

**Rutherford County
Bridge No. 87 on US 64
over Broad River
Federal Aid Project No. BRSTP-64(84)
W.B.S. No. 38581.1.1
T.I.P. No. B-4811**

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

7/14/14
DATE

For William F. Hancock
Richard Hancock, PE
Manager, Project Development & Environmental Analysis Unit

7-14-14
DATE

For Michael C. Johnson
John F. Sullivan, III, Division Administrator
Federal Highway Administration

**Rutherford County
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CATEGORICAL EXCLUSION

Documentation Prepared in
Project Development and Environmental Analysis Unit By:

7-14-14
DATE

Natalie Lockhart
Natalie Lockhart
Project Planning Engineer
Bridge Project Development Section

7-15-14
DATE

John L. Williams
John L. Williams, PE
Project Engineer
Bridge Project Development Section



PROJECT COMMITMENTS:

**Rutherford County
Bridge No. 87 on US 64
Over Broad River
Federal Aid Project No. BRSTP-64(84)
W.B.S. No. 38581.1.1
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Hydraulic 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.

**Division 13 Construction, Structures Management Unit, Roadway Design Unit-
Bicycle Accommodations**

Bridge No. 87 is not located along a designated bicycle route; however, the Lake Lure Planning Department and Isothermal Rural Planning Organization stated that they would like the bridge design to include pedestrian and bicycle accommodations as there is a great deal of bicycle activity on the roads near the project area and on the bridge itself. As a result, 4-foot paved shoulders and bicycle safe rail have been included in the design.

Roadway Design, PDEA-Angler Access

Roadway Design Unit and Project Development & Environmental Analysis Branch are working with Wildlife Resource Commission on coordinating with Lake Lure Baptist Church concerning angler access for safe public access.

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INTRODUCTION: Bridge No. 87 is included in the latest approved 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. 87 has a sufficiency rating of 59.1 out of a possible 100 for a new structure. When Bridge No. 87 was first programmed the sufficiency rating was 47.9. The sufficiency rating changed due to changes with inventory ratings, which increased the sufficiency rating. The bridge is considered functionally obsolete due to deck geometry of 2 out of 9 according to Federal Highway Administration (FHWA) standards.

Bridge No. 87 carries 2,500 vehicles per day with 4,100 vehicles per day projected for the year 2035. The substandard deck width, bridge railing and approach guardrail is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

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 is approaching the end of its useful life.

II. EXISTING CONDITIONS

The project is located just east of the Town of Lake Lure (see Figure 1). There are two churches, several small businesses and two entry points to a large gated community in immediate proximity to the bridge. Development in the area is residential in nature.

US 64 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 64 has a 22-foot pavement width with 2-foot grass shoulders. The roadway grade is in a sag vertical curve through the project area. The existing bridge is on a tangent. The roadway is situated approximately 29.0 feet above the creek bed.

Bridge No. 87 is a three-span structure that consists of reinforced concrete end bents and reinforced concrete solid pier interior bents. The existing bridge was constructed in 1926. The overall length of the structure is 237 feet. The clear roadway width is 22.0 feet. The posted weight limit on this bridge is 38 tons for single vehicles and 41 tons for TTST's.

There are no utilities attached to the existing structure but there are aerial power transmission lines along the north side of US 64 that cross the Broad River parallel to north side of bridge. Bell South has underground fiber-optic telephone cable along the north side of US 64 that goes under the Broad River parallel to the north side of bridge. Utility impacts are anticipated to be moderate.

The current traffic volume of 2,500 vehicles per day (VPD) is expected to increase to 4100 VPD by the year 2035. The projected volume includes one percent truck-tractor semi-trailer (TTST) and six percent dual-tired vehicles (DT). The posted speed limit is 35 miles per hour in the project area. One school bus crosses the bridge daily on the morning and afternoon routes.

There were four accidents reported in the vicinity of Bridge No. 87 during a recent three-year period. None of the accidents were associated with the alignment or geometry of the bridge or its approach roadway.

This section of US 64 is not part of a designated bicycle route nor is it listed in the T.I.P. as needing incidental bicycle accommodations. Sidewalks do not exist on the existing bridge and there is no indication of pedestrian usage on or near the bridge. Lake Lure Planning Department and Isothermal Rural Planning Organization requested that bicycle and pedestrian accommodations be included into the design noting that future land uses in the area would be complemented by pedestrian and bicycle activities.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a bridge approximately 250-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 11-foot lanes with 4-foot offset on the north side and 8-foot on the south side. The roadway grade of the new structure will be 0.8553% which is steeper than the existing to ease the existing vertical curve.

Bridge No. 87 is not located along a designated bicycle route; however, the Lake Lure Planning Department and Isothermal Rural Planning Organization stated that they would like the bridge design to include pedestrian and bicycle accommodations as there is a great deal of bicycle activity on the roads near the project area and on the bridge itself. There is no indication of pedestrian usage on or near the bridge. As a result, 8-foot paved shoulders and bicycle safe rail have been included in the design.

The existing roadway will be widened to a 22-foot pavement width to provide two 11-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 rural arterial

using AASHTO guideline, with a design speed of 30 miles per hour. No design exception will be required.

B. Reasonable and Feasible Alternatives

Four alternatives for replacing Bridge No. 87 that were studied in detail are described below.

Alternate 1

Alternate 1 involves replacement of the structure on a new location south of the existing bridge. Improvements to the approach roadways will be required for a distance of approximately 580 feet to the west and 973 feet to the east of the new structure. Traffic will be maintained on the existing structure (see Figure 2A).

Alternate 2 (Preferred)

Alternate 2 involves replacement of the structure on a new location north of the existing bridge. Improvements to the approach roadways will be required for a distance of approximately 385 feet to the west and 550 feet to the east of the structure. Traffic will be maintained on the existing structure (see Figure 2B).

Alternate 3

Alternate 3 involves replacement of the structure in place with a temporary onsite detour north of the existing. Improvement to the approach roadways will be required for a distance of approximately 208 feet to the west and 156 feet to the east of the structure. The temporary detour is approximately 1068 feet with a 234 foot bridge (see Figure 2C).

