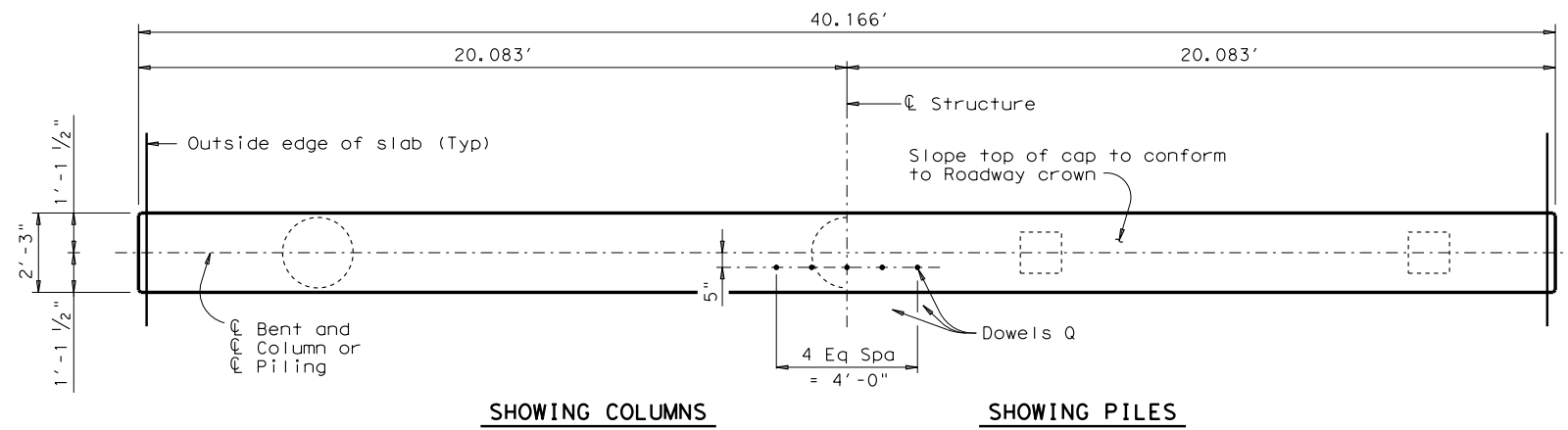


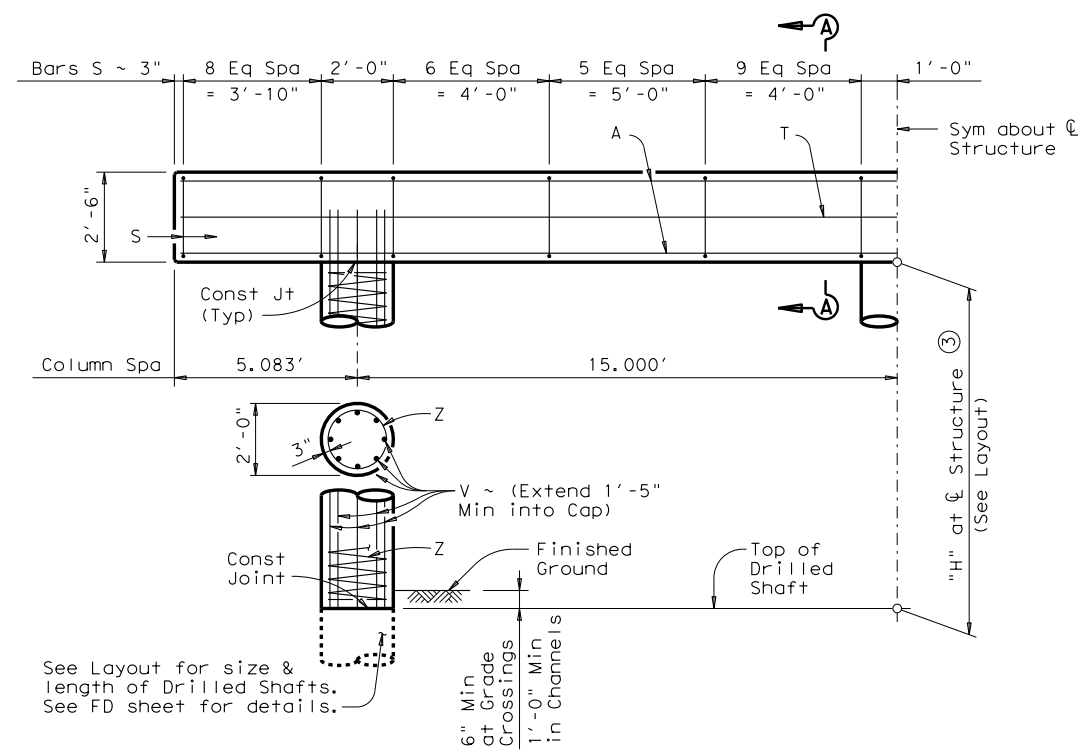
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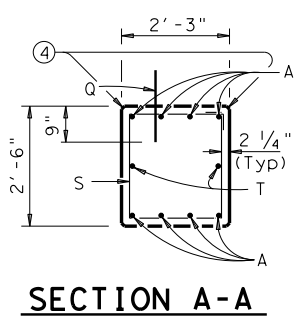
SHOWING COLUMNS

