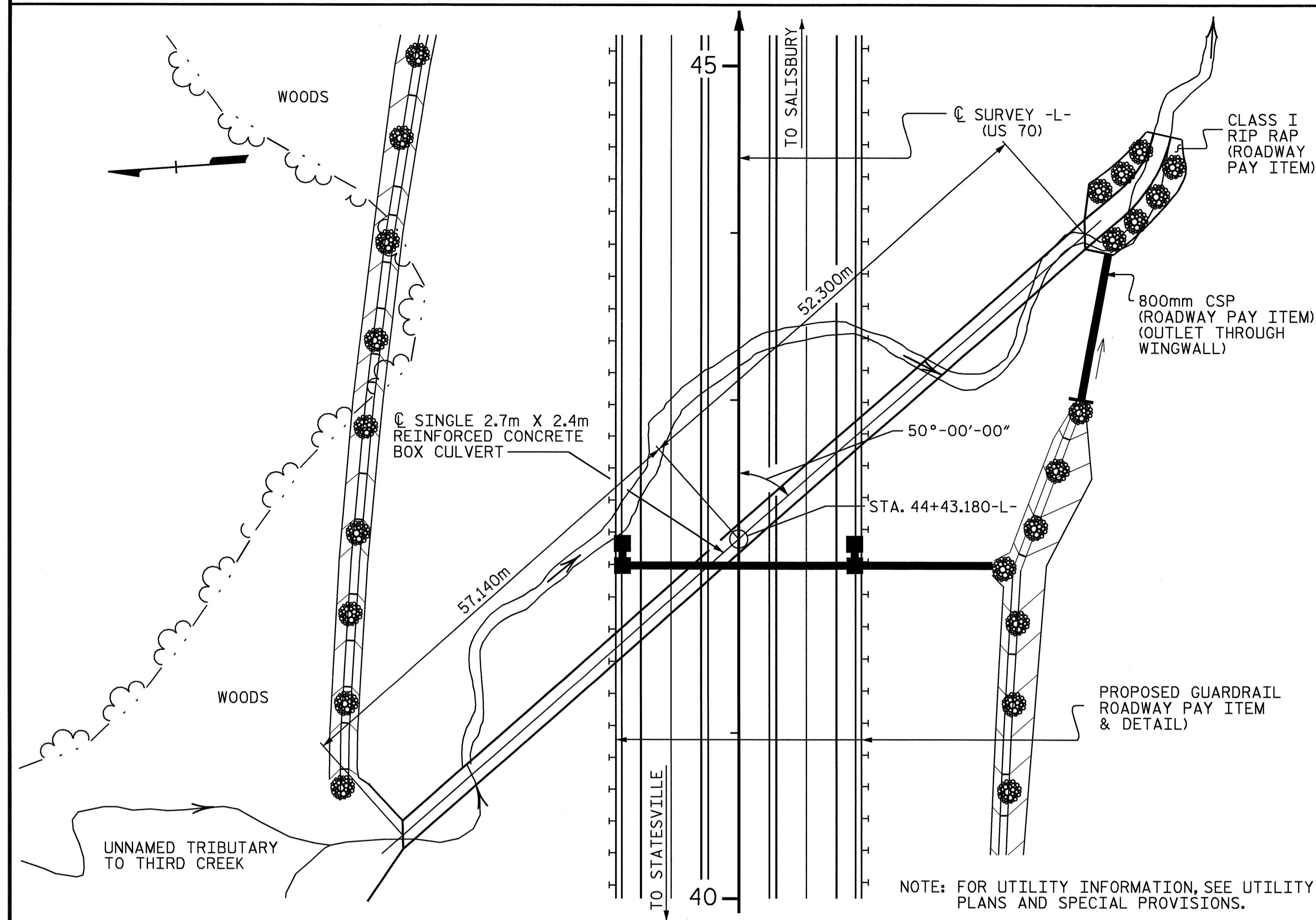


BENCH MARK: TBM8 RR SPIKE IN POWER POLE STA. 41+20.163 -L-
276.743m LT ELEV. 255.686 DATUM: NAD 83

F.A. PROJECT NO.: STP-70(75)



LOCATION SKETCH

GRADE POINT ELEV. @ STA. 44+43.180 -L-..... 253.000
BED ELEV. @ STA. 44+43.180 -L-..... 236.820
ROADWAY SLOPES 2 : 1

HYDRAULIC DATA

DESIGN DISCHARGE 16.6 c.m.s.
FREQUENCY OF DESIGN FLOOD 50 YEAR
DESIGN HIGH WATER ELEVATION 240.0
DRAINAGE AREA 78.0 Ha
BASIC DISCHARGE (Q100) 18.6 c.m.s.
BASIC HIGH WATER ELEVATION 240.3

