STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 3, 2006

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

ATTENTION: Mr. Bill Biddlecome
NCDOT Coordinator

Dear Sir:

Subject: **Nationwide 23 & 33 Permit Application** for the Replacement of Bridge No. 16 over Rockyhock Creek on SR 1222, Chowan County. Federal Aid Project No. BRZ-1222(5), State Project No. 8.2030401, TIP Project No. B-3636.

Please find enclosed the Preconstruction Notification (PCN), permit drawings, half-size plans, Categorical Exclusion Action Classification (CE), Natural Resources Technical Report (NRTR), and the Ecosystem Enhancement Program (EEP) acceptance letter for the above-mentioned project. The North Carolina Department of Transportation proposes to replace existing Bridge No. 16 over Rockyhock Creek on SR 1222 in Chowan County. The project involves replacement of the existing structure with an 80-foot long bridge in the same location using top-down construction. The approach roadway will consist of 12-foot travel lanes with five-foot shoulders (eight-foot where guardrails are needed). The proposed structure for Bridge No. 16 will provide a 24-foot travel-way with 3-foot offsets on each side. An offsite detour will be utilized. NCDOT also proposes to replace the 2.5-foot x 8-foot reinforced concrete box culvert with an 8-foot, 2-inch x 5-foot, 9-inch aluminum pipe arch to the southwest of Bridge No. 16. The project schedule calls for an April 18, 2006 let with a review date of February 28, 2006. Proposed permanent impacts include 0.198 acre of wetland. Proposed permanent impacts to surface water will be 0.004 acre.

Impacts to Water of the United States

General Description: Rockyhock Creek is located in the 03010203 CU of the Chowan River Basin. The Division of Water Quality (DWQ) has assigned Rockyhock Creek a Stream Index Number of 25-22. DWQ has assigned a best usage classification of **B NSW**.

Permanent Impacts: Rockyhock Creek and adjacent riverine wetlands will be impacted by the proposed project. Construction of the proposed project will result in permanent impacts of 0.072 acre of fill, 0.016 acre of excavation, and 0.110 acre of mechanized clearing in wetlands (see permit drawings). In addition, 0.004 acre of surface water will be impacted by this project.

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

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

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Utility Impacts: There will be no impacts to jurisdictional waters. The existing utilities will be replaced using directional bore and staying within the slope stakes (see permit drawings).

Bridge Demolition

The superstructure for Bridge No. 16 should allow removal without dropping components into the water. Likewise, it should be possible to remove the timber piles without dropping them into the water. The concrete piers may result in as much as 55 cubic yards of fill depending on the method of removal to be determined after a contractor is selected. Best Management Practices for Bridge Demolition and Removal will be implemented. Any component of the bridge dropped into the water shall be immediately removed.

NCDOT will observe an in-stream construction moratorium from February 15 to June 30 and utilize Stream Crossing Guidelines for Anadromous Fish Passage.

Avoidance and Minimization

Due to the location of this project and the juxtaposition of adjacent wetlands and surface waters, total avoidance of the surrounding marsh and wetland is impossible during the construction of this project. NCDOT has taken steps to minimize the impacts to this resource.

To minimize impacts to the wetland adjacent to Bridge No. 16, NCDOT is replacing the bridge in place and utilizing an off-site detour.

Minimum width for the approaches and structure has been utilized. Fill slopes in wetlands on this project will be 3:1 due to the loose alluvial sandy soils lacking clay or cohesion in order to avoid major erosion and slope failure.

Mitigation

NCDOT proposes to use the North Carolina Ecosystem Enhancement Program (EEP) to mitigate for permanent impacts associated with this project. The EEP acceptance letter was received on October 3, 2005. A copy of this letter is included with this application.

Federally Protected Species

As of January 29, 2003, the US Fish and Wildlife Service (USFWS) lists the bald eagle (*Haliaeetus leucocephalus*) as threatened for Chowan County. The biological conclusion of "May Affect, Not Likely to Adversely Affect" remains valid.

Regulatory Approvals

Section 404 Permit: This project is being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). Therefore, we do not anticipate requesting an individual permit but propose to proceed under a Nationwide 23 & 33 as authorized by a Nationwide Permit 23 & 33 (67 FR 2020; January 15, 2002).

Section 401 Permit: We anticipate 401 General Certification number 3403 and 3366 will apply to this project. In accordance with 15A NCAC 2H, Section .0500(a) we are providing two copies of this

application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their review.

CAMA Permit: A CAMA Major Development Permit application is being submitted under separate cover to the Division of Coastal Management.

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

If you have any questions or need additional information, please contact Chris Underwood at (919) 715-1451.

Sincerely,

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

W/attachment:

Mr. John Hennessy, NCDWQ
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Ms. Cathy Brittingham, NCDCM
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Anthony Roper, P.E., Division 1 Engineer
Mr. Clay Willis, Division 1 Environmental Officer

W/o attachment

Mr. Scott McLendon, USACE, Wilmington
Ms. Wanda Gooden, DCM, Elizabeth City
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Mr. John Williams, P.E., Planning Engineer

Office Use Only: Form Version March 05

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
   - ☒ Section 404 Permit
   - ☐ Section 10 Permit
   - ☒ 401 Water Quality Certification
   - ☐ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ
   - ☐ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: NW 23, NW 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here: ☒

4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here:

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☒

II. Applicant Information

1. Owner/Applicant Information
   Name: North Carolina Department of Transportation
   Mailing Address: Project Development and Environmental Analysis Branch
   1548 Mail Service Center
   Raleigh, NC 27699-1548
   Telephone Number: (919)733-3141 Fax Number: (919) 733-9794
   E-mail Address: gthorpe@dot.state.nc.us (Gregory Thorpe, PhD.)

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
   Name: _____
   Company Affiliation: _____
   Mailing Address: _____
   _____
   _____
   _____
   Telephone Number: _____ Fax Number: _____
   E-mail Address: _____

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 16 over Rockyhock Creek on SR 1222

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3636

3. Property Identification Number (Tax PIN): N/A

4. Location
   County: Chowan Nearest Town: Edenton
   Subdivision name (include phase/lot number):
   Directions to site (include road numbers/names, landmarks, etc.): Bridge No. 16 over Rockyhock Creek on SR 1222 (Rockyhock Creek Rd.)

5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
   Decimal Degrees (6 digits minimum): 36° 08' 19.9 °N 76° 39 58.4 °W

6. Property size (acres): N/A

7. Name of nearest receiving body of water: Rockyhock Creek

8. River Basin: Chowan
   (Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at http://h2o.enr.state.nc.us/admin/maps/.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: Forested riparian wetlands with little development

10. Describe the overall project in detail, including the type of equipment to be used: The existing bridge and culvert will be replaced in place. Work to be conducted with dozers, track-hoes, and other equipment typically used for highway construction projects.

11. Explain the purpose of the proposed work: To replace a structurally deficient bridge.

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules. Jurisdictional determination from the USACE AID 200510008, NW 6 AID 200510884

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.
N/A

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: Permanent and temporary impacts to wetlands

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
1	Fill	Cypress/gum swamp	Yes	0	0.072

1	Excavation	Cypress/gum swamp	Yes	0	0.016
1	Mech. Clearing	Cypress/gum swamp	Yes	0	0.110
Total Wetland Impact (acres)					0.198

3. List the total acreage (estimated) of all existing wetlands on the property: 10

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
1	Rockyhock Creek	permanent fill	perennial	20 ft		0.004
Total Stream Impact (by length and acreage)						0.004

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
Total Open Water Impact (acres)				

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.004
Wetland Impact (acres):	0.198
Open Water Impact (acres):	N/A
Total Impact to Waters of the U.S. (acres)	0.202
Total Stream Impact (linear feet):	N/A

7. Isolated Waters
Do any isolated waters exist on the property? ☐ Yes ☒ No
Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

8. Pond Creation
If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.
Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands
Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.):_____
Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.):_____
Current land use in the vicinity of the pond:_____
Size of watershed draining to pond:_____ Expected pond surface area:_____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts._____
Proposed impacts include measures such as replacement in place and an offsite detour.
Additional avoidance and minization measures are included in the attached cover letter.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application

lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.
   The NCEEP has agreed to provide compensatory mitigation for impacts from this project.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

   Amount of stream mitigation requested (linear feet): N/A
   Amount of buffer mitigation requested (square feet): N/A
   Amount of Riparian wetland mitigation requested (acres): 0.198
   Amount of Non-riparian wetland mitigation requested (acres): N/A
   Amount of Coastal wetland mitigation requested (acres): N/A

IX. Environmental Documentation (required by DWQ)

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes ☒ No ☐

2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)? Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation. Yes ☒ No ☐

3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes ☒ No ☐

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)? Yes ☐ No ☒

2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3 (2 for Catawba)	
2		1.5	
Total			

* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. _____
N/A

XI. Stormwater (required by DWQ)

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level._____
Onsite stormwater will be approximately equal to that of the existing site condtions. Standard sedimentation and erosion control measures will be adhered to throughout project construction.

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

N/A

XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?
Yes ☐ No ☒

Is this an after-the-fact permit application? Yes ☐ No ☒

XIV. Cumulative Impacts (required by DWQ)

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☐ No ☒
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at http://h2o.enr.state.nc.us/ncwetlands. If no, please provide a short narrative description:

XV. Other Circumstances (Optional):

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).
N/A

Applicant/Agent's Signature 1/3/06 **Date**
(Agent's signature is valid only if an authorization letter from the applicant is provided.)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 3, 2006

Division of Coastal Management
1367 U.S. 17 South
Elizabeth City, NC 27909

ATTENTION: Ms. Wanda Gooden
NCDOT Coordinator

Dear Madam:

Subject: **CAMA Major Development Permit Application** for the Replacement of Bridge No. 16 over Rockyhock Creek on SR 1222, Chowan County. Federal Aid Project No. BRZ-1222(5), State Project No. 8.2030401, TIP Project No. B-3636.

Please find enclosed the CAMA Major Development Permit Application, permit drawings, half-size plans, Categorical Exclusion Action Classification (CE), Natural Resources Technical Report (NRTR), Ecosystem Enhancement Program (EEP) acceptance letter, and the landowner receipts for the above-mentioned project. WBS Element 33184.1.1 will be debited for $400.00 for the application of the subject project. The North Carolina Department of Transportation proposes to replace existing Bridge No. 16 over Rockyhock Creek on SR 1222 in Chowan County. The project involves replacement of the existing structure with an 80-foot long bridge in the same location using top-down construction. The approach roadway will consist of 12-foot travel lanes with five-foot shoulders (eight-foot where guardrails are needed). The proposed structure for Bridge No. 16 will provide a 24-foot travel-way with 3-foot offsets on each side. An offsite detour will be utilized. NCDOT also proposes to replace the 2.5-foot x 8-foot reinforced concrete box culvert with an 8-foot, 2-inch x 5-foot, 9-inch aluminum pipe arch to the southwest of Bridge No. 16. The project schedule calls for an April 18, 2006 let with a review date of February 28, 2006. Proposed permanent impacts include 0.198 acre of wetland. Proposed permanent impacts to surface water will be 0.004 acre.

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

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

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

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Federally Protected Species

As of January 29, 2003, the US Fish and Wildlife Service (USFWS) lists the bald eagle (*Haliaeetus leucocephalus*) as threatened for Chowan County. The biological conclusion of "May Affect, Not Likely to Adversely Affect" remains valid.

Regulatory Approvals

NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit. The landowner receipts are attached. NCDOT has also applied for the issuance of a United States Army Corps of Engineers NWP 23 & 33, and a 401 Water Quality Certification under separate cover. NCDOT has received a stormwater permit for this project.

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

If you have any questions or need additional information, please contact Chris Underwood at (919) 715-1451.

Sincerely,

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

W/attachment:

Mr. John Hennessy, NCDWQ
Mr. Travis Wilson, NCWRC
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Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Mr. John Williams, P.E., Planning Engineer

Form DCM-MP-1

APPLICATION

(To be completed by all applicants)

1. APPLICANT

a. Landowner:

Name **N. C. Department of Transportation**

Address **P.O. Box 850**

City **Edenton** State **N.C.**

Zip **27932** Day Phone **(252) 482-7977**

Fax **(252) 482-8722**

b. Authorized Agent:

Name _____

Address _____

City _____ State _____

Zip ____ Day Phone _____

Fax _____

c. Project name (if any) _____

_____

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

2. LOCATION OF PROPOSED PROJECT

a. County **Chowan**

b. City, town, community or landmark
Edenton, NC

c. Street address or secondary road number
SR 1222

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) **Rockyhock 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.
Replacement of bridge #16 and pipe arch on SR 1222

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**

d. 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.

Roadway transportation over bridge and pipe arch. Top down construction for bridge and replacement in the same location for the pipe arch.

4. LAND AND WATER CHARACTERISTICS

a. Size of entire tract **N/A, NCDOT Right of Way**

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

c. Approximate elevation of tract above MHW or NWL
Appr. 6.0'

d. Soil type(s) and texture(s) of tract
Stream crossing, wetland

e. Vegetation on tract **Bottomland Hardwoods**

f. Man-made features now on tract
Bridge, RCBC, roadway, utilities

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

____ Conservation ____ Transitional
____ Developed __x__ Community
__x__ Rural ____ Other

h. How is the tract zoned by local government?
Residential

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) __**X**__ Other ____
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, point discharge

o. Describe existing drinking water supply source.
N/A

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.

  NC Stormwater Permit

- **A check for $250** 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 3 day of June, 20 04.

Print Name Phil Harris

Signature _____
Landowner or Authorized Agent

Please indicate attachments pertaining to your proposed project.

X 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-2

EXCAVATION AND FILL

(Except 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.

Describe below the purpose of proposed excavation or fill activities. **All values to be given in feet.**

	Length	Width	Average Existing Depth	Final Project Depth
Access channel (MLW) or (NWL)	86.0' (Pipe arch)	8.0' (Pipe arch)		
Canal				
Boat basin				
Boat ramp				
Rock groin				
Rock breakwater				
Other (Excluding shoreline stabilization)				

1. EXCAVATION

a. Amount of material to be excavated from below MHW or NWL in cubic yards **295 (Pipe arch)**

b. Type of material to be excavated **Swamp**

c. Does the area to be excavated include coastal wetlands (marsh), submerged aquatic vegetation (SAVs) or other wetlands? X Yes ___ No

d. High ground excavation in cubic yards **1320 (Bridge)**

2. DISPOSAL OF EXCAVATED MATERIAL

a. Location of disposal area to be determined by the contractor

b. Dimensions of disposal area to be determined by the contractor

c. Do you claim title to disposal area?
___ Yes X No
If no, attach a letter granting permission from the owner.

d. Will a disposal area be available for future maintenance? X Yes ___ No
If yes, where? to be determined by the contractor

e. Does the disposal area include any coastal wetlands (marsh), SAVs or other wetlands?
___ Yes __X__ No

f. Does the disposal include any area in the water?
___ Yes __X__ No

3. SHORELINE STABILIZATION **N/A**

a. Type of shoreline stabilization
___ Bulkhead ___ Riprap

b. Length_____

c. Average distance waterward of MHW or NWL
_____

d. Maximum distance waterward of MHW or NWL
_____

e. Shoreline erosion during preceding 12 months
_____
(Source of information) _____

f. Type of bulkhead or riprap material _____
_____

g. Amount of fill in cubic yards to be placed below water level
(1) Riprap _____
(2) Bulkhead backfill _____

h. Type of fill material _____
_____

i. Source of fill material _____
_____

4. OTHER FILL ACTIVITIES
(Excluding Shoreline Stabilization)

a. Will fill material be brought to site?
__**X**__ Yes ___ No

If yes,

(1) Amount of material to be placed in the water
None
(2) Dimensions of fill area _____
0.104 ac
(3) Purpose of fill **Roadway slope**
_____

b. Will fill material be placed in coastal wetlands (marsh), SAVs or other wetlands?
__**X**__ Yes ___ No

If yes,

(1) Dimensions of fill area **See above**
_____
(2) Purpose of fill **See above**
_____

5. GENERAL

a. How will excavated or fill material be kept on site and erosion controlled? _____
Standard erosion control (AEC)
Fill to be stored on causeway
_____

b. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?
Standard road construction equipment
_____

c. 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. _____
_____
_____
_____

NCDOT
Applicant or Project Name

Signature

1/3/06
Date

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)
Cored Slab

c. Water body to be crossed by bridge
Rockyhock Creek

d. Water depth at the proposed crossing at MLW or NWL **Water depth appr. 6.0'**

e. Will proposed bridge replace an existing bridge?
__X__ Yes ____ No
If yes,
(1) Length of existing bridge **66.0'**
(2) Width of existing bridge **24.0'**
(3) Navigation clearance underneath existing bridge **Appr. 6.0'**
(4) Will all, or a part of, the existing bridge be removed? (Explain) **All**

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 **98.0'**

h. Width of proposed bridge **36.0'**

i. Height of proposed bridge above wetlands
the bridge will be over the stream, not wetlands

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

k. Navigation clearance underneath proposed bridge
Appr. 6.0'

l. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ____ Yes __X__ No
If yes, explain _____

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?
____ Yes __X__ No
If yes, please provide record of their action.

2. CULVERTS

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

b. Number of culverts proposed **1**

c. Type of culvert (construction material, style)
8'2" X 5'9" aluminum pipe arch

d. Will proposed culvert replace an existing bridge?
____ Yes __X__ 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?
__X__ Yes ____ No
If yes,
(1) Length of existing culvert **40.0'**
(2) Width of existing culvert **10.0'**
(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) **Yes**

f. Length of proposed culvert **86.0'**

g. Width of proposed culvert **5'9"**

h. Height of the top of the proposed culvert above the MHW or NWL **Appr. 4.0'**

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

j. Will the proposed culvert affect existing navigation potential? ____ Yes __X__ 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?
__X__ Yes ____ No
If yes,
(1) Length of area to be excavated **86.0'**
(2) Width of area to be excavated **6.0'**
(3) Depth of area to be excavated **1.0'**
(4) Amount of material to be excavated in cubic yards **Appr. 325**

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 **86.0'**
(2) Width of area to be excavated **6.0'**
(3) Amount of material to be excavated in cubic yards **Appr. 325**

c. Will the placement of the proposed bridge or culvert require any highground excavation?
____ Yes __X__ No
If yes,
(1) Length of area to be excavated _____
(2) Width of area to be excavated _____
(3) Amount of material to be excavated in cubic yards _____

d. If the placement of the bridge or culvert involves any excavation, please complete the following:
(1) Location of the spoil disposal area
to be determined by the contractor
(2) Dimensions of spoil disposal area
to be determined by the contractor
(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? __N/A__ Yes ____ 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 **20 feet**
(2) Width of area to be filled **8 feet**
(3) Purpose of fill **Road**

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 **Appr. 360'**
(2) Width of area to be filled **Appr. 3.0'**
(3) Purpose of fill **Roadway fill**

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 **1425 feet**
(2) Width of area to be filled **40 feet**
(3) Purpose of fill **Improving the existing causeway**

4. GENERAL

a. Will the proposed project involve any mitigation?
X Yes ____ No
If yes, explain in detail Compensatory mitigation will be provided by the NC Ecosystem Enchancement Program

b. Will the proposed project require the relocation of any existing utility lines? _X_ Yes ____ No
If yes, explain in detail the existing utilities will be relocated via directional boring and beneath the fill slope

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?
Standard erosion control (AEC)

f. What type of construction equipment will be used (for example, dragline, backhoe or hydraulic dredge)?
Road construction equipment (backhoe,crane, etc.)

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?
____ Yes _X_ No
If yes, explain in detail

NCDOT
Applicant or Project Name

Signature

1/3/06
Date

Underwood
Michael F. Easley, Governor

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

Alan W. Klimek, P.E. Director
Division of Water Quality

DIVISION OF WATER QUALITY
June 27, 2005

Dr. Gregory J. Thorpe
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Subject: Permit No. SW7050512
TIP No. B-3636, # 16 Bridge Replacement
Other Stormwater Permit
Linear Public Road/Bridge Project
Chowan County

Dear Dr. Thorpe:

The Washington Regional Office received a completed Stormwater Application for the subject project on May 13, 2005. 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. SW7050512 dated June 27, 2005 to the NC Department of Transportation for the proposed replacement of bridge # 16 over Rocky Creek and widening of a section of SR 1222 in Chowan County.

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, 6714 Mail Service Center, Raleigh, NC 27699-6714. 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 me at (252) 948- 3923.

Sincerely,

Roger K. Thorpe
Environmental Engineer
Washington Regional Office

cc: Washington Regional Office
Central Files

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

STATE STORMWATER MANAGEMENT PERMIT

OTHER 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

NC Department of Transportation

Chowan County

FOR THE

Construction of a public road/bridge 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 replacement of bridge # 16 and the widening of a section of SR 1222 in Chowan County.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations:

I. DESIGN STANDARDS

1. The runoff from the impervious surfaces has been directed away from surface waters as much as possible.
2. The Amount of built-upon area has been minimized as much as possible.
3. Best management Practices are employed which minimizes water quality impacts.
4. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.
5. Vegetated roadside ditches are 3:1 slopes or flatter.

II. SCHEDULE OF COMPLIANCE

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

2. 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.

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

4. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction for the following items:

   a. Major revisions to the approved plans, such as road realignment, deletion of any proposed BMP, changes to the drainage area or scope of the project, etc.
   b. Project name change.
   c. Redesign of, addition to, or deletion of the approved amount of built-upon area, regardless of size.
   d. Alteration of the proposed drainage.

