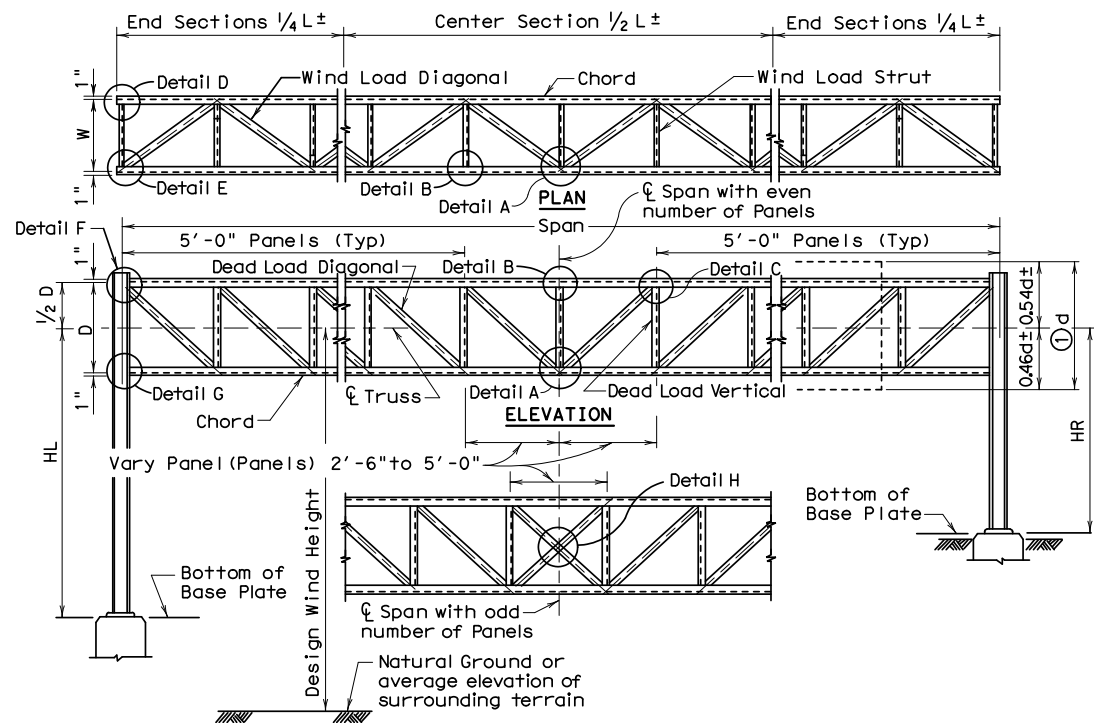


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SPAN	TRUSS DETAILS											
	160'		165'		170'		175'					
	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION		
W x D = WIDTH x DEPTH	6.5 x 6.5		6.5 x 6.5		6.5 x 6.5		6.5 x 6.5		7.0 x 7.0		7.0 x 7.0	
CHORD - ②, Unless Otherwise Shown	L 6 x 6 x 1/2 [21]	L 6 x 6 x 3/16 [22]	L 6 x 6 x 3/16 [23]	L 6 x 6 x 5/8 [24]	L 6 x 6 x 3/16 [24]	L 6 x 6 x 5/8 [25]	L 6 x 6 x 3/16 [24]	L 6 x 6 x 5/8 [25]	L 6 x 6 x 3/16 [24]	L 6 x 6 x 5/8 [25]	L 6 x 6 x 3/16 [24]	L 6 x 6 x 5/8 [25]
DEAD LOAD DIAGONAL - ③, Unless Otherwise Shown	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 x 2 1/2 x 1/4 [3]
WIND LOAD DIAGONAL - ③	L 4 x 3 1/2 x 3/8 [5]	L 3 1/2 x 3 1/2 x 5/16 [4]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 4 x 5/16 [4]	L 4 x 3 1/2 x 3/8 [5]	L 3 1/2 x 3 1/2 x 5/16 [5]	L 4 x 4 x 5/16 [5]	L 3 1/2 x 3 1/2 x 5/16 [5]	L 4 x 4 x 5/16 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]
DEAD LOAD VERTICAL - ③	L 3 x 2 1/2 x 1/4 [2]	L 3 x 2 1/2 x 1/4 [2]	L 3 x 3 x 1/4 [2]	L 3 x 2 1/2 x 1/4 [2]	L 3 x 3 x 1/4 [2]	L 3 x 2 1/2 x 1/4 [2]	L 3 x 3 x 1/4 [2]	L 3 x 2 1/2 x 1/4 [2]	L 3 x 3 x 1/4 [2]	L 3 1/2 x 3 x 1/4 [4]	L 3 x 3 x 1/4 [2]	L 3 x 2 1/2 x 1/4 [2]
WIND LOAD STRUT - ③	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]
TOTAL DEFL. & TRUSS D.L.	D.L. = 149 lb/ft	DEFL = 3.93"	D.L. = 152 lb/ft	D.L. = 160 lb/ft	DEFL = 4.02"	D.L. = 165 lb/ft	D.L. = 160 lb/ft	DEFL = 4.51"	D.L. = 166 lb/ft	D.L. = 168 lb/ft	DEFL = 4.54"	D.L. = 173 lb/ft

