

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<u><b>B-5171</b></u>
W.B.S. No.	<u><b>42329.1.1</b></u>
Federal Project No.	<u><b>BRSTP-1400 (6)</b></u>

A. Project Description:

The purpose of this project is to replace Granville County Bridge No. 125 on SR 1400 (Grassy Creek Road) over Aarons Creek. Bridge No. 125 is 100 feet long. The replacement structure will be a bridge approximately 135 feet long providing a minimum 27'-10" clear deck width. The bridge will include two 10-foot lanes and 3'-11 ½ "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 400 feet from the west end of the new bridge and 370 feet from the east end of the new bridge. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Four-foot grass shoulders will be provided on each side (7-foot shoulders where guardrail is included). The roadway will be designed as a Rural Local 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. 125 has a sufficiency rating of 19.81 out of a possible 100 for a new structure.

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

The superstructure and substructure of Bridge No. 125 have timber elements that are fifty-eight years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement. Timber components of Bridge No. 125 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities; therefore the bridge has reached 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	\$ 403,000
Roadway Approaches	178,000
Structure Removal	30,000
Misc. & Mob.	106,000
Eng. & Contingencies	108,000
Total Construction Cost	\$ 825,000
Right-of-way Costs	\$11,000
Utility Costs	N/A
Total Project Cost	\$836,000

**Estimated Traffic:**

Current	-	175 vpd
Year 2030	-	255 vpd
TTST	-	2%
Dual	-	3%

**Accidents:** Traffic Engineering has evaluated a recent three year period and found no accidents occurring in the vicinity of the project.

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

**Pedestrian and Bicycle Accommodations:**

This portion of SR 1400 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Neither permanent nor temporary bicycle or pedestrian accommodations are required for this project.

**Bridge Demolition:** Bridge No. 125 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 1400.

**Rehabilitation** – The bridge was constructed in 1957 and the timber materials within the bridge has reached the end of their useful life. Rehabilitation would require replacing the timber components which would constitute effectively replacing the bridge.

**Offsite Detour** – Bridge No. 125 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 SR 1402, NC 96, and SR 1403. The majority of traffic on the road is through traffic. The detour for the average road user would result in six minutes additional travel time (4.5 miles additional travel). Up to a nine-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. Granville County Emergency Services along with Granville County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 5 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 1400 is acceptable, a new alignment was not considered as an alternative.

#### **Other Agency Comments:**

The **N.C. Wildlife Resource Commission** and **U.S. Fish & Wildlife Service** 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.

#### **Public Involvement:**

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

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"/>
 <u>PERMITS AND COORDINATION</u>		
(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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(11) Does the project involve Coastal Barrier Resources Act resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(12) Will a U. S. Coast Guard permit be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(13) Could the project result in the modification of any existing regulatory floodway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(14)	Will the project require any stream relocations or channel changes?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

		<u>  <b>YES</b>  </u>	<u>  <b>NO</b>  </u>
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(15)	Will the project induce substantial impacts to planned growth or land use for the area?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(16)	Will the project require the relocation of any family or business?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	<u>  <b>X</b>  </u>	<input type="checkbox"/>
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(19)	Will the project involve any changes in access control?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(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)?	<u>  <b>X</b>  </u>	<input type="checkbox"/>
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(23)	Is the project anticipated to cause an increase in traffic volumes?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	<u>  <b>X</b>  </u>	<input type="checkbox"/>
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(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>  <b>X</b>  </u>	<input type="checkbox"/>
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(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?	<input type="checkbox"/>	<u>  <b>X</b>  </u>
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(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	<u>  <b>X</b>  </u>	<input type="checkbox"/>
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(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>  <b>X</b>  </u>
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- (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

G. CE Approval

TIP Project No.	<u>B-5171</u>
W.B.S. No.	<u>42329.1.1</u>
Federal Project No.	<u>BRSTP-1400 (6)</u>

Project Description:

The purpose of this project is to replace Granville County Bridge No. 125 on SR 1400 (Grassy Creek Road) over Aarons Creek. Bridge No. 125 is 100 feet long. The replacement structure will be a bridge approximately 135 feet long providing a minimum 27'-10" clear deck width. The bridge will include two 10-foot lanes and 3'-11 1/2 "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.

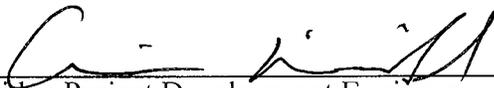
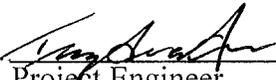
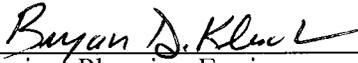
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Traffic will be detoured off-site during construction (see Figure 1).

Categorical Exclusion Action Classification:

  X   TYPE II(A)  
       TYPE II(B)

Approved:

<u>4/13/15</u> Date	 _____ Bridge Project Development Engineer Project Development & Environmental Analysis Unit
<u>4/13/2015</u> Date	 _____ Project Engineer Project Development & Environmental Analysis Unit
<u>4-13-15</u> Date	 _____ Project Planning Engineer Project Development & Environmental Analysis Unit

For Type II(B) projects only:

<u>  N/A  </u> Date	<u>  N/A  </u> _____ John F. Sullivan, III, PE, Division Administrator Federal Highway Administration
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**PROJECT COMMITMENTS:**

**Granville County  
Bridge No. 125 on SR 1400 (Grassy Creek Road)  
over Aarons Creek  
Federal Aid Project No. BRSTP-1400 (6)  
W.B.S. No. 42329.1.1  
S.T.I.P. No. B-5171**

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

In order to have time to adequately reroute school busses, Granville County Schools will be contacted at least one month prior to road closure.

