

Jackson County
Bridge No. 27 on US 23 Business (Haywood Road)
over Scott Creek and the Great Smoky Mountain Railroad
Federal Aid Project No. BRNHS-0023(28)
W.B.S. No. 48037.1.1
S.T.I.P. No. B-5905

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

12.1.16

DATE



Brian Yamamoto, P.E., Group Leader
Project Development & Environmental Analysis Unit

12/5/2016

DATE

DocuSigned by:



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:

11/29/16
DATE

Lauren Triebert
Lauren Triebert, P.E.
Project Planning Engineer
VHB Engineering NC, P.C.



12/1/2016
DATE

Tracy A. Walter
Tracy A. Walter, P.E.
Project Planning Engineer
PDEA

PROJECT COMMITMENTS:

Jackson County
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PDEA - Natural Environment Section (NES)

The biological conclusion for Appalachian elktoe is **May Affect Not Likely To Adversely Affect**. The USFWS will be consulted for concurrence with this finding through an informal consultation to be initiated prior to right-of-way (ROW) acquisition. Construction authorization will not be requested until Endangered Species Act compliance is satisfied for the Northern Long Eared Bat and the Appalachian elktoe.

Division, Structures Management, Roadway Design

There is a determination of **No Adverse Affect** regarding the C.C. Mason House, which is eligible for the National Register. However, this determination is based on minimal trees and shrub trimming activity during construction, as well as the replacement bridge having two bar metal rails.

Roadway Design, Structure Design - Railroad

During final design, the Great Smoky Mountain Railroad will be coordinated with to ensure that the proposed design and construction of the project will not substantially disrupt service.

Roadway Design, Structure Design – Future Greenway

Additional coordination with the County Planning office and the Division should be undertaken during final design so as to not preclude the future construction of a greenway under the bridge, connecting Monteith Farmstead to the River Area and Downtown Dillsboro. It is assumed that this connection will be made along the east side of Scott Creek, under the bridge.

NES, Roadside Environmental, Division – Trout Designation

Scott Creek has been designated as trout waters of the State, and therefore a moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer will be in place from January 1 to April 15 to protect the egg and fry stages of trout. Sedimentation and erosion control measures should adhere to the Design Standards for Sensitive Watersheds.

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 14 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.

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INTRODUCTION: The replacement of Bridge No. 27 is included in the North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP). The location is shown in Figure 1 – Project Vicinity. 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. 27 has a sufficiency rating of 4.66 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to a structural evaluation appraisal of 3 out of 9 in accordance to Federal Highway Administration (FHWA) standards. The structure is also considered Functionally Obsolete due to a Structural Evaluation and Deck Geometry appraisal of 3 out of 9.

With railroad traffic underneath, a vertical under-clearance of only 21 feet 3 inches, and an aging structure (77 years old), the bridge is approaching the end of its useful life and in need of replacement.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. The bridge has a posted weight limit of 30 tons for single vehicles and 31 tons for truck-tractor semi-tractors. 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 the Town of Dillsboro in Jackson County, at the intersection of US 23 Business (Haywood Road) and SR 1380 (Dillsboro Road) (see Figure 1 – Project Vicinity). Land use in the vicinity of the bridge is primarily commercial and residential in nature. Monteith Farmstead and Community Park is located north of the project along Dillsboro Road.

US 23 Business (Haywood Road) is classified as a rural minor arterial in the Statewide Functional Classification System and it is not a National Highway System Route.

In the vicinity of the bridge, US 23 Business (Haywood Road) west of the bridge has approximately 24-foot pavement width with nominal grass shoulder on the north side and narrow paved shoulder on the south side; east of the bridge the road has approximately 30-foot pavement width and narrow paved shoulder on both sides and a sidewalk on the south

side. The existing bridge is on a skew. The roadway is situated approximately 48 feet above the creek bed.

The bridge crosses over Scott Creek as well as the Great Smoky Mountains Railroad (GSMR). Crossing occurs at Milepost T 48.2, with mileposts increasing east to west on the T-line. Two tracks are located on GSMR in downtown Dillsboro and eastward which converge into one track, by way of a turnout, under Bridge #27 (the project bridge). There is infrequent freight traffic along this portion of the line as well as excursion trains operated by GSMR from Bryson City to Dillsboro (the Tuckasegee River Excursion route), several days per week, mostly during summer and fall months.

