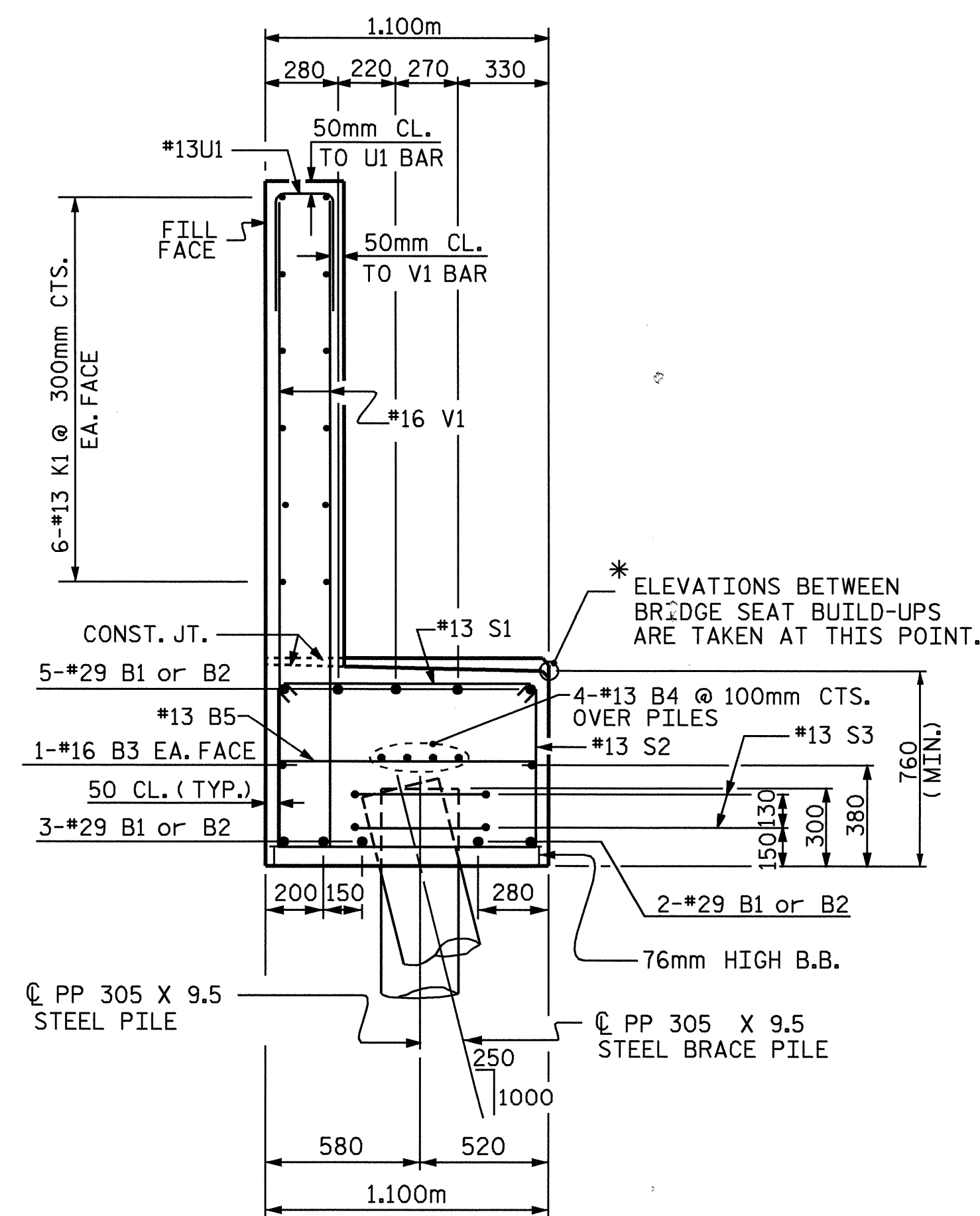
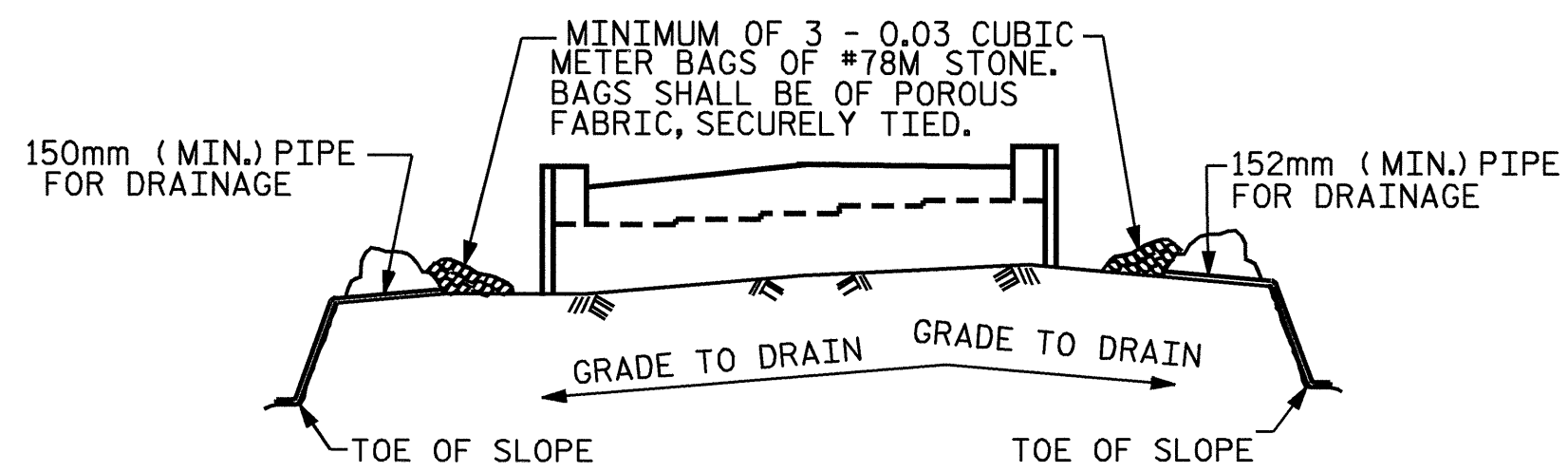


