STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 16, 2007

MEMORANDUM TO: Mr. H. Allen Pope, PE
Division Three Engineer

FROM: Philip S. Harris, III, P.E., Unit Head
Natural Environment Unit
Project Development and Environmental Analysis Branch

SUBJECT: Sampson County, Replace Bridge No. 14 on NC 411 over Black River; T.I.P. Number B-1381; Federal Aid Project BRSTP-411(1); State Project 8.1280401

Attached is the U. S. Army Corps of Engineers 404 Nationwide Permit Number 23 and the general conditions for the 401 Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

Cc:

Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design
Dr. David Chang, P.E., Hydraulics
Mr. Randy Garris, P.E. State Contract Officer
Mr. Art McMillan, P.E., Highway Design
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, FHWA
Mr. Rob Hanson, P.E., PDEA Eastern Region Unit Head
Mr. Mason Herndon, Division Environmental Officer

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-733-3141
FAX: 919-715-1501
WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

PROJECT COMMITMENTS:

Sampson County
Bridge No. 14 on NC 411
Over the Black River
Federal Aid Project No. BRSTP-411(1)
State Project No. 8.1280401
W.B.S. No. 32594.1.1
T.I.P. No. B-1381

In addition to the Nationwide Permit 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, Design Standards in Sensitive Watersheds, NCDOT's Best Management Practices for Protection of Surface Waters, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Commitments Developed through Project Development

All Design Units/Resident Engineer– Historic District

Because the project lies in the middle of Clear Run Historic District, all design and construction work will be conducted so as to minimize impact to the properties surrounding the bridge to the extent practical.

Structure Design – On Bar Metal Rail

As part of the negotiations with the SHPO, NCDOT has agreed to include 1-bar metal rail as part of the new bridge design.

Natural Environment Unit– Bridge Demolition

Except for the deck the entire bridge is constructed of timber and steel. It is unlikely that there will be any temporary fill resulting from bridge demolition.

Roadside Environmental Unit, Division Resident Engineer – Sensitive Watersheds

The Black River is designated, as Outstanding Resource Waters and will be subject to Design Standards for Sensitive Watersheds.

Natural Environment Unit– Coast Guard Permit not required.

The Black River is historically navigable but currently not used by anything other than small recreational boats. Advance approval has been given by the Coast Guard for the construction of such bridges. An individual Coast Guard Bridge Permit will not be required.

All Design Groups/ Division Resident Engineer – Anadramous Fish, High Quality Wetlands

The North Carolina Wildlife Resource Commission (NCWRC) has indicated that a moratorium on in-water construction will be in place from September 1 to January 1 of any given year. *Upon further communication with NCWRC on May 24, 2006 the moratorium on in-water work has been revised to February 15 to June 15 for use by anadromous fish.*

To the extent practical, construction should be accomplished without the use of construction pads.

To the extent practical, bridge demolition should occur without getting into the water.

To the extent practical, the footprint of the proposed project should be minimized.

NCDOT will implement Stream Crossing Guidelines for Anadromous Fish Crossings.

NCDOT will implement High Quality Waters Sedimentation and Erosion Control Measures.

Commitments Developed through Permitting

No additional commitments were developed through permitting.

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January 16, 2007

To: File

From: Veronica Barnes, Permit Specialist

Subject: B-1381 Section 404 Permit by Default

The Section 404 permit for this project has been issued by default, as the U.S. Army Corps of Engineers review time period has exceeded 45 days (per Nationwide Permit General Condition number 13, a., 3). Therefore, NCDOT must comply with all conditions, descriptions, and mitigation allowance in the attached permit application dated September 14, 2006, Pre-Construction Notification Form, Permit Drawings, 404 General Conditions and Ecosystem Enhancement Program mitigation acceptance letter. A permit modification will be required if any of the above conditions, descriptions, and mitigation allowances cannot be met.

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LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

NATIONWIDE PERMIT 23
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 18, 2002

Approved Categorical Exclusions: Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 CFR part 1500 et seq.), that the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and the Office of the Chief of Engineers (ATTN: CECW-OR) has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination. Before to approval for purposes of this nationwide permit of any agency's categorical exclusions, the Chief of Engineers will solicit public comment. In addressing these comments, the Chief of Engineers may require certain conditions for authorization of an agency's categorical exclusions under this nationwide permit. (Sections 10 and 404)

NATIONWIDE PERMIT GENERAL CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. No activity may cause more than a minimal adverse effect on navigation.

2. Proper Maintenance. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

4. Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

6. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its Section 401 Water Quality Certification and Coastal Zone Management Act consistency determination.

7. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a 'study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

8. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Water Quality.

a. In certain states and tribal lands an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c)).

b. For NWPs 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44, where the state or tribal 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality). An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs).

This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies to identify such measures or to require monitoring.

10. Coastal Zone Management. In certain states, an individual state coastal zone management consistency concurrence must be obtained or waived (see 33 CFR 330.4(d)).

11. Endangered Species.

a. No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the FWS or NMFS the District Engineer may add species-specific regional endangered species conditions to the NWPs.

b. Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web pages at http://www.fws.gov/r9endspp/endspp.html and http://www.nfms.noaa.gov/prot res/overview/es.html respectively.

12. Historic Properties. No activity that may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

13. Notification.

a. Timing; where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a preconstruction notification (PCN) as early as possible. The District Engineer must determine if the notification is complete within 30 days of the date of receipt and can request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the District Engineer will notify the prospective permittee that the notification is still incomplete and the PCN review process will not commence until all of the requested information has been received by the District Engineer. The prospective permittee shall not begin the activity:

1. Until notified in writing by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division Engineer; or

2. If notified in writing by the District or Division Engineer that an Individual Permit is required; or

3. Unless 45 days have passed from the District Engineer's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b. Contents of Notification: The notification must be in writing and include the following information:

1. Name, address and telephone numbers of the prospective permittee;

2. Location of the proposed project;

3. Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), Regional General Permit(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);

4. For NWPs 7, 12, 14, 18, 21, 34, 38, 39, 40, 41, 42, and 43, the PCN must also include a delineation of affected special aquatic sites, including wetlands, vegetated shallows (e.g., submerged aquatic vegetation, seagrass beds), and riffle and pool complexes (see paragraph 13(f));

5. For NWP 7 (Cutfall Structures and Maintenance), the PCN must include information regarding the original design capacities and configurations of those areas of the facility where maintenance dredging or excavation is proposed;

6. For NWP 14 (Linear Transportation Projects), the PCN must include a compensatory mitigation proposal to offset permanent losses of waters of the US and a statement describing how temporary losses of waters of the US will be minimized to the maximum extent practicable;

7. For NWP 21 (Surface Coal Mining Activities), the PCN must include an Office of Surface Mining (OSM) or state-approved mitigation plan, if applicable. To be authorized by this NWP, the District Engineer must determine that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are minimal both individually and cumulatively and must notify the project sponsor of this determination in writing;

8. For NWP 27 (Stream and Wetland Restoration Activities), the PCN must include documentation of the prior condition of the site that will be reverted by the permittee;

9. For NWP 29 (Single-Family Housing), the PCN must also include:

i. Any past use of this NWP by the Individual Permittee and/or the permittee's spouse;

ii. A statement that the single-family housing activity is for a personal residence of the permittee;

iii. A description of the entire parcel, including its size, and a delineation of wetlands. For the purpose of this NWP, parcels of land measuring \1/4\-acre or less will not require a formal on-site delineation. However, the applicant shall provide an indication of where the wetlands are and the amount of wetlands that exists on the property. For parcels greater than

\1/4\-acre in size, formal wetland delineation must be prepared in accordance with the current method required by the Corps. (See paragraph 13(f));

iv. A written description of all land (including, if available, legal descriptions) owned by the prospective permittee and/or the prospective permittee's spouse, within a one mile radius of the parcel, in any form of ownership (including any land owned as a partner, corporation, joint tenant, co-tenant, or as a tenant-by-the-entirety) and any land on which a purchase and sale agreement or other contract for sale or purchase has been executed;

10. For NWP 31 (Maintenance of Existing Flood Control Facilities), the prospective permittee must either notify the District Engineer with a PCN prior to each maintenance activity or submit a five-year (or less) maintenance plan. In addition, the PCN must include all of the following:

i. Sufficient baseline information identifying the approved channel depths and configurations and existing facilities. Minor deviations are authorized, provided the approved flood control protection or drainage is not increased;

ii. A delineation of any affected special aquatic sites, including wetlands; and,

iii. Location of the dredged material disposal site;

11. For NWP 33 (Temporary Construction, Access, and Dewatering), the PCN must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic resources;

12. For NWPs 39, 43 and 44, the PCN must also include a written statement to the District Engineer explaining how avoidance and minimization for losses of waters of the US were achieved on the project site;

13. For NWP 39 and NWP 42, the PCN must include a compensatory mitigation proposal to offset losses of waters of the US or justification explaining why compensatory mitigation should not be required. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

14. For NWP 40 (Agricultural Activities), the PCN must include a compensatory mitigation proposal to offset losses of waters of the US. This NWP does not authorize the relocation of greater than 300 linear feet of existing serviceable drainage ditches constructed in non-tidal streams unless, for drainage ditches constructed in intermittent nontidal streams, the District Engineer waives this criterion in writing, and the District Engineer has determined that the project complies with all terms and conditions of this NWP, and that any adverse impacts of the project on the aquatic environment are minimal, both individually and cumulatively;

15. For NWP 43 (Stormwater Management Facilities), the PCN must include, for the construction of new stormwater management facilities, a maintenance plan (in accordance with state and local requirements, if applicable) and a compensatory mitigation proposal to offset losses of waters of the US. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

16. For NWP 44 (Mining Activities), the PCN must include a description of all waters of the US adversely affected by the project, a description of measures taken to minimize adverse effects to waters of the US, a description of measures taken to comply with the criteria of the NWP, and a reclamation plan (for all aggregate mining activities in isolated waters and non-tidal wetlands adjacent to headwaters and any hard rock/mineral mining activities);

17. For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work; and

18. For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

c. Form of Notification: The standard Individual Permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(18) of General Condition 13. A letter containing the requisite information may also be used.

d. District Engineer's Decision: In reviewing the PCN for the proposed activity, the District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The District Engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the District Engineer will notify the permittee and include any conditions the District Engineer deems necessary. The District Engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the

PCN, the District Engineer will expeditiously review the proposed compensatory mitigation plan. The District Engineer must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then the District Engineer will notify the applicant either:

1. That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an Individual Permit;

2. that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or

3. that the project is authorized under the NWP with specific modifications or conditions. Where the District Engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the US will occur until the District Engineer has approved a specific mitigation plan.

e. Agency Coordination: The District Engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

For activities requiring notification to the District Engineer that result in the loss of greater than \1/2\-acre of waters of the US, the District Engineer will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 15 calendar days before making a decision on the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The District Engineer will indicate in the administrative record associated with each notification that the resource agencies'

concerns were considered. As required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the District Engineer will provide a response to NMFS within 30 days of receipt of any Essential Fish Habitat conservation recommendations. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

f. Wetland Delineations: Wetland delineations must be prepared in accordance with the current method required by the Corps (For NWP 29 see paragraph (b)(9)(iii) for parcels less than (\1/4\-acre in size). The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;

b. A statement that any required mitigation was completed in accordance with the permit conditions; and

c. The signature of the permittee certifying the completion of the work and mitigation.

15. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed \ 1/3\-acre) .

16. Water Supply Intakes. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.

17. Shellfish Beds. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4.

18. Suitable Material. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash,

debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).

19. Mitigation. The District Engineer will consider the factors discussed below when determining the acceptability of appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment that are more than minimal.

a. The project must be designed and constructed to avoid and minimize adverse effects to waters of the US to the maximum extent practicable at the project site (i.e., on site).

b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

c. Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland impacts requiring a PCN, unless the District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. Consistent with National policy, the District Engineer will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances.

d. Compensatory mitigation (i.e., replacement or substitution of aquatic resources for those impacted) will not be used to increase the acreage losses allowed by the acreage limits of some of the NWPs. For example, \1/4\-acre of wetlands cannot be created to change a,\3/4\acre loss of wetlands to a \1/2\-acre loss associated with NWP 39 verification. However, \1/2\-acre of created wetlands can be used to reduce the impacts of a \1/2\-acre loss of wetlands to the minimum impact level in order to meet the minimal impact requirement associated with NWPs.

e. To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland or upland vegetated buffers
to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.

f. Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., easements, deed restrictions) of vegetated buffers to open waters. In many cases, vegetated buffers will be the only compensatory mitigation required. Vegetated buffers should consist of native species. The width of the vegetated buffers required will address documented water quality or aquatic habitat loss concerns. Normally, the vegetated buffer .will be 25 to 50 feet wide on each side of the stream, but the District Engineers may require slightly wider vegetated buffers to address documented water quality or habitat loss concerns. Where both wetlands and

open waters exist on the project site, the Corps will determine the appropriate compensatory mitigation (e.g., stream buffers or wetlands compensation) based on what is best for the aquatic environment or, a watershed basis. In cases where vegetated buffers are determined to be the most appropriate form of compensatory mitigation, the District Engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland impacts.

g. Compensatory mitigation proposals submitted with the " notification" may be either conceptual or detailed. If conceptual plans are approved under the verification, then the Corps will condition the verification to require detailed plans be submitted and approved by the Corps prior to construction of the authorized activity in waters of the US.

h. Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases that require compensatory mitigation, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

20. Spawning Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce
adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes

structures and work in navigable waters of the US, or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

a. Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWPs in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

b. For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The District Engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps.

a. Discharges in Floodplain; Below Headwaters. Discharges of dredged or fill material into waters of the US within the mapped 100year floodplain, below headwaters (i.e. five cfs), resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, 43, and 44.

b. Discharges in Floodway; Above Headwaters. Discharges of dredged or fill material into waters of the US within the FEMA or locally mapped floodway, resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, and 44.

c. The permittee must comply with any applicable FEMA-approved state or local

floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12-months after such date (including any modification that affects the project).

For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps.

For projects that have been verified by the Corps, an extension of a Corps approved completion date maybe requested. This request must be submitted at least one month before the previously approved completion date.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of a NWP.

2. NWPs do not obviate the need to obtain other Federal, State, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best Management Practices (BMPs): BMPs are policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or nonstructural. A BMP policy may affect the limits on a development.

Compensatory Mitigation: For purposes of Section 10/404, compensatory mitigation is the restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable adverse impacts, which remain, after all appropriate and practicable avoidance and minimization has been achieved.

Creation: The establishment of a wetland or other aquatic resource where one did not formerly

exist.

Enhancement: Activities conducted in existing wetlands or other aquatic resources that increase one or more aquatic functions.

Ephemeral Stream: An ephemeral stream has *flowing* water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runnoff from rainfall is the primary source of water for stream flow.

Farm Tract: A unit of contiguous land under one ownership that is operated as a farm or part of a farm.

Flood Fringe: That portion of the 100-year floodplain outside of the floodway (often referred to as "floodway fringe").

Floodway: The area regulated by Federal, state, or local requirements to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program) within the 100-year floodplain.

Independent Utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent Stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the US: Waters of the US that include the filled area and other waters that are permanently adversely affected by flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent above-grade, at-grade, or below-grade fills that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the US is the threshold measurement of the impact to existing waters for determining whether a project may qualify for a NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and values. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the US temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the US. Impacts to ephemeral waters are only not included in the acreage or linear foot measurements of loss of waters of the US or loss of stream bed, for the purpose of determining compliance with the threshold limits of the NWPs.

Non-tidal Wetland: An area that, during a year with normal patterns of precipitation has standing or flowing water for sufficient duration to establish an ordinary high water mark. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. The term "open water" includes rivers, streams, lakes, and ponds. For the purposes of the NWPs, this term does not include ephemeral waters.

Perennial Stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for the most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Permanent Above-grade Fill: A discharge of dredged or fill material into waters of the US, including wetlands, that results in a substantial increase in ground elevation and permanently converts part or all of the waterbody to dry land. Structural fills authorized by NWPs 3, 25, 36, etc. are not included.

