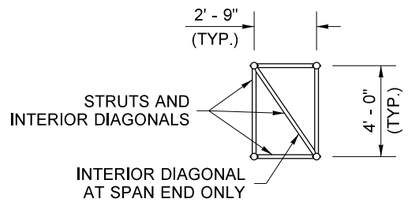
POST SELECTION			
TOTAL SIGN AREA ◇1 Σ (X TIMES Y) (FT^2)	POST SIZE		
	O.D.	WALL	
50 OR LESS	18"	0.438"	SINGLE OR DOUBLE CANTILEVER
50+ to 100	18"	0.438"	
100+ to 150	24"	0.375"	
150+ to 200	24"	0.375"	
200+ to 250	24"	0.375"	DOUBLE CANTILEVER ONLY
250+ to 300	24"	0.375"	
300+ to 350	24"	0.438"	
350+ to 400	24"	0.500"	

◇1 SUM OF SIGN FOR DOUBLE CANTILEVER

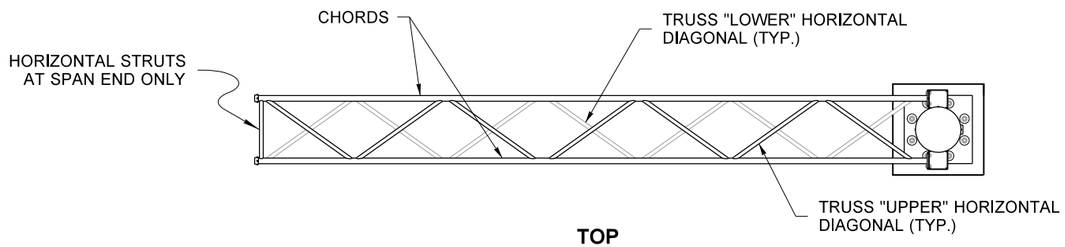


END

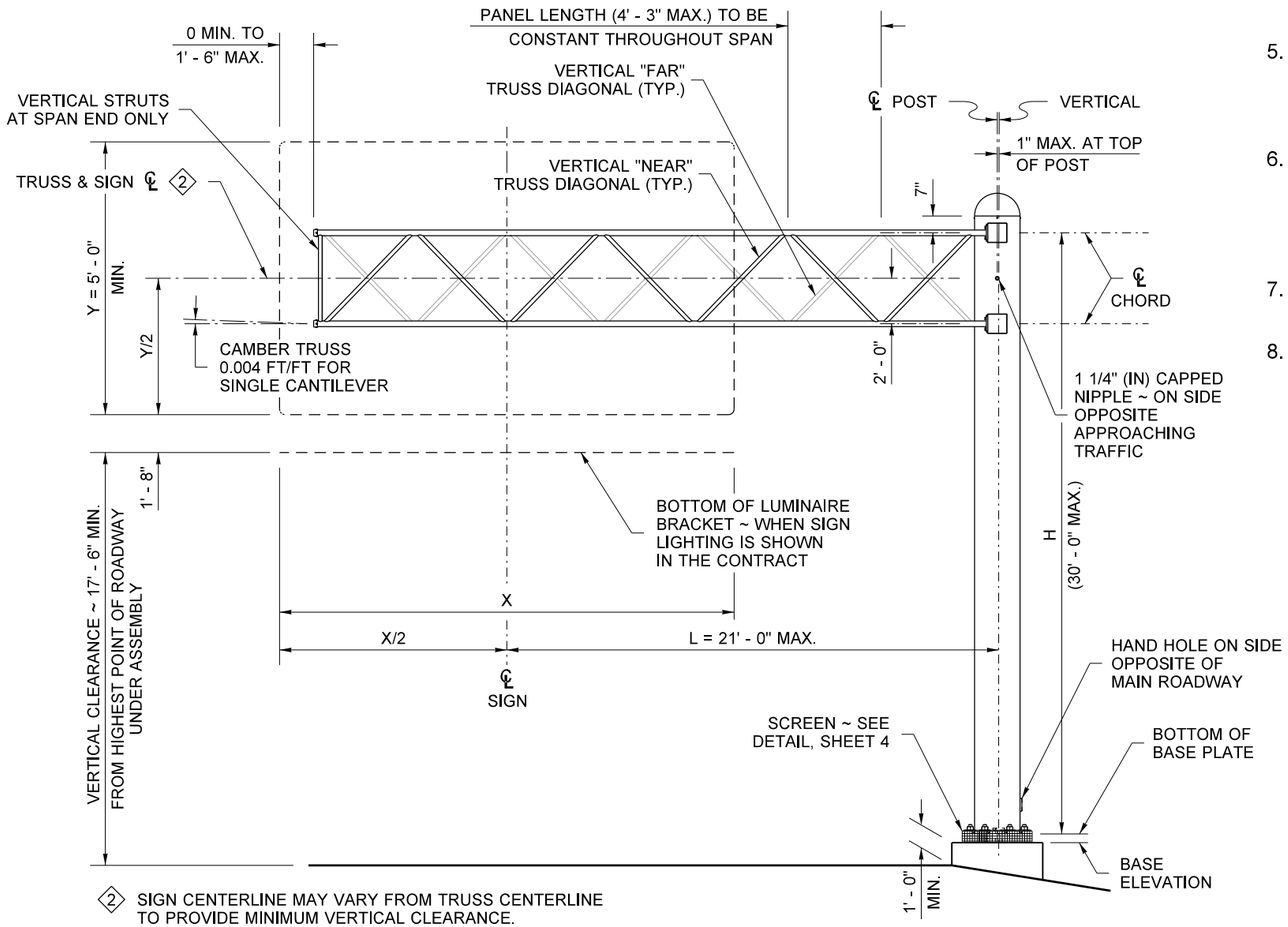
ALL TRUSS DIAGONALS AND STRUTS SHALL BE 1 1/2" (IN) PIPE (0.145" (IN) WALL)

