

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<u>B-5143</u>
W.B.S. No.	<u>42304.1.1</u>
Federal Project No.	<u>BRZ-1105 (20)</u>

A. Project Description:

The purpose of this project is to replace Duplin County Bridge No. 408 on SR 1105 over Stewarts Creek. Bridge No. 408 is 70 feet long. The replacement structure will be a bridge approximately 100 feet long providing a minimum 26'-0" clear deck width. The bridge will include two 10-foot lanes and 3'-5" 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 2-foot above the existing structure.

The approach roadway will extend approximately 430 feet from the south end of the new bridge and 200 feet from the north end of the new bridge. The approaches will be widened to include a 22-foot pavement width providing two 11-foot lanes. Six-foot five-inch grass shoulders will be provided on each side (9-foot shoulders where guardrail is included). The roadway will be designed as a Rural Local Route using Sub-Regional Tier guidelines with a 60 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. 408 has a sufficiency rating of 26.9 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to superstructure condition appraisal of 3 out of 9 and a structural evaluation appraisal of 3 out of 9 according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Program. The bridge also meets the criteria for functionally obsolete due to structural evaluation appraisal of 3 out of 9.

The superstructure and substructure of Bridge No. 26 have timber elements that are forty-five 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. 408 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 2011-2012 prices, are as follows:

Structure	\$ 346,000
Roadway Approaches	\$ 181,000
Detour Structure and Approaches	- 0 -
Structure Removal	\$ 35,000
Misc. & Mob.	\$ 102,000
Eng. & Contingencies	\$ 111,000
Total Construction Cost	\$ 775,000
Right-of-way Costs	\$ 21,000
Utility Costs	\$ 22,000
Total Project Cost	\$ 818,000

Estimated Traffic:

Current	-	360 vpd
Year 2030	-	450 vpd
TTST	-	2%
Dual	-	3%

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

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

Pedestrian and Bicycle Accommodations: This portion of SR 1105 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Therefore, neither permanent nor temporary bicycle nor pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 408 will be removed using Best Management Practices for Bridge Demolition & Removal.

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 1105.

Rehabilitation – The bridge was constructed in 1967 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. 408 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 1113, SR 1106, and SR 1107. The majority of traffic on the road is through traffic. The detour for the average road user would result in 5 minutes additional travel time (3 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. Duplin County Emergency Services along with Duplin County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 3 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and concur 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 1105 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>	<u>YES</u>	<u>NO</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? 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? | <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

There are no unfavorable responses.

G. CE Approval

TIP Project No.	<u>B-5143</u>
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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>3/12/12</u> Date	<u>William F. Spohn</u> Bridge Project Development Engineer Project Development & Environmental Analysis Unit
<u>3/12/12</u> Date	<u>Byron D. Klein</u> Project Engineer Project Development & Environmental Analysis Unit
<u>3/12/12</u> Date	<u>James A. Smith</u> 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:

**Duplin County
Bridge No. 408 on SR 1105
Over Stewarts Creek
Federal Aid Project No. BRZ-1105 (20)
W.B.S. No. 42304.1.1
S.T.I.P. No. B-5143**

