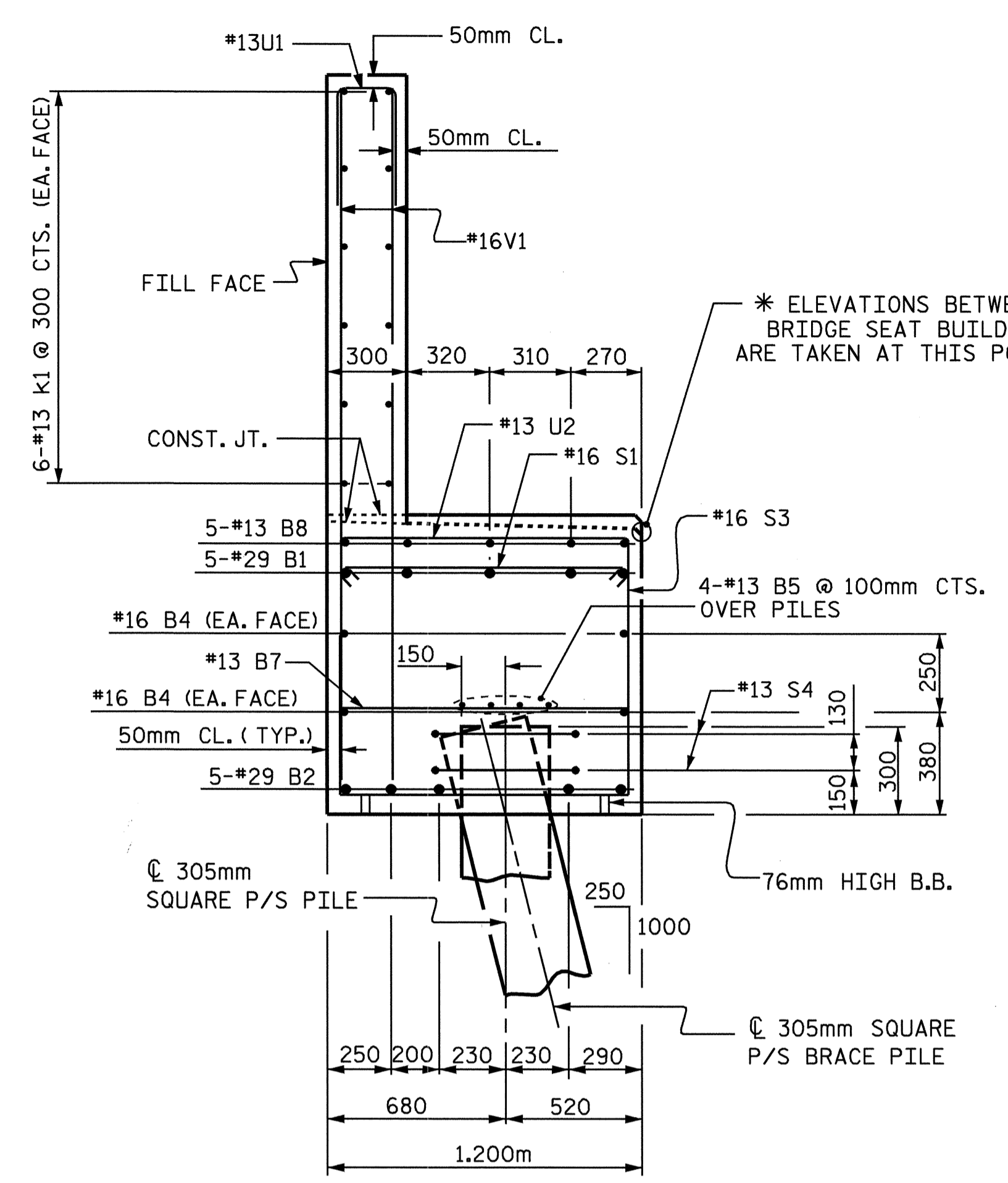
