

Iredell County
Bridge No. 57 on SR 1302 (Cornelius Rd.)
over Cornelius Creek (Lake Norman)
Federal Aid Project No. BRZ-1302(41)
W.B.S. No. 42303.1.1
T.I.P. No. B-5142

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

4/23/14
DATE

Richard W. Hancock
By Richard W. Hancock, P.E.
Manager, Project Development & Environmental Analysis Unit

4-24-14
DATE

John F. Sullivan, III
John F. Sullivan, III, Division Administrator
Federal Highway Administration

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CATEGORICAL EXCLUSION

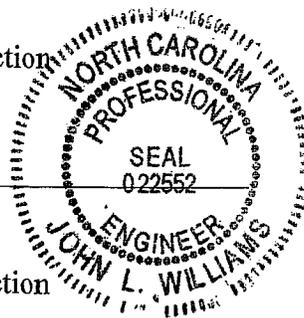
Documentation Prepared in
Project Development and Environmental Analysis Unit By:

4-23-14
DATE

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Bridge Project Development Section

4-23-14
DATE

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



PROJECT COMMITMENTS:

**Iredell County
Bridge No. 57 on SR 1302
Over Cornelius Creek
Federal Aid Project No. BRZ-1302(41)
W.B.S. No. 42303.1.1
T.I.P. No. B-5142**

Roadside Environmental Unit, Division Resident Engineer – Sensitive Watersheds

Bridge No. 57 is located in the Lake Norman Water Supply Watershed for the Catawba River. NCDWQ requests that NCDOT strictly adhere to “Design Standards in Sensitive Watersheds” throughout the design and construction of the project. This would apply for any area that drains to streams having WS CA classifications.

Hydraulic Unit, Division Resident Engineer- Hazardous Spill Catch Basins

This bridge project is located within the Critical Area of a Water Supply NCDOT will maintain hazardous spill catch basin in the project area.

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.

Roadway Design, Structure Design, Bike & Ped. Division- Bicycle Accommodations

This road is part of a recommended route for the Lake Norman Regional Bicycle Plan. It is recommended that the bridge be designed to accommodate 4 ft. paved shoulders continued for at least 100 ft. on either side of the approach roadway. Bicycle safe bridge railing height is also recommended.

Division Construction, PDEA- FERC Compliance

NCDOT will apply for conveyance of easement and obtain an approved commercial application from Duke Energy for the proposed project.

Hydraulic Unit, Roadside Environmental Unit, Natural Environment Unit –Buffer Rules

The project crosses Lake Norman which is subject to the Catawba buffer rules. The buffer protection rule requires maintaining and protecting existing 50-foot wide vegetated riparian (shoreline) areas along the Catawba River below Lake James and along the mainstem lake shorelines from, and including, Lake James to the North Carolina portion of Lake Wylie.

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INTRODUCTION: Bridge No. 57 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. 57 has a sufficiency rating of 7 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to structural evaluation of 2 out of 9 according to Federal Highway Administration (FHWA) standards. It is also considered functionally obsolete due to deck geometry of 2 out of 9.

Bridge No. 57 has a fifty-nine year old timber substructure which has a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few members are damaged or prematurely deteriorated. However, past a certain degree of deterioration, timber structures become impractical to maintain and upon eligibility are programmed for replacement. Bridge No. 57 is approaching the end of its useful life.

Bridge No. 57 carries 8,700 vehicles per day with 17,800 vehicles per day projected for the year 2035. The posted weight limit on the bridge is 32 tons for single vehicles and 36 tons for truck-tractor semi-trailers. Replacement of the bridge will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located in the northern Lake Norman area. The bridge is about 0.5 miles west of an I-77 overpass (see Figure 1). Development in the area is agriculture and residential in nature.

SR 1302 is classified as a minor collector in the Statewide Functional Classification System and it is not a National Highway System Route.

In the vicinity of the bridge, SR 1302 has a 22-foot pavement width with 2-foot grass shoulders (see Figure 3). 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 23.0 feet above the creek bed.

Bridge No. 57 is a five-span structure that consists of reinforced concrete deck on I-beam supported by timber piles with reinforced concrete caps. The existing bridge (see Figure 3)

was constructed in 1955. The overall length of the structure is 200 feet. The clear roadway width is 24.0 feet. The posted weight limit on this bridge is 32 tons for single vehicles and 36 tons for TTST's.

There are no utilities attached to the existing structure, but Duke Energy Company has aerial power transmission lines with communication cable attached, running the length of the L line. Alltel Telephone is present with buried fiber optic cable on either side of the bridge as well as the length of the project. PSNC energy is responsible for natural gas in the area but there are no lines in the general area of the project. There are no water or sewer lines within the limits of this project. Utility impacts are anticipated to be low.

The current traffic volume of 8,700 vehicles per day (VPD) is expected to increase to 17,800 VPD by the year 2035. The projected volume includes one percent truck-tractor semi-trailer (TTST) and three percent dual-tired vehicles (DT). The posted speed limit is 55 miles per hour in the project area. Twenty-five school buses cross the bridge daily on their morning and afternoon routes.

