STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

March 1, 2005

N. C. Dept. of Environment and Natural Resources
Division of Coastal Management
1367 U. S. Highway 17
Elizabeth City, NC 27909

ATTENTION: Ms. Lynn Mathis
NCDOT Coordinator

Dear Madam:

Subject: **CAMA Major Development Permit Application** for the Replacement of Bridge No. 24 over Halls Creek on SR 1140, Pasquotank County, Federal Aid Project No. BRZ-1140(2); State Project No. 8.2110401; TIP No. B-4222.

The project involves the removal and replacement of Bridge Number 24 carrying SR 1140 over Halls Creek in Pasquotank County. A new bridge approximately 104 feet long and clear width of 30 feet will be constructed to carry SR 1140 over the creek. SR 1140 will be detoured using SR 1141, SR 1144, SR 1139 and SR 1136 for a total detour length of 8.7 miles. The project is shown in the approved Categorical Exclusion and permit drawings.

Water Resources

The project is located within the 03010205 hydrologic unit of the Pasquotank River Basin. Halls Creek originates north of SR 1144 in Pasquotank County and flows south to its confluence with Little River southeast of the project area and has a best usage classification of C Sw.

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

Impacts to Waters of the United States

The majority of the area surrounding the current SR 1140 and bridge No. 24 is comprised of a residential community with wetlands adjacent to the project.
Outlined below are the proposed land and water disturbing activities:

There will be 0.01 acres of fill in wetlands due to the proposed activity. This fill is a result of widening the approach shoulders to lead up to a wider bridge.

There will be 0.006 acres of wetland excavation necessary to create the new roadside ditches that are being pushed outward as a result of the wider approach shoulders.

There will be 0.02 acres of mechanized clearing in wetlands to accommodate for construction activities, providing the unobstructed movement of heavy equipment.

There is also 0.01 acres of temporary dewatering of Hall's Creek due to the need for a temporary cofferdam to construct the bent supporting the new structure.

Land Disturbing Activities

Bridge No. 24, an 8 span structure, will be replaced with a bridge that only has two spans. In order to accommodate for the larger spans, a larger (taller) girder must be used, thus raising the grade of the bridge. There will be approximately 448 cubic yards of fill placed on high ground to raise the grade approaching the new structure.

Also, 51.9 cubic yards of high ground excavation is necessary to create the new roadside ditches that are being pushed outward as a result of the wider approach shoulders.

A timber bulkhead is located in the southwestern portion of the project area. If this bulkhead is in conflict with construction activities, it will be removed and then replaced once the project is complete. Only the portion of the bulkhead that is within the right of way and in conflict with construction activities will be removed, resulting in a maximum removal/ replacement of 25'. It will be replaced at the existing location, parallel to Hall's Creek.

As the northwestern bank of Hall's Creek in close proximity to a building, 6 square yards of class 1 stone will be used to ensure proper stabilization.

No stabilization is necessary under the bridge, as the increased length of the bridge will allow for a lower gradient leading to the abutment of the bridge.

Utility Relocation Impacts

Three utilities exist within the project area. On the north, aerial power spans Hall's Creek and a water line is buried through Hall's Creek. On the south side of the project, Sprint telephone lines run underground until reaching Hall's Creek where they span aerially.

All of the utilities mentioned above will be directionally bored under Hall's Creek.

Bridge Demolition

Bridge Number 26 is composed of a reinforced concrete deck and railings on timber joists. The bridge has 8 spans and totals 68 feet in length. The original end and interior bents of the substructure were constructed of timber piles and caps and have been replaced with steel H-piles and steel caps. The original timber piles are still in place.

As stated in "NCDOT Best Management Practices for Construction and Maintenance Activities," because a CAMA permit is required, dropping of any component of a bridge into the water will not be permitted. All components from previous bridges must be removed.

The North Carolina Wildlife Resources Commission (NCWRC) requests a moratorium on in-water work between February 15 and June 15. Because a moratorium applies, this project falls under Case 2 (allowing no in-water work during moratorium periods) of the Best Management Practices for Bridge Demolition and Removal.

Avoidance and Minimization

The construction of this project has minimized the extent of the built-upon area by using the existing alignment for the widening. Traffic will be maintained using an off site detour. Best management practices (BMP's) will be utilized to minimize water quality impacts. No portion of the project is located in the critical area of the watershed. In compliance with 15A NCAC 02B.0104(m) we have incorporated the use of BMP's in the design of the project.

Mitigation

Based upon the agreements stipulated in the "Memorandum of Agreement Among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District" (MOA), it is understood that the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP), will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for NCDOT projects that are listed in Exhibit 1 of the subject MOA during the EEP transition period ending on June 30, 2005.

Since the subject project is listed in Exhibit 1, the necessary compensatory mitigation to offset unavoidable impacts to jurisdictional waters under the federal Clean Water Act will be provided by the EEP. The offsetting mitigation will derive from an inventory of assets already in existence within the same 8-digit cataloguing unit. The Department has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable impacts to 0.036 acre of jurisdictional will be offset by compensatory mitigation provided by the EEP program.

A letter dated October 26, 2004 from the EEP accepting this mitigation is attached to this application.

Federally Protected Species

Some populations of fauna and flora have been in, or are in, the process of decline either due to natural forces or their inability to co-exist with human activities. Federal law (under the provisions of the Endangered Species Act (ESA) of 1973, as amended) requires that any action likely to adversely affect a species classified as federally protected be subject to review by the United States Fish and Wildlife Service (USFWS). Other species may receive additional protection under separate state laws. Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE) and Proposed Threatened (PT) are protected under provisions of ESA §§7 and 9, as amended.

As of January 29, 2003, the USFWS lists one federally protected species, the bald eagle (*Haliaeetus leucocephalus*) for Pasquotank County.

Surveys were conducted by NCDOT biologists in May of 2001 and February of 2004. No populations were identified. However, as habitat exists in the project area, the biological conclusion is May Affect, Not Likely to Adversely Affect.

The US Fish and Wildlife service concurred with this biological conclusion in the attached letter dated March 11, 2004.

Regulatory Approvals

The department has obtained a state stormwater management permit (Permit No. SW7040406) for this project. A copy of this permit is included with this application.

The department is also in receipt of an exemption of a United States Coast Guard permit, also included with this application.

The NCDOT hereby requests that this project be authorized by the issuance of a Coastal Area Management Act Major Development Permit. Please debit the appropriate CAMA Major Development Permit Fee to work order number 33174.1.1. Attached to this cover letter are the completed MP forms along with the appropriate permit drawings, and certified mail "green cards" from the adjacent riparian landowner notifications. The NCDOT has also requested authorization from the North Carolina Division of Water Quality and the U. S. Army Corps of Engineers under separate cover. If you have any questions, please contact Mr. Michael Turchy of my staff at maturchy@dot.state.nc.us or (919) 715-1468.

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

Sincerely,

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

Cc:

W/attachment

Ms. Cathy Brittingham, NCDCM
Mr. Bill Biddlecome, USACE, Washington
Mr. John Hennessy, DWQ, Raleigh
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Mike Street, NCDMF
Mr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. D. R. Conner, P.E., Division 1 Engineer
Mr. Clay Willis, Division 1 Environmental Officer
Ms. Beth Harmon, EEP

W/o attachment

Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Mark Staley, Roadside Environmental
Ms. Theresa Ellerby, PDEA Project Planning Engineer

Form DCM-MP-1

APPLICATION

(To be completed by all applicants)

1. APPLICANT

a. Landowner:

Name N. C. Department of Transportation

Address 1548 Mail Service Center

City Raleigh State NC

Zip 27699-1548 Day Phone 919-733-3141

Fax 919-733-9794

b. Authorized Agent:

Name Phil Harris, PE

Address Same as above

City _____ State _____

Zip _____ Day Phone _____

Fax _____

c. Project name (if any) **B-4222 replacement of Bridge No.24 over Hall's Creek on SR 1140**

NOTE: Permit will be issued in name of landowner(s), and/or project name.

2. LOCATION OF PROPOSED PROJECT

a. County: Pasquotank

b. City, town, community or landmark Nixonton

c. Street address or secondary road number SR 1140

d. Is proposed work within city limits or planning jurisdiction? _ Yes X No

e. Name of body of water nearest project (e.g. river, creek, sound, bay) Hall's Creek

3. DESCRIPTION AND PLANNED USE OF PROPOSED PROJECT

a. List all development activities you propose (e.g. building a home, motel, marina, bulkhead, pier, and excavation and/or filling activities.

Remove existing bridge and construct new bridge in same location. An adjacent timber bulkhead may need to be replaced if it is in conflict with construction activities. If the bulkhead is removed, a new bulkhead will be replaced parallel to Halls Creek near the existing structure.

b. Is the proposed activity maintenance of an existing project, new work, or both? **Both**

c. Will the project be for public, private or commercial use? Public

Give a brief description of purpose, use, methods of construction and daily operations of proposed project. If more space is needed, please attach additional pages. **Proposed bridge will be constructed using a "top down" construction method The roadway approaches will be upgraded to current design standards**

4. LAND AND WATER CHARACTERISTICS

a. Size of entire tract N/A

b. Size of individual lot(s) N/A

c. Approximate elevation of tract above MHW or NWL 3'

d. Soil type(s) and texture(s) of tract Dorovan: Typic Medisaprists, Augusta: Aeric Ochraquults, Wahee: Aeric Ochraquults

e. Vegetation on tract black gum, bald cypress, red maple, sweetgum, giant cane, blackberry, Japonese honeysuckle, maintained residential yards.

f. Man-made features now on tract bridge, residences

g. What is the CAMA Land Use Plan land classification of the site? *(Consult the local land use plan.)*

_X_ Conservation	____ Transitional
____ Developed	____ Community
____ Rural	____ Other

h. How is the tract zoned by local government? N/A

i. Is the proposed project consistent with the applicable zoning? _X_ Yes ____ No
(Attach zoning compliance certificate, if applicable)

j. Has a professional archaeological assessment been done for the tract? _X_ Yes ____ No
If yes, by whom? NCDOT

k. Is the project located in a National Registered Historic District or does it involve a National Register listed or eligible property?
____ Yes _X_ No

l. Are there wetlands on the site? _X_ Yes ____ No
Coastal (marsh) ____ Other _X_
If yes, has a delineation been conducted? Yes
(Attach documentation, if available)

m. Describe existing wastewater treatment facilities. N/A

n. Describe location and type of discharges to waters of the state. (For example, surface runoff, sanitary wastewater, industrial/commercial effluent, "wash down" and residential discharges.) surface runoff

o. Describe existing drinking water supply source. Private wells

5. ADDITIONAL INFORMATION

In addition to the completed application form, the following items must be submitted:

- **A copy of the deed** (with state application only) or other instrument under which the applicant claims title to the affected properties. If the applicant is not claiming to be the owner of said property, then forward a copy of the deed or other instrument under which the owner claims title, plus written permission from the owner to carry out the project.

- **An accurate, dated work plat** (including plan view and cross-sectional drawings) drawn to scale in black ink on an 8 1/2" by 11" white paper. (Refer to Coastal Resources Commission Rule 7J.0203 for a detailed description.)

  Please note that original drawings are preferred and only high quality copies will be accepted. Blue-line prints or other larger plats are acceptable only if an adequate number of quality copies are provided by applicant. (Contact the U.S. Army Corps of Engineers regarding that agency's use of larger drawings.) A site or location map is a part of plat requirements and it must be sufficiently detailed to guide agency personnel unfamiliar with the area to the site. Include highway or secondary road (SR) numbers, landmarks, and the like.

- **A Stormwater Certification**, if one is necessary.

- A list of the **names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail.** Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management. Upon signing this form, the applicant further certifies that such notice has been provided.

  Name See attached list
  Address _____
  Phone _____

  Name _____
  Address _____
  Phone _____

  Name _____
  Address _____
  Phone _____

- **A list of previous state or federal permits** issued for work on the project tract. Include permit numbers, permittee, and issuing dates.

  _____

- **A check for $400** made payable to the Department of Environment, Health, and Natural Resources (DEHNR) to cover the costs of processing the application.

- **A signed AEC hazard notice** for projects in oceanfront and inlet areas.

- **A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A - 1 to 10)** If the project involves the expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

6. CERTIFICATION AND PERMISSION TO ENTER ON LAND

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to conditions and restrictions contained in the permit.

I certify that to the best of my knowledge, the proposed activity complies with the State of North Carolina's approved Coastal Management Program and will be conducted in a manner consistent with such program.

I certify that I am authorized to grant, and do in fact, grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

This is the 2 day of March, 2005.

Print Name Philip S. Hewett III

Signature _____
Landowner or Authorized Agent

Please indicate attachments pertaining to your proposed project.

___ DCM MP-2 Excavation and Fill Information
___ DCM MP-3 Upland Development
___ DCM MP-4 Structures Information
_X_ DCM MP-5 Bridges and Culverts
___ DCM MP-6 Marina Development

NOTE: Please sign and date each attachment in the space provided at the bottom of each form.

Form DCM-MP-5

BRIDGES AND CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM-MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project.

1. BRIDGES

a. Public __X__ Private _____

b. Type of bridge (construction material)
Concrete Cored Slab Bridge

c. Water body to be crossed by bridge
Hall's Creek

d. Water depth at the proposed crossing at MLW or
10.7

e. Will proposed bridge replace an existing bridge?
__X__ Yes _____ No
If yes,
(1) Length of existing bridge **68'-0"**
(2) Width of existing bridge **22' -0"**
(3) Navigation clearance underneath existing bridge **None**
(4) Will all, or a part of, the existing bridge be removed? (Explain)
All components of the existing bridge will be removed

f. Will proposed bridge replace an existing culvert(s)?
_____ Yes __X__ No
If yes,
(1) Length of existing culvert _____
(2) Width of existing culvert _____
(3) Height of the top of the existing culvert above the MHW or NWL _____
(4) Will all, or a part of, the existing culvert be removed? (Explain) _____

g. Length of proposed bridge **104'-0"**

h. Width of proposed bridge **30'-0"**

i. Height of proposed bridge above wetlands
2.7'

j. Will the proposed bridge affect existing water flow?
_____Yes __X__ No
If yes, explain

k. Navigation clearance underneath proposed bridge
2.5 feet

l. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? __X__ Yes _____ No
If yes, explain **Navigation will be improved by a larger horizontal opening. The number of bents will be reduced from 7 to 1.**

m. Will the proposed bridge cross wetlands containing no navigable waters? _____ Yes __X__ No
If yes, explain _____

n. Have you contacted the U.S. Coast Guard concerning their approval?
__X__ Yes _____ No
If yes, please provide record of their action.

2. CULVERTS N/A

a. Water body in which culvert is to be placed
_____

b. Number of culverts proposed _____

c. Type of culvert (construction material, style)
_____

d. Will proposed culvert replace an existing bridge?
_____ Yes _____ No
If yes,
(1) Length of existing bridge _____
(2) Width of existing bridge _____
(3) Navigation clearance underneath existing bridge _____
(4) Will all, or a part of, the existing bridge be removed? (Explain) _____

e. Will proposed culvert replace an existing culvert?
_____ Yes _____ No
If yes,
(1) Length of existing culvert _____
(2) Width of existing culvert _____
(3) Height of the top of the existing culvert above the MHW or NWL _____
(4) Will all, or a part of, the existing culvert be removed? (Explain) _____
_____
_____

f. Length of proposed culvert _____

g. Width of proposed culvert _____

h. Height of the top of the proposed culvert above the MHW or NWL _____

i. Will the proposed culvert affect existing water flow?
_____ Yes _____ No
If yes, explain _____
_____

j. Will the proposed culvert affect existing navigation potential? _____ Yes _____ No
If yes, explain _____
_____

3. EXCAVATION AND FILL

a. Will the placement of the proposed bridge or culvert require any excavation below the MHW or NWL?
_____Yes __X__ No
If yes,
(1) Length of area to be excavated
_____
(2) Width of area to be excavated
_____
(3) Depth of area to be excavated
_____
(4) Amount of material to be excavated in cubic yards _____

b. Will the placement of the proposed bridge or culvert require any excavation within:
_____ Coastal Wetlands _____ SAVs __X__ Other Wetlands
If yes,
(1) Length of area to be excavated
43'
(2) Width of area to be excavated
7'
(3) Amount of material to be excavated in cubic yards **22.3 cubic yards- this is the roadside ditch located in the wetland.**

c. Will the placement of the proposed bridge or culvert require any highground excavation?
__X__ Yes _____ No
If yes,
(1) Length of area to be excavated **100'**
(2) Width of area to be excavated **7'**
(3) Amount of material to be excavated in cubic yards **51.9 cubic yards- this is the roadside ditch located in the upland area.**

d. If the placement of the bridge or culvert involves any excavation, please complete the following:
(1) Location of the spoil disposal area
Unknown- contractor descrition
_____
(2) Dimensions of spoil disposal area
Unknown
(3) Do you claim title to the disposal area?
_____ Yes __X__ No
If no, attach a letter granting permission from the owner.

