

Buncombe County  
Bridge No. 307 on SR 2426 (Shope Creek Road) over Shope Creek  
Federal-Aid Project No. BRZ-2426(2)  
W.B.S. No. 55010.1.FD1  
STIP Project B-5510

**ADMINISTRATIVE ACTION  
CATEGORICAL EXCLUSION**

UNITED STATES DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
AND  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

10/31/2016

DATE

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James McInnis, Jr., PE, Project Engineer  
Project Development & Environmental Analysis Unit

11/1/2016

DATE

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

Buncombe County  
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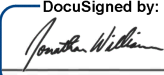
October 2016

*Documentation Prepared by:*

*Stewart Engineering, Inc.  
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10/31/2016

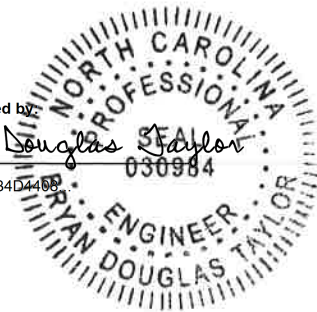
DATE

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Jonathan Williamson, AICP  
Senior Transportation Planner

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Bryan Douglas Taylor  
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Doug Taylor, PE  
Manager of Transportation Services



*Documentation Prepared for:  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation*

10/31/2016

DATE

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Angela Sanderson  
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Angela Sanderson  
Project Planning Engineer

**PROJECT COMMITMENTS:**

Buncombe County  
Bridge No. 307 on SR 2426 Over Shope Creek  
Federal Aid Project No. BRZ-2426(2)  
W.B.S. No. 55010.1.FD1  
STIP Project B-5510

**NCDOT Design Groups / Division Resident Construction Engineer**

The NCWRC has identified Shope Creek as 'Wild Trout Waters' and capable of supporting a trout population. Therefore, a moratorium on all in-water work will be in place from January 1 to April 15 of any given year.

**NCDOT Natural Environment Section (NES) – Biological Surveys Group**

Construction authorization will not be requested until Endangered Species Act Section 7 compliance is satisfied for those species with a Biological Conclusion of "Unresolved." These species include: Gray Bat; Northern long-eared bat; Spotfin Chub; Appalachian Elktoe; and Tan Riffleshell.

**NCDOT Human Environment Section (HES) – Archaeology Group**

Additional archaeology work will be required and conducted should design plans change to encompass property outside of the currently defined APE.

Buncombe County  
Bridge No. 307 on SR 2426 (Shope Creek Road) over Shope Creek  
Federal-Aid Project No. BRZ-2426(2)  
W.B.S. No. 55010.1.FD1  
STIP Project B-5510

**INTRODUCTION:** Bridge No. 307 is included in the latest approved North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP). No substantial environmental impacts are anticipated. The project is classified as a Federal “Categorical Exclusion”.

**I. PURPOSE AND NEED**

The purpose of STIP Project B-5510 is to replace Buncombe County Bridge No. 307 on SR 2426 (Shope Creek Road) over Shope Creek. See Figure 1 in the Appendix for a project vicinity map.

NCDOT Bridge Management Unit records indicate Bridge No. 307 has a sufficiency rating of 48.49 out of a possible 100 for a new structure. The bridge is considered functionally obsolete due to a structural appraisal of 4 out of 9 and a deck geometry appraisal of 2 out of 9.

Bridge No. 307 was built in 1962. The superstructure and substructure have timber elements that are over fifty years old. Timber components have a typical life expectancy of 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 elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement. Timber components of Bridge No. 307 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities, therefore the bridge is approaching the end of its useful life.

In 2013, Bridge No. 307 carried 630 vehicles per day and is projected to carry 1,260 vehicles per day in the future (2025 ADT). Bridge No. 307 carries one lane of traffic. The substandard deck width (18 feet) is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

**II. EXISTING CONDITIONS**

The project is located within Buncombe County, and SR 2426 is a no-outlet spur off of SR 2419 (Bull Creek Road). Land use in the area is rural residential and consists of single-family and mobile-home residences on medium-size individual lots.

SR 2426 is classified as a rural local road in the Statewide Functional Classification System and it is not a National Highway System Route.

In the vicinity of the bridge, SR 2426 is two lanes, with a 16-foot pavement width with 2-foot grass shoulders. The roadway is situated approximately six feet above the creek bed.

Bridge No. 307 is a one-span structure that consists of steel girders on wooden posts and caps and a wooden deck with an asphalt-wearing surface. The end bents consist of wooden caps on timber piles with timber bulkheads. The existing bridge was constructed in 1962. The overall length of the structure is 27 feet. The bridge clear roadway width is 17 feet. The posted weight limit on this bridge is 18 tons for single vehicles and 24 tons for truck tractor semi-trailers.

