

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	B-5407
W.B.S. No.	46122.1.1
Federal Project No.	<u>BRZ-1311(13)</u>

A. Project Description:

The purpose of this project is to replace Polk County Bridge No. 34 on SR 1311 (Rock Spring Road) over Walnut Creek (See Figure 1 and Figure 2 for project vicinity and location). Bridge No. 34 is 102 feet long. The replacement structure will be a bridge approximately 110 feet long providing a minimum 31 feet clear deck width. The bridge will include two 11-foot lanes and 4-foot 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 no less than 0.3% to facilitate deck drainage.

The approach roadway will extend approximately 200 feet from the east end of the new bridge and 140 feet from the west end of the new bridge. The approaches will be widened to include a 22-foot pavement width providing two 11-foot lanes and 3-4 foot paved shoulder. The roadway will be designed as a Minor Collector using 3R guidelines with a 60 mile per hour design speed (See Figure 3).

Traffic will be detoured off-site during construction including the use of SR 1310, SR 1161, and SR 1311.

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 34 has a sufficiency rating of 21.5 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to superstructure condition appraisal of 5 out of 9 and 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 2 out of 9 and a deck geometry appraisal of 4 out of 9.

The superstructure and substructure of Bridge No. 34 have timber elements that are aging, and it has an estimated remaining life of four years. Timber components have a typical life expectancy between 40 and 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. 34 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 2015 prices, are as follows:

Structure	\$ 404,000
Roadway Approaches	145,000
Structure Removal	34,000
Misc. & Mob.	131,000
Eng. & Contingencies	111,000
Total Construction Cost	\$ 825,000
Right-of-way Costs	26,000
Right-of-way Utility Costs	7,000
Total Project Cost	\$ 858,000

Estimated Traffic:

Current (2013)-	600 vpd
Future (2035) -	600 vpd
TTST	- 2%
Dual	- 9%

Accidents: Traffic Engineering has evaluated a recent ten year period (2005-2015) and found no crashes occurring in the vicinity of the project. No safety recommendations are made for the design of this bridge, assuming no design standard exceptions.

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

Pedestrian and Bicycle Accommodations: This portion of SR 1311 (Rock Spring Road) is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. However, the NCDOT Division of Bicycle and Pedestrian Transportation indicated that the Polk County CTP shows bicycle facilities planned for this location. As a result, 4-foot offsets and acceptable railing height will be included in the design. Neither permanent nor temporary bicycle or pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 34 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 1311.

Rehabilitation – The bridge was constructed in 1966, with reconstruction last occurring in 1989 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. 34 will be replaced on the existing alignment. Traffic will be detoured offsite 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 1310, SR 1161, and SR 1311. The majority of traffic on the road is through traffic. The detour for the average road user would result in 13 minutes additional travel time (5.4 miles additional travel). Up to a 6-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate the preference of an offsite detour but with now stronger evaluation of other project variables. In this case, Polk County Emergency Services noted concern with the offsite detour due increased response times and curves along detour route. Polk County Schools Transportation also indicated that the detour is acceptable. Polk County Planning indicated some concern to agricultural uses with the offsite detour. NCDOT Division 14 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.

Additional Alternatives – Additional alternatives were considered, including replacing the bridge on the existing alignment while utilizing an on-site (downstream) detour and an alternative to replace the bridge on a new alignment downstream. However, due to the desire to maintain a perpendicular crossing, cost effectiveness, and the acceptable nature of the proposed offsite detour, the replace in place with off-site detour was ultimately selected as the preferred alternative.

Other Agency Comments:

The **N.C. Wildlife Resource Commission (NCWRC)** and **U.S. Fish & Wildlife Service (USFWS)** in standardized letters provided a statement that they prefer any replacement structure to be a spanning structure.

Response: The proposed bridge will span the active channel width.

In addition, the NCWRC stated that a trout moratorium is not requested, as significant, reproducing trout resources are not expected. However, “stringent

sedimentation and erosion control measures and standard recommendations should apply”.

Response: In response to these comments, NCDOT will include the necessary BMPs to address these concerns during the final design process.

