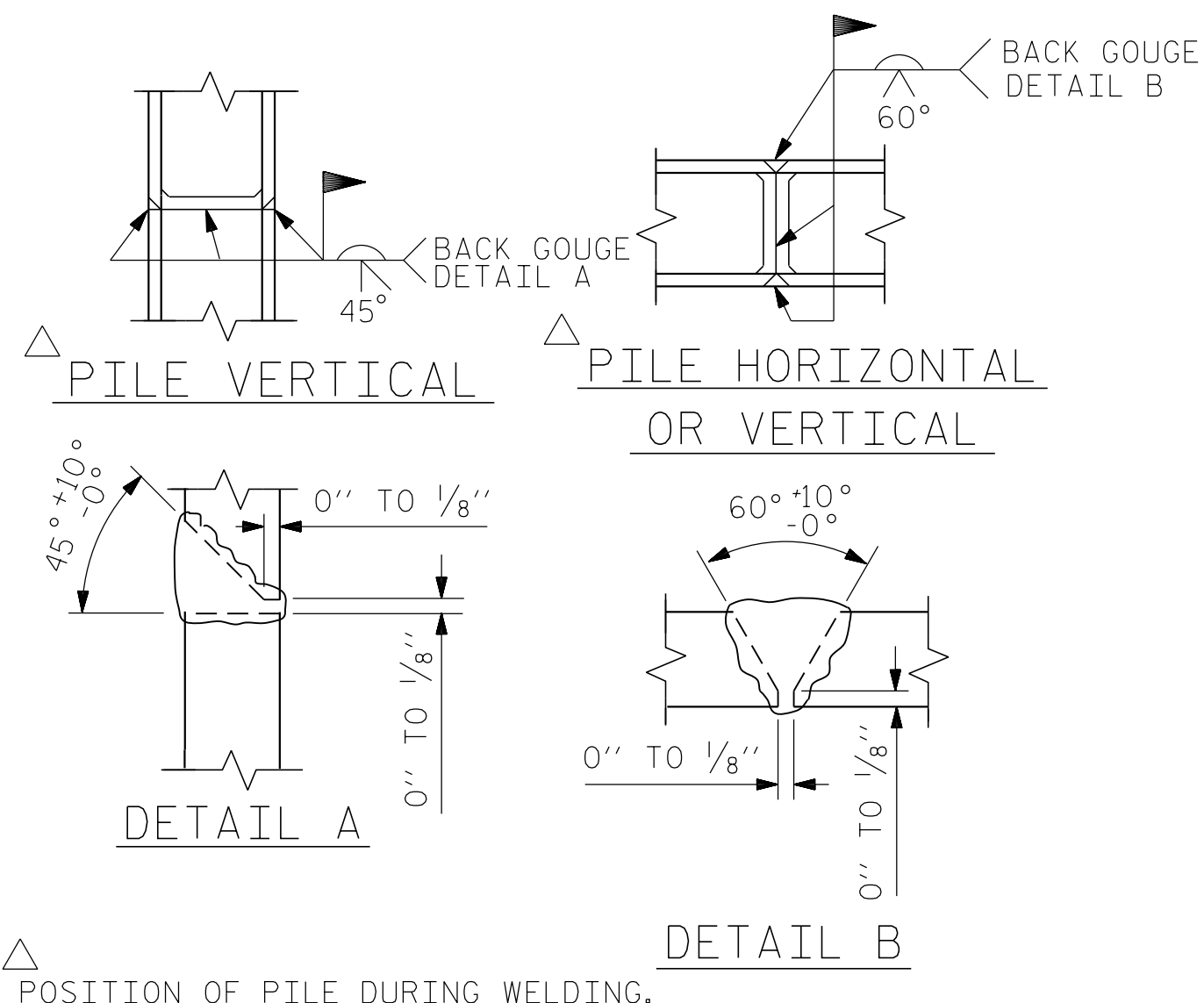


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

