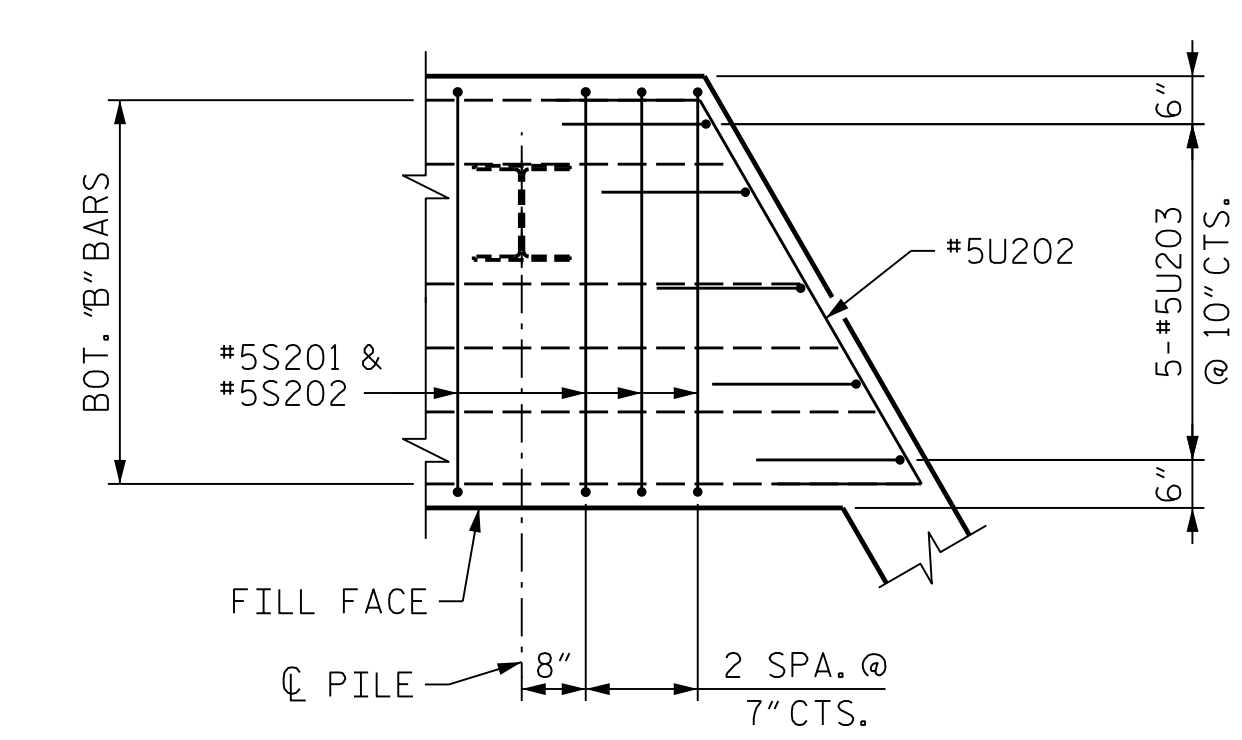
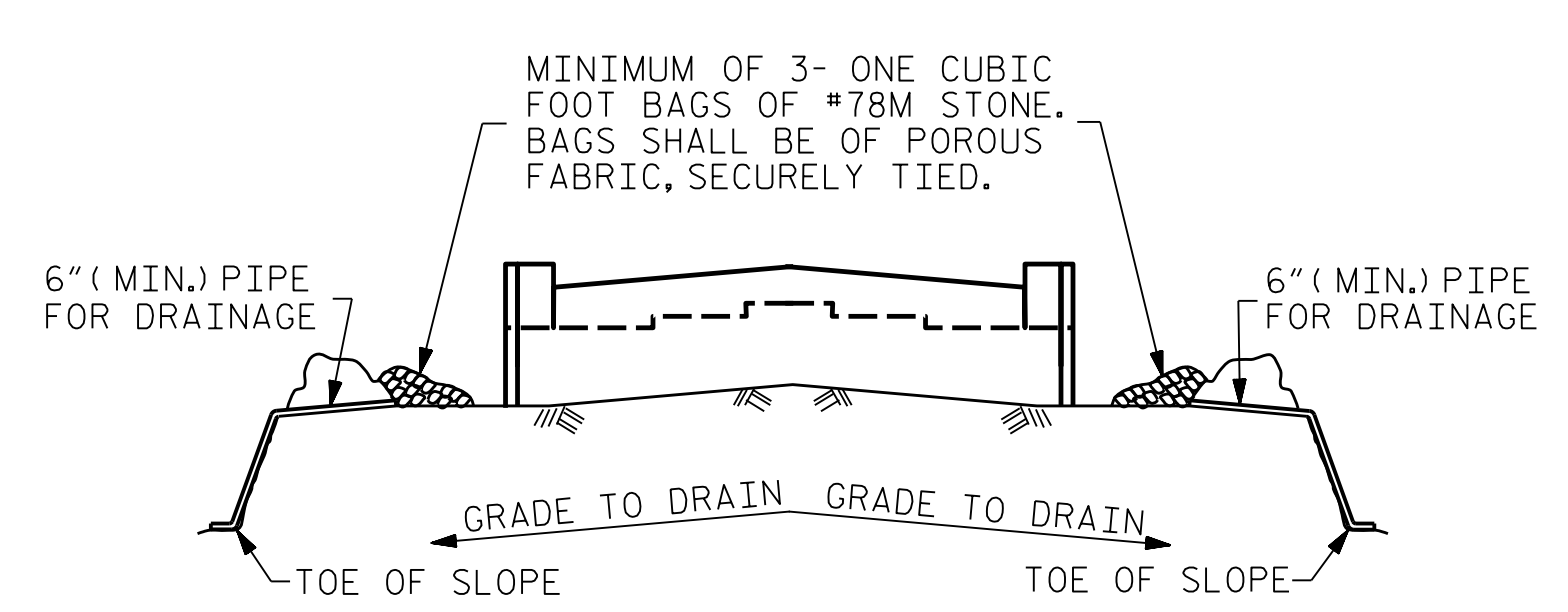


