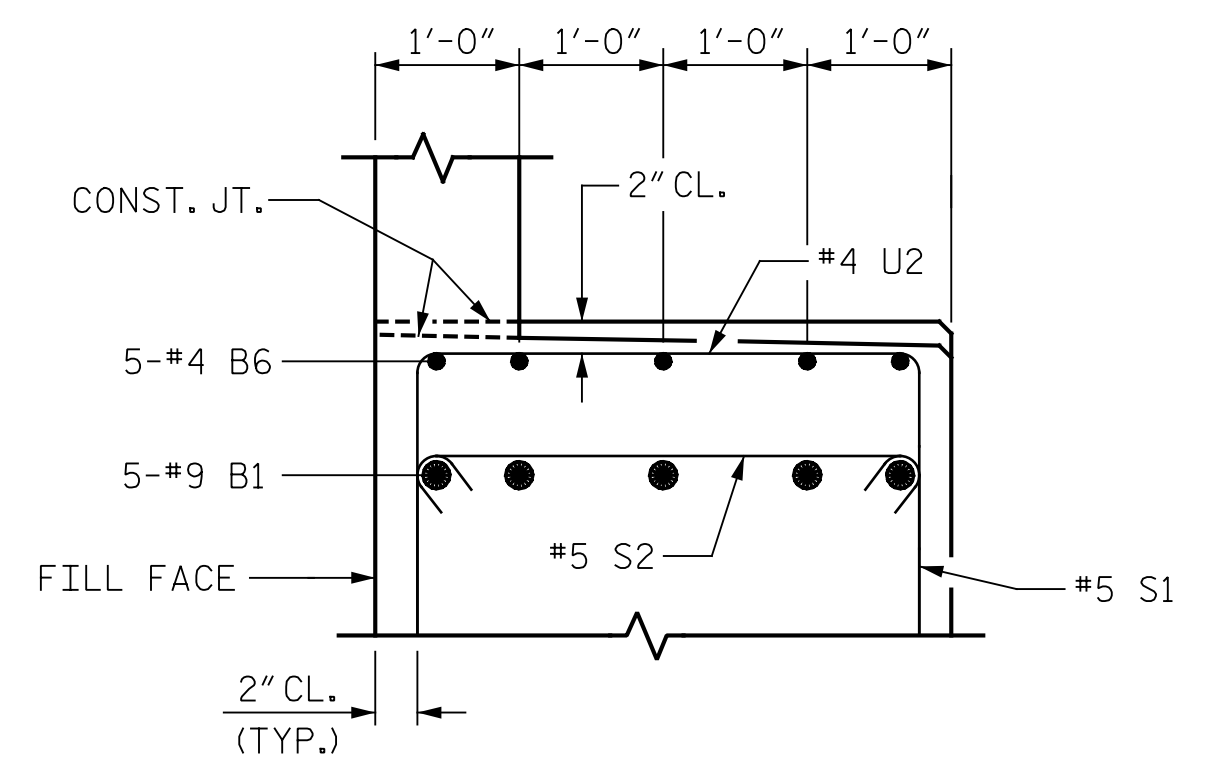


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

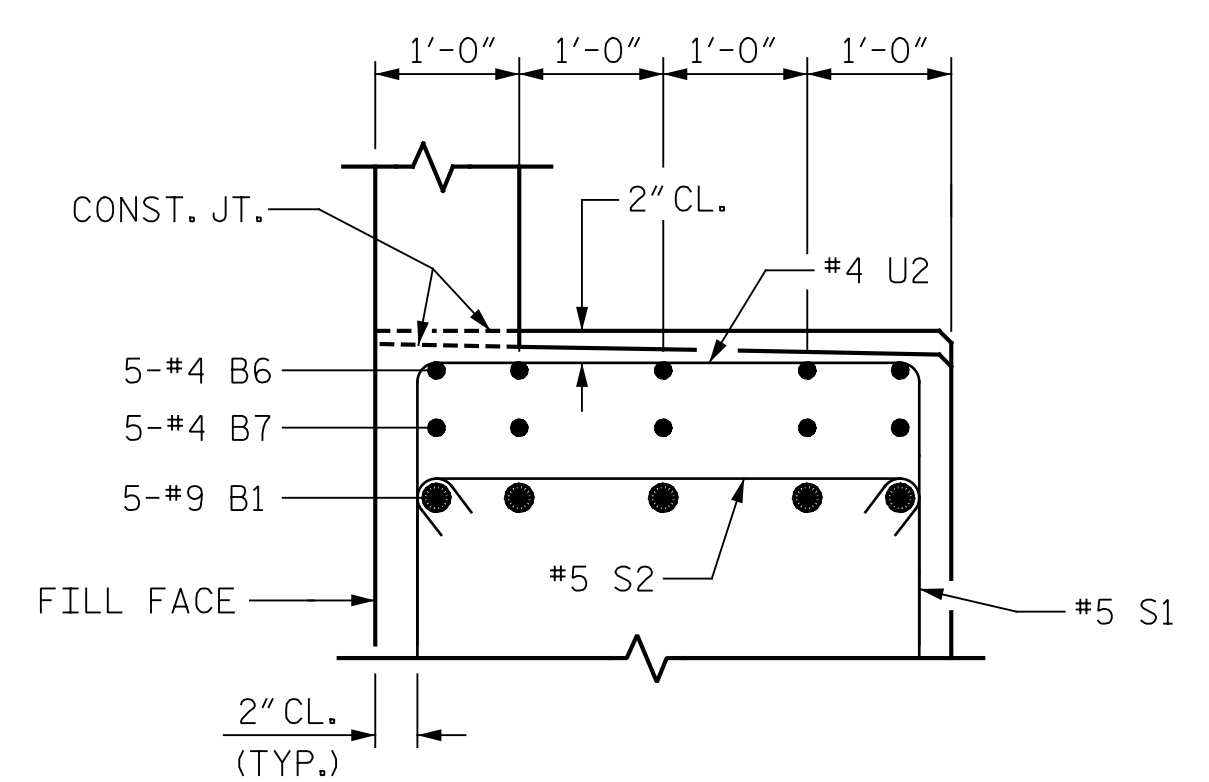
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

