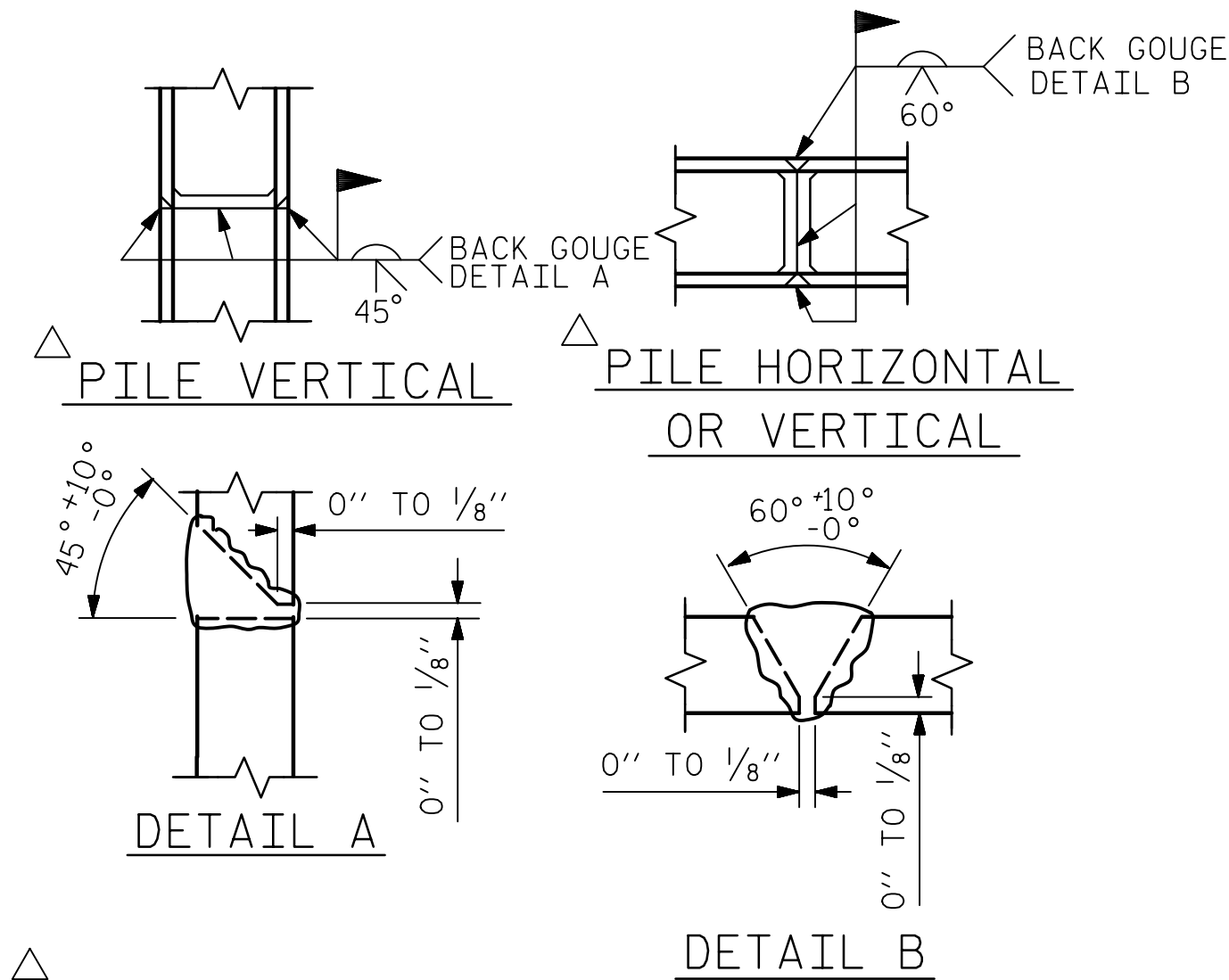


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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 DETEIORATED 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.

