CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

STIP Project No.	**B-5391**
W.B.S. No.	**46106.1.1**
Federal Project No.	**BRZ-1609(002)**

A. Project Description:

The purpose of this project is to replace Alexander County Bridge No. 139 on SR 1609 (County Home Road) over Glade Creek (see **Figure 1**). Bridge No. 139 is a single-span, 36-foot long, one-lane bridge with a clear roadway width of approximately 16 feet. The replacement structure will be a 55-foot bridge at approximately the same grade and elevation. The new bridge width will include two 10-foot lanes and 2-foot, 5-inch shoulders to total a clear deck width of 24 feet and 10 inches (see **Figures 2 and 3**). 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 proposed approach roadway will extend approximately 430 feet north and 350 feet south from the new bridge. The approaches will include two 10-foot travel lanes with 3-foot shoulders. The roadway will be designed with Sub-Regional Tier Guidelines with a 55-mile per hour (mph) design speed (with a design exception for speed at 15 mph).

Traffic will be detoured off-site during construction using NC 16 and SR 1610 (Millersville Road). The off-site detour is approximately three miles and takes roughly five minutes of additional travel time.

The 2016-2025 State Transportation Improvements Program (STIP) shows the Right of Way (ROW) Acquisition in the 2017 fiscal year and construction in the 2018 fiscal year. The ROW and construction costs shown in the STIP are $50,000 and $425,000, respectively, and total $475,000.

B. Purpose and Need:

NCDOT Bridge Management Unit records (November 4, 2014) indicate Bridge No. 139 has a sufficiency rating of 44 out of a possible 100 for a new structure and is currently in fair condition. However, Bridge No. 139 has one lane that carries two-way traffic.

According to Federal Highway Administration (FHWA) standards, the bridge meets the criteria for "functionally obsolete[1]" due to a deck geometry appraisal of 3 out of 9[2] (critical). Also, its structural evaluation rated 4 out of 9 (poor).

The bridge was built in 1961 and is in need of replacement. This is a federally-funded bridge replacement project.

The timber deck on steel girders with other timber components 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. The posted weight limit for the bridge is 16 tons for single vehicles and 20 tons for tractor-trailer semi-trucks.

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

[1] "Functionally obsolete" means that the bridge is safe, but needs to be replaced to meet current and future traffic demands. It is narrow, has insufficient load-carrying capacity, is poorly aligned with the roadway, and/or can no longer adequately service today's traffic.

[2] Bridge Inspection Evaluation codes: "Critical" is 0-3; "Poor" is 4; "Fair" is 5-6; and "Good" is 7-9.

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 are as follows:

Structure (bridge and bridge approaches)	$ 178,820
Roadway Approaches	$ 275,970
Structure Removal	$ 15,375
Misc. & Mob.	$ 116,835
Eng. & Contingencies	$ 88,000
Total Construction Cost (December 2015)	$ 675,000
Right-of-way Costs (August 2015)	$ 35,400
Right-of-way Utility Costs	$ 0*
Total Project Cost	**$ 710,400**

**There is an underground telephone wire that is the telephone company's responsibility.*

Estimated Traffic:
On March 21, 2013, traffic volumes were forecasted for the current and design years shown below:

Current (2013) - 100 vpd
Design Year (2040) - 200 vpd
TTST - 1%
Dual - 14%

Accidents: Traffic Safety Systems Management Unit has evaluated a recent ten year period and found five accidents occurring in the vicinity of the project. Of these accidents, three were related to striking fixed objects (such as ditches or embankments), one was related to overturning the vehicle, and one was related to sideswiping another vehicle going in the opposite direction. None of the crashes were fatal. A Bridge and Approach Investigation Checklist was performed on June 20, 2013 that determined 15 to 20 mph is a comfortable passenger car speed across the existing alignment.

Design Exceptions: There is a proposed design exception for the design speed to be 15 mph for this project.

Pedestrian and Bicycle Accommodations: SR 1609 is not part of a designated bicycle route nor is it listed in the State Transportation Improvement Program (STIP) as including a proposed bicycle project. There are no sidewalks or pedestrian paths located along the project corridor. No recommendations have been incorporated into the proposed project for bicycle and pedestrian facilities on the bridge.

Bridge Demolition: Bridge No. 139 is constructed 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 adjacent residents and volume of traffic served by SR 1609 (County Home Road).

Rehabilitation – The bridge was constructed in 1961 with timber and steel components. Continual rehabilitation would require replacing the components which would constitute effectively replacing the bridge.

Replace in Place with Offsite Detour (Alternative 1) – Bridge No. 139 will be replaced on the existing alignment. Traffic will be routed along the off-site detour while the new bridge is being constructed. **This alternative is the Preferred Alternative** and costs less than Alternative 2.

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 off-site detour. The off-site detour for this project would include NC 16 and SR 1610 (Millersville Road).

The detour for the average road user would result in five minutes additional travel time (3 miles additional travel). A six-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone, the detour is acceptable. NCDOT will coordinate construction schedules with the Alexander County Emergency Services Director and School Transportation Coordinator for any impacts to their services.

NCDOT Division 12 has indicated the condition of all roads, bridges and intersections on the off-site detour are acceptable without improvement and recommends the use of the off-site detour.

Replace on New Alignment (Alternative 2) – Alternative 2 replaces the bridge on a new alignment, approximately 500 feet east (upstream) of the existing location near a powerline crossing, with a 180-foot bridge. Traffic would be maintained on the existing roadway while the new bridge is being constructed. This alternative is not the preferred alternative because the costs total $1,450,000, which is more than double the costs of Alternative 1.

Other Agency Comments:

NCDOT has sought input from the following agencies as part of the project development for B-5391: US Environmental Protection Agency, US Fish and Wildlife Service (USFWS), US Department of Agriculture, NC Division of Environmental Quality (NCDEQ), Alexander County Emergency Management Services, Alexander County School System, and the Alexander County Planning Department.

The USFWS and NCDEQ had some general comments about bridge replacement projects. During field investigations, several populations of dwarf-flowered heartleaf (DFHL) were found within the project study limits. Section 7 Consultation with the USFWS will be required for impacts to the species and habitat. Compliance with Section 7 will be complete prior to requesting construction authorization.

The **United States Department of Agriculture** provided guidance and support regarding the Farmland Protection Policy Act (FPPA) and this project's impacts on farmland. As is required by the FPPA, the Form NRCS-AD-1006 (for point projects) has been completed according to the FHWA guidelines. Alternative 1 received a total point value of less than 160 points and falls below the NRCS minimal criteria to be evaluated further for farmland impacts. No other alternatives other than those already discussed in this document will be considered without a re-evaluation of the project's potential impacts upon farmland.