Bridge No. 27 is a six-span structure with reinforced concrete floor on continuous I-beams, reinforced concrete abutment, reinforced concrete piles and bents, and reinforced concrete spill through abutment. The existing bridge was constructed in 1939. The overall length of the structure is 344 feet. The clear roadway width is 26 feet.

There are a number of utilities that interact with the existing structure; however, none are attached to the structure. Power and telephone are aerial except for the west side of the bridge which is underground for the traffic signal lights. There are underground gas lines and sewer lines around the site. Additionally, there is a traffic control signal at the west end of the bridge.

The 2013 traffic volume of 8,900 vehicles per day (VPD) is expected to increase to 12,000 VPD by the year 2035. The projected volume includes one percent truck-tractor semi-trailer (TTST) and five percent dual-tired vehicles (DT). The posted speed limit on this roadway is 25 mph west of the bridge, but increases to 35 mph at the bridge and traveling eastward. Five school buses cross the bridge daily (total of 20 crossings a day).

Four accidents were reported in the vicinity of Bridge No. 27 during the evaluated five-year period (2010-2015). None of the accidents were associated with the alignment or geometry of the bridge or its approach roadway.

This section of US 23 Business (Haywood Road) is not part of a designated bicycle route. There are minimal sidewalks on both sides of the existing bridge and connecting sidewalk at the southeastern corner of the bridge. The Jackson County Comprehensive Transportation Plan (CTP) calls for connecting all existing sidewalks along Haywood Road through the bridge, and shows a recommended multi-use path that follows Scott Creek and crosses under the bridge location. NCDOT Division of Bicycle & Pedestrian Transportation (Bike/Ped Division) highly recommends that this roadway be designed to meet the State's guidelines for the development of complete streets as Bridge No. 27 serves as the primary transportation connection between the contiguous towns of Sylva and Dillsboro.

III. ALTERNATIVES

A. Preferred Alternative

Bridge No. 27 will be replaced on the existing alignment while traffic is maintained on a temporary two-lane onsite detour alignment to the south (see Figure 2 – Preliminary Design). The total project length will be approximately 1,220 feet.

The permanent replacement structure will be a bridge approximately 430 feet long providing a minimum deck width of 41.5 feet. The bridge will include two 12-foot lanes with 4-foot striped bike lanes and 2-foot gutter on both sides as well as a 5.5-foot sidewalk on the south side of the bridge. The bridge length is based on preliminary design information and is set by hydraulic requirements. The vertical clearance of the new bridge will match the existing clearance of 21'-3," which is less than the standard 23' requirement. This clearance exception is acceptable to GSMR and NCDOT.

The approach roadway will extend approximately 500 feet from the west end of the new bridge and 300 feet from the east end of the new bridge. The west approach will include 32 feet of pavement width providing two 12-foot lanes with an additional 4 feet on the each side for bicycles. Along this same approach, a variable 4-foot grassed shoulder will be provided on the north side and curb and gutter, and a 5-foot sidewalk in a 10-foot berm (14 feet where guardrail is included) on the south side. The east approach will consist of 32 feet of pavement width providing two 12-foot lanes with an additional 4 feet for bicycles on each side. Along this same approach the north side will have curb and gutter and a minimal 3-foot berm, and the south side will also have curb and gutter that will include a 5-foot sidewalk in a 10-foot berm (14 feet where guardrail is included). The roadway will be designed as a Rural Minor Arterial using AASHTO standards with a 30 mile per hour design speed on the western approach and a 40 mile per hour design speed on the eastern approach.

NCDOT Division 14 concurs with the preferred alternative.

B. Alternatives Eliminated from Further Consideration

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by US 23 Business (Haywood Road).

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

Alternative 1, replacing the bridge at its current location using an offsite detour was eliminated from consideration, as there is no suitable detour option. Additionally, an off-site detour option was presented to the public in March 2015 and was met with much opposition, including from the Division representatives.

