

**Martin County
Bridge No. 16 on NC 171
over Hardison Mill Creek
Federal Aid Project No. BRSTP-171(14)
W.B.S. No. 33532.1.1
State Project No. 8.1090601
T.I.P. No. B-4185**

REVISED
CATEGORICAL EXCLUSION & FINAL SECTION 4(f) EVALUATION

UNITED STATES DEPARTMENT OF TRANSPORTATION

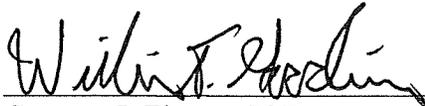
FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

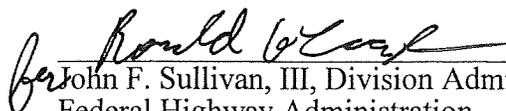
DIVISION OF HIGHWAYS

4/18/12
DATE



for Gregory J. Thorpe, PhD,
Environmental Management Director, PDEA

4/18/12
DATE



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

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Documentation Prepared in
Project Development and Environmental Analysis Branch By:

4-17-12

DATE

Natalie Lockhart

Natalie Lockhart
Project Development Engineer

4-17-12

DATE

John L. Williams

John L. Williams, PE, Project Engineer
Bridge Project Development Unit



PROJECT COMMITMENTS:

**Martin County
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All Design Groups/ Division Resident Construction Engineer – Anadromous Fish

A moratorium on in-water construction will be in place from February 15 to June 30 of any given year.

Stream Crossing Guidelines for Anadromous Fish will be implemented in the design and construction of this project.

Structure Design and Project Development and Environmental Analysis Branch- Architectural History

The preferred Alternate 2 offers the least long-term damage to the Farm Life Rural Historic District's integrity because of the least temporary damage that would be caused by the temporary detour in Alternate 3. Although the Mizell-Roberson House is no longer there, the extensive removal of trees and plantings will require an Adverse Effect. The following measures have been developed through coordination between the NCDOT, FHWA, and the State Historic Preservation Office to minimize impacts to the National Register eligible resource and are documented in the MOA (Appendix A).

I. Farm Life Rural Historic District

- a. Recordation: Prior to the initiation of work, NCDOT shall record the existing condition of the properties immediately surrounding the bridge in accordance with the attached Historic Structures and Landscape Recordation Plan [Appendix A].
- b. Replacement Bridge Design: NCDOT shall consult with the North Carolina SHPO on the design for the replacement bridge and provide the SHPO an opportunity to comment upon the design plans for the replacement bridge.
- c. Staging Areas: NCDOT shall restrict staging areas for construction within the boundary of the Farm Life Rural Historic District and ensure that in those areas there is no impact to historic structures, nor impact to

vegetation (e.g. no cut trees). The Hardison Mill Cemetery, which is directly adjacent to the new alignment of NC 171, shall not be impacted or used as a staging area.

- d. Landscaping: Replacement plantings will be placed in accordance with NCDOT's Guidelines for Planting within Highway Right-of-Way. Within the historic district, NCDOT will plant mature trees, shrubs, and other plantings, specifically within the original alignment, to replace the trees, shrubs and other plantings removed for the construction of the new alignment. Preliminary Post-Construction Landscape Design plans will be provided to SHPO for review and comment. All new plant materials will be warranted for two growing seasons and replaced by NCDOT, if they fail within that time period.

II. Unanticipated Discovery

In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the NRHP, all work will be halted within the limits of the NRHP-eligible resource(s) and the FHWA and SHPO contacted. If after consultation with the Signatory and Concurring Party(ies) additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory and Concurring Party(ies), will develop and implement appropriate protection/mitigation measures for the resource(s). Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

III. Dispute Resolution

Should any of the Signatory Parties object within (30) days to any plans or documentation provided for review or object to the implementation of any of the stipulations pursuant to this MOA, the FHWA shall consult with the objecting party(ies) to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, the FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

1. Provide the FHWA with recommendations which the FHWA will take into account in reaching a final decision regarding the dispute, or
2. Notify the FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR Section 800.7 (c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA and NCDOT's responsibility to carry out all of

the actions under this agreement that are not the subject of the dispute will remain unchanged.

IV. Amendments

If any Signatory to this MOA believes that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agree upon, the dispute resolution process set forth in Stipulation III will be followed.

V. Termination

Any Signatory to this MOA may terminate the agreement by providing notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VI. Duration

Unless terminated pursuant to Stipulation V above, this MOA will be in effect until FHWA, in consultation with the other Signatory and Concurring Party(ies), determines that all of its terms have been satisfactorily fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Hydraulics Unit- FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine status of project with regard to applicability of NCDOT's Memorandum of Agreement with FMP (dated 6/5/08), 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.

Martin County
Bridge No. 16 on NC 171
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T.I.P. No. B-4185

INTRODUCTION: Bridge No. 16 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and is eligible for the Federal-Aid Highway Bridge Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal “Categorical Exclusion”.

