

MINIMUM CRITERIA DETERMINATION CHECKLIST

TIP Project No. B-5177
W.B.S. Project No. 42548.1.2

Project location: Bridge No. 278 over Middle Fork South Fork New River on SR 1540 in Watauga County.

Project Description: The purpose of this project is to replace Watauga County Bridge No. 278 on SR 1540 over Middle Fork South Fork New River. The SR 1540 intersection will be realigned with US 321 and SR 1531. The total proposed project length is 580 feet, with an overall proposed right of way of 50 feet. SR 1540 will be widened to provide two 11-foot through travel lanes with eight-foot shoulders including 6-foot paved. The roadway will be designed as a Local Route using Sub-Regional Tier Guidelines with a 20 mile per hour design speed. The proposed roadway design includes an 11-foot left turn lane for eastbound traffic exiting Tweetsie Railroad.

Bridge No. 278 is currently 46 feet long. The replacement structure will consist of a triple barrel, 14-foot wide by 12-foot high reinforced concrete box culvert. Water resources in the area are classified as WS-IV. The North Carolina Resource Commission (NCWRC) designated Middle Fork South Fork New River as Hatchery Supported Designated Public Mountain Trout Water.

Traffic will be maintained on-site during construction using the existing bridge.

Purpose and Need: NCDOT Bridge Management Unit records indicate Bridge No. 278 has a sufficiency rating of 43.67 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to a deck and substructure condition appraisal of 4 out of 9 as well as a superstructure rating of 3 out of 9 according to Federal Highway Administration (FHWA) standards. The bridge also meets the criteria for functionally obsolete due to structural appraisal of 3 out of 9.

The substructure of Bridge No. 278 has experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. An interior crutch bent has been installed. The posted weight limit on the bridge is 10 tons for single vehicles and 13 tons for truck-tractor semi-trailers. The bridge is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

Anticipated Permit or Consultation Requirements: A Clean Water Act Section 404 Nationwide Permit No. 14 (Linear Transportation Projects) will be required for impacts to "Waters of the United States" resulting from this project. In addition to the Clean Water Act Section 404 permit, a NCDWR Section 401 Water Quality Certification will be required prior to the issuance of a Section 404 Permit. Other required 401 certifications will include a GC 4088 for the linear transportation project.

Special Project Information:

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

Estimated Costs:

The estimated costs, based on 2017 prices, are as follows:

Utilities:	\$	32,000
Right-of-Way:	\$	250,000
Construction:	\$	1,250,000
Total:	\$	1,532,000

Estimated Traffic:

Current (2017)	1500 vpd
Year (2040)	1800 vpd
TTST	1%
Dual	3%

Accidents: A NCDOT TEASS analysis evaluated a ten year period from 7/1/2007 to 6/30/2017 and found three crashes occurring on SR 1540 from US 321 to 500 feet west of the bridge.

Design Exceptions: No design exceptions are required as the road is acting as a low-speed urban street per the AASHTO Green Book Table 3-13b.

Pedestrian and Bicycle Accommodations: This portion of SR 1540 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. The Blue Ridge Conservancy is leading the effort to develop the Middle Fork Greenway into a complete bicycle and pedestrian corridor connecting Boone and Blowing Rock. The Middle Fork Greenway crosses Tweetsie Railroad Lane just west of the existing bridge and stops at the end of the Tweetsie Railroad parking lot. The triple barrel culvert will accommodate the greenway in one of the barrels. If during the final design the hydraulic opening needs supplementing (made larger or supplemental pipe) due to the greenway then any additional cost to accommodate the greenway would require an agreement with Watauga County.

Bridge Demolition: Bridge No. 278 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 1540.

Realign – The bridge alignment will be shifted to the north realigning the intersections of US 321 with SR 1540 and SR 1531.

Structure Type: The current bridge structure was built in 1961 and has a drainage area of 8.5 square miles according to the Preliminary Hydraulics Field Visit for Environmental Impact a 3 @ 14 foot wide by 12 foot high reinforced concrete box culvert was determined adequate.

Other Agency Comments:

The **NCDOT Rail Division, N.C. Division of Water Quality, U.S. Army Corps of Engineers,** and The **Environmental Protection Agency** had no special concerns for this project.

