

**Randolph County**  
**Bridge No. 374 on SR 2481 (Low Bridge Rd.)**  
**over Sandy Creek**  
**Federal Aid Project No. BRZ-2481(2)**  
**W.B.S. No. 46074.1.1**  
**T.I.P. No. B-5360**

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

1-6-15  
DATE

*Richard W. Hancock*  
\_\_\_\_\_  
FOR Richard W. Hancock, PE,  
Manager, Project Development & Environmental Analysis Unit

1-6-15  
DATE

*John F. Sullivan, III*  
\_\_\_\_\_  
FOR John F. Sullivan, III, Division Administrator  
Federal Highway Administration

**Randolph County**  
**Bridge No. 374 on SR 2481 (Low Bridge Rd.)**  
**over Sandy Creek**  
**Federal Aid Project No. BRZ-2481(2)**  
**W.B.S. No.46074.1.1**  
**T.I.P. No. B-5360**

CATEGORICAL EXCLUSION

Documentation Prepared in  
Project Development and Environmental Analysis Unit By:

1-6-15

DATE

Natalie Lockhart

Natalie Lockhart  
Project Planning Engineer  
Project Development Section

1-5-15

DATE

Ted Walls

Ted Walls, PE  
Project Engineer  
Project Development Section

## **PROJECT COMMITMENTS:**

**Randolph County  
Bridge No. 374 on SR 2481  
Over Sandy Creek  
Federal Aid Project No. BRZ-2481(2)  
W.B.S. No.46074.1.1  
T.I.P. No. B-5360**

### **Division Eight Construction, Resident Engineer's Office – Offsite Detour**

In order to have time to adequately reroute school busses, Randolph County Schools will be contacted at (336) 318-6100 at least one month prior to road closure.

Randolph County Emergency Services will be contacted at (336) 318-6911 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

### **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.

### **Contracts Unit - Length of Construction**

B-5360 and B-5546 are on the same contract. TIP B-5360 will need to be replaced first then B-5546 Bridge No. 307 on SR 2481 over Mount Pleasant Creek will be replaced after to accommodate schools.

### **Right of Way Branch, Project Development – Voluntary Agricultural District (VAD)**

This project is located within the Randolph County VAD. If any property holders refuse settlement, before pursuing condemnation, the Right of Way Branch must contact Project Development in order to pursue a public meeting with the Randolph County VAD. This does not mean that the Department cannot condemn but is a procedural requirement prior to condemnation.

Randolph County  
Bridge No. 374 on SR 2481 (Low Bridge Rd.)  
over Sandy Creek  
Federal Aid Project No. BRZ-2481(2)  
W.B.S. No.46074.1.1  
T.I.P. No. B-5360

**INTRODUCTION:** Bridge No. 374 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. 374 has a sufficiency rating of 29.15 out of a possible 100 for a new structure. The bridge is considered structurally deficient and functionally obsolete due to structural evaluation of 3 out of 9 and deck geometry of 3 out of 9 according to Federal Highway Administration (FHWA) standards.

Bridge No. 374 has a fifty-four year old timber superstructure 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. 374 is approaching the end of its useful life.

Bridge No. 374 carries 400 vehicles per day with 700 vehicles per day projected for the year 2040. The substandard deck width, bridge railing and approach guardrail is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

The posted weight limit on the bridge is 12 tons for single vehicles and 16 tons for truck-tractor semi-trailers. The bridge is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

## **II. EXISTING CONDITIONS**

The project is located in central Randolph County (see Figure 1). Sandy Ridge Drive neighborhood is located east of the bridge. Development in the area is agriculture and residential in nature.

SR 2481 is classified as a local rural route in the Statewide Functional Classification System and it is not a National Highway System Route.

In the vicinity of the bridge, SR 2481 is a 11-foot wide unpaved road 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 5.5 feet above the creek bed.