CHORD SELECTION		
SIGN AREA (X TIMES Y) (FT^2)	CHORD SIZE	
	NOM. DIAM.	WALL
50 OR LESS	2"	0.154"
50+ TO 100	2"	0.218"
100+ TO 150	2 1/2"	0.203"
150+ TO 200	3"	0.216"

MATERIAL SPECIFICATIONS	
PIPE (CHORDS, DIAGONALS, STRUTS AND POSTS)	ASTM A 36 OR ASTM A 53 GRADE B, TYPE E OR S, OR A 500 GRADE B
PLATES	ASTM A 36
SHAPES	ASTM A 36 ASTM A 992
BOLTS, NUTS, & WASHERS	STD. SPEC. SECT. 9-06.5(3)
PIPE, PLATE & SHAPE GALVANIZING	AASHTO M 111
FASTENER GALVANIZING	ASTM F2329



TOP



◇2 SIGN CENTERLINE MAY VARY FROM TRUSS CENTERLINE TO PROVIDE MINIMUM VERTICAL CLEARANCE.

ELEVATION

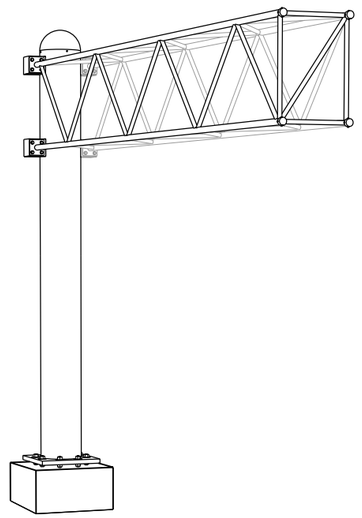
SINGLE CANTILEVER SIGN STRUCTURE

NOTES

1. Vertical and horizontal clearance requirements shall be as shown on the Contract Plans.
2. No post splices permitted in lower third of height, nor closer than3' - 0" to bottom chord, except as otherwise noted. No chord shop splices permitted in first two-thirds of the span, except as otherwise noted. A maximum of two splices are permitted in the post. For post or chord shop splice details, see **Standard Plan G-70.10**.
3. The back-up plates or rings for all full penetration welds shall be welded continuously to the joined pieces. This can be done by either a continuous fillet weld on the back side of the piece, or by a continuous weld in the root of the full
4. penetration weld.
5. All bolt holes shall be drilled, and the diameter shall be 1/16" (in) larger than the nominal bolt diameter, except as noted.
6. The design and analysis of the structures has been done in accordance with AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals Dated 2001, using 90 MPH wind velocity and fatigue category - I.
7. Adjust post alignment in plane normal to roadway center-line by means of leveling nuts located below base plate to maintain upward slope in cantilever arm(s). Tighten anchor nuts above base
8. plate in accordance with **Standard Specification Section 6-03.3(33).**

Variable Message Signs (VMS) exceeding 700 lbs. and/or 200 sq. ft. shall not be installed on cantilever structure.

For electrical requirements, see **Standard Plan J-75.45.**



PERSPECTIVE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\02-PSL Work in Progress\Fern\(SD-10) Cantiliever Sign Structure(Truss Type)\PS_SD-10_e.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	11:13:17 AM				10	WASH	
DATE	7/19/2019				JOB NUMBER		
PLOTTED BY	liddelf						
DESIGNED BY							
ENTERED BY							
CHECKED BY					CONTRACT NO.		LOCATION NO.
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

P.E. STAMP BOX — DATE

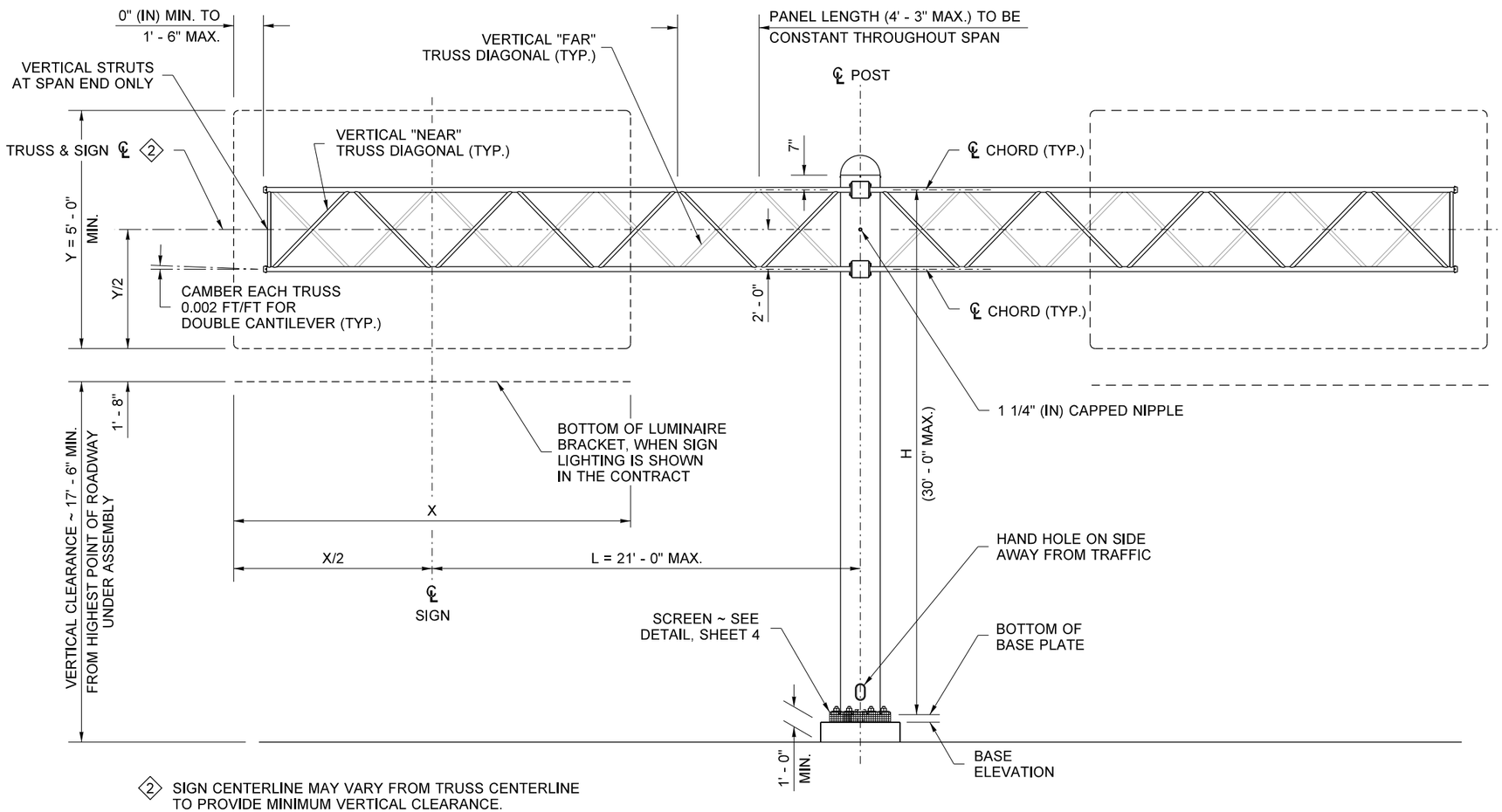
P.E. STAMP BOX — DATE

Washington State Department of Transportation

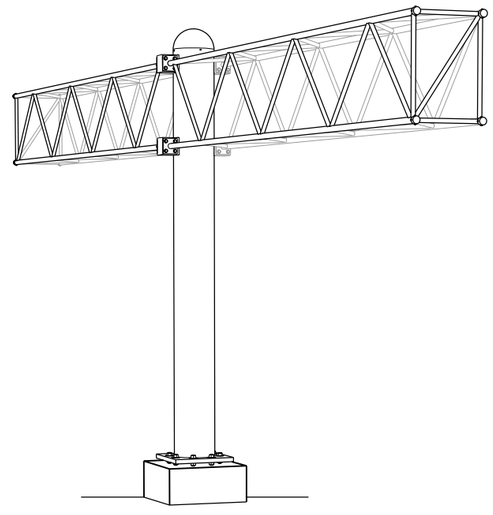
CANTILEVER SIGN STRUCTURE (TRUSS TYPE)

PLAN REF NO SD-10

SHEET 1 OF 4 SHEETS



ELEVATION



PERSPECTIVE

DOUBLE CANTILEVER SIGN STRUCTURE

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DATE	6/20/2019				10	WASH			
