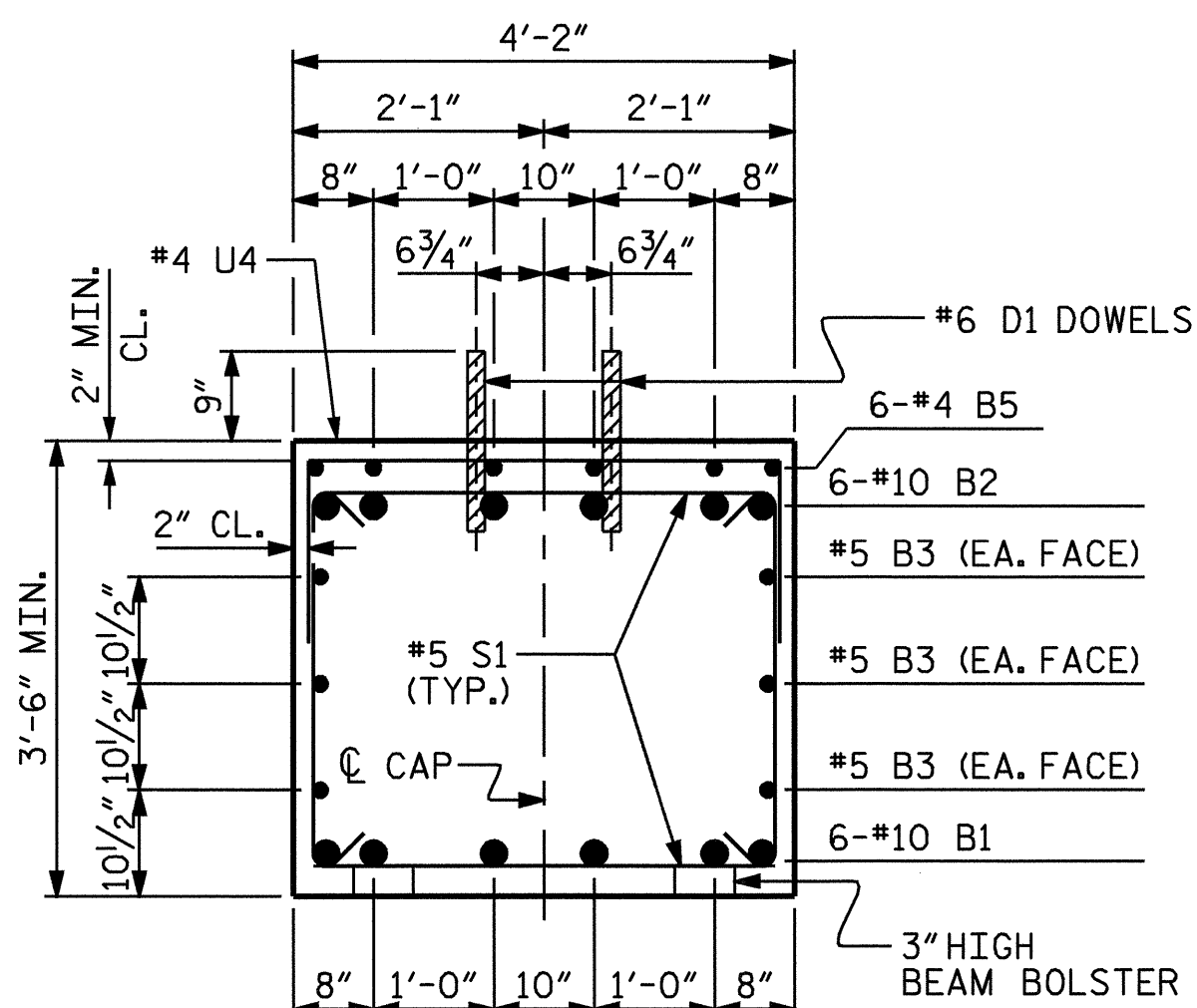
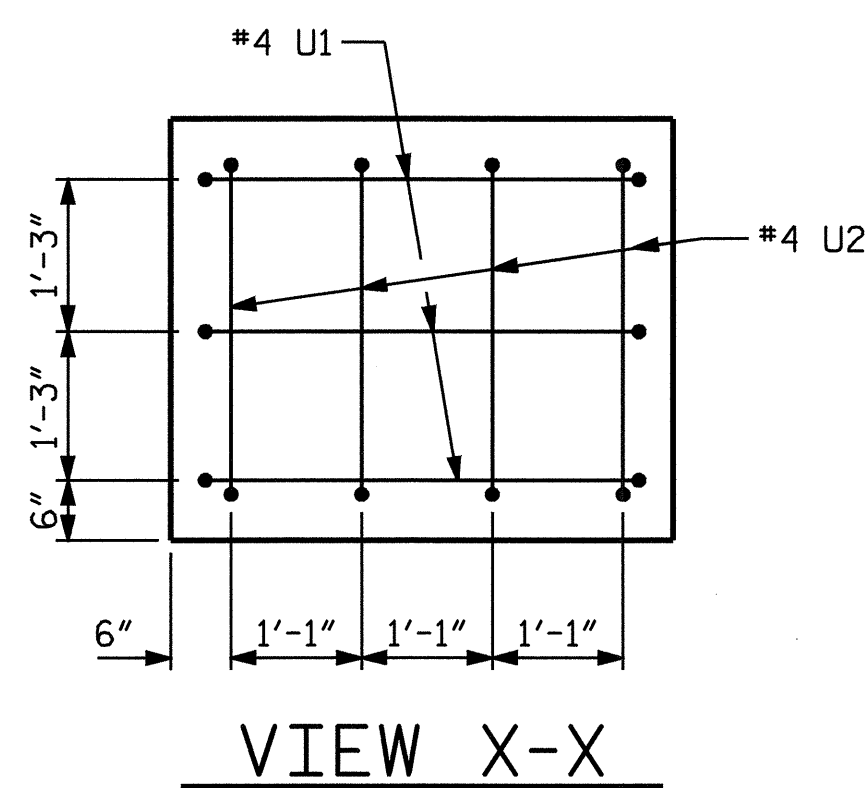