Alternate 4

Alternate 4 involves replacement of the structure in place with a temporary onsite detour south of the existing. Improvements to the approach roadways will be required for a distance of approximately 208 feet to the west and 141 feet to the east of the structure. The temporary detour is approximately 891 feet with a 207 foot bridge (see Figure 2D).

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 64.

“Rehabilitation” of the old bridge is not practical due to its age and deteriorated condition. Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities.

Staged Construction is not feasible for this bridge because the 22-foot deck width and beam configuration will not support removal of a portion and maintenance of traffic on the remaining portion.

Offsite detour was eliminated from further study due to delays for fire and rescue operations as well as having a major impact on tourism for Lake Lure/Chimney Rock Area.

D. Preferred Alternative

Bridge No. 87 will be replaced on a new location as shown by Alternative 2 in Figure 2B. Alternate 2 was chosen as the preferred alternate based on public comments received from a Public Meeting that was held in October 2013. After comparing and reviewing all of the alternates, Alternate 2 had fewer environmental impacts as well as lower construction costs.

NCDOT Division 13 concurs with the selection of Alternative 2 as the preferred alternative.

IV. ESTIMATED COSTS

The estimated costs, based on 2014 prices, are as follows:

	Alternative 1	Alternative 2 Preferred	Alternative 3	Alternative 4
Structure	\$ 900,000	\$ 690,000	\$ 705,000	\$ 705,000
Roadway Approaches	\$ 768,000	\$ 413,000	\$ 751,000	\$ 852,000
Detour Structure and Approaches	- 0 -	-0-	\$ 449,000	\$ 404,000
Structure Removal	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000
Misc. & Mob.	\$ 490,000	\$ 299,000	\$ 521,000	\$ 558,000
Eng. & Contingencies	\$ 330,000	\$ 236,000	\$ 412,000	\$ 419,000
Total Construction Cost	\$ 2,550,000	\$ 1,700,000	\$ 2,900,000	\$ 3,000,000
Right-of-way Costs	\$ 738,000	\$ 165,000	\$ 214,000	\$ 602,000
Right-of-way Utility Costs	\$ 70,000	\$ 140,000	\$ 53,000	\$ 53,000
Total Project Cost	\$ 3,458,000	\$ 2,005,000	\$ 3,167,000	\$ 3,655,000

V. NATURAL ENVIRONMENT

Physical Characteristics

Water Resources

Water resources in the study area are part of the Broad River basin (U.S. Geological Survey [USGS] Hydrologic Unit 03050105). Two streams were identified in the study area (Table 1). The physical characteristics of the streams are provided in Table 2.

Table 1. Water resources in the project study area.

Stream Name	Map ID	DWQ Index Number	Best Usage Classification
Broad River	Broad River	9-(22)	C
UT1 to Broad River	UT1 to Broad River	9-(22)	C

Table 2. Physical characteristics of water resources in the project study area.

Map ID	Bank Height (ft)	Bankful Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
Broad River	5-8	50-60	12-30	Cobble, sand	Moderate	Clear
UT1 to Broad River	15-20	2	6	Clay, sand, gravel	Moderate	Clear

The North Carolina Wildlife Resources Commission (NCWRC) has indicated that the Broad River is not trout water in a letter dated April 15, 2009. There are no designated anadromous fish waters or Primary Nursery Areas present in the study area. There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. There are no streams within one mile of the project study area on the North Carolina 2012 Final 303 (d) list for sedimentation or turbidity impairments.

There is a benthic monitoring station located in the Broad River at the bridge crossing. It was sampled in September 2005 and received a rating of fair.

Biotic Resources

Table 3. Coverage of terrestrial communities in the study area.

Community	Coverage (ac.)
Maintained/ Disturbed	5.5
Bottomland Hardwood Forest	2.2
White Pine Forest	1.5
Total	9.2

Jurisdictional Topics

Surface Waters and Wetlands

One jurisdictional wetland was identified within the study area. Wetland classification and quality rating data are presented in Table 4. All wetlands in the study area are within the Broad River basin. Wetland site WA is included within the bottomland hardwood forest community.

Table 4. Jurisdictional characteristics of wetlands in the study area.

Map ID	NCWAM Classification	Area (ac.)	Hydrologic Classification	NCDWQ Wetland Rating
Wetland A	Riverine Swamp Forest	0.13	Riparian	61

An open water feature was noted in the northeast quadrant of the project in the floodplain of the Broad River. This feature is currently full of water and maybe jurisdictional dependent upon consultation with the Army Corps of Engineers. NCDOT Hydraulics has already tailored their design to accommodate this feature. If the channel is jurisdictional, there will an increase in impacts from the project though not a significant increase.

Permits

The proposed project has been designated as a Categorical Exclusion (CE) for the purposes of NEPA documentation. As a result, a Nationwide Permit 23 will likely be applicable. Other permits that may apply include a NWP No. 33 for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge construction or rehabilitation. The USACE holds the final discretion as to what permit will be required to authorize project construction.

In addition to the 404 permit, other required authorizations include the corresponding Section 401 Water Quality Certification (WQC) from the NCDWQ. A NCDWQ Section 401 Water Quality General certification for a Categorical Exclusion may be required prior to the issuance of a Section 404 Permit. Other required 401 certifications may include a GC 3688 for temporary construction access and dewatering.

Federally Protected Species

As of January 31, 2014 the USFWS lists five federally protected species for Rutherford County (Table 5). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements for each species are based on the current best available information as per referenced literature and USFWS correspondence.

