

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

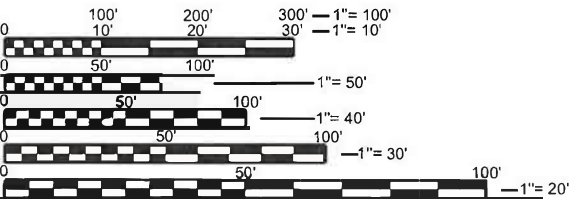
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	1
		ILLINOIS	CONTRACT NO. 46676	

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STANDARDS

701006-05
701101-05
701106-02
701201-05
701301-04
701400-12
701401-13
701406-13
701411-09
701426-09
701901-11
720021-03



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
STATEWIDE SIGN MAINT INT 26-13
VARIOUS COUNTIES
M-60-013-26



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 4 2026
[Signature] REGIONAL ENGINEER

August 14 2026
[Signature] ENGINEER OF DESIGN AND ENVIRONMENT

August 14 2026
[Signature] 5
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

MODEL: \$MODELNAME\$
FILE NAME: \$FILE\$

Code Number	Item	Unit of Measure	100% STATE 0021 Quantity
X7200315	SIGN FRAME S-325 DBL	FOOT	5
X7200310	SIGN FRAME S-325 SING	FOOT	5
X0301036	BASE PLATE S-325	EACH	5
X0301037	BASE PLATE S-218	EACH	5
X0325749	FIBER WRAP	SQ FT	50
X0326718	INSTAL REST AREA SIGN	EACH	5
X2600014	F & I SADDLE SHIM BL	EACH	5
X5090098	REPLACE HDRL SUPPORT	EACH	20
X5090100	FUR & INSTL HANDRAIL	FOOT	80
X5210005	TIGHTEN SUP ANCH BOLT	EACH	40
X7200050	TEMP SIGN SUP REP	EACH	15
X7200060	F & E GRAFFI RES S PL	SQ FT	120
X7200065	SIGN PANEL BACKPLATE	SQ FT	100
X7200070	REPAIR SIGN PANEL	EACH	50
X7200075	REM & REIN SIGN PANEL	SQ FT	2500
X7200080	RE-ERECT SIGN PANEL	SQ FT	5000
X7200085	RPL/TIGH CLP PER SIGN	EACH	10
X7200096	F & E SIGN PAN - LOGO	SQ FT	15000
X7240205	REMOV SIGN COMPLETE	EACH	100
X7270005	RE-E STR ST SN SUP BA	EACH	150
X7270006	BREAK SLIP B CON BOLT	EACH	5
X7270010	STR STL SN SUP-COUP T	POUND	500
X7270015	FUR BRKWAY COUP SET	EACH	5
X7270020	FUR HINGE PLATE SET	EACH	30

REV - MS

	USER NAME = \$USERS\$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ESTIMATED SUMMARY OF QUANTITIES					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -							VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	2
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -							CONTRACT NO. 46676				
	PLOT DATE = \$DATES\$	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS	FED. AID PROJECT	

Code Number	Item	Unit of Measure	100% STATE 0021 Quantity
X7270025	REM EX SIGN SUPPORT	EACH	75
X7301034	SIGN POST S-325	FOOT	20
X7301035	SIGN POST S-218	FOOT	20
X7330065	RPL HNDRL LCK PIN CON	EACH	5
X7330066	REP HDRL LOC PIN CON	EACH	20
X7330068	TIGHTEN CANT CONN	EACH	2
X7330069	TIGHTEN END SUP CONN	EACH	5
X7330070	OVHD SN SUP GROUT REP	EACH	20
X7330072	OVHD SIN STR-END SUP	EACH	2
X7330076	BR MOUNT SIGN SUPPORT	EACH	6
X7330078	REPL WLKWY SUP BRCKT	EACH	5
X7330080	REPL WLKWY S BRKT BLT	EACH	10
X7330082	MTNG BRCKT TY B	EACH	5
X7330084	MTNG BRCKT TYB REPAIR	EACH	2
X7330087	F&I WLKY TIE DN BOLTS	EACH	16
X7330090	METAL SCREEN	EACH	10
X7330093	INT MEMBR TRUSS CLAMP	EACH	4
X7330094	INTERNAL TRUSS DAMPER	EACH	4
X7330102	REPL OVHD SIN WALKWAY	FOOT	200
X7330112	SAFETY CHAIN	EACH	20
X7330120	REPL SPL FLANGE BOLT	EACH	2
X7330210	OSS T1 TRUSS ONLY	FOOT	15
X7330220	OSS T2TRUSS ONLY	FOOT	15
X7330230	OSS T3 TRUSS ONLY	FOOT	15

Code Number	Item	Unit of Measure	100% STATE 0021 Quantity
X7350005	SIGN SUPPORT REPAIR	EACH	85
X7350010	SIGN SUPPORT BRACKET	EACH	75
X8040310	ELECT SERV DISCONNECT	EACH	4
X8040510	RELOC ELECT SERVICE	EACH	2
X8050204	REMOVE ELEC SERVICE	EACH	2
X8140232	REPL HH COVER BOLT	EACH	12
X8140234	REPL HH COVER	EACH	5
X8420506	REM EX SIGN LT UNT NS	EACH	20
53212754	STR REP CON DP OVER 5	SQ FT	5
53212755	STR REP CON DP = < 5	SQ FT	5
Z0030902	TIGHTEN FUSE & BSE PL	EACH	5
Z0030904	TIGHTEN SPLICE FLANGE	EACH	2
Z0030905	INS SER SN OR MILE PL	EACH	20
Z0030907	REM SER OR MILE PLATE	EACH	15
Z0030910	TRANSFER SERVICE SIGN	EACH	180
Z0049792	RELO SADDLE SHIM BLCK	EACH	1
Z0051398	REMOVE EXISTING SIGN POST	EACH	70
Z0052394	REPL U-BOLT	EACH	5
Z0052395	TIGHTEN U-BOLT	EACH	5
Z0077598	DRILL WEEP HOLE	EACH	5
Z0077802	TEMP WOOD POST	EACH	4
67100100	MOBILIZATION	L SUM	1
70200100	NIGHT WORK ZONE LIGHT	L SUM	1
72000100	SIGN PANEL T1	SQ FT	100

REV - MS

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	PLOT DATE = \$DATES	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS	FED. AID PROJECT	

Code Number	Item	Unit of Measure	100% STATE 0021 Quantity
72400320	REMOV SIGN PANEL T2	SQ FT	100
72400330	REMOV SIGN PANEL T3	SQ FT	25000
72400500	RELOC SIN PAN ASSY TA	EACH	2
72400600	RELOC SIN PAN ASSY TB	EACH	2
72400710	RELOC SIGN PANEL T1	SQ FT	100
72400720	RELOC SIGN PANEL T2	SQ FT	100
72400730	RELOC SIGN PANEL T3	SQ FT	100
72700100	STR STL SIN SUP BA	POUND	15000
72700200	TUB STL SN SUPPORT BA	POUND	100
72800100	TELES STL SIN SUPPORT	FOOT	100
73000100	WOOD SIN SUPPORT	FOOT	10
73300100	OVHD SIN STR-SPAN T1	FOOT	30
73300200	OVHD SIN STR-SPAN T2	FOOT	30
73300300	OVHD SIN STR-SPAN T3	FOOT	30
73301810	OSS WALKWAY TY A	FOOT	50
73302110	OSS CANT 1CA 2-0X4-6	FOOT	25
73302150	OSS CANT 2CA 2-0X5-6	FOOT	25
73302190	OSS CANT 3CA 2-0X7-0	FOOT	25
73303000	OH SN STR-MOTUBE	FOOT	10
73304000	OVHD SIN STR BR MT	FOOT	50
73400100	CONC FOUNDATION	CU YD	250
73400200	DRILL SHAFT CONC FDN	CU YD	80
73500020	REM OH SIN STR MONO	EACH	1
73600100	REMOV OH SIN STR-SPAN	EACH	4

Code Number	Item	Unit of Measure	100% STATE 0021 Quantity
73600200	REMOV OH SIN STR-CANT	EACH	2
73602000	REM OVHD SN STR-BR MT	EACH	4
73700100	REM GR MT SIN SUPPORT	EACH	20
73700200	REM CONC FDN-GR MT	EACH	75
73700300	REM CONC FDN-OVHD	EACH	20
73800900	REM OH SIN STR-WLKWAY	FOOT	300

WORK ORDER

Sheet 1 of 3

WORK ORDER NO. _____

LOCATION DESCRIPTION _____

CONTRACT NO. 46676

Date of Issue _____

ROUTE _____

CLAIM NO.: _____

CODE NUMBER		UNIT	QUANTITY	UNIT PRICE	ITEM COST
72000100	SIGN PANEL T1	SQ FT			
72000200	SIGN PANEL T2	SQ FT			
72000300	SIGN PANEL T3	SQ FT			
72100100	SIGN PANEL OVERLAY	SQ FT			
72300100	INSTALL EX SIGN PANEL	SQ FT			
72400100	REMOV SIN PAN ASSY TA	EACH			
72400200	REMOV SIN PAN ASSY TB	EACH			
72400310	REMOV SIGN PANEL T1	SQ FT			
72400320	REMOV SIGN PANEL T2	SQ FT			
72400330	REMOV SIGN PANEL T3	SQ FT			
72400500	RELOC SIN PAN ASSY TA	EACH			
72400600	RELOC SIN PAN ASSY TB	EACH			
72400710	RELOC SIGN PANEL T1	SQ FT			
72400720	RELOC SIGN PANEL T2	SQ FT			
72400730	RELOC SIGN PANEL T3	SQ FT			
72700100	STR STL SIN SUP BA	POUND			
72700200	TUB STL SN SUPPORT BA	POUND			
72800100	TELES STL SIN SUPPORT BA	FOOT			
73000100	WOOD SIN SUPPORT	FOOT			
73300100	OVHD SIN STR-SPAN T1	FOOT			
73300200	OVHD SIN STR-SPAN T2	FOOT			
73300300	OVHD SIN STR-SPAN T3	FOOT			
73301810	OSS WALKWAY TY A	FOOT			
73302110	OSS CANT 1CA 2-0X4-6	FOOT			
73302150	OSS CANT 2CA 2-0X5-6	FOOT			
73302190	OSS CANT 3CA 2-0X7-0	FOOT			
73303000	OH SN STR-MOTUBE	FOOT			
73304000	OVHD SIN STR BR MT	FOOT			
73400100	CONC FOUNDATION	CU YD			
73400200	DRILL SHAFT CONC FDN	CU YD			
73500020	REM OH SIN STR MONO	EACH			
73600100	REMOV OH SIN STR-SPAN	EACH			
73600200	REMOV OH SIN STR-CANT	EACH			
73602000	REM OVHD SN STR-BR MT	EACH			
73700100	REM GR MT SIN SUPPORT	EACH			
73700200	REM CONC FDN-GR MT	EACH			
73700300	REM CONC FDN-OVHD	EACH			
73800900	REM OH SIN STR-WLKWAY	FOOT			
X0301032	SIGN FRAME S-325 DBL	FOOT			
X0301033	SIGN FRAME S-325 SING	FOOT			
X0301036	BASE PLATE S-325	EACH			
X0301037	BASE PLATE S-218	EACH			
X0325749	FIBER WRAP	SQ FT			

SAMPLE

MODEL: \$MODELNAME\$
FILE NAME: \$FILES\$

USER NAME = \$USERS\$

PLOT SCALE = \$SCALE\$

PLOT DATE = \$DATES\$

DESIGNED -

DRAWN -

CHECKED -

DATE -

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SAMPLE WORK ORDER

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.

SECTION

COUNTY

TOTAL SHEETS

SHEET NO.

VAR

STATEWIDE FREEWAY SIGN MAINT 26-13

VARIOUS

63

7

CONTRACT NO. 46676

ILLINOIS

FED. AID PROJECT

Sheet 2 of 3
WORK ORDER NO.

CODE NUMBER		UNIT	QUANTITY		ITEM COST
X0326718	INSTAL REST AREA SIGN	EACH			
X2600014	F & I SADDLE SHIM BL	EACH			
X5090098	REPLACE HDRL SUPPORT	EACH			
X0326998	FUR & INSTL HANDRAIL	FOOT			
X5210005	TIGHTEN SUP ANCH BOLT	EACH			
X7200050	TEMP SIGN SUP REP	EACH			
X7200060	F & E GRAFFI RES S PL	SQ FT			
X7200065	SIGN PANEL BACKPLATE	SQ FT			
X7200070	REPAIR SIGN PANEL	EACH			
X7200075	REM & REIN SIGN PANEL	SQ FT			
X7200080	RE-ERECT SIGN PANEL	SQ FT			
X7200085	RPL/TIGH CLP PER SIGN	EACH			
X7200096	F & E SIGN PAN - LOGO	SQ FT			
X7240205	REMOV SIGN COMPLETE	EACH			
X7270005	RE-E STR ST SN SUP BA	EACH			
X7270006	BREAK SLIP B CON BOLT	EACH			
X7270010	STR STL SN SUP-COUP T	POUND			
X7270015	FUR BRKWAY COUP SET	EACH			
X7270020	FUR HINGE PLATE SET	EACH			
X7270025	REM EX SIGN SUPPORT	EACH			
X7301034	SIGN POST S-325	FOOT			
X7301035	SIGN POST S-218	FOOT			
X7330065	RPL HNDRL LCK PIN CON	EACH			
X7330066	REP HDRL LOC PIN CON	EACH			
X7330068	TIGHTEN CANT CONN	EACH			
X7330069	TIGHTEN END SUP CONN	EACH			
X7330070	OVHD SN SUP GROUT REP	EACH			
X7330072	OVHD SIN STR-END SUP	EACH			
X7330076	BR MOUNT SIGN SUPPORT	EACH			
X7330078	REPL WLKWY SUP BRCKT	EACH			
X7330080	REPL WLKWY S BRKT BLT	EACH			
X7330082	MTNG BRCKT TY B	EACH			
X7330084	MTNG BRCKT TYB REPAIR	EACH			
X7330087	F&I WLKY TIE DN BOLTS	EACH			
X7330090	METAL SCREEN	EACH			
X7330093	INT MEMBR TRUSS CLAMP	EACH			
X7330094	INTERNAL TRUSS DAMPER	EACH			
X7330102	REPL OVHD SIN WALKWAY	FOOT			
X7330112	SAFETY CHAIN	EACH			
X7330120	REPL SPL FLANGE BOLT	EACH			
X7330210	OSS T1 TRUSS ONLY	FOOT			
X7330220	OSS T2 TRUSS ONLY	FOOT			
X7330230	OSS T3 TRUSS ONLY	FOOT			
X7350005	SIGN SUPPORT REPAIR	EACH			
X7350010	SIGN SUPPORT BRACKET	EACH			
X8040310	ELECT SERV DISCONNECT	EACH			
X8040510	RELOC ELECT SERVICE	EACH			

SAMPLE

MODEL: \$MODELNAME\$
FILE NAME: \$FILE\$

	USER NAME = \$USERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SAMPLE WORK ORDER			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	8
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -					CONTRACT NO. 46676				
	PLOT DATE = \$DATES	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

Sheet 3 of 3
WORK ORDER NO.

CODE NUMBER		UNIT	QUANTITY		ITEM COST
X8050204	REMOVE ELEC SERVICE	EACH			
X8140232	REPL HH COVER BOLT	EACH			
X8140234	REPL HH COVER	EACH			
X8420506	REM EX SIGN LT UNT NS	EACH			
Z0012754	STR REP CON DP = < 5	SQ FT			
Z0012755	STR REP CON DP OVER 5	SQ FT			
Z0030902	TIGHTEN FUSE & BSE PL	EACH			
Z0030904	TIGHTEN SPLICE FLANGE	EACH			
Z0030905	INS SER SN OR MILE PL	EACH			
Z0030907	REM SER OR MILE PLATE	EACH			
Z0030910	TRANSFER SERVICE SIGN	EACH			
Z0049792	RELO SADDLE SHIM BLCK	EACH			
Z0051398	REM EX SIGN POST	EACH			
Z0052394	REPL U-BOLT	EACH			
Z0052395	TIGHTEN U-BOLT	EACH			
Z0077598	DRILL WEEP HOLE	EACH			
Z0077802	TEMP WOOD POST	EACH			
			Total		

DISTRICT CONTACT

SUBMITTED BY:

Deputy Director, Division of Highways,
Regional Engineer

NAME:

DATE:

TELEPHONE:

APPROVED BY:

Traffic Operations Engineer, Central Office

EMAIL ADDRESS:

DATE:

FILE NAME: \$FILE	USER NAME = \$USERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SAMPLE WORK ORDER				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -						VAR.	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	9	
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	PLOT DATE = \$DATES	DATE -	REVISED -											
					SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 46676			
					ILLINOIS FED. AID PROJECT									

CLEAR HEIGHT DETAIL

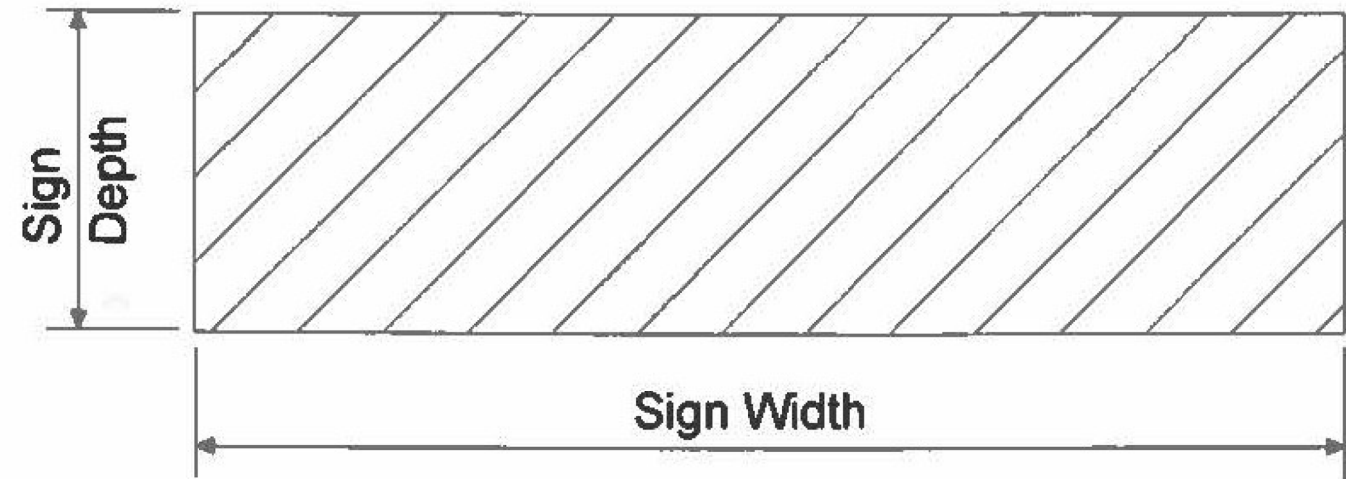


Figure 1

- * May be reduced to 6' 0" when a supplemental panel is mounted below the main panel.
- ** Between top of stud post and fuse plate. May be reduced to 5' 0" when D = 30' 0" and the slope is 2:1 or steeper or where it would be unlikely for an out of control vehicle to reach the post.

The criteria illustrated in Figure 2 above is for expressways or fully access controlled freeways. All mounting heights shall be in accordance with the latest edition of the Illinois Manual on Uniform Traffic Control Devices.

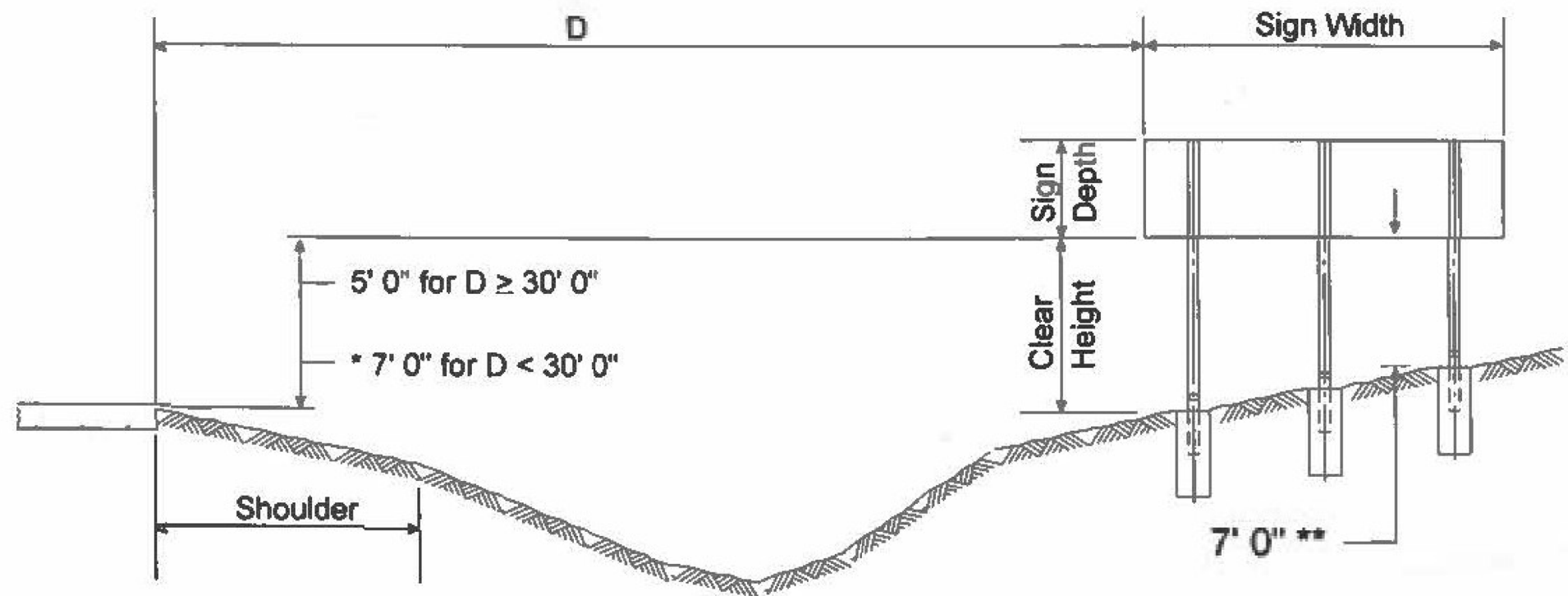


Figure 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

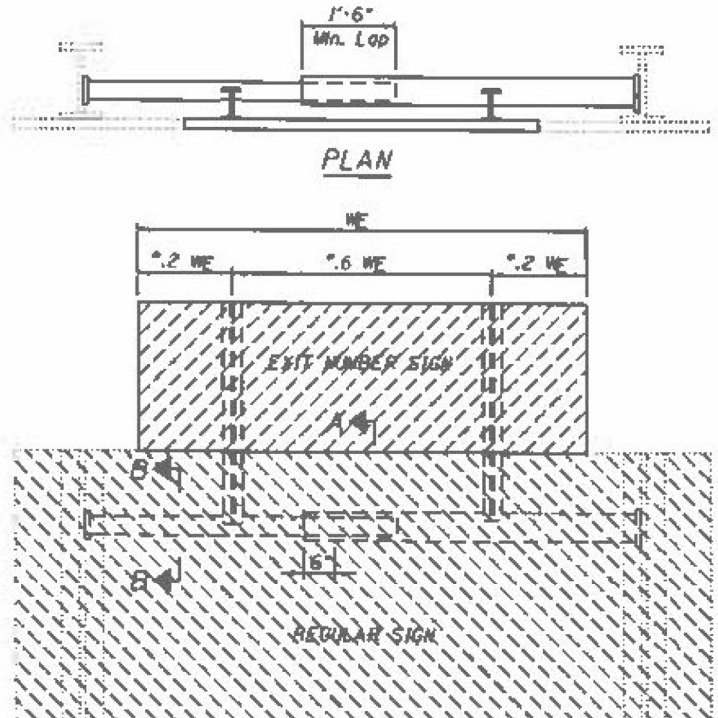
CLEAR HEIGHT DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	10
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

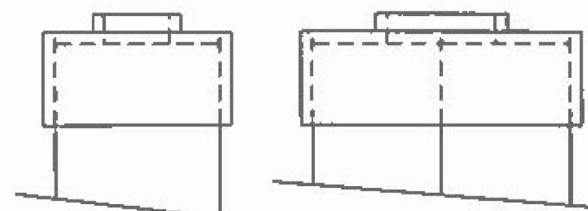
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	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



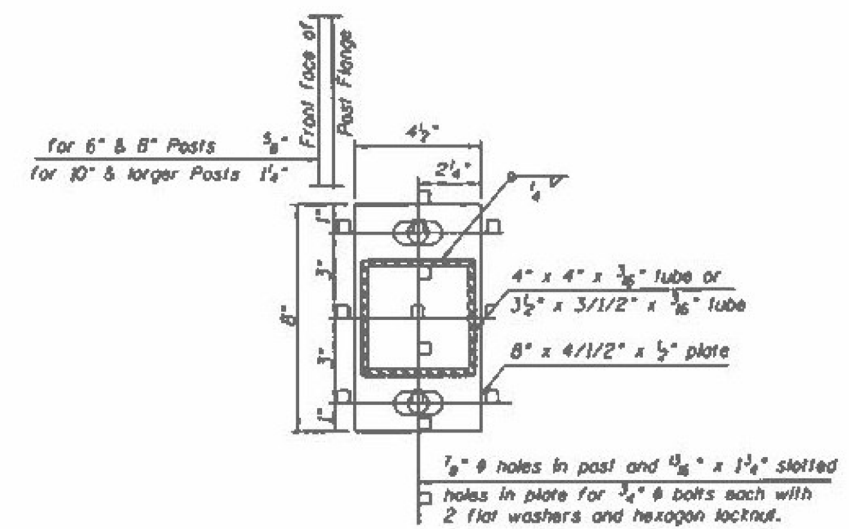
FRONT VIEW

SECTION A-A



New or Existing Structures which have been designed for the additional 2' Exit Number Sign.

TYPICAL INSTALLATIONS



SECTION B-B

General Notes

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to ordering of materials and construction.

Hollow structural steel shapes and plates shall conform to the requirements of ASTM designation A-500 Grade B or A-501 structural steel tubing.

All structural steel shapes and plates shall conform to the requirements of ASTM designation A-36.

All bolts, nuts, cap screws, washers, lockwashers and locknuts shall conform to ASTM A-325 and shall be galvanized in accordance with ASTM designation A-153.

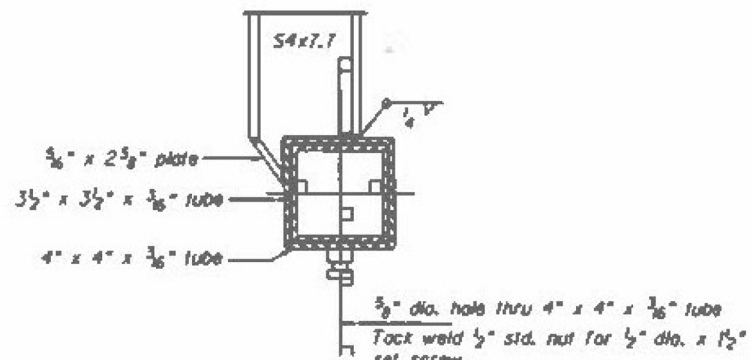
All field drilled holes shall be coated with an approved zinc rich paint before erection.

All welding shall be done in accordance with current AWS Specifications.

METHOD OF MEASUREMENT: The Exit Panel Mounting Bracket Type B shall consist of the telescoping tubes, one or two stub posts, bracing plates, and plates and hardware.

Two posts installations will require one bracket, three or more posts installations will require two brackets. Special cases of four, six and eight posts installations may require one bracket, depending on the width of the Exit Panel and spacing of main posts.

BASIS OF PAYMENT: This work will be paid for at the contract unit price each for Exit Panel Mounting Bracket Type B for shoulder mounted sign posts.



DETAIL A

BILL OF MATERIAL

EXIT PANEL MOUNTING BRACKET TYPE B	EACH	2
SEE SIGN SCHEDULE FOR LOCATIONS		

* THIS DIMENSION MAY VARY BY ±06 WE.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR MOUNTING EXIT NUMBER SIGN PANELS ON SHOULDER
MOUNTED SIGN POSTS (MOUNTING BRACKET TYPE B)

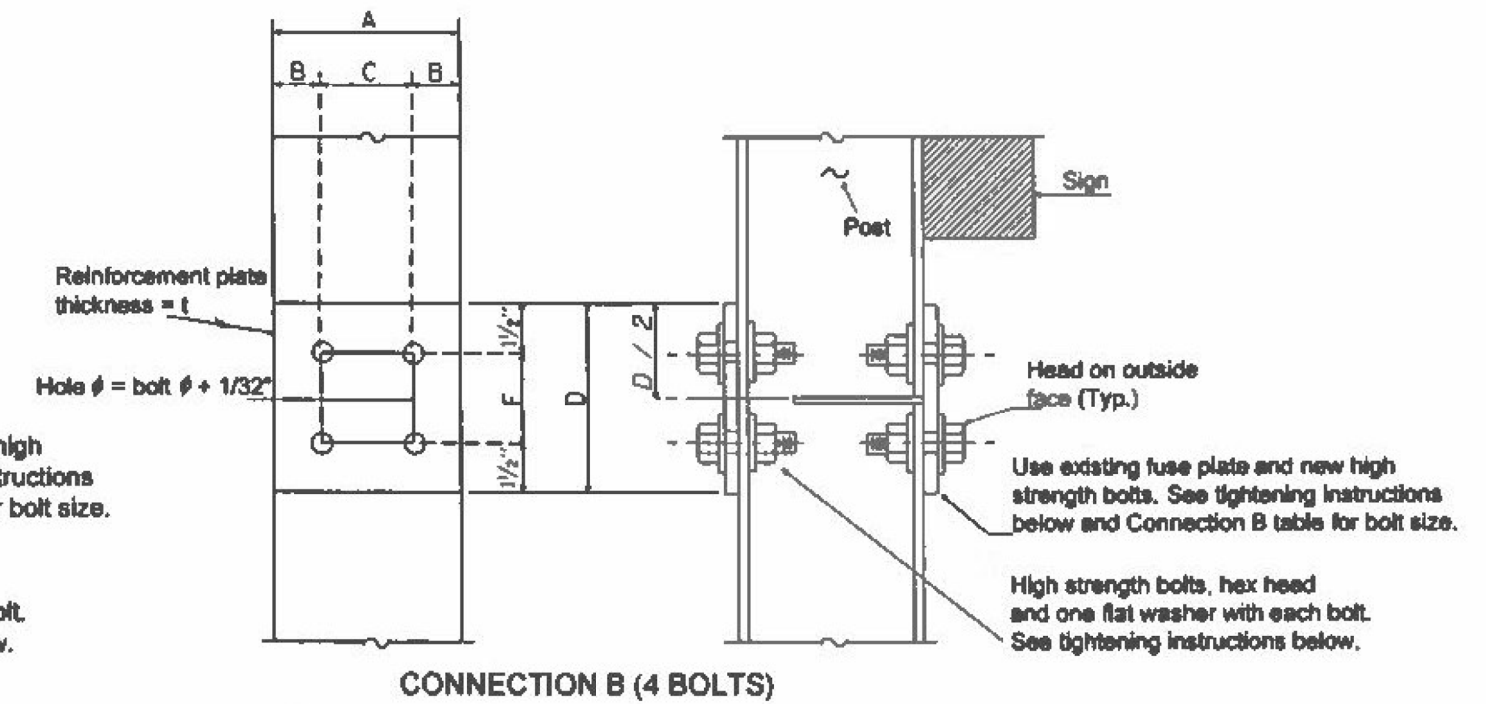
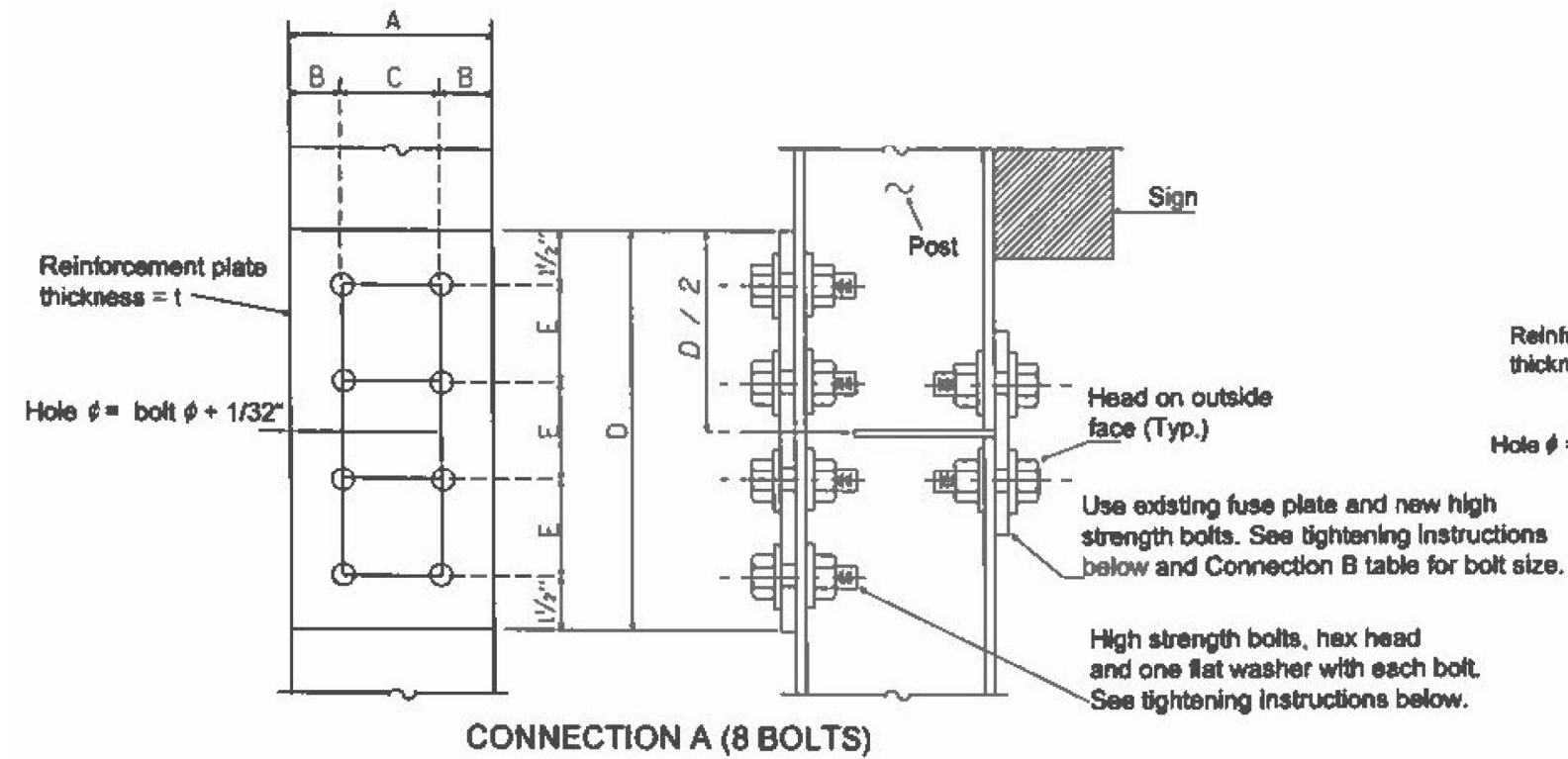
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	11
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

MODEL: SHIELD NAMES
FILE NAME: STILES

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



POST	CONNECTION A (8 BOLTS)						
	A	B	C	D	E	t	Bolt ϕ
W 8 X 9							
W 8 X 15	6"	1 1/4"	3 1/2"	10 1/2"	2 1/2"	1/4"	1/2"
W 8 X 18	5 1/4"	1 1/4"	2 3/4"	10 1/2"	2 1/2"	3/8"	1/2"
W 10 X 22	5 3/4"	1 1/2"	2 3/4"	12"	3"	3/8"	5/8"
W 10 X 26	5 3/4"	1 1/2"	2 3/4"	12"	3"	1/2"	5/8"
W 12 X 26	6 1/2"	1 1/2"	3 1/2"	12"	3"	1/2"	5/8"
W 14 X 30	6 3/4"	1 5/8"	3 1/2"	12"	3"	1/2"	5/8"
W 14 X 38	6 3/4"	1 5/8"	3 1/2"	12"	3"	1/2"	5/8"
W 16 X 45	7"	1 3/4"	3 1/2"	12"	3"	1/2"	5/8"

POST	CONNECTION B (4 BOLTS)						
	A	B	C	D	E	t	Bolt ϕ
W 8 X 9	4"	7/8"	2 1/4"	3"	2"	1/4"	1/2"
W 8 X 15	6"	1 1/4"	3 1/2"	3 1/2"	2 1/2"	1/4"	3/4"
W 8 X 18	5 1/4"	1 1/4"	2 3/4"	3 1/2"	2 1/2"	3/8"	3/4"
W 10 X 22	5 3/4"	1 1/2"	2 3/4"	6"	3"	3/8"	7/8"
W 10 X 26	5 3/4"	1 1/2"	2 3/4"	6"	3"	1/2"	7/8"
W 12 X 26	6 1/2"	1 1/2"	3 1/2"	6"	3"	1/2"	7/8"
W 14 X 30	6 3/4"	1 5/8"	3 1/2"	6"	3"	1/2"	7/8"
W 14 X 38	6 3/4"	1 5/8"	3 1/2"	6"	3"	1/2"	7/8"
W 16 X 45	7"	1 3/4"	3 1/2"	6"	3"	1/2"	7/8"

INSTRUCTIONS FOR INSTALLING REINFORCEMENT PLATE
AND FUSE PLATE WITH HIGH STRENGTH BOLTS

If the beam flanges are not in full contact with the reinforcement plate due to burrs, galvanizing runs or misalignment of the flanges, the plate or plates shall be removed and flanges ground, straightened or corrected until full contact is obtained.