5. The Director may determine that other revisions to the project should require a modification to the permit.

III. GENERAL CONDITIONS

1. This 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 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 the 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. The permittee is responsible for compliance with the terms and conditions of this permit until such time as the Director approves the transfer.

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

3. 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.

4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by 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.

5. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.

6. The permit issued shall continue in force and effect until revoked or terminated.

7. The permittee shall notify the Division of any name, ownership or mailing address changes within 30 days.

Permit issued this the 27 th day of June, 2005.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

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

Permit Number SW7050512

Ecosystem Enhancement PROGRAM

October 3, 2005

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, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-3636, Bridge Number 16 over Rockyhock Creek on SR 1222**,** Chowan County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory riverine wetland and stream mitigation for the subject project. Based on the information supplied by you in a letter dated September 30, 2005, the impacts are located in CU 03010203 of the Chowan River Basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Riverine Wetland:	0.223 acre
Stream:	72 feet

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. However, according to the 2005 Impact Projection Database, there were no anticipated impacts listed for this project. Fortunately, sufficient assets are available in the cataloging unit to meet the mitigation needs for this project. The compensatory riverine wetland and stream 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, P.E.
EEP Director

cc: Mr. Bill Biddlecome, USACE-Washington
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-3636

Ecosystem Enhancement PROGRAM

October 3, 2005

Mr. Bill Biddlecome
US 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-3636, Bridge 16 over Rockyhock Creek on SR 1222, Chowan County; Chowan River Basin (Cataloging Unit 03010203); Northern Outer Coastal Plain (NOCP) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory mitigation for the 0.223 acre of unavoidable riverine wetland impact and 72 feet of unavoidable stream impact associated with the above referenced project.

EEP will commit to implementing sufficient compensatory riverine wetland and stream mitigation up to a 2:1 ratio to offset the impacts associated with this project by the end of the MOA year in which this project is permitted, in accordance with Section X of the Memorandum of Agreement between the U. S. Army Corps of Engineers, N. C. Department of Environment and Natural Resources, and N. C. Department of Transportation (Tri-Party MOA), signed on July 22, 2003. EEP understands the USACE will allow remaining high quality preservation assets to be utilized as a component in the mitigation strategy at a 5:1 ratio. Therefore, EEP intends to utilize high quality riverine wetland and stream preservation assets in the following manner:

High Quality Stream Preservation (5:1) in Same Eco-Region

Roanoke River (Cashie), Bertie County NOCP Eco-Region Roanoke River Basin, CU 03010107	360 feet stream 1.115 acre riverine

Utility drawing 1 of 2

7/2/99

REVISIONS

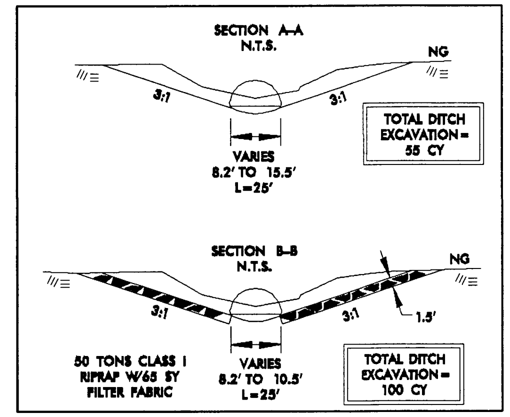
English

PROJECT REFERENCE NO.	SHEET NO.
B-3636	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

- B-3636
- CHOWAN CO., NC
- BRIDGE NO. 16, PIPE ARCH AND APPROACHES ON SR 1222 OVER ROCKYHOCK CREEK
- 404 WETLANDS

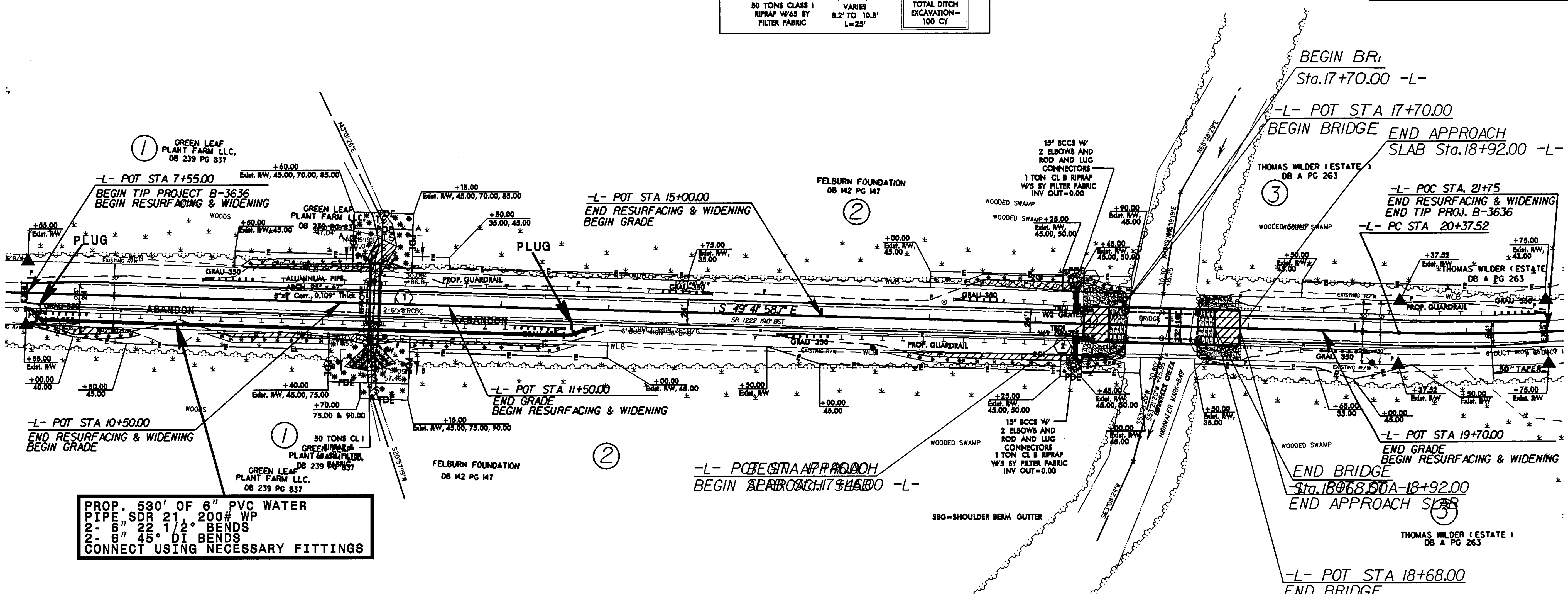
08/01/05

THE EXISTING WATER LINE IS OWNED BY CHOWAN COUNTY WATER DISTRICT



-L-
PI Sta 23+04.74
Δ= 15° 29' 33.4" (LT)
D = 2° 55' 00.0"
L = 531.18'
T = 267.22'
R = 1,964.43'

NAD 83

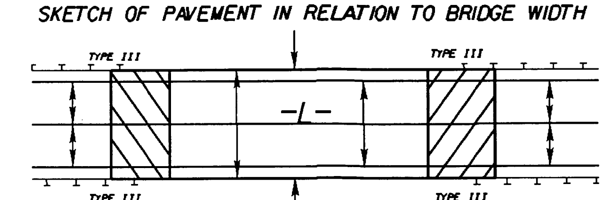


PROP. 530' OF 6" PVC WATER PIPE SDR 21, 200# WP
2- 6" 22 1/2° BENDS
2- 6" 45° DI BENDS
CONNECT USING NECESSARY FITTINGS

Symbol	Description
TS	DENOTES TEMPORARY SURFACE WATER IMPACTS
S	DENOTES FILL IN SURFACE WATER
F	DENOTES FILL IN WETLAND
E	DENOTES EXCAVATION IN WETLAND
*	DENOTES MECHANIZED CLEARING

NOTE:
FILL IN WATER SURFACE DUE TO BRIDGE PIERS= 25sf

SKETCH OF PAVEMENT IN RELATION TO BRIDGE WIDTH



22-DEC-2005 11:58
r:\hydraulics\permit drawings\b3636_hyd_pmt.dgn
dduffield AT HY22I523

Utility drawing 2 of 2

PROJECT REFERENCE NO.	SHEET NO.
B-3636	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

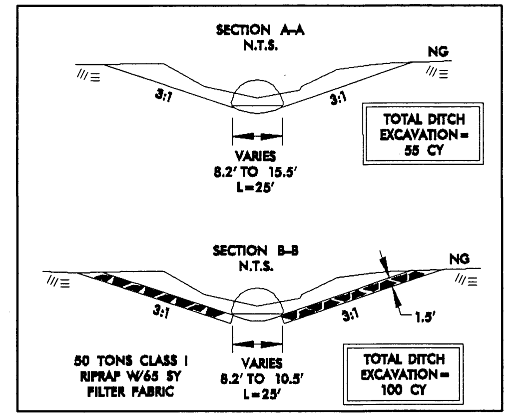
- B-3636
- CHOWAN CO., NC
- BRIDGE NO. 16, PIPE ARCH AND APPROACHES ON SR 1222 OVER ROCKYHOCK CREEK
- 404 WETLANDS

08/01/05

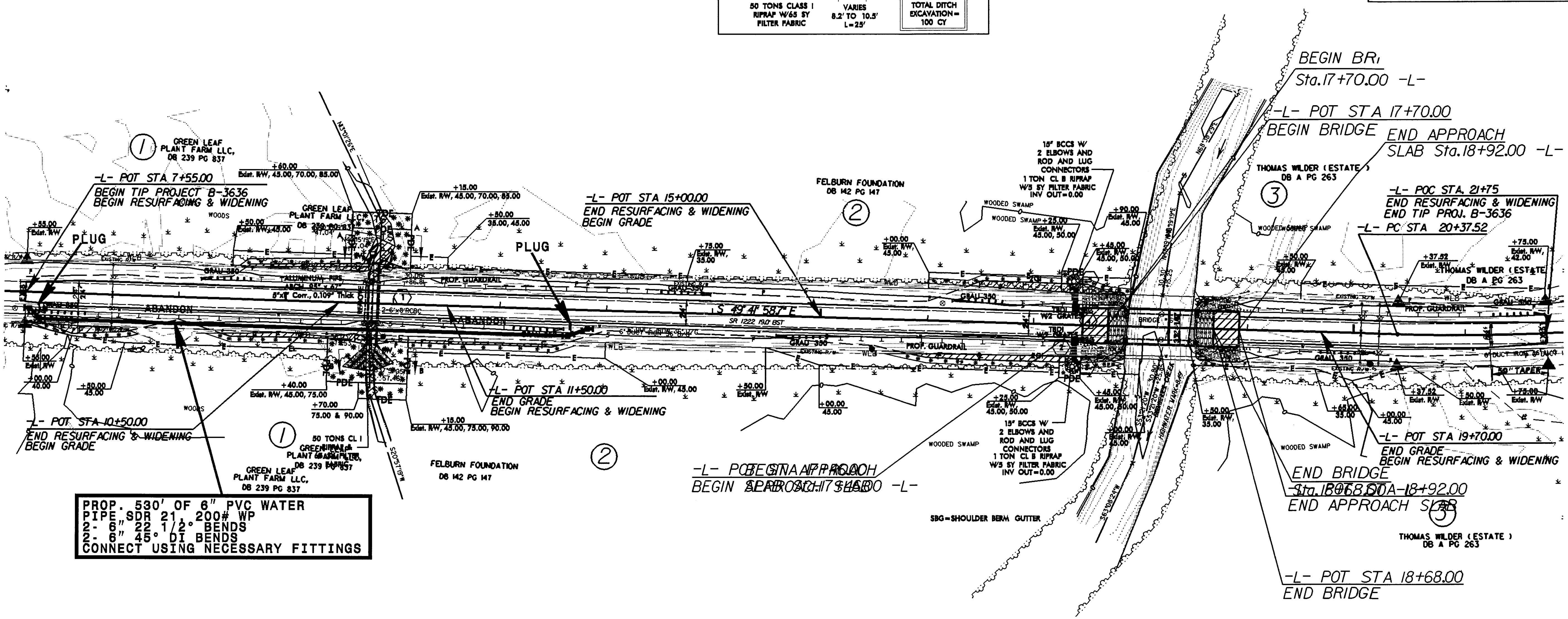
REVISIONS

7/2/99

THE EXISTING WATER LINE IS OWNED BY CHOWAN COUNTY WATER DISTRICT



-L-
PI Sta 23+04.74
Δ= 15° 29' 33.4" (LT)
D = 2° 55' 00.0"
L = 531.18'
T = 267.22'
R = 1,964.43'



PROP. 530' OF 6" PVC WATER PIPE SDR 21, 200# WP
2- 6" 22 1/2° BENDS
2- 6" 45° DI BENDS
CONNECT USING NECESSARY FITTINGS

DENOTES TEMPORARY SURFACE WATER IMPACTS

DENOTES FILL IN SURFACE WATER

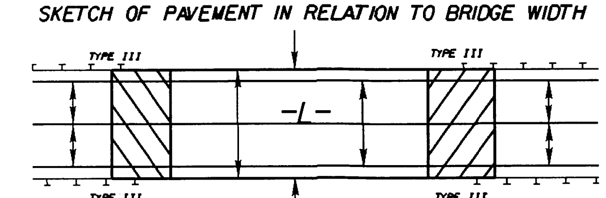
DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

NOTE:
FILL IN WATER SURFACE DUE TO BRIDGE PIERS= 25sf

SKETCH OF PAVEMENT IN RELATION TO BRIDGE WIDTH



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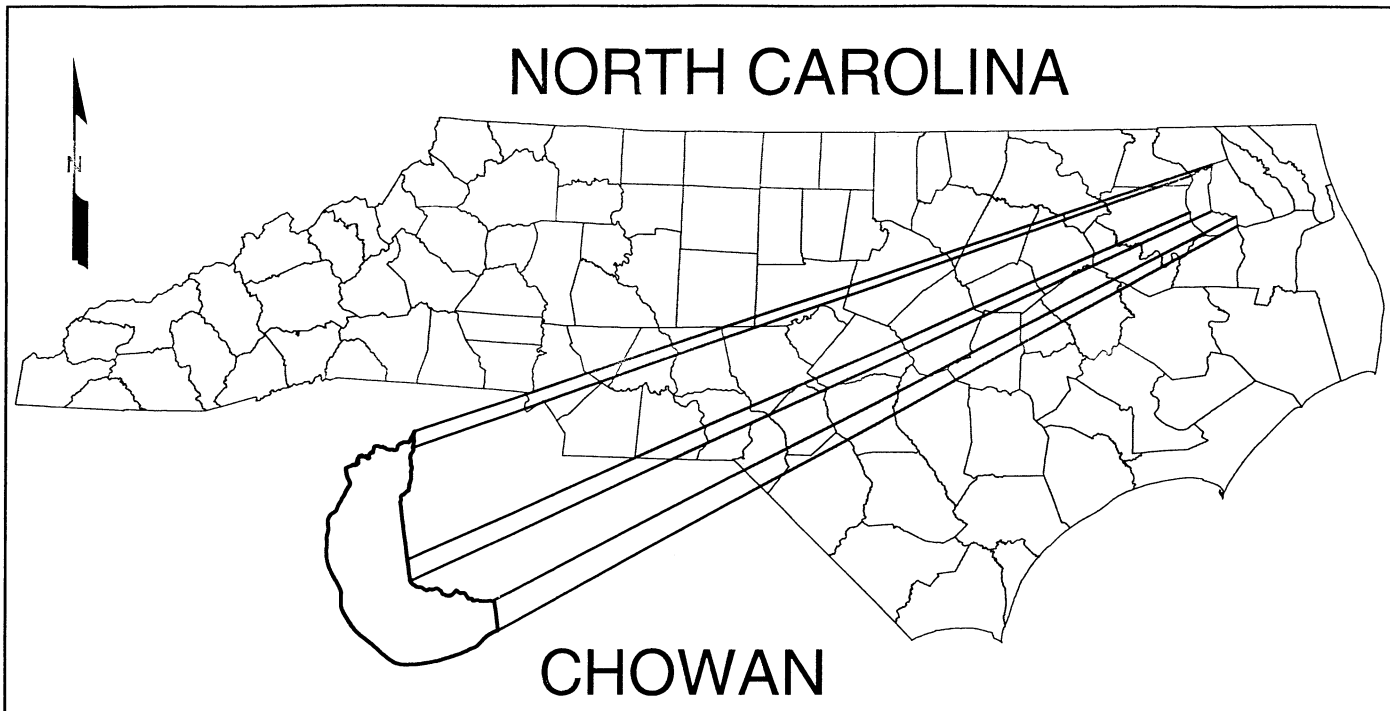
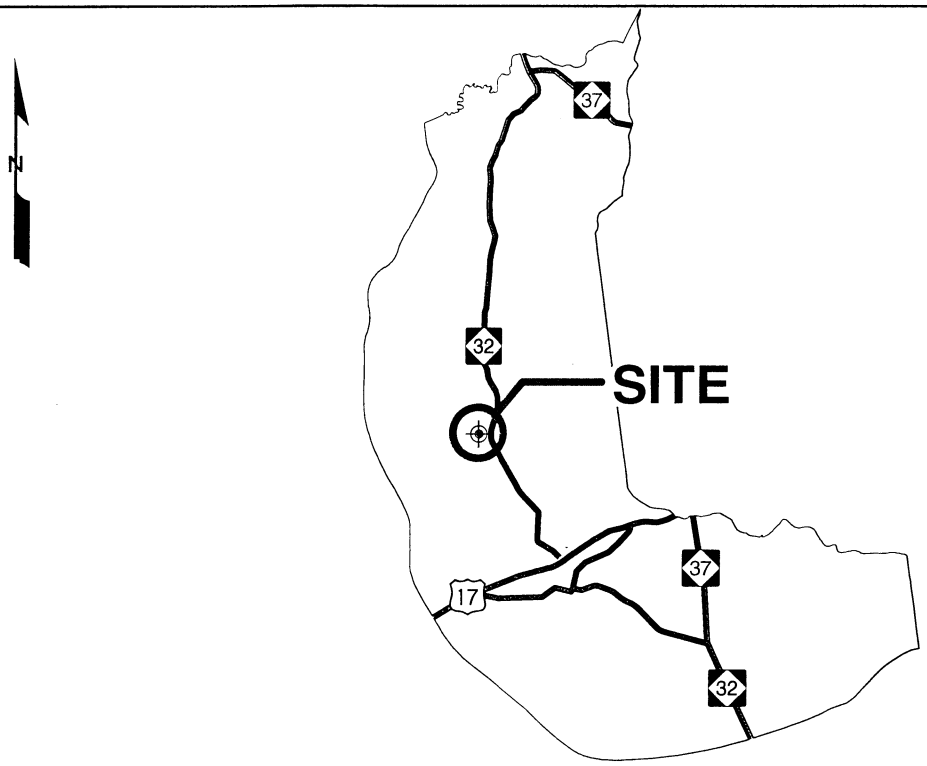
dduffield AT HY221523





VICINITY MAP

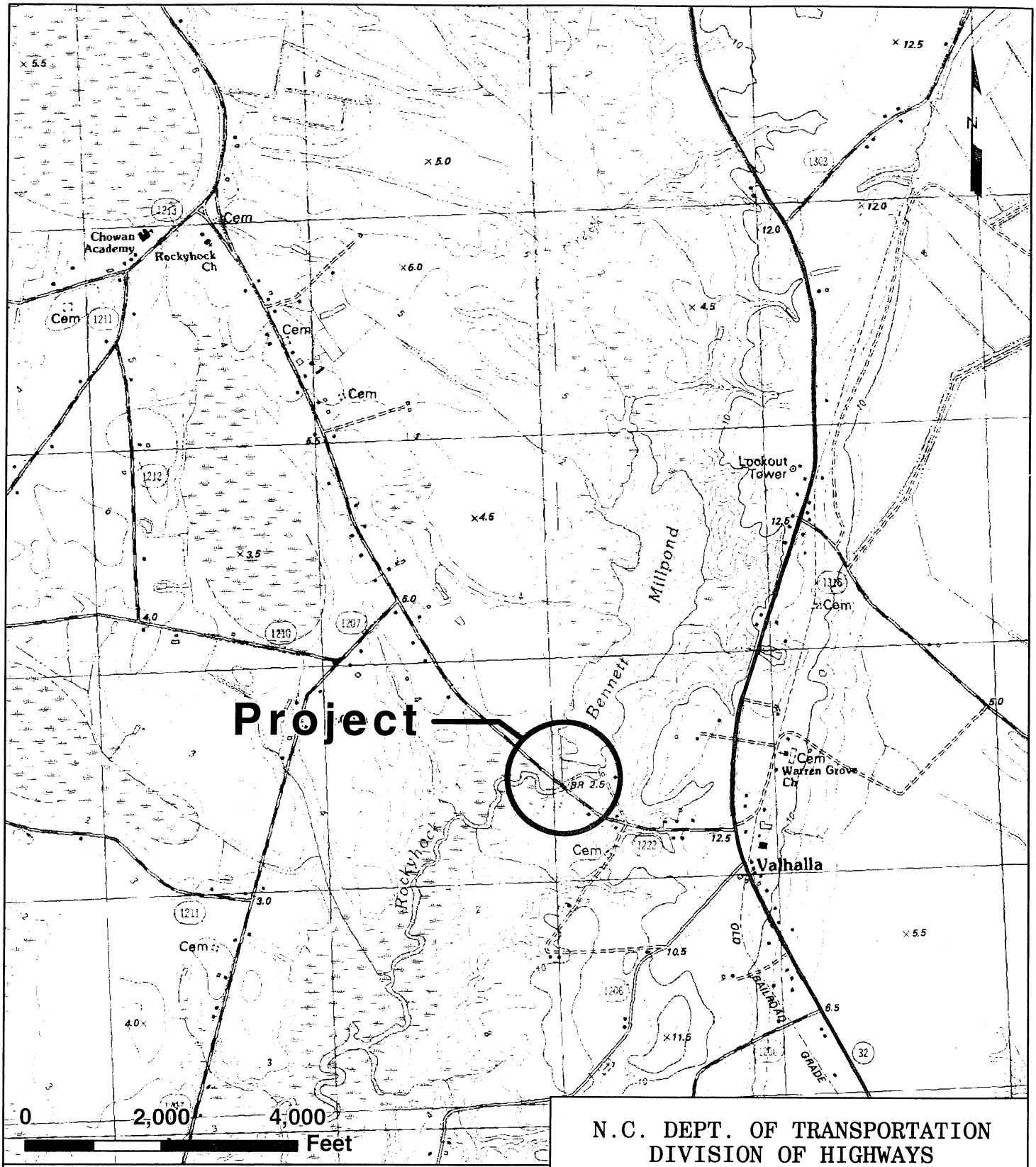
N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CHOWAN COUNTY

PROJECT NO. 33184.1.1 (B-3636)

BRIDGE NO. 16, PIPE ARCH,
AND APPROACHES ON SR 1222
OVER ROCKYHOCK CREEK

3/23/05

permit drawing 1 of 7



1 inch equals 2,000 feet

LOCATION

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CHOWAN COUNTY

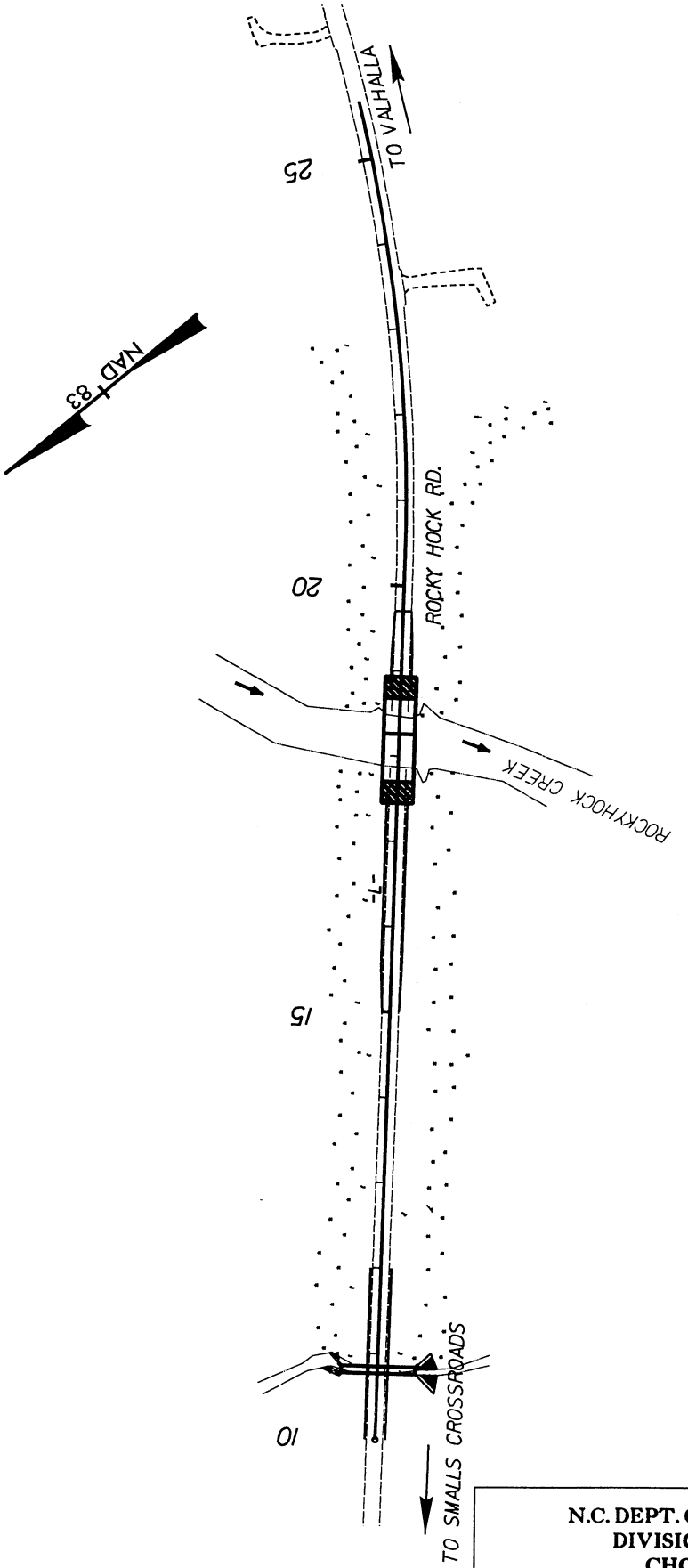
PROJECT NO. 33184.1.1 (B-3636)

BRIDGE NO. 16, PIPE ARCH,
AND APPROACHES ON SR 1222
OVER ROCKYHOCK CREEK

3/23/05

Source: USGS 7.5 Minute Quadrangles, Val-Halla, NC

permit drawing 2 of 7



200
0
100

SITE MAP

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CHOWAN COUNTY

PROJECT 33184.1.1 (B-3636)

BRIDGE NO. 16, PIPE ARCH, AND APPROACHES ON SR 1222 OVER ROCKYHOCK CREEK

permit drawing 3 of 7

03/16/05

R:\HYDRAULICS\B3636_PMT_SITE.DGN

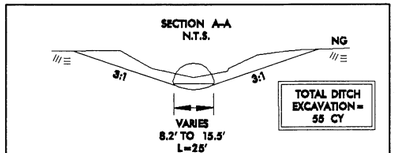
7/2/99

REVISIONS

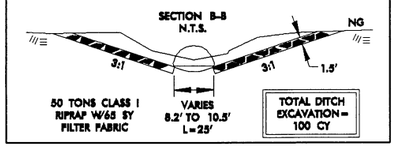
English

PROJECT REFERENCE NO.	SHEET NO.
B-3636	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SECTION A-A
N.T.S.

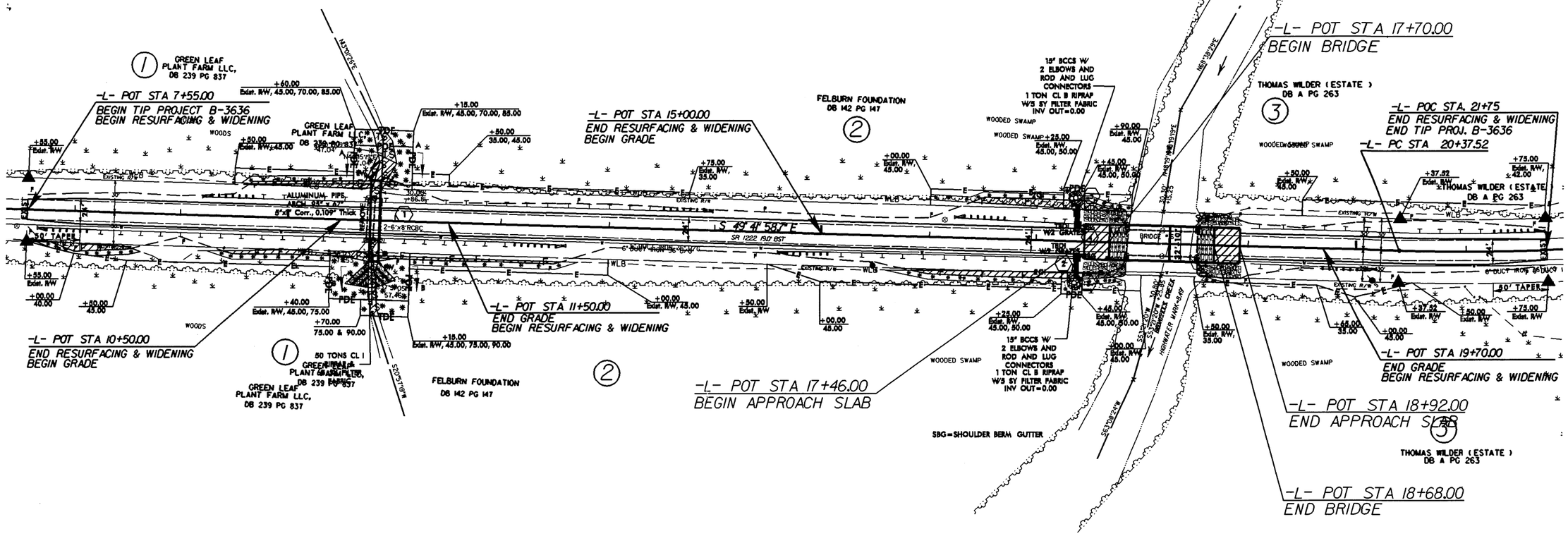


SECTION B-B
N.T.S.



-L-
PI Sta 23+04.74
△= 15° 29' 33.4" (LT)
D = 2° 55' 00.0"
L = 531.18'
T = 267.22'
R = 1,964.43'

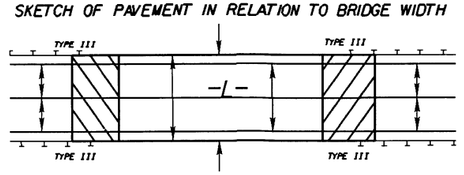
NAD 83



TS TS	DENOTES TEMPORARY SURFACE WATER IMPACTS
S S S	DENOTES FILL IN SURFACE WATER
F F F	DENOTES FILL IN WETLAND
E E E	DENOTES EXCAVATION IN WETLAND
* * * * * *	DENOTES MECHANIZED CLEARING

NOTE:
FILL IN WATER SURFACE DUE TO BRIDGE PIERS= 25sf

SKETCH OF PAVEMENT IN RELATION TO BRIDGE WIDTH



permit drawing 4 of 7

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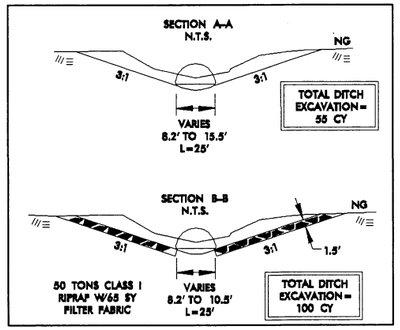
rdunfield

7/2/99

REVISIONS

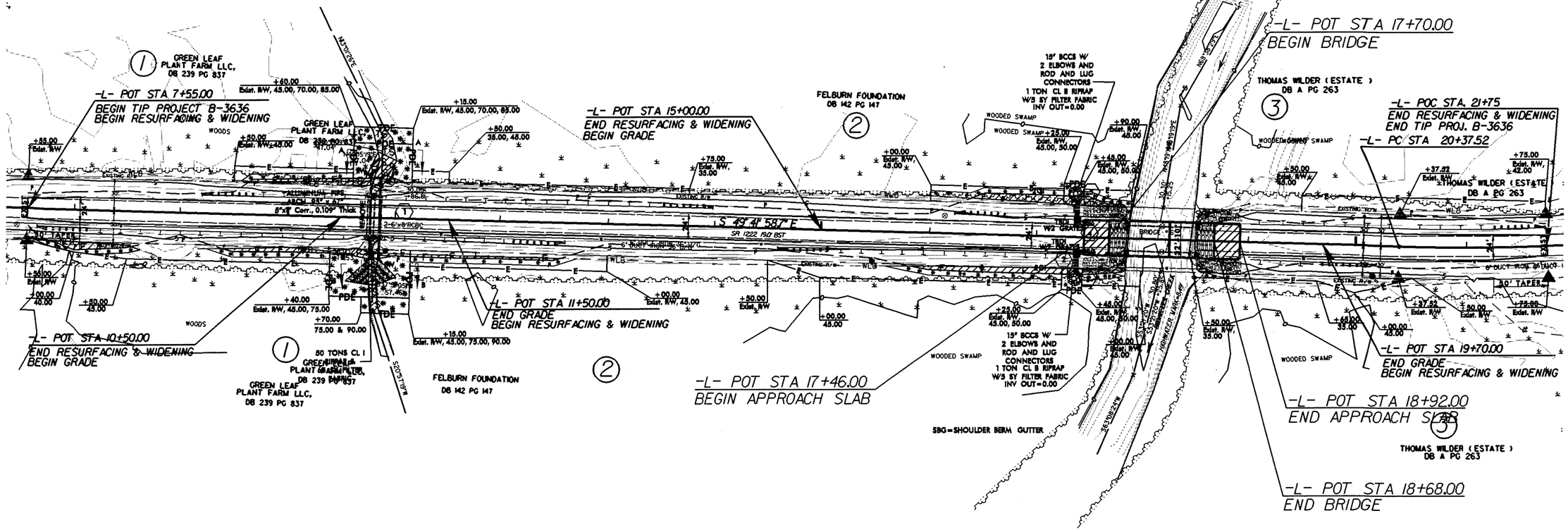
English

PROJECT REFERENCE NO.	SHEET NO.
B-3636	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-
PI Sta 23+04.74
Δ= 15° 29' 33.4" (LT)
D = 2° 55' 00.0"
L = 531.18'
T = 267.22'
R = 1,964.43'

NAD 83



TS TS	DENOTES TEMPORARY SURFACE WATER IMPACTS
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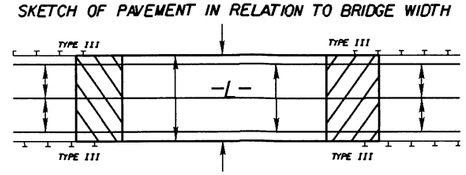
SKETCH OF PAVEMENT IN RELATION TO BRIDGE WIDTH



permit drawing 5 of 7

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adufield AT HY221523

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER ADDRESS
1	GREE LEAF PLANT FARM LLC	2153 Rocky Hock Rd., Edenton, NC 27932-9549
2	FELBURN FOUNDATION	1429 Hwy 176 West, Tryon, NC 28782
3	THOMAS WILDER (ESTATE)	2034 Rocky Hock Rd., Edenton, NC 27932

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CHOWAN COUNTY
PROJECT: 33184.1.1 (B-3636)

10/12/2005
permit drawing 6 of 7

R:/z-misc/Hydro/Wetprop.xls

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 8+00	Roadway	0.01									
1	-L- 10+80	Pipe Arch	0.03		0.016	0.10						
1	-L- 18+00	Bridge	0.04			0.01		0.004				
TOTALS:			0.072		0.016	0.110		0.004				

Note: 25sf fill in surface water for piers

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

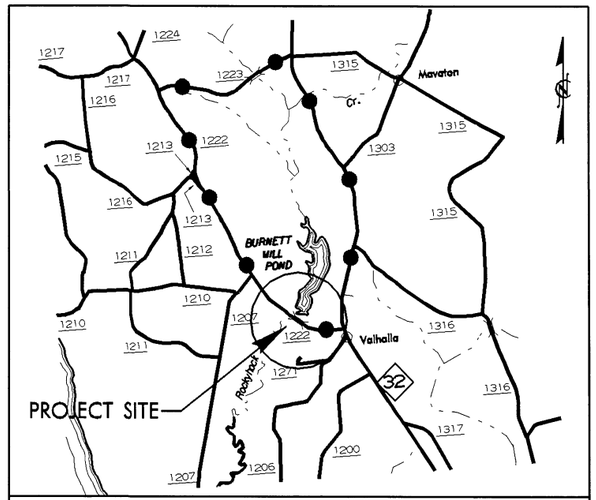
CHOWAN COUNTY
PROJECT 33184.1.1 (B-3636)
Permit Drawing 7 of 7

1/3/2006

ATN Revised 3/31/05
R:\z-misc\Hydro\WetlandPermitSummary.xls

CONTRACT: C201469 TIP PROJECT: B-3636

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



VICINITY MAP

OFF SITE DETOUR

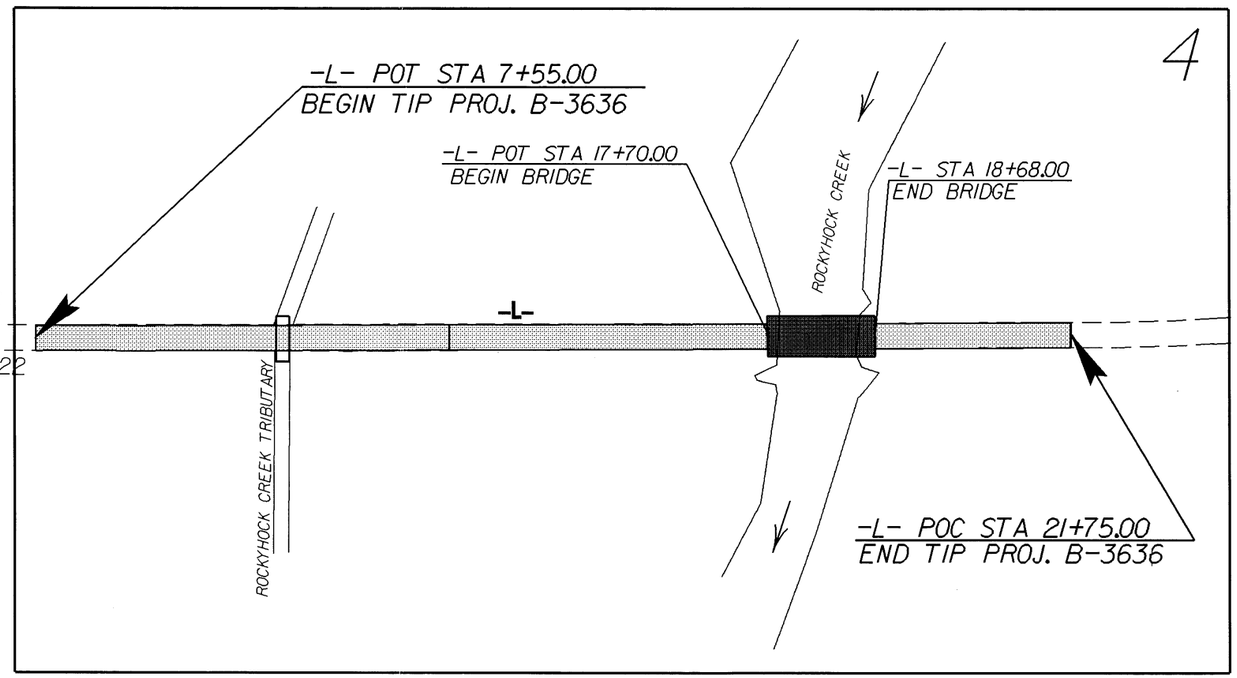
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

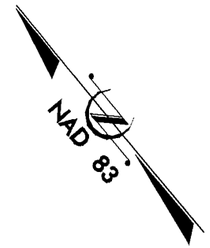
CHOWAN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3636	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33184.1.1	BRZ-1222(5)	PE
33184.2.1	BRZ-1222(5)	R/W, UTILITIES
33184.3.1	BRZ-1222(5)	CONSTRUCTION

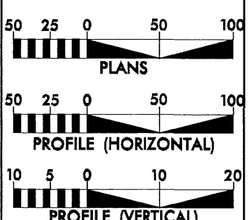
LOCATION: BRIDGE NO. 16 OVER ROCKYHOCK CREEK ON SR 1222
TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE





DESIGN EXCEPTION FOR SHOULDER WIDTH REQUIRED

GRAPHIC SCALE



DESIGN DATA

ADT 2004 = 2,540 vpd
ADT 2025 = 3,800 vpd

DHV = 10 %
D = 60 %
*T = 4 %
V = 60 MPH

*DUALS =3% *TTST =1%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-3636 = 0.250 MILES
LENGTH STRUCTURE TIP PROJECT B-3636 = 0.019 MILES
TOTAL LENGTH TIP PROJECT B-3636 = 0.269 MILES

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

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 30, 2005

LETTING DATE: APRIL 18, 2006

JAMES A. SPEER, PE
PROJECT ENGINEER

JOHN C. LANSFORD, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

20-DEC-2005 07:22
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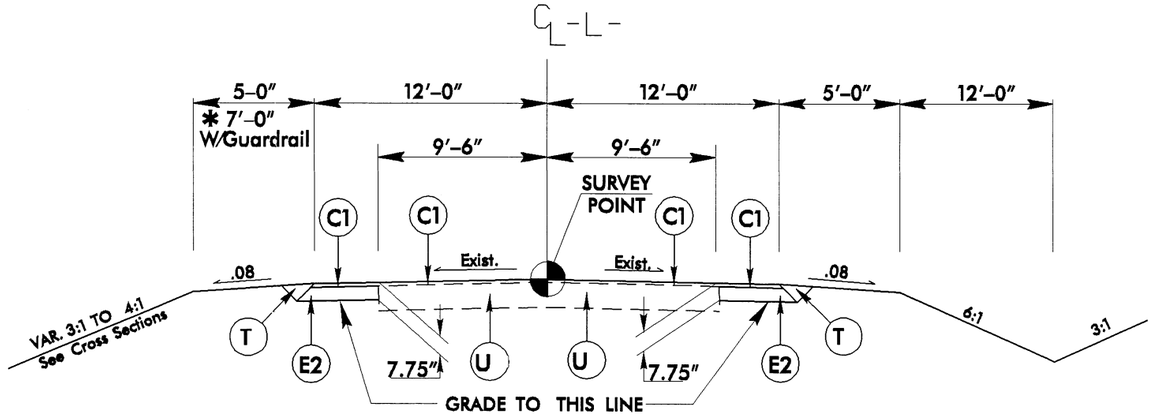
10/26/98

PROJECT REFERENCE NO.	SHEET NO.
B-3636	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE IN LAYERS NOT TO EXCEED 1.5" IN DEPTH
E1	PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
E2	PROP. APPROX. 6½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 370.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
U	EXISTING PAVEMENT.
T	EARTH MATERIAL.