**PLAN OF COLUMNS AND DRILLED PIERS**

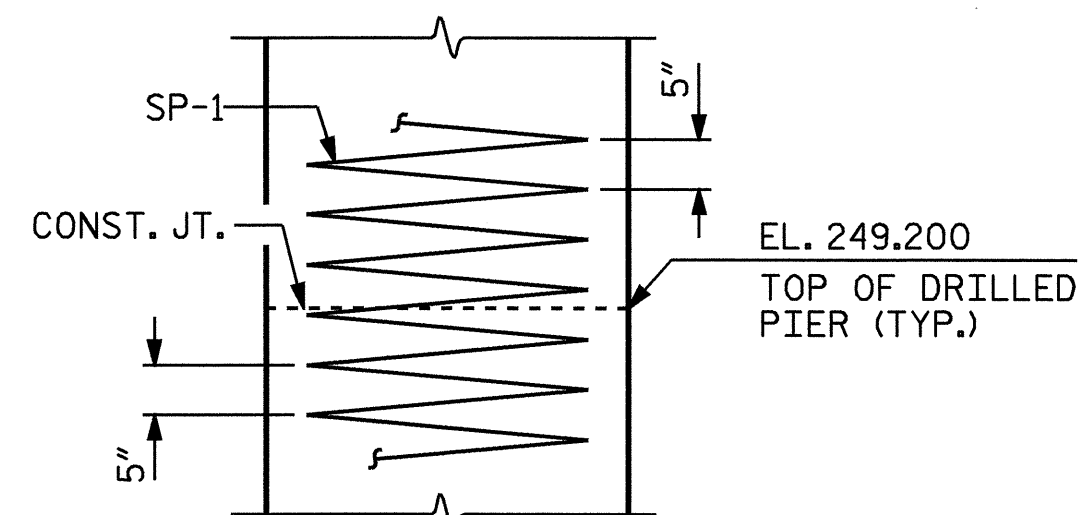
REINFORCING STEEL AND DIMENSIONS ARE TYPICAL FOR ALL COLUMNS AND DRILLED PIERS.



