

## MINIMUM CRITERIA DETERMINATION CHECKLIST

**TIP Project No.**            B-4828  
**W.B.S. Project No.**       38598.2.1

**Project Location:** Bridge No. 56 over Sandy Creek on SR 1526 (Weldon Mill Road) in Vance County

**Project Description:** The purpose of this project is to replace Vance County Bridge No. 56 on SR 1526 over Sandy Creek, which is structurally deficient and functionally obsolete. Bridge No. 56 is 81 feet long. The replacement structure will be a replace in place bridge approximately 130 feet long providing a minimum 27 feet and 10 inches of clear deck width. The bridge will include two 10-foot lanes and 3-foot, 10-inch offsets. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 517 feet from the south end of the new bridge and 353 feet from the north end of the new bridge. The approaches will include a 20-foot pavement width providing two 10-foot lanes. Shoulders will consist of one foot of paved shoulder and three additional feet of grassed shoulder, totaling four feet of shoulder on each side. The roadway will be designed as a Rural Local Route using Sub-Regional Tier Guidelines with a 45 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure 1). A temporary 100-foot long pedestrian bridge is proposed to be built on the east side of the bridge across Sandy Creek to allow pedestrian traffic from The Run of the Mill Bed and Breakfast to The Bees' Knees Country Store (see Figure 2). The trails from SR 1526 to the temporary pedestrian bridge will include a 4-foot gravel path and a running slope of up to 8.33% for 200 feet.

The preferred alternative was selected to limit the costs of Right of Way, construction, and roadway approaches by replacing the existing bridge on its current alignment. Additional project costs will be incurred with the pedestrian bridge on the east side of the proposed bridge in addition to trails approaching the pedestrian bridge from the roadway.

**Purpose and Need:** NCDOT Bridge Management Unit records indicate Bridge No. 56 has a sufficiency rating of 28.53 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to superstructure condition appraisal of 4 out of 9 according to Federal Highway Administration (FHWA) standards, which are also used to assess state-funded bridge replacements. The bridge also meets the criteria for functionally obsolete due to structural appraisal of 3 out of 9. The bridge was built in 1949.

The superstructure and substructure of Bridge No. 56 have steel and timber elements that are sixty-eight years old. Timber 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 prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon

eligibility are programmed for replacement. Steel elements show section-loss, areas of paint failure and corrosion. Steel and timber components of Bridge No. 56 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.

**Anticipated Permit or Consultation Requirements:**

A Nationwide permit (33 CFR 330.5(a)) will likely be required for impacts to “Waters of the United States” resulting from this project.

An NCDWR Section 401 Water Quality General Certification may be required prior to the issuance of a Section 404 Permit. The USACE holds the final discretion as to what permit will be required to authorize project construction.

NCDOT Design Engineers will consult with the Division of Bicycle and Pedestrian Transportation regarding the alignment of the temporary pedestrian bridge and trails connecting the pedestrian bridge and SR 1526 on both sides of Sandy Creek. The Division of Bicycle and Pedestrian Transportation was asked to comment on the alignment of the temporary pedestrian bridge and connecting trails based on the preliminary design. The Division requested that the steep sections of the connecting trails be minimized, signage be posted along the trail to alert users of steep sections, and a binding agent be used in the trail construction to protect the trail surface during weather events.

**Special Project Information:**

**Environmental Commitments:** Greensheet Commitments are located at the end of the checklist.

**Estimated Costs:**

The estimated costs for Alternative 1, the Preferred Alternative, based on 2016 prices, are as follows:

	Alternative 1
Utility:	\$6,520.00
R/W:	\$55,400
Const:	\$975,000
Total	<hr/> \$1,036,920.00

**Estimated Traffic:**

Current 2017	555 vpd
Year 2037	828 vpd
TTST	1%
Dual	7%

**Accidents:** Traffic Engineering has evaluated a recent ten year period (2003-2013) and found one accident occurring in the vicinity of the project. This accident occurred near the bridge and involved a head-on collision between a passenger car and stationary farm equipment. No injuries occurred. Existing speed limit is a statutory 55 mph. However, the recommended speed limit is

45 mph. The accident was not determined to be associated with the geometry of the bridge or its approach roadways.

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

**Pedestrian and Bicycle Accommodations:** This portion of SR 1526 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project.