**PART SECTION B-B**



**SECTION A-A**

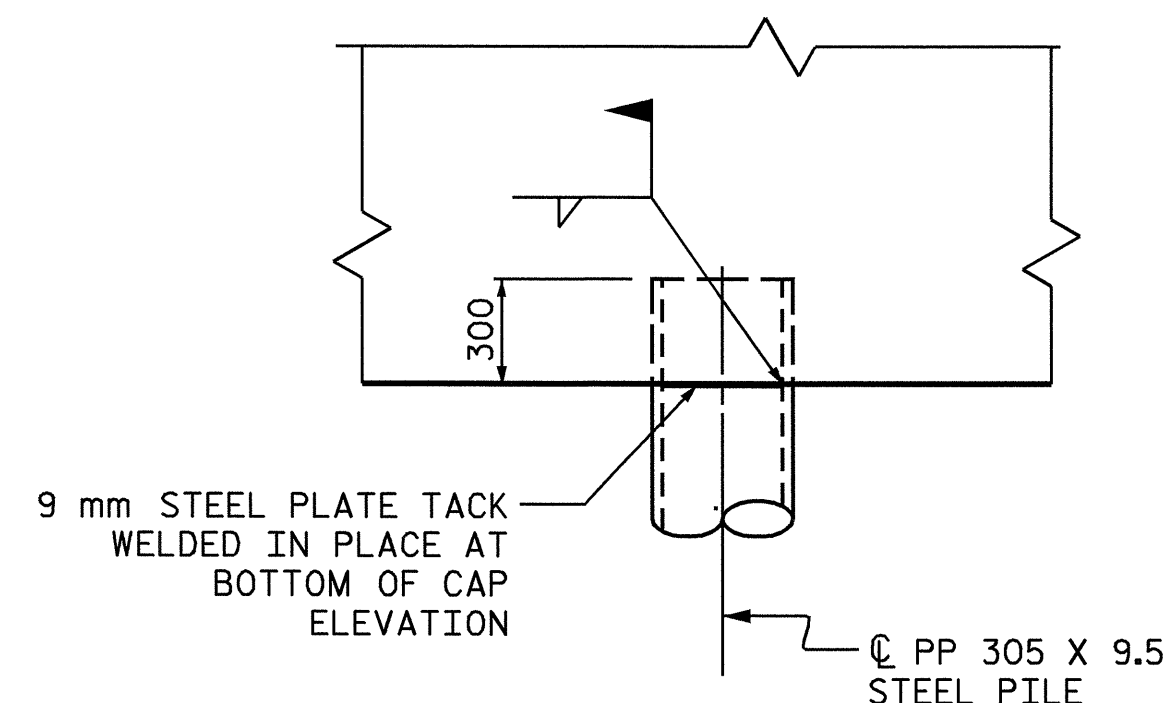


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

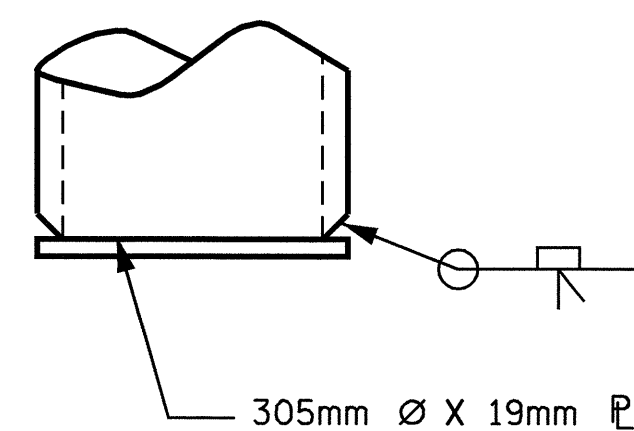
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