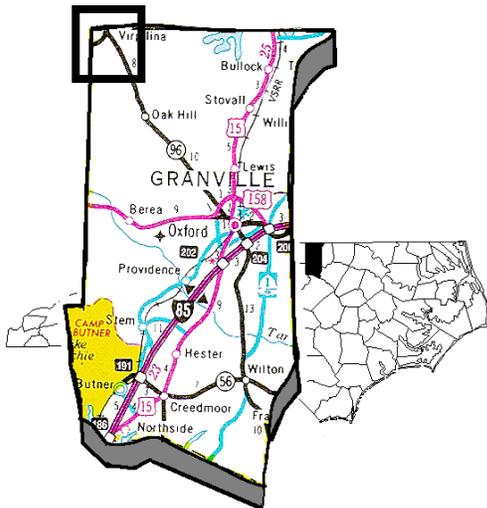
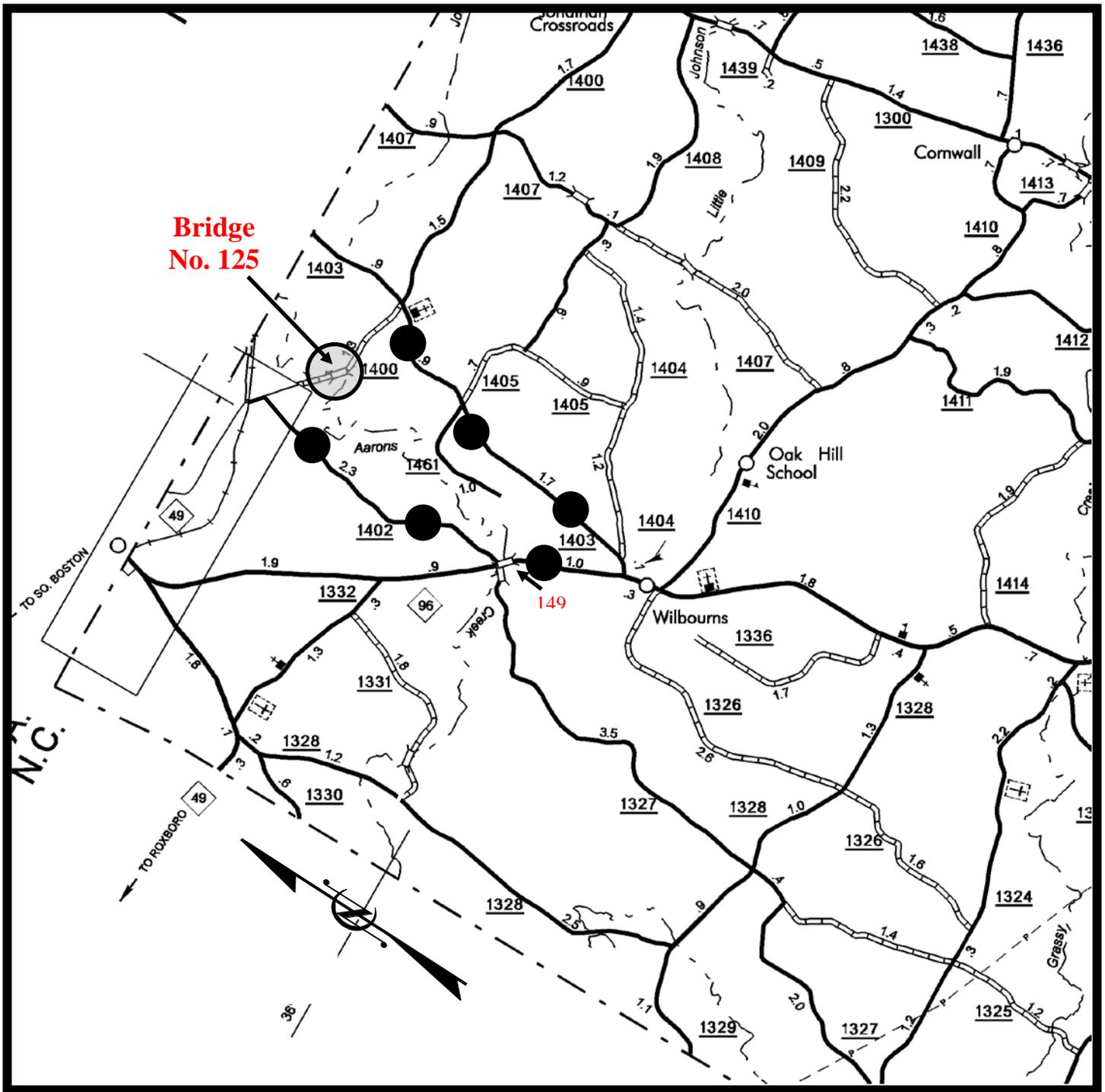
Granville County Emergency Services will be contacted at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

**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).

**Division Construction-FEMA**

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



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT &amp; ENVIRONMENTAL ANALYSIS BRANCH</p>
<p align="center"><b>GRANVILLE COUNTY REPLACE BRIDGE NO. 125 ON SR 1400 OVER AARONS CREEK B-5171</b></p>	
<p align="right">Figure 1</p>	





RECEIVED  
Division of Highways

JUN - 9 2009

Preconstruction  
Project Development and  
Environmental Analysis Branch

North Carolina Department of Cultural Resources  
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

June 5, 2009

MEMORANDUM

TO: Tracy Walter  
Project Development and Environmental Analysis  
NCDOT Bridge Unit

FROM: Peter Sandbeck *PSS for Peter Sandbeck*

SUBJECT: Bridge 125 on SR 1400 over Crooked Fork Creek, B-5171, Granville County, ER 09-1296

Thank you for your letter of May 29, 2009, concerning the above project.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The Rufus Amis House and Mill, GV 59, a National Register-listed property, is located in the general vicinity of the project area. The project as proposed will not adversely effect this property. However, if the APE for the project changes, please notify our office for further review.

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

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

cc: Mary Pope Furr, NCDOT  
Matt Wilkerson, NCDOT