

— LOCATION SKETCH —

HYDRAULIC DATA

DESIGN DISCHARGE = 3,000 CFS.
 FREQUENCY OF DESIGN FLOOD = 25 YR.
 DESIGN HIGH WATER ELEVATION = 38.870
 DRAINAGE AREA = 53.6 SQ. MI.
 BASIC DISCHARGE (Q100) = 4,500 CFS.
 BASIC HIGH WATER ELEVATION = 40.370

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 7,000 CFS.
 FREQUENCY OF OVERTOPPING FLOOD = 500+YR.
 OVERTOPPING FLOOD ELEVATION = 42.800

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

ASSUMED LIVE LOAD = HS20 OR ALTERNATE LOADING, EXCEPT THAT CORED SLAB UNITS HAVE BEEN DESIGNED FOR HS25.
 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 4 SPANS 1 @ 30'-6", 2 @ 30'-0", AND 1 @ 30'-6", PRESTRESSED CONCRETE CHANNELS WITH A 3.5" ASPHALT WEARING SURFACE ON PRECAST CONCRETE CAPS ON TIMBER PILES WITH A CLEAR ROADWAY WIDTH OF 24'-1" AND LOCATED AT THE PROPOSED SITE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. FOR SALVAGE OF MATERIAL, SEE SPECIAL PROVISIONS FOR "REMOVAL OF EXISTING STRUCTURE AT STA. 17+62.50-L-."

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 25 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.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

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

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

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.

THE STANDARD THREE MONTH WAITING PERIOD AFTER THE COMPLETION OF THE EMBANKMENT PRIOR TO THE CONSTRUCTION OF THE APPROACHSLAB, HAS BEEN WAIVED.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 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.

THIS BRIDGE SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS. CRANE ACCESS MAY BE RESTRICTED TO SPAN A AND SPAN C REQUIRING WORK FROM BOTH ENDS. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.

DRIVE PILES AT END BENT NO.1 AND NO.2 TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

DRIVE PILES AT BENT NO.1 AND NO.2 TO AN ELEVATION NO HIGHER THAN EL. 2.000 AND A MINIMUM BEARING CAPACITY OF 60 TONS EACH PLUS CAPACITY TO ACCOUNT FOR DOWN DRAG OR NEGATIVE SKIN FRICTION AND SCOUR.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 AND NO.2 IS ELEVATION 16.000 FEET. BRIDGE MAINTENANCE USES SCOUR CRITICAL ELEVATIONS TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

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

PREDRILLING OF PILES TO ELEVATION 16.000 MAYBE UTILIZED TO INSTALL PILES AT BENTS NO.1 AND NO.2. SEE PREDRILLING OF PILES SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUBSTRUCTURE, SEE SPECIAL PROVISIONS.

JETTING IS NOT ALLOWED TO INSTALL PILES.

PROVIDE GALVANIZED STEEL PILES AT INTERIOR BENTS, IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS AND THE GALVANIZING STEEL PILES SPECIAL PROVISIONS.

FOR STEEL H PILES, SEE SPECIAL PROVISIONS.

PILINGS FROM THE EXISTING BRIDGE, AS WELL AS ANY REMNANT PILINGS FROM PREVIOUS BRIDGES SHALL BE REMOVED IN THEIR ENTIRETY. IN THE EVENT THAT A PILING BREAKS DURING THE REMOVAL AND CANNOT BE REMOVED IN ITS ENTIRETY, THE PILING MAY BE CUT OFF FLUSH WITH THE BED OF THE WATER BODY IF PRIOR APPROVAL IS RECEIVED FROM NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING PILINGS AS IT IS CONSIDERED TO BE INCLUDED IN THE PAY ITEM REMOVAL OF EXISTING STRUCTURE AT STA. 17+62.50-L-.

THE COST OF THE 2 BAR METAL RAIL AND CONCRETE PARAPET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR CONSTRUCTION OF SUPERSTRUCTURE. SEE SPECIAL PROVISIONS FOR "CONSTRUCTION OF SUPERSTRUCTURE."

TOTAL BILL OF MATERIAL											
	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	BRIDGE APPROACH SLABS	HP 12 X 53 STEEL PILES		HP 14 X 73 STEEL PILES		GALVANIZING STEEL PILES	PLAIN RIP RAP CLASS II (2-0" THICK)	CONSTRUCTION OF SUBSTRUCTURE	CONSTRUCTION OF SUPERSTRUCTURE
	LUMP SUM	LUMP SUM	LUMP SUM	NO.	LIN.FT.	NO.	LIN.FT.	LUMP SUM	TONS	LUMP SUM	LUMP SUM
SUPERSTRUCTURE											
END BENT NO. 1				7	280				203		
BENT NO. 1						7	298	LUMP SUM			
BENT NO. 2						7	245	LUMP SUM			
END BENT NO. 2				7	210				169		
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	14	490	14	543	LUMP SUM	372	LUMP SUM	LUMP SUM

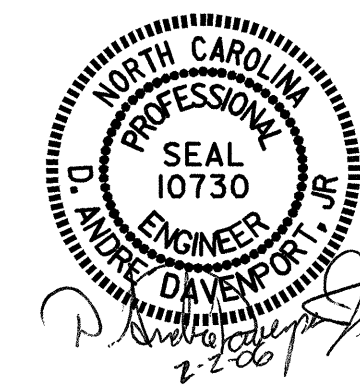
PROJECT NO. B-4224
PENDER/DUPLIN COUNTY
 STATION: 17+62.50 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE OVER DOCTOR'S CREEK ON SR 1305/SR 1155 BETWEEN SR 1001 AND SR 1154



DRAWN BY : S. P. LAM DATE : 10/12/05
 CHECKED BY : H. T. BARBOUR DATE : 10/25/05

REVISIONS						SHEET NO. S-3
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 28
2			4			