OVERTOPPING FLOOD DATA

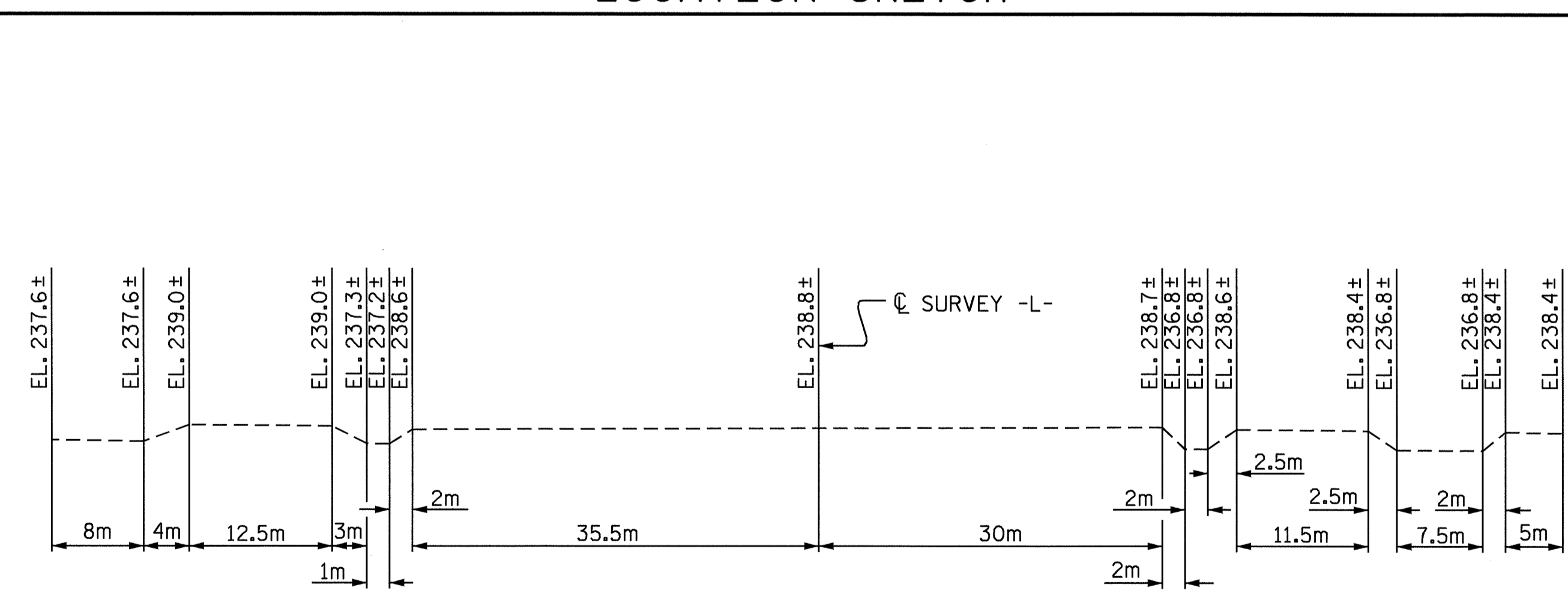
OVERTOPPING DISCHARGE 56.6 c.m.s.
FREQUENCY OF OVERTOPPING FLOOD 500 YR+
OVERTOPPING FLOOD ELEVATION 249.3

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	1368	#19	6	2480	7583
A2	1368	#19	6	1960	5993
A100	629	#25	STR	2980	7447
A101	4	#25	STR	2540	40
A102	4	#25	STR	2140	34
A103	4	#25	STR	1720	27
A104	4	#25	STR	1340	21
A105	4	#25	STR	940	15
A200	713	#22	STR	2980	6463
A201	6	#22	STR	2420	44
A202	6	#22	STR	1880	34
A203	6	#22	STR	1340	24
A204	6	#22	STR	820	15
B1	1152	#13	STR	3140	3596
B2	1368	#13	STR	2180	2964
C1	676	#13	STR	8940	6007
G1	4	#13	STR	3920	16
S2	12	#25	STR	3920	187
F1	71	#13	STR	1860	131
TOTAL					40,641

