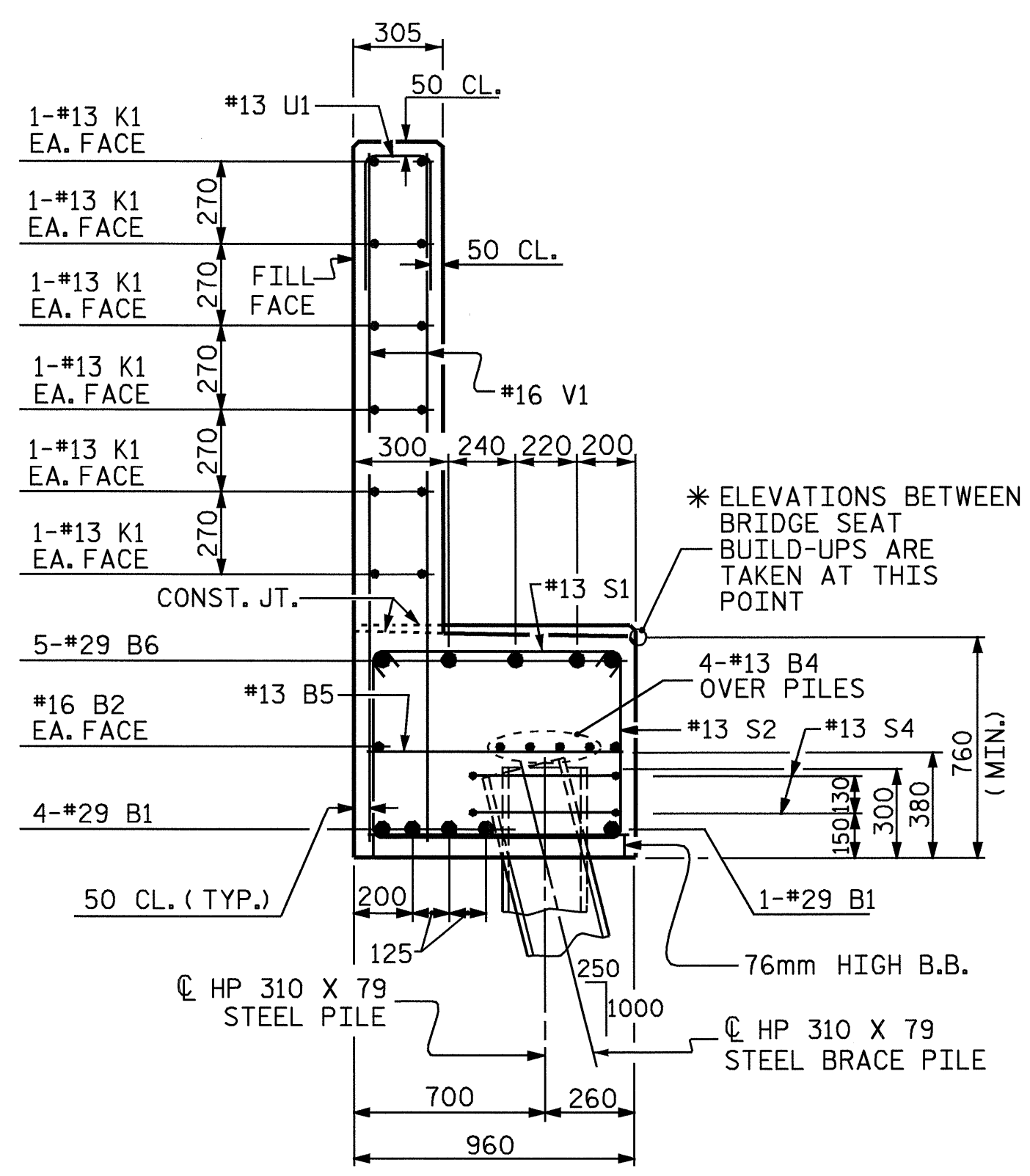


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