There are no utilities attached to the existing structure, but overhead power and telephone lines cross the branch just south of the bridge.

The current (2013) traffic volume of 630 vehicles per day (VPD) is expected to increase to 1,260 VPD by the year 2025. The current volume includes zero percent truck-tractor semi-trailers and six percent dual-axle trucks. The posted speed limit is 35 miles per hour in the project area.

No accidents have been reported in the vicinity of Bridge No. 307 during the last ten-year period.

This section of SR 2426 is identified as an “Other Bicycle Corridor” in the Land of Sky Regional Council 2013 Blue Ridge Bike Plan, identifying it as a low-priority bicycle facility. Buncombe County planning indicated the road is not heavily travelled by bicyclists or vehicles, though local residents do travel on the road by bicycle daily.

### **III. ALTERNATIVES**

#### **A. Preferred Alternative**

The preferred alternative is to replace existing Bridge No. 307 with a double-barrel, 8-foot wide by 7-foot high reinforced concrete box culvert approximately 90 feet in length. The culvert size is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing grade.

The approach roadway will extend approximately 150 feet from the northeast end of the new culvert and approximately 160 feet from the southwest end of the new culvert. The approaches will include a 20-foot pavement width providing two 10-foot lanes. Three-foot grass shoulders will be provided on each side (7-foot shoulders where guardrail is included). See Figure 2 in the Appendix for the proposed design plan. The roadway will be designed as a Rural Local Route using Sub Regional tier guidelines with a 30 mile-per-hour design speed.

Traffic will be maintained on-site during construction, the proposed culvert will be built in stages, allowing traffic to be shifted onto a portion of the culvert while the existing bridge is removed and the culvert completed.

**B. Alternatives Eliminated from Further Consideration**

**No Build** – The no build alternative would result in eventually closing the road, which is unacceptable given the lack of alternate routes.

**Rehabilitation** – The bridge was constructed in 1962 and the timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components which would constitute effectively replacing the bridge.

**Offsite Detour** – Due to SR 2426 being a dead-end road, an offsite detour is not feasible.

**IV. ESTIMATED COSTS**

The estimated costs, based on 2016 prices, are as follows:

Construction Cost	\$ 1,100,000
Right-of-way Costs	94,000
Right-of-way Utility Costs	13,000
Total Project Cost	\$ 1,207,000

**V. NATURAL ENVIRONMENT**

A *Natural Resources Technical Report* (June 2015) was prepared for the project to identify any potential impacts to natural resource features. Jurisdictional area determinations and protected species surveys were conducted in the study area between January 26 and 28, 2015.

**Physical Characteristics**

**Water Resources**

Water resources in the study area are part of the French Broad River Basin [U.S. Geological Survey (USGS) Hydrologic Unit 06010105]. Six streams were identified in the study area (Table 1). 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 one mile downstream of the study area. The North Carolina 2014 Final 303(d) list of impaired waters does not identify the streams within the study area as impaired waters. There are no NCDWR benthic samples available within the study area or within one mile downstream.

**Table 1 - Water Resources in the Study Area**

Stream Name	Map ID	NCDWQ Index Number	Best Usage Classification
Shope Creek	Shope Creek	6-78-18-3	C
Unnamed Tributary (UT) to Shope Creek	SB	6-78-18-3	C
UT to Shope Creek	SC	6-78-18-3	C
UT to Shope Creek	SD	6-78-18-3	C
UT to Shope Creek	SE	6-78-18-3	C
UT to Shope Creek	SF	6-78-18-3	C

**Waters of the United States**

Six jurisdictional streams were identified in the study area (Table 2). The jurisdictional streams in the study area have been designated as cool water streams for the purposes of stream mitigation.

**Table 2 – Jurisdictional Characteristics of Water Resources in the Study Area**

Map ID	Impacts (ft)	Classification	Compensatory Mitigation Required	River Basin Buffer
Shope Creek	300	Perennial	Yes	Not Subject
SB	0	Perennial	Yes	Not Subject
SC	0	Perennial	Yes	Not Subject
SD	0	Perennial	Yes	Not Subject
SE	25	Perennial	Yes	Not Subject
SF	0	Perennial	Yes	Not Subject
<b>Total</b>	<b>325</b>			

**Surface Waters and Wetlands**

Two jurisdictional wetlands were identified within the study area. Wetland classification and quality rating data are presented in Table 3. All wetlands in the study area are within the French Broad River Basin [U.S. Geological Survey (USGS) Hydrologic Unit 06010105]. Wetland sites are classified as either NCWAM Bottomland Hardwood Forest or Bog. Wetland WA occurs within the successional Piedmont/low mountain alluvial forest community and wetland WB occurs within the bottomland hardwood forest natural community.