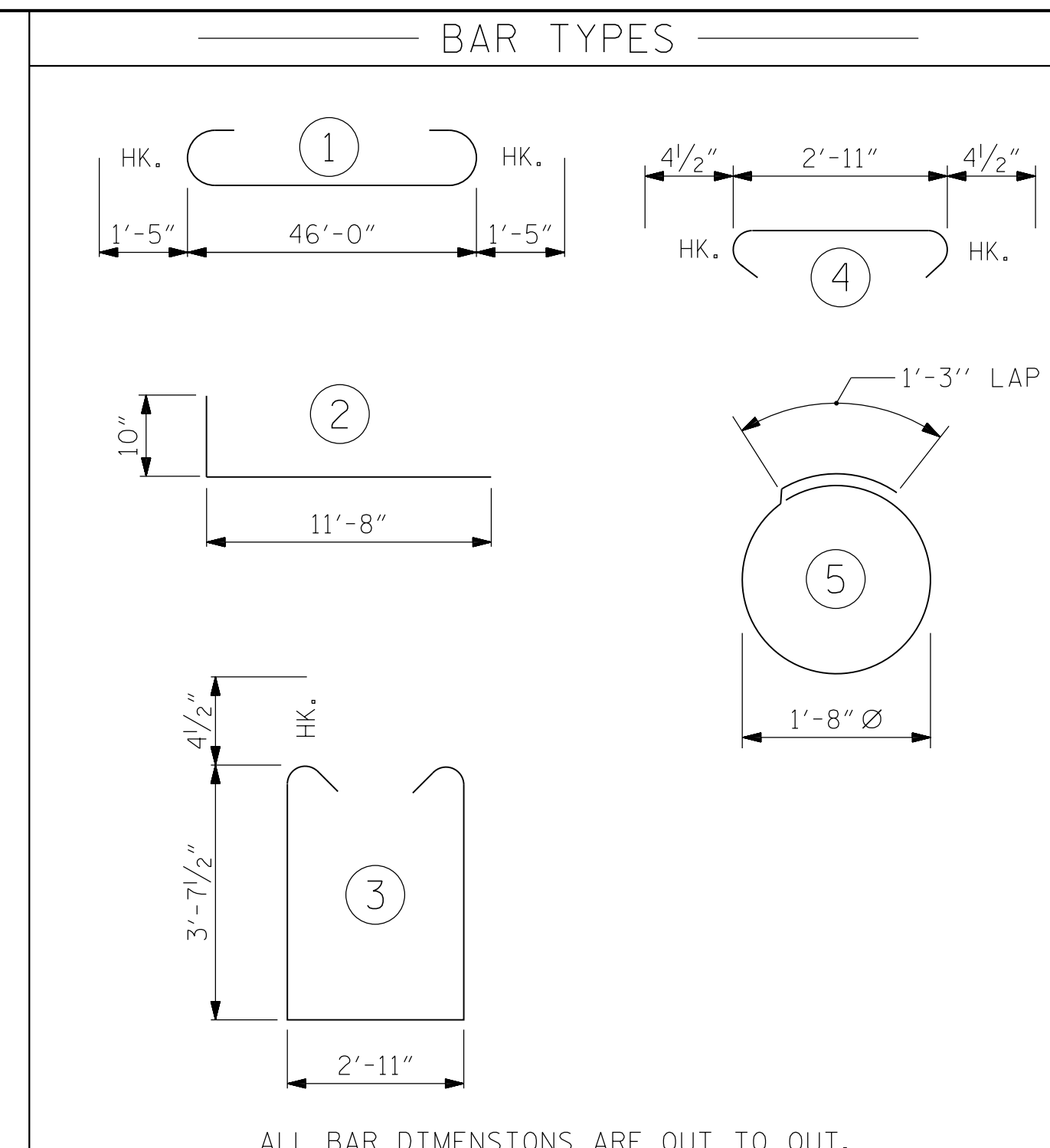
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