The State Historic Preservation Office (HPO) reviewed the subject project and recommended a survey because of the potential for historic properties. As a result NCDOT identified the Farm Life Rural Historic District as a district eligible for the National Register of Historic Places within the project area. FHWA determined that the proposed project would have an “Adverse Effect” on the Farm Life Rural Historic District dated 6/23/08. Subsequently a Memorandum of Agreement was prepared that provides the measures to mitigate the adverse effect on the historic district.

The original NEPA Document states that the (Preferred) Alternate 3 involves replacement of the structure with a 125-foot new bridge on existing location. A temporary bridge 125 feet long and 28 feet clear roadway width will be built 20 feet to the west of the existing bridge. The approach work is approximately 260 feet north and south of the existing structure. This alternate will be designed using standard guidelines with a design speed of 50 miles per hour. The total length of the detour alignment is 1100 feet. Traffic will be shifted onto the temporary bridge during construction of the new bridge. This alternate was preferred to avoid the historic property (Mizell-Roberson) house located west of the bridge.

On a field visit in October 2011 to the project site it was discovered that the Mizell-Roberson house was torn down and now a trailer occupies the property. An effects meeting was held on November 1, 2011 to inform HPO of the changes to the historic property. With the new development to the Farm Life Historic District it was suggested that the alternate should change in order to save \$100,000; by eliminating the temporary detour in Alternate 3. Alternate 2 involves replacement of the bridge on a new alignment to the west of the existing bridge. The replacement bridge would be 150 feet long. The approach work is approximately 400 feet to the south and 730 feet to the north. This alternate will be designed using standard guidelines with a design speed of 50 miles per hour. Traffic would be maintained on the existing bridge during construction.

HPO agreed that the Preferred Alternate should be Alternate 2 since the historic property is no longer there. There is still an “Adverse Effect” to the Farm Life Historic District because of the bridge replacement project.

I. PURPOSE AND NEED STATEMENT

NCDOT Bridge Management Unit records indicate Bridge No. 16 has a sufficiency rating of 59.5 out of a possible 100 for a new structure. The bridge originally qualified with a sufficiency rating of 50.1 out of 100. The sufficiency rating is up as a result of a temporary crutch bent. The substandard deck width, bridge railing and approach guardrail is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations. The bridge is considered functionally obsolete due to deck geometry appraisal of 2 out of 9 according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Program.

Bridge No. 16 has a sixty-two year old timber sub-structure. Timber structures have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. The bridge is a four-span structure that consists of a reinforced concrete deck on continuously supported I-beams. The substructure is composed of reinforced concrete caps with timber piles.

Bridge No. 16 carries 3,300 vehicles per day with 6,300 vehicles per day projected for the year 2030. The clear deck width is 24 feet. The posted weight limit on the bridge is 38 tons for single vehicles. The bridge is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located in the southeast section of Martin County approximately 0.3 miles from SR 1542 Noah Roberson Road (see Figure 1). Development in the area is agricultural and residential in nature.

NC 171 is classified as a rural major collector in the Statewide Functional Classification System and it is not a National Highway System Route. This route is not a designated bicycle route and there is no indication that an unusual number of bicyclists or pedestrians use this roadway.

In the vicinity of the bridge, NC 171 has a 20-foot pavement width with 6-foot grass shoulders (see Figure 3). The roadway grade is crest vertical curve through the project area. The existing bridge is on a tangent horizontal alignment. The roadway is situated approximately 15.0 feet above the creek bed.

Bridge No. 16 is a four-span structure that consist of a reinforced concrete deck on continuously supported I-beams. The substructure is composed of reinforced concrete caps with timber piles. The existing bridge was constructed in 1950. The overall length of the structure is 100 feet. The clear roadway width is 24 feet. The posted weight limit on this bridge is 38 tons for single vehicles (SV).

There are no utilities attached to the existing structure. Underground telephone becomes aerial on the west side of the bridge crossing. Aerial power lines follow a corridor several hundred feet west of the bridge. Utility impacts are anticipated to be low.

The current traffic volume of 3,300 vehicles per day (VPD) is expected to increase to 6,300 VPD by the year 2030. The projected volume includes twelve percent truck-tractor semi-trailer (TTST) and two percent dual-tired vehicles (DT). The posted speed limit is 45 miles per hour in the project area. Three school buses cross the bridge daily on their morning and afternoon routes.

There was one accident reported in the vicinity of Bridge No. 16 during a recent three-year period. The accident was not associated with the alignment or geometry of the bridge or its approach roadway.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a bridge approximately 150-feet long. The bridge length is based on preliminary design information and is set by hydraulic requirements. The bridge will be of sufficient width to provide for two 12-foot lanes with 3-foot offsets on each side. The roadway grade of the new structure will be approximately the same as the existing grade.

The existing roadway will be widened to a 24-foot pavement width to provide two 12-foot lanes. Eight-foot shoulders will be provided on each side; with 2ft paved shoulders. This roadway will be designed as a rural major collector.

B. Reasonable and Feasible Alternatives

Two alternates for replacing Bridge No. 16 that were studied in detail are described below.

Alternate 2(Preferred)

Alternate 2 involves replacement of the bridge on a new alignment to the west of the existing bridge. The replacement bridge would be 150 feet long. The approach work is approximately 400 feet to the south and 730 feet to the north. This alternate will be designed using standard guidelines with a design speed of 50 miles per hour. Traffic would be maintained on the existing bridge during construction (see Figure 2B).