**Table 3 – Jurisdictional Characteristics of Wetlands in the Study Area**

Map ID	NCWAM Classification	Hydrologic Classification	NCDWQ Wetland Rating	Impacts (ac)
WA	Bog	Riparian	57	0
WB	Bottomland Hardwood Forest	Riparian	42	0
			<b>Total</b>	<b>0</b>

**Permits**

The proposed project has been designated as a Categorical Exclusion for the purposes of National Environmental Policy Act documentation. As a result, a Nationwide Permit (NWP) 23 will likely be applicable. A NWP No. 33 may also apply 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. If a Section 404 permit is required a Section 401 Water Quality Certification from the NC Division of Water Resources will also be needed.

In a letter dated April 10, 2015, the North Carolina Wildlife Resources Commission recommended a construction moratorium for trout from January 1 to April 15 for the project.

**Federally Protected Species**

As of July 24, 2015 the United States Fish and Wildlife Service (USFWS) lists 11 federally protected species for Buncombe County (Table 4).

**Table 4 – Threatened and Endangered Species Listed for Buncombe County**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Glyptemys muhlenbergii</i>	Bog Turtle	T(S/A)	No	Not Required
<i>Glaucomys sabrinus coloratus</i>	Carolina Northern Flying Squirrel	E	No	No Effect
<i>Myotis grisescens</i>	Gray Bat	E	Unknown	Unresolved
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Unknown	Unresolved
<i>Erimonax monachus</i>	Spotfin Chub *	T	Unknown	Unresolved
<i>Alasmidonta raveneliana</i>	Appalachian Elktoe *	E	Unknown	Unresolved
<i>Microhexura montivaga</i>	Spruce-fir Moss Spider	E	No	No Effect
<i>Epioblasma florentina walkeri</i>	Tan Riffleshell *	E	Unknown	Unresolved
<i>Geum radiatum</i>	Spreading Avens	E	No	No Effect
<i>Spiraea virginiana</i>	Virginia Spiraea *	T	No	No Effect
<i>Gymnoderma lineare</i>	Rock Gnome Lichen	E	No	No Effect

E – Endangered

T – Threatened

T (S/A) – Threatened due to similarity of appearance

\* - Historic record (the species was last observed in the county more than 50 years ago)

Construction authorization will not be requested until Endangered Species Act Section 7 compliance is satisfied for those species with a Biological Conclusion of “Unresolved.” These species include: Gray Bat; Northern long-eared bat; Spotfin Chub; Appalachian Elktoe; and Tan Riffleshell.



### ***Bald Eagle and Golden Eagle Protection Act***

A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (one mile plus 660 feet) of the project limits, was performed on April 2, 2015 using 2014 and 2015 color aerials. No water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since there is 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. Additionally, a review of the NC Natural Heritage Program database on February 19, 2015 revealed no known occurrences of this species within one 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**

Under the provisions of a programmatic agreement between FHWA, NCDOT, HPO, OSA and the Advisory Council on Historic Preservation (effective July 1, 2009), NCDOT architectural historians reviewed the proposed project and determined that no surveys are required (see form dated April 4, 2015 in the Appendix).

### **Archaeology**

Two archaeological sites (31BN27 and 31BN670) are known within a mile radius of the bridge. It was determined that an archaeological survey was warranted. The NCDOT Archaeology Group conducted an archaeological investigation for the proposed bridge replacement project. The archaeological investigations show no significant archaeological sites are within the project's area of potential effect (APE). As a result of the current investigation, no further archaeological work is required for replacement of Bridge No. 307. However, additional work will be required should design plans change to encompass property outside of the currently defined APE. Documentation of these recommendations and conclusions are contained in the Appendix.

## **Community Impacts**

A *Community Impact Assessment* (June 2015) was prepared for the project to identify and assess the potential for community impacts as a result of the project. 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. There are soils classified as prime, unique, state important or locally important farmland in the vicinity of the project. Construction will involve a slight shift to the northwest of the existing alignment. Therefore, the project will involve the direct conversion of land with prime farmland soils. A preliminary screening with the NRCS Form AD-1006 resulted in a score of 54 points out of 160. A preliminary score of less than 60 cannot result in a notable impact on protected farmland soils.

Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations directs all federal agencies or their representatives to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. 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 Buncombe 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 mobile source air toxics (MSAT) concerns. Consequently, this project 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.

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 a substandard bridge will result in safer traffic operations.

The bridge replacement will not require any relocations nor 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.

Buncombe 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: 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, Buncombe County Planning Department, and the City of Asheville.

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: The current structure is a bridge built in 1962. The reason for initially building a bridge was not because a culvert would not work but because the design, materials, and labor were not practical at the time this structure was built. Based on the drainage area and design discharges, a two-barrel 8-foot wide by 7-foot high reinforced concrete box culvert was determined to be adequate from a hydraulics standpoint. The culvert will be buried below the

streambed and will be designed with alternating sills and low flow channel in one barrel and with a two-foot high sill in the other barrel, with floodplain benches at the entrance and outlet of the culvert to maintain normal channel flow. The culvert will be designed such that the slope, low flow velocities, and low flow channel designs are consistent with the existing stream. Because culverts generally cost less, require less maintenance throughout their service life, and last longer than bridges, a culvert is the preferred replacement structure type.

## **IX. PUBLIC INVOLVEMENT**

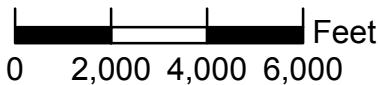
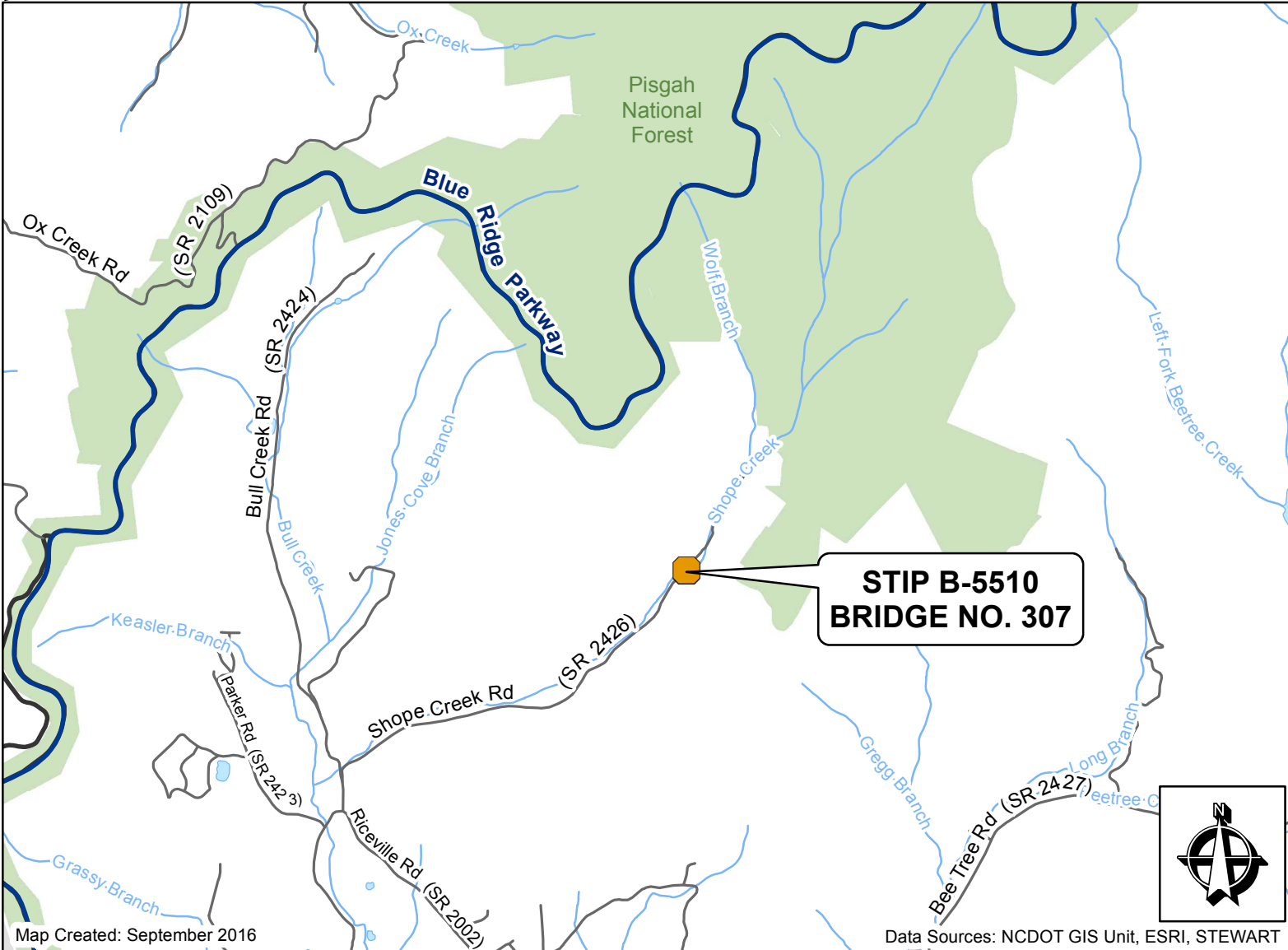
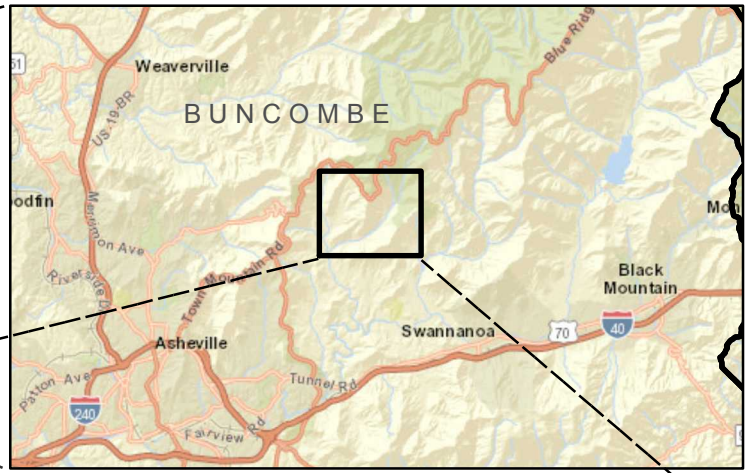
A landowner notification letter was sent to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.


