

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<u>B-4624</u>
W.B.S. No.	<u>38441.1.2</u>
Federal Project No.	<u>BRZ-1929(3)</u>

A. Project Description:

The purpose of this project is to replace Bridge No. 80 on SR 1929 (Estes Road) over Wolf Island Creek, in Rockingham County. The existing Bridge No. 80 is 151 feet long. The proposed replacement structure will be a bridge approximately 170 feet long, providing a minimum 30-foot, 10-inch clear deck width. The new bridge will include two 10-foot lanes, and 5-foot, 5-inch offsets. The proposed bridge length is based on NCDOT preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 150 feet from the west end of the new bridge and 210 feet from the east end of the new bridge. The approach roadway will include a 20-foot pavement width, providing two 10-foot lanes. Six-foot turf shoulders will be provided on each side of the roadway. An additional three feet of earthen shoulder will be required, where guardrail is included. The roadway will be designed using sub-regional tier guidelines, with a 50 mile-per-hour design speed.

Currently, Bridge No. 80 carries 245 vehicles-per-day (vpd), with 400 vpd projected for future conveyance in 2035. The substandard deck width is becoming increasingly unacceptable, and replacement of the bridge will result in safer traffic operations.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. The posted weight limit on the bridge is 19 tons for single vehicles and 23 tons for truck-tractor semi-trailers. Bridge No. 80 is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

Traffic will be detoured off-site, during construction. (See Figure 1)

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 80 has a sufficiency rating of 26.6, out of a possible 100.

The bridge is considered structurally deficient, due to age (57 years old), type of service (highway), a deck condition rating of “4,” a superstructure condition appraisal of “4,” and a substructure condition rating of “3,” according to Federal Highway Administration (FHWA) standards. Bridge No. 80 also meets the criteria for “functionally obsolete” due to age, type of service, and a structural evaluation of “3.”

The substructure of Bridge No. 80 has timber elements that are 57 years old. Timber bridge components have 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 elements are damaged or are prematurely deteriorated. Past a certain degree of deterioration, most timber bridge elements become impractical to maintain and, upon eligibility, are programmed for replacement. In a recent Bridge Inspection Report, the timber piles used in two of the four interior bents are decayed and considered to be ineffective. Steel piles have been placed adjacent to these timber piles to support the bridge. The remaining timber components of Bridge No. 80 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.

C. Proposed Improvements:

Circle one or more of the following Type II improvements which apply to the project:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).
 - a. Restoring, Resurfacing, Rehabilitating, and Reconstructing pavement (3R and 4R improvements)
 - b. Widening roadway and shoulders without adding through lanes
 - c. Modernizing gore treatments
 - d. Constructing lane improvements (merge, auxiliary, and turn lanes)
 - e. Adding shoulder drains
 - f. Replacing and rehabilitating culverts, inlets, and drainage pipes, including safety treatments
 - g. Providing driveway pipes
 - h. Performing minor bridge widening (less than one through lane)
 - i. Slide Stabilization
 - j. Structural BMP's for water quality improvement

2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.
 - a. Installing ramp metering devices
 - b. Installing lights
 - c. Adding or upgrading guardrail

- d. Installing safety barriers including Jersey type barriers and pier protection
 - e. Installing or replacing impact attenuators
 - f. Upgrading medians including adding or upgrading median barriers
 - g. Improving intersections including relocation and/or realignment
 - h. Making minor roadway realignment
 - i. Channelizing traffic
 - j. Performing clear zone safety improvements including removing hazards and flattening slopes
 - k. Implementing traffic aid systems, signals, and motorist aid
 - l. Installing bridge safety hardware including bridge rail retrofit
3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
 - a. Rehabilitating, reconstructing, or replacing bridge approach slabs
 - b. Rehabilitating or replacing bridge decks
 - c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
 - d. Replacing a bridge (structure and/or fill)
 4. Transportation corridor fringe parking facilities.
 5. Construction of new truck weigh stations or rest areas.
 6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
 7. Approvals for changes in access control.
 8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
 9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
 10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
 11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
 12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited

number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

13. Acquisition and construction of wetland, stream and endangered species mitigation sites.
14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. Special Project Information:

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

Structure	\$ 528,000
Roadway Approaches	191,000
Structure Removal	57,000
Miscellaneous & Mobilization	125,000
Engineering & Contingencies	149,000
Total Construction Cost	\$ 1,050,000
Right-of-Way Costs	28,000
Utility Relocation Costs	0
Total Project Cost	\$ 1,078,000

Estimated Traffic:

Current	-	245 vpd
Year 2035	-	400 vpd
TTST	-	2%
Dual	-	3%

Accidents: Traffic Engineering has evaluated a recent ten-year period and found no accidents occurring in the vicinity of the project.

Design Exceptions: There are no anticipated design exceptions for this project.

Pedestrian and Bicycle Accommodations: Neither permanent nor temporary bicycle or pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 80 is constructed almost entirely of timber, steel, and concrete, and can be removed by standard techniques, with no resulting debris.

Alternatives Discussion:

No Build – The no build alternative would result in eventually closing SR 1929 (Estes Road), which is unacceptable given the volume of traffic served by this road.

Rehabilitation – The bridge was constructed in 1959. The timber, steel, and concrete 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 – Bridge No. 80 will be replaced on the existing SR 1929 (Estes Road) alignment. Traffic will be detoured offsite, (see Figure 1) during the construction period. 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, due to the offsite detour. The offsite detour for this project would include US 29 Business and SR 1931 (Burton Road). The majority of traffic using SR 1929 is through traffic. The worst-case detour for the average SR 1929 road user would result in seven minutes of additional travel time or 5.0 miles of additional travel. A potential 6-month construction duration, is expected to construct this project.

Based on the NCDOT Guidelines, the criteria above indicate the preference of an offsite detour, but with consideration of other project variables. In this case, Rockingham County Emergency Services, Rockingham County Department of Planning & Inspections, and Rockingham County Schools, have provided the following comments on the offsite detour (see Local Official Input Forms in the *B-4624 Rockingham County Community Impact Assessment*, May 22, 2013):

1. **Rockingham County Emergency Services** – an offsite detour would impact EMS response times by 5 minutes and fire response times by 8-10 minutes. There is also concern regarding the capacity of the bridge on SR 1931 (Burton Road).
2. **Rockingham County Department of Planning & Inspections** – SR 1931 (Burton Road) begins as a paved road but becomes a gravel road at some point. Concern was expressed about putting the road in service with higher traffic volumes.
3. **Rockingham County Schools** – there would be moderate impact to two school buses that each make two trips daily to access students on the east side of Bridge No. 80 on SR 1929 (Estes Road). A turnaround for buses is recommended.

NCDOT Division 7 staff has identified the proposed offsite detour route. They will verify that the condition of all roads, bridges and intersections along the detour are adequate for the traffic service anticipated, including emergency vehicle use.

Onsite Detour – An onsite detour was not evaluated for the B-4624 construction, due to the presence of an acceptable offsite detour.

Staged Construction – Staged construction was not considered for the construction of this project, because of the availability of an acceptable offsite detour.

New Alignment – Given that the alignment of SR 1929 (Estes Road) is acceptable, a new alignment was not considered as an alternative for the B-4624 construction.

Other Agency Comments:

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 and routing traffic on an off-site detour during construction.

Response: NCDOT will be replacing the existing Bridge No. 80 on SR 1929 (Estes Road) with a new bridge on existing location, with the use of an offsite detour during construction.

The **Army Corps of Engineers**, **N.C. Department of Environmental Quality**, and **N.C. Marine Fisheries** had no special concerns for this project.

Public Involvement:

A letter, dated February 7, 2013, was sent by the NCDOT Project Development and Environmental Analysis Unit to all property owners to be affected directly by this project. These property owners were invited to return comments to the NCDOT. No comments have been received, to date.