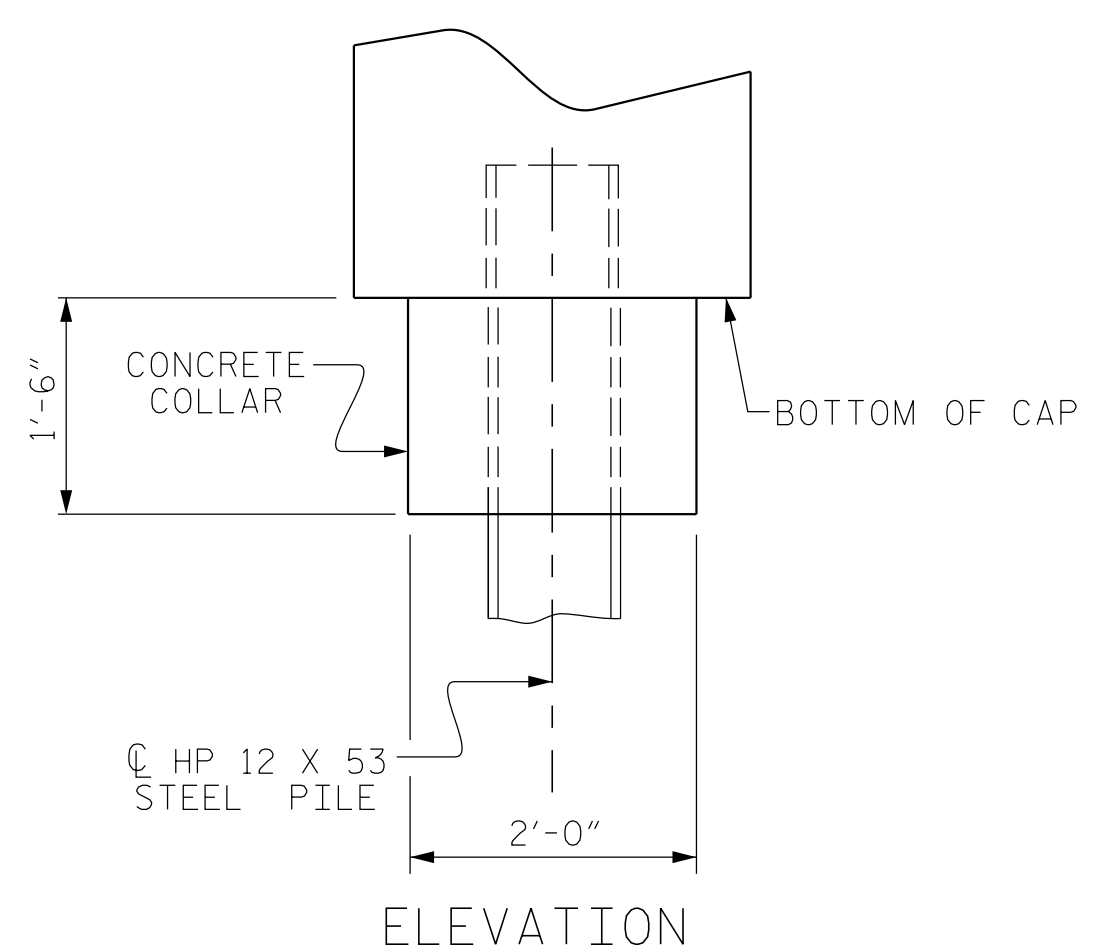