Alternate 3

Alternate 3 involves replacement of the structure with a 125-foot new bridge on existing location. A temporary bridge 125 feet long and 28 feet clear roadway width will be built 20 feet to the west of the existing bridge. The approach work is approximately 260 feet north and

south of the existing structure. This alternate will be designed using standard guidelines with a design speed of 50 miles per hour. The total length of the detour alignment is 1100 feet. Traffic will be shifted onto the temporary bridge during construction of the new bridge (see Figure 2A).

C. Alternates Eliminated From Further Consideration

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by NC 171.

“Rehabilitation” of the old bridge is not practical due to its age and deteriorated condition.

Staged Construction is not feasible for this bridge because the 24-foot deck width and beam configuration will not support removal of a portion and maintenance of traffic on the remaining portion.

Alternate 1

Bridge No. 16 would be replaced with a 125-foot bridge in the same location and elevation as the existing bridge. During construction, traffic was to be detoured offsite. However, there were local concerns as to the efficiency and safety of the offsite detour, specifically cited by EMS (local emergency transport responders), Martin County Public Schools’ Transportation Director, and local citizens. It was felt that the present secondary roads to be utilized in the offsite detour are not designed to carry heavy truck traffic.

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. In this case Martin County Emergency Services has indicated that an offsite detour is not acceptable due to response issues during road closure. Martin County School Transportation has indicated that rerouting buses around this project will be a problem due to the distances the buses had to travel. In view of the objections from Martin County Emergency Services, an offsite detour is not preferred. NCDOT Division 1 concurs in these recommendations.

D. Preferred Alternative

Bridge No. 16 will be replaced on a new alignment as shown by Alternate 2 in Figure 2B. Traffic will be maintained on the existing bridge during construction.

NCDOT Division 1 concurs with Alternate 2 as the selected alternate based on environmental constraints.

IV. ESTIMATED COSTS

The estimated costs for the two alternatives are as follows:

	Alternative 2 (Preferred)	Alternative 3
Structure	\$ 508,000	\$ 375,000
Roadway Approaches	\$ 564,000	\$ 548,000
Detour Structure and Approaches	-0-	\$ 221,000
Structure Removal	\$ 43,000	\$ 47,000
Misc. & Mob.	\$ 252,000	\$ 256,000
Eng. & Contingencies	\$ 233,000	\$ 253,000
Total Construction Cost	\$ 1,600,000	\$ 1,700,000
Right-of-way Costs	\$ 48,000	\$ 48,000
Total Project Cost	\$ 1,648,000	\$ 1,748,000

V. NATURAL ENVIRONMENT

Physical Characteristics

Water Resources

Hardison Mill Creek is located within sub-basin 03-02-09 of the Roanoke River Basin and is part of USGS hydrologic unit for the Lower Roanoke River Hydrologic Unit (No. 03010107). Hardison Mill Creek (SIN 23-50-3) is a tributary of Sweetwater Creek which flows into the Roanoke River. The Roanoke River Basin is not currently subject to vegetated riparian buffer requirements by the state.

Hardison Mill Creek has been assigned a Best Usage Classification of "C" and is not listed on the Section 303(d) Waters list as an impaired waterway. No Outstanding Resource Waters, High Quality Waters, or Water Supply Waters occur within 3.0 miles upstream or downstream of the project study area. Hardison Mill Creek is not designated as a North Carolina Natural and Scenic River, or as a National Wild and Scenic River.

Biotic Resources

Two natural plant communities occur within the project study area and two additional community/land use types resulting from human activities have been identified. These communities include: Cypress-Gum Swamp (Blackwater Subtype), Coastal Plain Bottomland Hardwoods (Blackwater Subtype), Agricultural Lands, and Rural Residential/Maintained/Disturbed Lands. These communities total approximately 25.3 acres in the study area and do not include any open water attributed to Hardison Mill Creek [0.5 acre] or impervious road surface [0.2 acres]. A summary of the coverage of each plant community within the project study area is presented in Table 1.

Table 1. Plant Communities and Land Uses Occurring Within the Project Study Area for Bridge No. 16 (TIP B-4185)

Plant Community	Area (acres)	Percent of Project Study Area
Cypress-Gum Swamp (Blackwater Subtype)	4.9	19%
Coastal Plain Bottomland Hardwoods (Blackwater Subtype)	1.3	5%
Agricultural Lands	7.8	31%
Rural Residential Lands/ Maintained/Disturbed Lands	11.3	45%
Totals:	25.3	100%

Jurisdictional Topics

Surface Waters and Wetlands

Field assessments identified that National Wetland Inventory (NWI) palustrine, forested, deciduous, semi-permanently flooded (PF06F) wetlands are present on both sides of Bridge No. 16 underlying the Cypress-Gum Swamp (Blackwater Subtype) forest community. The wetland areas comprise approximately 4.5 acres of the project study area and are located in all four quadrants of the stream crossing. There is an abandoned road bed separating the wetlands delineated on the northeast side of the crossing. The DWQ Wetland Rating for these wetlands is 75.