PLOTTED BY	liddelf				JOB NUMBER				
DESIGNED BY									
ENTERED BY									
CHECKED BY					CONTRACT NO.		LOCATION NO.		
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY					

P.E. STAMP BOX — DATE

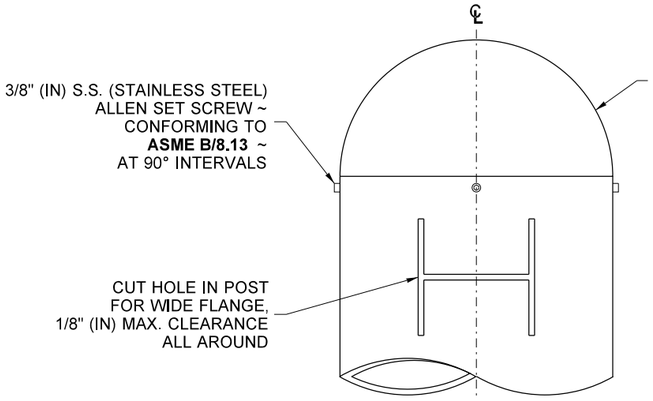
P.E. STAMP BOX — DATE

Washington State
Department of Transportation

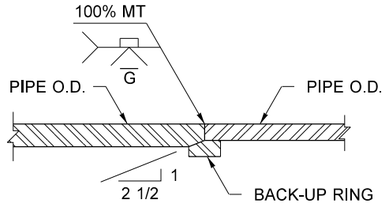
CANTILEVER SIGN STRUCTURE (TRUSS TYPE)