Table 5. Federally protected species listed for Rutherford County.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Myotis sodalist</i>	Indiana bat	E	Yes	No Effect
<i>Hexastylis naniflora</i>	Dwarf flowered heartleaf	T	Yes	No Effect
<i>Isotria medeoloides</i>	Small whorled pagonia	T	No	No Effect
<i>Sisyrinchium dichotomum</i>	White irisette	E	Yes	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	No Effect

E - Endangered

T – Threatened

A US Fish and Wildlife Service proposal for listing the Northern Long-eared Bat (*Myotis septentrionalis*) as an Endangered species was published in the Federal Register in October 2013. The listing will become effective on or before April, 2015. Furthermore, this species is included in USFWS's current list of protected species for Rutherford County. NCDOT is working closely with the USFWS to understand how this proposed listing may impact NCDOT projects. NCDOT will continue to coordinate appropriately with USFWS to determine if this project will incur potential effects to the Northern long-eared bat, and how to address these potential effects, if necessary.

Indiana bat

Biological Conclusion: No Effect

The Indiana bat has different summer and winter habitat requirements. Winter habitat is in caves and abandoned mines that usually have standing water on the floor. The bats migrate to the winter habitat between September and November; they stay there with occasional periods of activity until they emerge in mid-March to early May. Hibernation only occurs in regions where winter temperatures are stable and are around 40 degrees Fahrenheit. They have been found under loose bark on dead and living trees along small to medium-sized streams. Optimum foraging is over streams with mature riparian vegetation overhanging the water by more than nine feet.

Dwarf flowered heartleaf

Biological Conclusion: No Effect

The majority of the project area contains areas that have been disturbed too frequently which do not provide good habitat for the dwarf-flowered heartleaf. No *Hexastylis* spp. were found during field surveys conducted on October 1, 2008 and June 17, 2009 within the forested communities. A search of the NHP database on October 16, 2008 found no occurrence of this species within one mile of the project.

White irisette

Biological Conclusion: No Effect

The majority of the project area contains areas that have been disturbed too frequently which does not provide good habitat for the white irisette. Surveys for the white irisette were conducted on June 17, 2009 along the edges and within the forested communities. A search of the NHP database on October 14, 2008 found no occurrence of this species within one mile of the project.

Bald 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. Suitable foraging habitat for bald eagle does not exist within 1.0 mile of the study area.

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 Unit, under the provisions of a Programmatic Agreement with FHWA, NCDOT, HPO, 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 November 25, 2013).

Archaeology

NCDOT – Human Environment Unit, under the provisions of a Programmatic Agreement with FHWA, NCDOT, HPO, 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 January 17, 2014).

Community Impacts

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

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. All construction will take place along existing alignment. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

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

The project is located in Rutherford County, which has been determined to comply with the National Air Quality Standards. The proposed project is located in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

This project will not result in any meaningful changes in traffic volume, 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. As such 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 MSAT's.

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.

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.

Rutherford 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.

The Federal Highways Administration has determined that a U.S. Coast Guard Permit is not required for this project.

VIII. COORDINATION & AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development: U.S. Army Corps of Engineers, NC Department of Environment & Natural Resources, U.S. Fish & Wildlife Service, N.C Wildlife Resource Commission, N.C. Division of Parks & Recreation, North Carolina State Historic Preservation Office, Lake Lure Planning Department, and Town of Chimney Rock

The **U.S. Fish & Wildlife Service** in standardized letters provided a request that they prefer any replacement structure to be a spanning structure.

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

The **North Carolina Wildlife Resource Commission** states that the Broad River is Class C waters. A species of crayfish is found in the vicinity. Public access to this waterway is lacking in the project vicinity. It is recommended that NCDOT incorporate an angler access area into their plans for this project for safe public access in accordance with the MOA between our agencies.

Response: NCDOT is considering angler access into the design. NCDOT is still coordinating with North Carolina Wildlife Resource Commission.

The **Division of Water Quality** many areas in the western section of NC contain geological formations known as acid-forming rock. A determination should be made regarding the presence of acid-forming rock.

Response: Geotechnical Unit states that the chances of acid-rock being involved with this project are remote.

Lake Lure and Isothermal Planning Organization officials stated that they would like the bridge design to include pedestrian and bicycle accommodations as there is a great deal of bicycle activity on the roads near the project area and on the bridge itself.

Response: There is no indication of pedestrian usage on or near the bridge; therefore no pedestrian accommodations will be incorporated into the design. Four-foot paved shoulders and bicycle safe rail have been included in the design.

The **Army Corps of Engineers** and **N.C Division of Parks & Recreation** had no special concerns for this project.

IX. PUBLIC INVOLVEMENT

A newsletter has been sent to all those living along US 64 in the project vicinity.