There were three accidents reported in the vicinity of Bridge No. 57 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 SR 1302 is part of the Lake Norman Regional Bicycle Plan. Sidewalks do not exist on the existing bridge and there is no indication of pedestrian usage on or near the bridge. No pedestrian accommodations are required for this project.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a bridge approximately 200-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. The roadway grade of the new structure will be near the existing grade.

Bridge No. 57 is not located along a designated bicycle route; however, this road is part of a recommended route for the Lake Norman Regional Bicycle Plan as well as the Mooresville Comprehensive Bicycle Plan which identifies this roadway as a future bicycle facility. As a result, 4-foot paved shoulders and bicycle safe bridge railing will be included in the design.

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 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 collector.

B. Reasonable and Feasible Alternatives

Three alternatives for replacing Bridge No. 57 that were studied in detail are described below.

Alternate 1

Alternate 1 involves replacement of the structure in place with temporary onsite detour (see Figure 2A). Improvements to the approach roadways will be required for a distance of approximately 408 feet to the west and 355 feet to the east of the structure. This alternate will be designed using standard AASHTO guidelines with a design speed of 60 mph.

Alternate 2

Alternate 2 involves replacement of the structure on a new location to the north of the existing bridge (see Figure 2B). The existing bridge would serve as an on-site detour. Improvements to the approach roadways will be required for a distance of approximately 639 feet to the west and 738 feet to the east of the structure. This alternate will be designed using standard AASHTO guidelines with a design speed of 60 miles per hour.

Alternate 3 (Preferred)

Alternate 3 involves replacement of the structure parallel to the existing structure (see Figure 2C). The existing bridge would serve as an on-site detour. Improvements to the approach roadways will be required for a distance of approximately 1148 feet west and 796 feet to the east of the structure. This alternate will design will be designed using standard AASHTO guidelines with a design speed of 60 miles per hour.

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 SR 1302.

“Rehabilitation” of the old bridge is not practical due to its age and deteriorated condition. Rehabilitation of a timber structure is generally practical only when a few members are damaged or prematurely deteriorated. However, past a certain degree of deterioration, timber structures become impractical to maintain and upon eligibility are programmed for replacement.

Staged Construction is not feasible for this bridge because the 24-foot deck width and beam configuration will not support removal of a portion and maintenance of traffic on the remaining portion.

Offsite Detour would not be feasible because NC 150 has a high ADT traveling through Mooresville, so adding an extra 8,700 vpd would create unacceptable delays.

D. Preferred Alternative

Bridge No. 57 will be replaced parallel to the existing bridge shown by Alternative 3 in Figure 2C. Alternate 3 is preferred because it accommodates future widening and it's near the existing grade. There were no objections by stakeholders and smaller benefits such as reduced construction time and complexity with more of a buffer for equipment.

NCDOT Division 12 concurs with the selection of Alternative 3 as the preferred alternative.

IV. ESTIMATED COSTS

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

	Alternative 1	Alternative 2	Alternative 3 Preferred
Structure	\$ 627,000	\$ 627,000	\$ 576,000
Roadway Approaches	\$ 734,000	\$ 590,000	\$ 820,000
Detour Structure and Approaches	\$ 420,000	\$ 0	\$ 0
Structure Removal	\$ 83,000	\$ 83,000	\$ 72,000
Misc. & Mob.	\$ 499,000	\$ 372,000	\$ 346,000
Eng. & Contingencies	\$ 337,000	\$ 229,000	\$ 286,000
Total Construction Cost	\$ 2,700,000	\$ 1,900,000	\$ 2,100,000
Right-of-way Costs	\$ 153,000	\$ 93,000	\$ 155,000
Right-of-way Utility Costs	\$ 63,000	\$ 63,000	\$ 63,000
Total Project Cost	\$ 2,916,000	\$ 2,056,000	\$ 2,318,000

V. NATURAL ENVIRONMENT

Physical Characteristics

Water Resources

Water resources in the project study area are part of the Catawba River basin (United States Geological Survey Hydrologic Unit 03050101). The project crosses Cornelius Creek which was flooded in 1963 due to the creation of Lake Norman. There are no Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supplies (WS-I or WSII), or ORW streams within one mile of the project study area. No 303(d) streams are listed on or within one mile of the project area. There are no wetlands located in the project study area.

The project crosses Lake Norman which is subject to the Catawba buffer rules. The buffer protection rule 15A NCAC 2B .0243 requires maintaining and protecting existing 50-foot wide vegetated riparian (shoreline) areas along the Catawba River below Lake James and along the mainstem lake shorelines from, and including, Lake

James to the North Carolina portion of Lake Wylie. Lake Norman is a Reservoir and this project falls within the Critical Area and Hazardous Spill Basin Boundary.

Table 1. Water resources in the project study area.