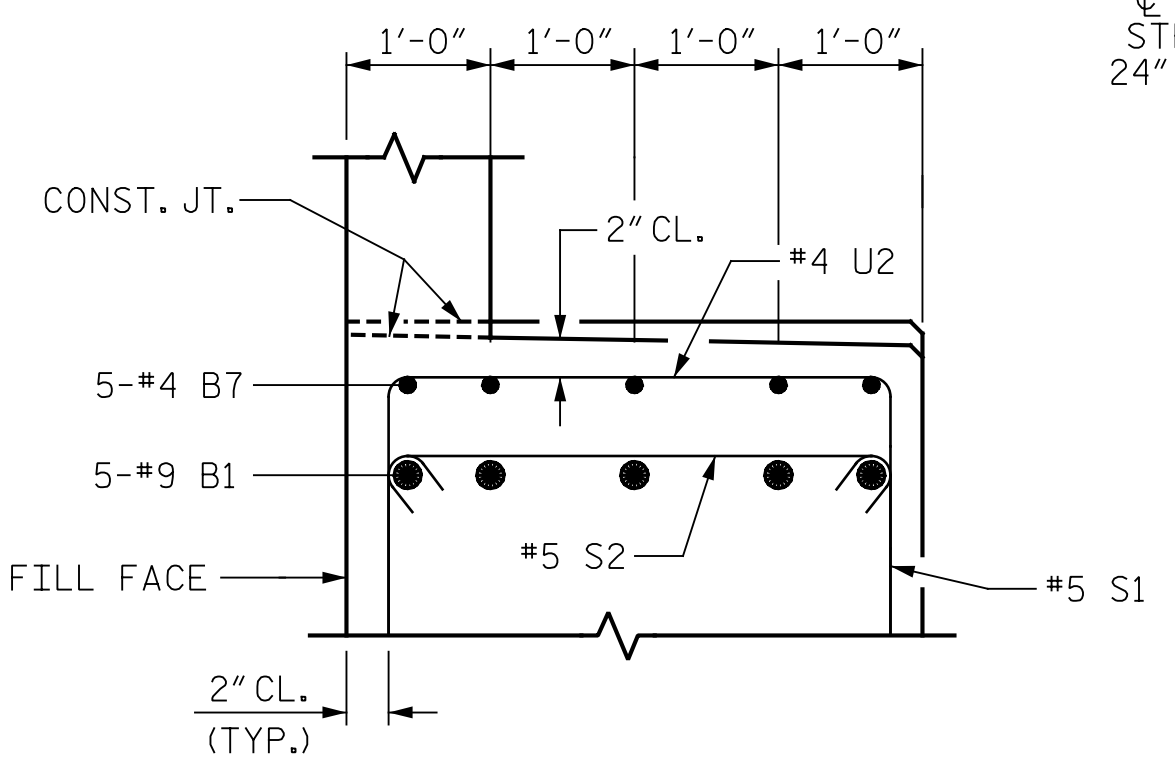


**PARTIAL SECTION B-B**