Bridge No. 374 is a timber deck on I-beams with concrete abutments and mass concrete interior bent. The existing bridge was constructed in 1960. The overall length of the structure is 78 feet. The clear roadway width is 18.0 feet. The posted weight limit on this bridge is 12 tons for single vehicles and 16 tons for TTST's.

There are no utilities attached to the existing structure, but there are underground telephone lines present throughout the project crossing aerially at the creek on the north side of the bridge. Aerial power lines are not located at the bridge, but do cross SR 2481 and Sandy Creek a few hundred feet south and west of the bridge. Utility impacts are anticipated to be low.

The current traffic volume of 400 vehicles per day (VPD) is expected to increase to 700 VPD by the year 2040. The projected volume includes one percent truck-tractor semi-trailer (TTST) and eight percent dual-tired vehicles (DT). The operating speed limit is 55 miles per hour in the project area. No school buses cross the bridge daily on their morning and afternoon routes.

There were two accidents reported in the vicinity of Bridge No. 374 during a recent three-year period. One crash occurred in the vicinity of the bridge and the other crash occurred at the bridge where a vehicle traveling eastbound lost control and ended in the creek. Both accidents were associated with the alignment or geometry of the bridge or its approach roadway.

This section of SR 2481 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. Neither permanent nor temporary bicycle nor pedestrian accommodations are required for this project.

### **III. ALTERNATIVES**

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

Bridge No. 374 will be replaced downstream on new alignment to the east of the existing bridge while traffic is detoured offsite (see Figure 2). The total project length of the new alignment will be 2015 feet.

The permanent replacement structure will be a bridge approximately 290 feet long providing a minimum 27'-10" clear deck width. The bridge will include two 10-foot lanes and 3'-11" offsets. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately 39 feet higher than the existing structure.

The approach roadway will extend approximately 794 feet from the northwest end of the new bridge and 970 feet from the southeast end of the new bridge. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Three-foot grass

shoulders will be provided on each side (6-foot shoulders where guardrail is included). The roadway will be designed as a Rural Local Route using Sub-Regional Tier Guidelines with a 40 mile per hour design speed. There are design exceptions required for design speed, sag vertical curve K factor and nighttime stopping site distance.

Although the cost and environmental impacts of a new alignment are higher than a replace in-place structure with offsite detour, concerns regarding flooding and the vertical curve will be addressed with this design. This bridge floods very often so the grade of the bridge will be increased. The vertical curve and low point of vertical curve will be moved off of the bridge with replacing the existing bridge on a new alignment to the east. Due to the low ADT in the vicinity of the bridge the traffic will be detoured offsite.

NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 2455 (Hardin Ellison Rd.), SR 2495 (Academy St.), SR 2491 (Patterson Grove Rd.) and SR 2442 (Ramseur Julian Rd.). The majority of traffic on the road is through traffic. The detour for the average road user would result in 1 minute additional travel time (.6 miles additional travel). Up to a 12-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone the detour is acceptable. Randolph County Emergency Services along with Randolph County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 8 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and concur with the use of the detour.

NCDOT Division 8 concurs that this is the preferred alternative.

## **B. Alternatives Eliminated from Further Consideration**

Replace in place was eliminated because of a large cut area and greater impacts to the surrounding parcels.

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by SR 2481.

“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 12-foot deck width and beam configuration will not support removal of a portion and maintenance of traffic on the remaining portion.

**C. Preferred Alternative**

Bridge No. 374 will be replaced at a new alignment to the east of the existing bridge as shown by Alternative 1 in Figure 2. NCDOT Division 8 concurs with the selection of Alternative 1 as the preferred alternative.

**IV. ESTIMATED COSTS**

The estimated costs, based on 2015 prices, are as follows:

	Alternative 1 Preferred
Structure	\$ 870,000
Roadway Approaches	528,000
Structure Removal	11,000
Misc. & Mob.	269,000
Eng. & Contingencies	272,000
Total Construction Cost	\$ 1,950,000
Right-of-way Costs	68,000
Right-of-way Utility Costs	26,000
Total Project Cost	\$ 2,044,000

**V. NATURAL ENVIRONMENT**

**Physical Characteristics**

**Water Resources**

Water resources in the study area are part of the Cape Fear River basin [U.S. Geological Survey (USGS) Hydrologic Unit 03030003]. Two streams were identified in the study area (Table 1). The physical characteristics of these streams are provided in Table 2.