Stream Name	DWQ Index Number	Best Usage Classification
Lake Norman	11-(75)	WS-IV,B;CA

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

Map ID	Width @ Bridge (ft)	Water Depth @ Bridge (ft)	Substrate	Clarity
Lake Norman	141	12	Sand, Mud	Low

Biotic Resources

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

Community	Coverage (ac.)
Maintained/ Disturbed	3.6
Dry-Mesic Oak-Hickory Forest	2.6
Total	6.2

Jurisdictional Topics

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

Plants and animals with federal classifications of Endangered (E), Threatened (T),

Proposed Endangered (PE), Proposed Threatened (PT), are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of September 22, 2010, the United States Fish and Wildlife Service list a total of two federally protected species for Iredell County. Habitat for dwarf-flowered heartleaf exists in the additional project study area in the dry-mesic oak-hickory forest on the southside of the project extension but a March 31, 2014 survey by NCDOT personnel found no plants. A review of NCNHP records on April 1, 2014 indicates no known occurrence of the Dwarf-flowered heartleaf within 1.0 mile of the study area.

Dwarf-flowered Heartleaf

Minimal habitat for dwarf-flowered heartleaf exists in the additional project study area in the dry-mesic oak-hickory forest on the northeast and southeast quadrants of the project but a September 28, 2011 survey by NCDOT personnel found no plants. A review of NCNHP records, updated October 19, 2011 indicates no known occurrence of the Dwarf-flowered heartleaf within 1.0 mile of the study area, therefore the biological conclusion is **No Effect**.

The bald eagle has been delisted from the Endangered Species Act as of August 8, 2007. It is still protected under the Bald and Golden Eagle Protection Act. Suitable habitat for bald eagle does exist in the project study area along Lake Norman. A survey for nest trees was conducted on September 28, 2011 within the study area and to a distance of 660 feet on all sides with no nests or eagles being observed.

Federally protected species listed for Iredell County.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Glyptemys muhlenbergii</i>	Bog turtle	T (S/A)	No	No Effect
<i>Hexastylis naniflora</i>	Dwarf-flower heartleaf	T	Yes	No Effect

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 January 7, 2014).

Archaeology

The NCDOT Archaeology Group first reviewed the project information in December 2009 (Programmatic Agreement # 09-11-0018). The review indicated there was potential for the presence of prehistoric archaeological sites within the project's Area of Potential Effects (A.P.E.). An archaeological survey was conducted by NCDOT archaeologists on 6/15/2010. The survey identified no archaeological sites within the A.P.E. A No Prehistoric or Historic Properties Present Form was submitted to the project manager on 8/6/2010. Preliminary design plans for three bridge alternatives were submitted to the Archaeology Group on 12/17/2013. The new information was reviewed, and no additional archaeological survey work is necessary. An updated No National Register of Historic Places Eligible or Listed Archaeological Sites Present of Affected Form was submitted on 3/20/2014 (see attached form).

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 a new 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

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.

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.

Iredell 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, One Lake One Day Organization, Duke Energy & Town of Mooresville.

The **N.C. Wildlife Resource Commission** and **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.

Duke Energy provides hydroelectricity for Lake Norman. A FERC permit is required for this project.

Response: Lake Norman is managed by Duke Energy for generation of hydroelectricity and any project affecting the Lake is subject to compliance with the rule of the Federal Energy Regulatory Commission (FERC). Duke Energy has indicated they do not currently have a preference among the alternatives but that regardless of which alternative selected NCDOT will apply for conveyance of easement and obtain an approved commercial application from Duke Energy for the proposed project.

The **N.C. Division of Water Quality** requests that NCDOT strictly adhere to “Design Standards in Sensitive Watersheds” throughout the design and construction of the project. This would apply for any area that drains to streams having WS CA classifications. Should the bridge project be located within the Critical Area of a Water Supply NCDOT may be required to design, construct, and maintain hazardous spill catch basin in the project area.

Response: NCDOT will adhere to “Design Standards in Sensitive Watersheds” throughout the design and construction of the project. NCDOT will maintain hazardous spill catch basins in the project area.

The **Town of Mooresville** has stated that SR 1302 is part of the recommended route for the Lake Norman Regional Bicycle Plan. They ask for the bridge to include a four-foot shoulder to accommodate bicycle lanes. The Mooresville Comprehensive Transportation Plan recommends widening Cornelius Rd. to a four-lane divided facility.

Response: Four –foot paved shoulders as well as bike safe rails have been included into the design. Alternate 3 is designed to have Cornelius Road developed into a 4-lane median divided facility in the future.

The **Army Corps of Engineers** and **One Lake One Day** had no special concerns for this project.