Preservation: The protection of ecologically important wetlands or other aquatic resources in perpetuity through the implementation of appropriate legal and physical mechanisms. Preservation may include protection of upland areas adjacent to wetlands as necessary to ensure protection and/or enhancement of the overall aquatic ecosystem.

Restoration: Re-establishment of wetland and/or other aquatic resource characteristics and function(s) at a site where they have ceased to exist, or exist in a substantially degraded state.

Riffle and Pool Complex: Riffle and pool complexes are special aquatic sites under the

404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Single and Complete Project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers (see definition of independent utility). For linear projects, the "single and complete project" (i.e., a single and complete crossing) will apply to each crossing of a separate water of the US (i.e., a single waterbody) at that location. An exception is for linear projects crossing a single waterbody several times at separate and distant locations; each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies.

Stormwater Management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater Management Facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and BMPs, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream Channelization: The manipulation of a stream channel to increase the rate of water flow through the stream channel. Manipulation may include deepening, widening, straightening, armoring, or other activities that change the stream cross-section or other aspects of stream channel geometry to increase the rate of water flow through the stream channel. A channelized stream remains a water of the US, despite the modifications to increase the rate of water flow.

Tidal Wetland: A tidal wetland is a wetland (i.e., water of the US) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

Vegetated Buffer: A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters, which separates the open water from developed areas, including agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and values (e.g., aquatic habitat

for fish and other aquatic organisms, moderation of water temperature changes, and detritus for aquatic food webs) and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or planting native trees, shrubs, and herbaceous plants on land next to openwaters. Mowed lawns are not considered vegetated buffers because they provide little or no aquatic habitat functions and values. The establishment and maintenance of vegetated buffers I a method of compensatory mitigation that can be used in conjunction with the restoration, creation, enhancement or preservation of aquatic habitats to ensure that activities authorized by NWPs result in minimal adverse effects to the aquatic environment. (See General Condition 19.)

Vegetated Shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: A waterbody is any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

FINAL REGIONAL CONDITIONS FOR NATIONWIDE PERMITS IN THE WILMINGTON DISTRICT

1. Waters Excluded from NWP or Subject to Additional Notification Requirements:

a. The Corps identified waters that will be excluded from use of this NWP. These waters are:

1. Discharges into Waters of the United States designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning area are prohibited during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

2. Discharges into Waters of the United States designated as sturgeon spawning areas are prohibited during the period between February 1 and June 30, without prior written approval from the National Marine Fisheries Service (NMFS).

b. The Corps identified waters that will be subject to additional notification requirements for activities authorized by this NWP. These waters are:

1. Prior to the use of any NWP in any of the following North Carolina *designated waters*, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant must furnish a written statement of compliance with all of the conditions of the applicable Nationwide Permit. The North Carolina *designated waters* that require additional notification requirements are "Outstanding Resource Waters" (ORW) and "High Quality

Waters" (HQW) (as defined by the North Carolina Division of Water Quality), or "Inland Primary Nursery Areas" (IPNA) (as defined by the North Carolina Wildlife Resources Commission), or contiguous wetlands (as defined by the North Carolina Division of Water Quality), or "Primary Nursery Areas" (PNA) (as defined by the North Carolina Division of Marine Fisheries).

2. Applicants for any NWP in a designated "Area of Environmental Concern" (AEC) in the twenty (20) coastal counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA), must also obtain the required CAMA permit. Construction activities may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – P.O. Box 1890, Wilmington, NC 28402 or Washington Field Office – P.O. Box 1000, Washington, NC 27889) for authorization to begin work.

3. Prior to the use of any NWP on a Barrier Island of North Carolina, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable Nationwide Permit.

4. Prior to the use of any NWP in a "Mountain or Piedmont Bog" of North Carolina, applicants shall comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP.

Note: The following wetland community types identified in the N.C. Natural Heritage Program document, "Classification of Natural communities of North Carolina (Michael P. Schafale and Alan S. Weakley, 1990), are subject to this regional condition.

Mountain Bogs	Piedmont Bogs
Swamp Forest-Bog Complex	Upland Depression Swamp Forest
Swamp Forest-Bog Complex (Spruce Subtype)	
Southern Appalachian Bog (Northern Subtype)	
Southern Appalachian Bog (Southern Subtype)	
Southern Appalachian Fen	

5. Prior to the use of any NWP in Mountain Trout Waters within twenty-five (25) designated counties of North Carolina, applicants shall comply with Nationwide General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Notification will include a letter of comments and recommendations from the North Carolina Wildlife Resources Commission (NCWRC), the

location of work, a delineation of wetlands, a discussion of alternatives to working in the Mountain Trout Waters, why other alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to the Mountain Trout Waters. To facilitate coordination with the NCWRC, the proponent may provide a copy of the notification to the NCWRC concurrent with the notification to the District Engineer. The NCWRC will respond both to the proponent and directly to the Corps of Engineers.

The twenty-five (25) designated counties are:

Alleghany	Ashe	Avery	Yancey
Buncombe	Burke	Caldwell	Wilkes
Cherokee	Clay	Graham	Swain
Haywood	Henderson	Jackson	Surry
Macon	Madison	McDowell	Stokes
Mitchell	Polk	Rutherford	
Transylvania	Watauga		

6. Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination of the disposal area and allow a temporary shellfish closure to be made. Any disposal of sand to the beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas. If beach disposal was to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swim advisory shall be posted and a press release shall be made. NCDENR Shellfish Sanitation Section must be notified before commencing this activity.

2. List of Final Corps Regional Modifications and Conditions for All Nationwide Permits

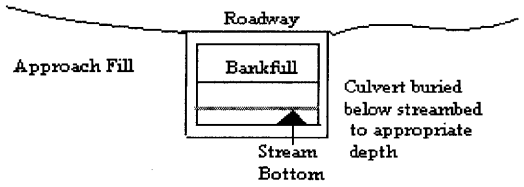
a. Individual or multiple NWPs may not be used for activities that result in the cumulative loss or degradation of greater than 300 total linear feet of perennial streambed or intermittent streambed that exhibits important aquatic function(s).

b. Prior to the use of any NWP (except 13, 27, and 39) for any activity that has more than a total of 150 total linear feet of perennial streambed impacts or intermittent streambed impacts (if the intermittent stream has important aquatic function), the applicant must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Compensatory mitigation is typically required for any impact that requires such notification. [Note: The Corps uses the Intermittent Channel Evaluation Form, located with Permit Information on the Regulatory Program Web Site, to aid in the determination of the intermittent channel stream status. Also, NWPs 13, 27 and 39 have specific reporting requirements.]

c. For all Nationwide Permits which allow the use of concrete as a building material, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the state until the concrete has hardened.

d. For all Nationwide Permits that allow for the use of riprap material for bank stabilization, filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

e. For all NWPs that involve the construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms.
All culverts in the 20 CAMA coastal counties must be buried to a depth of one foot below the



bed of the stream or wetland. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. Bottomless arch culverts will satisfy this condition. A waiver from the depth specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional Condition would result in more adverse impacts to the aquatic environment.

NORTH CAROLINA DIVISION OF WATER QUALITY GENERAL CERTIFICATION CONDITIONS

For the most recent General Certification conditions, call the NC Division of Water Quality, Wetlands/401 Certification Unit at (919) 733- 1786 or access the following website:

http://h2o.enr.state.nc.us/ncwetlands/certs.html

NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT STATE CONSISTENCY

Consistent.

Citations:
2002 Nationwide Permits - Federal Register Notice 15 Jan 2002
2002 Nationwide Permits Corrections - Federal Register Notice 13 Feb 2002
2002 Regional Conditions – Authorized 17 May 2002

WQC #3403

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 23 (APPROVED CATEGORICAL EXCLUSIONS) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

This General Certification is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality Regulations in 15A NCAC 2H, Section .0500 and 15A NCAC 2B .0200 for the discharge of fill material to waters and wetland areas as described in 33 CFR 330 Appendix A (B) (23) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 2B .0200. This Certification replaces Water Quality Certification Number 2670 issued on January 21, 1992, Certification Number 2734 issued on May 1 1993, Certification Number 3107 issued on February 11, 1997 and Water Quality Certification Number 3361 issued March 18, 2002. This WQC is rescinded when the Corps of Engineers re-authorizes Nationwide Permit 23 or when deemed appropriate by the Director of the DWQ.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Conditions of Certification:

1. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires notification to the Division of Water Quality. Two copies shall be submitted to DWQ at the time of notification in accordance with 15A NCAC 2H .0501(a). Written concurrence from DWQ is not required unless any standard conditions of this Certification cannot be met;

2. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance with the appropriate turbidity water quality standard;

3. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur. The mitigation plan must be implemented and/or constructed before any permanent building or structure on

site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the travelling public;

4. Compensatory stream mitigation shall be required at a 1:1 ratio for not only perennial but also intermittent stream impacts equal to or exceeding 150 feet and that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II unless the project is a linear, publicly-funded transportation project, which has a 150-foot per-stream impact allowance;

5. All sediment and erosion control measures placed in wetlands or waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;

6. Measures shall be taken to prevent live or fresh concrete from coming into contact with freshwaters of the state until the concrete has hardened;

7. In accordance with North Carolina General Statute Section 143-215.3D(e), any request for written concurrence for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted and will be the higher of the two fees;

8. Impacts to any stream length in the Neuse, Tar-Pamlico, Randleman and Catawba River Basins (or any other river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as "exempt" from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse, Tar-Pamlico, Randleman and Catawba River Basins shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;

9. Additional site-specific conditions may be added to projects for which written concurrence is required or requested under this Certification in order to ensure compliance with all applicable water quality and effluent standards;

10. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide and Regional General Permits, whichever is sooner;

11. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed.

Non-compliance with or violation of the conditions herein set forth by a specific fill project shall result in revocation of this Certification for the project and may result in criminal and/or civil penalties.

WQC #3403

The Director of the North Carolina Division of Water Quality may require submission of a formal application for individual certification for any project in this category of activity that requires written concurrence under this certification, if it is determined that the project is likely to have a significant adverse effect upon water quality or degrade the waters so that existing uses of the wetland, stream or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 2003

DIVISION OF WATER QUALITY

By

Alan W. Klimek, P.E.

Director

WQC # 3403

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

September 14, 2006

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1890
Wilmington, NC 28402-1890

ATTN: Mr. Dave Timpy
NCDOT Coordinator

Dear Sir:

Subject: **Nationwide 23 Permit Application** for the Replacement of Bridge No. 14 over the Black River on NC 411, Sampson County, Federal Aid Project No. BRSTP-411(1); State Project No. 8.1280401; TIP No. B-1381.

Please find enclosed the half-size plans, the Categorical Exclusion (CE), and Natural Resources Technical Report (NRTR) for the above-mentioned project. The North Carolina Department of Transportation proposes to replace existing Bridge No. 14 over the Black River on NC411 in Sampson County.

The project involves replacing the old bridge on the existing location with a new 4-span bridge approximately 204 feet long and 37 feet wide. Traffic will be detoured off-site during construction.

Impacts to Waters of the United States

General Description: The Black River is the only water resource within the study area and is located in the Cape Fear Drainage Basin, Subbasin 03-06-19. The Black River [Index No. 18-68] has been assigned a Best Usage Classification of **C Sw ORW** by the North Carolina Department of Environmental and Natural Resources and is in Hydrologic Unit 03030006. The Black River is not designated as a North Carolina Natural or Scenic River, or as a National Wild and Scenic River, nor is it listed as a 303(d) stream. No designated High Quality Waters (HQW), Water Supply I (WS-I), or Water Supply II (WS-II) waters occur within 1.0 mile of the project study area.

Permanent Impacts: NCDOT anticipates limited permanent impacts for this project. The only impacts to surface waters will result from the placement of in-water bents. Bents in the water will be 15.72 square feet each for a total of 31.45 square feet or less than .001 acre of permanent impacts.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-733-3141
FAX: 919-715-1501
WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Temporary Impacts: NCDOT does not anticipate any temporary impacts for this project. Temporary workpads or causeways are unnecessary for the demolition of the existing bridge and construction of the new bridge.

Utility Impacts: NCDOT Utilities reported a power line located on the North side of Bridge No. 14 that travels the length of the project. This line is not in conflict with the project and will remain in place during construction.

Several buried telephone cables are located on the North and South sides of NC 411 and travel aerially on two poles over the Black River. Any adjustments to these cables to clear the area for bridge construction will take place by open trench method outside of any jurisdictional resources.

Bridge Demolition

Bridge No. 14 is composed of a reinforced concrete deck on timber joists and I-beams. The original structure was composed of reinforced concrete caps on timber piles. Temporary steel crutches have been added to reinforce the structure until replacement. It is likely that all components can be removed without any appreciable debris falling into the water.

All measures will be taken to avoid any temporary fill from entering Waters of the United States. Best Management Practices (BMP's) for Bridge Demolition and Removal will be implemented.

Avoidance and Minimization

NCDOT has minimized impacts to the fullest extent possible. The number of bents in the water is being reduced from five for the existing bridge to two for the new bridge. In compliance with 15A NCAC 02B.0104(m) we have incorporated the use of BMP's in the design of the project. Traffic will be detoured off-site during construction.

An in-stream moratorium from September 1 to January 1 to protect anadromous fish that may use the river as a travel corridor is recommended in the CE. The Wildlife Resources Commission has informed NCDOT that these dates are incorrect. The correct in-stream moratorium will occur from February 15 to June 15.

Mitigation

No mitigation is required for this project due to the limited impacts to the Black River. There are no wetlands within the project area.

Federally Protected Species

As of 27 April 2006, the U.S. Fish and Wildlife Service (FWS) lists four protected species for Sampson County (Table 1). Descriptions of the protected species are provided in the attached Categorical Exclusion. Habitat surveys were conducted on 31 August 2006 for Red-cockaded woodpecker, American chaffseed, and Pondberry. No suitable habitat for any of these species will be impacted by the project. Therefore, Biological Conclusions of "No Effect" remain valid.

Table 1. Federally Protected Species for Sampson County

Common Name	Scientific Name	Status	Habitat	Biological conclusion
American alligator	*Alligator mississippiensis*	Threatened (S/A)	N/A	N/A
Red-cockaded woodpecker	*Picoides borealis*	Endangered	Yes	No Effect
American chaffseed	*Schwalbea americana*	Endangered	No	No Effect
Pondberry	*Lindera melissifolia*	Endangered	No	No Effect

Regulatory Approvals

Section 404 Permit: This project is being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). Therefore, we do not anticipate requesting an individual permit but propose to proceed under a Nationwide 23 as authorized by a Nationwide Permit (67 FR 2020; January 15, 2002).

Section 401 Water Quality Certification: We anticipate 401 General Certification number 3403 will apply to this project. In accordance with 15A NCAC 2H, Section .0500(a) we are providing two copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their review.

United States Coast Guard: A letter of exemption from the USCG is included in the CE. The letter exempts NCDOT from needing an USCG permit for this project.

The NCDOT hereby requests that this project be authorized by the North Carolina Division of Water Quality and the U. S. Army Corps of Engineers. If there are any questions, please contact Ms. Veronica Barnes of my staff at vabarnes@dot.state.nc.us or (919) 715-7232.

A copy of this permit application will be posted on the DOT website at: http://www.ncdot.org/planning/pe/naturalunit/Permit.html.

Sincerely,

E. R. Lusk

for Gregory J. Thorpe, Ph.D.,
Environmental Management Director
Project Development and Environmental Analysis Branch

Cc:

w/attachment
- Mr. John Hennessy, NCDWQ (2 Copies)
- Mr. Travis Wilson, NCWRC
- Mr. Gary Jordan, USFWS
- Mr. Ron Sechler, NMFS
- Mr. Michael Street, NCDMF
- Dr. David Chang, P.E., Hydraulics
- Mr. Mark Staley, Roadside Environmental
- Mr. Greg Perfetti, P.E., Structure Design
- Mr. H. Allen Pope, P.E., Division 3 Engineer
- Mr. Mason Herndon, Division 3 Environmental Officer

w/out attachment
- Mr. Jay Bennett, P.E., Roadway Design
- Mr. Majed Alghandour, P. E., Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Mr. Scott McLendon, USACE, Wilmington
- Mr. John Williams, PDEA

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	**B-1381**
State Project No.	**8.1280401**
W.B.S. No.	**32594.1.1**
Federal Project No.	**BRSTP-411(1)**

A. Project Description:

This project proposes to replace Bridge No. 14 on NC 411 over the Black River in Sampson County. B-1381 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and is eligible for the Federal-Aid Bridge Replacement and Rehabilitation Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

The replacement structure will consist of a bridge 230-foot long and 30 feet wide. The bridge will be of sufficient width to provide for two 12-foot lanes with three-foot offsets on each side. Traffic will be detoured offsite during construction.