The USFWS also suggested that a biologist survey the action area for the dwarf-flowered heartleaf (*Hexastylis naniflora*), a threatened species that can be found in the riparian area along small streams.

Response: A field survey was conducted for potential impacts to threatened and endangered species, including the dwarf-flowered heartleaf, in 2013 (March and April). As detailed in the NRTR, a biological conclusion of No Effect for this species was rendered based on survey results of the study area.

Polk County Schools noted that the best time for construction is when school is not in session (summer months).

Response: NCDOT will continue coordination with Polk County Schools regarding construction timelines; however, with an expected project duration of approximately 6 months, some overlap with the school year is expected.

Public Involvement:

A letter was sent to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date. Additionally, a letter was sent on March 1, 2013 to all property owners affected directly by this project to alert them to ongoing field work.

There is no substantial controversy on social, economic, or environmental grounds concerning the project.

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 type="checkbox"/>

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| | <input type="checkbox"/> | <u>X</u> |
| (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? | <u>X</u> | <input type="checkbox"/> |
| (5) Will the project require the use of U. S. Forest Service lands? | <input type="checkbox"/> | <u>X</u> |
| (6) Will the quality of adjacent water resources be adversely impacted by proposed construction activities? | <input type="checkbox"/> | <u>X</u> |
| (7) Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)? | <input type="checkbox"/> | <u>X</u> |
| (8) Will the project require fill in waters of the United States in any of the designated mountain trout counties? | <input type="checkbox"/> | <u>X</u> |
| (9) Does the project involve any known underground storage tanks (UST's) or hazardous materials sites? | <input type="checkbox"/> | <u>X</u> |

PERMITS AND COORDINATION

YES NO

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| (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"/> | <u>N/A</u> |
| (11) Does the project involve Coastal Barrier Resources Act resources? | <input type="checkbox"/> | <u>X</u> |
| (12) Will a U. S. Coast Guard permit be required? | <input type="checkbox"/> | <u>X</u> |
| (13) Could the project result in the modification of any existing regulatory floodway? | <u>X</u> | _____ |
| (14) Will the project require any stream relocations or channel changes? | <input type="checkbox"/> | <u>X</u> |

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

YES NO

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| (15) Will the project induce substantial impacts to planned growth or land use for the area? | <input type="checkbox"/> | <u>X</u> |
| (16) Will the project require the relocation of any family or business? | <input type="checkbox"/> | <u>X</u> |
| (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>X</u> |
| (18) | If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor? | <u>X</u> | <input type="checkbox"/> |
| (19) | Will the project involve any changes in access control? | <input type="checkbox"/> | <u>X</u> |
| (20) | Will the project substantially alter the usefulness and/or land use of adjacent property? | <input type="checkbox"/> | <u>X</u> |
| (21) | Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness? | <input type="checkbox"/> | <u>X</u> |
| (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>X</u> | <input type="checkbox"/> |
| (23) | Is the project anticipated to cause an increase in traffic volumes? | <input type="checkbox"/> | <u>X</u> |
| (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? X

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 13: Polk County is a participant in the Federal Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The project is within a **Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway have been established.** The Hydraulic Unit will coordinate with FEMA to determine whether a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for this project. If required, the Division will submit sealed as-built construction plans to the Hydraulic Unit upon project completion certifying the project was built as shown on the construction plans.

G. CE Approval

TIP Project No.	<u>B-5407</u>
W.B.S. No.	<u>46122.1.1</u>
Federal Project No.	<u>BRZ-1311(13)</u>

Project Description:

The purpose of this project is to replace Polk County Bridge No. 34 on SR 1311 (Rock Spring Road) over Walnut Creek. Bridge No. 34 is 102 feet long. The replacement structure will be a bridge approximately 110 feet long providing a minimum 26 feet clear deck width. The bridge will include two 11-foot lanes and 4-foot 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 no less than 0.3% to facilitate deck drainage.

The approach roadway will extend approximately 200 feet from the east end of the new bridge and 140 feet from the west end of the new bridge. The approaches will be widened to include a 22-foot pavement width providing two 11-foot lanes and 3-4 foot paved shoulder. The roadway will be designed as a Minor Collector using 3R guidelines with a 60 mile per hour design speed.

