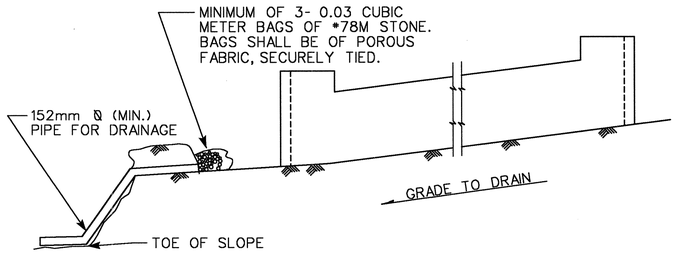
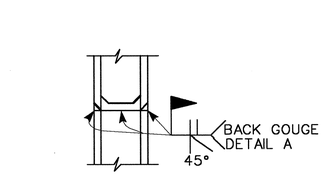


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

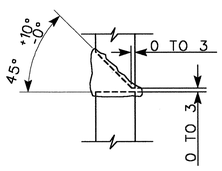
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES

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 FOR THE SEVERAL PAY ITEMS.

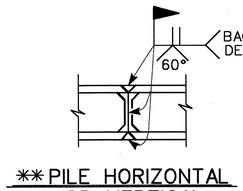
TEMPORARY DRAINAGE AT END BENT



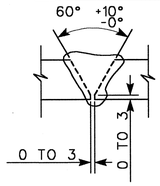
**PILE VERTICAL



DETAIL A



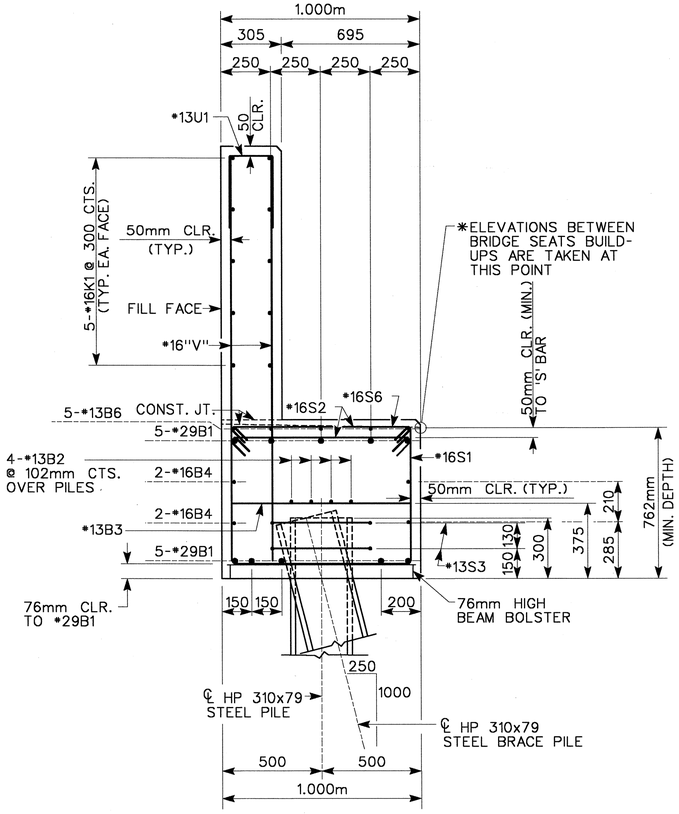
**PILE HORIZONTAL OR VERTICAL



DETAIL B

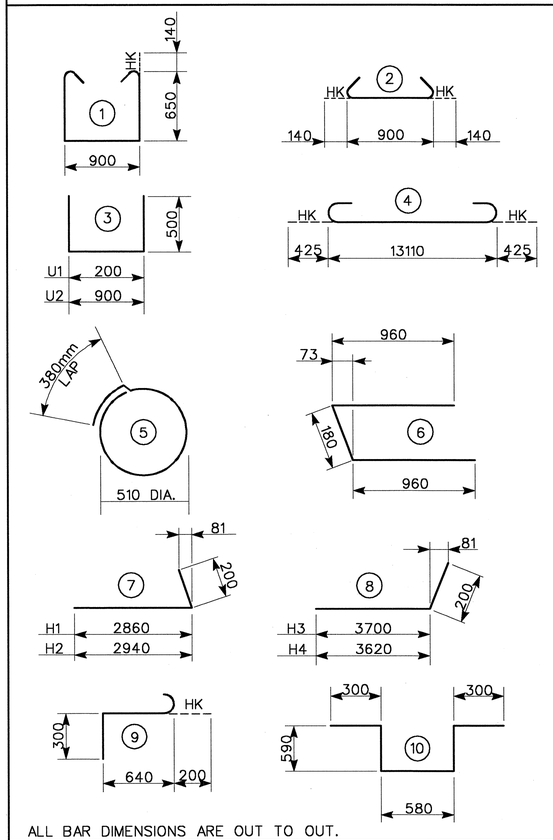
PILE SPLICE DETAILS

**POSITION OF PILE DURING WELDING



SECTION A-A

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

FOR END BENT #2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	29	4	13960	565
B2	8	13	STR	6980	56
B3	11	13	STR	900	10
B4	4	16	STR	13200	82
B5	16	13	STR	900	14
H1	10	13	7	3060	30
H2	10	13	7	3140	31
H3	11	13	8	3900	43
H4	11	13	8	3820	42
K1	10	16	STR	13200	205
S1	48	16	1	2480	185
S2	48	16	2	1180	88
S3	16	13	5	1980	31
S4	3	19	9	1140	8
S5	1	19	10	2360	5
U1	37	13	3	1200	44
U2	24	13	3	1900	45
U3	4	13	6	2100	8
V1	74	16	STR	1960	225
V2	34	16	STR	2600	137
V3	26	16	STR	2400	97

REINFORCING STEEL -	kg	1951
CLASS A CONCRETE BREAKDOWN		
POUR 1 -		
(CAP & BOT. OF WINGS)	m^3	12.3
POUR 2 -		
(TOP OF WINGS & BACKWALL)	m^3	8.8
CLASS A CONCRETE TOTAL	m^3	21.1
HP 310x79 STEEL PILES		
NO. 9	METERS	54.0
STEEL PILE POINTS	EA.	9

PROJECT NO. R-2552B

JOHNSTON COUNTY

STATION: 65+51.880 -L-
14+25.318 -Y7-

SHEET 3 of 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT #2
SUBSTRUCTURE

PBS&J
1616 E. MILLBROOK RD., SUITE 310
RALEIGH, NORTH CAROLINA 27604
PHONE (919) 876-6888
FAX (919) 876-6848

DRAWN BY : SD DATE : 7/03
CHECKED BY : JL DATE : 9/03

NORTH CAROLINA PROFESSIONAL SEAL 027417 ENGINEER ADAM J. REEDER
1-13-04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS
2			4			431