

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<u>B-5342</u>
W.B.S. No.	<u>46056.1.1</u>
Federal Project No.	<u>BRSTP-1148(5)</u>

A. Project Description:

The purpose of this project is to replace Alamance County Bridge No. 169 on SR 1148 (Anthony Road) over Gum Creek. Bridge No. 169 is 50 feet long. The replacement structure will be a bridge approximately 70 feet long providing a minimum 30 feet 6 inches clear deck width. The bridge will include two 11-foot lanes and 4-foot 3-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 130 feet from the northeast end of the new bridge and 200 feet from the southwest end of the new bridge. The approaches will be widened to include a 22-foot pavement width providing two 11-foot lanes. Six-foot grass shoulders will be provided on each side (9-foot shoulders where guardrail is included). Four feet of the shoulders will be full depth paved shoulders. The roadway will be designed as a Collector Route using Sub Regional Tier guidelines with a 50 mile per hour design speed.

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

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 169 has a sufficiency rating of 15.26 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to substructure condition appraisal of 4 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 and a deck geometry appraisal of 2 out of 9.

The substructure of Bridge No. 169 has timber elements that are sixty-one 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. Timber components of Bridge No. 169 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities; therefore the bridge is approaching the end of its useful life.

C. Proposed Improvements:

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

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

2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.
 - a. Installing ramp metering devices
 - b. Installing lights
 - c. Adding or upgrading guardrail
 - d. Installing safety barriers including Jersey type barriers and pier protection
 - e. Installing or replacing impact attenuators
 - f. Upgrading medians including adding or upgrading median barriers
 - g. Improving intersections including relocation and/or realignment
 - h. Making minor roadway realignment
 - i. Channelizing traffic
 - j. Performing clear zone safety improvements including removing hazards and flattening slopes
 - k. Implementing traffic aid systems, signals, and motorist aid
 - l. Installing bridge safety hardware including bridge rail retrofit

3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
 - a. Rehabilitating, reconstructing, or replacing bridge approach slabs
 - b. Rehabilitating or replacing bridge decks
 - c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
 - d. Replacing a bridge (structure and/or fill)

4. Transportation corridor fringe parking facilities.
5. Construction of new truck weigh stations or rest areas.
6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
7. Approvals for changes in access control.
8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.
13. Acquisition and construction of wetland, stream and endangered species mitigation sites.
14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. Special Project Information:

The estimated costs, based on 2014 prices, are as follows:

Structure & Approach Slabs	\$ 263,000
Roadway Approaches	\$ 174,000
Structure Removal	\$ 25,000
Misc. & Mob.	\$ 195,000
Eng. & Contingencies	\$ 120,000
Total Construction Cost	\$ 777,000
Right-of-way Costs	\$ 105,000
Utility Costs	\$ 306,000
Total Project Cost	\$ 1,188,000

Estimated Traffic:

Current 2014	-	4700 vpd
Year 2035	-	6500 vpd
TTST	-	2%
Dual	-	6%

Accidents: Traffic Engineering has evaluated a recent three year period and found one accident occurring in the vicinity of the project. The accident was not associated with the geometry of the bridge or its approach roadways.

Design Exceptions: There are design exceptions for the sag vertical curve K factor and the nighttime stopping sight distance

Pedestrian and Bicycle Accommodations: This portion of SR 1148 is currently not designated as Alamance County Bicycle Route, however it is on the Burlington-Graham Metropolitan Planning Organization's Bike Plan. NCDOT will provide 4-foot 3-inch offset on both sides of the bridge along with bicycle safe railing. Four feet of the shoulder width on the approaches will be paved, as well, to accommodate bicycle traffic. Sidewalks do not exist on the existing bridge and there is no indication of pedestrian usage on or near the bridge.

Bridge Demolition: Bridge No. 169 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 1148.

Rehabilitation – The bridge was constructed in 1953 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.

Offsite Detour – Bridge No. 169 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 would include NC 62 (Alamance Road), SR 1155 (Hatchery Road), and SR 1154 (Tucker Street Extension). The majority of traffic on the road is through traffic. The detour for the average road user would result in 6 minutes additional travel time (4.8 miles additional travel). Up to a 10-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. Alamance County Emergency Services along with Alamance County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 7 has indicated the condition of all roads, bridges, and intersections on the offsite detour, are acceptable without improvement and concurs with the use of the detour.

Onsite Detour – An onsite detour was not evaluated due to the presence of an acceptable offsite detour.