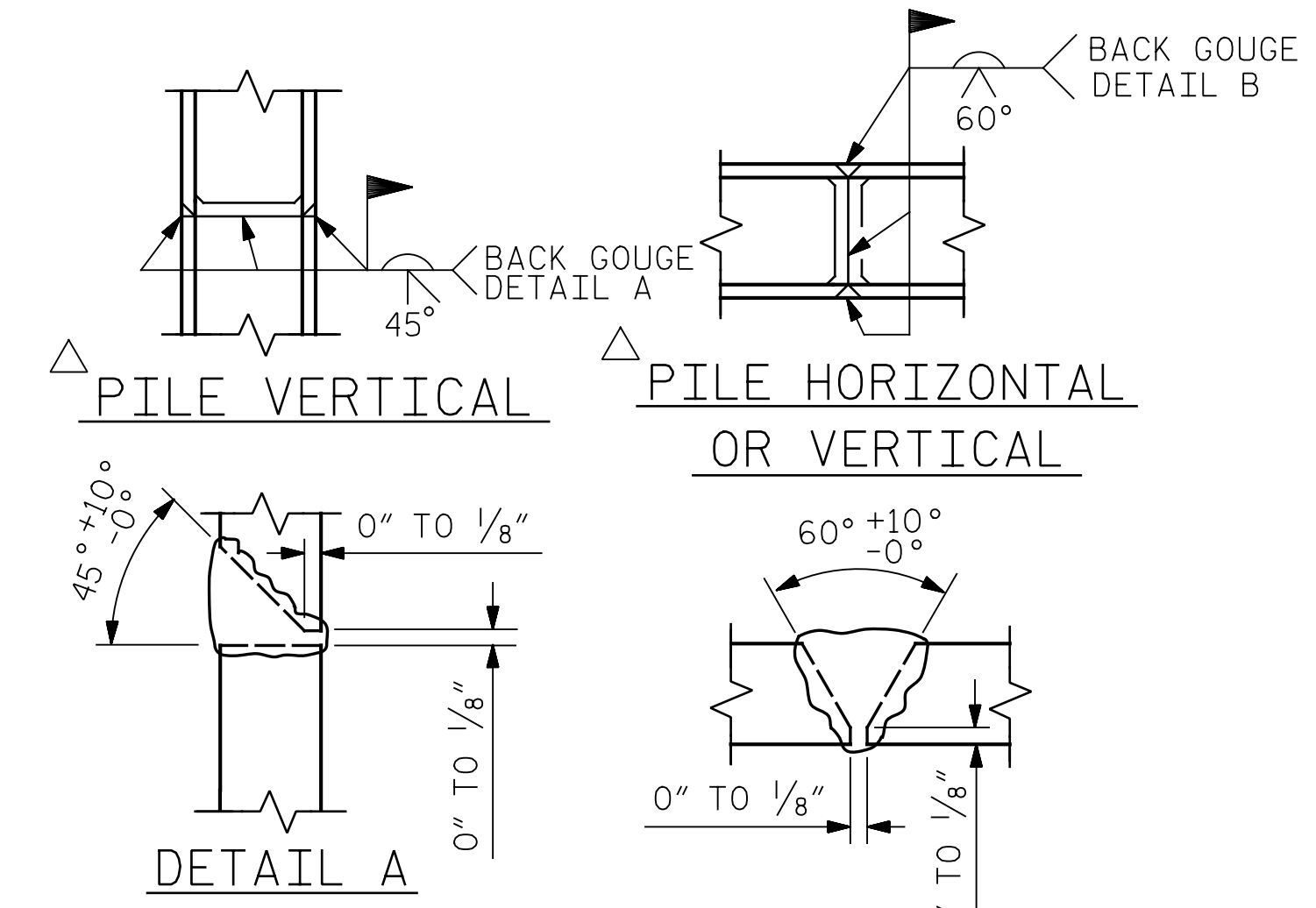


**PARTIAL SECTION C-C**

(TYP. @ BRG. 1, 2, & 3)