DETAIL "X"
("K" BARS NOT SHOWN FOR CLARITY)



DETAIL "Y"
("K" BARS NOT SHOWN FOR CLARITY)



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

6" (MIN.) PIPE FOR DRAINAGE

6" (MIN.) PIPE FOR DRAINAGE

GRADE TO DRAIN

GRADE TO DRAIN

TOE OF SLOPE

TOE OF SLOPE

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.

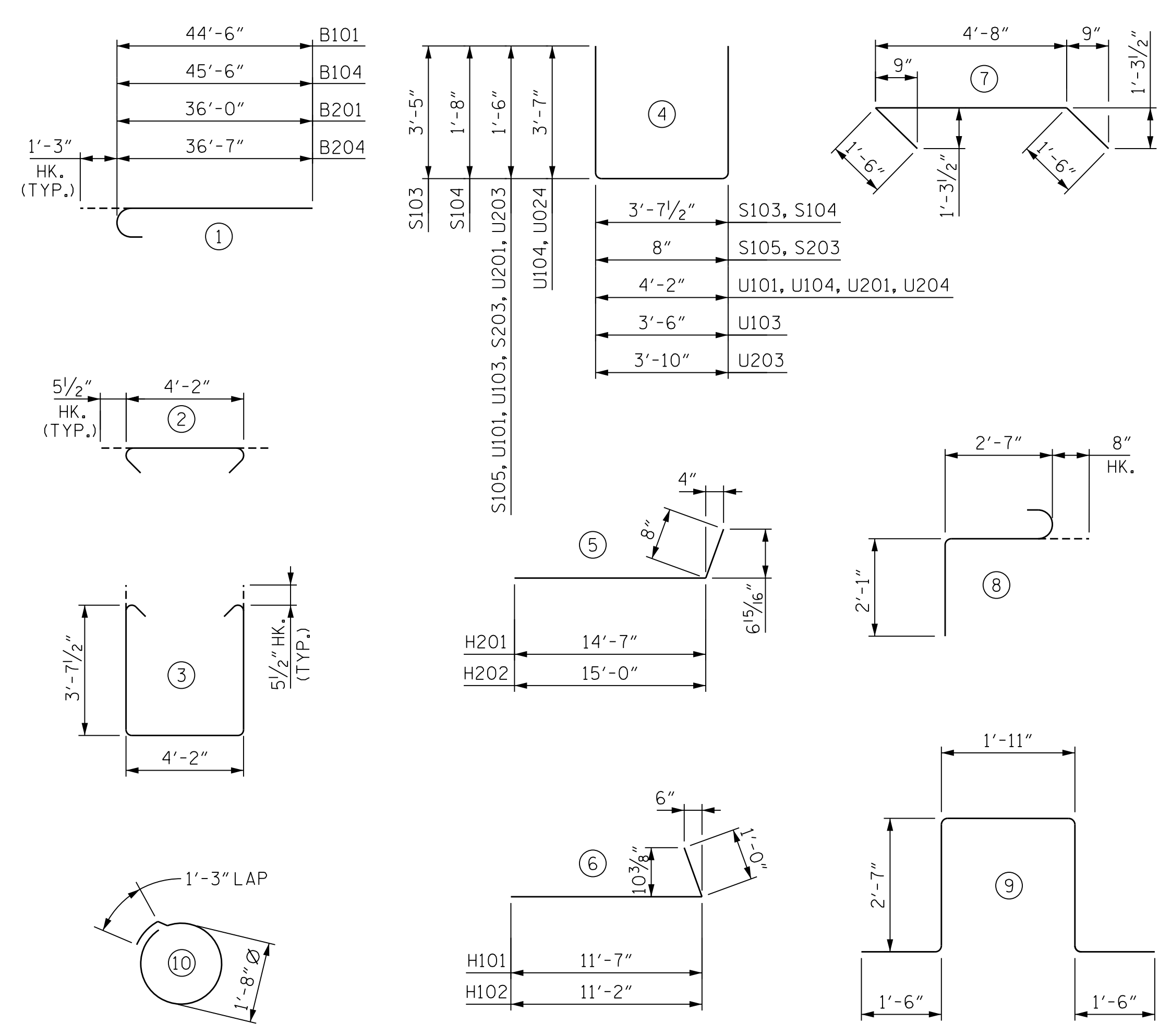
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