**Table 1. Water resources in the study area.**

Stream Name	Map ID	NCDWQ Index Number	Best Usage Classification
Sandy Creek	Sandy Creek	17-16-(1)a	WS-III
UT to Sandy Creek	SC	17-16-(1)a	WS-III

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

Map ID	Bank Height (ft)	Bankful Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
Sandy Creek	2-5	25	6-24	Gravel, cobble, bedrock	Moderate	Slightly turbid
SC	1-2	3	6	Sand, gravel	Slow	Clear

There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. There are no designated High Quality Waters (HQW), Outstanding Resource Waters (ORW), trout waters, or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. The streams within the project study area are not identified on the North Carolina 2012 Final 303(d) list of impaired waters, nor do they drain to any 303(d) waters within 1.0 mile of the study area.

### Biotic Resources

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

Community	Coverage (ac.)
Maintained/ Disturbed	0.11
Mesic Mixed Hardwood Forest (Piedmont Subtype)	0.15
Piedmont/Low Mountain Alluvial Forest	0.10
<b>Total</b>	<b>0.36</b>

### Jurisdictional Topics

#### Surface Waters and Wetlands

One jurisdictional wetland was identified in the study area. Wetland classification and quality rating data are presented in Table 4. The wetland in the study area is within the Cape Fear River basin (USGS Hydrologic Unit 03030003). Wetland site WA is included within the piedmont/low mountain alluvial forest community.

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

Map ID	NCWAM Classification	Hydrologic Classification	NCDWQ Wetland Rating	Area (ac.)
WA	Floodplain Pool	Riparian	55	0.01

#### Permits

The proposed project has been designated as a Categorical Exclusion (CE) for the purposes of National Environmental Policy Act (NEPA) 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 or work bridges that are often used during bridge construction. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required then a Section 401 Water Quality Certification (WQC) from the NCDWQ will be needed.

### Federally Protected Species

As of December 26, 2012, the United States Fish and Wildlife (USFWS) list two federally protected species for Randolph County (Table 5).

**Table 5. Federally protected species listed for Randolph County.**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Helianthus schweinizii</i>	Schweinitz's sunflower	E	Yes	No Effect
<i>Notropis mekistocholas</i>	Cape fear shiner	E	Yes	No Effect

E - Endangered

#### **Biological Conclusion: No Effect**

Suitable habitat for the Schweinitz's sunflower is present in the addendum study area along the power line corridor. This area is open and regularly maintained. Surveys were conducted by KHA biologists throughout the power line corridor, including the portion of the corridor within the amended study area, on September 12, 2012. No individuals of Schweinitz's sunflower were observed. A review of the North Carolina Natural Heritage Program (NCHNP) records, updated March 20, 2012, indicates no known occurrence of this species within 1.0-mile of the study area.

#### **Biological Conclusion: No Effect**

Surveys for the Cape Fear shiner were conducted within Sandy Creek by NCDOT biologists on April 19, 2012. As a result of the survey, as well as the physical characteristics of the creek, and a review of NCHNP data, it was concluded that the Cape Fear shiner does not exist in the project vicinity.

#### **Northern Long-eared Bat**

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 Rockingham 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.

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

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

A desktop-GIS assessment of the project study area, as well as the area within a 1.13 mile radius (1.0 mile plus 660 feet) of the project limits, was performed on February 7, 2012 using 2010 color aerials. No water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the project study area and the area within

660 feet of the project limits was not conducted. Additionally, a review of the NCNHP database on February 7, 2012 revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences, and minimal impact anticipated for this project, it has been determined that this project will not affect this species.