SHOWING PILES

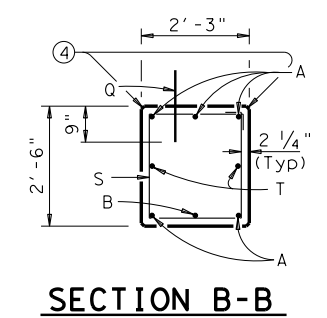
PLAN



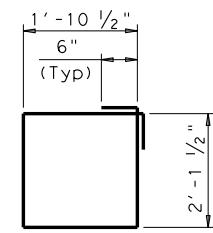
HALF ELEVATION ~ 3 COLUMN BENT



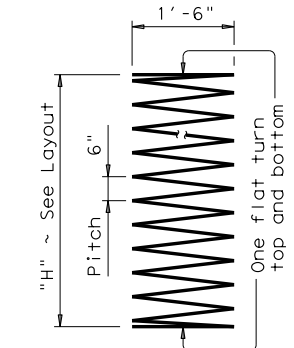
SECTION A-A



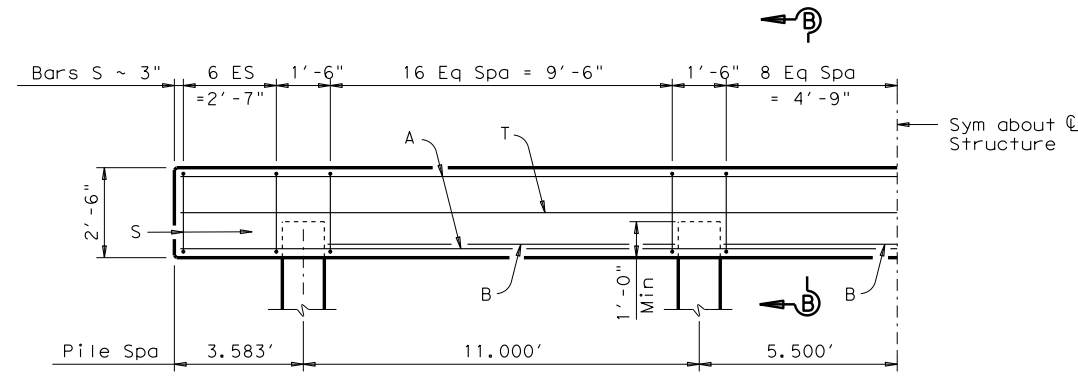
SECTION B-B



BARS S



BARS Z



HALF ELEVATION ~ 4 PILE BENT

Note: For piling larger than 16", adjust Bars S as required to avoid piling.

TABLE OF MAXIMUM ALLOWABLE EXPOSED PILE HEIGHTS

Pile Type		Max Ht
Concrete	Steel	Ft
16" Sq	HP14x73	16
18" Sq	HP14x117	20

TABLE OF CONSTANT QUANTITIES				
3 COLUMN BENT				
Bar	No.	Size	Length	Weight
A	8	#11	39'-10"	1,693
Q	5	# 6	1'- 6"	11
S	60	# 5	9'- 0"	563
T	2	# 5	39'-10"	83
Reinforcing Steel			Lb	2,350
Class "C" Concrete			CY	8.4

TABLE OF ESTIMATED QUANTITIES				
4 PILE BENT				
Bar	No.	Size	Length	Weight
A	5	#11	39'-10"	1,058
B	3	#11	9'- 6"	151
Q	5	# 6	1'- 6"	11
S	65	# 5	9'- 0"	610
T	2	# 5	39'-10"	83
Reinforcing Steel			Lb	1,913
Class "C" Concrete			CY	8.4

TABLE OF VARIABLE QUANTITIES ~ 3 COLUMN BENT

"H"	Class "C" Conc (Cols)	Bars V 24 ~ #7		Bars Z 3 ~ #3 Spiral	
Ft	CY	Length	Weight	Length	Weight
24	8.4	25'-5"	1,247	237'	267

TOTAL EST QUANT ~ 3 COL BENT

Reinf Steel	Class "C" Conc
Lb	CY
3,864	16.8

- Adjust Bars V length by 1 Ft and Bars Z length by 9.4777 Ft for each linear foot of variation in "H" value.
- Adjust Reinforcing Steel Total by 60 Lbs and Class "C" Conc by 0.349 CY for each linear foot of variation in "H" value.
- This standard may not be used for "H" heights or exposed pile heights exceeding the values shown in the tables. In areas of very soft soil or where scour is anticipated, allowable "H" heights or exposed pile heights shall be evaluated by the Engineer prior to the use of this standard.
- See standard CS-MD for Preformed Bituminous Fiber Material.
- When HP14x117 steel piling is specified in the plans, the Contractor has the option of furnishing either HP14x117 or HP16x101 steel piling.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications. All cap reinforcing shall be Grade 60. Concrete strength $f'_c = 3,600$ psi. Column and Drilled Shaft reinforcing may be Grade 40. See Layout for foundation type, size and length. See standard FD for foundation details and notes. These bent details do not support the use of multi-pile footings as shown on the FD standard. See standard CS-MD for details not shown. For usual soil and construction conditions, slab formwork may be supported from the sides of bent caps if one of the following is satisfied:
 1) For column bents, a maximum "H" height of 24'.
 2) For pile bents, a maximum exposed pile height of 20'.
 Calculated Foundation Loads: 90 Tons/Drilled Shaft
 65 Tons/Pile
 These bent details may be used with standards CS-25-38, CS-50-38, CS-75-38 and CS-80-38 only.

HL93 LOADING



INTERIOR BENTS FOR C-I-P CONC SLAB SPANS

38 FT ROADWAY

BCS-38

FILE: bcs10ste.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS				
02-2012: Piles	DIST	COUNTY	SHEET NO.	

DATE: FILE: