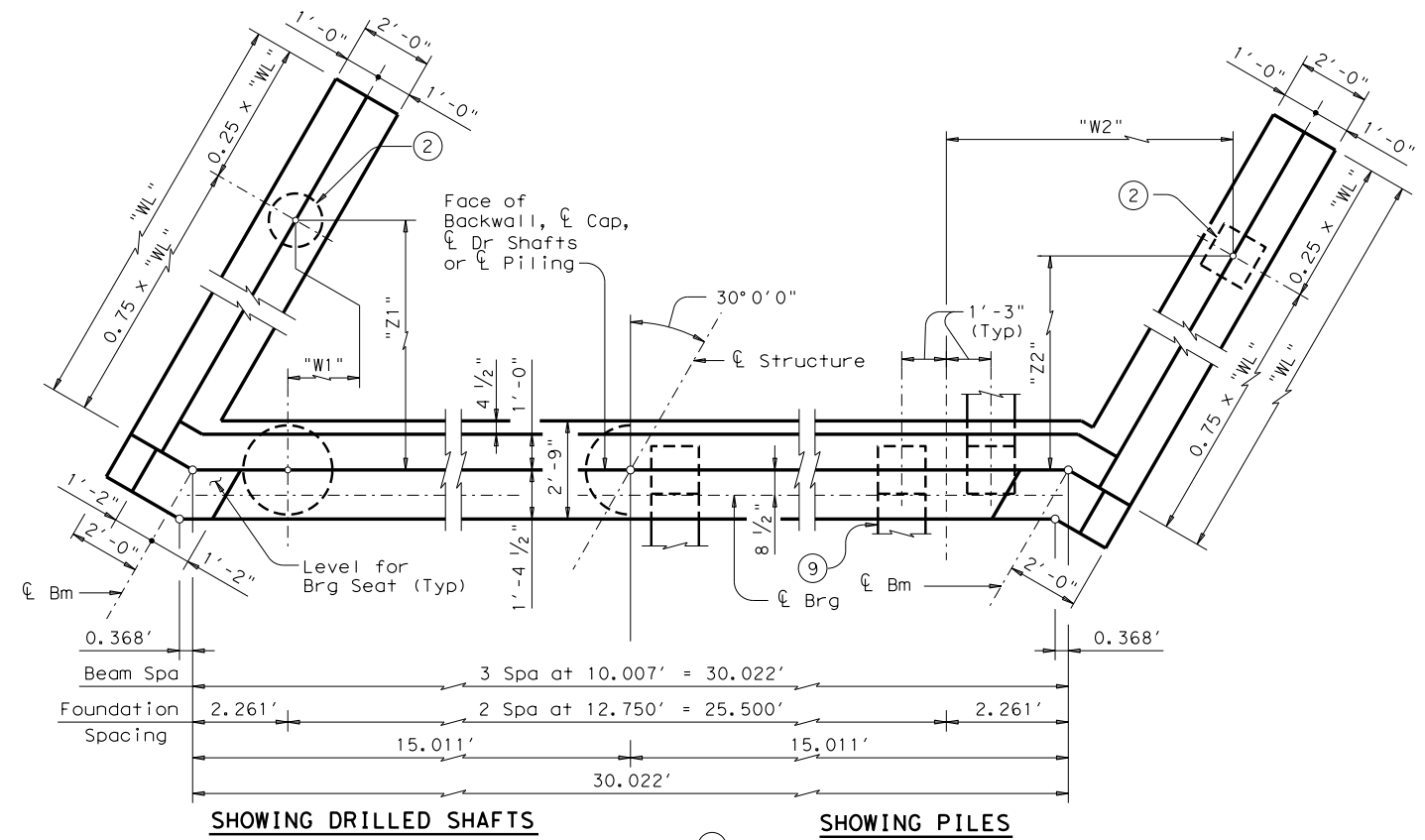
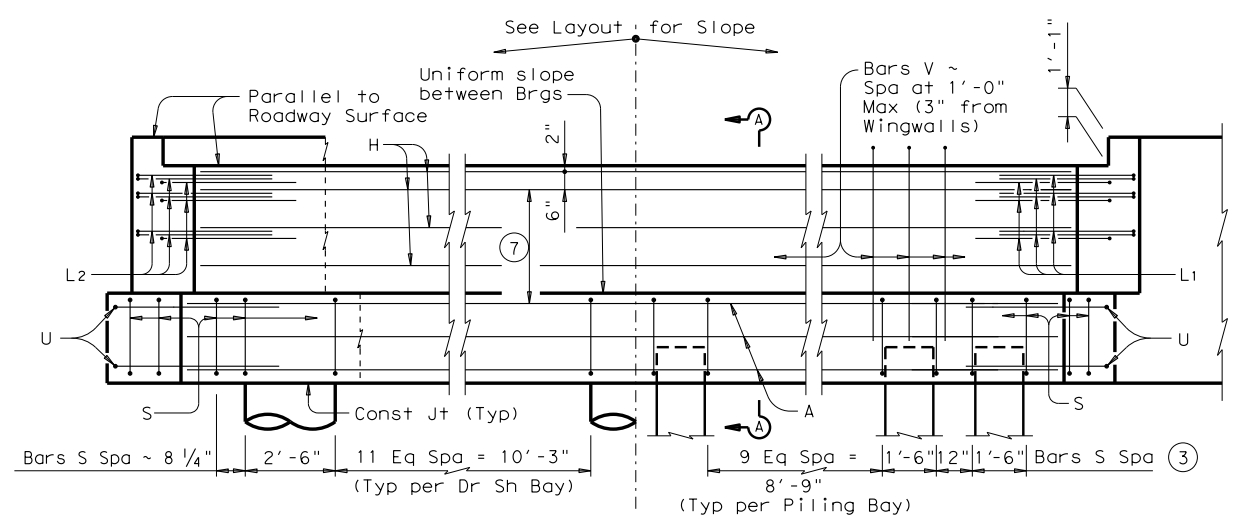