## **VI. HUMAN ENVIRONMENT**

### **Section 106 Compliance Guidelines**

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

#### **Historic Architecture**

NCDOT – Human Environment 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 surveys are required (see form dated January 9, 2012). After further study and surveys being complete it was determined that No Prehistoric or Historic Properties are present or affected (see form dated April 2, 2012).

#### **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 August 16, 2013).

### **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 on a new alignment. There are soils classified as

prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will involve the direct conversion of farmland acreage within these classifications. A preliminary screening with the AD 1006 form resulted in a score of 55 points out of 160. A preliminary score of less than 60 cannot result in a notable impact on protected farmland soils.

This project is located within the Randolph County VAD. If any property holders refuse settlement, before pursuing condemnation, the Right of Way Branch must contact Project Development in order to pursue a public meeting with the Randolph County VAD. This does not mean that the Department cannot condemn but is a procedural requirement prior to condemnation.

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 Randolph 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.

Randolph 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, and Randolph County Planning Department.

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 **N.C. Wildlife Resource Commission** requested public fishing access in the vicinity of the bridge.

**Response:** NCDOT engineers recommended not having public fishing access near the bridge due to public misuse and respecting property owner rights. Property owners living near the creek would oppose public access.

The **Division of Water Quality** states that Sandy Creek are class WS III; 303 (d) waters of the State. DWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of nutrient runoff to Sandy Creek.

**Response:** Sandy Creek is not included on the 2012 Final 303 (d) list or 2014 Draft 303 (d) list. Standard sediment and erosion control BMP's will apply.

The **Randolph County Planning Department**, the **N.C. Division of Parks & Recreation** and the **Army Corps of Engineers** had no special concerns for this project.

## **IX. PUBLIC INVOLVEMENT**

A newsletter has been sent to all those living along SR 2481. No comments have been received to date.

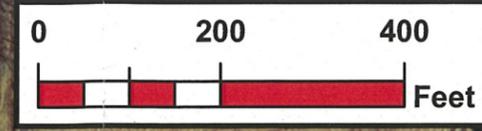
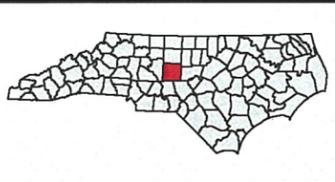
Based on the lack of responses to the newsletter, a Public Meeting was determined unnecessary.

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.





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

ALTERNATE 1 (PREFERRED):  
REPLACE DOWNSTREAM ON A  
NEW ALIGNMENT TO THE EAST OF  
THE EXISTING BRIDGE REPLACE  
BRIDGE 374 ON SR 2481  
(LOW BRIDGE ROAD)  
OVER SANDY CREEK  
RANDOLPH COUNTY  
TIP PROJECT B-5360



