

LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE _____ 5600 CFS
 FREQUENCY OF DESIGN FLOOD _____ 25 YEARS
 DESIGN HIGH WATER ELEVATION _____ 272.10
 DRAINAGE AREA _____ 33.3 SQ. MI.
 BASIC DISCHARGE (Q100) _____ 7000 CFS
 BASIC HIGH WATER ELEVATION _____ 272.7

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE _____ 3000 CFS
 FREQUENCY OF OVERTOPPING FLOOD _____ +10 YRS.+
 OVERTOPPING FLOOD ELEVATION _____ 270.16

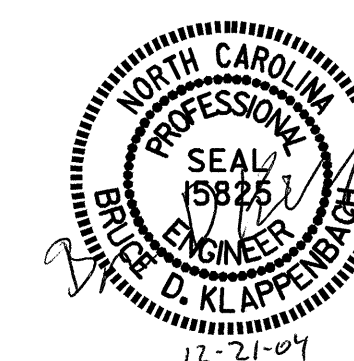
TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	HP 12 X 53 STEEL PILES		GALVANIZING STEEL PILES	PLAIN RIP RAP CLASS II (2'-0" THICK)	CONSTRUCTION OF SUBSTRUCTURE	CONSTRUCTION OF SUPERSTRUCTURE
			NO.	LIN. FT.				
	LUMP SUM	LUMP SUM			LUMP SUM	TONS	LUMP SUM	LUMP SUM
SUPERSTRUCTURE								
END BENT NO. 1		LUMP SUM	8	240		95		
BENT NO. 1			8	240	LUMP SUM			
BENT NO. 2			8	240	LUMP SUM			
END BENT NO. 2		LUMP SUM	8	240		125		
TOTAL	LUMP SUM	LUMP SUM	32	960	LUMP SUM	220	LUMP SUM	LUMP SUM

ASSUMED LIVE LOAD = HS 20 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 SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.
 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.
 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 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.
 THE EXISTING STRUCTURE CONSISTING OF 8 SPANS, 1 @ 17'-8", 6 @ 17'-0", 1 @ 17'-7", WITH A REINFORCED CONCRETE DECK ON 19 LINES OF 6 x 12 TIMBER JOIST, ON TIMBER CAPS AND TIMBER PILES AT THE END BENTS AND INTERIOR BENTS, WITH A CLEAR ROADWAY WIDTH OF 24'-0" LOCATED AT THE SAME LOCATION AS THE PROPOSED STRUCTURE, SHALL BE REMOVED.
 ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.
 PILES FOR END BENT NO. 1 AND END BENT NO. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.
 WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.
 PILES AT BENTS NO. 1 AND 2 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THAN 245.0 FEET AND SATISFY THE BEARING CAPACITY OF 50 TONS EACH.

THE STEEL PILES AT BENT 1 AND BENT 2 SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. FOR GALVANIZING STEEL PILES, SEE SPECIAL PROVISIONS.
 THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 IS ELEVATION 258.7 FEET. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
 THE SCOUR CRITICAL ELEVATION FOR BENT NO. 2 IS ELEVATION 254.4 FEET. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 21.00 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 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 SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 THE ENTIRE COST OF FURNISHING AND INSTALLING THE DROP INLET, INCLUDING GRATES, FRAMES, AND ANY NECESSARY HARDWARE WILL BE A ROADWAY PAY ITEM.
 FOR CONSTRUCTION OF SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.
 FOR CONSTRUCTION OF SUBSTRUCTURE, SEE SPECIAL PROVISIONS.
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

DRAWN BY : J.B. WILSON DATE : 12/03
 CHECKED BY : M.G. SHAIKH DATE : 1/04



PROJECT NO. B-3703
WAKE COUNTY
 STATION: 18+17.85 -L-

SHEET 4 OF 4
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE ON SR 1404
 OVER MIDDLE CREEK
 BETWEEN SR 4734
 AND SR 1386

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			27