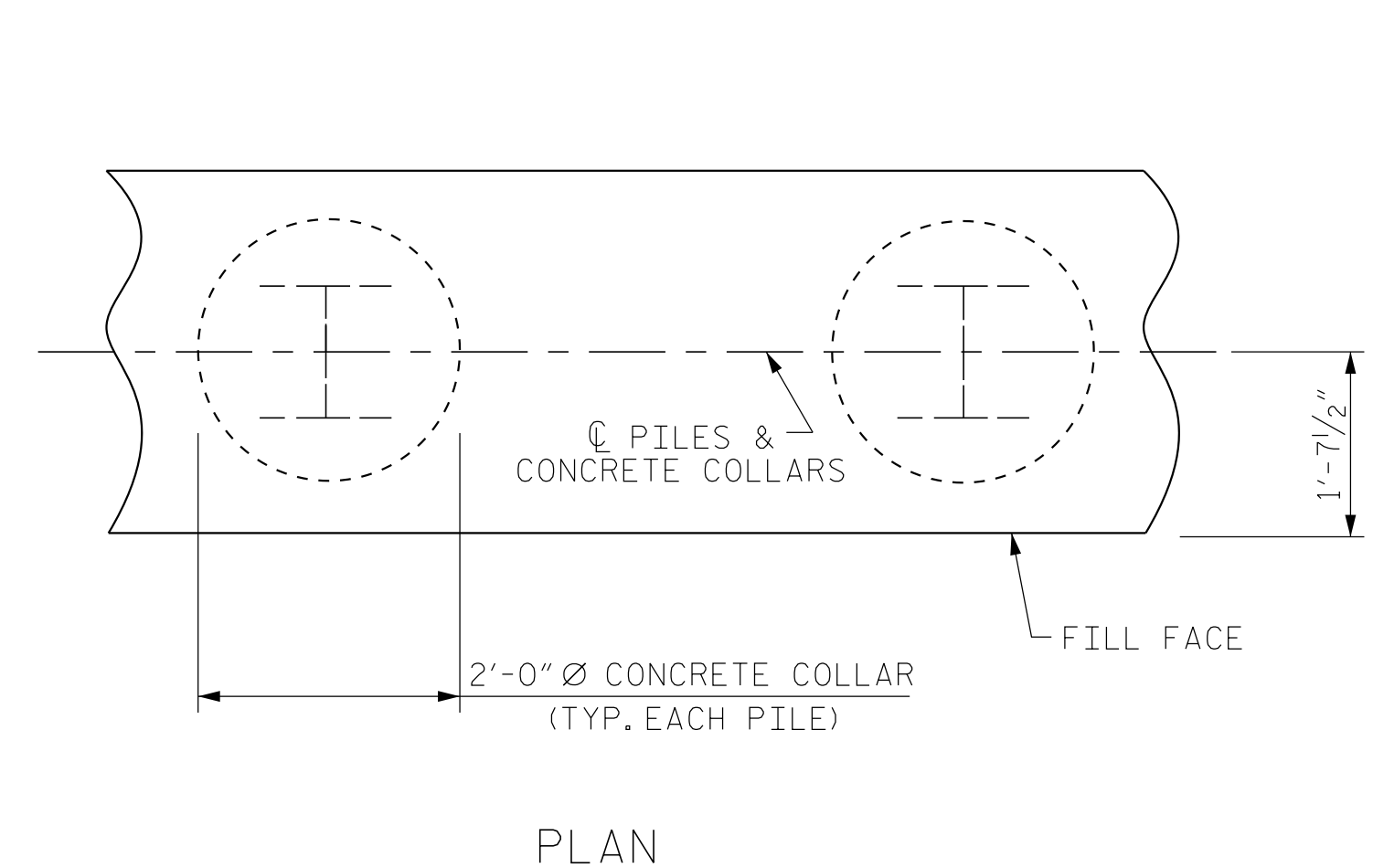