SD-10

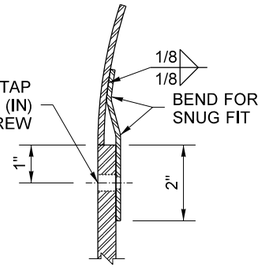
SHEET 2 OF 4 SHEETS



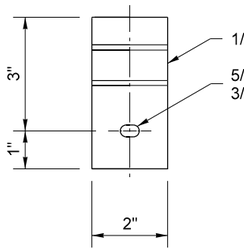
ELEVATION
ROTATED 90° TO SHOW CUTOUT



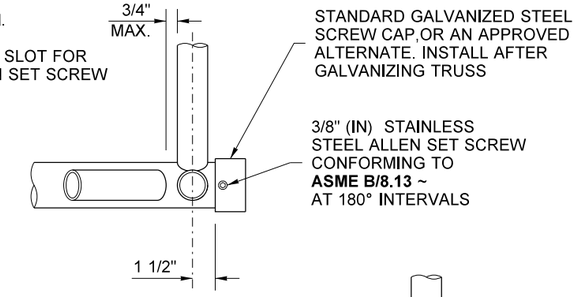
DETAIL "D"



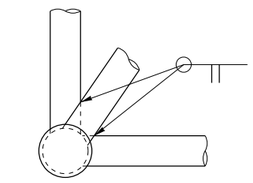
SECTION THROUGH FINIAL AND POST



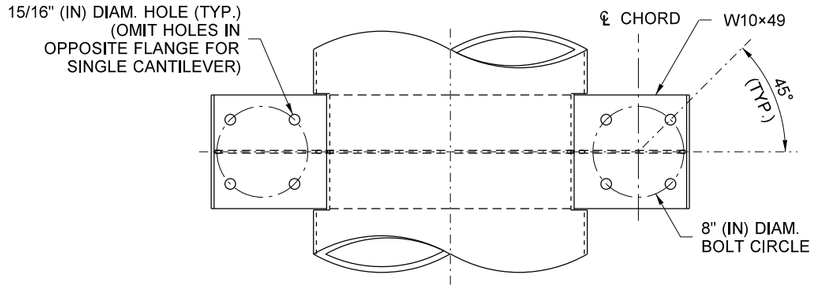
FINIAL BRACKET



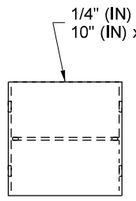
SPAN END ~ SIDE



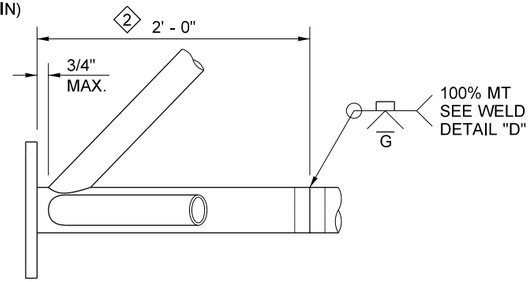
SPAN END ~ END
OPPOSITE HAND SHOWN FOR CLARITY



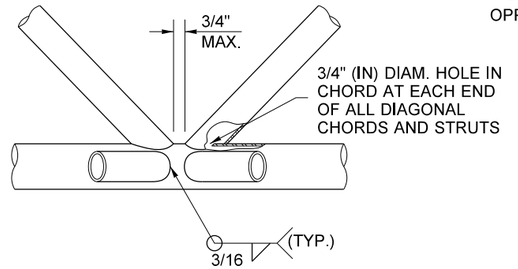
