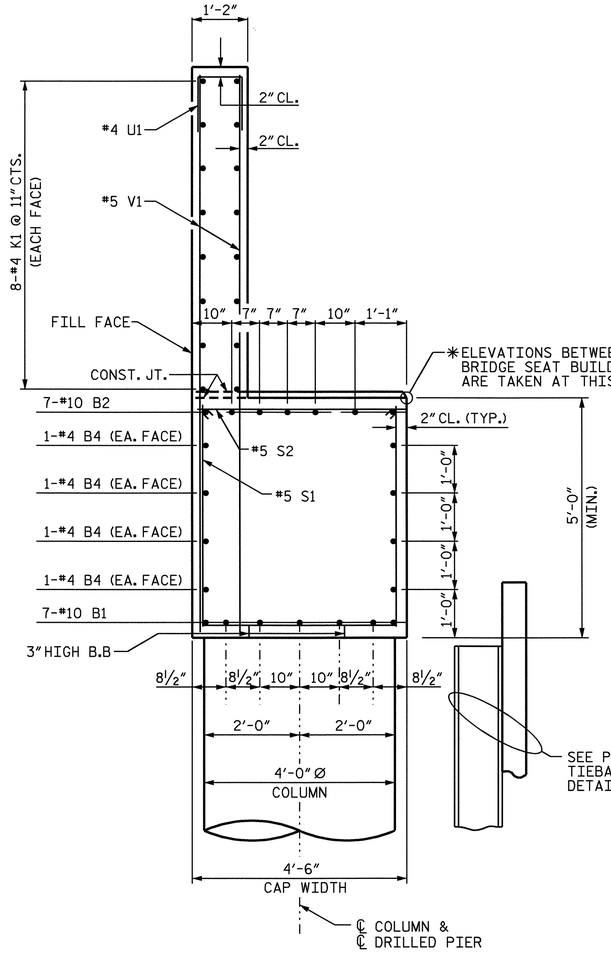
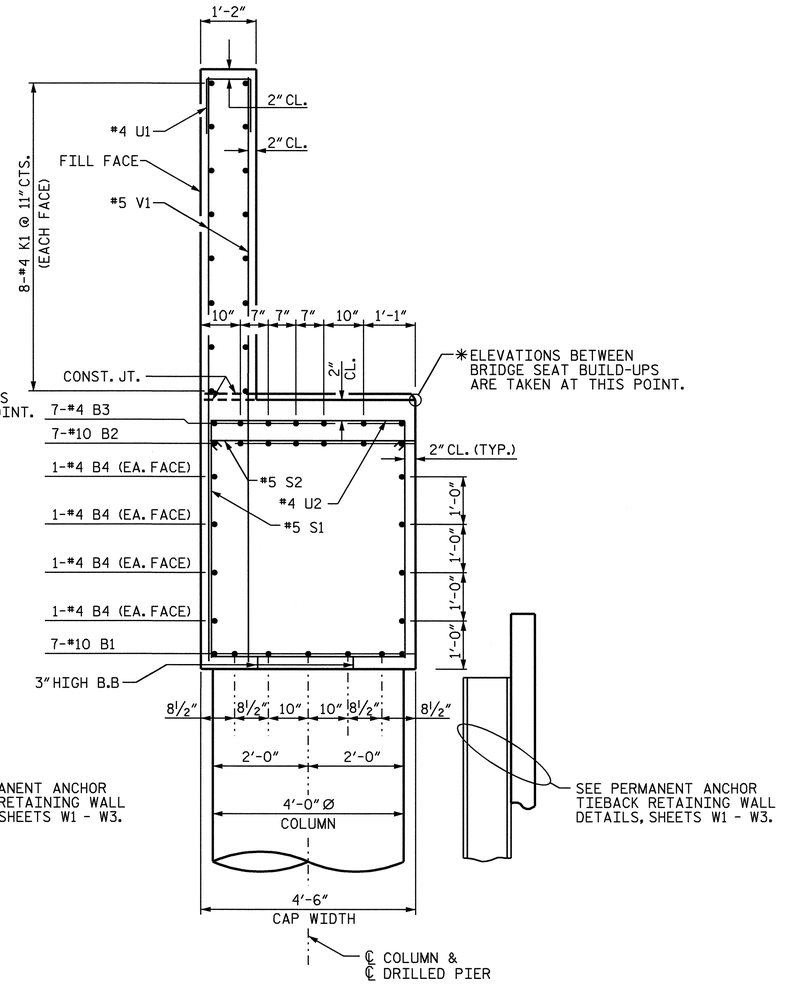


SECTION A-A



SECTION B-B

GALVANIZED REINFORCING STRAP NOTES

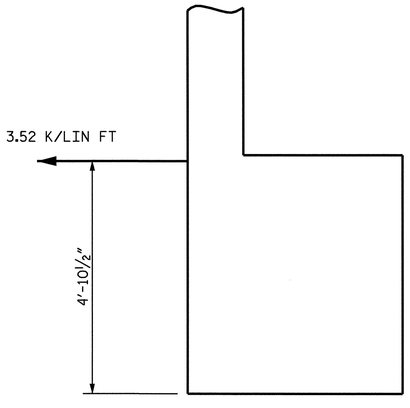
GALVANIZED REINFORCING STRAPS SHALL BE ATTACHED TO THE END BENT BACKWALL. FOR DESIGN CRITERIA AND DETAILS, SEE "GALVANIZED REINFORCING STRAP" SPECIAL PROVISIONS.

PLANS, WORKING DRAWINGS, AND DESIGN CALCULATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND APPROVAL. SEE SPECIAL PROVISIONS.