Public Involvement:

A letter was sent by the Location & Surveys Unit to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

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? | ☒ | ☐ |

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? | ☐ | ☒ |
| 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? | ☐ | ☒ |
| 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? | ☐ | ☒ |
| 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? | ☐ | ☒ |
| 6. Will the proposed activity endanger the existence of a species on the Department of Interior’s threatened and endangered species list? | ☐ | ☒ |
| 7. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or groundwater impacts? | ☐ | ☒ |
| 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? | ☐ | ☒ |
| 9. Is the proposed project likely to precipitate significant, foreseeable alterations in land use, planned growth, or development patterns? | ☐ | ☒ |
| 10. Does the proposed action divide or disrupt an established community? | ☐ | ☒ |
| 11. Does the proposed action bypass an existing community? | ☐ | ☒ |
| 12. Is the proposed action likely to have a significant detrimental impact on ambient noise levels for adjoining areas? | ☐ | ☒ |

- | | | | |
|-----|---|--------------------------|-------------------------------------|
| 13. | Is the proposed action likely to have a significant impact on travel patterns or traffic volumes? | ☐ | ☒ |
| 14. | Does the proposed action require the relocation of significant numbers of people? | ☐ | ☒ |

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? | ☐ | ☒ |
| 16. Does the action require the placement of fill in waters of the United States? | ☒ | ☐ |
| 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? | ☐ | ☒ |
| 18. Does the project require stream relocation or channel changes? | ☐ | ☒ |
| 19. Is the proposed action located in an Area of Environmental Concern, as defined in the Coastal Area Management Act? | ☐ | ☒ |
| <u>Cultural Resources</u> | | |
| 20. Will the project have an “effect” on a property or site listed on the National Register of Historic Places? | ☐ | ☒ |
| 21. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas? | ☐ | ☒ |

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.

The Division Environmental Engineer inspected the bridge for bats during scoping. There will be approximately 0.2 acres of tree cutting from trees that separated parking bays within the parking lot at the project location due to cut and fill work. The Northern Long Eared Bat is listed as a protected species in this county but the project does not fall within 0.25 miles of any red HUC identified in the SLOPES spelled out in the Nationwide Permit Regional conditions.

Reviewed by:

<u>11/7/2017</u>	<u>Joe L. Laws</u>
Date	Division Bridge Program Manager
<u>11/9/2017</u>	<u>J. Heath Slaughter</u>
Date	Division Environmental Officer
<u>10/27/17</u>	<u>Anne Lenart Redmond</u>
Date	Anne Lenart-Redmond STV 1500 Perimeter Park Drive, Suite 120 Morrisville, NC 27560

PROJECT COMMITMENTS:

**Watauga County
Bridge No. 278 on SR 1540
Over Middle Fork South Fork New River
W.B.S. No. 42548.1.2
T.I.P. No. B-5177**

Construction Moratoria

Middle Fork South Fork New River is considered Hatchery Supported Designated Public Mountain Trout Water. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer shall be in place from October 15 to April 15 to protect the egg and fry stage of trout. NCDOT will implement Guidelines for Construction of Highway Improvements Adjacent to or Crossing Trout Waters in North Carolina in the design and construction of this project.

Middle Fork Greenway

Middle Fork Greenway currently crosses Tweetsie Railroad Lane (SR 1540) with an at-grade intersection and will be realigned through a barrel of the culvert.

FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement with FMP, 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, 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.

STV Engineers, Inc.
1500 Perimeter Park Drive, Ste. 120
Morrisville, NC 27560
NC License Number F-0991