(4) Will the disposal area be available for future maintenance? _____ Yes __X__ No

(5) Does the disposal area include any coastal wetlands (marsh), SAVs, or other wetlands? _____ Yes __X__ No
If yes, give dimensions if different from (2) above. _____

(6) Does the disposal area include any area below the MHW or NWL? _____ Yes __X__ No
If yes, give dimension if different from No. 2 above. _____

e. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed below MHW or NWL? __X__ Yes _____No
If yes,
(1) Length of area to be filled 40 feet
(2) Width of area to be filled 7 feet
(3) Purpose of fill temporary cofferdam to construct bent for new structure

f. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed within:
_____ Coastal Wetlands _____ SAVs __X__ Other Wetlands If yes,
(1) Length of area to be filled **150'**
(2) Width of area to be filled **4'**
(3) Purpose of fill **Widen shoulders to approach wider structure.**

g. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed on highground? __X__ Yes _____No
If yes,
(1) Length of area to be filled **~550'**
(2) Width of area to be filled **~22'**
(3) Purpose of fill **Fill used to raise the grade of the bridge.**

4. GENERAL

a. Will the proposed project involve any mitigation?
__X__ Yes _____No
If yes, explain in detail **EEP will be providing compensatory mitigation for the 0.036 acres of wetland, see attached EEP acceptance letter.**

b. Will the proposed project require the relocation of any existing utility lines? __X__ Yes __ No
If yes, explain in detail Power, Water, and Telephone lines will be moved. They all will be re-installed using directional boring resulting in no jurisdictional impacts.

c. Will the proposed project require the construction of any temporary detour structures?
_____ Yes __X__ No
If yes, explain in detail _____

d. Will the proposed project require any work channels?
_____ Yes __X__ No
If yes, complete Form DCM-MP-2

e. How will excavated or fill material be kept on site and erosion controlled? **NCDOT High Quality Waters Erosion Control Methods will be used**

f. What type of construction equipment will be used (for example, dragline, backhoe or hydraulic dredge)? **Heavy highway construction equipment**

g. Will wetlands be crossed in transporting equipment to project site? _____ Yes __X__ No
If yes, explain steps that will be taken to lessen environmental impacts. _____

h. Will the placement of the proposed bridge or culvert require any shoreline stabilization?
__X__ Yes _____ No
If yes, explain in detail **6 square yards of Class 1 stone will be used for stabilization on the north west bank of Hall's Creek. An existing timber bulkhead is located on the south west quadrant of the project. If this timber bulkhead is found to be in conflict with construction activities, this structure will be replaced in the approximate location, parallel to Hall's Creek.**

NCDOT
Applicant or Project Name

Signature

3/2/05
Date

10/26/98

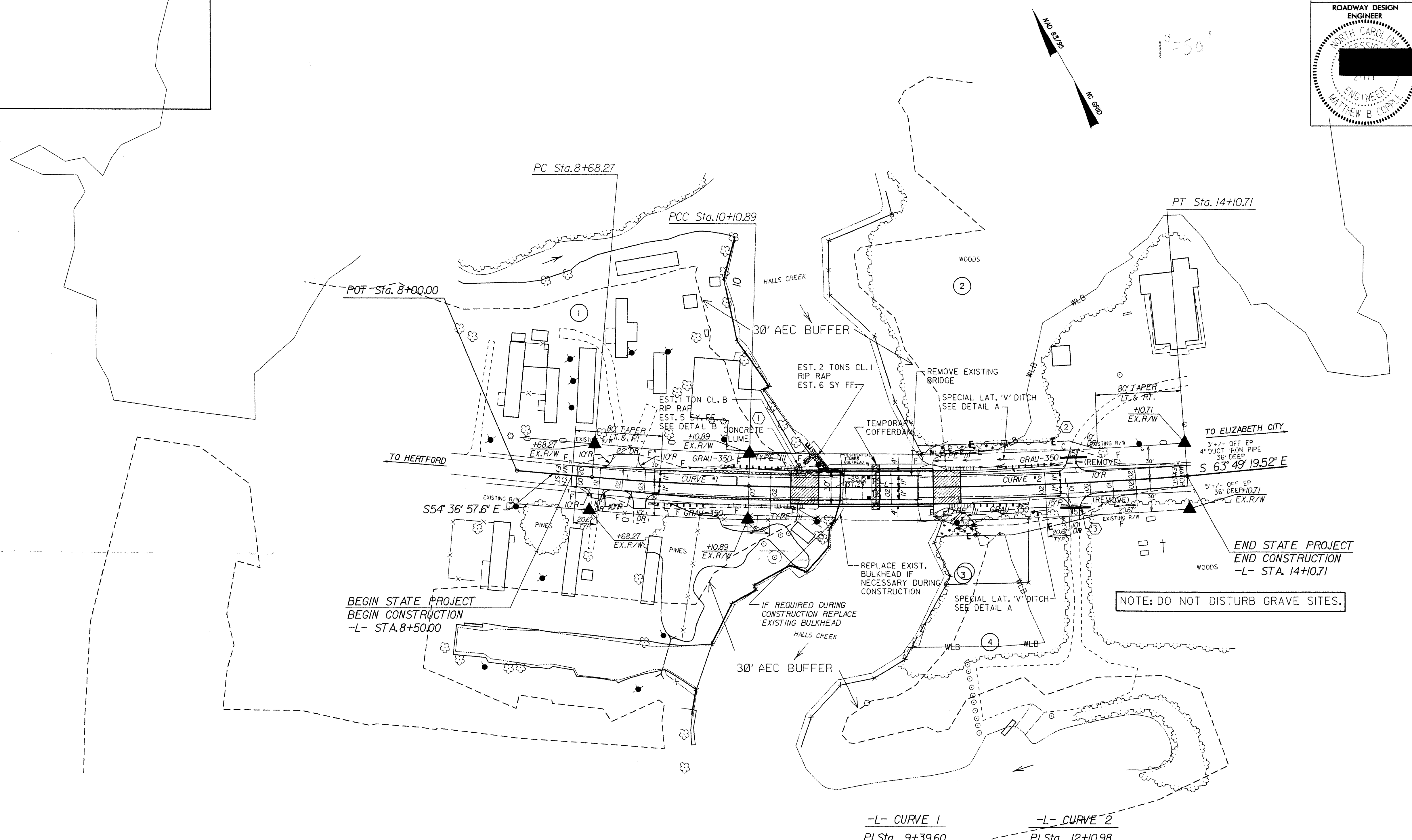
REVISIONS

ENGLISH

PROJECT REFERENCE NO.	SHEET NO.
B-4222	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

[redacted]

1"=50'



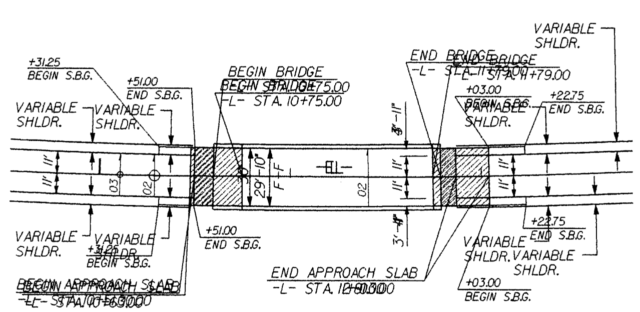
NOTE: DO NOT DISTURB GRAVE SITES.

-L- CURVE 1

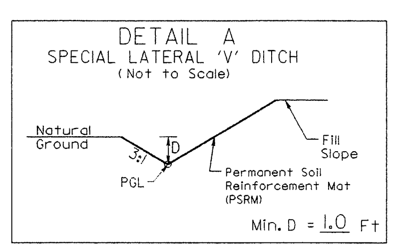
PI Sta 9+39.60
Δ = 3° 12' 32.0" (LT)
D = 2° 15' 00.0"
L = 142.62'
T = 71.33'
R = 2,546.48'
e = .03
RUNOFF = SEE PLANS

-L- CURVE 2

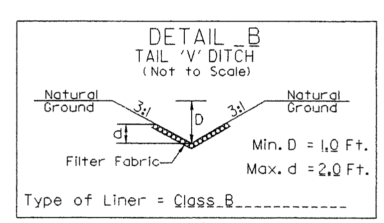
PI Sta 12+10.98
Δ = 5° 59' 49.9" (LT)
D = 1° 30' 00.0"
L = 399.81'
T = 200.09'
R = 3,819.72'
e = .02
RUNOFF = SEE PLANS



SKETCH SHOWING ROADWAY IN RELATION TO STRUCTURE



-L- STA 11+75 TO STA 13+50 LT.
-L- STA 11+85 TO STA 13+50 RT.



-L- STA. 10+56 LT.

DENOTES TEMPORARY FILL IN SURFACE WATERS

DENOTES FILL IN WETLANDS

DENOTES EXCAVATION IN WETLANDS

DENOTES MECHANIZED CLEARING

SBG - SHOULDER BERM GUTTER

DENOTES APPROACH SLAB

FOR -L- PROFILE SEE SHEET NO.5

SEE SHEETS S-1 THRU S-19 FOR STRUCTURE PLANS

Ramey Kemp & Associates, Inc.
Transportation Consulting Engineers
4928-A Windy Hill Drive Raleigh, North Carolina 27609
(919) 872-5115 fax (919) 878-5416

18-JAN-2005 13:02
b4222_ds_permpsh.dgn

10/26/98

REVISIONS

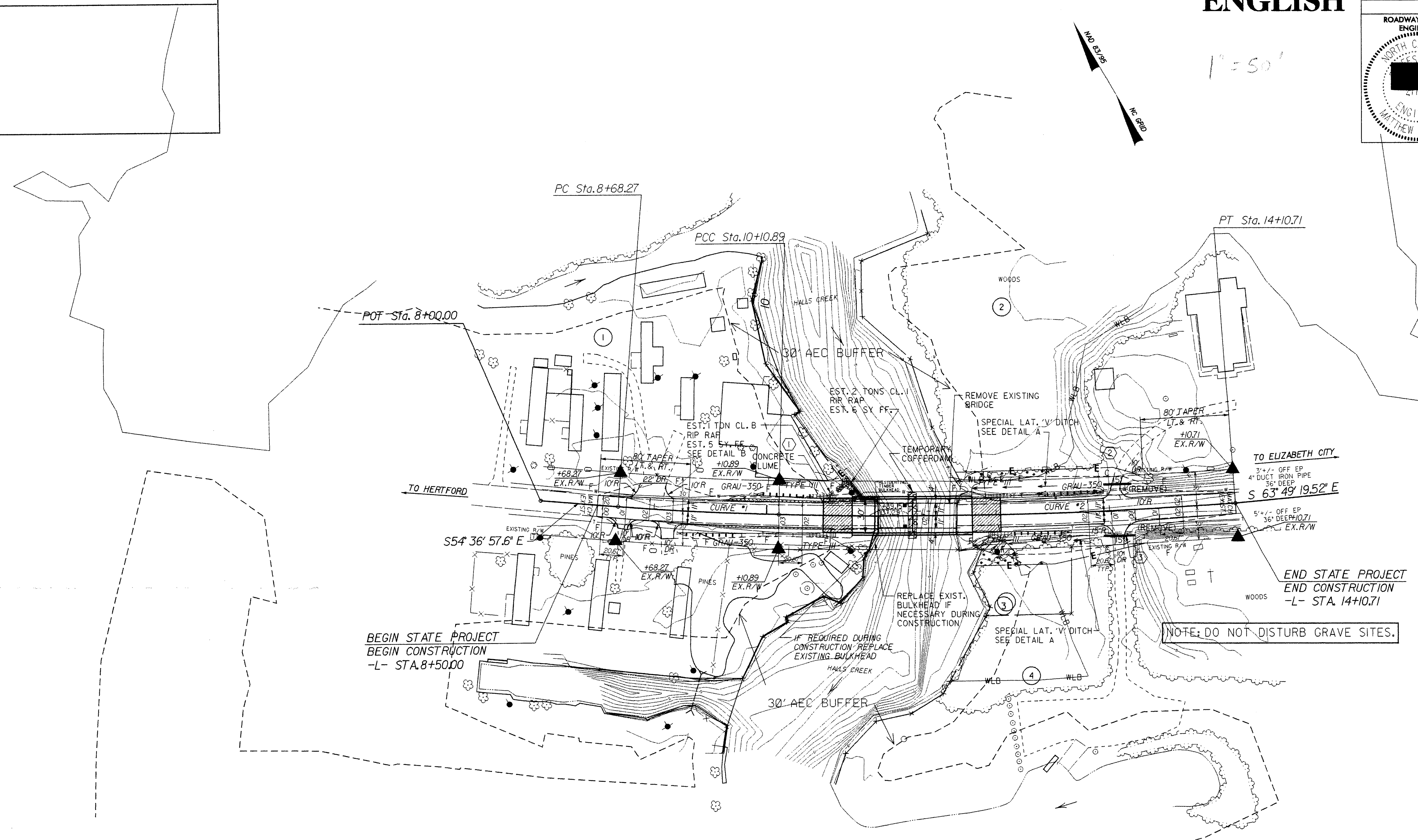
ENGLISH

PROJECT REFERENCE NO.	SHEET NO.
B-4222	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

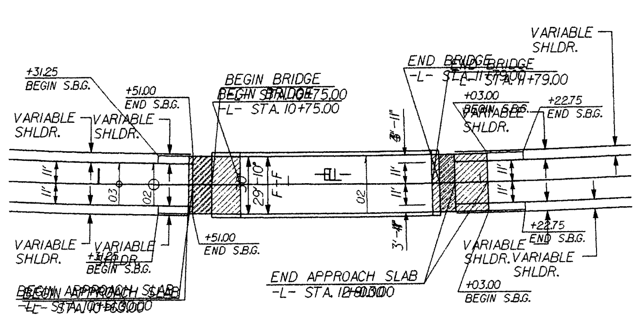
NORTH CAROLINA PROFESSIONAL [redacted] 18442 ENGINEER MATTHEW B. COPPLE

NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD LEON BOLLINGER, JR.

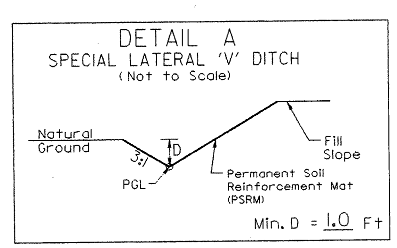
1" = 50'



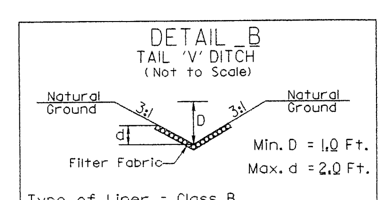
-L- CURVE 1	-L- CURVE 2
PI Sta 9+39.60	PI Sta 12+10.98
Δ = 3° 12' 32.0" (LT)	Δ = 5° 59' 49.9" (LT)
D = 2° 15' 00.0"	D = 1° 30' 00.0"
L = 142.62'	L = 399.81'
T = 71.33'	T = 200.09'
R = 2,546.48'	R = 3,819.72'
e = .03	e = .02
RUNOFF = SEE PLANS	RUNOFF = SEE PLANS



SKETCH SHOWING ROADWAY IN RELATION TO STRUCTURE



-L- STA 11+75 TO STA 13+50 LT.
-L- STA 11+85 TO STA 13+50 RT.



-L- STA. 10+56 LT.

DENOTES TEMPORARY FILL IN SURFACE WATERS

DENOTES FILL IN WETLANDS

DENOTES EXCAVATION IN WETLANDS

DENOTES MECHANIZED CLEARING

SBG SHOULDER BERM GUTTER

DENOTES APPROACH SLAB

FOR -L- PROFILE SEE SHEET NO.5

SEE SHEETS S-1 THRU S-19 FOR STRUCTURE PLANS

Ramey Kemp & Associates, Inc.
Transportation Consulting Engineers
4928-A Windy Hill Drive Raleigh, North Carolina 27609
(919) 872-5115 Fax (919) 878-5416

3-JAN-2005 13:02
S:\Galen\B-4222\design\b4222_ds_permpsh.dgn

TIP PROJECT B-4222

CONTRACT:

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4222	1	

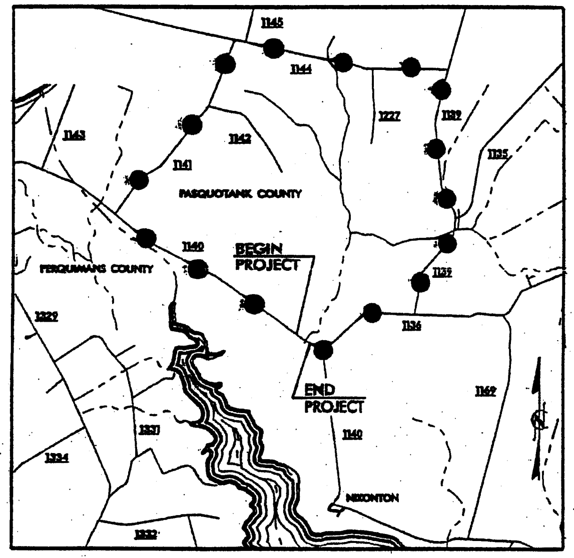
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33566.1.1	BRZ-1140(2)	P.E.
33566.2.2	BRZ-1140(2)	R/W & UTIL
33566.3.1	BRZ-1140(6)	CONSTR.