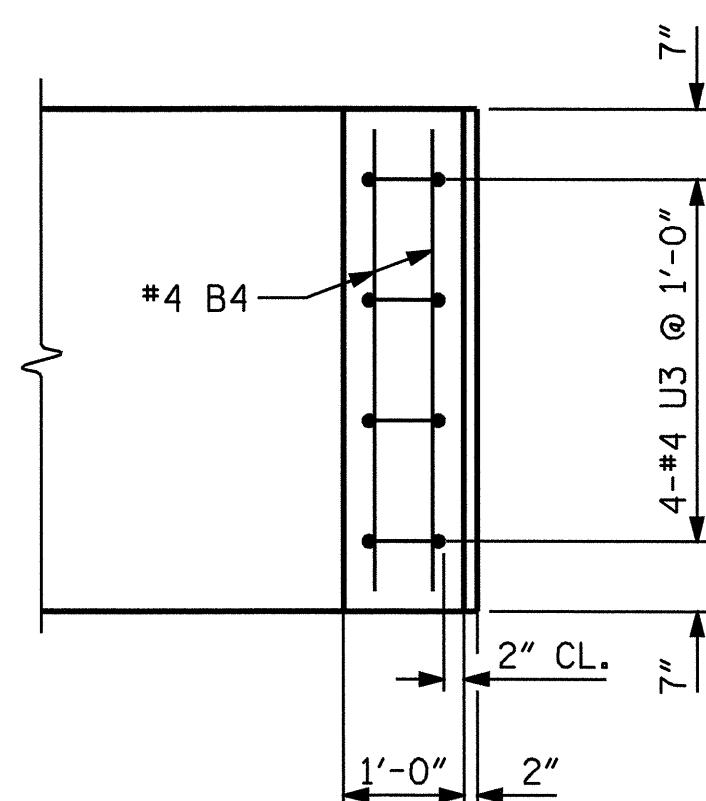
**SECTION A-A**



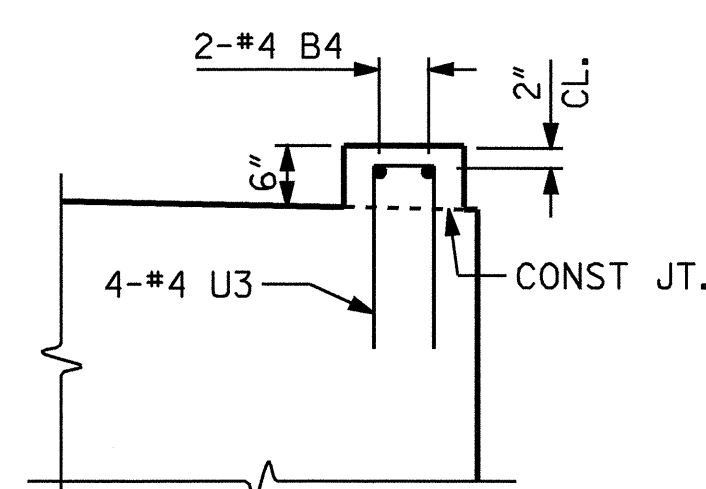
