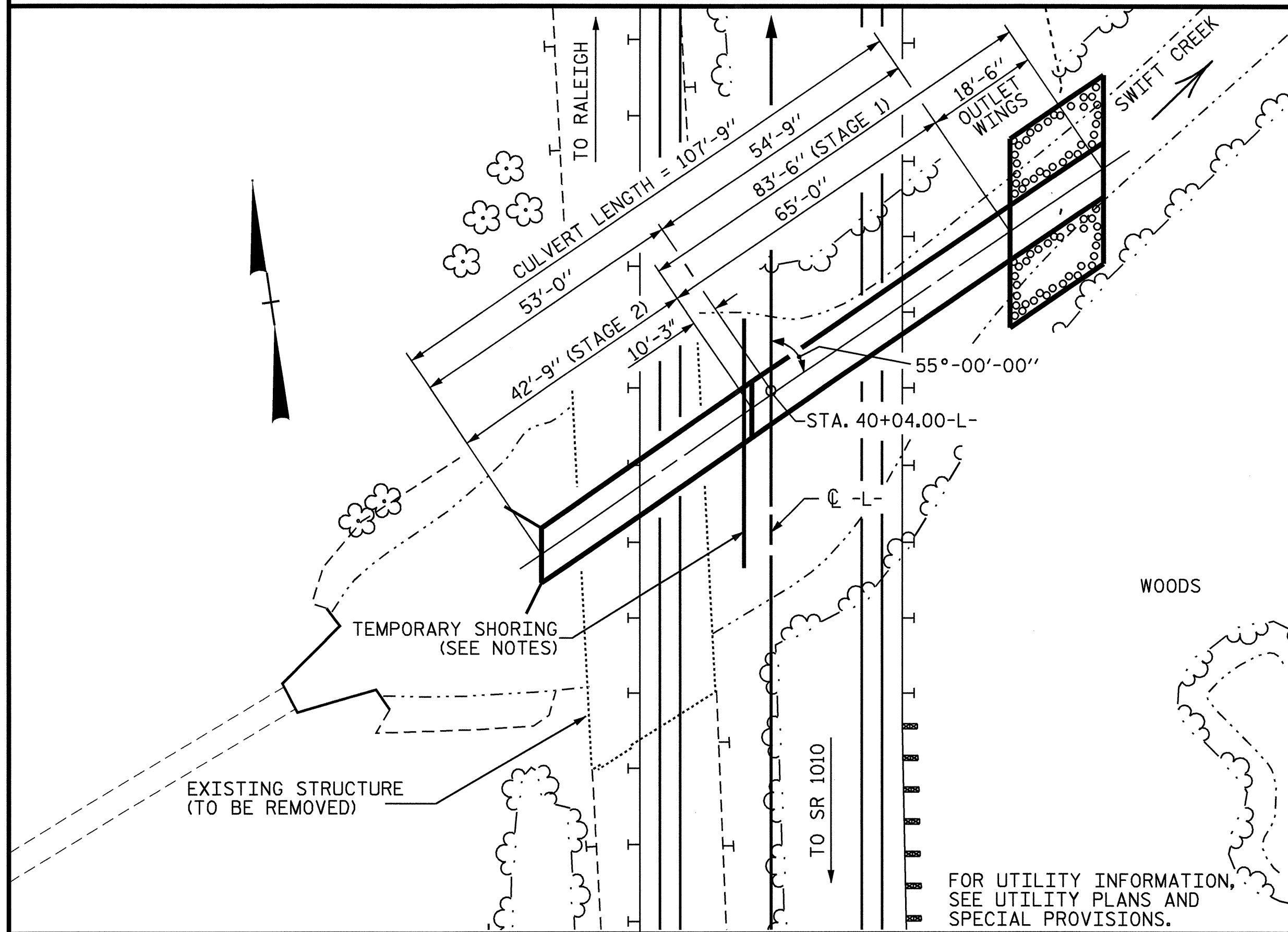


NOTES



LOCATION SKETCH

- ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.  
DESIGN FILL----- 9.33 FT  
FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.  
3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.  
CONCRETE IN CULVERT STAGES TO BE POURED IN THE FOLLOWING ORDER:  
1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.  
2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.  
THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.  
DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.  
AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