IX. PUBLIC INVOLVEMENT

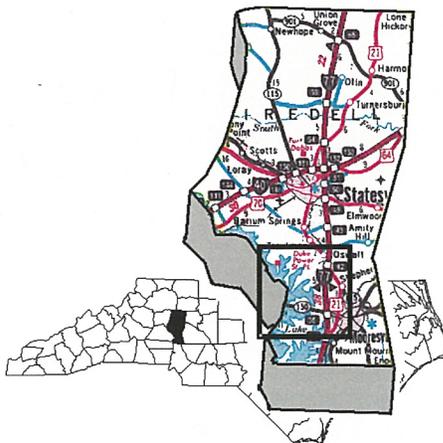
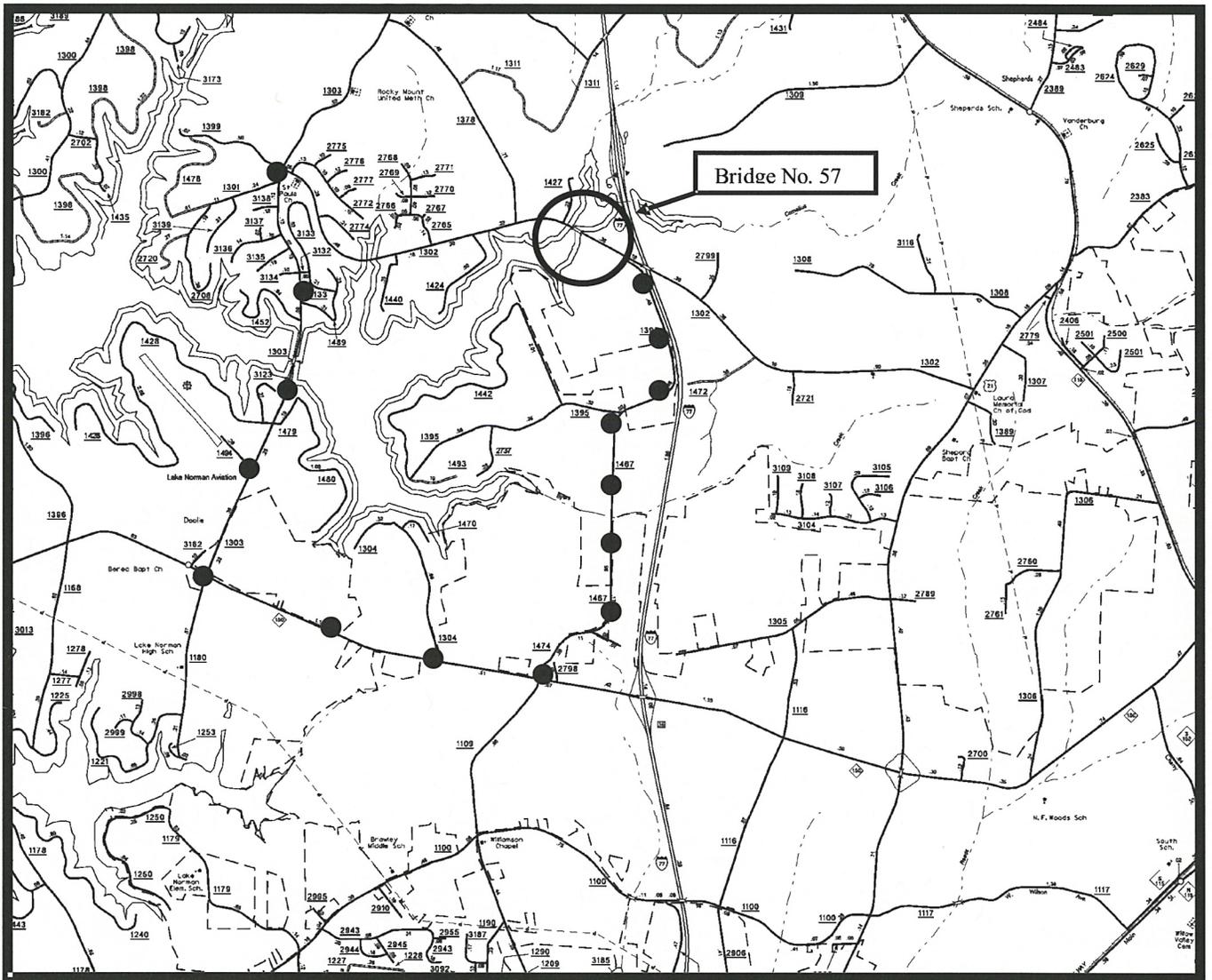
A newsletter has been sent to all those living along SR 1302. No comments have been received to date.

Based on the lack of responses to the newsletter, a Citizen's Informational Workshop was determined unnecessary.