Hardison Mill Creek has a well-developed floodplain on the east side of the roadway. The floodplain west of NC 171 (downstream) appears to be at a slightly higher elevation as demonstrated by the extensive flooding east of the road, and less flooding to the west. The Rosgen Stream Classification Type for Hardison Mill Creek is Type "C" for the segment through the project area.

Anadromous fish species have been documented to use this part of the river basin for spawning and as nursery areas. There is a moratorium on in-water work from February 15 to June 30. Aquatic wildlife may be temporarily displaced during the bridge replacement project.

Permits

If minor wetland impacts occur to Hardison Mill Creek or to the adjacent wetlands, a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and Section 401 certification will be required from the state prior to construction. This permit and certification is required if fill is placed in wetlands and "Waters of the United States." It

is anticipated that a Nationwide Permit No. 23 is required for the proposed project. In the event that NWP No. 23 does not apply, minor impacts attributed to bridging and associated approach improvements are expected to qualify under a Regional General Bridge Permit designated for NCDOT bridges (Permit No. 031) issued by the Wilmington USACE District (USACOE-WD 1998). Notification to the Wilmington USACE office is required if this general permit is to be utilized. Nationwide Permit No. 33 may be required if temporary construction including cofferdams, access, and dewatering are required for this project. The USACE will determine final permit requirements.

Prior to issuing a permit to fill in wetlands, it should be demonstrated that alternatives and design options allowed for adverse impacts to be first avoided, then minimized as per the Section 404(b)(1) Guidelines, the USACE/EPA Memorandum of Agreement (MOA), Executive Order 11990 (42 FR 26961), and the U.S. Fish and Wildlife Service (USFWS) mitigation policy directives (46 FR 7644-7663).

Hardison Mill Creek is in a Limited Detailed FEMA Flood Study. 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). Upon completion of project construction, the Division will submit sealed as-built construction plans to the Hydraulics Unit, 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.

Federally Protected Species

Species with the federal classification of Endangered (E) or Threatened (T), or officially proposed (P) for such listing, are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The bald eagle (*Haliaeetus leucocephalus*) is no longer listed on the threatened list- Effective August 8, 2007, the bald eagle was delisted from the Endangered Species Act. A Biological Conclusion is no longer necessary for this species. The bald eagle is protected under the Bald and Golden Eagle Protection Act. No other protected species were identified which may occur in the project area.

BALD EAGLE BIOLOGICAL CONCLUSION: NO EFFECT

In the July 9, 2007 Federal Register (72:37346-37372), the bald eagle was declared recovered, and removed (de-listed) from the Federal List of Threatened and Endangered wildlife. This delisting took effect August 8, 2007. After delisting, the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d) becomes the primary law protecting bald eagles. The Eagle Act prohibits take of bald and golden eagles and provides a statutory definition of "take" that includes "disturb". The USFWS has

developed National Bald Eagle Management Guidelines to provide guidance to land managers, landowners, and others as to how to avoid disturbing bald eagles.

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water. There were no large trees suitable for bald eagle nesting found within the project study area. There are no large bodies of water for feeding habitat within 1.0 mile of the project study area. The bald eagle was removed from the Federal List of Threatened and Endangered wildlife effective August 8, 2007 and no longer requires a biological conclusion. There is no nesting and foraging habitat in the project area, no bald eagle nests or individuals have been seen within a 660 foot radius of the project area.

VI. HUMAN ENVIRONMENT

Section 106 Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

Historic Architecture

The State Historic Preservation Office (HPO) reviewed the subject project and recommended a survey because of the potential for historic properties. As a result NCDOT identified the Farm Life Rural Historic District as a district eligible for the National Register of Historic Places within the project area. FHWA determined that the proposed project would have an "Adverse Effect" on the Farm Life Rural Historic District dated 6/23/08. Subsequently a Memorandum of Agreement was prepared that provides the measures to mitigate the adverse effect on the historic district. Copies of all forms, letters & documents are attached (see Appendix A).

Archaeology

The State Historic Preservation Office (HPO) reviewed the subject project. There are no known archaeological sites within the proposed project area, and no archaeological investigation needed to be conducted.

Community Impacts

No adverse impact on families or communities is anticipated. Right-of-way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from the construction of the project.

This project has been coordinated with the United States Natural Resources Conservation Service. The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. All work will be done within the existing right-of-way. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

The project will not have a disproportionately high and adverse human health and environmental effect on any minority or low-income population.

Noise & Air Quality

The project is located in Martin County, which has been determined to comply with the National Air Quality Standards. The proposed project is located in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

This project will not result in any meaningful changes in traffic volume, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. As such FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently this effort is exempt from analysis for MSAT's.

VII. SECTION 4(f)

Section 4(f) of the USDOT Act of 1966 (49 U.S.C. 303) protects the use of publicly owned parks, recreation areas, wildlife/ waterfowl refuges, and historic properties from USDOT actions. USDOT may only approve a transportation program or project requiring the use of publicly owned land of a public park, recreation areas or wildlife and waterfowl refuge, or land of an historic site of national, State, or local significance (as determined by the Federal State, or local officials having jurisdiction over the park, recreation areas refuge, or site) when there is no prudent and feasible alternative to using that land and when the program or project includes all possible planning to minimize harm to the resource.