> **Response:** Form AD-1006 was completed. This project will not have significant impacts to farmland with either Alternative 1 or 2.

Alexander County Emergency Management Services responded that they will need a three-month advance notice in order to notify all 911 operators so they can familiarize themselves with all addresses impacted and communicate to the first responders to reroute the fire and EMS.

> **Response:** NCDOT will coordinate construction schedules with the Alexander County Emergency Services Director and School Transportation Coordinator for any impacts to their services.

Public Involvement:

On March 31, 2013, property owner notification letters were mailed out to residents in the direct study area to inform them of possible natural systems surveys on their property. On October 10, 2015, a project newsletter (English and Spanish versions) was mailed to residents to inform them about the proposed

project, NCDOT's preference of Alternative 2, and the schedule for right of way acquisition and construction. In January 2016, a second project newsletter (English and Spanish versions) was mailed to residents. The second newsletter discussed the change in the preferred alternative selection from Alternative 2 to Alternative 1. Costs were more than double for Alternative 2.

Based on there being no responses to the newsletter, a Public Meeting was determined unnecessary.

E. Threshold Criteria

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

ECOLOGICAL		YES	NO
(1)	Will the project have a substantial impact on any unique or important natural resource?		X
(2)	Does the project involve habitat where federally listed endangered or threatened species may occur?	X	
(3)	Will the project affect anadramous fish?		X
(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?	X	
(5)	Will the project require the use of U. S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?		X
(8)	Will the project require fill in waters of the United States in any of the designated mountain trout counties?		X
(9)	Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?		X

PERMITS AND COORDINATION		YES	NO
(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)?		X
(11)	Does the project involve Coastal Barrier Resources Act resources?		X
(12)	Will a U. S. Coast Guard permit be required?		X
(13)	Could the project result in the modification of any existing regulatory floodway?	X	
(14)	Will the project require any stream relocations or channel changes?		X

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES		YES	NO
(15)	Will the project induce substantial impacts to planned growth or land use for the area?		X
(16)	Will the project require the relocation of any family or business?		X
(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?		X
(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	X	
(19)	Will the project involve any changes in access control?		X
(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?		X
(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?		X
(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)?	X	

(23)	Is the project anticipated to cause an increase in traffic volumes?		X
(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	X	
(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?		X
(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?		X
(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	X	
(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?		X
(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: Suitable habitat for the DFHL is present within the study area on north-facing slopes in the mesic mixed hardwood forest areas. A review of NCNHP records, on November 26, 2014,

indicates no known DFHL occurrence within 1.0 mile of the study area. However, surveys conducted by biologists on April 10, 2013 and during the spring of 2014 determined that several sub-populations of heartleaf occur within the project area. The USFWS has concurred with the species identification of these populations as an approximately 50/50 split of *Hexastylis naniflora* and *Hexastylis heterophylla*. Compliance with Section 7 will be complete prior to requesting construction authorization.

On July 24, 2015, the Northern long-eared bat (NLEB) was added to the U.S. Fish and Wildlife Service (USFWS) list of protected species for Alexander County. Endangered Species Act compliance for the NLEB will be documented for this project prior to project letting. Compliance with Section 7 will be complete prior to requesting construction authorization.

Response to Question 13: Alexander County is a participant in the National Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The effective FEMA floodplain mapping indicates that this crossing of Glade Creek is located within a flood hazard zone designated as Zone AE, for which 100-year base flood elevations have been established in a Limited Detailed Flood Study. The Hydraulic Unit will coordinate with FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for this project. The Division will submit sealed as-built construction plans to the Hydraulic Unit upon project completion certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Response to Question 25: The roadway will essentially be at the same location and elevation; however, the new slope stakes will extend out further than the existing right of way limits and result in acquisition of new right of way outside of the existing facility.

G. CE Approval

STIP Project No.	**B-5391**
W.B.S. No.	**46106.1.1**
Federal Project No.	**BRZ-1609(002)**

Project Description:

The purpose of this project is to replace Alexander County Bridge No. 139 on SR 1609 (County Home Road) over Glade Creek (see **Figure 1**). Bridge No. 139 is a single-span, 36-foot long, one-lane bridge with a clear roadway width of approximately 16 feet. The replacement structure will be a 55-foot bridge at approximately the same grade and elevation. The new bridge width will include two 10-foot lanes and 2-foot, 5-inch shoulders to total a clear deck width of 24 feet and 10 inches (see **Figures 2 and 3**). 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 proposed approach roadway will extend approximately 430 feet north and 350 feet south from the new bridge. The approaches will include two 10-foot travel lanes with 3-foot shoulders. The roadway will be designed with Sub-Regional Tier Guidelines with a 55-mile per hour (mph) design speed (with a design exception for speed at 15 mph).

Traffic will be detoured off-site during construction using NC 16 and SR 1610 (Millersville Road). The off-site detour is approximately three miles and takes roughly five minutes of additional travel time.

The 2016-2025 State Transportation Improvements Program (STIP) shows the Right of Way (ROW) Acquisition in the 2017 fiscal year and construction in the 2018 fiscal year. The ROW and construction costs shown in the STIP are $50,000 and $425,000, respectively, and total $475,000.

Categorical Exclusion Action Classification:

_____ TYPE II(A)
__X__ TYPE II(B)

Approved:

03/31/2016 Stacy Oberhausen
Date — Stacy Oberhausen, PE –NCDOT Proj. Dev. Group Supervisor
Project Development & Environmental Analysis Unit

3-30-16
Date — Wilson Stroud – NCDOT Project Planning Engineer
Project Development & Environmental Analysis Unit

NORTH CAROLINA PROFESSIONAL 3-30-2016 SEAL 025484 ENGINEER KRISTINA S. MILLER

3-30-2016
Date — Kristina Miller, PE - Consultant Project Manager
Rummel, Klepper and Kahl, LLP. (RK&K)

For Type II(B) projects only:

3-31-16 for Michael C. Fatzinger
Date — John F. Sullivan, III, PE – Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS

STIP Project No. B-5391
Replacement of Bridge No. 136 on SR 1609 (County Home Road)
Over Glade Creek in Alexander County
Federal Aid Project No. BRZ 1609(2)
WBS Element 46106.1.1

Hydraulic Unit – FEMA Coordination
The Hydraulic Unit will coordinate with FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for this project.