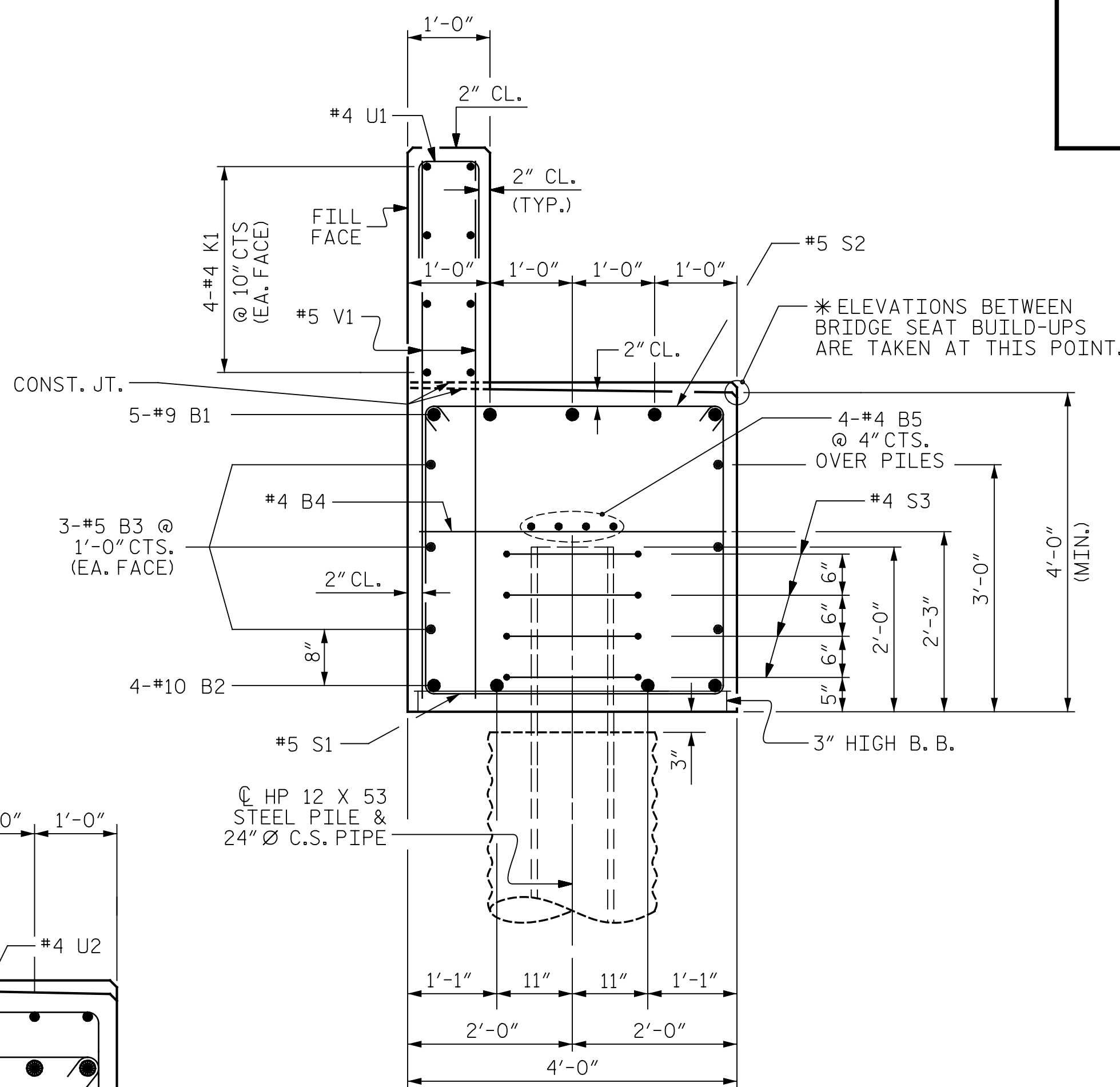


**PARTIAL