ELEVATION



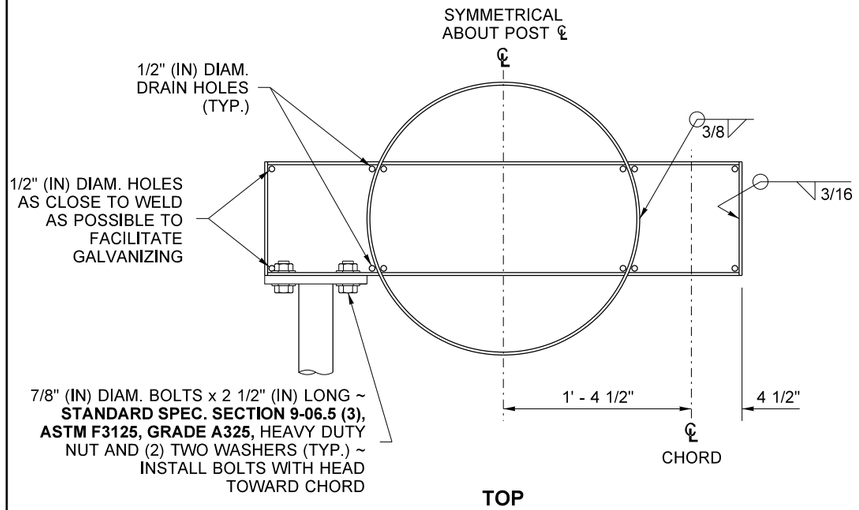
END OF CHORD



BASE ~ SIDE



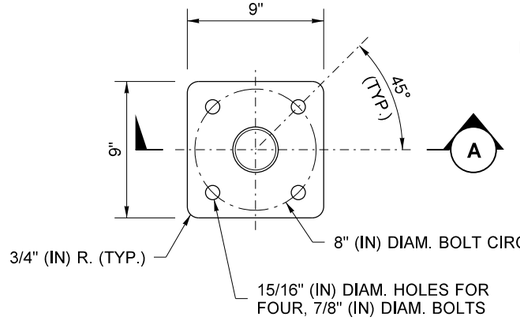
DIAGONAL CONNECTION DETAIL
TYPICAL OF ALL DIAGONALS



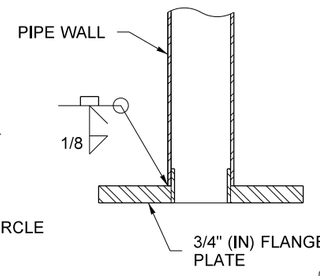
TOP

CHORD TO POST CONNECTION DETAIL

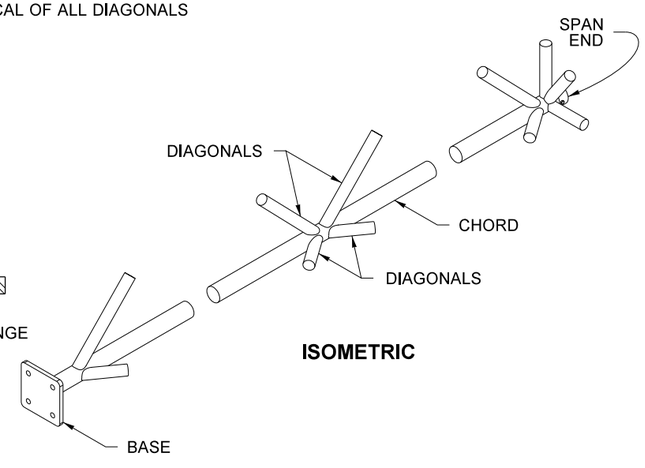
◇2 3" (IN) DIAM. PIPE (t = 0.300) SPLICE WITH 3" (IN) DIAM. PIPE (t = 0.216) (SEE CHORD SELECTION TABLE)
2 1/2" (IN) DIAM. PIPE (t = 0.276) SPLICE WITH 2 1/2" (IN) DIAM. PIPE (t = 0.203) (SEE CHORD SELECTION TABLE)



BASE ~ TOP



SECTION (A)