Approach work will extend approximately 150 feet east and 200 feet west of the bridge. The existing 18-foot wide pavement will be widened to 24 feet to provide two 12-foot lanes along the approaches. Eight-foot grass shoulders will be provided on each side (11 feet with guardrail). This roadway will be designed as a rural major collector with a 60 mile per hour design speed.

B. Purpose and Need:

At the time of programming, Federal Highway Administration requires that a bridge have a sufficiency rating of less than 50 paired with being either structurally deficient and/or functionally obsolete in order to qualify for the Federal Highway Bridge Replacement and Rehabilitation Program. Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 26.6 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to a structure appraisal of 2 out of 9 according to Federal Highway Administration (FHWA) standards.

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:

Project History

A Categorical Exclusion and Programmatic Section 4(f) were signed on June 30, 1995. The project was originally scheduled for Let in 1998 but all bids came in over the estimated cost and were thrown out. The project remained dormant until recently. The purpose of this Programmatic Categorical Exclusion is to update the environmental documentation for the project so that the project may be pursued to construction let once again. The original Programmatic 4(f) is included as an attachment to this document.

Estimated Costs:

Total Construction $ 625,000

Right of Way for this project was purchased prior to the original Let date. The current proposal stays within those R/W Limits.

Estimated Traffic:

Current	-	800
Year 2025	-	1200
TTST	-	2%
Dual	-	1%

Accidents: In a check of a recent three-year period, four accidents occurred in the vicinity of the bridge. None were within the proposed project limits. The nearest was on the curve in the east approach. Because this is an historic district, it is considered appropriate to limit the project to what is currently proposed.

Design Speed: 60 mph

Functional Classification: Rural Major Collector

School Busses: During the school year there are six school bus crossings per day at this location. The Transportation Director for Sampson County Public Schools indicated that re-routing would not be a problem during construction.

Division Office Comments: The Division concurs with the proposed alternate.

Bridge Demolition: Bridge 14 is composed of a reinforced concrete deck on timber joists and I-beams. The original structure was composed of reinforced concrete caps on timber piles. Temporary steel crutches have been added to reinforce the structure until replacement. It is likely that all components can be removed without any appreciable debris falling into the water.

Studied Offsite Detour: 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 1130, NC 903, NC 411 and back to SR 1130. The duration of the project will be approximately 8 months. The detour for the average road user would result in 9.3 minutes additional travel time (7 miles additional travel). According to the Guidelines, these criteria fall within a range where NCDOT would normally consider an onsite detour to be appropriate but if mitigating circumstances are present, an offsite detour might be considered acceptable. The presence of the historic district is a mitigating circumstance on this project. It would not be possible to use an onsite detour without impacts to the historic structures. For this reason, NCDOT has elected to detour traffic offsite during construction.

Design Exception: There will be no design exceptions for this project.

E. Threshold Criteria

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

ECOLOGICAL		YES	NO
(1)	Will the project have a substantial impact on any unique or important natural resource?		X
(2)	Does the project involve habitat where federally listed endangered or threatened species may occur?		X
(3)	Will the project affect anadromous fish?		X
(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?	X	
(5)	Will the project require the use of U. S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Water Resources (OWR) and/or High Quality Waters (HQW)?	X	
(8)	Will the project require fill in waters of the United States in any of the designated mountain trout counties?		X
(9)	Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?		X

PERMITS AND COORDINATION		YES	NO
(10)	If the project is located within a CAMA county, will the project significantly affect the coastal zone and/or any "Area of Environmental Concern" (AEC)?		X
(11)	Does the project involve Coastal Barrier Resources Act resources?		X
(12)	Will a U. S. Coast Guard permit be required?	X	
(13)	Will the project result in the modification of any existing regulatory floodway?		X

		YES	NO
(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?	X	
(30)	Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)?	X	
(31)	Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended?		X
(32)	Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers?		X

F. Additional Documentation Required for Unfavorable Responses in Part E

Documentation for Question 7: The Black River is classified as an Outstanding Resource Water. High Quality Sedimentation and Erosion Control Measures will be implemented to minimize impacts during construction.

Documentation for Question 12: A U.S. Coast Guard Permit will be required since the Black River is historically a navigable water. The new bridge will maintain or increase the vertical and horizontal clearance under the bridge.

Documentation for Question 28: Clear Run Historic District is eligible for the National Register of Historic Places. All efforts have been made to minimize the impacts to the historic district. Section 106 and Section 4(f) documentation were provided in the original CE and are repeated as an attachment to this document.

Documentation for Question 29: There is an archaeological site on the northwest quadrant of the project. As part of the original effort to Let the project to construction, the site was excavated and all appropriate materials recovered and preserved to clear the location for new construction.

Documentation for Question 30: Both the archaeological site and the Clear Run Historic District are considered Section 4(f) resources. All impacts have been minimized and mitigated as part of the previous Administrative Action. The Section 4(f) documentation is included as an attachment to this document.

G. CE Approval

TIP Project No.	**B-1381**
State Project No.	**8.1280401**
W.B.S. No.	**32594.1.1**
Federal Project No.	**BRSTP-411(1)**

Project Description:

This project proposes to replace Bridge No. 14 on NC 411 over the Black River in Sampson County. The replacement structure will consist of a bridge 230-foot long and 30 feet wide. The bridge will be of sufficient width to provide for two 12-foot lanes with three-foot offsets on each side. Traffic will be detoured offsite during construction.

Approach work will extend approximately 150 feet east and 200 feet west of the bridge. The existing 18-foot wide pavement will be widened to 24 feet to provide two 12-foot lanes along the approaches. Eight-foot grass shoulders will be provided on each side (11 feet with guardrail). This roadway will be designed as a rural major collector with a 60 mile per hour design speed.

Categorical Exclusion Action Classification:

____ TYPE II(A)
_X_ TYPE II(B)

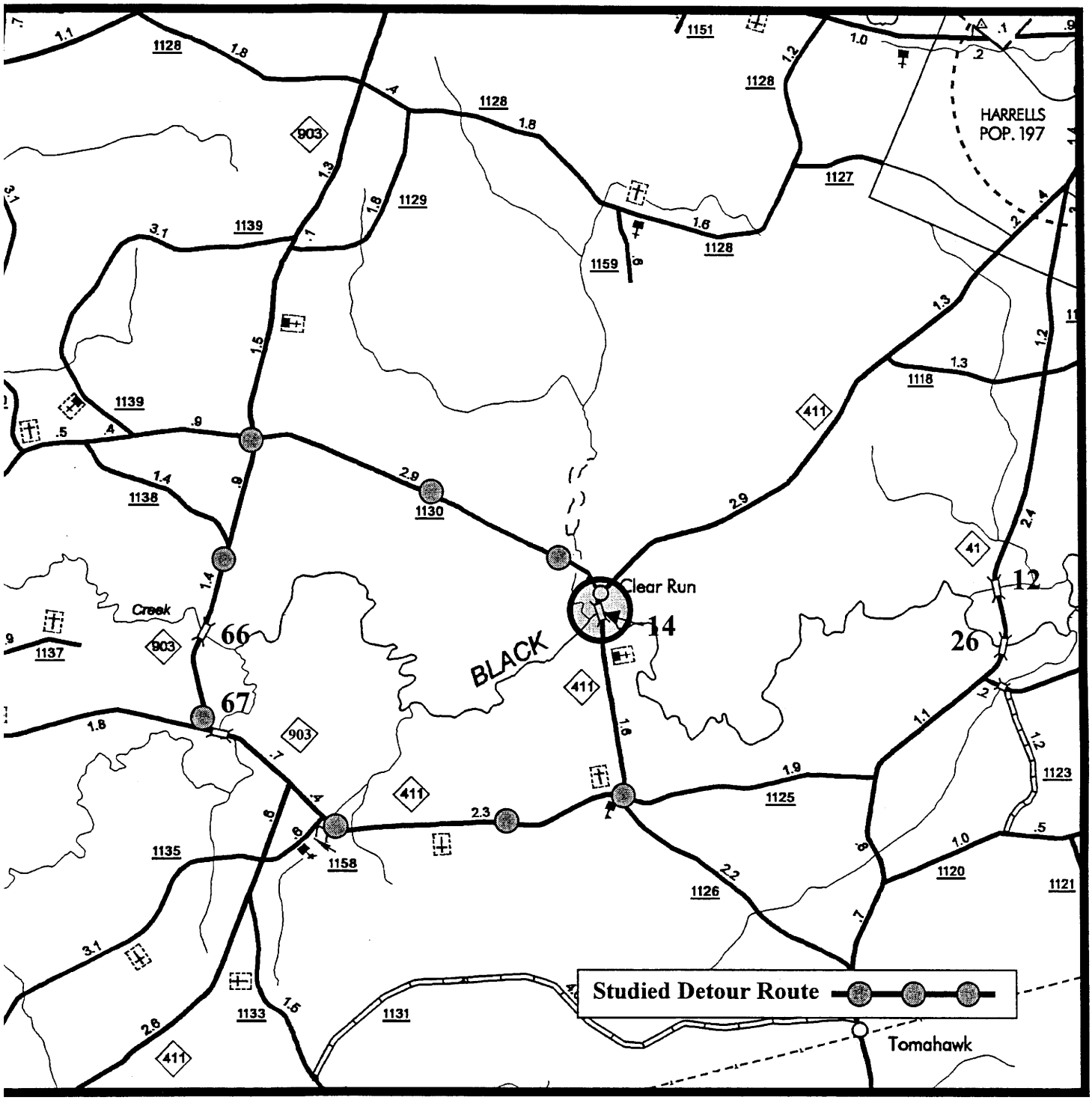
Approved:

6/28/04 — Teresa Hart
Date — Assistant Manager
Project Development & Environmental Analysis Branch

6-29-04 — William T. Goodwin Jr.
Date — Project Planning Unit Head
Project Development & Environmental Analysis Branch

6/30/04 — John D. Williams
Date — Project Planning Engineer
Project Development & Environmental Analysis Branch

6/30/04 — for
Date — John F. Sullivan, III, P.E., Division Administrator
Federal Highway Administration



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

SAMPSON COUNTY
REPLACE BRIDGE 14 ON NC 411
OVER BLACK RIVER
B-1381

Figure 1

NORTH CAROLINA DIVISION
FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL
FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENTS
WITH HISTORIC SITES

F. A. PROJECT BRSTP-411(1)

STATE PROJECT 8.1280401

T. I. P. NO. B-1381

DESCRIPTION: Replace Bridge No. 14 on NC 411 over the Black River in Sampson County, State Project No. 8.1280401, Federal Aid Project No. BRSTP-411(1), TIP # B-1381.

		YES	NO
1.	Is the proposed project designed to improve the operational characteristics, safety, and/or physical condition of the existing highway facility on essentially the same alignment?	X	☐
2.	Is the project on new location?	☐	X
3.	Is the historic site adjacent to the existing highway?	X	☐
4.	Does the project require the removal or alteration of historic buildings, structures, or objects?	☐	X
5.	Does the project disturb or remove archaeological resources which are important to preserve in place rather than to recover for archaeological research?	☐	X
6.	a. Is the impact on the Section 4(f) site considered minor (i.e. no effect, no adverse effect)?	X	☐
	b. If the project is determined to have "no adverse effect" on the historic site, does the Advisory Council on Historic Preservation object to the determination of "no adverse effect"?	☐	X

7.	Has the SHPO agreed, in writing, with the assessment of impacts and the proposed mitigation?	X	☐
8.	Does the project require the preparation of an EIS?	☐	X

ALTERNATIVES CONSIDERED AND FOUND NOT TO BE FEASIBLE AND PRUDENT

The following alternatives were evaluated and found not to be feasible and prudent:

		Yes	No
1.	Do nothing	X	☐
	Does the "do nothing" alternative:		
	(a) correct capacity deficiencies?	☐	X
or	(b) correct existing safety hazards?	☐	X
or	(c) correct deteriorated conditions?	☐	X
and	(d) create a cost or impact of extraordinary measure?	☐	X
2.	Improve the highway without using the adjacent historic site.		
	(a) Have minor alignment shifts, changes in standards, use of retaining walls, etc., or traffic management measures been evaluated?	X	☐

(b) The items in 2(a) would result in:
(circle, as appropriate)

(i) substantial adverse environmental impacts

or (ii) substantial increased costs

or (iii) unique engineering, transportation, maintenance, or safety problems

or (iv) substantial social, environmental, or economic impacts

or (v) a project which does not meet the need

or (vi) impacts, costs, or problems which are of extraordinary magnitude

		Yes	No
3.	Build an improved facility on new location without using the historic site.	X	☐

(a) An alternate on new location would result in: (circle, as appropriate)

(i) a project which does not solve the existing problems

or (ii) substantial social, environmental, or economic impacts

or (iii) a substantial increase in project cost or engineering difficulties

and (iv) such impacts, costs, or difficulties of truly unusual or unique or extraordinary magnitude

MINIMIZATION OF HARM

		Yes	No
1.	The project includes all possible planning to minimize harm necessary to preserve the historic integrity of the site.	X	☐

2. Measures to minimize harm have been agreed to, in accordance with 36 CFR Part 800, by the FHWA, the SHPO, and as appropriate, the ACHP. X ☐

3. Specific measures to minimize harm are described as follows:

The existing bridge is being replaced on the existing location and all work on approaches is being kept to a minimum. Only work which is absolutely necessary for safety is proposed. That work includes drainage pipes along the side of the road, guardrail extending from each corner of the bridge, and some regrading on the shoulder at the northwest corner of the bridge. A right of way taking of approximately one meter will be required on either side of the east approach in order to accomplish the work described above. A right of way taking of approximately two meters will be required on the north shoulder of the west approach to meet the safety standards for shoulders. Finally, a one bar metal rail is proposed for the bridge instead of the normal jersey barrier. This is to allow for a better view of the historic district as well as the river when crossing the bridge.

Note: Any response in a box requires additional information prior to approval. Consult Nationwide 4(f) evaluation.

COORDINATION

The proposed project has been coordinated with the following :

a. State Historic Preservation Officer (SHPO)

NCDOT and FHWA have coordinated with SHPO from the outset of the project to minimize harm to Clear Run Historic District. Attachments 2 through 9 reflect this coordination..

b. Advisory Council on Historic Preservation (ACHP)

NCDOT and FHWA have coordinated with the ACHP through correspondence. They have stated agreement with the determination of "no adverse effect". They also noted that this completes compliance of Section 106 of the National Historic Preservation Act. (See Attachment 9)

c. Property owner

Amos McLamb is the present land owner of all properties surrounding the bridge. NCDOT on behalf of FHWA has contacted Mr. Johnson early in the process and described the project and its effects. Mr. Johnson concurs with the project as described.

d. Local/State/Federal Agencies

NCDOT and FHWA have coordinated from the beginning of the planning process with the FHWA and SHPO to ensure that all known issues were addressed. Attachments 2 through 9 reflect this coordination.

e. US Coast Guard

NCDOT and FHWA have coordinated with the US Coast Guard regarding this project and concurs with the Coast Guard that this project will require a Coast Guard permit since the waters of the Black River are historically navigable at this location. NCDOT will obtain a Coast Guard permit prior to construction as noted in Section II of the document.

SUMMARY OF APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project. There are no feasible and prudent alternatives to the use of the historic site.

The project includes all possible planning to minimize harm, and the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed with local and state agencies.

Approved:

6-30-95 _____
Date Asst. Manager, Planning & Environmental Branch NCDOT

6/30/95 _____
Date FOR Division Administrator, FHWA

U.S. Department of Transportation
United States Coast Guard

Commander
United States Coast Guard
Atlantic Area

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: (Aowb)
Phone: (757)398-6422

16590
15 NOV 02

Mr. John Williams
Manager, Project Development and
Environmental Analysis Branch
State of North Carolina, DOT
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Williams:

Our Bridge Staff has reviewed your letter and site plan, dated November 7, 2002, for the replacement of a bridge on State Route 411 over Black River, located in Sampson County, North Carolina.

