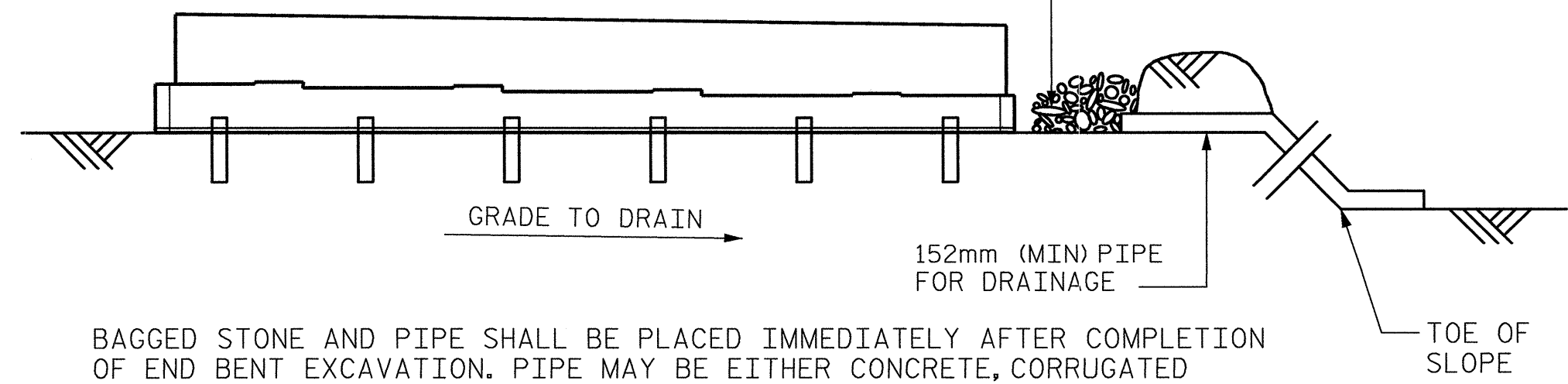


MINIMUM OF 3 - 0.03 CUBIC METER BAGS OF #78M STONE. BAGS SHALL BE OF POROUS FABRIC, SECURELY TIED.



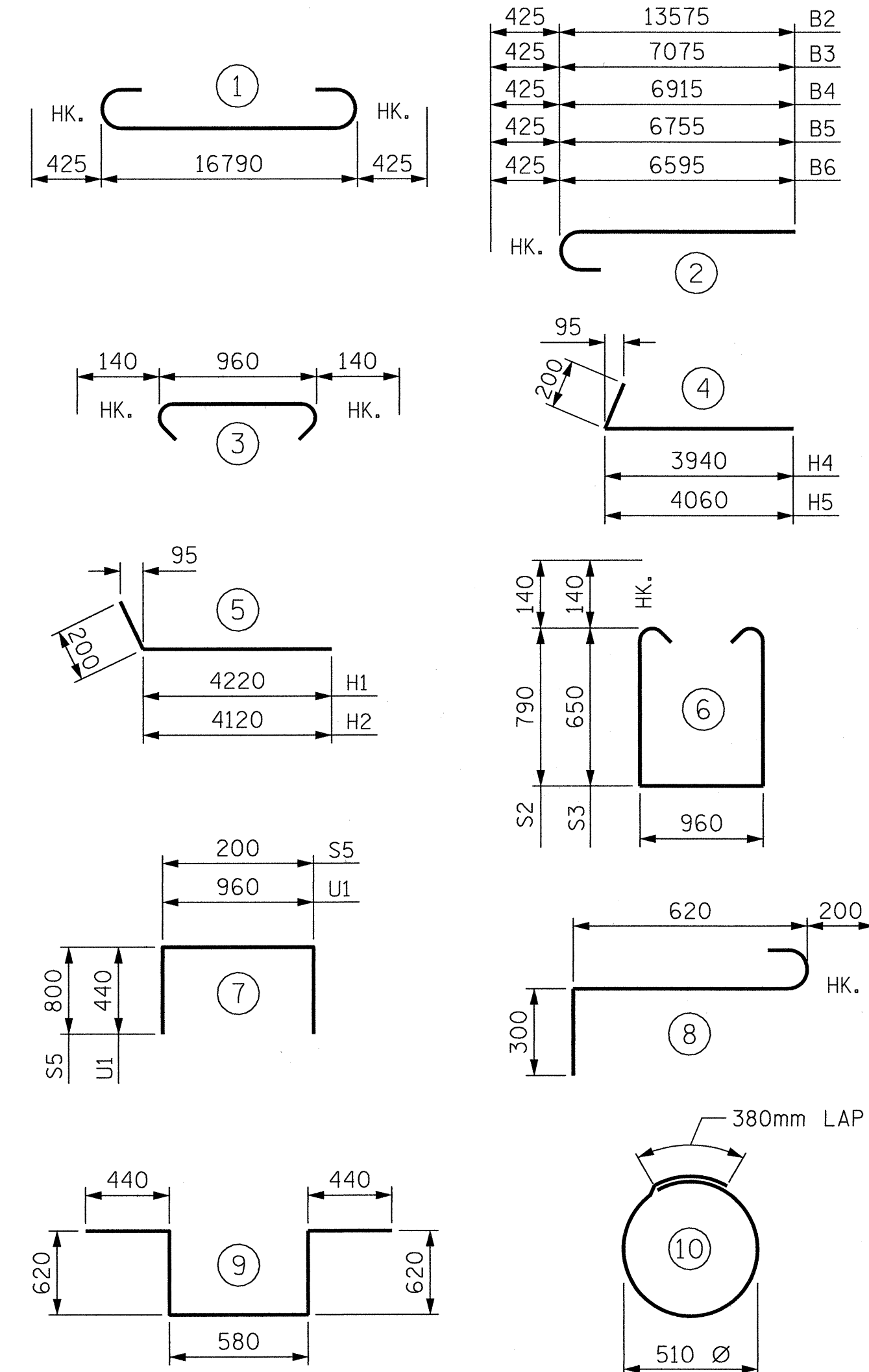
BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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 FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT

BAR TYPES



ALL BARS DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

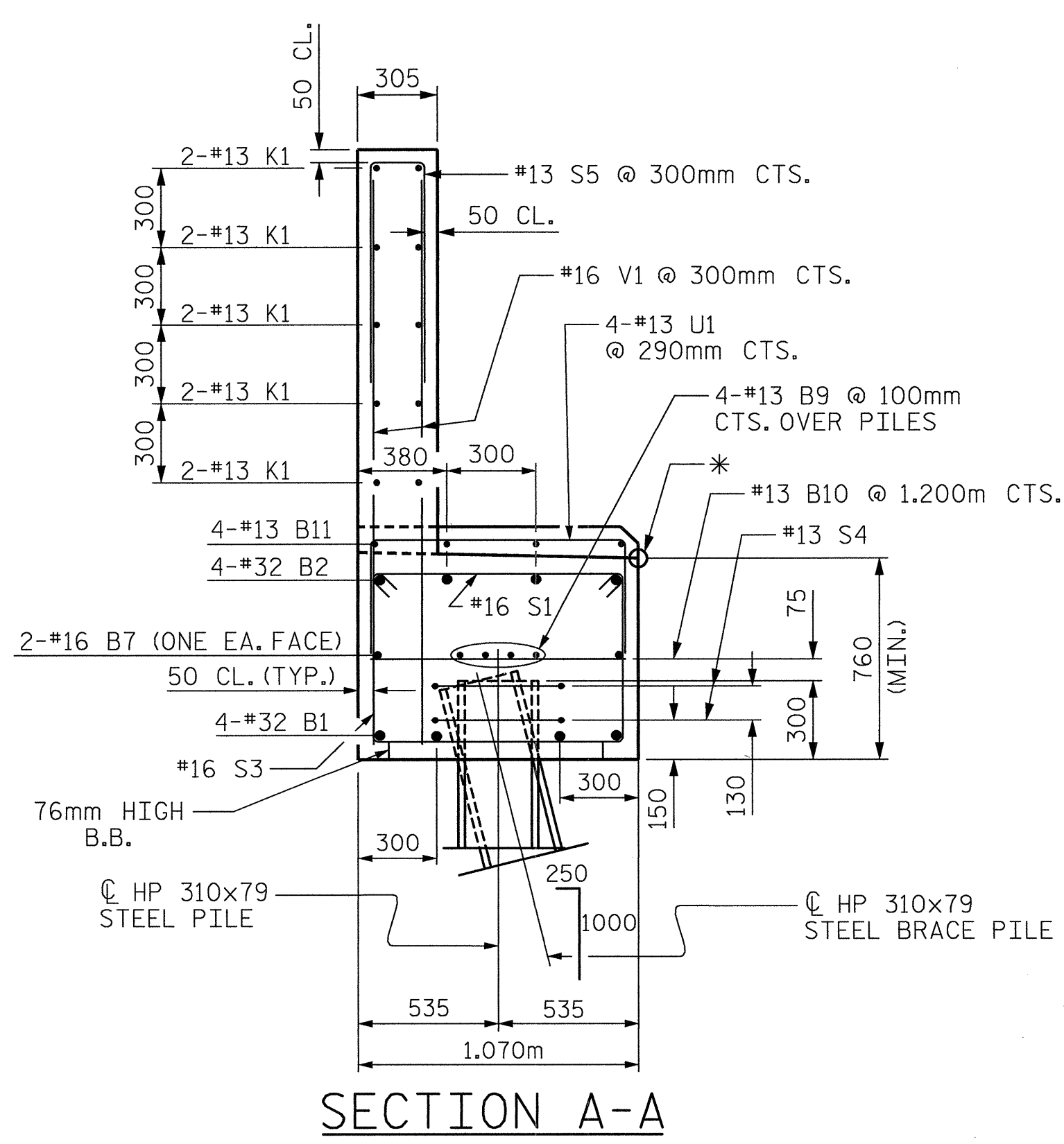
END BENT #2

BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
B1	4	32	1	17640	452
B2	4	32	2	14000	359
B3	1	32	2	7500	48
B4	1	32	2	7340	47
B5	1	32	2	7180	46
B6	1	32	2	7020	45
B7	2	16	STR.	16780	52
B8	2	16	STR.	3960	12
B9	8	13	STR.	8780	70
B10	14	13	STR.	960	13
B11	8	13	STR.	900	7
H1	11	16	5	4420	75
H2	11	16	5	4320	74
H3	8	16	STR.	1000	12
H4	10	16	4	4140	64