The bolts shall be brought to a "snug tight" condition to insure that the reinforcement or fuse plate is in full contact with the flange of the post. "Snug tight" shall be obtained by a few impacts on an impact wrench or the full effort of a man using an ordinary spud wrench. After all the bolts are "snug tight", each shall be tightened by an additional one - third rotation. The hardened washer specified shall be under the bolt head which shall be turned in the tightening process rather than the nut.

GENERAL NOTES

The Contractor shall have the choice of using the eight (8) bolt Connection A or the four (4) bolt Connection B for the reinforcement plate, unless specified.

The steel reinforcement plate shall conform to AASHTO M270 Gr. 36. (CVN not required).

High strength bolts, nuts, and washers shall conform to AASHTO M154.

The steel reinforcement plate, new high strength bolts, nuts, and hardened washers and areas of damaged or missing paint on fuse plates shall be painted with an approved zinc rich paint (two coats) after assembly.

MODEL: SHIELD NAMES
FILE: NAME: STATES

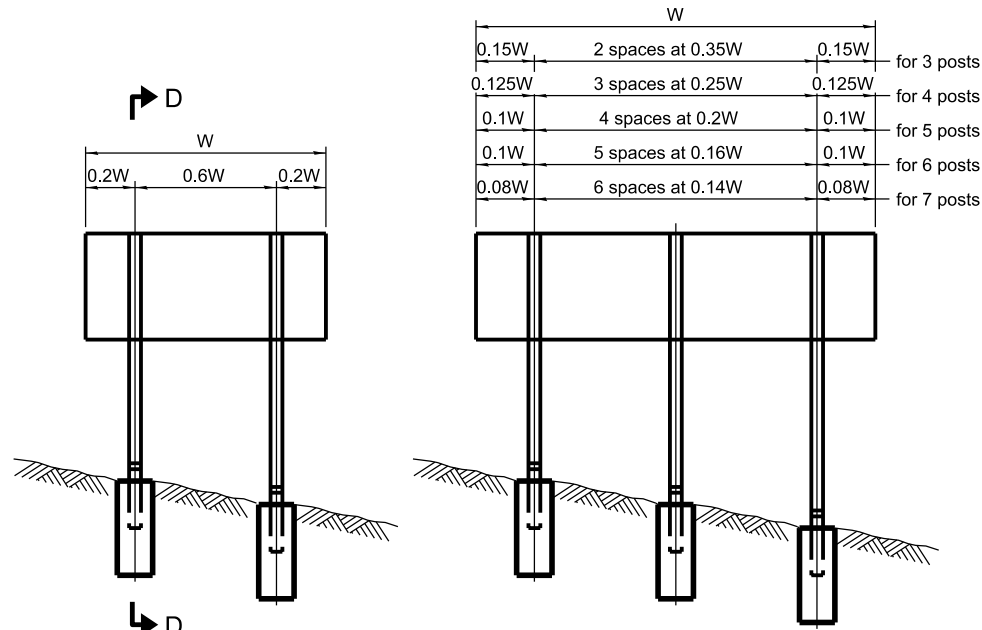
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	DRAWN -	REVISED -
PLOT SCALE = \$SCALES	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

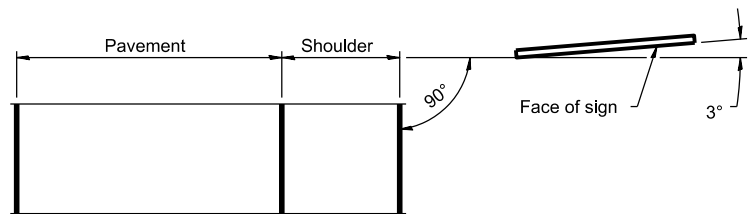
REINFORCEMENT PLATE DETAILS
"BREAK-AWAY" SIGN POSTS

SCALE: SHEET OF SHEETS STA. TO STA.

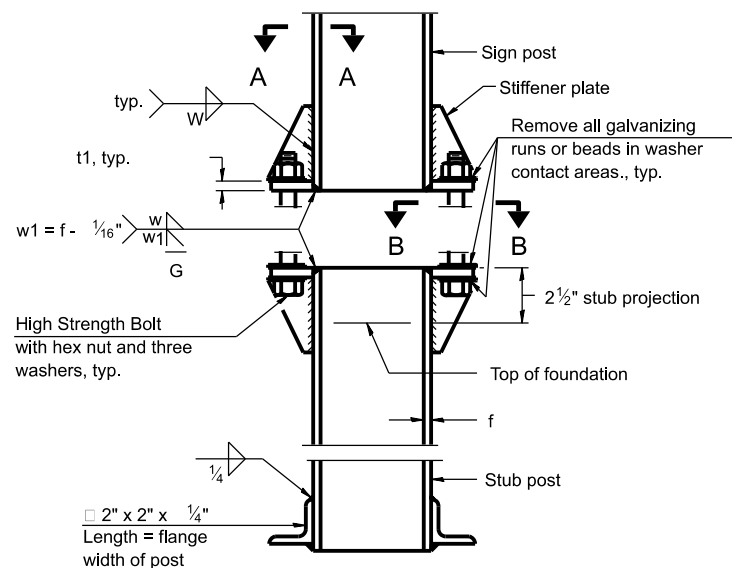
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VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	12
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



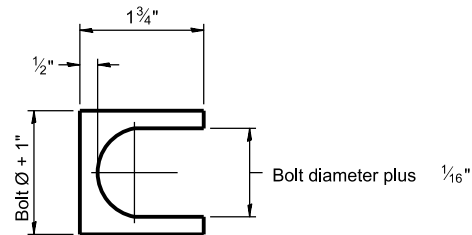
ELEVATION



LOCATION SKETCH

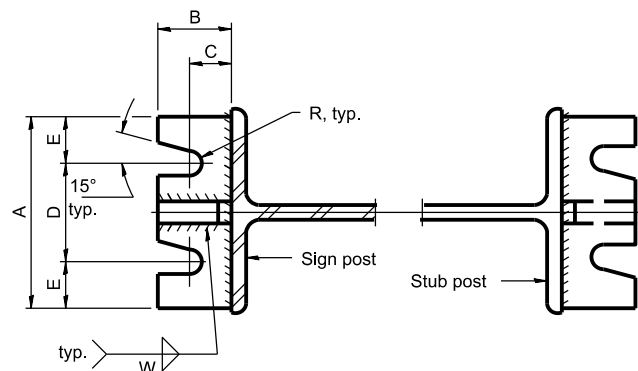


ELEVATION
SIGN POST & STUB POST



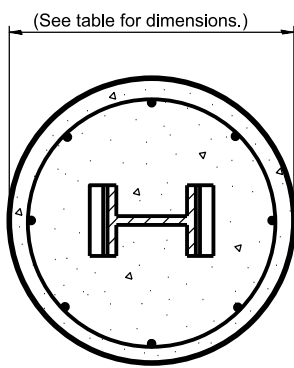
SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

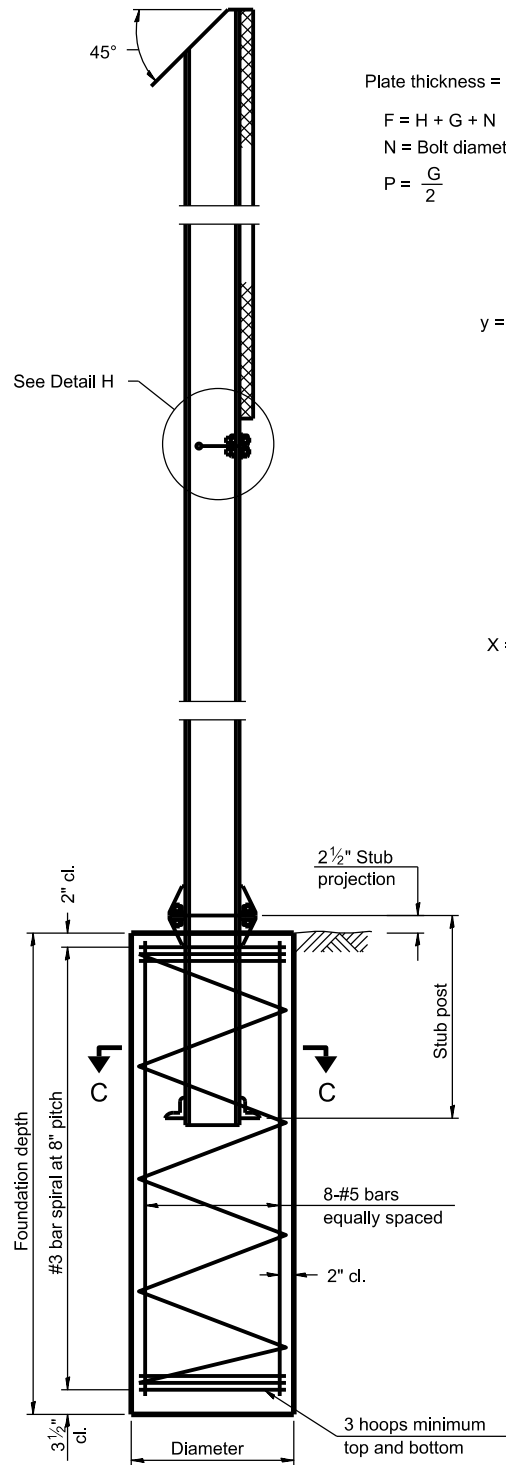


SECTION A-A

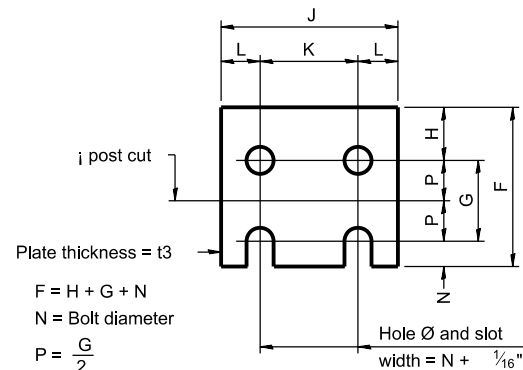
SECTION B-B



SECTION C-C

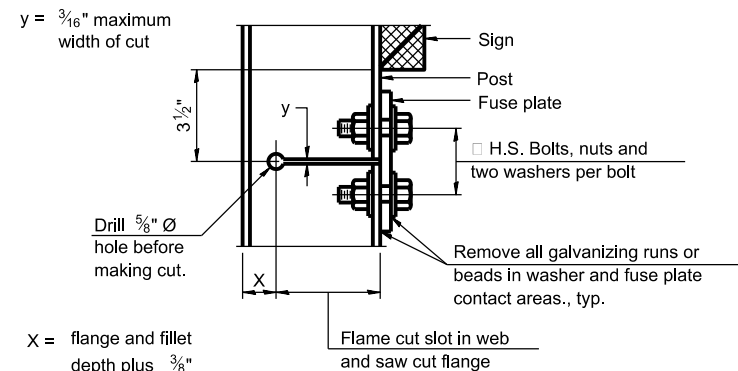


SECTION D-D

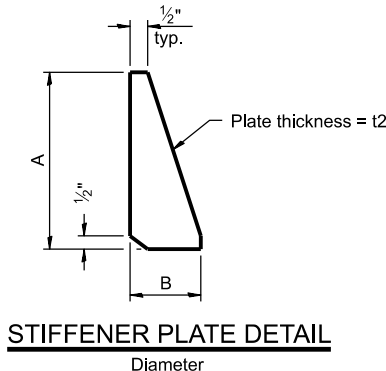


FUSE PLATE DETAIL
(Install with notches down.)

FUSE PLATE DATA		
N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



DETAIL H



STIFFENER PLATE DETAIL
Diameter

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
Structural steel - 20,000 p.s.i.
Reinforcing steel - 20,000 p.s.i.
Concrete - 1,400 p.s.i.
Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

(Sheet 1 of 2)

BAW-A-1

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
DRAWN -	REVISD -	
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST DETAILS

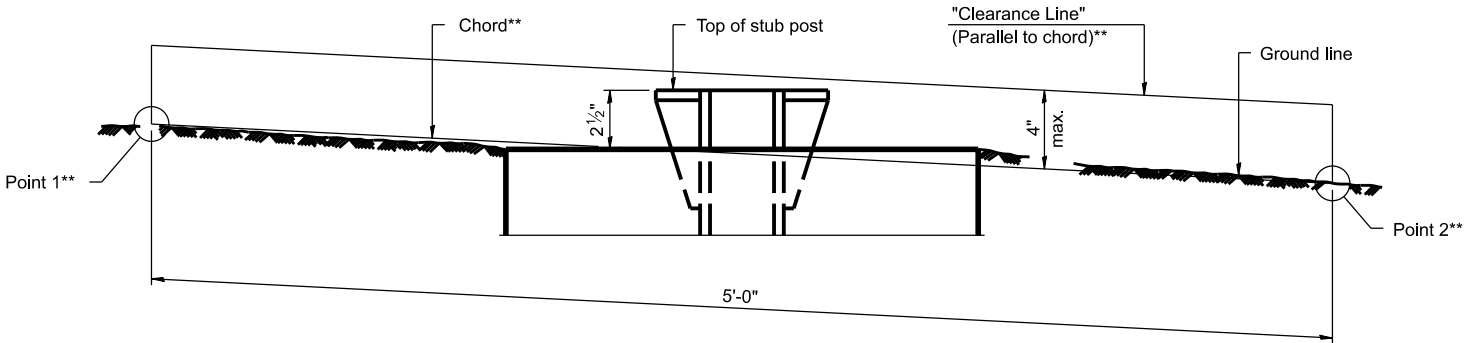
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	13
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA			
	Foundation			Reinforcement				Stub Post	Bolt Size	A	B	C	D	E	t1	t2	R	W	J	K	L	t3
	Diameter	Minimum Depth	Concrete cu. yds.) ①	Vertical Bars	Bar Spirals		lbs. ②															
				Length	Diameter	Length																
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 ½"	79'-0"	78	2'-3"	5⁄8" x 3 ¼"	6"	2 ¼"	1 ¼"	3 ½"	1 ¼"	¾"	½"	1 1⁄32"	¼"	4"	2 ¼"	7⁄8"	¼"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 ½"	79'-0"	78	2'-6"	5⁄8" x 3 ¼"	6"	2 ¼"	1 ¼"	3 ½"	1 ¼"	¾"	½"	1 1⁄32"	¼"	6"	3 ½"	1 ¼"	⅜"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 ½"	79'-0"	78	2'-6"	¾" x 3 ¾"	6"	2 ½"	1 ⅜"	3 ¼"	1 ⅜"	1"	½"	13⁄32"	5⁄16"	5 ½"	2 ¾"	1 ¼"	⅜"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 ½"	105'-0"	92	3'-0"	¾" x 3 ¾"	6"	2 ½"	1 ⅜"	3 ¼"	1 ⅜"	1"	½"	13⁄32"	5⁄16"	5 ¾"	2 ¾"	1 ½"	½"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 ½"	112'-0"	98	3'-0"	7⁄8" x 4"	7"	2 ¾"	1 ½"	4"	1 ½"	1"	¾"	15⁄32"	⅜"	5 ¾"	2 ¾"	1 ½"	⅝"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 ½"	119'-0"	107	3'-0"	7⁄8" x 4"	7"	2 ¾"	1 ½"	4"	1 ½"	1"	¾"	15⁄32"	⅜"	6 ½"	3 ½"	1 ½"	⅝"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 ½"	145'-0"	113	3'-0"	7⁄8" x 4"	7"	2 ¾"	1 ½"	4"	1 ½"	1"	¾"	15⁄32"	⅜"	6 ¾"	3 ½"	1 ⅝"	½"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 ½"	153'-0"	122	3'-6"	1" x 4 ½"	7 ½"	3"	1 ¾"	4"	1 ¾"	1 ¼"	¾"	17⁄32"	⅜"	6 ¾"	3 ½"	1 ⅝"	½"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 ½"	162'-0"	130	3'-6"	1" x 4 ½"	7 ½"	3"	1 ¾"	4"	1 ¾"	1 ¼"	¾"	17⁄32"	⅜"	7"	3 ½"	1 ¾"	½"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																				
	Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	½" x 1 ½"	½" x 1 ½"	½" x 1 ½"	½" x 1 ½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
W6x15	½" x 1 ¾"	½" x 1 ¾"	½" x 1 ¾"	⅝" x 2"	⅝" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	—	—	—	—	—	—	—	—	—	—	—	—
W8x18	½" x 1 ¾"	½" x 1 ¾"	½" x 1 ¾"	½" x 1 ¾"	⅝" x 2"	⅝" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	—	—	—	—	—	—	—	—	—	—	—
W10x22	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2"	⅝" x 2"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	—	—	—	—	—	—	—	—
W10x26	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2 ¼"	⅝" x 2 ¼"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	—	—	—	—	—	—	—
W12x26	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2 ¼"	⅝" x 2 ¼"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	—	—	—	—	—	—
W14x30	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2"	⅝" x 2"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	¾" x 2 ¼"	—	—	—	—
W14x38	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2 ¼"	⅝" x 2 ¼"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	¾" x 2 ½"	7⁄₈" x 2 ½"	7⁄₈" x 2 ½"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"
W16x45	—	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2 ¼"	⅝" x 2 ¼"	⅝" x 2 ¼"	¾" x 2 ½"	¾" x 2 ½"	7⁄₈" x 2 ½"	7⁄₈" x 2 ½"	7⁄₈" x 2 ½"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"	1" x 2 ¾"



ELEVATION
GROUND LINE & STUB POST

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

BAW-A-2

5-15-2023

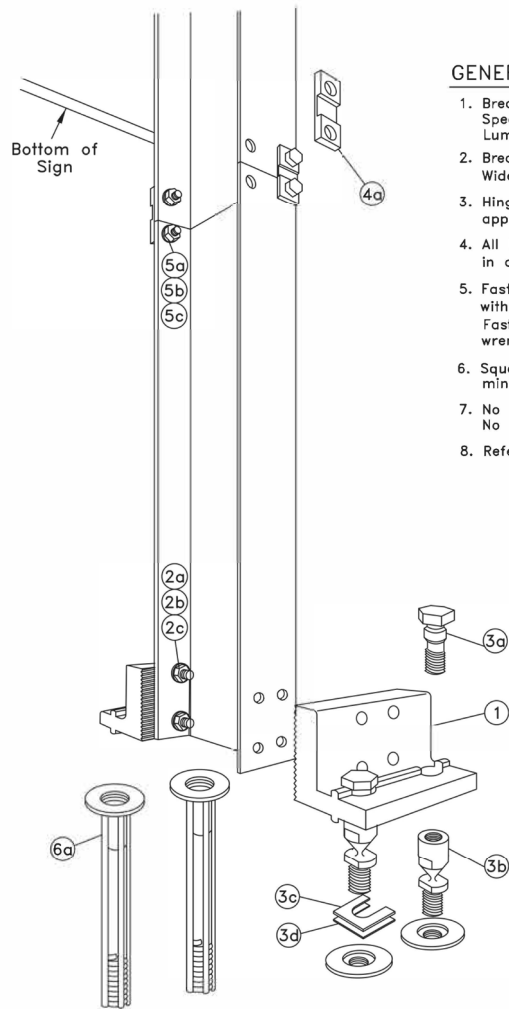
(Sheet 2 of 2)

	USER NAME = \$USERS\$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES				F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	14
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -						CONTRACT NO.46676				
	PLOT DATE = \$DATES\$	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				
SCALE:		SHEET OF SHEETS		STA.		TO STA.							

PARTS LIST

ITEM	DESCRIPTION	SIZE/SPECIFICATIONS	QTY/ POST	PART NUMBER
Model AI6		Includes Items 1-5 below.	1	SBMAI6*
2a	Bolt	12.7mm(1/2")-13UNCx57.2mm(2-1/4"), Hex Head, ASTM A325, Galv. ASTM A153	8	
2b	LockWasher	12.7mm(1/2"), ANSI B18-21-1, Galv. ASTM A153	8	
2c	Nut	12.7mm(1/2")-13UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	8	
3a	Special Bolt	15.9mm(5/8")-11UNC, ASTM A449, Galv. ASTM A153	4	
3b	Coupling	15.9mm(5/8")-11UNC, LP, AMS 6378D, Galv. ASTM A153, Polyester Coat	4	
3c	Shim	15.9mm(5/8") Horseshoe, 14 Gauge, Galv. Steel Sheet	2	
3d	Shim	15.9mm(5/8") Horseshoe, 18 Gauge, Galv. Steel Sheet	2	
4a	Hinge Plate	Type A, AISI 4130 Steel, Galv. ASTM A123	4	
5a	Bolt	12.7mm(1/2")-13UNCx37.2mm(1-1/2"), Hex Head, ASTM A325, Galv. ASTM A153	8	
5b	LockWasher	12.7mm(1/2"), ANSI B18-21-1, Galv. ASTM A153	8	
5c	Nut	12.7mm(1/2")-13UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	8	
6a	Anchor	15.9mm(5/8")-11UNC, 304 S.S. Ferrule, AISI 1038 Rod, AISI 1008 Coil	4	

*Complete assembly includes line items 1-5. Item 6, Anchors sold separately.



GENERAL NOTES:

- Break-Safe meets all requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."
- Break-Safe Model AI6 is designed to fit W6x9 (W150x14) Wide Flange I-Beam signposts.
- Hinge Items 4 & 5 above are not used for single post sign applications.
- All hardware items are American Standard sizes, gvanized in accordance with ASTM A153.
- Fasteners, except for special bolt and coupling, are installed with lockwashers, and do not have specific torque requirements. Fasteners should be secured as tight as possible with conventional wrenches, unless noted otherwise.
- Square-up and level individual components, particularly Anchors to minimize the need for shimming between the Couplings and Anchors.
- No more than two shims shall be placed under any one coupling. No more than three shims underneath any pair of couplings.
- Refer to other side of page for complete installation instructions.

W 6 X 9

Break-Safe Model AI6
Breakaway Support System for Sign Posts

Scale: Not To Scale Date: January 2015

Drawing No. BS-AI6 Sheet: 1 of 2

INSTALLATION INSTRUCTIONS

ANCHOR ASSEMBLY:

Note: Precise positioning of the anchors is critical to proper assembly of the system. It is recommended that actual posts be used to locate the correct position of the anchors.

- Fabricate a flat, rigid template with four (4) 16mm (5/8") diameter holes located to match the specified anchor pattern of the Break-Safe Brackets attached to the signpost. See diagram below.
- Attach four (4) Transpo Type A Female Anchors to the template using four (4) 16mm (5/8") diameter bolts. Ensure that each Anchor Washer is snug against the bottom of the template.
- Lower Anchor Assembly into fresh concrete foundation, and vibrate into position such that the tops of the Anchor Washers are flush with the finished top surface of the foundation. Support the template such that all Anchors are level and in their proper locations.
- Allow concrete to cure, and then remove the bolts and template from the top of the foundation.

HINGE ASSEMBLY:

- Butt upper and lower post sections together on a flat surface.
- Drill eight (8) 14.3mm (9/16") holes in the flanges of the post sections as shown.
- Place Hinge Plates on outer surface of the post flanges and secure with bolts, lock washers, and nuts. Ensure that upper and lower post sections are in alignment, and then tighten all nuts 1/2 turn beyond snug.

BRACKET ASSEMBLY:

- Drill eight (8) 14.3mm (9/16") diameter holes in the flanges of the lower post section as shown.
- Place Brackets squarely on outer surface of the post flanges, and secure with bolts, lock washers, and nuts. Then, tighten all 1/2 turn beyond snug.

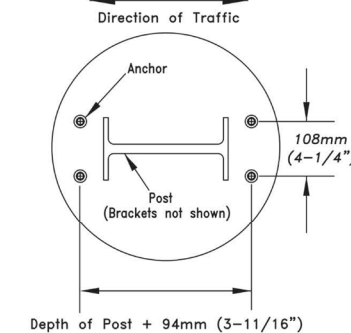
COUPLING ASSEMBLY:

- Thread four (4) Break-Safe Couplings into Anchors. Do not tighten.
- Suspend post assembly over foundation, insert Special Bolts through holes in the Brackets, and thread them snug into the Couplings.
- If post is not plumb, insert Shims (14g and/or 18g) between the Couplings and Anchors, where needed.
- Use lower wrench flats to tighten Couplings into Anchors as tight as possible using a conventional wrench. Do not use a pipe wrench. Couplings must be seated squarely.
- Tighten Special Bolts while holding Couplings by the upper wrench flats with an additional wrench to prevent an induced torque stress across the necked portion of the Coupling. All Special Bolts shall also be tightened as tight as possible using conventional wrenches.

SIGN PANEL ASSEMBLY:

- After all signposts are secured in place, attach sign panel assembly to posts in accordance with the sign manufacturer's recommendations.

PLAN VIEW OF TYPICAL FOUNDATION

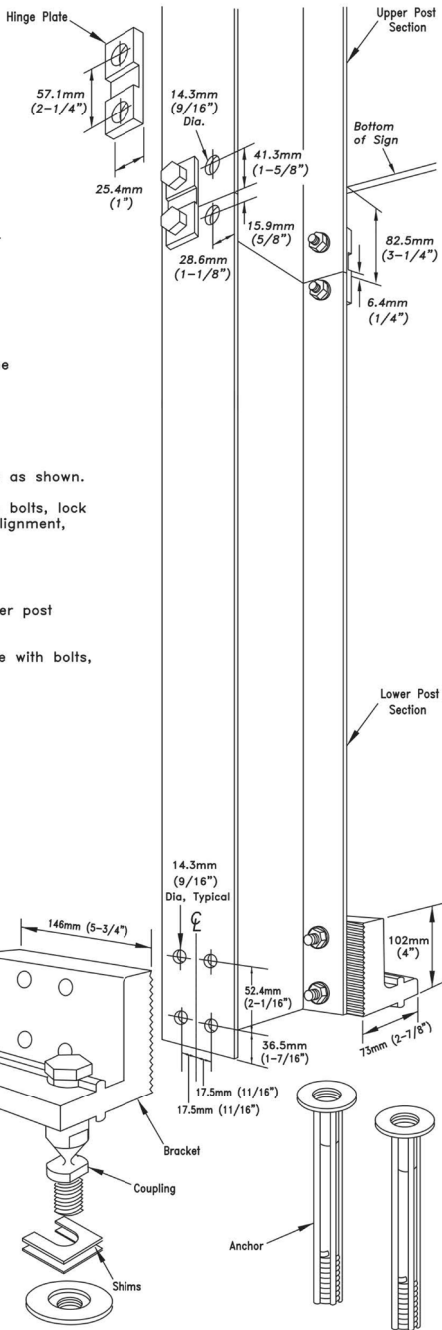


W 6 X 9

Break-Safe Model AI6
Breakaway Support System for Sign Posts

Scale: Not To Scale Date: January 2015

Drawing No. BS-AI6 Sheet: 2 of 2



USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-12	VARIOUS	63	15
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

ITEM	DESCRIPTION	SIZE/SPECIFICATIONS	QTY/ POST	PART NUMBER
	Model B525	Includes Items 1–5 below.	1	SEM525*
2a	Bolt	12.7mm(1/2")–13UNCx63.5mm(2–1/2"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2b	Bolt	12.7mm(1/2")–13UNCx69.8mm(2–3/4"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2c	Bolt	12.7mm(1/2")–13UNCx76.2mm(3"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2d	Cap Screw	12.7mm(1/2")–13UNCx31.7mm(1–1/4"), Hex Head, ASTM A307, Galv. ASTM A153	4	
2e	LockWasher	12.7mm(1/2"), ANSI B18–21–1, Galv. ASTM A153	16	
2f	Nut	12.7mm(1/2")–13UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	12	
3a	Special Bolt	25.4mm(1")–8UNC, ASTM A449, Galv. ASTM A153	4	
3b	Coupling	25.4mm(1")–BUNC, LP, AMS 6378D, Galv. ASTM A153, Polyester Coat	4	
3c	Shim	25.4mm(1") Horseshoe, 14 Gauge, Galv. Steel Sheet	2	
3d	Shim	25.4mm(1") Horseshoe, 18 Gauge, Galv. Steel Sheet	2	
4a	Hinge Plate	Type B525, AISI 4130 Steel, Galv. ASTM A123	4	
5a	Bolt	19.0mm(3/4")–10UNCx57.1mm(2–1/4"), Hex Head, ASTM A325, Galv. ASTM A153	8	
5b	LockWasher	19.0mm(3/4"), ANSI B18–21–1, Galv. ASTM A153	8	
5c	Nut	19.0mm(3/4")–10UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	8	
6a	Anchor	25.4mm(1")–8UNC, 304 S.S. Ferrule, AISI 1038 Rod, AISI 1008 Coil	4	

1. Break-Safe meets all requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."
2. Break-Safe Model B525 is designed to fit W6 (W150mm) and W8 (W200mm) Wide Flange I-Beam, and 5" (127mm) and 6" (150mm) Square Tube signposts.
3. Hinge Items 4 & 5 above are not used for single post sign applications.
4. All hardware items are American Standard sizes, gvanized in accordance with ASTM A153.
5. Fasteners, except for special bolt and coupling, are installed with lockwashers, and do not have specific torque requirements. Fasteners should be secured as tight as possible with conventional wrenches, unless noted otherwise.
6. Square-up and level individual components, particularly Anchors to minimize the need for shimming between the Couplings and Anchors.
7. No more than two shims shall be placed under any one coupling. No more than three shims underneath any pair of couplings.
8. Refer to other side of page for complete installation instructions.

Break-Safe Model B525
Breakaway Support System for Sign Posts

for 6" & 8" W-Shape I-Beam Posts
Multiple Post Sign Application with Hinges

Scale: Not To Scale	Date: January 2015
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Drawing No. BS-B525	Sheet: 1
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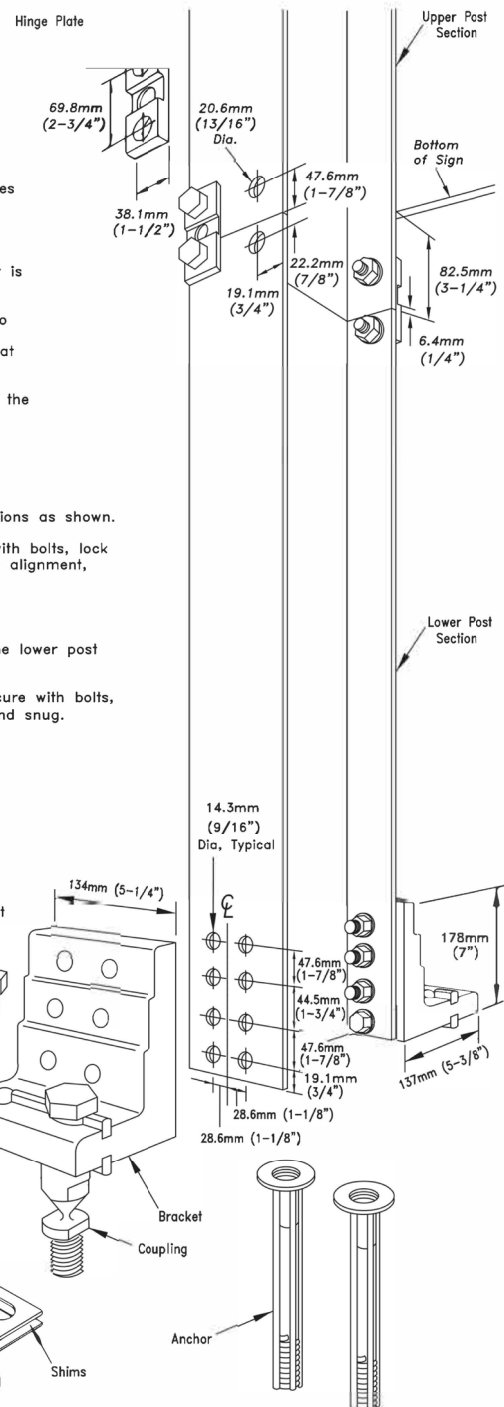
$$B = \text{Depth of Post} + 203\text{mm (8")}$$

Break-Safe Model B525

Breakaway Support System for Sign Posts

Scale: Not To Scale	Date: January 2015
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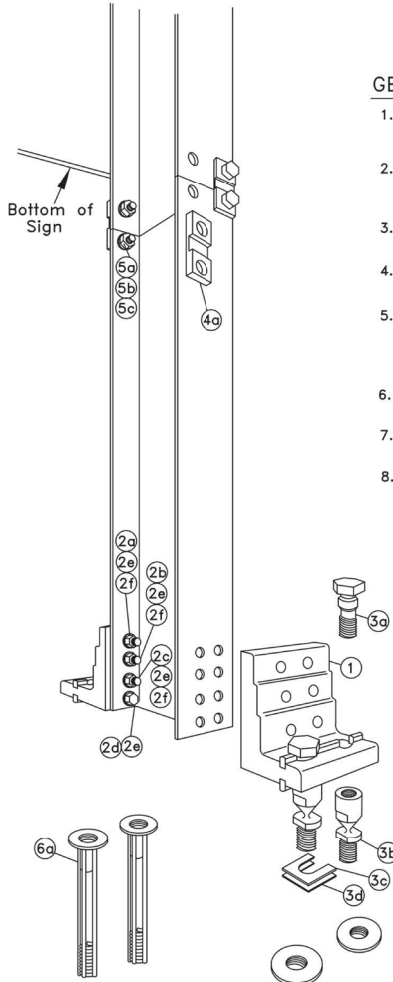
Drawing No. BS-B525	Sheet: 2
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PARTS LIST

ITEM	DESCRIPTION	SIZE/SPECIFICATIONS	QTY/ POST	PART NUMBER
Model B650		Includes Items 1-5 below.	1	SBM650*
2a	Bolt	15.9mm(5/8")-11UNCx69.9mm(2-3/4"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2b	Bolt	15.9mm(5/8")-11UNCx76.2mm(3"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2c	Bolt	15.9mm(5/8")-11UNCx82.6mm(3-1/4"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2d	Cap Screw	15.9mm(5/8")-11UNCx31.7mm(1-1/4"), Hex Head, ASTM A307, Galv. ASTM A153	4	
2e	LockWasher	15.9mm(5/8"), ANSI B18-21-1, Galv. ASTM A153	16	
2f	Nut	15.9mm(5/8")-11UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	12	
3a	Special Bolt	25.4mm(1")-8UNC, ASTM A449, Galv. ASTM A153	4	
3b	Coupling	25.4mm(1")-8UNC, LP, AMS 6378D, Galv. ASTM A153, Polyester Coat	4	
3c	Shim	25.4mm(1") Horseshoe, 14 Gauge, Galv. Steel Sheet	2	
3d	Shim	25.4mm(1") Horseshoe, 18 Gauge, Galv. Steel Sheet	2	
4a	Hinge Plate	Type B650, AISI 4130 Steel, Galv. ASTM A123	4	
5a	Bolt	19.0mm(3/4")-10UNCx57.1mm(2-1/4"), Hex Head, ASTM A325, Galv. ASTM A153	8	
5b	LockWasher	19.0mm(3/4"), ANSI B18-21-1, Galv. ASTM A153	8	
5c	Nut	19.0mm(3/4")-10UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	8	
6a	Anchor	25.4mm(1")-8UNC, 304 S.S. Ferrule, AISI 1038 Rod, AISI 1008 Coil	4	

*Complete assembly includes line items 1-5. Item 6, Anchors sold separately.