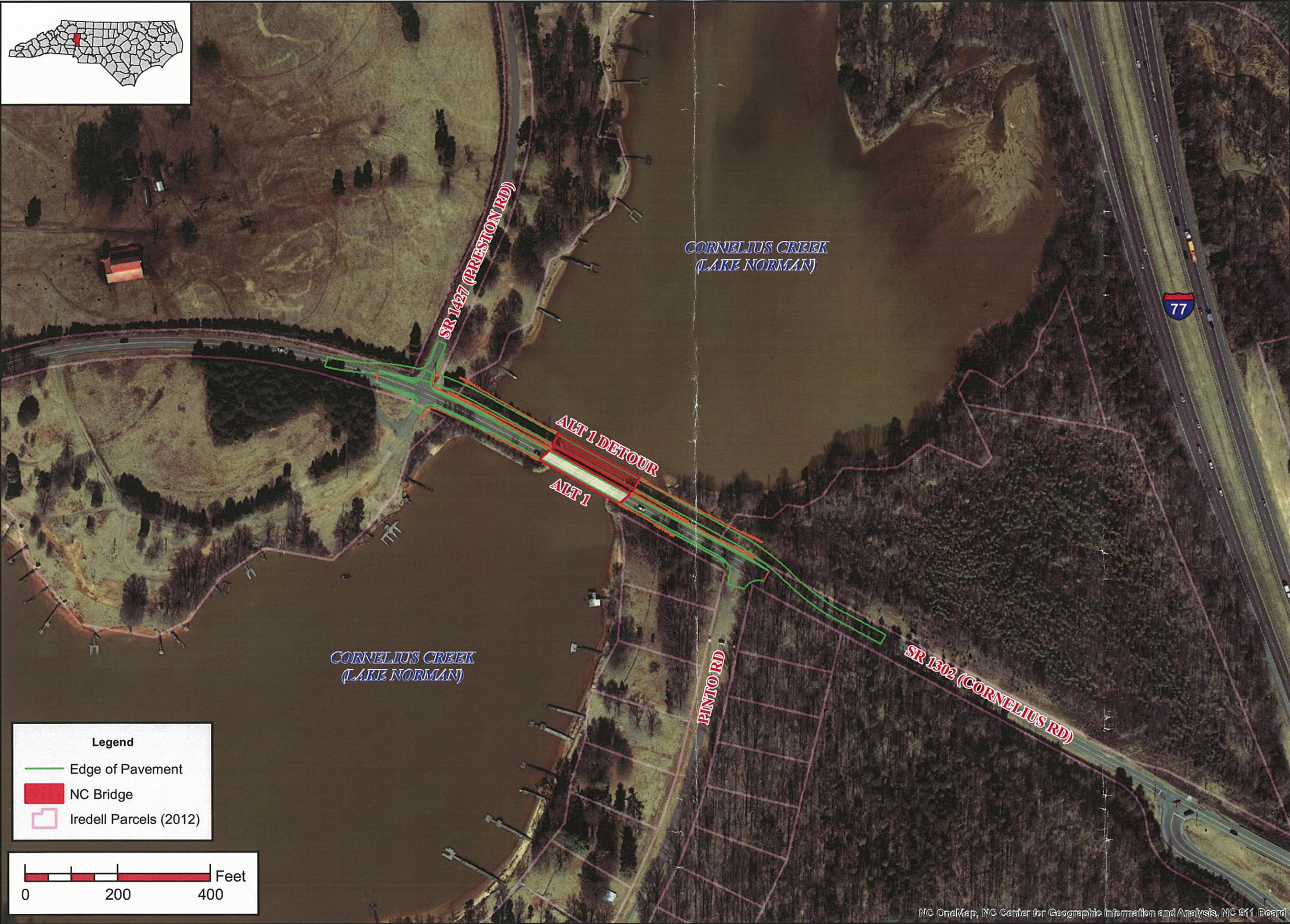
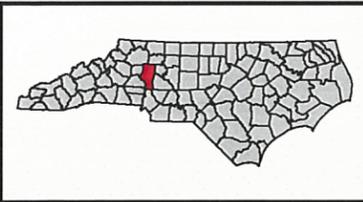
There is not substantial controversy on social, economic, or environmental grounds concerning the project.

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>IREDELL COUNTY REPLACE BRIDGE NO. 57 ON SR 1302 OVER CORNELIUS CREEK B-5142</p>	
<p>Figure 1</p>	



Legend

- Edge of Pavement
- NC Bridge
- Iredell Parcels (2012)



