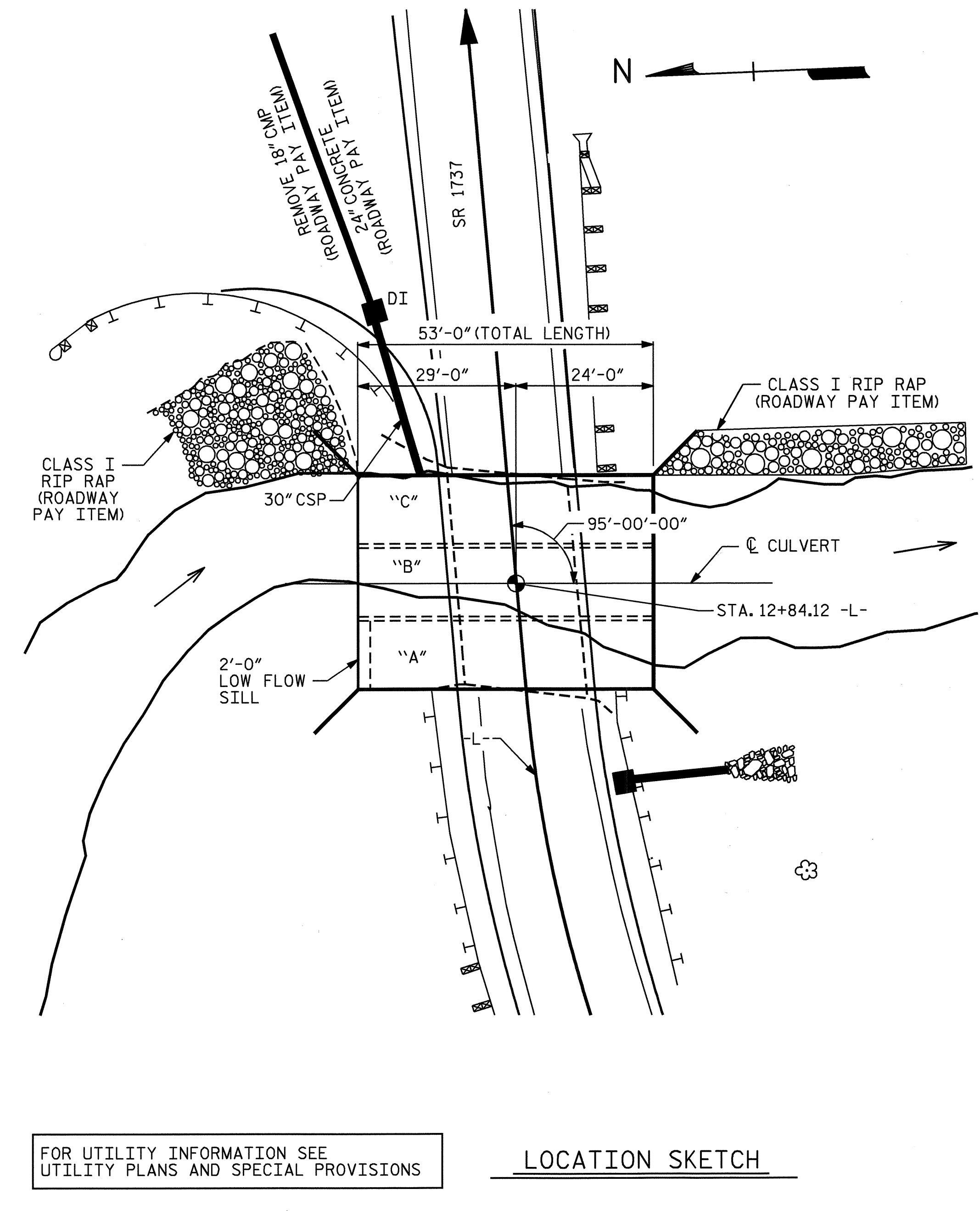


BENCH MARK : NCGS MONUMENT MCD 40 ON NE BRIDGE WING WALL, ELEV 1260.61, DATUM NAV88

F.A. PROJECT NO. BRZ-1737(6)



ROADWAY DATA

GRADE POINT ELEVATION @ STATION 12+84.12 -L-	= 1262.77
BED ELEVATION @ STATION 12+84.12 -L-	= 1247.00
ROADWAY SLOPE	= 2 : 1