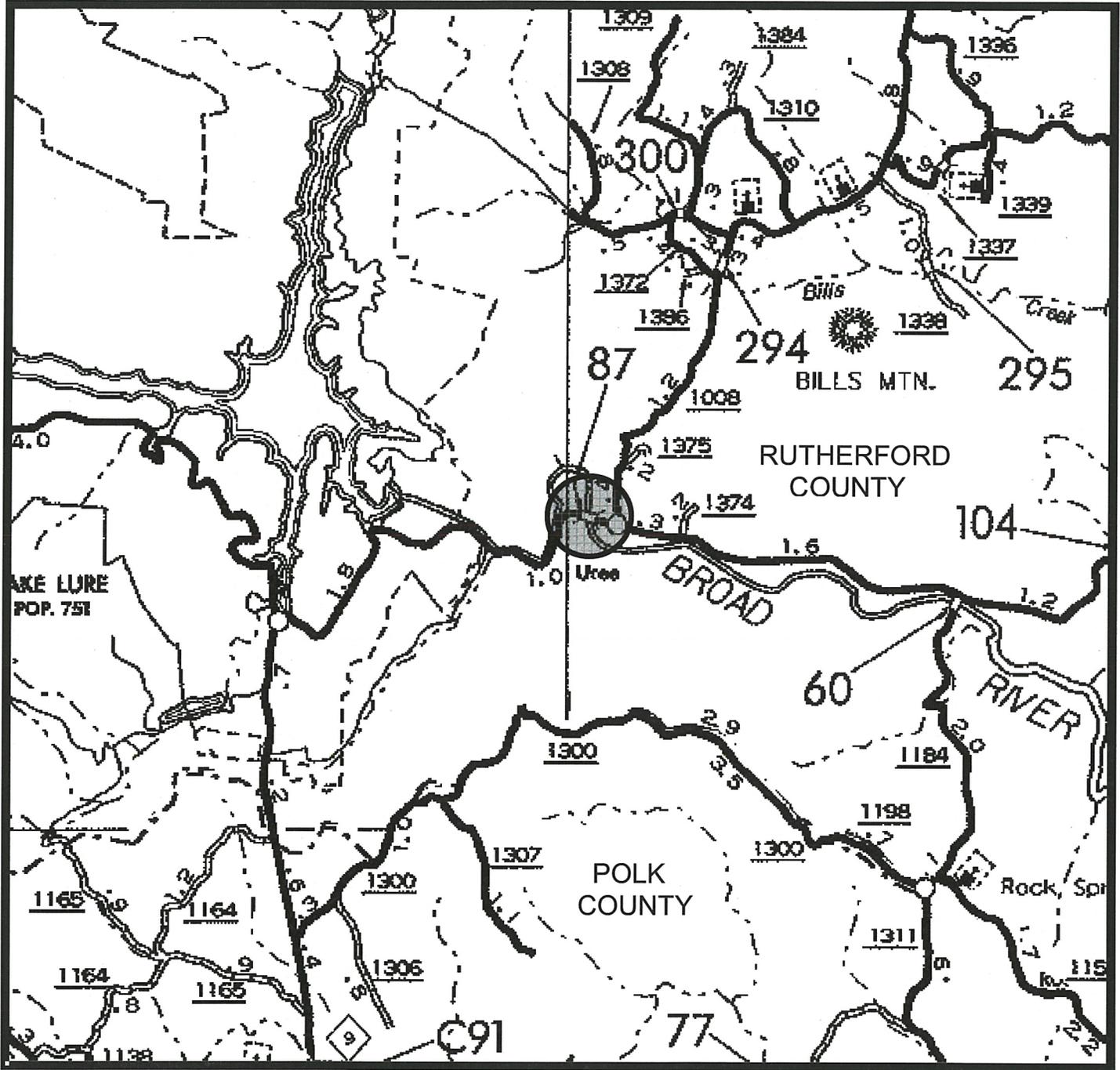
Based on responses to the newsletter, a public meeting was determined necessary. NCDOT held a public meeting October 7, 2013 at the Lake Lure Baptist Church. A total of thirty-five

people attended the meeting. As a result of the public meeting Alternate 2 was chosen as the preferred alternate because the public agreed that the bridge replacement would have fewer impacts to Lake Lure Baptist Church. Division 13 agreed to Alternate 2 as the preferred alternate.

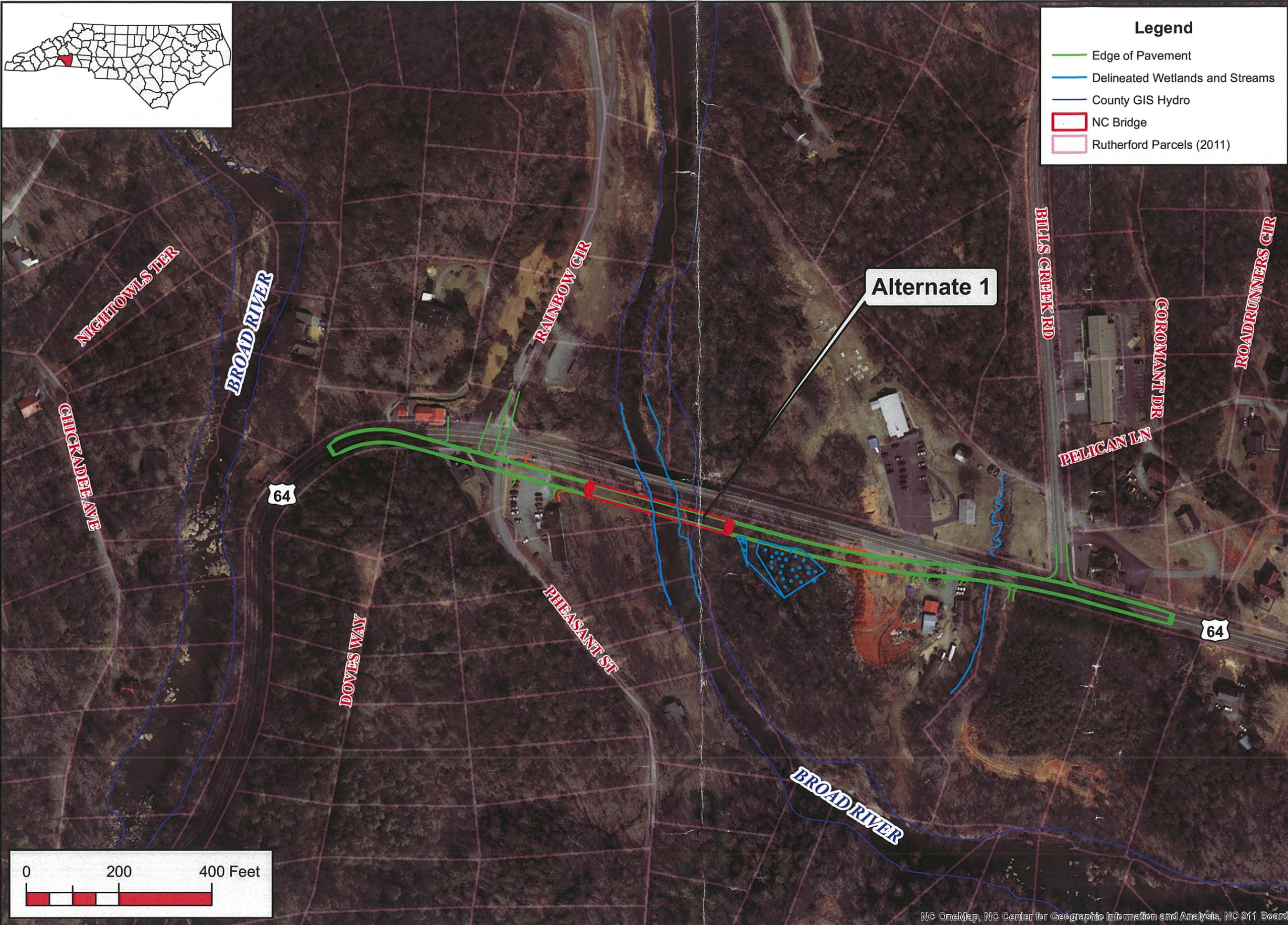
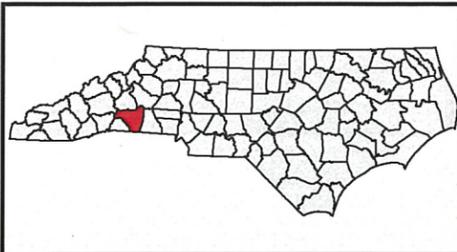
There is not substantial controversy on social, economic, or environmental grounds concerning the project.