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

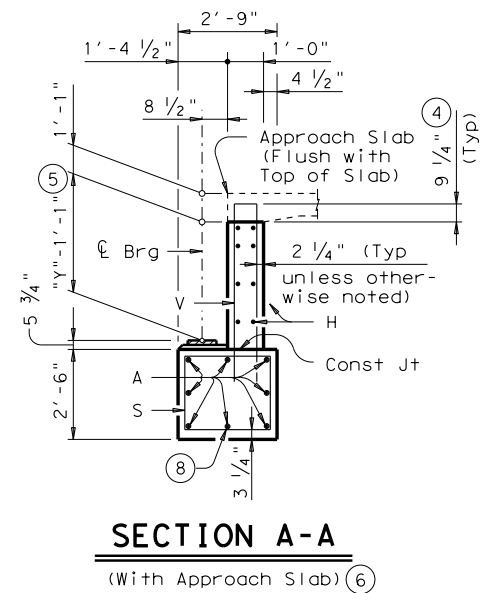
DATE: FILE:



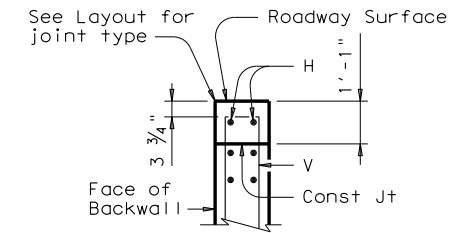
SHOWING DRILLED SHAFTS PLAN 1 SHOWING PILES



SHOWING DRILLED SHAFTS ELEVATION SHOWING PILES



SECTION A-A (With Approach Slab) 6



BACKWALL DETAIL (Without Approach Slab) 6

**GENERAL NOTES:**  
 Designed according to AASHTO LRFD Specifications. Concrete compressive strength  $f'_c = 3,600$  psi. All cap and wall reinforcing shall be Grade 60. See Bridge Layout for beam type, header slope, and foundation type, size and length. See standard FD for foundation details and notes. See standard CRR for riprap attachment details, if applicable. See standard SBBR for location and size of anchor bolt required for erection bracing. See applicable rail details for rail anchorage in wingwalls. Details are drawn showing Right Forward skew. See Bridge Layout for actual skew direction. These abutment details may be used with standard SSB-28-30 only.

Header Slope	Beam Type	Wingwall Type	Wingwall Lgth "WL"	"W1"	"Z1"	"W2"	"Z2"
2:1	W18	Cantilevered	8.000'	Not Applicable			
	W21	Cantilevered	9.000'	Not Applicable			
	W24	Cantilevered	10.000'	Not Applicable			
	W27	Cantilevered	10.000'	Not Applicable			
	W30	Cantilevered	11.000'	Not Applicable			
	W33	Cantilevered	11.000'	Not Applicable			
3:1	W36	Cantilevered	12.000'	Not Applicable			
	W40	Cantilevered	12.000'	Not Applicable			
	W18	Cantilevered	12.000'	Not Applicable			
	W21	Founded	13.000'	1.748'	8.944'	8.002'	7.944'
	W24	Founded	14.000'	2.123'	9.593'	8.377'	8.593'
	W27	Founded	15.000'	2.498'	10.243'	8.752'	9.243'
	W30	Founded	15.000'	2.498'	10.243'	8.752'	9.243'
	W33	Founded	16.000'	2.873'	10.892'	9.127'	9.892'
W36	Founded	17.000'	3.248'	11.542'	9.502'	10.542'	
W40	Founded	18.000'	3.623'	12.191'	9.877'	11.191'	

- See Table A for variable dimensions based on header slope and beam type.
- See Table A to determine if wingwall foundations are required.
- For Piling larger than 16", adjust Bars S spacing as required to avoid Piling.
- Increase as required to maintain 3 3/4" from Finished Grade.
- See SSSD-28 standard for "Y" value.
- See Layout to determine if Approach Slab is present.
- Use 2 Eq Spa for W18 thru W27 beams and 3 Eq Spa for W30 beams and larger.
- With pile foundations, replace Bar A located at bottom centerline of cap with 2 ~ #11 x 8'-9" placed between piling groups. Deduct 66 Lbs from reinforcing steel total.
- See Detail "A" on FD standard.