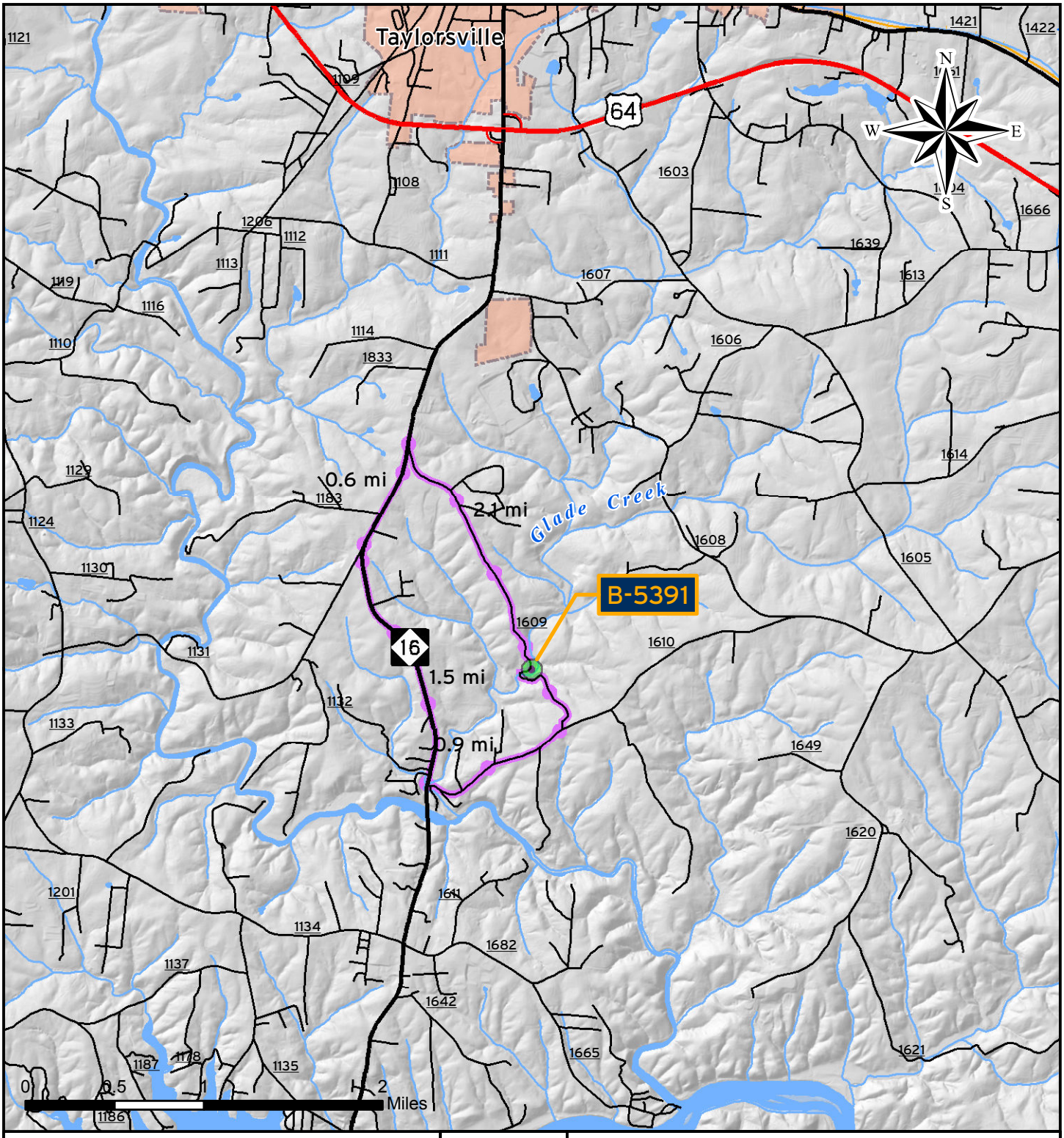
Division 12 Construction – FEMA Coordination
This project involves construction activities on or adjacent to FEMA-regulated streams. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

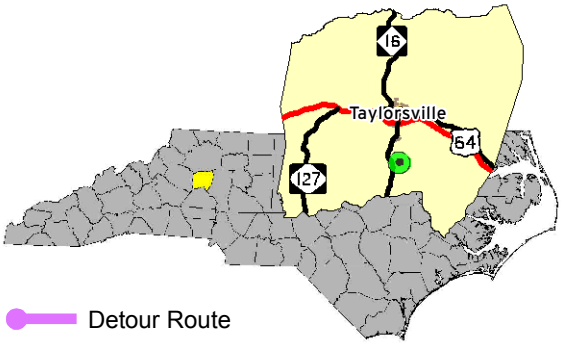
Division 12 Field Office –Emergency Services and School Notification
NCDOT will coordinate construction schedules with the Alexander County Emergency Services Director and School Transportation Coordinator with regard to potential impacts to their services. Emergency Services will need a three-month advance notice in order to notify all 911 operators so they can familiarize themselves with all addresses impacted and communicate to the first responders to reroute the fire and EMS.

Natural Environment Section – Endangered Species
Compliance with Section 7 for the Northern long-eared bat (NLEB) and Dwarf-flowered heartleaf (DFHL) will be completed prior to construction authorization.

Roadway Design Unit and Traffic Management Unit – Signage
The roadway is being designed with a design speed exception at 15 mph for a 55-mph Sub-Regional Tier project. Appropriate cautionary signage will be incorporated into the construction plans.