GENERAL NOTES:

- Break-Safe meets all requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."
- Break-Safe Model B650 is designed to fit W10 (W250mm) thru W21 (W530mm) Wide Flange I-Beam, and 7" (178mm) and 8" (203mm) Square Tube signposts.
- Hinge Items 4 & 5 above are not used for single post sign applications.
- All hardware items are American Standard sizes, gvanized in accordance with ASTM A153.
- Fasteners, except for special bolt and coupling, are installed with lockwashers, and do not have specific torque requirements. Fasteners should be secured as tight as possible with conventional wrenches, unless noted otherwise.
- Square-up and level individual components, particularly Anchors to minimize the need for shimming between the Couplings and Anchors.
- No more than two shims shall be placed under any one coupling. No more than three shims underneath any pair of couplings.
- Refer to other side of page for complete installation instructions.

W10 through W21

Break-Safe Model B650
Breakaway Support System for Sign Posts

for 10" thru 21" W-Shape I-Beam Posts
Multiple Post Sign Application with Hinges

Scale: Not To Scale

Date: January 2015

Drawing No. BS-B650

Sheet: 1 of 2

Patent Nos. 4,528,786 and 5,596,845

INSTALLATION INSTRUCTIONS

ANCHOR ASSEMBLY:

Note: Precise positioning of the anchors is critical to proper assembly of the system. It is recommended that actual posts be used to locate the correct position of the anchors.

- Fabricate a flat, rigid template with four (4) 25mm (1") diameter holes located to match the specified anchor pattern of the Break-Safe Brackets attached to the signpost. See diagram below.
- Attach four (4) Transpo Type B Female Anchors to the template using four (4) 25mm (1") diameter bolts. Ensure that each Anchor Washer is snug against the bottom of the template.
- Lower Anchor Assembly into fresh concrete foundation, and vibrate into position such that the tops of the Anchor Washers are flush with the finished top surface of the foundation. Support the template such that all Anchors are level and in their proper locations.
- Allow concrete to cure, and then remove the bolts and template from the top of the foundation.

HINGE ASSEMBLY: (for Multiple Post Sign Applications)

- Butt upper and lower post sections together on a flat surface.
- Drill eight (8) 20.6mm (13/16") holes in the flanges of the post sections as shown.
- Place Hinge Plates on outer surface of the post flanges and secure with bolts, lock washers, and nuts. Ensure that upper and lower post sections are in alignment, and then tighten all nuts 1/2 turn beyond snug.

BRACKET ASSEMBLY:

- Drill sixteen (16) 17.5mm (11/16") diameter holes in the flanges of the lower post section as shown.
- Place Brackets squarely on outer surface of the post flanges, and secure with bolts, lock washers, nuts, and cap screws. Then, tighten all 1/2 turn beyond snug.

COUPLING ASSEMBLY:

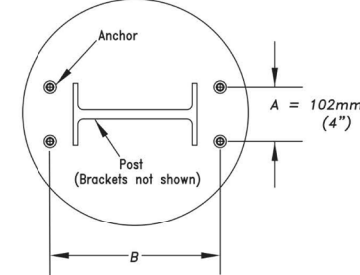
- Thread four (4) Break-Safe Couplings into Anchors. Do not tighten.
- Suspend post assembly over foundation, insert Special Bolts through holes in the Brackets, and thread them snug into the Couplings.
- If post is not plumb, insert Shims (14g and/or 18g) between the Couplings and Anchors, where needed.
- Use lower wrench flats to tighten Couplings into Anchors as tight as possible using a conventional wrench. Do not use a pipe wrench. Couplings must be seated squarely.
- Tighten Special Bolts while holding Couplings by the upper wrench flats with an additional wrench to prevent an induced torque stress across the necked portion of the Coupling. All Special Bolts shall also be tightened as tight as possible using conventional wrenches.

SIGN PANEL ASSEMBLY:

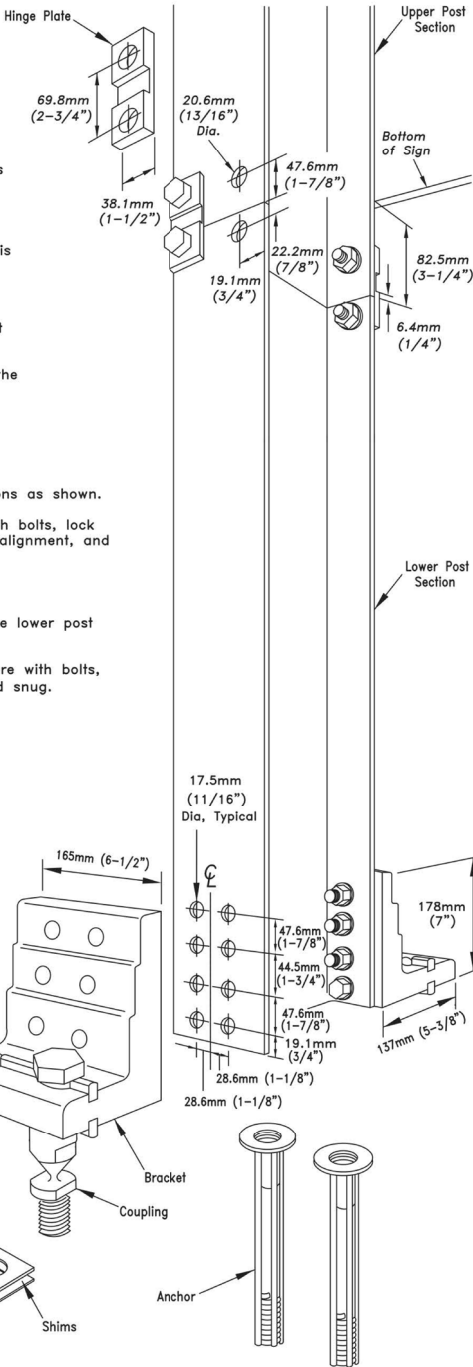
- After all signposts are secured in place, attach sign panel assembly to posts in accordance with the sign manufacturer's recommendations.

PLAN VIEW OF TYPICAL FOUNDATION

Direction of Traffic



B = Depth of Post + 203mm (8")



W10 through W21

Break-Safe Model B650
Breakaway Support System for Sign Posts

Scale: Not To Scale

Date: January 2015

Drawing No. BS-B650

Sheet: 2 of 2

Patent Nos. 4,528,786 and 5,596,845

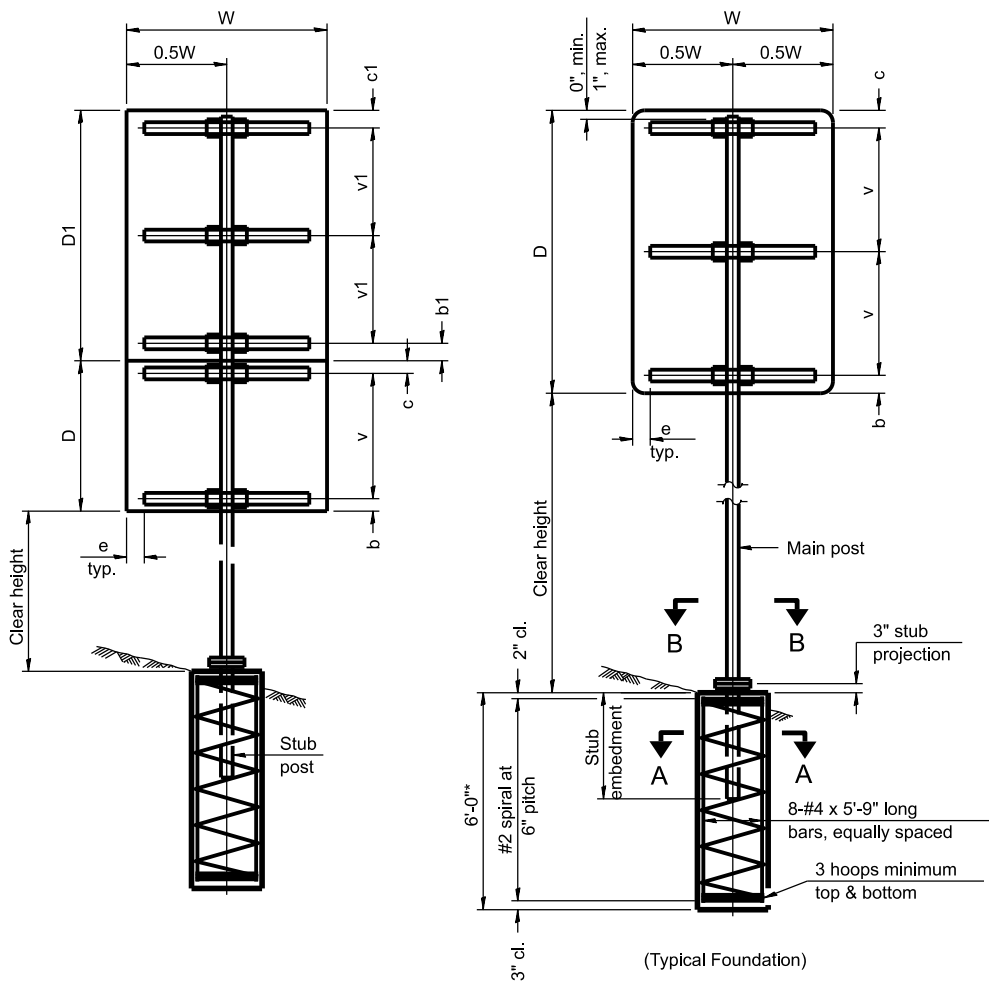
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PLOT DATE = \$DATES	CHECKED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAKAWAY COUPLING DEVICES

SCALE: SHEET OF SHEETS STA. TO STA.

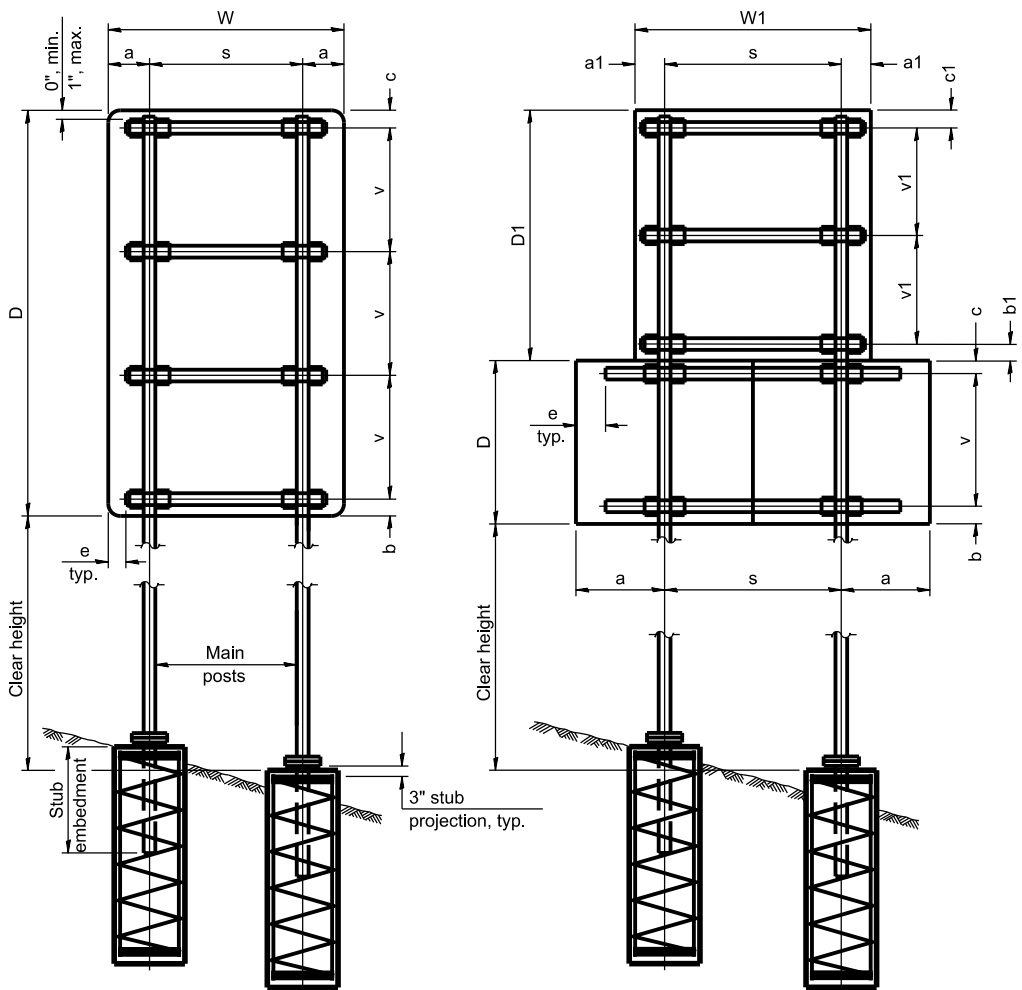
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	17
				CONTRACT NO.46676
ILLINOIS FED. AID PROJECT				



SINGLE POST ASSEMBLY EXAMPLES

- Dimensional changes required for varying site conditions shall be approved by the Engineer.

a or a1 = 6" min. to 2'-0" max. (Approximately 0.2W or 0.2W)
b or b1 = 3" min. to 4" max
c or c1 = 3" min. to 4" max
e = 0" min. to 6" max
s = 3'-0" min. to 6'-0" max. (Approximately 0.6W or 0.6W)
v or v1 = 2'-0" min. to 2'-11" max.



DUAL POST ASSEMBLY EXAMPLES

MAIN POST STEEL TUBING	WEIGHT PER FOOT (POUND)	STUB POST TABLE		MAIN POST TABLE				
		Stub Embedment	Stub Post Length	Bolt Size	A	t	R	Bolt Circle
3" x 2" x 1/4"	7.11	2'-0"	2'-3"	1/2" x 2 3/4"	8 1/4"	5/8"	9/32"	6 1/2"
4" x 2" x 1/4"	8.81	2'-0"	2'-3"	1/2" x 2 3/4"	8 1/4"	5/8"	9/32"	6 1/2"
4" x 3" x 1/4"	10.51	2'-3"	2'-6"	5/8" x 3 1/4"	10"	3/4"	11/32"	8"
5" x 3" x 1/4"	12.21	2'-3"	2'-6"	5/8" x 3 1/4"	10"	3/4"	11/32"	8"
6" x 3" x 1/4"	13.91	2'-3"	2'-6"	5/8" x 3 1/4"	11 1/2"	3/4"	11/32"	9 1/2"
6" x 4" x 1/4"	15.62	2'-3"	2'-6"	3/4" x 3 1/2"	11 1/2"	3/4"	13/32"	9 1/2"
6" x 4" x 5/16"	19.08	2'-3"	2'-6"	3/4" x 3 1/2"	11 1/2"	3/4"	13/32"	9 1/2"
7" x 5" x 1/4"	19.02	2'-6"	2'-9"	3/4" x 3 1/2"	1'-2"	3/4"	13/32"	1'-0"
8" x 4" x 1/4"	19.02	2'-6"	2'-9"	3/4" x 3 1/2"	1'-2"	3/4"	13/32"	1'-0"
8" x 6" x 1/4"	22.42	2'-6"	2'-9"	7/8" x 3 1/2"	1'-2"	3/4"	15/32"	1'-0"

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

One foundation requires 0.7 cubic yards of concrete and 46 pounds of reinforcement bars and spiral hoops.

LOADING: 80 mph wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
Structural steel - 20,000 psi
Reinforcing steel - 20,000 psi
Concrete - 1,400 psi
Footing soil pressure - 2,000 psf

After fabrication, the post, fuse plate, base plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

For Sections A-A and B-B, see Base Sheet BAT-A-2.

FOUNDATIONS:
All necessary excavation or drilling (except in rock); backfilling with excavated material; disposal of unsuitable or surplus material; formwork; and furnishing and placing the Class SI Concrete and reinforcement bars, shall be included in the pay item used for foundations.

The measurement of the tubular steel shall be computed on the basis of the weight per foot of the support, multiplied by the combined length of the main posts and stub posts.

BAT-A-1

5-15-2023

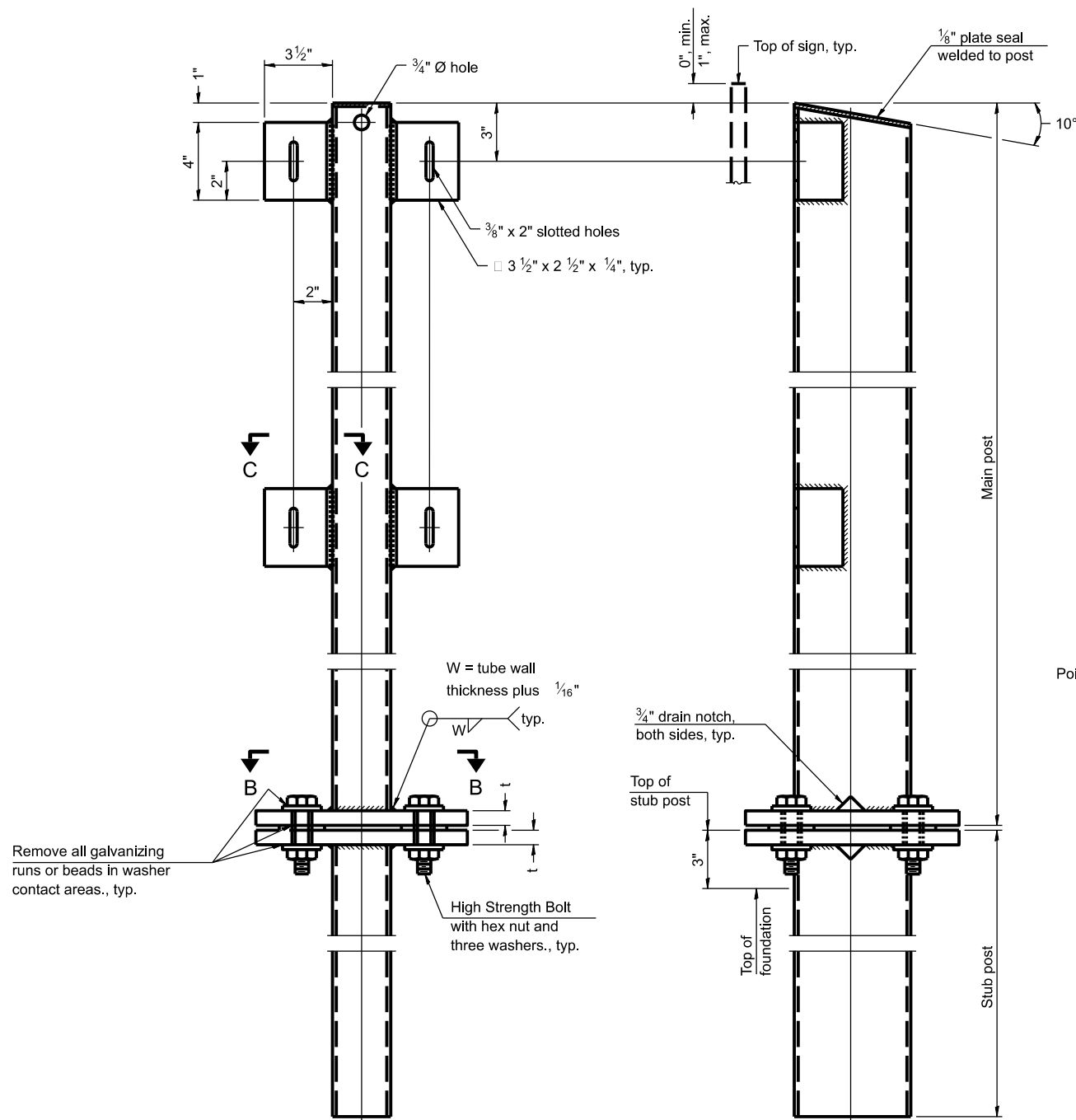
(Sheet 1 of 2)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY TUBULAR STEEL
SIGN POSTS AND FOUNDATIONS

SCALE: SHEET OF SHEETS STA. TO STA.

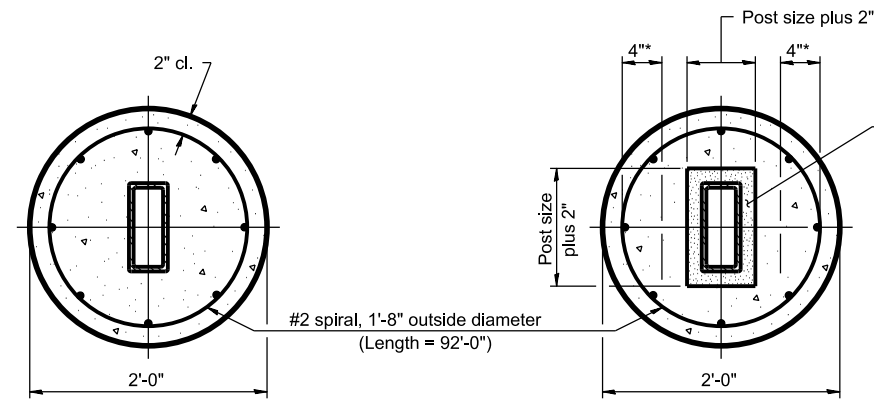
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VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	18
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



FRONT ELEVATION

SIDE ELEVATION

MAIN POST & STUB POST

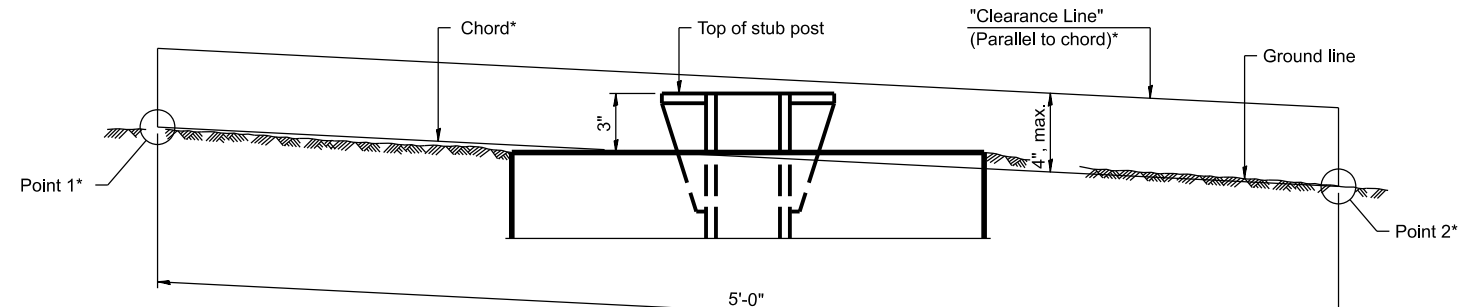


SECTION A-A
(CAST-IN-PLACE)

OR

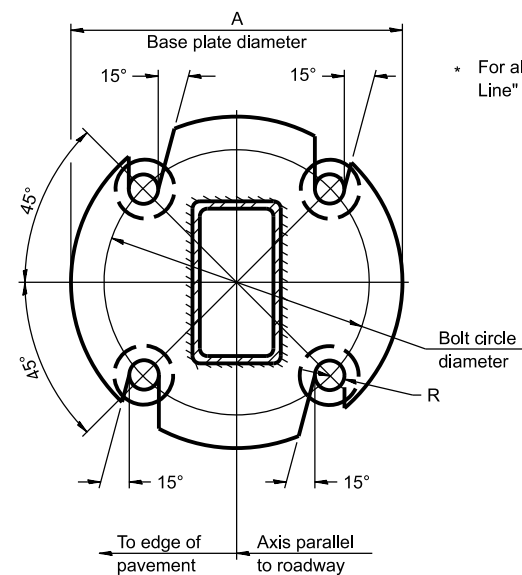
SECTION A-A
(PRECAST)

* Hot dip galvanized lifting loops or inserts may be placed in precast foundation inside the spiral reinforcement but not within 6" of the long axis of the post. Inserts must be adequate for safely lifting a total of 3,000 pounds and must not interfere with installation of the stub post or proper functioning of the slip base.

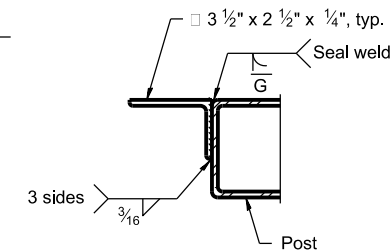


ELEVATION
GROUND LINE & STUB POST

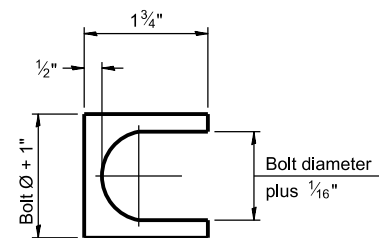
* For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.



SECTION B-B



SECTION C-C
Weld continuously around corners.



SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

BAT-A-2

5-15-2023

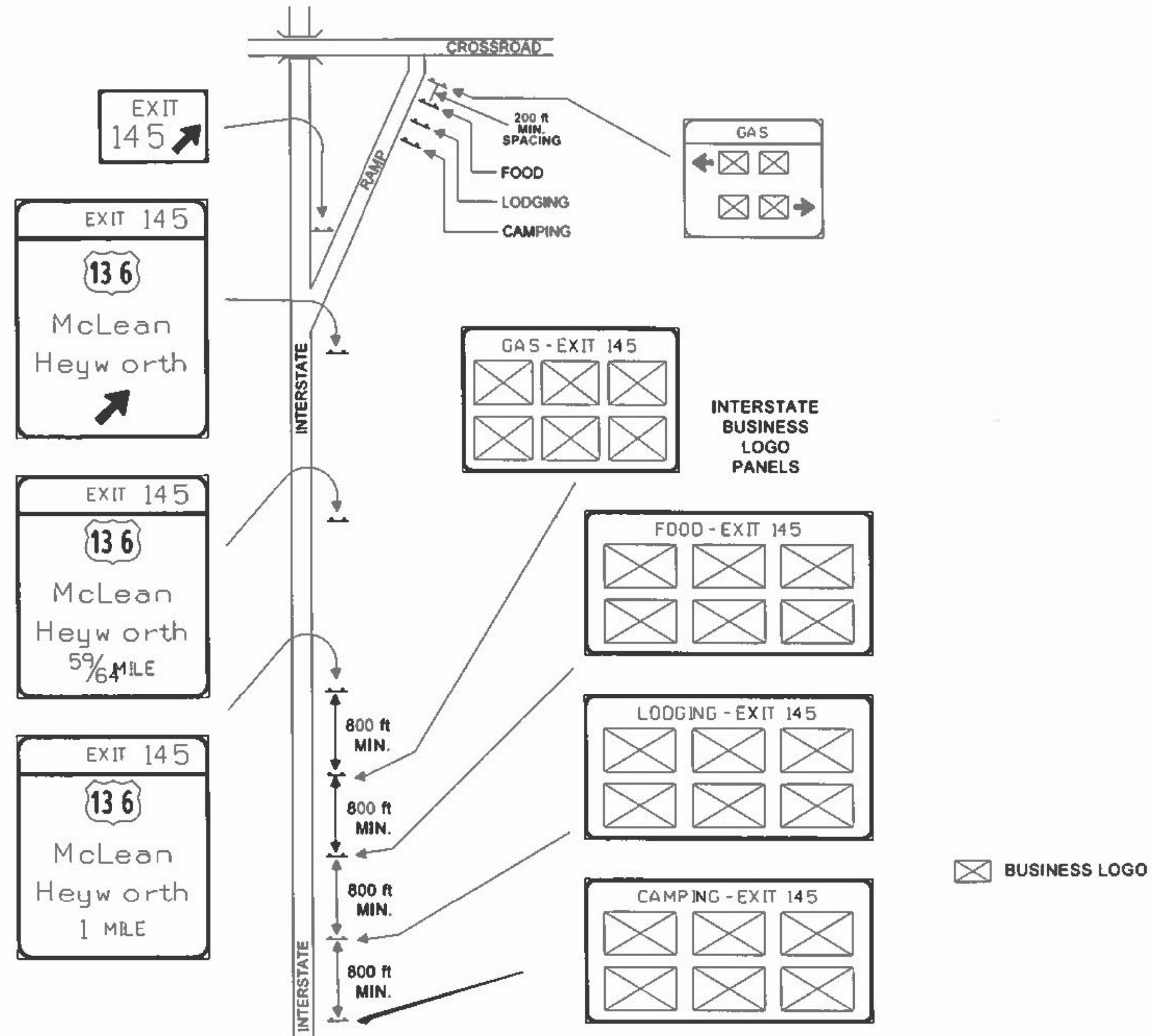
(Sheet 2 of 2)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY TUBULAR STEEL
SIGN POSTS AND FOUNDATIONS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	19
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



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FILE: NAMES: SHELLS

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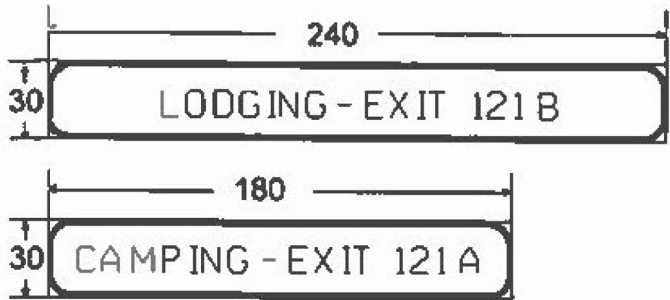
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL LOGO SIGNING SIGN LAYOUT

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	20
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

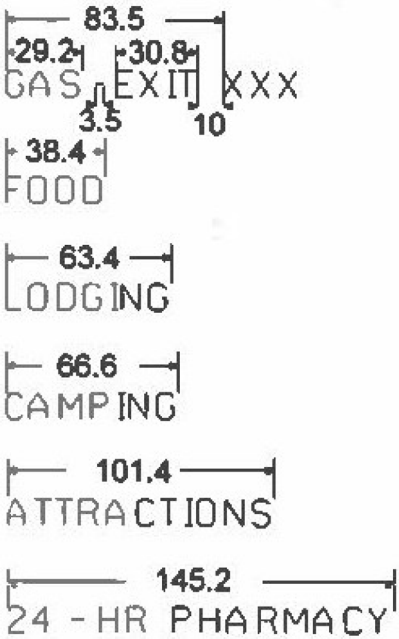
MAINLINE SUPPLEMENTAL SERVICE SIGN DETAILS



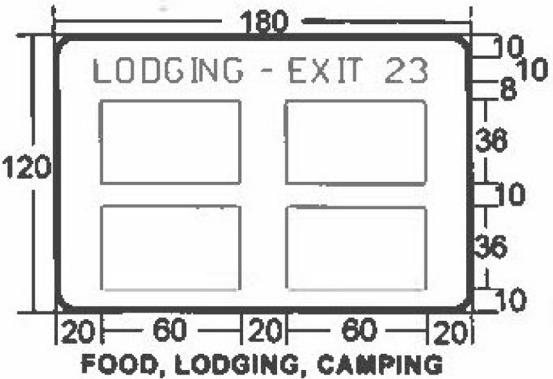
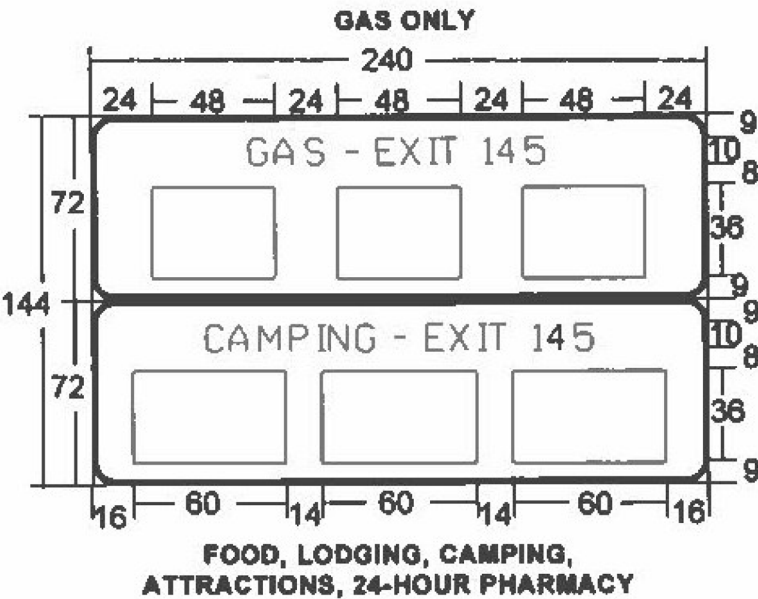
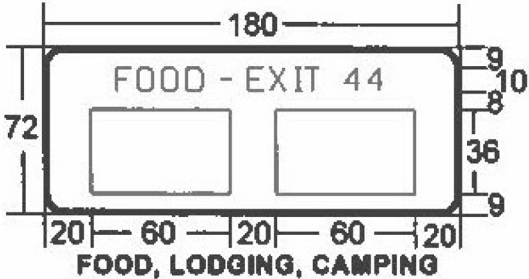
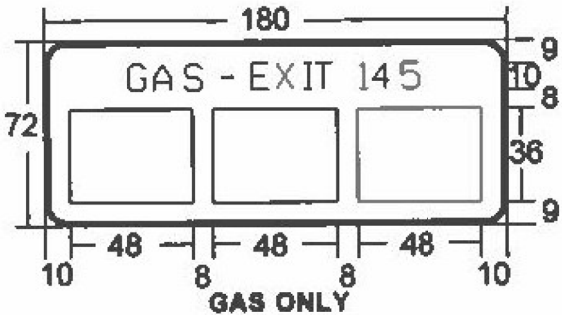
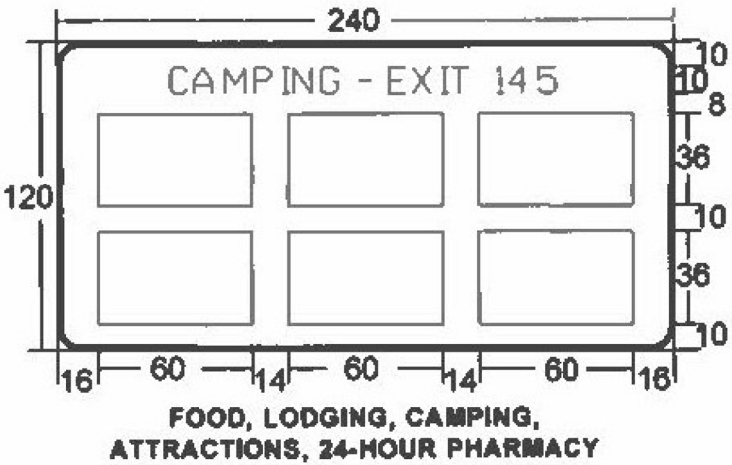
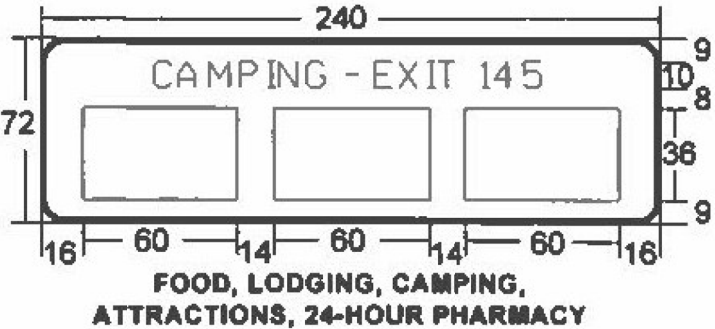
MAINLINE SUPPLEMENTAL SERVICE SIGNS
ONLY USED FOR THE FOLLOWING SERVICES.
GAS, FOOD, LODGING, AND CAMPING

- MAINLINE SUPPLEMENTAL SERVICE SIGN NOTES:
- To be placed beneath Logo Service Signs where indicated.
 - Same general notes and legend sizes apply here as to other mainline Logo Service Signs.