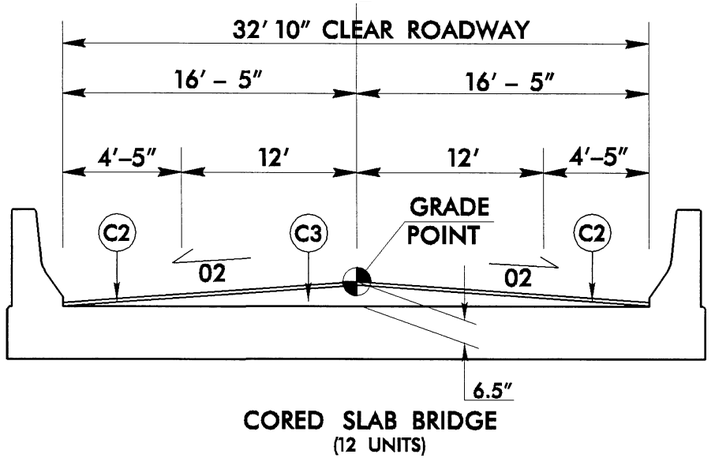
NOTE: ALL SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:
-L- STA. 7+55.00 to 10+50.00
-L- STA. 11+50.00 to 15+00.00
-L- STA. 19+70.00 to 21+75.00

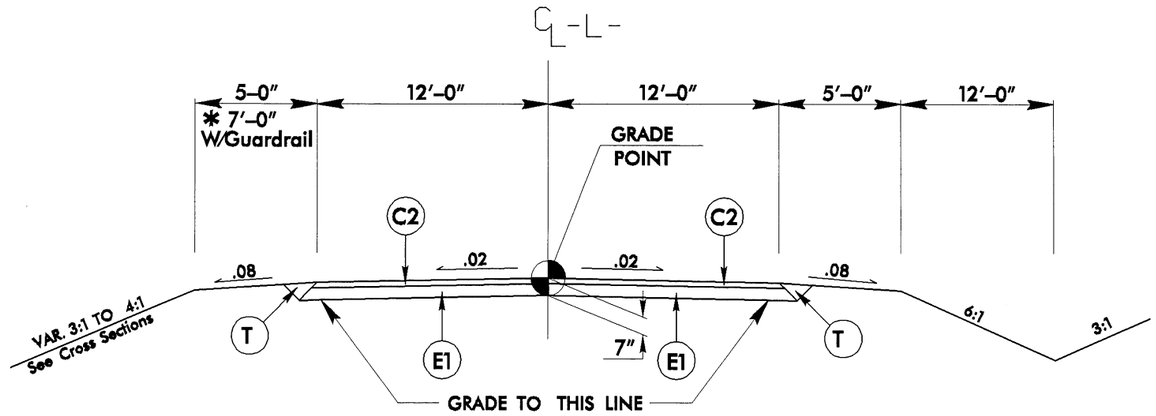
* USE EXTRA LENGTH GUARDRAIL POSTS; SEE DETAIL 2-



CORED SLAB BRIDGE
(12 UNITS)

TYPICAL SECTION ON STRUCTURE

-L- STA 17+70.00 +/- TO 18+68.00 +/-



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATIONS:
-L- STA. 10+50.00 TO 11+50.00
-L- STA. 15+00.00 TO 17+70.00
-L- STA. 18+68.00 TO 19+70.00

DESIGN EXCEPTION REQUIRED FOR SHOULDER WIDTH

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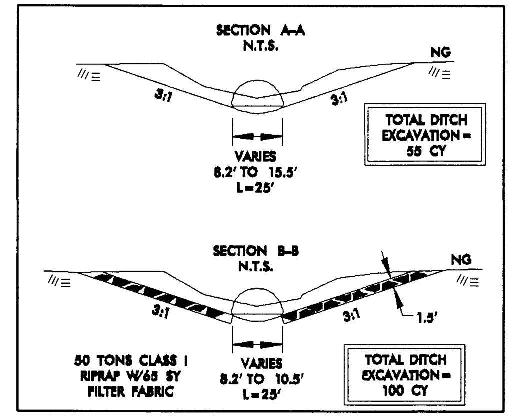
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-3636	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

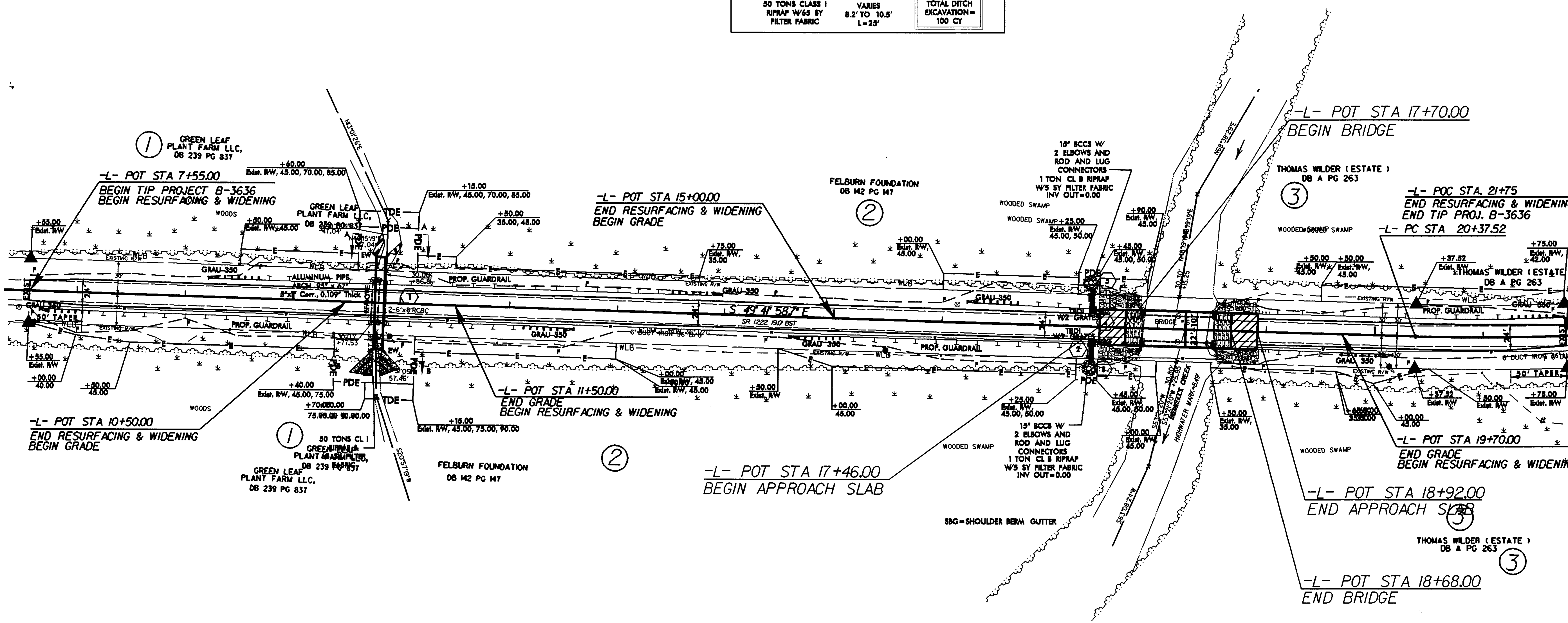
English

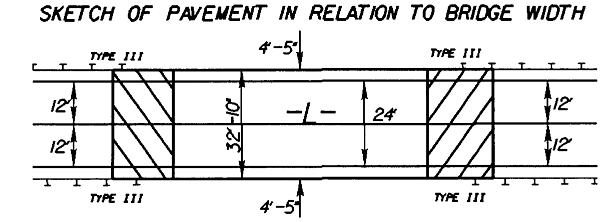
SEE SHEETS S-1 THRU S-18 FOR STRUCTURE PLANS
SEE SHEET 5 FOR -L- PROFILE



-L-
PI Sta 23+04.74
Δ = 15° 29' 33.4" (LT)
D = 2° 55' 00.0"
L = 531.18'
T = 267.22'
R = 1,964.43'

NAD 83





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dduffield AT HY221523

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-3636	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L- STA. 10+50
ELEV. = 7.35'
END RESURFACING
BEGIN GRADE

-L- STA. 7+55
ELEV. = 7.59'
BEGIN RESURFACING

(-)0.0400%

95" x 67"
ALUMINUM
PIPE ARCH
0.109" Thick
5" x1" Corrugations

-L- STA. 11+50
ELEV. = 7.31'
END GRADE
BEGIN RESURFACING

-L- STA. 15+00
ELEV. = 6.8'
END RESURFACING

Remove Exist. Culvert

1 @ 56.0 FT, 1 @ 42.0 FT
℄ BRIDGE STA. 18+19.00 -L-
(EL 6.9) SKEW = 90
21" CORED SLAB

℄ BENT
STA. 18+26.00 -L-

-L- STA. 15+00
ELEV. = 6.8'
BEGIN GRADE

(+)0.3000%

(-)0.6983%

(+)0.2471%

-L- STA. 19+70
ELEV. = 7.32'
END GRADE
BEGIN RESURFACING

END RESURFACING
STA. 21+75 -L-
ELEV. = 8.37'

CLASS II RIPRAP
(STRUCT. ITEM)

PI = 15+85.93
EL = 6.21'
VC = 154'
K = 154

PI = 18+95.00
EL = 7.14'
VC = 54'
K = 1028

HYDRAULIC DATA FOR
BRIDGE & ARCH PIPE OVER
ROCKYHOCK CREEK TRIBUTARY
ON SR 1222

DESIGN DISCHARGE = 1500 CFS
DESIGN FREQUENCY = 25 YR
DESIGN ELEVATION = 4.2 FT
BASE FLOOD DISCHARGE = 2300 CFS
BASE FLOOD FREQUENCY = 100 YR
BASE FLOOD ELEVATION = 5.3 FT
OVERTOPPING DISCHARGE = 3200 CFS
OVERTOPPING FREQUENCY = 500 YR
OVERTOPPING ELEVATION = 6.4 FT

BM-10 EL = 1.90'
N 877674.5000 E 2688807.9000
RR SPIKE IN BASE OF 12" GUM
-BL- Sta. 17+43.50 (69.50' RT)
-L- Sta. 15+28.26 (56.27' RT)

BM-11 EL = 17.37'
N 876933.6000 E 2689950.2000
RR SPIKE IN BASE OF 30" OAK
-BL- Sta. 30+98.60 (84.80' RT)

TO BE EXCAVATED
(STRUCT. ITEM)

SEE SHEET 4 FOR -L- LINE

20-DEC-2005 07:22
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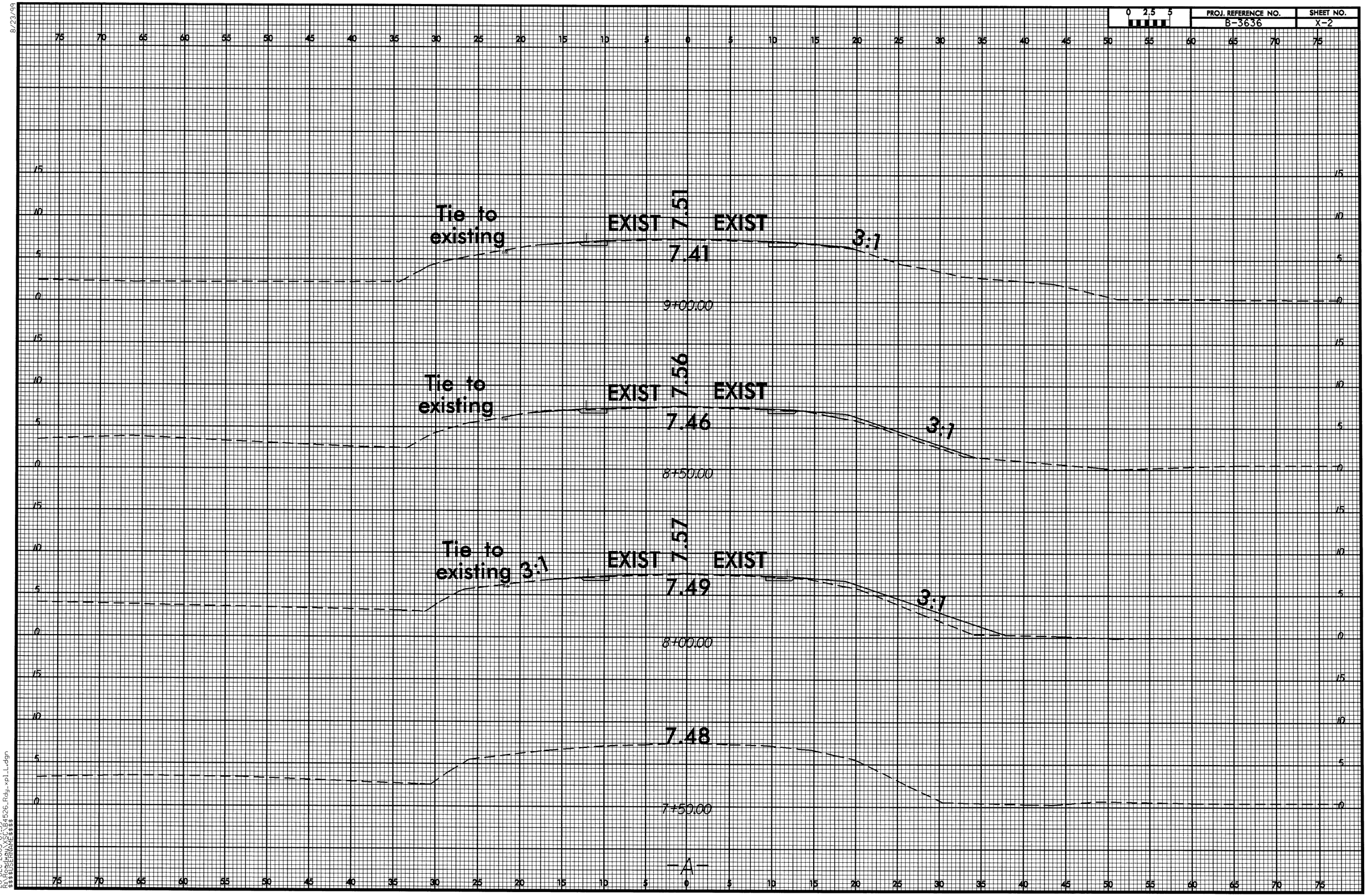
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-2



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-3

11+00.00

02 7.33 02

7.22

3:1

3:1

10+50.00

EXIST 7.35 EXIST

7.25

3:1

3:1

10+00.00

EXIST 7.41 EXIST

7.30

3:1

3:1

9+50.00

EXIST 7.48 EXIST

7.35

3:1

3:1

—A—

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8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-4

