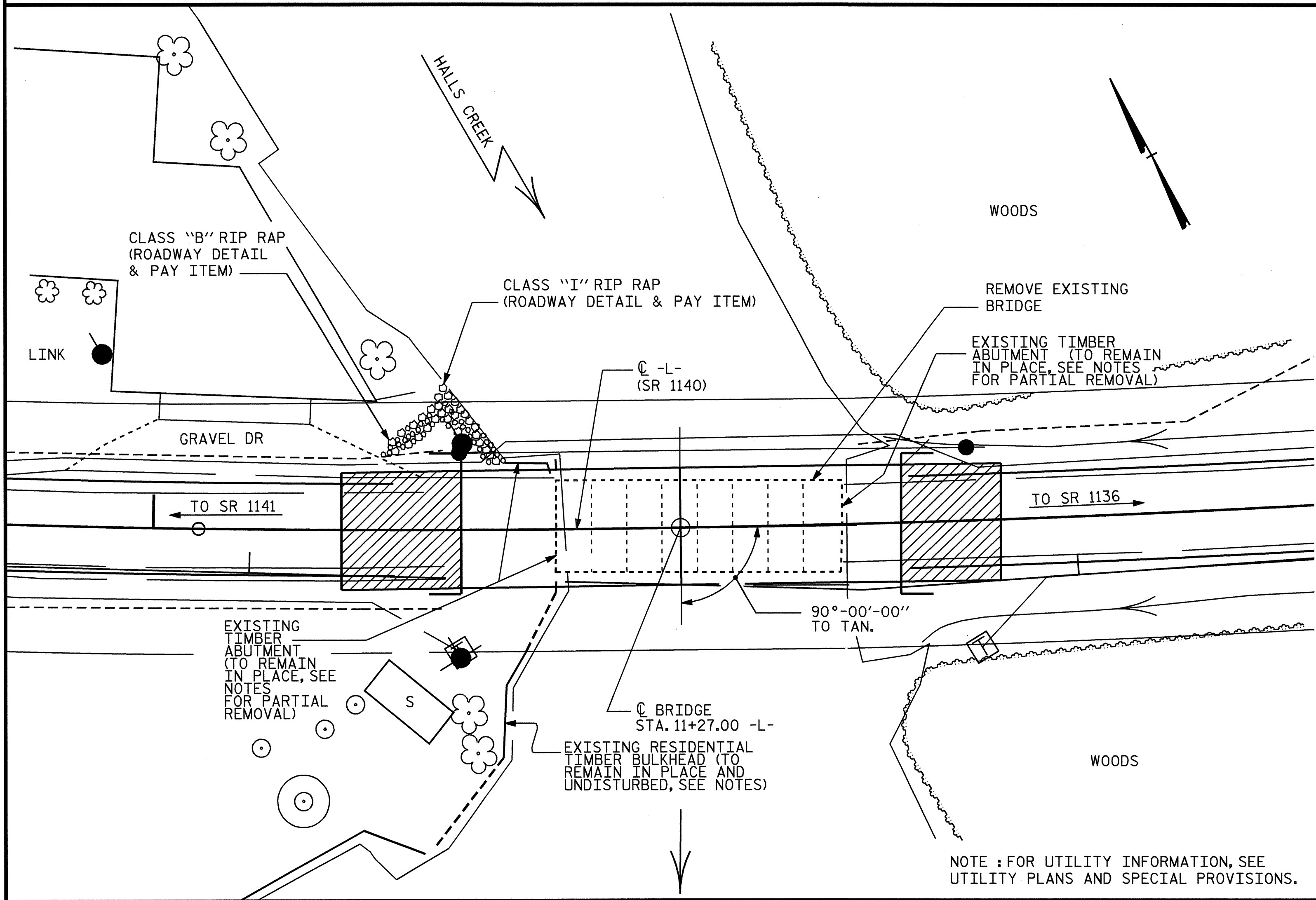


B.M. #11 : R/R SPIKE IN BASE OF 18 INCH MAPLE 37.48 FEET RIGHT OF STA. 12+95.00 -L-, EL. 3.34, NGVD 88



LOCATION SKETCH

TOTAL BILL OF MATERIAL								
	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	16" PRESTRESSED CONCRETE PILES		HP 12 X 53 STEEL PILES		CONSTRUCTION OF SUPERSTRUCTURE	CONSTRUCTION OF SUBSTRUCTURE
			NO.	LIN.FT.	NO.	LIN.FT.		
	LUMP SUM	LUMP SUM					LUMP SUM	LUMP SUM
SUPERSTRUCTURE								
END BENT 1		LUMP SUM			7	455		
BENT 1			7	399				
END BENT 2		LUMP SUM			7	455		
TOTAL	LUMP SUM	LUMP SUM	7	399	14	910	LUMP SUM	LUMP SUM