Black River is considered a navigable waterway of the United States for Bridge Administration purposes. It also meets the criteria for advance approval waterways set forth in Title 33, Code of Federal Regulations, Section 115.70, at the bridge site. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. In such cases, the Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways. The Black River bridge project qualifies in the advance approval category. Accordingly, an individual Coast Guard bridge permit will not be required for the new bridge across this waterway.

The fact that a Coast Guard permit will not be required for this bridge does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of this projects.

Sincerely,

ANN B. DEATON
Chief, Bridge Section
By direction of the Commander
Fifth Coast Guard District

Wayne Elliott

North Carolina Wildlife Resources Commission

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391
Charles R. Fullwood, Executive Director

1 7 1993

MEMORANDUM

TO: L.J. Ward, P.E., Manager
Planning and Environmental Branch
N.C. Department of Transportation

FROM: David Yow, Highway Project Coordinator
Habitat Conservation Program

kwk for David Yow

DATE: September 14, 1993

SUBJECT: Review of Scoping Sheet for Bridge No. 41 on NC 411 over the Black River, Sampson County, North Carolina, TIP No. B-1381.

The N. C. Wildlife Resources Commission (NCWRC) has reviewed the proposed project and possible impacts to existing wildlife and fishery resources in the area. An on-site investigation was conducted on September 9, 1993. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332 (2) (C)), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

The North Carolina Department of Transportation (NCDOT) plans to replace an obsolete wood/asphalt bridge over the Black River on existing location. The NCWRC encourages replacement at location for such projects and supports the NCDOT in its choice of this alternative. No significant effect on horizontal or vertical clearance for river navigation is anticipated, although public access to the creek may be temporarily impaired by construction activities.

In addition to on-site replacement with road closure, strict adherence to Best Management Practices for construction activities on the project area should be employed to minimize impacts from erosion on water quality. The NCWRC also recommends that all bridge replacement work within the stream channel be conducted between September 1 and January 1 to minimize impacts

ATTACHMENT 1

to anadromous fish stocks and freshwater game fish. Any instream construction outside of this window should be coordinated with Keith W. Ashley, District Fisheries Biologist, at (919-866-4250). Also, the completed structure and roadway approaches should not obstruct existing public use of the site for boating access. Public access to the unimproved boat landing adjacent to the site should be maintained during construction to the extent practicable.

Thank you for the ongoing opportunity to provide input to the planning stages for this project. If we can provide further assistance, please call David Yow, Highway Project Coordinator, at (919)-528-9887.

cc: Keith W. Ashley, District 4 Fisheries Biologist
Tom Padgett, District 4 Wildlife Biologist
John Williams, NCDOT

North Carolina Department of Cultural Resources

James B. Hunt, Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
William S. Price, Jr., Director

April 22, 1994

Nicholas L. Graf
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, N.C. 27601-1442

Re: Section 106 Consultation, Archaeological Survey Report, Bridge Replacement No. 14 over Black River on NC 411, Sampson County, Federal-aid BRSTP-411(1), State 8.1280401, TIP B-1381, ER 94-8479

Dear Mr. Graf:

Thank you for your letter of March 3, 1994, transmitting the archaeological survey report by Anna L. Gray of the North Carolina Department of Transportation concerning the above project. We apologize for the delay in our response.

The proposed bridge replacement project is located within the boundaries of the National Register-listed Clear Run District. Although the areas of significance for the district were listed as agriculture, architecture, and commerce in the National Register documentation, significant associated archaeological resources are present and discussed in the nomination. During the archaeological survey, Ms. Gray located the remains of a house and a barn within the area of potential effect, but was unable to locate any surface evidence of a blacksmith-cooper shop described in the nomination. Since archaeological resources will be affected regardless of the alternate selected, Ms. Gray recommended that subsurface investigation be undertaken only after the selected alternate has been identified, thereby avoiding unnecessary destruction of significant archaeological resources. We concur with this recommendation.

Based on the results of the investigation, we also concur with the finding by Federal Highway Administration that no visible remains or features would be suitable for public display or interpretation and that preservation in place of the archaeological remains is not warranted. As soon as the selected alternate for the bridge replacement is identified, please forward that information so we may determine appropriate archaeological investigations. By copy of this letter, we also request that Ms. Gray complete and submit to our office archaeological site forms for the house and barn remains identified during her survey.

ATTACHMENT 3

The above comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

Renee Gledhill-Earley

for David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: H. F. Vick
T. Padgett

North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
William S. Price, Jr., Director

July 11, 1994

Nicholas L. Graf
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, N.C. 27601-1442

Re: Replace Bridge No. 14 on NC 411 over Black River, Sampson County, B-1381, ER 94-9126

Dear Mr. Graf:

On June 9, 1994, members of the Historic Preservation Office met with representatives of the Federal Highway Administration (FHwA) and the North Carolina Department of Transportation (NCDOT) to discuss the project's effect upon the National Register-listed Clear Run Historic District. During the meeting, we recommended that the new bridge design include a three-bar metal rail rather than a solid concrete barrier.

We have received additional information from NCDOT concerning the design for the new bridge. We understand that FHwA presently accepts the three-bar metal rail only when used with a sidewalk. Thus, NCDOT has provided us with photographs and details of a two-bar metal rail which is acceptable without a sidewalk.

Based upon our discussions at the June 9 meeting and additional information provided by NCDOT, we concur with FHwA's determination that the project will have no effect upon the Clear Run Historic District if the following conditions are carried out:

1. NCDOT shall stop the guard rail on the north side of NC 411 west of the Clear Run Grocery building.

2. NCDOT shall use the two-bar metal rail design for the new bridge.

3. NCDOT shall conduct archaeological testing at the scattered tree site west of the Black River. Depending upon the information discovered, we may reassess the project's effect upon the Clear Run Historic District.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

David Brook

David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: H. F. Vick
B. Church

TIP # B-1381 Federal Aid # BRSTP-411(1) County SAMPSON

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Brief Project Description REPLACE BRIDGE No. 14 ON NC411 OVER BLACK RIVER

On FEBRUARY 9, 1995, representatives of the

- ✓ North Carolina Department of Transportation (NCDOT)
- ___ Federal Highway Administration (FHwA)
- ✓ North Carolina State Historic Preservation Office (SHPO)
- ___ Other ___

reviewed the subject project and agreed

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

Signed:

Representative, NCDOT — 2-09-95 Date

Roy C Shelton — 2/21/95 Date

FHwA, for the Division Administrator, or other Federal Agency

Dolores A Hall — 2/9/95 Date

Representative, SHPO

for David Brook, Deputy — 2/14/95 Date

State Historic Preservation Officer

(over)

ATTACHMENT 7

B-1301 Federal Aid # BRSTP-411(1) County SAMPSON

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

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

CLEAR RUN HISTORIC DISTRICT (NR) - NO ADVERSE EFFECT

WITH THE FOLLOWING CONDITIONS:

1. NCDOT SHALL STOP THE GUARDRAIL ON THE NORTH SIDE OF NC411 WEST OF THE CLEAR RUN GROCERY BUILDING
2. NCDOT SHALL USE THE TWO-BAR METAL RAIL DESIGN FOR THE NEW BRIDGE
3. NCDOT WILL PREPARE AND CARRY OUT A DATA RECOVERY PLAN FOR 31SP300** (the blacksmith/cooper shop) PRIOR TO CONSTRUCTION.

ialed: NCDOT _____ FHwA _____ SHPO

North Carolina Department of Cultural Resources

James B. Hunt, Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
William S. Price, Jr., Director

March 15, 1995

MEMORANDUM

TO: H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
Division of Highways
Department of Transportation

FROM: David Brook
Deputy State Historic Preservation Officer

SUBJECT: Replace Bridge No. 14 on NC 411 over Black River, Sampson County, B-1381

On March 9, 1995, Debbie Bevin of our staff met with John Williams of the North Carolina Department of Transportation (NCDOT) to discuss the above project. Mr. Williams indicated that NCDOT can use a one-bar metal rail on the replacement bridge. We are pleased to learn this since we prefer the one-bar rail rather than the two-bar rail discussed previously.

Representatives of NCDOT, the Federal Highway Administration, and the State Historic Preservation Office have already signed a concurrence form stating that the project will have no adverse effect on the National Register-listed Clear run Historic District if certain conditions are met. Substitution of a one-bar metal rail for the two-bar rail does not change our determination of effect and provides a further degree of compatibility with the character of the historic district.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:slw

cc: N. Graf
B. Church
J. Williams

ATTACHMENT 8

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

APR 12 1995

Mr. Nicholas L. Graf
Division Administrator
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

REF: Proposed Replacement of Bridge No. 14
Sampson County, North Carolina
Project No. BRSTP-411(1)

Dear Mr. Graf:

On March 30, 1995, the Council received your determination, supported by the North Carolina State Historic Preservation Officer (SHPO), that the referenced undertaking will have no adverse effect upon the Clear Run Historic District, which is listed on the National Register of Historic Places. Pursuant to Section 800.5(d)(2) of the Council's regulations, "Protection of Historic Properties" (36 CFR Part 800), we do not object to your determination. Therefore, you are not required to take any further steps to comply with Section 106 of the National Historic Preservation Act other than to implement the undertaking as proposed and consistent with any conditions you have reached with the North Carolina SHPO.

Thank you for your cooperation.

Sincerely,

MANaber

MaryAnn Naber
Historic Preservation Officer
Eastern Office of Review

ATTACHMENT 9

Elliott/Williams

North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

December 30, 1997

Nicholas L. Graf, P.E.
Division Administrator
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Re: Archaeological Data Recovery Report, Federal-aid Project BRSTP-411(1), B-1381, Sampson County; ER94-7361 & ER98-7820

Dear Mr. Graf:

Thank you for your letter of October 21, 1997, transmitting the above mentioned archaeological report. We apologize for the delay in our comments.

The report of the data recovery excavations of archaeological site 31SP300**1, the Clear Run Blacksmith-Cooper Shop, by Ellen Mayo Brady, Victoria L. Saxe, Clay Swindell, Daniel P. Lynch and Loretta Lautzenheiser of Coastal Carolina Research, Inc. is a very clear and well-written report which fulfills the stipulations of the scope-of-work developed for the project. We concur that the excavations are sufficient to retrieve the important information at the site and together with the report adequately mitigate the effects of the bridge replacement project. We do not recommend any additional archaeological investigations in connection with the bridge replacement.

We look forward to receipt of the final report and believe its wide distribution will be a valuable contribution to the professional archaeological community. Attached are a few minor corrections to be addressed in the final report.

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

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

David Brook

David Brook
Deputy State Historic Preservation Officer

DB:slw

Attachment

cc: Frank Vick, NCDOT
Tom Padgett, NCDOT
Loretta Lautzenheiser, Coastal Carolina Research, Inc.

Specific Comments, Data Recovery Excavations, 31SP300**1
ER 94-7361 and ER 98-7820, Sampson County

1. Page 23, last line: Debra should be Deborah
2. Page 30, 2nd full paragraph: Bituminous coal has more sulfur that anthracite coal.
3. Page 52: Figure 29 is upside down.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

April 7, 2004

Memorandum To: John Williams, P.E.,
Bridge Replacement Unit

From: Brett Feulner
TIP Project Management Team

Subject: Proposed replacement of Sampson County Bridge No. 14 on NC 411 over the Black River. TIP No. B-1381; State Project No. 8.1280401; Federal l Aid Project No. BRSTP-411(1).

The attached Natural Resources Technical Report provides inventories and descriptions of natural resources within the project study area, and estimations of impacts likely to occur to these resources as a result of project construction. Pertinent information concerning Waters of the United States and protected species is also provided.

cc: File

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Proposed replacement of Bridge No 14 on NC 411 over the Black River.

Sampson County

TIP No. B-1381

State Project No. 8.2180401

Federal Aid Project No. BRSTP-411 (1)
WBS Element No 32594.1.1

Natural Resources Technical Report

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

Brett M. Feulner
Environmental Specialist
April 8, 2004

EXECUTIVE SUMMARY

B-1381
SAMPSON COUNTY

Proposed replacement of Bridge No. 14 on NC 411 over the Black River, Sampson County, North Carolina; TIP No. B-1381.

INTRODUCTION

The proposed project calls for the replacement of Bridge No. 14 on NC 411 over the Black River (Figure 1) on existing location with an off-site detour. Project plans call for replacing the existing bridge with a 62.3 meter (207 feet), 9.2-meter (30.2 feet) wide two-lane bridge. The right of way width is 18.3 meters (60 feet) An offsite detour will be make use of SR 1130, SR 1003 and NC 411.

PHYSICAL CHARACTERISTICS

Water Resources

The Black River is the only water resource within the study area and is located in the Cape Fear River Drainage Basin, Subbasin 03-06-19, and Hydrologic Unit 03030006.

Streams have been assigned a best usage classification by the DWQ. The classification of the Black River [Index No. 18-68)] is **C Sw ORW**. Class **C** uses include aquatic life propagation and survival, fishing, wildlife, secondary recreation and agriculture. Swamp waters (Sw) are defined as waters which have low velocities and other natural characteristics which are different from adjacent streams. Outstanding Resource Waters (ORW) are high quality waters that are unique and special waters of exceptional state or national recreation or ecological significance that require special protection to maintain existing uses.

Since the Black River is classified as a ORW, the proposed project is located in a "High Quality Water Zone" which is defined as areas that are within 1 mile and drain into an HQW. Construction that impacts a "High Quality Water Zone" is required to follow Design Standards in Sensitive Watersheds in the Sedimentation Control Guidelines (Title 15A. 4B. 0024).

Biotic Resources

Three terrestrial communities were identified in the project study area: Cypress-Gum Swamp, Mesic Pine Flatwood Forest and maintained/disturbed land. Table 1 shows the impacts of the project on these communities.

Table 1. Anticipated Impacts to Biotic Communities

Community	Impacts (Acres)
Cypress-Gum Swamp	0.1
Mesic Pine Flatwoods	0.0
Maintained Disturbed	1.3
Black River	0.17
Total	1.57

JURISDICTIONAL TOPICS

Surface Waters and Wetlands

The Black River is considered a jurisdictional surface water under Section 404 of the Clean Water Act (CWA). The field investigation revealed no wetlands within the project study area.

Permits

If minor impacts occur to the Black River, 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. It is anticipated that a Nationwide Permit (NWP) No. 23 [33 CFR 330.5(a)(23)] will be required. Nationwide Permit No. 23 is for projects expected to have minimal impact. 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.

Mitigation

According to 15A NCAC 2H .0506(h) and 40 CFR 1508.20, mitigation will be required for stream impacts to jurisdictional streams requiring mitigation when these impacts are equal to or greater than 150 linear feet per stream. Because the proposed alignment only impacts one jurisdictional stream, it is anticipated that the USACE and NCDWQ will not require mitigation.

Federally-Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the ESA. As of January 29, 2003, there are three federally-protected species (Table 3) listed for Sampson County. The North Carolina Natural Heritage Program (NHP) has no record of the occurrence of either of these species within one mile of the project.

Table 2. Federally-Protected Species for Sampson County

Scientific Name	Common Name	Status
Alligator mississippiensis	American alligator	Threatened (S/A)
Picoides borealis	Red cockaded woodpecker	Endangered
Lindera melissifolia	Pondberry	Endangered

American Alligator
No Biological conclusion is required for the American alligator.

Red cockaded woodpecker: **No Effect**
Potential habitat was found within the project corridor. There were several loblolly pine trees found in the Mesic Pine Flatwoods Forest that were approximately 60 feet tall and 12-14 inch dbh. Current project plans call for replacing this bridge in place, therefore none of the pine trees are expected to be removed. However, if project plans change and the removal of any large pine trees will occur, then this biological conclusion will need to be confirmed. There was no evidence of current or previous nesting on any of the pine trees. Additionally, the understory in this community was much thicker then preferred by the RCW. The NC Natural Heritage Program Database was checked and no occurrences of the RCW were observed within one mile of the project area.