There is one property impacted by the proposed action that is protected under section 4(f). An evaluation is required for use of this property. These resources are described below. See figures in Appendix A for location of resource.

Farm Life Rural Historic District
Martin County

FHWA determined that the Farm Life Rural Historic District located around SR 1516 and NC 171 has a 4(f) use.

The attached Section 4(f) Evaluation concludes, there is no feasible and prudent alternative to the use of land from the Farm Life Rural Historic District and the proposed action includes all possible planning to minimize harm to the Farm Life Rural Historic District resulting from such use.

VIII. GENERAL ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Environmental Management, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no underground storage tanks or hazardous waste sites in the project area.

Martin County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential. The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine status of project with regard to applicability of NCDOT's Memorandum of Agreement with FMP (dated 6/5/08), or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

IX. COORDINATION & AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development: **U.S. Army Corps of Engineers, NC Department of Natural Resources, U.S. Fish & Wildlife Service, N.C Wildlife Resource Commission, North Carolina State Historic**

Preservation Office, N.C. Division of Marine Fisheries, and National Marine Fisheries Service.

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.

The **N.C. Division of Water Quality** and the **Army Corps of Engineers** had no special concerns for this project. The **Division of Marine Fisheries Service** stated that an in-stream moratorium would be applicable to this project for anadromous fish. They recommend the moratorium be from February 15 through June 30.

X. 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.

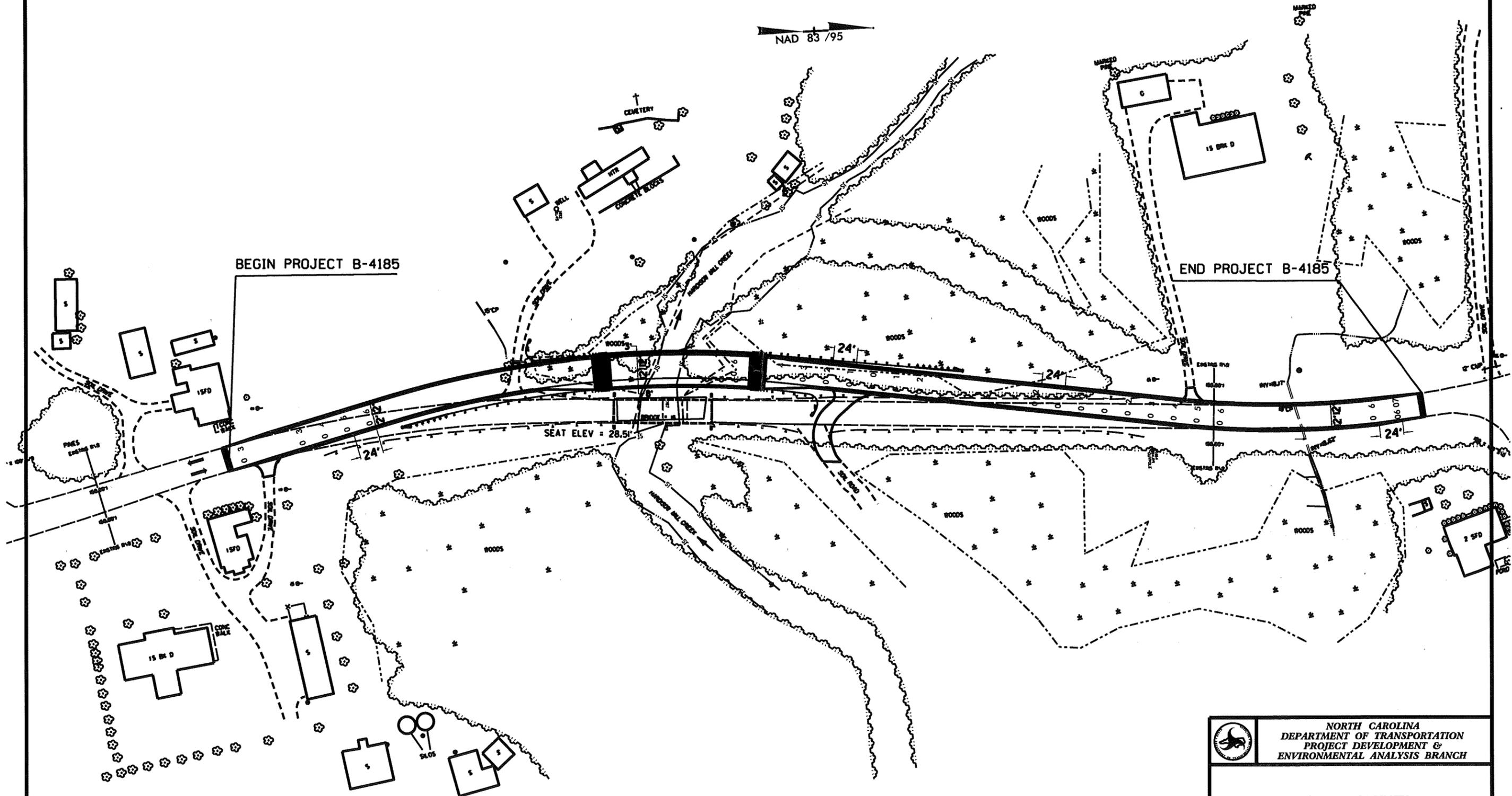
There is not substantial controversy on social, economic, or environmental grounds concerning the project.

