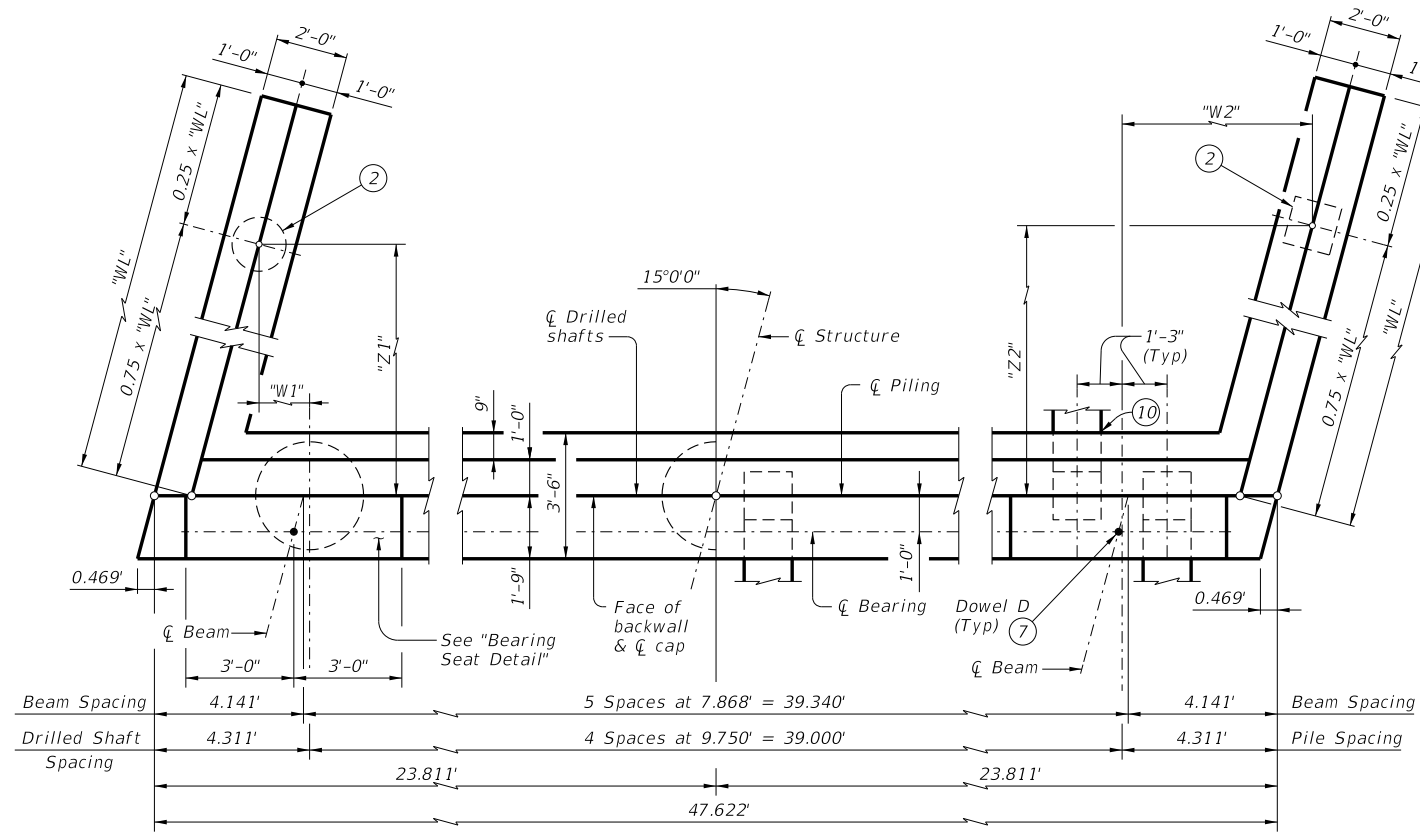


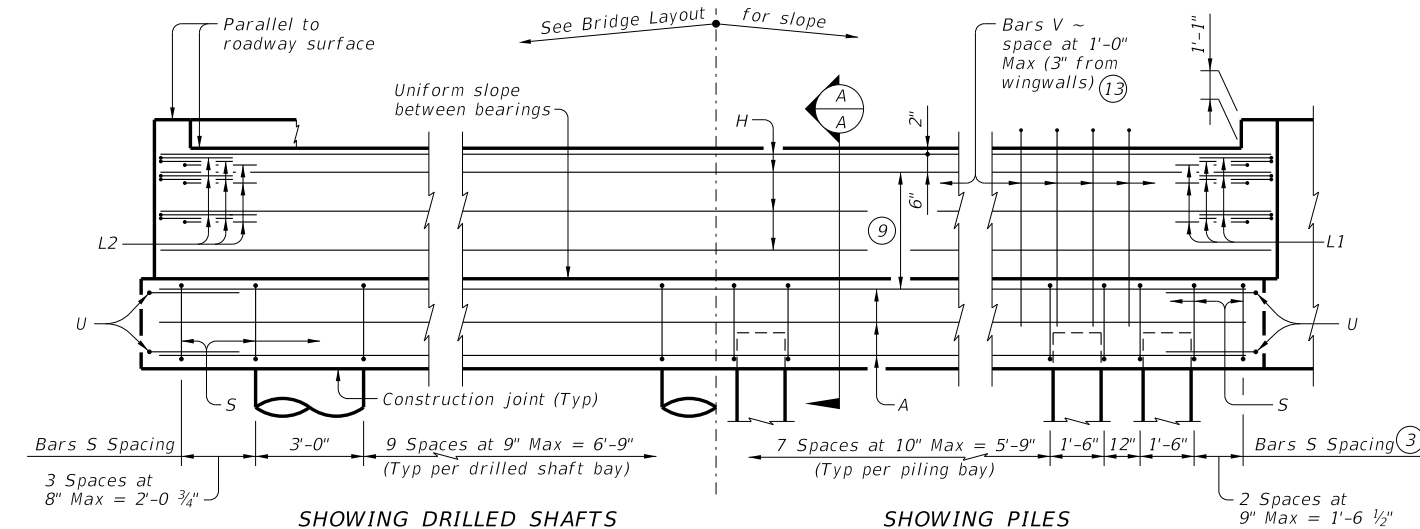
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SHOWING DRILLED SHAFTS SHOWING PILES

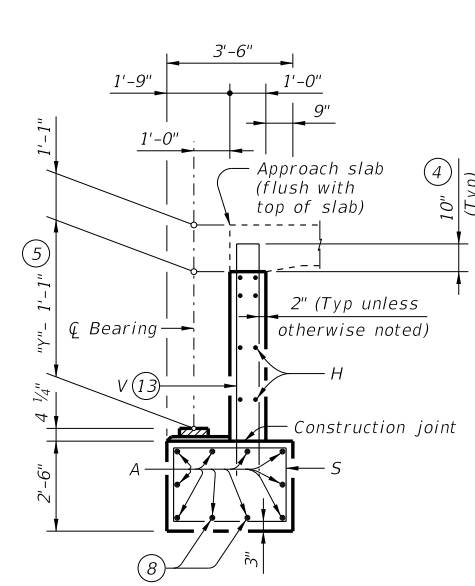
PLAN 1



SHOWING DRILLED SHAFTS SHOWING PILES

ELEVATION

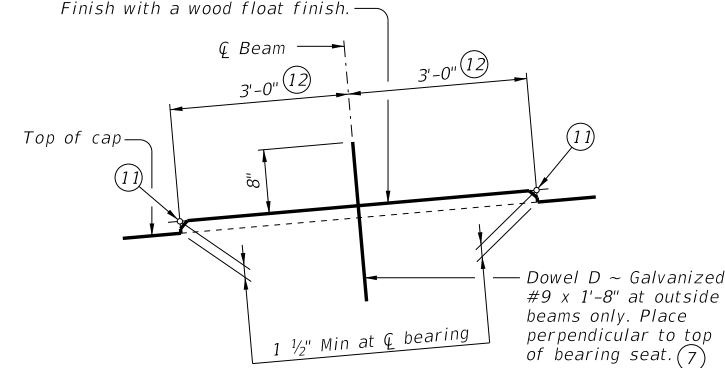
Header Slope	Beam Type	Wingwall Type	Wingwall Length "WL"	"W1"	"Z1"	"W2"	"Z2"				
2:1	XB20	Cantilevered	7.000'	Not Applicable							
	XB28	Cantilevered	8.000'								
	XB34	Cantilevered	9.000'								
	XB40	Cantilevered	10.000'								
3:1	XB20	Cantilevered	10.000'	Not Applicable							
	XB28	Cantilevered	12.000'								
	XB34	Founded	14.000'					0.558'	10.142'	5.994'	10.142'
	XB40	Founded	15.000'					0.364'	10.867'	6.188'	10.867'



