



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

June 15, 2007

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

ATTENTION: Ms. Jennifer Frye
NCDOT Coordinator

Dear Madam:

Subject: **Revised Nationwide Permit 23 Application** for the proposed replacement of Bridge No. 98 on SR 1246 (Butler Island Road) over Big Swamp, in Sampson County (Division 3). Federal Aid Project No. BRZ-1246(2), State Project No. 8.2281701, TIP No. B-4271, WBS Element 33612.1.1.

The purpose of this letter is to submit revisions to the Clean Water Act (CWA) Section 404 permit application submitted by the North Carolina Department of Transportation (NCDOT) on March 16, 2007. This project has a review date of July 3, 2007 and is due to let on August 21, 2007. Included with this request are revised: permit drawings, Wetland Restoration Plan, and wetland impact summary sheet.

The NCDOT is proposing the following revisions:

- The new bridge length will be 120 feet long, not 105 feet, with three spans of 35', 50', and 35'.
- The wetland line shown on the permit drawings has been corrected and no longer bisects Big Swamp.
- Impacts originally submitted were not calculated based on 3:1 fill slopes, though the application and cross sections indicated the 3:1 slopes. For this reason, impacts to jurisdictional wetlands have increased from 0.04 ac to 0.05 ac.
- The Wetland Restoration Plan now defines mitigation areas more clearly.

Regulatory Approvals

The NCDOT respectfully requests this project to be authorized by USACE 404 Permit (NW 23) and North Carolina Department of Environment and Natural Resources, Division of Water Quality (NCDWQ) 401 Water Quality Certification (GC 3632). We are providing two copies of this revised application to the NCDWQ, for their review.

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

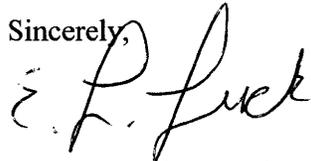
WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

A copy of this modification request will be posted on the NCDOT website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>.

If you have any questions or need additional information, please contact Worth Calfee at (919) 715-7225.

Sincerely,



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

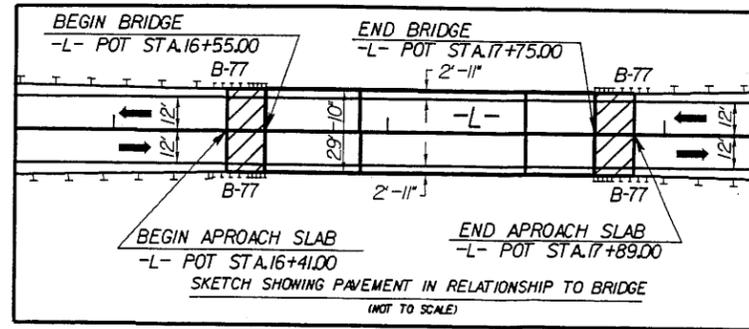
w/attachment

Mr. John Hennessy, NCDWQ
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. H. Allen Pope, P.E., Division 3 Engineer
Mr. Mason Herndon, Division 3 Environmental Officer
Ms. LeiLani Paugh, Natural Environment Unit

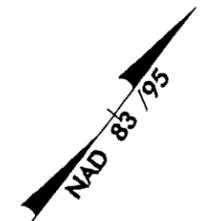
w/out attachment

Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Mr. Gregory M. Blakeney, PDEA Project Planning Engineer