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

E. Threshold Criteria

The following evaluation of threshold criteria must be completed for Type II actions

<u>ECOLOGICAL</u>	<u>YES</u>	<u>NO</u>
(1) Will the project have a substantial impact on any unique or important natural resource?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) Does the project involve habitat where federally listed endangered or threatened species may occur?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Will the project affect anadromous fish?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4) If the project involves wetlands, is the amount of permanent and/or temporary wetland taking less than one-tenth (1/10) of an acre and have all practicable measures to avoid and minimize wetland takings been evaluated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Will the project require the use of U. S. Forest Service lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6) Will the quality of adjacent water resources be adversely impacted by proposed construction activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(7) Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(8) Will the project require fill in waters of the United States in any of the designated mountain trout counties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(9) Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>PERMITS AND COORDINATION</u>	<u>YES</u>	<u>NO</u>
(10) If the project is located within a CAMA county, will the project significantly affect the coastal zone and/or any "Area of Environmental Concern" (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(11) Does the project involve Coastal Barrier Resources Act resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(12) Will a U. S. Coast Guard permit be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(13) Could the project result in the modification of any existing regulatory floodway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(14)	Will the project require any stream relocations or channel changes?	<input type="checkbox"/>	<u> X </u>
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SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

		<u> YES </u>	<u> NO </u>
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(15)	Will the project induce substantial impacts to planned growth or land use for the area?	<input type="checkbox"/>	<u> X </u>
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(16)	Will the project require the relocation of any family or business?	<input type="checkbox"/>	<u> X </u>
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(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?	<input type="checkbox"/>	<u> X </u>
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(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	<u> X </u>	<input type="checkbox"/>
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(19)	Will the project involve any changes in access control?	<input type="checkbox"/>	<u> X </u>
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(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?	<input type="checkbox"/>	<u> X </u>
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(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<u> X </u>
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(22)	Is the project included in an approved thoroughfare plan and/or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	<u> X </u>	<input type="checkbox"/>
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(23)	Is the project anticipated to cause an increase in traffic volumes?	<input type="checkbox"/>	<u> X </u>
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(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	<u> X </u>	<input type="checkbox"/>
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(25)	If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility?	<u> X </u>	<input type="checkbox"/>
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(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?	<input type="checkbox"/>	<u> X </u>
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(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	<u> X </u>	<input type="checkbox"/>
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(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?	<input type="checkbox"/>	<u> X </u>
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- (29) Will the project affect any archaeological remains which are important to history or pre-history? X
- (30) Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)? X
- (31) Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended? X
- (32) Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers? X

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 2:

As of March 25, 2015, the United States Fish and Wildlife (USFWS) lists three federally protected species for Rockingham County. A brief description of habitat requirements for each species follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements for each species are based on the current, best available information from referenced literature and/or the USFWS.

Table 1. Federally protected species listed for Rockingham County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Percina rex</i>	Roanoke logperch	E	Marginal	*
<i>Pleurobema collina</i>	James spiny mussel	E	Marginal	No Effect
<i>Echinacea laevigata</i>	Smooth coneflower	E	No	No Effect

E - Endangered

* May Affect, Not Likely to Adversely Affect

Roanoke logperch Biological Conclusion: May Affect, Not Likely to Adversely Affect

NCDOT biologists conducted a fish survey at the project site on September 10, 2013. This portion of Wolf Island Creek has more areas that are unstable and dominated by shifting sands and silt than the known location downstream in Wolf Island Creek. The majority of the habitat at this site is not suitable for Roanoke logperch.

As a result of the September 10, 2013 survey, as well as the physical characteristics of the creek and a review of GIS and NHP data, it appears that the Roanoke Logperch does not exist in the project vicinity. Wolf Island Creek, at this site, does have areas of marginal habitat for Roanoke logperch. The fact that Wolf Island Creek has marginal habitat and that the Roanoke logperch has been found 7.3 miles downstream, the biological conclusion for Roanoke logperch for B-4624 in Wolf Island Creek is “May Affect, Not Likely to Adversely Affect.”

James spiny mussel

Biological Conclusion: No Effect

A survey was performed by NCDOT staff members on September 10, 2013. No James spiny mussel were found during the 1.0 man-hour survey.

As a result of the survey on September 10, 2013, as well as the review of GIS and NCHNP data, it appears that the James spiny mussel does not exist in the project vicinity. Wolf Island Creek contains only marginal habitat for James spiny mussel. Furthermore, the study area is 30.0 miles from the known population of this species in the Mayo River. In summary, the biological conclusion for James spiny mussel for B-4624 in Wolf Island Creek is “No Effect.”

Smooth coneflower

Biological Conclusion: No Effect

A smooth coneflower habitat survey was completed for this project on May 21, 2013. It was determined that more open areas within the study area were either too maintained or too overgrown to support smooth coneflower. In addition, the NC Natural Heritage Program database, updated April 1, 2013, shows no occurrences of smooth coneflower within one mile of the study area. Due to lack of habitat, this project will have no effect on this species.

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 April 24, 2013, 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 study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NCHNP database (updated April 1, 2013) revealed no known occurrences of this species within 1.0 mile of the 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.

Northern Long-eared Bat

The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Rockingham County, where B-4624 is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

Response to Question 4:

Water resources in the study area are part of the Roanoke River Basin (U.S. Geological Survey [USGS] Hydrologic Unit 03010103). One stream was identified in the study area (Table 2 and Figure 3). The physical characteristics of the stream are provided in Table 3.

Table 2. Water Resources in the Study Area

Stream Name	Map ID	NCDWQ Index Number	Best Usage Classification
Wolf Island Creek	Wolf Island Creek	22-48	C

Table 3. Physical Characteristics of Water Resources in the Study Area

Map ID	Height (ft)	Width (ft)	Water Depth (ft)	Channel Substrate	Velocity	Clarity
Wolf Island Creek	5-8	25-35	0.5-3	Boulder, cobble, gravel, sand	Moderate	Slightly turbid

There are no waters classified as High Quality Waters (HQW), Water Supplies (WS-1: undeveloped watersheds or WS-II: predominantly undeveloped watersheds), or Outstanding Resource Waters (ORW) that occur within 1.0 mile of the study area. Wolf Island Creek is not listed on the North Carolina 2014 Final 303(d) list of impaired waters for sedimentation or turbidity in the study area or within 1.0 mile of the study area.

One jurisdictional stream was identified in the study area (Table 4).

Table 4. Jurisdictional Characteristics of Water Resources in the Study Area

Map ID	Length (ft)	Classification	Compensatory Mitigation Required	River Basin Buffer
Wolf Island Creek	215	Perennial	Yes	Not Subject
Total	215			

Table 5: Stream Impacts

Map ID*	Stream Name	Impact (LF)	Comment
Wolf Island Creek	Wolf Island Creek	62	Permanent
Wolf Island Creek	Wolf Island Creek	26	Temporary
	Total	88	

* Please refer to Figure 3 for the Map ID.

Two wetlands were identified within the study area (Figure 3). Wetland classification and quality rating data are presented in Table 6. All wetlands in the study area are within the Roanoke River Basin (USGS Hydrologic Unit 03010103).

Table 6: Jurisdictional Characteristics of Wetlands and Impacts in Study Area

Map ID	NCWAM Classification	Hydrologic Classification	NCDWO Wetland Rating	Area (ac.)	Impact Area (ac.)
WA	Non-tidal Freshwater	Riparian	49	0.4	0.000
WB	Non-tidal Freshwater	Riparian	49	0.8	0.001
			Total	1.2	0.001

Project B-4624 will likely require a nationwide permits (NWP) for work in streams, wetlands and other waters of the United States under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899

Response to Question 13:

Rockingham County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. The project is within a Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway, have been established. (See Figure 2) Potential impacts to Zone AE are provided in Table 7 below.

Table 7: Zone AE Impacts

Flood Zone	Impact Area (SF)	Impact Area (AC)	Comment
AE	4,127	0.095	Permanent
AE	17,403	0.400	Temporary

Any shift in alignment will result in an impact area of about the same magnitude or greater. The proposed bridge replacement will provide equivalent or greater conveyance of Wolf Island Creek, than that of the existing bridge along SR 1929 (Estes Road) and is not anticipated to increase the level or extent of upstream flood potential.

The NCDOT Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering the FEMA National Flood Insurance Program, to determine status of project with regard to applicability of the NCDOT Memorandum of Agreement with the FMP (dated 6/5/08), or approval of a Conditional Letter Of Map Revision (CLOMR) and subsequent final Letter Of Map Revision (LOMR).