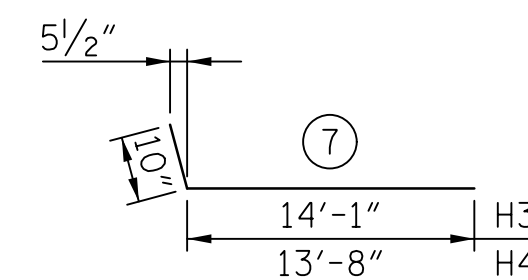
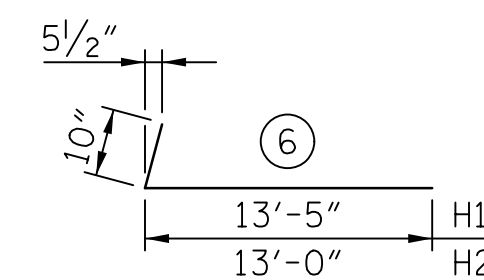
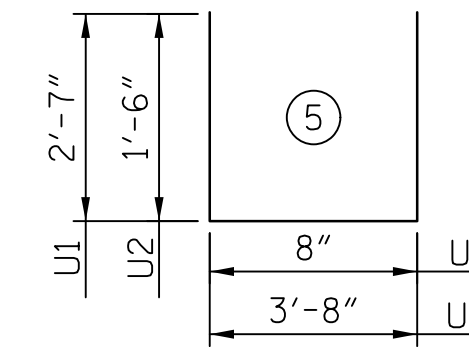
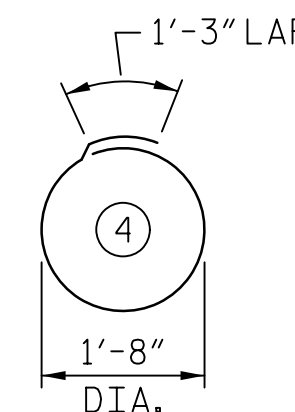
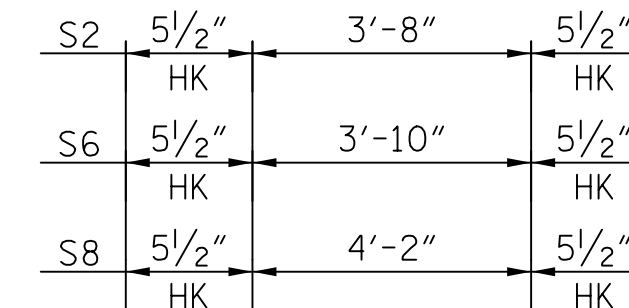
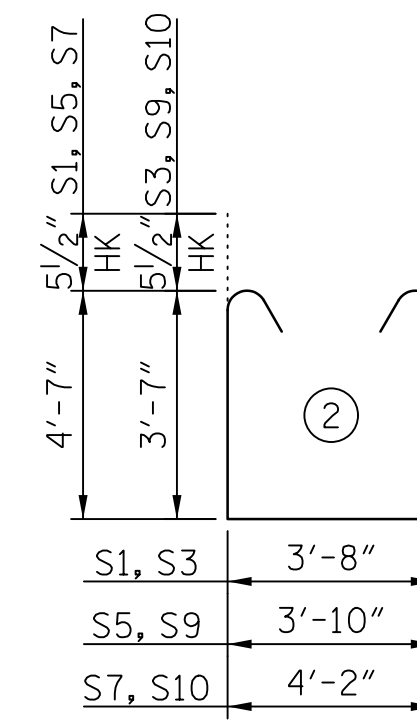
TEMPORARY DRAINAGE AT END BENT



PILE SPLICE DETAILS

BAR TYPE

1'-3"	54'-3"	B1
HK		
1'-3"	55'-7"	B2
HK		
1'-3"	55'-0"	B3
HK		
1'-3"	56'-5"	B4
HK		
1'-3"	56'-4"	B5
HK		
1'-3"	57'-6"	B6
HK		
1'-3"	40'-4"	B13
HK		
1'-3"	39'-11"	B14
HK		
1'-3"	41'-6"	B15
HK		
1'-3"	42'-1"	B16
HK		
1'-3"	42'-6"	B17
HK		
1'-3"	20'-11"	B20
HK		
1'-3"	19'-6"	B21
HK		
1'-3"	20'-2"	B22
HK		
1'-3"	18'-11"	B23
HK		
1'-3"	18'-11"	B24
HK		
1'-3"	17'-6"	B25
HK		
1'-3"	20'-9"	B29
HK		
1'-3"	19'-4"	B30
HK		
1'-3"	19'-9"	B31
HK		
1'-3"	18'-0"	B32
HK		
1'-3"	18'-8"	B33
HK		



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT 1 (STAGE I)