MAINLINE SIGN WORD SPACING

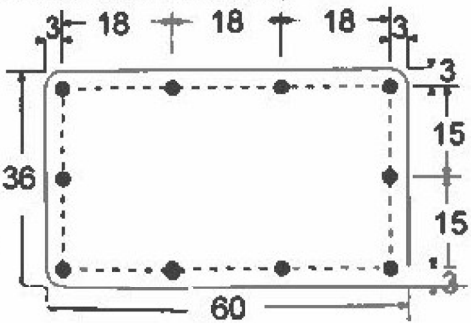


- GENERAL NOTES FOR MAINLINE SIGNS:
- All legends are 10 inch E Modified.
 - All borders are 2 inches wide.
 - All corners have a 9 inch radius.
 - Background is Blue.
 - Legend and border is white.
 - All dimensions are shown in inches.
 - Multiple services on a single panel shall be listed by priority, from left to right or top to bottom. Priority order is GAS, FOOD, LODGING, CAMPING, ATTRACTIONS, 24-HOUR PHARMACY.

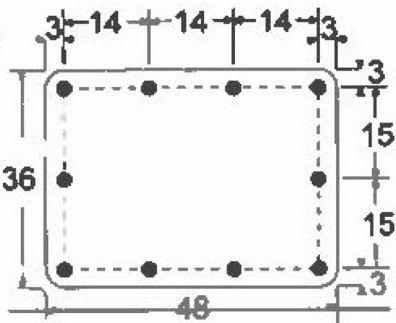


MAINLINE SERVICE PLATE HOLE SPACING DETAILS
(PLATES FURNISHED BY OTHERS)

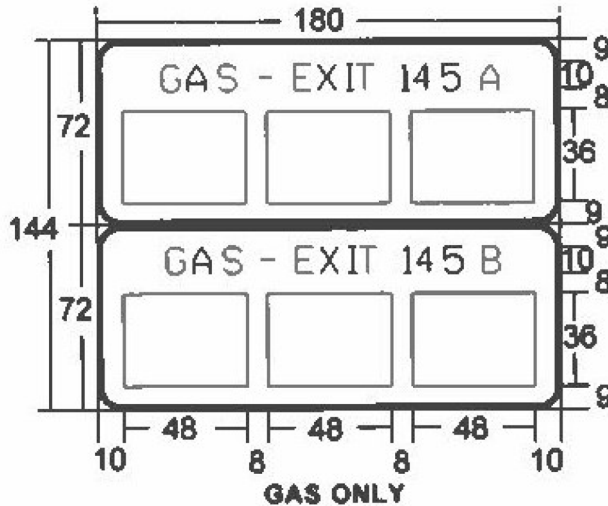
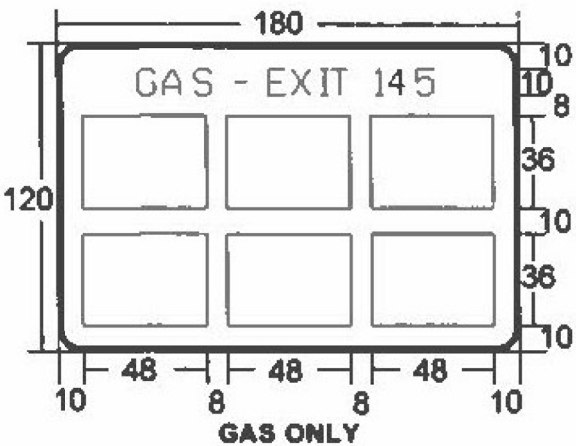
Hole spacing for 60" wide
by 36" high FOOD,
LODGING, CAMPING,
ATTRACTIONS,
24-HR PHARMACY logos.

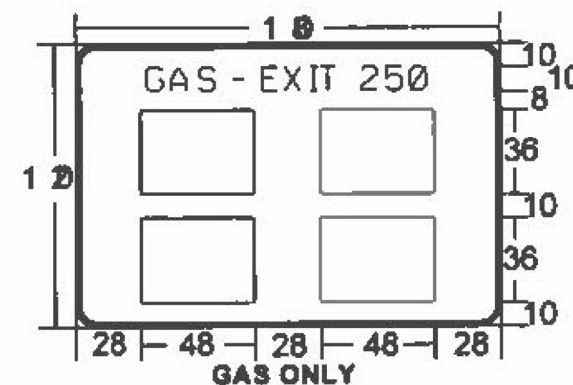
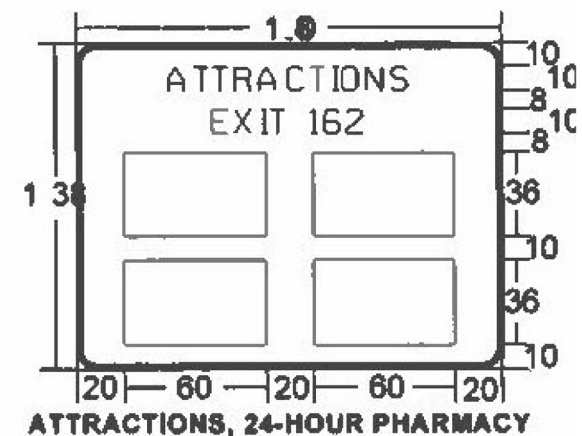
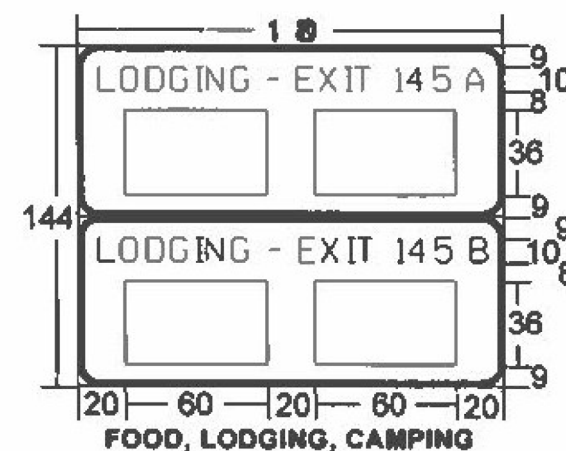
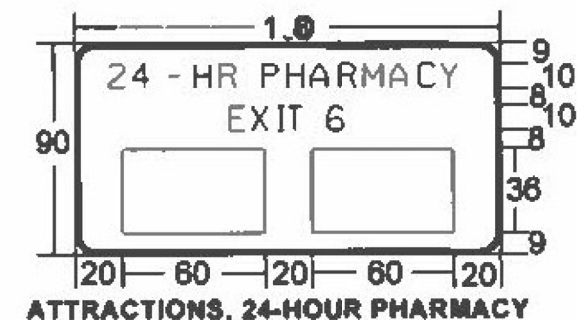
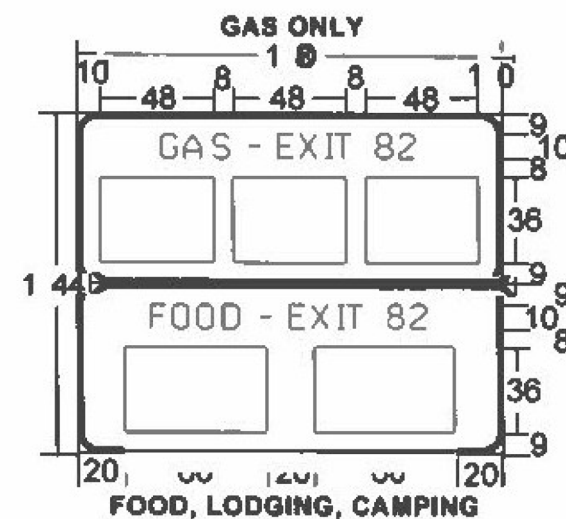
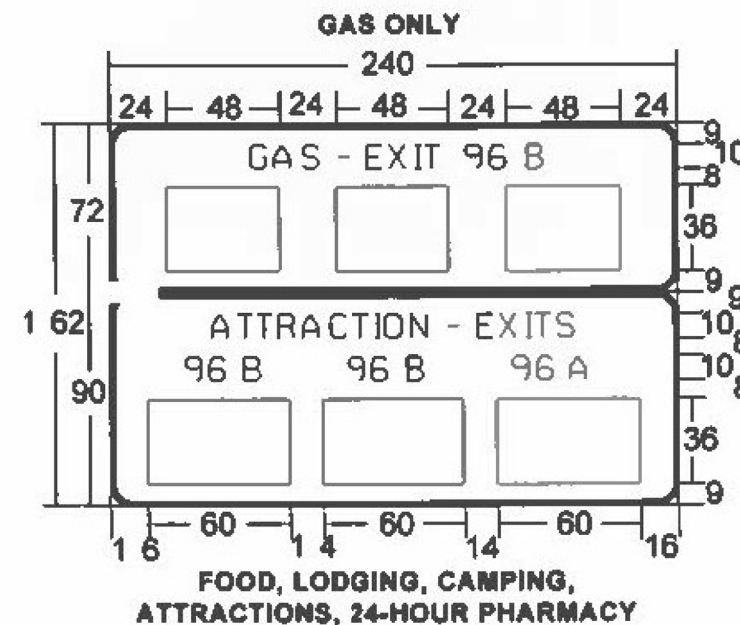
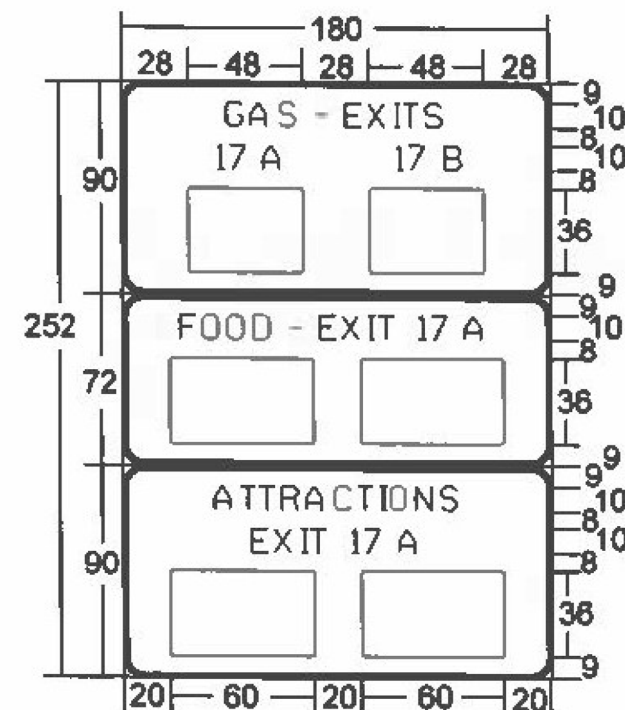
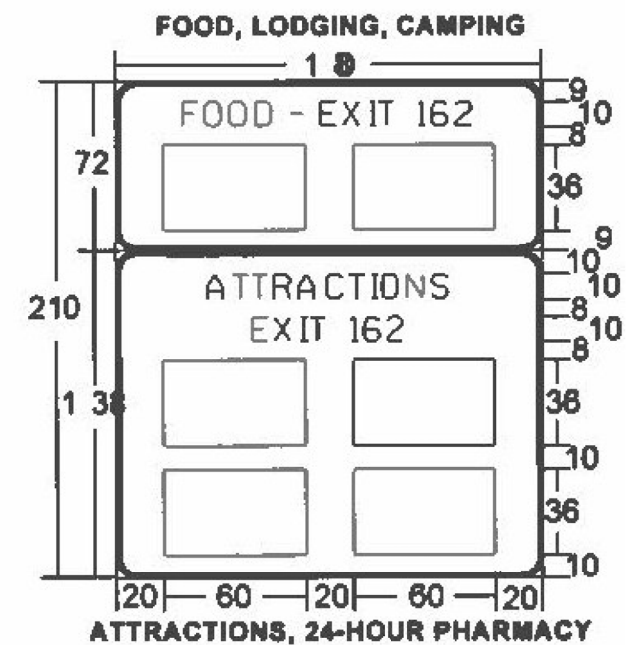
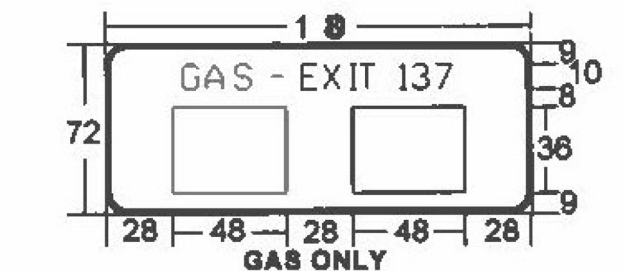
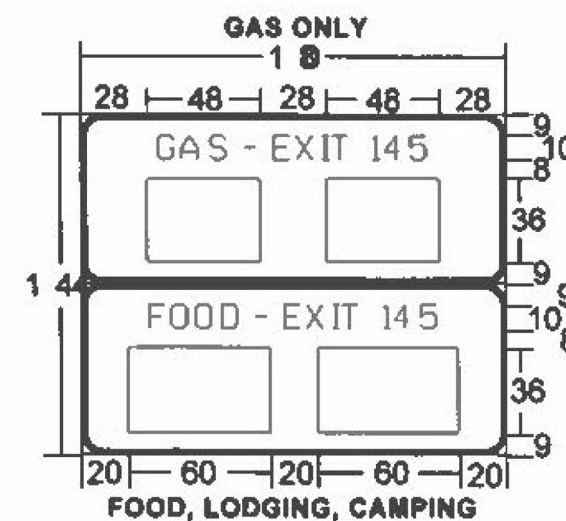
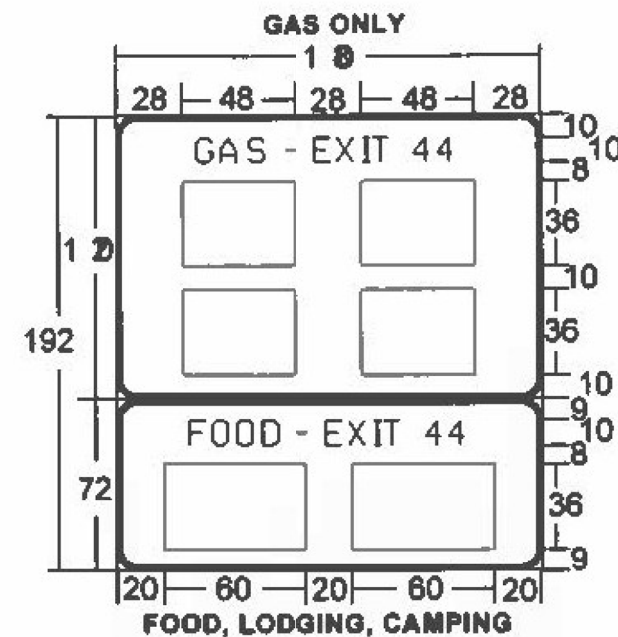
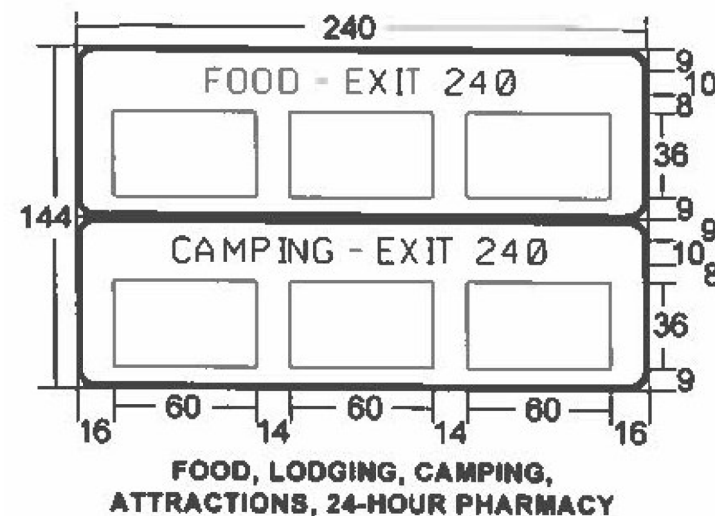


Hole spacing for
48" wide by 36"
high GAS logo.



- SERVICE PLATE NOTES:
- Holes must be 3/16" (0.1875 in. dia.).
 - All Service Plate corners have a 3 inch radius.





GENERAL NOTES FOR MAINLINE SIGNS:

1. All legends are 10 inch E Modified.
2. All borders are 2 inches wide.
3. All corners have a 9 inch radius.
4. Background is Blue.
5. Legend and border is white.
6. All dimensions are shown in inches.
7. Multiple services on a single panel shall be listed by priority, from left to right or top to bottom. Priority order is GAS, FOOD, LODGING, CAMPING, ATTRACTIONS, 24-HOUR PHARMACY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

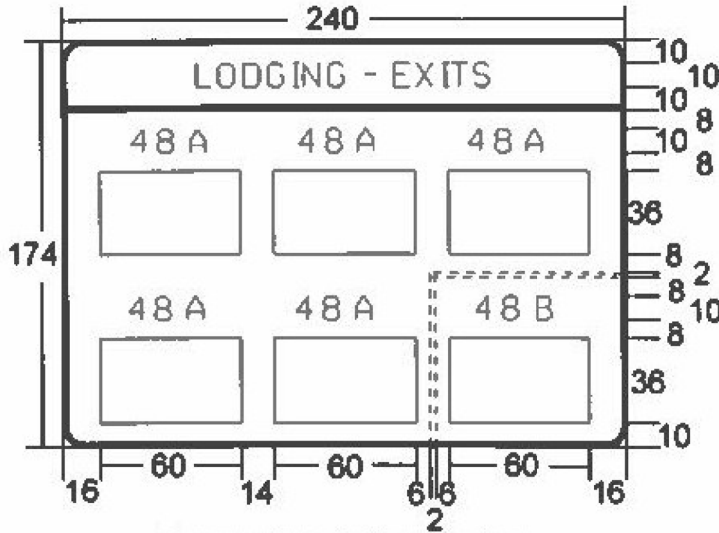
MAINLINE SIGN EXAMPLES

SCALE: SHEET OF SHEETS STA. TO STA.

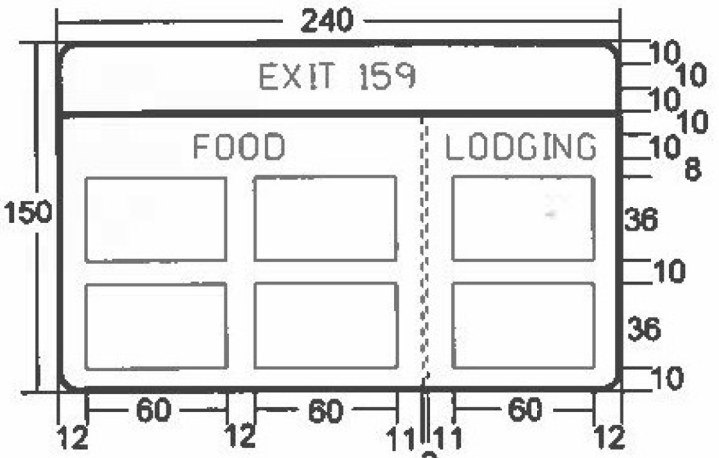
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VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	22
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

DETACHABLE BORDER

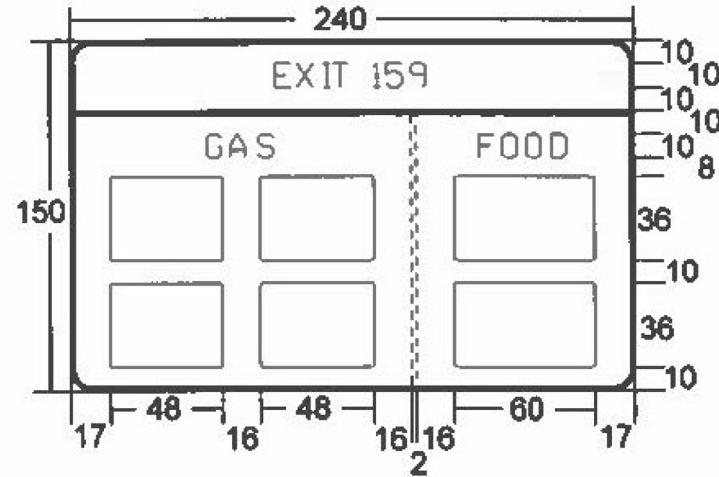
When using a detachable border, secure with a rivet at the beginning, end and every 2 feet in between.



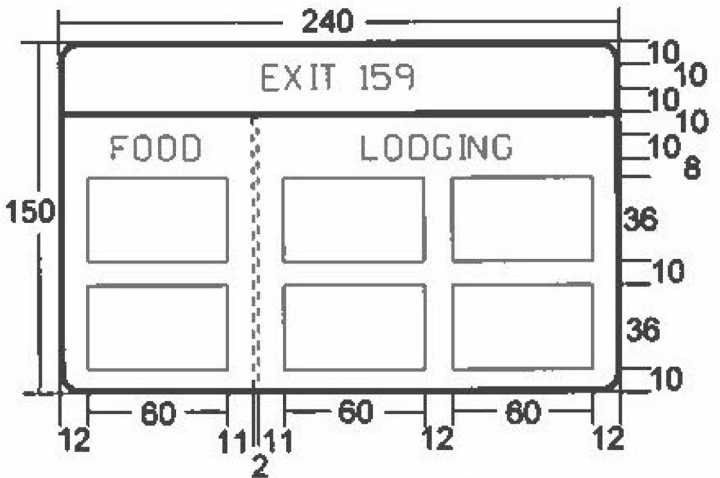
FOOD, LODGING, CAMPING,
ATTRACTIONS, 24-HOUR PHARMACY



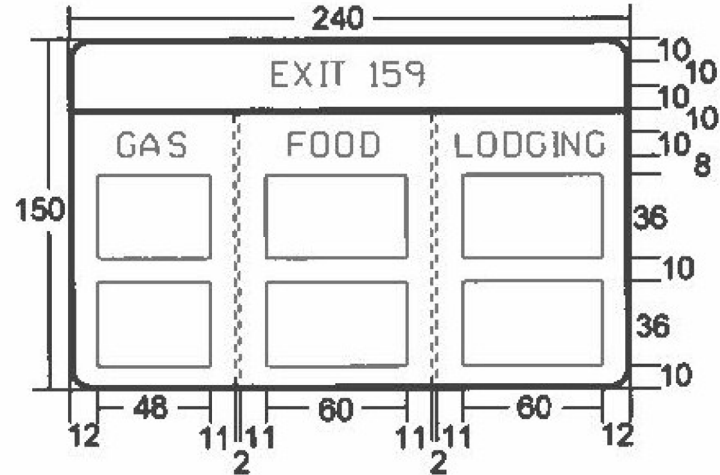
FOOD, LODGING, CAMPING



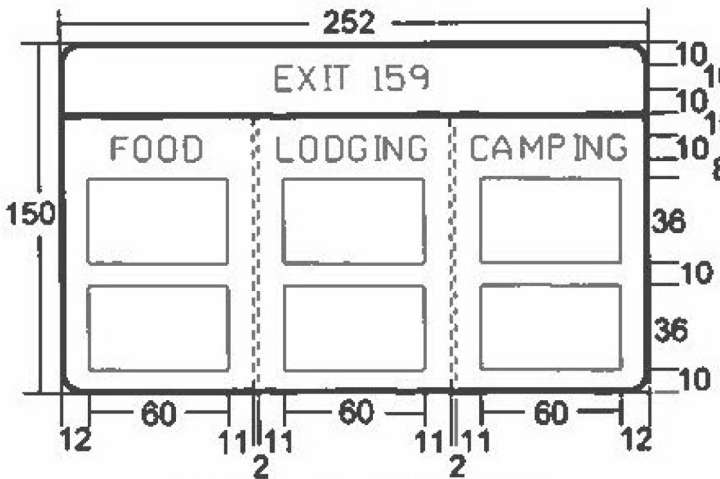
GAS, FOOD, LODGING, CAMPING



FOOD, LODGING, CAMPING



GAS, FOOD, LODGING, CAMPING

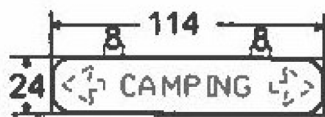
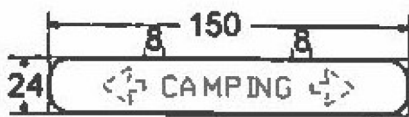
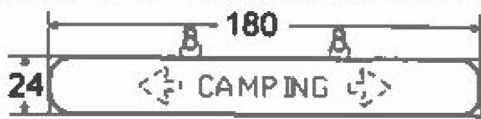


FOOD, LODGING, CAMPING

GENERAL NOTES FOR MAINLINE SIGNS:

1. All legends are 10 inch E Modified.
2. All borders are 2 inches wide.
3. All corners have a 9 inch radius.
4. Background is Blue.
5. Legend and border is white.
6. All dimensions are shown in inches.
7. Multiple services on a single panel shall be listed by priority, from left to right or top to bottom. Priority order is GAS, FOOD, LODGING, CAMPING, ATTRACTIONS, 24-HOUR PHARMACY.

RAMP SUPPLEMENTAL SERVICE SIGN DETAILS



RAMP SUPPLEMENTAL
SERVICE SIGNS ONLY
USED FOR THE
FOLLOWING SERVICES,
GAS, FOOD,
LODGING,
AND CAMPING

RAMP SUPPLEMENTAL
SERVICE SIGN NOTES:

1. To be placed beneath Logo Service Signs where indicated.
2. Same general notes and legend sizes apply here as to other ramp Logo Service Signs.

RAMP SIGN WORD SPACING

23.4
GAS

30.8
FOOD

50.8
LODGING

53.2
CAMPING

81.2
ATTRACTIONS

133.2
24 - HR PHARMACY

GENERAL NOTES FOR RAMP SIGNS:

1. All legends are 8 inch E Modified.
2. All borders are 1 inches wide.
3. All corners have a 9 inch radius.
4. Background is Blue.
5. Legend and border is white.
6. All dimensions are shown in inches.
7. Multiple services on a single panel shall be listed by priority, from left to right or top to bottom. Priority order is GAS, FOOD, LODGING, CAMPING, ATTRACTIONS, 24-HOUR PHARMACY.

ARROW HOLE SPACING DETAILS:

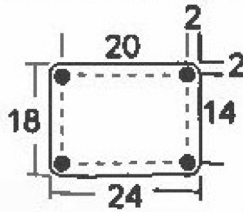


RAMP SERVICE PLATE NOTES:

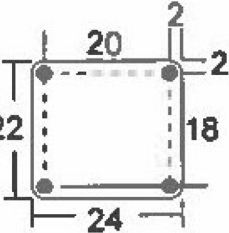
1. Holes must be 3/8" (0.1875 in. dia.).
2. All Ramp Service Plate corners have a 2 inch radius.

RAMP SERVICE PLATE HOLE SPACING DETAILS
(PLATES FURNISHED BY OTHERS)

Hole spacing for 24" wide
by 18" high GAS, FOOD,
LODGING, CAMPING,
ATTRACTIONS, or
24-HR PHARMACY logos.



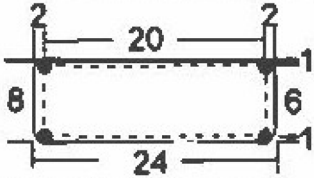
Hole spacing for
24" wide by 22" high
open seasonally
CAMPING logo.



RAMP SERVICE PLATE NOTES:

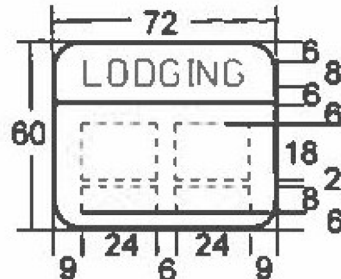
1. Holes must be 3/8" (0.1875 in. dia.).
2. All Ramp Service Plate corners have a 2 inch radius.

MILEAGE PLATE HOLE SPACING DETAIL

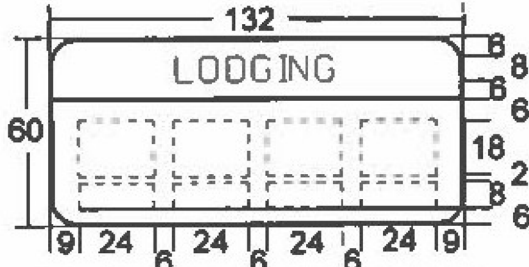


MILEAGE PLATE NOTES:

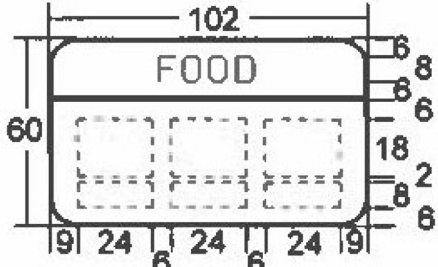
1. Holes must be 3/8" (0.1875 in. dia.).
2. All legends are C series.
3. All legends are centered.
4. All dimensions are shown in inches.
5. Legend is white.
6. Background is Blue.



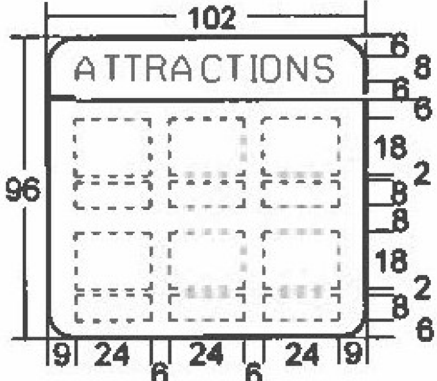
GAS, FOOD,
LODGING, CAMPING



GAS, FOOD, LODGING, CAMPING,
ATTRACTIONS, 24-HOUR PHARMACY



GAS, FOOD, LODGING,
CAMPING, ATTRACTIONS



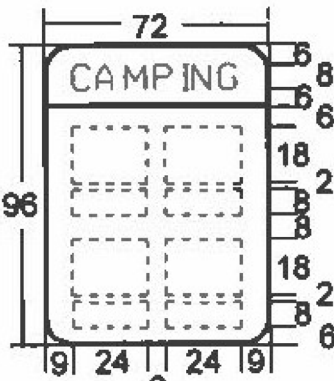
GAS, FOOD, LODGING,
CAMPING, ATTRACTIONS



POSSIBLE RAMP SERVICE
PLATE LOCATIONS



POSSIBLE RAMP MILEAGE
PLATE LOCATIONS



GAS, FOOD,
LODGING, CAMPING

MODEL
FILE NAME: SHELLS

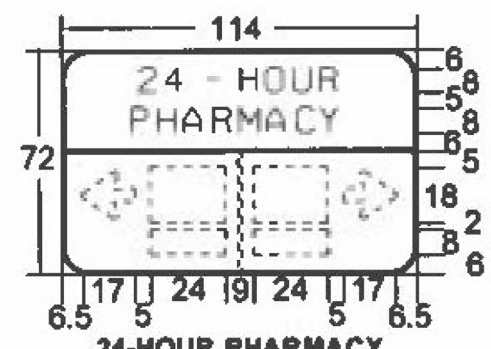
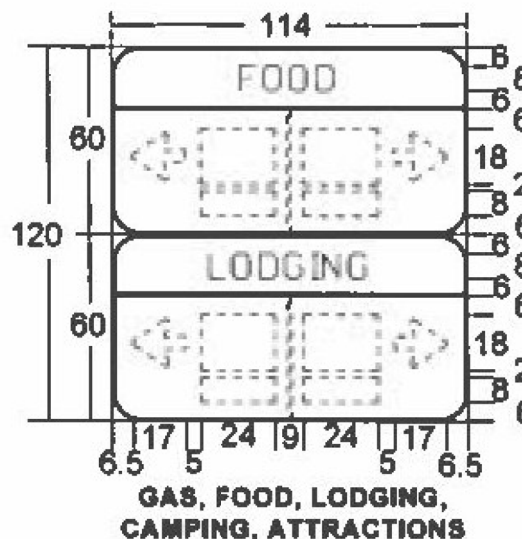
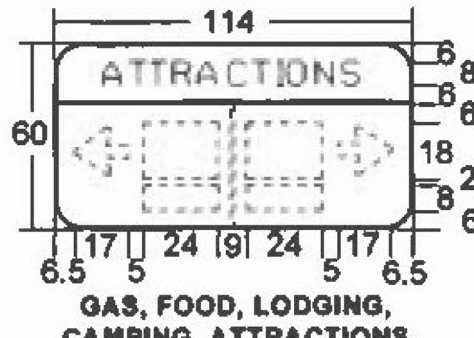
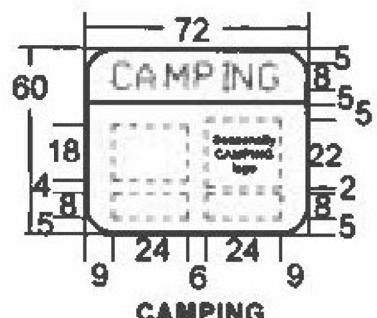
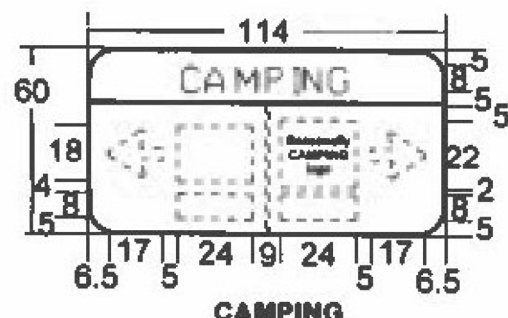
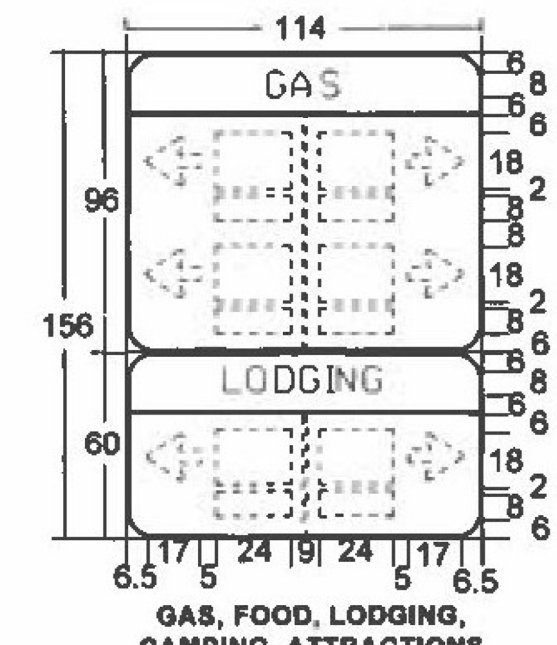
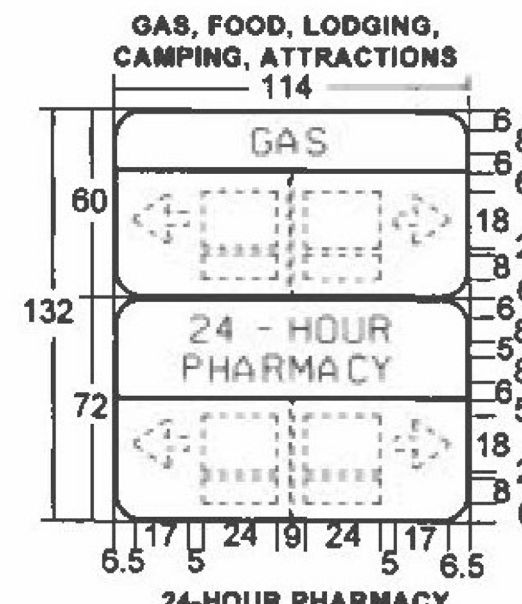
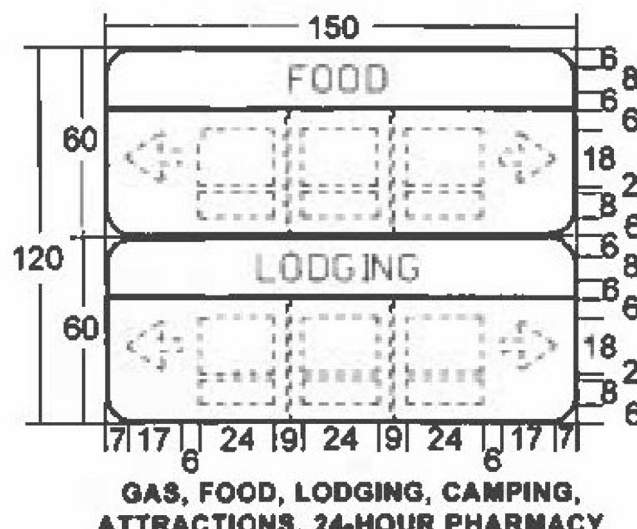
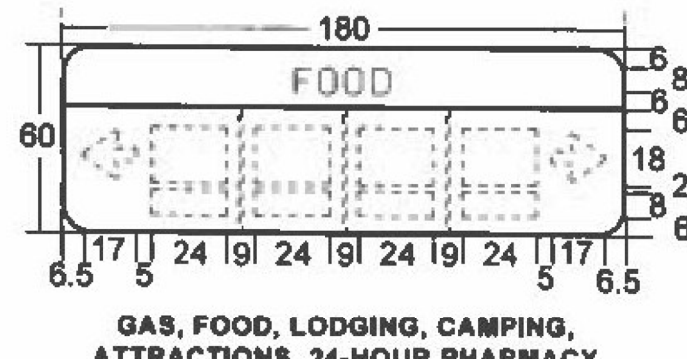
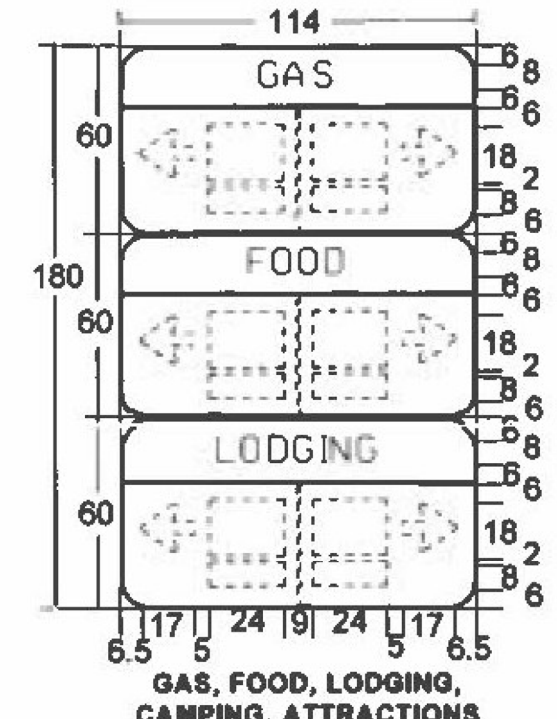
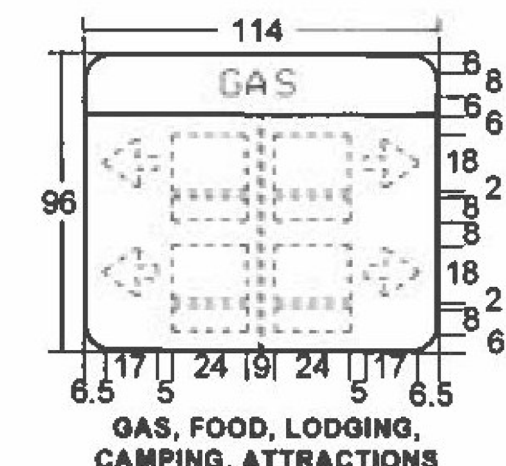
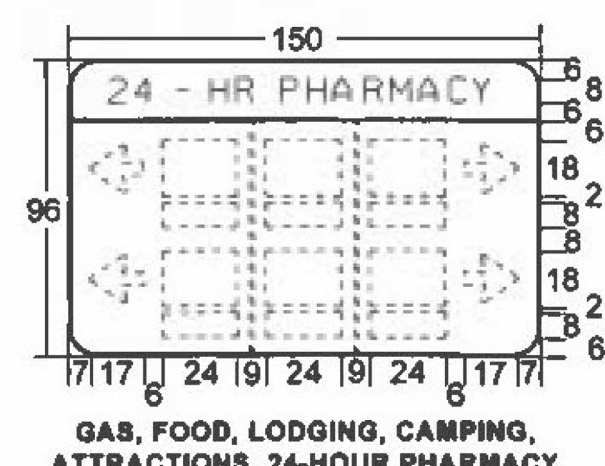
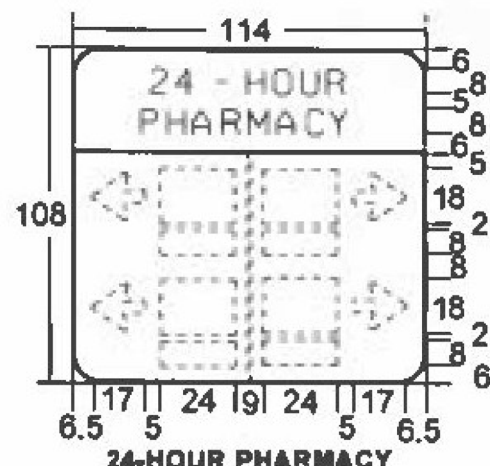
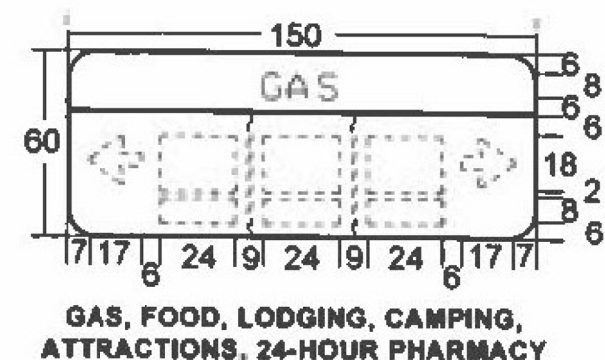
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PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAMP SIGN SPECIFICATIONS AND EXAMPLES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	24
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