S = COLUMN SPACING	TOWER DETAILS									
	8.5'		8.5'		8.5'		9.0'			
TOWER HEIGHT										
20'	W 18 x 50	(115)	W 18 x 50	(119)	W 18 x 50	(122)	W 18 x 55	(119)	W 18 x 55	(126)
21'	W 18 x 50	(121)	W 18 x 55	(127)	W 18 x 55	(130)	W 18 x 55	(126)	W 18 x 55	(126)
22'	W 18 x 55	(129)	W 18 x 55	(133)	W 18 x 55	(137)	W 21 x 57	(133)	W 21 x 57	(133)
23'	W 18 x 55	(135)	W 21 x 57	(140)	W 21 x 57	(144)	W 21 x 62	(139)	W 21 x 62	(139)
24'	W 21 x 57	(142)	W 21 x 62	(147)	W 21 x 62	(150)	W 21 x 62	(146)	W 21 x 62	(146)
25'	W 21 x 62	(148)	W 21 x 62	(153)	W 21 x 62	(157)	W 21 x 62	(153)	W 21 x 62	(153)
26'	W 21 x 62	(155)	W 21 x 62	(160)	W 21 x 62	(164)	W 21 x 68	(159)	W 21 x 68	(159)
27'	W 21 x 62	(161)	W 21 x 68	(166)	W 21 x 68	(171)	W 21 x 68	(166)	W 21 x 68	(166)
28'	W 21 x 68	(168)	W 21 x 68	(173)	W 21 x 68	(178)	W 21 x 68	(173)	W 21 x 68	(173)
29'	W 21 x 68	(174)	W 21 x 68	(180)	W 24 x 68	(185)	W 24 x 68	(180)	W 24 x 68	(180)
30'	W 21 x 68	(181)	W 24 x 68	(187)	W 24 x 68	(192)	W 24 x 68	(186)	W 24 x 68	(186)
31'	W 24 x 68	(188)	W 24 x 68	(194)	W 24 x 68	(199)	W 24 x 68	(193)	W 24 x 68	(193)
32'	W 24 x 68	(194)	W 24 x 68	(200)	W 24 x 76	(206)	W 24 x 76	(198)	W 24 x 76	(198)
33'	W 24 x 68	(201)	W 24 x 76	(207)	W 24 x 76	(213)	W 24 x 76	(207)	W 24 x 76	(207)
34'	W 24 x 76	(207)	W 24 x 76	(214)	W 24 x 76	(220)	W 24 x 76	(214)	W 24 x 76	(214)
35'	W 24 x 76	(214)	W 24 x 76	(221)	W 24 x 76	(227)	W 24 x 84	(224)	W 24 x 84	(224)
36'	W 24 x 76	(221)	W 24 x 76	(228)	W 24 x 84	(237)	W 24 x 84	(231)	W 24 x 84	(231)
37'	W 24 x 76	(228)	W 24 x 84	(238)	W 24 x 84	(245)	W 24 x 84	(238)	W 24 x 84	(238)
38'	W 24 x 84	(238)	W 24 x 84	(245)	W 24 x 84	(252)	W 24 x 94	(245)	W 24 x 94	(245)
39'	W 24 x 84	(245)	W 24 x 84	(253)	W 24 x 84	(260)	W 24 x 94	(252)	W 24 x 94	(252)
40'	W 24 x 84	(252)	W 24 x 84	(260)	W 24 x 94	(267)	W 24 x 94	(259)	W 24 x 94	(259)
42'	W 24 x 94	(267)	W 24 x 94	(276)	W 24 x 104	(285)	W 24 x 104	(278)	W 24 x 104	(278)
45'	W 24 x 104	(288)	W 24 x 104	(299)	W 24 x 104	(308)	W 24 x 104	(300)	W 24 x 104	(300)



- ① d = Sign Depth
Where signs of different depths are used, the bottom edges of all signs may be placed in line. Where this is done, all signs should be so positioned that the bottom edges are approximately 0.46 of the depth of the deepest sign below the \bar{C} of the truss.
- ② "Low-Alloy Steel" for non-bridge structures per Item 442, "Metal For Structures".
- ③ "Carbon Steel" for non-bridge structures per Item 442, "Metal For Structures".

SHEET 1 OF 2



HIGH LEVEL OVERHEAD SIGN BRIDGE DETAILS

HOSB-Z1L

© TxDOT November 2007	REVISED	DATE	BY	CHKD	APP'D	PROJECT	SHEET NO.
8/08 removed trash artifacts; angle sizes (select spans); misc text							

DATE: FILE:

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SPAN	TRUSS DETAILS								TOWER DETAILS							
	180'		185'		190'		195'		9.0'		9.0'		9.5'		9.5'	
	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION	END SECTIONS	CENTER SECTION
W x D = WIDTH x DEPTH	7.0 x 7.0		7.0 x 7.0		7.0 x 7.0		7.0 x 7.0		7.5 x 7.5		7.5 x 7.5		7.5 x 7.5		7.5 x 7.5	
CHORD - (2), Unless Otherwise Shown	L 6 x 6 x 5/8 [26]	L 6 x 6 x 3/4 [29]	L 6 x 6 x 5/8 [28]	L 6 x 6 x 3/4 [29]	L 6 x 6 x 5/8 [28]	L 6 x 6 x 3/4 [29]	L 6 x 6 x 5/8 [28]	L 6 x 6 x 3/4 [29]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]	L 6 x 6 x 3/4 [30]
DEAD LOAD DIAGONAL - (3), Unless Otherwise Shown	L 3 x 3 x 1/4 (2) [3]	L 3 x 2 1/2 x 1/4 [3]	L 3 x 3 x 1/4 (2) [3]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]	L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [3]
WIND LOAD DIAGONAL - (3)	L 4 x 4 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 3 1/2 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]	L 4 x 4 x 3/8 [5]
DEAD LOAD VERTICAL - (3)	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]	L 3 1/2 x 3 x 1/4 [3]	L 3 x 3 x 1/4 [3]
WIND LOAD STRUT - (3)	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]
TOTAL DEFL. & TRUSS D.L.	D.L.=178 lb/ft	DEFL=4.72"	D.L.=178 lb/ft	DEFL=5.23"	D.L.=178 lb/ft	DEFL=5.23"	D.L.=184 lb/ft	DEFL=5.22"	D.L.=200 lb/ft	D.L.=206 lb/ft	DEFL=5.44"	D.L.=206 lb/ft	DEFL=5.44"	D.L.=220 lb/ft	D.L.=220 lb/ft	D.L.=220 lb/ft

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TRUSS DETAILS 3/4" Dia. H.S. Bolts	
200'	
END SECTIONS	CENTER SECTION
7.5 x 7.5	7.5 x 7.5
L 6 x 6 x 3/4 [32]	L 6 x 6 x 7/8 [34]
L 3 x 3 x 1/4 (2) [4]	L 3 x 3 x 1/4 [4]
L 4 x 4 x 3/8 [6]	L 4 x 4 x 3/8 [5]
L 3 1/2 x 3 x 5/16 [3]	L 3 1/2 x 3 1/2 x 1/4 [3]
L 3 x 2 x 3/16 [2]	L 3 x 2 x 3/16 [2]
D.L.=211 lb/ft	DEFL=6.06"
D.L.=223 lb/ft	

TOWER DETAILS	
9.5'	
TOWER HEIGHT	COLUMN SIZE & UPLIFT (kips)
20'	W 21 x 62 (131)
21'	W 21 x 62 (138)
22'	W 21 x 62 (145)
23'	W 21 x 68 (153)
24'	W 21 x 68 (160)
25'	W 21 x 68 (167)
26'	W 24 x 68 (174)
27'	W 24 x 68 (182)
28'	W 24 x 68 (189)
29'	W 24 x 76 (196)
30'	W 24 x 76 (204)
31'	W 24 x 76 (211)
32'	W 24 x 84 (221)
33'	W 24 x 84 (228)
34'	W 24 x 84 (236)
35'	W 24 x 94 (244)
36'	W 24 x 94 (251)
37'	W 24 x 94 (258)
38'	W 24 x 94 (266)
39'	W 24 x 104 (274)
40'	W 24 x 104 (282)
42'	W 24 x 104 (297)
45'	W 24 x 117 (320)

NOTE: Details on these sheets are for Design Wind Heights between 30 feet and 50 feet.

GENERAL NOTES

Design conforms to AASHTO 1994 Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Revisions thereto.

For overhead sign bridges with different tower heights, average the height of the two towers and use the tabulated height nearest the calculated average. For average heights falling midway between the two tabulated heights use the larger height.

For truss lengths falling between those shown in the tables use the sizes called for in the next longer span.

Overhead sign bridges are designed for the equivalent area of a 10 foot deep sign panel over 75 percent of the span length, located as necessary to produce maximum stress. Design includes 3 pounds per square foot for sign panel, 20 pounds per linear foot for lights, and 50 pounds per linear foot for walkway, all placed as specified for the design sign panel.

Refer to "Overhead Sign Bridge Truss Details" for details called out in plan and elevation views.

The number of High Strength Bolts required in truss connection or splice are indicated in brackets, e.g. [3], after the member size.

KEY TO TRUSS AND TOWER DETAILS

Truss members are all angles.
Truss columns are all wide flange shapes.

W 18 x 55 (115) ← 115 kips Uplift at base plate
— 55 Pounds per foot.
— 18" Nominal size
— Wide Flange

DEFL = 0.12" = inches Deflection due to dead load of truss, walkway, signs and lights.
DL = 42 lb/ft = pounds per foot dead load of truss members only; does not include walkway, signs, and lights.

SHEET 2 OF 2



HIGH LEVEL OVERHEAD SIGN BRIDGE DETAILS

HOSB-Z1L

© TxDOT November 2007	REVISED	DESIGNED	CHECKED	APPROVED
8/08 angle sizes (select spans); applicability note; noted design specifications	CUAT	SECT	JUB	HIGHWAY
	DIST	COUNTY		SHEET NO.