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

New Alignment – Given that the alignment for SR 1148 is acceptable, a new alignment was not considered as an alternative.

Other Agency Comments:

The N.C. Wildlife Resource Commission in standardized letters provided a request that they prefer any replacement structure to be a spanning structure.

Response: NCDOT will be replacing the existing bridge with a new bridge.

The N.C. Division of Water Quality, in a letter dated Feb. 1, 2011, recommends that highly protective sediment and erosion control Best Management Practices be implemented to reduce the risk of nutrient runoff to Gum Creek. NCDWQ requests that the road design plans provide treatment for the storm water runoff through BMPs as detailed in the most recent version of NCDWQ Stormwater Best Management Practices. NCDWQ also requests that Riparian buffer impacts be avoided and minimized to the greatest extent possible.

Response: NCDOT will implement for sedimentation, erosion control measures, and storm water drainage BMPs during project construction. NCDOT will adhere to NC DWQ's Riparian Buffer rules for the Jordan Lake drainage.

Public Involvement:

A letter dated April 4, 2011 was sent by the Project Development and Environmental Analysis Unit to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

E. Threshold Criteria

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

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

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?

(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? | <u> X </u> | <input type="checkbox"/> |
| (25) | If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility? | <u> X </u> | <input type="checkbox"/> |
| (26) | Is there substantial controversy on social, economic, or environmental grounds concerning the project? | <input type="checkbox"/> | <u> X </u> |
| (27) | Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project? | <u> X </u> | <input type="checkbox"/> |
| (28) | Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places? | <input type="checkbox"/> | <u> X </u> |
| (29) | Will the project affect any archaeological remains which are important to history or pre-history? | <input type="checkbox"/> | <u> X </u> |
| (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)? | <input type="checkbox"/> | <u> X </u> |
| (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? | <input type="checkbox"/> | <u> X </u> |
| (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? | <input type="checkbox"/> | <u> X </u> |

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 13: Alamance County is a participant in the National Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). Based on the most current information available from the NC Floodplain Mapping Program (FMP), this stream crossing is in a designated flood hazard zone which is within a redelineated detailed flood study reach. The Hydraulics Unit will coordinate with the FMP, to determine the status of the 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 a FEMA-regulated stream. 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.

G. CE Approval

TIP Project No.	<u>B-5342</u>
W.B.S. No.	<u>46056.1.1</u>
Federal Project No.	<u>BRSTP-1148(5)</u>

Project Description:

The purpose of this project is to replace Alamance County Bridge No. 169 on SR 1148 (Anthony Road) over Gum Creek. Bridge No. 169 is 50 feet long. The replacement structure will be a bridge approximately 70 feet long providing a minimum 30 feet 6 inches clear deck width. The bridge will include two 11-foot lanes and 4-foot 3-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 130 feet from the northeast end of the new bridge and 200 feet from the southwest end of the new bridge. The approaches will be widened to include a 22-foot pavement width providing two 11-foot lanes. Six-foot grass shoulders will be provided on each side (9-foot shoulders where guardrail is included). Four feet of the shoulders will be full depth paved shoulders. The roadway will be designed as a Collector Route using Sub Regional Tier guidelines with a 50 mile per hour design speed.

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

Categorical Exclusion Action Classification:

 TYPE II(A)
 X TYPE II(B)

Approved:

8/4/14
Date

Gregory J. Blatzgry
Project Planning Engineer
Project Development & Environmental Analysis Unit

8-4-14
Date

Bryan D. Kluck
Project Engineer
Project Development & Environmental Analysis Unit

8/4/14
Date

William T. Gordon
Bridge Project Development Engineer
Project Development & Environmental Analysis Unit

For Type II(B) projects only:

8/8/14
Date

John F. Sullivan, III
John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS:

**Alamance County
Bridge No. 169 on SR 1148 (Anthony Road) over Gum Creek
Federal Aid Project No. BRSTP-1148(5)
W.B.S. No. 46056.1.1
T.I.P. No. B-5342**

All standard procedures and measures, including NCDOT's Best Management Practices for Protection of Surface Waters, Guidelines for Best Management Practices for Bridge Demolition and Removal, will be implemented, as applicable, to avoid or minimize environmental impacts. The following special commitments have been agreed to by NCDOT:

Division 7 Construction:

In order to allow Emergency Management Services (EMS) time to prepare for road closure, the NCDOT Resident Engineer will notify the Director of the Alamance County EMS at (336) 570-6796 of the bridge removal 30 days prior to road closure.