Pondberry: **No Effect**
There was no habitat found within the project study area for the pondberry. There are no seasonally flooded wetlands, sandy sinks, pond margins, swampy depressions sinks, or pineland depressions. Additionally the NC Natural Heritage Program Database was checked and no occurrences of pondberry were reported within one mile of the project area.

CONCLUSIONS
Within the study area for this project, there are no wetlands and one jurisdictional stream, Black River. The Black River is not listed as a 303(d) stream. A Biological Conclusion of "No Effect" has been issued for the pondberry and the red cockaded woodpecker.

Table of Contents

FIGURES AND TABLES

1.0 INTRODUCTION

The following Natural Resources Technical Report is submitted to assist in preparation of a Categorical Exclusion (CE) for the proposed project. The project is situated in Sampson County (Figure 1).

1.1 Project Description

The proposed project calls for the replacement of Bridge No. 14 on NC 411 over the Black River on existing location with an off-site detour. Project plans call for replacing the existing bridge with a 207 feet, 30.2 feet wide two-lane bridge. The right-of-way width is 60 feet An offsite detour will be make use of SR 1130, SR 1003 and NC 411.

1.2 Purpose

The purpose of this technical report is to inventory, catalog and describe the various natural resources likely to be impacted by the proposed action. This report also attempts to identify and estimate the probable consequences of the anticipated impacts to these resources. Recommendations are made for measures that will minimize resource impacts. These descriptions and estimates are relevant only in the context of existing preliminary design concepts. If design parameters and criteria change, additional field investigations will need to be conducted.

1.3 Methodology

Research was conducted prior to field investigations. Information sources used in this pre-field investigation of the study area include: U.S. Geological Survey (USGS) quadrangle map (Ingold), U.S. Fish and Wildlife Service (FWS) National Wetland Inventory Map, Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service) soil maps, and NCDOT aerial photographs of project area (1:1200). Water resource information was obtained from publications of the Department of Environment, Health and Natural Resources (DENR, 2003). Information concerning the occurrence of federal and state protected species in the study area was gathered from the Fish and Wildlife Service (FWS) list of protected species and species of concern, and the N.C. Natural Heritage Program (NHP) database of rare species and unique habitats.

General field surveys were conducted along the proposed alignment by NCDOT biologists Brett Feulner and Matt Haney on July 30, 2003 . Plant communities and their associated wildlife were identified and recorded. Wildlife identification involved using one or more of the following observation techniques: active searching and capture, visual observations (binoculars), and identifying characteristic signs of wildlife (sounds, scat, tracks, and burrows).

Figure 1

Jurisdictional wetland determinations were performed utilizing delineation criteria prescribed in the "Corps of Engineers Wetland Delineation Manual" (Environmental Laboratory, 1987).

1.4 Qualifications of Principal Investigator

Investigator:	Brett Feulner, Environmental Biologist NCDOT.
Education:	BS Forest Management, North Carolina State University
Experience:	Environmental Biologist, NCDOT February 2003- Present
	Environmental Scientist, LandMark Design Group June 2001- Dec. 2002
Expertise:	Wetland Delineation, Section 7 field investigations; NEPA investigations.

1.5 Terminology

Definitions for aerial descriptions used in this report are as follows: **Project Study Area** denotes the area bounded by proposed right-of-way limits; **Project Vicinity** describes an area extending 0.5 mile on all sides of the project study area; and **Project Region** is equivalent to an area represented by a 7.5 minute USGS quadrangle map with the project occupying the central position.

2.0 PHYSICAL RESOURCES

2.1 Regional Characteristics

The project study area lies within the Coastal Plain Physiographic Province. The topography in this section of Sampson County is characterized as nearly level to gently sloping. Project elevation is approximately 25 feet above mean sea level (msl). The city of Clinton is approximately 20 miles to the north of the project area. The study area within the proposed right of way is primarily forested.

2.2 Soils

Two soil phases occur within project boundaries: Chipley sand and Bibb and Johnston soils.

- Chipley sand is a moderately well drained soil that occurs on smooth, low ridges. Permeability is rapid, the seasonal high water table is located 2 to 3 ft below the surface and flooding occurs infrequently for brief periods. Chipley sand is listed as non-hydric.
- Bibb and Johnston is a very poorly drained soil along major streams. The seasonal high water table is at or near the surface for several months during the year. This soil is flooded for brief periods. Bibb and Johnston soils are listed as a hydric soil.

Soil core samples taken throughout the project area revealed soils with a sandy texture. The soils did not exhibit hydric conditions, such as low chroma colors, in low areas and adjacent to Black River. Therefore, hydric soil indicators, as defined in the "Corps of

Engineers Wetland Delineation Manual", 1987, were not observed within the project study area.

2.3 Water Resources

This section contains information concerning those water resources likely to be impacted by the project. Water resource information encompasses physical aspects of the resource, its relationship to major water systems, Best Usage Standards and water quality of the resources. Probable impacts to these water bodies are also discussed, as are means to minimize impacts.

2.3.1 Waters Impacted and Characteristics

The Black River will be the only surface water resource directly impacted by the proposed project (Figure 1). The Black River is located in sub-basin 03-06-19, Hydrologic Unit 03030006 of the Cape Fear River Basin, the largest river basin in the state of North Carolina. Currently there are no buffer rules in effect for the Cape Fear River Basin.

The Black River is described as having a slow flow with large pools and low turbidity. The substrate is composed of silt and sand. The Black River at Bridge No. 14, is approximately 70 ft wide and has an approximate depth of 4.5 ft at this location.

2.3.2 Clean Water Act Section 303(d) Streams

The DWQ has assembled a list of impaired waterbodies according to the Clean Water Act Section 303(d) and 40 CFR 130.7, hereafter referred to as the NC 2000 Section 303(d) list. The list is a comprehensive public accounting of all impaired waterbodies. An impaired waterbody is one that does not meet water quality standards including designated uses, numeric and narrative criteria and anti-degradation requirements defined in 40 CFR 131. The standards violation may be due to an individual pollutant, multiple pollutants, pollution, or an unknown cause of impairment. The source of impairment could be from point sources, nonpoint sources, and atmospheric deposition. Some sources of impairment exist across state lines. North Carolina's methodology is strongly based on the aquatic life use support guidelines available in the Section 305(b) guidelines (EPA-841-B-97-002A and -002B). Those streams attaining only Partially Supporting (PS) or Not Supporting (NS) status are listed on the NC 2000 Section 303(d) list. Streams are further categorized into one of six parts within the NC 2000 Section 303(d) list, according to source of impairment and degree of rehabilitation required for the stream to adequately support aquatic life. Within Parts 1, 4, 5, and 6 of the list, N.C. has developed a priority ranking scheme (low, medium, high) that reflects the relative value and benefits those waterbodies provide to the State. **The Black River is not on the NC 2000 Section 303(d) list.**

2.3.3 Best Usage Classification

Streams have been assigned a best usage classification by the DWQ. The classification of the Black River [Index No. 18-68)] is **C Sw ORW**. Class **C** uses include aquatic life propagation and survival, fishing, wildlife, secondary recreation and agriculture. Swamp waters (Sw) are defined as waters which have low velocities and other natural characteristics which are different from adjacent streams. Outstanding Resource Waters (ORW) are high quality waters that are unique and special waters of exceptional state or national recreation or ecological significance that require special protection to maintain existing uses.

Since the Black River is classified as a ORW, the proposed project is located in a "High Quality Water Zone" which is defined as areas that are within 1 mile and drain into an HQW. Construction that impacts a "High Quality Water Zone" is required to follow Design Standards in Sensitive Watersheds in the Sedimentation Control Guidelines (Title 15A. 4B. 0024).

2.3.4 Water Quality

The Benthic Macroinvertebrate Ambient Network (BMAN) is managed by DWQ and is part of an ongoing ambient water quality monitoring program which addresses long term trends in water quality. The program assesses water quality by sampling for selected benthic macroinvertebrate organisms at fixed monitoring sites. Some macroinvertebrates are sensitive to very subtle changes in water quality; thus, the species richness and overall biomass of these organisms are reflections of water quality. **There are no BMAN Stations located within one mile of the project area.**

The Ambient Monitoring System (AMS) is a network of stream, lake, and estuarine water quality monitoring stations strategically located for the collection of physical and chemical water quality data. The type of water quality data or parameters, that are collected is determined by the waterbody's freshwater or saltwater classification and corresponding water quality standards (DWQ, 1995). Class **C** waters are sampled at a minimum frequency of once per month. Bridge No. 14 over the Black River is designated as a location for a AMS station. A water level/quality monitoring structure is attached to the bridge. The structure consists of a stainless steel box (located approximately 1.2 m above the deck) connected to a section of corrugated galvanized pipe which extends to the creek bottom. The DWQ reports that high conductivity readings and elevated concentrations of nitrate/nitrite-nitrogen have been noted at this location (DWQ, 1995).

Point source dischargers located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) Program. Any discharger is required to register for a permit. **There are no point source dischargers located within one mile of the project area.**

2.4 Summary of Anticipated Impacts

Impacts to water resources in the project area are likely to result from activities associated with project construction. Activities likely to result in impacts are clearing and grubbing on streambanks, riparian canopy removal, instream construction, fertilizers and pesticides used in revegetation, and pavement/culvert installation. The following impacts to surface water resources are likely to result from the above mentioned construction activities.

- Increased sedimentation and siltation downstream of the crossing and increased erosion in the project area.
- Alteration of stream discharge due to silt loading and changes in surface and groundwater drainage patterns.
- Changes in light incidence and water clarity due to increased sedimentation and vegetation removal.
- Changes in and destabilization of water temperature due to vegetation removal.
- Alteration of water levels and flows due to interruptions and/or additions to surface and ground water flow from construction.
- Increased nutrient loading during construction via runoff from exposed areas.
- Increased concentrations of toxic compounds in roadway runoff.
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles.

In order to minimize potential impacts to water resources in the project area, NCDOT's Best Management Practices for the Protection of Surface Waters will be strictly enforced during the construction phase of the project. Limiting in stream work activities and re-vegetating stream banks immediately following the completion of the grading will further reduce impacts.

3.0 BIOTIC RESOURCES

Biotic resources located in the project area include terrestrial and aquatic communities. This section describes the communities encountered and the relationships between fauna and flora found within these communities. The composition and distribution of biotic communities throughout the project area are reflective of the topography, hydrologic influences, and the project area's past and present land uses. Descriptions of the terrestrial systems are presented in the context of plant community classifications and follow those presented by Schafale and Weakly (1990) where possible. The dominant flora and fauna observed, or likely to occur, in each community are described and discussed.

Scientific nomenclature and the common names (when applicable) are provided for each described animal and plant species. The plant taxonomy generally follows Radford et al (1968). Animal taxonomy follows Lee et al (1982), Martof et al (1980), Potter et al (1980), and Webster et al (1985). All subsequent references to the same organism will include the common name only. Fauna that is observed during the site visit is denoted

with an asterisk (*). Scat evidence or tracks equate to observation of the species. Published range distributions and habitat analysis are used in estimating fauna expected to be present within the project area.

3.1 Terrestrial Communities

Three distinct terrestrial communities are identified in the project study area: Cypress-Gum Swamp, Mesic Pine Flatwood forest and maintained/disturbed community.

3.1.1 Cypress-Gum Swamp

This unique coastal plain swamp community occurs as a fringe along both banks of the Black River. The canopy of this community is dominated by bald cypress (*Taxodium distichum*), sweet gum (*Liquidambar styraciflua*), and red maple(*Acer rubrum*). The understory of this community is composed of saplings of trees found in the canopy as well as water oak (*Quercus nigra*) and willow oak (*Q phellos*).

3.1.2 Mesic Pine Flatwood Forest

The Mesic Pine Flatwood Forest is present along both sides Black River. The transition from the pine forest to maintained/disturbed community is abrupt in some areas due to mowing activities and is more gradual in some areas. The transitional areas between the pine forest and the maintained community exhibit characteristics of a successional community composed of species in the canopy of the pine forest.

The canopy is dominated by loblolly pine (*Pinus taeda*). The midstory is composed of sweet gum, American elm (*Ulmus americana*), sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), and red maple. The shrub layer consists saplings of the canopy and midstory trees as well as persimmon (*Diospyros virginiana*), southern red oak (*Quercus falcata*), hickory (*Carya* sp.), river birch (*Betula nigra*), red bud (*Cercis* canadensis) and Chinese privet (*Ligustrum sinense*). Virginia creeper (*Parthenocissus quinquefolia*), muscadine (*Vitis rotundifolia*) and trumpet creeper (*Campsis radicans*) comprise the vine layer of this community.

3.1.3 Maintained/Disturbed Community

The maintained/disturbed community is found along an access road to the Black River in the northwest quadrant and along the road shoulders along NC 411 and are present along the entire length of the project. Flora within this periodically maintained community includes: fescue (*Festuca* spp.), bermuda grass (*Cynodon dactylon*), and crabgrass (*Digitaria* sp.),

The maintained habitat within the project area is surrounded by extensive forested areas and represents only a minor constituent of a larger community structure within the project

vicinity. Therefore, faunal species frequenting the maintained community will be largely those species inhabiting the alluvial forest.

3.2 Wildlife

Many faunal species are highly adaptive and may populate or exploit the entire range of biotic communities discussed. Generally, the community boundaries are abrupt with little transitional area between them. The forested tracts and drainageways provide habitat for species requiring a forest community, and provide shelter and movement corridors for other wildlife species within the project vicinity.

Mammals that commonly exploit habitats found within the project area consist of the white-tailed deer* (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), and raccoon* (*Procyon lotor*).

Forests and forest edge habitats located in the project area also provide opportunities for foraging and shelter for avian species such as the belted kingfisher* (*Megaceryle alcyon*), northern cardinal* (*Cardinalis cardinalis*), morning dove* (*Zenaida macoura*), crow* (*Corvus brachyrhynchos*) prothonotary warbler (*Protonotaria citrea*), northern parula (*Parula americana*), tufted titmouse (*Parus bicolor*), red-eyed vireo (*Vireo olivaceus*), and blue-gray gnatcatcher (*Polioptila caerulea*). The barred owl (*Strix varia*) is a permanent resident in this community type.

A variety of reptiles and amphibians may also be expected to utilize the terrestrial communities within the project area. These animals include the broadhead skink (*Eumeces laticeps*), marbled salamander (*Ambystoma opacum*), black racer (*Coluber constrictor*), and eastern box turtle (*Terrapene carolina*).

3.3 Aquatic Communities

This community is contained within the Black River. No submersed or emergent aquatic vegetation was observed within this section of the Black River. Fauna associated with the aquatic community includes various invertebrate and vertebrate species. Common species found in the black river include cottonmouth (*Agkistrodon piscivorus*), banded watersnake (*Nerodia fasciata*), yellow bellied slider (*Chrysemys scripta*), American alligator (*Alligator mississippiensis*) beaver (*Castor canadensis*), and racoon. Fish species that are likely to be found include eastern mosquito fish (*Gambusia affinis*), redfin pickeral (*Esox americanus*), eastern mud minnow (*Umbra pygmae*), yellow bullhead (*Ictalurus natalis*), bowfin (*Amia calva*), longnose gar (*Lepisosteus osseus*), American eel (*Anguilla rostrata*), banded pygmy sunfish (*Elassoma zonatum*), and madtom (*Noturus* sp.)

3.4 Summary of Anticipated Impacts

Construction related activities in or near the previously described resources have the potential to impact biological functions. This section quantifies and qualifies impacts to

the natural resources in terms of area impacted and ecosystems effected. Temporary and permanent impacts are also considered.

Plant communities found within the proposed project area serve as nesting and sheltering habitat for various wildlife species. Replacing Bridge No. 14 and its associated improvements may reduce habitat for faunal species, thereby diminishing faunal numbers. However, due to the size and scope of this project, it is anticipated that impacts to fauna will be minimal.

Areas modified by construction (non-paved) will become road shoulders and early successional habitat. Increased traffic noise and reduced habitat will displace some wildlife further from the roadway while attracting other wildlife by creating more early successional habitat. Animals temporarily displaced by construction activities may repopulate areas suitable for the species. This temporary displacement of animals will result in an increase of competition for the remaining resources.