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.

# APPENDIX



	<b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT</b>
	<b>BRIDGE NO. 307 ON SR 2426 (SHOPE CREEK RD) OVER SHOPE CREEK BUNCOMBE COUNTY STIP PROJECT B-5510</b>
<b>PROJECT VICINITY</b>	
<b>FIGURE 1</b>	

# BUNCOMBE COUNTY

## B-5510

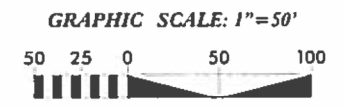
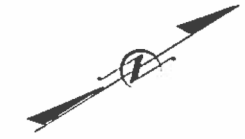
### ALTERNATE 2

### STAGE CONSTRUCTION

PROJECT REFERENCE NO. B-5510	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	
INCOMPLETE PLANS <small>DO NOT USE FOR R/W ACQUISITION</small>	
STEWART	MORFATT & NICHOL

ANTICIPATED DESIGN DATA

DESIGN STANDARDS	=	SUBREGIONAL TIER
DESIGN SPEED	=	30 MPH
ADT 2013	=	630
ADT 2033	=	
DHV	=	
D	=	
DUAL	=	
TTST	=	
MIN. RADIUS	=	250'
MAX GRADE	=	14%
K SAG	=	37
K CREST	=	19
SE MAX	=	0.04
CLASSIFICATION	=	RURAL LOCAL
TERRAIN	=	MOUNTAINOUS
DESIGN EXCEPTIONS	=	NONE

