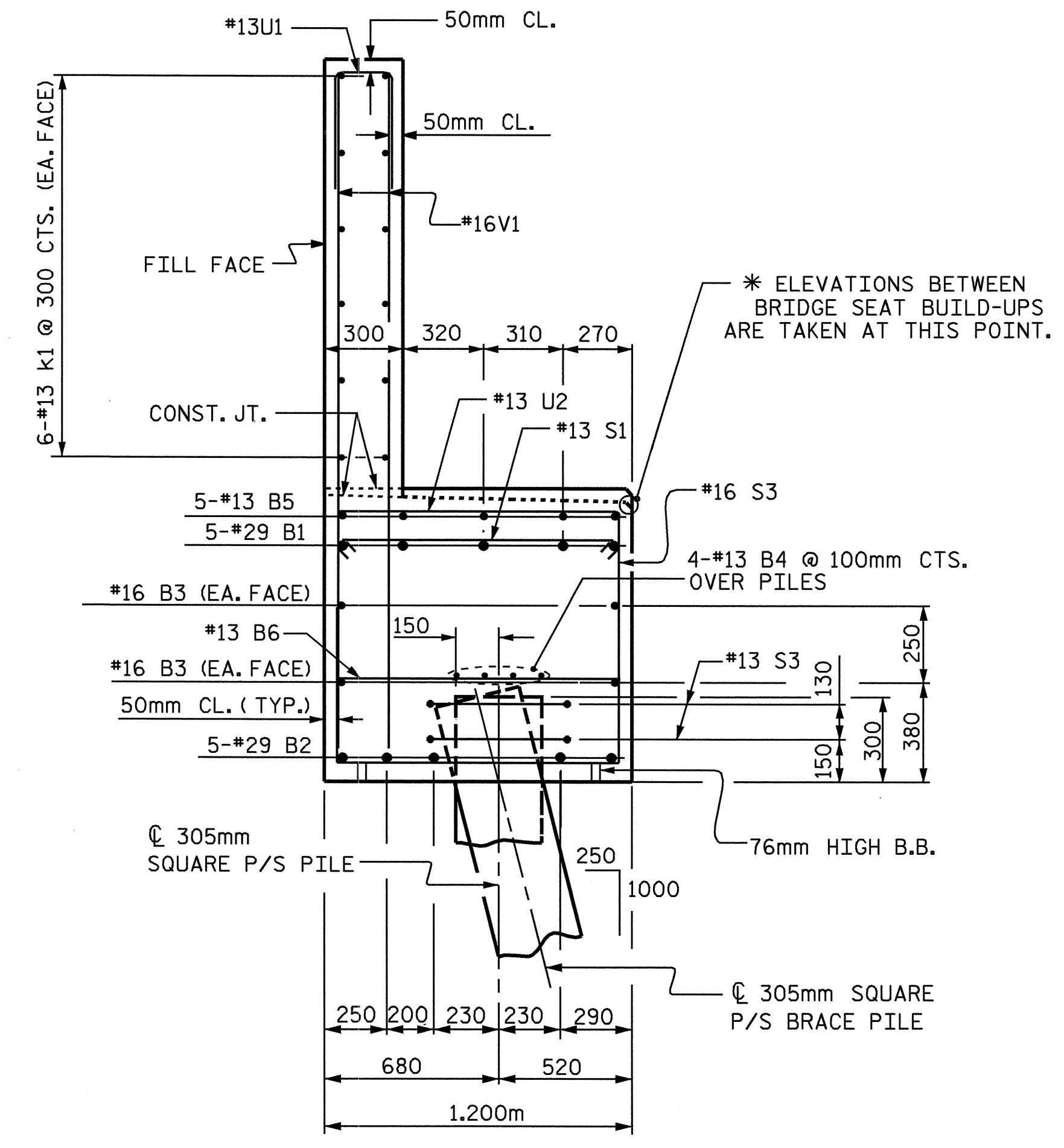