GENERAL NOTES FOR RAMP SIGNS:

1. All legends are 8 inch E Modified.
2. All borders and vertical bars are 1 inch wide.
3. All corners have a 9 inch radius.
4. Background is Blue.
5. Legend and border is white.
6. All dimensions are shown in inches.
7. Multiple services on a single panel shall be listed by priority, from left to right or top to bottom. Priority order is GAS, FOOD, LODGING, CAMPING, ATTRACTIONS, 24-HOUR PHARMACY.

POSSIBLE VERTICAL BAR LOCATIONS

POSSIBLE RAMP SERVICE PLATE LOCATIONS

POSSIBLE RAMP MILEAGE PLATE LOCATIONS

POSSIBLE ARROW LOCATIONS



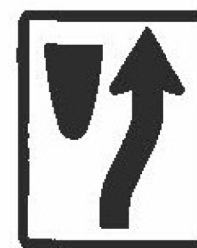
A
48" X 48"
White on Brown
Arrow on left
of symbols
where noted



F
12" X 24"
Std. R7-8/
Std. R7-1101
combined



K
12" X 18"
White on Brown



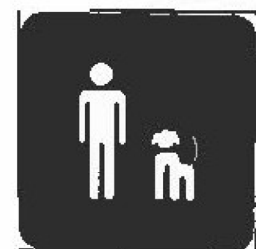
P
24" X 30"
Std. R4-7



U
18" X 24"
Std. R6-2
Arrow direction
as noted



B
48" X 48"
White on Brown



G
24" X 24"
White on Brown



L
CLICK IT
OR
TICKET



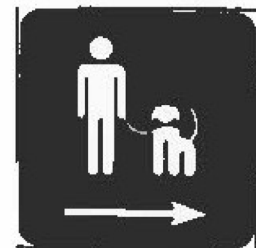
Q
36" X 36"
Std. 30" X 30"
R1-1
← Brown



V
48" X 48"
White on
brown



C
48" X 48"
White on Brown



H
24" X 24"
White on Brown



M
36" X 36"
White on Brown



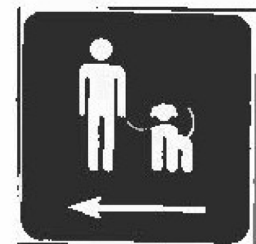
R
36" X 24"
White on
brown



W
36" X 36"
with
24" X 24"
black/yellow
warning sign
← Brown



D
48" X 48"
White on Brown
Arrow on left
of symbols
where noted



I
24" X 24"
White on Brown



N
36" X 24"
White on
Brown



S
18" X 24"
Std. R2-1
Speed as
noted



X
36" X 24"
White on
brown



E
48" X 48"
Std. 36" X 36"
R5-1
or
36" X 36"
overall
with Std 36" X 36"
R5-1 where noted



J
24" X 24"
White on Brown



O
24" X 18"
White on
Brown



T
36" X 36"
Std. 30" R1-2
← Brown



Y
36" X 36"
with Std.
24" X 24"
W6-1
← Brown

USER NAME = \$USERS	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = \$SCALES	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	26
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



Z
12" X 18"
White on brown.
Logo: white on blue



EE
24" X 36"
Std. 18" shield
White on brown
Route as noted.



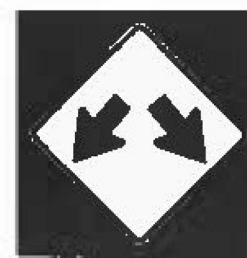
JJ
18" X 36"
Upper: White on red
Lower: Black on white



OO
48" X 48"
White on Brown
Arrow on left of symbols where noted



AA
Brown
Top 36" X 36" with 24" X 24" W1-1
Speed 36" X 18"
Black on yellow.
Speed and arrow direction as noted.



FF
36" X 36"
Std. 24" X 24" W12-1
Brown background



KK
18" X 30"
White on brown



PP
48" X 48"
White on Brown



BB
48" X 36"
White on Brown
Std. 18" shield
(1 sign north and 1 sign south)
Route and direction as noted.



GG
12" X 12"
Std. R8-3



LL
18" X 24"
Std. W1-8



QQ
48" X 48"
Std. W11-2
Brown background



CC
24" X 24"
Std/RM-160
Modified
White on brown



HH
24" X 24"
Std. R3-1
Direction as noted



MM
12" X 18"
White on brown.
Logo: White on blue



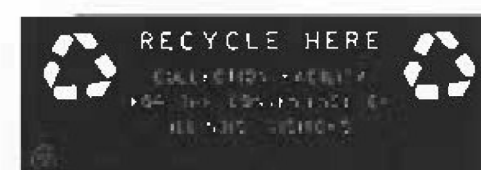
RR
12" X 18"
White on Brown



DD
36" X 24"
White on brown



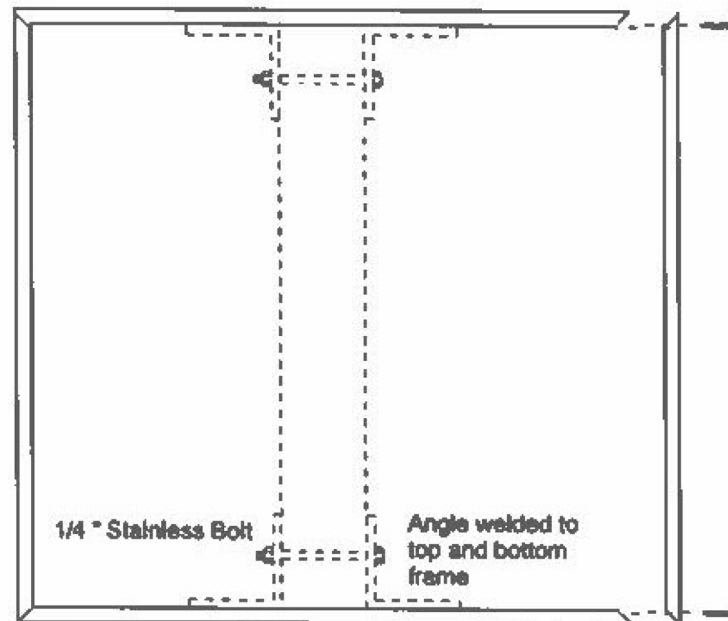
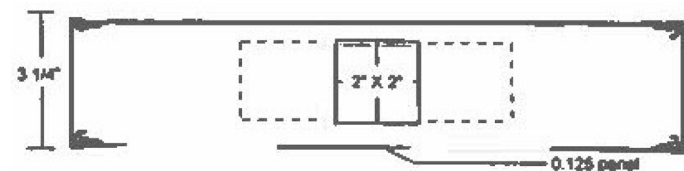
II
30" X 24"
Black on white



NN
72" X 24"
White on Brown

USER NAME = \$USERS	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = \$SCALES	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	27
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



NOTES

All posts and frames shall be manufactured from heavy duty 6063 alloy aluminum extrusions. Posts shall be temper T6 and frames temper T5.

All extrusions shall be produced to Aluminum Association standards and ASTM B221.

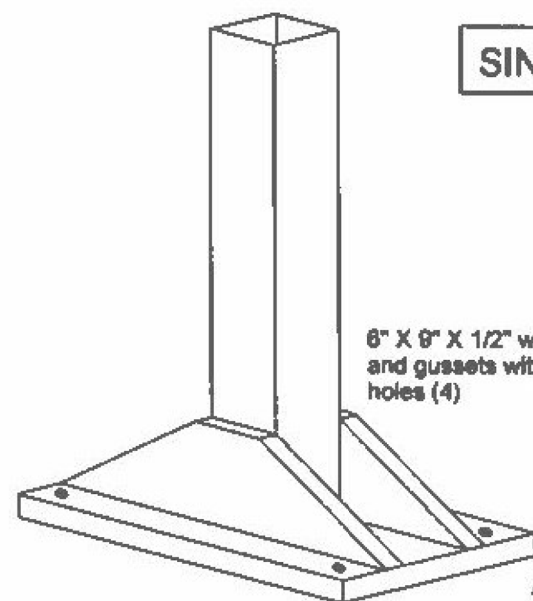
All hardware shall be stainless steel. All fasteners shall be tamper resistant.

Frames and posts shall be finished in dark bronze meeting the approval on the Engineer. Color samples shall be furnished prior to fabrication. The finish is to be acrylic polyurethane, electrostatically applied to pretreated and primed surfaces and oven baked.

218 - 2" square post (.156 wall)

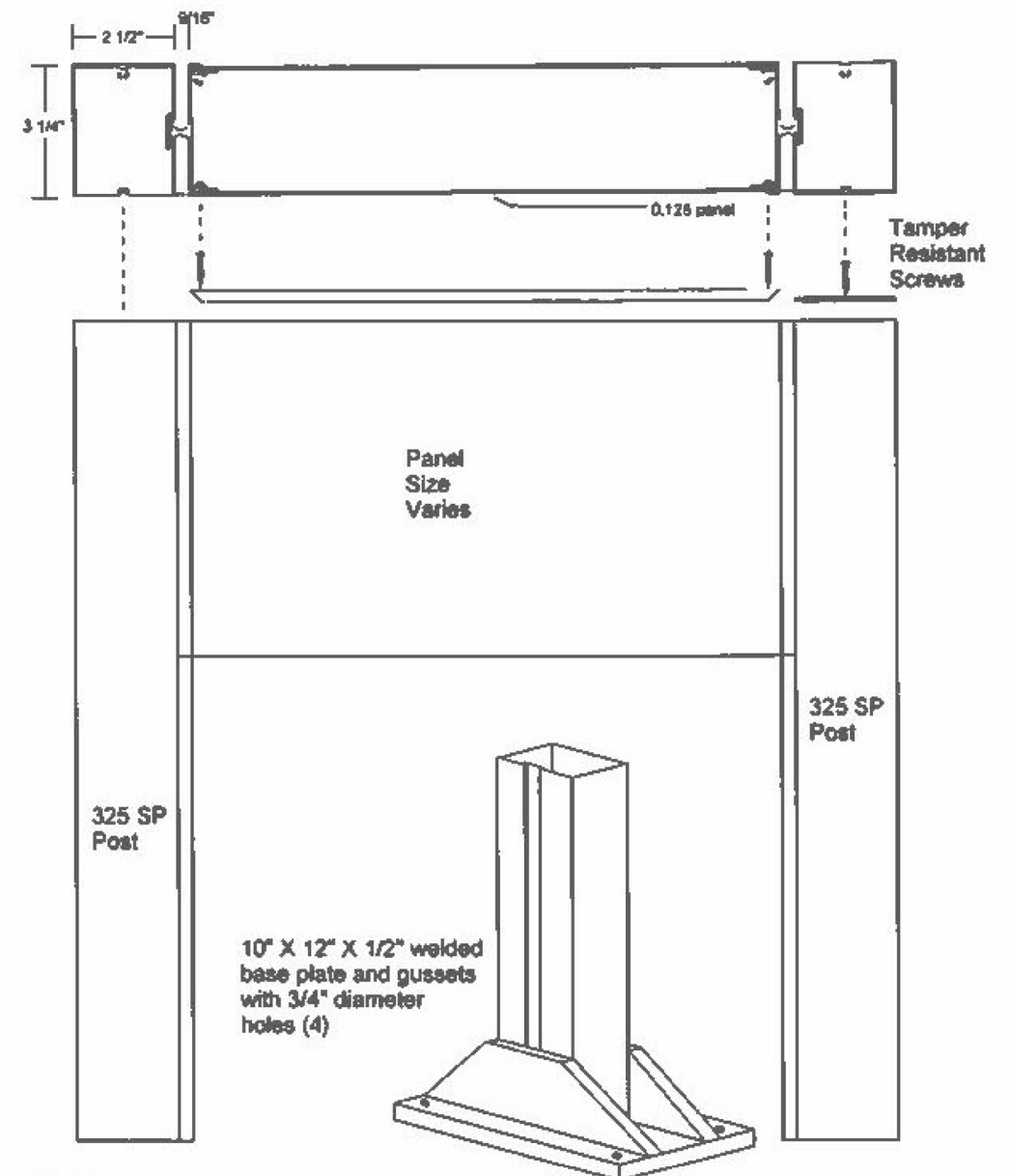
Surface mount with base plate or direct burial as specified.

SINGLE POST INSTALLATIONS



Anchor system to meet the approval of the Engineer.

DOUBLE POST INSTALLATIONS



Anchor system to meet the approval of the Engineer.

NOTES

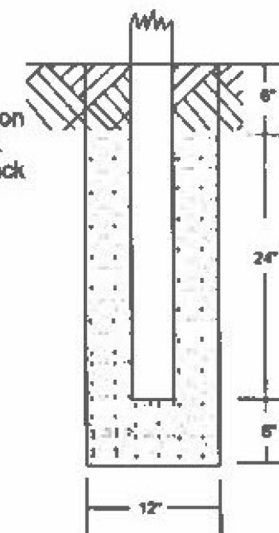
All posts and frames shall be manufactured from heavy duty 6063 alloy aluminum extrusions. Posts shall be temper T6 and frames temper T5.

All extrusions shall be produced to Aluminum Association standards and ASTM B221.

All hardware shall be stainless steel. All fasteners shall be tamper resistant.

Frames and posts shall be finished in dark bronze meeting the approval on the Engineer. Color samples shall be furnished prior to fabrication. The finish is to be acrylic polyurethane, electrostatically applied to pretreated and primed surfaces and oven baked.

Top of foundation 6" below grade. Backfill with black dirt and seed.



MODEL
FILE NAME: SEI15

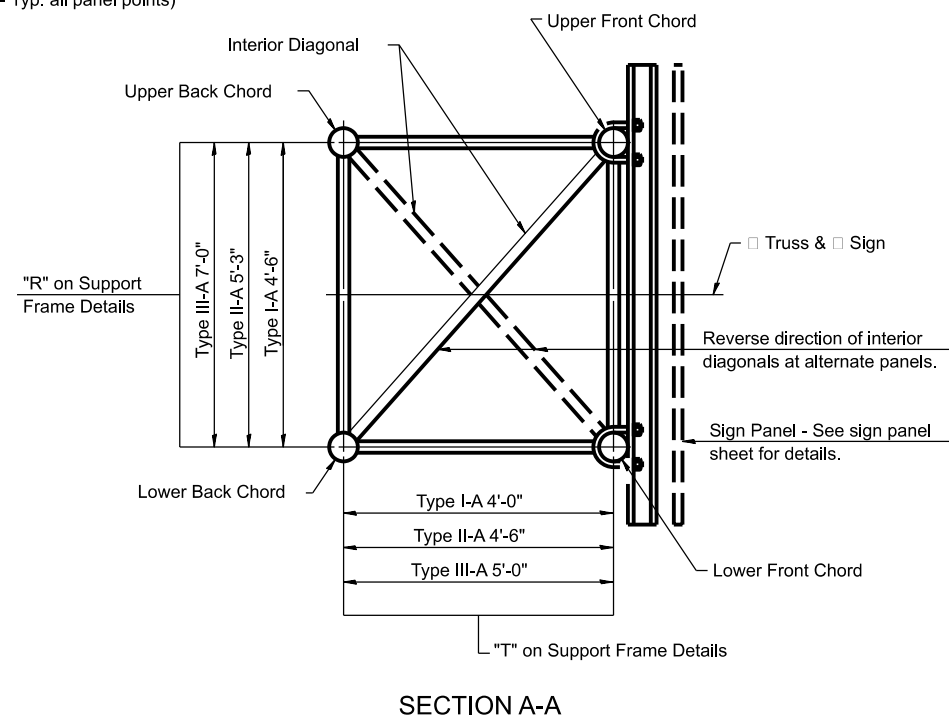
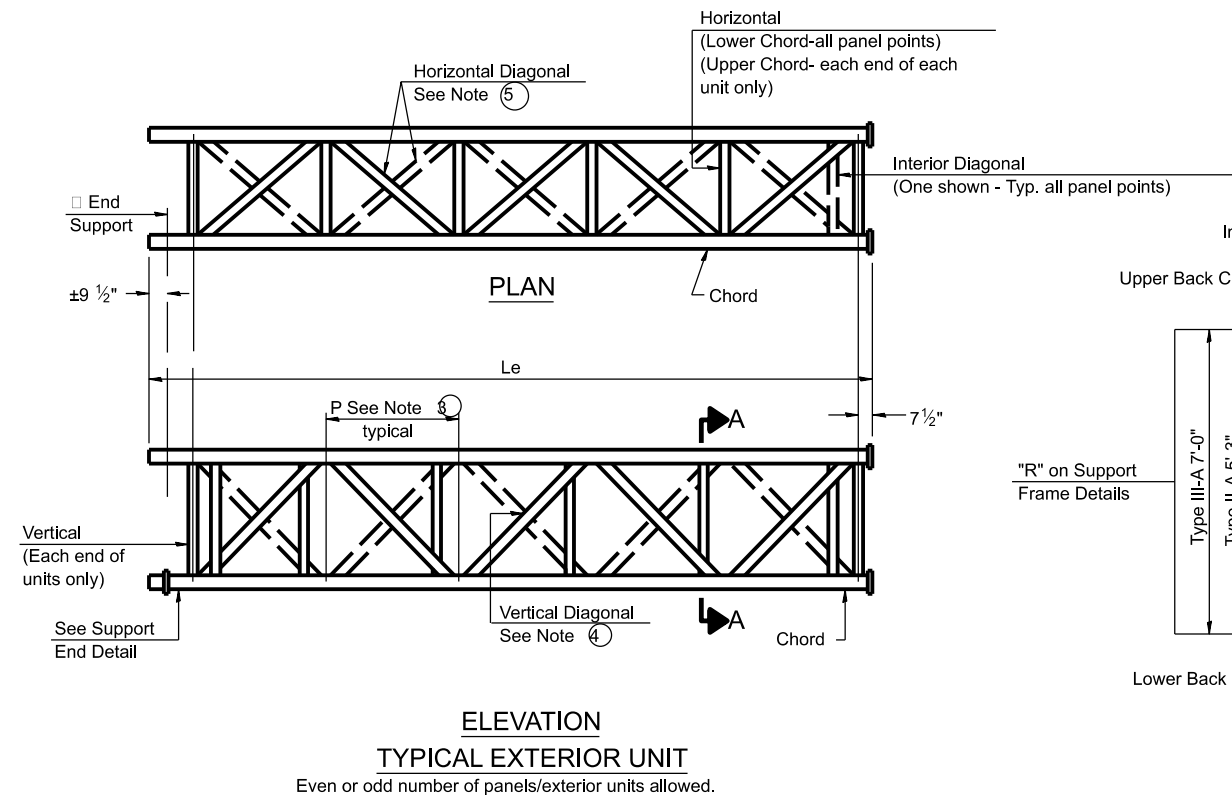
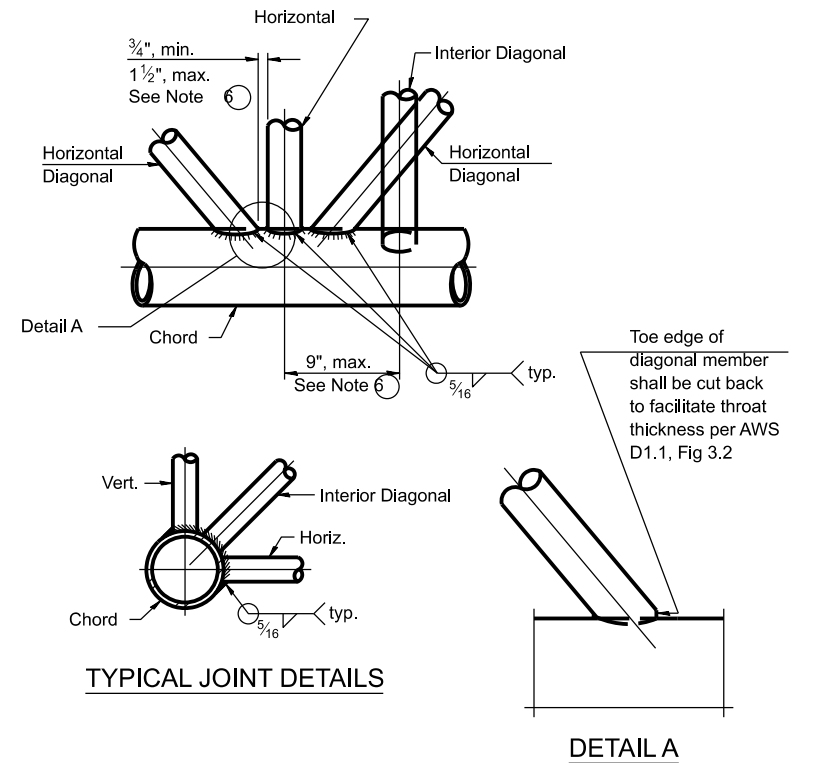
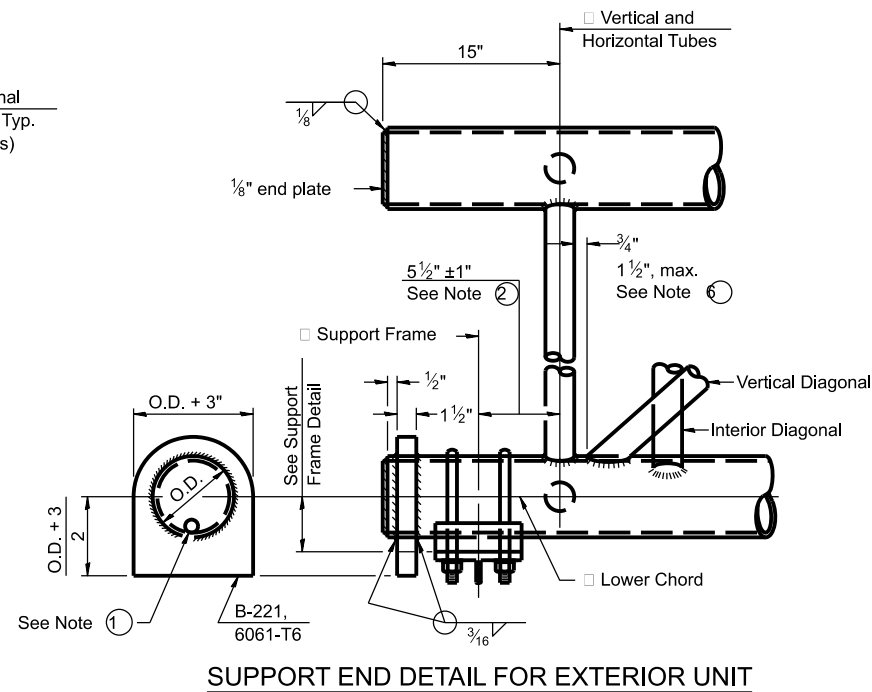
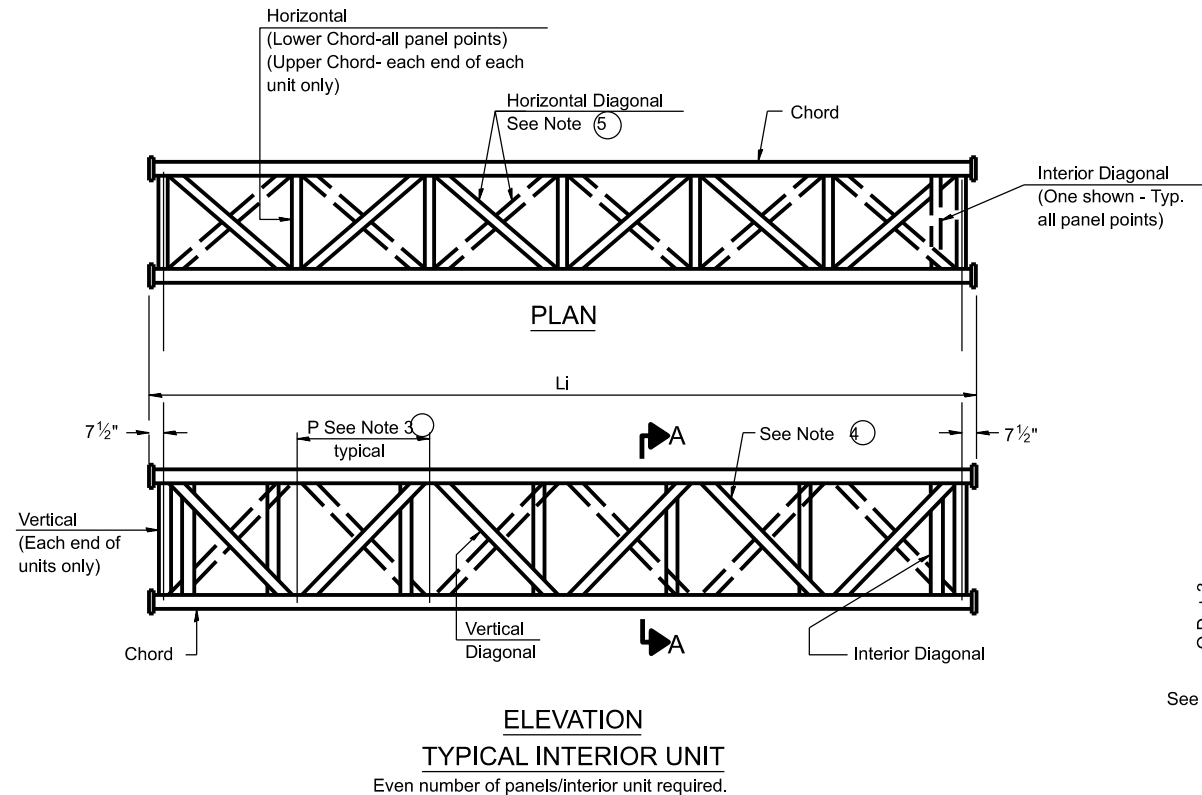
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PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE AND DOUBLE POST INSTALLATIONS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	28
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

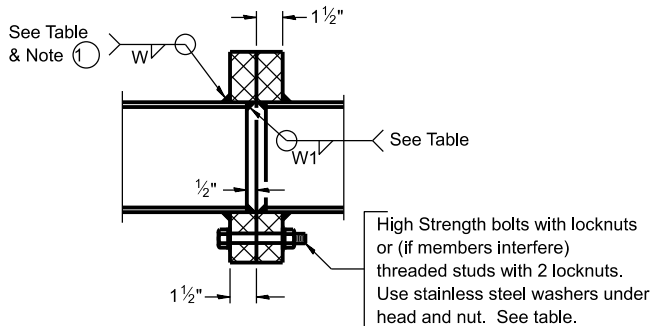


- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. $\frac{1}{2}"$ $\varnothing$ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② $5\frac{1}{2}"$ end dimension may vary by $\pm 1"$ to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a $\frac{3}{4}"$ minimum to $1\frac{1}{2}"$ maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
PLOT DATE = \$DATE\$	CHECKED -	REVISED -
	DATE -	REVISED -

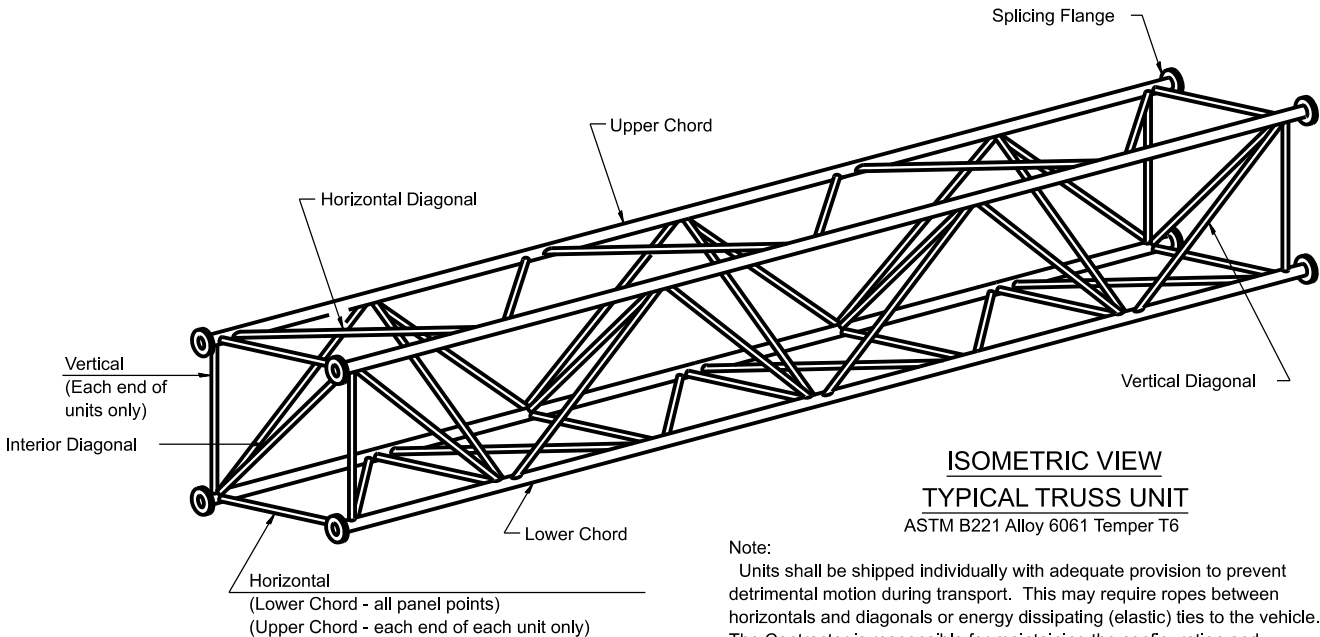
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	30
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

TRUSS UNIT TABLE

[illegible]

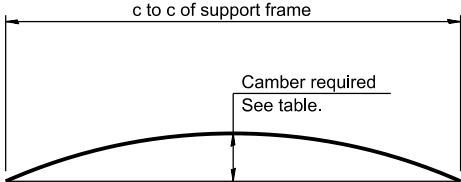
SECTION B-B

- ① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



Note:

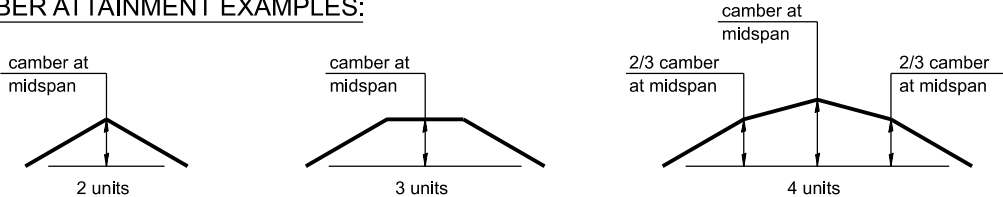
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



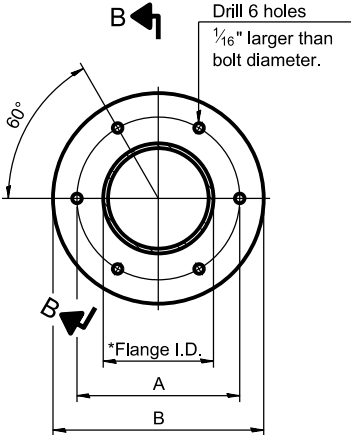
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

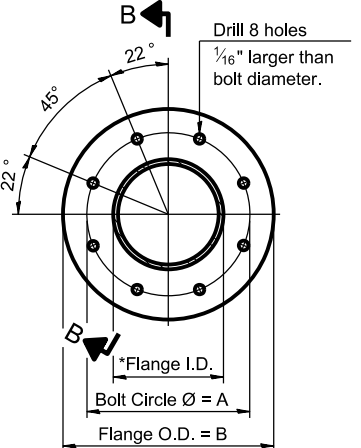
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES

ASTM B221, Alloy 6061-T6
ASTM B209, Alloy 6061-T651

*To fit O.D. of Chord with maximum gap of $\frac{1}{16}$ ".