XI. CONCLUSION

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project. The project is therefore considered to be a federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

**ALTERNATIVE 2
(PREFERRED)**

NAD 83 / 95



 NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

MARTIN COUNTY
BRIDGE NO. 16 ON NC 171
OVER HARDISON MILL CREEK
B-4185

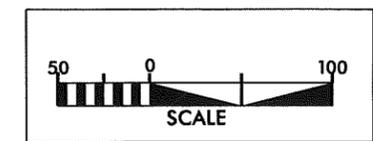


FIGURE 2B

Martin County

Bridge No. 16 on NC 171 over Hardison Mill Creek

(Past) Mizell-Roberson House

FIGURE 3



FIGURE 3

Mizell-Roberson House



Martin County

Bridge No. 16 on NC 171 over Hardison Mill Creek

(Present) Trailer

FIGURE 3

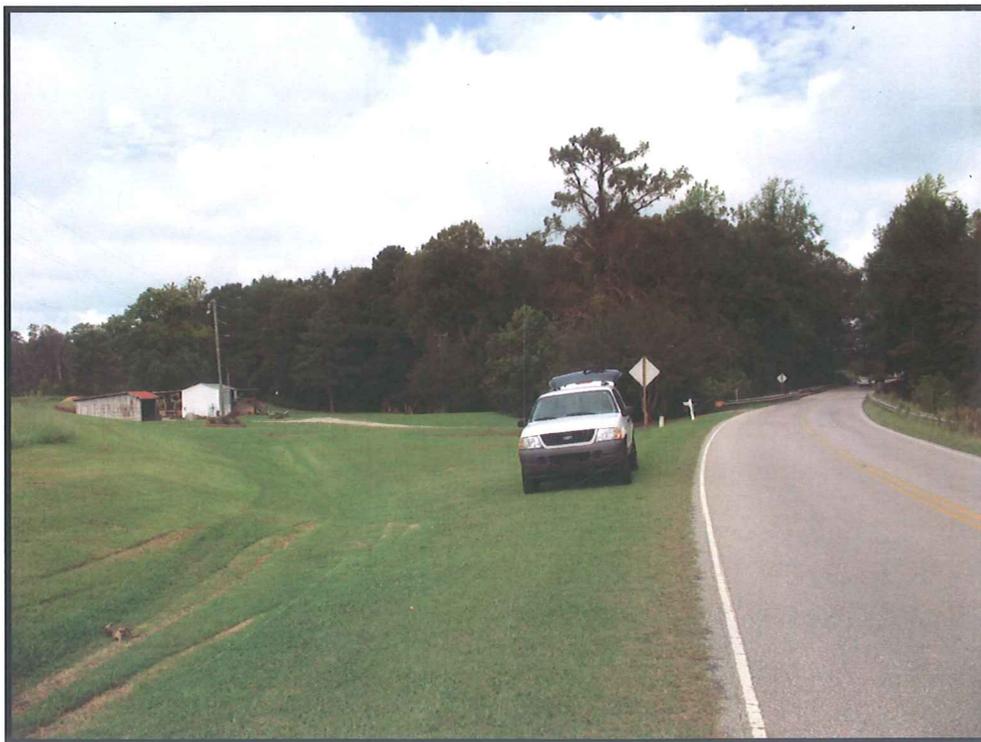


FIGURE 3



**AMENDED MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER
FOR
TIP NO. B-4185
REPLACEMENT OF BRIDGE NO. 16 ON NC HIGHWAY 171
OVER HARDISON MILL CREEK
FARM LIFE VICINTY, MARTIN COUNTY**

WHEREAS, the Federal Highway Administration (FHWA) has determined that the replacement of Bridge No. 16 on NC 171 over Hardison Mill Creek in Martin County, North Carolina (the Undertaking) will affect the Farm Life Rural Historic District, a property determined eligible for listing in the National Register of Historic Places; and

WHEREAS, the Undertaking will require removal of approximately three acres of vegetation and construction of a new alignment of NC 171 on land associated with the Hardison Mill Creek Cemetery, which is a contributing resource within the historic district; and

WHEREAS, the FHWA has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the North Carolina Department of Transportation (NCDOT) has participated in the consultation and been invited by FHWA and the North Carolina SHPO to concur in this Memorandum of Agreement (MOA); and

WHEREAS, The property owners of the Hardison Mill Creek Cemetery have been notified of the scope and impacts of the Undertaking, and have been invited to concur with the MOA; and

WHEREAS, a previously contributing resource to the historic district (Mizell-Roberson House) has been removed, resulting in a change of the design plans for the project, necessitating a new MOA to replace the MOA of September 2009; and

WHEREAS, the FHWA has notified the Advisory Council on Historic Preservation (Council) of the adverse effect and the Council has declined to comment or participate in the consultation;

NOW, THEREFORE, FHWA and the North Carolina SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on the historic district.