Alternative 3, replacing the bridge on new alignment to the south of the existing bridge was also considered and eliminated due to this alignment likely resulting in an adverse effect to a property eligible for listing on the National Register of Historic Places.

IV. ESTIMATED COSTS

The estimated costs for the proposed project as provided by NCDOT, based on 2016 prices, are as follows:

	Preferred Alternative
Structure & Retaining Walls	\$ 5,143,000
Roadway Approaches	\$ 860,000
Detour Structure and Approaches	\$ 901,000
Structure Removal	\$ 172,000
Misc. & Mob.	\$ 1,234,000
Eng. & Contingencies	\$ 1,290,000
Total Construction Cost	\$ 9,600,000
Right-of-way Costs*	\$651,000
Utility Costs*	\$189,000
Total Project Cost	\$ 10,440,000

*estimated in 2015 dollars

V. NATURAL ENVIRONMENT

Natural resources were evaluated and documented in a Natural Resources Technical Report (NRTR) by NCDOT, dated June 2013. This section summarizes those evaluations, as well as some updated/current information.

Physical Characteristics

The study area lies in the Blue Ridge physiographic region of North Carolina. Topography in the project vicinity is composed of mountain peaks and valleys with narrow level floodplains along streams. Elevations in the study area range from 1,900 to 2,100 feet above sea level. Land use in the project vicinity consists primarily of residential and commercial development.

Water Resources

Water resources in the study area are part of the Little Tennessee River Basin. One stream, Scott Creek, was identified in the study area; NCDWR Index No. 2-79-39; Best Usage Classification of C: Tr. There are no designated High Quality Waters (HQW), Outstanding Resource Waters (ORW) or Water Supply Watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. The 2014 Final 303(d) list, as well as the 2016 draft 303(d) list, designates Scott Creek as impaired, but not due to sedimentation or turbidity.

Biotic Resources

Two terrestrial communities were identified in the study area: Maintained/Disturbed and Piedmont/Low Mountain Alluvial Forest.

Jurisdictional Topics

Surface Waters

Scott Creek is classified as a perennial stream and is considered a cold water stream for the purposes of stream mitigation.

No jurisdictional wetlands were identified in the study area.

Permits

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

Construction Moratoria

Scott Creek has been designated as trout waters of the State, and therefore a moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer will be in place from January 1 to April 15 to protect the egg and fry stages of trout.

Stream Mitigation

NCDOT has selected an alternative that avoids and minimizes impacts to protected resources to the greatest extent practicable. Potential on-site stream mitigation opportunities will be investigated. If on-site mitigation is not feasible, mitigation will be provided by North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP).

Federally Protected Species

As of October 2016, the US Fish and Wildlife Service (USFWS) listed nine federally protected species for Jackson County (Table 5).

Table 5 – Federally Protected Species List for Jackson County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Microhexura montivaga</i>	Spruce-Fir Moss Spider	E	No	No Effect
<i>Alasmidonta raveneliana</i>	Appalachian Elktoe	E	No	May Affect Not Likely To Adversely Affect
<i>Isotria medeoloides</i>	Small whorled pogonia	T	No	No Effect
<i>Helonias bullata</i>	Swamp Pink	T	No	No Effect
<i>Gymnoderma lineare</i>	Rock Gnome Lichen	E	No	No Effect
<i>Glaucomys sabrinus coloratus</i>	Carolina Northern Flying Squirrel	E	No	No Effect
<i>Myotis sodalist</i>	Indiana bat	E	No	No Effect
<i>Clemmys muhlenbergii</i>	Bog (Muhlenberg) turtle	T (S/A)	No	Not Required
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Unknown	Unresolved

E – Endangered

T – Threatened

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

Appalachian Elktoe (*Alasmidonta raveneliana*)

Endangered

Biological Conclusion: May Affect Not Likely To Adversely Affect

A survey was conducted on September 5, 2013 and summarized in a *Freshwater Mussel Survey Report* dated October 9, 2013. No freshwater mussels were found during the survey. However, Appalachian elktoe is known from the Tuckasegee River, approximately 2,400 feet downstream, of the project where critical habitat is designated and NCNHP records are established. The biological conclusion for this species is **May Affect Not Likely To Adversely Affect**.