PILE SPLICE DETAILS

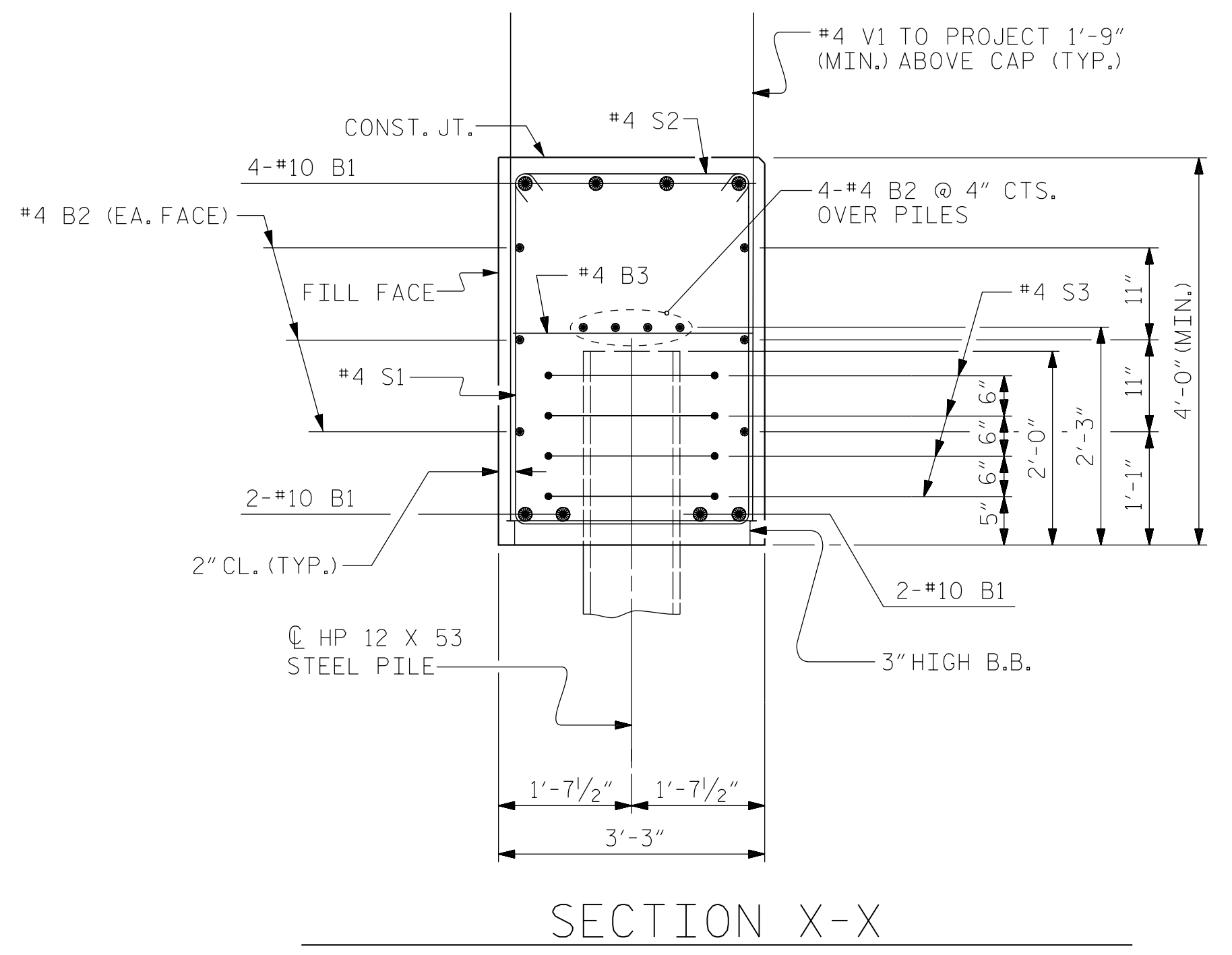


END BENT No. 1 HP 12 X 53 STEEL PILES NO: 18 LIN. FT.= 360	END BENT No. 2 HP 12 X 53 STEEL PILES NO: 18 LIN. FT.= 475
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BILL OF MATERIAL FOR ONE END BENT					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	16	#10		48'-10"	3376
B2	40	#4	STR	24'-4"	651
B3	24	#4	STR	2'-11"	47
H1	32	#5		12'-6"	418
H2	32	#7	STR	10'-0"	655
S1	84	#4		10'-11"	613
S2	84	#4		3'-8"	206
S3	72	#4		6'-6"	313
V1	120	#4	STR	6'-0"	481
V2	68	#5	STR	9'-5"	669
REINFORCING STEEL (FOR ONE END BENT)					7,429 LBS.
CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT)					
POUR #1 CAP, LOWER PART OF WINGS & COLLARS					57.3 C.Y.
TOTAL CLASS A CONCRETE					57.3 C.Y.



CORROSION PROTECTION FOR STEEL PILES DETAIL
(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.")

PROJECT NO. R-5605
TRANSYLVANIA COUNTY
STATION: 36+73.00 -L-
SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
END BENT No. 1 & 2
DETAILS

ASSEMBLED BY : PFC	DATE : 8/15
CHECKED BY : CMT	DATE : 8/15
DRAWN BY : WJH 12/11	REV. 8/14 MAA/TMG
CHECKED BY : AAC 12/11	

*****SYSTEM*****
*****DCN*****
*****USERNAME*****

Prepared in the Office of:
Mattern & Craig
CONSULTING ENGINEERS & SURVEYORS
FIRM LICENSE NO. C-1154
12 BROAD STREET
ASHEVILLE, NORTH CAROLINA 28801
(828) 254-2201 - FAX (828) 254-4582

Seal of Steven A. Campbell, Engineer, License No. 14309, State of North Carolina.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			51