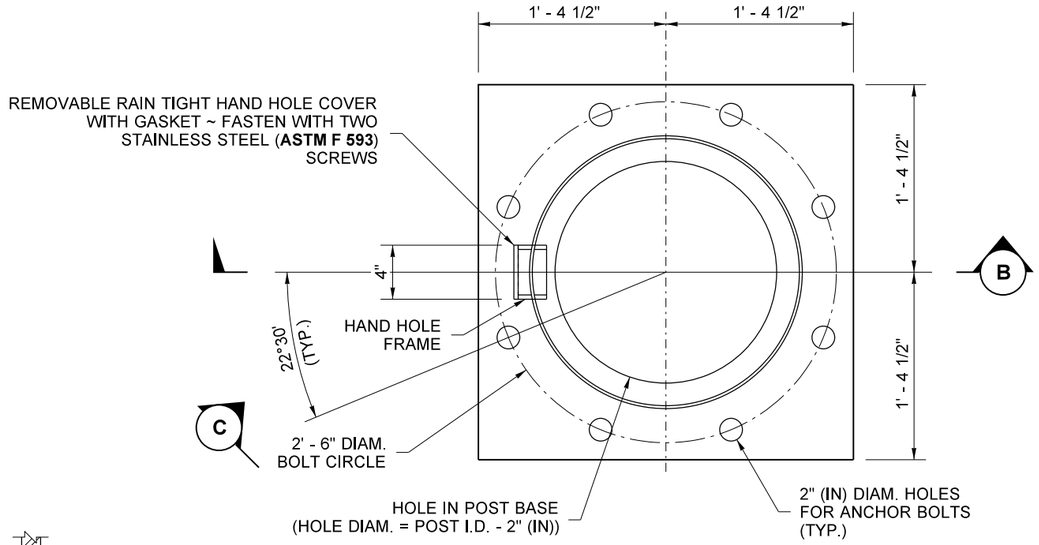


ISOMETRIC

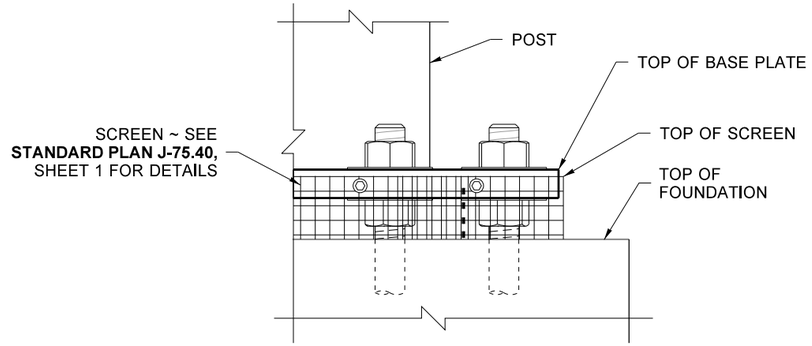
TYPICAL TRUSS DETAILS

(ENDS OF DIAGONALS SHALL BE CUT TO FIT NEATLY AGAINST CHORDS)

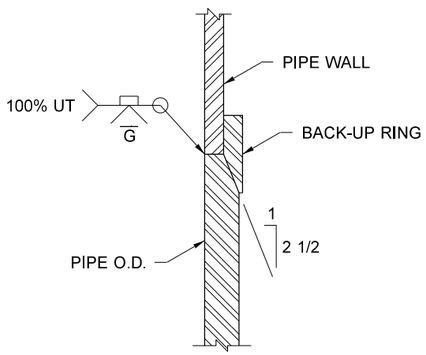
FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\02-PSL Work in Progress\Fern\(SD-10)Cantilever Sign Structure(Truss Type)\SD-10_e.dgn						Plot 3
TIME	11:51:47 AM			REGION NO. 10	STATE WASH	FED.AID PROJ.NO.	SD-10
DATE	4/5/2019			JOB NUMBER			
PLOTTED BY	liddelf						SHEET 3 OF 4 SHEETS
DESIGNED BY				CONTRACT NO.	LOCATION NO.		
ENTERED BY							
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.	REVISION	DATE	BY	P.E. STAMP BOX DATE	P.E. STAMP BOX DATE	Washington State Department of Transportation	CANTILEVER SIGN STRUCTURE (TRUSS TYPE)