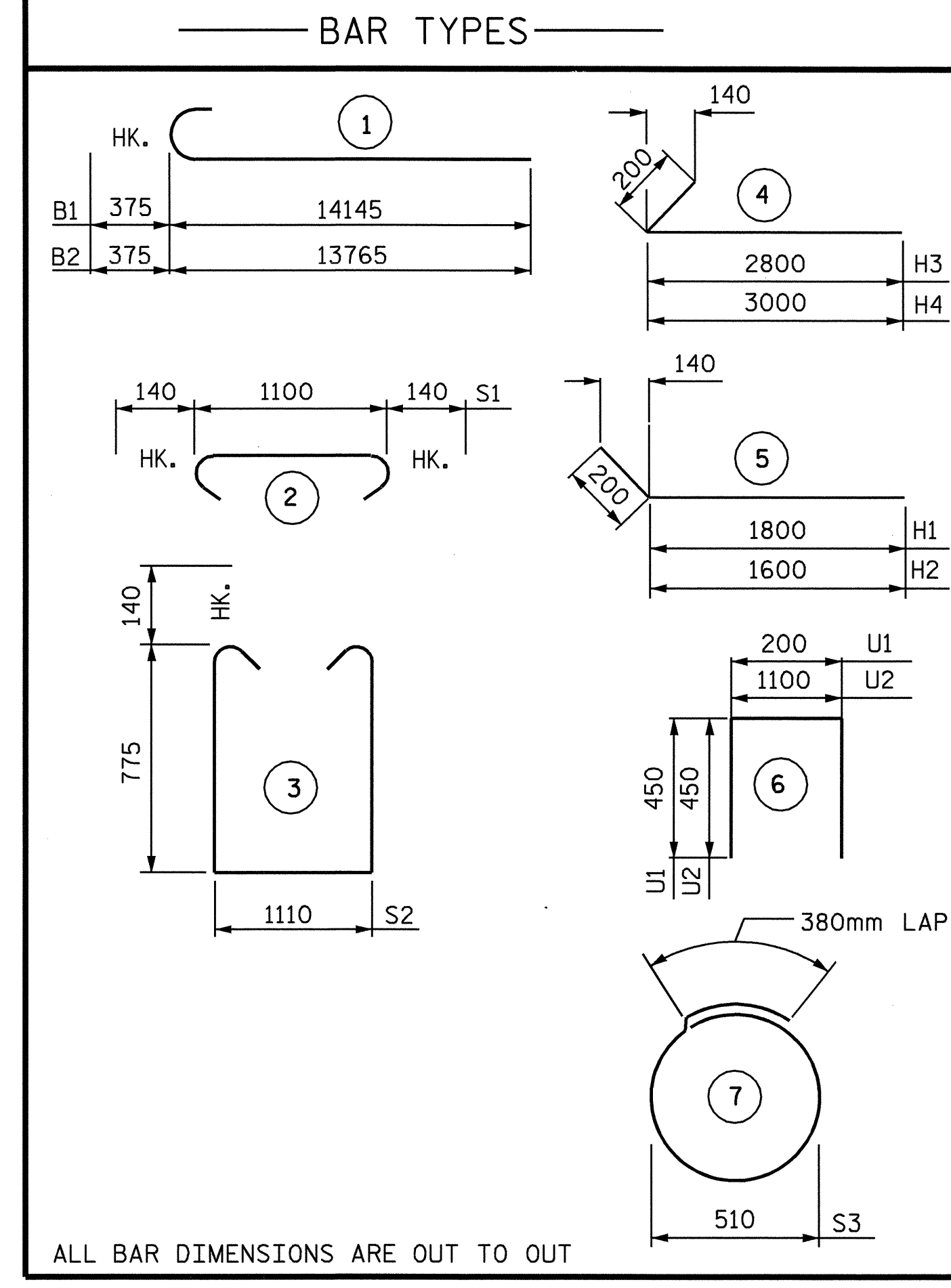