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
B1	1	9	1	55'-6"	189
B2	1	9	1	56'-10"	193
B3	1	9	1	56'-3"	191
B4	1	9	1	57'-8"	196
B5	1	9	1	57'-7"	196
B6	1	9	1	58'-9"	200
B7	12	5	STR	30'-5"	381
B8	8	4	STR	29'-11"	160
B9	15	4	STR	3'-8"	37
B10	2	5	STR	31'-11"	67
B11	3	9	STR	26'-6"	270
B12	2	9	STR	27'-10"	189
B13	1	9	1	41'-2"	140
B14	1	9	1	42'-3"	144
B15	1	9	1	42'-9"	145
B16	1	9	1	43'-4"	147
B17	1	9	1	43'-9"	149
B18	5	4	STR	12'-8"	42
B19	25	4	STR	2'-9"	46
S1	46	5	2	13'-9"	660
S2	61	5	3	4'-7"	292
S3	15	5	2	11'-9"	184
S4	32	4	4	6'-6"	139
S5	1	5	2	13'-11"	15
S6	1	5	3	4'-9"	5
S7	1	5	2	14'-3"	15
S8	1	5	3	5'-1"	5
U1	49	4	5	5'-10"	191
U2	37	4	5	6'-8"	165
V1	98	4	STR	8'-6"	556
V3	38	5	STR	7'-9"	307
V4	38	5	STR	5'-7"	221
K1	32	4	STR	29'-4"	627
K4	10	4	STR	4'-5"	30
H1	24	6	6	14'-3"	514
H2	24	6	6	13'-10"	499

TOTAL REINFORCING STEEL	7,507 LBS.
CLASS A CONCRETE	
POUR #1 (CAP. & LOWER WINGWALLS)	44.1 C.Y.
POUR #2 (BACKWALL & UPPER WINGWALL)	12.2 C.Y.
TOTAL =	56.3 C.Y.
HP 12x53 STEEL PILES:	
NO. = 8	LIN. FT. = 600
PILE REDRIVES	4 EA.

BILL OF MATERIAL

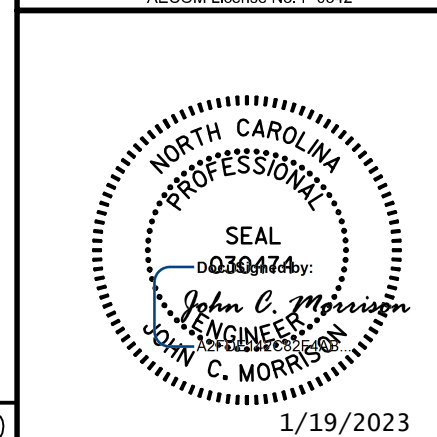
END BENT 1 (STAGE II)

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
B19	10	4	STR	3'-8"	24
B20	1	9	1	22'-2"	75
B21	1	9	1	20'-7"	70
B22	1	9	1	21'-3"	72
B23	1	9	1	19'-11"	68
B24	1	9	1	20'-3"	69
B25	1	9	1	18'-9"	64
B26	3	5	STR	21'-10"	68
B27	3	5	STR	19'-6"	61
B28	4	4	STR	20'-2"	54
B29	1	9	1	20'-7"	70
B30	1	9	1	20'-11"	71
B31	1	9	1	19'-4"	66
B32	1	9	1	19'-9"	67
B33	1	9	1	20'-3"	69
S2	21	5	3	4'-7"	100
S3	21	5	2	11'-9"	257
S4	12	4	4	6'-6"	52
S6	1	5	3	4'-9"	5
S8	1	5	3	5'-1"	5
S9	1	5	2	11'-11"	12
S10	1	5	2	12'-3"	13
U1	18	4	5	5'-10"	70
U2	12	4	5	6'-8"	53
V2	36	4	STR	8'-6"	204
V5	38	5	STR	6'-8"	264
V6	38	5	STR	5'-5"	215
K2	16	4	STR	22'-7"	241
K4	10	4	STR	4'-5"	30
H3	22	6	7	14'-11"	493
H4	22	6	7	14'-6"	479

TOTAL REINFORCING STEEL	3,437 LBS.
CLASS A CONCRETE	
POUR #1 (CAP. & LOWER WINGWALLS)	15.7 C.Y.
POUR #2 (BACKWALL & UPPER WINGWALL)	7.2 C.Y.
TOTAL =	22.9 C.Y.
HP 12x53 STEEL PILES:	
NO. = 3	LIN. FT. = 225
PILE REDRIVES	2 EA.

PROJECT NO. **B-4654**
 WAKE COUNTY
 STATION: **22+71.80 -L-**

SHEET 5 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE

END BENT 1 SECTION AND DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-37
1			3			TOTAL SHEETS
2			4			49

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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DRAWN BY : T.B. STUMP DATE : 01/2019
 CHECKED BY : J.C. MORRISON DATE : 01/2019
 DESIGNED BY : T.B. STUMP DATE : 01/2019
 DESIGN CHECKED BY : J.C. MORRISON DATE : 01/2019