OS4-A-2

5-15-2023

USER NAME = \$USER\$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DATE -	REVISED -

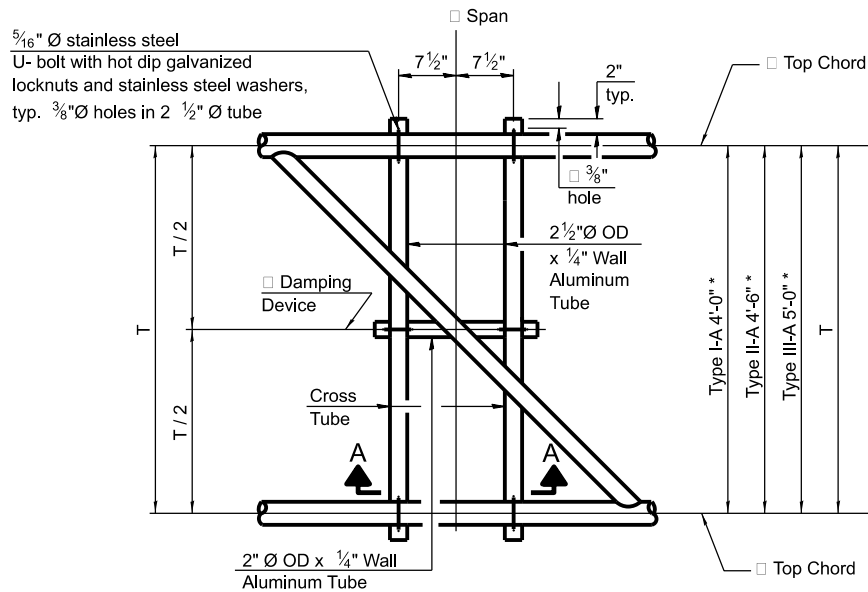
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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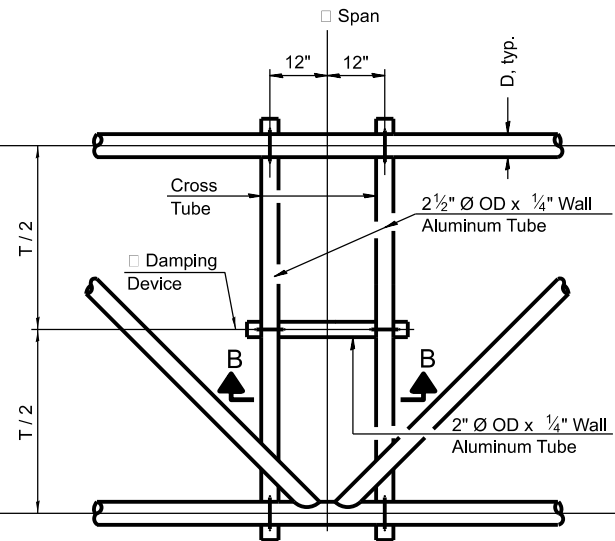
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	31
		CONTRACT NO.46676		
ILLINOIS		FED. AID PROJECT		

MODEL: \$MODELNAME\$
FILE NAME: \$FILE\$



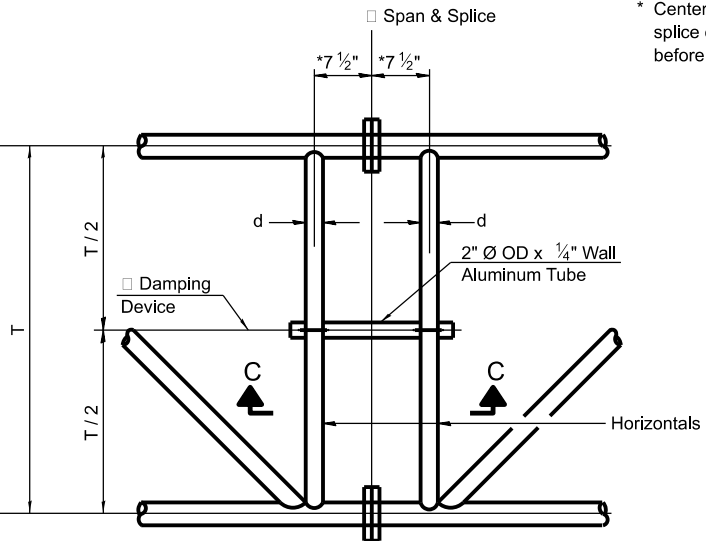
PLAN DETAIL "A"

Span between Panel Points



PLAN DETAIL "B"

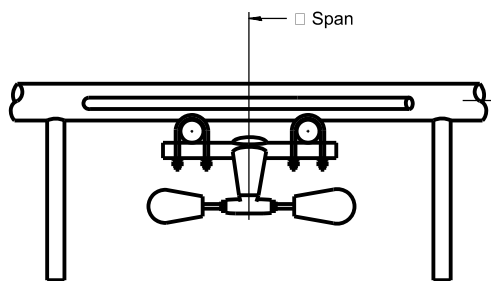
Span at Panel Point



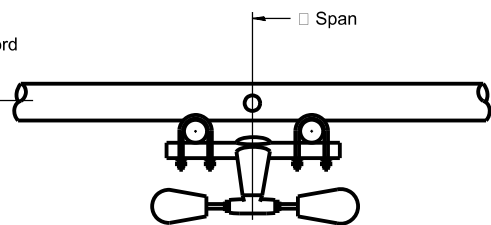
PLAN DETAIL "C"

Span at Chord Splice

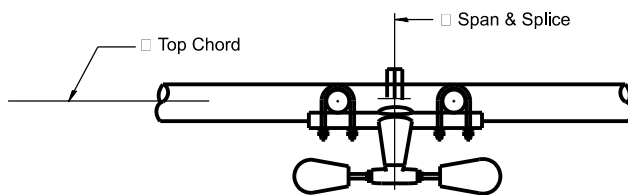
* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.



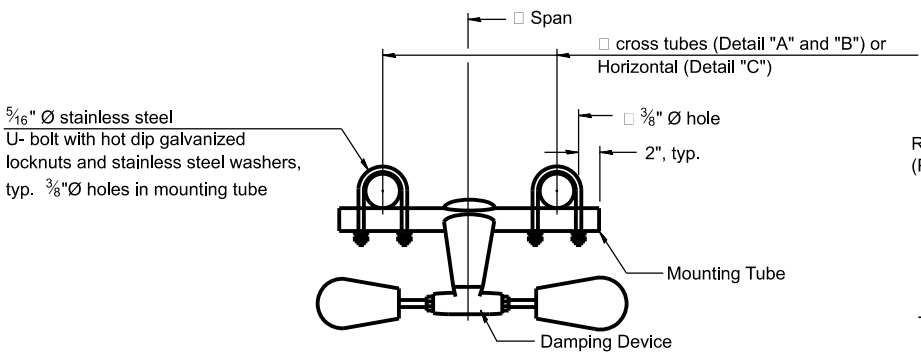
SECTION A-A



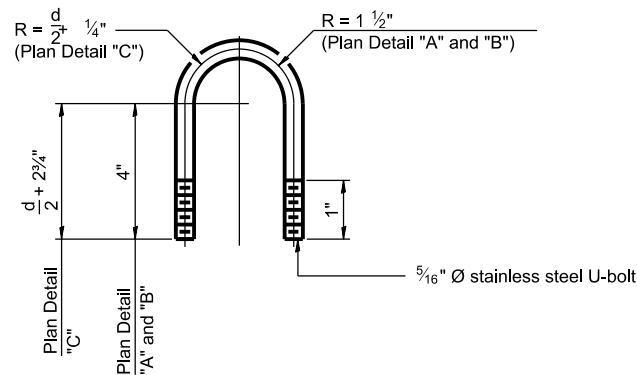
SECTION B-B



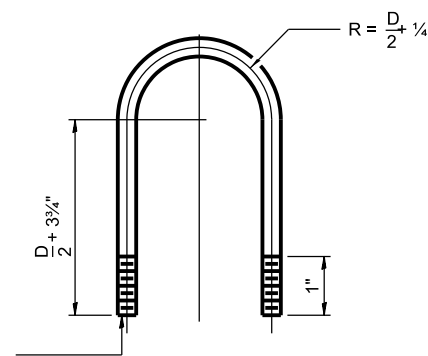
SECTION C-C



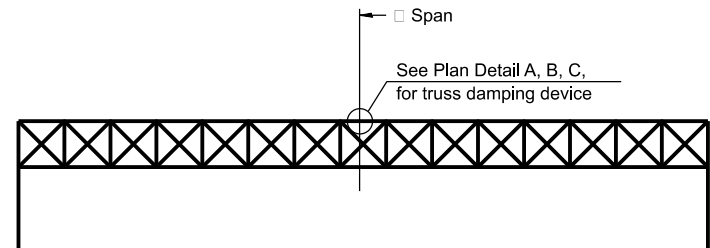
TRUSS DAMPING
DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE
U-BOLT DETAIL
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead
Sign Truss

Notes: Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...

USER NAME = \$USERS	DESIGNED -	REVISED -
DRAWN -	REVISED -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	32
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

DETAIL A

SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.

SECTION B-B

SIDE ELEVATION

8" Ø PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

HANDHOLE COVERS

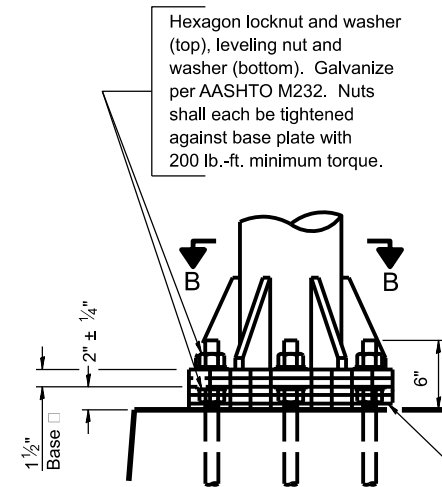
DETAIL D

Backfill shall be placed
prior to erection of
support frame

END ELEVATION

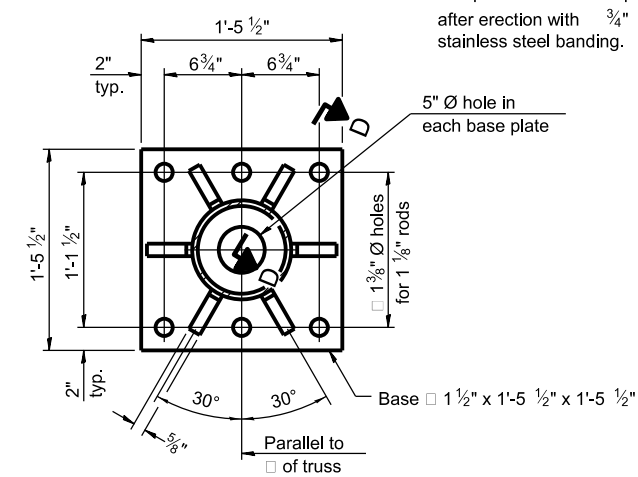
- Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
- Load combinations considered include deadload plus:
- a) 100% wind normal to sign, 20% parallel to sign
 - b) 60% wind normal to sign, 30% parallel to sign
- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.
 - ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
 - ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be not dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
 - ④ See General Notes for fasteners.
 - ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
 - ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

[illegible]

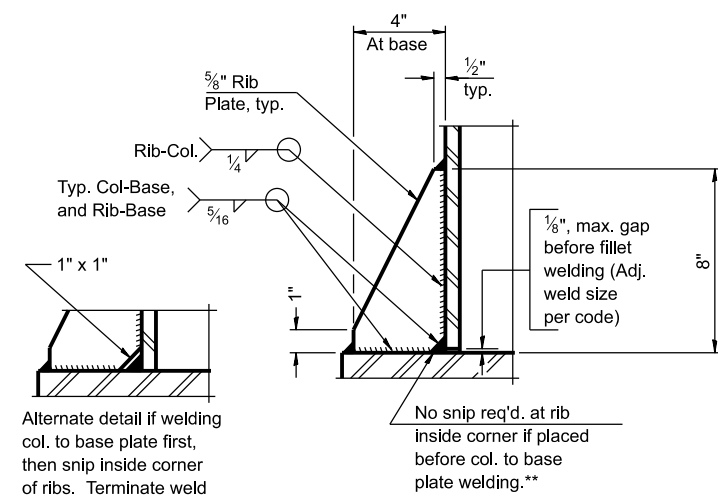


DETAIL B

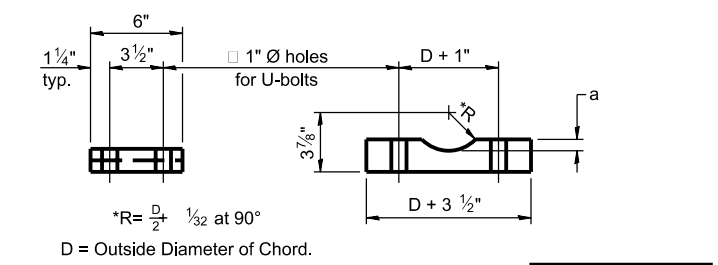
Ribs shall be cut to fit slope of pipe.



SECTION B-B



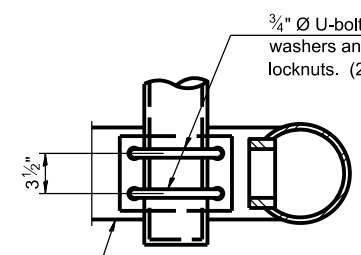
SECTION D-D



SADDLE SHIM DETAIL

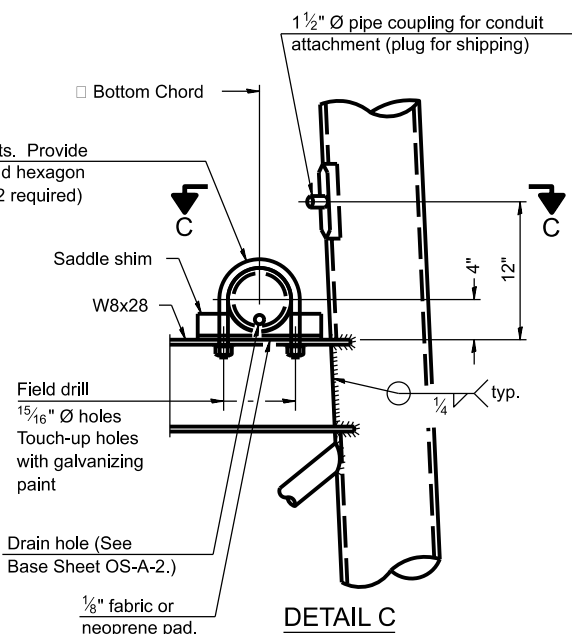
ASTM B26 Alloy 356-F or ASTM B209 Alloy 6061-T651 (4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"

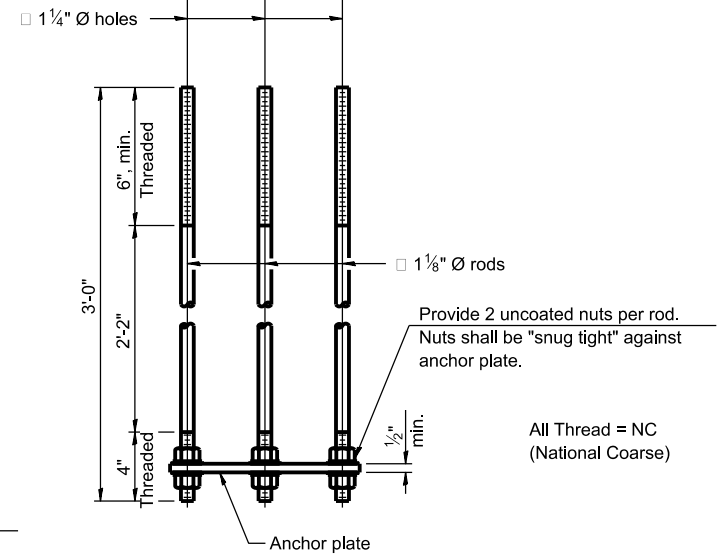
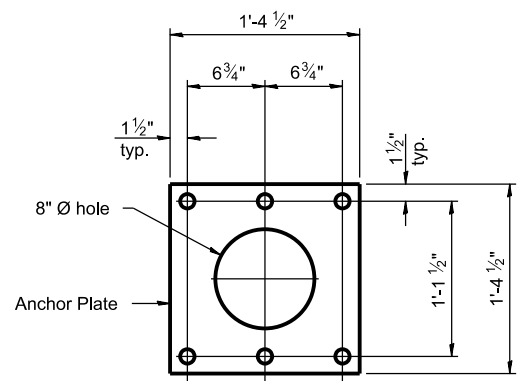


SECTION C-C

(Handhole cover not shown)

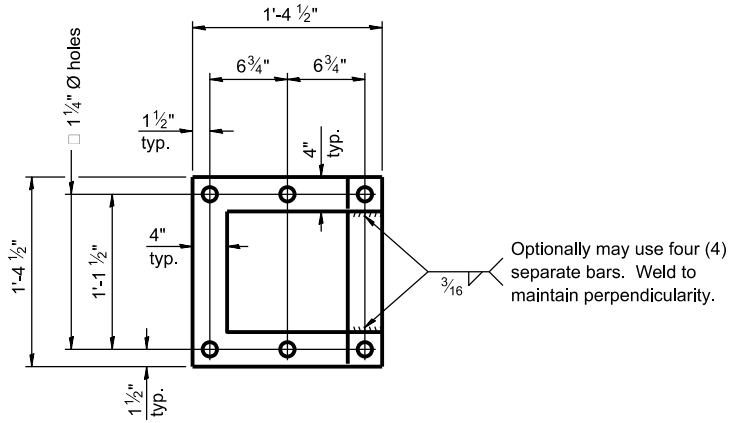


DETAIL C

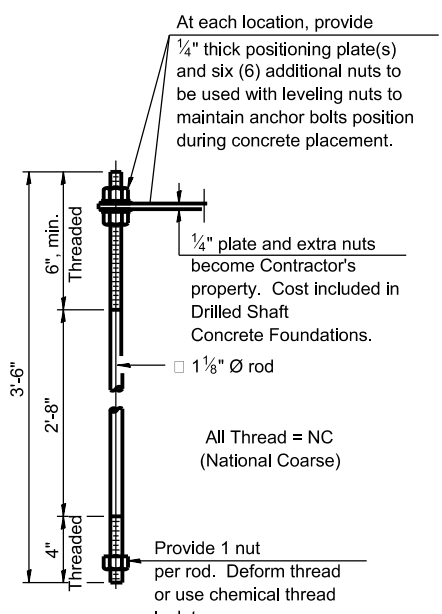


ANCHOR ROD DETAIL

Spread Footing Foundation



POSITIONING PLATE(S)



ANCHOR ROD DETAIL

Drilled Shaft Foundation

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12 inch minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE I-A TRUSS
8" Ø PIPE SUPPORT FRAME DETAILS

OS-A-4A

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	34
CONTRACT NO.46676				

ILLINOIS FED. AID PROJECT

DETAIL A

SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.

SECTION B-B

HANDHOLE COVERS

DETAIL D

Backfill shall be placed
prior to erection of
support frame

	3" Galvanized Steel
	Conduit. Thread
	and cap both ends.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.

Load combinations checked include deadload plus:

- a) 100% wind normal to sign, 20% parallel to sign
 - b) 60% wind normal to sign, 30% parallel to sign
- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.
 - ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, type.
 - ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
 - ④ See General Notes for fasteners.
 - ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
 - ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

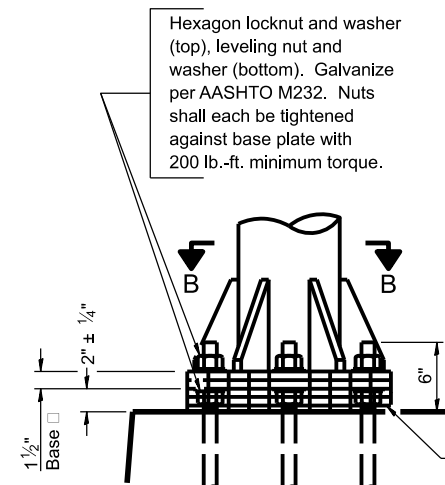
[illegible]

10" Ø PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

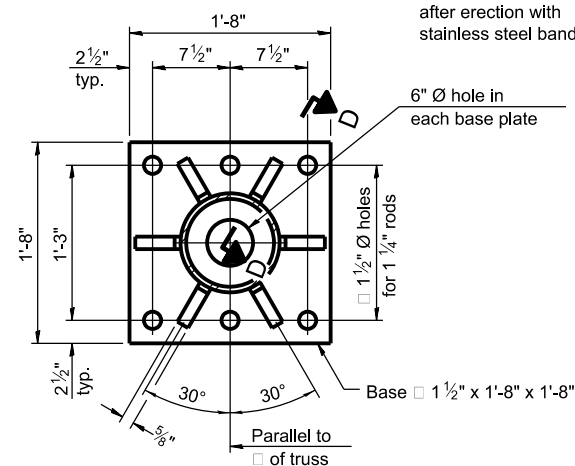
END ELEVATION

[illegible]

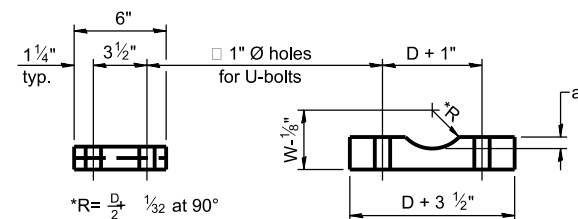
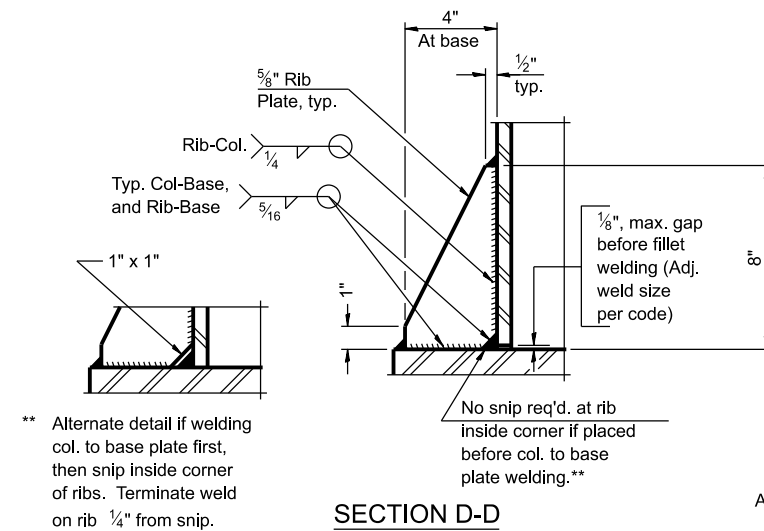


DETAIL B

Ribs shall be cut to fit slope of pipe.



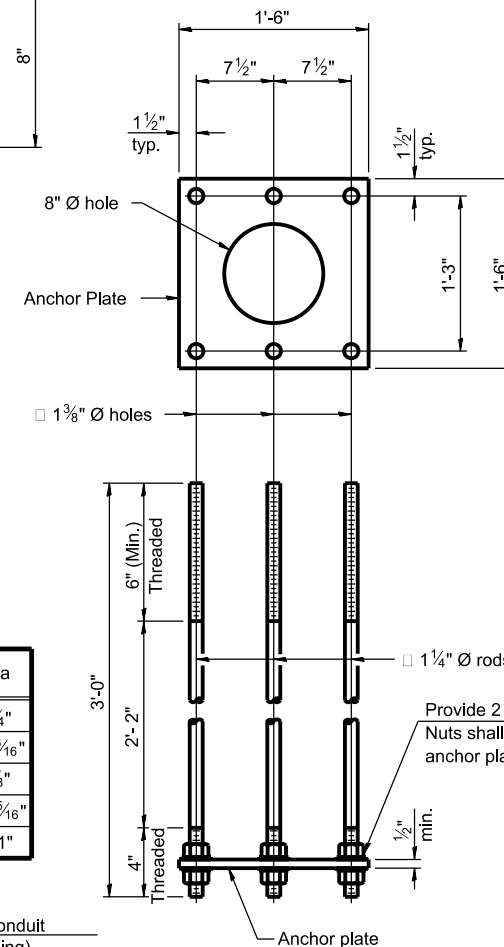
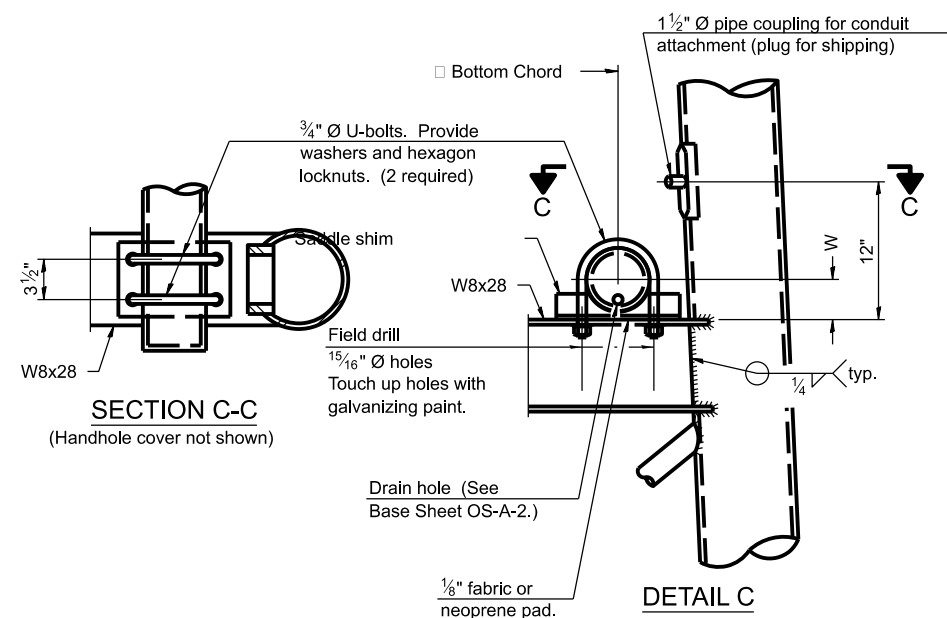
SECTION B-B



SADDLE SHIM DETAIL

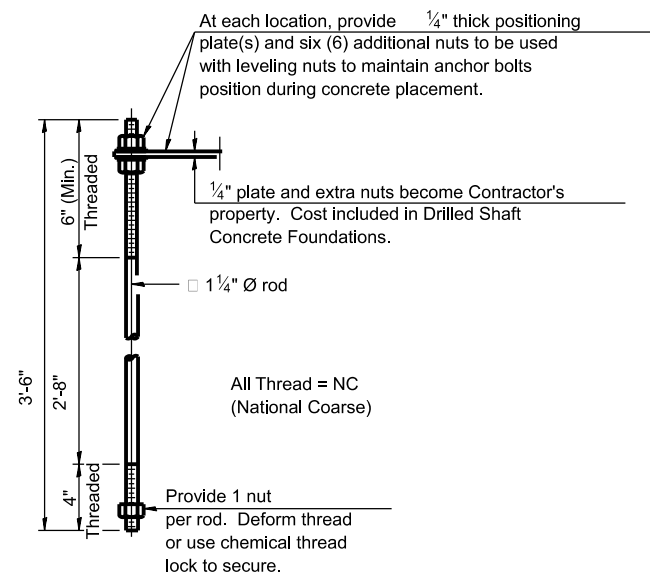
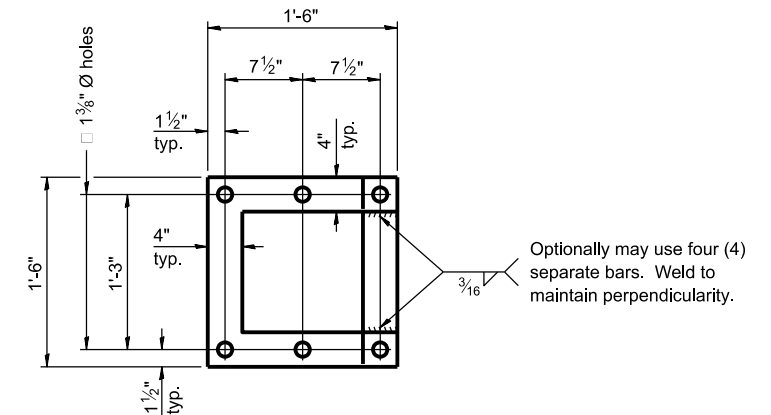
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"



ANCHOR ROD DETAIL

Spread Footing Foundation

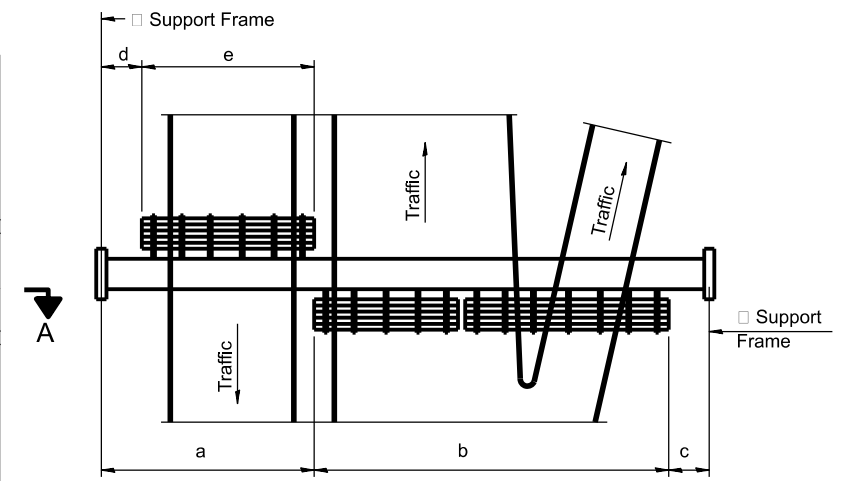


ANCHOR ROD DETAIL

Drilled Shaft Foundation

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

10" Ø PIPE SUPPORT FRAME DETAILS



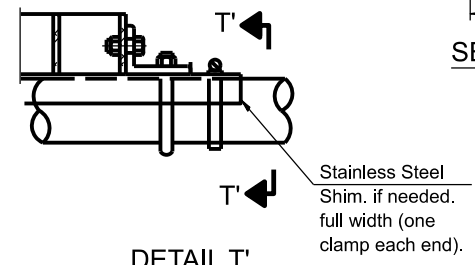
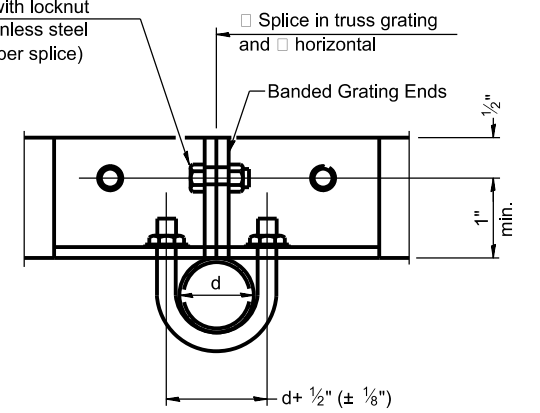
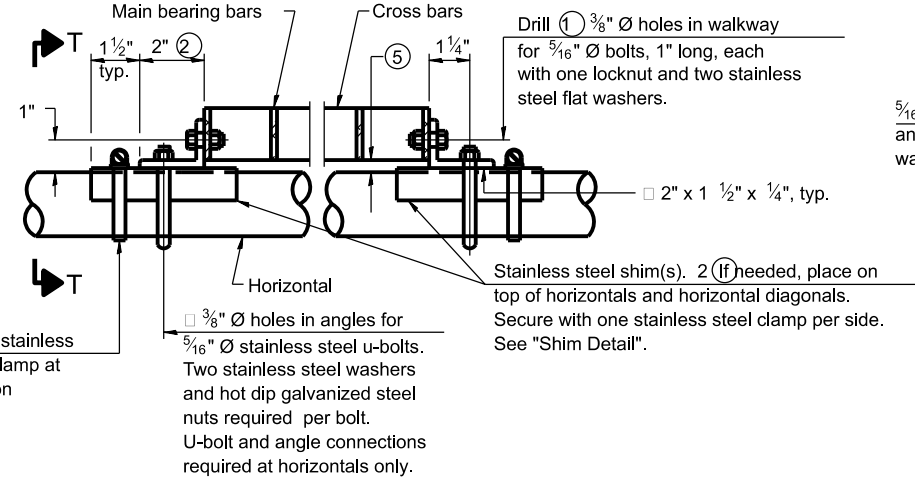
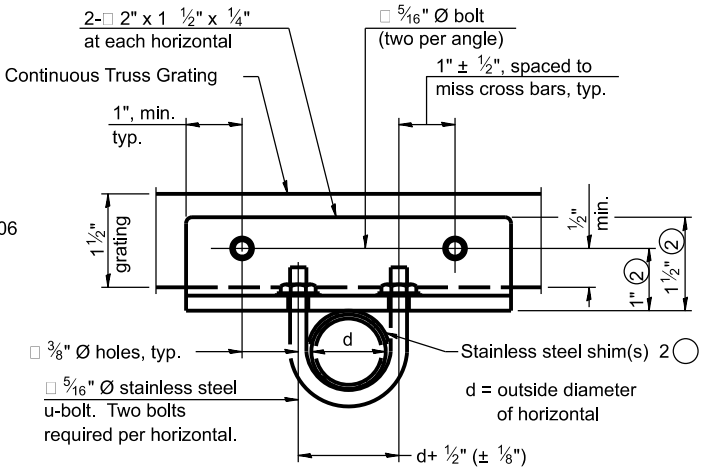
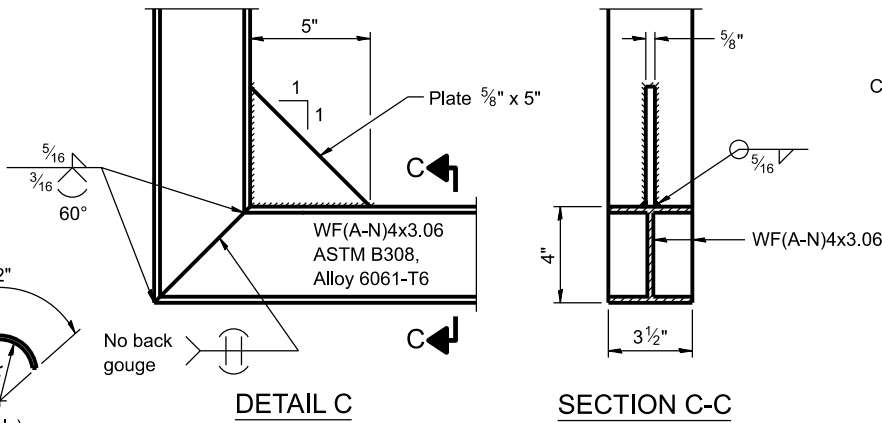
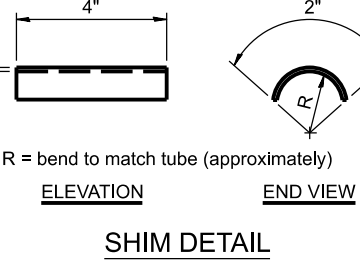
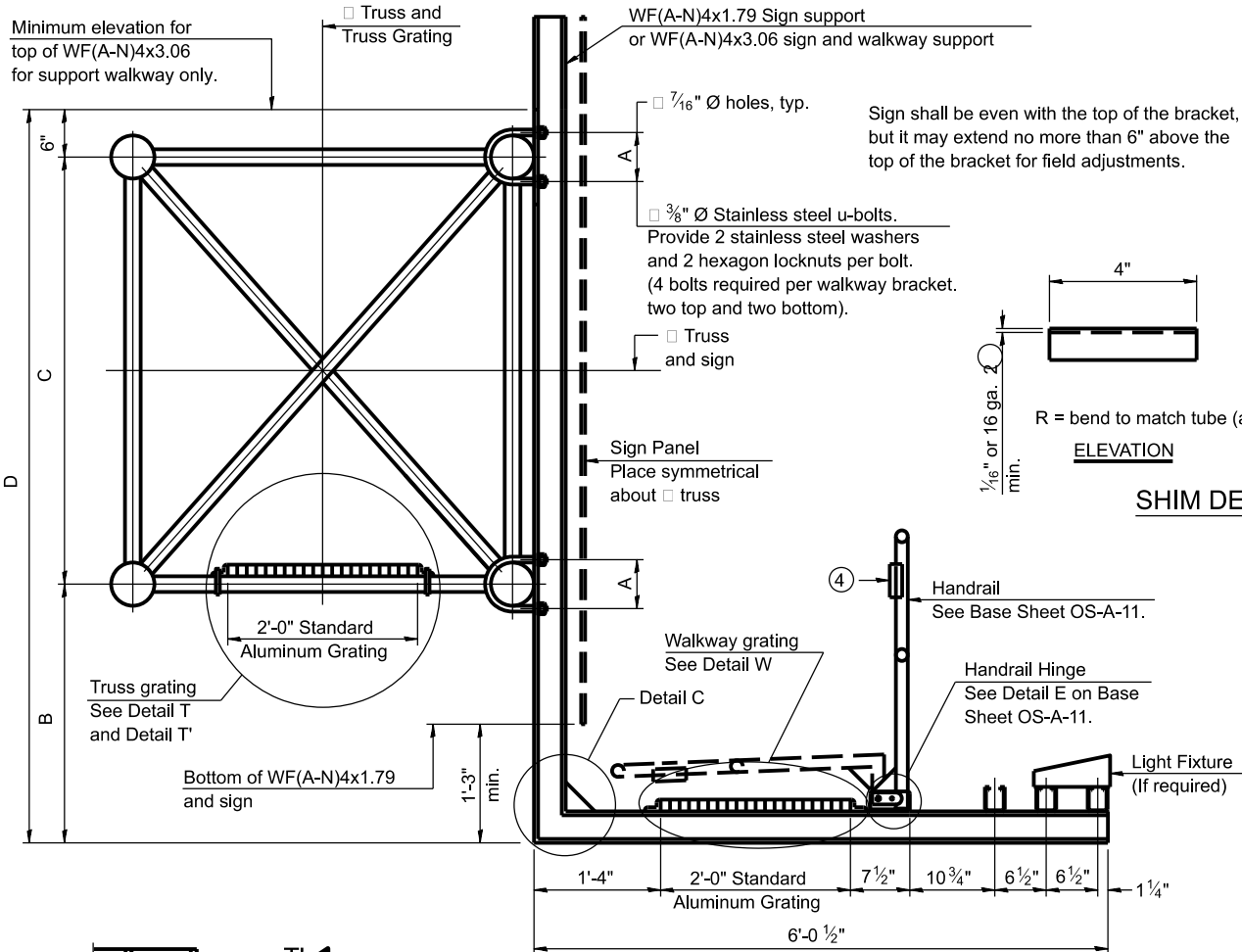
PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