Figures

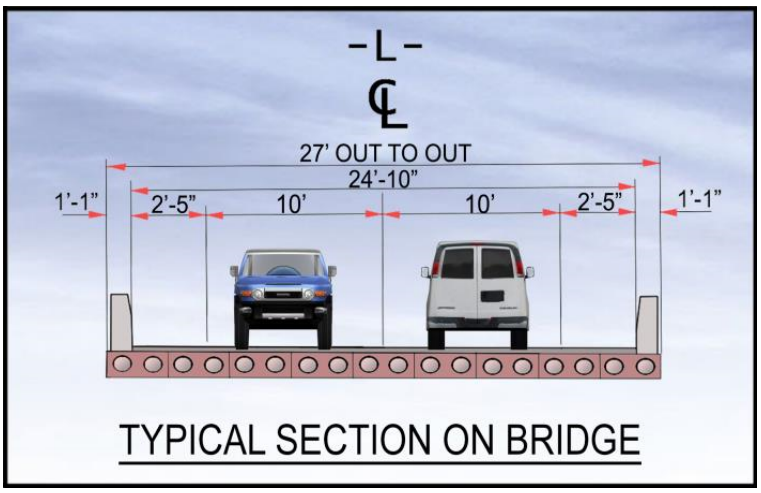




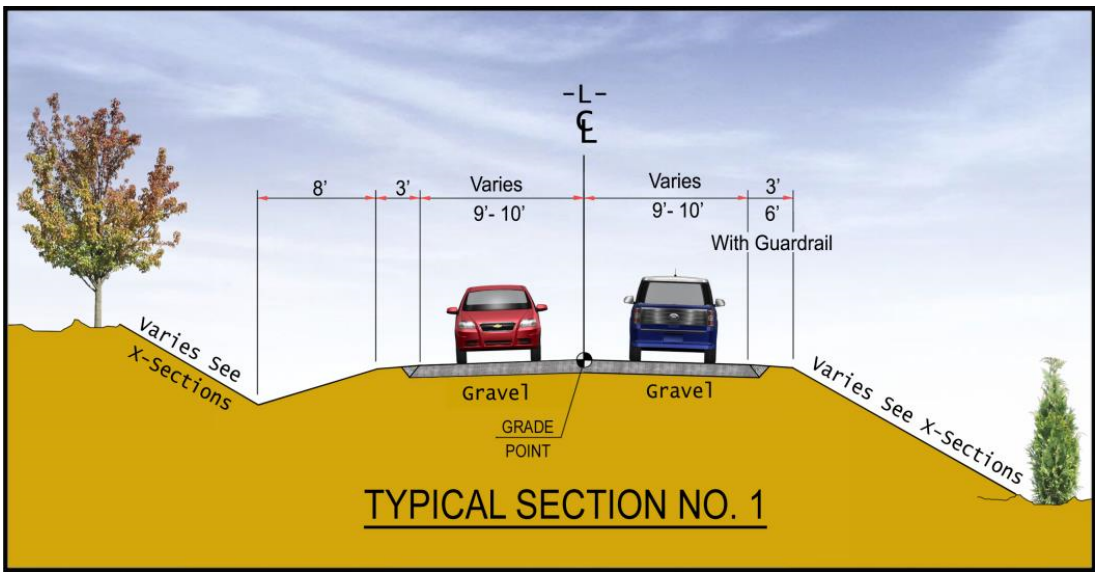
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT

B-5391
REPLACE BRIDGE NO. 139 ON SR 1609 OVER GLADE CREEK ALEXANDER COUNTY

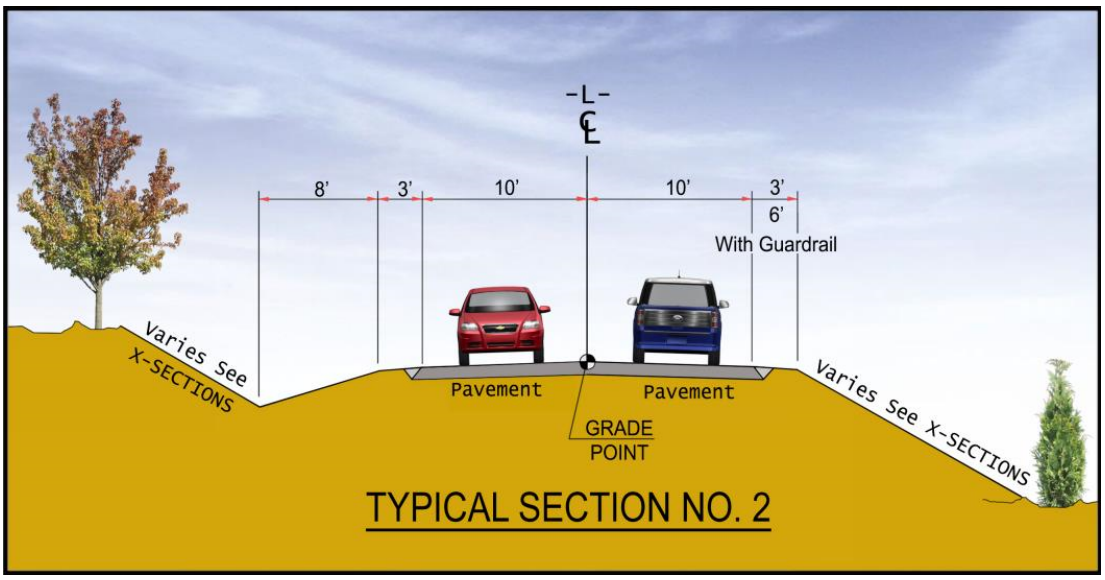
VICINITY FIGURE 1



Proposed Typical Section for Bridge No. 139

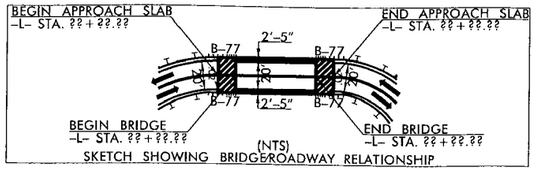


Proposed Typical Section for County Home Road which is unpaved near Bridge No. 139



Proposed Typical Section for County Home Road which is paved directly adjacent to Bridge No. 139

Figure 2



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

B-5391
REPLACE BRIDGE NO. 139 ON SR 1609 OVER GLADE CREEK ALEXANDER COUNTY

PREFERRED ALTERNATIVE 1

FIGURE 3

Appendix

USDA
United States Department of Agriculture
Natural Resources Conservation Service
4407 Bland Road, Suite 117
Raleigh, North Carolina 27609

Milton Cortés, Assistant State Soil Scientist
Telephone No.: (919) 873-2171
Fax No.: (919) 873-2157
E-mail: milton.cortes@nc.usda.gov

September 25, 2015

Mrs. Elizabeth Workman-Maurer
Senior Planner
RK&K
900 Ridgefield Drive, Suite 350
Raleigh, NC 27609

Dear Mrs. Workman-Maurer;

The following information is in response to your review request in the B-5391 replace bridge 139 over Glade Creek, bridge on existing and new location project, Alexander Co., North Carolina

Projects are subject to Farmland Protection Policy Act (FPPA) requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Farmland means prime or unique farmlands as defined in section 1540(c)(1) of the Act or farmland that is determined by the appropriate state or unit of local government agency or agencies with concurrence of the Secretary to be farmland of statewide of local importance.