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.



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH</p>
<p>RUTHERFORD COUNTY REPLACE BRIDGE NO. 87 ON US 64 OVER BROAD RIVER B-4811</p>	
<p>Figure 1</p>	



Legend

- Edge of Pavement
- Delineated Wetlands and Streams
- County GIS Hydro
- NC Bridge
- Rutherford Parcels (2011)



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

**ALTERNATE 1 : NEW LOCATION SOUTH
BRIDGE No. 87 ON US 64 OVER
BROAD RIVER**
RUTHERFORD COUNTY
TIP PROJECT B-4811



County:
Rutherford

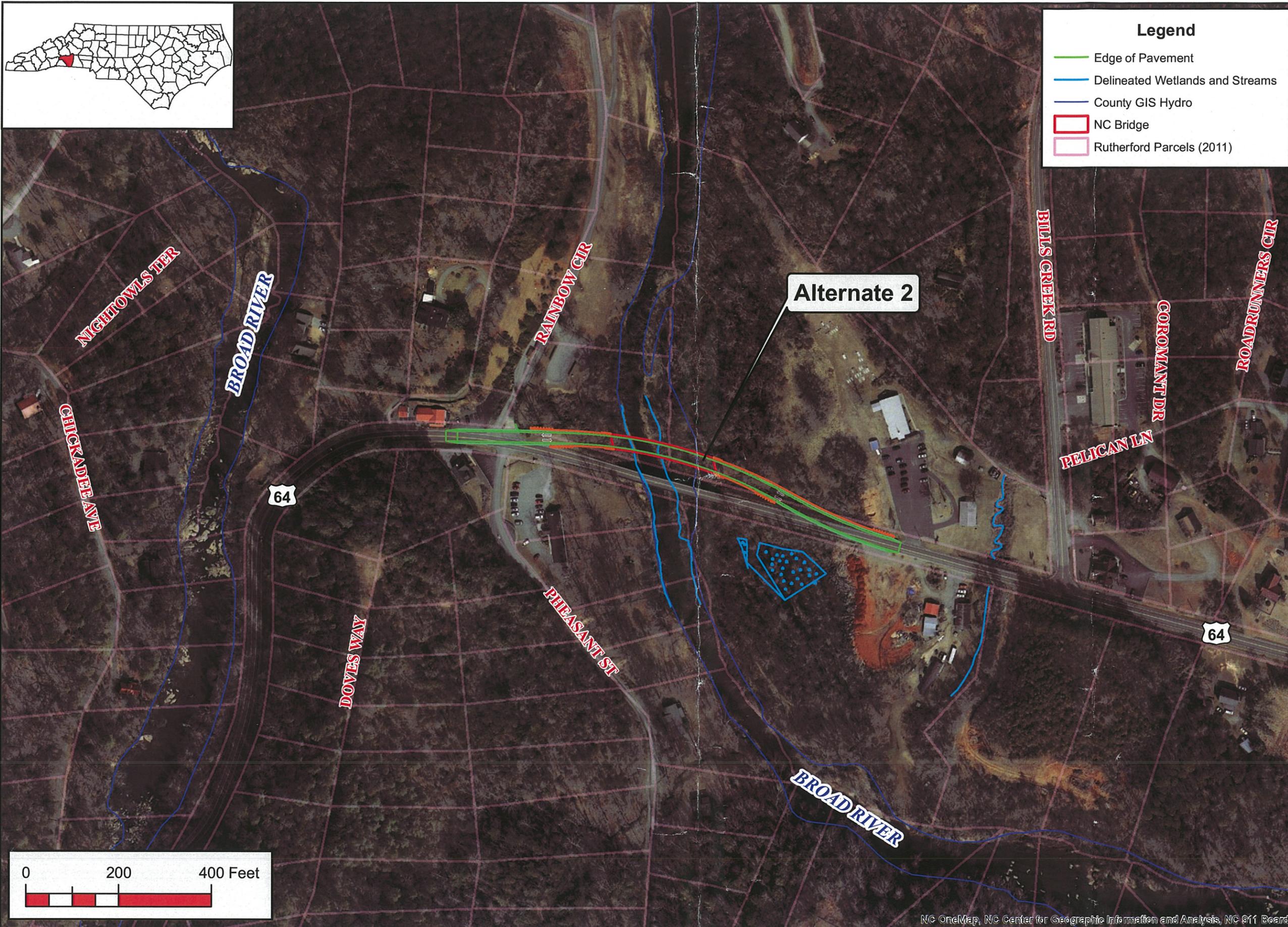
Div: 13	TIP# B-4811
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WBS:
38581.1.1

Date:
MAY 2014

**Figure
2a**

By: J.TORTORELLA



NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board

By: J.TORTORELLA



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

ALTERNATE 2 (PREFERRED) :
NEW LOCATION NORTH
BRIDGE No. 87 ON US 64 OVER
BROAD RIVER
RUTHERFORD COUNTY
TIP PROJECT B-4811



