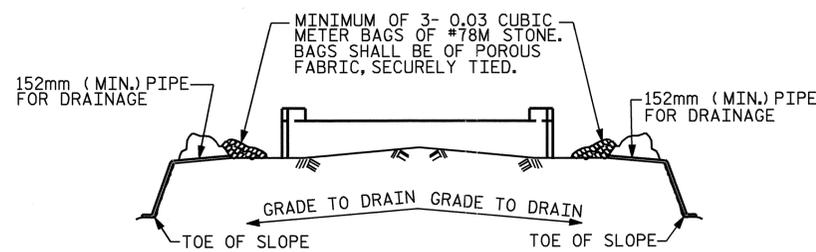


NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC PLASTIC PIPE DRAINS, HARDWARE CLOTH AND FASTENERS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

PIPE DRAIN DETAILS

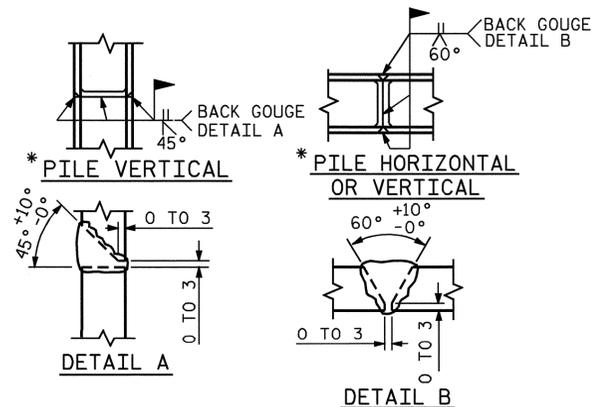


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

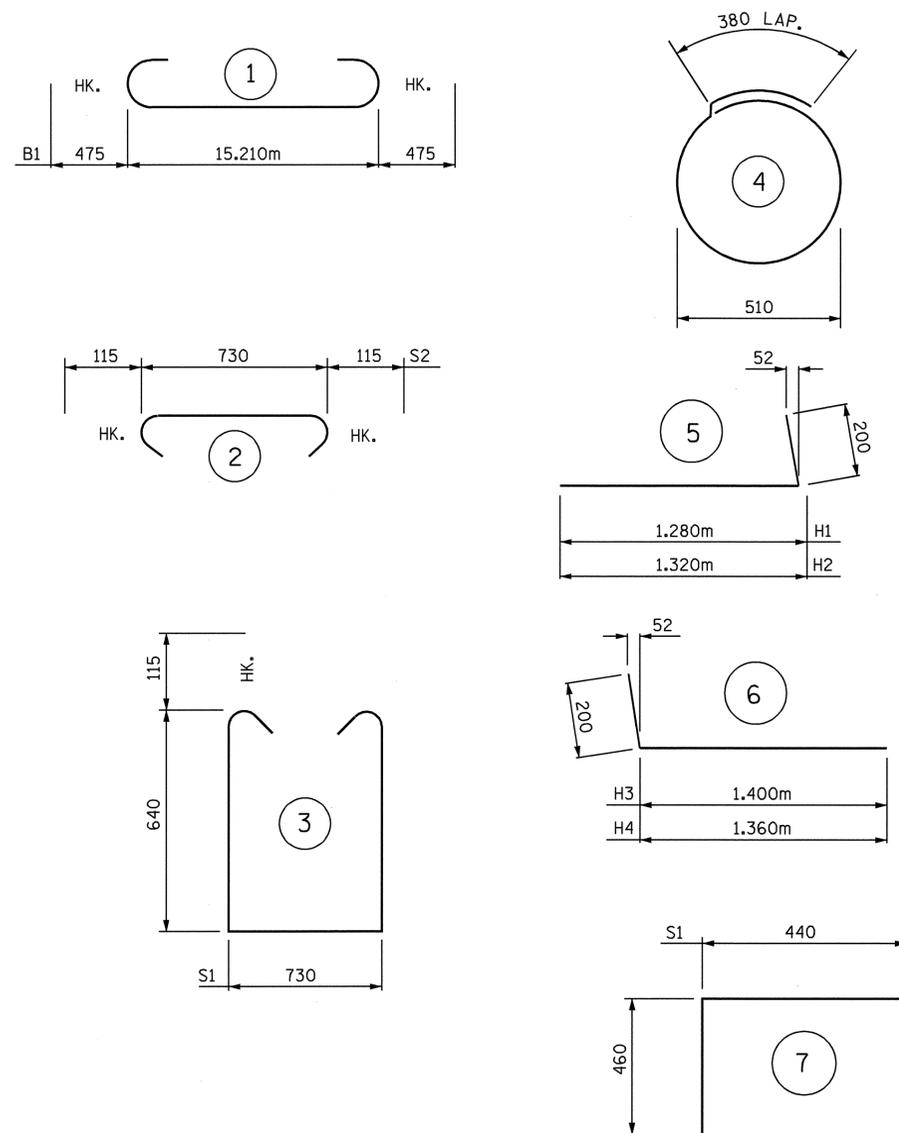
TEMPORARY DRAINAGE AT END BENT



* POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS

BAR TYPES



BILL OF MATERIAL

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| B1 | 8 | #29 | 1 | 16160 | 654 |
| B2 | 2 | #19 | STR | 15240 | 68 |
| B3 | 8 | #13 | STR | 8000 | 64 |
| B4 | 13 | #13 | STR | 740 | 10 |
| D1 | 28 | #19 | STR | 460 | 29 |
| H1 | 5 | #16 | 5 | 1480 | 11 |
| H2 | 5 | #16 | 5 | 1520 | 12 |
| H3 | 5 | #16 | 6 | 1600 | 12 |
| H4 | 5 | #16 | 6 | 1560 | 12 |
| K1 | 8 | #13 | STR | 900 | 7 |
| S1 | 50 | #13 | 3 | 2240 | 111 |
| S2 | 50 | #13 | 2 | 960 | 48 |
| S3 | 14 | #13 | 4 | 1980 | 28 |
| S4 | 4 | #13 | 7 | 1360 | 5 |
| V1 | 36 | #13 | STR | 1220 | 44 |

REINFORCING STEEL = 1115 KG
 CLASS 'A' CONCRETE BREAKDOWN
 POUR #1 CAP & BOTTOM OF WINGS = 10.3 CU. M
 POUR #2 TOP PART OF WINGS = 0.7 CU. M.
 POUR #3 LATERAL GUIDES = 0.1 CU. M.
 CLASS 'A' CONCRETE TOTAL = 11.1 CU. M.

HP 310 x 79 STEEL PILES
 NO. 7 LIN. M. = 98.0m

PROJECT NO. R-2514A
ONslow COUNTY
 STATION: 182+87.400 -L- MED.

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT #2
 (RIGHT LANE)



DRAWN BY: J.B. WILSON DATE: 11/03
 CHECKED BY: G.M. Patterson DATE: 11/03

| REVISIONS | | | | | SHEET NO. |
|-----------|-----|-------|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | DATE: | S-41 |
| 1 | | | 3 | | TOTAL SHEETS |
| 2 | | | 4 | | 46 |