PLANS SUBMITTED FOR REVIEW SHALL INCLUDE THE FOLLOWING: PLAN VIEW, ELEVATION VIEW, TYPICAL SECTIONS, AND STRAP DETAILS.

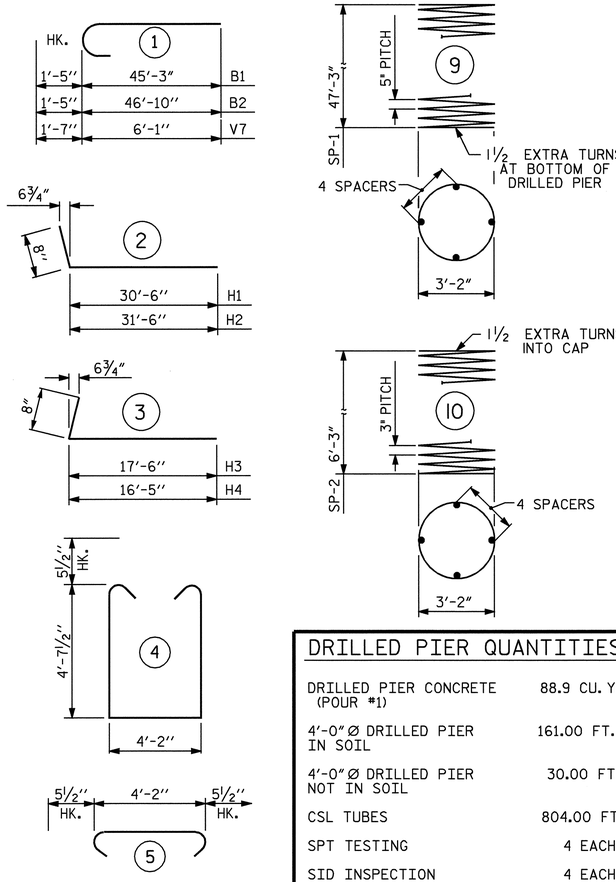
THE GALVANIZED REINFORCING STRAPS SHALL BE DESIGNED WITH THE FOLLOWING SOIL PARAMETERS:
- FRICTION ANGLE = 34 DEGREES
- COHESION c = 0.0
- UNIT WEIGHT OF SOIL = 110 PCF

FOR CONFLICTS WITH PILES IN THE END BENT WINGS, SEE PLAN VIEW AND FOUNDATION LAYOUT SHEETS.



GALVANIZED REINFORCING STRAP LOAD DETAIL

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	10	1	46'-8"	2,811
B2	14	10	1	48'-3"	2,907
B3	21	4	STR.	21'-7"	303
B4	24	4	STR.	29'-3"	469
B5	21	4	STR.	2'-8"	37
H1	15	7	2	31'-2"	956
H2	15	7	2	32'-2"	986
H3	15	7	3	18'-2"	567
H4	15	7	3	17'-1"	524
K1	48	4	STR.	29'-4"	941
K2	8	4	STR.	4'-9"	25
M1	80	11	STR.	53'-9"	22,846
S1	60	5	4	14'-4"	897
S2	60	5	5	5'-1"	318
S3	6	6	7	3'-9"	34
S4	2	6	8	8'-11"	27
U1	71	4	6	3'-10"	182
U2	45	4	6	7'-2"	215
V1	142	5	STR.	11'-5"	1,691
V2	16	5	STR.	13'-2"	220
V3	26	5	STR.	13'-4"	362
V4	20	5	STR.	12'-2"	254
V5	20	5	STR.	12'-4"	257
V6	29	5	STR.	12'-6"	378
V7	80	11	1	7'-8"	3,259

TOTAL REINFORCING STEEL (LBS) 41,466

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
SP-1	4	**	9	1126'-4"	4,699
SP-2	4	***	10	260'-3"	695

TOTAL SPIRAL REINFORCING STEEL (LBS) 5,394

CLASS "A" CONCRETE

	POUR #2	11.2 CU. YD.
	POUR #3	84.4 CU. YD.
	POUR #4	37.6 CU. YD.
TOTAL CLASS "A" CONCRETE		133.2 CU. YD.

TOTAL HP 12 X 53 STEEL PILES
NO. 2 LIN. FT. 80

DRILLED PIER QUANTITIES

DRILLED PIER CONCRETE (POUR #1)	88.9 CU. YD.
4'-0" Ø DRILLED PIER IN SOIL	161.00 FT.
4'-0" Ø DRILLED PIER NOT IN SOIL	30.00 FT.
CSL TUBES	804.00 FT.
SPT TESTING	4 EACH
SID INSPECTION	4 EACH
CROSSHOLE SONIC LOGGING	2 EACH
PERMANENT STEEL CASING FOR 4'-0" DIA. DRILLED PIERS	59.00 FT.

GALVANIZED REINFORCING STRAPS	1200 LIN. FT
#57 STONE BACKFILL FOR GALVANIZED REINFORCING STRAPS	625 CU. YD.

** THE SP-1 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR.

*** THE SP-2 SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR.

PROJECT NO. R-2911D

ROWAN COUNTY

STATION: 231+17.87 -L-
14+25.15 -Y8-

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT #2

LEFT LANE

NORTH CAROLINA PROFESSIONAL SEAL 20724 ENGINEER STEVEN DOUGLAS RACKLEY
10/1/04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			120

DRAWN BY : R. L. CHESSON DATE : 2004 AUG
CHECKED BY : S. H. SOCKWELL DATE : 9/04

STR. #1