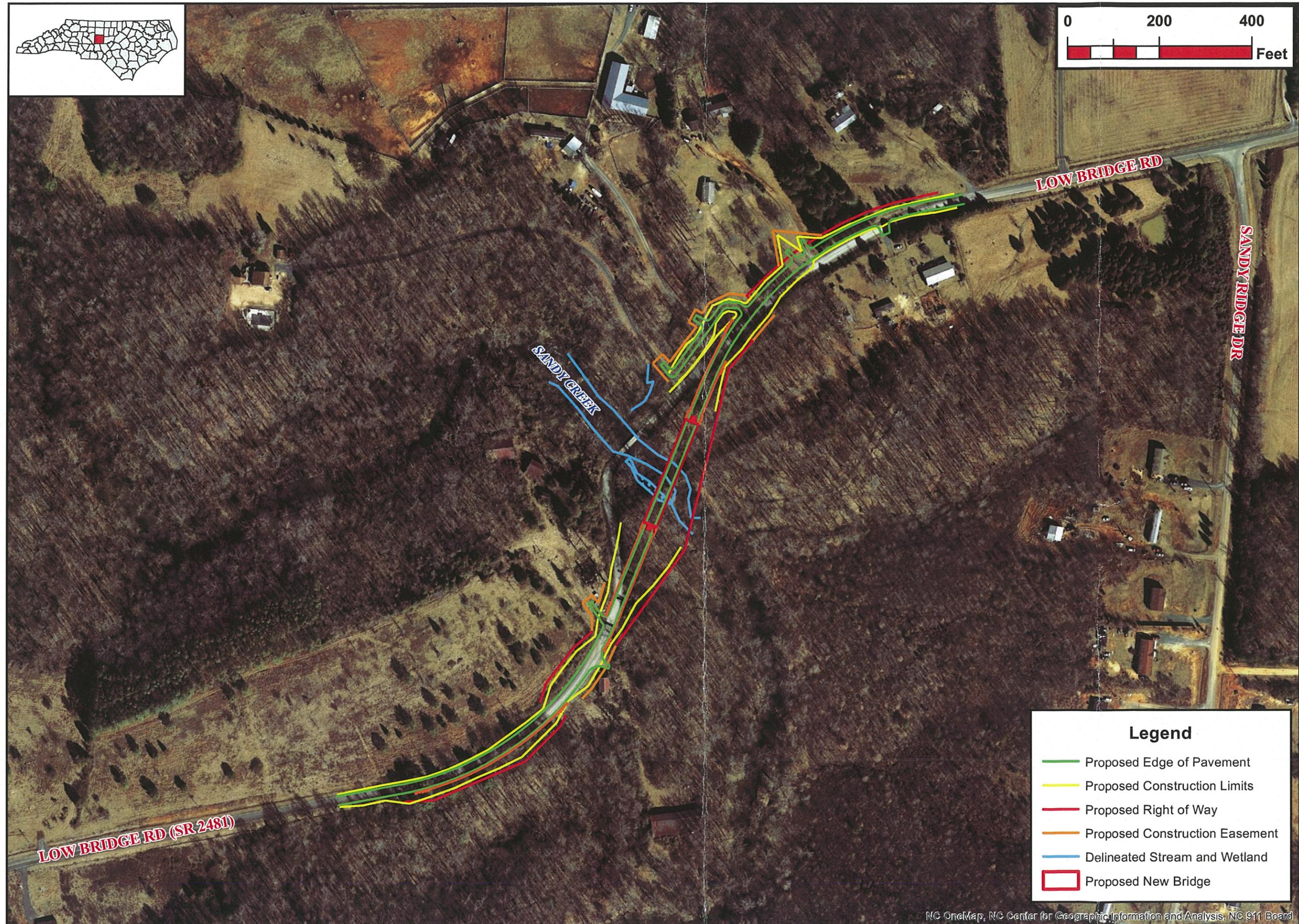
County:  
RANDOLPH

Div: 8 TIP# B-5360

WBS:  
46074.1.1

Date:  
DECEMBER 2014

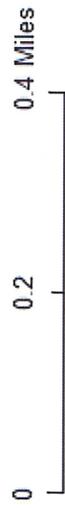
Figure  
2



**Legend**

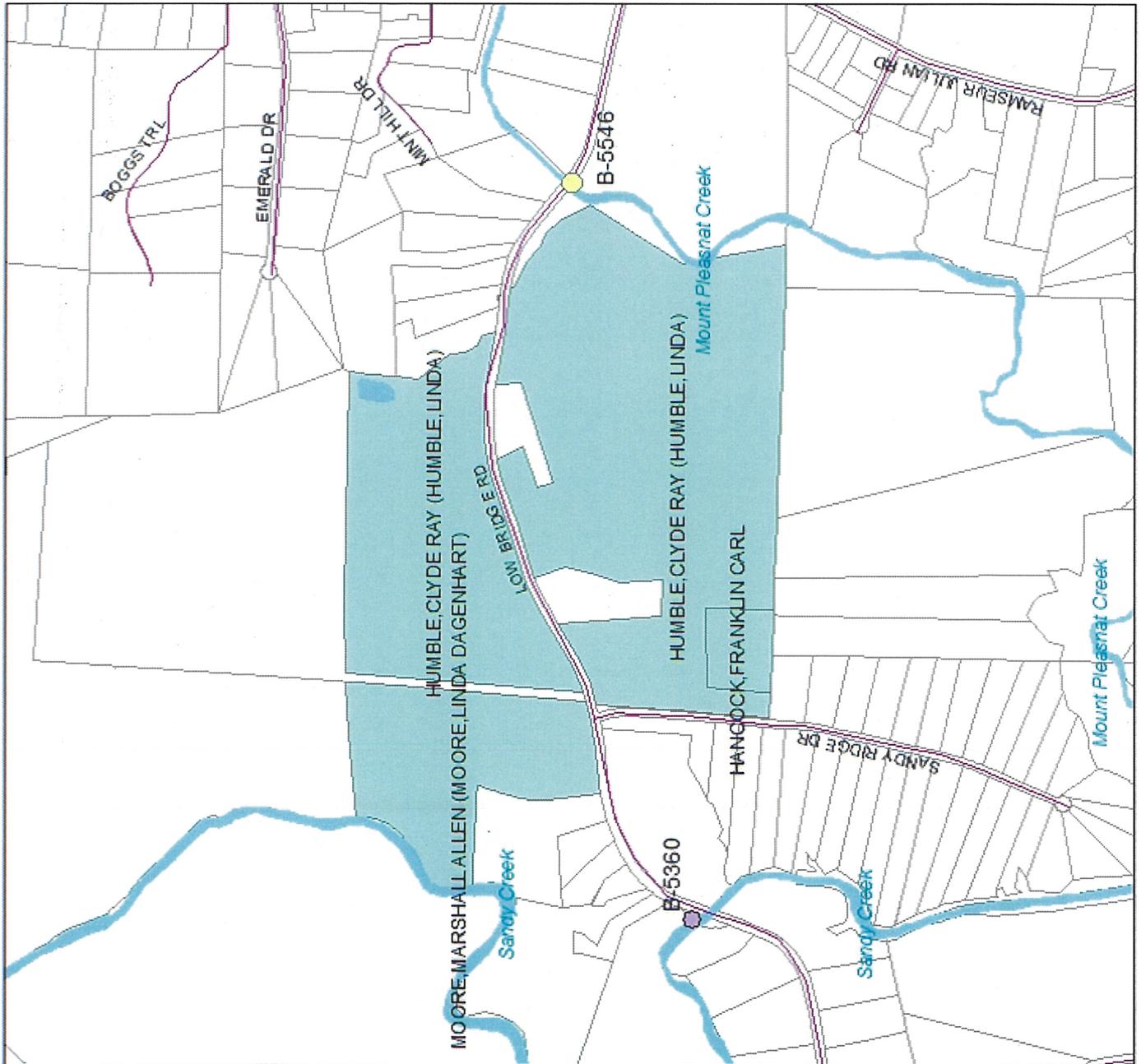
- Proposed Edge of Pavement
- Proposed Construction Limits
- Proposed Right of Way
- Proposed Construction Easement
- Delineated Stream and Wetland
- Proposed New Bridge

# B-5360 & B-5546 Randolph Voluntary Agriculture Districts



**Legend**

-  B-5360
-  Streets
-  Water Bodies
-  B-5360 and B-5546 VAD
-  Randolph\_2011Parcels



11-12-0036

**SURVEY REQUIRED FORM****PROJECT INFORMATION**

Project No: B-5360 County: Randolph  
 WBS No: 46074.1.1 Document: CE/PCE  
 F.A. No: BRZ-2481(2) Funding:  State  Federal  
 Federal (USACE) Permit Required?  Yes  No Permit Type:

Project Description: Replace Bridge No. 374 over Sandy Creek on SR 2481.