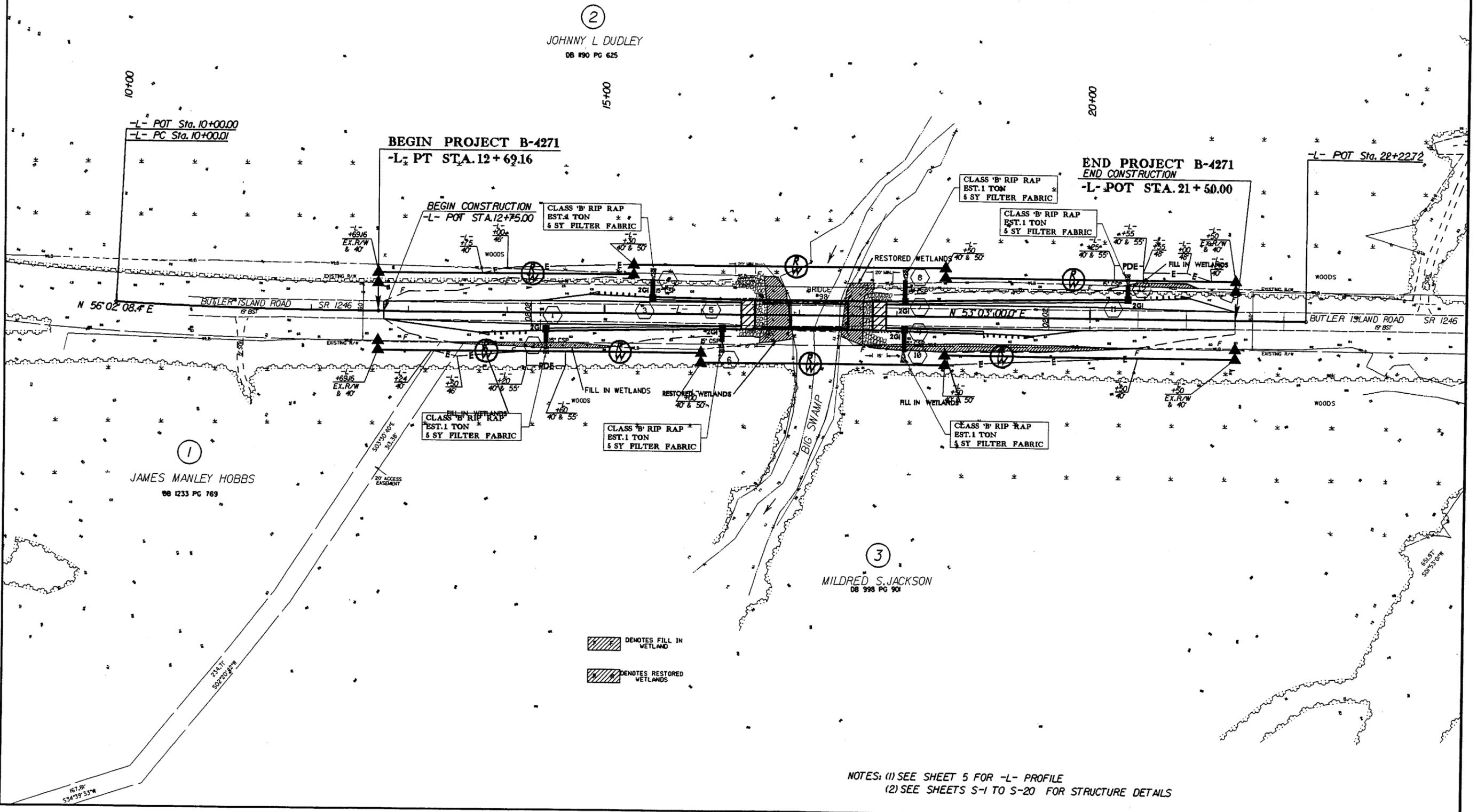
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 $L = 269.15'$
 $T = 134.60'$
 $R = 5,165.00'$
 SE = EXISTING



PROJECT REFERENCE NO. B-4271	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



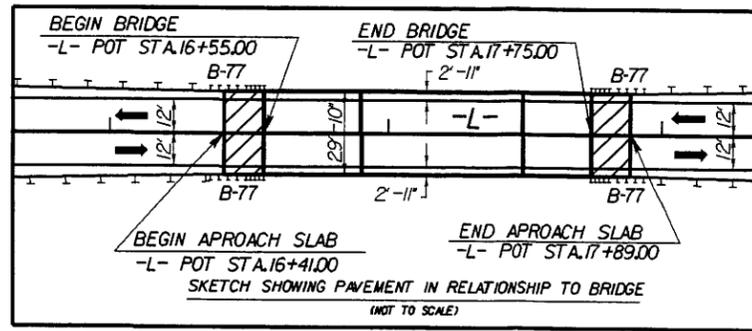
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 DB 890 PG 625



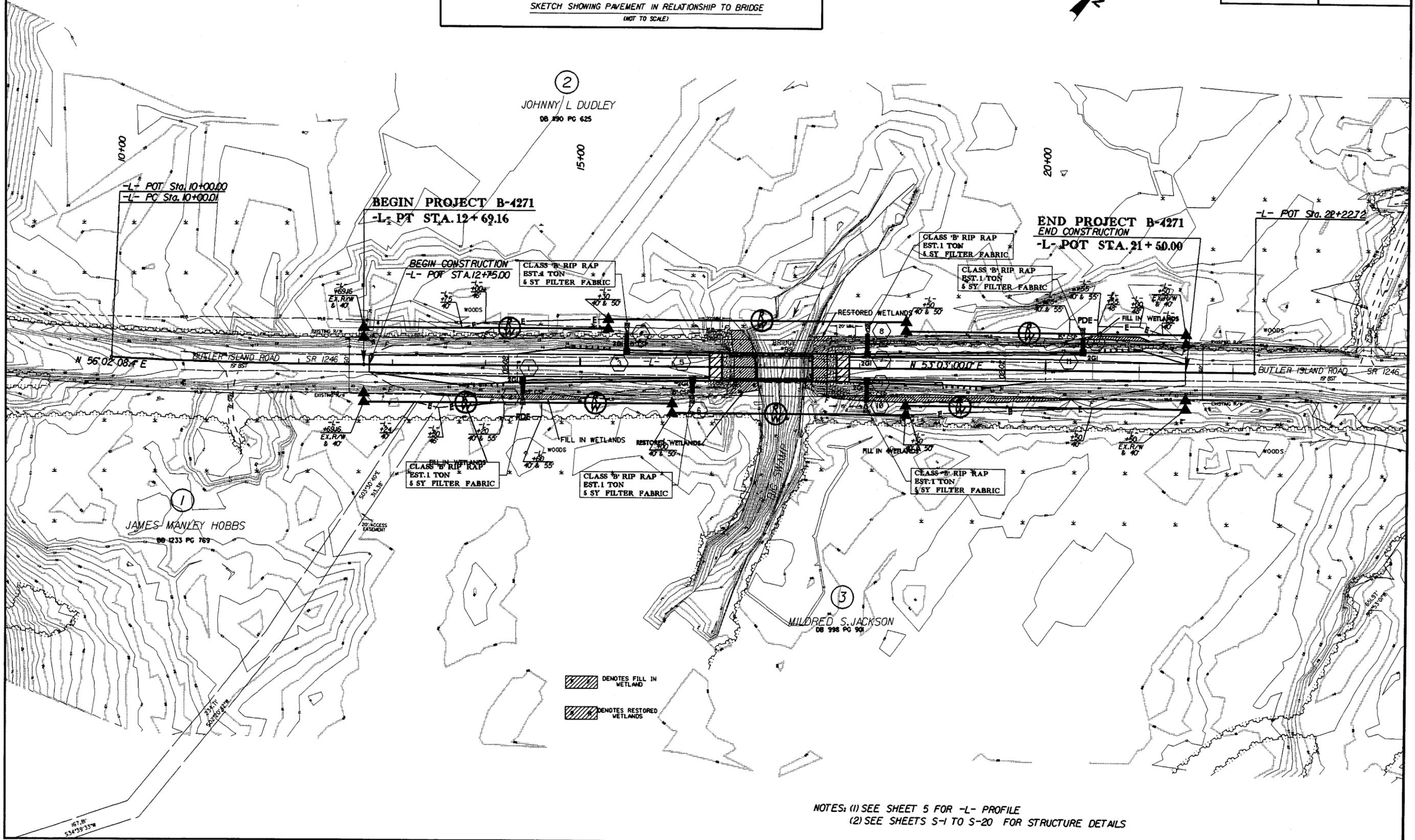
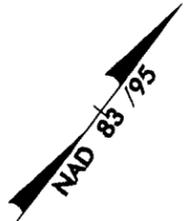
/// DENOTES FILL IN WETLAND
 /// DENOTES RESTORED WETLANDS

NOTES: (1) SEE SHEET 5 FOR -L- PROFILE
 (2) SEE SHEETS S-1 TO S-20 FOR STRUCTURE DETAILS

-L- CURVE DATA
 PI Sta 11+34.61
 $\Delta = 2^{\circ} 59' 08.4" (LT)$
 $D = 1,061.335'$
 $L = 269.15'$
 $T = 134.60'$
 $R = 5,165.00'$
 SE = EXISTING



PROJECT REFERENCE NO.		SHEET NO.	
B-4271		4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



NOTES: (1) SEE SHEET 5 FOR -L- PROFILE
 (2) SEE SHEETS S-1 TO S-20 FOR STRUCTURE DETAILS

**Wetland Restoration Plan
At Bridge No. 98 over Big Swamp
on SR 1246
Sampson County**

**TIP B-4271
Federal Aid Project No. BRZ-1246 (2)
WBS No. 33612.1.1**

January, 2007

The North Carolina Department of Transportation (NCDOT) will perform on-site mitigation for wetland impacts at the SR 1246 overpass of Big Swamp. This mitigation site occurs within Transportation Improvement Program (TIP) B-4271. The project begins approximately 390 feet west of Bridge No. 98 and continues for approximately 490 feet to the west of the bridge. The roadway project will impact 0.05 acres of unavoidable wetlands. NCDOT will restore approximately 0.06 acres of coastal plain small stream swamp wetland as onsite mitigation for the impacts on B-4271.