Division Three Construction, Resident Engineer's Office – Offsite Detour

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

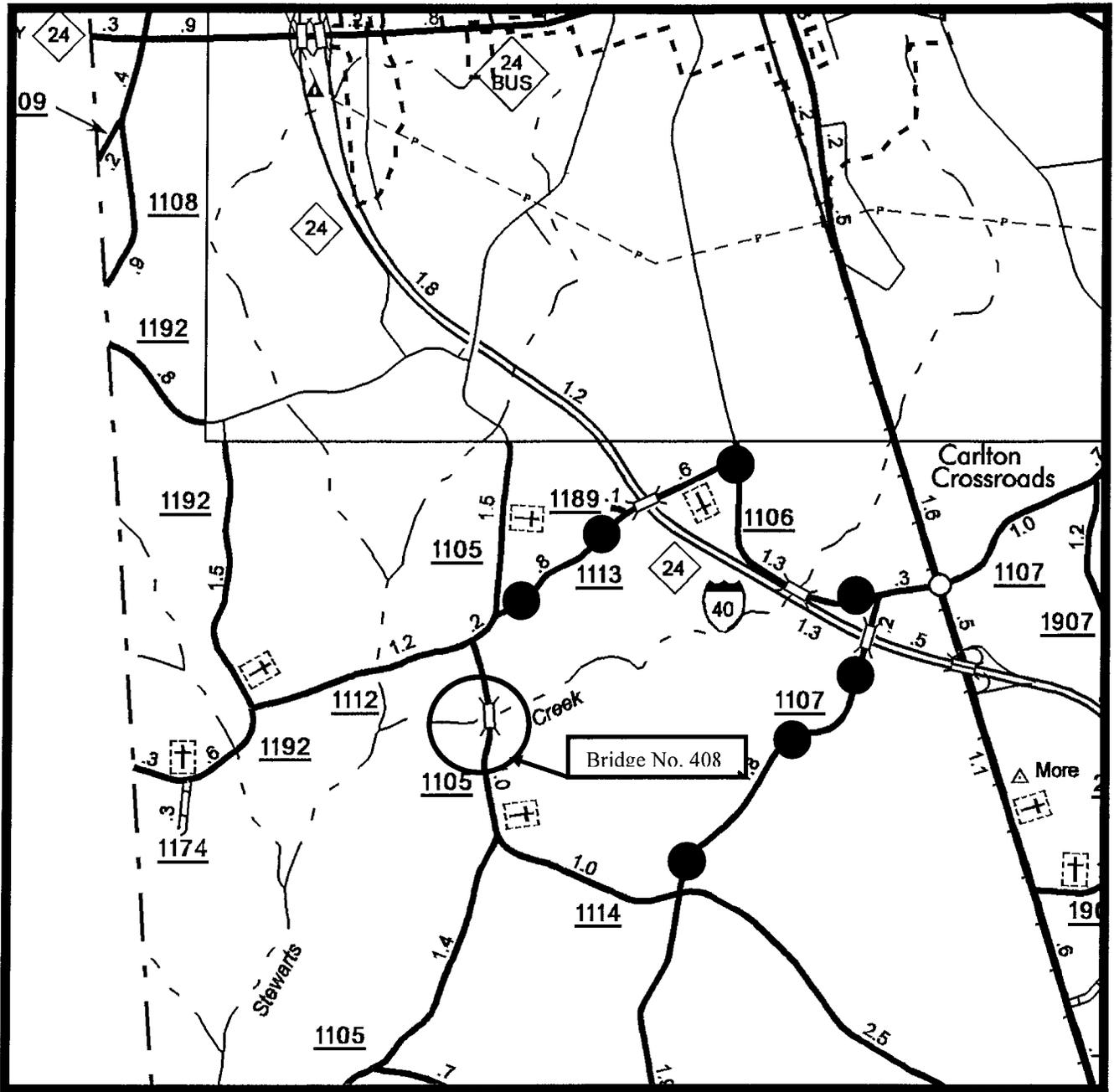
Duplin County Emergency Services will be contacted at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

Hydraulic Unit – FEMA Coordination

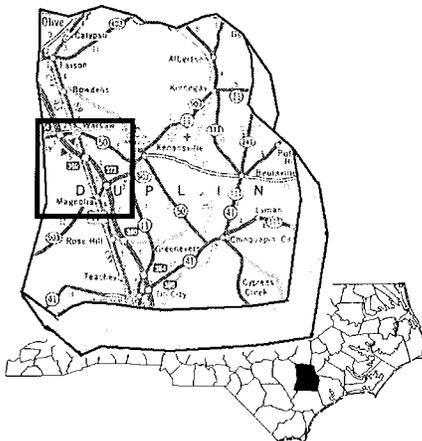
The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

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.



