

MINIMUM CRITERIA DETERMINATION CHECKLIST

Project No.: BR-0044

State Project No.: WBS 67044.1.1

Project Location: Bridge 780168 on NC 14/87 over the Smith River, Rockingham County, NC

Project Description:

The North Carolina Department of Transportation (NCDOT) is proposing to replace bridge 780168, carrying NC 14/87 over the Smith River in Rockingham County (Figure 1). A new bridge will be constructed to the north of the existing bridge, and traffic will be maintained on the existing bridge during construction. Following construction of the new bridge, the existing bridge would be removed. The proposed action is listed in the Bridge Program as Project Number BR-0044.

Bridge No. 780168 is located in a rural area just north of the town limits of Eden. The area surrounding the bridge is primarily undeveloped forestland; however, one home is located approximately 550 feet west of the bridge, on the north side of NC 14/87. One commercial property is located approximately 700 feet east of the bridge, also on the north side of the road. The existing bridge includes two, 12-foot travel lanes and four-foot paved shoulders. The bridge is 525 feet long with seven spans. It is at a 45 degree skew to the river.

The proposed replacement bridge would be constructed approximately 10 feet north of the existing bridge and will be approximately 529 feet in length with two, 12-foot lanes and 4-foot paved shoulders. Project construction will extend approximately 860 feet to the west and 865 feet to the east from the replacement bridge along NC 14/87. The roadway will be designed as a Principal Arterial using American Association of State Highway and Transportation Officials (AASHTO) and Regional Tier Guidelines with a 60 mile per hour design speed.

Current cost estimates for the selected alternative are as follows:

Right of Way	\$ 310,736
Utility Estimates	\$ 17,520
Construction	\$ 5,600,000
Total	\$ 5,928,256

Purpose and Need:

The purpose of the proposed project is to replace a deficient bridge. Bridge No. 168 is considered structurally deficient with a sufficiency rating of 69.08 out of 100. Being structurally deficient does not mean that the bridge is unsafe, but does mean the bridge is in need of repair or replacement. As a bridge ages, the cost of repairs and continued maintenance eventually necessitate the need for replacement. The current bridge was constructed in 1966 and is reaching the end of its useful life.

Anticipated Permit or Consultation Requirements:

It is anticipated that a Clean Water Act Section 404 Nationwide Permit (NWP) 3 will be applicable. The USACE holds the final discretion as to what permit may be required to authorize project construction. A Section 401 General Water Quality Certification will be needed if a Section 404 permit is required.

Special Project Information:

This portion of NC 14/87 is a two-lane undivided roadway that provides connectivity between Eden, NC and Ridgeway, VA for local communities along its route. The posted speed limit is 55 mph.

Environmental Commitments:

The list of project commitments (green sheet) is located at the end of the checklist.

Traffic:

Current (2015):	8,080 vpd
Future (2040):	8,400 vpd
TTST:	10%
Duals:	2%

Design Exceptions:

There are no anticipated design exceptions for this project.

Bridge Demolition: The existing bridge is made of concrete and steel and it should be possible to remove it with no debris falling to the water below.

Alternatives Discussion:

No Build – There would be no changes to the existing bridge and would not address the need to replace the deficient bridge.

Build Alternative 1 (Selected) - Alternative 1 would replace the bridge with a parallel structure to the north approximately 10 feet (Figure 2). The replacement bridge would be 529 feet long with a minimum 32-foot clear deck width. The bridge will have two 12-foot lanes and 4-foot offsets. Road work would extend approximately 860 feet to the west of the existing bridge and approximately 865 feet to the east. One residence west of the bridge would be affected by the road realignment to the north. Under Alternative 1, traffic will be maintained on the existing bridge structure during construction.

Build Alternative 2 - Alternative 2 would replace the existing bridge in place with a new structure with two, 12-foot lanes and four-foot offsets. One residence west of the bridge would be affected by construction of the new bridge. Alternative 2 would require use of an offsite detour for traffic during construction. The detour route would take traffic along NC 700 and W. Aiken Road (SR 1714) for approximately 2.3 miles. Alternative 2 was eliminated from consideration because an offsite traffic detour is not desirable due to the high volume of tractor trailers using this route.