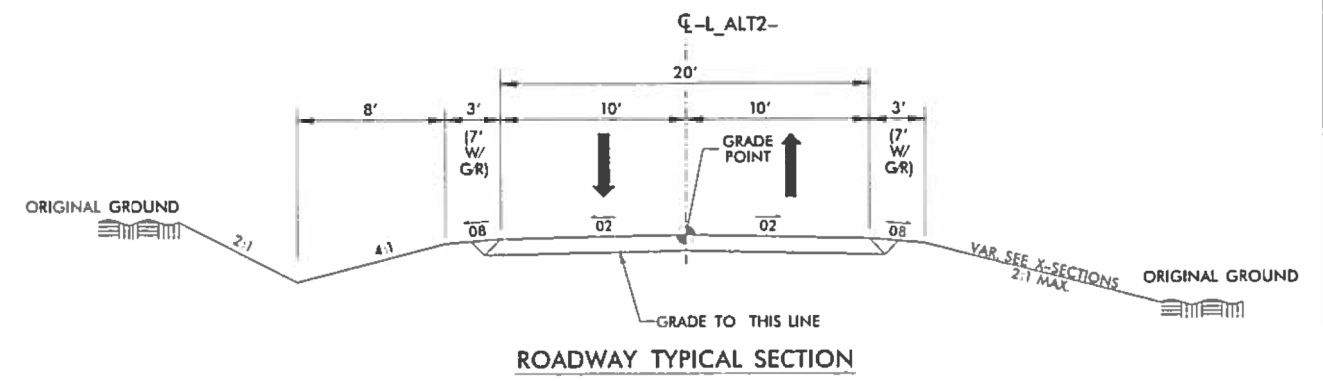
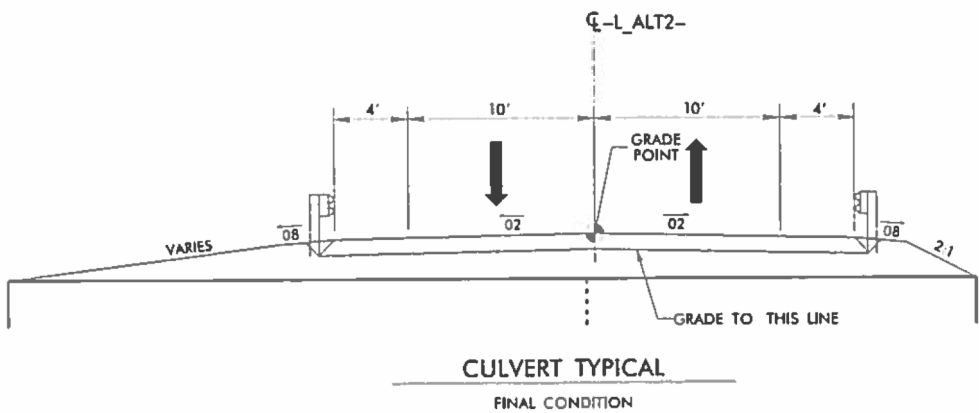
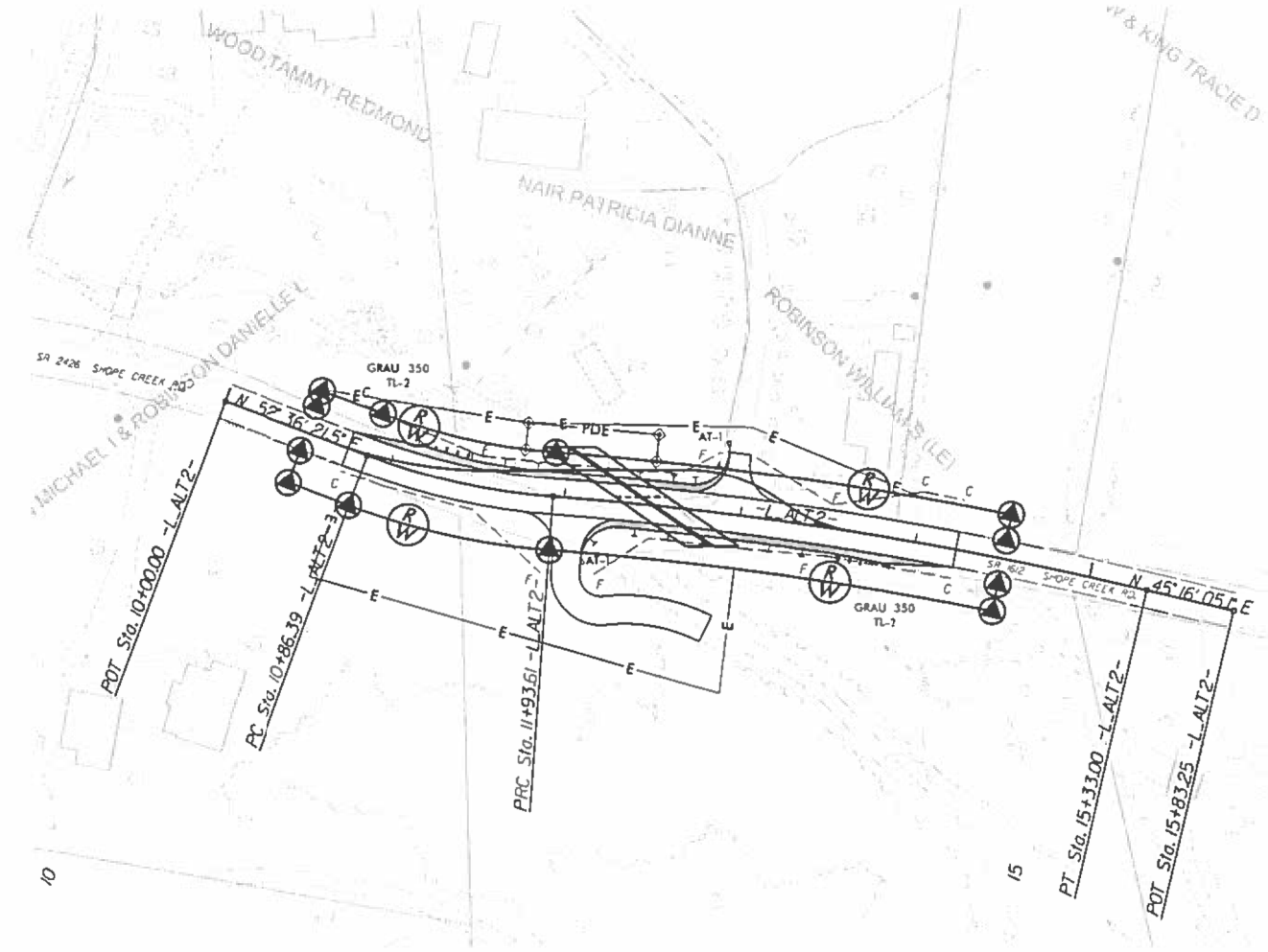