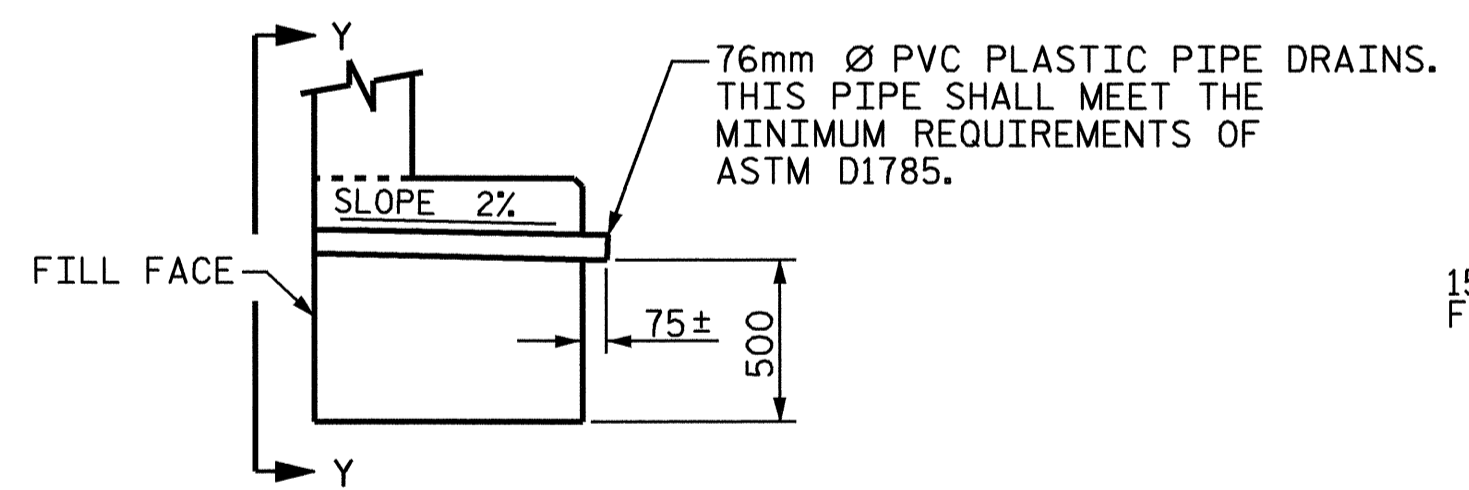