Property owners of The Run of the Mill Bed and Breakfast and The Bees' Knees Country Store indicated there is substantive pedestrian traffic between the two businesses that crosses Bridge No. 56. A temporary pedestrian bridge on the east side of Bridge No. 56 is proposed to allow pedestrian traffic to cross Sandy Creek.

The Forest Service Trail Accessibility Guidelines (FSTAG) will be followed to implement trails from SR 1526 to the pedestrian bridge on both sides of Sandy Creek. There were several factors that contributed to using the FSTAG. Since there is steeper relief in the surrounding terrain, the consultant investigated options where any proposed design would be contextually sensitive and appropriate to the project area. The project team concluded that due to the low expected volume of pedestrian traffic, project costs, and to limit construction impacts that the Forest Service guidelines provided adequate guidance on the goals of the project and was appropriate to the unique conditions of this site. The NCDOT Division of Bicycle and Pedestrian Transportation concurred that the Forest Service guidelines were appropriate for this project.

**Bridge Demolition:** Bridge No. 56 is constructed entirely of timber and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

**Alternatives Discussion:**

**No Build** – The no build alternative would result in eventually closing the road which is unacceptable given the volume of traffic served by SR 1526, businesses located on road, and importance of the road to local agricultural operations.

**Rehabilitation** – The bridge was constructed in 1949 and the timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components which would constitute effectively replacing the bridge.

**Onsite Detour** – An onsite detour was not evaluated due to the presence of an acceptable offsite detour. Concerns about pedestrian traffic across Sandy Creek have been addressed by the temporary bridge to the east of Bridge No. 56.

**Staged Construction** – Staged construction was not considered because of the availability of an acceptable offsite detour and accelerated construction schedule.

**New Alignment (Alternative 2)** – A new alignment was studied to move Bridge No. 56 to the east and leave the existing bridge open to traffic during construction. The project costs for Alternative 2 would have included additional costs of right of way and the construction of new approaches. For these reasons, the department elected to pursue Alternative 1 and drop Alternative 2 from further consideration.

**Offsite Detour** (Alternative 1 – Preferred Alternative) – Bridge No. 56 will be replaced on the existing 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 resulting from the offsite detour. The offsite detour for this project will include SR 1533, SR 1523, and SR 1529. The majority of traffic on the road is local traffic. The detour for the average road user will result in 30 minutes additional travel time (10 miles additional travel). Up to a 4-month duration of construction is expected on this project. The Division agrees with the use of an offsite detour.

**Other Agency Issues and Comments:**

An NC State Historic Preservation Office (SHPO) Meeting was held on April 4, 2017, at the NCDOT PDEA offices at the Century Center Building B in Raleigh to discuss this bridge replacement project. The bridge design includes a temporary pedestrian bridge just east of the existing bridge, which will ameliorate the effect on the Weldon’s Mill, which is eligible for the National Register of Historic Places, and Run of the Mill Bed and Breakfast properties. In addition, the existing bridge was determined to not be eligible itself for the National Register. It was noted the pedestrian bridge is proposed to be completely off the Weldon’s Mill property. In addition, all construction and bridge hydraulics should fit within the existing NCDOT right-of-way (ROW). The proposed alignment of the preferred alternative is designed to avoid impacting the Weldon’s Mill property.

**Response:** The SHPO decided the B-4828 current designs have No Adverse Effects. The NCDOT will avoid impacts to the boundary of the Weldon’s Mill historic property.

A Freshwater Mussel Survey Report was completed in October 2013 by the NCDOT Natural Environment Section, now the Environmental Analysis Unit (EAU), to survey for the dwarf wedgemussel. The biological conclusion was “No effect” because of poor habitat conditions, low diversity of other mussel taxa, and the distance to any NCNHP element occurrences. However, NCDOT EAU guidance recommends that surveys for protected animal species like the dwarf wedgemussel are valid for 2 years. Given the length of time between the 2013 survey and the proposed project construction period, NCDOT will conduct a mussel survey prior to applying for a USACE permit to determine if formal consultation with the US Fish and Wildlife Service is necessary prior to constructing the project.

**Public Involvement:**

The owners of The Run of the Mill Bed and Breakfast, The Bees' Knees Country Store, and Weldon's Mill property expressed concerns in a letter to NCDOT, dated March 15, 2015. The owners were consulted during a site visit with project team leaders on February 10, 2017.

A newsletter was distributed in May 2017 to property owners within the study area. No comments were received; however, the team was contacted by the owners of the Run of the Mill Bed and Breakfast, the Bees' Knees Country Store, and Weldon's Mill property via a March 15, 2015, letter. The team coordinated with the property owners during a site visit on February 10, 2017, leading to the agreement to provide a temporary pedestrian bridge during project construction. No public meetings have occurred at this time.

**PART A: MINIMUM CRITERIA**

- |   | YES                                 | NO                       |
|---|-------------------------------------|--------------------------|
| 1. Is the proposed project listed as a type and class of activity which would qualify as a Non-Major Action under the Minimum Criteria rules? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

If “yes”, under which category?

Category # 9

(Note: If either Category #8 or #15 is used, complete Part D of this checklist.)

If “no”, then the project does not qualify as a Non-Major Action. A state environmental impact statement (EIS) or environmental assessment (EA) will be required.

**PART B: MINIMUM CRITERIA EXCEPTIONS**

- |  | YES                      | NO                                  |
|--|--------------------------|-------------------------------------|
| 2. Would 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 has such widespread implications, that an uncommon concern for its environmental effects has been expressed to the NCDOT?  | <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. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or groundwater 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 of shellfish, finfish, wildlife, or their natural habitats?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Is the proposed project likely to precipitate significant, foreseeable alterations in land use, planned growth, or development patterns?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Does the proposed action divide or disrupt an established community?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Does the proposed action bypass an existing community?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action likely to have a significant detrimental impact on ambient noise levels for adjoining areas?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- |     |   |                          |                                     |
|-----|---|--------------------------|-------------------------------------|
| 13. | Is the proposed action likely to have a significant impact on travel patterns or traffic volumes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 14. | Does the proposed action require the relocation of significant numbers of people?                 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |




Note: If any of Questions 2 through 14 in part B are answered “YES”, the proposed project does not qualify as a Non-Major Action. A state EIS or EA will be required.

**PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS**

- |                           |  | YES                      | NO                                  |
|---------------------------|--|--------------------------|-------------------------------------|
| <u>Ecological Impacts</u> |  |                          |                                     |
| 15.                       | Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 16.                       | Does the action require the placement of fill in waters of the United States?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 17.                       | 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"/> |
| 18.                       | Does the project require stream relocation or channel changes?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 19.                       | 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"/> |
| <u>Cultural Resources</u> |  |                          |                                     |
| 20.                       | Will the project have an “effect” on a property or site listed on the National Register of Historic Places?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 21.                       | Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Questions in PART C are designed to assist the Engineer in determining whether a permit or consultation with a state or federal resource agency may be required. If any question in PART C is answered “YES”, refer to the Environmental Guidance section of this document and contact the appropriate individual for assistance.

Reviewed by:

10/31/2017	
Date	Elmo Vance Project Manager Project Delivery Team
10.31.2017	
Date	Brian Yamamoto, PE Deputy Team Leader Project Delivery Team
10/31/2017	
Date	Cindy Camacho, AICP Consultant Project Manager



## **PROJECT COMMITMENTS:**

**Vance County  
Bridge No. 56 on SR 1526  
Over Sandy Creek  
W.B.S. No. 38598.2.1  
T.I.P. No. B-4828**

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

In order to have time to adequately reroute school busses, Vance County Schools will be contacted at (252) 492-2127 at least one month prior to road closure.

Vance County Emergency Services will be contacted at (252) 438-8264 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