PASQUOTANK COUNTY

LOCATION: BRIDGE NO. 24 OVER HALLS CREEK ON SR 1140

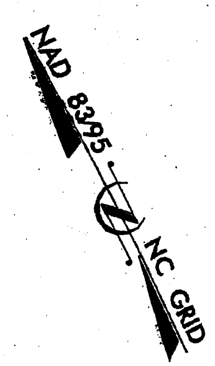
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

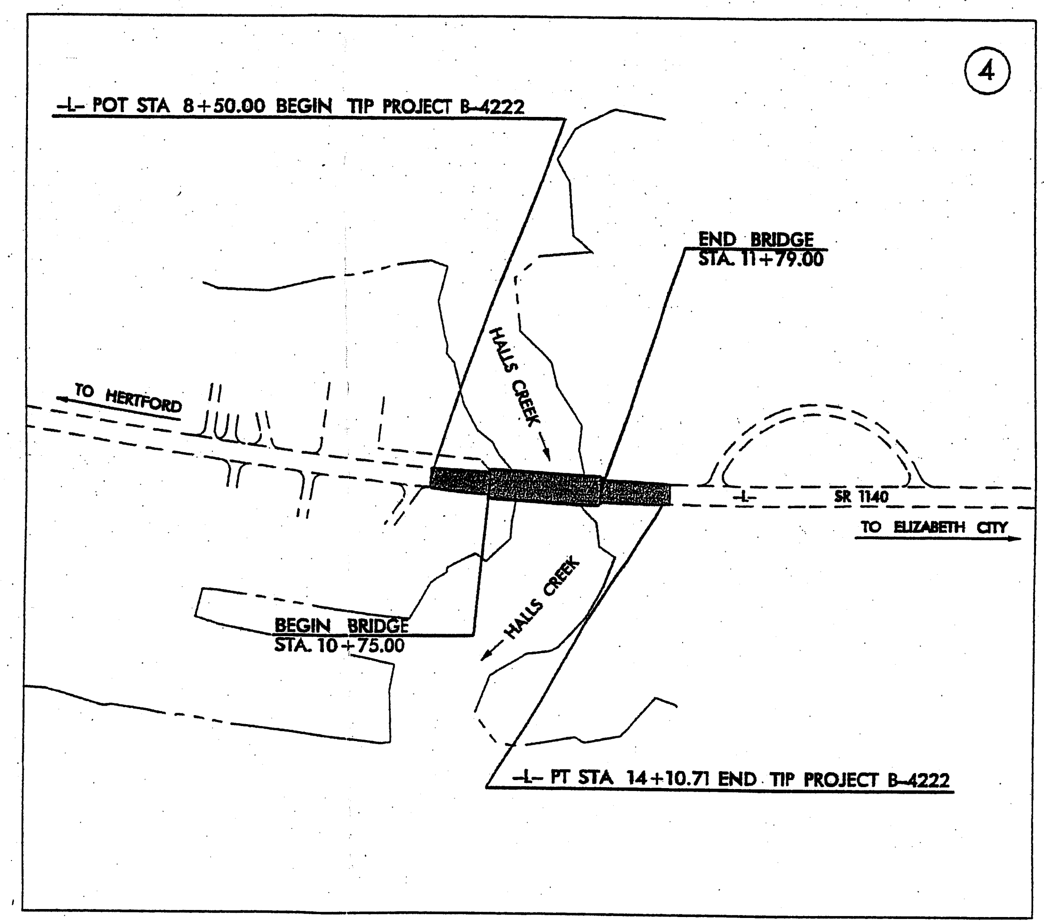
SUBMITTAL: 100% PLANS



DENOTES OFFSITE DETOUR

VICINITY MAP





GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

5 2.5 0 5 10 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2001 = 1,400
ADT 2025 = 2,800
DHV = 12 %
D = 60 %
T = 4 % *
V = 40 MPH

* TTST 1 % DUAL 3 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4222	=	0.086 mi
LENGTH STRUCTURE TIP PROJECT B-4222	=	0.020 mi
TOTAL LENGTH OF TIP PROJECT B-4222	=	0.106 mi

Plans prepared in the office of:

for the North Carolina Department of Transportation

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 19, 2003

LETTING DATE: SEPTEMBER 21, 2004

N.C.D.O.T. CONTACT:
VIRGINIA MABRY
PROJECT DESIGN ENGINEER
DESIGN SERVICES

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18442 ENGINEER RICHARD LEON BOLLINGER, JR.

4-02-04 P.E.

RICHARD LEON BOLLINGER, JR.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022982 ENGINEER MICHAEL A. YOUNG

4-2-04 P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-4222	2

*S.U.E = SUBSURFACE UTILITY ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

- Edge of Pavement
- Curb
- Prop. Slope Stakes Cut — C
- Prop. Slope Stakes Fill — F
- Prop. Woven Wire Fence
- Prop. Chain Link Fence
- Prop. Barbed Wire Fence
- Prop. Wheelchair Ramp — WCR
- Curb Cut for Future Wheelchair Ramp — CCFR
- Exist. Guardrail
- Prop. Guardrail
- Equality Symbol
- Pavement Removal

RIGHT OF WAY

- Baseline Control Point
- Existing Right of Way Marker
- Exist. Right of Way Line w/Marker
- Prop. Right of Way Line with Proposed R/W Marker (Iron Pin & Cap)
- Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker
- Exist. Control of Access Line — CA
- Prop. Control of Access Line — CA
- Exist. Easement Line — E
- Prop. Temp. Construction Easement Line — E
- Prop. Temp. Drainage Easement Line — TDE
- Prop. Perm. Drainage Easement Line — PDE

HYDROLOGY

- Stream or Body of Water
- River Basin Buffer — RBB
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Shoreline
- Falls, Rapids
- Prop Lateral, Tail, Head Ditches — FLOW

STRUCTURES

MAJOR

- Bridge, Tunnel, or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR

- Head & End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Boxes — CB
- Paved Ditch Gutter

UTILITIES

- Exist. Pole
- Exist. Power Pole
- Prop. Power Pole
- Exist. Telephone Pole
- Prop. Telephone Pole
- Exist. Joint Use Pole
- Prop. Joint Use Pole
- Telephone Pedestal — T
- U/G Telephone Cable Hand Hold — HH
- Cable TV Pedestal — C
- U/G TV Cable Hand Hold — HH
- U/G Power Cable Hand Hold — HH
- Hydrant
- Satellite Dish
- Exist. Water Valve
- Sewer Clean Out
- Power Manhole — P
- Telephone Booth
- Cellular Telephone Tower
- Water Manhole — W
- Light Pole
- H-Frame Pole
- Power Line Tower
- Pole with Base
- Gas Valve
- Gas Meter
- Telephone Manhole — T
- Power Transformer
- Sanitary Sewer Manhole
- Storm Sewer Manhole — S
- Tank; Water, Gas, Oil
- Water Tank With Legs
- Traffic Signal Junction Box — S
- Fiber Optic Splice Box — F
- Television or Radio Tower
- Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement — TS

- Recorded Water Line — W
- Designated Water Line (S.U.E.*) — W
- Sanitary Sewer — SS
- Recorded Sanitary Sewer Force Main — FSS
- Designated Sanitary Sewer Force Main(S.U.E.*) — FSS
- Recorded Gas Line — G
- Designated Gas Line (S.U.E.*) — G
- Storm Sewer — S
- Recorded Power Line — P
- Designated Power Line (S.U.E.*) — P
- Recorded Telephone Cable — T
- Designated Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Unknown Utility (S.U.E.*) — ?UTL
- Recorded Television Cable — TV
- Designated Television Cable (S.U.E.*) — TV
- Recorded Fiber Optics Cable — FO
- Designated Fiber Optics Cable (S.U.E.*) — FO
- Exist. Water Meter
- U/G Test Hole (S.U.E.*) — ATTUR
- Abandoned According to U/G Record — E.O.I.
- End of Information

BOUNDARIES & PROPERTIES

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Property Line Symbol — PL
- Exist. Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Property Number — 123
- Parcel Number — 6
- Fence Line
- Existing Wetland Boundaries — WW & ISBW
- High Quality Wetland Boundary — WLB
- Medium Quality Wetland Boundaries — HQ WLB
- Low Quality Wetland Boundaries — MQ WLB
- Proposed Wetland Boundaries — LO WLB
- Existing Endangered Animal Boundaries — WLB
- Existing Endangered Plant Boundaries — EAB — EPB

BUILDINGS & OTHER CULTURE

- Buildings
- Foundations
- Area Outline
- Gate
- Gas Pump Vent or U/G Tank Cap
- Church
- School
- Park
- Cemetery
- Dam
- Sign
- Well — GS OW
- Small Mine
- Swimming Pool

TOPOGRAPHY

- Loose Surface
- Hard Surface
- Change in Road Surface
- Curb
- Right of Way Symbol — R/W
- Guard Post — GP
- Paved Walk
- Bridge
- Box Culvert or Tunnel
- Ferry
- Culvert
- Footbridge
- Trail, Footpath
- Light House

VEGETATION

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — VINEYARD

RAILROADS

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH

Ramey Kemp & Associates, Inc.
Transportation Consulting Engineers
4928-A Windy Hill Drive Raleigh, North Carolina 27609
(919) 872-5115 fax (919) 878-5466

$$$$$$$SYSTIME$$$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$$$$

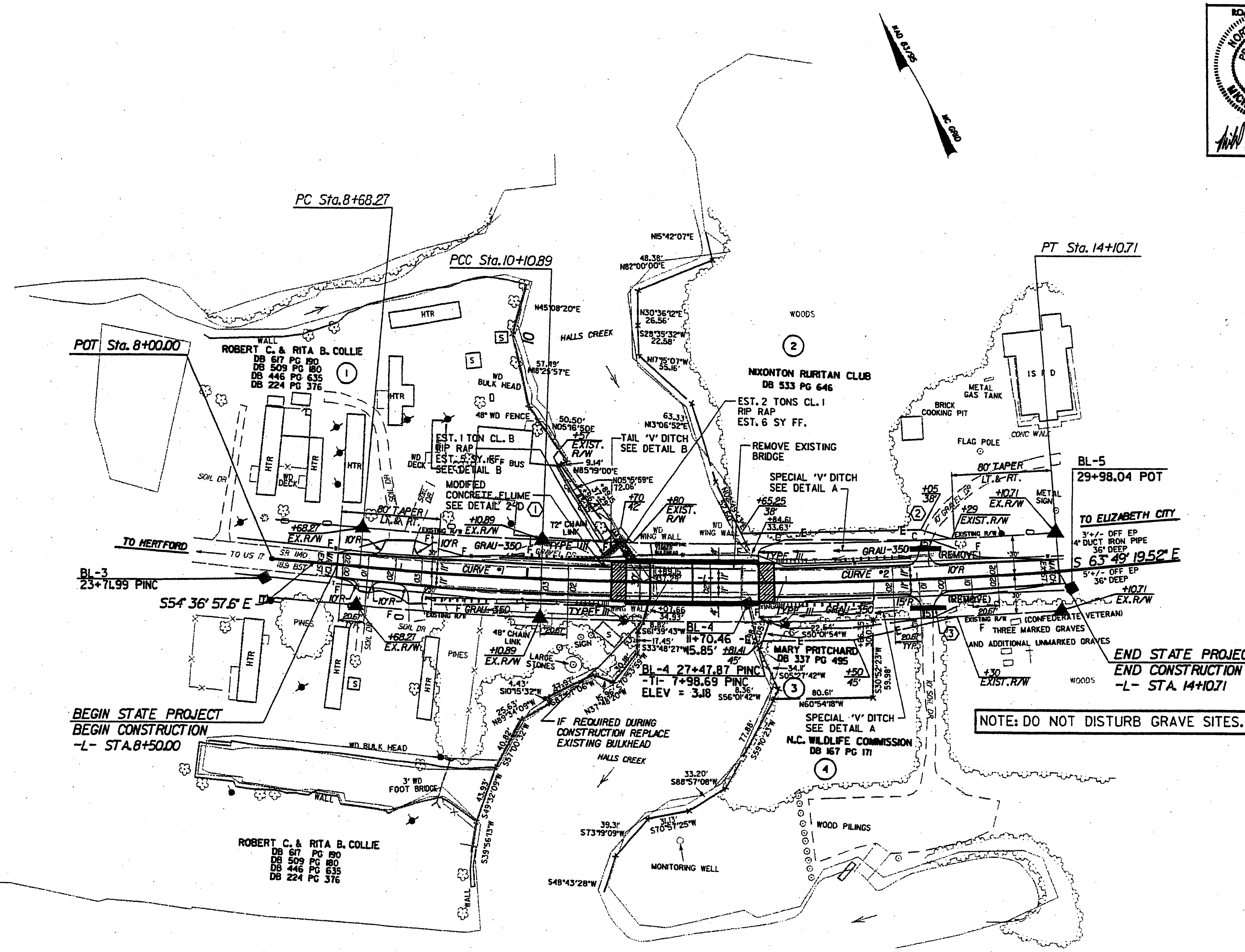
10/26/98

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4222	3
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022982 MICHAEL A. YOUNG — 4-2-04

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18442 RICHARD LEON BOLLINGER, JR. — 4-02-04



NOTE: DO NOT DISTURB GRAVE SITES.

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4222-2"
WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF
NORTHING: 910586.368(ft) EASTING: 2802663.673(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.00002093
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4222-2" TO -L- STATION 8+50.00 IS
S 52° 27' 54.5" E 706.07'

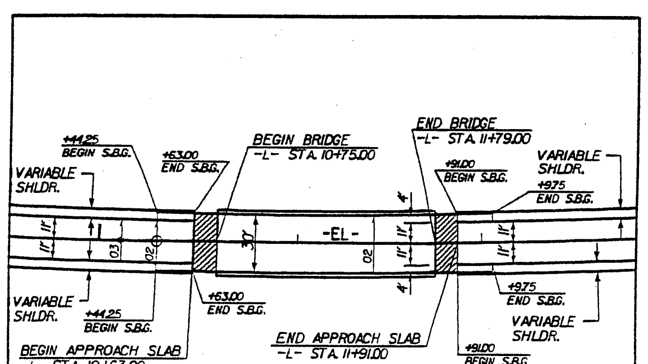
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

-L- CURVE 1

PI Sta 9+39.60
Δ = 3° 12' 32.0" (LT)
D = 2° 15' 00.0"
L = 142.62'
T = 71.33'
R = 2,546.48'
e = .03
RUNOFF = SEE PLANS

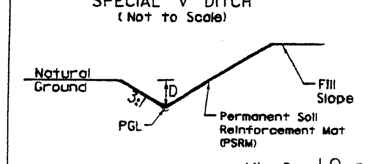
-L- CURVE 2

PI Sta 12+10.98
Δ = 5° 59' 49.9" (LT)
D = 1° 30' 00.0"
L = 399.81'
T = 200.09'
R = 3,819.72'
e = .02
RUNOFF = SEE PLANS



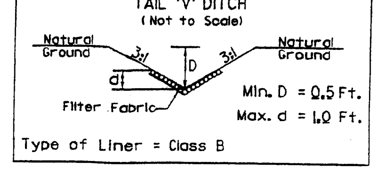
SKETCH SHOWING ROADWAY IN RELATION TO STRUCTURE

DETAIL A
SPECIAL 'V' DITCH
(Not to Scale)



-L- STA 11+75 TO STA 13+50 LT.
-L- STA 11+85 TO STA 13+50 RT.

DETAIL B
TAIL 'V' DITCH
(Not to Scale)



-L- STA. 10+56 LT.

DENOTES APPROACH SLAB

FOR -L- PROFILE SEE SHEET NO. 5

SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

Ramey Kemp & Associates, Inc.
Transportation Consulting Engineers
4928-A Windy Hill Drive Raleigh, North Carolina 27609
(919) 872-5115 Fax (919) 878-5416

Ecosystem Enhancement
PROGRAM

October 26, 2004

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4222, Bridge 24 over Hall's Creek, Pasquotank County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide wetland mitigation for the subject project. Based on the information supplied by you in a letter dated October 22, 2004, the impacts are located in CU 03010205 of the Pasquotank River Basin in the Northern Outer Coastal Plain Eco-Region, and are as follows:

Riverine Wetland: 0.036 acre

As stated in your letter, the subject project is listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. The wetland mitigation for the subject project will be provided in accordance with this agreement.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

William D. Gilmore

William D. Gilmore, P.E.
Transition Manager

cc: Bill Biddlecome, USACE-Washington
John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-4222

Ecosystem Enhancement PROGRAM

October 26, 2004

Mr. Bill Biddlecome
U. S. Army Corps of Engineers
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

Dear Mr. Biddlecome:

Subject: EEP Mitigation Acceptance Letter:

B-4222, Bridge 24 over Hall's Creek, Pasquotank County
Cataloging Unit 03010205 (Pasquotank), Northern Outer Coastal Plain Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) proposes to provide preservation to compensate for the unavoidable 0.036 acre of riverine wetland impacts of the subject project in the following manner:

Wetland Preservation (10:1) in same eco-region (0.36 acre)
Roanoke River – Cashie Site, Bertie County

The subject TIP project is listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. The compensatory mitigation for the project will be provided in accordance with Section IX, EEP Transition Period, of the Agreement.

If you have any questions or need additional information, please contact Ms. Beth Harmon at (919) 715-1929.

Sincerely,

William D. Gilmore, P.E.
Transition Manager

cc: Phil Harris, Office of Natural Environment, NCDOT
John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-4222

D-4222 ... Murphy

Michael F. Easley, Govenor

William G. Ross, Jr. Secretary
Department of Environment and Natural Resources

Alan W. Klimek, P.E., Director
Coleen H. Sullins, Deputy Director
Division of Water Quality

April 22, 2004

Mr. Gregory Thorpe, PH.D.
Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

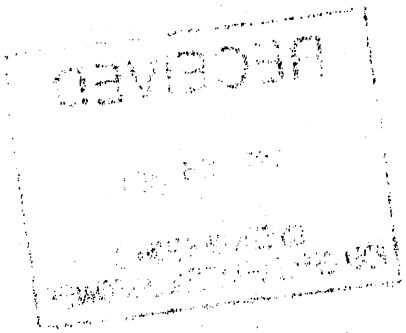
Subject: Permit No. SW7040406
General Stormwater Permit
Hall's Creek Bridge Replacement
Pasquotank County

Dear Mr. Thorpe:

The Washington Regional Office received the completed Stormwater Application for the subject project on April 6, 2004. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7040406 dated April 22, 2004 to the Department of Transportation.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the office of Administrative Hearings, P.O. Drawer 27447, Raleigh, NC 27611-7447. Unless such demands are made this permit shall be final and binding.



If you have any questions or need additional information concerning this matter, please contact Mr. Robert Tankard at (252) 946-6481, extension 233.