SECTION A-A

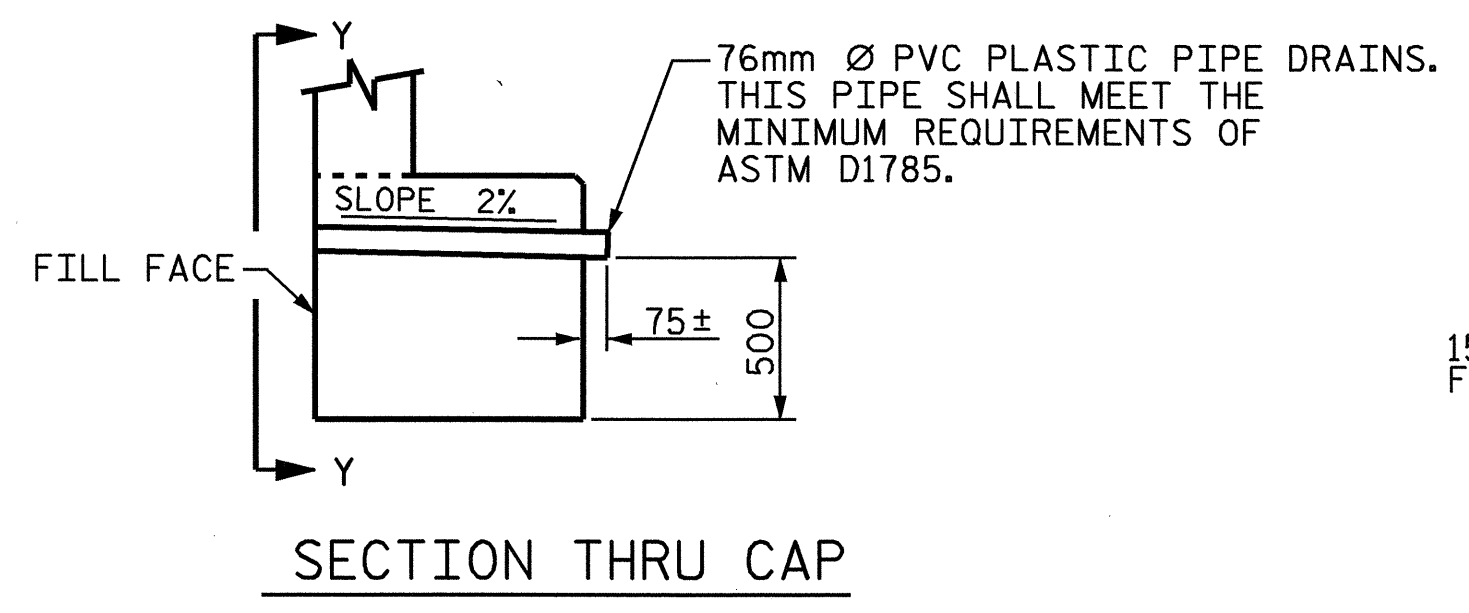


SECTION B-B

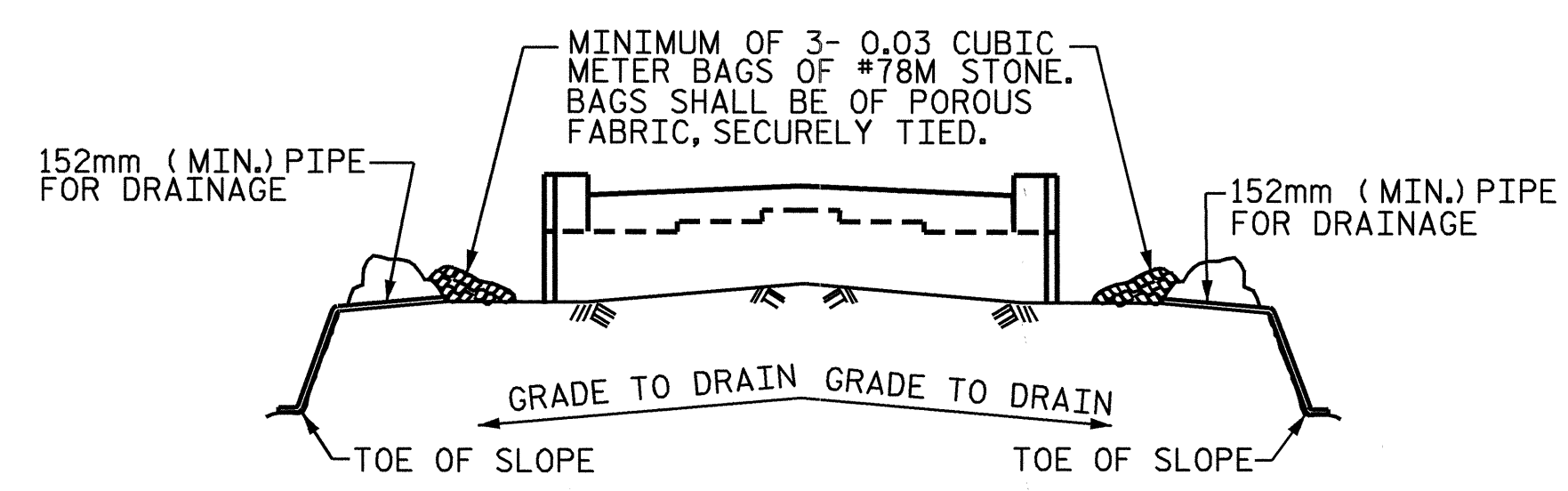


ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL						
END BENT 1						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	10	29	1	14520	735	
B2	10	29	1	14140	715	
B3	8	16	STR	13260	165	
B4	12	13	STR	9020	108	
B5	5	13	STR	1300	6	
B6	22	13	STR	1100	24	
H1	10	16	5	2000	31	
H2	10	16	5	1800	28	
H3	10	16	4	3000	47	
H4	10	16	4	3200	50	
K1	36	13	STR	9020	323	
K2	4	13	STR	1220	5	
S1	114	16	2	1380	244	
S2	114	16	3	2940	520	
S3	30	13	7	2000	60	
U1	77	13	6	1100	84	
U2	4	13	6	2000	8	
V1	154	16	STR	2400	574	
V2	20	16	STR	2800	87	
V3	26	16	STR	2780	112	
REINFORCING STEEL					kg	3926
CLASS A CONCRETE BREAKDOWN						
POUR 1 (CAP AND LOWER PORTION OF WINGS)					m ³	31.0