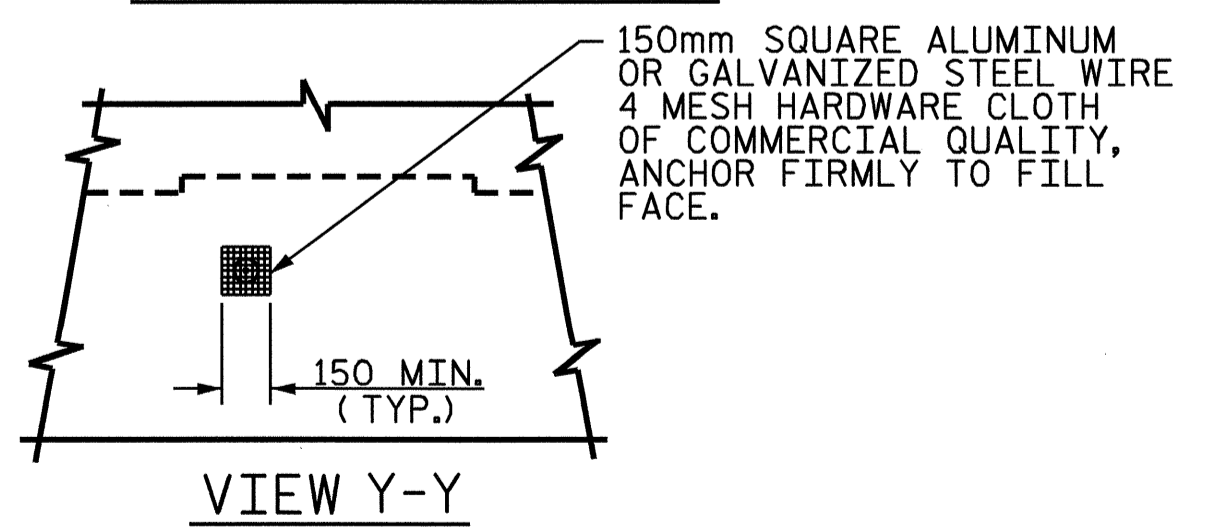
SECTION A-A



SECTION B-B



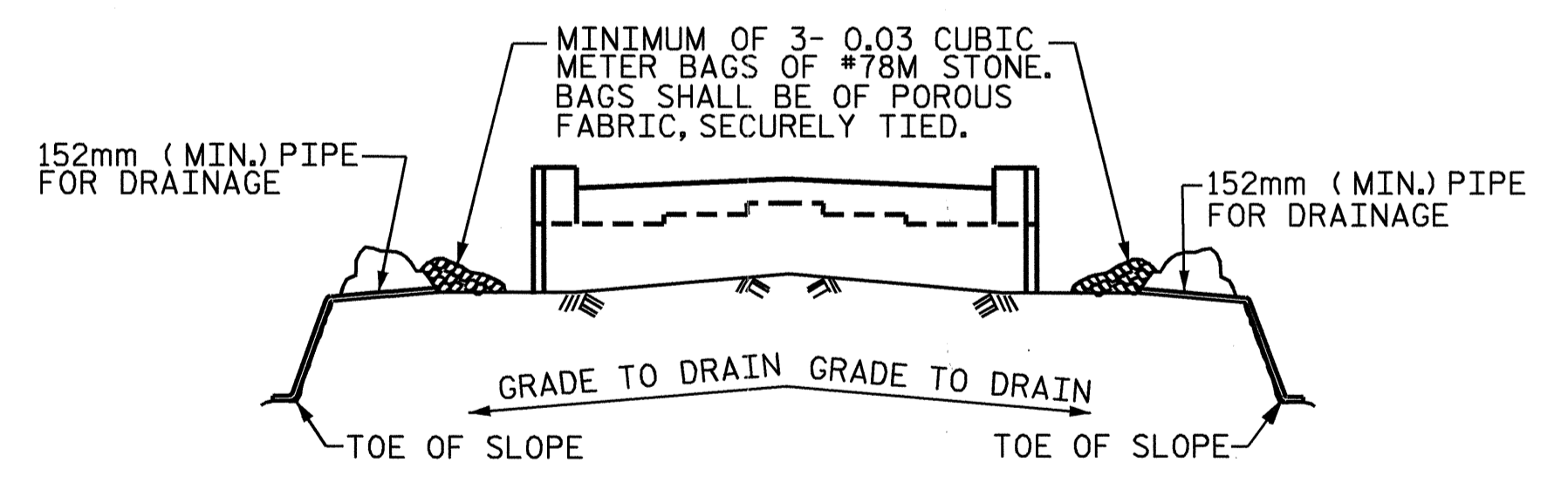
SECTION THRU CAP



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

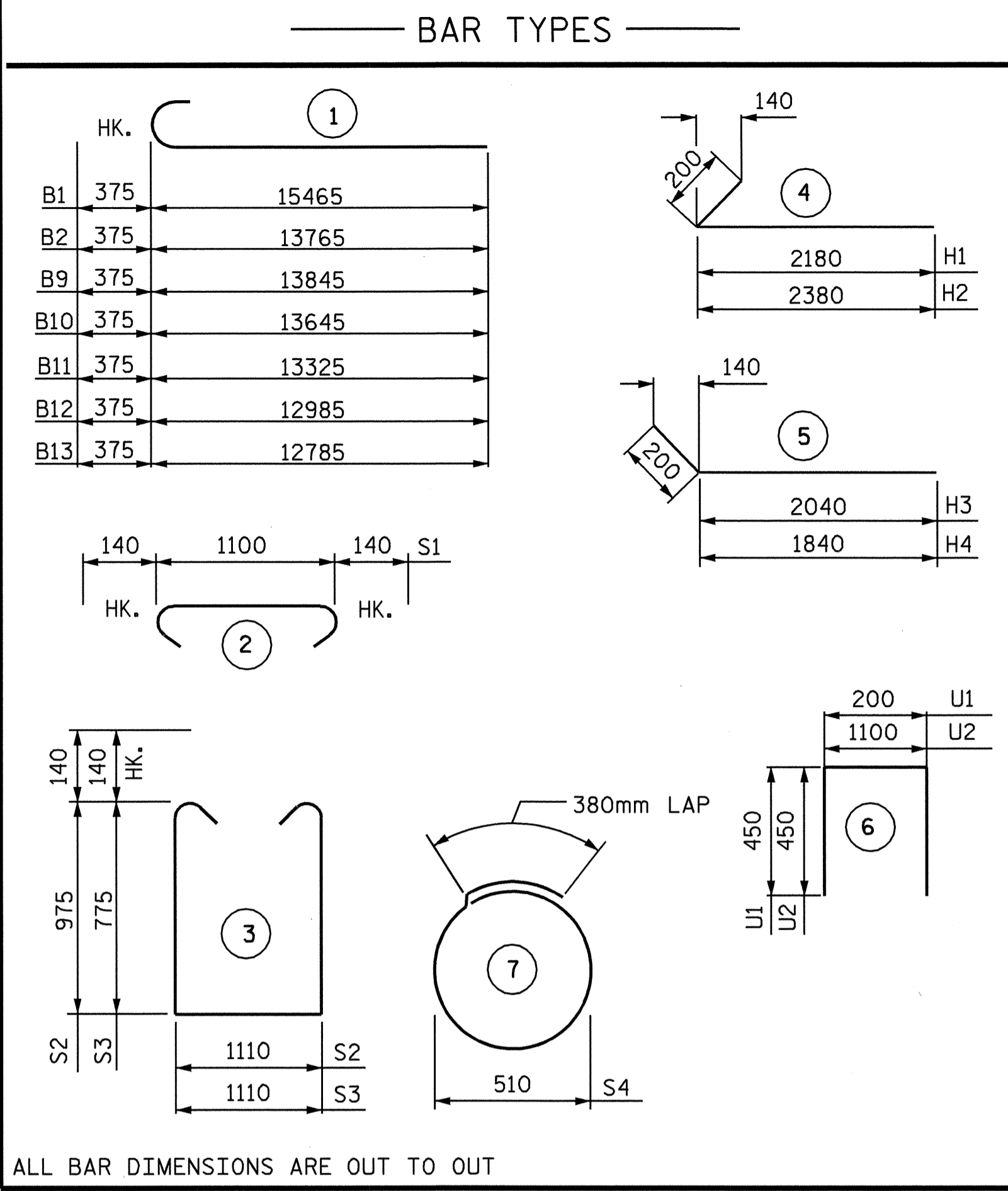


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL						
END BENT 2						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	5	29	1	15840	401	
B2	10	29	1	14140	716	
B3	5	13	STR	1300	6	
B4	8	16	STR	13260	165	
B5	12	13	STR	9020	108	
B6	2	16	STR	12100	38	
B7	23	13	STR	1100	25	
B8	5	13	STR	4780	24	
B9	1	29	1	14220	72	
B10	1	29	1	14020	71	
B11	1	29	1	13700	69	
B12	1	29	1	13360	68	
B13	1	29	1	13160	67	
H1	11	16	4	2380	41	
H2	11	16	4	2480	42	
H3	10	16	5	2240	35	
H4	10	16	5	2040	31	
K1	36	13	STR	9020	323	
K2	4	13	STR	1260	5	
S1	114	16	2	1380	244	
S2	60	16	3	3340	311	
S3	54	16	3	2940	246	
S4	30	13	7	2000	60	
U1	77	13	6	1100	84	
U2	15	13	6	2000	30	
V1	154	16	STR	2560	612	
V2	24	16	STR	2980	111	
V3	22	16	STR	2780	95	
REINFORCING STEEL					kg	4100
CLASS A CONCRETE BREAKDOWN						
POUR 1 (CAP AND LOWER PORTION OF WINGS)					m ³	34.3
POUR 2 (BACKWALL AND UPPER PORTION OF WINGS)					m ³	15.8
CLASS A CONCRETE TOTAL					m ³	50.1
305mm SQUARE P/S PILES						
NO. 15	METERS					285.0

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 2

Professional Engineer Seal for Ting Hsiung Fong, No. 16301, dated 3/18/04.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS 312
2			4			

DRAWN BY: S. M. RASHIDI DATE: 6/11/03
CHECKED BY: T. H. FONG DATE: 1/21/04