EXIST 7.33
7.25
3:1
3:1
EXIST
13+00.00

EXIST 7.37
7.26
3:1
3:1
EXIST
12+50.00

EXIST 7.34
7.23
3:1
3:1
EXIST
12+00.00

02 7.31
7.21
3:1
3:1
02
11+50.00

-A-

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-5

EXIST 6.81

3:1

EXIST

3:1

15+00.00

EXIST 7.06

3:1

EXIST

6.96

3:1

14+50.00

EXIST 7.17

3:1

EXIST

7.08

3:1

14+00.00

EXIST 7.29

3:1

EXIST

7.18

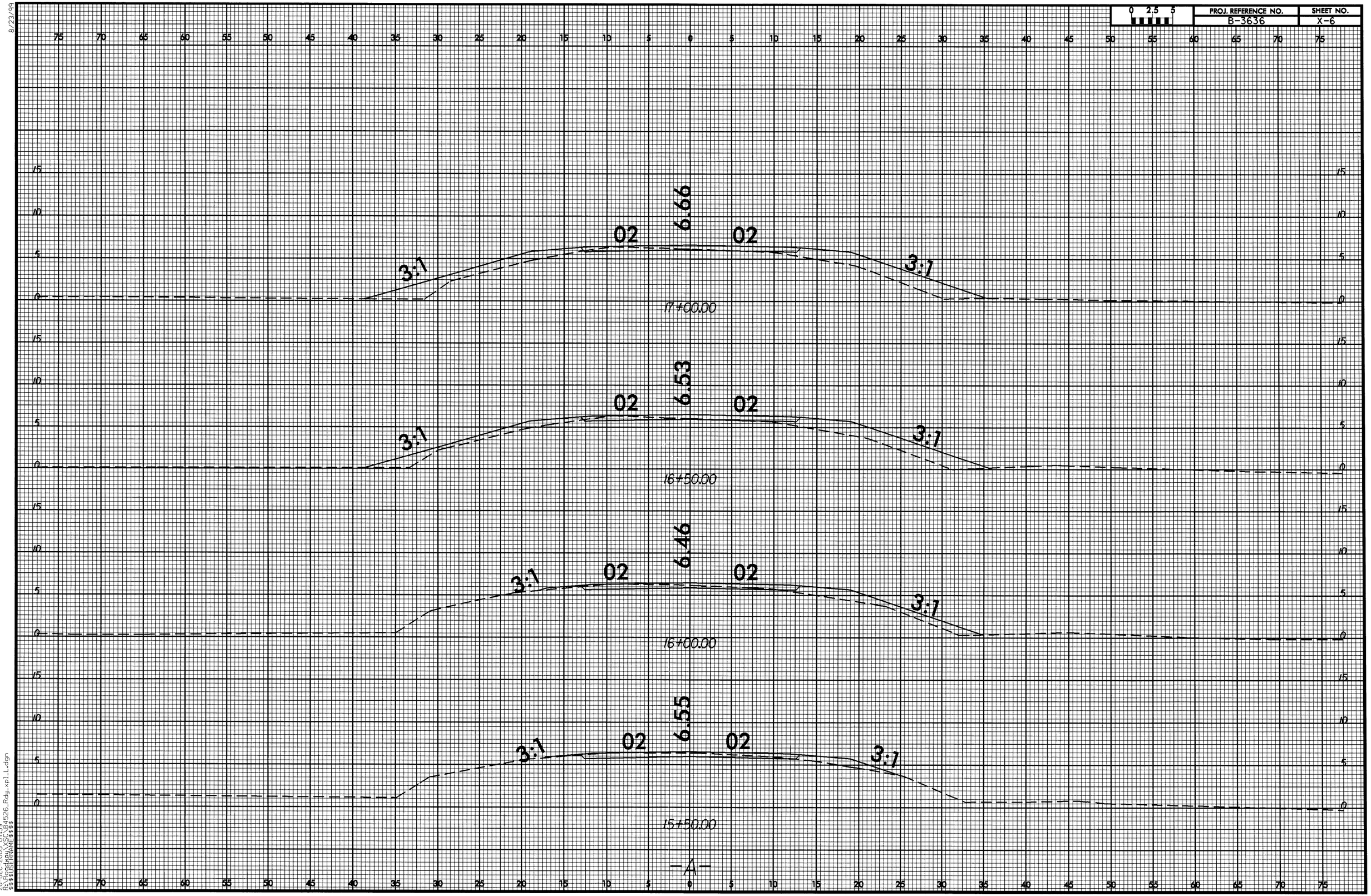
3:1

13+50.00

—A—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-6



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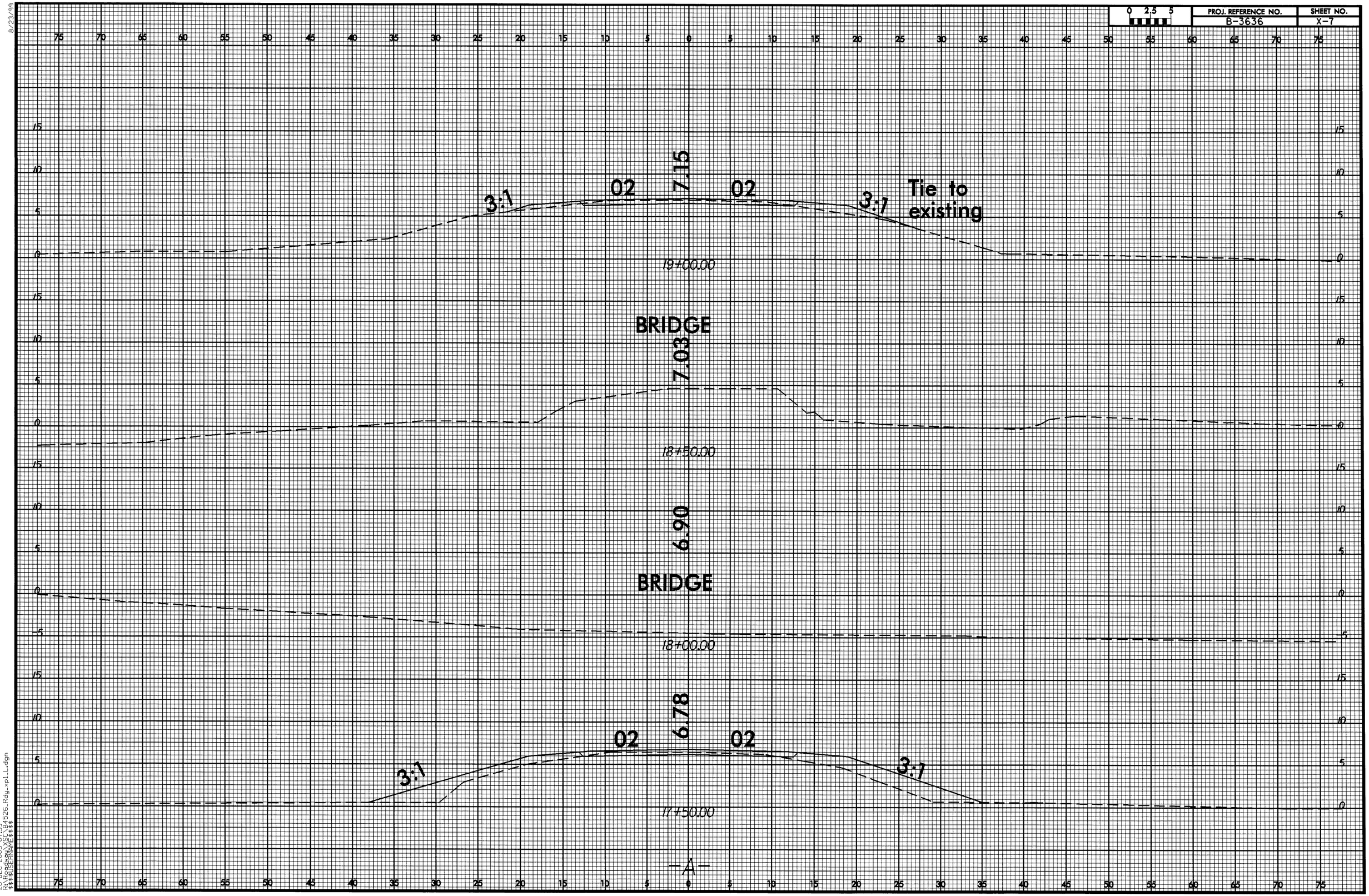
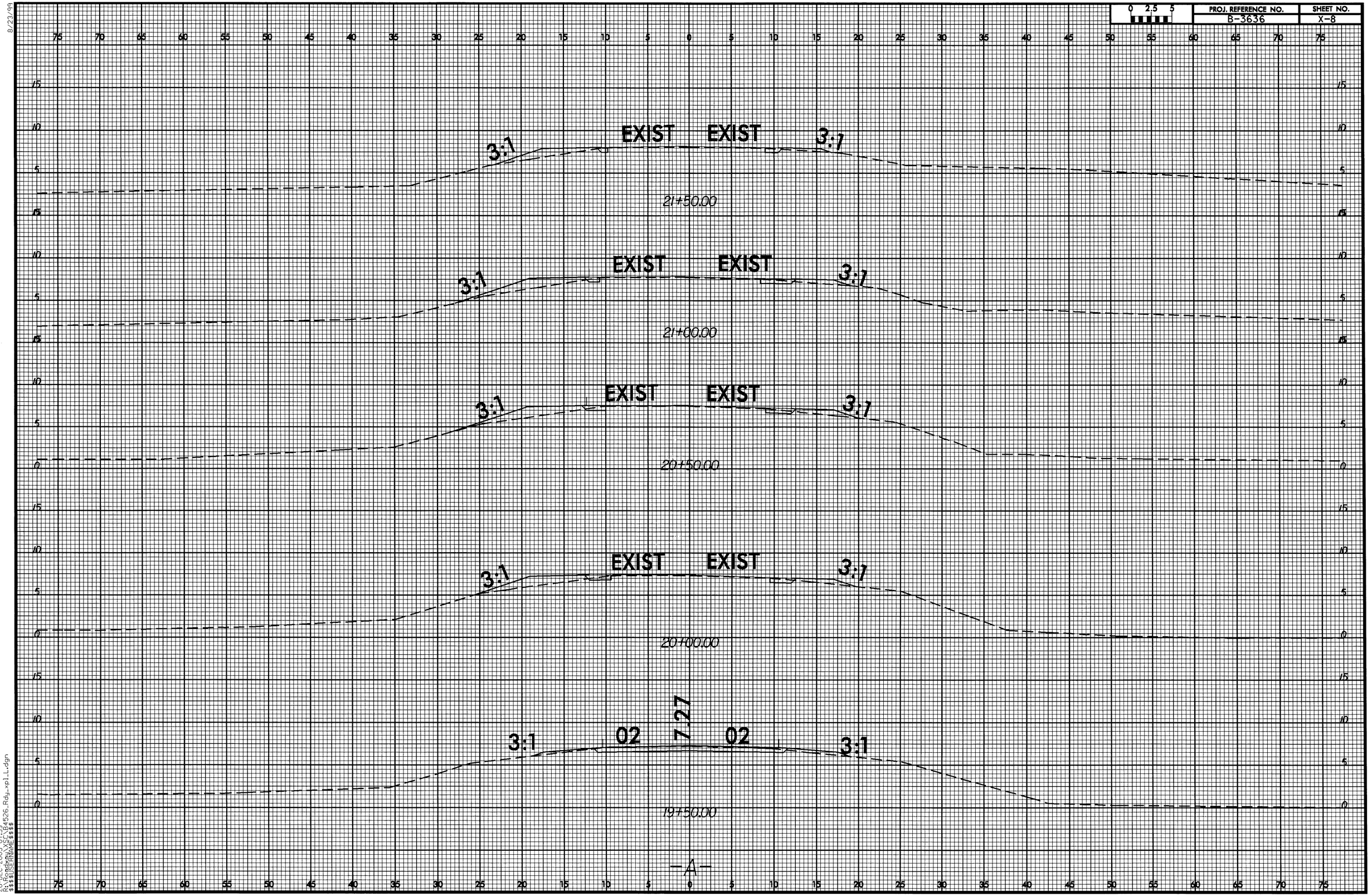
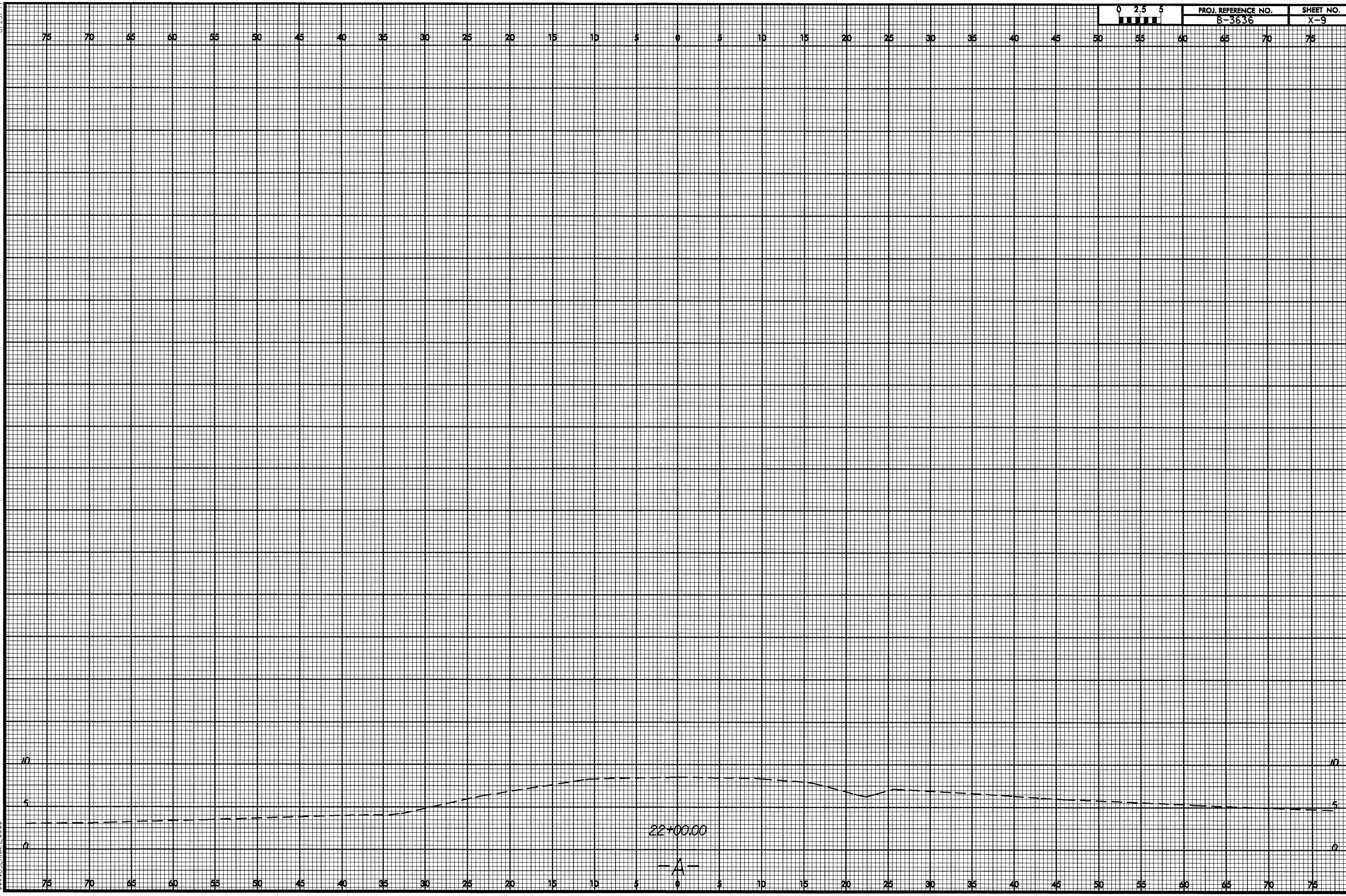
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3636	X-7





PROJ. REFERENCE NO.	SHEET NO.
B-3636	X-9



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CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	**B-3636**
State Project No.	**8.2030401**
W.B.S. No.	**33184.1.1**
Federal Project No.	**BRZ-1222(5)**

A. Project Description:

This project proposes to replace Bridge No. 16 on SR 1222 over Rocky Hock Creek in Chowan County. The replacement structure will be a 80-foot long bridge. The bridge will be of sufficient width to provide for two 12-foot lanes with three-foot offsets on each side. Traffic will be detoured offsite during construction.

The roadway grade of the new structure will be approximately the same as the existing grade at this location.

The approach roadway extending approximately 110 feet from the east end of the bridge and 280 feet from the west end of the bridge will be widened to a 24-foot pavement width to provide two 12-foot lanes. Five-foot shoulders will be provided on each side (eight-foot shoulders where guardrail is included). This roadway will be designed as a rural local route with a 60 mile per hour design speed.

B. Purpose and Need:

Bridge No. 118 includes a two-span superstructure composed of a five-inch reinforced concrete deck on I-beams. The original substructure includes solid reinforced concrete piers and abutments. The structure was later widened with concrete caps on timber piles.

Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 34.7 out of a possible 100 for a new structure. The bridge is considered functionally obsolete due to a deck geometry appraisal of 2 out of 9 according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Replacement and Rehabilitation Program.

Wear and tear resulting from increasing traffic, aging (59 year old) bridge components, increasing maintenance costs, and a cross section narrower than generally desired for this type of facility are the reasons for replacing this bridge.

C. Proposed Improvements:

Circle one or more of the following Type II improvements which apply to the project:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).

a. Restoring, Resurfacing, Rehabilitating, and Reconstructing pavement (3R and 4R improvements)
b. Widening roadway and shoulders without adding through lanes
c. Modernizing gore treatments
d. Constructing lane improvements (merge, auxiliary, and turn lanes)
e. Adding shoulder drains
f. Replacing and rehabilitating culverts, inlets, and drainage pipes, including safety treatments
g. Providing driveway pipes
h. Performing minor bridge widening (less than one through lane)
i. Slide Stabilization
j. Structural BMP's for water quality improvement

2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.

a. Installing ramp metering devices
b. Installing lights
c. Adding or upgrading guardrail
d. Installing safety barriers including Jersey type barriers and pier protection
e. Installing or replacing impact attenuators
f. Upgrading medians including adding or upgrading median barriers
g. Improving intersections including relocation and/or realignment
h. Making minor roadway realignment
i. Channelizing traffic
j. Performing clear zone safety improvements including removing hazards and flattening slopes
k. Implementing traffic aid systems, signals, and motorist aid
l. Installing bridge safety hardware including bridge rail retrofit

3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.

a. Rehabilitating, reconstructing, or replacing bridge approach slabs
b. Rehabilitating or replacing bridge decks
c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
d. Replacing a bridge (structure and/or fill)

4. Transportation corridor fringe parking facilities.

5. Construction of new truck weigh stations or rest areas.

6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.

7. Approvals for changes in access control.

8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near

a street with adequate capacity to handle anticipated bus and support vehicle traffic.

9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.

10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.

11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.

12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

13. Acquisition and construction of wetland, stream and endangered species mitigation sites.

14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. Special Project Information:

Estimated Costs:

Total Construction	$ 475,000
Right of Way	$ 34,000
Total	$ 509,000

Estimated Traffic:

Current – 2300	Year 2025 - 3800
TTST - 1%	Dual - 3%

Accidents: In a check of a recent three-year period, one accident occurred just northeast of the bridge. The accident was not associated with the geometry of the road.

Functional Classification: Rural Minor Collector

School Busses: During the current school year there are 12 school bus crossings per day at this location. The School Bus Transportation Director for Chowan County indicated

that they can re-route the busses without too much trouble although a turn-around location will need to be identified or created between the bridge and NC 32.

Bridge Demolition: The superstructure for Bridge No. 16 should be possible to remove without dropping components into the water. Likewise, the timber piles should be possible to remove without dropping them into the water. The concrete piers may result in as much as 55 cubic yards of fill depending on the method of removal to be determined after a contractor is selected. According to NCDOT's Best Management Practices for Bridge Demolition and Removal, the contractor shall make every practical effort to minimize the fill.

Studied Offsite Detour: NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1223, NC 32 and back to SR 1222. The detour for the average road user would result in 2.5 minutes additional travel time (1.6 miles additional travel) which falls within the range of acceptable delay for the three-month duration of construction expected on this project. Chowan County Emergency Services has indicated a particular concern for this project in that there are two retirement homes just north of the bridge. The road closure would result in a 3.5-minute response delay for an average of four or five trips per week. NCDOT's original query to EMS indicated a road closure time up to one year. The Area Bridge Construction Engineer has estimated that the fastest construction would be approximately three months less and communicated this with EMS who agreed that they could work around this timeframe. Chowan County EMS did request that we minimize road closure as much as possible. Chowan County Schools have indicated that they could also work around an offsite detour provided that a turn-around location is provided south of the bridge.

Design Exception: NCDOT believes that a 30-foot clear deck width is appropriate for this project.

The NCDOT Bridge Policy calls for a 40 foot clear deck width for a Rural Minor Collector whose project design year ADT is greater than 2000 vehicles per day. For bridges greater than 100 feet a 30-foot clear deck width is acceptable.

Given the existing alignment characteristics of SR 1222, a 30-foot cross section should provide acceptable service to traffic without compromising safety. It will help minimize impacts to the surrounding high quality wetlands and the anadramous fish stream.

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

E. Threshold Criteria

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

ECOLOGICAL		YES	NO
(1)	Will the project have a substantial impact on any unique or important natural resource?		X
(2)	Does the project involve habitat where federally listed endangered or threatened species may occur?	X	
(3)	Will the project affect anadromous fish?	X	
(4)	If the project involves wetlands, is the amount of permanent and/or temporary wetland taking less than one-tenth (1/10) of an acre and have all practicable measures to avoid and minimize wetland takings been evaluated?	X	
(5)	Will the project require the use of U. S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Water Resources (OWR) and/or High Quality Waters (HQW)?		X
(8)	Will the project require fill in waters of the United States in any of the designated mountain trout counties?		X
(9)	Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?		X

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

(14)	Will the project require any stream relocations or channel changes?		X

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES		YES	NO
(15)	Will the project induce substantial impacts to planned growth or land use for the area?		X
(16)	Will the project require the relocation of any family or business?		X
(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?		X
(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	X	
(19)	Will the project involve any changes in access control?		X
(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?		X
(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?		X
(22)	Is the project included in an approved thoroughfare plan and/or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	X	
(23)	Is the project anticipated to cause an increase in traffic volumes?		X
(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	X	
(25)	If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility?	X	
(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?		X
(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	X	
(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?		X

(29)	Will the project affect any archaeological remains which are important to history or pre-history?		X
(30)	Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)?		X
(31)	Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended?		X
(32)	Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers?		X

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 2: Marginal habitat for the Bald Eagle. Surveys have been conducted and a Biological Assessment of "May Affect, Not Likely to Adversely Affect" has been submitted to U.S. Fish & Wildlife Service for concurrence. The opinion will be updated if the project is not let to construction by April 2006.

Response to Question 3: National Marine Fisheries Service has requested a risk averse approach regarding anadramous fish. They recommend applying a moratorium from February 1 to September 30 of any given year.

G. CE Approval

TIP Project No.	**B-3636**
State Project No.	**8.2030401**
W.B.S. No.	**33184.1.1**
Federal Project No.	**BRZ-1222(5)**

Project Description:

This project proposes to replace Bridge No. 16 on SR 1222 over Rocky Hock Creek in Chowan County. The replacement structure will be a 80-foot long bridge. The bridge will be of sufficient width to provide for two 12-foot lanes with three-foot offsets on each side. Traffic will be detoured offsite during construction.

The roadway grade of the new structure will be approximately the same as the existing grade at this location.

The approach roadway extending approximately 110 feet from the east end of the bridge and 280 feet from the west end of the bridge will be widened to a 24-foot pavement width to provide two 12-foot lanes. Five-foot shoulders will be provided on each side (eight-foot shoulders where guardrail is included). This roadway will be designed as a rural local route with a 60 mile per hour design speed.

Categorical Exclusion Action Classification:

____ TYPE II(A)
X TYPE II(B)

Approved:

10-4-04 — Teresa Hart
Date — Assistant Manager
Project Development & Environmental Analysis Branch

10/4/04 — William D. Gooch
Date — Project Planning Unit Head
Project Development & Environmental Analysis Branch

10-04-04 — John D. Williams
Date — Project Planning Engineer
Project Development & Environmental Analysis Branch

For Type II(B) projects only:

10-7-04 — for John F. Sullivan, III, P.E., Division Administrator
Date — Federal Highway Administration

PROJECT COMMITMENTS:

Chowan County
Bridge No. 16 on SR 1222
Over Rocky Hock Creek
Federal Aid Project No. BRZ-1222 (5)
State Project No. 8.2030401
W.B.S. No. 33184.1.1
T.I.P. No. B-3636

All Design Groups/Division Resident Engineer – Anadramous Fish

The North Carolina Division of marine Fisheries has indicated that a moratorium on in-water construction will be in place from February 1 to September 30 of any given year.

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

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

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

NCDOT will implement Stream Crossing Guidelines for Anadramous Fish Crossings.

Office of Natural Environment – Bald Eagle

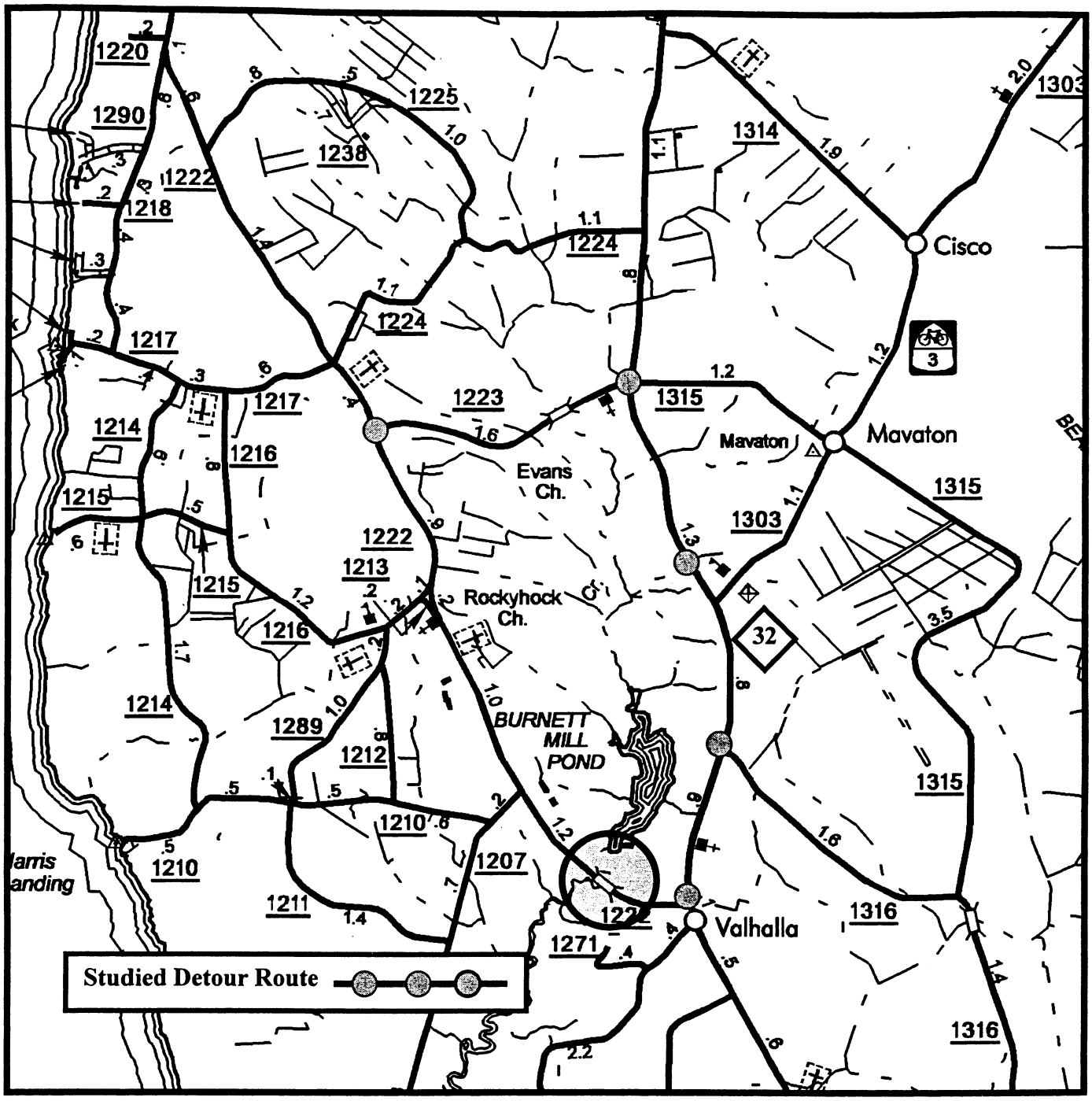
A Biological Opinion of "May Affect, Not Likely to Adversely Affect" has been reached for this project. If the project does not let to construction prior to April 2006, the assessment will have to be re-confirmed.