Sincerely,

Jim Mulligan
Water Quality Supervisor
Washington Regional Office

cc: Pasquotank County Inspections
Washington Regional Office
Central Files

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

STATE STORMWATER MANAGEMENT PERMIT

GENERAL PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

Department of Transportation

FOR THE

construction, operation and maintenance of stormwater management systems in compliance with the provisions of 15A NCAC 2H.1000 (hereafter referred to as the *"stormwater rules"*) and the approved stormwater management plans and specifications, and other supporting data as attached and on file with and approved by the Division of Water Quality and considered a part of this permit for the Hall's Creek Bridge located on NCSR 1140 in Pasquotank County, NC.

The Permit shall be effective from the date of issuance until rescinded and shall be subject to the following specific conditions and limitations.

I. DESIGN STANDARDS

1. 0.06 acres of new impervious areas are proposed.

2. Approved plans and specifications for projects covered by this permit are incorporated by reference and are enforceable parts of the permit.

3. No stormwater piping in addition to the existing piping shall be allowed except:

   a. That minimum amount necessary to direct runoff beneath an impervious surface such as a road.

   b. That minimum amount needed under driveways to provide access to lots.

II. SCHEDULE OF COMPLIANCE

1. Grasslined swales, vegetated buffers and other Best Management Practices used for stormwater runoff control shall be adequately maintained throughout the life of the project.

2. The permittee shall at all times provide adequate erosion control measures in conformance with the approved Erosion Control Plan.

3. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.

III. GENERAL CONDITIONS

1. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division of Water Quality, in accordance with North Carolina General Statutes 143-215.6A to 143.215.6C.

2. The permit may be modified, revoked or terminated for cause. The filing of a request for a permit modification, or termination does not void any permit condition.

3. The issuance of this permit does not prohibit the Director from reopening and modifying laws, rules, and regulations contained in Title 15A of the North Carolina Administrative Code, Subchapter 2H.1000; and North Carolina General Statute 143-215.1 et.al.

4. The following items will require a modification to the permit:

   a. Any revision to the approved plans, regardless of size

   b. Project name change

   c. Transfer of ownership

   d. Redesign or addition to the approved amount of built-upon area.

   e. Further subdivision of the project area

   f. In addition, the Director may determine that other revisions to the project should require a modification to the permit.

5. For any additions or modifications of the previously permitted built-upon area, the permittee shall submit to the Director revised plans and specifications and shall receive approval prior to construction.

6. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

7. The permit is not transferable to any person except after notice to and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name and incorporate such other requirements as may be necessary. A formal permit request must be submitted to the Division of Water Quality accompanied by the appropriate fee, documentation from both parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits, and may or may not be approved.

8. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state and federal) which have jurisdiction.

Permit issued this the 22nd day of April, 2004.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

pAlan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number SW7040406

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

March 11, 2004

Lindsey Riddick
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Riddick:

This letter is in response to your letter of February 24, 2004 which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion of the North Carolina Department of Transportation (NCDOT) that the replacement of Bridge No. 24 on SR 1140 over Halls Creek in Pasquotank County (TIP No. B-4222) may affect, but is not likely to adversely affect the federally threatened bald eagle (*Haliaeetus leucocephalus*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to the information you submitted, eagle surveys were conducted at the project site in May 2001 and February 2004. In a telephone conversation between Mr. Gary Jordan of my staff and Tyler Stanton of NCDOT on March 10, 2004, Mr. Stanton stated that the eagle surveys were limited to a relatively small area that was defined as the project area in the Categorical Exclusion (CE). This defined project area is too limited to adequately survey for eagles. When an eagle nest survey is required due to the presence of large water bodies, the surveys should extend, at a minimum, 0.5 mile from the project limits, and preferably out to 1.0 mile. Your letter includes the statement "...Due to the lack of trees suitable for nesting..." However, both aerial and ground level photographs in the CE reveal suitably sized trees for eagle nesting within 0.5 mile of the project site.

The project site is already disturbed, and the project involves replacing an existing bridge with a new bridge on the same alignment. It appears that little, if any, additional tree clearing will occur at the project site. It also appears that the site experiences significant human activity. Given these facts, the Service concurs with your conclusion that the proposed bridge replacement may affect, but is not likely to adversely affect the bald eagle. We believe that the requirements of section 7 (a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this

review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

For future letters requesting concurrence, the Service requests that additional information be provided. Your letter for this project, for example, should have included the extent of the surveys, whether or not eagles were actually observed, and your rationale for stating that no trees suitable for nesting were present. The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Bill Biddlecome, USACE, Washington, NC
John Hennessy, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC

B4222 4
MT

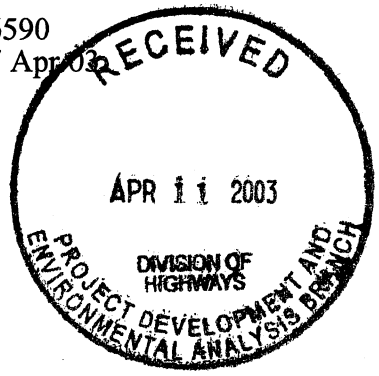
U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: Oan-b
Phone: (757) 398-6587
Fax: (757) 398-6334
Email: tknowles@lantd5.uscg.mil

16590
07 Apr 03



Mr. Gregory J. Thorpe
Environmental Management Director, PDEA
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

This is in response to your letter of March 14, 2003, to construct a bridge across Halls Creek, in Pasquotank County, North Carolina.

Since this stream at this site is subject to tidal influence, it is considered legally navigable for Bridge Administration purposes. This stream at the crossing site also meets the criteria for advanced approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways. Your letter and attachments confirmed such conditions exist at this site. Therefore, an individual permit will not be required for this project.

The fact that a Coast Guard permit is not required 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 the project.

If you have any questions regarding this matter, please contact Mr. Terrance Knowles, at the phone number or address shown above.

Sincerely,

Waverly L. Gregory, Jr.

WAVERLY GREGORY, JR.
Chief, Bridge Administration Section
By direction of the Commander
Fifth Coast Guard District

PASQUOTANK COUNTY
BRIDGE NO. 24 ON SR 1140 (OKISKO ROAD)
OVER HALLS CREEK

FEDERAL-AID PROJECT NO. BRZ-1140 (2)
STATE PROJECT NO. 8.2110401
TIP NO. B-4222

CATEGORICAL EXCLUSION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
N.C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED:

02-28-03
DATE

for Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation

2/28/03
DATE

for Donald J. Voelker, Acting Division Administrator
Federal Highway Administration

PASQUOTANK COUNTY
BRIDGE NO. 24 ON SR 1140 (OKISKO ROAD)
OVER HALLS CREEK

FEDERAL-AID PROJECT NO. BRZ-1140 (2)
STATE PROJECT NO. 8.2110401
TIP NO. B-4222

CATEGORICAL EXCLUSION

FEBRUARY 2003

Document Prepared by Ramey Kemp & Associates, Inc.
4928-A Windy Hill Dr.
Raleigh, NC 27609

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Date

For the North Carolina Department of Transportation

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PROJECT COMMITMENTS

PASQUOTANK COUNTY
BRIDGE NO. 24 ON SR 1140 (OKISKO ROAD)
OVER HALLS CREEK

FEDERAL-AID PROJECT NO. BRZ-1140 (2)
STATE PROJECT NO. 8.2110401
TIP NO. B-4222

In addition to the standard 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 the Protection of Surface Waters, Design Standards for Sensitive Watersheds, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Division 1

1.) The NCDOT will observe a moratorium on in-water work between February 15 through June 15 to protect fish spawning. The NCDOT will follow the "Stream Crossing Guidelines for Anadromous Fish Passage".

2.) The NCDOT will schedule construction so that road closure begins on December 1 (after the fall harvest season). Work will be scheduled such that the road can be reopened on later than the following September.

3.) The U.S. Geological Survey (USGS) geodetic survey marker located on the northeast end of the existing bridge will be relocated prior to removal of the existing bridge.

BRIDGE REPLACEMENT

PASQUOTANK COUNTY
BRIDGE NO. 24 ON SR 1140 (OKISKO ROAD)
OVER HALLS CREEK

FEDERAL-AID PROJECT NO. BRZ-1140(2)
STATE PROJECT NO. 8.2110401
T.I.P. NO. B-4222

INTRODUCTION:

The replacement of Bridge No. 24, located on SR 1140 over Halls Creek, in Pasquotank County, is included in the North Carolina Department of Transportation (NCDOT) 2002-2008 Transportation Improvement Program (TIP) as B-4222 and in the Federal-Aid Bridge Replacement Program (BRZ-1140 (2)). The location is shown in Figures 1 and 7.

No substantial impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

I. PURPOSE AND NEED

The NCDOT Bridge Maintenance Unit records indicate Bridge No. 24 has a sufficiency rating of 9.1 out of a possible 100 for a new structure. The bridge is considered structurally deficient and functionally obsolete. The replacement of this inadequate structure will result in safer and more efficient traffic operations.

II. EXISTING CONDITIONS

Bridge No. 24 is located approximately 900 ft (274 m) west of SR 1136 in an area referred to as Halls Creek in Pasquotank County. Refer to Figures 1 and 7 for the project location and Figures 2 and 3 for photos of the existing project area.

Bridge No. 24 was constructed in 1952. The bridge is not currently posted to restrict weight limits.

The overall length of the eight-span structure is 68 ft (20.7 m). It has a clear roadway width of 22 ft (6.6 m) that includes two 11 ft (3.3 m) travel lanes over the bridge. The superstructure consists of a reinforced concrete deck on timber joists and an asphalt wearing surface. The original end and interior bents were constructed of timber piles and caps but have been replaced with steel H-piles and steel caps. The original timber piles are still in-place. The height from the crown to the stream bed is 12 ft (3.6 m).

SR 1140 is classified as a rural minor collector in the Statewide Functional Classification System. The 2002 average daily traffic volume (ADT) on SR 1140 is estimated to be 1,450 vehicles per day (vpd). The percentages of truck traffic are 1 percent TTST vehicles and 3 percent dual-tired vehicles. The projected 2025 ADT is 2,800 vpd.

The two-lane facility measures approximately 20 ft (6.0 m) in width and has 3-ft (1.2-m) grassed shoulders on each side of the roadway. The horizontal alignment of SR 1140 is straight and the vertical alignment is flat within the project area. The speed limit in the immediate vicinity of the bridge is posted at 35 miles per hour (mph) (60 km/h), but changes to a 55 mph (90 km/h) approximately 600 ft (180 m) west of the existing bridge. Existing right-of-way is approximately 60 ft (18.3 m) in width.

This section of SR 1140 is not part of a designated bicycle route nor is it listed in the Transportation Improvement Program as needing incidental bicycle accommodations. There is no indication that an unusual number of bicyclists use this roadway.

There is a telephone cable that extends along the south side of SR 1140 throughout the project area. The cable is located underground except where it becomes aerial over Halls Creek. There are aerial electric service lines running along the north side of SR 1140 throughout the project area. There is a waterline along the north side of SR 1140 in the vicinity of the bridge. Utility impacts are expected to be minimal.

Land use within the project area is a mixture of residential properties. There is an old cemetery lying 165 feet (51 m) southeast of the bridge and 30 feet (10 m) from the centerline of the road. It is largely overgrown and contains 11 marked graves with approximately 30 to 50 unmarked graves. A historic site is situated directly across the road from the cemetery, with a granite monument marking the "First Albemarle Assembly Meeting", on February 6, 1665. Also on the same side of SR 1140 is a large civic meetinghouse, located approximately 115 feet from the centerline of the road. A mobile home park is situated west of the bridge on both sides of SR 1140 and there is an abandoned store building lying northwest of the bridge.

Land use surrounding the project area is largely agricultural and SR 1140 is a main thoroughfare for farmers during the spring and fall harvest seasons.

There is a NC Wildlife Commission public boating access area, referred to as the Halls Creek Launch, located on the south side of SR 1140 on the east side of the existing bridge. There are two driveways off of SR 1140 that serve the facility.

Four school buses cross Bridge No. 24 two times a day, for a total of eight bus trips per day.

There have been four crashes reported on SR 1140 within the project area between August 1, 1999 and July 31, 2002. One involved striking a deer, two involved striking another vehicle, and one involved a single vehicle losing control and overturning.

There is a U.S. Geological Survey (USGS) geodetic survey marker located on the northeast end of the existing bridge. The marker number, date, and elevation are 33 MEA, 1976, and 5 ft (1.5 m), respectively.

III. ALTERNATIVES

A. Project Description

Based upon a preliminary hydraulics analysis, the proposed replacement structure will be approximately 115 ft (35 m) long with a 30 ft (9 m) clear roadway width. The bridge will include two 11 ft (3.3 m) travel lanes with 4 ft (1.2 m) of lateral clearance on each side of the bridge.

The length and opening size of the proposed structure may increase or decrease as necessary to accommodate peak flows as determined by a more detailed hydraulic analysis to be performed during the final design phase of the bridge.

The roadway approaches will provide two 11 ft (3.3 m) travel lanes with 8 ft (2.4 m) grassed shoulders. The roadway approach and bridge grades will approximately match existing bridge and roadway elevations. The design speed is 40 mph (65 km/h).

B. Build Alternatives

The build alternative studied for replacing the existing bridge is described below:

Alternative A (Preferred)

Alternative A consists of replacing the bridge in-place with a new bridge. During construction, traffic will be maintained by using an off-site detour. Refer to Figure 4 for illustration of this alternative. The project limits will extend no more than 250 ft (76 m) in each direction from the center of the existing bridge.

SR 1140 will be closed within the project limits for approximately 4 to 6 months during the construction of the bridge and roadway work. Existing traffic will be detoured via SR 1141 (Glade Road), SR 1144 (Simpson Ditch Road), SR 1139 (Body Road) and SR 1136 (Four Forks Road). The detour length is estimated to be 8.7 miles (14 km). Refer to Figure 5 for illustration of the temporary off-site detour route.

C. Alternatives Eliminated From Further Consideration

A "Do-Nothing" alternative will eventually necessitate closure of the bridge due to its poor condition. This is not desirable due to the traffic service provided by SR 1140.

Investigation of the existing structure by the NCDOT Bridge Maintenance Unit indicates that rehabilitation of the old bridge is not feasible due to its age and deteriorated condition.

Alternative B consists of replacing the bridge in-place with a new bridge. During construction, traffic will be maintained by using a temporary on-site detour located on the south side (downstream) of the existing bridge. The temporary detour will be located approximately 15 ft (4.6 m) from the south side of the proposed bridge and will have an approach roadway width of 28 ft (8.6 m) with 3-ft (1.0-m) wide shoulders on each side. The temporary detour on the south side of the existing bridge will result in relocatees on the west side of the creek and impact an existing cemetery.

A temporary detour on the north side of the existing bridge was also evaluated but will result in relocatees on the west side of the creek. This detour would also have substantial impact to the Ruritan Club property adjacent to the creek on the east side.

Elevations in the project study area range from approximately 3 to 7 ft (1 to 2 m) above mean sea level (USGS 1982).

The project vicinity consists of cypress/gum swamp, hardwood forest, agricultural land, and adjacent urbanized areas.

The project study area crosses three soil mapping units. The soil types in parentheses represent the proposed new soil series names in the unpublished soil survey for Pasquotank County (NRCS 2001). Hydric soils are mapped as Swamp soils (Dorovan: Typic Medisaprists), which are poorly drained. Non-hydric soils with hydric inclusions are mapped as Bertie fine sandy loam (Augusta: Aeric Ochraquults), which are moderately well drained to somewhat poorly drained. Non-hydric soils are mapped as Lenoir very fine sandy loam (Wahee: Aeric Ochraquults), which are somewhat poorly drained.

C. Water Resources

C.1. Waters Impacted

The project study area is located within sub-basin 030152 of the Pasquotank River Basin (DENR 2001a) and is part of USGS hydrologic unit 03010205 (USGS 1974). Halls Creek originates north of SR 1144 in Pasquotank County and flows south to its confluence with Little River southeast of the study area. The drainage area at the bridge crossing is 11.8 square miles (30.4 square kilometers). This stream has been assigned Stream Index Number (SIN) 30-5-3 by the DWQ from its source to the Little River (DENR 2001a).

Halls Creek is a perennial stream with slow flow over substrate consisting of silt and mud. Water clarity was moderate with tannic acid being the primary contributor to the tea-colored water. The channel ranges in width from 70 ft (21 m) to 160 ft (49 m), and has an average depth of greater than 5 ft (1.5 m). A geomorphic characterization of the stream section within the project study area indicates Halls Creek is a "C" type channel (Rosgen 1996).

Halls Creek has been assigned a best usage classification of **C Sw** (DENR 2001a). The **C** designation indicates waters that support aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation is any activity involving human body contact with water on an infrequent or incidental basis. Point source discharges of treated wastewater are permitted in these waters, pursuant to Rules .0104 and .0211 of 15A NCAC 2B; however, local programs to control nonpoint source and stormwater discharge of pollution are required. The **Sw** designation refers to Swamp Waters, which have low velocities and other natural characteristics that are different from adjacent streams.

No Outstanding Resource Waters **(ORW)**, High Quality Waters **(HQW)**, **WS-I**, or **WS-II** Waters occur within 1.0 mile (1.6 kilometers [km]) upstream or downstream of the project study area (DEM 1993, DENR 2001a). Halls Creek is not designated as a North Carolina Natural and Scenic River, or as a national Wild and Scenic River. Halls Creek is designated as an anadromous fish spawning area (NCCGIA 2001).

One method used by DWQ to monitor water quality is through long-term monitoring of macroinvertebrates. In 1997, benthic macroinvertebrate samples were taken upstream of the project study area. One sampling location is located approximately 4.5 miles (7.2 km) upstream of the study area at US 17 on the Little River (DWQ 1997). This location received a bioclassification of fair (DWQ 1997).

Another measure of water quality being used by the DWQ is the North Carolina Index of Biotic Integrity (NCIBI), which assesses biological integrity using the structure and health of the fish community. No NCIBI sampling has been reported for any Pasquotank County stream systems (DWQ 1996).