Northern long-eared bat (*Myotis septentrionalis*)

Threatened

Biological Conclusion: Unresolved

The biological conclusion for this species is unresolved and the NLEB screening and subsequent surveys will be the responsibility of the NCDOT Biological Surveys Group. The USFWS recommended survey window is June 1 – August 15.

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. There are no large water bodies within 1 mile and 660 feet of the project study area. Therefore, no survey is needed.

VI. HUMAN ENVIRONMENT

Section 106 Compliance Guidelines

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

Historic Architecture

NCDOT – Human Environment Section (HES), 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 a historic architecture and landscapes survey was required. That survey was completed and determined that the C.C. Mason House (circa 1920s bungalow located at 308 Haywood Road) was eligible for National Register listing in December 2014. Based on the proposed boundary for the property (following the parcel boundary to the west, north, and east, and the edge of pavement of US 23 Business to the south; encompassing the main house, associated outbuildings, and rock wall lining the front of the house), a determination of No Adverse Effect was found for the proposed project, with a commitment of minimal trimming of trees and shrubs (see form dated May 5, 2015 in Appendix A).

Archaeology

NCDOT – HES, 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 archaeological surveys are required (see form dated May 1, 2013 in Appendix A).

Community Impacts

Minimal adverse community impacts are anticipated with this project and no Environmental Justice populations appear to be affected; thus, impacts to minority and low income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the

community, and no denial of benefit is expected. Right-of-way acquisition will be limited. Two business relocations are anticipated with implementation of the proposed alternative.

The relocations associated with the proposed action would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 (Public Law 91-646) and the North Carolina Relocation Assistance Act (GS-133-5 through 133-17). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business which is comparable to their existing location.

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. The replacement bridge will not permanently alter traffic capacity or travel patterns, reduce travel time, affect access to, or exposure of, adjacent parcels, or create new transportation or land use nodes. Due to its minimal transportation impact causing activities this project will neither influence nearby land uses nor stimulate growth.

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. Construction will take place along existing alignment, with an onsite detour to the south. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. As such, this project will not have a significant impact to prime farmland.

Noise & Air Quality

The project is located in Jackson 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.

Jackson 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, NCDOT Rail Division, Great Smoky Mountain Railroad, Jackson County Planning Department, Jackson County Emergency Management, Jackson County Schools, and Town of Dillsboro.

The **U.S. Fish & Wildlife Service (USFWS)** in standardized letters provided a request that they prefer any replacement structure to be a spanning structure. In addition, the **USFWS** stated that a survey of Scott Creek for Appalachian elktoe should be performed to assess if this species will be directly affected by the proposed project, as the project area is approximately 0.4 mile upstream of a known population. The **USFWS** also recommends that the design be a bridge, not a culvert, and if space allows, incorporate surface water infiltration basins to reduce the velocity of runoff and filter road-derived pollutants. Request for informal consultation with **USFWS** was recommended prior to ROW acquisition.

Response: A survey was conducted for Appalachian elktoe, and no freshwater mussels were found. The survey concluded that, while impacts are unlikely to occur, they cannot be completely discounted. Therefore, a finding of **May Affect Not Likely To Adversely Affect** was reached for the Biological Conclusion. Continued coordination with USFWS will be undertaken prior to ROW acquisition to ensure concurrence with this finding.

The **N.C. Division of Water Quality** recommends, in addition to general comments regarding bridge replacement projects, that as Scott Creek is class C-trout waters, the most protective sediment and erosion control BMPs be implemented, and all disturbances within trout buffers be conducted in accordance with the NC Division of Land Resources and NCWRC requirements. If the waters are identified by NCWRC as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC-recommended moratoria for trout, and strictly adhere to NC regulations “Design Standards in Sensitive Watersheds” throughout design and construction of the project.

Response: Correspondence was sent to NCWRC, dated February 6, 2013 requesting information on possible moratoria for the project. NCDOT will comply with all prevailing regulations, including an in-water construction moratorium for Trout Waters from January 1 – April 15, and implement applicable BMPs.