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.  
FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.  
INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR REMOVAL OF EXISTING STRUCTURE AT STATION 40+04.00 -L-".  
FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.  
AT THE CONTRACTOR'S OPTION THE VERTICAL CONSTRUCTION JOINT BETWEEN THE OUTLET WINGS AND THE BARREL MAY BE ELIMINATED AND THE "C" BARS IN THE BARREL MAY BE EXTENDED TO REPLACE THE "D" AND "H" BARS IN THE WINGS.  
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 SAMPLE 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 MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.  
AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.  
FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

HYDRAULIC DATA

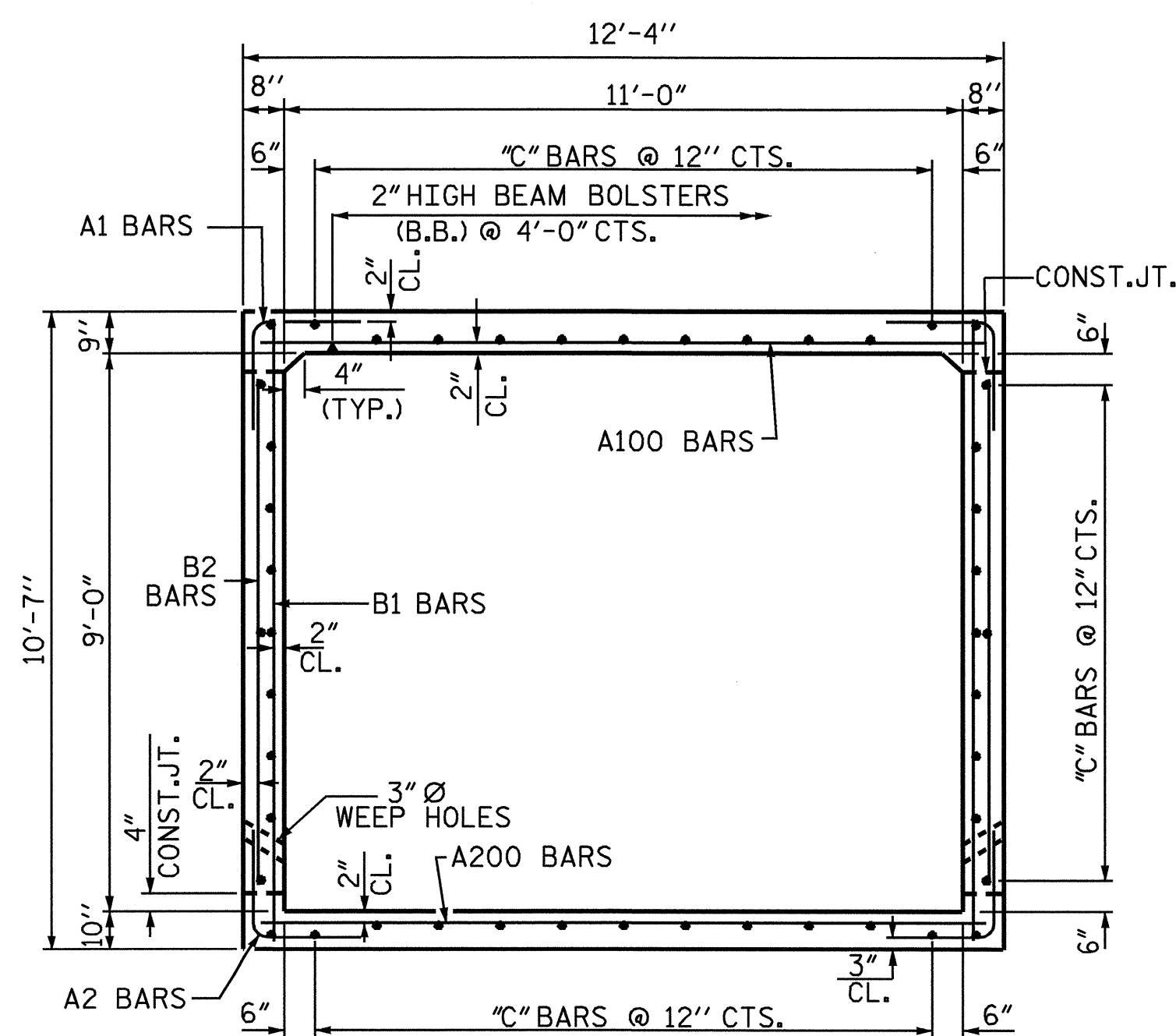
DESIGN DISCHARGE = 540 CFS  
FREQUENCY OF DESIGN FLOOD = 50 YR  
DESIGN HIGH WATER ELEVATION = 261.26  
DRAINAGE AREA = 35.8 MI<sup>2</sup>  
BASIC DISCHARGE = 550 CFS  
BASIC HIGH WATER ELEVATION = 261.33