The calculated impacts to biotic resources reflect the relative abundance of each community present within the study area. Project construction will result in clearing and degradation of portions of these communities. Table 1 summarizes potential losses to these biotic communities resulting from project construction. Estimated impacts are derived using the proposed 60.0-ft ROW on the proposed alignment. Since the entire ROW will probably not be impacted, actual impacts may be considerably less than indicated.

Table 1. Anticipated Impacts to Biotic Communities

Community	Impacts
Cypress-Gum Swamp	0.1
Mesic Pine Flatwoods	0.0
Maintained Disturbed	1.3
Black River	0.17
Total	1.57

Note: Values cited are in acres

4.0 JURISDICTIONAL TOPICS

This section provides descriptions, inventories and impact analysis pertinent to two important issues--Waters of the United States and rare and protected species.

4.1 Waters of the United States

Surface waters and wetlands fall under the broad category of "Waters of the United States" (Waters of the U.S.), as defined in Section 33 of the Code of Federal Register (CFR) Part 328.3. Any action that proposes to dredge or place fill material into surface waters or wetlands falls under the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (33 U.S.C. 1344). Surface waters

include all standing or flowing waters which have commercial or recreational value to the public.

4.1.1 Characteristics of Wetlands and Surface Waters

Potential wetland communities were investigated pursuant to the 1987 "Corps of Engineers Wetland Delineation Manual". The three parameter approach is used where hydric soils, hydrophytic vegetation, and prescribed hydrologic characteristics must **all** be present for an area to be considered a wetland. **There were no wetlands found within the project corridor.**

4.1.2 Summary of Anticipated Impacts

Anticipated impacts to "Waters of the US" were determined by using the width and length of the bridge. Impacts to the Black River are approximately 0.16 ac.

4.1.3 Permits

Impacts to jurisdictional surface waters are anticipated. In accordance with provisions of section 404 of the Clean Water Act (33 U.S.C. 1344), a permit will be required from the USACE for the discharge of dredged or fill material into "Waters of the United States."

A Section 404 Nationwide Permit 23 CFR 330.5(a) (23) is likely to be applicable for all impacts to Waters of the United States from the proposed project. This permit authorizes activities undertaken, assisted, authorized, regulated, funded or financed in whole, or part, by another Federal agency or department where that agency or department has determined that pursuant to the council on environmental quality regulation for implementing the procedural provisions of the National Environmental Policy Act;

(1) that the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and;

(2) that the office of the Chief of Engineers has been furnished notice of the agency' or department's application for the categorical exclusion and concurs with that determination.

A 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.

4.1.4 Mitigation

The USCE has adopted, through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological and physical integrity of Waters of the U.S., specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

4.1.4.1 Avoidance

Avoidance examines all appropriate and practicable possibilities of averting impacts to Waters of the U.S. According to a 1990 Memorandum of Agreement between the Environmental Protection Agency (EPA) and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes. Wetland impacts can be avoided by confining construction activities within the boundaries of the existing road shoulder (maintained/ disturbed community).

4.1.4.2 Minimization

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to Waters of the U.S. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the proposed project footprint through the reduction of median widths, ROW widths, fill slopes, and/or road shoulder widths. Other practical minimization mechanisms include: strict enforcement of sedimentation control BMP's for the protection of surface waters during the entire life of the project, reduction of clearing and grubbing activity, reduction/elimination of direct discharge into streams, reduction of runoff velocity, re-establishment of vegetation on exposed areas, judicious pesticide and herbicide usage, minimization of "in-stream" activity, and litter/debris control.

4.1.4.3 Compensatory Mitigation

Compensatory mitigation is not normally considered until anticipated impacts to Waters of the U.S. have been avoided and minimized to the maximum extend possible. It is recognized that "no net loss of wetlands" functions and values may not be achieved in every permit action. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, creation, and enhancement of Waters of the U.S. Such actions should be undertaken in areas adjacent to or contiguous to the discharge site.

Projects authorized under Nationwide Permits that result in the fill or alteration of:

- More than 0.1 acre (0.04 ha) may require compensatory mitigation,
- At least 1.0 acre (0.40 ha) of wetlands will require compensatory mitigation, and/or
- At least 150 linear feet (45.7 meters) of streams will require compensatory mitigation.

The impacts from this project do not meet the minimum mitigation threshold. **Therefore, no mitigation requirement is anticipated**. However, final permit/mitigation decisions rest with the USACE.

4.2 Rare and Protected Species

Some populations of fauna and flora have been in, or are in, the process of decline due to either natural forces or their inability to coexist with human activities. Federal law (under the provisions of the Endangered Species Act of 1973, as amended) requires that any action, likely to adversely affect a species classified as federally protected, be subject to review by the USFWS. Other species may receive additional protection under separate state laws.

4.2.1 Federally-Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Sections 7 and 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003, the FWS lists the following federally-protected species for Durham County (Table 2). A brief description of each species' characteristics and habitat follows.

Table 2. Federally-Protected Species for Sampson County

Scientific Name	Common Name	Status	Biological Conclusion
Alligator mississippiensis	American alligator	Threatened (S/A)	N/A
Picoides borealis	Red cockaded woodpecker	Endangered	No Effect
Lindera melissifolia	Pondberry	Endangered	No Effect

[1] Threatened species are species that are likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

[2] Endangered is defined as a species that is threatened with extinction throughout all or a significant portion of its range.

Name: American alligator *(Alligator mississippiensis)*
Family: Alligatoridae
Federal Status: Threatened Due to Similarity of Appearance
Date Listed: June 4, 1987

Characteristics:
The alligator is a large aquatic reptile, measuring 1.8-5.8 meters in length, with a broadly rounded snout, heavy body, laterally compressed tail, and a dark gray or blackish color. Young are black with conspicuous yellow crossbands; the banding may occasionally persist on adults, although very faintly. Unlike the American crocodile, the fourth tooth on the lower jaw of the alligator fits in a notch in the upper jaw and is not exposed when the jaws are closed.

The alligator can be found on the east coast of the United States from Tyrrell County, North Carolina to Corpus Christi, Texas, and north in the Mississippi River drainage basin to Arkansas and southeastern Oklahoma. Home ranges may vary considerably, with 3,162 acres for males and 21 acres for females being average. Individuals can travel great distances, both overland and in the water, but males tend to travel more than females.

The alligator is found rivers, streams, canals, lakes, swamps, bayous, and coastal marshes. Adult animals are highly tolerant of salt water, but the young are apparently more sensitive, with salinities greater than 5 parts per thousand considered harmful. The diet consists of anything of suitable size, including mammals, reptiles, amphibians, birds, fish, and crustaceans.

Nesting takes place in late spring and early summer, with the female building a mound of grass and other vegetation that may be two feet high and six feet across. The nest is usually constructed near the water, in a shaded location. The clutch of 30-60 (average 35) eggs is laid in a cavity near the top of the mound, and is incubated by the heat from the decaying vegetation. The female usually remains near the nest until the eggs hatch. Hatching takes place in about nine weeks, at which time the young begin calling to alert the female to excavate the nest.

No survey or biological conclusion is required for this species.

Name: Red-cockaded woodpecker (*Picoides borealis)*
Family: Picidae
Status: Endangered
Date Listed: 10/13/70

The red-cockaded woodpecker (RCW) once occurred from New Jersey to southern Florida and west to eastern Texas. It occurred inland in Kentucky, Tennessee, Arkansas, Oklahoma, and Missouri. The RCW is now found only in coastal states of its historic range and inland in southeastern Oklahoma and southern Arkansas. In North Carolina moderate populations occur in the sandhills and southern coastal plain. The few

populations found in the piedmont and northern coastal plain are believed to be relics of former populations.

The adult red-cockaded woodpecker (RCW) has a plumage that is entirely black and white except for small red streaks on the sides of the nape in the male. The back of the RCW is black and white with horizontal stripes. The breast and underside of this woodpecker are white with streaked flanks. The RCW has a large white cheek patch surrounded by the black cap, nape, and throat.

The RCW uses open old growth stands of southern pines, particularly longleaf pine (*Pinus palustris*), for foraging and nesting habitat. A forested stand must contain at least 50% pine, lack a thick understory, and be contiguous with other stands to be appropriate habitat for the RCW. These birds nest exclusively in trees that are $\geq$60 years old and are contiguous with pine stands at least 30 years of age. The foraging range of the RCW is up to 200 hectares (500 acres). This acreage must be contiguous with suitable nesting sites.

These woodpeckers nest exclusively in living pine trees and usually in trees that are infected with the fungus that causes red-heart disease. Cavities are located in colonies from 3.6-30.3 m (12-100 ft) above the ground and average 9.1-15.7 m (30-50 ft) high. They can be identified by a large incrustation of running sap that surrounds the tree. The large incrustation of sap is believed to be used as a defense by the RCW against possible predators. A clan of woodpeckers usually consists of one breeding pair and the offspring from previous years. The RCW lays its eggs in April, May, and June and hatch 38 days later. Clutch size ranges in number from 3-5 eggs. All members of the clan share in raising the young. Red-cockaded woodpeckers feed mainly on insects but may feed on seasonal wild fruits.

Biological Conclusion: **No Effect**
Potential habitat was found within the project corridor. There were several loblolly pine trees found in the Mesic Pine Flatwoods Forest that were approximately 60 feet tall and 12-14 inch dbh. Current project plans call for replacing this bridge in place, therefore none of the pine trees are expected to be removed. However, if project plans change and the removal of any large pine trees will occur, then this biological conclusion will need to be confirmed. There was no evidence of current or previous nesting on any of the pine trees. Additionally, the understory in this community was much thicker then preferred by the RCW. The NC Natural Heritage Program Database was checked and no occurrences of the RCW were observed within one mile of the project area.

Name: Pondberry (*Lindera melissifolia*)
Family: Laurel (Lauraceae)
Federal Status: Endangered
Date Listed: July 31, 1986
Best Search Time: February-September

Characteristics:
Pondberry is a deciduous shrub growing to approximately 2 meters tall, and spreading by means of stolons. The leaves are thin, drooping, prominantly veined and pubescent beneath, ovate to elliptical, and have rounded bases. Leaves emit a sassafras-like odor when crushed. This species is dioecious (male and female flowers are on separate plants), and the flowers of both sexes are pale yellow, small, and appear before the leaves emerge in the spring. The fruit is a bright red drupe containing one seed, which forms in the late summer or fall and is supported on a stout pedicel that remains on the branch after the fruit falls. Vegetative reproduction (stolons) seems to be more common than sexual reproduction (seeds).

Pondberry is known from several widely scattered locations across the Southeast, in Arkansas, Georgia, Mississippi, Missouri, North Carolina, and South Carolina. In interior areas, habitat for pondberry consists of seasonally flooded wetlands, sandy sinks, pond margins, and swampy depressions (Steyermark 1949). In the coastal plain of the Carolinas, pondberry is found along the margins of sinks, ponds, and pineland depressions. Soils in these areas are sandy with a high peat content, and have a high water table. Fire may have been an important factor in maintaining suitable habitat in the past. This species is most often found in shade, but may be seen full sun in areas where competition is not as intense.

Pondberry can be distinguished from southern spicebush (*Lindera benzoin*) by having drooping foliage, rounded leaf bases rather than tapered, sassafras-like odor of the crushed leaves rather than spicy, and fruit pedicels that persist throughout the winter. Pondberry can be distinguished from bog spicebush (*Lindera subcoriacea*) because the latter's leaves have little or no fragrance when crushed.

Biological Conclusion: **No Effect**
There was no habitat found within the project study area for the pondberry. There are no seasonally flooded wetlands, sandy sinks, pond margins, swampy depressions sinks, or pineland depressions. Additionally the NC Natural Heritage Program Database was checked and no occurrences of pondberry were reported within one mile of the project area.

4.2.2 Federal Species of Concern and State Listed Species

There are fourteen Federal Species of Concern (FSC) listed by the USFWS for Sampson County. Federal species of concern are not afforded federal protection under the Endangered Species Act of 1973, as amended, and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. However, the status of these species is subject to change, and so should be included for consideration. An FSC is defined as a species that is under consideration for listing for which there is insufficient information to support listing. In addition, organisms which are listed as Endangered (E), Threatened (T), or Special Concern (SC) by the NCNHP list of Rare Plant and Animal Species are afforded state protection under

the NC State Endangered Species Act and the NC Plant Protection and Conservation Act of 1979, as amended.

Table 3 lists Federal Candidate and State listed species, the species state status (if afforded state protection) and the existence of suitable habitat for each species in the study area. This species list is provided for information purposes as the status of these species may be upgraded in the future.

Table 3. Federal Species of Concern for Sampson County.

Scientific Name	Common Name	NC Status
Aimophila aestivalis	Bachman's sparrow	SC
Corynorhinus rrafinesquii	Rafinesque's big-eared bat	SC/PT **
Heterodon simus	Southern hognose snake	SC
Noturus sp.	"Broadtail" madtom	SC
Ophisaurus mimicus	Mimic glass lizard	SC
Rana capito capito	Carolina gopher frog	T
Dolania americana	American sand burrowing mayfly	SR
Dionaea muscipula	Venus flytrap	SR-L, SC
Juglans cinerea	Butternut	W5
Ludwigia brevipes	Long beach seedbox	FSC
Litsea aestivalis	Pondspice	SR-T
Macbridea caroliniana	Carolina bogmint	2
Solidago verna	Spring-flowering goldenrod	SR-L
Cylindrocolea andersonii	A liverwort	SR-P

"T"--A Threatened species is one which is likely to become endangered species within the foreseeable future throughout all or a significant portion of its range.
"SC"--A Special Concern species is one which requires monitoring but may be taken or collected and sold under regulations adopted under the provisions of Article 25 of Chapter 113 of the General Statutes (animals) and the Plant Protection and Conservation Act (plants). Only propagated material may be sold of Special Concern plants that are also listed as Threatened or Endangered.
"C"--A Candidate species is one which is very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction, direct exploitation or disease. The species is also either rare throughout its range or disjunct in North Carolina from a main range in a different part of the country or the world.
"SR"--A Significantly Rare species is one which is very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction, direct exploitation or disease. The species is generally more common elsewhere in its range, occurring peripherally in North Carolina.
"W2"--A Watch Category 2 species is a rare to uncommon species in North Carolina, but is not necessarily declining or in trouble.
"W5"--A Watch Category 5 species is a species with increasing amounts of threats to its habitat; populations may or may not be known to be declining.
"/P_"--denotes a species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the listing process.
* -- Historic record - the species was last observed in the county more than 50 years ago.
** -- Obscure record - the date and/or location of observation is uncertain.

Surveys for these species were not conducted during the site visit, nor were any of these species observed. A review of the N.C. Natural Heritage Program data base of rare species and unique habitats revealed no records of North Carolina rare and/or protected species in or near the project study area.

5.0 CONCLUSIONS

Within the study area for this project, there are no wetlands and one jurisdictional stream, the Black River. Impacts to the Black River are approximately 60 feet. Estimated impacts are derived using the width of the bridge and approximate length of the river at the

location of the bridge. The Black River is not listed as a 303(d) stream. A Biological Conclusion of "No Effect" has been issued for the two species listed as federally protected in Sampson County.