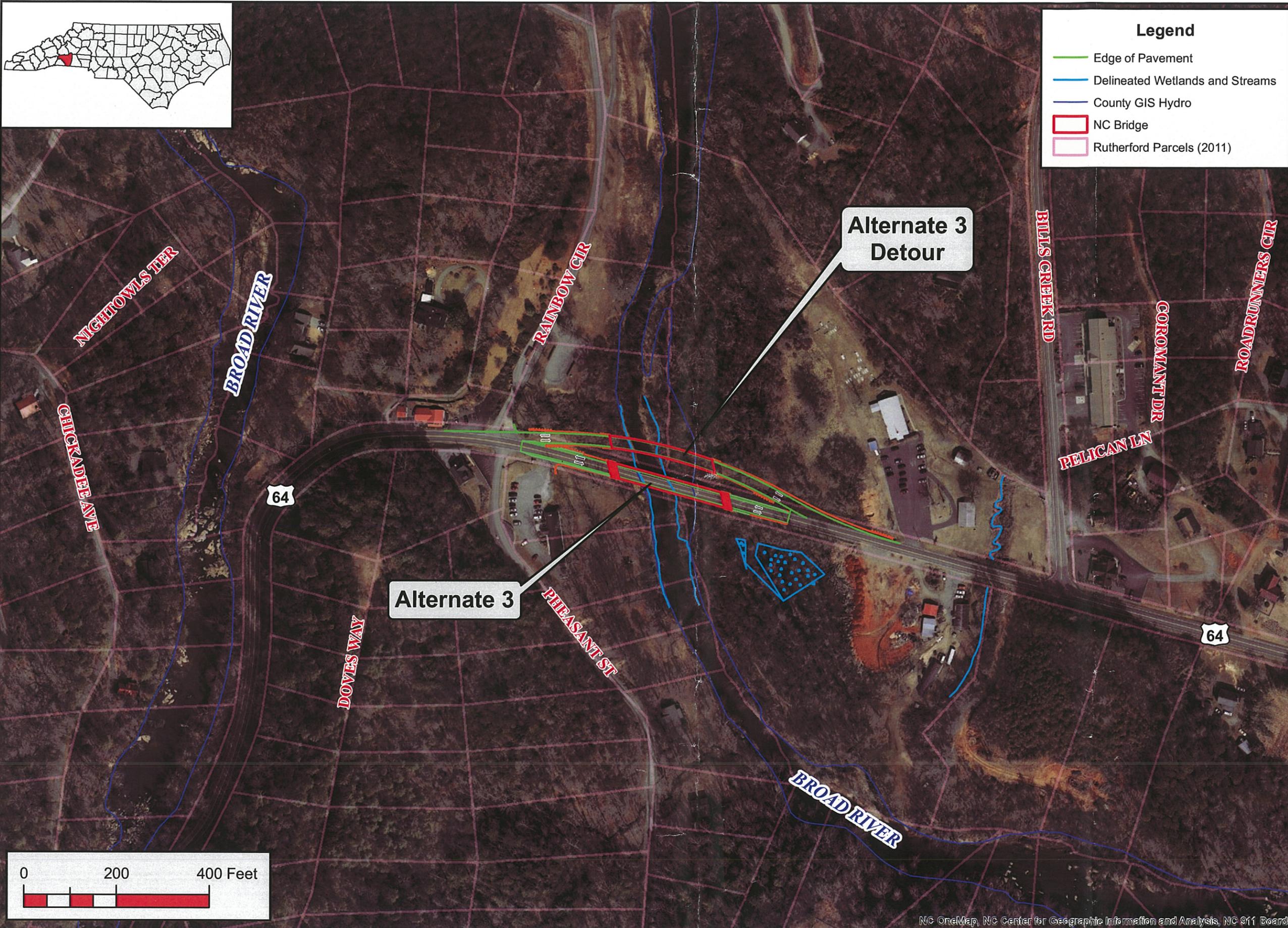
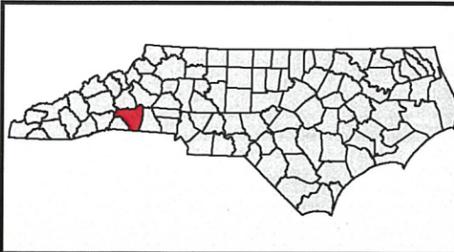
County:
Rutherford

Div: 13 TIP# B-4811

WBS:
38581.1.1

Date:
MAY 2014

Figure
2b



Legend

- Edge of Pavement
- Delineated Wetlands and Streams
- County GIS Hydro
- NC Bridge
- Rutherford Parcels (2011)