**SUMMARY OF CULTURAL RESOURCES REVIEW – SURVEY REQUIRED**

*Brief description of review activities, results of review, and conclusions:* Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 9, 2012. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 1000' from each end of the bridge and 50' from the centerline each way. There is a house and outbuilding complex situated directly south of the bridge approximately 130' from the south end of the bridge. Aerial Images show that the house may no longer be standing. North of the bridge are several houses and structures that will need to be evaluated. A historic architecture survey is required to assess these structures and the complex south of the bridge if still standing.

**SUPPORT DOCUMENTATION**

See attached: Maps.

**FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL – SURVEY REQUIRED**

Archaeology Historic Architecture (circle one)

*Katherine L. Husband*  
 NCDOT Cultural Resources Specialist

*January 9, 2012*  
 Date

July 9, 2012

Proposed fieldwork completion date

11-12-0036

**NO PREHISTORIC OR HISTORIC PROPERTIES  
PRESENT/AFFECTED FORM**

**PROJECT INFORMATION**

*Project No:* B-5360 *County:* Randolph  
*WBS No:* 46074.1.1 *Document:* CE/PCE  
*F.A. No:* BRZ-2481(2) *Funding:*  State  Federal  
*Federal (USACE) Permit Required?*  Yes  No *Permit Type:*

*Project Description:* Replace Bridge No. 374 over Sandy Creek on SR 2481 (Low Bridge Road).

**SUMMARY OF FINDINGS**

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

## Historic Architecture/Landscapes

- 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.
- All properties greater than 50 years of age located in the APE have been considered and all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- There are no historic properties present or affected by this project. (*Attach any notes or documents as needed*)

## SUMMARY OF CULTURAL RESOURCES REVIEW

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

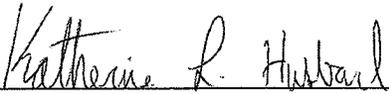
Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 9, 2012. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 1000' from each end of the bridge and 50' from the centerline each way. There is a house and outbuilding complex situated directly south of the bridge approximately 130' from the south end of the bridge. Aerial Images show that the house may no longer be standing. North of the bridge are several houses and structures that will need to be evaluated. A historic architecture survey is required to assess these structures and the complex south of the bridge if still standing.

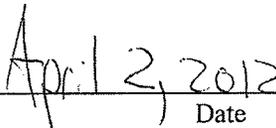
A survey was conducted on March 29, 2012. Frame outbuildings are all that remain in the southwest quadrant of the bridge location as well as a pole barn in the southeast quadrant. No other historic structures are present. There are no National Register eligible properties within the APE. In addition, Bridge No. 374 is not NR Eligible based on the NCDOT Historic Bridge Inventory. If design plans change, additional review will be required.

## SUPPORT DOCUMENTATION

See attached: Maps.

Signed:

  
Katherine R. Hubbard  
Cultural Resources Specialist, NCDOT

  
Date

11-12-0036

**NO SURVEY REQUIRED FORM****PROJECT INFORMATION**

Project No: **B-5360** County: Randolph  
 WBS No: 46074.1.1 Document: Minimum Criteria Sheet  
 F.A. No: BRZ-2481(2) Funding:  State  Federal

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

*Project Description: Replace Bridge No. 374 over Sandy Creek on SR2481. The archaeological APE for the project is defined as a 600ft. long (extending 300ft. from each bridge end-point) and 80ft. wide (40ft. laterally from the SR2481 center-line) corridor centered upon the Bridge 374 structure and SR1404 center-line.*

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

A map review and site file search was conducted at the Office of State Archaeology (OSA) on Monday, January 9, 2012. This work revealed three large previously recorded archaeological sites situated east of the project area, but no resources contained within the currently defined APE. Recorded by an amateur collector in 2003, sites RD1092-RD1093 all consist of unassessed multi-component Archaic-lithic surface scatters. As such, other level, upland ground surfaces in the immediate area hold a moderate to high potential of containing prehistoric lithic sites. In addition, no National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), or Surveyed Site (SS) properties are located within or directly proximal to the project study area. Topographic maps, historic maps, USDA soil survey maps (PaD), archaeological/historical reference materials, and aerial photographs were inspected by the cultural resource specialist to evaluate factors that may have led to prehistoric/historic occupation of the APE, and to assess the level of impacts and disturbances that may have resulted in the degradation or destruction of formerly unknown archaeological deposits within the project construction footprint.