SECTION A-A

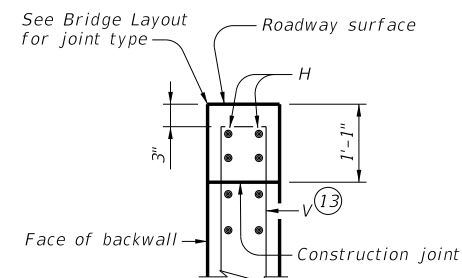
(With approach slab) 6

Level along a line perpendicular to backwall. Uniform slope between left and right bearing seat elevations. Finish with a wood float finish.



BEARING SEAT DETAIL

(Remove all loose material and clean bearing surface before placing the bearing pad.)



BACKWALL DETAIL

(Without approach slab) 6

- 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" from finished grade.
- See Span Details for "Y" value.
- See Bridge Layout to determine if approach slab is present.
- Omit Dowels D at end of multi-span unit. Adjust reinforcing steel total accordingly.
- With pile foundations, move Bars A shown to clear piles.
- Spacing based on beam type:
XB20 ~ 2 spaces at 1'-0" Max
XB28 ~ 3 spaces at 1'-0" Max
XB34 ~ 3 spaces at 1'-0" Max
XB40 ~ 3 spaces at 1'-0" Max
- See Detail A on Common Foundation Details (FD) standard.
- Right and left elevations and locations are provided elsewhere.
- Measured along ϕ of bearing.
- Field bend as needed to clear piles.

TABLE OF FOUNDATION LOADS

Span Length	Drilled Shaft Load	Battered Pile Load
	Tons/DS	Tons/Pile
40	60	49
45	64	51
50	69	53
55	73	56
60	77	58
65	81	60
70	85	62
75	90	64
80	94	66
85	98	68
90	102	71
95	106	73
100	110	75
105	114	77
110	118	79

MATERIAL NOTES:

- Provide Class C concrete ($f'c = 3,600$ psi.)
- Provide Class C (HPC) concrete if shown elsewhere in the plans.
- Provide Grade 60 reinforcing steel.
- Galvanize dowel bars D.

GENERAL NOTES:

- Designed according to AASHTO LRFD Bridge Design Specifications.
- See Bridge Layout for header slope and foundation type, size and length.
- See Common Foundation Details (FD) standard for all foundation details and notes.
- See Concrete Riprap (CRR) standard sheet or Stone Riprap (SRR) standard sheet for riprap attachment details, if applicable.
- See Shear Key Details (XBSK) standard sheet for all shear key details and notes if applicable.
- See applicable rail details for rail anchorage details in wingwalls.
- Details are drawn showing right forward skew. See Bridge Layout for actual skew direction.
- These abutment details may be used with standard SXB-44-15 only.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