●—●—● Denotes Studied Detour Route



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT</p>
<p align="center">DUPLIN COUNTY REPLACE BRIDGE NO. 408 ON SR 1105 OVER STEWARTS CREEK B-5143</p>	
<p align="right">Figure 1</p>	

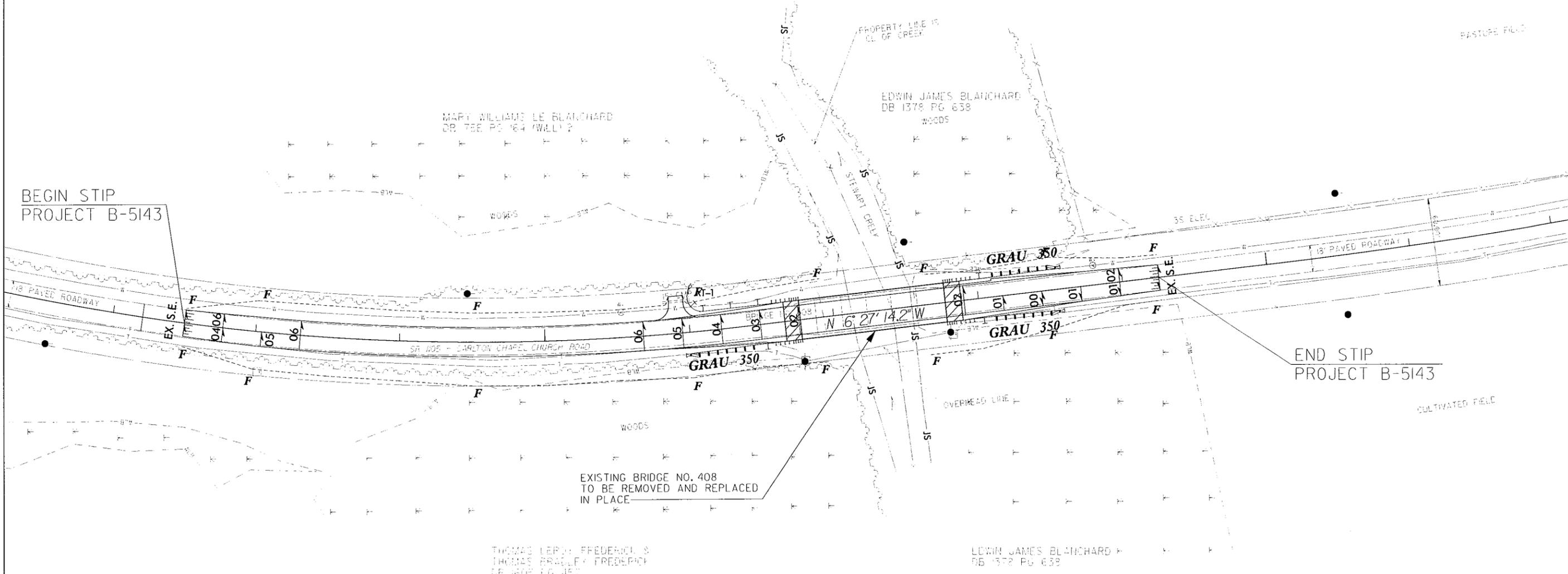
20+00

15+00



BEGIN STIP
PROJECT B-5143

END STIP
PROJECT B-5143



EXISTING BRIDGE NO. 408
TO BE REMOVED AND REPLACED
IN PLACE

THOMAS LEPID: FREDERICK S
THOMAS BRADLEY FREDERICK
DB 1808 PG 451
DB 1809 PG 482
DB 1810 PG 507

EDWIN JAMES BLANCHARD F
DB 1378 PG 638



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

DUPLIN COUNTY
REPLACE BRIDGE NO. 408 ON SR 1105
OVER STEWARTS CREEK
B-5143

FIGURE 2

Bridge Construction CFY 2013-2014

SHPO Number	TIP	Project	County	Division	Project Engineer	Archaeological Survey	Architectural Survey
ER 08-2582	B-5143	Bridge 4408 on SR 1105 over Stewarts Creek	Duplin	3	H. Schwab	No	No

A- *[Signature]* 11/17/08

S- *[Signature]* 11/10/08
CES

Doc 12/31/08

Patricia Sanderson
11/27/08

NOV 14 2008