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



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

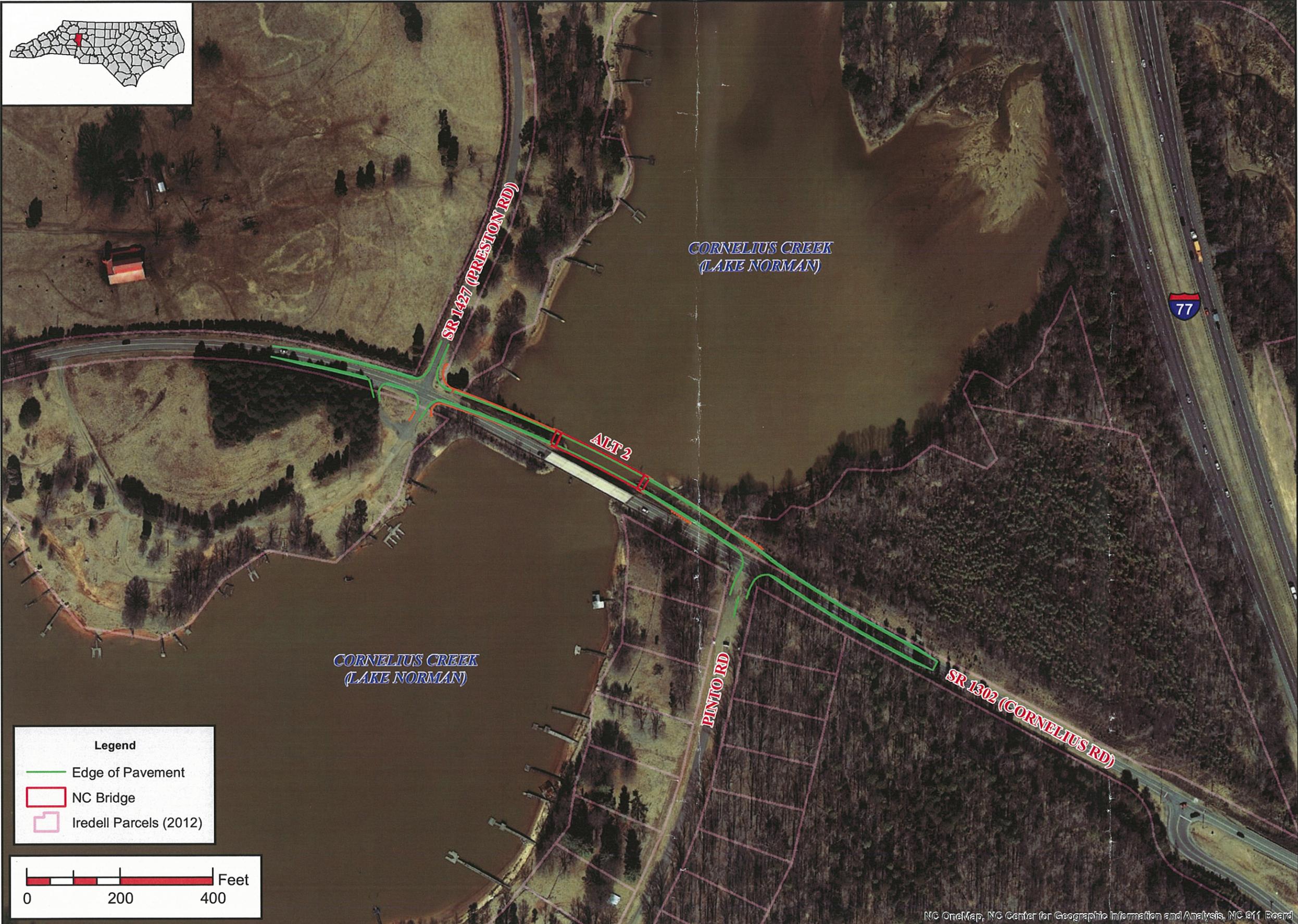
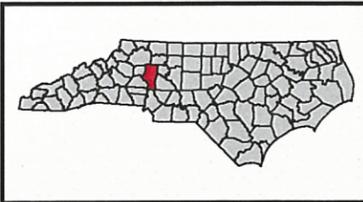
AERIAL MAP
ALTERNATIVE 1 REPLACE IN
PLACE WITH TEMPORARY
ON SITE DETOUR
OVER CORNELIUS CREEK
IREDELL COUNTY
TIP PROJECT B-5142



County: IREDELL	
Div: 12	TIP# B-5142
WBS: 42303.1.1	
Date: March 2014	

Figure
2a

By: J.TORTORELLA



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



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

AERIAL MAP
ALTERNATIVE 2 REPLACE ON
NEW LOCATION USING THE EXISTING
BRIDGE AS AN ON SITE DETOUR
OVER CORNELIUS CREEK
IREDELL COUNTY
TIP PROJECT B-5142



County: IREDELL

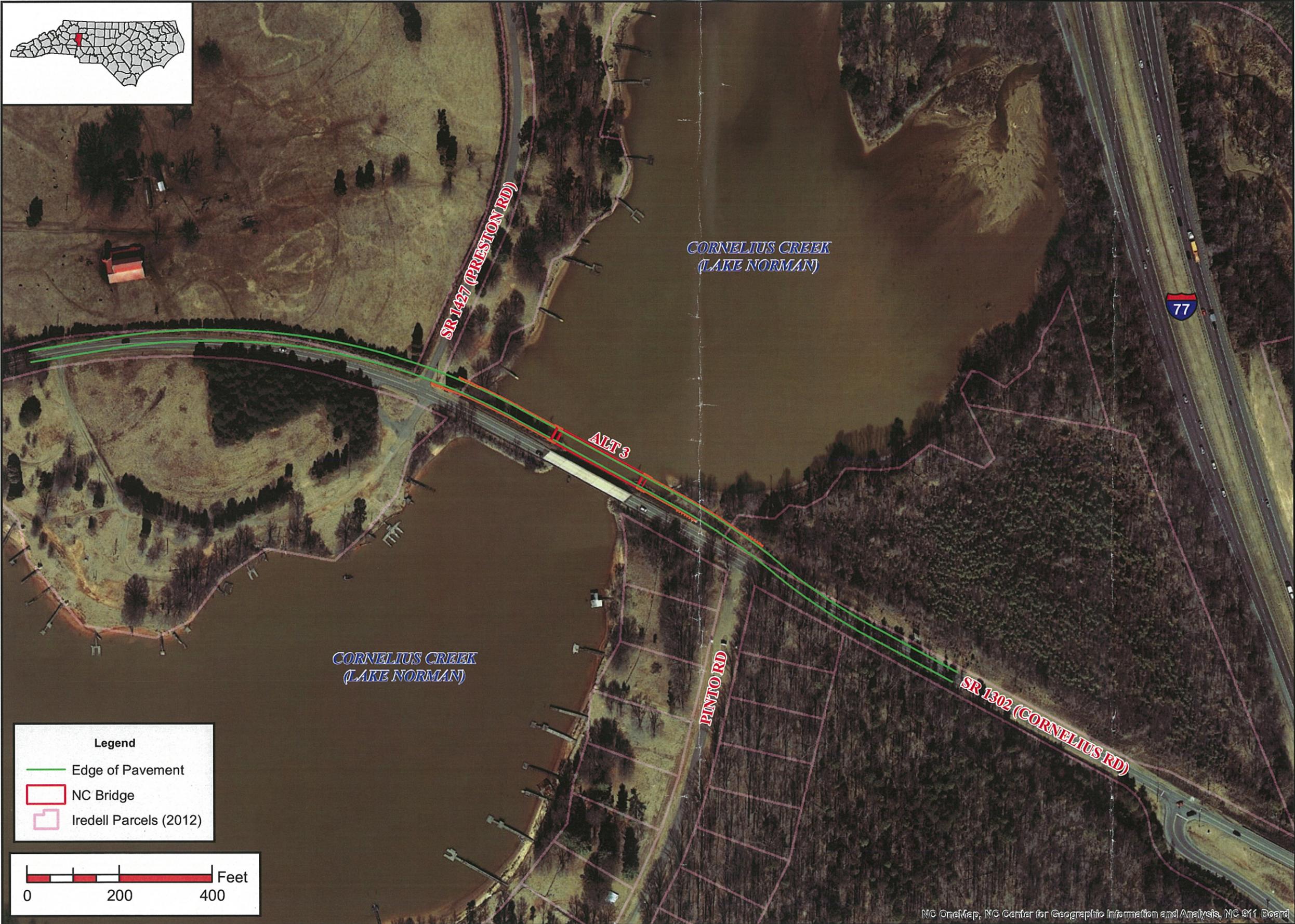
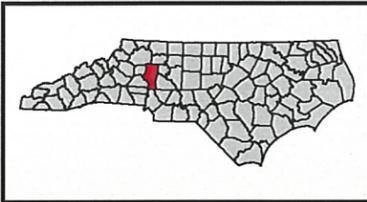
Div: 12 TIP# B-5142