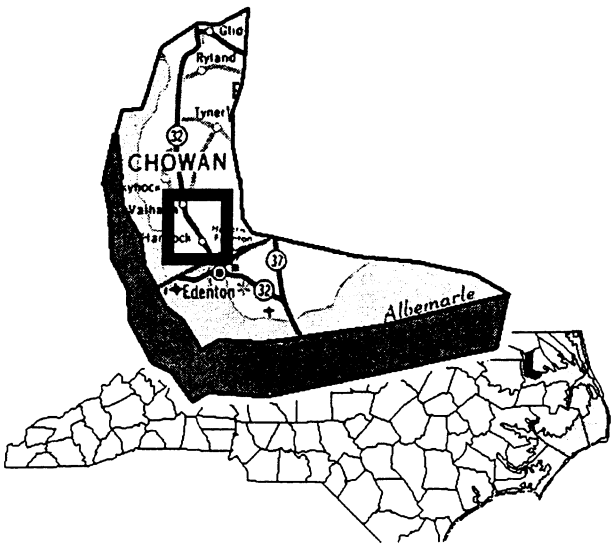
Project Services/ All Design Groups/ Utilities – Need for accelerated construction schedule

Chowan County Emergency Services has indicated that there are two rest homes just north of the bridge and response time will be delayed as a result of road closure. There is a high frequency of visits each week to the two homes. They have strongly requested that if we can not maintain traffic onsite that construction should be accomplished in the fastest manner practical. The contract and all aspects of design and construction should be fashioned to facilitate this outcome. Coordinate with PDEA Project Engineer if there are questions.

Division Resident Construction Engineer – School Bus Turn-Around

Chowan County Schools have six busses a day which cross the bridge and all pick up and drop off children south of the bridge. The school system has requested a location for a turn-around be coordinated with the school transportation director. The resident engineer will coordinate with the school transportation director prior to construction to accommodate this need.





NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

CHOWAN COUNTY
REPLACE BRIDGE 16 ON SR 1222
OVER ROCKY HOCK CREEK
B-3636

Figure 1

CHOWAN COUNTY
EMERGENCY SERVICE BUILDING
208 W. HICKS ST.
EDENTON, N.C. 27932
(919) 482-4365

OFFICE OF:
EMERGENCY MANAGEMENT

OFFICE OF:
EMS/RESCUE

May 2, 2000

Mr. John L. Williams, P.E.
NC Department of Transportation
Bridge Replacement Planning Unit
P.O. Box 25201
Raleigh, NC 27611-5201

SUBJECT: Replacement of Bridge No. 16 on SR 1222, over Rocky Hock Creek in Chowan County (T.I.P. No. B-3636)

Dear Mr. Williams,

At a recent, Chowan County 911 Advisory Board meeting we discussed the proposed replacement of Bridge No. 16 on SR 1222. Attending the meeting were Sheriff Fred Spruill, Edenton Police Chief Gregory Bonner, Edenton Fire Chief Chuck Westbrook, 911 Director Jim Carr and myself. We all have great concerns of public safety with the closing of this bridge and rerouting of traffic.

There are many contributing factors in the Rocky Hock area that are of concern to us. They are as follows:

(1) Two (2) densely populated retirement communities are located in this response area.
(2) Two (2) large industries are located in this response area.
(3) A day care is located in this response area.
(4) One (1) of the State's largest rural church congregations is located in this response area.

(5) Rocky Hock Road is the primary route of emergency response vehicles to the Rocky Hock community.
(6) Many elderly citizens live off the primary routes of Rocky Hock Road.

Closing this bridge and rerouting traffic will cause a major delay of emergency response personnel to the Rocky Hock community. By taking alternate routes this will cause an additional 3.5 miles of travel and delay response time by 4 minutes. These are critical numbers for emergency responders in a rural community. These delays could mean the difference between life and death.

If possible, please consider putting a temporary bridge at Rocky Hock Creek site during construction of the new bridge. Your consideration will be greatly appreciated.

Sincerely,

Douglas L. Belch, Coordinator
Chowan County Emergency Services

CC: Cliff Copeland, Chowan County Manager
Fred Spruill, Chowan County Sheriff
Gregory Bonner, Edenton Police Chief
Chuck Westbrook, Edenton Fire Department Chief
Jim Carr, Chowan County 911 Director

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

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

Division of Archives and History
Jeffrey J. Crow, Director

September 12, 2000

MEMORANDUM

To: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch

From: David Brook
Deputy State Historic Preservation Officer

Re: Replacement of Bridge No. 16 on SR 1222 over Rocky Hock Creek, TIP No. B-3636, Chowan County, ER 00-8452

On March 7, 2000, April Montgomery of our staff met with North Carolina Department of Transportation (NCDOT) staff for a meeting of the minds concerning the above project. We reported our available information on historic architectural and archaeological surveys and resources along with our recommendations. NCDOT provided project area photographs and aerial photographs at the meeting.

Based upon our review of the photographs and the information discuss at the meeting, we offer our preliminary comments regarding this project.

In terms of historic architectural resources, we are aware of no historic structures located within the area of potential effect. We recommend that no historic architectural survey be conducted for this project.

There are no known archaeological 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 inclusion 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.

Having provided this information, we look forward to receipt of either a Categorical Exclusion or Environmental Assessment, which indicates how NCDOT addressed our comments.

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

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, Environmental Review Coordinator, at 919/733-4763.

DB:kgc

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342 • 715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4618 Mail Service Center, Raleigh NC 27699-4618	(919) 733-6545 • 715-4801

Natural Resources Technical Report for the proposed replacement of Bridge No. 16 on SR 1222 over Rockyhock Creek, Chowan County

TIP No. B-3636
Federal Aid Project No. BRZ-1222(5)
State Project No. 8.2030401

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

Chris Underwood, Environmental Specialist
October 2005

Natural Resources Technical Report for the proposed replacement of Bridge No. 16 on SR 1222 over Rockyhock Creek, Chowan County

Executive Summary

TIP No. B-3636
Federal Aid Project No. BRZ-1222(5)
State Project No. 8.2030401

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

Chris Underwood, Environmental Specialist
October 2005

EXECUTIVE SUMMARY

B-3636

CHOWAN COUNTY

Bridge No. 16 over Rockyhock Creek on SR 1222 (Rockyhock Road) in Chowan County.

INTRODUCTION

The proposed project, Transportation Improvement Program (TIP) No. B-3636, will replace Bridge No. 16 on SR 1222 over Rockyhock Creek in Chowan County, North Carolina. The bridge, constructed in 1949, is currently structurally deficient and in need of replacement. The replacement is intended to provide a safer bridge consistent with federal and state bridge standards.

The proposed project is situated in the northeastern portion of the Coastal Plain physiographic province. The geography consists predominantly of gently sloping uplands and broad, level floodplains along most streams. The elevation of the project study area is approximately 50 feet above Mean Sea Level (MSL). The land uses surrounding and within the project study area are mainly forests, agricultural fields, and some residential development. Also, Bennett's Millpond is to the north of Bridge No. 16. Chowan silt loam and Dorovan muck are classified as hydric soils.

PHYSICAL CHARACTERISTICS

Water Resources

The proposed project is situated in the North Carolina Division of Water Quality (NCDWQ) Sub-basin 03-01-04 and Hydrologic Unit (HUC) 03010203 of the Chowan River Basin. The project study area contains approximately 400 linear feet of Rockyhock Creek. Rockyhock Creek flows north to south underneath the bridge proposed for replacement.

The best usage classification of this section of Rockyhock Creek is class B-NSW (DWQ Index No. 25-22, 9/6/79). No High Quality Waters (HQW), Water Supplies (WS-I or WS-II), or Outstanding Resource Waters (ORW) occur within the project vicinity.

Biotic Resources

Three plant communities were observed in the project study area: mesic mixed hardwood forest, cypress-gum forest, and maintained-disturbed areas. Design alternatives have yet to be identified for this project, therefore no estimated area of impact to these natural communities has been calculated at this time. The following table describes the acreage of plant communities within the project study area; however, actual impact acreage within the construction limits will likely be less.

Table 1. Natural Communities within the Project Study Area.

Community Type	Percentage of Project Study Area
Mesic Mixed Hardwood Forest	5%
Cypress-Gum Forest	70%
Maintained-Disturbed Area	25%

JURISDICTIONAL TOPICS

Surface Waters and Wetlands

Rockyhock Creek is a jurisdictional surface water under Section 404 of the Clean Water Act (CWA). One jurisdictional wetland was identified within the project study area. Since no alternatives have been selected, specific impacts to waters of the United States cannot by determined. However, some impacts to Rockyhock Creek and the wetland could be anticipated for the proposed project. The following table describes the acreage of the wetland and linear footage of the stream located within the project study area; however, actual impacts within the construction limits will likely be less.

Table 2. Jurisdictional Wetlands and Streams within the Project Study Area.

Jurisdictional Wetland/Stream	Area within Project Study Area
Wetland 1	9 acres
Rockyhock Creek	400 linear feet

The bridge superstructure is reinforced concrete deck on timber joists. The substructure is timber caps on timber piles. Removal of the superstructure and substructure is not likely to cause fill in surface waters.

The following issues apply to the proposed project:

- Anadromous fish moratorium
- CAMA AEC (Public Trust Waters)

Permits

In accordance with the Federal Register (January 15, 2002), Part II, Volume 67, Number 10, the project will likely require authorization under a Section 404 Nationwide Permit #23 (Approved Categorical Exclusions). A Nationwide Permit # 33 (Temporary Construction, Access, and Dewatering) may be needed for temporary construction access if that is not addressed in the NEPA document. A final permitting strategy cannot be developed until a design alternative is selected.

Section 401 General Water Quality Certifications for NWP #23 and #33 are No. 3361 and 3366, respectively. Written concurrence from the N.C. Division of Water Quality (DWQ) is not required provided all standard conditions of these Certifications are met. Final determination of permit applicability lies with USACE. NCDOT will coordinate with the USACE after the completion of final design to obtain the necessary permits.

Mitigation

In accordance with 15A NCAC 2H.0506(h) and 40 CFR 1508.20, mitigation will be required for permanent impacts to jurisdictional streams. In addition, mitigation will be required for permanent wetland impacts. At this time, no design alternatives have been selected; however, once an alternative and right-of-way widths are established, specific impact calculations to wetlands and streams can be determined and mitigation requirements can be further evaluated.

Federally-Protected Species

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and

Section 9 of the ESA. According to the January 29, 2003 USFWS listing, the bald eagle is the only federally threatened species listed for Chowan County.

BIOLOGICAL CONCLUSION: May Affect, Not Likely to Adversely Affect

The project area is approximately 4 miles upstream of the confluence of Rockyhock Creek and the Chowan River and suitable nesting and foraging habitat is available. This habitat consisted of cypress-gum swamp adjacent to Bennett's Mill Pond. A walking visual search for the species was conducted to ensure no individuals existed within the immediate vicinity of the proposed bridge replacement. Also a canoe survey of Bennet's Mill Pond was conducted to determine if there were nests nearby. In addition, each road that parallels Rockyhock Creek was driven to survey the trees along the creek for nests. During the survey, no bald eagles or their nests were observed. In addition, the North Carolina Natural Heritage Program database of rare and protected species was reviewed and revealed no records of bald eagles in the project area. Therefore, construction of the proposed project may affect, but is not likely to adversely affect this species.

1.0 INTRODUCTION

The following Natural Resources Technical Report is submitted to assist in the preparation of a Categorical Exclusion (CE) for the proposed project. The purpose of this document is to inventory and describe the natural resources which occur within the proposed right-of-way boundaries and which are likely to be impacted by the proposed action. Assessments of the nature and severity of probable impacts to these natural resources are provided, along with recommendations for measures that will minimize resource impacts.

This report identifies areas of particular environmental concern, which may affect the selection of a preferred alignment or may necessitate changes in design criteria. Such environmental concerns should be addressed during the preliminary planning stages of the proposed project in order to maintain environmental quality in the most efficient and effective manner. The analyses contained in this document are relevant only in the context of the existing preliminary project boundaries and design. If design parameters and criteria change, additional field investigations may be necessary.

1.1 Project Description

The proposed project calls for the replacement of an obsolete bridge, bridge No. 16, on SR 1222 over Rockyhock Creek in Chowan County, North Carolina. Figure 1 depicts the project vicinity. Bridge No. 16 will be replaced in place with a new bridge with traffic detoured off-site on local roads during construction. The existing right-of-way is approximately 60 feet from ditch line to ditch line. The proposed right-of-way is an 80-foot corridor. Approximately 1250 feet of the approaches to the bridge will be upgraded.

1.2 Methodology

Prior to a site visit, published resource information pertaining to the project area was gathered and reviewed. Resources utilized in this preliminary investigation of the project area include:

- U.S. Geological Survey (USGS) quadrangle map (Edenhouse, N.C.)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Map (Edenhouse, N.C.)
- NCDOT aerial photomosaics of the project area
- Natural Resource Conservation Service (NRCS) Soil Survey of Chowan/Perquimans County, North Carolina (1986).
- NC Center for Geographic Information and Analysis Environmental Sensitivity Base Map of Chowan County (1995)

Water resource information was obtained from publications of the Department of Environment and Natural Resources. Quantitative sampling was not undertaken to support existing water quality data. Information concerning the occurrence of federal and state protected species in the study area was obtained from the USFWS list of protected and candidate species (January 29, 2003) and from the N.C. Natural Heritage Program (NCNHP) database of rare species and unique habitats. NCNHP files were reviewed for documented sightings of state or federally listed species and locations of significant natural areas.

NCDOT Environmental Biologist Chris Underwood conducted general field surveys along the proposed alignment on April 14, 2004. Water resources were identified and their physical characteristics were recorded. Plant communities and their associated wildlife were also identified and described. Terrestrial community classifications generally follow Schafale and Weakley (1990) where possible, and plant taxonomy follows Radford, et al. (1968). Animal taxonomy follows Martof, et al. (1980), Menhenick (1991), Potter, et al. (1980), and Webster, et al. (1985). Vegetative communities were mapped utilizing aerial photography of the project site. Predictions regarding wildlife community composition involved general qualitative habitat assessment based on existing vegetative communities. Field surveys for federally-protected species were performed following initial habitat assessments where suitable habitat for each species was identified.

Jurisdictional wetlands were identified and evaluated based on criteria established in the "Corps of Engineers Wetland Delineation Manual" (Environment Laboratory, 1987) and "Guidance for Rating the Values of Wetlands in North Carolina" (Division of Environmental Management, 1995). Wetlands were classified based on the classification scheme of Cowardin, et al. (1979).

1.3 Definition of Area Terminology

For the purposes of this document, the following terms are used concerning the limits of natural resources investigations. "Project area" denotes the area bounded by the proposed right-of-way limits along the full length of the project alignment. "Project vicinity" is defined as an area extending 0.6 mile on all sides of the project area, and "project region" denotes an area equivalent in size to the area represented by a 7.5 minute USGS quadrangle map, i.e. 61.8 square miles.

1.4 Qualifications of Principal Investigator

Investigator:	Chris Underwood
Education:	BS Wildlife and Fisheries Science, University of Tennessee at Knoxville, 1989
Experience:	Environmental Biologist, NCDOT, May 2003- Present
	Senior Biologist, Tennessee Valley Authority, 1991- 2003
Expertise:	Fish taxonomy, stream biology, fisheries biology, natural resource surveys, & wetland delineations

2.0 PHYSICAL CHARACTERISTICS OF PROJECT AREA

Soil and water resources, which occur in the project area, are discussed below with respect to possible environmental concerns. Soil properties and site topography significantly influence the potential for soil erosion and compaction, along with other possible construction limitations or management concerns. Water resources within the project area present important management limitations due to the need to regulate water movement and the increased potential for water quality degradation. Excessive soil disturbance resulting from construction activities can potentially alter both the flow and quality of water resources, limiting downstream uses. In addition, soil characteristics and the availability of water directly influence the composition and distribution of flora and fauna in biotic communities, thus affecting the characteristics of these resources.

2.1 Regional Characteristics

The project area of Chowan County lies in the Coastal Plain physiographic province of northeastern North Carolina. The topography of Chowan County is nearly level with the lowest points being along major drainageways. Elevations in the project region range from near sea level to approximately 50.0 feet above sea level near the Snow Hill area of Chowan County.

The project area occurs approximately 4 miles upstream of the mouth of Rockyhock Creek as it enters the Chowan River. The majority of the project vicinity consists of natural forested communities. Limited areas of agriculture also occur within the project vicinity. Land use patterns in the project region are not expected to change in the foreseeable future.

2.2 Soils

The dominant soils occurring within the project area are Chowan silt loam (NRCS 1999). This soil occurs on flood plains of small streams that flow into Albemarle Sound, Chowan River, and Perquimans River. It is a very poorly drained soil that is underlain by muck. Included with this soil are small areas of Dorovan muck.

Table 1 provides an inventory of the specific soil types which occur in the project area. A brief description of each soil type is also provided. Proportional area of each soil type was determined from NRCS soil maps of the project area.

Table 1. Soils occurring in the project area.

Map Unit	Soil Series	% Slope	% of Project Area	Hydric Class.
CO	Chowan Silt Loam	Nearly level	Nearly 100	H
DO	Dorovan Muck	Nearly level	Unmapped; inclusions	H

Note: H Hydric soils or soils having hydric soils as a major component.

As stated above, Chowan silt loam is a nearly level, very poorly drained soil that occurs on the flood plains of small streams that flow into the Albemarle Sound. Typically, the surface layer is dark grayish brown silt loam 6.0 inches thick. Below that, to a depth of 27 inches, is gray silty clay loam in the upper part and dark grayish brown silt loam in the lower part. The underlying material, to a depth of 80.0 inches, is black muck. This soil ranges from extremely acidic to moderately acidic in the mineral horizon and is extremely acidic to strongly acidic in the organic horizon. Chowan silt loam is subject to frequent flooding for long periods.

Dorovan muck soils are nearly level, poorly drained soils on the Albemarle Sound, Chowan River, Perquimans River, and major streams. Typically, the surface layer is very dark brown muck 3.0 inches thick. Below that to a depth of 96.0 inches is black muck. The soil is made up of highly decomposed organic matter and is extremely acidic. The seasonal high water table is at or near the surface and the soil is subject to frequent flooding for extended periods of time.

Erosion hazards are generally slight, primarily due to the nearly level topography of the project area. Surface runoff velocity under such conditions is low, limiting its erosive potential.

As indicated in Table 2, forest productivity for soils occurring in the project area is poor as compared to other soils in the Coastal Plain region. Due to the severe wetness, active forest management for timber production is not present in the project corridor. However, it is likely that the swamp forests in the project corridor have been harvested in the past and may possibly be harvested again in the future. This is most likely to occur when drought and high timber prices combine to allow easier access and financial incentive for timber harvest.

Table 2. Potential forest productivity of soils in the project area.

Soil Series	Site Index-Water tupelo	Green ash
Chowan silt loam	80	98

Note: Site Index is defined as the expected average height in feet of dominant trees in an even aged stand at 50 years of age. Water tupelo and Green ash are the only species for which a site index was provided in the soil survey

2.3 Water Resources

This section contains information concerning surface water resources likely to be impacted by the proposed project. Water resource assessments include the physical characteristics, best usage standards, and water quality aspects of the water resources, along with their relationship to major regional drainage systems. Probable impacts to surface water resources are also discussed, as are means to minimize impacts.

2.3.1 Physical Characteristics of Impacted Surface Waters

Water resources within the project vicinity are part of sub-basin 030104 of the Chowan River basin (HUC 03010203). The project area occurs approximately four miles upstream of the confluence of Rockyhock Creek and the main stem of the Chowan River.