SECTION D-D**

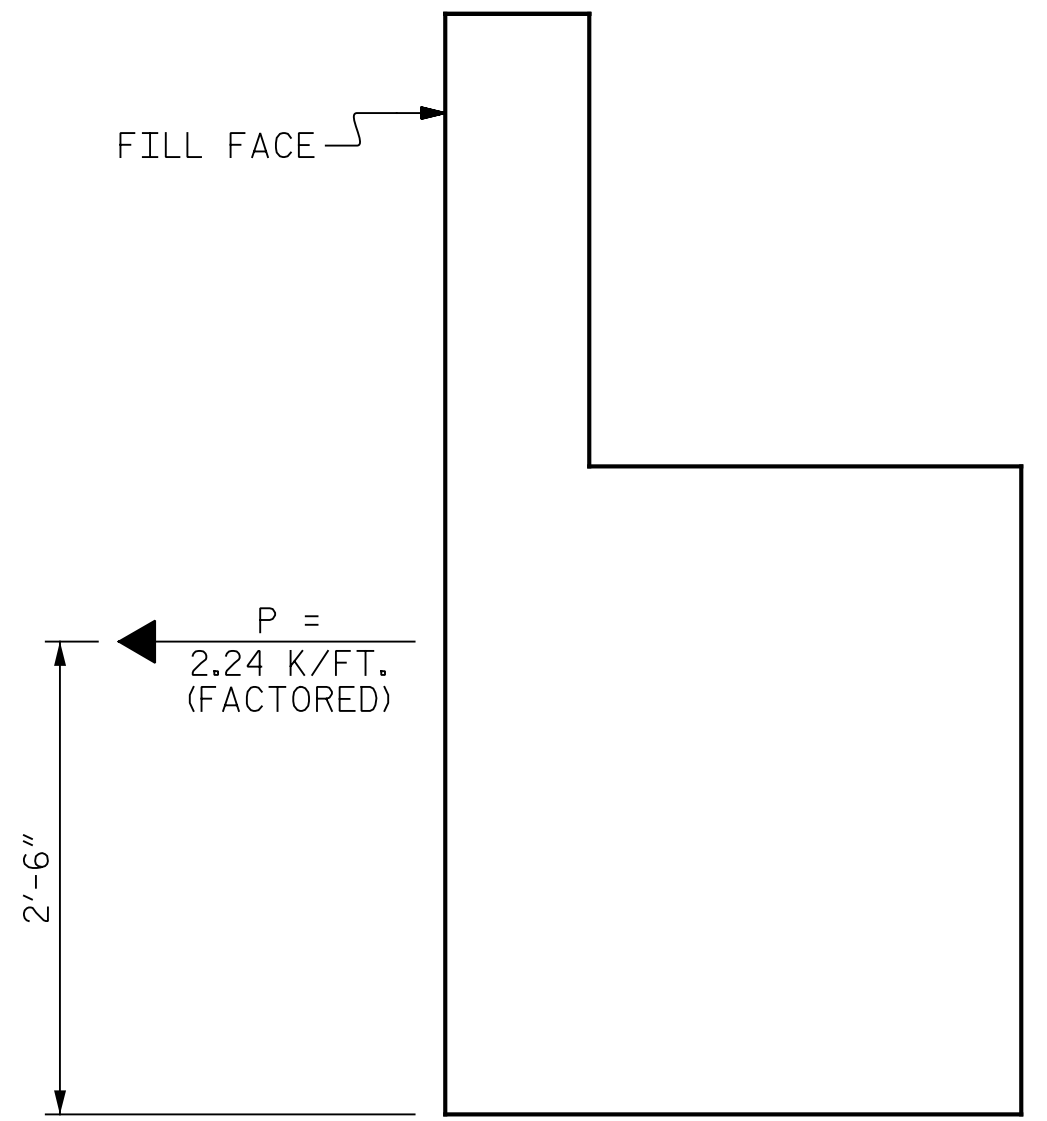