In order to allow Alamance County Schools to prepare for road closure, the NCDOT Resident Engineer will notify the Transportation Director at (336) 570-6480 of the bridge removal 30 days prior to road closure.

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.

Hydraulic 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).

Hydraulic Design Unit, Natural Environment Section, Roadside Environmental Unit:

This project is subject to NC Division of Water Quality Riparian Buffer Rules for the Jordan Lake drainage (Cape Fear River Basin). Also, the best usage classification for Gum Creek is listed as WS-V; NSW, therefore, sedimentation and erosion control measures shall adhere to the most recent version of NCDWQ's Stormwater BMPs.

Structures Management Unit , Division 7 Construction– FAA Coordination:

Burlington-Alamance Regional Airport is located approximately 0.25 mile west of the project area. Coordination should be made regarding crane height restrictions and construction safety protocols. A Federal Aviation Administration Permit must be submitted.

Appendix A

Figures



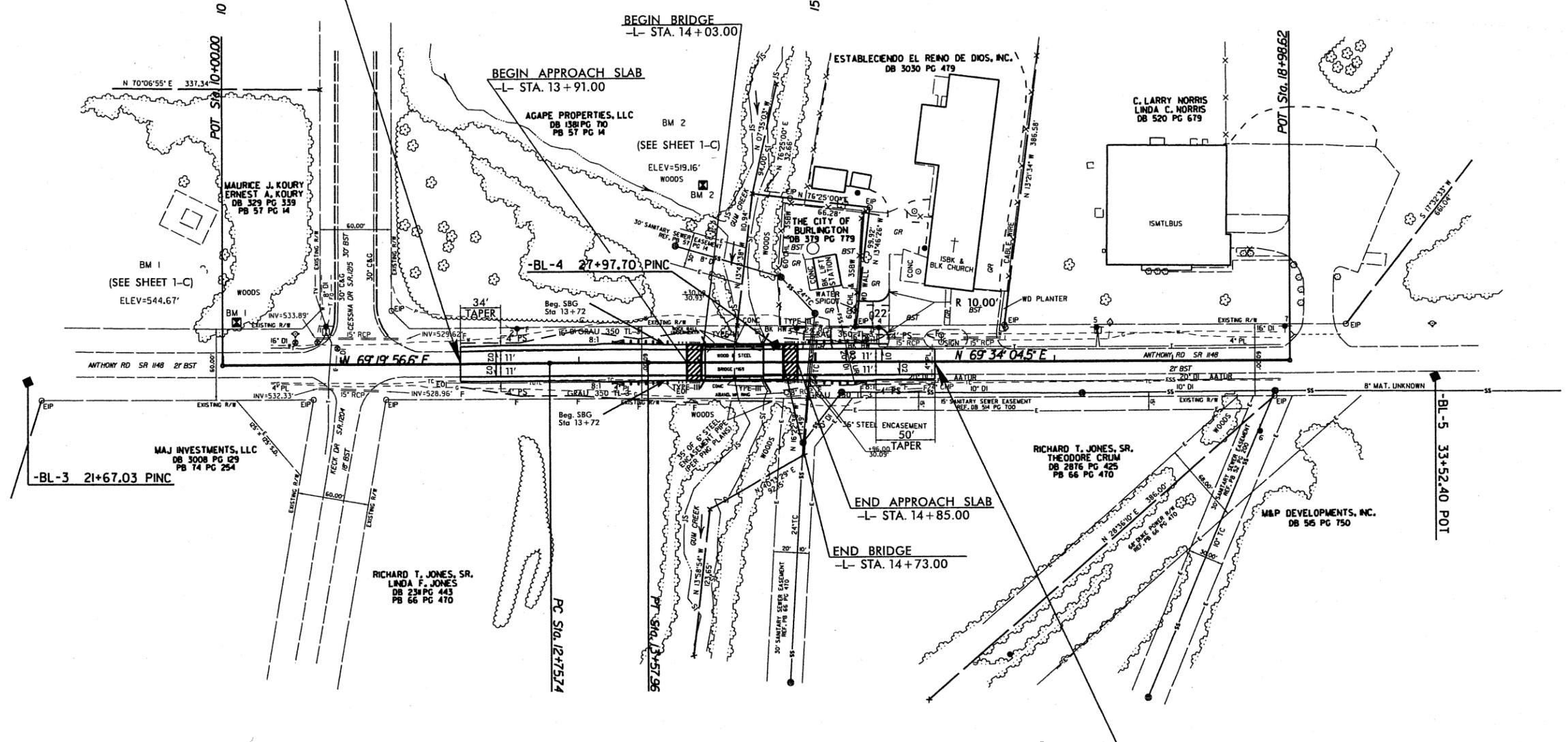
North Carolina Department of
Transportation
Division of Highways
Project Development &
Environmental Analysis Unit