Traffic will be detoured off-site during construction.

Categorical Exclusion Action Classification:

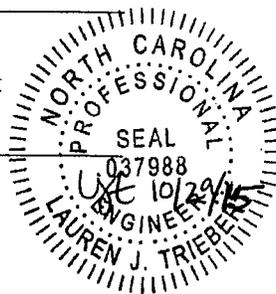
 TYPE II(A)
 X TYPE II(B)

Approved:

11-04-2015 Stacy Oberhausen
Date Stacy Oberhausen, PE, CPM
Group Supervisor
Project Development & Environmental Analysis Unit

10-29-15 Marshall Edwards
Date Marshall Edwards
Project Planning Engineer
Project Development & Environmental Analysis Unit

10/29/15 Lauren Triebert
Date Lauren Triebert, PE, ENV SP
VHB Engineering NC, P.C.



For Type II(B) projects only:

11-4-15 Michael W. Estey
Date for John F. Sullivan, III, RE, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS:

**Polk County
Bridge No. 34 on SR 1311 (Rock Spring Rd.)
over Walnut Creek
Federal Aid Project No. BRZ-1311(13)
W.B.S. No. 46122.1.1
S.T.I.P. No. B-5407**

PDEA - Natural Environment Section

Construction authorization will not be requested until ESA compliance is satisfied for the NLEB.

Hydraulic Unit – FEMA Coordination

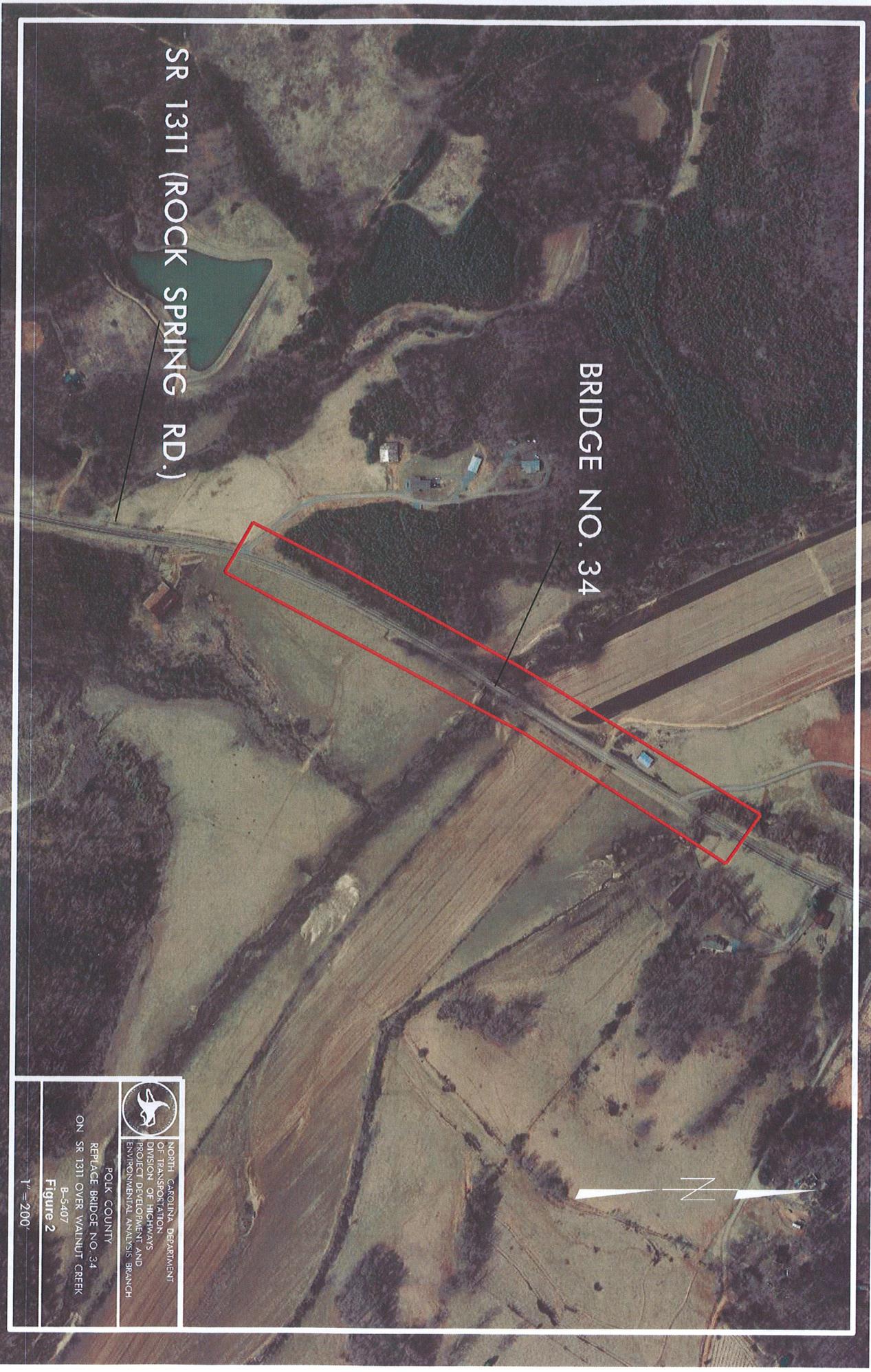
The project is within a Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway have been established. The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability 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.