SEE SHEET 5 FOR -DET\_ALT2- ALIGNMENT  
SEE SHEET 6 FOR -L\_ALT2- PROFILE  
SEE SHEET 7 FOR -DET\_ALT2- PROFILE

Figure 2

-L\_ALT2-

PI Sta 11+40.37	PI Sta 13+63.66
$\Delta = 16^{\circ} 22' 55.9"$ (LT)	$\Delta = 9^{\circ} 02' 39.5"$ (RT)
D = 15' 16" 43.9"	D = 2' 39" 53.7"
L = 107.22'	L = 339.38'
T = 53.98'	T = 170.05'
R = 375.00'	R = 2150.00'



REVISIONS

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15-03-0048



## 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

<b>Project No:</b>	B-5510	<b>County:</b>	Buncombe
<b>WBS No.:</b>	55010.1.FD1	<b>Document Type:</b>	PCE or CE
<b>Fed. Aid No:</b>	NA	<b>Funding:</b>	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	NW
<b>Project Description:</b> Replacement of Bridge No. 307 over Shope Creek on SR 2426 (Shope Creek Road).			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<p><b><u>Description of review activities, results, and conclusions:</u></b>  Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on March 31, 2015. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 100' from the centerline each way and 700' from each end of the bridge. According to Buncombe County GIS/Tax information, the structures within the APE are mid to late 20<sup>th</sup> century houses and consist of frame houses, mobile homes, and modular homes. According to tax photographs of the properties and Bing Maps Birds Eye View, all of the properties are unremarkable and not eligible for National Register listing. Bridge No. 307, built 1962, is also not eligible for National Register listing. There are no National Register listed or eligible properties, and no survey is required. If design plans change, additional review will be required.</p> <p><b><u>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:</u></b>  HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Buncombe 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.</p>
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### SUPPORT DOCUMENTATION

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

### FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

*Kate Hubbard*

4/1/2015

NCDOT Architectural Historian

Date

Historic Architecture and Landscapes NO SURVEY REQUIRED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.



15-03-0048



**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.

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**PROJECT INFORMATION**

*Project No:* **B-5510** *County:* **Buncombe**  
*WBS No:* **55010.1.FD1** *Document:* **PCE or CE**  
*F.A. No:* **Not Provided** *Funding:*  State  Federal

*Federal Permit Required?*  Yes  No *Permit Type:* **NWP 3 and/or NWP 14**

**Project Description:**

*The project calls for the replacement of Bridge No. 307 on SR 2426 (Shope Creek Road) over the Shope Creek in Buncombe County. The archaeological Area of Potential Effects (APE) for the project is defined as a 1,400-foot (426.72 m) long corridor running 700 feet (213.36 m) northeast and 700 feet southwest along Shope Creek Road from the center of Bridge No. 307. The corridor is approximately 200 feet (60.96 m) wide extending 100 feet (30.48 m) on either side of the road from its present center.*

**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:***

Bridge No. 307 is located northeast of Asheville, northwest of Black Mountain, and south of the Blue Ridge Parkway in the eastern half of Buncombe County, North Carolina. The project area is plotted near the southern portion of the Craggy Pinnacle USGS 7.5' topographic quadrangle (Figure 1).

A map review and site file search was conducted at the Office of State Archaeology (OSA) on April 31, 2015. No previously recorded archaeological sites are identified within the APE, but two sites (31BN27 and 31BN670) are reported within a mile radius of the bridge. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2015), there are no known historic architectural resources within the APE that may yield intact archaeological deposits. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), and historic maps (North Carolina maps website) were examined for information on environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance. An archaeological field investigation was carried out on May 19, 2015, to evaluate the project area.