EXISTING CONDITIONS

The project is located in Sampson County, southwest of Roseboro, approximately 3 miles from the intersection of NC 242 and SR 1246 (Butler Island Rd.) close to the Sampson and Cumberland County line. The project study area land use is primarily comprised of agricultural and forested land.

The Natural Resources Technical Report for TIP B-4271, dated March 2003, provides further details concerning existing roadway and project study area conditions.

The existing embankments of the approaches to Bridge No. 98 are located within the floodplain of Big Swamp within a wetland community known as a Coastal Plain Small Stream Swamp. The wetland is dominated by tulip poplar (*Liriodendron tulipifera*), sweet bay (*Magnolia virginiana*), fetterbush (*Lyonia lucida*) and a herbaceous layer of cane (*Arundinaria gigantea*). The transition zone where the wetland grades into the existing causeway slope is dominated by cane (*Arundinaria gigantea*).

PROPOSED CONDITIONS DESIGN

The proposed wetland mitigation will consist of restoring 0.06 acres of riverine wetland with 0.03 acres of restoration occurring underneath the new bridge span. Restoration will involve removing causeway fill and transition area along both approaches to Bridge No. 98 to match the adjacent wetland elevation. Representative spot elevations will be taken in all four quadrants of the bridge project within the adjacent reference wetland to

determine target elevations. Excavated areas will be ripped and disked prior to planting of the site if necessary.

The Natural Environment Unit shall be contacted to provide construction oversight to ensure that the wetland mitigation area is constructed appropriately.

VEGETATION PLANTING

Native grass seeding and mulching will be performed on all disturbed areas within the wetland restoration area for stabilization purposes according to guidance and standard procedures of NCDOT's Roadside Environmental Unit (Appendix A).

The restoration areas adjacent to the new bridge structure will also be planted following the successful completion of site grading and stabilization. They will be planted with bottomland hardwood species including at least three of the following: water oak (*Quercus nigra*), tulip poplar (*Liriodendron tulipifera*), green ash (*Fraxinus pennsylvanica*), willow oak (*Quercus phellos*), sycamore (*Platanis occidentalis*), water tupelo (*Nyssa aquatica*), swamp chestnut oak (*Quercus michauxii*).

MONITORING

Upon successful completion of construction, the following monitoring strategy is proposed for the mitigation site. NCDOT will document monitoring activities on the site in an annual report distributed to the regulatory agencies.

HYDROLOGIC MONITORING

No specific hydrological monitoring is proposed for this restoration site. The target elevation will be based on the reference wetland and verified during construction. Constructing the site at the adjacent wetland elevation will ensure the hydrology in the restored area is similar to the hydrology in the reference area.

VEGETATION SUCCESS CRITERIA

NCDOT shall monitor the restoration site by visual observation and photo points for survival and aerial cover of vegetation. NCDOT shall monitor the site for a minimum of three years or until the site is deemed successful. Monitoring will be initiated upon completion of the site planting.

Appendix A

Native Grass Seeding and Mulching

Bermuda

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands, and adjacent to Stream Relocation construction within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank or center of depression. The stream bank of the stream relocation shall be seeded by a method that does not alter the typical cross section of the stream bank. Native Grass Seeding and Mulching shall also be performed in the permanent soil reinforcement mat section of preformed scour holes, and in other areas as directed.

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

March 1 - August 31

25#	Bermudagrass (hulled)
6#	Indiangrass
8#	Little Bluestem
4#	Switchgrass
25#	Browntop Millet
500#	Fertilizer
4000#	Limestone

September 1 - February 28

35#	Bermudagrass (unhulled)
6#	Indiangrass
8#	Little Bluestem
4#	Switchgrass
35#	Rye Grain
500#	Fertilizer
4000#	Limestone

Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis.

Native Grass Seeding and Mulching shall be performed in accordance with Section 1660 of the *Standard Specifications* and vegetative cover sufficient to restrain erosion shall be installed immediately following grade establishment.

Measurement and Payment

Native Grass *Seeding and Mulching* will be measured and paid for in accordance with Article 1660-8 of the *Standard Specifications*.