Pedestrian and Bicycle Accommodations:

The existing bridge does not include pedestrian or bicycle accommodations, and pedestrian and bicycle traffic does not utilize this roadway. The NCDOT Bicycle and Pedestrian Unit determined that bicycle and pedestrian accommodations do not appear warranted at this time. As such, no additional accommodations are proposed.

Jurisdictional Resources:

Jurisdictional resources in the study area include the Smith River, wetland WA, intermittent stream SA on the southwestern side of the study area, and perennial stream SA on northeastern side of the study

area. Minor impacts from the selected alternative to the Smith River may occur due to the placement and/or the removal of bents. No impacts will occur to wetland WA or intermittent stream SA. Impacts to the perennial section of SA are 91 feet (Figure 2). Impacts are based on 25% design slope stake limits plus 40 feet.

Protected Species:

The following species are listed for Rockingham County: bald eagle (*Haliaeetus leucocephalus*), Roanoke logperch (*Percina rex*), James spiny mussel (*Pleurobema collina*), and smooth coneflower (*Echinacea laevigata*). No smooth coneflowers or bald eagle nests were found during field surveys. The biological conclusion for these species is No Effect. A review of the North Carolina Natural Heritage Program indicates a known occurrence of Roanoke logperch within 1.0 mile of the study area. Surveys for the Roanoke logperch and James spiny mussel will be completed prior to construction.

In addition, 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.

Cultural Resources:

NCDOT’s cultural resources staff reviewed the project under a programmatic agreement with the State Historic Preservation Office and determined that there are no historic properties within the Area of Potential Effects (APE) and no architectural survey is required. However, a preliminary archaeological resources review of the study area determined that further surveys were warranted. These surveys found no archeological sites eligible or listed on the National register.

Preliminary reports identified Eden City Park adjacent to the project. This land has been sold to a private owner and is no longer a city park.

Residential and Commercial Impacts

The residential home on the west side of Bridge No. 780168 is likely to be impacted due to slope stakes occurring through the house structure. Final determination on a potential take or relocation of this residence will be made during the right of way acquisition process. The commercial property to the east of the bridge may have temporary access impacts to their driveway during construction.

Public Involvement:

A postcard was mailed to residents of the project study area in January 2018 to announce the beginning of the project. Additionally, postcards will be distributed to property owners in the vicinity of the projects to update them on the project status, preferred alternative, and project schedule.

PART A: MINIMUM CRITERIA

- | | | |
|--|-------------------------------------|--------------------------|
| | YES | NO |
| 1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is <u>not</u> required? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

If yes, under which category? **Category #8**

PART B: MINIMUM CRITERIA EXCEPTIONS

- | | YES | NO |
|--|--------------------------|-------------------------------------|
| 2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action located in an Area of Environmental Concern, as defined in the coastal Area Management Act? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Cultural Resources

- 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places?
- 15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?

Question 9:

Suitable habitat for smooth coneflower, although marginal, is present in the study area. A visual assessment of these areas on June 6, 2018 did not identify the presence of any coneflowers. A review of the North Carolina Natural Heritage Program (NCNHP) records, accessed on April 16, 2018, indicated no known occurrences within 1.0 mile of the study area. The biological conclusion is No Effect.

The Smith River provides suitable foraging and nesting habitat. A visual search of the project areas and within 660 feet of the project areas along the river in June and October 2018, did not reveal the presence of any bald eagle nests. A review of the NCNHP records, accessed on April 16, 2018, indicated no known bald eagle occurrences within 1.0 mile of the study area. This project will have no effect on this species.

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 BR-0044 is located.

Aquatic surveys for the Roanoke logperch and James spinymussel will be completed prior to construction. If any individuals are located NCDOT will initiate coordination with US Fish and Wildlife Service (USFWS) to obtain concurrence on biological conclusions for the species.

Question 10: Two jurisdictional streams and one jurisdictional wetland were identified in the study area (Figure 2). Preliminary impacts were calculated using the 25% design slope stake limits plus 40 feet. Exact impact acreages, including required extent of fill placement, will be determined during final design.