STIPULATIONS

FHWA will ensure that the following measures are carried out:

I. Farm Life Rural Historic District

- a. Recordation: Prior to the initiation of work, NCDOT shall record the existing condition of the properties immediately surrounding the bridge in accordance with the attached Historic Structures and Landscape Recordation Plan [Appendix A].
- b. Replacement Bridge Design: NCDOT shall consult with the North Carolina SHPO on the design for the replacement bridge and provide the SHPO an opportunity to comment upon the design plans for the replacement bridge.
- c. Staging Areas: NCDOT shall restrict staging areas for construction within the boundary of the Farm Life Rural Historic District and ensure that in those areas there is no impact to historic structures, nor impact to vegetation (e.g. no cut trees). The Hardison Mill Cemetery, which is directly adjacent to the new alignment of NC 171, shall not be impacted or used as a staging area.
- d. Landscaping: Replacement plantings will be placed in accordance with NCDOT's Guidelines for Planting within Highway Right-of-Way. Within the historic district, NCDOT will plant mature trees, shrubs, and other plantings, specifically within the original alignment, to replace the trees, shrubs and other plantings removed for the construction of the new alignment. Preliminary Post-Construction Landscape Design plans will be provided to SHPO for review and comment. All new plant materials will be warranted for two growing seasons and replaced by NCDOT, if they fail within that time period.

II. Unanticipated Discovery

In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the NRHP, all work will be halted within the limits of the NRHP-eligible resource(s) and the FHWA and SHPO contacted. If after consultation with the Signatory and Concurring Party(ies) additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory and Concurring Party(ies), will develop and implement appropriate protection/mitigation measures for the resource(s). Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

III. Dispute Resolution

Should any of the Signatory Parties object within (30) days to any plans or documentation provided for review or object to the implementation of any of the stipulations pursuant to this MOA, the FHWA shall consult with the objecting party(ies) to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, the FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

1. Provide the FHWA with recommendations which the FHWA will take into account in reaching a final decision regarding the dispute, or
2. Notify the FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR Section 800.7 (c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA and NCDOT's responsibility to carry out all of the actions under this agreement that are not the subject of the dispute will remain unchanged.

IV. Amendments

If any Signatory to this MOA believes that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agree upon, the dispute resolution process set forth in Stipulation III will be followed.

V. Termination

Any Signatory to this MOA may terminate the agreement by providing notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VI. Duration

Unless terminated pursuant to Stipulation V above, this MOA will be in effect until FHWA, in consultation with the other Signatory and Concurring Party(ies), determines that all of its terms have been satisfactorily fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Execution of this Memorandum of Agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking, and that FHWA has taken into account the effects of the Undertaking on the Farm Life Rural Historic District.

AGREE:

Federal Highway Administration:

fo 

John H. Sullivan III, P.E.
Administrator, North Carolina Division

3-1-2012
Date

State Historic Preservation Officer:



Jeffery J. Crow
North Carolina State Historic Preservation Officer

3/13/12
Date

CONCUR:

North Carolina Department of Transportation:



Drew Joyner, P.E.
Manager, Human Environment Unit

3/8/12
Date

FILED BY:

Advisory Council on Historic Preservation

Date

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER
FOR
TIP NO. B-4185
REPLACEMENT OF BRIDGE NO. 16 ON NC HIGHWAY 171
OVER HARDISON MILL CREEK
FARM LIFE VICINTY, MARTIN COUNTY**

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CONCUR:

Rachel Perry
Owners of the Hardison Mill Creek Cemetery

Date

APPENDIX A

B-4185

Historic Structures and Landscape Recordation Plan For Bridge No. 16 Replacement on NC 171 over Hardison Mill Creek Martin County

Photographic Requirements

- ◆ Selected photographic views of the intersections as a whole, and views of structures in the Area of Potential Effects (APE) and their setting, including:
 - Overall views of the structures (elevations and oblique views); and
 - Overall views of the project area, showing the relationship of the structures to their setting, and surrounding landscape.

Photographic Format

- ◆ Color digital images are to be shot on a SLR digital camera with a minimum resolution of 300 dpi, at a high quality (preferably RAW) setting, to be saved in TIF format as the archival masters.
- ◆ Images should be catalogued in such a way as to be easily cross-referenced with an accompanying inventory. The printed inventory of the images—including subject, location, date, and photographer information for each image—is to be completed according to Division of Archives and History standards, and should also be included in the CD-ROMs.
- ◆ These images are to be saved on two sets of CD-ROMs, one for NCDOT and one for NC-HPO. There should also be two sets of contact sheets, to be printed on coated inkjet paper, as well.

Copies

- ◆ One (1) set of all photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made a permanent part of the statewide survey and iconographic collection.
- ◆ Another contact sheet and CD-ROM shall be deposited in the files of the Historic Architecture Section of NCDOT.