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, NCDOT Division 7 staff shall submit sealed, as-built construction plans to the NCDOT 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.

G. CE Approval

TIP Project No.	<u>B-4624</u>
W.B.S. No.	<u>38441.1.2</u>
Federal Project No.	<u>BRZ-1929(3)</u>

Project Description:

The purpose of this project is to replace Bridge No. 80 on SR 1929 (Estes Road) over Wolf Island Creek in Rockingham County. The existing Bridge No. 80 is 151 feet long. The proposed replacement structure will be a bridge approximately 170 feet long, providing a minimum 30-foot, 10-inch clear deck width. The new bridge will include two 10-foot lanes, and 5-foot, 5-inch offsets. The proposed bridge length is based on NCDOT preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 150 feet from the west end of the new bridge and 210 feet from the east end of the new bridge. The approach roadway will include a 20-foot pavement width, providing two 10-foot lanes. Six-foot turf shoulders will be provided on each side of the roadway. An additional three feet of earthen shoulder will be required, where guardrail is included. The roadway will be designed using sub-regional tier guidelines, with a 50 mile-per-hour design speed.

Traffic will be detoured off-site, during construction. (See Figure 1)

Categorical Exclusion Action Classification:

TYPE II(A)
 TYPE II(B)

Approved:

4/5/2017 Karen S. Reynolds
Date Karen S. Reynolds - Project Development Engineer
Project Development & Environmental Analysis Unit

4/5/17 Beverly G. Robinson
Date Beverly G. Robinson, CMP - Western Region Group Supervisor
Project Development & Environmental Analysis Unit

4/4/2017 Brian D. Dehler
Date Brian D. Dehler, PE - Project Manager
HW Lochner, Inc. (Lochner)



For Type II(B) projects only:

4/6/17 Joseph P. Deagle
Date ^{for} John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

for project B-4624

PROJECT COMMITMENTS:

**Bridge No. 80 on SR 1929 Over Wolf Island Creek - Rockingham County
Federal Aid Project No. BRZ-1929(3)
W.B.S. No. 38441.1.2; T.I.P. No. B-4624**

Division 7 Construction, Resident Engineer's Office

In order to have time to adequately reroute school busses, Rockingham County Schools will be contacted at (336) 634-3275, at least one month prior to road closure.

In order to allow Emergency Management Services (EMS) time to prepare for road closure, the NCDOT Resident Engineer will notify the Rockingham County Emergency Services Director at (336) 634-3000, at least one month prior to road closure.

NCDOT will verify that existing highway facilities proposed for the offsite detour route, are adequate to serve emergency service vehicles and school bus traffic.

The Resident Engineer's Office shall consult with NCDOT Public Involvement to determine appropriate measures for communicating road closures and detour routes with noted Limited English Proficiency (LEP) populations located in the Direct Community Impact Area (DCIA).

Hydraulic Unit

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of the project, with regard to applicability of the NCDOT Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Division 7 Construction

This project involves construction activities in or adjacent to FEMA-regulated stream(s), therefore, NCDOT Division 7 staff shall submit sealed, as-built construction plans to the NCDOT 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.

Best Management Practices will be implemented during construction to manage invasive plant species.

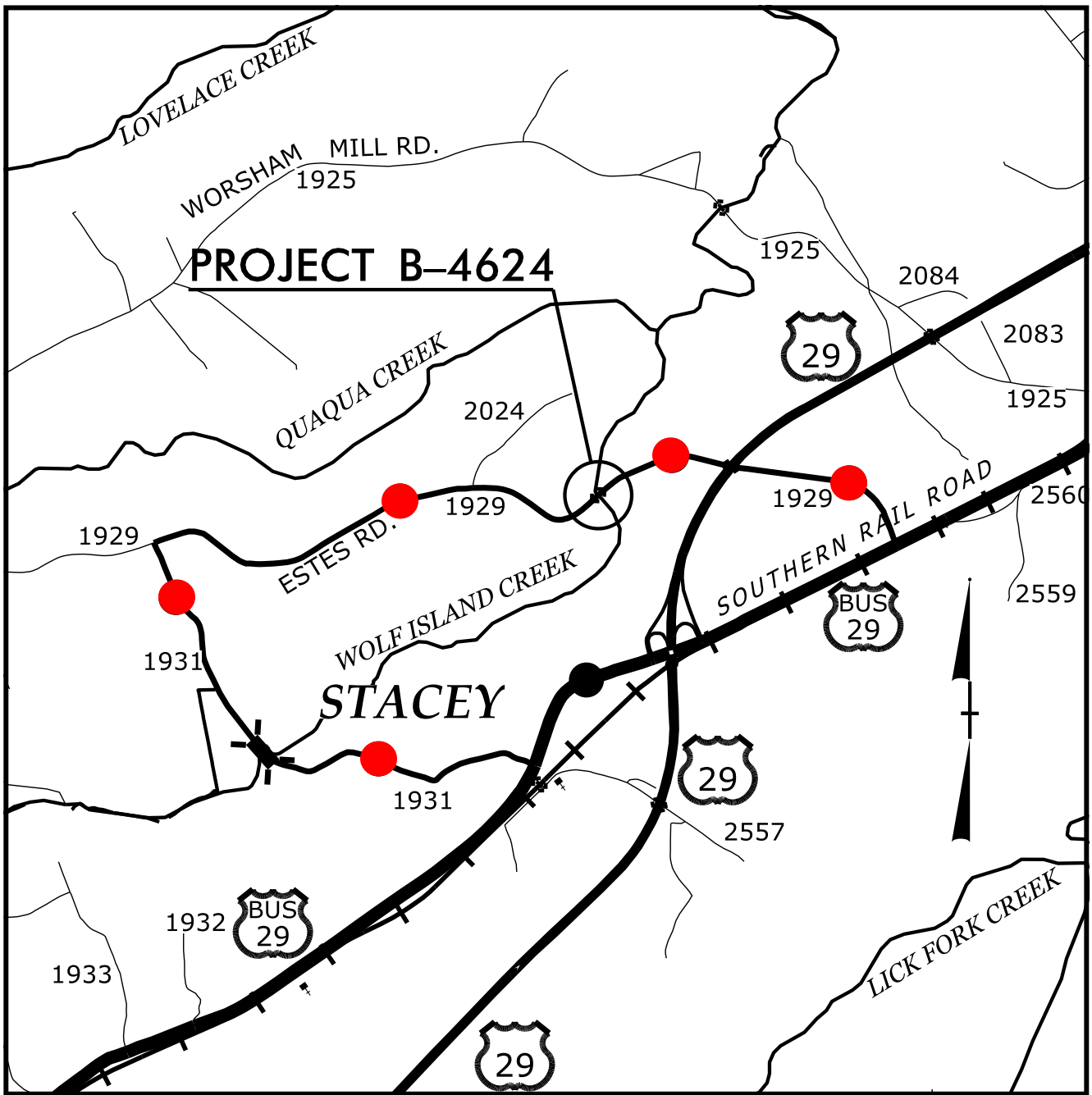
Heavy Equipment should be operated from the bank, rather than in stream channels, in order to minimize sedimentation, and reduce the likelihood of introducing other pollutants into streams.

Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project, by the end of the growing season following completion of construction.

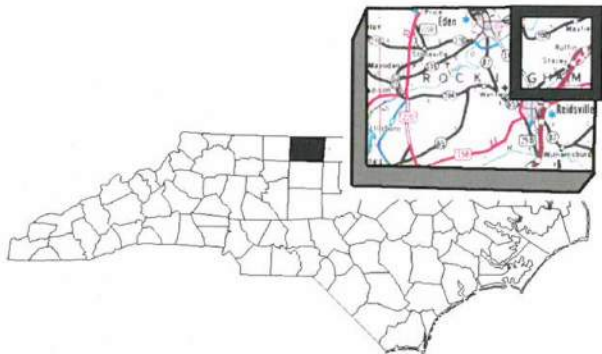
All Design Groups/Division Resident Construction Engineer


When concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters, due to the potential for elevated pH and possible aquatic life and fish kills.