“Farmland" does not include land already in or committed to urban development or water storage. Farmland ``already in" urban development or water storage includes all such land with a density of 30 structures per 40-acre area. Farmland already in urban development also includes lands identified as ``urbanized area" (UA) on the Census Bureau Map, or as urban area mapped with a ``tint overprint" on the USGS topographical maps, or as ``urban-built-up" on the USDA Important Farmland Maps. See over for more information.

The area in question meets one or more of the above criteria for Farmland. Farmland area will be affected or converted. Enclosed is the Farmland Conversion Impact Rating form AD1006 with PARTS II, IV and V completed by NRCS. The corresponding agency will need to complete the evaluation, according to the Code of Federal Regulation 7CFR 658, Farmland Protection Policy Act.

If you have any questions, please contact me at number above.

Sincerely,

Milton Cortes

Milton Cortés
Assistant State Soil Scientist

cc. Kent Clary, State Soil Scientist, USDA NRCS, NC

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request Sept. 25, 2015
Name of Project B-5391 replace bridge 139 over Glade C	Federal Agency Involved FHWA/NCDOT
Proposed Land Use bridge on existing and new location	County and State Alexander County, NC
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 09/25/15 / Person Completing Form: Milton Cortes NRCS. NC

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated: none	Average Farm Size: 88 acres
Major Crop(s): Corn	Farmable Land In Govt. Jurisdiction — Acres: 25.5 % 43,024 acres	Amount of Farmland As Defined in FPPA — Acres: 25.3 % 42,062 acres	
Name of Land Evaluation System Used: Alexander LESA, NC	Name of State or Local Site Assessment System: N/A	Date Land Evaluation Returned by NRCS: 09/25/15 by email	

PART III *(To be completed by Federal Agency)* Alt 1	Alternative Site Rating: Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.61	1.43		
B. Total Acres To Be Converted Indirectly	0	0		
C. Total Acres In Site	0.61	1.43		
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.27	0.57		
B. Total Acres Statewide Important or Local Important Farmland	0.34	0.86		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	.0014	0.0034		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	20	25		
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	51	35		

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)	7	7		
3. Percent Of Site Being Farmed	(20)	10	10		
4. Protection Provided By State and Local Government	(20)	0	0		
5. Distance From Urban Built-up Area	(15)	12	12		
6. Distance To Urban Support Services	(15)	12	12		
7. Size Of Present Farm Unit Compared To Average	(10)	2	2		
8. Creation Of Non-farmable Farmland	(10)	0	0		
9. Availability Of Farm Support Services	(5)	3	3		
10. On-Farm Investments	(20)	14	14		
11. Effects Of Conversion On Farm Support Services	(10)	0	0		
12. Compatibility With Existing Agricultural Use	(10)	0	0		
TOTAL SITE ASSESSMENT POINTS	160	60	60	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	51	35	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	60	60	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	111	95	0	0

Site Selected: Site A = Alt 1 (revise | Date Of Selection Sept. 2014 | Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

(Subsequent to this submittal, the preferred alternative selection was revised to Alternative 1.)

Name of Federal agency representative completing this form: NCDOT (on behalf of FHWA) | Date: 10/8/15

(See Instructions on reverse side)

Form AD-1006 (03-02)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

January 23, 2013

Ms. Natalie Lockhart
Bridge Project Planning Engineer
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Ms. Lockhart:

Subject: Information Request, State Transportation Improvement Project Numbers B-5390, B-5391, B-5392, and B-5393.

On December 27, 2012, we received your letters (via email) requesting information on the subject projects to aid in initial project evaluation. We submit the following comments and recommendations in accordance with the provisions of section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. §§1531-1543); the Fish and Wildlife Coordination Act, as amended (16 U.S.C.§§661-667e); the National Environmental Policy Act (42 U.S.C.§4321 et seq.); the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§1536, 1538); the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d); and the Clean Water Act (33 U.S.C. §1251 et seq.).

General Recommendations for Replacing Structures that Cross Rivers and Streams - We generally recommend the use of clear-spanning bridge structures designed, at a minimum, to accommodate the active channel width. Use of culverts is discouraged. Properly sized spanning structures will provide for the passage of aquatic species and accommodate the movement of debris and bed material. Furthermore, spanning structures usually: (1) can be constructed with minimal in-stream impacts, (2) do not require stream-channel realignment, and (3) retain the natural streambed conditions; and the horizontal and vertical clearances may be designed to allow for human and wildlife passage beneath the structures. If possible, bridge supports (bents) should not be placed in the streams. Bents can collect debris during flood events, resulting in the scouring of bridge foundations. In-stream bents can also result in hydrologic changes, such as bedload scour or deposition, which may adversely affect in-stream habitat. Deck drains of the

spanning structures should not discharge directly into the streams; instead, they should drain through a vegetated area before entering the streams. Removal of vegetation in riparian areas should be minimized. Armoring of the bank with riprap should be minimized. The reseeding of disturbed areas should be performed promptly after grading, and seed mixes should consist of native vegetation in order to prevent the spread of invasive plant species. New structures should be constructed without the use of in-stream causeways or work pads whenever possible. When causeways are necessary, using the largest washed stone practicable for the application will prevent unnecessary damage to in-stream habitat and will facilitate complete removal. We recommend that all equipment be refueled and receive maintenance outside of the riparian zone. Refueling and maintenance should take place in designated refueling sites that are provisioned to quickly contain any spills of fuel, lubricants, and other fluids.

Migratory Birds - The MBTA (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds (including the bald eagle), their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. To avoid impacts to migratory birds, we recommend conducting a visual inspection of the bridges and any other migratory bird nesting habitat within the project area during the migratory bird nesting season of March through September. If migratory birds are discovered nesting in the project impact area, including on the existing bridges, the North Carolina Department of Transportation (NCDOT) should avoid impacting the nests during the migratory bird nesting season (March through September). If birds are discovered nesting on the bridges during years prior to the proposed construction date, the NCDOT, in consultation with us, should develop measures to discourage birds from establishing nests on the bridges by means that will not result in the take of the birds or eggs, or the NCDOT should avoid construction and demolition activities during the nesting period.

Bald Eagle - The bald eagle has been removed from the federal list of endangered and threatened species due to its recovery. However, this species continues to be afforded protection by the Eagle Act (16 U.S.C. 668-668d) and the MBTA (16 U.S.C. 703-712). The Eagle Act, enacted in 1940 and amended several times, prohibits anyone without a permit issued by the Secretary of the Interior from "taking" bald eagles, including their parts, nests, or eggs. "Take" is defined as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" means "To agitate or bother a bald or golden eagle to the degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment." In addition to immediate impacts, these definitions also cover impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present if, upon an eagle's return, such alterations agitate or bother the eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits and causes injury, death, or nest abandonment.