Preliminary Wetland and Stream Impacts for Selected Alternative

Stream or Wetland	Classification	Stream Impacts* (ft.) or Wetland Impacts* (ac)
Smith Creek	Perennial	0 ft**
SA	Intermittent/Perennial	0 ft/91 ft
WA	Riparian	0 ac

*Impacts are based on 25% design slope stake limits plus a 40 feet buffer

**No linear feet of impacts but some minor acreage impacts for the placement of bents in the water

PART D: (To be completed when either category #8, 12(i) or #15 of the rules are used.)

- 16. Project length: 2,255 ft
- 17. Right of Way width: 150-257 ft
- 18. Project completion date: 2022

- | | |
|--|-----------------------------------|
| 19. Total acres of newly disturbed ground surface: | <u>3.2 acres</u> |
| 20. Total acres of wetland impacts: | <u>0 acres</u> |
| 21. Total linear feet of stream impacts: | <u>91 feet</u> |
| 22. Project purpose: | <u>Replace a deficient bridge</u> |

Prepared by:

2/21/19

Date

Rachelle Beaugard

Rachelle Beaugard, Transportation Planner, AECOM

Prepared For:

North Carolina Dept. of Transportation Structures Management Unit

Reviewed by:

2/27/2019

Date

DocuSigned by:

Kevin Fischer

SMU Representative

PROJECT COMMITMENTS

**Rockingham County
Bridge No. 780168 over Smith River
W.B.S. No. 67044.1.1
Project No. BR-0044**

Division 7 Construction

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 NLEB 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 in Divisions 1-8 is "May Affect, Likely to Adversely Affect." The PBO will provide 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 the project is located. This level of incidental take is authorized from the effective date of final listing through April 30, 2020.

Project requirement for PBO compliance: After project completion, the contract administrator for construction must submit the actual amount of tree clearing reported in tenths of acres. This information should be submitted to the NCDOT-Environmental Analysis Unit-Biological Surveys Group.

Roanoke logperch and James spiny mussel

Aquatic surveys for the Roanoke logperch and James spiny mussel will be completed prior to construction, and if any individuals are located, NCDOT will initiate coordination with US Fish and Wildlife Service (USFWS) to obtain concurrence on biological conclusions for the species before construction can begin.