A clear bank (riprap free) area of at least 10 feet should remain on each side of the stream underneath the bridge.

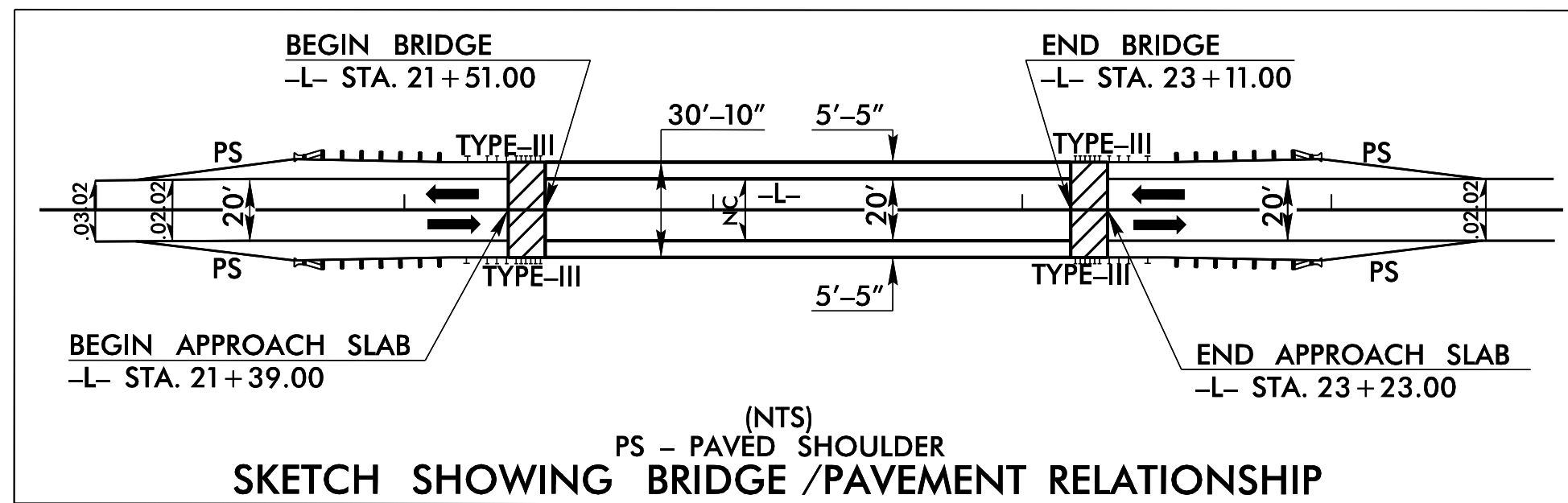


DETOUR ROUTE —●—●—●—●—



	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
	ROCKINGHAM COUNTY REPLACE BRIDGE 80 ON SR 1929 OVER WOLF ISLAND CREEK B-4624
Figure 1	

8/17/99

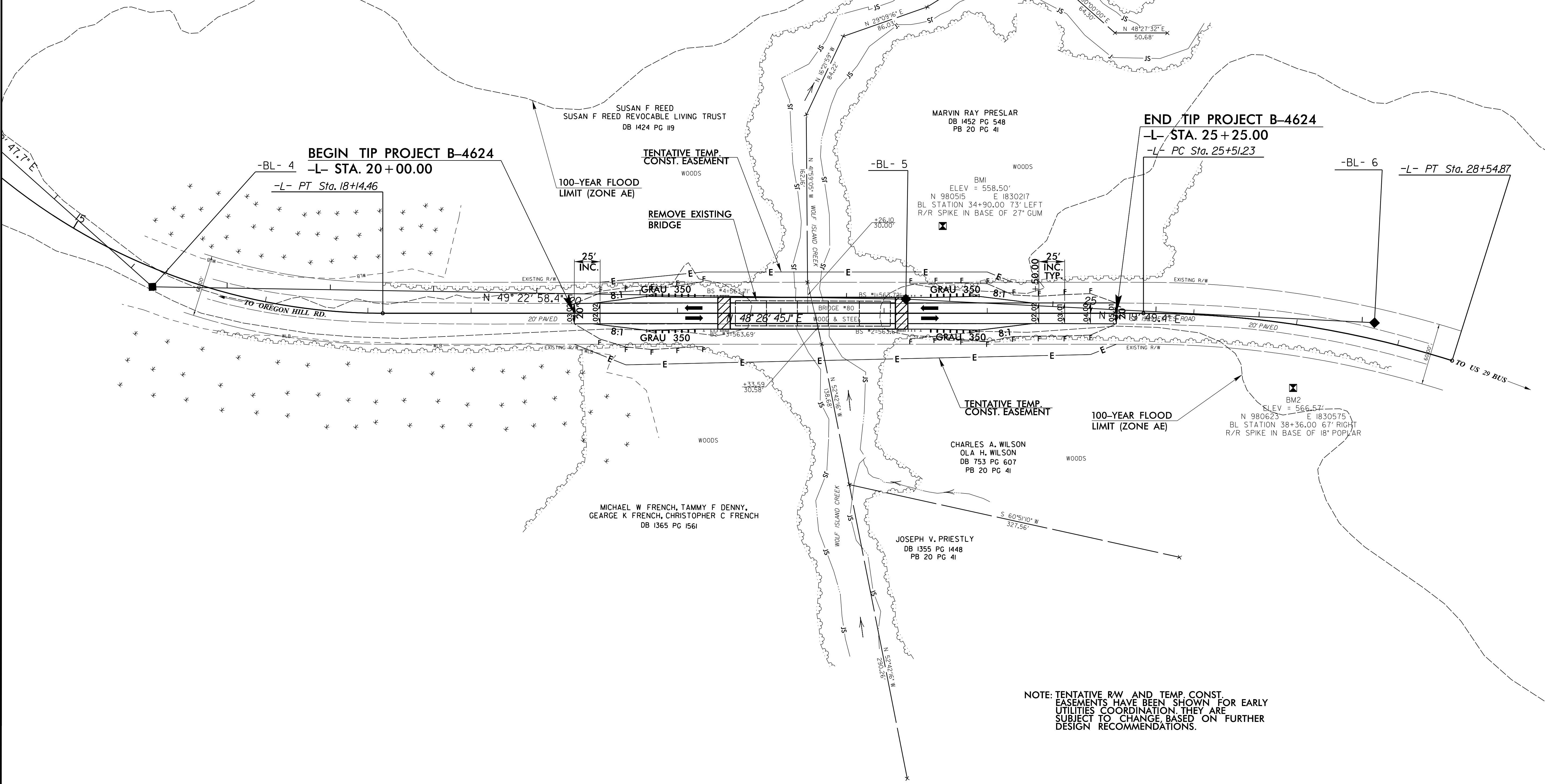


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$T = 488.87'$	$T = 153.00'$
$R = 585.00'$	$R = 996.45'$



PROJECT REFERENCE NO. B-4624	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	








REVISIONS



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FIGURE 2

Jurisdictional Resources & Terrestrial Communities

- | | |
|--|--|
|  Study Area |  Non-tidal Freshwater Marsh |
|  Wetlands |  Piedmont Alluvial Forest |
|  Impervious Surface |  Wolf Island Creek |
|  Maintained/Disturbed | |

WA

WB



Figure 3
B-4624
Rockingham County



0 125 250 Feet



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

January 8, 2013

Gregory M. Blakeney
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Blakeney:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental effects of the proposed replacement of the following bridges. These comments provide information in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

B-4624, Bridge No. 80 over Wolf Island Creek on SR 1929, Rockingham County
B-4802, Bridge No. 18 over the Haw River on SR 1002, Rockingham County
B-4805, Bridge No. 9 over a Prong of Troublesome Creek on SR 2406, Rockingham County

The Service does not have any specific concerns for these projects. We recommend the following general conservation measures to avoid or minimize impacts to fish and wildlife resources:

1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical;
2. If unavoidable wetland or stream impacts are proposed, a plan for compensatory mitigation to offset unavoidable impacts should be provided early in the planning process;
3. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be replanted with appropriate tree species;
4. In streams utilized by anadromous fish, the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage" should be implemented;
5. New bridges should be long enough to allow for sufficient wildlife passage along stream corridors;
6. On each side of the stream bank underneath bridges, at least 10 feet of the bank should remain clear of riprap;

7. "Best Management Practices (BMP) for Construction and Maintenance Activities" should be implemented;
8. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;
9. Bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream; and
10. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain. If spanning the flood plain is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area.