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

Topographic maps and USDA soil data demonstrate that the archaeological APE is characterized by sloping ground surfaces (15%-30%) unfit for prehistoric or historic settlement. Furthermore, disturbances associated with the existing right-of-way and ditch-lines, and residential impacts (graded drives connecting to SR2481) further negate recovery of significant archaeological deposits. No further archaeological work is advocated for the project as proposed.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)  Previous Survey Info  Photos  Correspondence  
 Photocopy of County Survey Notes

**FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL****NO SURVEY REQUIRED**

  
 NCDOT Cultural Resources Specialist

1/17/2012  
 Date

11-12-0036

**NO ARCHAEOLOGICAL SURVEY REQUIRED FORM**

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

**PROJECT INFORMATION**

Project No: B-5360 (resubmital) County: Randolph  
 WBS No: 46074.1.1 Document: MCS  
 F.A. No: BRZ-2481(2) Funding:  State  Federal

Federal Permit Required?  Yes  No Permit Type: unspecified

*Project Description: Replacement of Bridge No. 374 over Sandy Creek on SR2481 (Low Bridge Road) in Randolph County, North Carolina. The bridge will be replaced on new location directly adjacent to, and southeast of the existing structure. The archaeological Area of Potential Effects (APE) encompasses the project study area as depicted on the Figure 2 project map of the downstream alternate #1.*

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

A map review and site file search conducted at the Office of State Archaeology (OSA) on Monday, January 9, 2012 determined that no previously documented archaeological sites are located within the boundaries of the archaeological APE. Three large multi-component prehistoric sites (31RD1091 – 31RD1093) are situated a short distance to the east along the subject roadway. The proximity of these Archaic lithic scatters to the project area demonstrate a sustained occupation and settlement of hunter-gatherers in this portion of the county along Sandy Creek. Based on this data alone, the upland ground surfaces bordering the Bridge 374 APE have a moderate to high potential of containing similar Archaic stone artifacts and knapping debris. An inspection of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties illustrated that no historic architectural resources with potential archaeological features or deposits are situated in or proximal to the APE. In general, this review confirmed that no existing NRHP listed properties or state documented archaeological sites will be impacted by the proposed bridge replacement project.

Further, the project study area was referenced on topographic, geologic and NRCS soil survey maps (PaD) for the appraisal of environmental, geomorphological, ecological and other factors that may have resulted in past occupation at this location. Aerial photographs (NCDOT Spatial Data Viewer) were examined and the Google Street View map application (when amenable) was utilized for assessing disturbances, both natural and human induced, which compromise the integrity of potential archaeological sites/deposits. Lastly, construction design data was examined for determining the character and extent of the potential impacts to the APE ground surfaces during replacement of the bridge structure.

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

The project APE contains no NRHP listed historic properties, previously identified archaeological sites or cemeteries. Despite a minor alignment shift and replacement of the bridge structure on new location (8/15/2013) immediately to the southeast of the existing structure, no in-field archaeological survey or investigation will be necessary for this re-submitted project from the NCDOT Bridge Group. Sloping ground surfaces characterized by erosive soil profiles characterize the diminutive new location addition to the archaeological APE. Although some very minor potential exists for documenting an isolated artifact or disturbed surface scatter along the ground surfaces bordering the APE in the uplands near the projects eastern and western termination points, significant NRHP eligible archaeological sites are unlikely to be affected. No further archaeological work or input is advocated for the B-5360 bridge replacement project.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

**FINDING BY NCDOT ARCHAEOLOGIST**

**NO ARCHAEOLOGY SURVEY REQUIRED**

*Scott Halverson* \_\_\_\_\_ *8/16/2013*