If any active nests are located within a half mile of the project sites, we request that work at the sites be restricted from mid-January through July in order to prevent adverse impacts to the bald eagle. This will prevent disturbance of the eagles from the egg-laying period until the young fledge, which encompasses their most vulnerable times. We ask that you consult with this office

before construction begins to confirm that the eagles have left the nest. Once this has been confirmed, construction may begin.

B-5390 - Bridge No. 31 on SR 2002 over Muddy Fork Creek in Cleveland County - A full list of federally endangered and threatened species and federal species of concern with known occurrences in Cleveland County is available on the USFWS website at *http://www.fws.gov/nc-es/es/countyfr.html*. A review of available information indicates that Cleveland County has widely distributed occurrences of the dwarf-flowered heart leaf (*Hexastylis naniflora*), a threatened species. Our records indicated a known location 4 miles from the project site. This species can often be found in forested riparian areas. A review of aerial photographs indicates a forested riparian area around the project site. We recommend that a biologist survey the project area prior to right-of-way acquisition. If this species is present, please consult with our office.

B-5391 – Bridge No. 139 on 1609 over Glade Creek in Alexander County - A full list of federally endangered and threatened species and federal species of concern with known occurrences in Alexander County is available on the USFWS website at *http://www.fws.gov/nc-es/es/countyfr.html*. A review of available information indicates that there are no known federally protected species near the proposed action area. We request that the NCDOT follow the above-listed general recommendations to maintain environmental integrity.

B-5392 - Bridge No. 201 on SR 1641 over Knob Creek in Cleveland County - A full list of federally endangered and threatened species and federal species of concern with known occurrences in Cleveland County is available on the USFWS website at *http://www.fws.gov/nc-es/es/countyfr.html*. A review of available information indicates that Cleveland County has widely distributed occurrences of the dwarf-flowered heart leaf (*Hexastylis naniflora*), a threatened species. Our records indicated a known location 1 mile from the project site. This species can often be found in forested riparian areas. A review of aerial photographs indicates a forested riparian area around the project site. We recommend that a biologist survey the project area prior to right-of-way acquisition. If this species is present, please consult with our office.

B-5392 – Bridge No. 192 on SR 1662 over Maple Creek in Cleveland County - A full list of federally endangered and threatened species and federal species of concern with known occurrences in Cleveland County is available on the USFWS website at *http://www.fws.gov/nc-es/es/countyfr.html*. A review of available information indicates that Cleveland County has widely distributed occurrences of the dwarf-flowered heart leaf (*Hexastylis naniflora*), a threatened species. Our records indicated a known location less than 1 mile from the project site. This species can often be found in forested riparian areas. A review of aerial photographs indicates a forested riparian area around the project site. We recommend that a biologist survey the project area prior to right-of-way acquisition. If this species is present, please consult with our office.

If you have questions about these comments, please contact Mr. Jason Mays of our staff at 828/258-3939, Ext. 226. In any future correspondence concerning these projects, please reference our log numbers with your project numbers as follows:

NCDOT Project Nos.	USFWS Log Nos.
• B-5390	4-2-13-096
• B-5391	4-2-13-097
• B-5392	4-2-13-098
• B-5393	4-2-13-099

Sincerely,

Brian P. Cole
Field Supervisor

cc:
Ms. Liz Hair, Asheville Regulatory Field Office, U.S. Army Corps of Engineers, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006
Ms. Marla J. Chambers, Western NCDOT Permit Coordinator, North Carolina Wildlife Resources Commission, 12275 Swift Road, Oakboro, NC 28129
Ms. Alan Johnson, North Carolina Division of Water Quality, 610 East Center Ave., Suite 301 Mooresville, NC 28115
Mr. Chuck Howard, Tennessee Valley Authority, 400 W. Summit Hill Drive, Knoxville, TN 37902

North Carolina Department of Environment and Natural Resources
Division of Water Quality

Pat McCrory
Governor

Charles Wakild, P. E.
Director

John E. Skvarla, III
Secretary

MEMORANDUM

To: Natalie Lockhart, NCDOT, Project Dev./Env. Analysis
From: Alan Johnson, NC Division of Water Quality, MRO
Date: February 22, 2013
Subject: Scoping comments on proposed bridge replacement projects

Reference your correspondence dated December 12, 2012, in which you requested comments for the referenced projects:

Project	Stream Name	River Basin	Stream Classification(s)	303(d) Listing
B-5393	Maple Crk	Broad	WS-IV	
B-5390	Muddy Fork Crk	Broad	C	
B-5392	Knob Crk	Broad	CA, WS-IV, 303d	Ecological/Biological Integrity
B-5391	Glade Crk	Catawba	WS-IV	

Project Specific Comments:

1. Streams Classified as 303d waters of the State: It is recommended that the most protective sediment and erosion control BMPS be implemented in accordance with the *Design Standards in Sensitive Watersheds* (15A NCAC 04B .0124) to reduce the risk to further impairment to the affected stream. It is also requested that road design plans provide treatment of storm water runoff through best management practices as detailed in the most recent version of the NCDWQ *Stormwater Best Management Practices*

2. B-5390: The creek appears widen as it flows under the bridge. If possible, and depending construction, the creek should be brought back in line with up/down stream channel width.

3. B-5393: The creek appears widen as it flows under the bridge. If possible, and depending construction, the creek should be brought back in line with up/down stream channel width.

General Project Comments:

1. The use of rip rap should be **minimized** for stream stabilization where soft measures can be performed. The use of heavy coir fiber/coconut matting and coir fiber logs is encouraged for areas that may need only "temporary" stabilization. Riprap shall 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 properly designed, sized and installed.

Mooresville Regional Office
Location: 610 East Center Avenue, Suite 301, Mooresville, NC 28115
Phone: (704) 663-1699\Fax: (704) 663-6040\ Customer Service: 1-877-623-6748
Internet: http://portal.ncdenr.org/web/wq

2. 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.

3. The construction of floodway benches/storm water benches is highly recommended to reduce scouring and erosion of the stream banks and which also allows for wildlife passage.

4. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification (if required), the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.

5. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should 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.

6. Stormwater shall not be discharge directly to the stream. Bridge deck drains shall not directly discharge in the stream. Stormwater shall be directed across the bridge and pre-treated through site appropriate means (grass swales, preformed scour holes, vegetated buffers, etc.) before entering the stream.

7. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.

8. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

Thank you for requesting our input at this time. If you have any questions or require additional information, please contact me at 704-669-1699 or alan.johnson@ncdenr.gov.

cc: Sonia Corrillo, Wetland Unit
Lyn Hardison, Environmental Assist. Officer,
Washington Regional Office
File Copy

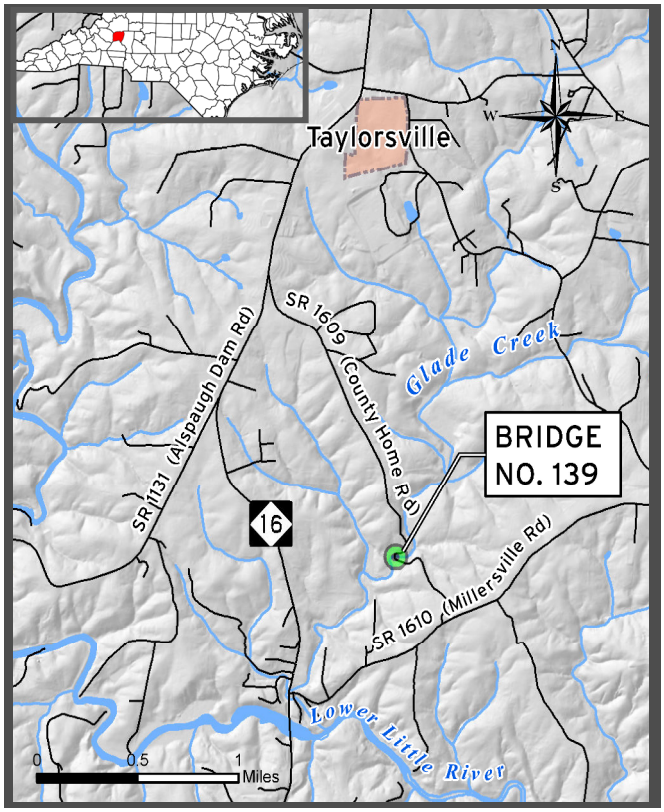
Alexander County *October 2015*

Bridge No. 139 Replacement Project

Transportation Improvement Program (TIP)
TIP No. B-5391

Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek

NCDOT Mission: Connecting people, products, and places safely and efficiently, with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.



Project Description

The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to replace Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek in Alexander County. Bridge No. 139 was built in 1961 and is a one-lane, 15-foot bridge that is reaching the end of its useful life. The purpose of the project is to provide a safer and more durable structure at this location.

Preferred Alternative

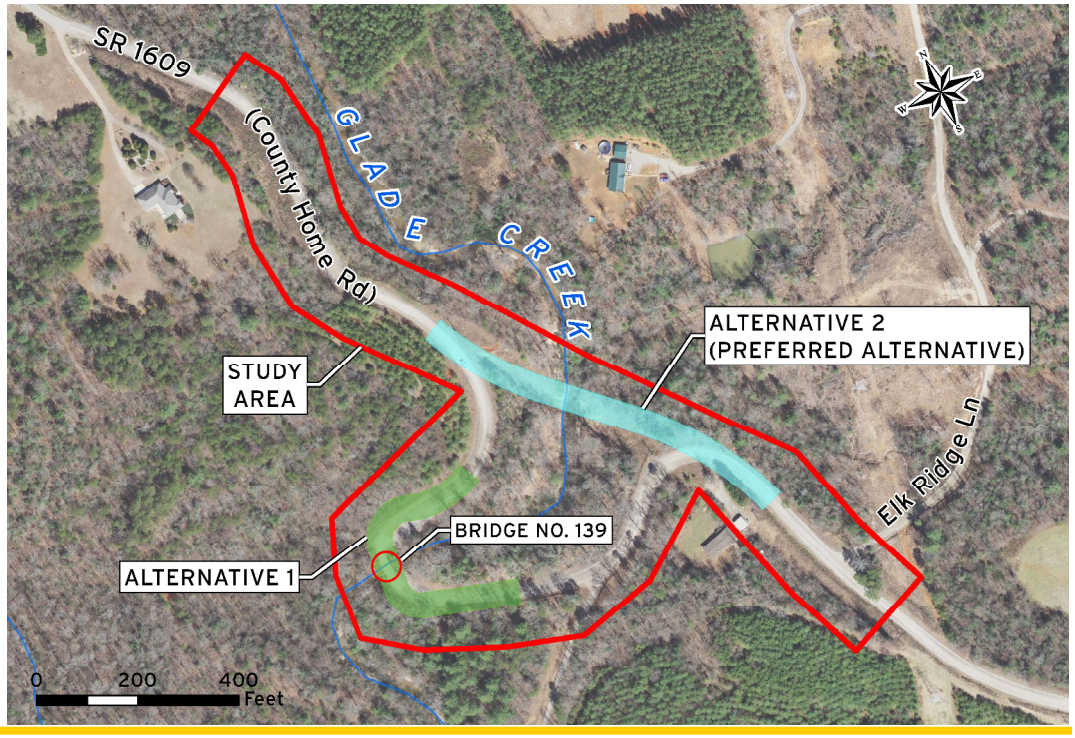
Two alternatives were developed for the proposed project. Alternative 1 replaces the bridge on the existing alignment; Alternative 2 replaces the bridge on a new location approximately 500 feet east of the existing bridge near a powerline easement. Alternative 2 was selected as the preferred alternative because the new location will allow a better horizontal and vertical alignment and an improved design speed to match nearby roadways. The new bridge will be approximately 100 feet long and 24 feet wide, with two ten-foot lanes and two-foot shoulders.

Study Area

The study area is shown in red. No relocations are anticipated from either alternative. However, some property acquisition will be required.

Construction

Traffic will be maintained on the existing roadway and the bridge. Construction of the new bridge will take about six months to complete. Furthermore, access will be maintained to existing driveways along County Home Road.



Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek (TIP No. B-5391)

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
Attn: Wilson Stroud
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Important Information
Please Read!

Schedule for Bridge No. 139

- Dec 2015 Completion of Environmental Studies
- Dec 2016 Right-of-Way Acquisition Begins
- Dec 2017 Construction Begins

Do you want to share your thoughts on the project?

Please feel free to mail, email or fax your questions or comments to a project team member by **October 30, 2015**.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.