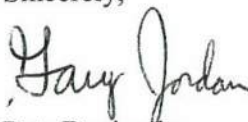
Section 7(a)(2) of the Endangered Species Act requires that all federal action agencies (or their designated non-federal representatives), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally threatened or endangered species. To assist you, a county-by-county list of federally protected species known to occur in North Carolina and information on their life histories and habitats can be found on our web page at <http://www.fws.gov/nc-es/es/countyfr.html>.

Although the North Carolina Natural Heritage Program (NCNHP) database does not indicate any known occurrences of listed species near the project vicinity, use of the NCNHP data should not be substituted for actual field surveys if suitable habitat occurs near the project site. The NCNHP database only indicates the presence of known occurrences of listed species and does not necessarily mean that such species are not present. It may simply mean that the area has not been surveyed. If suitable habitat occurs within the project vicinity for any listed species, surveys should be conducted to determine presence or absence of the species.

If you determine that the proposed action may affect (i.e. likely to adversely affect or not likely to adversely affect) a listed species, you should notify this office with your determination, the results of your surveys, survey methodologies and an analysis of the effects of the action on listed species, including consideration of direct, indirect and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e. no beneficial or adverse, direct or indirect effect) on listed species, then you are not required to contact our office for concurrence.

The Service appreciates the opportunity to comment on these projects. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

for 
Pete Benjamin
Field Supervisor



☰ North Carolina Wildlife Resources Commission ☰

Gordon Myers, Executive Director

MEMORANDUM

TO: Rachelle Beauregard
NCDOT, PDEA-NES

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: April 10, 2013

SUBJECT: Bridge Replacements

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Our standard recommendations for bridge replacement projects of this scope are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.
2. Bridge deck drains should not discharge directly into the stream.
3. Live concrete should not be allowed to contact the water in or entering into the stream.
4. If possible, bridge supports (bents) should not be placed in the stream.
5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary

structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the stream underneath the bridge.
7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.
8. In streams that contain threatened or endangered species, NCDOT biologist should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.
9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.
10. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.
11. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.
12. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.
13. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.
14. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.
15. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be

reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.
3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be utilized as mitigation for the subject project or other projects in the watershed.

Project specific comments:

B-4550, Hoke County, replace bridge No. 41 and 42 on SR 1432 over Rockfish Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4729, Chatham County, replace bridge No. 306 on SR 1303 over North Prong Rocky River: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4802, Rockingham County, replace bridge No. 18 on SR 1002 over the Haw River: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4805, Rockingham County, replace bridge No. 9 on SR 2406 over prong of Troublesome Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4624, Rockingham County, replace bridge No. 80 on SR 1929 over Wolf Island Creek: The potential exist for Roanoke logperch (*Percina rex*: state E, federal E) to be found at this site. NCDOT should coordinate with NCWRC and USFWS in conducting a survey to determine the presence or absence of this species. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4662, Wake County, replace bridge No. 196 on SR 2308 over Moccasin Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4828, Vance County, replace bridge No. 56 on SR 1526 over Sandy Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4831, Wake County, replace bridge No. 371 on SR 1152 over White Oak Creek: Harris Game Land is located within the project study area, DOT should coordinate closely during the design and construction of this project to avoid and minimize impacts to this area. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4794, Randolph County, replace bridge No. 18 on SR 1107 over Bettie McGees Creek: This portion of Bettie McGees Creek is designated as Significant Aquatic Habitat by the NC Natural Heritage Program. Our records also indicate the potential for listed species to be present within the project area, including: Carolina creekshell (*Villosa vaughaniana*: state E, FSC), Notched rainbow (*Villosa constricta*: state SC), and Eastern creekshell (*Villosa delumbis*: state SR). We recommend NCDOT follow the Design Standards for Sensitive Watersheds during the design and construction of this project. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5322, Person County, replace bridge No. 51 on SR 1343 over Richland Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5323, Granville County, replace bridge No. 143 on SR 1442 over Johnston Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5326, Wake County, replace bridge No. 247 on SR 2555 over White Oak Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5328, Franklin County, replace bridge No. 129 on SR 1406 over Sandy Creek: This portion of Sandy Creek is designated as Significant Aquatic Habitat by the NC Natural Heritage Program. Our records also indicate the potential for listed species to be present within the project area, including: Carolina creekshell Notched rainbow (*Villosa constricta*: state SC), Atlantic pigtoe (*Fusconaia masoni*: state E, FSC), and Creeper (*Strophitus undulatus*: state T). We recommend NCDOT follow the Design Standards for Sensitive Watersheds during the design and construction of this project. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5346, Alamance County, replace bridge No. 3 on SR 1529 UT: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5347, Alamance County, replace bridge No. 170 on SR 1212 over prong of Alamance Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5348, Orange County, replace bridge No. 85 on SR 1005 over Phil's Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5349, Alamance County, replace bridge No. 173 on SR 1149 over Little Alamance Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5350, Alamance County, replace bridge No. 44 on SR 1768 over Jordan's Creek: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5351, Guilford County, replace bridge No. 242 on US29/US70/I-85 Business over the Deep River: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5353, Guilford County, replace bridge No. 147 on US29/US 70/I-85 Business over US 311: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5354, Guilford County, replace bridge No. 360 on SR 4771 over US 29: We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5362, Montgomery County, replace bridge No. 53 on NC 73 over Drowning Creek: This portion of Drowning Creek is designated as Significant Aquatic Habitat by the NC Natural Heritage Program. We recommend NCDOT follow the Design Standards for Sensitive Watersheds during the design and construction of this project. We recommend replacing this bridge with a bridge. Standard recommendations apply.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (919) 707-0370. Thank you for the opportunity to review and comment on this project.

15-11-0029



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:	B-4624	County:	Rockingham
WBS No.:	38441.1.1	Document Type:	PCE
Fed. Aid No:	BRZ-1929-(3)	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Permit Type(s):	
<u>Project Description:</u> Replacement of Bridge No. 80 on SR 1929 (Estes Road) over Wolfe Island Creek. Project length is 0.095 miles (502 feet). The right-of-way will remain the same. Two 9 foot lanes will be replaced with two 11 foot lanes.			