**VIEW X-X**



**CONSTRUCTION JOINT DETAIL**

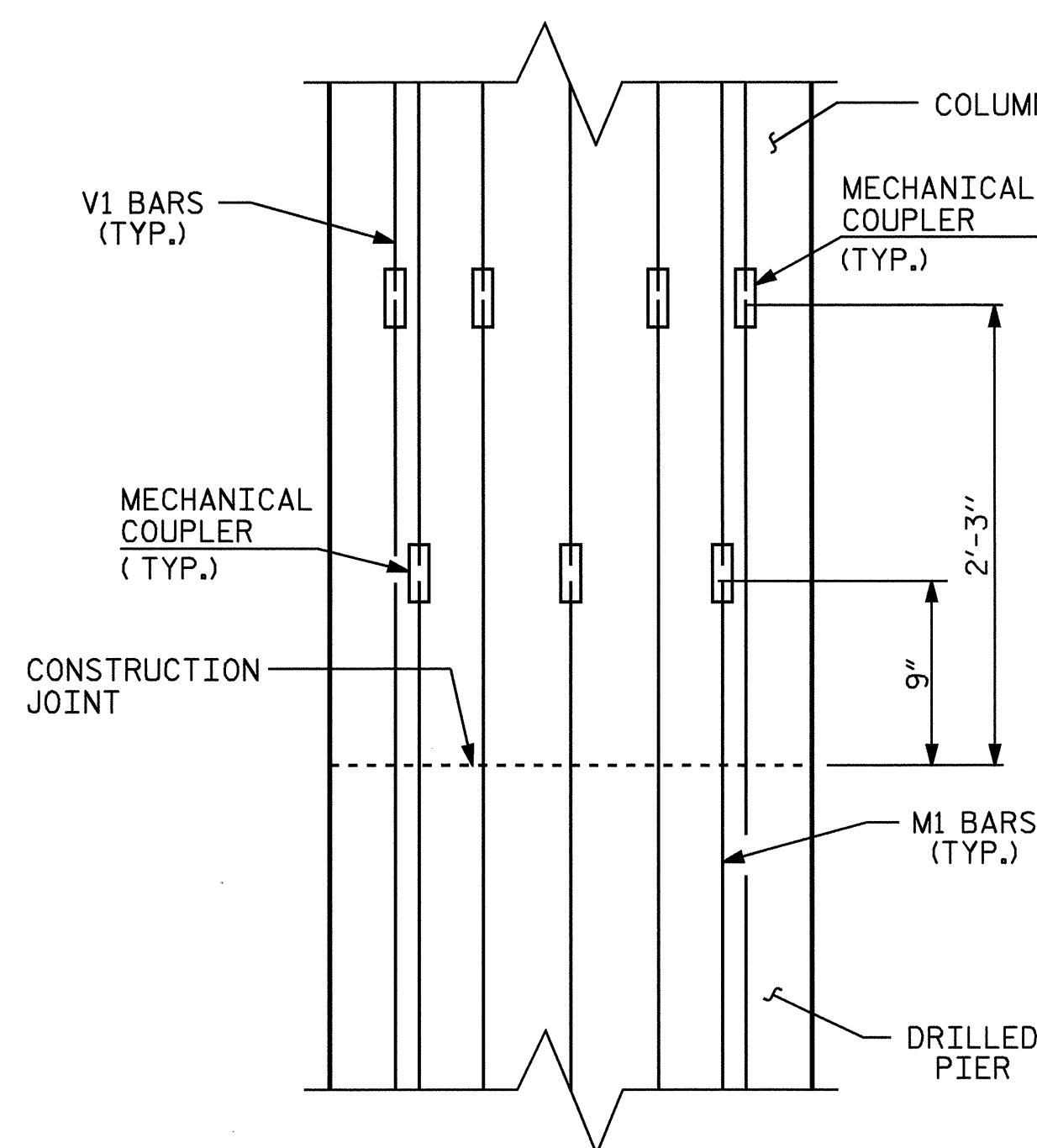