HYDRAULIC DATA

DESIGN DISCHARGE	1861 CFS
FREQUENCY OF DESIGN FLOOD	25 YEARS
DESIGN HIGH WATER ELEVATION	1256.6
DRAINAGE AREA	4.5 SQ. MI.
BASIC DISCHARGE (Q100)	2409 CFS
BASIC HIGH WATER ELEVATION	1257.4

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	1861 CFS
FREQUENCY OF OVERTOPPING FLOOD	25 YRS.
OVERTOPPING FLOOD ELEVATION	1256.6

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @	3.619 CY/FT	191.8 C.Y.
WING ETC.		56.0 C.Y.
TOTAL		247.8 C.Y.
REINFORCING STEEL		
BARREL		37,846 LBS.
WINGS ETC.		3802 LBS.
TOTAL		41,648 LBS.
CULVERT EXCAVATION =	LUMP SUM	
FOUNDATION COND. MAT'L. =	133 TONS	
REMOVAL OF EXISTING STRUCTURE =	LUMP SUM	

NOTES

ASSUMED LIVE LOAD ----- HS20-44 OR ALTERNATE LOADING.
 DESIGN FILL----- 2.51 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 CULVERTS 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 EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 36'-3 5/8", WITH A 3" ASPHALT WEARING SURFACE ON 3 X 4 TIMBER FLOOR ON 8 LINES OF 16" I-BEAMS, ON REINFORCED CONCRETE ABUTMENTS, WITH A CLEAR ROADWAY WIDTH OF 19.2' LOCATED AT THE SAME LOCATION AS THE PROPOSED STRUCTURE, SHALL BE REMOVED.

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 12+84.12 -L-."

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 ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.

STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR WALLS 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.

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.

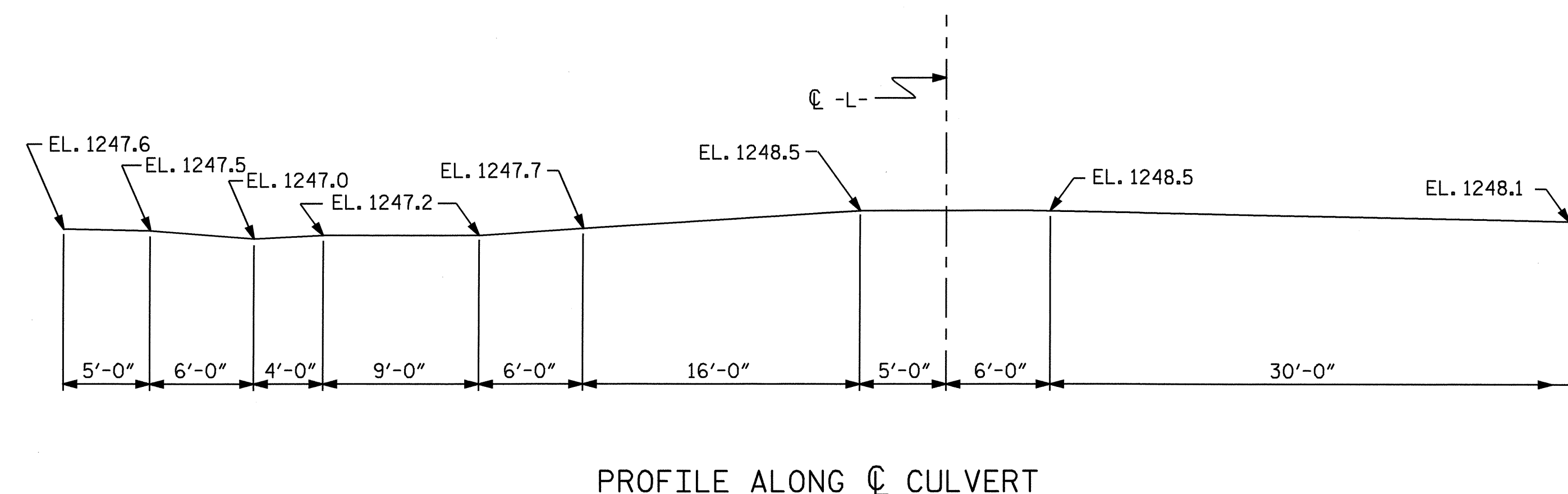
THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE 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.