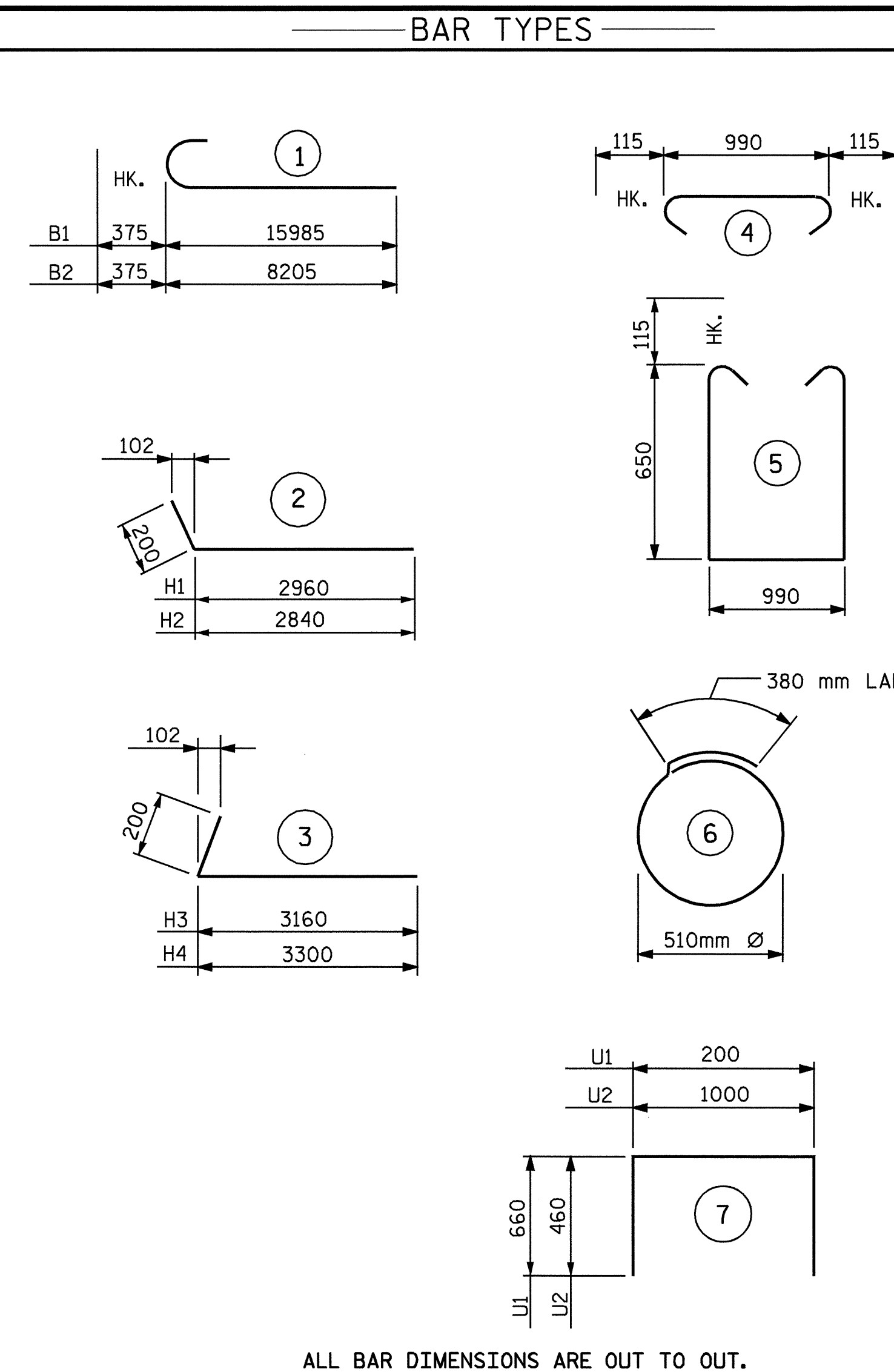
**TEMPORARY DRAINAGE AT END BENT**



**PIPE PILE IN CAP DETAIL**



**DRIVING PLATE DETAIL**



ALL BAR DIMENSIONS ARE OUT TO OUT.

**BILL OF MATERIAL**

**END BENT #2**

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	10	29	1	16360	828
B2	10	29	1	8580	434
B3	4	16	STR	11200	70
B4	12	13	STR	7660	91
B5	18	13	STR	980	18
B6	10	13	STR	800	8
B7	5	13	STR	4180	21

H1	10	16	2	3160	49
H2	10	16	2	3040	47
H3	10	16	3	3360	52
H4	10	16	3	3500	54
H5	4	16	STR	1020	6

K1	36	13	STR	7440	266
S1	78	13	4	1220	95
S2	78	13	5	2520	195
S3	22	13	6	2000	44

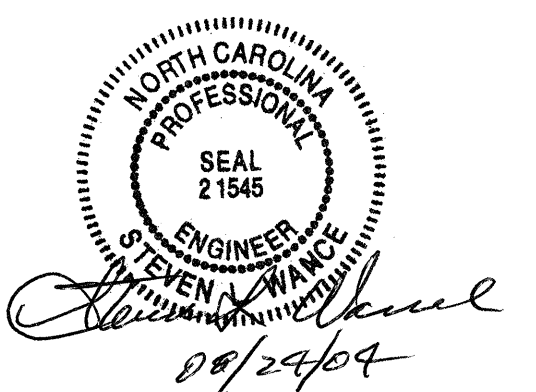
U1	65	13	7	1520	98
U2	18	13	7	1920	34

V1	130	16	STR	2500	504
V2	60	16	STR	2880	268

REINFORCING STEEL Kgs. = 3182

CLASS A CONCRETE BREAKDOWN :  
POUR #1 CU. METERS = 20.4  
POUR #2 CU. METERS = 16.9  
CLASS A CONCRETE TOTAL CU. METERS = 37.3

PP 305 X 9.5 STEEL PILES  
NO = 11 METERS = 220.0



PROJECT NO. R-513A  
ROBESON COUNTY  
STATION: 68+75.743 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**SUBSTRUCTURE  
END BENT #2**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-62
1			3			TOTAL SHEETS
2			4			172

DRAWN BY : SWANCEPE DATE : 05/04  
CHECKED BY : N.O. TRAN DATE : 07/03

16-AUG-2004 10:49  
W:\SquadM\0513a\str2\swance\Microstation\513a2EB+drw.dgn