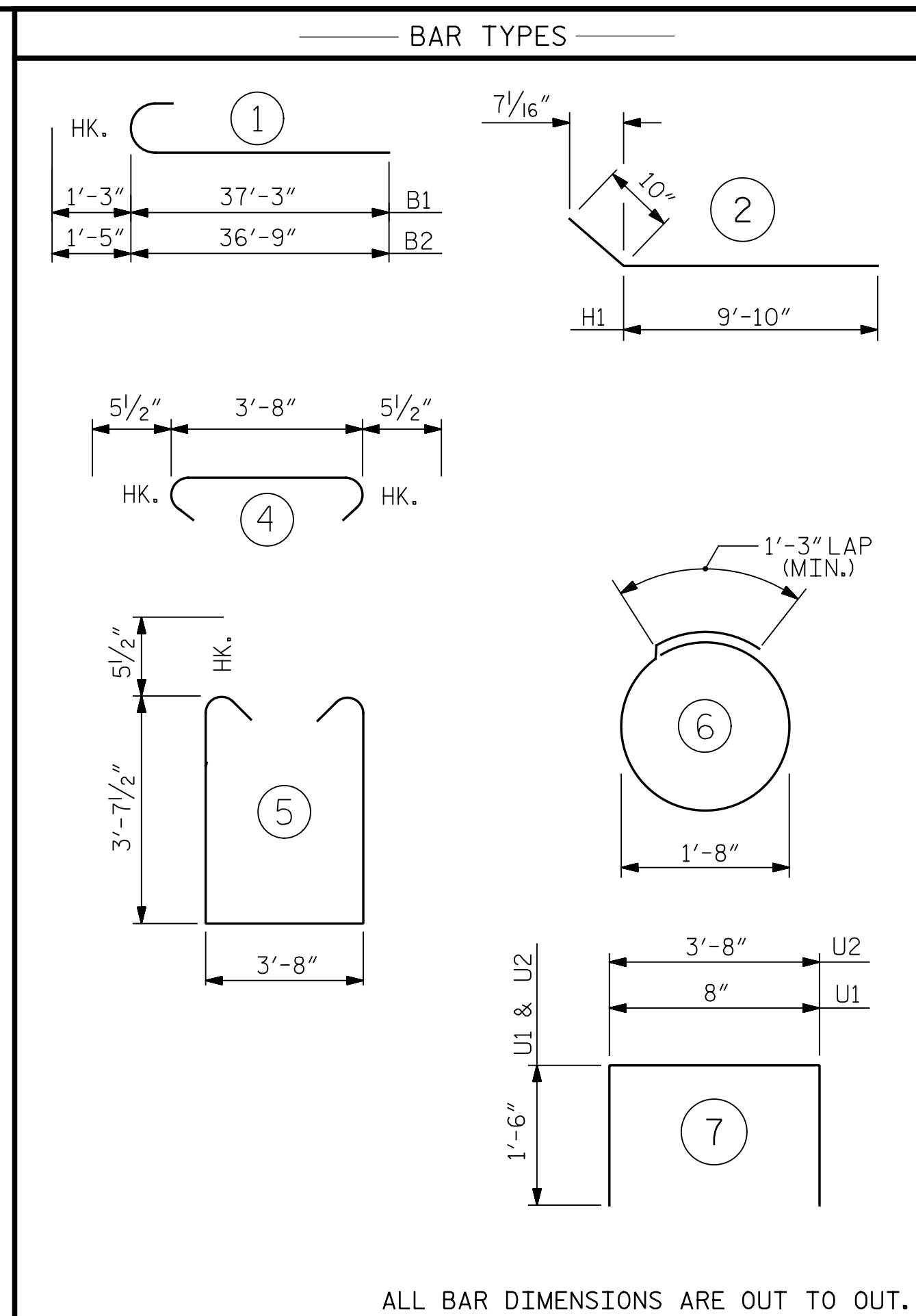