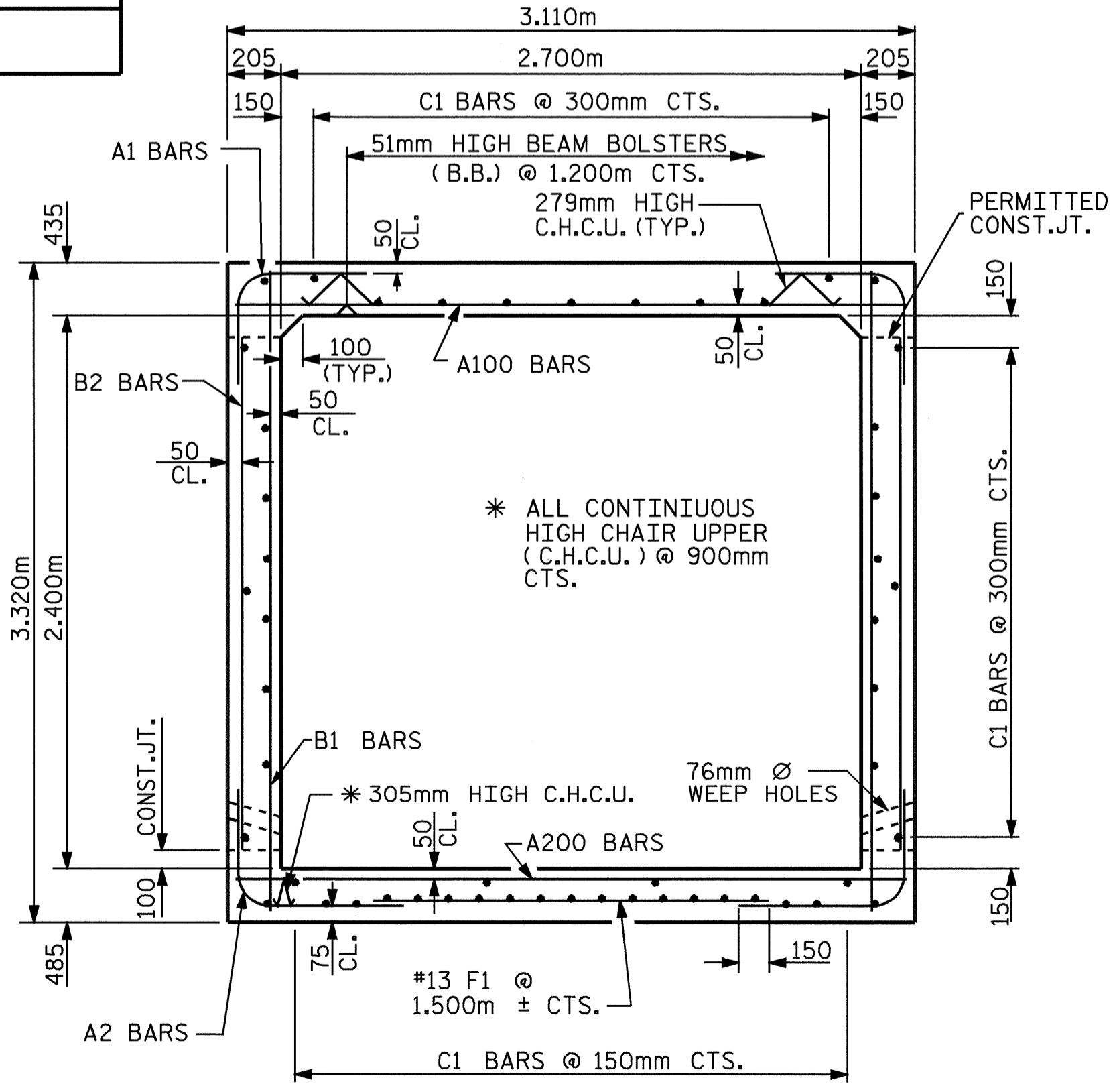
BAR	SIZE	SPLICE LENGTH
B1	13	540
C1	13	590

NOTES

ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.
DESIGN FILL----- 13.99m
FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
76mm 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 100mm 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.
TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 21.0m. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
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.
FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
ALL ELEVATIONS ARE IN METERS.
THE 800mm DIA. PIPE THROUGH THE WINGWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.
THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 360,000kg OF REINFORCING STEEL, ONE 760mm SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 360,000kg OF REINFORCING STEEL, TWO 760mm 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 CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



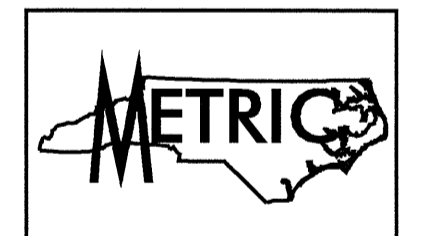
PROFILE ALONG CULVERT



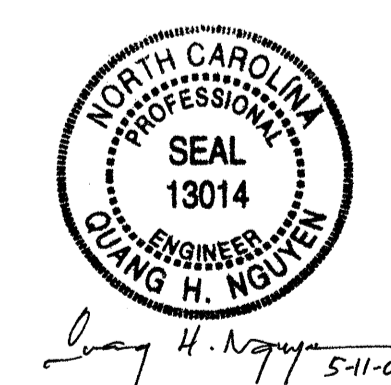
RIGHT ANGLE SECTION OF BARREL

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
BARREL @ 3.84 m ³ /m	420.3 m ³
WINGS, ETC.	22.3 m ³
TOTAL	442.6 m ³
REINFORCING STEEL	
BARREL	40,641 kg
WINGS, ETC.	890 kg
TOTAL	41,531 kg
CULVERT EXCAVATION -----	LUMP SUM
FOUNDATION COND. MAT'L ----	231 METRIC TONS



PROJECT NO. R-2911A
IREDELL COUNTY
STATION: 44+43.180 -L-



SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 2.7m X 2.4m
CONCRETE BOX CULVERT
50° SKEW

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

TOTAL SHEETS	
NO.	DATE:
1	6

ASSEMBLED BY : D. HODGE DATE : 1/2004
CHECKED BY : M. CHEEK DATE : 2/2004
DRAWN BY : EEM 6/97
CHECKED BY : ARB 7/97

BAR TYPE
DIMENSIONS ARE OUT TO OUT

THERE ARE 52 "C" BARS IN SECTION OF BARREL