The **NCDOT Rail Division** offered comment indicating that the train speeds in this location are generally 10-20 mph and that there is infrequent freight traffic at this location. Primary use is by passenger excursion trains operating in the fall and summer months. The bridge opening should provide for two tracks, and the rail division stated that space for a third track is not needed. A vertical clearance of 23’-0” is the current standard for bridges over railroad tracks and the horizontal clearance from centerline of nearest track to face of bridge bent is 25’-0.”

Response: NCDOT Roadway Design Unit has completed the preliminary designs to account for these clearances, with an exception to maintain the existing 21’-3” vertical clearance, and will continue to coordinate with the Rail Division and Great Smoky Railroad through the final design phase.

Jackson County Emergency Management stated that US 23 Business (Haywood Road) is heavily used by emergency vehicles, trucks, and pedestrians. In addition, Sylva and Dillsboro experience an increase in tourist traffic during the summer for festivals and events. Emergency Management indicated that temporary and permanent crossings should meet weight and width requirements for fire trucks and other emergency vehicles.

Response: The proposed project includes a temporary on-site detour. All temporary and permanent crossings will comply with prevailing regulations and construction standards, including those relevant to accommodating emergency vehicles.

The **Jackson County Planning Department** indicated that US 23 Business (Haywood Road) is heavily traveled and serves as the main corridor between Sylva and Dillsboro, connecting Highway 441 for travelers south to Franklin and Georgia. Any closures would impact traffic flow for seasonal events, and the Department requests no closures between 6:00 am and 8:00 pm. In addition, the Department requests pedestrian accommodations be included in the proposed bridge replacement.

Response: The proposed project includes an on-site detour to maintain traffic along the corridor. Pedestrian and bicyclist accommodations are included in the proposed project.

IX. PUBLIC INVOLVEMENT

A letter was sent in February 2013 by the Project Development and Environmental Analysis Unit to all property owners affected directly by this project notifying them of the on-going bridge replacement studies. Property owners were invited to comment on the project.

A meeting was held with local officials from the Dillsboro area on March 25, 2015 at Jarrett Memorial Baptist Church. At this meeting, the project team presented the three considered alternatives and the results of various technical reports such as the NRTR. In addition, preliminary construction cost estimates and schedule details were shared with officials. The primary feedback received from the local officials regarding the alternatives being considered was voicing opposition to the Alternative 1, which included the offsite detour. It was widely discussed that detouring traffic from this area for any amount of time would be a detriment to the tourism and local businesses that the downtown Dillsboro area depends on.

The project team felt a public meeting presenting the selected alternative would be beneficial to the reception of the project. This public meeting was held April 30, 2015 at Jarrett Memorial Baptist Church in Dillsboro. Alternative 2 was presented to the public as the selected alternative moving forward. Other comments received included general questions about construction schedule, affected properties, pedestrian amenities along the bridge and the potential for a greenway accommodation under the bridge connecting to the Monteith Park located just north of the project area. NCDOT continues to coordinate with the Town of Dillsboro and the Great Smoky Mountain Railroad on the Town's potential future greenway within the project area.