HL93 LOADING

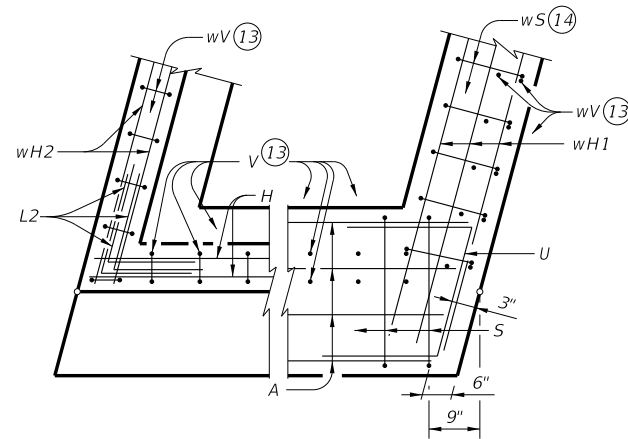
SHEET 1 OF 2



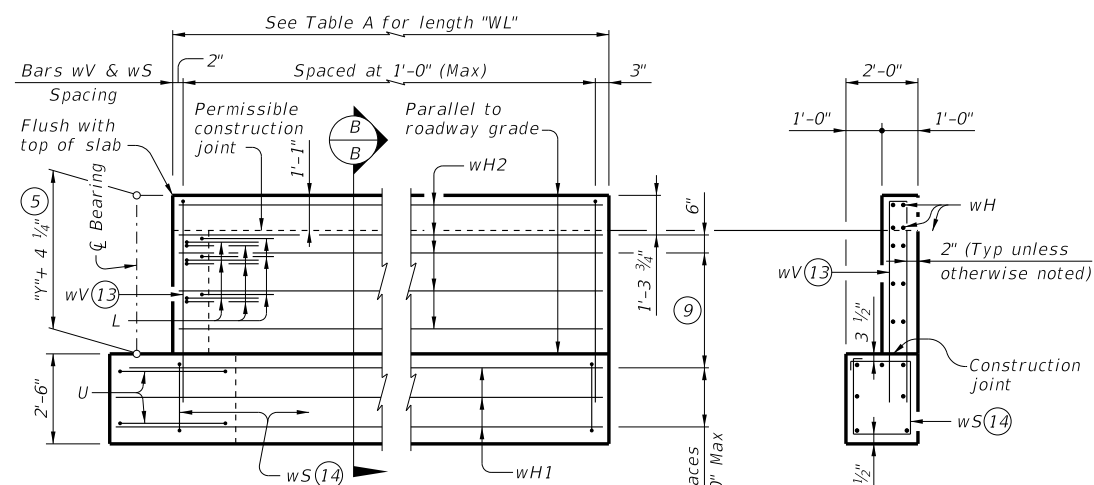
ABUTMENTS
PRESTR CONC X-BEAMS
(TYPE 5XB20 THROUGH 5XB40)
44' ROADWAY 15° SKEW
AXB-44-15

FILE: XB-AXB4415-22.dgn	DN: BMP	CK: EFC	DW: JER	CK: BMP
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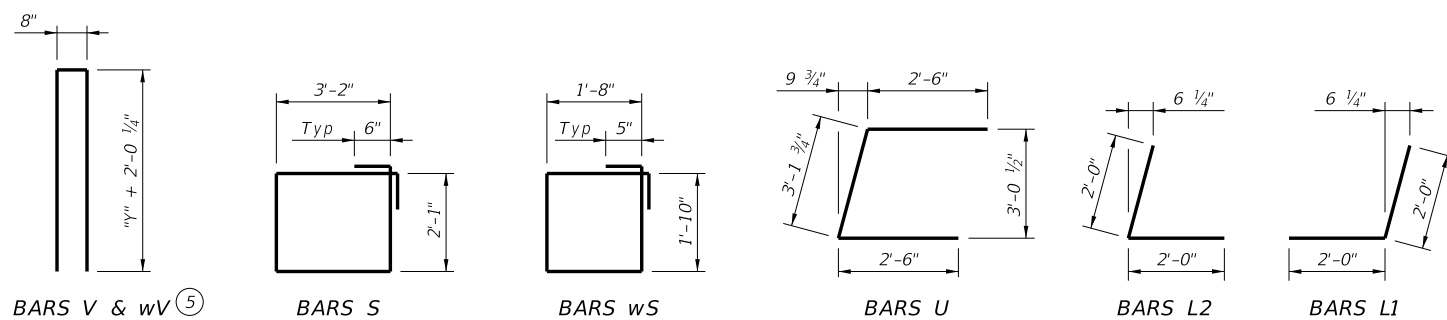