H5	10	16	4	4260	66
K1	20	13	STR.	8780	175
S1	61	16	3	1240	117
S2	26	16	6	2820	114
S3	35	16	6	2540	138
S4	12	13	10	1980	24
S5	49	13	7	1800	88
S6	2	19	9	2700	12
S7	6	19	8	1120	15
U1	8	13	7	1840	15
V1	98	16	STR.	2080	316
V2	36	16	STR.	2700	151
V3	36	16	STR.	2480	139

REINFORCING STEEL KG. 2746

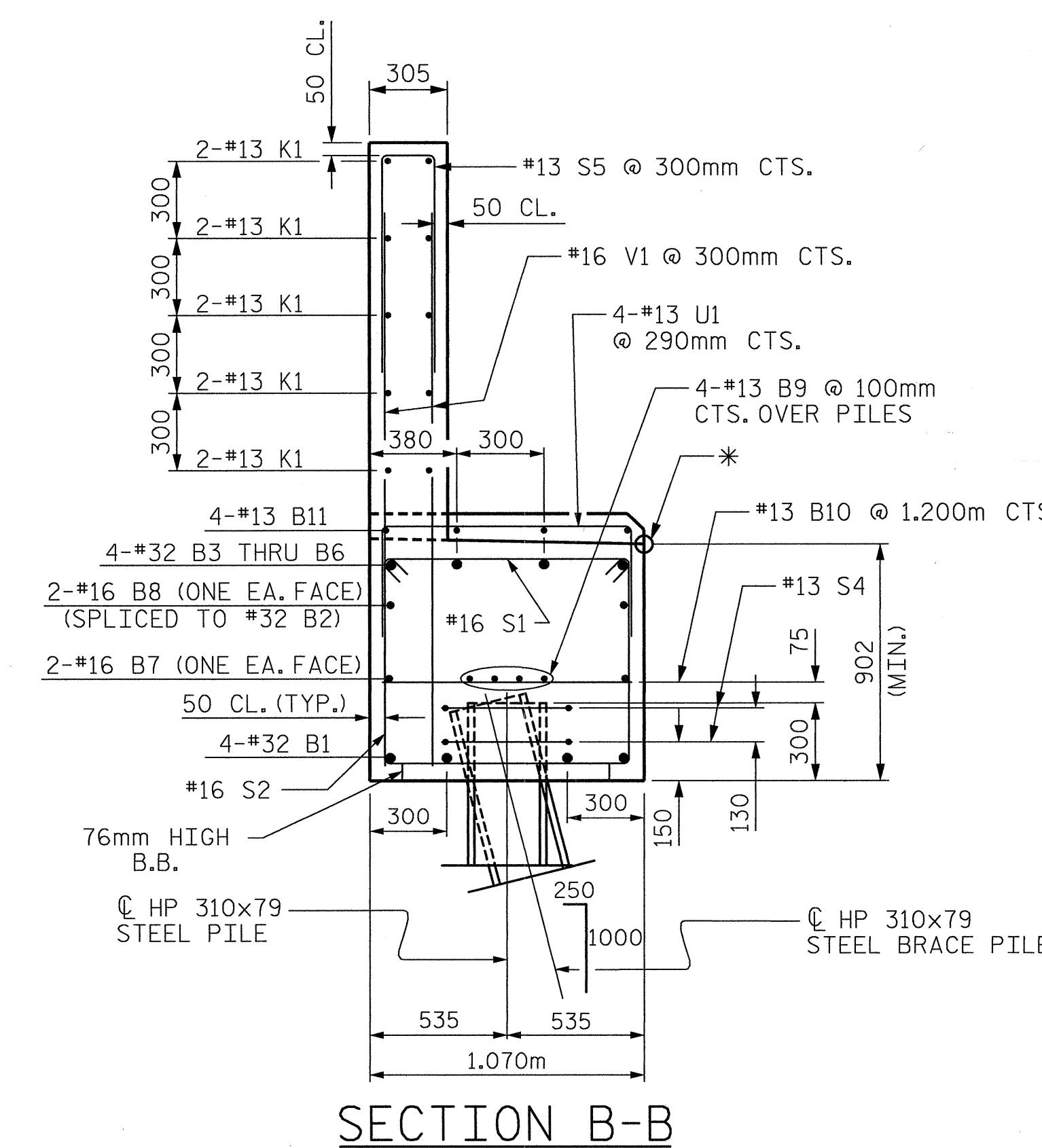
CLASS A CONCRETE
 POUR #1 CAP & LOWER PORTION OF WING CU. METERS 18.2
 POUR #2 BACKWALL & UPPER PORTION OF WING CU. METERS 11.8
 CLASS A CONCRETE CU. METERS 30.0