6.0 REFERENCES

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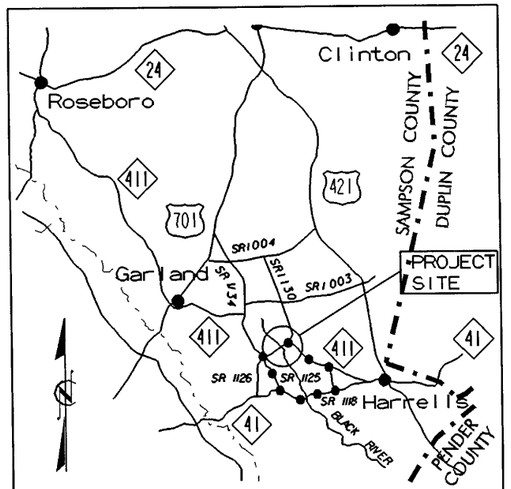
09/09/99

TIP PROJECT: B-1381

CONTRACT: C200855

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

OFF SITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SAMPSON COUNTY

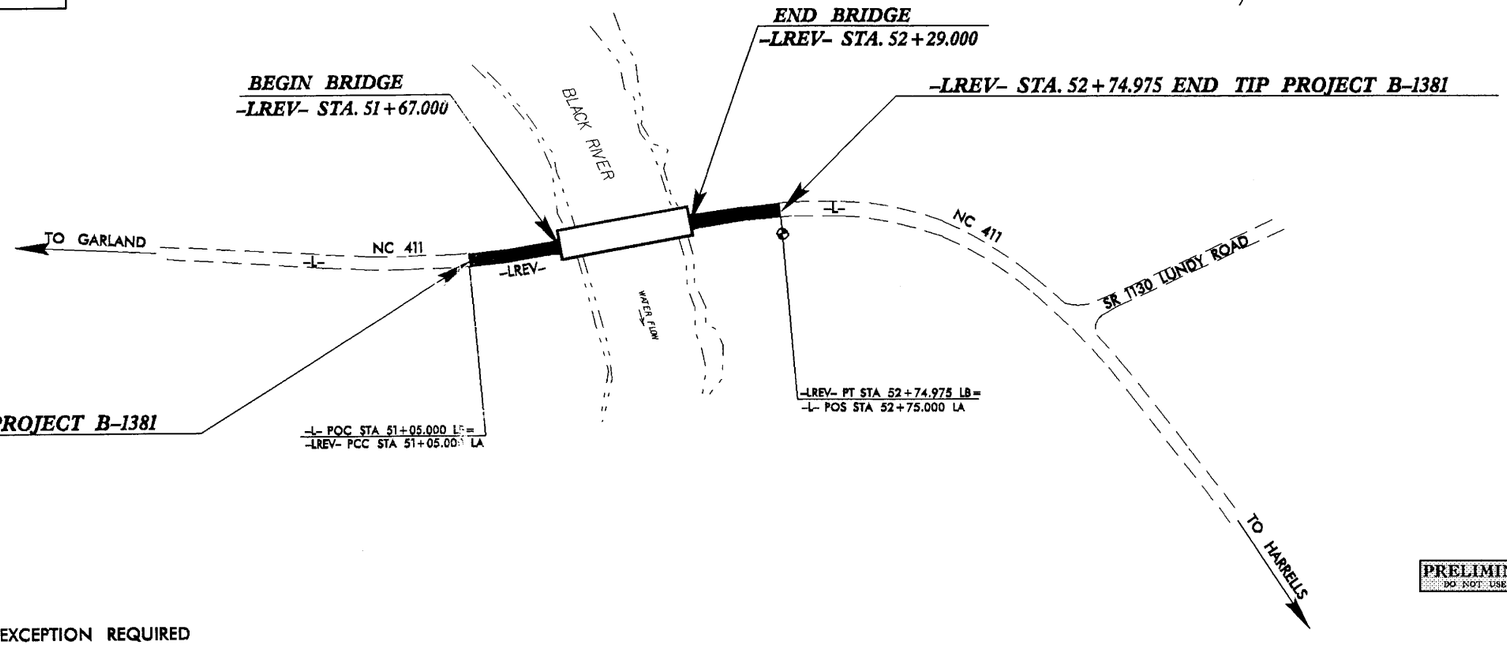
LOCATION: *BRIDGE 14 OVER BLACK RIVER AND APPROACHES ON NC 411 (AT CLEAR RUN) WEST OF HARRELLS*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE, AND STRUCTURE*

ALL DIMENSIONS IN THESE PLANS ARE IN METERS AND/OR MILLIMETERS UNLESS OTHERWISE SHOWN

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-1381	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
32594.1.1	BRSTP-411(1)	P.E.
32594.2.1	BRSTP-411(1)	R/W & UTIL



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

**DESIGN SPEED DESIGN EXCEPTION REQUIRED

GRAPHIC SCALES

PLANS 5m 0 10m

PROFILE (HORIZONTAL) 5m 0 10m

PROFILE (VERTICAL) 0.5m 0 1m

DESIGN DATA

ADT 2006 = 1475
ADT 2025 = 2800
DHV = 10%
D = 60%
*T = 5 %
**V = 65 km/h
*TTST 2% & DUAL 3%
FUNCT. CLASS. = RURAL MAJOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-1381 = 0.108 km

LENGTH STRUCTURE TIP PROJECT B-1381 = 0.062 km

TOTAL LENGTH TIP PROJECT B-1381 = 0.170 km

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 9, 1995
JUNE 30, 2005
LETTING DATE: MARCH 20, 2007

GLENN W. MUMFORD, PE
PROJECT ENGINEER

SUSAN C. LANCASTER, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

12-SEP-2006 17:01
F:\roadway\pro\b1381.tsh
$$$$USERNAME$$$$

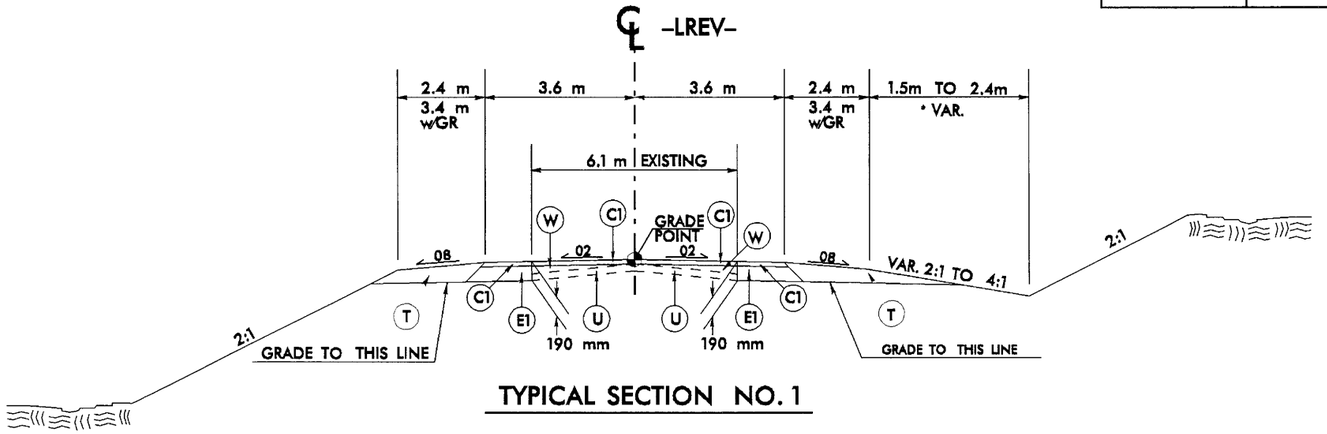
PROJECT REFERENCE NO.	SHEET NO.
B-1381	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE

C1	PROP. APPROX. 60 mm ASPHALT CONC. SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 72 kg PER SQUARE METER IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 2.40 kg PER SQUARE METER PER 1 mm DEPTH,TO BE PLACED IN LAYERS NOT TO EXCEED 40 mm IN DEPTH.
E1	PROP. APPROX. 130 mm ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 318.5 kg PER SQUARE METER.
E2	PROP. VAR. DEPTH ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 2.45 kg PER SQUARE METER PER 1 mm DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 75 mm IN DEPTH OR GREATER THAN 140 mm IN DEPTH.
U	EXISTING PAVEMENT.
T	EARTH MATERIAL.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

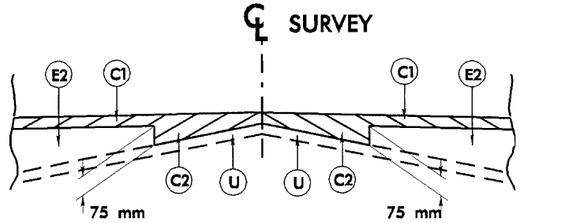


TYPICAL SECTION NO. 1

*NOTE: USE 1.5m FROM 52+50 TO 52+74.975 LT.

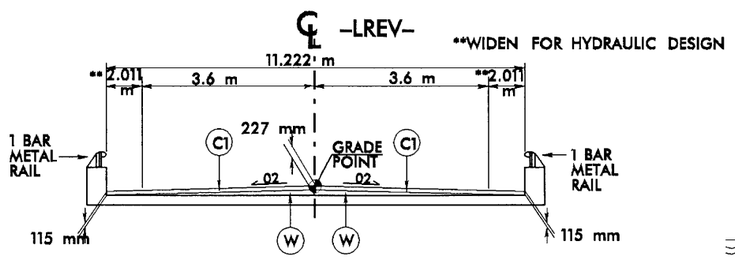
USE TYPICAL SECTION NO. 1 AS FOLLOWS:

–LREV– STA. 51+05.000 TO STA. 51+40.000 (TRANSITION FROM EXISTING TO T.S NO. 1)
–LREV– STA. 51+40.000 TO STA. 51+55.000
–LREV– STA. 52+39.975 TO STA. 52+74.975 (TRANSITION FROM T.S. NO. 1 TO EXISTING)



DETAIL SHOWING METHOD OF WEDGING

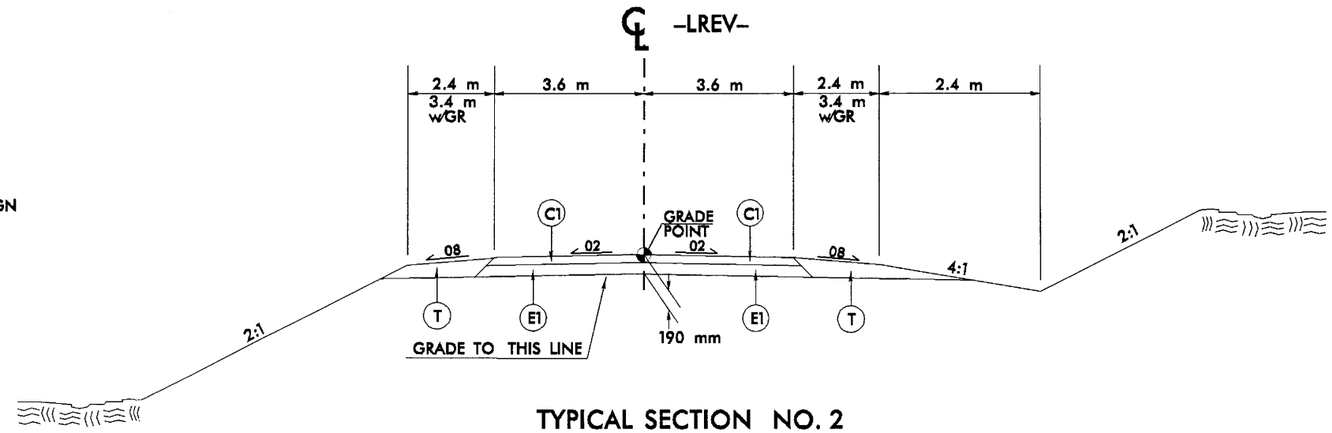
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 AS FOLLOWS:

–LREV– STA. 51+67.000 (BEGIN BRIDGE) TO STA. 52+29.000 (END BRIDGE)



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AS FOLLOWS:

–LREV– STA. 51+55.000 TO STA. 51+67.000 (BEGIN BRIDGE)
–LREV– STA. 52+29.000 (END BRIDGE) TO STA. 52+39.975

12-SEP-2006 17:0

PROJECT REFERENCE NO.	SHEET NO.
B-1381	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

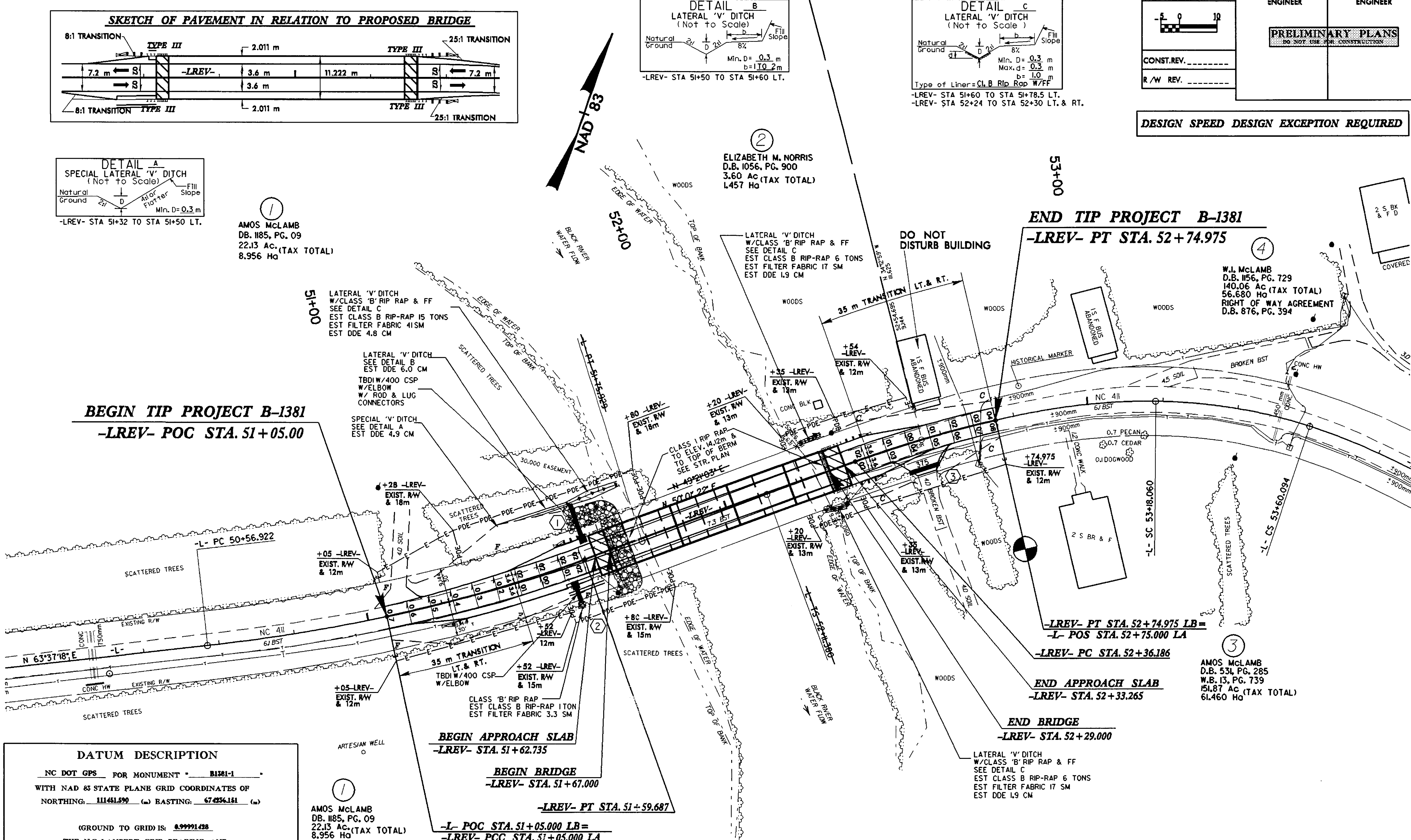
METRIC

CONST.REV. ________

R/W REV. ________

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DESIGN SPEED DESIGN EXCEPTION REQUIRED