WBS: 42303.1.1

Date: March 2014

Figure
2b

By: J.TORTORELLA



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

AERIAL MAP
ALTERNATIVE 3 REPLACE ON
NEW LOCATION WITH PARALLEL
STRUCTURE USING THE EXISTING
BRIDGE AS AN ON SITE DETOUR
OVER CORNELIUS CREEK
IREDELL COUNTY
TIP PROJECT B-5142



County:
IREDELL

Div: 12 TIP#
B-5142

WBS:
42303.1.1

Date:
March 2014

Figure
2c

By: J.TORTORELLA

B-5142 Bridge No. 57 over Cornelius Creek on SR 1302

Figure 3



Looking South from Bridge No. 57



South Face of Bridge No. 57

09-11-0018



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:	B-5142	County:	Iredell
WBS No.:	42302.1.1	Document Type:	CE
Fed. Aid No:	BRZ-1302(41)	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):	Nationwide 3
<u>Project Description:</u>			
Replace Bridge No. 57 over Cornelius Creek on SR 1302, Mooresville vicinity. Project plans have been revised since 2009 with the footprint of the project changing slightly.			

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:

Description of review activities, results, and conclusions:

Review of HPO quad maps, historic designations roster, and indexes was undertaken on 12/4/09, during which a National Register-Listed property, the ca. 1820s-1830s Cornelius House (ID0016) was identified in the project APE. A survey was conducted to re-evaluate the property for eligibility to the National Register of Historic Places (NRHP). After examination, the Cornelius House showed significant changes since its listing to the NRHP in 1980. The architectural historian determined that the Federal Style Cornelius House with distinctive tripartite plan did not retain its integrity of setting, design, materials, workmanship, feeling and association enough to be considered eligible for the NRHP, failing to convey its historic significance, and therefore cannot be considered a historic property. The original determination made in 2010 for Historic Architecture resulted in a "No Historic Properties Present/Affected" finding.

Historic Architecture and Landscapes NO HISTORIC PROPERTIES PRESENT OR AFFECTED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

This project was resubmitted by project engineers December of 2013 due to a change in the project footprint. New design plans were provided with Alternate 3 being the preferred alternative. Again, since the National Register-Listed Cornelius House (ID0016) has been determined to no longer be eligible for the NRHP and its status has not changed since 2010 (according to Google Street View, September 2012 image), NCDOT Historic Architecture makes a finding of "No Historic Properties Present/Affected" for this project.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