HL93 LOADING SHEET 1 OF 3

Texas Department of Transportation

Bridge Division Standard

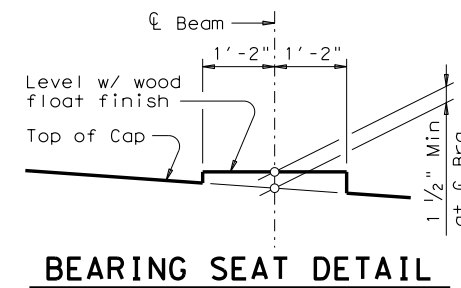
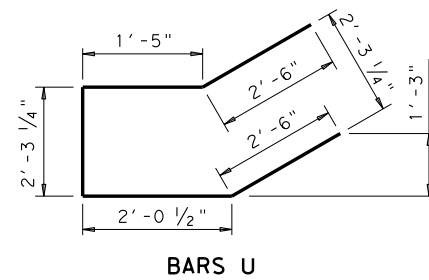
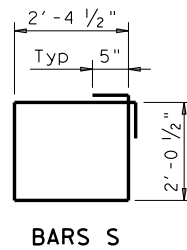
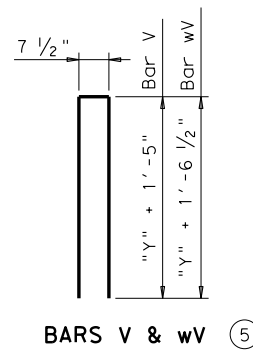
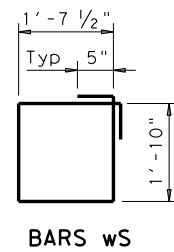
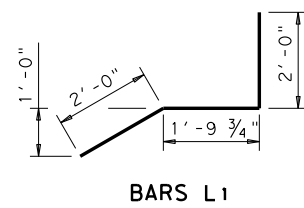
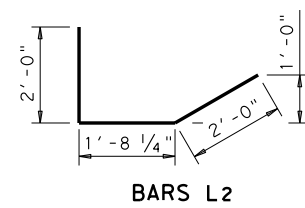
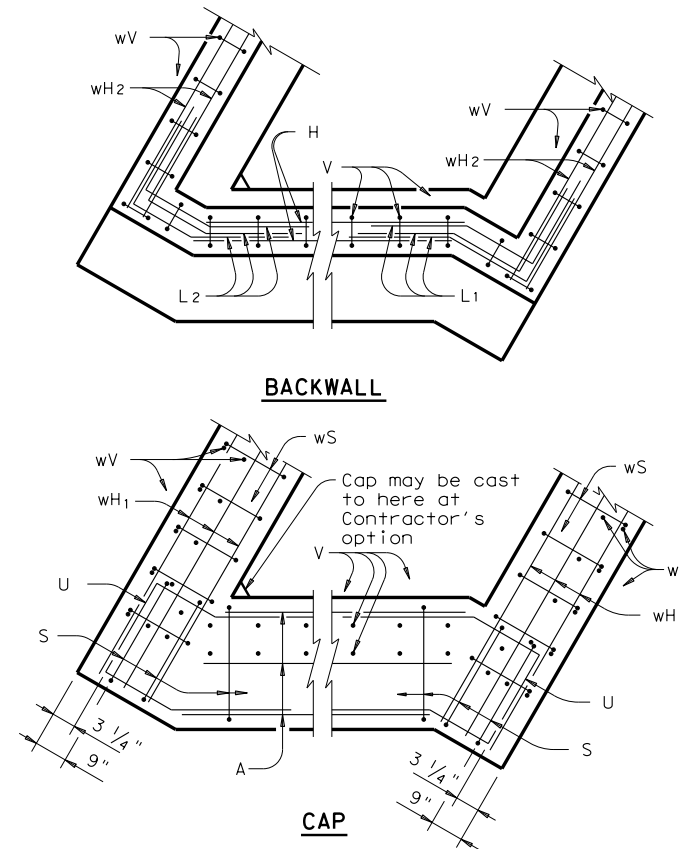
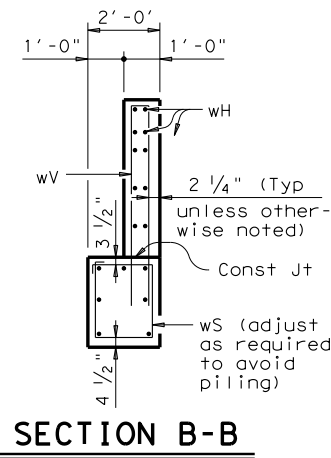
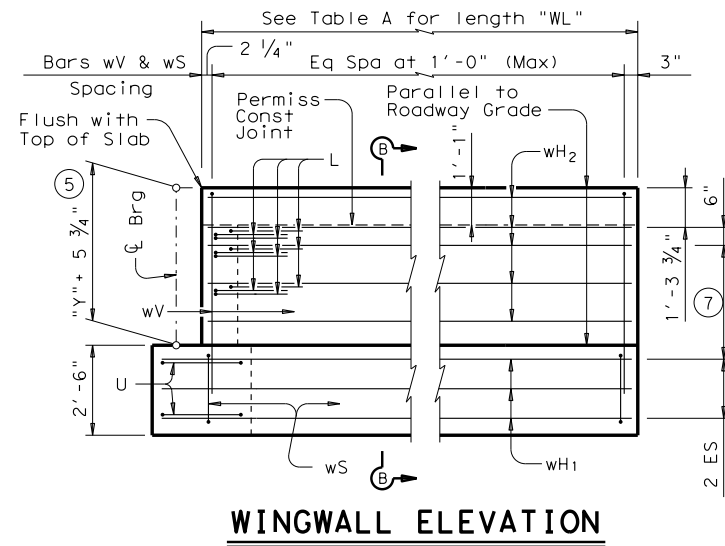
**ABUTMENTS**  
**STEEL BEAM SPANS**  
 28' ROADWAY 30° SKEW

ASB-28-30

FILE: sbstdel8.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY	SHEET NO.	

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: FILE:



**TABLE OF FOUNDATION LOADS**

Span Length	Shaft Load	Pile Load
	Tons/Shaft	Tons/Pile
30	49	43
35	53	46
40	56	47
45	60	49
50	63	51
55	66	52
60	69	54
65	72	55
70	75	57
75	78	58
80	82	60
85	85	62
90	88	64
95	92	66
100	96	68
105	100	70
110	103	71
115	106	73
120	110	75

⑤ See SBSD-28 standard for "y" value.

⑦ Use 2 Eq Spa for W18 thru W27 beams and 3 Eq Spa for W30 beams and larger.

HL93 LOADING SHEET 2 OF 3



**ABUTMENTS**  
**STEEL BEAM SPANS**  
 28' ROADWAY 30°SKEW

**ASB-28-30**

FILE: sbstdel8.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY	SHEET NO.	

