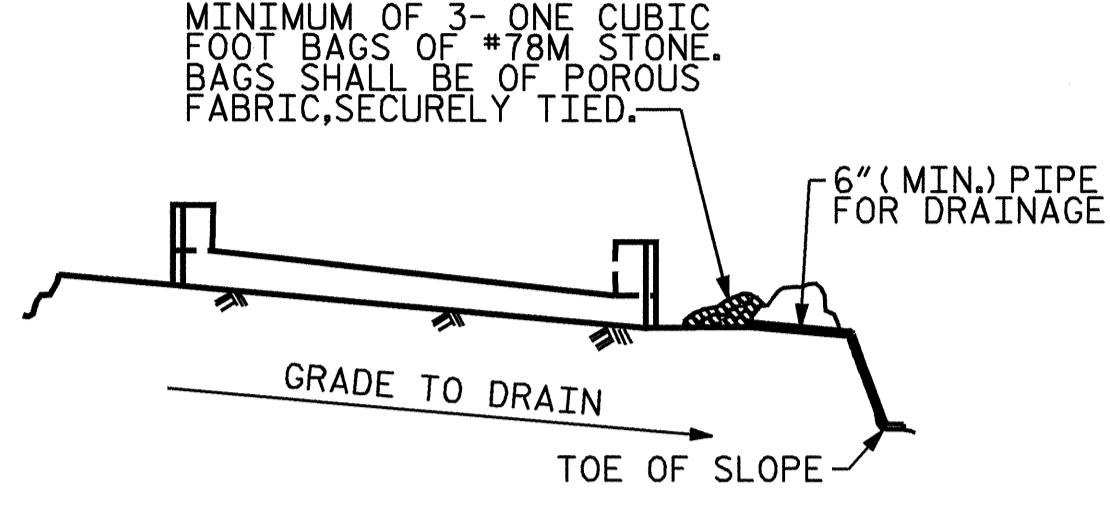


SECTION A-A



MINIMUM OF 3- ONE CUBIC FOOT 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.

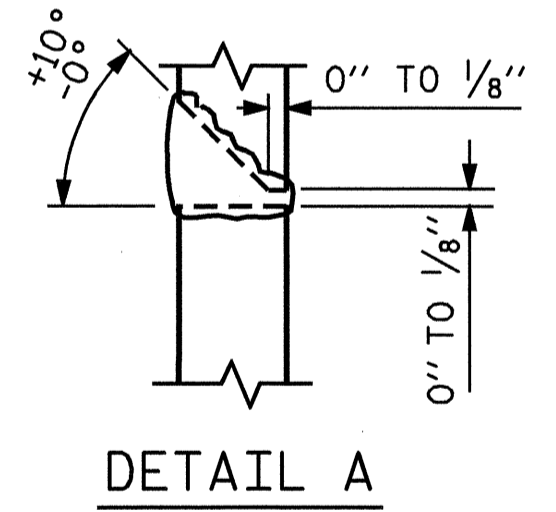
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

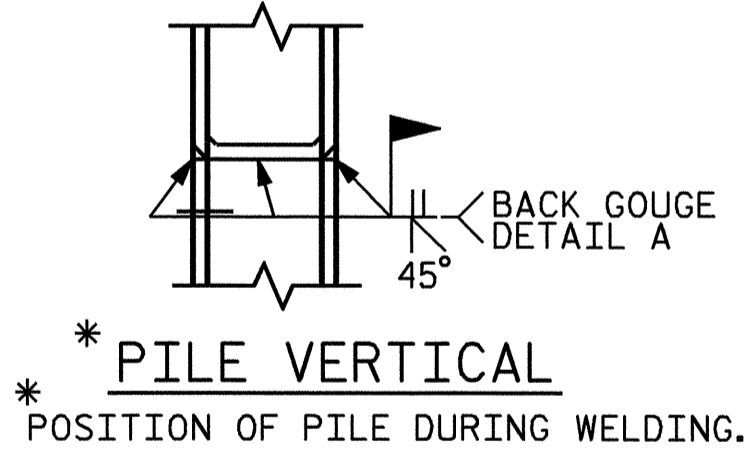
TEMPORARY DRAINAGE AT END BENT

BAR TYPES		BILL OF MATERIAL				
		END BENT #1				
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	8	9	1	41'-1"	1117	
B2	2	5	STR	38'-7"	80	
B3	8	4	STR	20'-7"	110	
B4	10	4	STR	2'-5"	16	
D1	22	6	STR	1'-6"	50	
H1	24	4	5	5'-4"	86	
K1	12	4	STR	2'-6"	20	
S1	37	4	2	7'-5"	183	
S2	37	4	4	3'-2"	78	
S3	12	4	4	6'-6"	52	
U1	4	4	6	4'-11"	13	
V1	16	5	STR	4'-0"	67	
V2	16	5	STR	4'-2"	70	
REINFORCING STEEL				LBS.	1942	
CLASS A CONCRETE						
POUR #1: CAP & LOWER WINGS				C.Y.	10.7	
POUR #2: UPPER WINGS				C.Y.	0.9	
POUR #3: LATERAL GUIDES				C.Y.	0.1	
TOTAL:				C.Y.	11.7	
HP 12 X 53 STEEL PILES				LIN. FT.	180	
NO. = 6						

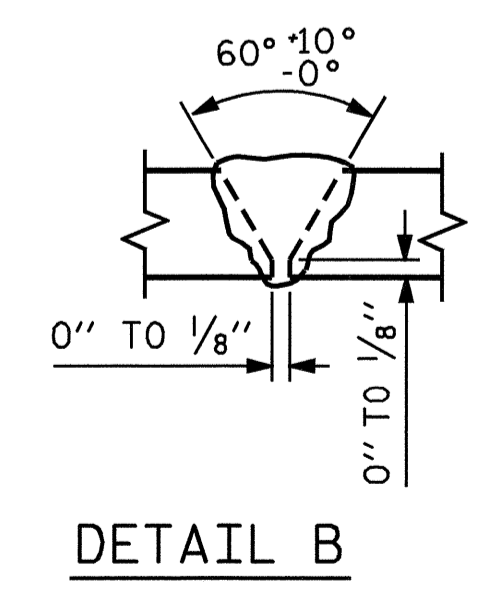
ALL BAR DIMENSIONS ARE OUT TO OUT.