POSITION OF PILE DURING WELDING.

**PILE SPLICE DETAILS**



**SECTION A-A**

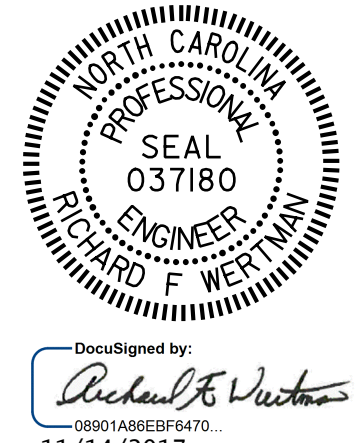


**TIE BACK DETAILS**

(DETAIL SHOWING TIE BACK RESTRAINT FOR END BENT)

BILL OF MATERIAL					
END BENT #1					
BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
B1	10	#9	1	38'-6"	1309
B2	8	#10	1	38'-2"	1314
B3	12	#5	STR	34'-4"	430
B4	16	#4	STR	3'-8"	40
B5	12	#4	STR	23'-7"	189
B6	25	#4	STR	2'-2"	36
B7	10	#4	STR	20'-4"	136
H1	26	#5	2	10'-8"	290
K1	24	#4	STR	23'-7"	378
K2	6	#4	STR	4'-6"	18
K3	6	#4	STR	4'-4"	18
S1	78	#5	5	11'-10"	963
S2	78	#5	4	4'-7"	373
S3	32	#4	6	6'-6"	139
U1	56	#4	7	3'-8"	138
U2	32	#4	7	6'-8"	143
V1	112	#5	STR	6'-7"	769
V2	12	#5	STR	8'-3"	104
V3	30	#5	STR	8'-6"	266
REINFORCING STEEL					7053 LBS.
CLASS A CONCRETE					
POUR #1 (CAP & LOWER WINGS)					41.7 C.Y.
POUR #2 (UPPER WINGS & BACKWALL)					9.6 C.Y.
TOTAL					51.3 C.Y.
HP 12 X 53 STEEL PILES					
No. = 8					576 LIN. FT.
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES					8 EACH
PILE REDRIVES					8 EACH

PROJECT NO. 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 106+59.74 -L1-  
 14+51.19 -Y-  
 SHEET 3 OF 3



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SUBSTRUCTURE  
 END BENT #1

DRAWN BY : I.M. FORD DATE : 10/16/17  
 CHECKED BY : R.F. WERTMAN DATE : 10/18/17  
 DESIGN ENGINEER OF RECORD : R.F. WERTMAN DATE : 11/06/17

PLANS PREPARED BY:  
**Gannett Fleming**  
 Excellence Delivered As Promised

2610 Wycliff Road  
 Suite 102  
 Raleigh NC 27607-3073  
 (919) 420-7660  
 NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SHEET NO. S02-18  
 TOTAL SHEETS 24