2.3.2 Best Usage Classification

Streams have been assigned a best usage classification by the Division of Water Quality (DWQ) which reflects water quality conditions and potential resource usage. Unnamed streams or tributaries carry the same best usage classification as that assigned to the stream segment to which they are a tributary. Rockyhock Creek carries the best usage classification of B-NSW (DWQ Index No. 25-22, 9/6/79). Class B refers to those waters designated for primary recreation and any other usage specified by the "C" classification; NSW (Nutrient Sensitive Waters) refers to waters which require limitations on nutrient inputs. Class C waters are defined as suitable for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Additionally, Rockyhock Creek is a designated anadromous fish spawning area for American shad, blueback herring, and alewife.

No waters classified as High Quality Waters (HQW), Water Supplies (WS-I or WS-II) or Outstanding Resource Waters (ORW) occur within 1.0 miles of project study area.

2.3.3 Water Quality

This section describes the water quality of the water resources within the project area. Potential sediment loads and toxin concentrations of these waters from both point sources and nonpoint sources are evaluated. Water quality assessments are made based on published resource information and existing general watershed characteristics. These data provide insight into the value of water resources within the project area to meet human needs and to provide habitat for aquatic organisms.

2.3.3.1 General Watershed Characteristics

The watershed of Rockyhock Creek is dominated by nearly equal proportions of forestland and agricultural lands with the immediate shoreline of the creek being dominated by a forested swamp community. Residential and commercial development is also present in the project vicinity, but only to a minor extent. Non-point source runoff from developed residential/commercial areas and agricultural practices is likely to be a source of water quality degradation to the water resources located in the project vicinity. However, the low intensity of such development and the limited surface area of impervious surfaces suggest that non-point source inputs from developed lands are not likely to be severe. Inputs of non-point source pollution from agricultural areas within the project area are likely to be more of a contributing factor. The high proportion of surface area occupied by forestland, along with the gently sloping topography and low erodibility of the soils, suggest that sedimentation of surface waters is probably moderate to low for Rockyhock Creek.

2.3.3.2 Ambient Water Quality Monitoring/Biologic Water Quality Monitoring

The DWQ has initiated a basinwide approach to water quality management for the 17 river basins of North Carolina, which includes biologic, chemical, and physical data that are collected at fixed sampling points. Based on these data, basinwide water quality is reassessed every five years for each river basin. Rockyhock Creek is located in the Chowan River basin (HUC 03010203), sub-basin 030104. A water quality monitoring site (020253632) is located downstream of the project area at the US 17 crossing of the Chowan River. According to the Chowan River Basin Basinwide Assessment Report (DWQ, January 2000), the Chowan River received a Good-Fair bioclassification for site 020253632 in 2000.

2.3.3.3 Point Source Dischargers

Point source dischargers located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program administered by the DWQ. All dischargers are required to register for a permit. No permitted dischargers are listed for water resources within the project area.

2.3.4 Summary of Anticipated Impacts

Potential impacts to water resources, which often result from highway construction, occur primarily because of increased sedimentation as a result of accelerated soil erosion from exposed areas. Sedimentation and substrate disturbance occurring during construction can significantly reduce water clarity and dissolved oxygen content, in addition to the direct clogging of stream channels. Effects are usually most severe locally but may extend downstream for a considerable distance, with decreasing intensity. However, impacts can be minimized through adequate planning which emphasizes the

reduction of disturbed surface area and by protecting exposed areas from the energy of falling and flowing waters. Use of BMPs will also help to ensure that impacts to water quality are temporary and localized rather than long-term and extensive.

Long term impacts to water resources resulting from the proposed project are expected to be minor, given the site characteristics. Soil erosion from exposed areas should be slight due to the nearly level topography of the site and the relatively slow flow rates of Rockyhock Creek.

Due to the cumulative effect of water quality degradation and varied usage of water resources downstream, consideration should be taken to minimize sediment and toxic discharge into surface waters. In order to minimize potential impacts to water resources in the project area, NCDOT's Best Management Practices for the Protection of Surface Waters should be enforced during the construction phase of the project. This would include:

1) elimination or reduction of direct and non-point discharge into the water bodies and minimization of activities conducted in streams.
2) installation of temporary silt fences, dikes, and earth berms to control runoff during construction.
3) placement of temporary ground cover or re-seeding of disturbed sites to reduce runoff and decrease sediment loadings.
4) elimination of construction staging areas in floodplains or adjacent to streams to minimize disturbed surface area in close proximity to surface waters and to reduce the potential for accidental discharge of toxins into water bodies.
5) protection of existing streambank vegetation to the greatest extent possible.
6) prevention of any uncured concrete coming into contact with the waters of Rockyhock Creek

3.0 BIOTIC RESOURCES

This section describes the biotic communities encountered in the project area, as well as the relationships between fauna and flora within these ecosystems. The composition and distribution of biotic communities throughout the project area are reflective of topography, soils, hydrology, and past and present land uses. Descriptions of the terrestrial systems are presented in the context of plant community classifications, defined by the dominant plant species observed. Representative animal species which are likely to occur in these habitats (based on published range distributions) are also cited.

Scientific nomenclature and common names (when applicable) are provided for each animal and plant species described. Subsequent references to the same organism refer to the common name only.

3.1 Terrestrial Communities

Three distinct terrestrial communities were identified within the project area: maintained/disturbed, cypress-gum swamp, and mesic mixed hardwood forest. Figure 2 depicts these communities. Community composition in the project vicinity is primarily reflective of the current and prior land uses of the area. Each community type exhibits some degree of past or continued human disturbance, which has affected their structure or species composition. It is likely that much of the original bald cypress (*Taxodium distichum*) that would have dominated the cypress-gum community has been removed through logging. Bald cypress has been replaced by swamp tupelo (*Nyssa aquatica*) as the dominant species. Community boundaries within the project area tend to be well defined since forested communities usually border

open, disturbed areas.

The landscape immediately surrounding the project area is occupied to a large extent by agriculture and forestland, interspersed with minor development along roadways. Remaining forests are frequently found along slopes or bottomlands, or as buffers between fields or around residential areas.

Many faunal species are highly adaptive and may populate the entire range of terrestrial communities discussed. Raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*) and northern cardinal (*Cardinalis cardinalis*) are examples of species, which are likely to occur in all of the habitats in the project area. These species are adapted to forest/clearing boundary conditions and likely utilize numerous habitats to some extent for shelter, foraging, or movement corridors. Such species may not be listed for each community described.

Wildlife observed during the site visit includes: the Virginia opossum, ruby-throated hummingbird (*Archilocus colubris*), tufted titmouse (*Parus bicolor*), Carolina chickadee (*Parus carolinensis*), northern parula (*Parula americana*), black-and-white warbler (*Mniotilta varia*), yellow-throated warbler (*Dendroica dominica*), Carolina wren (*Thryothorus ludovicianus*), song sparrow (*Melospiza melodia*), summer tanager (*Piranga rubra*), northern cardinal (*Cardinalis cardinalis*), turkey vulture (*Cathartes aura*), black vulture (*Coragyps atratus*), and red-shouldered hawk (*Buteo lineatus*).

3.1.1 Maintained/Disturbed

The Maintained/Disturbed community occupies ~25% of the project area and consists of areas heavily impacted and maintained by human development activities. The project area to a large extent consists of roadside areas including: the road shoulders and maintained right-of-way of existing SR 1222, utility rights-of-way, and roadways. Significant soil disturbance and compaction, along with frequent mowing and/or herbicide application, inhibit natural succession and keep this community in an early successional state. As a result, the vegetation of this community is dominated by grasses and herbs with scattered trees and shrubs.

Common plants of this community are fescue (*Festuca* sp.), crabgrass (*Digitaria* sp.), wild onion (*Allium canadense*), and foxtail grass (*Setaria* sp.). Important associate species include goldenrod (*Solidago sp.*), dandelion (*Taraxacum officinale*), clover (*Trifolium* spp.), plantain (*Plantago* sp.), blackberry (*Rubus* sp.), henbit (*Lamium* spp.), Japanese honeysuckle (*Lonicera japonica*), Queen Ann's lace (*Daucus carota*), broomsedge (*Andropogon virginicus*), and aster (*Aster* sp.). Seedlings of various tree species occur along road slopes, utility rights-of-way, and areas where mowing is less frequent. These species include yellow poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and winged sumac (*Rhus copallina*).

Wildlife found in this community is limited and consists primarily of wide-ranging, adaptable species such as hispid cotton rat (*Sigmodon hispidus*), white-footed mouse (*Peromyscus leucopus*), eastern harvest mouse (*Reithrodontomys humulis*), and eastern cottontail rabbit (*Sylvilagus floridanus*), which are well suited to coexistence with human development. Nocturnal mammals common to suburban areas, such as the raccoon and Virginia opossum, may travel periodically through the project area, and gray squirrels (*Sciurus carolinensis*) may inhabit forested fringes. Common reptiles include the eastern fence lizard (*Sceloporus undulatus*) and eastern box turtle (*Terrapene caroline*), and bird populations likely include species such as northern cardinal, Carolina chickadee, American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), common grackle (*Quiscalus quiscula*), and European starling

(*Sturnus vulgaris*). Predators found in this community are the black racer (*Coluber constrictor*) and the rat snake (*Elaphe obsoleta*).

3.1.2 Cypress-gum Swamp Forest

This community type comprises ~70% of the project area. This community occurs adjacent to SR 1222 and the banks of Rockyhock Creek, except where human development or disturbance has displaced it.

Dominant vegetation found in this community includes bald cypress, sweetgum, willow (*Salix* sp.), red maple (*Acer rubrum*), swamp tupelo, black cherry (*Prunus serotina*), and sweetbay (*Magnolia virginiana)* in the overstory. The understory is comprised of Carolina ash (*Fraxinus caroliniana*), giant cane (*Arundinaria gigantea*), false nettle (*Boehmeria cylindrica*), greenbrier (*Smilax* sp.), netted chainfern (*Woodwardia areolata*), and poison ivy (*Toxicodendron radicans*). Wax myrtle (*Myrica cerifera*) is also prevalent along the edge between this community and the roadside shoulder.

Wildlife expected in this community includes gray squirrel, gray fox (*Urocyon cinereoargenteus*), raccoon, muskrat (*Ondatra zibethicus*), Virginia opossum, barred owl (*Strix varia*), great blue heron (*Ardea herodias*), pileated woodpecker (*Dryocopus pileatus*), yellow-bellied sapsucker (*Sphyrapicus varius*), wood duck (*Aix sponsa*), and downy woodpecker (*Picoides pubescens*).

Amphibians common to this community include the southern two-toed amphiuma (*Amphiuma means*), spring peeper (*Hyla crucifer*), southern leopard frog (*Rana sphenocephala*), and the green tree frog (*Hyla cinerea*). Reptiles such as the northern water snake (*Nerodia sipedon*), eastern cottonmouth (*Agkistrodon piscivorous*), and the common snapping turtle (*Chelydra serpentina*) may also be found.

An osprey (*Pandion haliaetus*), green-backed heron (*Butorides striatus*), great blue heron, anhinga (*Anhinga anhinga*), fish crow (*Corvus ossifragus*), wood duck, mallard (*Anas platyrhynchos*), and Canada goose (*Branta canadensis*) were observed near the project.

3.1.3 Mesic Mixed Hardwood Forest

The mesic mixed hardwoods are located on the upland area to the southeast of Bridge 16 and comprises ~5% of the plant communities the project study area. Canopy species found include yellow poplar (*Liriodendron tulipfera*), white oak (*Quercus alba*), laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua*), and loblolly pine (*Pinus taeda*). Understory species include water oak (*Quercus nigra*), laurel oak, sweetgum, loblolly pine, American holly (*Ilex opaca*), grapevine (*Vitis* sp.), multiflora rose (*Rosa multiflora*), and privet (*Ligustrum vulgare*). Plants in the herbaceous layer include fescue (*Festuca* sp.), ironweed (*Vernonia altissima*), poison ivy, netted chain fern (*Woodwardia areolata*), columbine (*Aquilegia canadensis*), jack-in-the-pulpit (*Arisaema triphyllum*), and honeysuckle (*Lonicera* sp.).

Considering the small size of this community and the close proximity of the cypress-gum swamp forest, the wildlife found here would be similar to the cypress-gum swamp.

3.2 Aquatic Communities

One aquatic community type, defined as a Coastal Plain Perennial Stream, will be impacted by the

proposed project. Rockyhock Creek is characterized by slow moving, tannin stained water. The creek is accompanied in the project area by an extensive cypress-gum swamp community.

Coastal plain perennial streams are utilized by a variety of aquatic/semiaquatic insects such as dragonfly (*Odonata*) and stonefly (*Plecoptera*) and by certain species of crayfish (*Cambaridae*), and freshwater mussels. This stream system also supports a diverse fishery including bluegill (*Lepomis marcrochirus*), yellow bullhead catfish (*Ictalalurus natalis*), alewife (*Alosa aestivalis*), blueback herring (*Alosa aestivalis*), bowfin, (*Amia calva*), redfin pickerel (*Esox americana*), pirate perch (*Aphredoderus sayanus*) mosquito fish (*Gambusia holbrooki*), and eastern mud minnow (*Umbra pygmaea*).

A yellow belly slider (*Trachemys scripta scripta*) was observed during the site visit.

As stated earlier, Rockyhock Creek is known to be a spawning and nursery area for American shad, alewife, and blueback herring.

3.3 Summary of Anticipated Impacts

Construction of the proposed project will have various impacts on the biotic resources described. This section quantifies and qualifies potential impacts to the natural communities within the project area in terms of the area impacted and the organisms affected. Temporary versus permanent impacts are considered as well, along with recommendations to minimize or eliminate impacts.

3.3.1 Impacts to Terrestrial Communities

Impacts to terrestrial communities will result from project construction due to the clearing and paving of portions of the project area, and thus the loss of community area. Table 3 summarizes potential quantitative losses to these biotic communities, resulting from project construction. Calculated quantitative impacts to terrestrial communities reflect the relative abundance of each community present in the study area. Estimated impacts are derived based on the project length of approximately 1,200 feet and the right-of-way width through the project. However, project construction often does not require the entire right-of-way and certain portions of the project area are already paved; therefore, actual impacts may be somewhat less.

Table 3. Estimated area impacts to biotic communities.

Community	**Alternative 1 replace bridge in place with traffic detoured on existing roads.**
Maintained roadside	0.45
Cypress-gum swamp forest	1.04
Total	1.49

Note: Values cited are in acres

Total impacts indicated in Table 3 are estimates based on the estimated widths of the existing roadway cross section and the existing right-of-way. Actual impacts should be less once a final design for the stabilization of SR 1222 north of bridge No. 16 is complete.

The projected loss of terrestrial habitat resulting from project construction will have minimal impact on

populations of native flora and fauna. The relatively small scale of the project as a bridge replacement with minor roadway stabilization will result in a minimum of total habitat loss when the final design is complete. The impacted forest communities have considerable value as wildlife habitat. However, the displacement of native flora and fauna away from the project area should be minor.

Animals temporarily displaced by construction activities should repopulate areas suitable for the species following project completion. As a result, it is unlikely that existing species will be displaced significantly from the project area following construction. However, to minimize the temporary effects of project construction, all cleared areas along the roadways should be revegetated soon after project completion to minimize the loss of wildlife habitat.

Because the project consists of replacing a bridge and stabilizing the roadway on existing location, fragmentation of natural habitats and disruption of normal wildlife movement should not be a serious concern. The existing roadway already partially disrupts the natural movements of wildlife in habitat corridors, such that the proposed project is not expected to create unusual environmental conditions. Direct effects on biotic communities should be minimal. Additionally, secondary development impacts resulting from project construction are not expected. The project will not open new areas to development and there will be no upgrade to the level of service currently provided by SR 1222.

3.3.2 Impacts to Aquatic Communities

Potential impacts to aquatic communities downstream of the project area primarily consist of increased sedimentation of the stream channel and toxic inputs from stormwater runoff. Increased sedimentation during construction activities and road surface runoff, after construction, are widely recognized as factors that can contribute to the cumulative degradation of water quality. Aquatic organisms are generally highly sensitive to changes in water quality. Effects are generally most severe at the point of stream crossings, but can extend downstream for a considerable distance, if not controlled.

If precautionary measures are not taken, excessive soil erosion from construction sites may result in the following impacts to surface water resources:

1) Increased turbidity and sedimentation.
2) Reduced light penetration due to reduced water clarity.
3) Reduced concentrations of dissolved oxygen.
4) Increased nutrient loading.

Sedimentation in rivers and streams reduces water clarity and light penetration, affecting the photosynthetic ability and growth of aquatic vegetation. Suspended particles may also impact benthic filter feeders inhabiting downstream areas by clogging their filtration apparatus or by covering them with excessive sediment. Sedimentation affects the concentration of dissolved oxygen in the water column by raising water temperature. Warmer water contains less oxygen and results in a reduction in aquatic life dependent on high oxygen concentrations. Moreover, increased nutrient loading can result in the accelerated growth of certain types of algae at the expense of other aquatic organisms. The loss of aquatic plants and animals resulting from these processes may ultimately affect terrestrial fauna, which feed upon these resources.

In addition, the removal of streamside vegetation increases the exposure of the water's surface to direct sunlight, which results in locally elevated water temperatures and reduced concentrations of dissolved

oxygen. The removal or burial of these streambank plants also decreases the food and shelter resources available to aquatic organisms, and disturbance of streambank vegetation enhances the likelihood of erosion and sedimentation. Revegetation of streamside zones following construction stabilizes the soil and shades the water surface, thus mitigating these processes.

Toxic substances from roadways (e.g. oil, gas, etc.) may enter surface waters through stormwater runoff from impervious surfaces. Such chemical substances may result in the direct mortality of aquatic species inhabiting the water resources located in the project area.

Construction of the proposed project will require work to be conducted within Rockyhock Creek. However, the proposed project should have only minor impacts on downstream aquatic communities, assuming precautionary measures are taken. Local erosion from construction activities may be high during construction, but appropriate use of BMPs should prevent most sediment from reaching surface waters. Erosion rates should diminish rapidly following project completion if exposed soils are revegetated and streambanks are stabilized. Minimizing the area of streambank disturbance will greatly aid in limiting erosion from the project area and protecting aquatic communities. Following project completion, road shoulders should aid in absorbing toxic runoff from roadways. Other considerations to protect stream communities include:

1) consideration of bioengineering techniques for streambank protection/stabilization.
2) using native vegetation to stabilize streambanks.
3) minimizing/eliminating the use of fertilizers adjacent to streams.
4) properly installing and maintaining all erosion control measures

4.0 JURISDICTIONAL TOPICS

This section provides inventories and impact analyses pertinent to two significant regulatory issues: Waters of the United States and rare and protected species. These issues retain particular significance because of federal and state mandates, which regulate their protection. This section deals specifically with the impact analyses required to satisfy regulatory authority prior to project construction.

4.1 Waters of the United States

Surface waters and wetlands fall under the broad category of "Waters of the United States," as defined in Section 33 of the Code of Federal Register (CFR) Part 328.3. Any action that proposes to dredge or place fill material into surface waters or wetlands falls under the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (33 U.S.C. 1344). Surface waters include all standing or flowing waters which have commercial or recreational value to the public. Wetlands are identified based on the presence of hydric soils, hydrophytic vegetation, and saturated or flooded conditions during all or part of the growing season.

4.1.1 Characteristics of Wetlands and Surface Waters

Potential wetland communities were delineated using the criteria specified in the 1987 "Corps of Engineers Wetlands Delineation Manual". Criteria to delineate jurisdictional wetlands include:

1) presence of hydric soils,
2) presence of hydrophytic vegetation, and
3) evidence of prescribed hydrologic characteristics during the growing season

All of these features must be present for an area to be considered a wetland.

One jurisdictional riverine wetland occurs in the project area. This wetland is part of the cypress-gum swamp community described in section 3.1.2. The area is frequently flooded and is dominated by hydrophitic vegetation. Soil profiles in the Dorovan muck soil consists of 0-3.0 inches of 10YR 2/2 brown muck underlain by >20.0 inches of 10YR 2/1 black muck. These soils are very poorly drained and very acidic.

The classification scheme developed by Cowardin et al. (1979) provides a uniform approach in classifying wetland and open water systems. Based on this system, the wetlands in the project area would be classified as PFO6F. This classification is interpreted as palustrine (P), forested (FO), deciduous vegetation (6), with a semi-permanently flooded water regime (F).

4.1.2 Permits and Consultations

Impacts to jurisdictional surface waters and wetlands are anticipated from the proposed project. As a result, construction activities will require permits and certifications from various regulatory agencies in charge of protecting the water quality of public water resources. Surface water systems and wetlands receive similar treatment and consideration with respect to most regulatory permits. These permits are authorized under the Clean Water Act and under separate state laws regarding significant water resources.

4.1.2.1 Section 404 Permits

Impacts to jurisdictional wetlands and/or surface waters may occur from project construction. In accordance with provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit will be required from the USACE for the discharge of dredged or fill material into "Waters of the United States." The proposed project will require impacts to Rockyhock Creek, and the adjacent wetlands.

Given the magnitude of potential impacts, a Nationwide Permit 33 CFR 330.5 (a) 23 is likely to be applicable at the stream/wetland crossings found in the project study area. However, final decisions concerning applicable permits for the proposed project rest with the USACE.

On October 15, 2004, the USACE issued a Jurisdictional Determination (Action ID 200510008) for this project confirming the location of regulated wetlands and surface waters.

