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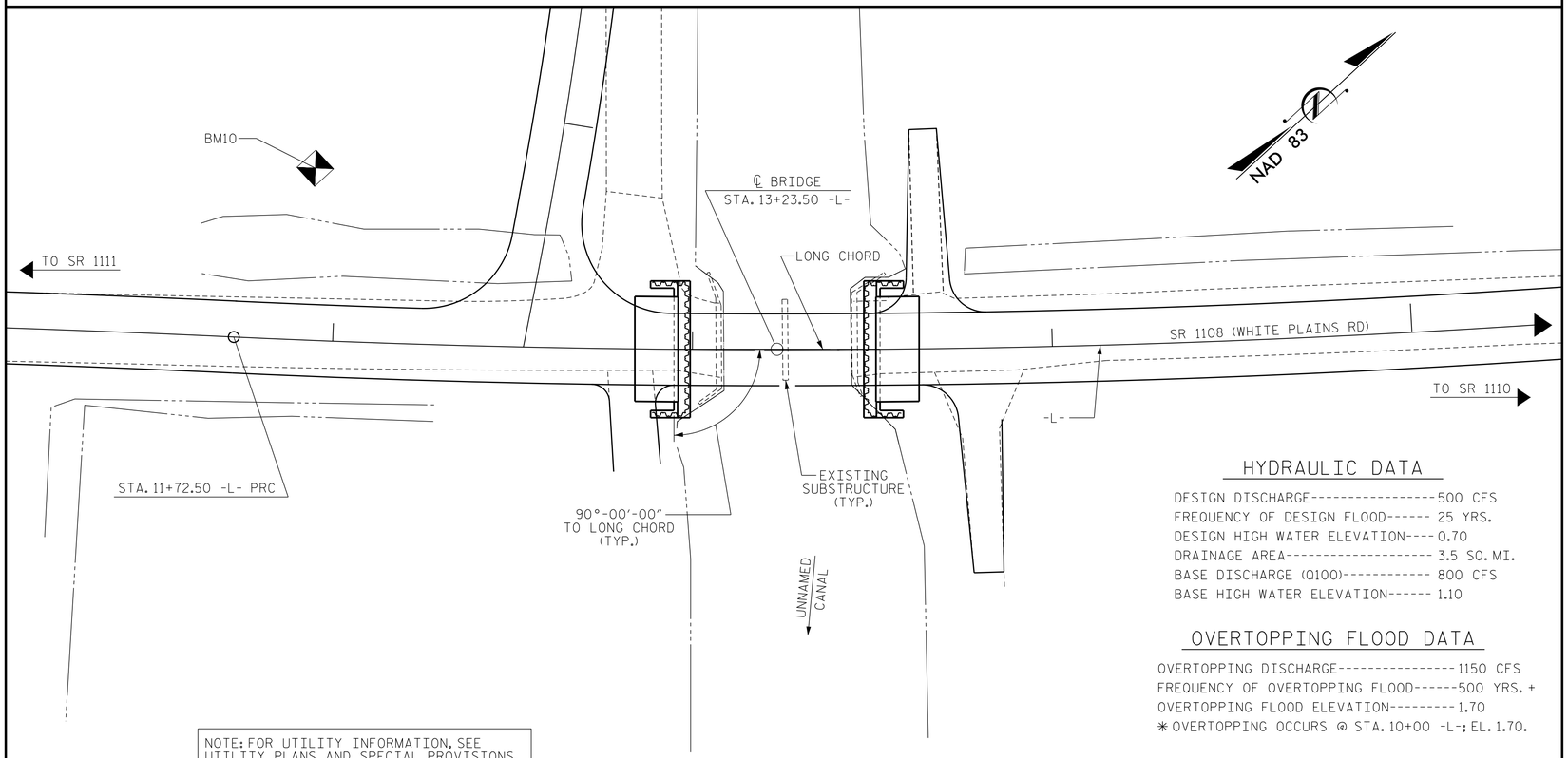
BM10: RR SPIKE SET IN BASE OF 18" PINE; STA. 11+93.23 -L-; 57' LT.; EL. 2.90 N 634161, E 2886466



NOTE: FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

HYDRAULIC DATA

DESIGN DISCHARGE----------500 CFS
FREQUENCY OF DESIGN FLOOD------ 25 YRS.
DESIGN HIGH WATER ELEVATION---- 0.70
DRAINAGE AREA---------- 3.5 SQ. MI.
BASE DISCHARGE (Q100)---------- 800 CFS
BASE HIGH WATER ELEVATION------ 1.10

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE----------1150 CFS
FREQUENCY OF OVERTOPPING FLOOD------500 YRS. +
OVERTOPPING FLOOD ELEVATION---------1.70
* OVERTOPPING OCCURS @ STA. 10+00 -L-; EL. 1.70.

LOCATION SKETCH

NOTES :

ASSUMED LIVE LOAD = HL93 OR ALTERNATE LOADING.

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

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

THIS STRUCTURE CONTAINS THE NECESSARY CORROSION PROTECTION REQUIRED FOR A CORROSIVE SITE.

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

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE EXISTING STRUCTURE CONSISTING OF 2 SPANS @ 17'-6" WITH AN ASHPHALT WEARING SURFACE ON TIMBER DECK WITH TIMBER JOIST AND A CLEAR ROADWAY WIDTH OF 24'-0" ON A SUBSTRUCTURE CONSISTING OF TIMBER CAPS ON JACKETED TIMBER PILES AND 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. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. 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.

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

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.

CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE END BENT CAPS AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR.

ALL BAR SUPPORTS USED IN THE PARAPET, END BENT CAPS AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

THE CONCRETE IN THE END BENT CAPS AND PILES SHALL CONTAIN SILICA FUME. SILICA FUME SHALL BE SUBSTITUTED FOR 5% OF THE PORTLAND CEMENT BY WEIGHT. IF THE OPTION OF ARTICLE 1024-1 OF THE STANDARD SPECIFICATIONS TO PARTIALLY SUBSTITUTE CLASS F FLY ASH FOR PORTLAND CEMENT IS EXERCISED, THEN THE RATE OF FLY ASH SUBSTITUTION SHALL BE REDUCED TO 1.0 LB OF FLY ASH PER 1.0 LB OF CEMENT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOUNDATION NOTES :

FOR PILES, SEE SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 AND END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 85 TONS PER PILE.

DRIVE PILES AT END BENT 1 AND END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 145 TONS PER PILE.

TESTING PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

FOR GALVANIZED STEEL SHEET PILES, SEE SPECIAL PROVISIONS.

PZ-27 SHEETING IS TO BE DRIVEN IN FRONT OF 12 INCH CONCRETE PILES AT END BENT 1 AND 2.

SHEET PILES AT END BENT 1 AND 2 SHOULD BE DRIVEN TO A TIP ELEVATION OF -24.0 FT.

THE SCOUR CRITICAL ELEVATION FOR END BENT 1 AND END BENT 2 IS ELEVATION -9.0 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PROJECT NO. 17BP.1.R.82
HYDE COUNTY
STATION: 13+23.50 -L-

SHEET 2 OF 2

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS AA CONCRETE	BRIDGE APPROACH SLABS	EPOXY REINFORCING STEEL	PILE DRIVING EQUIPMENT SETUP FOR 12" PRESTRESSED CONCRETE PILES	12" PRESTRESSED CONCRETE PILES		2 BAR METAL RAIL	2'-8¾" x 1'-3" CONCRETE PARAPET	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS		ASBESTOS ASSESSMENT	GALVANIZED STEEL SHEET PILES
	LUMP SUM	EACH	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	EACH	NO.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP SUM	NO.	LIN. FT.	LUMP SUM	SQ. FT.
SUPERSTRUCTURE										95.00	110.00		10	550.00		
END BENT 1				17.4		2,883	5	5	200							1140.0
END BENT 2				17.4		2,883	5	5	200							1135.6
TOTAL	LUMP SUM	1	LUMP SUM	34.8	LUMP SUM	5.766	10	10	400	95.00	110.00	LUMP SUM	10	550.00	LUMP SUM	2275.6

DRAWN BY : G.M. GILLAND DATE : 6-26-17
CHECKED BY : B.C. HUNT DATE : 7-2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ENGINEER OF RECORD:
DocuSigned by: Gregory M. Gilland
NORTH CAROLINA PROFESSIONAL SEAL 37400 ENGINEER GREGORY M. GILLAND
8/16/2017

WETHERILL ENGINEERING
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LICENSE NO. F-0377

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE ON
SR 1108 (WHITE PLAINS RD.)
OVER UNNAMED CANAL
BETWEEN SR 1111 & SR 1110

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			17

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