

BENCH MARK: TBM #2 R. R. SPIKE IN 20" OAK TREE LOCATED 130.08 FT. RT. OF STA. 12+26.51 -L-, ELEV. 639.35 FT.

F. A. PROJ. NO. BRSTP - 1745 (3)

NOTES

ASSUMED LIVE LOAD = HS20 OR ALTERNATE LOADING.
 DESIGN FILL----- 3.60 FT.

FOR OTHER STANDARD DATA AND NOTES SEE STANDARD NOTES 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 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.

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 EXISTING BRIDGE CONSISTING OF 8 LINES OF W16 X 36 I BEAMS ON 2'-7" CTS. & TIMBER DECK SUPPORTED BY TIMBER CAP & PILES W/TIMBER BULKHEADS SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. SEE SPECIAL PROVISION FOR REMOVAL OF EXISTING STRUCTURE AT STATION 13+14.00 -L-.

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 13+14.00 -L-".

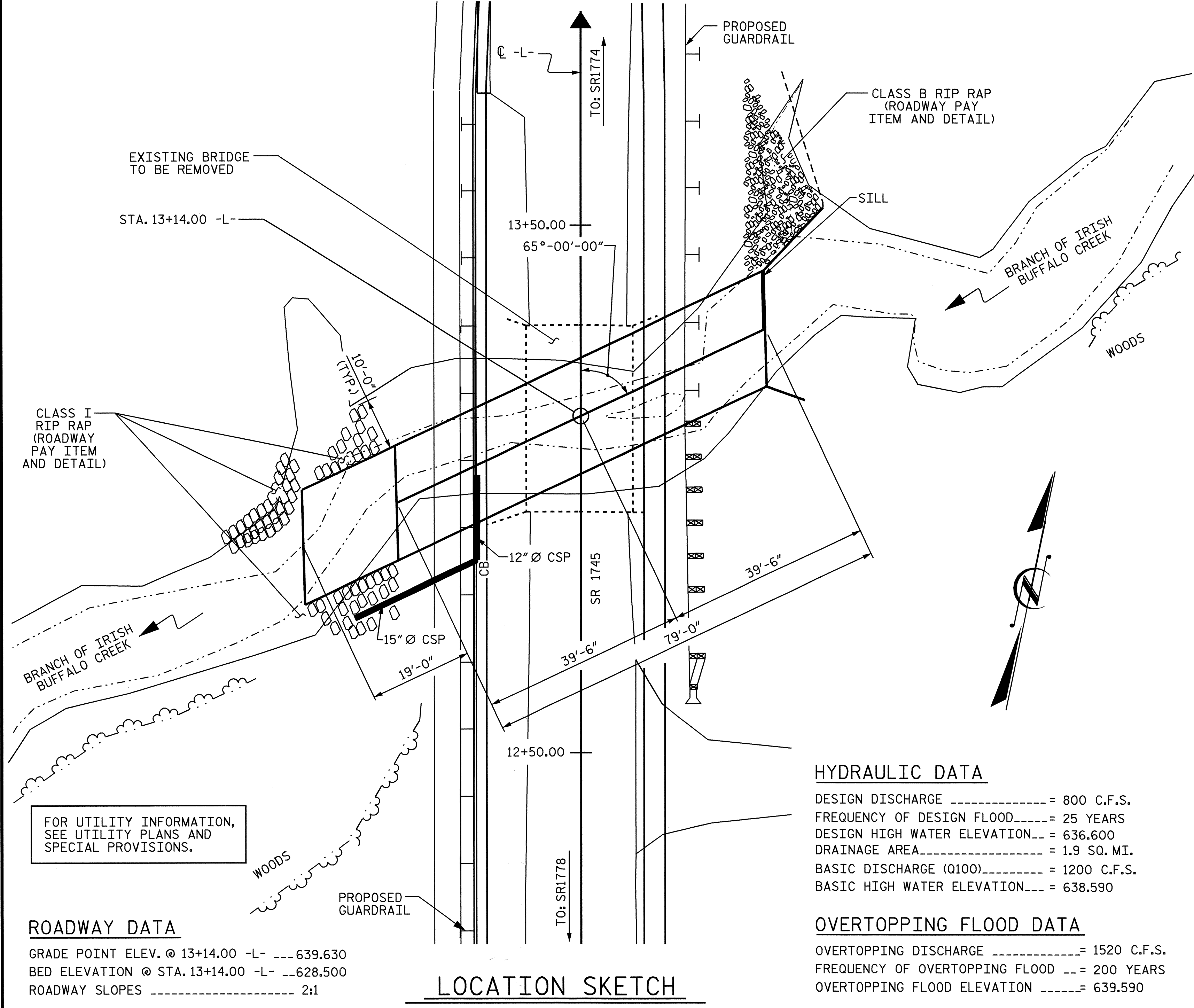
FOR CULVERT DIVERSION DETAILS AND PAY ITEMS, SEE EROSION CONTROL PLANS.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FEET. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

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 WILL BE PAID FOR BY THE CONTRACTOR.

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 AND SLAB.

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.