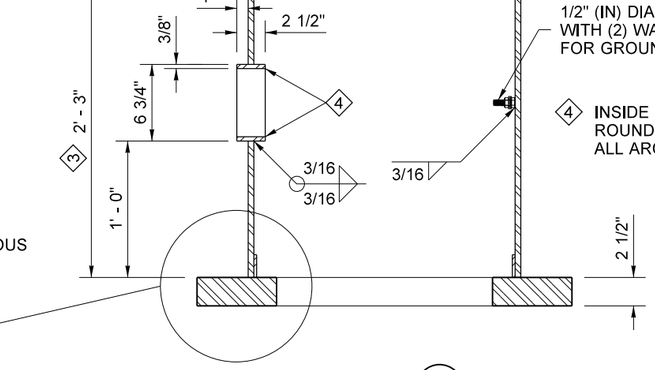
TOP



SCREEN DETAIL



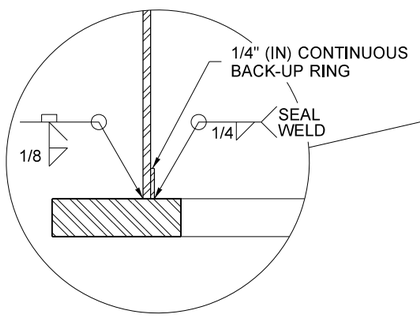
DETAIL "G"



SECTION B

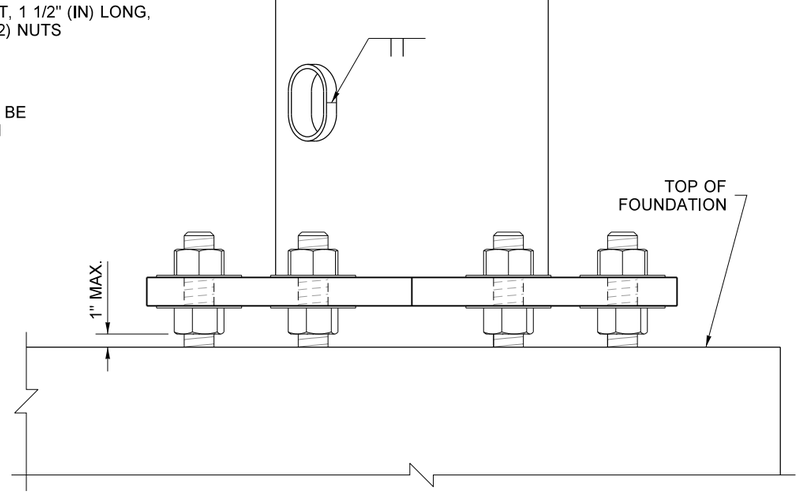
1/2" (IN) DIAM. STEEL BOLT, 1 1/2" (IN) LONG, WITH (2) WASHERS AND (2) NUTS FOR GROUND

4 INSIDE EDGES SHALL BE ROUND AND SMOOTH ALL AROUND



BASE WELD DETAIL

3 24" (IN) O.D. PIPE (t = 0.969) SPLICE WITH 24" (IN) O.D. UPPER POST (SEE POST SELECTION TABLE)
18" (IN) O.D. PIPE (t = 0.750) SPLICE WITH 18" (IN) O.D. UPPER POST (SEE POST SELECTION TABLE)



VIEW C

POST BASE DETAILS

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\02-PSL Work in Progress\Fern\(SD-10)Cantilever Sign Structure(Truss Type)\SD-10_e.dgm						PLOT4
TIME	8:49:55 AM			REGION NO. 10 / STATE WASH	FED.AID PROJ.NO.	Washington State Department of Transportation	SD-10
DATE	4/8/2019						
PLOTTED BY	liddelf			JOB NUMBER			SHEET 4 OF 4 SHEETS
DESIGNED BY							
ENTERED BY							
CHECKED BY				CONTRACT NO.	LOCATION NO.		
PROJ. ENGR.							
REGIONAL ADM.	REVISION	DATE	BY	P.E. STAMP BOX DATE	P.E. STAMP BOX DATE		CANTILEVER SIGN STRUCTURE (TRUSS TYPE)