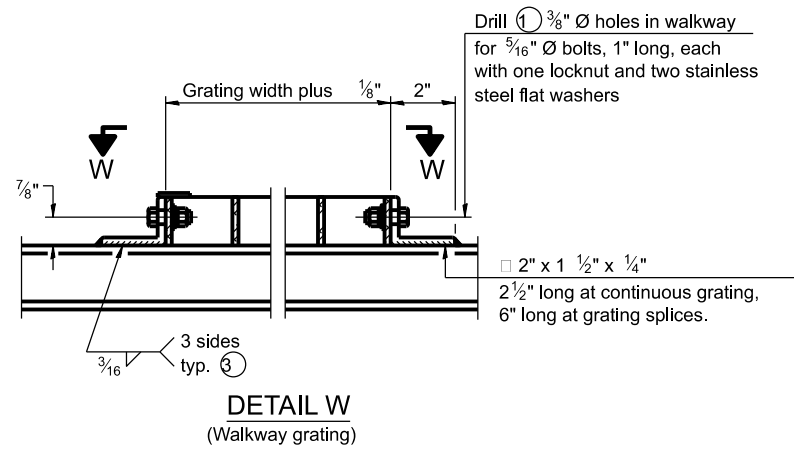
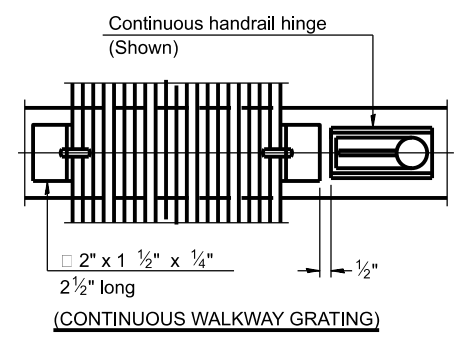
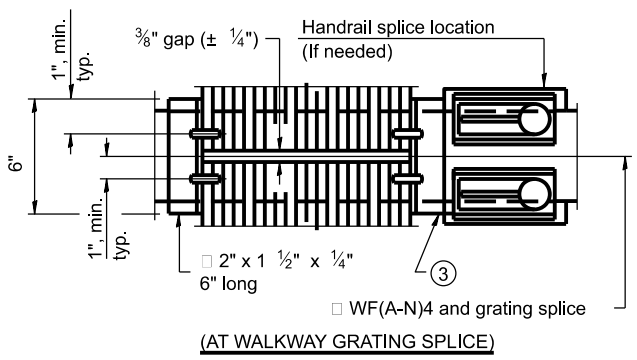
For Handrail Details see Base Sheet OS-A-11.

Walkway and Truss Grating width dimensions are nominal and may vary $\pm \frac{1}{2}$ " based on available standard widths.

[illegible]



Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be $\frac{3}{16}$ " x 1 1/2" on 1 $\frac{3}{16}$ " centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be $\frac{3}{16}$ " x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "T" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 $\frac{3}{16}$ " centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	$\textcircled{6}$ B	C	$\textcircled{6}$ D

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and extension bars. (See Base Sheet OS-A-11.) 1/4"
- $\square$ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-1.

OS-A-10

5-15-2023

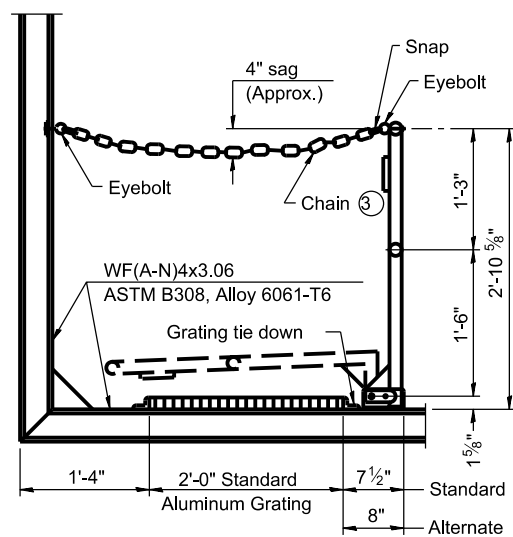
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PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

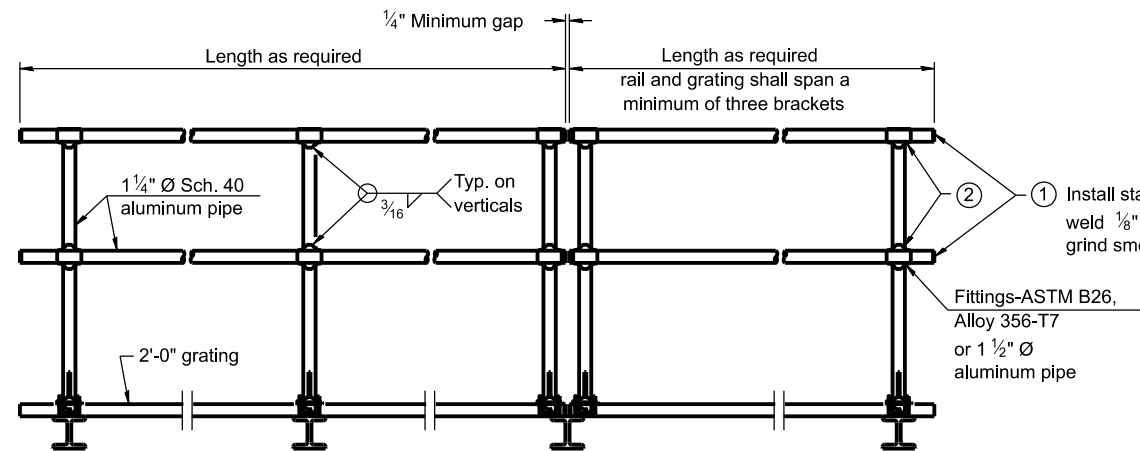
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	38
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



SIDE ELEVATION
(Showing safety chain w/o sign)

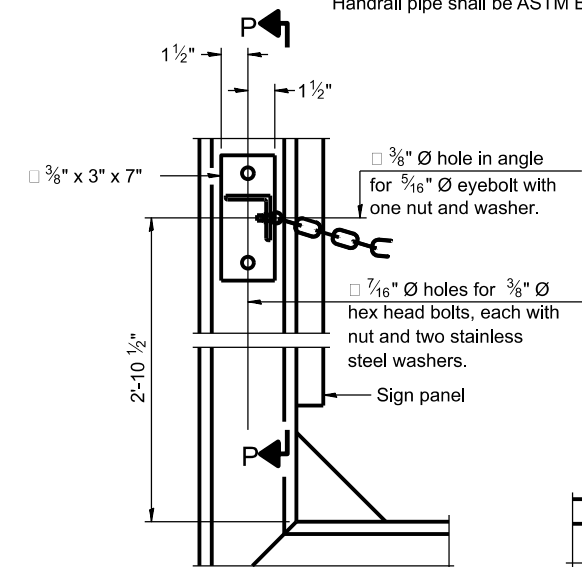


FRONT ELEVATION

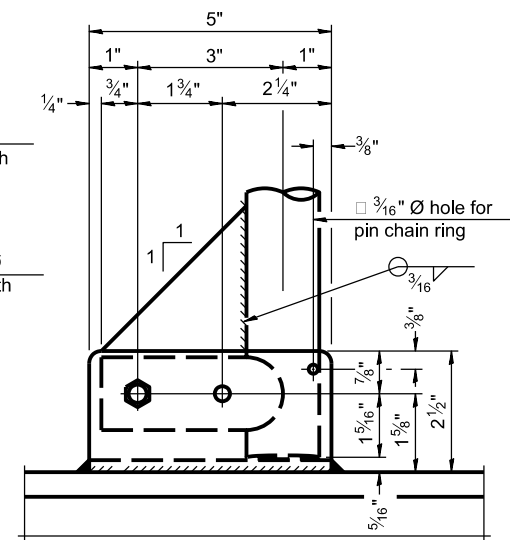
HANDRAIL DETAILS

Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

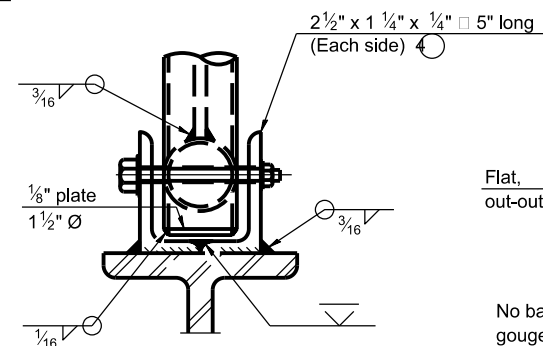
- ① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
- ② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" Ø hole in fitting for 3/8" Ø bolt. Field drill 7/16" Ø hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16" Ø holes on top rail at ends only.)



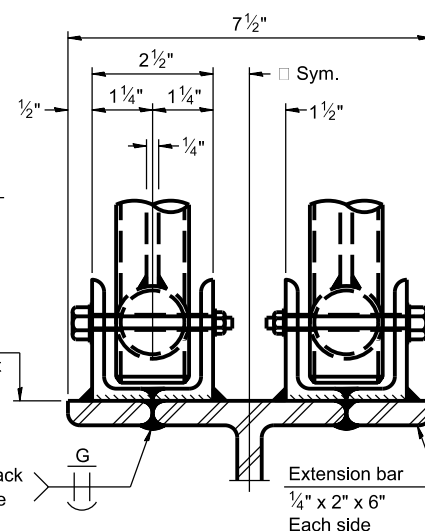
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



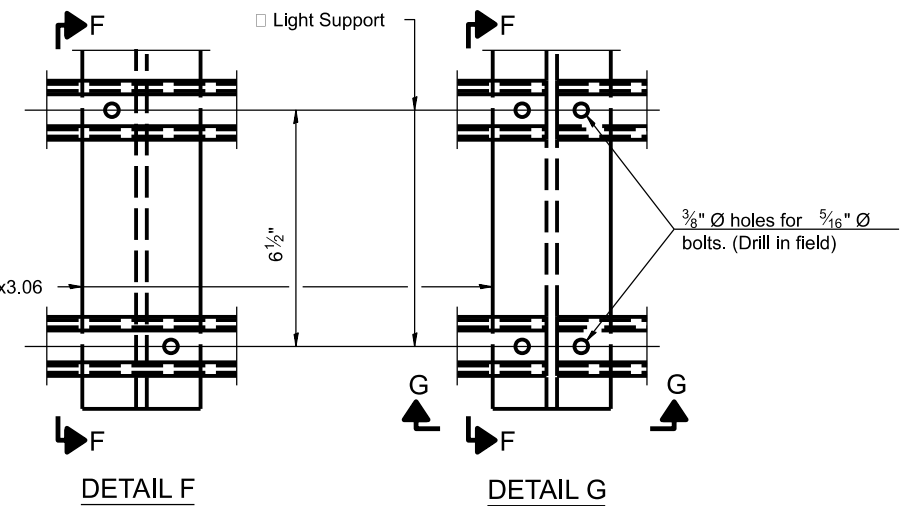
SIDE ELEVATION



FRONT ELEVATION
See "Elevation" at right for dimensions.

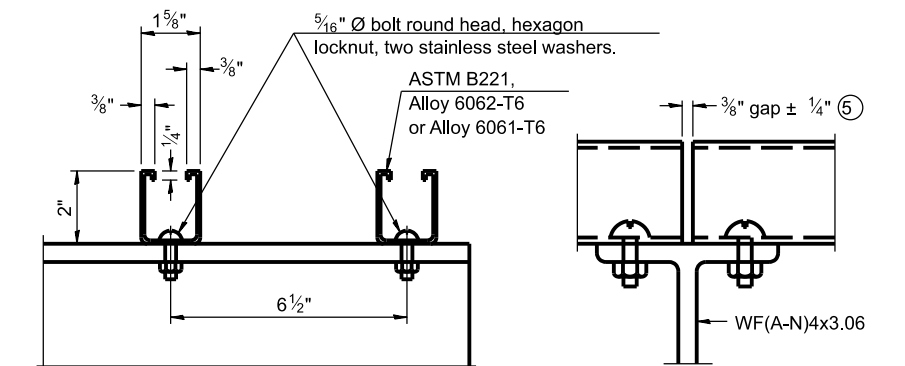


ELEVATION AT HANDRAIL JOINT



DETAIL F

DETAIL G

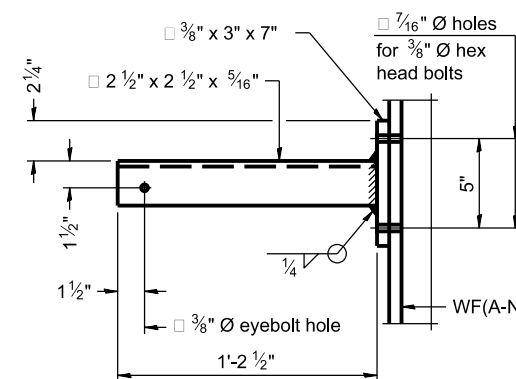


SECTION F-F

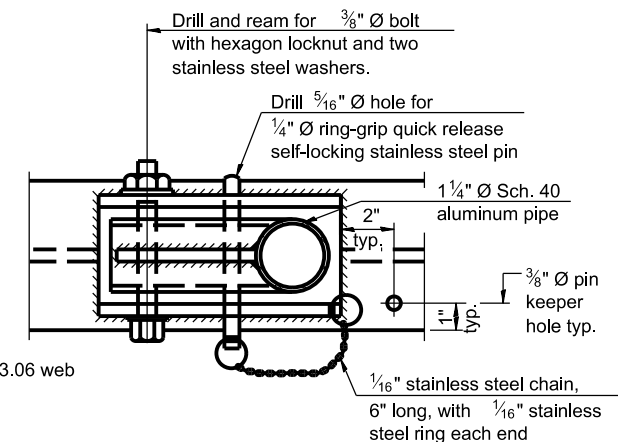
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

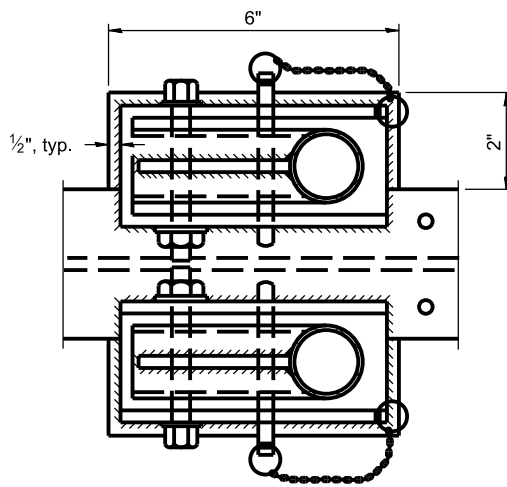
- ⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



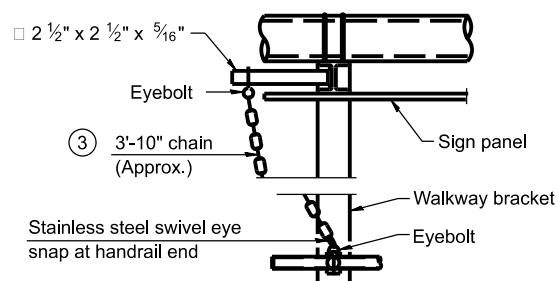
SECTION P-P



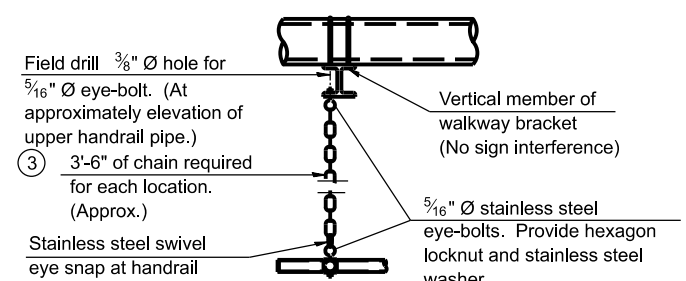
PLAN DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

OS-A-11

5-15-2023

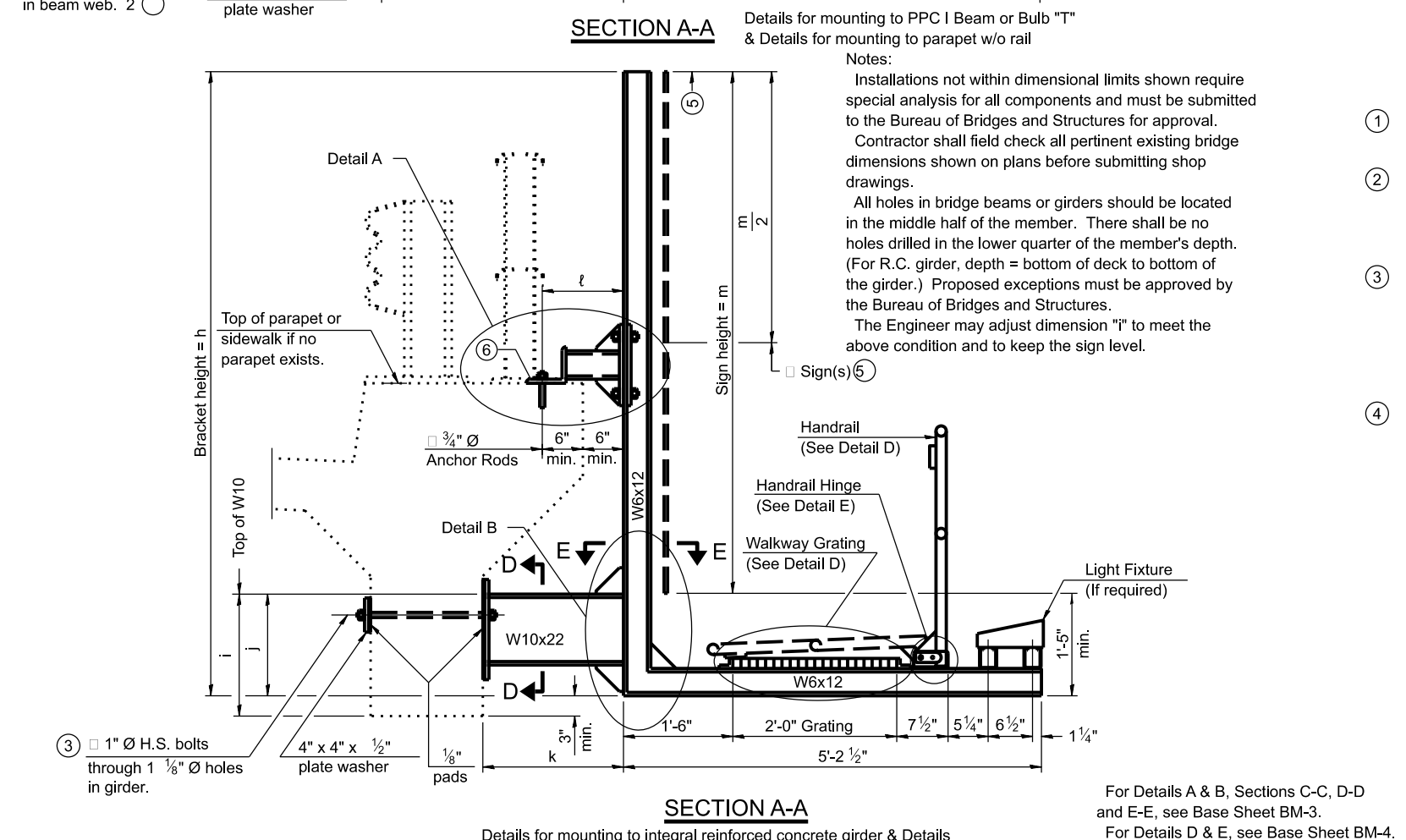
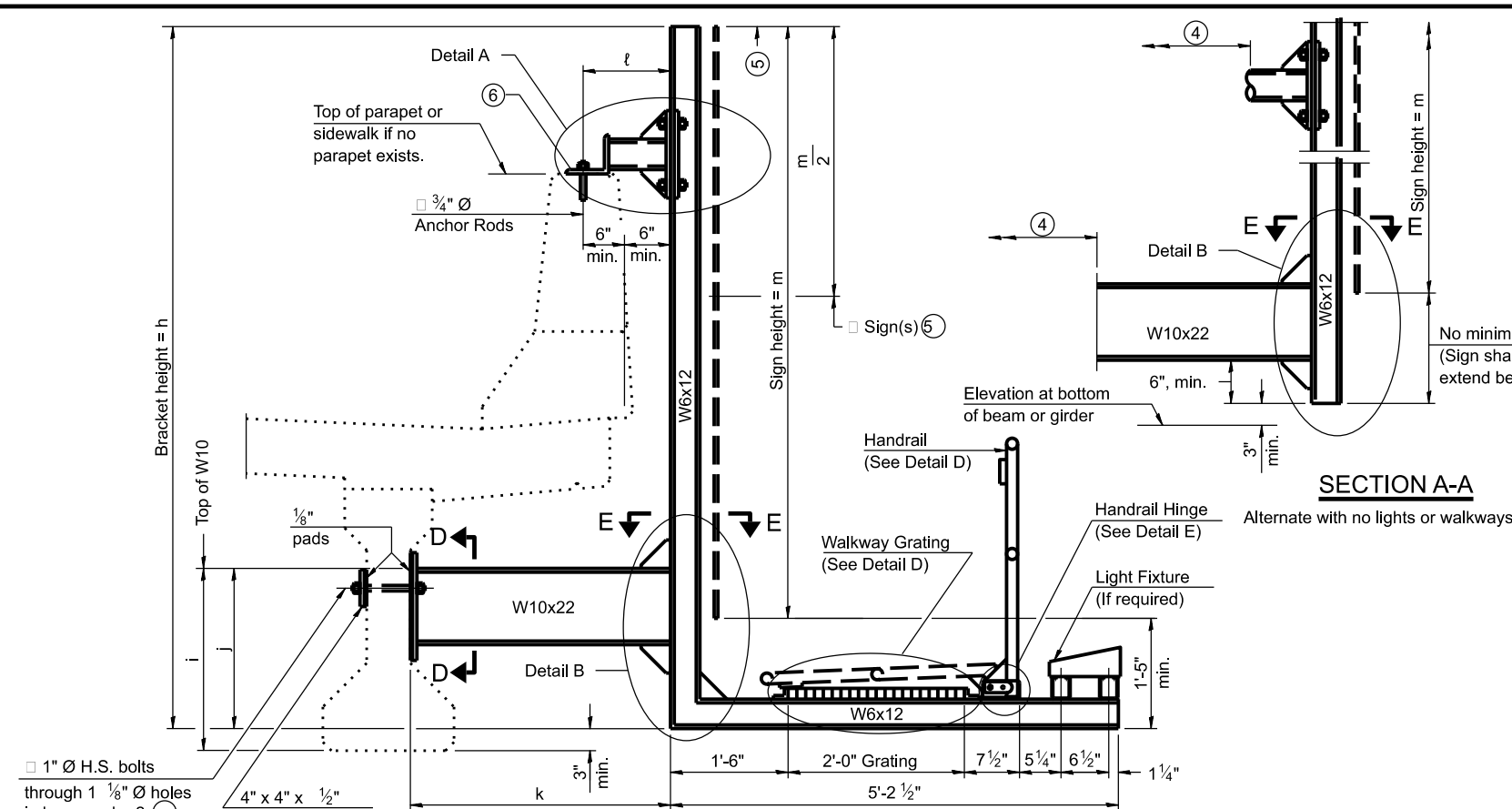
USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

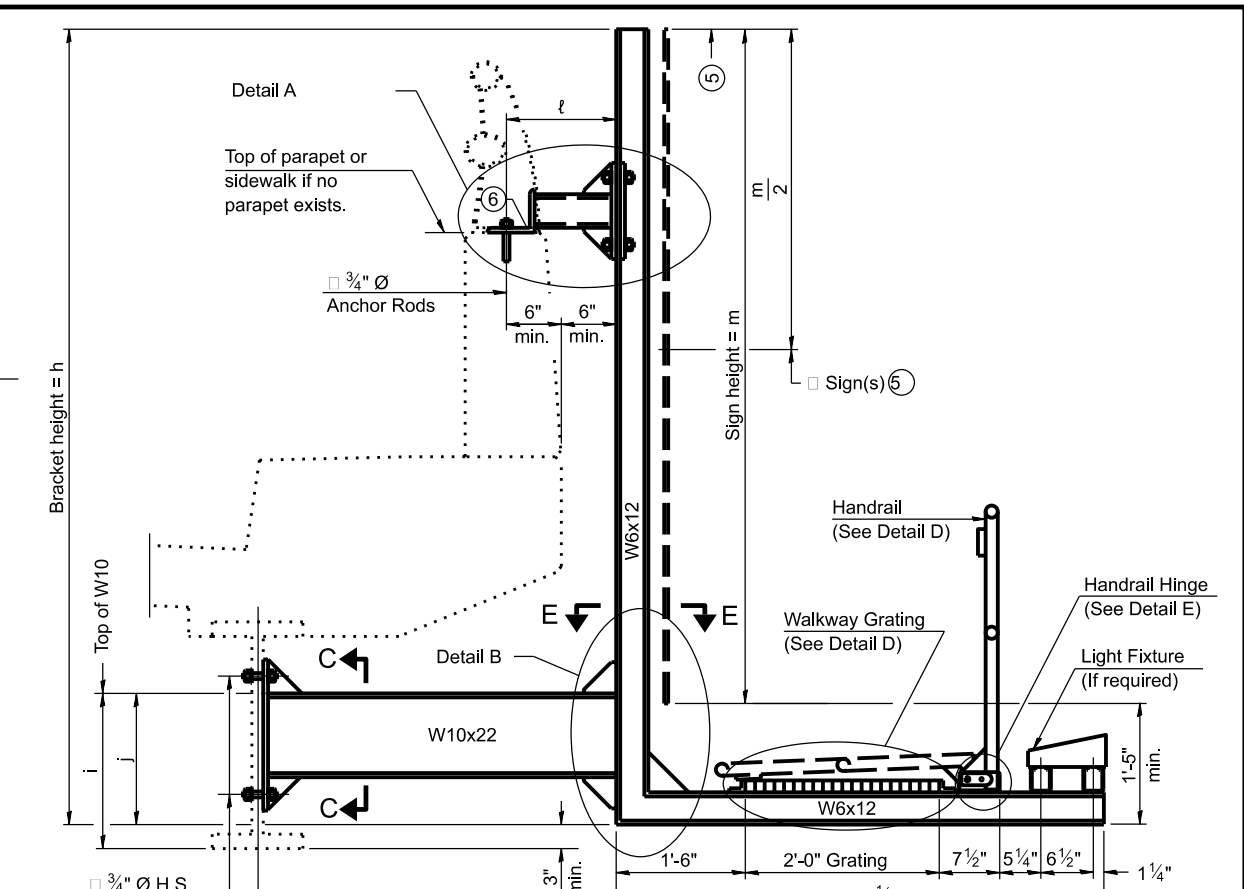
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	39
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



BM-2		5-15-2023		Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail	
USER NAME = \$USERS		DESIGNED -		REVISED -	
DRAWN -		CHECKED -		REVISED -	
PLOT SCALE = \$SCALES		DATE -		REVISED -	
PLOT DATE = \$DATES					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



bolts, drill
15/16" Ø holes in
beam web.

SECTION A-A

Details for mounting to steel beam or girder
& Details for mounting with existing parapet mounted rail

steel members may be drilled in the fabrication
field. Field drill existing members.

I beams, holes shall be formed during casting.
PC I beams, prestressing strand locations shall
be spaced to miss strands by 6", min.
drilling during field drilling of existing beams.

construction, form holes. For existing RC beams,
locate primary reinforcement and space holes to miss by 6",
minimize spalling and concrete fracturing/damage during
field drilling of existing concrete. Spalls over 1/4" deep or
beyond the coverage of the 4x4 plate washer shall be
repaired with epoxy mortar before installing washer.

attachment details of 3 1/2" pipe and W10x22, see other
sections as applicable.

⑤

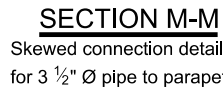
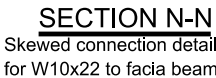
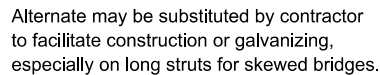
Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)

⑥

For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

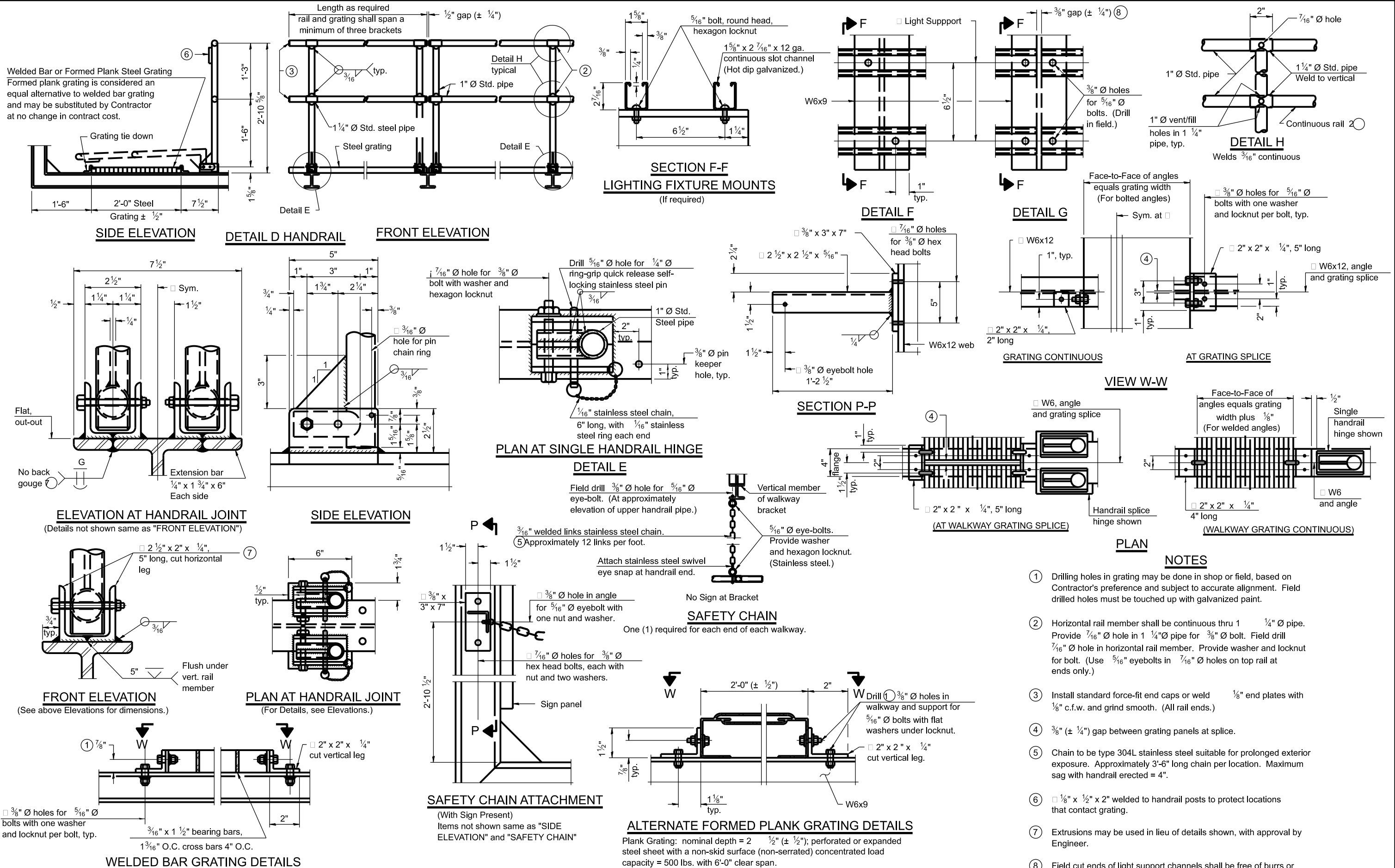
Structure Number	Station	h	i	j	k max. (10'-0" max.)	ℓ max. (8'-0" max.)	m (15'-0" max.)