Alamance County
Replace Bridge No. 169 on SR 1148
Over Gum Creek
B-5342

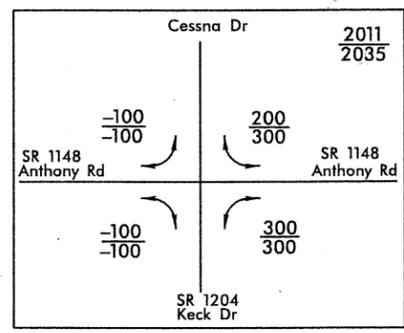
Figure 2

NAD 83 NRS 2007

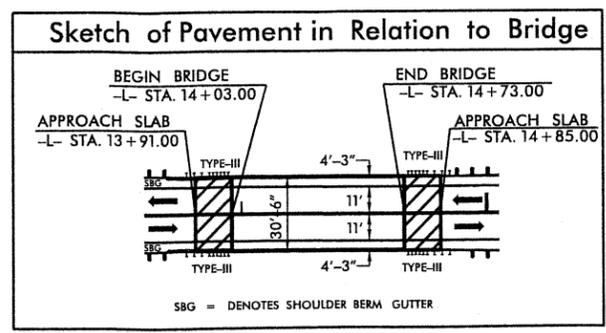
BEGIN TIP PROJECT B-5342
-L- STA. 12 + 00.00



END TIP PROJECT B-5342
-L- STA. 16 + 00.00



-L-
PI Sta 13+16.85
 $\Delta = 0'14''08.0''$ (RT)
D = 0'17''11.3''
L = 82.22'
T = 41.1'
R = 20,000.00'



REVISIONS

B-17/99
R:\JUL-2014\1623\185114_Rdy_psh4.dgn
11:53:53 AM 7/15/2014

Appendix B

Reference Letters



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

February 1, 2011

MEMORANDUM

To: Gregory M. Blakeney, NCDOT PDEA-Bridge Project Development Unit

From: Amy Euliss, NC Division of Water Quality, Winston Salem Regional Office

Subject: Scoping comments on proposed improvements to Bridge No 193 on SR 2719 (B-4959) in Guilford County, Bridge No. 126 on NC 87 (B-5239) and Bridge No. 169 on SR 1148 (B-5342) in Alamance County, Bridge No. 234 on SR 1581 (B-5340) in Orange County, and Bridge No. 5341 on SR 1767 (B-5341) in Rockingham County.

Reference your correspondence dated December 30, 2010 in which you requested comments for the referenced projects. Preliminary analysis of the project reveals the potential for multiple impacts to streams and jurisdictional wetlands in the project area.

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

Project Specific Comments:

B-4959: Bridge No. 193 over Buffalo Creek on SR 2719 in Guilford County

1. Buffalo Creek are class WSV; NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to Buffalo Creek. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices*.
2. This project is within the Jordan Lake Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B .0267

B-5239: Bridge No. 126 at Mill Race on NC 87 in Alamance County

1. This project is within the Jordan Lake Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B .0267
2. The Haw River are class C; NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to the Haw River. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices*.

B-5340: Bridge No. 234 over South Fork Little River on SR 1581 in Orange County

North Carolina Division of Water Quality, Winston-Salem Regional Office
Location: 585 Waughtown St. Winston-Salem, North Carolina 27107
Phone: 336-771-5000 \ FAX: 336-771-4630 \ Customer Service: 1-877-623-6748
Internet: www.ncwaterquality.org

An Equal Opportunity \ Affirmative Action Employer

One
North Carolina
Naturally

1. South Fork Little River are class WS II; HQW;NSW; NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to South Fork Little River. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices*.
2. This project is within the Neuse River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B .0233.
3. Review of the project reveals the presence of surface waters classified as WSII; High Quality Waters of the State in the project study area. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

B-5341: Bridge No. 110 over Wolf Island Creek on SR 1767 in Rockingham County

*Class C waters of the State. No project specific comments. See general comments below.