POUR 2 (BACKWALL AND UPPER PORTION OF WINGS)					m ³	16.0
CLASS A CONCRETE TOTAL					m ³	47.0
305mm SQUARE P/S PILES						
NO. 15 METERS						270.0



SECTION THRU CAP

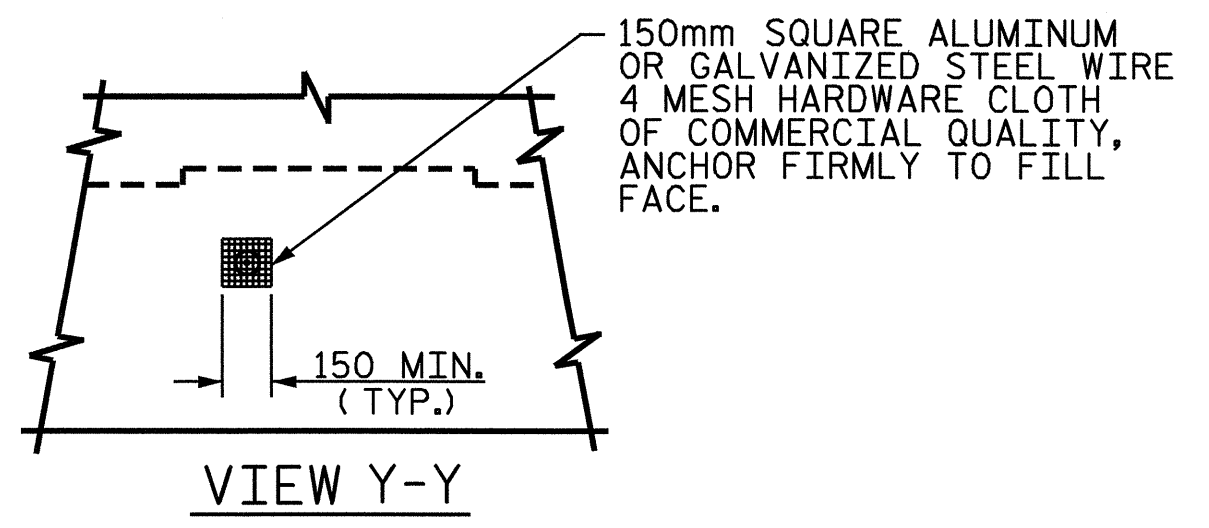


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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



VIEW Y-Y

NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC 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.

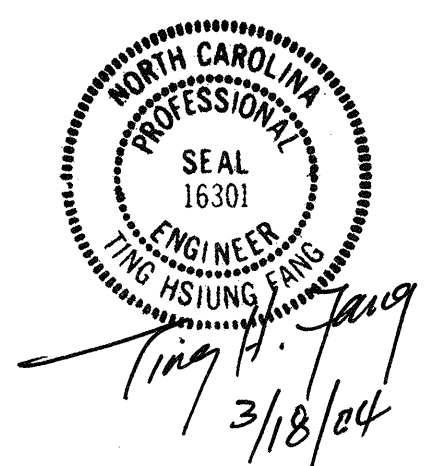
PIPE DRAIN DETAILS

PROJECT NO. R-513BB
ROBESON COUNTY
 STATION: 179+16.663 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 1



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			312

DRAWN BY: S. M. RASHIDI DATE: 6/11/03
 CHECKED BY: T. H. FANG DATE: 7/21/04