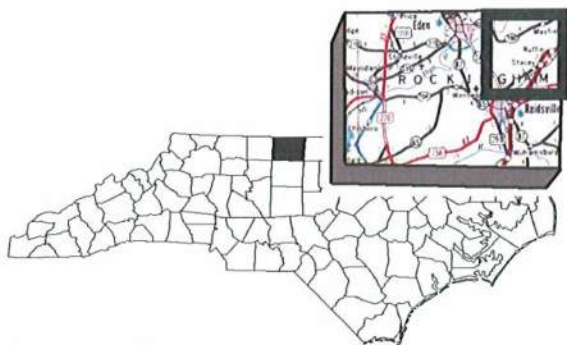
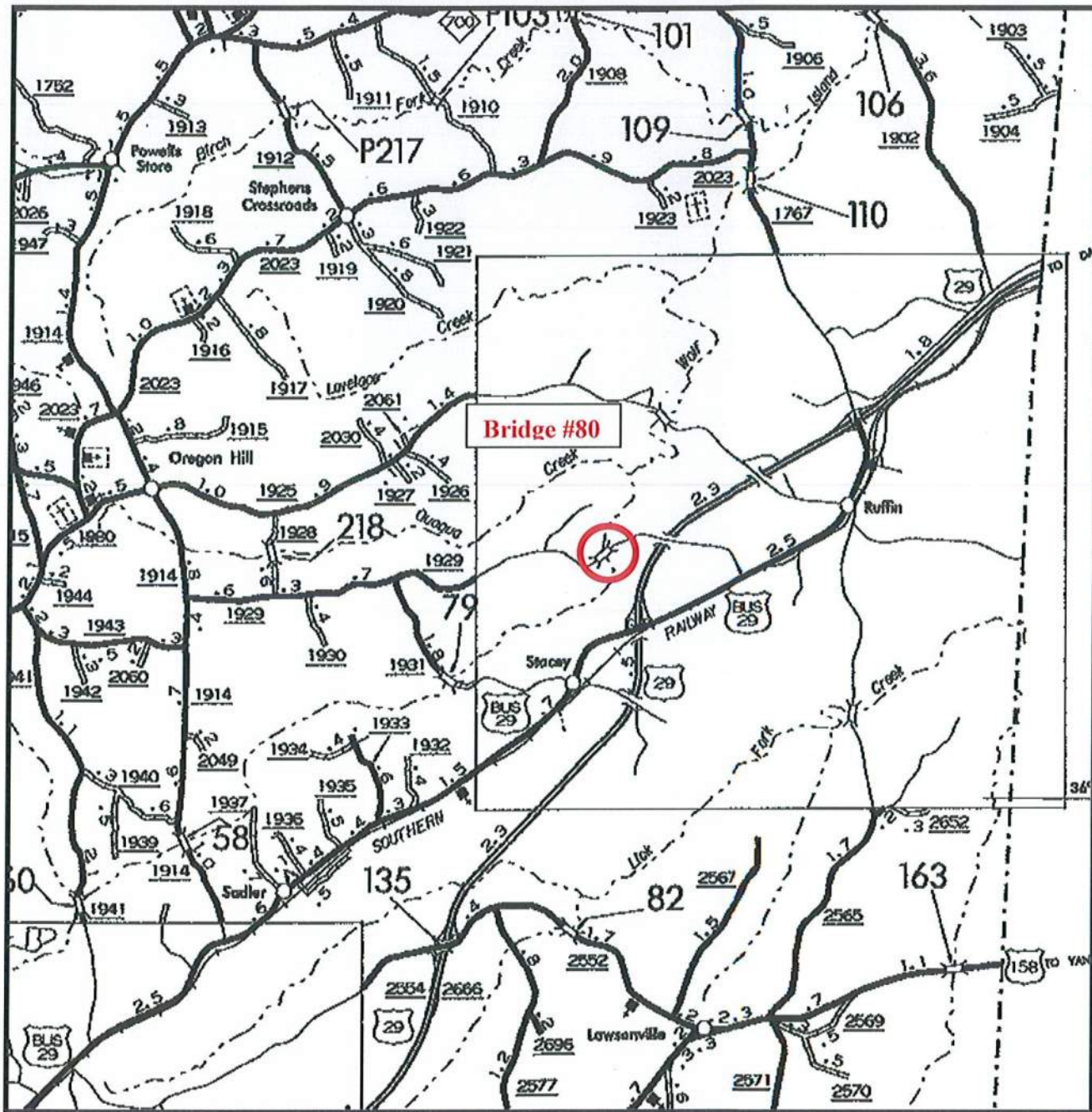
SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW


Description of review activities, results, and conclusions:

Review of HPO quad maps, HPOweb GIS mapping, historic designations roster, and indexes was conducted on 12/3/15. Based on this review, there are no existing NR, SL, DE, LD or SS properties in the Area of Potential Effects (APE). Built in 1959, Bridge No. 80 is not eligible for listing to the National Register of Historic Places (NRHP) according to the North Carolina Historic Bridge Inventory. There are no other properties that fall into the APE over the age of fifty years old, which is roughly defined as 250 feet from each end of the bridge and 50 feet on either side of the bridge and consisting of mainly wooded areas. Therefore, because there are no potential historic resources within the APE, a survey will not be required for this project.

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

HPO quad maps, HPOweb GIS mapping, Google Street View, Google maps and Rockingham County property records are considered valid tools for the purposes of determining the likelihood of historic resources being present. A survey is not required for this project.



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT</p>
	<p>ROCKINGHAM COUNTY REPLACE BRIDGE 80 ON SR 1929 OVER WOLF ISLAND CREEK B-4624</p>
<p>Figure 1</p>	