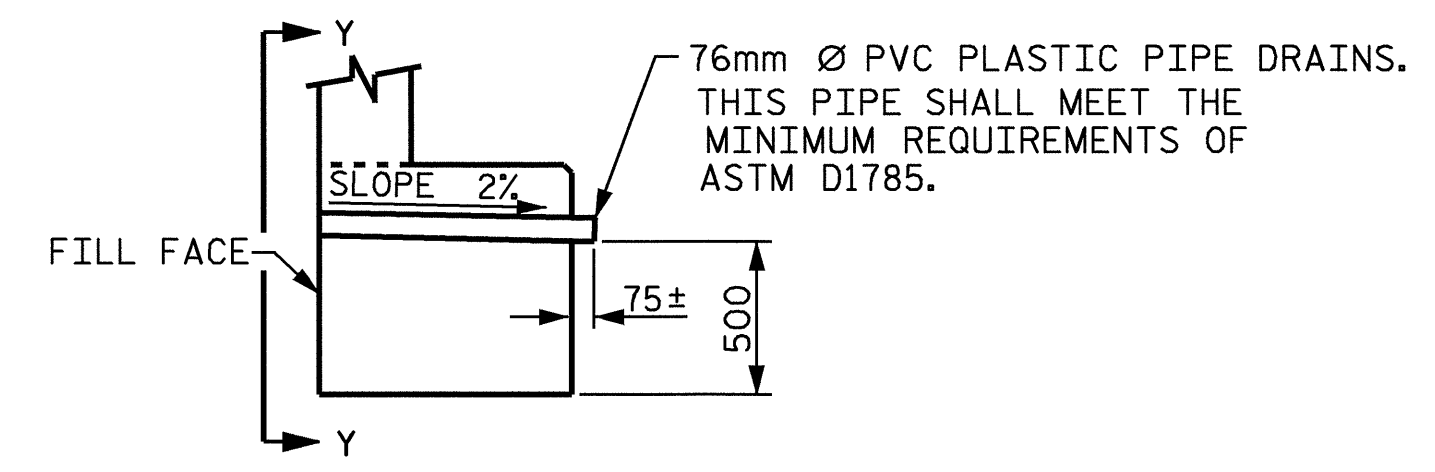
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