There is a N.C. Department of Natural Resources - Division of Water Quality monitoring well (Site ID number F111) located on the public boating access area property. The well is located approximately 150 to 200 ft (46 to 61 m) on the east side of Halls Creek due south of the existing bridge.

C.2. Essential Fish Habitat Assessment

An Essential Fish Habitat (EFH) assessment is typically required for bridge replacement in coastal counties. EFH is defined by the National Marine Fisheries Service (NMFS) as "those waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity" (NMFS 1999).

The current species list prepared by the NMFS pertaining to EFH has been reviewed and all listed species are either marine or estuarine species. The project study area is in close proximity to estuarine waters; however, it will not be considered EFH by the USACE and NMFS.

C.3. Permitted Discharges

Discharges that enter surface waters through a pipe, ditch, or other well-defined point of discharge are broadly referred to as "point sources". There are no permitted point source dischargers located along Halls Creek or within 5 miles (8 km) of the project study area (DENR 2001b).

C.4. Anticipated Impacts to Water Resources

Short-term impacts to water quality, such as sedimentation and turbidity, may result from construction-related activities. Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of a stringent erosion control schedule and the use of BMP's. The contractor will follow contract specifications pertaining to erosion control measures as outlined in 23 CFR 650 Subpart B and Article 107-13 entitled Control of Erosion, Siltation, and Pollution pursuant to NCDOT's Standard Specifications for Roads and Structures. These measures include: the use of dikes, berms, silt basins, and other containment measures to control runoff and elimination of construction staging areas in floodplains and adjacent waterways. Disturbed sites will be revegetated with herbaceous cover after any temporary construction impacts.

Other impacts to water quality, such as changes in water temperature as a result of increased exposure to sunlight due to the removal of stream-side vegetation or increased shade due to the construction of the bridges, and changes in stormwater flows due to changes in the amount of impervious surface adjacent to the stream channels, can be anticipated as a result of this project. However, due to the limited amount of overall change in the surrounding areas, impacts are expected to be temporary in nature.

No adverse long-term impacts to water resources are expected to result from the alternative being considered. The proposed project calls for replacement of the bridge in-place across Halls Creek, which will allow for continuation of present stream flow within the existing channel, thereby protecting stream integrity.

C.5. Impacts Related to Bridge Demolition and Removal

In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all contractors will follow appropriate guidelines for bridge demolition and removal. These guidelines are presented in three NCDOT documents entitled: "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Water of the United States", and "Best Management Practices for Bridge Demolition and Removal".

The superstructure of Bridge No. 24 consists of a reinforced concrete deck on timber joists. The bridge has 8 spans and totals 68 ft (20.7 m) in length. The original end and interior bents of the substructure were constructed of timber piles and caps and have been replaced with steel H-piles and steel caps. The original timber piles are still in place.

There is potential for the concrete deck to be dropped into Halls Creek during demolition and removal. The maximum potential temporary fill associated with the removal of the bridge deck is approximately 32.7 cubic yards (25 cubic meters). It is anticipated that there will be no temporary fill associated with demolition and removal of the substructure since it is composed of timber and steel and can be removed without dropping components into the water.

The North Carolina Wildlife Resources Commission (NCWRC) requests a moratorium on in-water work between February 15 and June 15. Because a moratorium applies, this project falls under Case 2 (allowing no in-water work during moratorium periods) of the Best Management Practices for Bridge Demolition and Removal.

D. Biotic Resources

D.1. Plant Communities

Terrestrial distribution and composition of plant communities throughout the project study area reflect landscape-level variations in topography, soils, hydrology, and past and present land use practices. When appropriate, the plant community names have been adopted and modified from the NHP classification system (Schafale and Weakley, 1990) and the descriptions written to reflect local variations within the project study area. Six plant communities were identified within the project study area: cypress-gum swamp, mixed hardwood forest, mixed pine/hardwood forest, agricultural land, successional areas, and maintained/disturbed areas. These communities total approximately 19.4 acres (7.9 ha), which does not include the approximately 2.7 acres (1.1 ha) of open water attributed to Halls Creek and pond.

Cypress-Gum Swamp – The cypress-gum swamp covers approximately 3.7 acres (1.5 ha) [19.0 percent] of the project study area. Cypress-gum swamps are associated with backswamps, sloughs, swales, and featureless floodplains of blackwater rivers. The canopy of this community is dominated by species such as swamp black gum (Nyssa biflora) and bald cypress (Taxodium distichum). The understory and shrub layer are usually poorly developed, though they may be dense in some sites and may include green ash (Fraxinus pennsylvanica) and red maple (Acer rubrum). The herb layer ranges from nearly absent to moderate cover. Herbaceous species include lizard's tail (Saururus cernuus) and arrow arum (Peltandra virginica).

Mixed Hardwood Forest – The mixed hardwood forest areas cover approximately 1.8 acres (0.7 ha) [9.3 percent] of the project study area. Tree species in this community consist of sweetgum (Liquidambar

styraciflua) and red maple. The shrub and groundcover layer consisted of red maple, sweetgum, wax myrtle (Myrica cerifera), giant cane (Arundinaria gigantea), and common greenbrier (Smilax rotundifolia).

Mixed Pine/Hardwood Forest – Mixed pine/hardwood forest covers approximately 1.0 acre (0.4 ha) [5.2 percent] of the project study area. Dominant tree species consist of loblolly pine (Pinus taeda), sweetgum; and red maple. Shrub and groundcover species consist of sweetgum, blackberry (Rubus argutus), poison ivy (Toxicodendron radicans), and Japanese honeysuckle (Lonicera japonica).

Agricultural Land – Agricultural land covers approximately 1.3 acres (0.5 ha) [6.7 percent] of the project study area. Agricultural land includes land that is currently or has been recently in production of harvestable crops and/or livestock. The agriculture land at the northwest end of the project study area is currently in row crop production. The agricultural land northeast and southeast portions of the project study area are currently utilized as pasture.

Successional Areas – Successional land covers approximately 1.1 acres (0.4 ha) [5.7 percent] of the project study area. The successional area consists of a fallow field that has been overtaken by opportunistic species such Japanese honeysuckle and blackberry.

Maintained/Disturbed Areas – Maintained/disturbed areas cover approximately 10.5 acres (4.3 ha) [54.1 percent] of the project study area. The maintained/disturbed areas within the project study area include roadsides and rights-of-way, maintained residential yards, powerline right-of-way corridors, and areas where other human related activities dominate.

D.2. Wildlife

The project study area was visually surveyed for signs of terrestrial and aquatic wildlife; however, little evidence of wildlife was observed during the field effort. The project study area is surrounded by busy roadways, cypress-gum swamp, forested areas, maintained/disturbed areas and agricultural areas. Expected wildlife species are those adapted to fragmented landscapes.

No bird species were observed within or adjacent to the project study area. Bird species expected to occur within the project study area include American crow (Corvus brachyrhynchos), mourning dove (Zenaida macroura), great egret (Casmerodius albus), great blue heron (Ardea heroides), and osprey (Pandion haliaetus).

No mammals were observed within the project study area. Species expected to be found in and around roadside and urban settings include raccoon (Procyon lotor), Virginia opossum (Didelphis virginiana), woodchuck (Marmota monax), red fox (Vulpes vulpes), gray squirrel (Sciurus carolinensis), and eastern cottontail (Sylvilagus floridanus). Other species that may use the Halls Creek floodplain as a travel corridor include white-tailed deer (Odocoileus virginianus).

No terrestrial reptiles were observed within the project study area. Species expected to occur within the project study area include eastern box turtle (Terrapene carolina), eastern garter snake (Thamnophis sirtalis), ringneck snake (Diadophis punctatus), and rat snake (Elaphe obsoleta).

No terrestrial amphibians were observed within the project study area. Species expected to occur within the project study area include such species as Fowler's toad (Bufo woodhouseii fowleri) and spring peeper (Pseudacris crucifer).

D.3. Aquatic Communities

The aquatic habitat located within the project study area includes Halls Creek and its side channels. Limited kick-netting, seining, dip-netting, electrofishing and visual observation of stream banks and channel within the project study area were conducted in Halls Creek to document the resident aquatic wildlife populations.

Fish species documented in the segment of Halls Creek within the project study area are pumpkinseed (Lepomis gibbosus), bluegill (Lepomis macrochirus), and eastern mosquitofish (Gambusia holbrooki). Coastal streams are often used by anadromous fish species such as striped bass (Morone saxatillis) and shad (Alosa spp. and Dorosoma spp.). Anadromous fish may occur in Halls Creek. Menhinick (1991) documents the occurrence of Atlantic menhaden (Brevoortia tyrannus) in the waterways adjacent to Halls Creek.

No aquatic reptiles were observed within the project study area. Species expected to occur within the project study area include northern water snake (Nerodia sipedon), cottonmouth (Agkistrodon piscivorus), and common snapping turtle (Chelydra serpentina).

Aquatic amphibians observed within the project study area were limited to bullfrog (Rana catesbeiana). Other species expected to occur within the project study area include green frog (Rana clamitans melanota) and southern leopard frog (Rana utricularia).

Aquatic invertebrate surveys included kick-net surveys, limited bottom sampling, and walking all streambanks in the project study area to locate freshwater mussel middens. Visual observation of the streambanks of Halls Creek revealed no evidence of freshwater mussels. Kick-net surveys and limited bottom sampling conducted within the channel of Halls Creek produced various aquatic macroinvertebrates.

Benthic invertebrate organisms collected within Halls Creek were identified to at least Order, and Family if possible, and include dragonflies (Odonota:Lestidae), midges (Diptera:Chironomidae), water beetles (Hemiptera:Corixidae), clams (Pelecypoda), sow bugs (Isopoda), and scuds (Amphipoda). Identifications are based on McCafferty (1998).

D.4. Anticipated Impacts to Biotic Communities

D.4.a. Terrestrial Communities Impacts

Potential impacts to plant communities are estimated based on the approximate area of each plant community present within the proposed right-of-way and temporary construction limits. No impacts to plant communities are anticipated because the existing right-of-way will not increase in size. The land currently within the existing right-of-way has been designated as maintained/disturbed land, and no impacts to natural plant communities are anticipated as a result of this project.

Due to the lack of infringement on natural plant communities, the proposed bridge replacement will not

result in substantial loss or displacement of known terrestrial animal populations. Wildlife movement corridors are not expected to be substantially impacted by the proposed project.

D.4.b. Aquatic Communities Impacts

The proposed bridge replacement will not result in substantial loss or displacement of known aquatic wildlife populations. Potential down-stream impacts to aquatic habitat will be avoided by bridging Halls Creek to maintain regular flow and stream integrity. In addition, temporary impacts to downstream habitat from increased sediment during construction are expected to be reduced by limiting in-stream work to an absolute minimum, except for the removal of the portion of the sub-structure below the water. BMP-BDR will be followed to minimize impacts due to anticipated bridge demolition.

E. SPECIAL TOPICS

E.1. Waters of the United States

Surface waters within the embankments of Halls Creek are subject to jurisdictional consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR 328.3). Wetlands subject to review under Section 404 of the Clean Water Act (33 U.S.C. 1344) are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a portion (12.5 percent) of the growing season (DOA 1987). Pursuant to Cowardin et al. (1979) the majority of the jurisdictional wetlands associated with Halls Creek are palustrine, deciduous forested wetlands that are semi-permanently flooded (PFO6F). A small area of jurisdictional wetlands is present within the existing right-of-way east of Halls Creek. These areas are part of the cypress/gum swamp (PFO6F), but have been impacted by maintenance within the existing right-of-way and are now palustrine, persistent emergent wetlands (PEM1C). The waters in Halls Creek within the project study area exhibit characteristics of riverine, lower perennial, unconsolidated bottom, permanently flooded waters (R2UBH) (Cowardin et al. 1979). Halls Creek is a jurisdictional surface water.

E.2. Potential Impacts to Waters of the United States

Temporary and permanent impacts to wetlands and surface waters are estimated based on the amount of each jurisdictional area within the proposed construction easement limits. Estimated wetland and surface water impacts are provided in Table 2. Impacts are restricted to 0.11 acre (0.04 ha) of surface water along approximately 60 linear ft (18 m) of channel and 0.017 acre (0.01 ha) of wetlands that are within the existing right-of-way. This emergent wetland is contiguous to the adjacent cypress-gum swamp. No portion of the cypress-gum swamp should be impacted by this proposed project.

Table 2
Potential Impacts to Jurisdictional Wetlands and Surface Waters

JURISDICTIONAL AREAS	Alternate A
R2UBH (Surface Waters) PEM1C (Wetland)	0.11 ac (0.04 ha) 0.017 ac (0.01 ha)
Total Areas:	**0.13 ac (0.05 ha)**
Stream Channel Impacts (Halls Creek)	60 ft (18 m)

E.3. Permits

Section 404 of the Clean Water Act – In accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit is required from the USACE for projects of this type for the discharge of dredged or fill material into "Waters of the United States". The USACE issues two types of permits for these activities. A general permit may be issued on a nationwide or regional basis for a category or categories of activities when: those activities are substantially similar in nature and cause only a minimal individual or cumulative environmental impacts, or when the general permit would result in avoiding unnecessary duplication or regulatory control exercised by another Federal, state, or local agency provided that the environmental consequences of the action are individually and cumulatively minimal. If a general permit is not appropriate for a particular activity, then an individual permit must be utilized. Individual permits are authorized on a case-by-case evaluation of a specific project involving the proposed discharges.

It is anticipated that this project will fall under Nationwide Permit 23, which is a type of general permit. Nationwide Permit 23 is relevant to approved Categorical Exclusions. This permit authorizes any activities, work and discharges undertaken, assisted, authorized, regulated, funded or financed, in whole or in part, by another federal agency and that the activity 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 environment. Activities authorized under nationwide permits must satisfy all terms and conditions of the particular permit. However, final permit decisions are left to the discretionary authority of the USACE.

Section 401 Water Quality Certification – A 401 Water Quality Certification, administered through the DWQ, will also be required. This certification is issued for any activity which may result in a discharge into waters for which a federal permit is required. According to the DWQ, one condition of the permit is that the appropriate sediment and erosion control practices must be utilized to prevent exceedances of the appropriate turbidity water quality standard.

E.4. Mitigation Evaluation

Avoidance – The project's purpose necessitates traversing the overflow; therefore totally avoiding surface water impacts is impossible. The proposed alternative involves replacing the bridge "in-place" and utilizing an off-site detour. This will prevent any temporary impacts associated with on-site detours.

Minimization – Impacts will be minimized by replacing the structure in its existing location and maintaining traffic with an off-site detour. This replacement method will require the smallest relative construction footprint. However, utilization of BMPs is recommended in an effort to minimize impacts, including avoiding placing staging areas within wetlands.

Mitigation - Compensatory mitigation is not expected for this project due to the limited nature of project impacts. Temporary impacts associated with the construction activities could be mitigated by replanting disturbed areas with native species and removal of any temporary fill material within the floodplain upon project completion.

F. Rare and Protected Species

F.1. Federally Protected Species

Species with the federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The following federal protected species are listed for Pasquotank County (USFWS list dated May 31, 2002):

Table 3
Federally Protected Species for Pasquotank County, NC

Common Name	Scientific Name	Status	Biological Conclusion
Bald eagle	Haliaeetus leucocephalus	T	No Effect

T – Threatened "a species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range".

Bald eagle - The bald eagle is a large raptor with a wingspan greater than 6 ft (1.8 m). Adult bald eagles are dark brown with white head and tail. Immature eagles are brown with whitish mottling on their tail, belly, and wing linings. Bald eagles typically feed on fish but may also take birds and small mammals. In the Carolinas, nesting season extends from December through May (Potter et al. 1980).

Bald eagles typically nest in tall, living trees in a conspicuous location near water and forage over large bodies of water with adjacent trees available for perching (Hamel 1992). Preventing disturbance activities within a primary zone extending 750 to 1500 ft (229 to 457 m) to outward from a nest tree is considered critical for maintaining acceptable conditions for eagles (USFWS 1987).

BIOLOGICAL CONCLUSION: No Effect

No bald eagles or nest trees were observed during the field investigation; however, bald eagles could potentially utilize the area for food. An updated NHP records search was performed on December 20, 2001, April 12, 2002 and December 10, 2002. There are no records of bald eagles occurring within 1.0 mile (1.6 km) of the project study area. Construction of this project will not have an impact on the bald eagle.

F.2. Federal Species of Concern

The May 31, 2002 FWS list also includes a category of species designated as "Federal species of concern" (FSC). The FSC designation provides no federal protection under the ESA for the species listed. No FSC are listed for Pasquotank County.

F.3. State Protected Species

Plant and animal species which are on the North Carolina state list as Endangered (E), Threatened (T), or Special Concern (SC), receive limited protection under the North Carolina Endangered Species Act (G.S. 113-331 et seq.) and the North Carolina Plant Protection Act of 1979 (G.S. 106-202 et seq.). No impacts to state listed species should result from this proposed project.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

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

B. Historic Architecture

A Historical Architectural Resources Survey report was completed to identify all historic resources located within the Area of Potential Effects (APE) for the project. This survey was conducted: 1) to determine the APE, which is defined as the geographic area within which the project may cause changes to the character or use of historic properties; 2) to identify all significant resources within the APE; and 3) to evaluate any identified resources according to National Register of Historic Places criteria. This study included background research and a field survey that was conducted in July 2001. Every property at least fifty years of age was photographed, mapped, and evaluated. One property, Halls Creek United Methodist Church (ca. 1827) was identified within the APE and evaluated. This antebellum church has been significantly altered in recent decades and is therefore not recommended as eligible of the National Register.

The State Historic Preservation Office reviewed the report and concurred (see memorandum in Appendix dated November 7, 2001) that the Halls Creek United Methodist Church is not eligible for listing in the National Register of Historic Places due to character altering changes since the 1950's.