NCHPOweb, Rockingham County



December 3, 2015

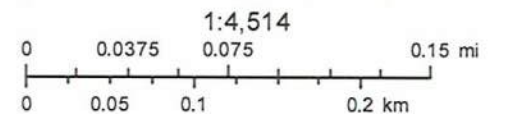
NR Points

- NR Individual Listing
- NR Listing, Gone

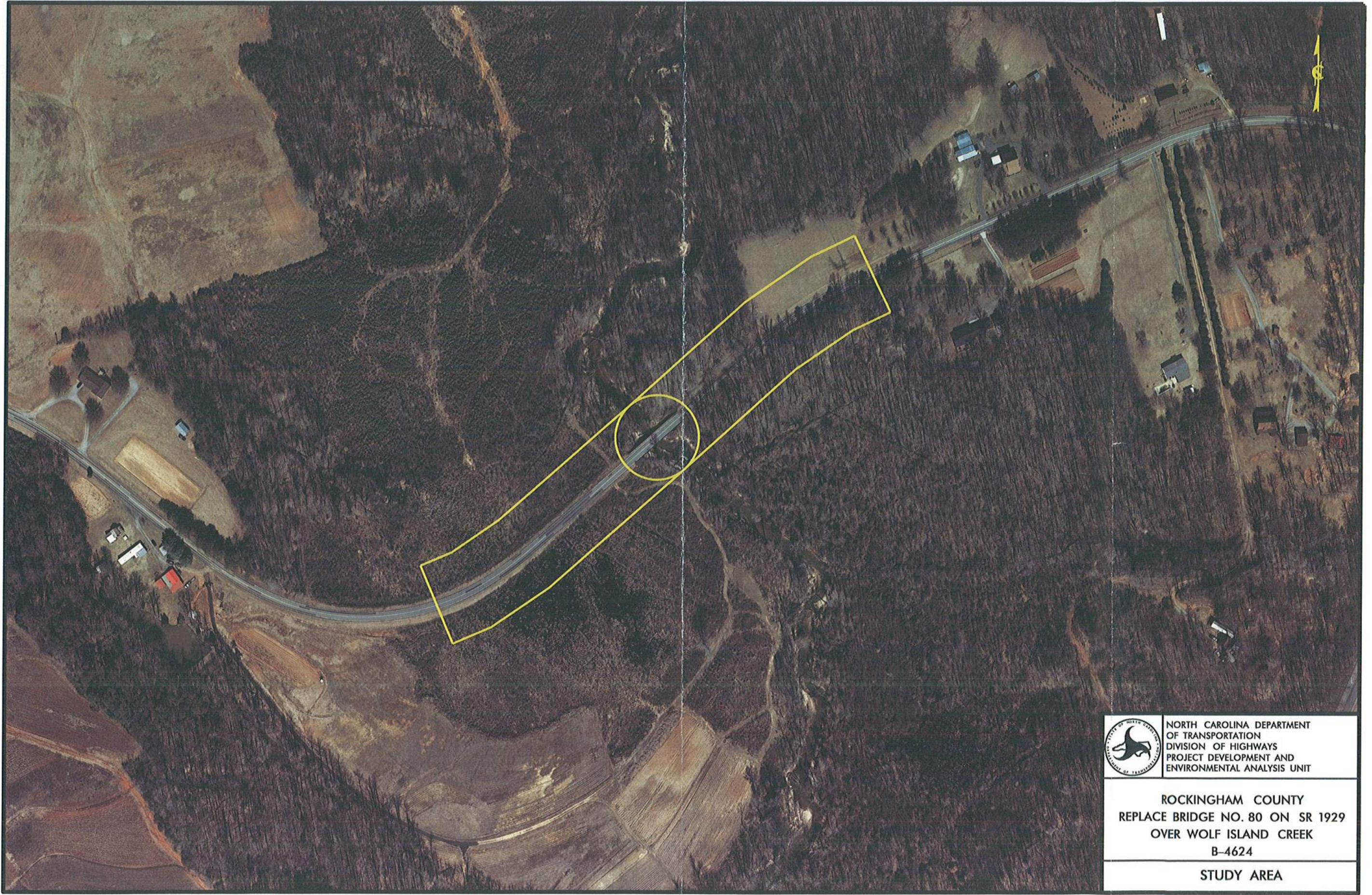
NR Boundaries

- ★ NRHD Center Point
- National Register Boundary

- Boundary of Destroyed/Removed NR Listing



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and

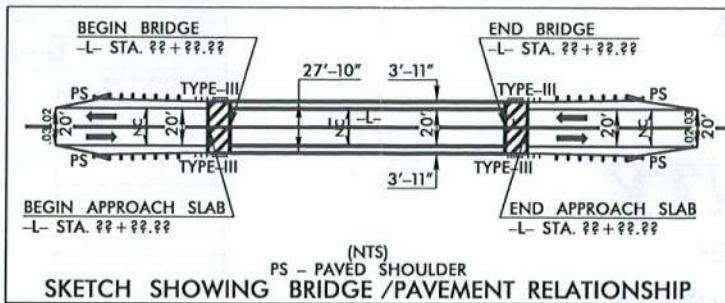


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

ROCKINGHAM COUNTY
REPLACE BRIDGE NO. 80 ON SR 1929
OVER WOLF ISLAND CREEK
B-4624

STUDY AREA

8/17/99

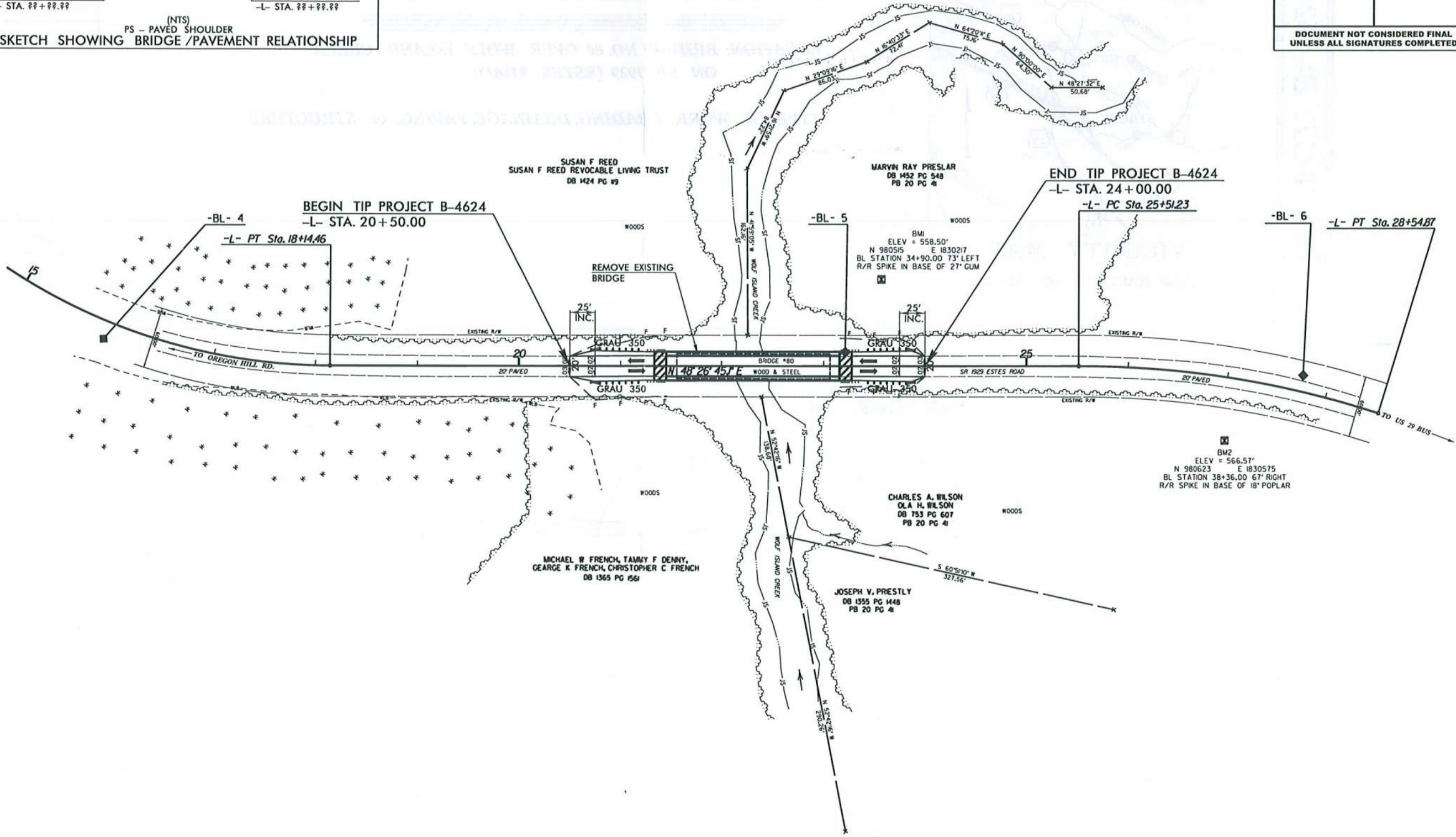


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PROJECT REFERENCE NO. B-4624	SHEET NO. 4
RDW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS



23-SEP-2015 08:01 P:\PROJECTS\B-4624_Rdwy\psh.dgn

SEE SHEET 5 FOR -L- PROFILE
SEE SHEET S-? THRU S-? FOR STRUCTURE PLANS



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-4624** County: **Rockingham**
 WBS No: **38411.1.1** Document: **P C E**
 F.A. No: **BRZ-1929-(3)** Funding: State Federal

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

Project Description: NCDOT proposes to replace Bridge No. 080 on SR 1929 (Estes Road) over Wolf Island Creek in Rockingham County. This is a federal funded undertaking and a federal permit is required from the USACE, therefore, Section 106 of the National Historic Preservation Act applies. This is a low impact project, and, as such, has a minimal footprint, little new impacts, and, importantly, an offsite detour. Design was available at the time of review and establishes a clear Area of Potential Effects (APE) that can be described as about 600 feet in length and, due to a proposed construction easement, up to 100 feet wide at the bridge. The majority of the APE may be considered disturbed by the existing roadway and 60-ft ROW, bridge and associated soil disruption.

For this improvement to an existing facility, the submitter provided detailed design mapping which will be attached to this form.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

Specific design mapping was available and compared to aerial and topographic mapping. The project area along SR 1929 passes through a largely undeveloped, wooded landscape with occasional residences and farms. The soil type present at Bridge No. 80 is Codorus loam, a frequently flooded soil sometimes considered as having a lower probability for archaeological sites due to regular wetness, though some site types may exist.

Virtual drive-by was not available on Google Maps. No cemeteries were noted during the aerial viewing or on the USGS mapping at the project location.

The Office of State Archaeology was visited on December 3, 2015 to review archaeological mapping and to reference any known archaeological surveys. An environmental review appeared marked at this bridge, however, no further notations were visible. Some distance away to the northeast, ER 90-8136, west of Mt. Hermon Church, was marked as an area recommended for survey, though no sites have been recorded there to date. There are no documented archaeological sites in the immediate vicinity of the current bridge replacement project.

For this undertaking, the proposed bridge replacement of the existing transportation facility Bridge No. 0080, little new soil disturbance will occur with the exception of cut/fill, drainage and possible easement work beside the bridge. As much of the existing APE has been modified for the current roadway, bridge, drainage and utilities, expectations are low for encountering new archaeological sites, especially any that may be intact and significant.

15-11-0029

As a result of this review, we conclude that the likelihood of encountering intact, NRHP-eligible resources are slim based on the limited new footprint of the undertaking at the same preexisting location, and previous bridge construction disturbances. The project should be considered compliant with Section 106. No archaeological survey is recommended for this undertaking as currently proposed.

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 scale and nature of the project is limited to replacement of an existing bridge with a new structure at the same location. An offsite detour will be used. The APE of the project overlays the current transportation facility and is heavily disturbed by the original roadway and bridge construction. New impacts will be limited to work adjacent to the bridge and bridge approach. Review of background archaeological information, examination of mapping and aerials suggests lowered probability for the presence of significant, intact archaeological resources on this landform type within the APE. The APE contains frequently flooded soils. Based on the minimal changes to the footprint of construction, periods of wetness, and the degree of existing disturbances, it is unlikely that intact, significant, NRHP-eligible archaeological resources would be encountered or impacted by the project. No archaeological survey is recommended. Therefore, this federally permitted undertaking should be considered compliant with Section 106.