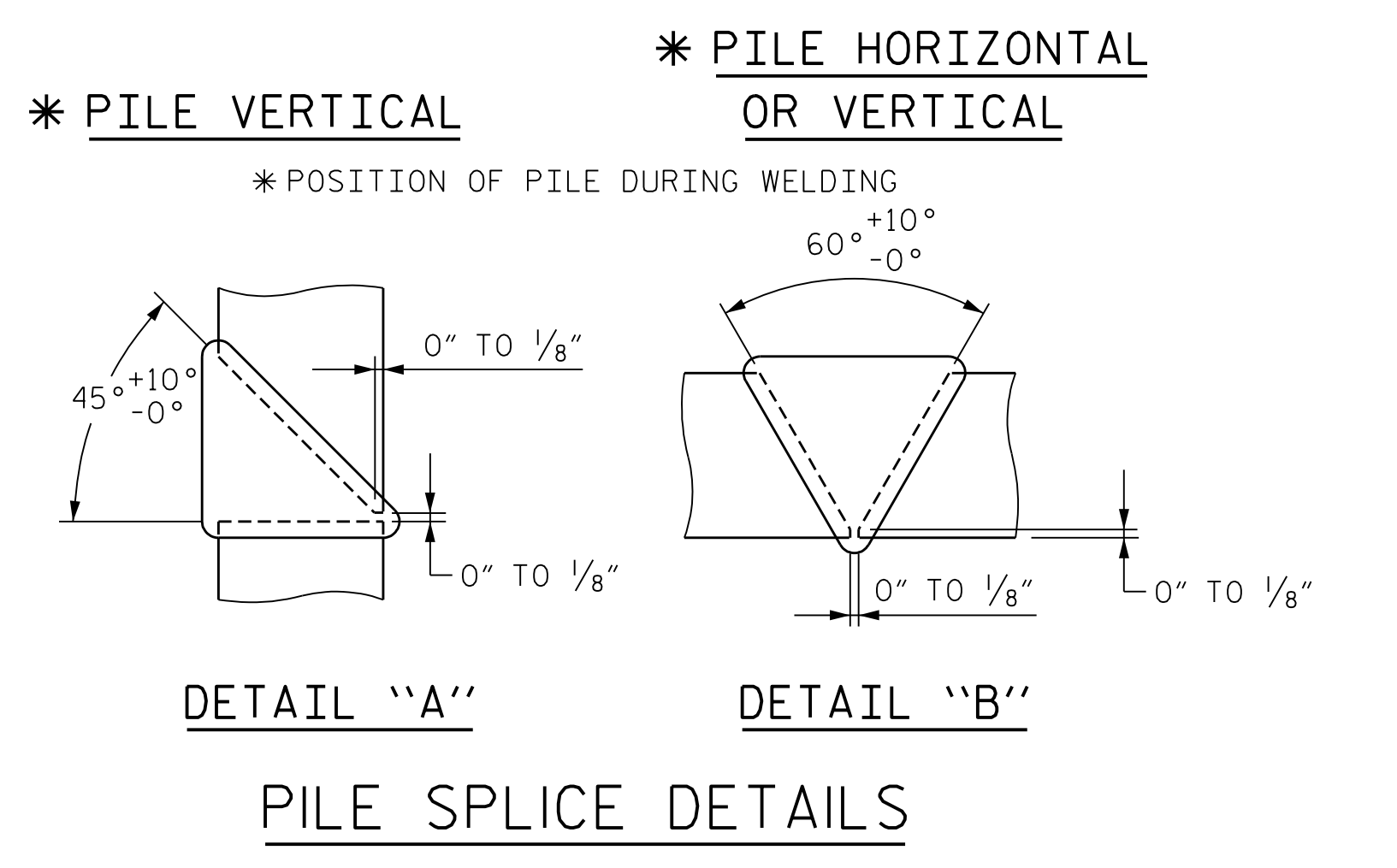
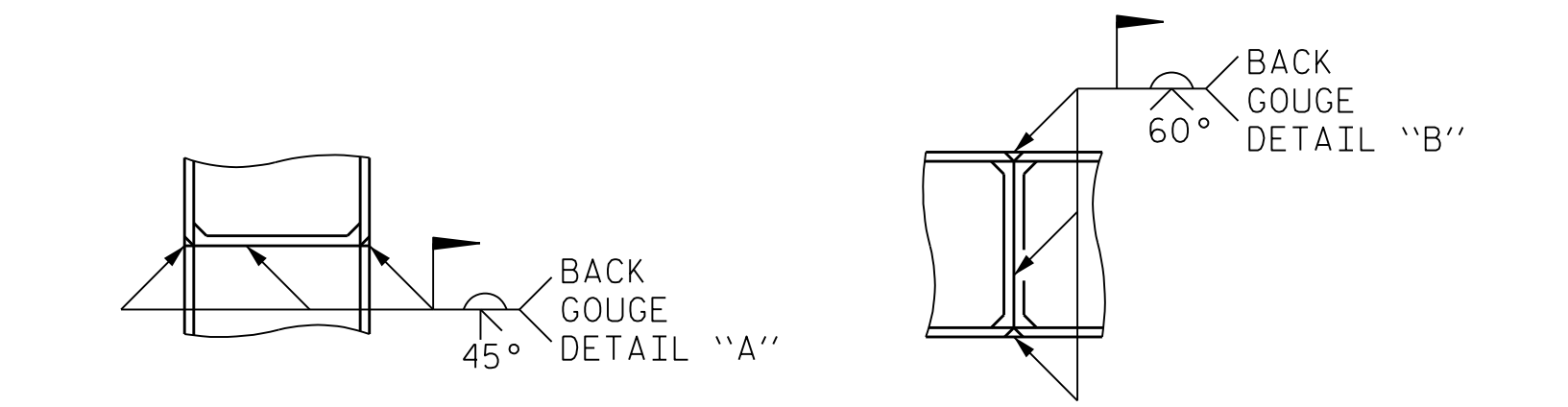
TEMPORARY DRAINAGE AT END BENT

DES BY: K. DICKENS	DATE: 06/21	DWG BY: B. PETERSON	DATE: 06/21
DES CHK: L. GUALTIERI	DATE: 06/21	CHK BY: K. DICKENS	DATE: 07/21