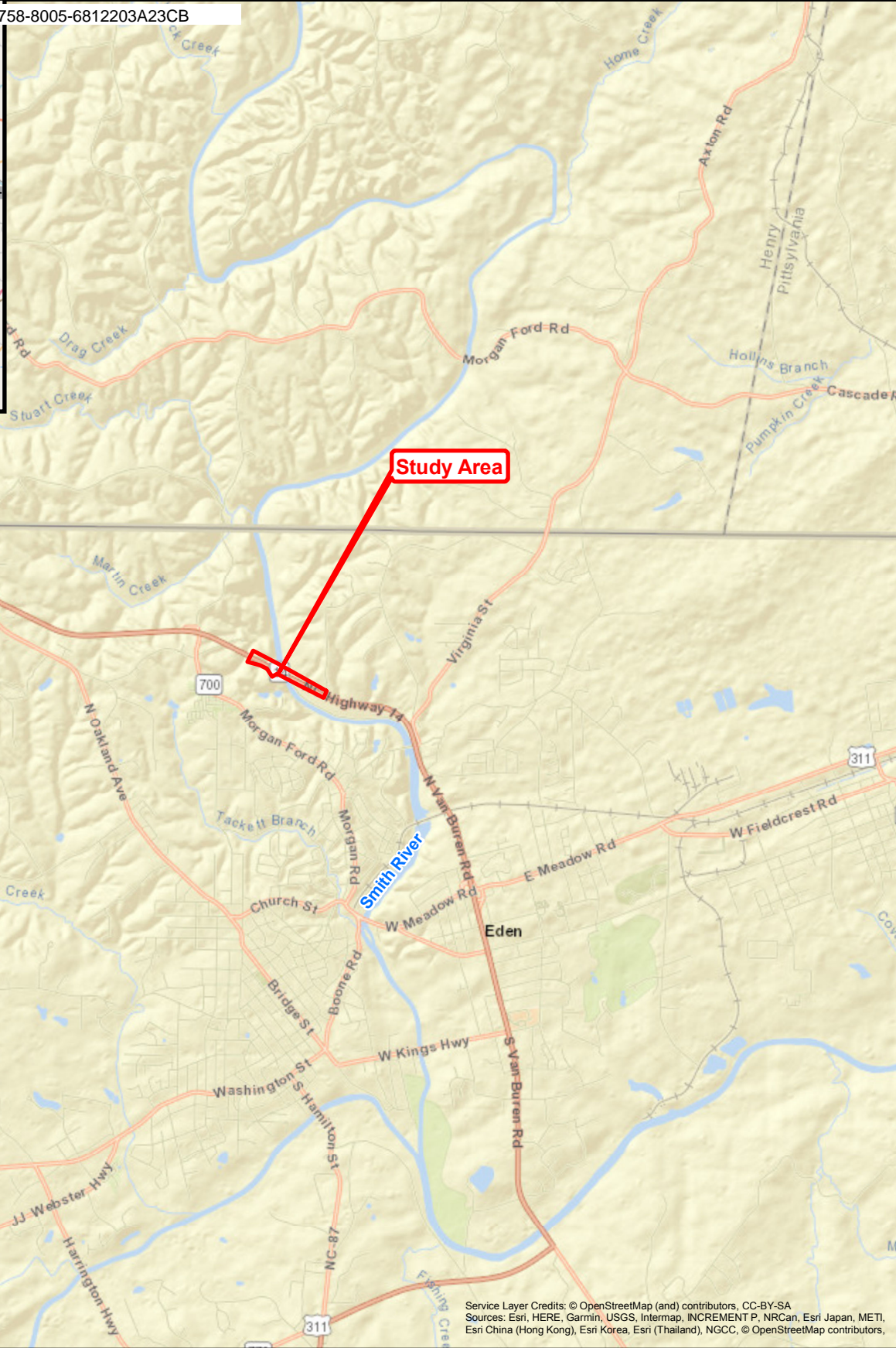
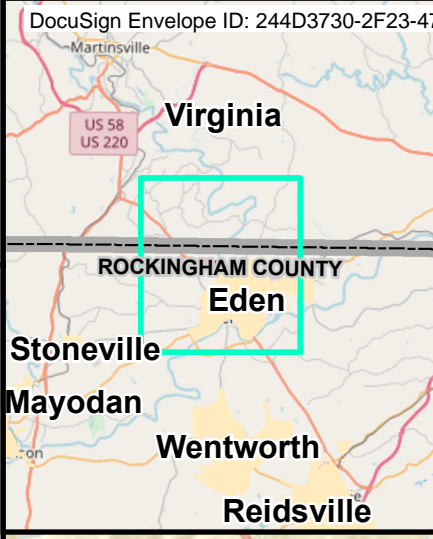
Commercial Property east of bridge

Driveway to property will remain open during construction. Division will coordinate with property owner east of bridge about access to their driveway during construction.

Division 7/Hydraulics Unit

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.

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).

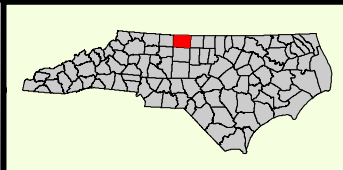
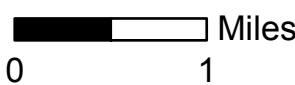