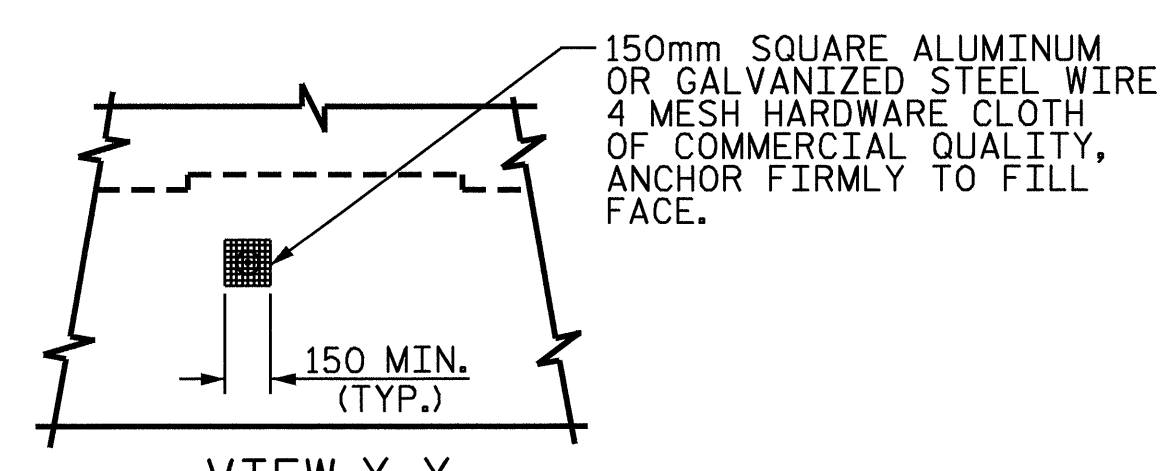
TEMPORARY DRAINAGE AT END BENT



SECTION A-A



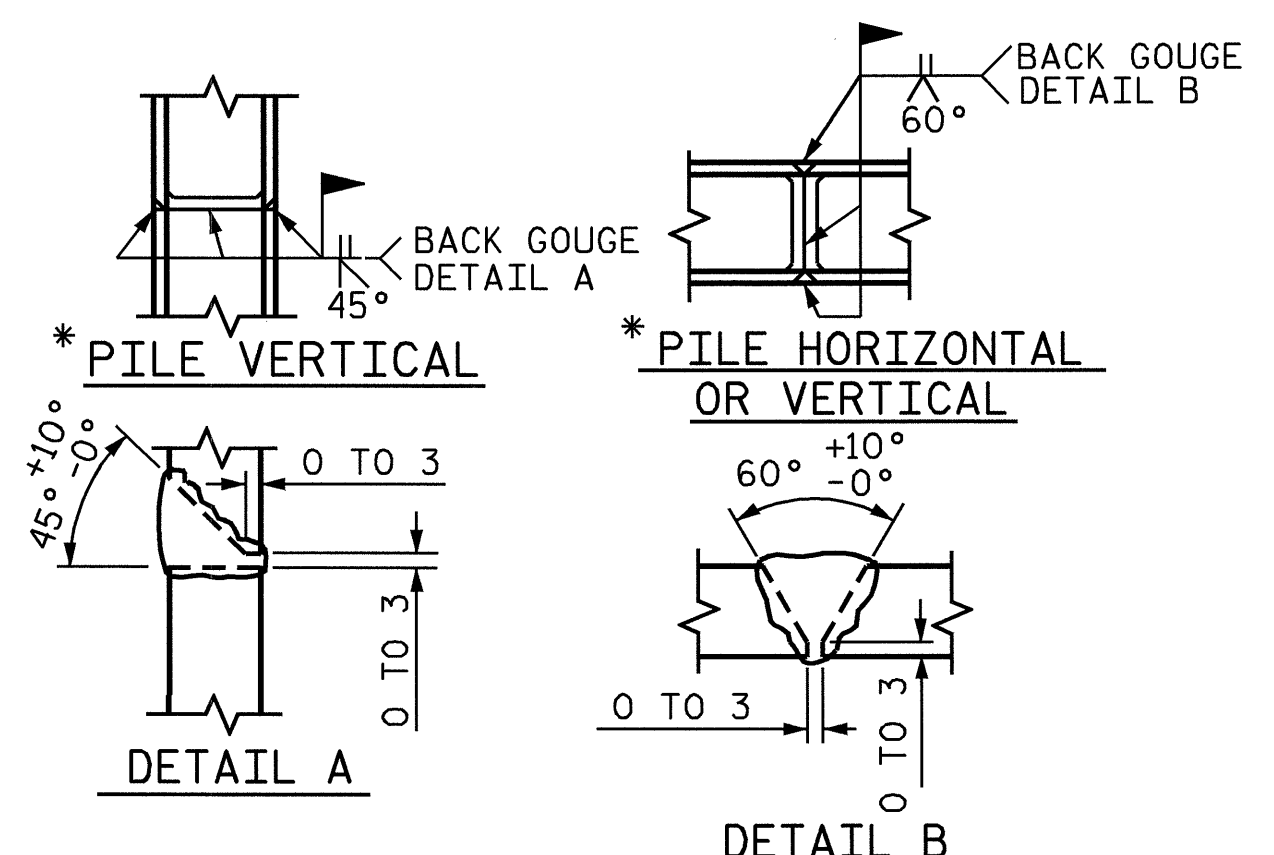
SECTION THRU CAP



VIEW Y-Y

NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC PLASTIC PIPE DRAINS, HARDWARE CLOTH AND FASTENERS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