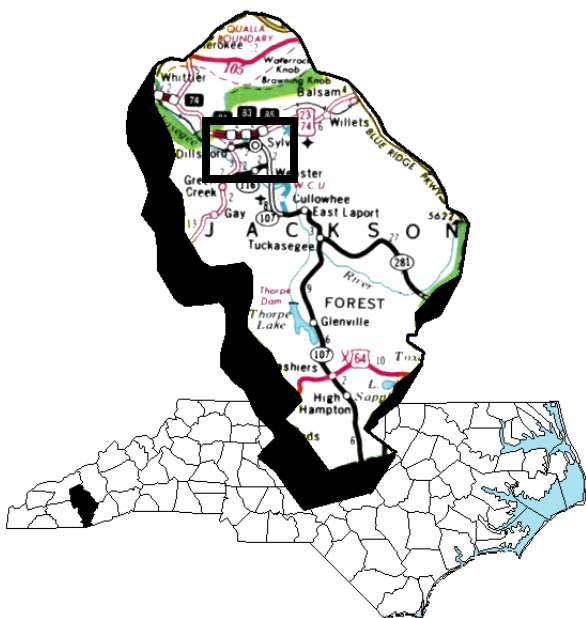
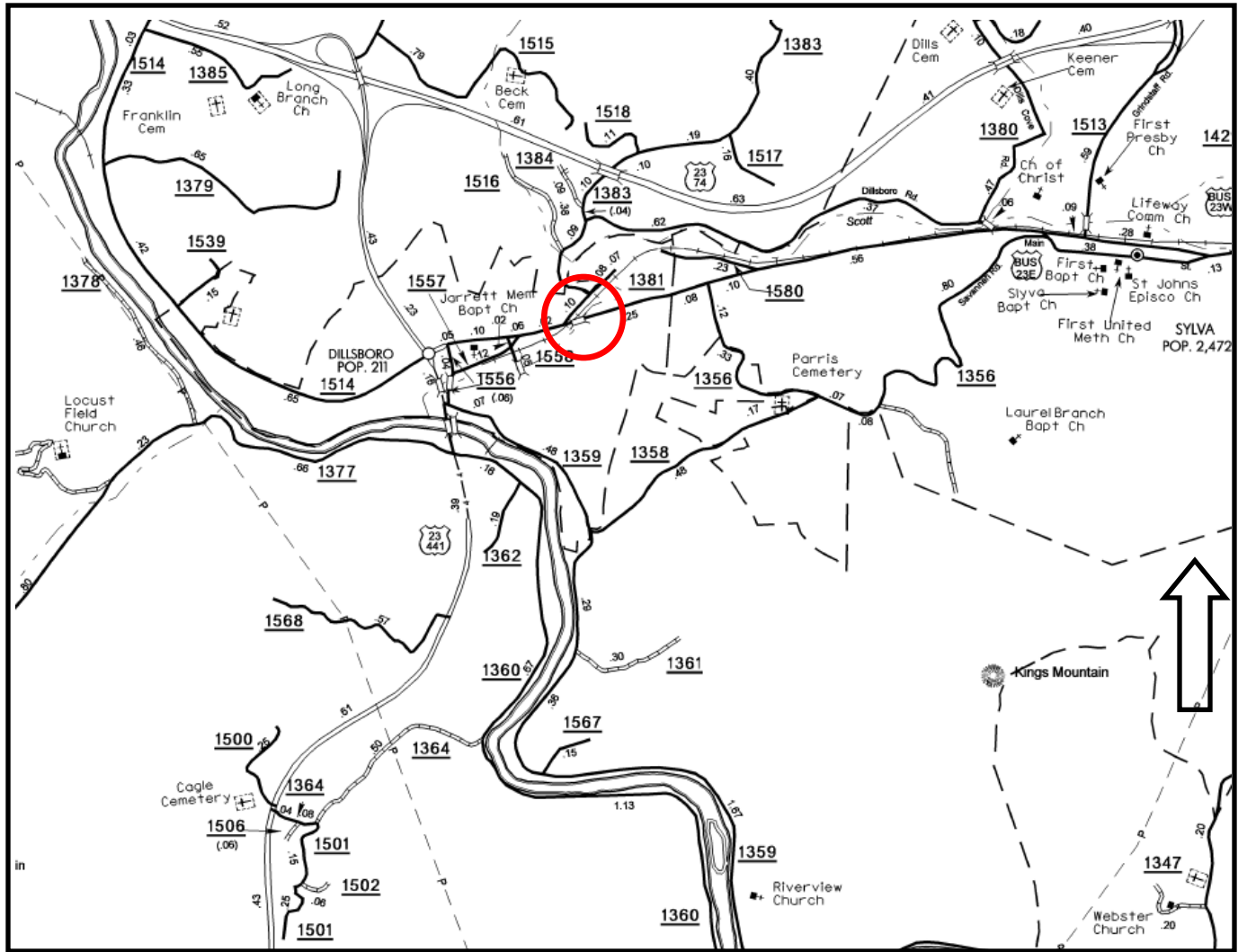
There is no substantial controversy on social, economic, or environmental grounds concerning the project, given the selection of Alternative 2 as the preferred alternative.