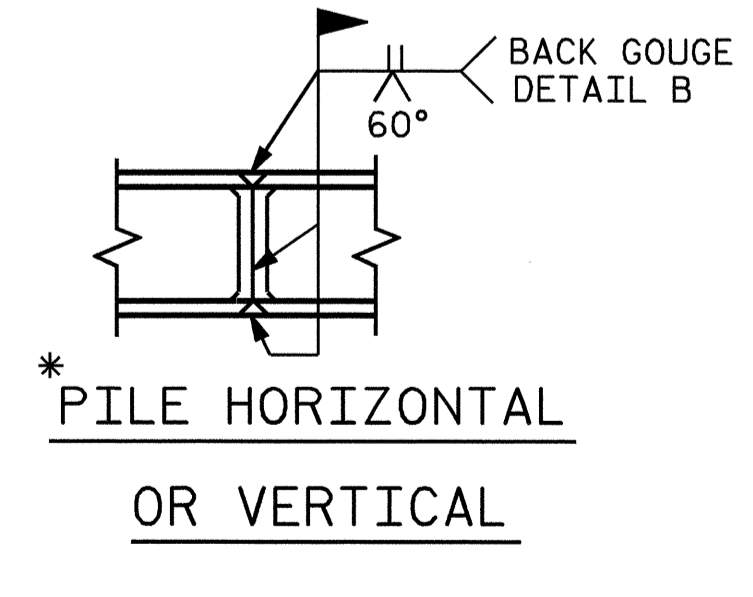
DETAIL A



*** PILE VERTICAL**
 POSITION OF PILE DURING WELDING.

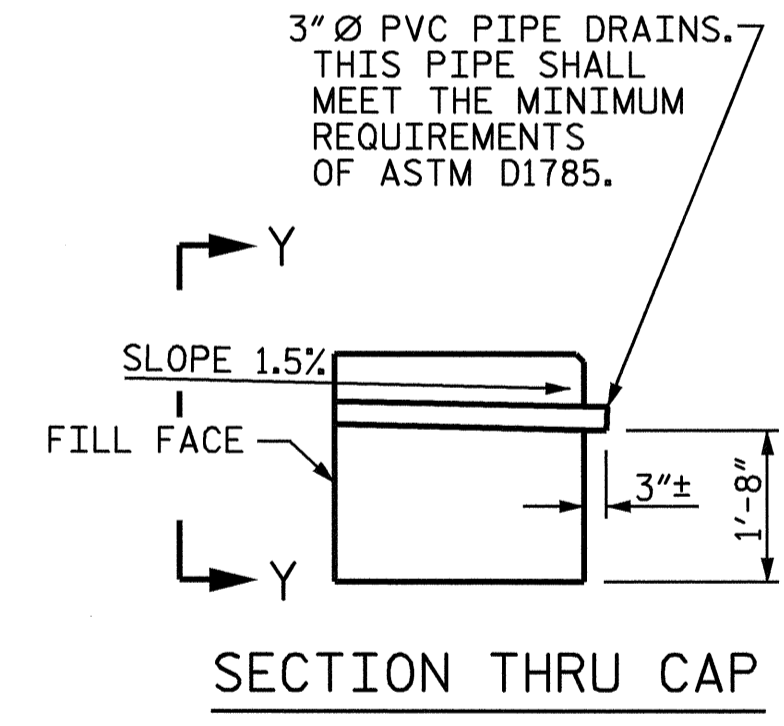


DETAIL B

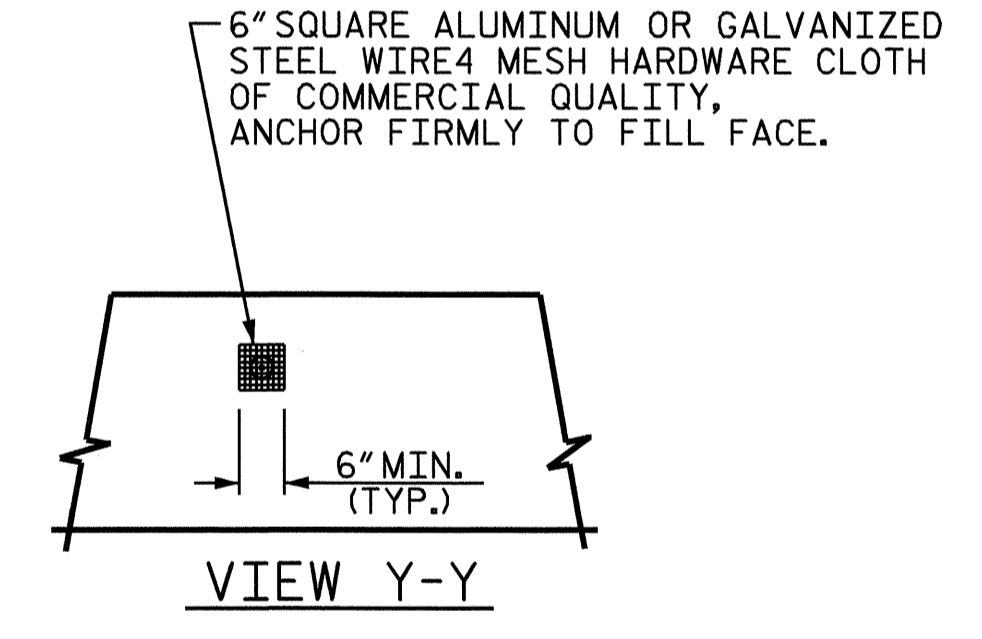


*** PILE HORIZONTAL OR VERTICAL**

PILE SPLICE DETAILS



SECTION THRU CAP



NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC PIPE DRAINS, HARDWARE CLOTH, AND FASTENERS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE FOR THE SEVERAL PAY ITEMS.

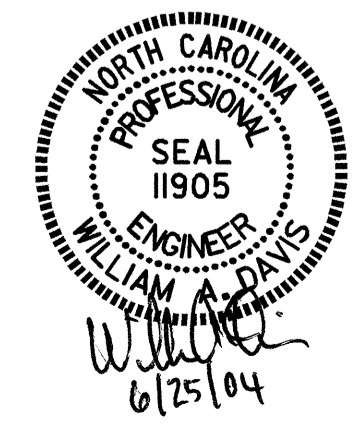
PIPE DRAIN DETAILS

PROJECT NO. B-3629
CASWELL COUNTY
 STATION: 26+65.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #1**



DRAWN BY : G.O. COOPER DATE : 4JAN'04
 CHECKED BY : J.G. KHARVA DATE : 4/16/04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			26