BACKWALL CAP
CORNER DETAILS



WINGWALL ELEVATION

SECTION B-B



BARS V & wV

BARS S

BARS wS

BARS U

BARS L2

BARS L1

TABLES OF ESTIMATED QUANTITIES WITH 2:1 HEADER SLOPE

TYPE 5XB20 BEAMS					TYPE 5XB28 BEAMS					TYPE 5XB34 BEAMS					TYPE 5XB40 BEAMS								
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight				
A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475				
D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11				
H	6	#6	47'-3"	426	H	8	#6	47'-3"	568	H	8	#6	47'-3"	568	H	8	#6	47'-3"	568				
L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54				
L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54				
S	48	#5	11'-6"	576	S	48	#5	11'-6"	576	S	48	#5	11'-6"	576	S	48	#5	11'-6"	576				
U	4	#6	8'-2"	49	U	4	#6	8'-2"	49	U	4	#6	8'-2"	49	U	4	#6	8'-2"	49				
V	47	#5	10'-0"	490	V	47	#5	11'-3"	551	V	47	#5	12'-6"	613	V	47	#5	13'-3"	650				
wH1	14	#6	8'-5"	177	wH1	14	#6	9'-5"	198	wH1	14	#6	10'-5"	219	wH1	14	#6	11'-5"	240				
wH2	16	#6	6'-8"	160	wH2	20	#6	7'-8"	230	wH2	20	#6	8'-8"	260	wH2	20	#6	9'-8"	290				
wS	16	#4	7'-10"	84	wS	18	#4	7'-10"	94	wS	20	#4	7'-10"	105	wS	22	#4	7'-10"	115				
wV	16	#5	10'-0"	167	wV	18	#5	11'-3"	211	wV	20	#5	12'-6"	261	wV	22	#5	13'-3"	304				
Reinforcing Steel				Lb	4,723	Reinforcing Steel				Lb	5,071	Reinforcing Steel				Lb	5,245	Reinforcing Steel				Lb	5,386
Class "C" Concrete				CY	22.4	Class "C" Concrete				CY	24.5	Class "C" Concrete				CY	26.3	Class "C" Concrete				CY	28.2

TABLES OF ESTIMATED QUANTITIES WITH 3:1 HEADER SLOPE

TYPE 5XB20 BEAMS					TYPE 5XB28 BEAMS					TYPE 5XB34 BEAMS					TYPE 5XB40 BEAMS								
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight				
A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475	A	10	#11	46'-7"	2,475				
D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11	D(7)	2	#9	1'-8"	11				
H	6	#6	47'-3"	426	H	8	#6	47'-3"	568	H	8	#6	47'-3"	568	H	8	#6	47'-3"	568				
L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54	L1	9	#6	4'-0"	54				
L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54	L2	9	#6	4'-0"	54				
S	48	#5	11'-6"	576	S	48	#5	11'-6"	576	S	48	#5	11'-6"	576	S	48	#5	11'-6"	576				
U	4	#6	8'-2"	49	U	4	#6	8'-2"	49	U	4	#6	8'-2"	49	U	4	#6	8'-2"	49				
V	47	#5	10'-0"	490	V	47	#5	11'-3"	551	V	47	#5	12'-6"	613	V	47	#5	13'-3"	650				
wH1	14	#6	11'-5"	240	wH1	14	#6	13'-5"	282	wH1	14	#6	15'-5"	324	wH1	14	#6	16'-5"	345				
wH2	16	#6	9'-8"	232	wH2	20	#6	11'-8"	350	wH2	20	#6	13'-8"	411	wH2	20	#6	14'-8"	441				
wS	22	#4	7'-10"	115	wS	26	#4	7'-10"	136	wS	30	#4	7'-10"	157	wS	32	#4	7'-10"	167				
wV	22	#5	10'-0"	229	wV	26	#5	11'-3"	305	wV	30	#5	12'-6"	391	wV	32	#5	13'-3"	442				
Reinforcing Steel				Lb	4,951	Reinforcing Steel				Lb	5,411	Reinforcing Steel				Lb	5,683	Reinforcing Steel				Lb	5,832
Class "C" Concrete				CY	24.2	Class "C" Concrete				CY	27.0	Class "C" Concrete				CY	29.7	Class "C" Concrete				CY	31.7

- (5) See Span Details for "Y" value.
- (7) Omit Dowels D at end of multi-span unit. Adjust reinforcing steel total accordingly.
- (9) Spacing based on beam type:
XB20 ~ 2 spaces at 1'-0" Max
XB28 ~ 3 spaces at 1'-0" Max
XB34 ~ 3 spaces at 1'-0" Max
XB40 ~ 3 spaces at 1'-0" Max
- (13) Field bend as needed to clear piles.
- (14) Adjust as required to avoid piling.
- (15) Quantities shown are for one abutment only (with approach slab.) With no approach slab, add 1.8 CY Class C concrete and 284 lbs of reinforcing steel for 4 additional H bars.

HL93 LOADING

SHEET 2 OF 2

Texas Department of Transportation Bridge Division Standard

ABUTMENTS
PRESTR CONC X-BEAMS
(TYPE 5XB20 THROUGH 5XB40)
44' ROADWAY 15° SKEW
AXB-44-15

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