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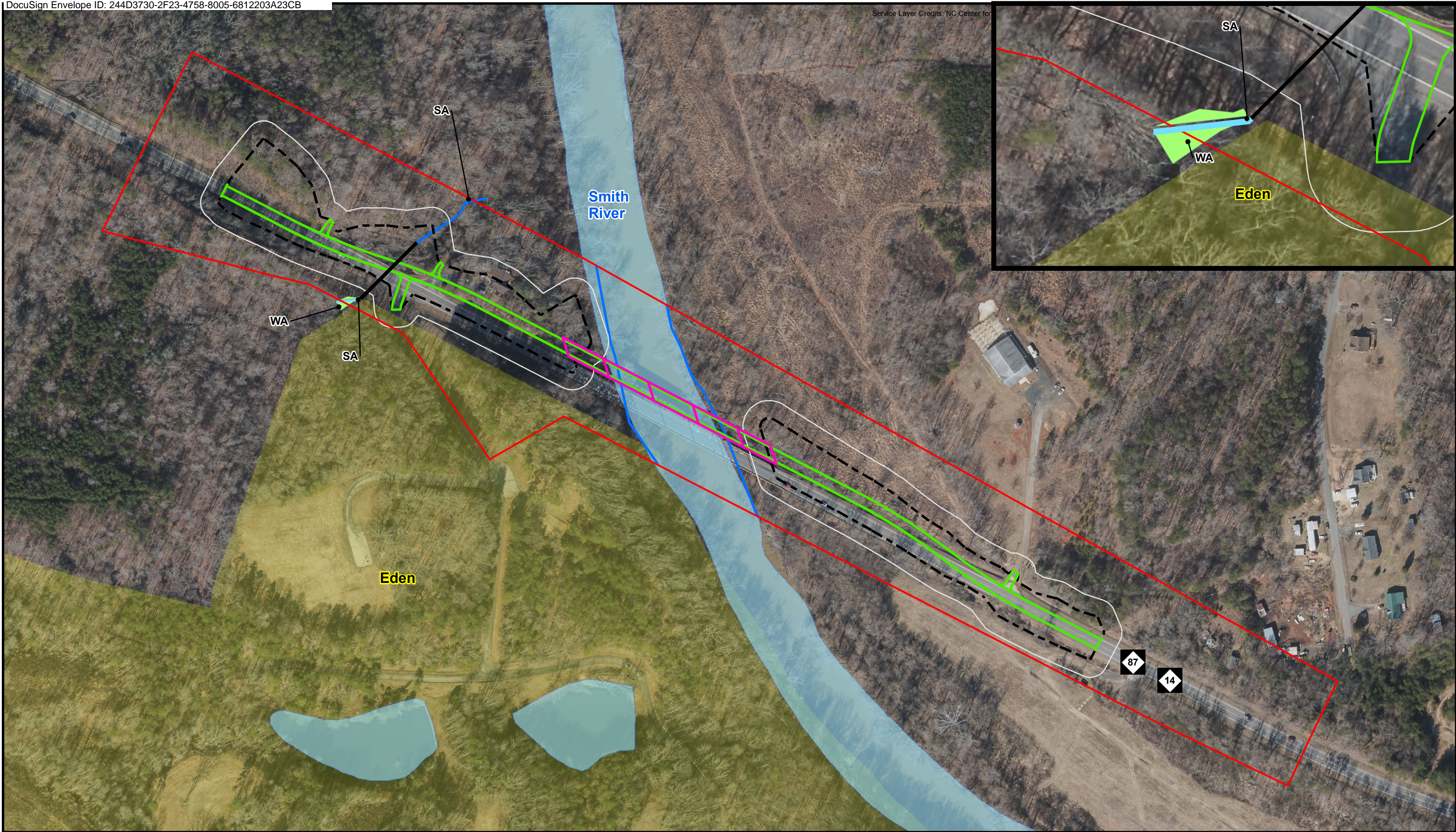


VICINITY MAP - Figure 1
Replace Bridge 780168 on NC 14/87 over the Smith River
Rockingham County, North Carolina

TIP Project BR-0044

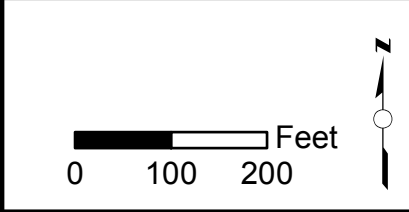


November 2018
 NAD83 NC StatePlane
 This map is for reference only.



- Culvert
- Project Study Area
- Proposed Roadway Bridge
- Proposed Edge of Travel
- Proposed Slope Stakes
- Slopestakes Plus 40 feet
- Intermittent Stream
- Perennial Stream
- Delineated Wetland
- Waterbody
- Municipal Boundary

ALTERNATIVE 1
 Replace Bridge 780168 on NC 14/87 over the Smith River
 Rockingham County, North Carolina
TIP BR-0044



Div: 7	TIP# BR-0044	Figure 2
Date: February 2019		