Bridge No. 307 and Shope Creek Road cross Shope Creek from the northeast to the southwest. The creek flows southwest into Bull Creek. These waterways are part of the French Broad drainage basin. The APE consists of a gentle sloping bench alongside the drainage (Figure 2). Outside and at the edges of the APE, hillside slope rises sharply. The bench is made up mostly of open residential properties and a horse pasture with forest along the hillside slopes (Figures 3 and 4). Ground disturbance is moderate to minimal from development activities such as landscaped lawns and buried utilities.

According to the USDA soil survey map, three soil types composed the APE (see Figure 2). The Toecane-Tusquitee complex (ToC) is found in the northern portion of the project area. This is a well drained loamy soil with a heavy concentration of rocks. Slope is between 8 and 15 percent. The middle section and a portion of the southern APE are made up of the Tusquitee-Whiteside complex (TwB; TwC). This too is a loamy soil that is moderately well drained to well drained. Slope along the TwB variant is 2 to 8 percent, while the TwC variant is 8 to 15 percent. Lastly, the Tate loam (TaB) is located at the southern end. This well drained series has a slope of 2 to 8 percent. All three soil types have the potential of yielding archaeological sites due to being gentle sloping and dry.

A review of the site files show that very few investigations have been carried out in the area. The most notable is the Cherokee Archaeological Project conducted by The University of North Carolina at Chapel Hill (UNC-CH) from 1964 to 1971. This project identified site 31BN27, which is found to the northeast on a tributary of Shope Creek known as Wolf Branch. The site forms by UNC-CH provide little information towards their investigations of the sites. Prehistoric lithic material and pottery fragments were collect, and the sites' eligibility for the National Register was not assessed. Found to the south of this site at the confluence of Shope Creek and Wolf Branch is 31BN670. This site was recognized by Thomas Watson, a local collector, in 1998. As with 31BN27, little is reported from this site other than a collection of prehistoric pottery and lithic material. Its eligibility has yet to be assessed as well. It is likely other sites are present along Shope Creek, but have yet to be identified due to a lack of investigations.

Lastly prior to fieldwork, a historic map review was conducted. Most maps prior to the 20th centuries provide only general details concerning the region illustrating just major roads and settlements. The 1902 USGS Mount Mitchell topographic map is one of the first in which the project area could be located (Figure 5). This map depicts an unimproved road similar to Shope Creek Road with a crossing at or near the current bridge. The map also shows structures along the road, but none appear to be within the project limits. The 1920 Soil Survey map for Buncombe County shows a similar picture with no major changes to the project area (Figure 6). From this review, it seems unlikely for any significant deposits associated with former structures to be impacted by the proposed bridge replacement project.

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The archaeological field investigation at Bridge No. 307 consisted of eight shovel test placement (STP) at 30-m (ca. 98-ft) intervals in two of the four quadrants (see Figure 2). Four (STP# 1–4) were placed in the southeast quadrant, while another four (STP# 5–6) were excavated in the northwest. None were placed in the northeast or southwest quadrants due to the presence of Shope Creek adjacent to the road. Additional STPs were also not excavated at the southern end of the southeast quadrant due to layer of exposed cobbles or at the northern end of the northwest quadrant since Shope Creek crossed back to the westside of the road. A surface inspection was not carried out because of poor visibility. In general, only one soil layer was identified before a dense layer of cobbles was encountered. The surface layer is typically 15 to 25 cm (ca. 6 to 10 in) thick and is a dark yellowish brown (10YR 4/4) loamy sand. Occasionally, a second layer of yellowish brown (10YR 5/4) loamy sand is present before the cobbles. This layer is approximately 5 cm (ca. 2 in) thick. Attempt to punch through the cobble layer failed as it likely represents a former creek channel. All STPs were negative for cultural material.

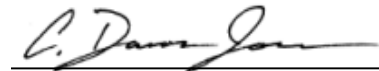
The archaeological investigations for the proposed replacement of Bridge No. 307 show that no significant archaeological sites are within the APE. Subsurface investigations reveal no cultural material but suggest that the project area was recently once part of the stream channel. As a result of the current investigation, no further archaeological work is required for replacement of Bridge No. 307 in Beaufort County. However, additional work will be required should design plans change to encompass property outside of the currently defined APE.

#### SUPPORT DOCUMENTATION

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

Other: **images of historic maps consulted**

Signed:



**C. Damon Jones**  
NCDOT ARCHAEOLOGIST

4/21/15

**Date**