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.

FIGURES

Figure 1 **Project Vicinity**
Figure 2 **Preliminary Design**



NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

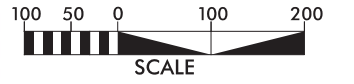
**JACKSON COUNTY
REPLACE BRIDGE NO. 27 ON US 23 BUSINESS
OVER SCOTT CREEK AND SOUTHERN RAILROAD
B-5905**

Figure 1

B-5905 ALTERNATIVE 2

POST CONSTRUCTION
PERMANENT ALIGNMENT

Figure 2



APPENDIX A

Section 106 Compliance

13-04-0043



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS 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-5905	County:	Jackson
WBS No.:	48037.1.1	Document Type:	PCE or CE
Fed. Aid No:	BRNHS-0023(28)	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):	

Project Description:

Replace Bridge No. 27 over Scott Creek and Southern Railroad on US23.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

The C. C. Mason House, a c. 1920s bungalow located at 308 Haywood Road, was determined eligible for National Register listing in December of 2014. The National Register Boundary for the property follows the parcel boundary of PIN 7631-36-7769 to the west, north, and east, and the edge of pavement of US 23 Business to the south. This boundary encompasses the main house, associated outbuildings, and rock wall lining the front of the house.

ASSESSMENT OF EFFECTS

Property Name:	C. C. Mason House	Status:	Determined Eligible
Survey Site No.:	JK666	PIN:	7631-36-7769
Effects			
<input type="checkbox"/> No Effect <input checked="" type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			
<u>Explanation of Effects Determination:</u>			
No Adverse Effect with 4/13/2015 Plans and minimal trimming of trees and shrubs. Bridge will be two bar metal rail for bikes.			
<u>List of Environmental Commitments:</u>			

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

Kate Hubbard 5/5/2015
 NCDOT Architectural Historian Date

Renee Medkirk-Easley 5/5/15
 State Historic Preservation Office Representative Date

John W. Brown 5-5-15
 Federal Highway Administration Representative Date

13-04-0043

**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-5905** County: **Jackson**
 WBS No: **48037.1.1** Document: **PCE or CE**
 F.A. No: **BRNHS-0023(28)** Funding: State Federal

Federal Permit Required? Yes No Permit Type: **Unknown at this time**

Project Description:

The project calls for the replacement of Bridge No. 27 on US 23 (Haywood Road) over Scott Creek and Southern Railroad in Jackson County. The archaeological Area of Potential Effects (APE) for the project is defined as a 2,000-foot (609.60 m) long corridor running 1,000 feet (304.80 m) east and 1,000 feet west along US 23 from center of Bridge No. 27. 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 CULTURAL RESOURCES REVIEW**Brief description of review activities, results of review, and conclusions:**

Bridge No. 27 is located in the town of Dillsboro just west of Sylva in the northern section of Jackson County, North Carolina. The project area is plotted in the northwest corner of the Sylva South 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 19, 2013. No previously recorded archaeological sites have been identified within the APE, but eight known sites (31JK190–31JK192, 31JK198, 31JK312, and 31JK546–31JK548) have been reported within a mile radius of bridge. In addition, there are existing National Register Listed (NRHP) and State Study Listed (SL) properties either within or adjacent to the archaeological APE according to the North Carolina State Historic Preservation Office online data base (HPOWEB 2013). NRHP boundaries for the Elias Brendle Monteith House and Outbuildings (JK-0375) run along the northeastern edge of the APE, and the SL Ray-Schneider (JK-0117) and Parson Kincaid Houses (JK-0116) are at the western end of the project. Although these properties fall alongside or within the APE, no archaeological resources associated with these properties should be affected, since they are situated at the margins of the project limits. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), and Google Street View application 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.