SKETCH OF PAVEMENT IN RELATION TO PROPOSED BRIDGE
8:1 TRANSITION
TYPE III
2.011 m
25:1 TRANSITION
7.2 m
-LREV-
3.6 m
11.222 m
DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D= 0.3 m
-LREV- STA 51+32 TO STA 51+50 LT.
DETAIL B
LATERAL 'V' DITCH
(Not to Scale)
Min. D= 0.3 m
b=1 TO 2m
-LREV- STA 51+50 TO STA 51+60 LT.
DETAIL C
LATERAL 'V' DITCH
(Not to Scale)
Min. D= 0.3 m
Max. d= 0.3 m
b= 1.0 m
Type of Liner= CL B Rip Rap W/FF
-LREV- STA 51+60 TO STA 51+78.5 LT.
-LREV- STA 52+24 TO STA 52+30 LT. & RT.
NAD 83
AMOS McLAMB
DB. 1185, PG. 09
22.13 Ac. (TAX TOTAL)
8.956 Ha
ELIZABETH M. NORRIS
D.B. 1056, PG. 900
3.60 Ac (TAX TOTAL)
1.457 Ha
W.I. McLAMB
D.B. 1156, PG. 729
140.06 Ac (TAX TOTAL)
56.680 Ha
RIGHT OF WAY AGREEMENT
D.B. 876, PG. 394
AMOS McLAMB
D.B. 531, PG. 285
W.B. 13, PG. 739
151.87 AC (TAX TOTAL)
61.460 Ha
END TIP PROJECT B-1381
-LREV- PT STA. 52+74.975
BEGIN TIP PROJECT B-1381
-LREV- POC STA. 51+05.00
DO NOT DISTURB BUILDING
BLACK RIVER WATER FLOW
EDGE OF WATER
TOP OF BANK
WOODS
SCATTERED TREES
HISTORICAL MARKER
BROKEN BST
NC 411
6.1 BST
-L- PC 50+56.922
N 63°37'18" E
ARTESIAN WELL
35 m TRANSITION LT.& RT.
LATERAL 'V' DITCH
W/CLASS 'B' RIP RAP & FF
SEE DETAIL C
EST CLASS B RIP-RAP 15 TONS
EST FILTER FABRIC 41 SM
EST DDE 4.8 CM
LATERAL 'V' DITCH
SEE DETAIL B
EST DDE 6.0 CM
TBDI W/400 CSP
W/ELBOW
W/ ROD & LUG CONNECTORS
SPECIAL 'V' DITCH
SEE DETAIL A
EST DDE 4.9 CM
CLASS I RIP RAP TO ELEV. 14.12m & TO TOP OF BERM SEE STR. PLAN
CLASS 'B' RIP RAP
EST CLASS B RIP-RAP 1 TON
EST FILTER FABRIC 3.3 SM
LATERAL 'V' DITCH
W/CLASS 'B' RIP RAP & FF
SEE DETAIL C
EST CLASS B RIP-RAP 6 TONS
EST FILTER FABRIC 17 SM
EST DDE 1.9 CM
BEGIN APPROACH SLAB
-LREV- STA. 51+62.735
BEGIN BRIDGE
-LREV- STA. 51+67.000
-LREV- PT STA. 51+59.687
-L- POC STA. 51+05.000 LB=
-LREV- PCC STA. 51+05.000 LA
-LREV- PT STA. 52+74.975 LB=
-L- POS STA. 52+75.000 LA
-LREV- PC STA. 52+36.186
END APPROACH SLAB
-LREV- STA. 52+33.265
END BRIDGE
-LREV- STA. 52+29.000
-L- SC 53+18.060
-L- CS 53+60.094

DATUM DESCRIPTION

NC DOT GPS FOR MONUMENT "B1381-1"
WITH NAD 83 STATE PLANE GRID COORDINATES OF
NORTHING: 111451.590 (m) EASTING: 674236.151 (m)

(GROUND TO GRID) IS: 0.99991428
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"B1381-1" TO -LREV- STATION 51+06.000 IS
N 64 12' 11.8" E 437.9034m

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

-LREV-

PI Sta 51+32.386	PI Sta 52+55.604
Δ = 7° 50' 00" (LT)	Δ = 6° 57' 20" (RT)
L = 54.687	L = 38.788
T = 27.386	T = 19.418
R = 400.000	R = 319.520
S.E. = SEE PLANS	S.E. = SEE PLANS
INC. = 6m	INC. = 6m

-L-

PI Sta 51+16.735	~~PIs Sta 52+83.029~~	PI Sta 53+39.230	PIs Sta 54+01.455
Δ = 14° 16' 15.0" (LT)	~~Θs = 21° 26' 48.4"~~	Δ = 16° 54' 01.9" (RT)	Θs = 24° 30' 38.0"
L = 119.007	~~Ls = 106.680~~	L = 42.033	Ls = 121.920
T = 59.813	~~LT = 71.649~~	T = 21.170	LT = 82.073
R = 477.800	~~ST = 36.042~~	R = 142.500	ST = 41.362

FOR -L- PROFILE SEE SHEET 5

FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-

REVISIONS

12-SEP-2006 17:01

PROJECT REFERENCE NO.	SHEET NO.
B-1381	5

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. ________

R /W REV. ________

-LREV-

DESIGN SPEED DESIGN EXCEPTION REQUIRED

STRUCTURE HYDRAULIC DATA

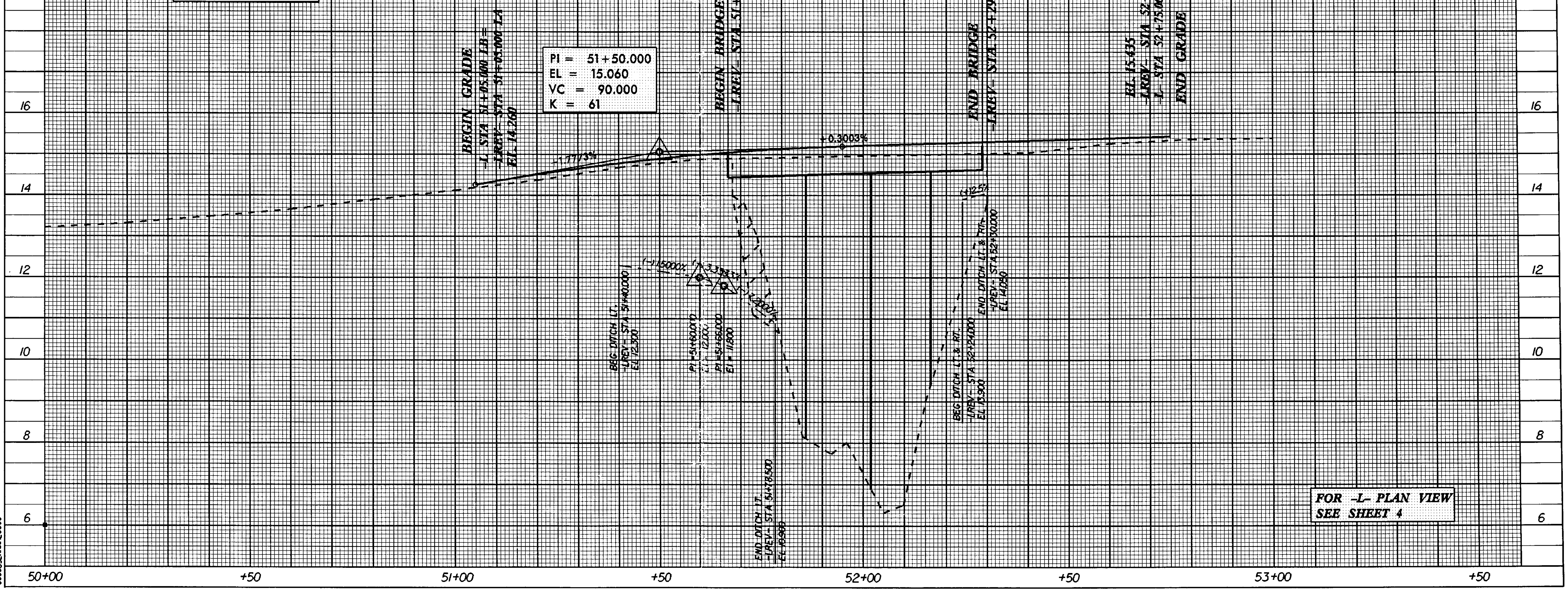
DESIGN DISCHARGE	= 355 CMS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 13.82 M
BASE DISCHARGE	= 432 CMS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 14.24 M
OVERTOPPING DISCHARGE	= 211 CMS
OVERTOPPING FREQUENCY	= 10 YRS
OVERTOPPING ELEVATION	= 12.54 M

PROPOSED CORED SLAB BRIDGE
1 @ 19 m, 2 @16 m, & 1 @11 m
SKEW = 90°
℄ -LREV- STA 51+98.000

BM#2
USGS MON. 15.168 LT.
-LREV- STA. 52+32.589
EL 15.106

BM #1
REBAR 4.507 RT.
-L- STA. 50+30.215
EL 12.973

PI = 51+50.000
EL = 15.060
VC = 90.000
K = 61

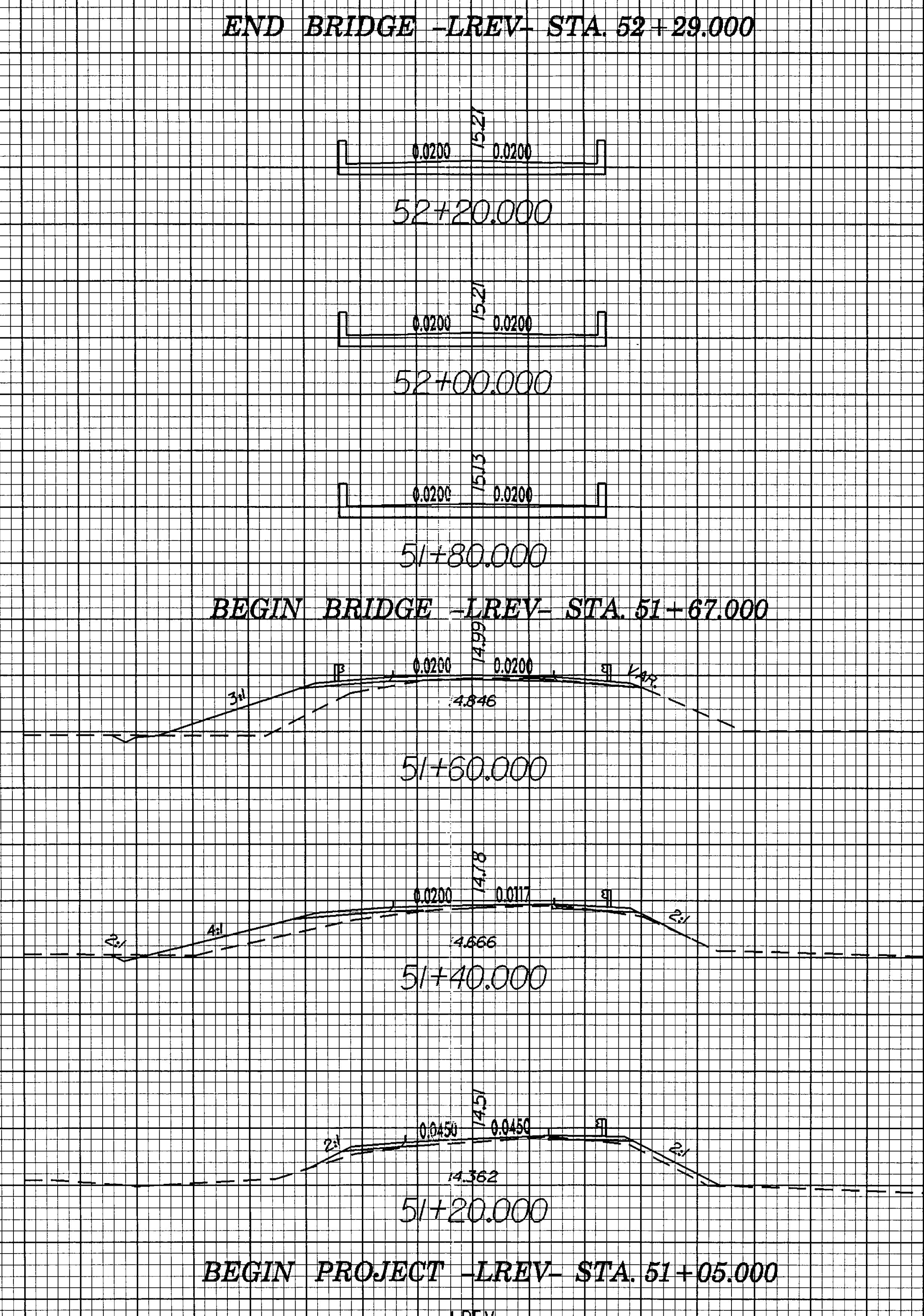


FOR -L- PLAN VIEW SEE SHEET 4

PROJECT REFERENCE NO.	SHEET NO.
B-1381	X-1

METRIC

Scale: 2.5 0 2.5 5



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

10/26/23

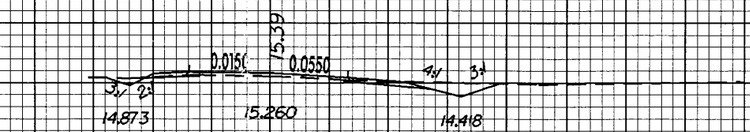
2.5 0 2.5 5

METRIC

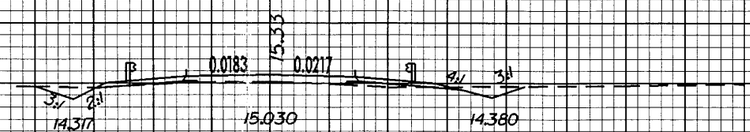
PROJECT REFERENCE NO.	SHEET NO.
B-1381	X-2

50 40 30 20 10 0 10 20 30 40 50

END PROJECT -LREV- STA. 52+74.975



52+60.000



52+40.000

-LREV-

15 15

50 40 30 20 10 0 10 20 30 40 50

12-SEP-2006 17:01

51+80 52+00 52+20

GRADE DATA

+1.7773% +0.3003%

PI = 51+50.000 -L-
ELEV. 15.060
VC = 90.000m

FILL FACE @ END BENT 1
STA. 51+67.000 -LREV-
EL. 15.047

BEGIN FRONT SLOPE
STA. 51+65.645 -LREV-
EL. 15.036

FIX

SPAN A SPAN B SPAN C SPAN D

EL. 14.4 ±

EL. 12.7 ±

2:1 SLOPE NORMAL TO CAP

EXP. EXP. FIX EXP. FIX EXP. FIX

HIGH WATER SURFACE EL. 14.300 1928

FILL FACE @ END BENT 2
STA. 52+29.000 -LREV-
EL. 15.297

BEGIN FRONT SLOPE
STA. 52+30.378 -LREV-
EL. 15.301

EL. 14.5 ±

SEE "DETAIL A"

450 (TYP.)

STEEL PILES

STEEL PIPE PILE (TYP.)

SEE "DETAIL B"

EXISTING GROUND LINE

STEEL PILES

NORMAL WATER SURFACE EL. 7.860 5-25-95

EL. 9.0 ±

EL. 8.3 ±

EL. 8.0 ±

EL. 7.7 ±

EL. 8.1 ±

EL. 7.5 ±

EL. 6.4 ±

EL. 6.5 ±

END BENT 1 BENT 1 BENT 2 BENT 3 END BENT 2

SECTION ALONG -LREV-

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

N

W.P. #1
STA. 51+67.000 -LREV-
FILL FACE @ END BENT 1

W.P. #2
STA. 51+86.000 -LREV-
BENT 1 CONTROL LINE

BLACK RIVER

W.P. #3
STA. 52+02.000 -LREV-
BENT 2 CONTROL LINE

W.P. #4
STA. 52+18.000 -LREV-
BENT 3 CONTROL LINE

W.P. #5
STA. 52+29.000 -LREV-
FILL FACE @ END BENT 2

BEGIN FRONT SLOPE
STA. 51+65.645 -LREV-

BRIDGE IDENT.
STA. 51+98.000 -LREV-

BEGIN FRONT SLOPE
STA. 52+30.378 -LREV-

TO SR 1130

-LREV-

-90°-00'-00" (TYP.)

EXISTING SUBSTRUCTURE (TO BE REMOVED, TYP.)

BEGIN APPROACH SLAB
STA. 51+62.735 -LREV-

END APPROACH SLAB
STA. 52+33.265 -LREV-

CLASS I RIP RAP

CLASS I RIP RAP

12.000m 4.000m

19.000m 16.000m 16.000m 11.000m

TOTAL LENGTH OF BRIDGE = 62.000m (FILL FACE TO FILL FACE)

PLAN

PILES NOT SHOWN FOR CLARITY

PROJECT NO. B-1381

SAMPSON COUNTY

STATION: 51+98.000-LREV-

SHEET 1 OF 2 REPLACES BRIDGE No. 14

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRELIMINARY

GENERAL DRAWING

BRIDGE ON NC 411 OVER
BLACK RIVER BETWEEN
SR 1126 AND SR 1130

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

DRAWN BY : J.P. ADAMS DATE : 5/10/05
CHECKED BY : S.H. SOCKWELL DATE : 5/11/05

14-AUG-2006 11:47
$$$$$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$