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 1450 CFS  
FREQUENCY OF OVERTOPPING FLOOD = 500 YR  
OVERTOPPING FLOOD ELEVATION = 269.60

ROADWAY DATA

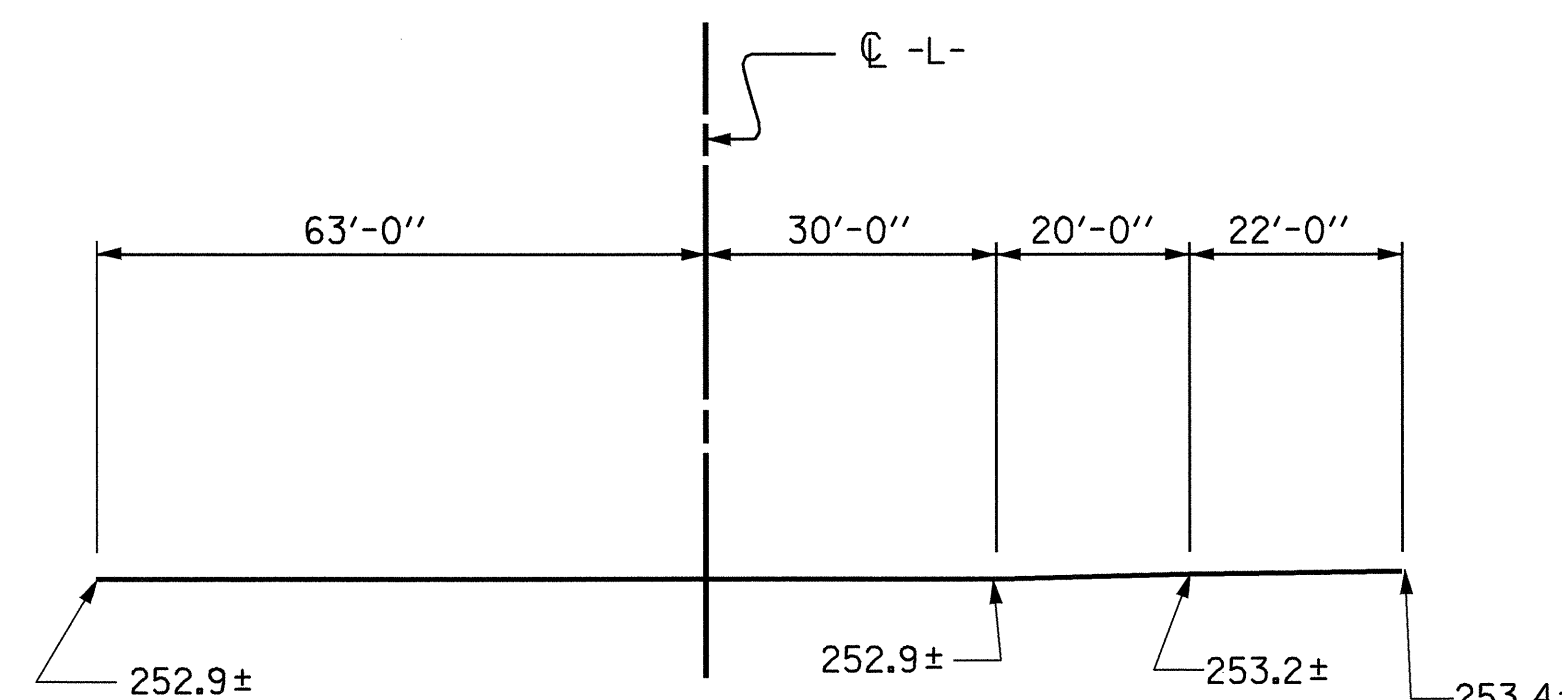
GRADE POINT ELEVATION @ STA. 40+04.00 -L- = 270.089  
BED ELEVATION @ STA. 40+04.00 -L- = 251.85  
ROADWAY SLOPES = 2:1