Bridge No. 27 and US 23 cross Scott Creek and the Southern Railroad roughly east to west. The creek flows south and empties into the Tuckasegee River. These waterways are part of the Little Tennessee drainage basin. The APE is situated along cut and graded hillside slopes and on urban developed high stream terraces (Figure 2). The area is mostly open with residential and business properties, but that hillsides are either forested or covered in secondary growth. Ground disturbance is considered heavy from urban development, past road and rail construction, and utilities.

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According to the USDA soil survey map, the APE encompasses three soil types (Figure 3). Most of the area is made up of the Braddock-Urban land complex (BrC). This is a well drained clay loam that typically has a slope of 2 to 15 percent. It is usually found on high stream terraces, which makes it desirable for urban development. This appears to be the case at the western end of the APE. However along this soil type to the east of Scott Creek, the landform does not resemble a stream terrace as slope exceeds 15 percent from the road to the creek. As a result, it is unclear if fill was used to cover the stream terrace in order to support US 23 or if the soil type was misidentified by the USDA. Along the hillsides, Fannin fine sandy loam (FaE) is found to the west, and the Evard-Cowee complex (EvE) is present to the east. These are both well drained soils with a steep slope of 30 to 50 percent. Overall, it is unlikely significant archaeological sites will be found on any of these soil types due to modern disturbance and the presence of steep slope. Significant sites are not usually found on landforms with a slope of 15 percent or more. From the soil present, it appears that no subsurface testing is required.

A review of the site files recognized several archaeological investigations in the vicinity of the bridge, which have produced a total of eight sites (31JK190–31JK192, 31JK198, 31JK312, and 31JK546–31JK548). These sites are situated along ridge tops/toes (31JK190–31JK192 and 31JK198) or within floodplains (31JK312 and 31JK546–31JK548). Most are 19th to 20th century historic sites (31JK191, 31JK192, 31JK198, 31JK546, and 31JK547) or isolated finds (31JK548). Only two have yielded prehistoric artifacts either associated with the Middle Archaic period (31JK90) or an unidentified period (31JK312). The closest site is 31JK312. It is located northeast of the bridge and approximately 180 feet (ca. 55 m) outside of the project limits. It sits on soil composed of Rosman fine sandy loam (RoA) next to Scott Creek. The site consists of a small lithic scatter. Since being identified in 1984 by archaeologist with NC DOT, the site has been graded and covered with gravel. Its eligibility for the NRHP has not been assessed. In general, the site file review suggests that unidentified sites are in the area, but not along the landforms present within the current APE. Again, this is due to slope and previous ground disturbance.

Lastly, a historic map review was conducted. Most early maps from the 18th and 19th centuries provide only general details concerning the region illustrating just major roads and settlements. The USGS 1907 Cowee topographic map is one of the earliest to show the project area with any accuracy (Figure 4). This map depicts Scott Creek and Southern Railroad, but does not show a road crossing the creek near the current bridge. It does, however, illustrate a road similar to nearby SR 1381/SR 1380 (Old Home Town Road/Dillsboro Road) running along the north side of Scott Creek. This map also plots historic structures towards the western end of the project area in Dillsboro. Two of these structures are the Ray-Schneider House and Parson Kincaid House. As previously mentioned, it is unlikely any archaeological deposits associated with these households will be impacted. Finally, it is not until the publication of the 1938 State Highway map for Jackson County that Bridge No. 27 and US 23 first appear, but this map provides no other useful information (Figure 5).

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 defined archaeological APE for the proposed replacement of Bridge No. 27 is located along cut and graded hillside slopes and on urban developed high stream terraces. It is unlikely intact and significant archaeological deposits will be present within the APE. This is due to slope of 15 percent or more along the hillsides and disturbed soils along the stream terraces. Previously known sites in the area suggest the likelihood of encountering a significant site in these areas is very doubtful. As long as impacts to the subsurface occur within the defined APE, no further archaeological work is recommended for the replacement of Bridge No. 27 in Jackson County. If construction should affect subsurface areas beyond the defined APE, further archaeological consultation will be necessary.

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SUPPORT DOCUMENTATION

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

Photos Correspondence
Other: **Images from historic maps**

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED



C. Damon Jones
NCDOT ARCHAEOLOGIST II

5/1/13

Date