Wilson Stroud
NCDOT-PD&EA Unit
1548 Mail Service Center
Raleigh, NC 27699-1548
Phone: 919-707-6045
Email: wstroud@ncdot.gov

Kristina Miller, PE
RK&K Consulting Firm
900 Ridgefield Drive, Ste. 350
Raleigh, NC 27609
Phone: 919-653-7384 Fax: 919-790-8382
Email: kmiller@rkk.com

Newsletter No. 2

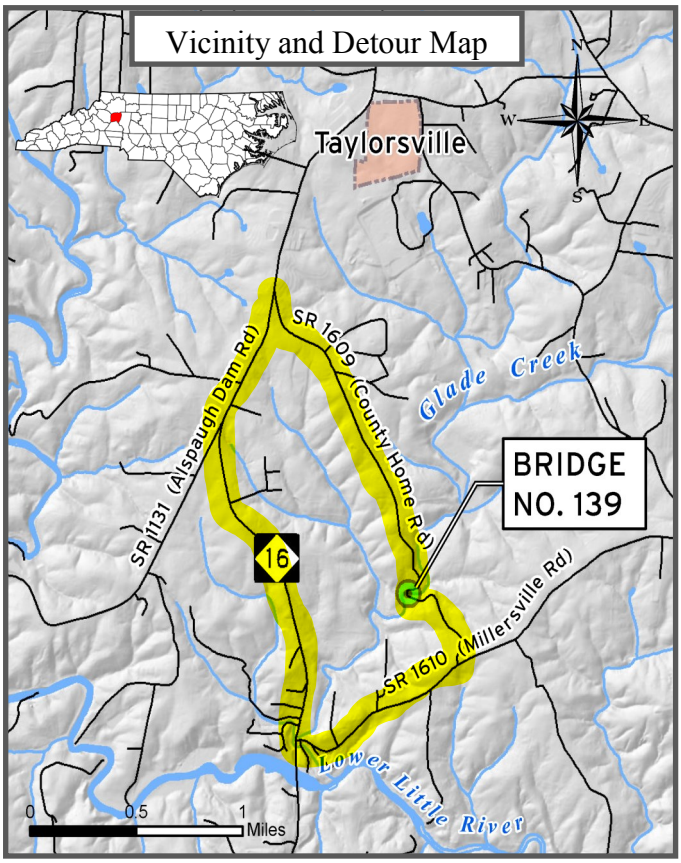
NCDOT Mission: Connecting people, products, and places safely and efficiently, with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.

Alexander County *January 2016*

Bridge No. 139 Replacement Project

Transportation Improvement Program (TIP)
TIP No. B-5391

Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek



Project Description

The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to replace Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek in Alexander County. Bridge No. 139 was built in 1961 and is a one-lane, 15-foot bridge that is reaching the end of its useful life. The purpose of the project is to provide a safer and more durable structure at this location.

Preferred Alternative has Changed

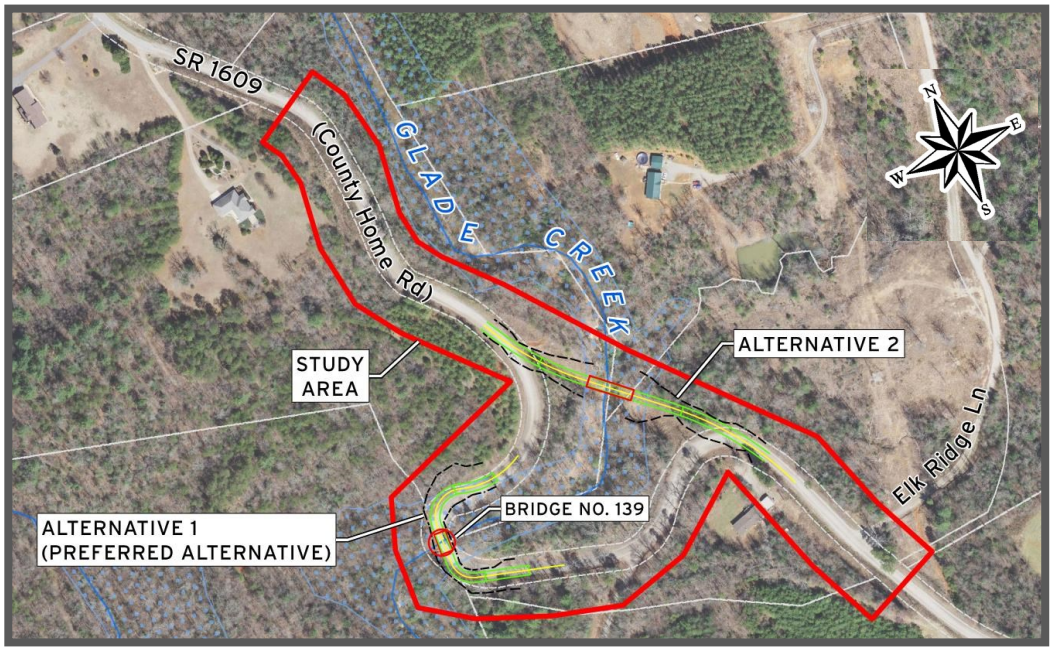
In October 2015, Newsletter No. 1 was mailed to nearby residences and businesses to inform the public about two alternatives that were being studied. At that time, Alternative 2 was selected as the Preferred Alternative. Alternative 2 replaces the bridge on a new location approximately 500 feet east of the existing bridge near a powerline easement. But after further design development, it was determined that a longer bridge would be needed at this location, resulting in higher costs. After evaluating the costs, traffic volumes, accident data, and system linkage, NCDOT changed the Preferred Alternative to Alternative 1, which replaces the bridge at its current location and uses an off-site detour, which is shown on the map to the left.

Study Area

The study area is shown in red. No relocations are anticipated. However, some property acquisition will be required.

Construction

Traffic will be maintained on an off-site detour while the bridge is replaced. Construction of the new bridge will take about six months to complete.



Bridge No. 139 on County Home Road (S.R. 1609) over Glade Creek (TIP No. B-5391)

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
Attn: Wilson Stroud
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Important Information
Please Read!

Schedule for Bridge No. 139

- Feb 2016 Completion of Environmental Studies
- Dec 2016 Right-of-Way Acquisition Begins
- Dec 2017 Construction Begins

Do you want to share your thoughts on the project?

Please feel free to mail, email or fax your questions or comments to a project team member by **February 5, 2016**.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.

Wilson Stroud
NCDOT-PD&EA Unit
1548 Mail Service Center
Raleigh, NC 27699-1548
Phone: 919-707-6045
Email: wstroud@ncdot.gov

Kristina Miller, PE
RK&K Consulting Firm
900 Ridgefield Drive, Ste. 350
Raleigh, NC 27609
Phone: 919-653-7384 Fax: 919-790-8382
Email: kmiller@rkk.com