C. Archaeology

In their February 25, 2003 memorandum the SHPO stated "Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for listing in the National Register of Historic Places will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project." A copy of the SHPO memorandum is included in the Appendix.

VII. ENVIRONMENTAL EFFECTS

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

The project is considered a Federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

Replacement of Bridge No. 24 will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

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

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

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

In compliance with Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) a review was conducted to determine whether minority of low-income populations were receiving disproportionately high and adverse human health and environmental impacts as a result of this project. The investigation determined the project would not disproportionately impact any minority or low-income populations.

The studied route does not contain any bicycle accommodations, nor is it a designated bicycle route; therefore, no bicycle accommodations have been included as part of this project.

This project has been coordinated with the United States Department of Agriculture, Natural Resources Conservation Service. The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland for all land acquisition and construction projects. The project involves replacing the bridge in its existing location. No impacts to prime or locally important farmland are anticipated.

No publicly owned parks or recreational facilities, wildlife and waterfowl refuges, or historic sites of national, state or local significance in the immediate vicinity of the project will be impacted.

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

No adverse effects to air quality are expected to result from this project. This project is an air quality "neutral" project, so it is not required to be included in the regional emissions analysis (if applicable), and a project level CO analysis is not required. Since the project is located in an attainment area, 40 CFR Part 51 is not applicable. If vegetation or wood debris is disposed of by open burning, it shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520 and 1990 Clean Air Act Amendments and the National Environmental Policy Act. This evaluation completes the assessment requirements for air quality, and no additional reports are required.

Ambient noise levels may increase during the construction of this project; however this increase will be only temporary and usually confined to daylight hours. There should be no notable change in traffic volumes after this project is complete. Therefore, this project will have no adverse effect on existing noise levels. Noise receptors in the project area will not be impacted by this project. This evaluation completes the assessment requirements for highway noise set forth in 23 CFR Part 772. No additional reports are required.

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

No adverse effect on the overall public is expected. There will be some inconvenience to local travel due to the closure of SR 1140. Pasquotank County Emergency Services Department indicates that this project will not significantly impact their response time.

Pasquotank County is a participant in the National Flood Insurance Regular Program. The project is not located in a Detailed Study Area, but is located within a Zone A floodplain. The approximate 100-year floodplain in the project area is shown in Figure 6. There are no practical alternatives to crossing the floodplain area. The replacement structure is proposed as an in-kind replacement. The proposed project is not anticipated to increase the upstream limits of the 100-year flood plain thereby minimizing impacts.

Geotechnical borings for the bridge foundation will be necessary.

There is a U.S. Geological Survey (USGS) geodetic survey marker located on the northeast end of the existing bridge. The marker number, date, and elevation are 33 MEA, 1976, and 5 ft (1.5 m), respectively. Relocation of this marker will be required prior to removal of the existing bridge.

Based on the above discussion, it is concluded that no substantial adverse environmental impacts will result from the replacement of Bridge No. 24.

VIII. PUBLIC INVOLVEMENT

A Citizens Informational Workshop was held on December 5, 2001, at the Nixonton Volunteer Fire Department to present the studied alternatives and to seek public comments. Alternatives A & B were presented. Eleven people attended the workshop including a representative from Pasquotank County. Local officials and citizens indicated that Alternative A was the locally preferred alternative for replacing the existing bridge.

A letter dated January 7, 2002 written on behalf of the Pasquotank County Board of Commissioners by the County Manager states: "it is in the best interest of the citizens of our area and the State of North Carolina to pursue the least expensive option which will also eliminate the need to take any homes in the area. Although this option will close the road for a period of time, the Board of Commissioners believes that this will have a minimal disruption for the area." A copy of this letter is provided in the Appendix of this report.

IX. AGENCY COMMENTS

Agency comments are summarized below. Letters from the commenting agencies are included in the appendix.

National Marine Fisheries Services (NMFS): If detours are required during bridge construction to maintain traffic flow, off-site detours are preferable because they avoid and minimize impacts to wetlands.

Response: The preferred alternative utilizes an off-site detour to maintain traffic.

North Carolina Wildlife Resources Commission (NCWRC): Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes an in-water work moratorium from February 15 to June 15.

Response: An in-water work moratorium between February 15 to June 15 to protect fish spawning will be observed and the "Stream Crossing Guidelines for Anadromous Fish Passage" will be followed to the maximum extent possible.

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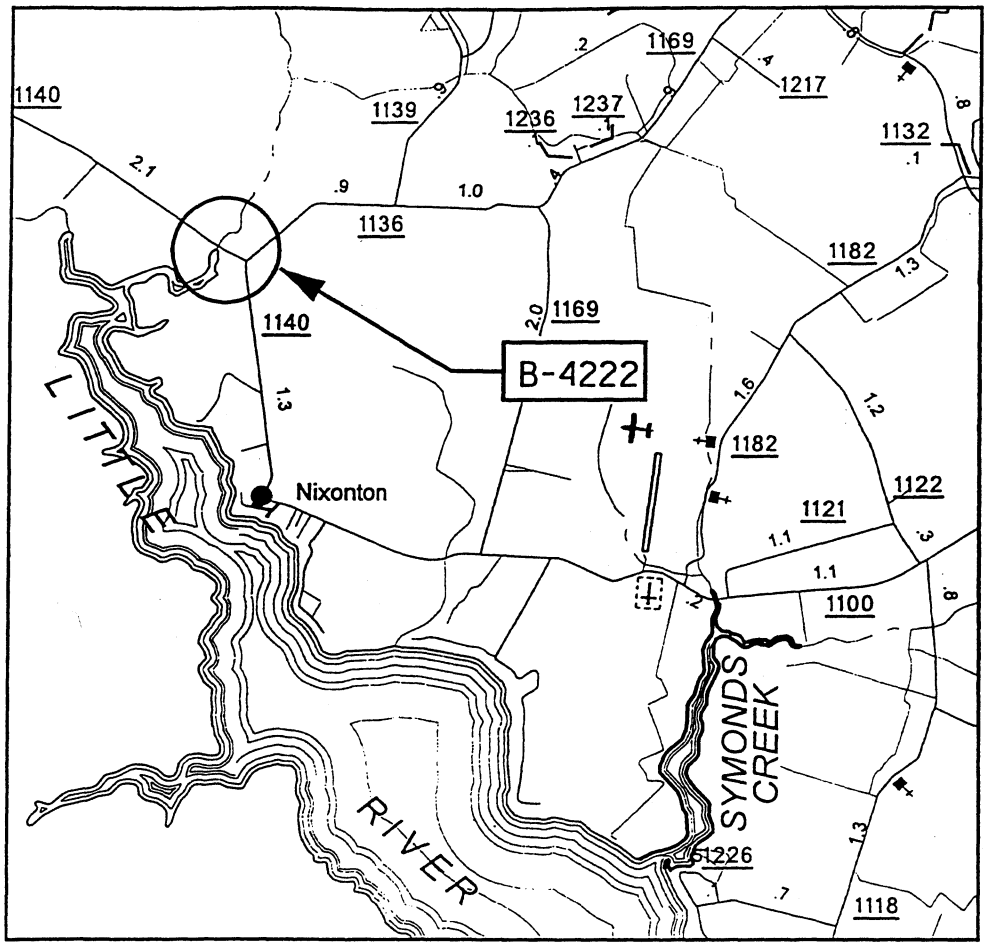
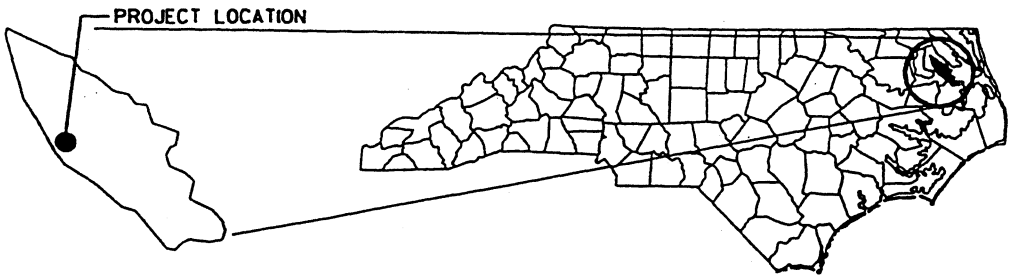
FIGURES



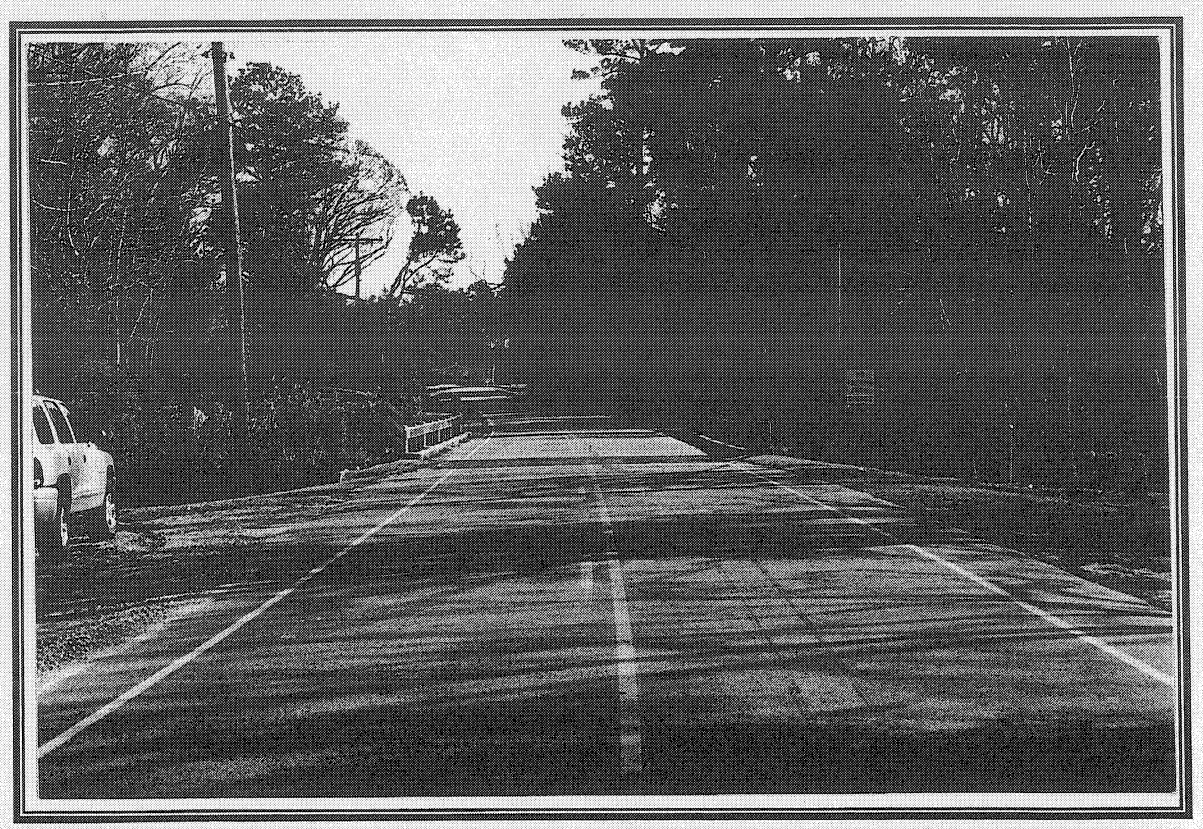


SCALE IN MILES

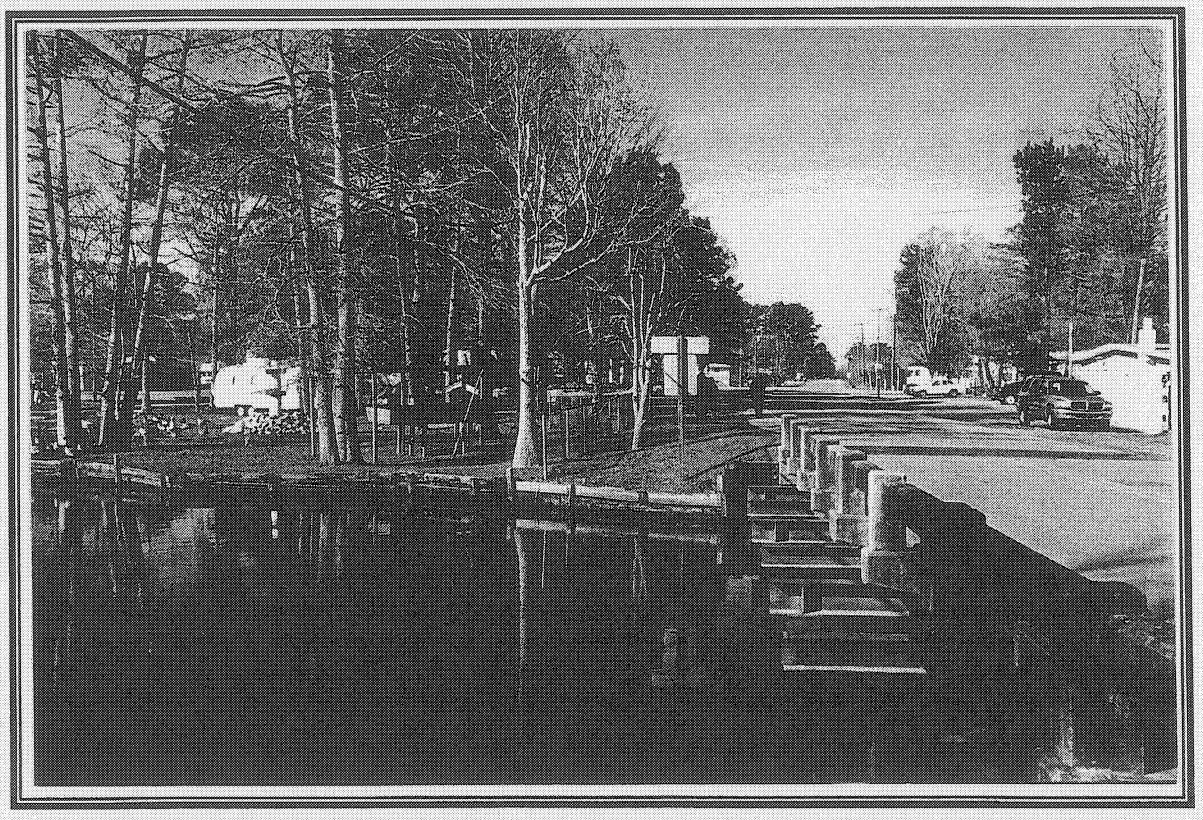
1 0 1

North Carolina Department of Transportation
Division of Highways
Project Development & Environmental Analysis Branch

FIGURE 1
AREA LOCATION MAP
BRIDGE NO. 24
ON SR 1140
OVER HALLS CREEK
PASQUOTANK COUNTY, NORTH CAROLINA
TIP PROJECT B-4222



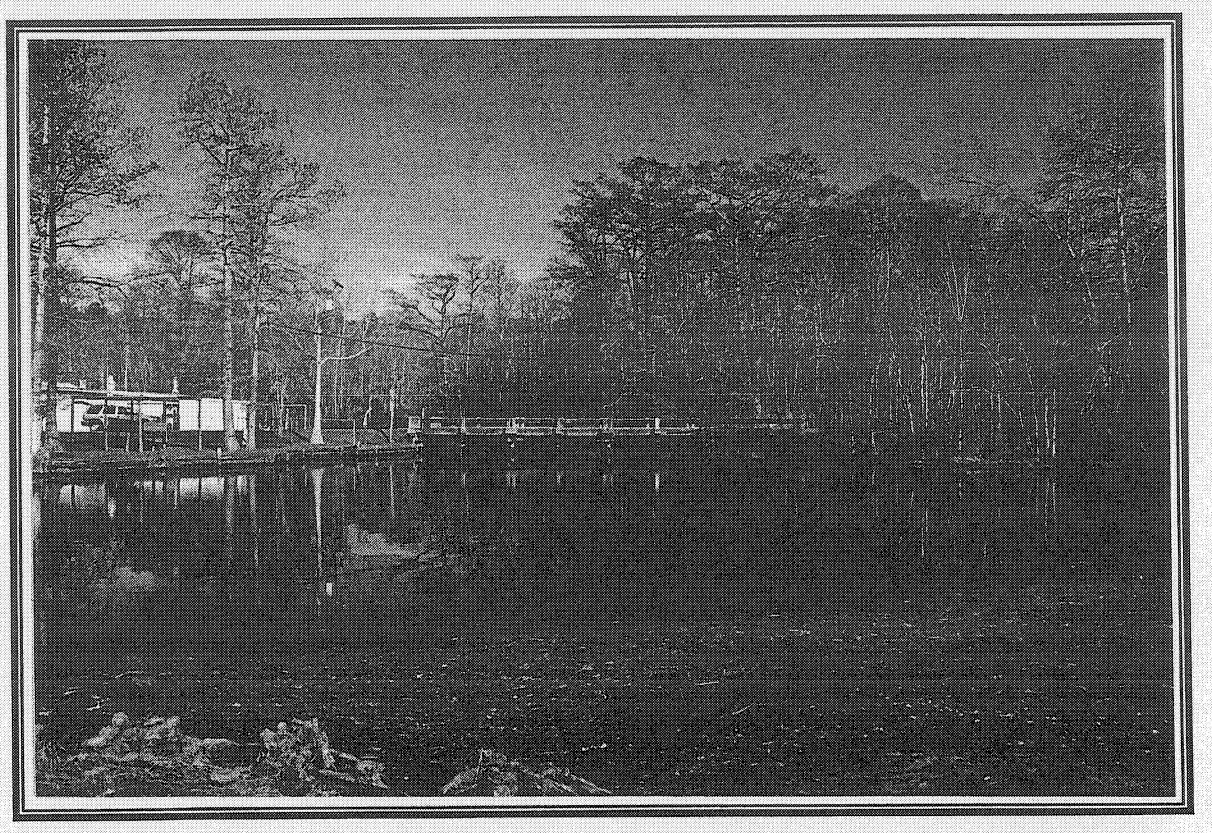
ON SR 1140 LOOKING EAST AT BRIDGE NO. 24



