174.1.1 *Document:*
F.A. No: BRSTP-0070(120) *Funding:* State Federal
Federal (USACE) Permit Required? Yes No *Permit Type:*

Project Description: Replace Bridge No. 46 over Eno River on US 70 Bypass.

SUMMARY OF CULTURAL RESOURCES REVIEW*Brief description of review activities, results of review, and conclusions:*

Review of Archaeological survey of Elizabeth Brady Road Extension [U-3808] of Orange County, NC reveals that this bridge and its APE have been surveyed as part of a larger project in the Hillsborough, NC region. No archaeological sites were recorded within the APE of the proposed bridge replacement project.

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

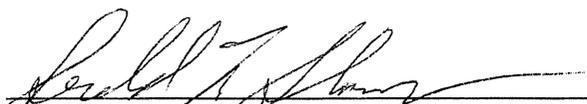
Previous intensive survey has already determined that no further work is warranted for this project. Replacement in place or to either side of the existing structure would have no impact within the APE to any possible cultural evidence.

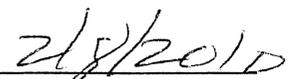
SUPPORT DOCUMENTATION

See attached: Map(s), Previous Survey Info

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL

NO SURVEY REQUIRED


 NCDOT Cultural Resources Specialist


 Date

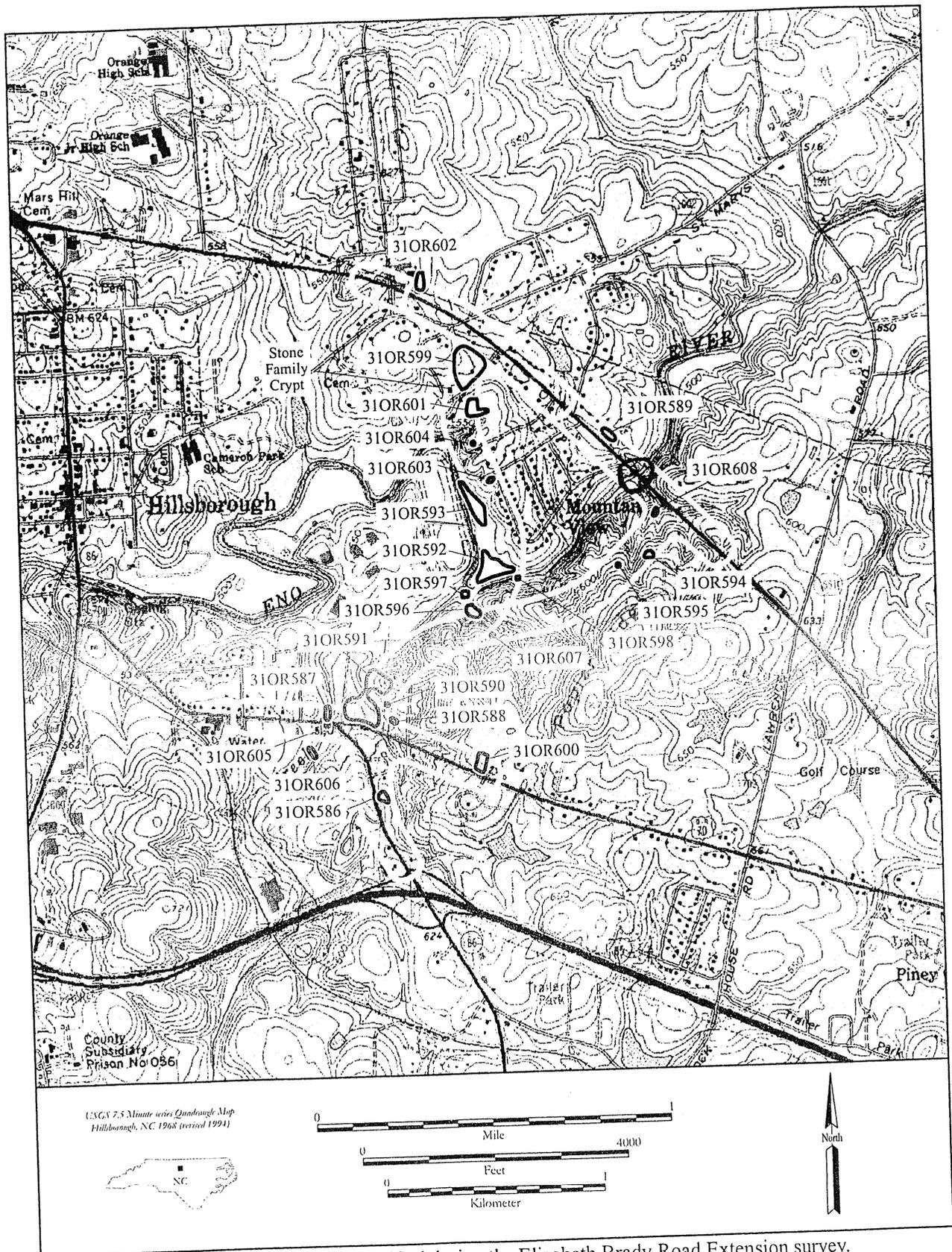


Figure 5.2. Archaeological resources identified during the Elizabeth Brady Road Extension survey.