Rockyhock Creek is a designated anadromous fish spawning area. An in-water work moratorium exists for this stream from February 15 to June 30 of any given year.

4.1.2.2 Water Quality Certification

This project will also require a 401 Water Quality General Certification from the DWQ prior to the issuance of a Section 404 Nationwide Permit. Section 401 of the Clean Water Act requires that the state

issue or deny water quality certification for any federally permitted or licensed activity that may result in a discharge into Waters of the United States. Section 401 Certification allows surface waters to be temporarily impacted for the duration of the construction or other land manipulation. Issuance of a 401 Certification from the DWQ is a prerequisite to the issuance of a Section 404 Permit.

4.1.2.3 Coastal Area Management Act Permitting

This project will also require a Major Development Permit from the North Carolina Division of Coastal Management (DCM). The North Carolina Coastal Area Management Act (CAMA) requires that development activities impacting Areas of Environmental Concern (AEC) in one of the twenty designated coastal counties be reviewed and authorized by the DCM.

Rockyhock Creek within the project area is a designated AEC. Therefore, the project will require authorization in the form of a CAMA Major Development Permit. Issuance of the CAMA Major Development Permit is also a prerequisite to the issuance of a Section 404 Permit.

4.1.3 Mitigation of Wetland Impacts

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

4.1.3.1 Avoidance

Avoidance mitigation examines all appropriate and practicable possibilities of averting impacts to Waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology and logistics in light of overall project purposes.

Due to the proximity of the project to a large continuum of cypress-gum swamp, it is unlikely that wetlands can be totally avoided. Additionally, the replacement of bridge No. 16 will require work in Rockyhock Creek.

4.1.3.2 Minimization

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to Waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the footprint of the proposed project through the reduction to median widths, ROW widths, fill slopes and/or road shoulder widths.

Unavoidable impacts to Waters of the United States should be minimized by modifications in design such as:

1) perpendicular stream crossings.
2) reduction of fill slopes
3) elimination of staging areas in lowland sites.
4) reduced clearing and grubbing activity in or near floodplain systems.

4.1.3.3 Compensatory Mitigation

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

In accordance with 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), July 22, 2003, the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP), will be requested to provide off-site mitigation, if necessary, to satisfy the federal CWA compensatory mitigation requirements for this project. Compensatory mitigation may be required for this project, although final determination rests with the USACE.

4.2 Rare and Protected Species

Threatened or endangered species are species whose populations are in decline and which face probable extinction in the near future without strict conservation management. Federal law under the Endangered Species Act (ESA) of 1973, as amended, protects plant and animal species which have been classified as Endangered (E), Threatened (T), Proposed Endangered (PE), or Proposed Threatened (PT). Provisions of Section 7 and Section 9 of the ESA require that any action, which is likely to adversely affect such federally classified species, be subject to review by the U.S. Fish and Wildlife Service (USFWS). Other potentially endangered species may receive additional protection under separate state laws. In North Carolina, protection of endangered species falls under the N.C. State Endangered Species Act and the N.C. Plant Protection and Conservation Act of 1979, administered and enforced by the N.C. Wildlife Resources Commission (WRC) and the N.C. Department of Agriculture, respectively.

4.2.1 Federally-Protected Species

As of January 29, 2003, the USFWS lists the following federally-protected species for Chowan County (Table 5). A brief description of the characteristics and habitat requirements of each species follows Table 5, along with a conclusion regarding potential project impacts.

Table 5. Federally Protected Species for Chowan County

Scientific Name	Common Name	Status
Haliaeetus leucocephalus	bald eagle	Threatened

Haliaeetus leucocephalus (bald eagle) **Threatened**
Animal Family: Accipitridae
Date Listed: 3/11/67

Adult bald eagles can be identified by their large white head and short white tail. The body plumage is dark-brown to chocolate-brown in color. In flight bald eagles can be identified by their flat wing soar.

Eagle nests are found in close proximity to water (within a half mile) with a clear flight path to the water, in the largest living tree in an area, and having an open view of the surrounding land. Human disturbance can cause an eagle to abandon otherwise suitable habitat. The breeding season for the bald eagle begins in December or January. Fish are the major food source for bald eagles. Other sources include coots, herons, and wounded ducks. Food may be live or carrion.

BIOLOGICAL CONCLUSION: May Affect, Not Likely to Adversely Affect

The project area is approximately 4 miles upstream of the confluence of Rockyhock Creek and the Chowan River and suitable nesting and foraging habitat is available. This habitat consisted of cypress-gum swamp adjacent to Bennett's Millpond. A walking visual search for the species was conducted to ensure no individuals existed within the immediate vicinity of the proposed bridge replacement. Also a canoe survey of Bennet's Millpond was conducted to determine if there were nests nearby. In addition, each road that parallels Rockyhock Creek was driven to survey the trees along the creek for nests. During the survey, no bald eagles or their nests were observed. In addition, the North Carolina Natural Heritage Program database of rare and protected species was reviewed and revealed no records of bald eagles in the project area. Therefore, construction of the proposed project may affect, but is not likely to adversely affect this species.

It should also be noted that the bald eagle is currently proposed to be delisted from the list of Endangered and Threatened Species.

On July 27, 2004, the USFWS concurred with the biological conclusion for bald eagle for this project.

4.2.2 Federal Species of Concern

One Federal Species of Concern (FSC) is listed by the USFWS for Chowan County as of January 29, 2003 (Table 6). FSC species are not afforded federal protection under the Endangered Species Act and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. However, the status of these species is subject to change, and so should be included for consideration.

In addition, organisms which are listed as Endangered (E), Threatened (T), or Special Concern (SC) by the North Carolina Natural Heritage Program list of Rare Plant and Animal Species are afforded limited

state protection under the NC State Endangered Species Act and the NC Plant Protection and Conservation Act of 1979. Species listed under state laws may or may not be federally protected. Species with state designations of Candidate (C), Significantly Rare (SR), and Watch List (W) are not protected under state laws; however, evidence suggests that populations of these species are also in decline.

Table 6 lists Federal Species of Concern, the state status of these species (if afforded state protection), and the potential for suitable habitat in the project area for each species. This species list is provided for informational purposes as the protection status of these species may be upgraded in the future.

Table 6. Federal Species of Concern for Chowan County.

Scientific Name	Common Name	NC Status	Habitat
Corynorhinus (=Plecotus) rafinesquii	Rafinesque's big-eared bat	SC/PT	Yes

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

"SC"--A Special Concern species is one which requires monitoring but may be taken or collected and sold under regulations adopted under the provisions of Article 25 of Chapter 113 of the General Statutes (animals) and the Plant Protection and Conservation Act (plants). Only propagated material may be sold of Special Concern plants that are also listed as Threatened or Endangered.

"/P_"--denotes a species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the listing process.

Surveys for this species were not conducted during the site visit, nor was this species observed. A review of the NCNHP database of rare species and unique habitats revealed no record of any federal Species of Concern within the project area. Based on available information, no impacts to state listed species are anticipated.

5.0 REFERENCES

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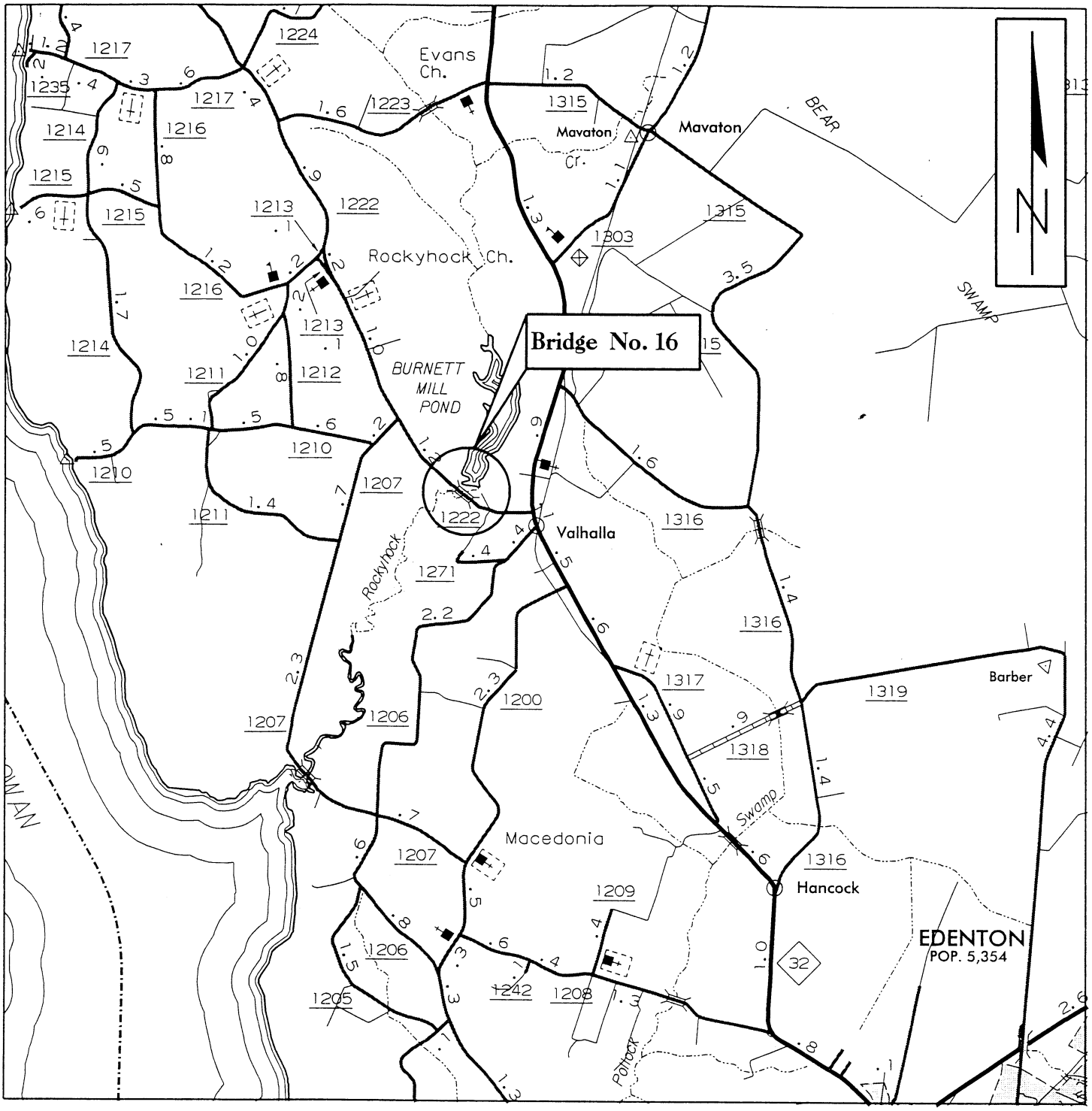
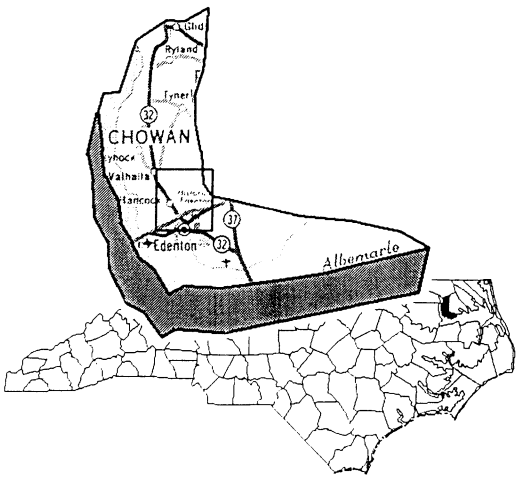
6.0 APPENDIX





North Carolina
Department of Transportation
Division of Highways
Planning & Environmental Branch

Chowan County
Replace Bridge No. 16 on SR 1222
Over Rocky Hock Creek
B-3636

SCALE: 1 in = 1 mi

Figure 1

Figure 2

1" : 200'

Legend

B-3636 Chowan County
Bridge #16 on SR 1222
Over Rockyhock Creek

Cypress/Gum Swamp

Mesic Mixed Hardwood Forest

Maintained/Disturbed

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Determination Manual)

Project / Site: B-3636 **Applicant / Owner:** NCDOT **Investigator:** Chris Underwood, Lindsey Riddick, Chris Manley	**Date:** 4/15/04 **County:** Chowan **State:** NC
Do normal circumstances exist on the site? Yes X No **Is the site significantly disturbed (Atypical situation)?** Yes No X **Is the area a potential problem area?** Yes No X **(explain on reverse if needed)**	**Community ID:** **Transect ID:** **Plot ID:**

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer rubrum.*	C,S	FAC	9. *Ulmus americana*	C	FACW
2. *Liquidambar styraciflua*	C,S	FAC+	10. *Ilex opaca*	S	FAC-
3. *Taxodium ascendens*	C,S	OBL	11. *Onoclea sensibilis*	H	FACW
4. *Decumaria barbara*	V	FACW	12. *Osmunda regalis*	H	OBL
5. *Berchemia scandens*	V	FACW	13. *Fraxinus americana*	C	FACU
6. *Smilax laurifolia*	V	FACW+	14. *Virburnum dentatum*	S	FAC
7. *Arundinaria gigantea*	G	FACW	15. *Impatiens capensis*	H	FACW
8. *Rosa palustris*	V	OBL	16.		

Percent of Dominant Species that are OBL, FACW, or FAC excluding FAC-). ~ 87%

Remarks: Wetland Vegetation Present Based Upon Greater than 50% of the Plant Species **are/are not** Classified as FAC-OBL in the National List of Plant Species that Occur in Wetlands. Sample plot was taken…in Wetland area: Cypress-gum

HYDROLOGY

___ **Recorded Data (Describe In Remarks):**
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ **No Recorded Data Available**

Field Observations:

Depth of Surface Water: n/a (in.)

Depth to Free Water in Pit: 12 (in.)

Depth to Saturated Soil: n/a (in.)

Wetland Hydrology Indicators

Primary Indicators:
- x Inundated
- x Saturated in Upper 12"
- x Water Marks
- x Drift Lines
- x Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Roots Channels in Upper 12"
- x Water-Stained Leaves
- x Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

GPS A041519A Hydric-1

SOILS

Map Unit Name
(Series and Phase): _____ **Drainage Class:** _____

Taxonomy (Subgroup): _____ **Confirm Mapped Type? Yes___ No___**

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-12		10 R 2.5/1	none		organic muck

Hydric Soil Indicators:

___ Histosol	___ Concretions
_x_ Histic Epipedon	_x_ High Organic Content in Surface Layer in Sandy Soils
___ Sulfidic Odor	___ Organic Streaking in Sandy Soils
___ Aquic Moisture Regime	_x_ Listed On Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils List
_x_ Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	**Yes** _X_ **No** ___	**Is the Sampling Point**	
Wetland Hydrology Present?	**Yes** _X_ **No** ___	**Within a Wetland?**	**Yes** _X_ **No** ___
Hydric Soils Present?	**Yes** _X_ **No** ___		

Remarks: **Location (describe) is/is not** classified as a wetland based upon the criteria set forth in the 1987 Army Corps of Engineers Wetlands Delineation Manual.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Determination Manual)

Project / Site: B-3636 **Applicant / Owner:** NCDOT **Investigator:** Chris Underwood, Lindsey Riddick, Chris Manley	**Date:** 4/15/04 **County:** Chowan **State:** NC
Do normal circumstances exist on the site? Yes____ No X **Is the site significantly disturbed (Atypical situation)?** Yes X No____ **Is the area a potential problem area?** Yes____ No X **(explain on reverse if needed)**	**Community ID:**_____ **Transect ID:**_____ **Plot ID:**_____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Vicia sp.*	H	FACU	9. *Lamium purpureum*	H	
2. *Valerianella locusta*	H	FAC-	10.		
3. *Viola papilionacea*	H	FAC	11.		
4. *Trifolium repens*	H	FACU	12.		
5. *Lonicera japonica*	H	FAC-	13.		
6. *Festuca sp.*	H	FACU	14.		
7. *Krigia*	H	FACU	15.		
8. *Cerastium vulgaris*	H	FACU-	16.		

Percent of Dominant Species that are OBL, FACW, or FAC excluding FAC-). ~ 12.5%

Remarks: Wetland Vegetation Present Based Upon Greater than 50% of the Plant Species **are/~~are not~~** Classified as FAC-OBL in the National List of Plant Species that Occur in Wetlands. Sample plot was taken…in upland area: causeway of road.

HYDROLOGY

___ **Recorded Data (Describe In Remarks):** ___ **Stream, Lake, or Tide Gauge** ___ **Aerial Photographs** ___ **Other** ___ **No Recorded Data Available** **Field Observations:** **Depth of Surface Water:** n/a **(in.)** **Depth to Free Water in Pit:** n/a **(in.)** **Depth to Saturated Soil:** n/a **(in.)**	**Wetland Hydrology Indicators** **Primary Indicators:** ___ **Inundated** ___ **Saturated in Upper 12"** ___ **Water Marks** ___ **Drift Lines** ___ **Sediment Deposits** ___ **Drainage Patterns in Wetlands** **Secondary Indicators:** ___ **Oxidized Roots Channels in Upper 12"** ___ **Water-Stained Leaves** ___ **Local Soil Survey Data** ___ **FAC-Neutral Test** ___ **Other (Explain in Remarks)**

Remarks: No hydrology indicators.

Dry-1

SOILS

Map Unit Name
(Series and Phase): _____ **Drainage Class:** _____

Taxonomy (Subgroup): _____ **Confirm Mapped Type? Yes** _____
No _____

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0+		10 YR 2/2			sandy loam fill material

Hydric Soil Indicators:

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma Colors
- ____ Concretions
- ____ High Organic Content in Surface Layer in Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ____ Listed On Local Hydric Soils List
- ____ Listed on National Hydric Soils List
- ____ Other (Explain in Remarks)

Remarks: Data point taken in roadside fill. Maintained and mowed roadside.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X
Hydric Soils Present? Yes ____ No X

Is the Sampling Point Within a Wetland? Yes ____ No X

Remarks: **Location (describe) is/is not** classified as a wetland based upon the criteria set forth in the 1987 Army Corps of Engineers Wetlands Delineation Manual.

Underwood

United States Department of the Interior

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

July 27, 2004

Phil Harris, III
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

This letter is in response to Greg Thorpe's letter of July 23, 2004 which provided the U.S. Fish and Wildlife Service (Service) with the biological determination of the North Carolina Department of Transportation that the replacement of Bridge No. 16 on SR 1222 over Rocky Hock Creek in Chowan County (TIP No. B-3636) 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, a survey was conducted at the project site on July 14, 2004. The survey extended to approximately a ¾ mile radius. No eagles or eagle nests were observed. Based on the information provided and other information available, the Service concurs with your determination that the project 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.

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).

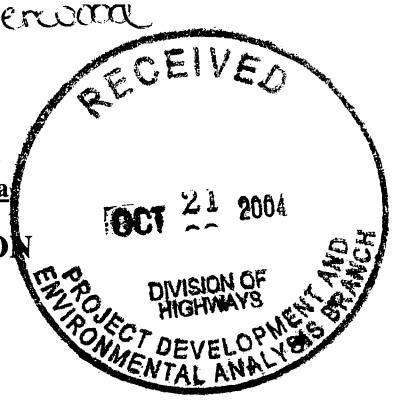
Sincerely,

John Ellis

John Ellis
Acting Ecological Services Supervisor

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

Undercoat



U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **200510008** County: **Chowan** U.S.G.S. Quad: **Valhalla**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Agent: **NCDOT, Gregory J. Thorpe, Ph.D.**
Address: **Environmental Management Director, PDEA**
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
Telephone No.: **(919) 733-3141**

Property description:
Size (acres) **1 acre** Nearest Town **Valhalla**
Nearest Waterway **Rockyhock Creek** River Basin **Chowan River**
USGS HUC **03010203** Coordinates N **36.1387202** W **76.6667212**
Location description **The project is located on NCSR 1222 at bridge number 16 approximately .5 miles west of NC highway 32 crossing and adjacent to Rocky Hock Creek (Bennett Millpond). TIP # B-3636.**

Indicate Which of the Following Apply:

_ Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

_ There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X There are waters of the U.S. including wetlands on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

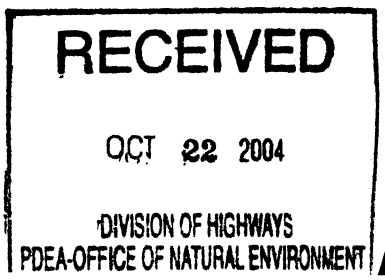
_ We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

_ The wetland on your property have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Elizabeth City, NC, at (252) 264-3901 to determine their requirements.



Action Id. **200510008**

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Bill Biddlecome** at **(252) 975-1616 ext. 31**.

Basis For Determination: **This site exhibits wetland criteria as described in the 1987 Corps Wetland Delineation Manual and is part of a broad continuum of wetlands connected to Rockyhock Creek which is a tributary to the Chowan River.**

Remarks: _____

Corps Regulatory Official: William J. Biddlecome

Date **10/15/2004** Expiration Date **10/15/2009**

Corps Regulatory Official (Initial): WJB

FOR OFFICE USE ONLY:

- A plat or sketch of the property and the wetland data form must be attached to the file copy of this form.
- A copy of the "Notification Of Administrative Appeal Options And Process And Request For Appeal" form must be transmitted with the property owner/agent copy of this form.
- If the property contains isolated wetlands/waters, please indicate in "Remarks" section and attach the "Isolated Determination Information Sheet" to the file copy of this form.