HP 310x79 STEEL PILES NO. 8 METERS 136.0



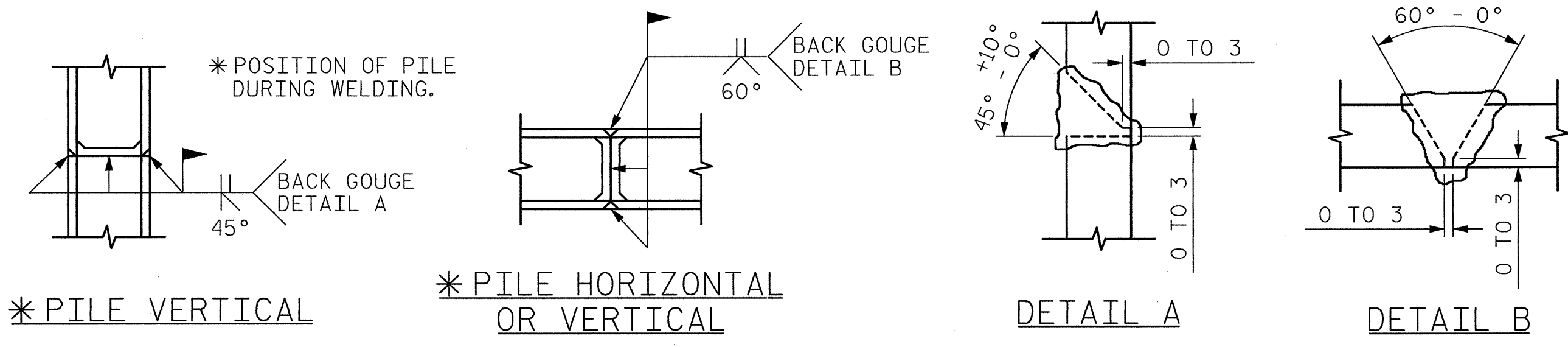
SECTION A-A

*ELEVATIONS BETWEEN BRIDGE SEAT BUILD-UPS ARE TAKEN AT THIS POINT.



SECTION B-B

*ELEVATIONS BETWEEN BRIDGE SEAT BUILD-UPS ARE TAKEN AT THIS POINT.



*PILE VERTICAL

*PILE HORIZONTAL OR VERTICAL

DETAIL A

DETAIL B

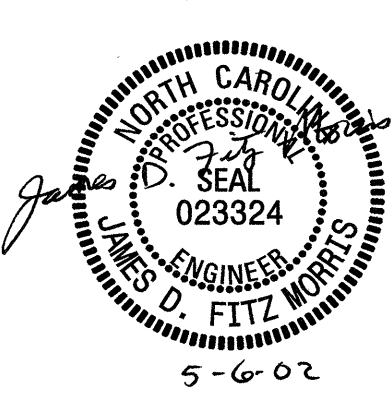
PILE SPLICE DETAILS

PROJECT NO. **R-2552B**

JOHNSTON COUNTY

STATION: **97+46.378-L-RT POC**

SHEET 3 OF 3



CTE ENGINEERS
 CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.
 13325 SOUTH POINT BOULEVARD, SUITE 400
 CHARLOTTE, NORTH CAROLINA 28273-5820
 (704) 583-0902

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
END BENT 2

DRAWN BY : MSB DATE : 05/01/02
 CHECKED BY : JDF DATE : 05/01/02

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

TOTAL SHEETS 43