B-5342: Bridge No. 169 over Gum Creek on SR 1148 in Alamance County

1. Gum Creek are class WSV; NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to Gum Creek. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices*.
2. This project is within the Jordan Lake Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B .0267

General Project Comments*:

(*Applies to all bridges listed above)

1. The environmental document shall provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
2. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, 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.
4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single stream. 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 stream mitigation.

5. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, NCDWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).
7. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
8. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) shall not be placed in the stream when possible.
9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.

10. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
11. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
12. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
13. 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 shall 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.

14. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3624/Nationwide Permit No. 6 for Survey Activities.
15. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
16. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NCDWQ. 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 should be used to prevent excavation in flowing water.
17. Sediment and erosion control measures shall not be placed in wetlands and streams.
18. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.
19. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
20. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
21. In most cases, NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.
22. 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.

Thank you for requesting our input at this time. NCDOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Amy Euliss at (336) 771-4959.

cc: Andy Williams, US Army Corps of Engineers, Raleigh Field Office
Federal Highway Administration

10-12-0015

NO SURVEY REQUIRED FORM

PROJECT INFORMATION

Project No: B-5342

County: Granville

WBS No: 46056.1.1

Document:

F.A. No:

Funding:

State

Federal

Federal (USACE) Permit Required? Yes No Permit Type: N/A

Project Description: Replace Bridge No. 169 with off-site detour.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

Review of HPO quad maps, historic designations roster, and indexes was undertaken on 2/24/2011. Based on this review, there are no existing NR properties in the Area of Potential Effects. There are no properties recorded present in the project APE. There will be no impact to new location.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE: No sites are recorded near the proposed project. A reconnaissance revealed extensive modification of the southern quadrants of the project, a sewer line and pumping station suggested complete destruction of the original floodplain. The survey for the 201 facility found no sites within the APE of the current proposed project (Woodall 1976). The land since then has been disturbed well beyond the proposed APE by both the sewer line as well as a continuation of SR 1215 northward. There will be no impact beyond the existing APE thus further work is unwarranted.

SUPPORT DOCUMENTATION

See attached: Map(s),

Woodall, J. Ned

1976 "The archaeological resources in the Alamance County complex 201 facility planning area." Archaeology Laboratories, Wake Forest University Publications in Archaeology.

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL NO SURVEY REQUIRED

ARCHAEOLOGY

HISTORIC ARCHITECTURE

(CIRCLE ONE)

NCDOT Cultural Resources Specialist

Date

NO HISTORIC PROPERTIES PRESENT/AFFECTED FORM**PROJECT INFORMATION**

Project No: B-5342 *County:* Alamance
WBS No: 46053.1.1 *Document:*
F.A. No: BRSTP-1148(5) *Funding:* State Federal
Federal (USACE) Permit Required? Yes No *Permit Type:*

Project Description:
Replace Bridge No. 169 over Gum Creek on SR 1148.

SUMMARY OF FINDINGS

The North Carolina Department of Transportation (NCDOT) reviewed the subject project and determined:

- There are no properties over fifty years old 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 National Register-listed or Study Listed properties within the project's area of potential effects.
- All properties greater than 50 years of age located in the APE have been considered and all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- There are no historic properties present or affected by this project. (*Attach any notes or documents as needed*)

SUMMARY OF CULTURAL RESOURCES REVIEW

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

Review of HPO quad maps, historic designations roster, and indexes was undertaken on February 4, 2010. Based on this review, no existing NR, SL, LD, or DE properties in the Area of Potential Effects were identified. The M. Anthony House (AM 1582, PIN 8863361248) is located in the vicinity of the bridge project. On March 16, 2011, a site visit was conducted to investigate the M. Anthony House in order to determine its eligibility for National Register listing. The house is a common I-house form with rear and side additions and alterations to original building materials. The M. Anthony House does not rise to the level of significance and integrity necessary for individual National Register listing. Adjacent to the M. Anthony House is a one-story, circa 1940 house (PIN 8863350704) which does not possess significant architectural merit to be individually eligible for listing in the National Register.

SUPPORT DOCUMENTATION

See attached: Maps, photographs

Signed:


Cultural Resources Specialist, NCDOT

4/11/2011
Date

Representative, HPO

Date

HPO/OSA Comments:



Bridge No 169

Property 1

AM 1582 M. Anthony House

Property 2

Aerial of Bridge No 169 and M. Anthony House (AM 1582)