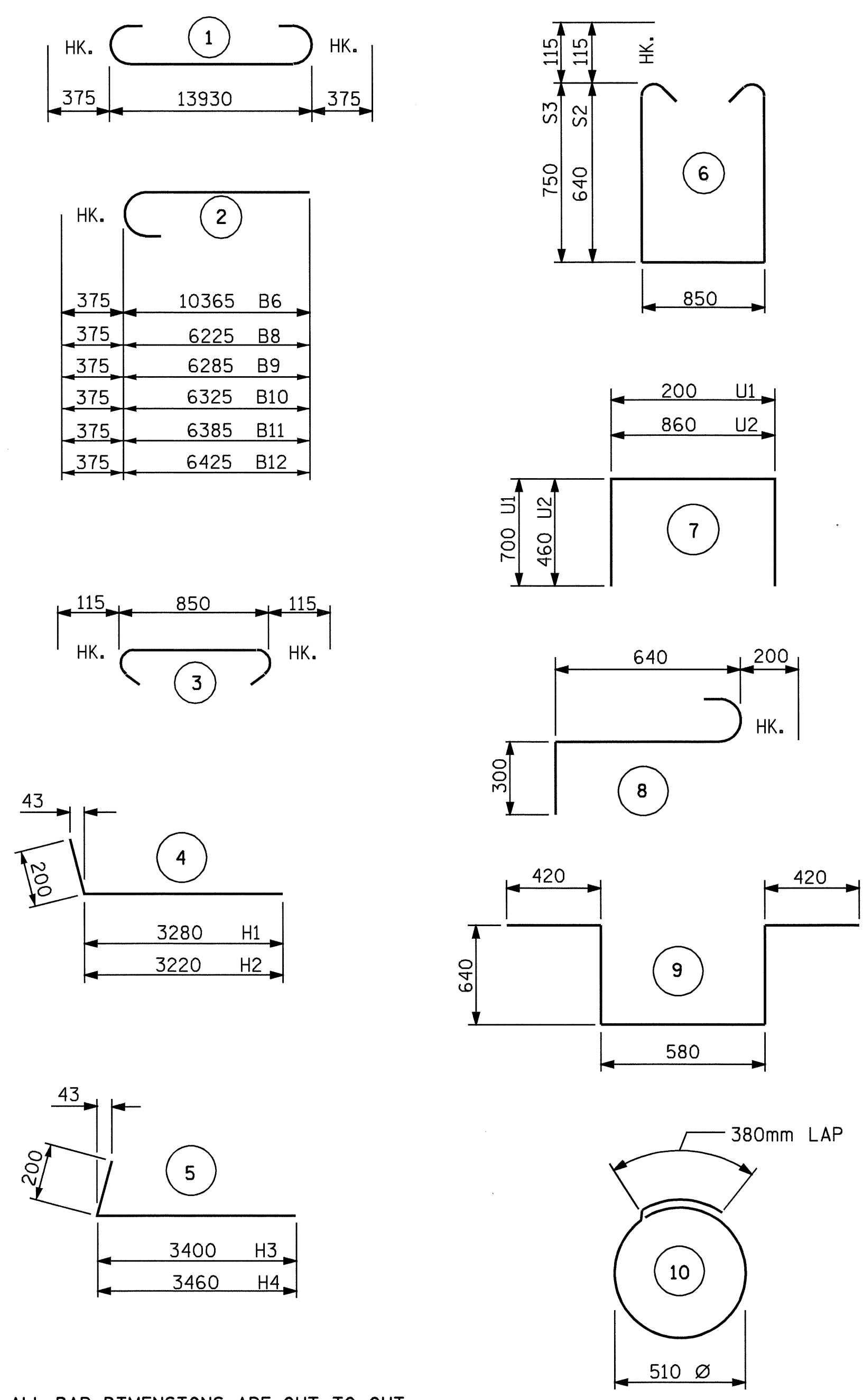
PIPE DRAIN DETAILS



* POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT #1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	#29	1	14680	371
B2	2	#16	STR	13980	43
B3	2	#16	STR	4640	14
B4	8	#13	STR	7360	59
B5	10	#13	STR	860	9
B6	5	#29	2	10740	272
B7	10	#13	STR	740	7
B8	1	#29	2	6600	33
B9	1	#29	2	6660	34
B10	1	#29	2	6700	34
B11	1	#29	2	6760	34
B12	1	#29	2	6800	34
H1	11	#16	4	3480	59
H2	11	#16	4	3420	58
H3	12	#16	5	3600	67
H4	12	#16	5	3660	68
K1	24	#13	STR	7360	176
K2	8	#13	STR	860	7
S1	54	#13	3	1080	58
S2	29	#13	6	2360	68
S3	25	#13	6	2580	64
S4	20	#13	10	1980	39
S5	6	#19	8	1140	15
S6	2	#19	9	2700	12
U1	40	#13	7	1600	64
U2	8	#13	7	1780	14
V1	80	#16	STR	2160	268
V2	30	#16	STR	2540	118
V3	32	#16	STR	2740	136

REINFORCING STEEL = 2235 kg					
CLASS A CONCRETE BREAKDOWN					
POUR #1: CAP & LOWER WINGS & BRACE PILE BLOCKS				13.9 CU. METERS	
POUR #2: BACKWALL & UPPER WINGS				10.5 CU. METERS	
TOTAL CLASS A CONCRETE				24.4 CU. METERS	

HP 310 X 79 STEEL PILES		252.0 METERS
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PROJECT NO. R-2911A
IREDELL COUNTY
 STATION: 39+62.402 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT #1
 LEFT LANE



REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS 106
2			4			

DRAWN BY: QT NGUYEN DATE: 2-04
 CHECKED BY: L.L. MURPHY DATE: 3-04