FIGURES

Figure 1	Project Vicinity
Figure 2	Project Study Area
Figure 3	Preliminary Design



BRIDGE NO. 34

SR 1311 (ROCK SPRING RD.)



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

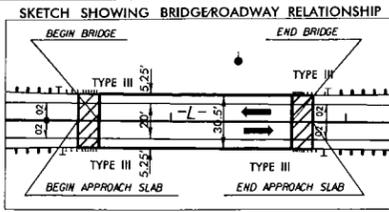
POLK COUNTY
REPLACE BRIDGE NO. 34
ON SR 1311 OVER WALNUT CREEK
B-5407
Figure 2

1" = 200'

8/17/99

PROJECT REFERENCE NO. B-5407	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Figure 3	

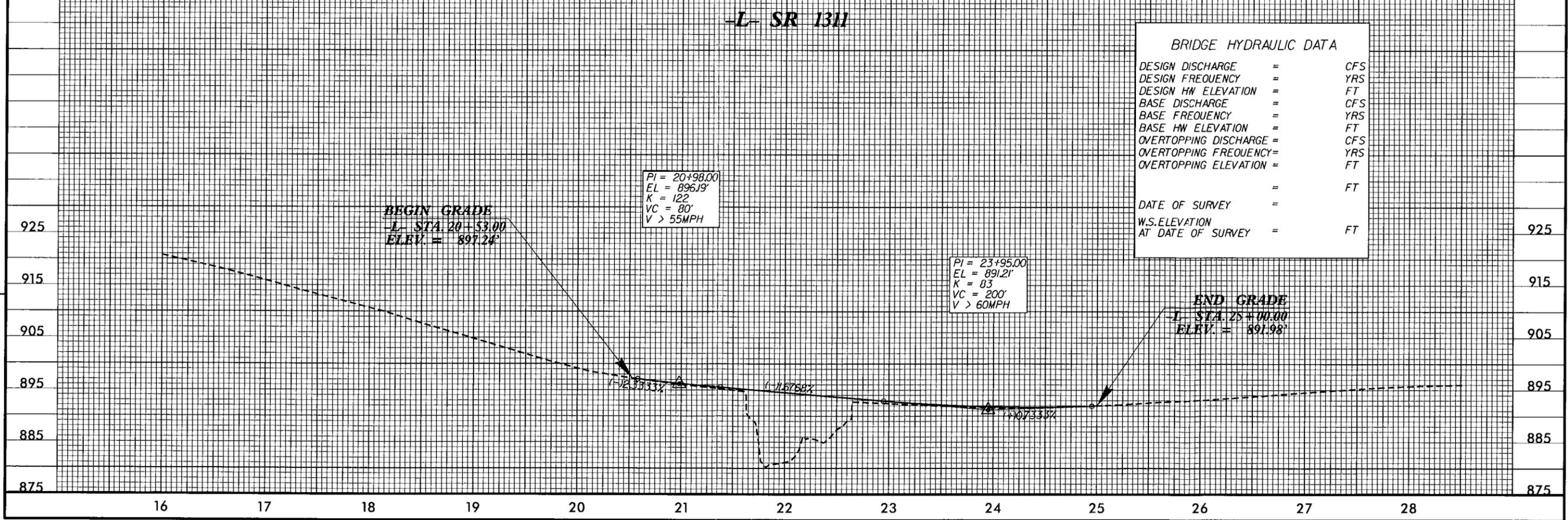
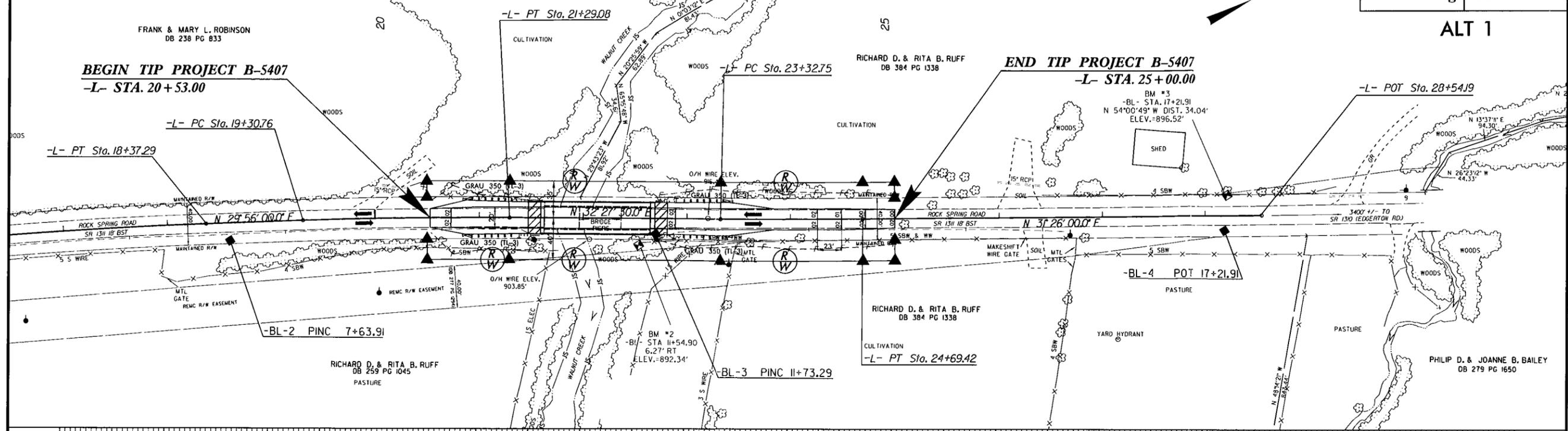
-L-		
PI Sta 17+17.98 Δ = 2° 59' 00.0" (RT) D = 14' 59.7" L = 238.68' T = 119.37' R = 4,584.00'	PI Sta 20+29.94 Δ = 2° 31' 30.0" (RT) D = 16' 23.7" L = 198.31' T = 99.17' R = 4,500.00'	PI Sta 24+01.09 Δ = 1° 01' 30.0" (LT) D = 0' 44' 59.8" L = 136.68' T = 68.34' R = 7,640.00'



UTILITY OWNERS
 POWER:
 RUTHERFORD EMC
 105 HUDLOW RD.
 FOREST CITY, NC 28043
 TELEPHONE:
 TDS TELECOM
 38 E. MAIN ST.
 SALUDA, NC 28773

BRIDGE DESCRIPTION:
 TWO LANE THREE SPAN BRIDGE WITH A WOOD DECK
 AND BST OVERLAY ON STEEL BEAMS WITH TIMBER PIERS.
 GUARDRAILS ARE STEEL. HEADWALLS AND WINGWALLS ARE WOOD.
 HIGH WATER ELEV.
 891' +/-

Figure 3
ALT 1



REVISIONS