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT



PILE SPlice DETAILS

BILL OF MATERIAL - END BENT 1

STAGE 1						STAGE 2					
BAR	QTY	SIZE	TYPE	LENGTH	WEIGHT	BAR	QTY	SIZE	TYPE	LENGTH	WEIGHT
B101	6	#9	1	45'-9"	934	B201	6	#9	1	37'-3"	760
B102	6	#9	STR	44'-6"	908	B202	6	#9	STR	36'-0"	735
B103	24	#5	STR	43'-3"	1083	B203	24	#5	STR	35'-5"	887
B104	6	#9	1	46'-9"	954	B204	6	#9	1	37'-10"	772
B105	6	#9	STR	45'-6"	929	B205	6	#9	STR	36'-7"	747
B106	20	#4	STR	4'-2"	56	B206	17	#4	STR	4'-2"	48
B107	12	#4	STR	29'-3"	235	B207	8	#4	STR	35'-2"	188
B108	30	#4	STR	3'-2"	64	B208	30	#4	STR	3'-2"	64
B109	6	#5	STR	41'-9"	308	B209	6	#5	STR	26'-11"	169
						B210	6	#5	STR	40'-8"	255
H101	24	#6	6	12'-7"	454	H201	14	#4	5	15'-3"	143
H102	24	#6	6	12'-2"	439	H202	14	#4	5	15'-8"	147
K101	42	#4	STR	29'-3"	821						
K102	4	#4	STR	3'-0"	9	K201	28	#4	STR	35'-2"	658
K103	8	#4	STR	2'-0"	11	K202	4	#4	STR	3'-0"	9
S101	99	#5	2	5'-1"	525	S201	85	#5	2	5'-1"	451
S102	99	#5	3	12'-4"	1274	S202	85	#5	3	12'-4"	1094
S103	1	#5	4	10'-6"	11	S203	65	#4	4	3'-8"	160
S104	1	#5	4	7'-0"	8	S204	56	#4	10	6'-6"	244
S105	74	#4	4	3'-8"	182	S205	3	#6	9	10'-1"	46
S106	68	#4	10	6'-6"	296	S206	3	#6	8	5'-4"	25
U101	60	#4	4	7'-2"	288	U201	74	#4	4	7'-2"	355
U102	4	#5	7	7'-8"	32	U202	5	#5	7	7'-8"	40
U103	5	#5	4	6'-6"	34	U203	5	#5	4	6'-10"	36
U104	17	#5	4	11'-4"	201	U204	14	#5	4	11'-4"	166
V101	148	#5	STR	9'-9"	1506	V201	130	#5	STR	10'-2"	1379
V102	32	#5	STR	11'-6"	384	V202	38	#5	STR	11'-11"	473

REINFORCING STEEL	LBS.	11,946	REINFORCING STEEL	LBS.	10,051
CLASS A CONCRETE			CLASS A CONCRETE		
POUR #1 (COLLARS, CAP, LOWER PART OF WINGS)	CU. YDS.	63.5	POUR #1 (COLLARS, CAP, LOWER PART OF WINGS)	CU. YDS.	56.5
POUR #2 (BACKWALL & UPPER PART OF WINGS)	CU. YDS.	23.2	POUR #2 (BACKWALL & UPPER PART OF WINGS)	CU. YDS.	21.2
TOTAL	CU. YDS.	86.7	TOTAL	CU. YDS.	77.7
HP12x53 STEEL PILES	NO. 18	540	HP12x53 STEEL PILES	NO. 14	420
PILE DRIVING EQUIPMENT SETUP FOR HP12x53 STEEL PILES	EA.	18	PILE DRIVING EQUIPMENT SETUP FOR HP12x53 STEEL PILES	EA.	14
STEEL PILE POINTS	EA.	18	STEEL PILE POINTS	EA.	14

PROJECT NO. B-3186/B-5898

HAYWOOD COUNTY

STATION: 42+71.13 -L-

SHEET 6 OF 6



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
END BENT 1
BILL OF MATERIALS**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.	
1	--	--	3	--	--	TOTAL SHEETS 59	
2	--	--	4	--	--		

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

1/25/2022

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PLOT DRIVER: NCDOT STRUCTURES DEFAULT PLOTTER.plt
 USER: PPETERSO
 DATE: 1/25/2022
 TIME: 8:32:44 AM
 FILE: ... \401.210.B5898B3186.SMU.E1.043_430168.dgn