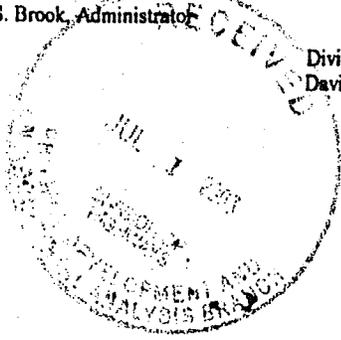
Karen Capps

North Carolina Department of Cultural Resources
State Historic Preservation Office

David L. S. Brook, Administrator

Division of Historical Resources
David J. Olson, Director

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary



June 26, 2003

MEMORANDUM

TO: William D. Gilmore, Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook *for David Brook*

SUBJECT: Replacement Bridge No. 16 on NC 171 over Hardison Mill Creek, B-4185, Martin County, ER03-0952

Thank you for your letter of April 7, 2003, concerning the above project.

We have conducted a search of our maps and files and located the following structure of historical or architectural importance within the general area of this project:

Farmlife Rural Historic District, SR 1516 and NC 171
Bridge No. 16 on NC 171

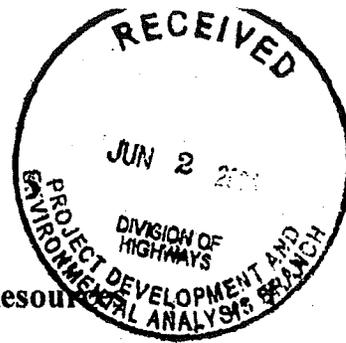
We recommend that a Department of Transportation architectural historian identify and evaluate any structures over fifty years of age within the project area, and report the findings to us.

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 conclusion 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 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.

www.hpo.dcr.state.nc.us

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801



North Carolina Department of Cultural Resources
State Historic Preservation Office

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

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

May 24, 2004

MEMORANDUM

TO: Greg Thorpe, Manager
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: David Brook *for David Brook*

SUBJECT: Historic Architectural Resources Survey Report, Replace Bridge No. 16 on NC Highway 171 over Hardison Mill Creek, B-4185, Martin County, ER03-0952

Thank you for your letter of April 15, 2004, transmitting the survey report by Penne Sandbeck.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following property is listed in the North Carolina Study List and remains eligible for listing in the National Register of Historic Places:

The Hardison Mill Creek component of the Farm Life Rural Historic District remains eligible for the National Register under Criterion A and C. The Hardison Mill Creek area is remarkable and exceptional for its retention of field patterns, forested swamps, period farmhouses, and outbuildings which reflect the regional shift from subsistence farming and timbering to larger scale agricultural output, dating from the late nineteenth to the mid-twentieth centuries.

We concur with the National Register boundaries of the Hardison Mill Creek component of the Farm Life Historic District as described and delineated in the survey report. This area is located in the northeastern corner of the Farm Life Historic District and falls within the Area of Potential Effects for the project.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following property is not eligible for listing in the National Register of Historic Places:

Bridge No. 16 on NC 171 over Hardison Mill Creek

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-4763/733-8653
RESTORATION	515 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4613	(919)733-6547/715-4801
SURVEY & PLANNING	515 N. Blount Street, Raleigh, NC	4617 Mail Service Center, Raleigh NC 27699-4618	(919)733-6545/715-4801

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Replace Bridge No. 16 over Hardison Mill Creek on NC Highway 171

On August 2, 2004, representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

COPI

Reviewed the subject project and agreed

- There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Penne Sandbeck
 Representative, NCDOT

8-2-2004
 Date

[Signature]
 FHWA, for the Division Administrator, or other Federal Agency

8/2/04
 Date

[Signature]
 Representative, HPO

8/2/04
 Date

Penne Bleckhill-Easley
 State Historic Preservation Officer

8-2-04
 Date

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Farm Life RHD (DE) No adverse effect with environmental commitments (see below);

Reason(s) why the effect is not adverse (if applicable).

NCDOT will ensure the following conditions:

1. New one-bar metal rail on the new structure
2. NCDOT will do no improvements outside the existing ditchline on the off-site detour
3. NCDOT will coordinate with SHPO if the scope of the project changes

Initialed:

NCDOT JPSS

FHWA BWA

HPO SDM

Federal Aid # BRSTP-171 (12)

TIP# B-4185

County: Martin

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Replace Bridge No. 16 over Hardison Mill Creek on NC Highway 171

On June 23, 2008, representatives of the



- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

Reviewed the subject project and agreed

- There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Peene Sandbeck

6-23-2008

Representative, NCDOT

Date

David W. P...

6-23-2008

FHWA, for the Division Administrator, or other Federal Agency

Date

Representative, HPO

Date

Peene Hedrick-Early

6.23.08

State Historic Preservation Officer

Date

TIP #B-4185

County: Martin

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Farm Life Rural Historic District (DOE): Adverse effect because temporary bridge closer to structure requires removal of extensive vegetation, changing the historic landscape of the RHD. This replaces the NC-HPO/NC DOT Concurrence Form for the Assessment of Effects signed 8-2-2004

Reason(s) why the effect is not adverse (if applicable).

Initiated:

NC DOT JSS

FHWA

DB

HPO

RSE