HYDRAULIC DATA

DESIGN DISCHARGE ----- = 800 C.F.S.
 FREQUENCY OF DESIGN FLOOD ----- = 25 YEARS
 DESIGN HIGH WATER ELEVATION --- = 636.600
 DRAINAGE AREA ----- = 1.9 SQ. MI.
 BASIC DISCHARGE (Q100) ----- = 1200 C.F.S.
 BASIC HIGH WATER ELEVATION --- = 638.590

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE ----- = 1520 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD -- = 200 YEARS
 OVERTOPPING FLOOD ELEVATION ----- = 639.590

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

ROADWAY DATA

GRADE POINT ELEV. @ 13+14.00 -L- --- 639.630
 BED ELEVATION @ STA. 13+14.00 -L- -- 628.500
 ROADWAY SLOPES ----- 2:1

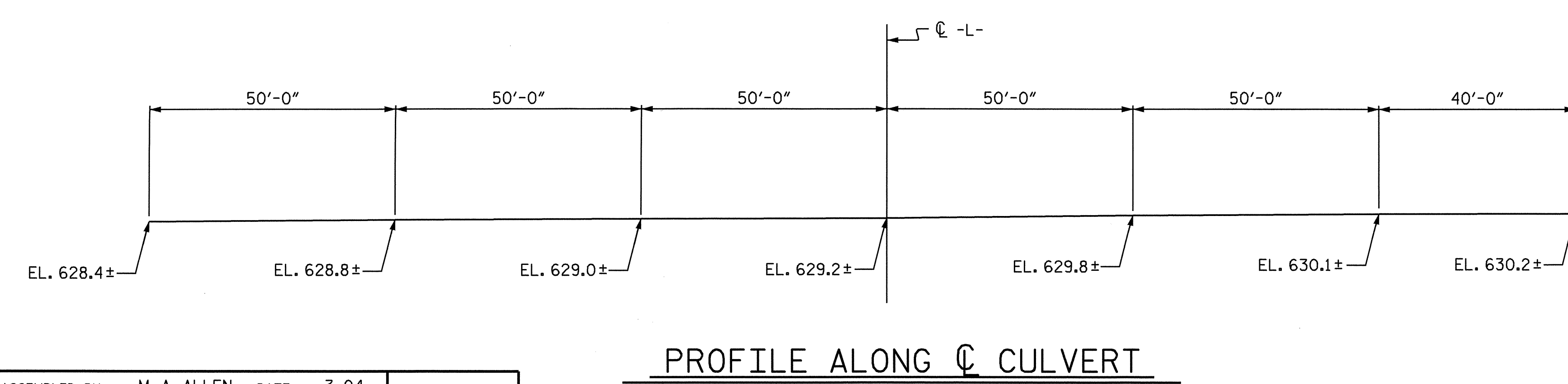
LOCATION SKETCH

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
BARREL @ 2.061 CY/FT	162.8 C.Y.
INLET WINGS ETC.	14.3 C.Y.
OUTLET WINGS ETC.	21.5 C.Y.
TOTAL	198.6 C.Y.
REINFORCING STEEL	
BARREL & OUTLET WINGS	35,722 LBS.
INLET WINGS ETC.	833 LBS.
TOTAL	36,555 LBS.
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MAT'L	153 TONS
REMOVAL OF EXISTING STRUCTURE	LUMP SUM

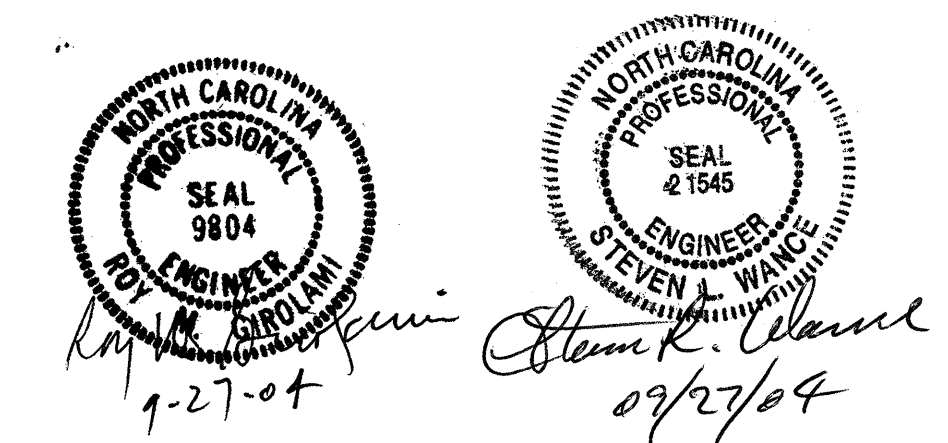
SPLICE LENGTH CHART

BAR	SIZE	SPLICE LENGTH
A200	#5	1'-9"
A400	#7	3'-1"
B1	#4	1'-9"
B3	#4	1'-9"
C1	#4	1'-11"



PROFILE ALONG CULVERT

PROJECT NO. B-3424
CABARRUS COUNTY
 STATION: 13+14.00 -L-
 SHEET 6 OF 11 REPLACE BRIDGE #264



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BARREL STANDARD
 DOUBLE 10 FT. X 8 FT.
 CONCRETE BOX CULVERT
 65° SKEW

SEPTEMBER 1990

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-6
1			3			TOTAL SHEETS 11
2			4			

ADDED 10-1-90

ASSEMBLED BY : <u>M. A. ALLEN</u> DATE : <u>3-04</u>	SPECIAL
CHECKED BY : <u>SWANc@PE</u> DATE : <u>4-04</u>	
DRAWN BY : <u>B. WYNN/D.DONOVAN</u> DATE : <u>SEPT. 1990</u>	STANDARD
CHECKED BY : <u>A.R.BISSETTE</u> DATE : <u>OCT. 90</u>	