PRELIMINARY PLANS

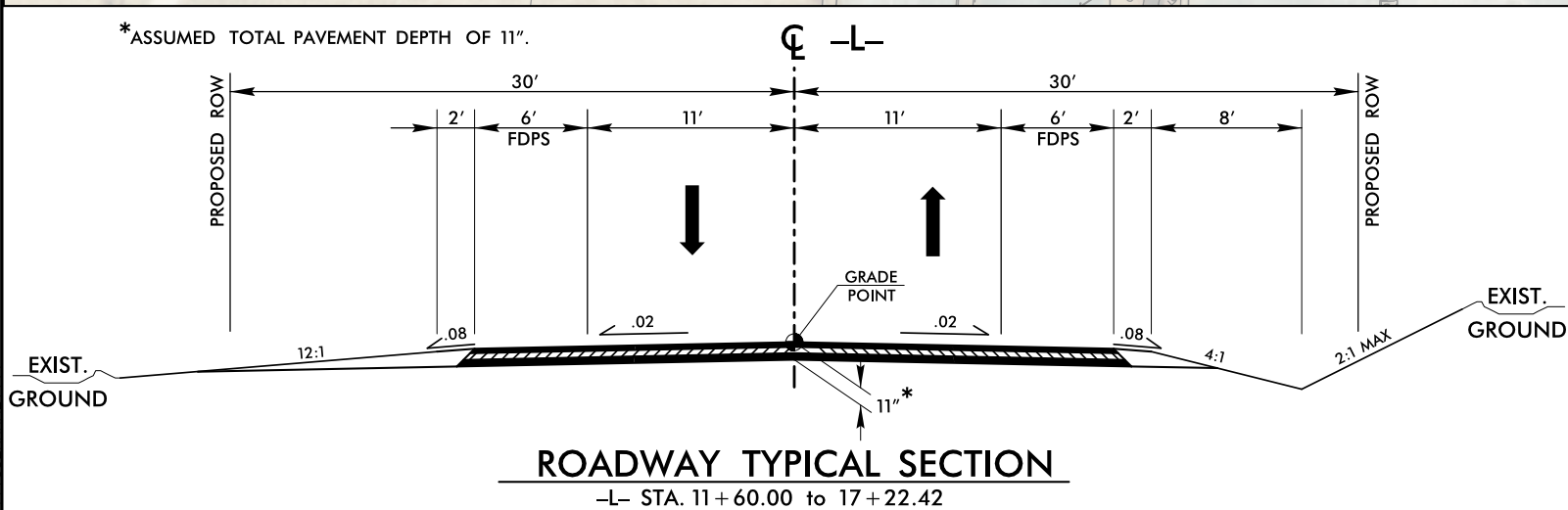
DATE PRINTED 10/27/2017

TRANSMITTED BY STV ENGINEERS, INC.

LAURA BELLE LILLIS
DB 1576 PG 666

 = PAVEMENT REMOVAL

 = HISTORIC PROPERTY



10-03-0167



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED 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-5177	County:	Watauga
WBS No.:	42548.1.1	Document Type:	CE
Fed. Aid No:	BRZ-1505	Funding:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE
<u>Project Description:</u> Replace Bridge No. 278 on SR 1540 over Middle Fork Creek & realign intersection of US 321 with SR 1540 & SR 1531			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- ☐ There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- ☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- ☐ There are no properties within the project's area of potential effects.
- ☒ There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- ☒ There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: March 2016

Description of review activities, results, and conclusions:

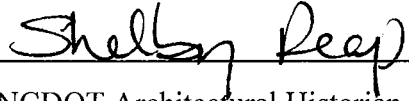
Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on March 30, 2010. Based on this review one National Register site and one identified historic site were identified in the Area of Potential Effects (APE). In March of 2016 an architectural historian completed an evaluation of Tweetsie Railroad (WT0940 and WT0010) and the Sholl House (WT0261). In a letter dated March 29, 2016, NCHPO concurred with our finding that Tweetsie Railroad is eligible for listing in the National Register and that the Sholl House is not eligible. Preliminary Plans show that the proposed project is outside the boundary for Tweetsie Railroad. No historic properties will be affected by this work.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – NO HISTORIC PROPERTIES PRESENT OF AFFECTED



NCDOT Architectural Historian

August 28, 2017

Date

WATAUGA COUNTY
B-5177 (940278)
NEW ALIGNMENT
MAINTAIN TRAFFIC ON EXISTING

END OF CROWFOOT CREEK
H-1

π Sto 1048.01
 Δ = 16 108.1 (RT)
 $\bar{L}$ = 171.7
 R = 680.9
 ρ = 483.6

π Sto 1349.55
 Δ = 25 32 26.5 (LT)
 $\bar{L}$ = 226.3
 R = 400.0*
 ρ = 3%
 ρ = SEE PLANS
 DS = 20 mph

π Sto 512170
 Δ = 22 10 22.7 (RT)
 $\bar{L}$ = 14 19 28.2
 R = 194.0
 ρ = 78.3
 R = 400.0*
 ρ = 3%
 ρ = SEE PLANS
 DS = 20 mph

DESIGN EXCEPTION REQUIRED FOR
MIN HORIZONTAL CURVE RADIUS

PRELIMINARY PLANS

PRINTED 08/18/2017
SWITTED BY STV ENGINEERS, INC.

LE LULUS
PG 666

5000

AND HUSKINS,
ETCHER
\$ 300

GN DATA
- SUIR REGIONAL TIER

= 308 REGIONAL HIK
 = 20 MPH
 = 1223

1300
= 30
= 2%

1% = 86'

- ☐ 11%
- ☐ LOCAL
- ☐ ROLLING

= NONE

PAVEMENT REMOVAL

HISTORIC PROPERTY

Orin





North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

March 29, 2016

MEMORANDUM

TO: Shelby Reap
Office of Human Environment
NCDOT Division of Highways

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*
Environmental Review Coordinator

SUBJECT: Historic Structures Survey Report, Replace Bridge 278 over Middle Fork Creek
And Realign Intersection of US 321 with SR 1540 and SR 1531, B-5177 and
PA 10-03-0167, Watauga County, ER 16-0453

Thank you for your March 10, 2016, letter transmitting the above-referenced report. We have reviewed the document and offer the following comments.

We concur that the **Tweetsie Railroad (WT0940 and WT0010)** is **eligible for listing** in the National Register of Historic Places under Criteria A, B, and C and that the proposed boundary appears appropriate.

We also concur that the **Sholl or Shull House (WT0261)** is **not eligible for listing** for the reasons outlined in the report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.