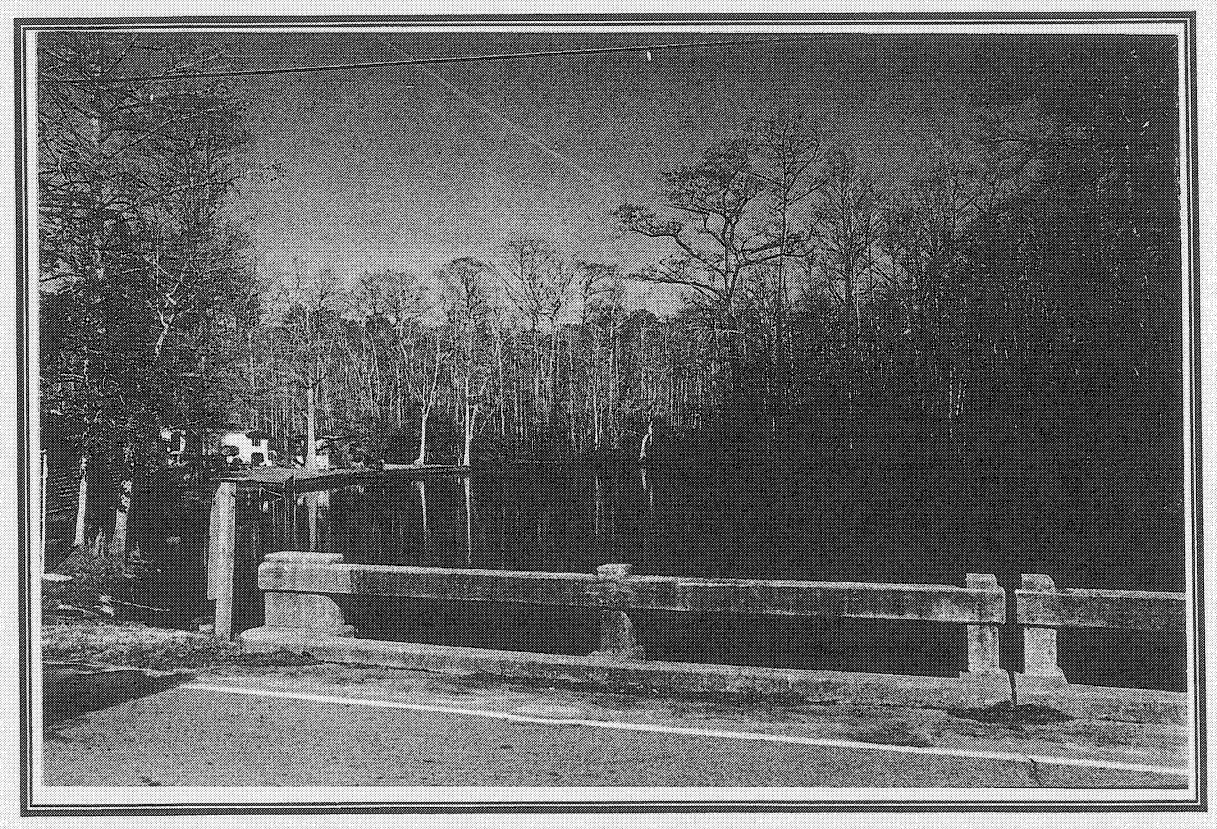
ON SOUTH SIDE OF SR 1140 LOOKING WEST

B-4222 PASQUOTANK COUNTY
REPLACE BRIDGE NO. 24 ON SR 1140 OVER HALLS CREEK

FIGURE 2
PROJECT PHOTOGRAPHS



LOOKING NORTH AT BRIDGE NO. 24



ON BRIDGE NO. 24 LOOKING NORTH

B-4222 PASQUOTANK COUNTY
REPLACE BRIDGE NO. 24 ON SR 1140 OVER HALLS CREEK

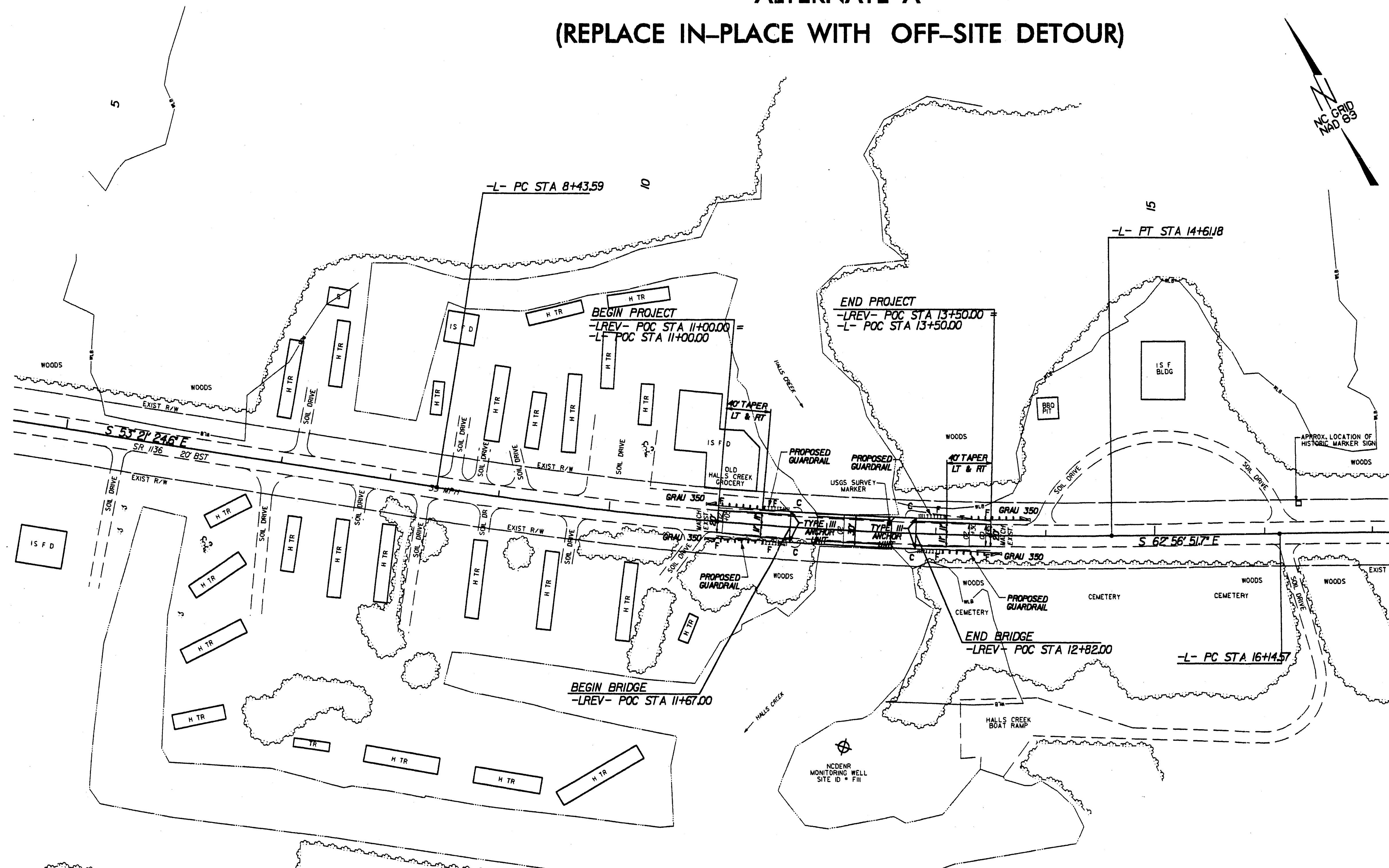
FIGURE 3
PROJECT PHOTOGRAPHS

PROJECT REFERENCE NO.	SHEET NO.
B-4222	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

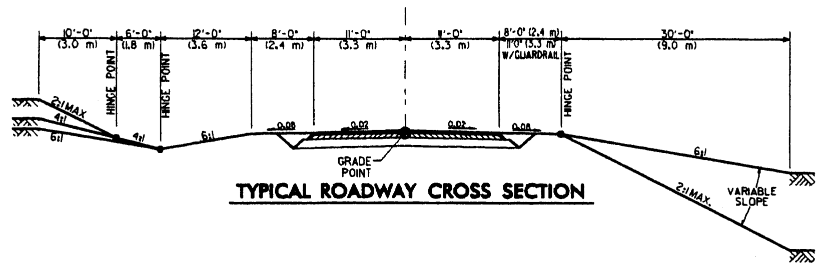
ALTERNATE A
(REPLACE IN-PLACE WITH OFF-SITE DETOUR)



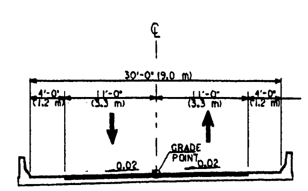
DESIGN DATA

DESIGN SPEED	40 mph (65 km/h)
POSTED SPEED	35 mph (60 km/h)
CURRENT YEAR ADT (2001)	1400 vpd
DESIGN YEAR ADT (2025)	2800 vpd
% TTST , % DUALS	1% , 3%
FUNCTIONAL CLASSIFICATION	Rural Minor Collector
TERRAIN	Flat
MAX RADIUS	468 ft (143 m)
MAXIMUM GRADE	7%
SUPERELEVATION RATE	Se = 0.08

-LREV- CURVE 1	-L- CURVE 1	-L- CURVE 2
PI Sta 12+25.05	PI Sta 11+53.11	PI Sta 17+21.58
Δ = 3° 52' 56.5" (LT)	Δ = 9° 35' 27.1" (LT)	Δ = 1° 08' 07.1" (RT)
D = 1° 33' 10.6"	D = 1° 33' 10.6"	D = 0° 31' 49.7"
L = 250.00'	L = 617.59'	L = 214.02'
T = 125.05'	T = 309.52'	T = 107.01'
R = 3,689.50'	R = 3,689.50'	R = 10,800.91'



TYPICAL ROADWAY CROSS SECTION

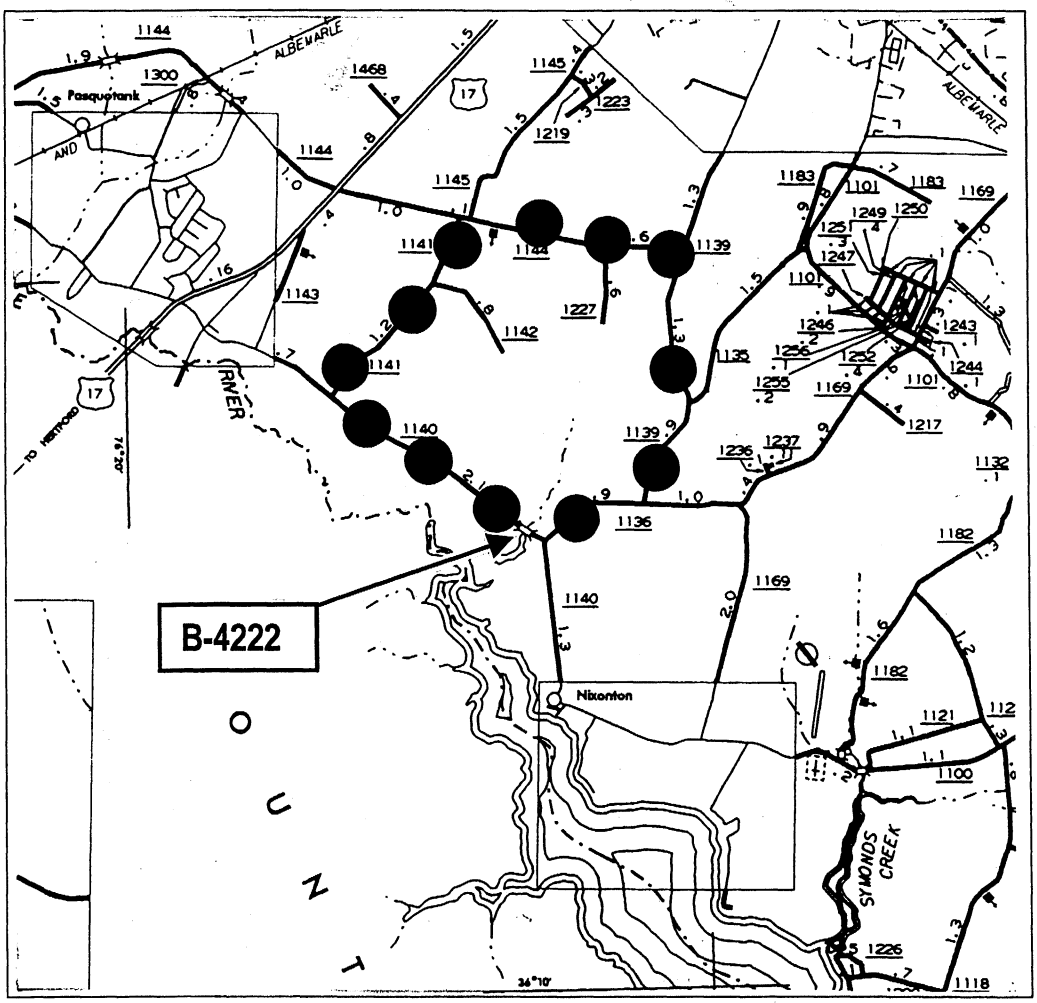


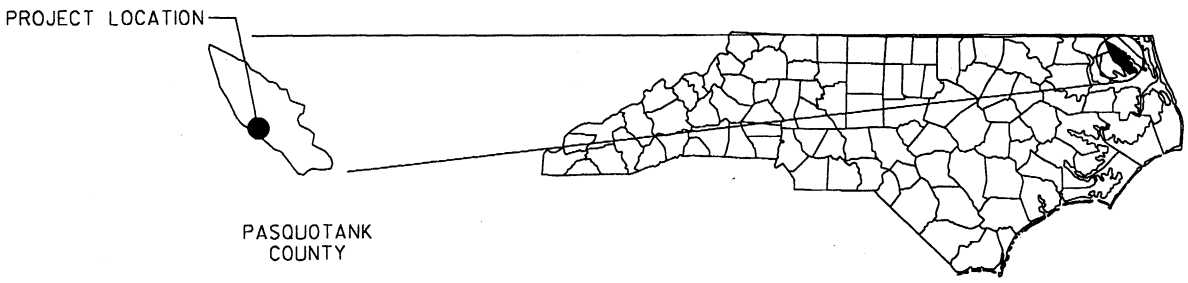
TYPICAL BRIDGE CROSS SECTION

FIGURE 4

SCALE

50 0 50 100





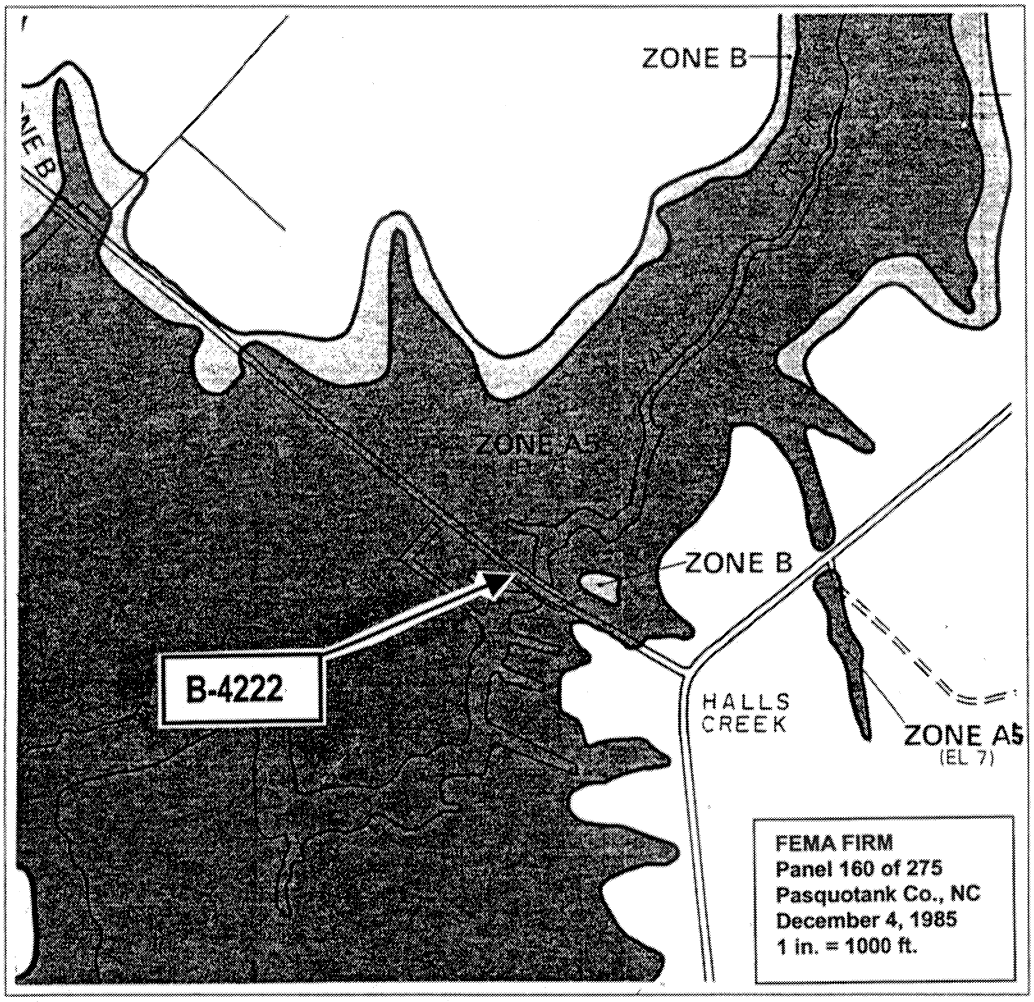
OFF-SITE DETOUR ROUTE

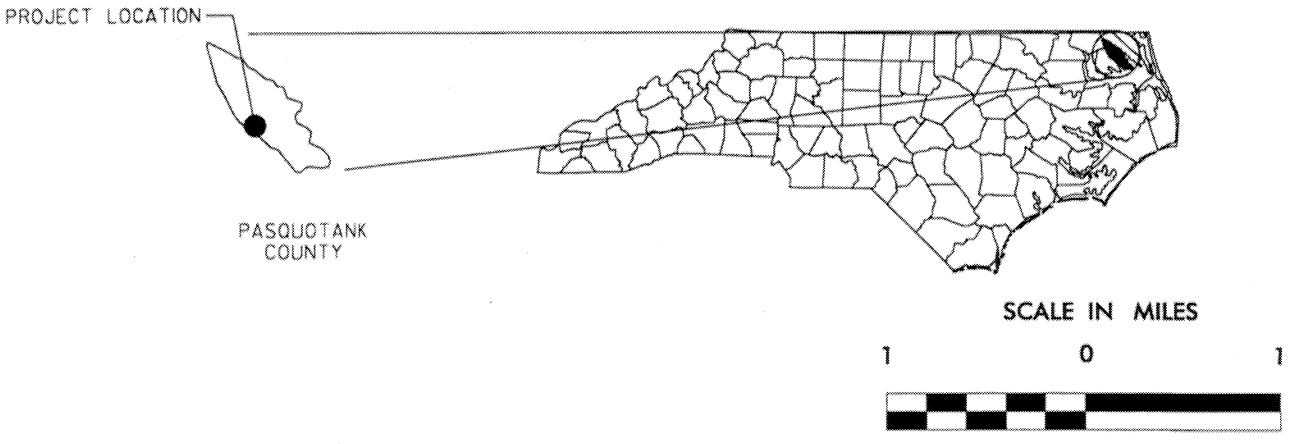
SCALE IN MILES

1 0 1

North Carolina Department of Transportation
Division of Highways
Project Development & Environmental Analysis Branch