DRAWN BY : M. POOLE DATE : 04/03  
 CHECKED BY : J.R. DUGGINS DATE : 10/03

NOTES

ASSUMED LIVE LOAD = HS20 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 BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF 8 SPANS @ 8'-6" CTS. WITH REINFORCED CONCRETE DECK ON TIMBER JOISTS SUPERSTRUCTURE AND A CLEAR ROADWAY WIDTH OF 22'-0" ON A SUBSTRUCTURE CONSISTING OF TIMBER CAPS ON TIMBER PILES END BENTS AND STEEL CAP ON STEEL PILES CRUTCH BENTS AND LOCATED AT THE PROPOSED STRUCTURE LOCATION SHALL BE REMOVED, EXCEPT FOR EXISTING TIMBER ABUTMENT AND EXISTING RESIDENTIAL TIMBER BULKHEAD. SEE NOTES BELOW.

THE CONTRACTOR SHALL EXERCISE CARE TO PROTECT THE EXISTING TIMBER ABUTMENTS AND RESIDENTIAL TIMBER BULKHEAD DURING CONSTRUCTION OF THE END BENTS. ANY DAMAGE TO THE ABUTMENTS OR RESIDENTIAL TIMBER BULKHEAD SHALL BE REPAIRED IN KIND TO THEIR EXISTING CONDITION AND AT NO EXTRA COST TO THE DEPARTMENT.

THE EXISTING TIMBER ABUTMENTS SHALL BE PARTIALLY REMOVED TO THE APPROXIMATE ELEVATION OF THE BERM EXCAVATIONS AS DIRECTED BY THE ENGINEER.

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 20 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.

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 DIFFERENCES 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 CONTAINS THE NECESSARY CORROSION PROTECTION REQUIRED FOR A CORROSIVE SITE.

CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE BENT CAPS AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR. FOR CALCIUM NITRITE CORROSION INHIBITOR, SEE SPECIAL PROVISIONS.

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

THE CONCRETE IN THE BENT CAP AND PILES OF BENT 1 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.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS -25 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUBSTRUCTURE, SEE SPECIAL PROVISIONS.

THE CONTRACTORS ATTENTION IS CALLED TO THE FACT THAT A COFFERDAM MAY BE REQUIRED TO CONSTRUCT THE BENT CAP AT BENT 1.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

PILES FOR END BENTS 1 AND 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

PILES AT BENT 1 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THEN - 56 FT. AND SATISFY THE BEARING CAPACITY OF 60 TONS EACH.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

INSTALLATION OF PILES UTILIZING JETTING WILL NOT BE ALLOWED FOR BENT 1.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH EQUIVALENT RATED ENERGY IN THE RANGE OF 35,000 TO 45,000 FT-POUNDS PER BLOW WILL BE REQUIRED TO DRIVE THE 16" PRESTRESSED CONCRETE PILES. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM THE PROVISIONS OUTLINED IN ARTICLE 450-6 OF THE STANDARD SPECIFICATIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE EFFECTS OF THE HORIZONTAL CURVE SHALL BE NEGLECTED IN THE CONSTRUCTION OF THIS BRIDGE. THE BRIDGE IS TO BE BUILT ALONG THE EXTENDED TANGENT.

HYDRAULIC DATA

DESIGN DISCHARGE.....N/A CFS.  
 FREQUENCY OF DESIGN FLOOD.....25 YEARS  
 DESIGN HIGH WATER ELEVATION.....N/A  
 DRAINAGE AREA.....11.80 SQ. MI.  
 BASIC DISCHARGE(Q100).....N/A CFS.  
 BASIC HIGH WATER ELEVATION.....5.90

OVERTOPPING FLOOD DATA

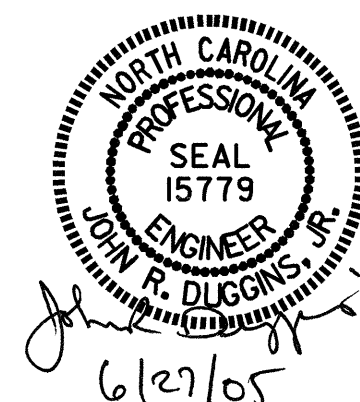
OVERTOPPING DISCHARGE.....N/A CFS.  
 FREQUENCY OF OVERTOPPING FLOOD..... < 10 YRS.  
 OVERTOPPING FLOOD ELEVATION.....2.60

PROJECT NO. B-4222  
PASQUOTANK COUNTY  
 STATION: 11+27.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE OVER HALLS CREEK  
 ON SR 1140 BETWEEN SR 1141 AND SR 1136



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