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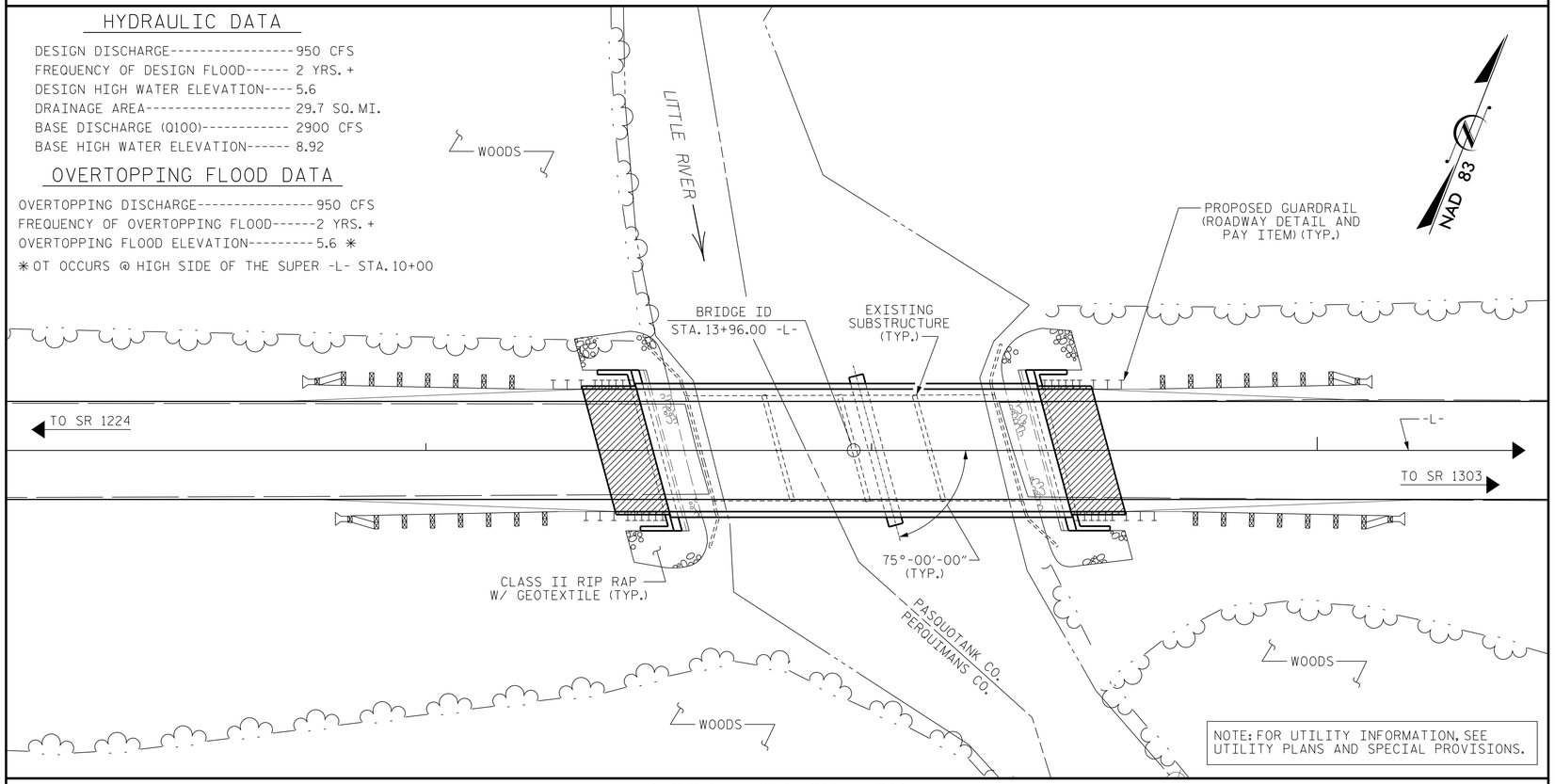
BM10 (RR SPIKE IN BASE OF 20" GUM) 39' LT OF STA. 15+93 -L-; EL. = 3.35 N 926988 E 2773134

HYDRAULIC DATA

DESIGN DISCHARGE---------- 950 CFS
FREQUENCY OF DESIGN FLOOD------ 2 YRS. +
DESIGN HIGH WATER ELEVATION---- 5.6
DRAINAGE AREA---------- 29.7 SQ. MI.
BASE DISCHARGE (Q100)---------- 2900 CFS
BASE HIGH WATER ELEVATION------ 8.92

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE---------- 950 CFS
FREQUENCY OF OVERTOPPING FLOOD------2 YRS. +
OVERTOPPING FLOOD ELEVATION--------- 5.6 *
* OT OCCURS @ HIGH SIDE OF THE SUPER -L- STA. 10+00



LOCATION SKETCH

NOTES :

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

THE EXISTING STRUCTURE CONSISTING OF 4 SPANS 1 @ 18'-0", 2 @ 17'-0", 1 @ 18'-0" WITH A REINFORCED CONCRETE FLOOR ON TIMBER JOISTS AND A CLEAR ROADWAY WIDTH OF 24.2' ON A SUBSTRUCTURE CONSISTING OF REINFORCED CONCRETE CAPS ON TIMBER PILES LOCATED AT THE PROPOSED STRUCTURE LOCATION SHALL BE REMOVED.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 30 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY ENGINEER. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCE BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES".

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	HP 12 x 53 STEEL PILES		HP 14 x 73 GALVANIZED STEEL PILES		PILE REDRIVES	TWO BAR METAL RAIL	1'-2" X 2'-8½" CONCRETE PARAPET	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS	
	LUMP SUM	EACH	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	TONS	SQ. YD.	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE												164.63	180.26			LUMP SUM	20	900.00
END BENT 1			LUMP SUM	13.4		2027	5	350			5			81	91			
BENT 1				10.4		2073			7	490	7							
END BENT 2			LUMP SUM	13.4		2027	5	350			5			81	91			
TOTAL	LUMP SUM	2	LUMP SUM	37.2	LUMP SUM	6127	10	700	7	490	17	164.63	180.26	162	182	LUMP SUM	20	900.00

FOUNDATION NOTES:

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO. 1 AND 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 85 TONS PER PILE. DRIVE PILES TO A REQUIRED DRIVING RESISTANCE OF 145 TONS PER PILE.

PILES AT INTERIOR BENT NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 120 TONS PER PILE. DRIVE PILES TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

INSTALL PILES AT INTERIOR BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN -37.5.

THE SCOUR CRITICAL ELEVATION FOR INTERIOR BENT NO. 1 IS ELEVATION -15.0. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

TESTING THE FIRST PRODUCTION PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS AND FOR PILE DRIVING CRITERIA, SEE PILE DRIVING CRITERIA PROVISION.

PROJECT NO. 17BP.1.R.65
PASQUOTANK COUNTY
STATION: 13+96.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE OVER LITTLE RIVER ON SR 1144 BETWEEN SR 1224 & SR 1303

NORTH CAROLINA PROFESSIONAL SEAL 037400 ENGINEER GREGORY M. GILLAND

WETHERILL ENGINEERING
559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27606
Bus: 919 851 8077
Fax: 919 851 8107
License: F-0377
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			20

DRAWN BY : G.M. GILLAND DATE : 12-10-14
CHECKED BY: J.A. DILWORTH DATE : 12-11-14
DESIGN ENGINEER OF RECORD: G.M. GILLAND DATE : 12-15-14

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