FIGURE 5
OFF-SITE DETOUR ROUTE
BRIDGE NO. 24
ON SR 1140
OVER HALLS CREEK
PASQUOTANK COUNTY, NORTH CAROLINA
TIP PROJECT B-4222





North Carolina Department of Transportation
Division of Highways
Project Development & Environmental Analysis Branch

FIGURE 6
100-YEAR FLOOD PLAIN
BRIDGE NO. 24
ON SR 1140
OVER HALLS CREEK
PASQUOTANK COUNTY, NORTH CAROLINA
TIP PROJECT B-4222

SR 1140

SR 1140

Project Study Area

Bridge Site

NC Wildlife Commission
Ramp

APPENDIX

Marion Ellerby

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

August 10, 2001

Mr. William D. Gilmore, P.E., Manager
NCDOT
Project Development and Environmental Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Gilmore:

Thank you for your June 21, 2001 request for information from the U.S. Fish and Wildlife Service (Service) on the potential environmental impacts of proposed bridge replacements in Hyde and Pasquotank Counties, North Carolina. This report provides scoping information and is provided in accordance with provisions of the Fish and Wildlife Coordination Act (FWCA) (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This report also serves as initial scoping comments to federal and state resource agencies for use in their permitting and/or certification processes for this project.

The North Carolina Department of Transportation (NCDOT) proposes to replace the following bridge structures:

1. B-3858 Bridge No. 6 on SR 1110 over Canal; and,

2. B-4222 Bridge No. 24 on SR 1140 over Halls Creek.

The following recommendations are provided to assist you in your planning process and to facilitate a thorough and timely review of the project.

Generally, the Service recommends that wetland impacts be avoided and minimized to the maximum extent practical as outlined in Section 404 (b)(1) of the Clean Water Act Amendments of 1977. In regard to avoidance and minimization of impacts, we recommend that proposed highway projects be aligned along or adjacent to existing roadways, utility corridors, or previously developed areas in order to minimize habitat fragmentation and encroachment. Areas exhibiting high biodiversity or ecological value important to the watershed and region should be avoided. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a structure wherever feasible. Where bridging is not feasible, culvert structures that maintain natural water flows and hydraulic regimes without scouring, or impeding fish and wildlife passage, should be employed. Highway shoulder and median widths should be reduced through wetland areas. Roadway embankments and fill areas

should be stabilized by using appropriate erosion control devices and techniques. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons.

The National Wetlands Inventory (NWI) maps of the Middletown and Nixonton 7.5 Minute Quadrangles show wetland resources in the specific work areas. However, while the NWI maps are useful for providing an overview of a given area, they should not be relied upon in lieu of a detailed wetland delineation by trained personnel using an acceptable wetland classification methodology. Therefore, in addition to the above guidance, we recommend that the environmental documentation for this project include the following in sufficient detail to facilitate a thorough review of the action.

1. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory. Wetland boundaries should be determined by using the 1987 Corps of Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers (Corps).

2. If unavoidable wetland impacts are proposed, we recommend that every effort be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity, preferably via conservation easement, should be explored at the outset.

The document presents a number of scenarios for replacing each bridge, ranging from in-place to relocation, with on-site and off-site detours. The Service recommends that each bridge be replaced on the existing alignment with an off-site detour.

The enclosed list identifies the federally-listed endangered and threatened species, and Federal Species of Concern (FSC) that are known to occur in Hyde and Pasquotank Counties. The Service recommends that habitat requirements for the listed species be compared with the available habitats at the respective project sites. If suitable habitat is present within the action area of the project, biological surveys for the listed species should be performed. Environmental documentation that includes survey methodologies, results, and NCDOT's recommendations based on those results, should be provided to this office for review and comment.

FSC's are those plant and animal species for which the Service remains concerned, but further biological research and field study are needed to resolve the conservation status of these taxa. Although FSC's receive no statutory protection under the ESA, we would encourage the NCDOT to be alert to their potential presence, and to make every reasonable effort to conserve them if found. The North Carolina Natural Heritage Program should be contacted for information on species under state protection.

The Service appreciates the opportunity to comment on this project. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding these comments, please contact Tom McCartney at 919-856-4520, Ext. 32.

Sincerely,

for Dr. Garland B. Pardue
Ecological Services Supervisor

Enclosures

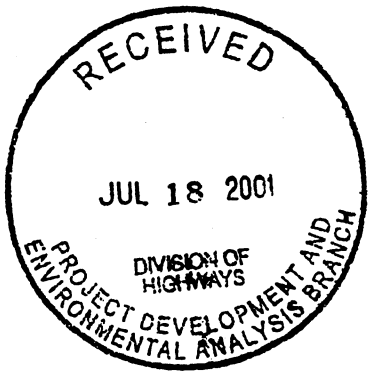
cc: COE, Washington, NC (Michael F. Bell)
NCDWQ, Raleigh, NC (John Hennessey)
NCDNR, Creedmoor, NC (David Cox)

FWS/R4:TMcCartney:TM:08/10/01:919/856-4520 extension 32:\2bdghyde.pas

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
101 Pivers Island Road
Beaufort, North Carolina 28516

JUL 18 2001

July 11, 2001



William D. Gilmore, P.E., Manager
Project Development and Environmental
Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Attention: Ms. Theresa Ellerby, Project Development Engineer

Dear Mr. Gilmore,

This responds to your June 21, 2001, request for the National Marine Fisheries Service's (NMFS) input on the proposed replacement of Bridges Nos. 6 (B-3858)and 24 (B-4222) by the North Carolina Department of Transportation (NCDOT) in Hyde and Pasquotank Counties, North Carolina. Bridge No. 6 cross a canal that flows into Wysocking Bay a tributary of the Pamlico Sound and Bridge No 24 crosses the Little River a tributary of the Albemarle Sound. These waters and wetlands provide habitat for anadromous fishery resources for which the NMFS is responsible. The NMFS recognizes the NCDOT's efforts to minimize losses of wetland and avoid impediments to upstream migration of anadromous fishes by replacing bridges with bridges. We also note the commitment to a seasonal restriction on work in waters that provide anadromous fish spawning and nursery habitat. Generally the spawning and nursery season for anadromous fishes in North Carolina's coastal river is between February 1 and March 31. For specific information on anadromous fish spawning and nursery sites within the project areas and appropriate seasonal restrictions, we recommend coordination with the North Carolina Division of Marine Fisheries and/or the Wildlife Resources Commission.

If detours are required during bridge construction to maintain traffic flow, off-site detours are preferable because they avoids and minimizes impacts to wetlands. If onsite detour are necessary, we recommend the use of a temporary bridge rather than temporary fill in wetlands. Our recent experience with temporary fills for construction access, indicates that subsidence of wetlands is likely, making onsite restoration of impacted wetlands difficult. If unavoidable losses of wetland are identified in the Categorical Exclusion for these projects, appropriate mitigation should be considered as a part of the project plans. In addition, demolition of the existing bridges, should follow the Bridge Demolition Guidelines developed by the NCDOT in cooperatively with the Corps of Engineers and the State and Federal resource agencies.

Finally, these comments do not satisfy federal action agencies consultation responsibilities under Section 7 of the Endangered Species Act of 1973, as amended. If any activity(ies) "may effect" listed

species and habitats under NMFS purview, consultation should be initiated with the NMFS, Protected Resources Division at 9721 Executive Center Drive North, St. Petersburg, FL 33702-2432.

Please direct related comments or questions to the attention of the Beaufort Facility which can be reached at 101 Pivers Island Rd, Beaufort, North Carolina 28516, or at (252) 728-5090.

Sincerely,

Ron Sechler

Ron Sechler
Fishery Biologist
Beaufort Facility

cc: FWS, Raleigh, NC
EPA, ATLA, GA
NCDMF
NCWRC
F/SER4
F/SER45

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

TO: Derrick Weaver
Project Development Engineer, NCDOT

FROM: David Cox, Highway Project Coordinator
Habitat Conservation Program

DATE: March 18, 2002

SUBJECT: NCDOT Bridge Replacements in Hyde, Nash, Pasquotank, and Wayne counties of North Carolina. TIP Nos. B-3858, B-3681, B-4222, and B-4320.

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. 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).

On bridge replacement projects of this scope our standard recommendations are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.

2. Bridge deck drains should not discharge directly into the stream.

3. Live concrete should not be allowed to contact the water in or entering into the stream.

4. If possible, bridge supports (bents) should not be placed in the stream.

5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 ext. 281 • Fax: (919) 715-7643

saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the steam underneath the bridge.

7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.

8. In streams that contain threatened or endangered species, NCDOT biologist Mr. Tim Savidge should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.

9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.

10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.

11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.

12. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.

13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.

15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.

16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for fish passage. Generally, this means that the culvert or pipe invert is buried at least 1 foot below the natural stream bed. If multiple cells are required the second and/or third cells should be placed so that their bottoms are at stream bankful stage (similar to Lyonsfield design). This could be

accomplished by constructing a low sill on the upstream end of the other cells that will divert low flows to another cell. This will allow sufficient water depth in the culvert or pipe during normal flows to accommodate fish movements. If culverts are long, notched baffles should be placed in reinforced concrete box culverts at 15 foot intervals to allow for the collection of sediments in the culvert, to reduce flow velocities, and to provide resting places for fish and other aquatic organisms moving through the structure.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.

3. Culverts or pipes should be situated so that no channel realignment or widening is required. Widening of the stream channel at the inlet or outlet of structures usually causes a decrease in water velocity causing sediment deposition that will require future maintenance.

4. Riprap should not be placed on the stream bed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area that is reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be used as wetland mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. B-3858 – Hyde County – Bridge No. 6 on SR 1110 over Lake Landing Canal (Grays Ditch). Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes an in-water work moratorium from February 15 to June 15. We are not aware of any threatened of endangered species in the project vicinity. Standard comments apply.

2. B-3681 – Nash County – Bridge No. 277 on SR 1555 over CSX Railroad. No Comment.

3. B-4222 – Pasquotank County – Bridge No. 24 on SR 1140 over Halls Creek. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes an in-water work moratorium from February 15 to June 15. We are not aware of any threatened of endangered species in the project vicinity. Standard comments apply.

4. B-4320 – Wayne County – Bridge No. 24 on NC 403 over the Northeast Cape Fear River. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes an in-water work moratorium from February 15 to June 15. We are not aware of any threatened of endangered species in the project vicinity. Standard comments apply.

We request that NCDOT routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. The NCDOT should install and maintain

sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box culverts, is recommended in most cases. Spanning structures allow wildlife passage along streambanks, reducing habitat fragmentation and vehicle related mortality at highway crossings.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (919) 528-9886. Thank you for the opportunity to review and comment on these projects.

Ellerby

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

November 7, 2001

MEMORANDUM

To: William D. Gilmore, Manager
PEDA/NCDOT

From: David Brook RGE for David Brook

Re: Historic Architectural Resources Survey Report, Replace Bridge #24 over Halls Creek, B-4222, Pasquotank County, ER02-7978

We are in receipt of the above referenced report from Mary Pope Furr. The report meets our guidelines and those of the Secretary of the Interior. Having reviewed the report, we concur that the Halls Creek United Methodist Church is not eligible for listing in the National Register of Historic Places due to character altering changes since the 1950s.

The above comments are offered in accordance with Section 106 of the National Historic Preservation Act and the regulations of the Advisory Council on Historic Preservation at 36 CFR 800. If you have any questions concerning this matter, please contact Renee Gledhill-Earley at 919/733-4763. Thank you.

cc: Mary Pope Furr

	Location	Mailing Address	Telephone/Fax
Administration	507 N. Blount St, Raleigh, NC	4617 Mail Service Center, Raleigh 27699-4617	(919) 733-4763 •733-8653
Restoration	515 N. Blount St, Raleigh , NC	4613 Mail Service Center, Raleigh 27699-4613	(919) 733-6547 •715-4801
Survey & Planning	515 N. Blount St, Raleigh, NC	4618 Mail Service Center, Raleigh 27699-4618	(919) 733-4763 •715-4801

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

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

Division of Historical Resources
David J. Olson, Director

February 25, 2003

MEMORANDUM

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

FROM: David Brook BJS for DB

SUBJECT: Bridge No.24 on SR 1140 over Halls Creek, B-4222, Pasquotank County, ER 01-10078

This letter is in response to a telephone call received on February 21, 2003 requesting clarification regarding the status of this project.

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

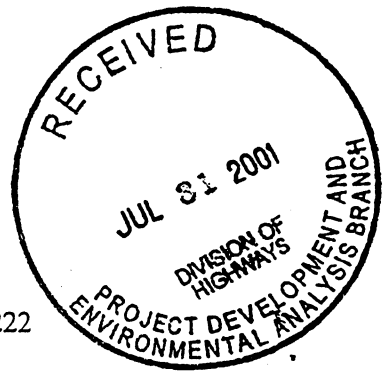
Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

DB:bjs

cc: Teresa Ellerby

North Carolina
Department of Environment and Natural Resources
Division of Coastal Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Donna D. Moffitt, Director



July 26, 2001

Mr. William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
State of North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Subject: Request for Environmental Input for B-3858 and B-4222

Dear Mr. Gilmore,

I have reviewed the Department of Transportation's (DOT's) written request for comments dated 6/21/01 and visited the site for the projects referenced above.

The proposed replacement of Bridge No. 24 on SR 1140 over Hall's Creek in Pasquotank County, B-4222, would be crossing and impacting Coastal Management Areas of Environmental Concern of Public Trust Waters and Coastal Shoreline. The only alternative presented is to replace the existing bridge with another bridge on the current alignment, with off site detour. A CAMA General Permit would cover the impacts associated with this project provided no significant expansion occurs. Specific conditions of CAMA General Permit 7H .2300 state that the total area of public trust area, estuarine waters, and wetlands to be excavated or filled shall not exceed 2500 square feet except that the wetland component shall not exceed 500 square feet.

The proposed replacement of Bridge No. 6 on SR 1110 over the canal in Hyde County, B-3858, would be crossing and impacting Coastal Management Areas of Environmental Concern of Public Trust Waters and Coastal Shoreline. The alternatives presented were; replacing the bridge on the existing alignment with an on site detour, and replacing the bridge to the south and using the existing bridge during construction. Both alternatives would require a CAMA Major Permit.

During the permitting process, we may have additional comments on the project's environmental impacts, and may place conditions on the permit to minimize any environmental impacts. The information provided in this letter shall not preclude us from requesting additional information throughout the permitting process, and following normal permitting procedures.

Please contact me at (252) 808-2808 or via e-mail at bill.arrington@ncmail.net if you have any questions or concerns.

Sincerely,

Bill Arrington
DOT Project Field Representative

Morehead City District \ 151-B Hwy. 24, Hestron Plaza II
Morehead City, North Carolina 28557
Phone: 252-808-2808 \ FAX: 252-247-3330 \ Internet: http://dcm2.enr.state.nc.us

COUNTY OF PASQUOTANK

Post Office Box 39
Elizabeth City, North Carolina 27907-0039
(252)335-0865
Fax (252)335-0866

January 7, 2002

Mr. Derrick Weaver, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Weaver:

I am writing on behalf of the Pasquotank County Board of Commissioners to express their support for Option A for the Hall's Creek Bridge Replacement Project. The Board of Commissioners believes that it is in the best interest of the citizens of our area and the State of North Carolina to pursue the least expensive option which will also eliminate the need to take any homes in the area. Although this option will close the road for a period of time, the Board of Commissioners believes that this will have a minimal disruption for the area. If you need any further information, please do not hesitate to contact me.

Sincerely yours,

Randy Keaton
County Manager

RK/ksj