**PLAN**

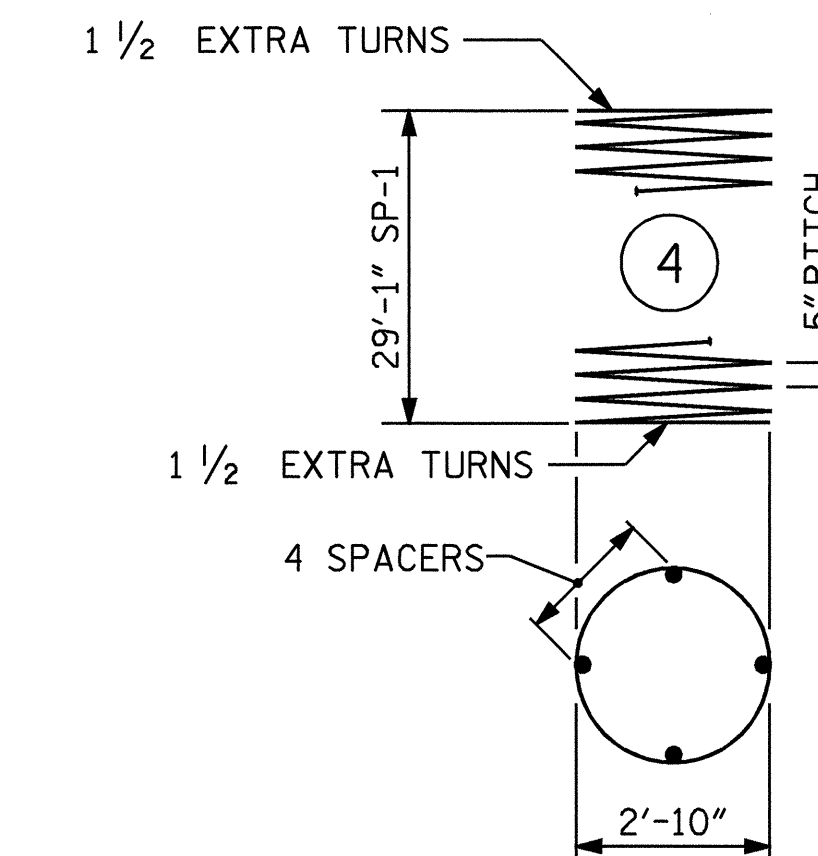
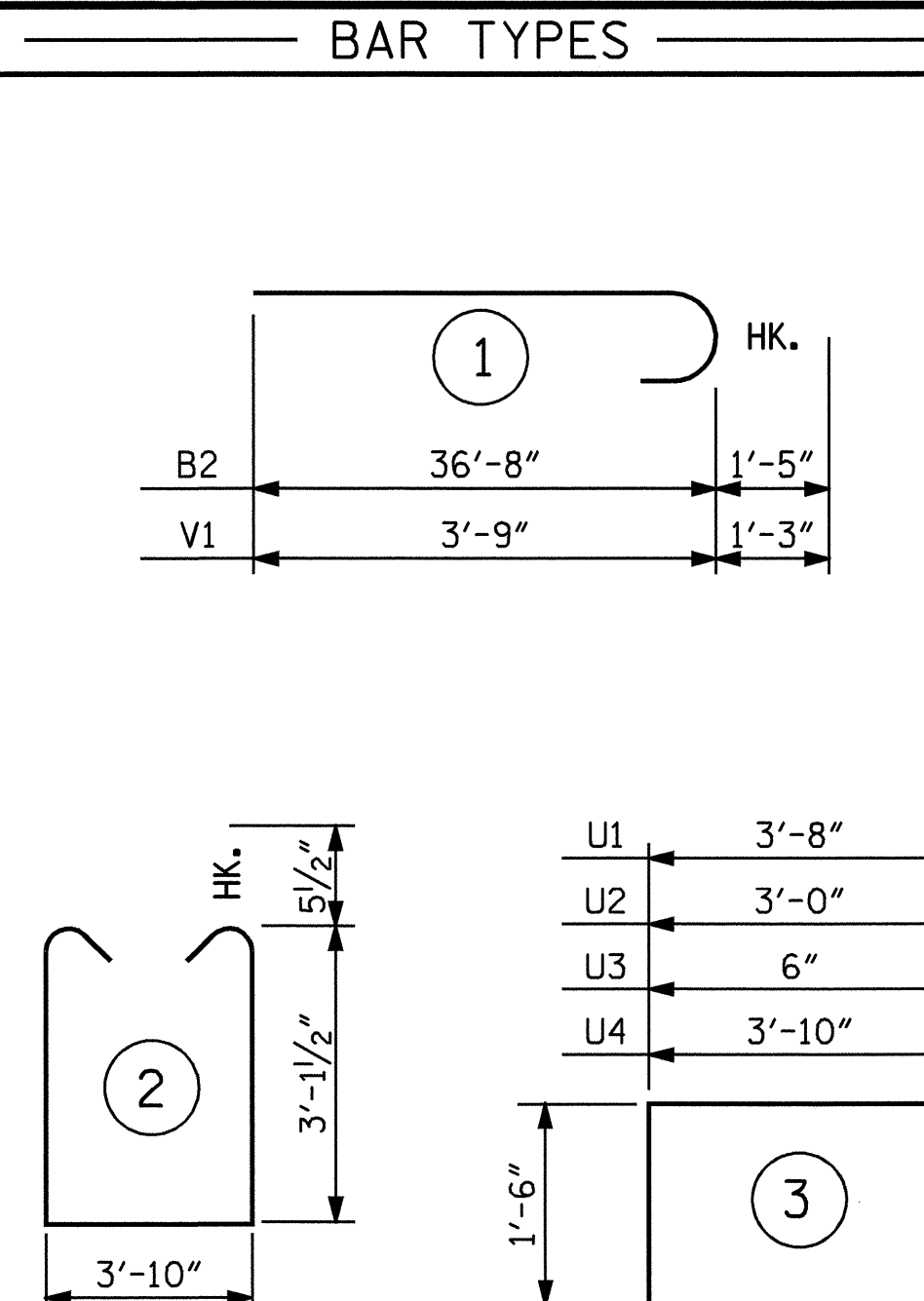