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

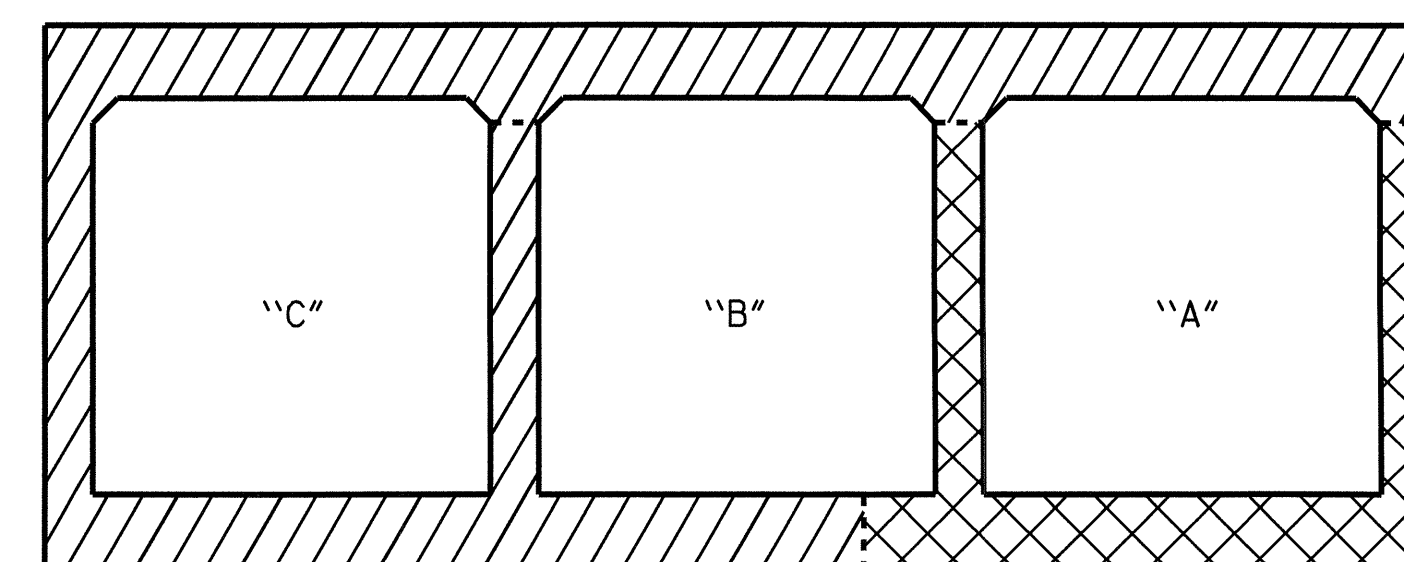
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR UTILITY INFORMATION SEE UTILITY PLANS AND SPECIAL PROVISIONS

LOCATION SKETCH



PROFILE ALONG CULVERT



STAGE I CONSTRUCTION
 STAGE II CONSTRUCTION

CONSTRUCTION STAGING

PROJECT NO. B-3873
MCDOWELL COUNTY
 STATION: 12+84.12 -L-
 SHEET 1 OF 5 REPLACES BRIDGE NO. 183

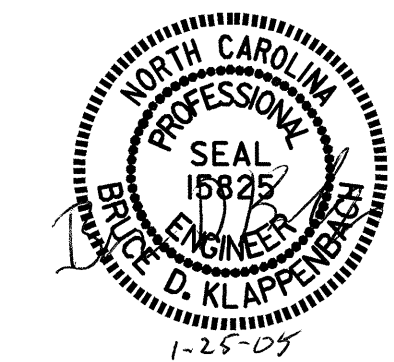
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BARREL STANDARD
 TRIPLE 11 FT. X 12 FT.
 CONCRETE BOX CULVERT
 95° SKEW**

AUGUST 1989

REVISIONS			SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 5



ADDED 11-1-90

ASSEMBLED BY : J.B. WILSON DATE : 9/14/04
 CHECKED BY : D.A. GLADDEN DATE : 10/13/04
 DRAWN BY : R.W. WRIGHT DATE : OCT. 1989
 CHECKED BY : A.R. BISSETTE DATE : OCT. 1989

SPECIAL
STANDARD