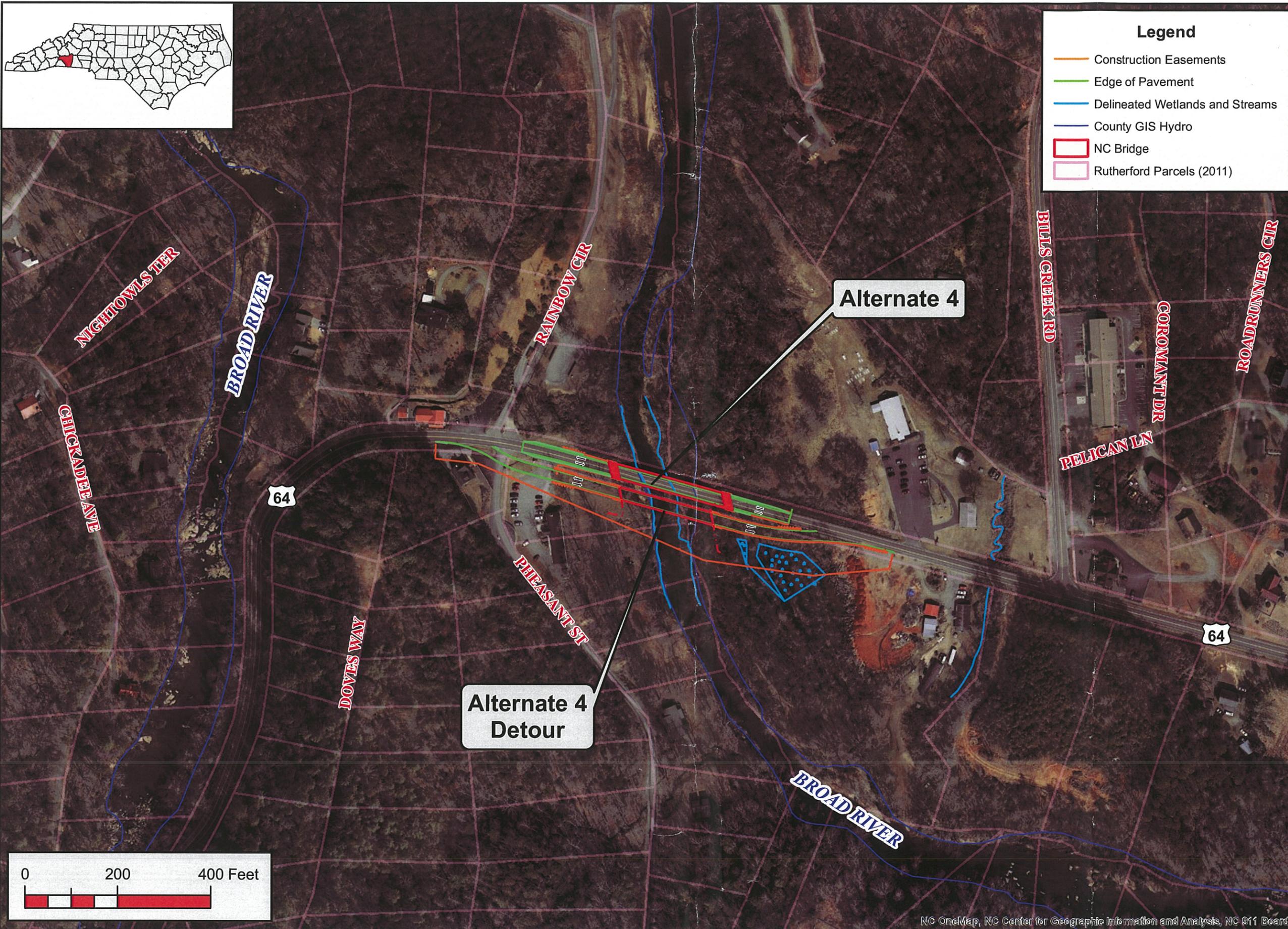
NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

**ALTERNATE 3 : REPLACE IN PLACE
WITH TEMPORARY ONSITE DETOUR NORTH
BRIDGE No. 87 ON US 64 OVER
BROAD RIVER**
RUTHERFORD COUNTY
TIP PROJECT B-4811



County: Rutherford	
Div: 13	TIP# B-4811
WBS: 38581.1.1	
Date: MAY 2014	

**Figure
2c**



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

**ALTERNATE 4 : REPLACE IN PLACE
WITH TEMPORARY ONSITE DETOUR SOUTH
BRIDGE No. 87 ON US 64 OVER
BROAD RIVER**

RUTHERFORD COUNTY
TIP PROJECT B-4811



County:
Rutherford

Div: 13 TIP# B-4811

WBS:
38581.1.1

Date:
MAY 2014

**Figure
2d**

13-10-0040



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY 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:	B-4811	County:	Rutherford
WBS No.:	38581.1.1	Document Type:	CE
Fed. Aid No.:	BRSTP-64(84)	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	NWP, TVA
<u>Project Description:</u> Replace Bridge No. 87 on US64 over Broad River on new location.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on November 22, 2013. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 600' from each end of the bridge, 200' north of the existing bridge centerline, and 100' south of the centerline of the existing bridge. Rutherford County GIS/Tax information indicates that there is one property over fifty years of age within the APE, a one-story frame commercial structure west of the bridge (Tax Parcel 0652.04-64-7724.0000). The building is sheathed in vinyl siding and capped by a standing seam metal gable roof. A one-story addition was constructed on the west elevation in 2000. A one-story porch on the south façade appears to have been added to the structure around the same time. The building is unremarkable and has been altered; it is not eligible for National Register listing. The surrounding structures, including two churches, a commercial building, a home, and the entrance to a housing development, are all under fifty years of age and not eligible for National Register listing. Bridge No. 87, built 1926, is not eligible for National Register listing based on the NCDOT Historic Bridge Inventory. There are no National Register listed or eligible properties within the APE and no survey is required. If design plans change, additional review will be required.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:

HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Rutherford County survey and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

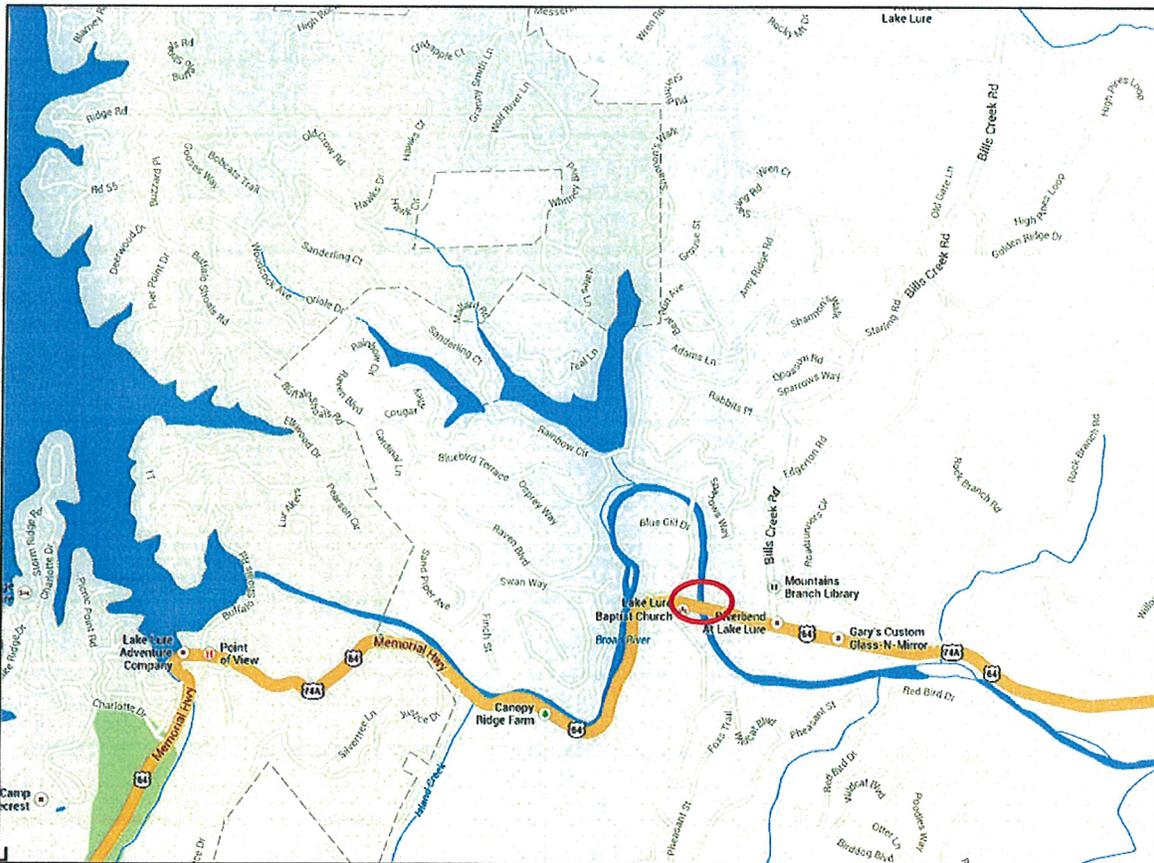
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Katherine A. Hubbel