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


 NCDOT ARCHAEOLOGIST

7/05/2016

Date

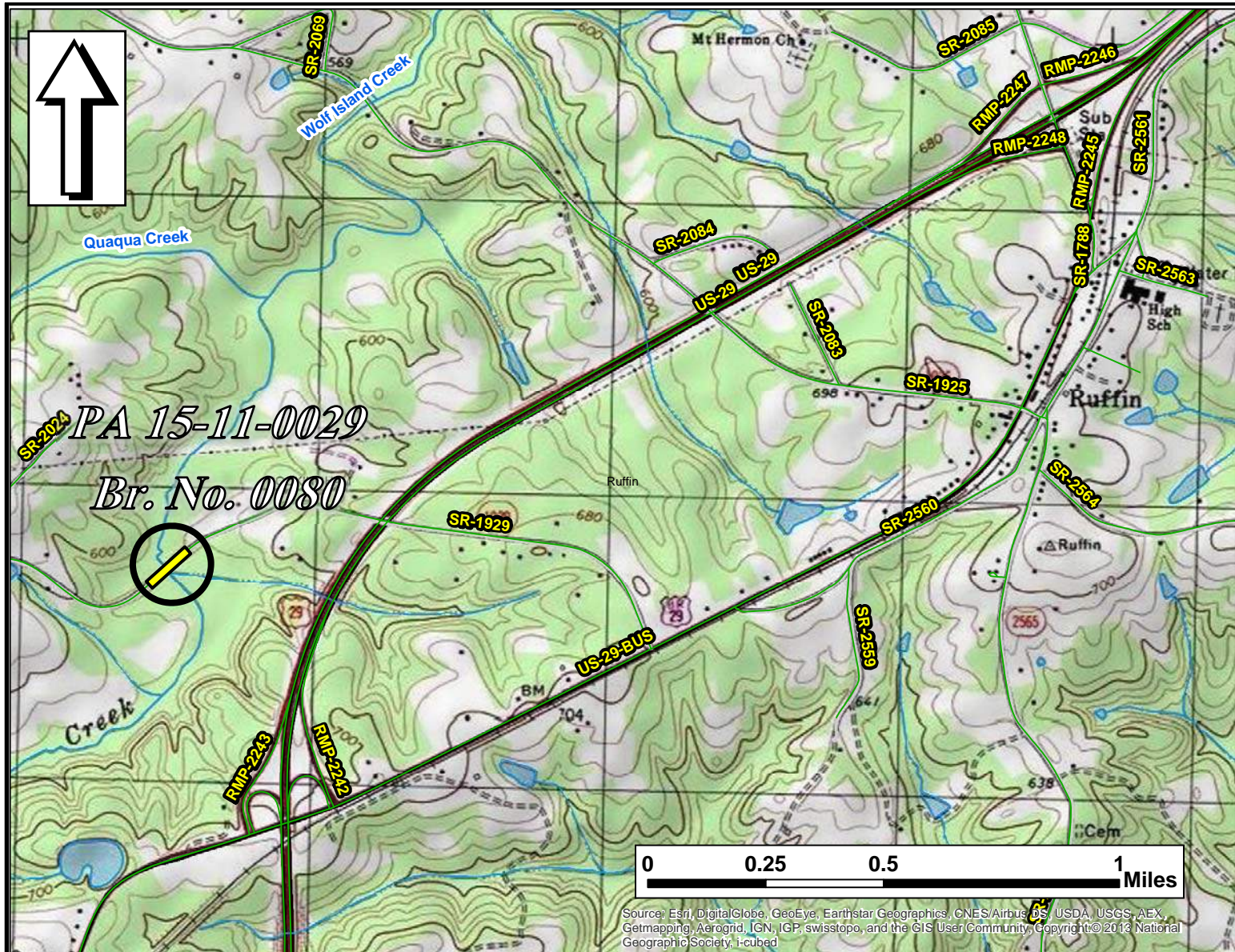


Figure 1. Vicinity of PA # 15-11-0029, on USGS topographic mapping (Ruffin), showing Bridge No. 0080 location along SR 1929 (Estes Road) over Wolf Island Creek in Rockingham County.

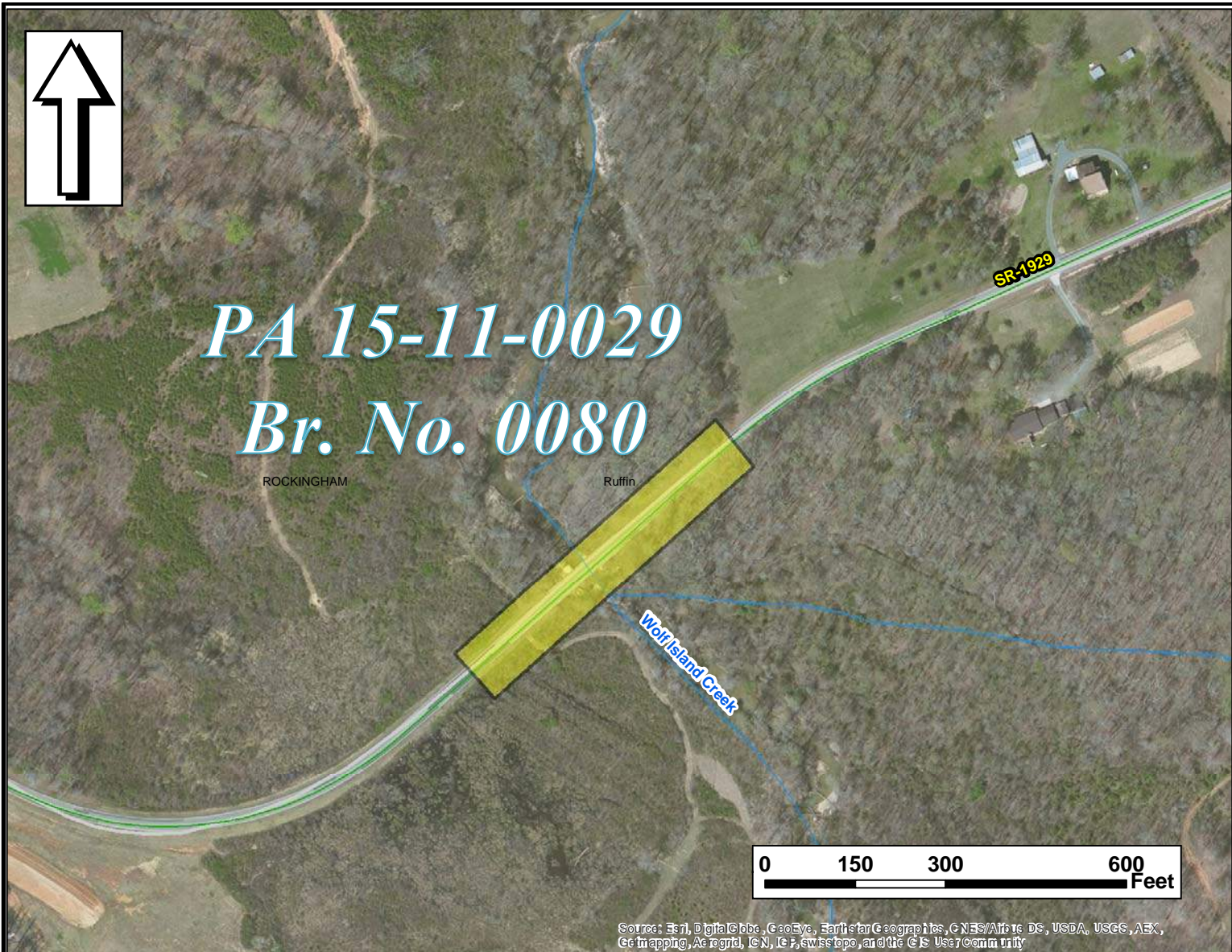


Figure 2. Aerial map of PA 15-11-0029, Br. No. 0080 replacement project along SR 1929 over Wolf Island Creek in Rockingham County. The APE is displayed in yellow.