### **Hydraulics Unit – FEMA Coordination**

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

### **Division Construction-FEMA**

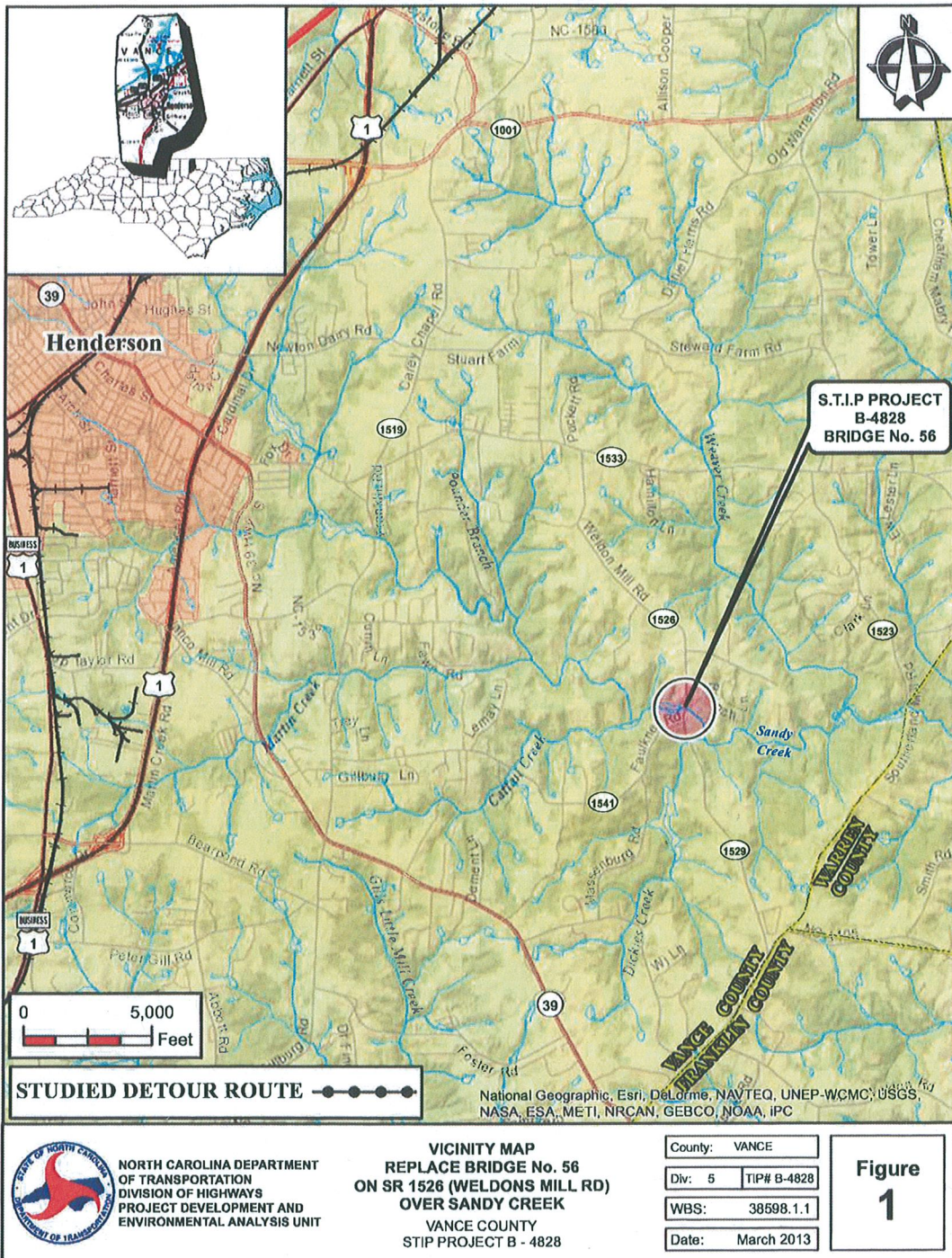
This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

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

In order to address specific requests from business owners on SR 1526, NCDOT will set the **minimum** reasonable contract time to reduce the period of road closure.

### **Division 5 Construction – Eligible Historic Weldon Mills Property**

The project will avoid all impacts to the eligible historic Weldon's Mill property. A 100-foot temporary pedestrian bridge will accommodate pedestrians on the east side of SR 1526. The bridge will be replaced in place and will have aesthetics similar to the existing bridge to mimic the historic character of the surrounding area.



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

**VICINITY MAP**  
**REPLACE BRIDGE No. 56**  
**ON SR 1526 (WELDON'S MILL RD)**  
**OVER SANDY CREEK**  
 VANCE COUNTY  
 STIP PROJECT B - 4828

County:	VANCE
Div:	5
TIP#	B-4828
WBS:	38598.1.1
Date:	March 2013

**Figure**  
**1**

By: J.TORTORELLA