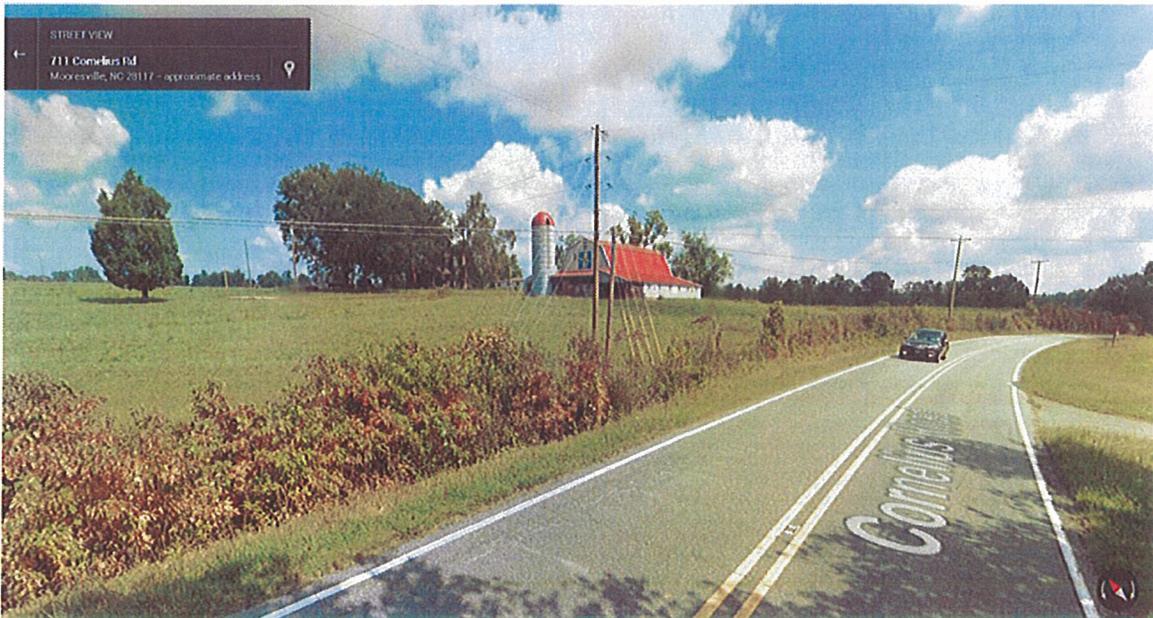
Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OR AFFECTED**

Megan Purgett

NCDOT Architectural Historian

1/7/14

Date



Cornelius House and ca. 1990s barn, Cornelius Road, Iredell County, facing northeast. Image courtesy of Google Street View.

09-11-0018



**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-5142 *County:* Iredell
WBS No: 42303.1.1 *Document:* Categorical Exclusion
F.A. No: brz-1302(41) *Funding:* State Federal

Federal Permit Required? Yes No *Permit Type:* FERC

Project Description: Replace Bridge No. 57 on SR 1302 over Cornelius Creek (Lake Norman). Area of Potential Effects (A.P.E.) is an approximately 60-meter (200-foot) wide corridor that extends along SR 1302 approximately 240 meters (800 feet) in each direction from the bridge. This includes three proposed alternatives. Design plans provided.

Note: this project was first assigned on 12/9/2009. A No Historic Properties Present form was submitted on 8/6/2010. Design plans for three alternatives were submitted on 12/18/2013.

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 original review (12/9/2009) included an examination of a topographic map, the Iredell County soil survey, an aerial photograph, and listings of previously recorded sites, previous archaeological surveys, and previous environmental reviews at the Office of State Archaeology (OSA). Also, a visual reconnaissance of the project was conducted on 1/6/2010.

There are no previously recorded archaeological sites within or adjacent to the A.P.E., although

many archaeological sites have been recorded along the rivers and streams that would become Lake Norman. The A.P.E. has not been previously surveyed for archaeological sites, and the A.P.E. is not within an area that has been reviewed by the State Historic Preservation Office (HPO).

The topographic map shows the landforms in all four quadrants are gently- to moderately-sloped ridge toes with a low to moderate potential for archaeological sites.

The soil survey identifies the soil in all quadrants as eroded or severely eroded Cecil sandy or Cecil clay loam, other than somewhat poorly-drained Chewacla soil next to the creek (now Lake Norman).

The archaeological reconnaissance conducted on 1/6/2010 identified landforms with low archaeological potential in southwest, northwest and northeast quadrants, and moderate potential in the southeast quadrant. The southwest quadrant consists of a raised roadbed from the bridge west for 50 meters (164 ft.), then is occupied by a paved turn-around or boat launch area. The northwest quadrant consists of a raised roadbed from the bridge west for 60 meters (197 ft.), then is occupied by a road (SR 1427), then a slope up. The northeast quadrant consists of a raised roadbed from the bridge east for 70 meters (230 ft.), then a slope up to the east.

Archaeological survey was conducted in the southeast quadrant on 6/15/2010. The survey excavated 5 shovel tests along the south side of the road and the east side of the lake. None contained any artifacts (see attached Table). The A.P.E. from the lake east for 60 meters (197 ft.) is a gentle slope up to a driveway for a (future) residential development, then a moderately-sloped, wooded area. The shovel tests contained eroded, rocky clay loam.

See attached design plans, photographs, and maps.

Preliminary design plans for three alternatives for the bridge replacement were provided on 12/17/2013. All three alternatives show that most of the impacts will be along the north side of the existing bridge. The 1/6/2010 reconnaissance found that the landforms in the northwest and northeast quadrants have a low potential for archaeological sites. The 6/15/2010 archaeological survey consisted of shovel tests in the southeast quadrant. The survey did not identify any archaeological sites, and no further archaeological work is recommended.

SUPPORT DOCUMENTATION

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

Other: design plans

Signed:

Caleb Smith

3/20/2014

NCDOT ARCHAEOLOGIST

Date