RIGHT ANGLE SECTION OF BARREL

THERE ARE 46 "C" BARS IN SECTION OF BARREL

STAGE 1 QUANTITIES		STAGE 2 QUANTITIES		TOTAL STRUCTURE QUANTITIES	
CLASS A CONCRETE		CLASS A CONCRETE		CLASS A CONCRETE	
BARREL @ 1.172 CY/FT	76.2 C.Y.	BARREL @ 1.172 CY/FT	50.1 C.Y.		159.3 C.Y.
HEADWALL & EDGE BEAMS	2.0 C.Y.	HEADWALL & EDGE BEAMS	2.0 C.Y.		
OUTLET WINGS	13.2 C.Y.	INLET WINGS ETC.	15.8 C.Y.		
TOTAL	91.4 C.Y.	TOTAL	67.9 C.Y.		
REINFORCING STEEL		REINFORCING STEEL		REINFORCING STEEL	
BARREL (INCL. OUTLET WINGS)	16425 LBS.	BARREL	9289 LBS.		26788 LBS.
TOTAL	16425 LBS.	INLET WINGS ETC.	1074 LBS.		
		TOTAL	10363 LBS.		
FOUNDATION COND. MATERIAL	73 TONS	FOUNDATION COND. MATERIAL	37 TONS		110 TONS
FILTER FABRIC FOR DRAINAGE	54 S.Y.				LUMP SUM
PLAIN RIP RAP, CLASS I	49 TONS				LUMP SUM
					54 S.Y.
					49 TONS



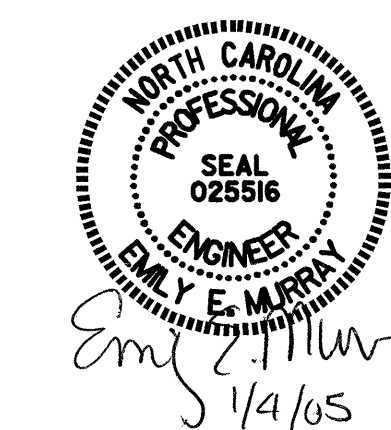
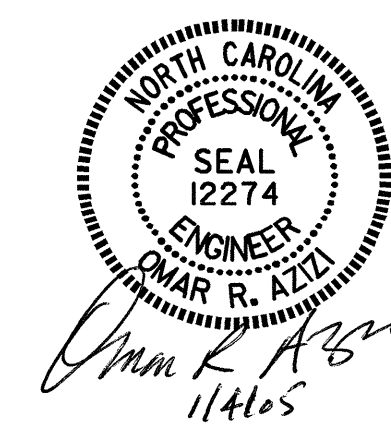
PROFILE ALONG CULVERT

PROJECT NO. B-3375

WAKE COUNTY

STATION: 40+04.00 -L-

SHEET 1 OF 4 REPLACES BRIDGE #301



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SINGLE 11 FT. X 9 FT.  
CONCRETE BOX CULVERT  
55° SKEW

DRAWN BY : C.MILLER DATE : 12/03  
CHECKED BY : W.D.CRUTCHER DATE : 12/03

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