Nov 25 2013

NCDOT Architectural Historian

Date



Project Location.



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT OR AFFECTED 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-4811** County: **Rutherford**
 WBS No: **3858.1.1** Document: **MCS**
 F.A. No: **BRSTP-64(84)** Funding: State Federal

Federal Permit Required? Yes No Permit Type: **NWP14 – TVA**

Project Description: This project proposes to replace Bridge No. 87, which carries US64 over the Broad River in Rutherford County, North Carolina. According to the environmental input request, the undertaking involves the replacement of the structure utilizing new location to the north of the existing bridge. The Right-of-way (ROW) will extend minimally 150ft north of the center-line for temporary and/or permanent accommodation of construction fill and other potential impacts. The archaeological Area of Potential Effects (APE) is centered upon Bridge 87 and measures 1000ft in length (500ft from each bridge end-point) and 250ft in width (200ft from the center-line to the northern limit and 50ft from the center-line to the southern limit).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects.
- No subsurface archaeological investigations are 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.
- There are no National Register Eligible or Listed ARCHAEOLOGICAL SITES present or affected by this project. (*Attach any notes or documents as needed*)

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

The project area is located in the west-central portion of Rutherford, immediately southeast of Lake Lure near the small Uree community. The Broad River is a fourth order stream trending north to south through the project area. It originates in the mountains of western North Carolina and flows southeast through the foothills and Piedmont before entering South Carolina. This section of Rutherford County is characterized by a typical western Piedmont topography of rolling, hilly terrain with elevations ranging between 1000ft AMSL and 1600ft AMSL. According to topographic and pedological data, the APE consists of occasionally flooded, excessively-drained, forested land surfaces bounded by areas of modern impact at the eastern and western project boundaries.

Based on the scope of the bridge replacement effort and presence of excessively drained and slightly elevated land surfaces in one of the project quadrants, an on-ground investigation of the APE was conducted on Wednesday, January 15, 2014. First, a walk-over of all APE ground surfaces was completed. This served to identify any above-ground archaeological or historical remains, and to determine the location and extent of subsurface investigation necessary for project compliance. The entire project study area was photographed and descriptive notes were taken at this time. The western project quadrants are essentially absent of floodplain land surfaces. Both of these locations are characterized by highly disturbed areas of past grading and other land altering activities related to the construction of a church (southwestern), development access point and home site (northwestern). Much of this area is in paved roads, driveways, and parking areas. Likewise, the two eastern project quadrants were rife with disturbance as illustrated by its underlying Udorthents fill designation, and the location of graded and paved areas at the eastern limits. The somewhat expansive floodplain sections were distinguished by wetlands, oxbows, and other areas unfit for the excavation of shovel test pits. However, one elevated landform with well-drained soils was identified within the northeastern quadrant in the APE boundaries.

A total of three shovel test pits were excavated along the small landform in the northeastern quadrant. This area measured roughly 100ft. in length (east-west) by 50ft. in width (north-south). This testable section of the APE was surrounded by wetlands and the Broad River to the west, a large oxbow immediately to the north, the raised US64 roadway to the south, and another small wetland area bordered by slope and impacts to the east. The three shovel test pits were spaced at 50ft. intervals along a short transect, with one located in the central portion of the landform and the remaining two situated at the western and eastern edges. For the most part, the subsurface soil profile was nearly identical for each of the shovel test pits. Stratum I contained 10YR4/2 grayish brown sandy loam with small pebbles and non-cultural gravel to 20cmbs – 30cmbs. Stratum II consisted of 10YR6/8 brownish yellow sand with water-worn pebbles and an occasional cobble or larger cobble fragment to 50cmbs – 60cmbs. Stratum III was typified by 7.5YR4/6 strong brown clayey sand subsoil with non-cultural gravels included. The third soil stratum was absent from the western-most shovel test pit (oxbow levee type formation) excavated closest to the Broad River. The second stratum extended to roughly 75cmbs before impenetrable tree roots were encountered. No cultural artifacts or features were encountered or unearthed during the excavation of project shovel test pits in the northeastern quadrant.

Following archaeological survey of the Bridge 87 APE in Rutherford County, North Carolina, no further archaeological input or work is recommended for the proposed project. Additional investigation of the APE is unlikely to recover meaningful data. A finding of "no historic properties affected" is considered appropriate for the project.

SUPPORT DOCUMENTATION

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

Other:

Signed:

Scott Eric Halvorsen

NCDOT ARCHAEOLOGIST

1/17/2014

Date