**ELEVATION**

**LATERAL GUIDE DETAIL**



**MECHANICAL COUPLER STAGGER DETAIL**



ALL BAR DIMENSIONS ARE OUT TO OUT.

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

**BILL OF MATERIAL**

**BENT 1**

BAR	NO	SIZE	TYPE	LENGTH	WEIGHT
B1	12	10	STR	35- 1	1812
B2	12	10	1	38- 1	1966
B3	12	5	STR	32- 8	409
B4	4	4	STR	3-10	10
B5	6	4	STR	22- 0	88
D1	80	6	STR	1- 6	180
M1	42	9	STR	31- 8	4522
S1	56	5	2	11- 0	642
U1	6	4	3	6- 8	27
U2	8	4	3	6- 0	32
U3	8	4	3	3- 6	19
U4	15	4	3	6-10	68
V1	42	9	1	5- 0	714
SP-1	3	**	4	638- 7	1998

REINFORCING STEEL	LBS.	
		10489

SPIRAL COLUMN REINFORCING STEEL	LBS.	
		1998

**CLASS A CONCRETE BREAKDOWN**

POUR #2 (COLUMNS)	C.Y.	3.1
POUR #3 (CAP)	C.Y.	36.8
POUR #4 (LATERAL GUIDE)	C.Y.	0.2
<b>TOTAL CLASS A CONCRETE</b>	<b>C.Y.</b>	<b>40.1</b>

**3'-6" Ø DRILLED PIERS**

DRILLED PIER CONCRETE		
POUR #1 (DRILLED PIERS)	C.Y.	28.5
3'-6" Ø DRILLED PIERS IN SOIL:		54.60 LIN. FT.
3'-6" Ø DRILLED PIERS NOT IN SOIL:		25.50 LIN. FT.
PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER:		54.60 LIN. FT.
CROSSHOLE SONIC LOGGING:		1 PER BENT
CSL TUBES:		350.40 LIN. FT.

PROJECT NO. B-3450

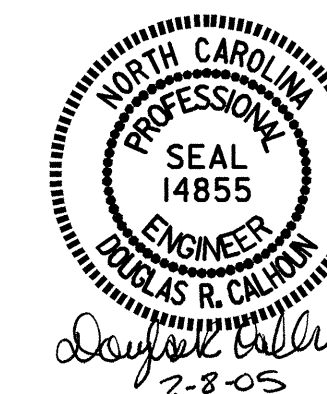
DURHAM COUNTY

STATION: 14+31.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**SUBSTRUCTURE BENT 1**



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-19
1			3			TOTAL SHEETS 53
2			4			

DRAWN BY : T. A. HARRIS DATE : 5/15/03  
CHECKED BY : A. L. MEADOWS DATE : 10/9/03

08-FEB-2005 08:31  
W:\squad\b3450\tharris\Microstation\STR.1\b3450\_sd.b1.01.dgn  
TAHarris