BRIDGE MOUNT SIGN STRUCTURES WALKWAY AND CONNECTION DETAILS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE:		SHEET	OF	SHEETS	STA.	TO STA.
		ILLINOIS	FED. AID PROJECT	CONTRACT NO.46676		



	ILLINOIS	FED. AID PROJECT
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MODEL: 5E11E1S



MODEL: SH06LMM00000
FILE NAME: SHEETS

BM-4

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

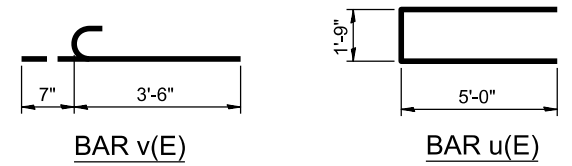
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
WALKWAY DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	43
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

*** A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.



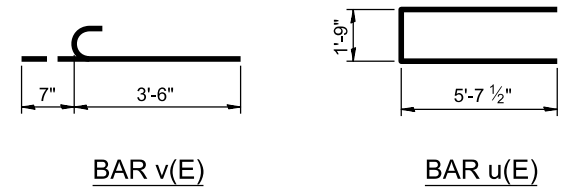
Bar	Number	Size	Length	Shape
t(E)	12	#5	*	
u(E)	18	#4	11'-9"	
v(E)	22	#5	4'-1"	
v1(E)	22	#5	*	
w(E)	27	#5	7'-3"	

SECTION A-A

[illegible]

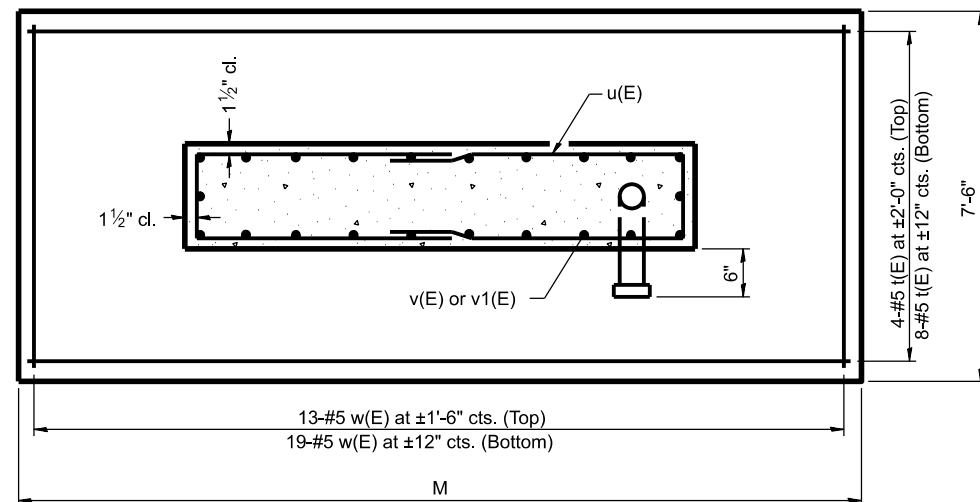
DETAILS FOR 6" Ø SUPPORT FRAME

*** A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.



Bar	Number	Size	Length	Shape
t(E)	12	#5	*	
u(E)	18	#4	13'-0"	
v(E)	24	#5	4'-1"	
v1(E)	24	#5	*	
w(E)	32	#5	7'-3"	

*Length of t(E) bar = (Dim. M) - 6"
v1(E) bar = (Dim. N) - 3"



SECTION A-A

[illegible]

DETAILS FOR 8" Ø SUPPORT FRAME

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

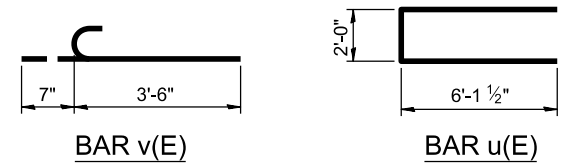
OVERHEAD SIGN STRUCTURES SPREAD FOOTING DETAILS

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	45
CONTRACT NO.46676				
		ILLINOIS	FED. AID PROJECT	

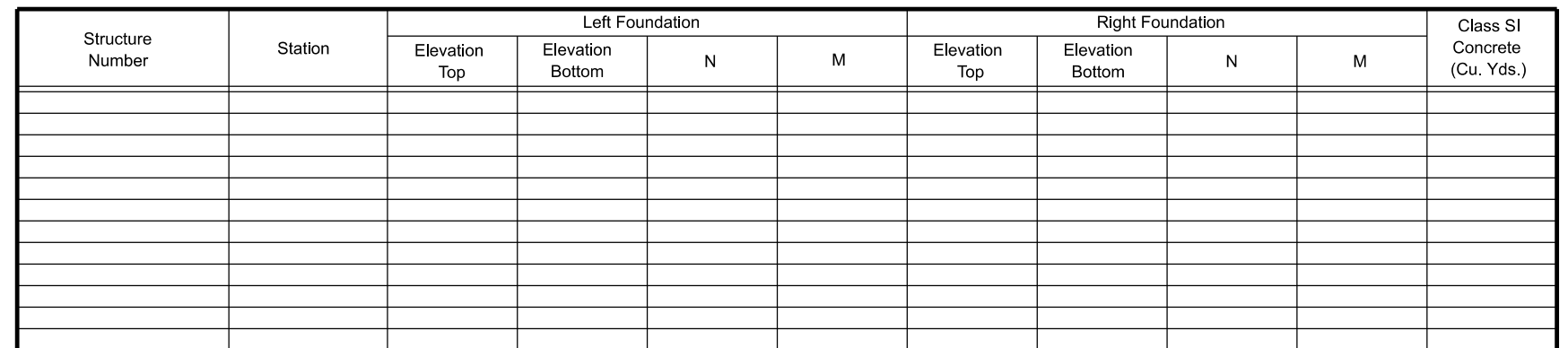
MODEL: FILE NAME: \$FILE1\$

*** A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.



Bar	Number	Size	Length	Shape
t(E)	12	#5	*	
u(E)	18	#4	14'-3"	
v(E)	28	#5	4'-1"	
v1(E)	28	#5	*	
w(E)	39	#5	7'-3"	

*Length of t(E) bar = (Dim. M) - 6"
v1(E) bar = (Dim. N) - 3"



During construction, if footing length or width or wall height change by more than 12", or if reinforcement is changed, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

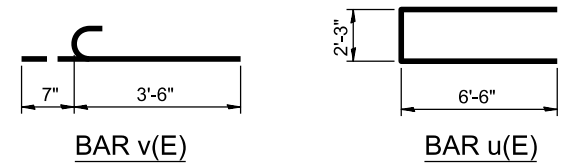
5-15-2023

**OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	46
		CONTRACT NO.46676		
ILLINOIS		FED. AID PROJECT		

MODEL:
FILE NAME: \$FILE1\$

*** A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.



Bar	Number	Size	Length	Shape
t(E)	14	#5	*	
u(E)	18	#4	15'-3"	
v(E)	30	#5	4'-1"	
v1(E)	30	#5	*	
w(E)	39	#5	7'-9"	

Diagram illustrating the cross-section of a rectangular reinforced concrete slab and its supporting beam.

Slab Dimensions and Reinforcement:

- Slab width: 8'-0"
- Slab depth: 16"
- Top reinforcement: 16-#5 w(E) at $\pm 1'-6"$ cts. (Top)
- Bottom reinforcement: 23-#5 w(E) at $\pm 12"$ cts. (Bottom)
- Clear cover (cl.): 1 1/2" (top and bottom)

Supporting Beam Dimensions and Reinforcement:

- Beam width: 6"
- Top reinforcement: 5-#5 t(E) at $\pm 2'-0"$ cts. (Top)
- Bottom reinforcement: 9-#5 t(E) at $\pm 12"$ cts. (Bottom)
- Clear cover (cl.): 1 1/2" (top and bottom)

Labels:

- u(E): Label for the top reinforcement of the beam.
- v(E) or v1(E): Label for the bottom reinforcement of the beam.

[illegible]

During construction, if footing length or width or wall height change by more than 12", or if reinforcement is changed, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

USER NAME = \$USER\$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DATE -	REVISED -

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	47
CONTRACT NO.46676				
ILLINOIS		FED. AID PROJECT		

MODEL: FILE NAME: \$FILE1\$

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	
#4 bar spiral (E) - see Side Elevation				

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

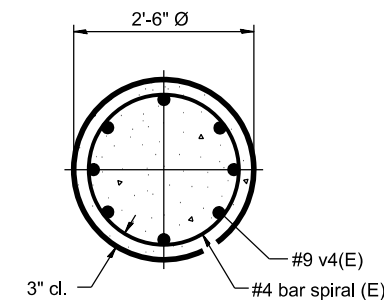
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

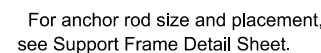
Concrete shall be placed monolithically, without construction joints

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



DETAILS FOR 6" Ø SUPPORT FRAME
TYPE I-A TRUSS



* Anchor rod shall be ground or
filed to bright metal at clamp
and cable connection location

[illegible]

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$S\$ALES	CHECKED -	REVISED -
PLOT DATE = \$D\$ATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES DRILLED SHAFT DETAILS

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	48
		CONTRACT NO.46676		
		(ILLINOIS)	FED. AID PROJECT	

MODEL: \$MODELNAME\$
FILE NAME: \$FILE\$

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	
#4 bar spiral (E) - see Side Elevation				

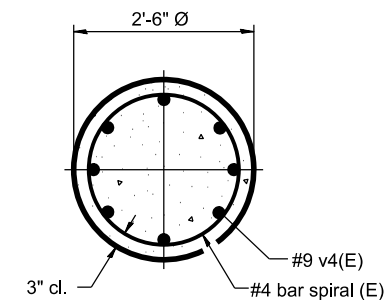
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

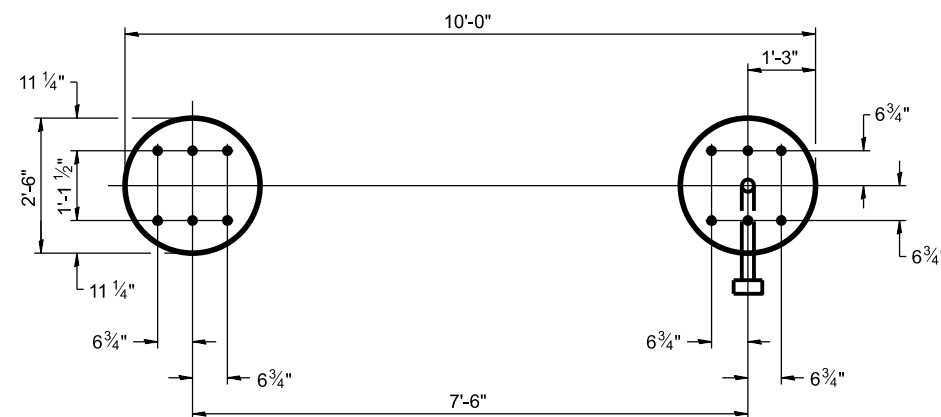
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



For anchor rod size and placement,
see Support Frame Detail Sheet.

DETAILS FOR 8" Ø SUPPORT FRAME
TYPE I-A TRUSS



PLAN

[illegible]

5-15-2023

USER NAME = \$USER\$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DATE -	REVISED -

OVERHEAD SIGN STRUCTURES DRILLED SHAFT DETAILS

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	49
		CONTRACT NO.46676		
		ILLINOIS	FED. AID PROJECT	

MODEL:
FILE NAME: \$FILE1\$

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	
#4 bar spiral (E) - see Side Elevation				

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

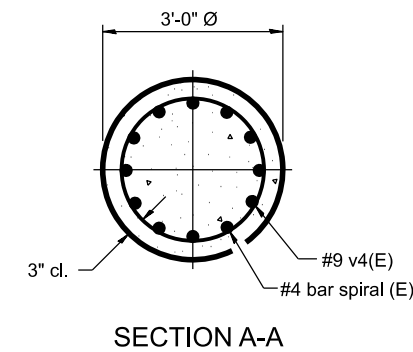
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

[illegible]

** B = $\frac{1}{2}$ the depth given in the Sign Structures Manual



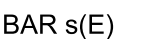
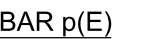
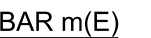
Pipe Support Frames	cc	M	a	a/2
6" Ø	7'-0"	9'-6"	0'-11"	5½"
8" Ø	7'-6"	10'-0"	1'-1 ½"	6¾"
10" Ø	8'-3"	11'-3"	1'-3"	7½"
12" Ø	9'-0"	12'-0"	1'-6"	9"



SECTION A-A
(Typical for 4 Shafts)

Bar	Number	Size	Length	Shape
h(E)	14	#4	M less 4"	
m(E)	22	#5	12'-0"	
n(E)	28	#6	10'-0"	
p(E)	8	#5	Varies	
s(E)	Varies	#5	Varies	
v(E)	48	#9	B less 0'-5"	

#4 Bar Spiral - See Side Elevation

[illegible]

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

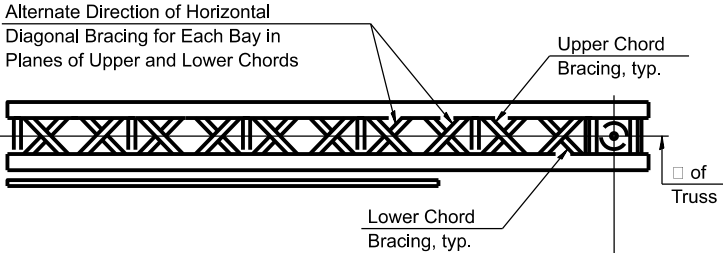
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

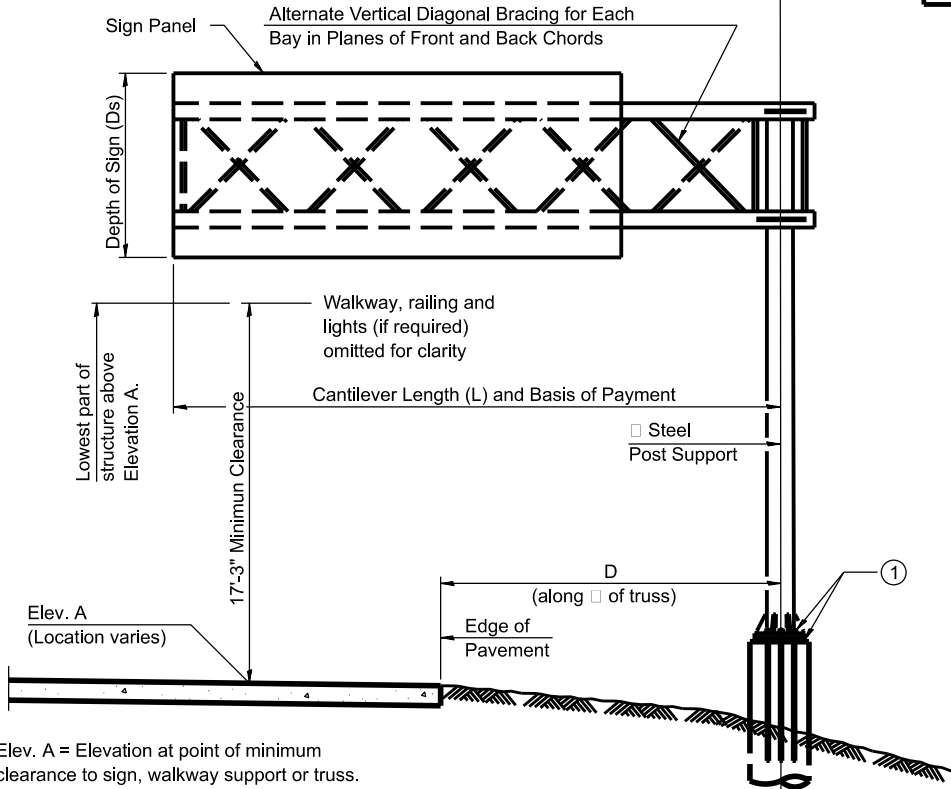
FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	



TYPICAL PLAN
(Walkway not shown)

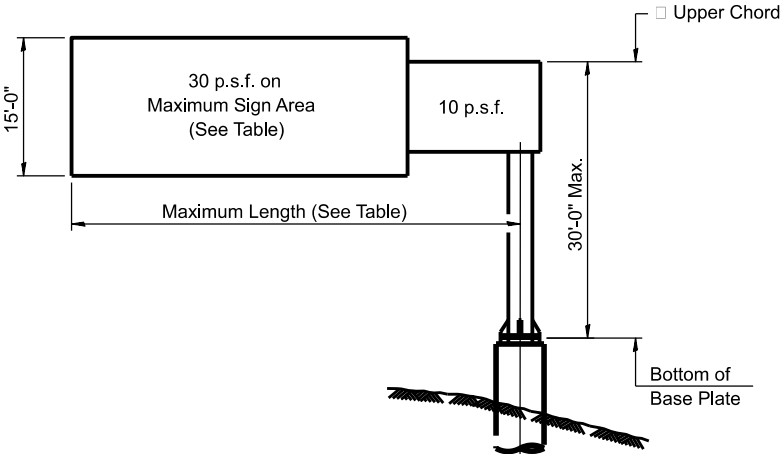


Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
Looking in Direction of Traffic

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards
Installations not within dimensional limits shown require special analysis for all components.

Note:
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

- ① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

OSC-A-1 5-15-2023

MODEL: SH06ELNAMES
FILE: NAME: SHEETS

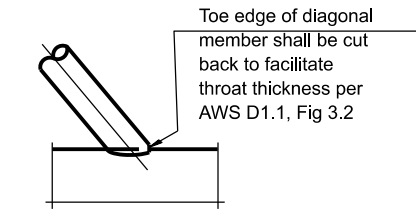
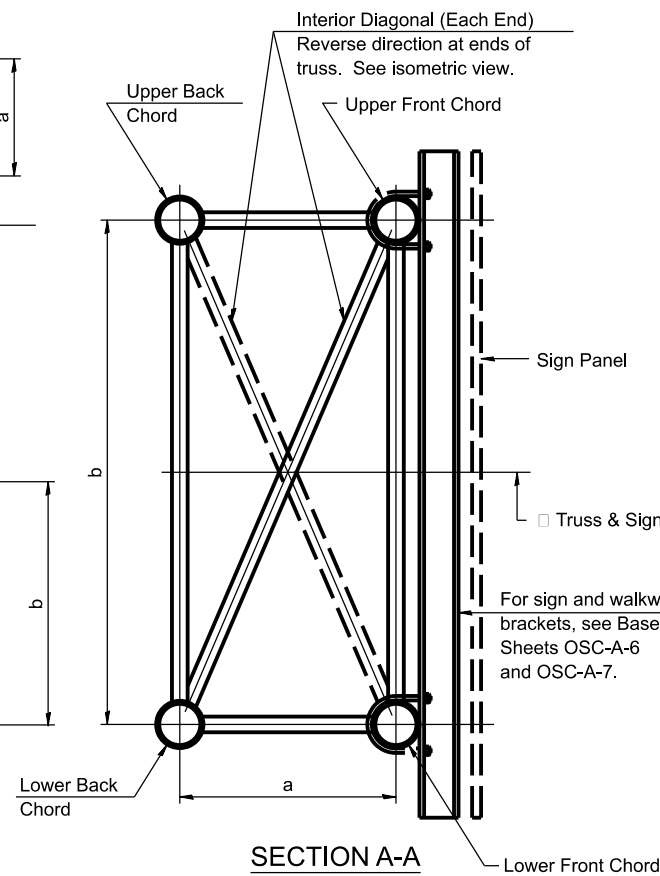
	USER NAME = \$USERS	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = \$\$SCALE\$	CHECKED -	REVISED -
	PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

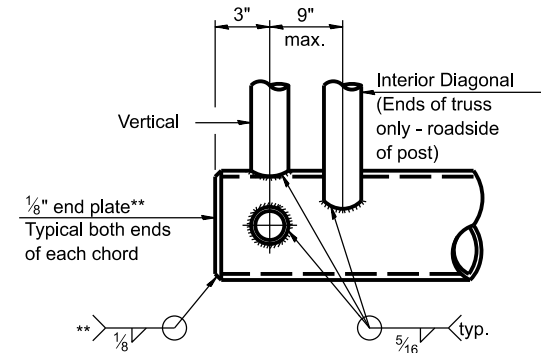
CANTILEVER SIGN STRUCTURES - GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	54
CONTRACT NO.46676				
		ILLINOIS	FED. AID PROJECT	

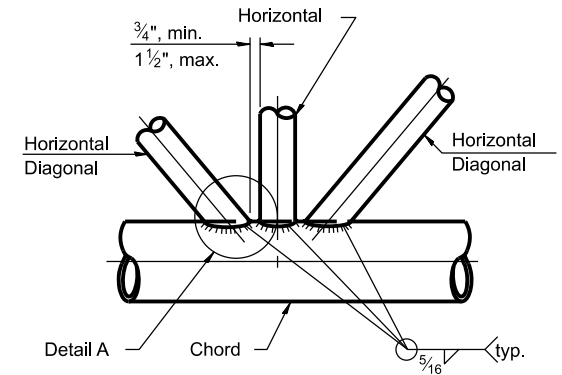


DETAIL A

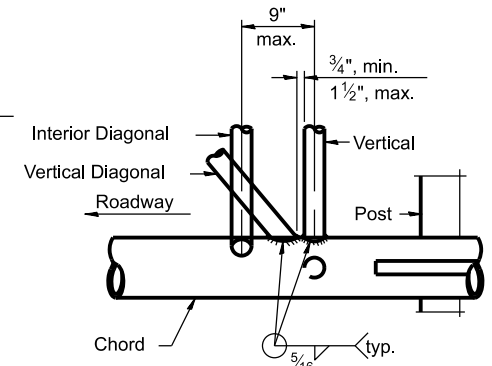


CANTILEVER END JOINT DETAIL

** Contractor may alternatively use standard aluminum drive-fit cap to close ends.
1/2" Ø Drain hole in end plate / drive-fit cap.



TRUSS INTERIOR JOINT DETAIL



POST END JOINT DETAIL

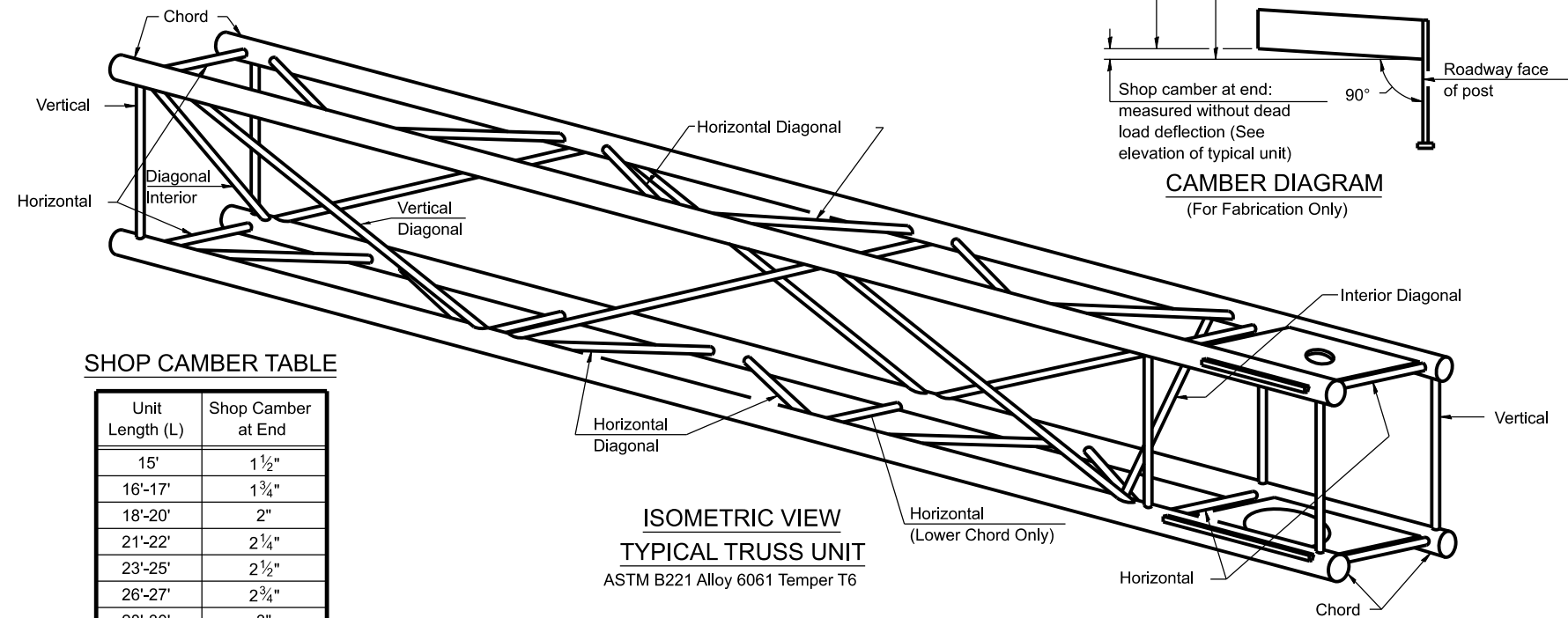
For Section B-B and Section C-C, see Base Sheet OSC-A-3.

TRUSS UNIT TABLE

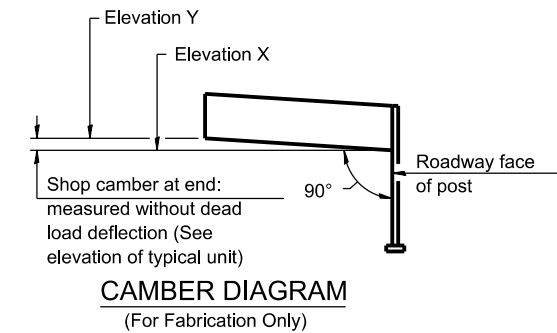
$$*P = \frac{L-s-3''}{\# \text{ Panels}}$$

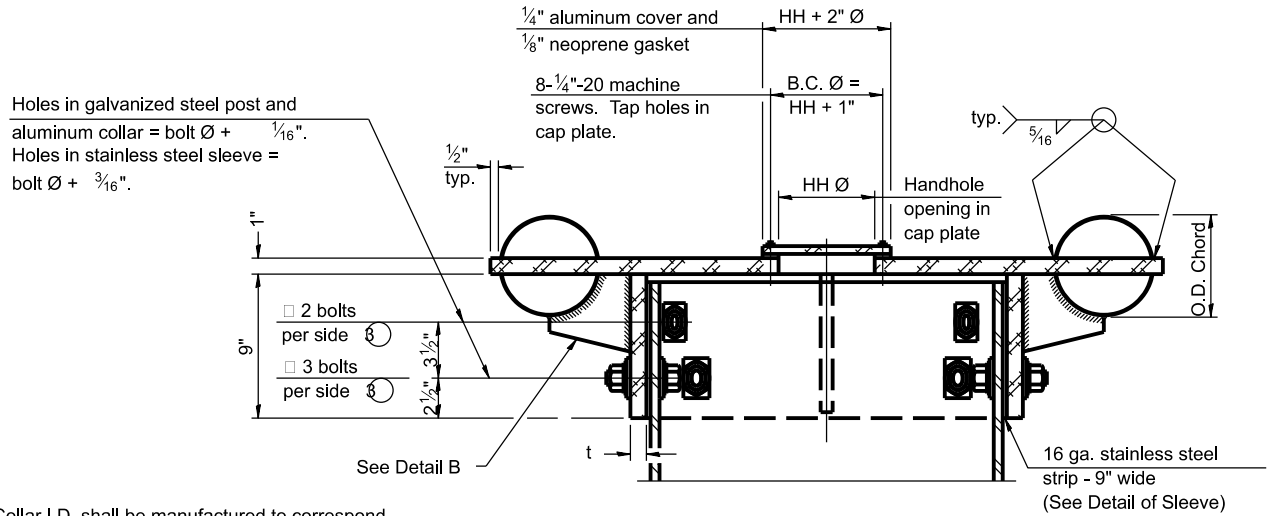
SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1½"
16'-17'	1¾"
18'-20'	2"
21'-22'	2¼"
23'-25'	2½"
26'-27'	2¾"
28'-30'	3"
31'-32'	3¼"
33'-35'	3½"
36'-37'	4"
38'-40'	4½"



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

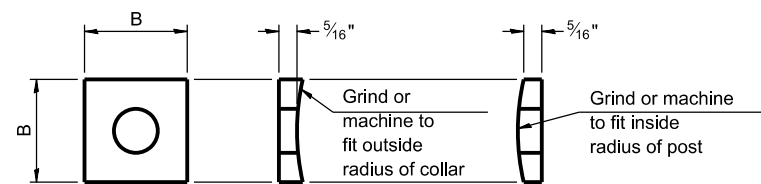
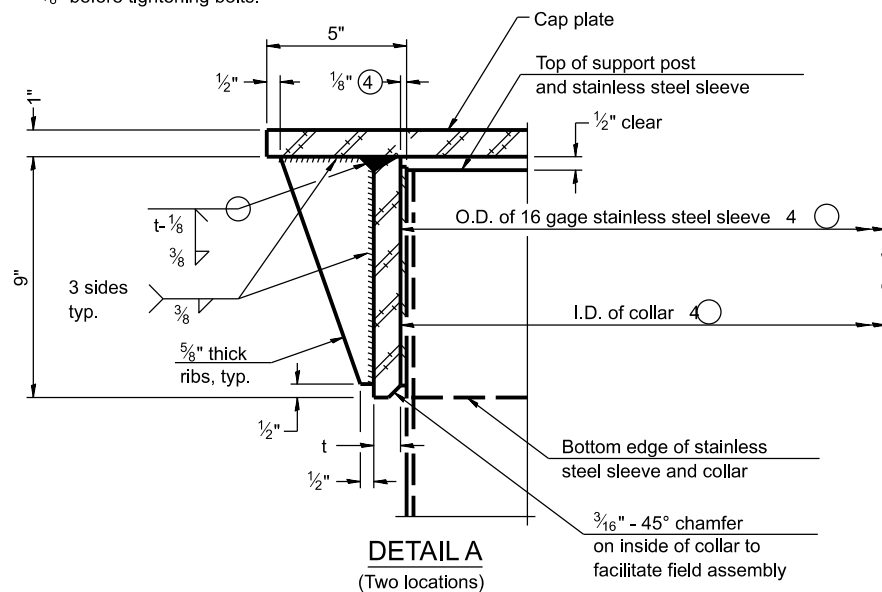




- ④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (± 1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

SECTION B-B

Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

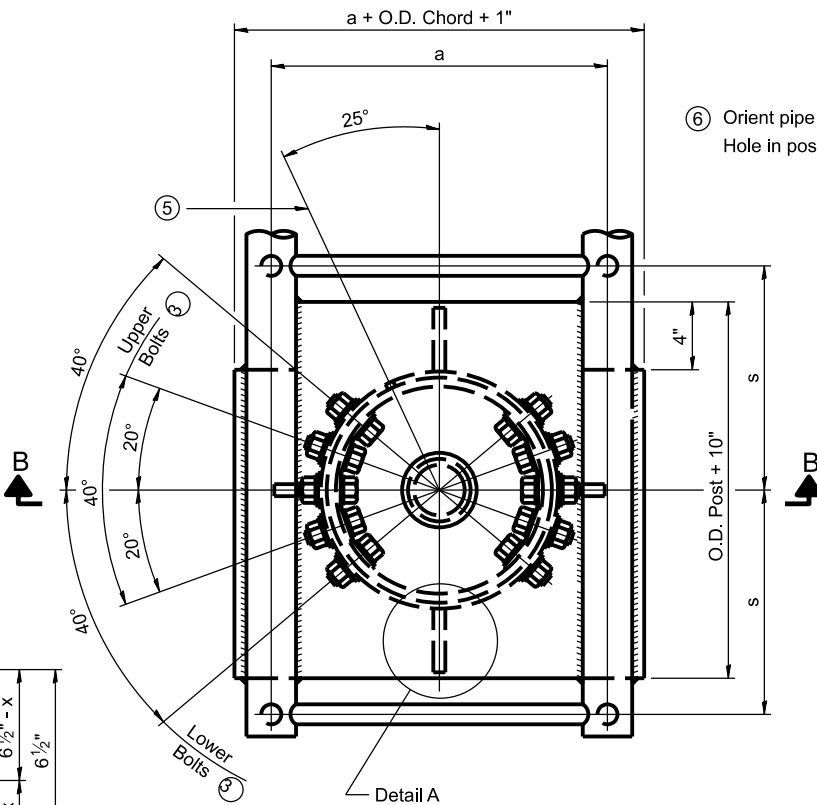
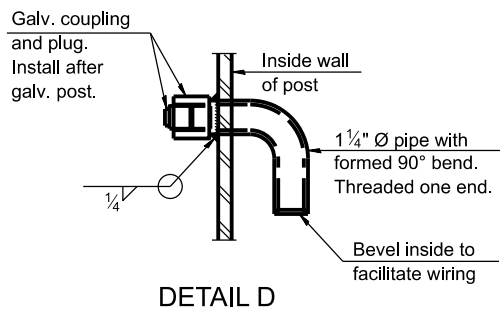
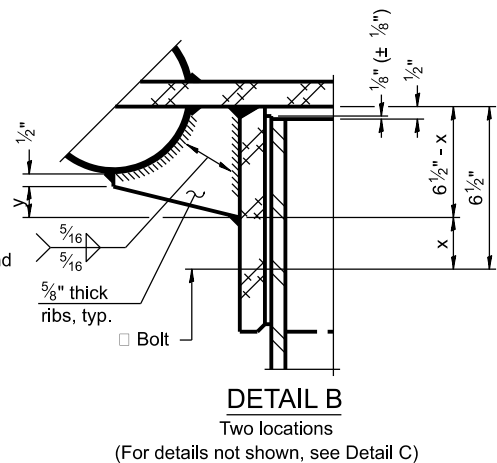


CONTOURED WASHERS

Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

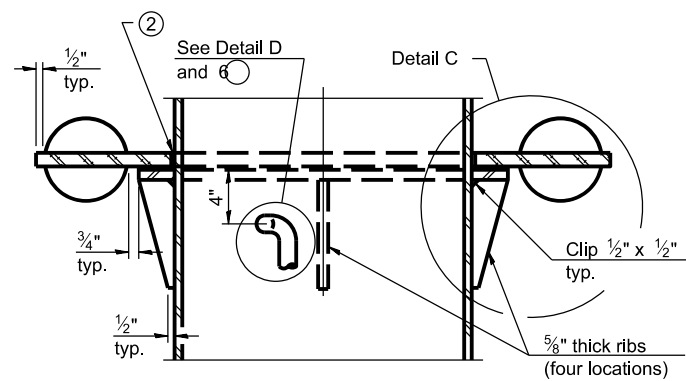
DETAIL OF STAINLESS STEEL SLEEVE

Weld to post after galvanizing.
(Prepare post surface to insure tight, uniform fit and allow welding.)
Welds to be 1 1/2" long at 6" cts. along top edge and at 1/4" opening.

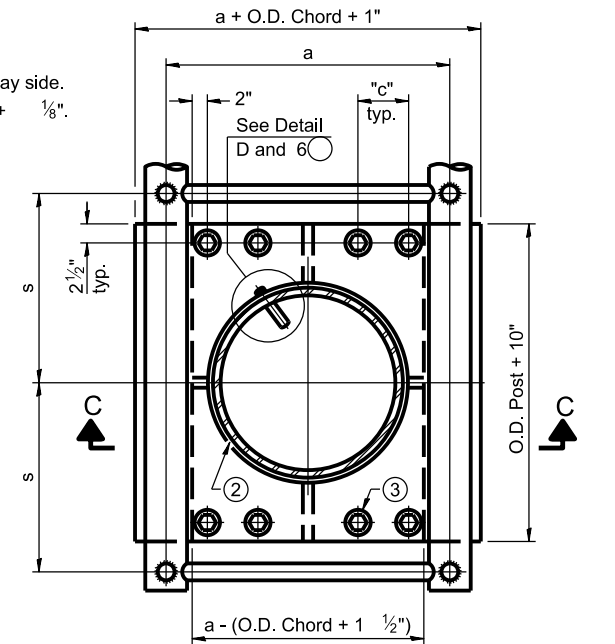


PLAN VIEW - TOP OF COLUMN

- ⑤ Optional full penetration weld in collar.
(Two locations maximum....(180° apart)....X-ray or UT 100%)

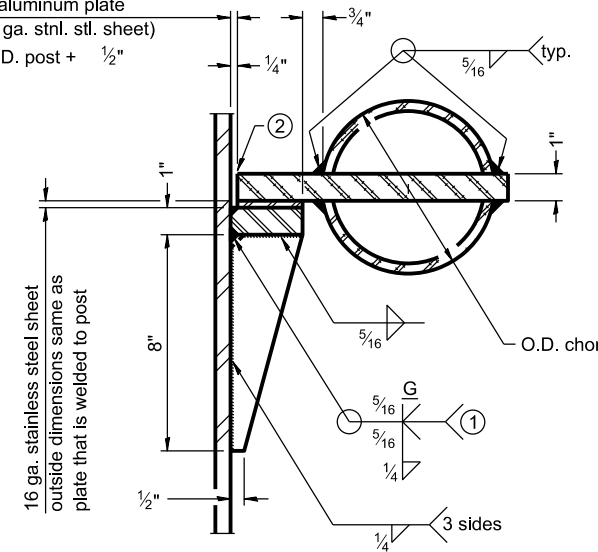


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

Hole in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2"



- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.
- ③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter	Lower Juncture Bolt Spacing Dimension "c" 3	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
I-C-A	16" Ø (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" Ø (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" Ø (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" Ø (171#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

OSC-A-3

5-15-2023

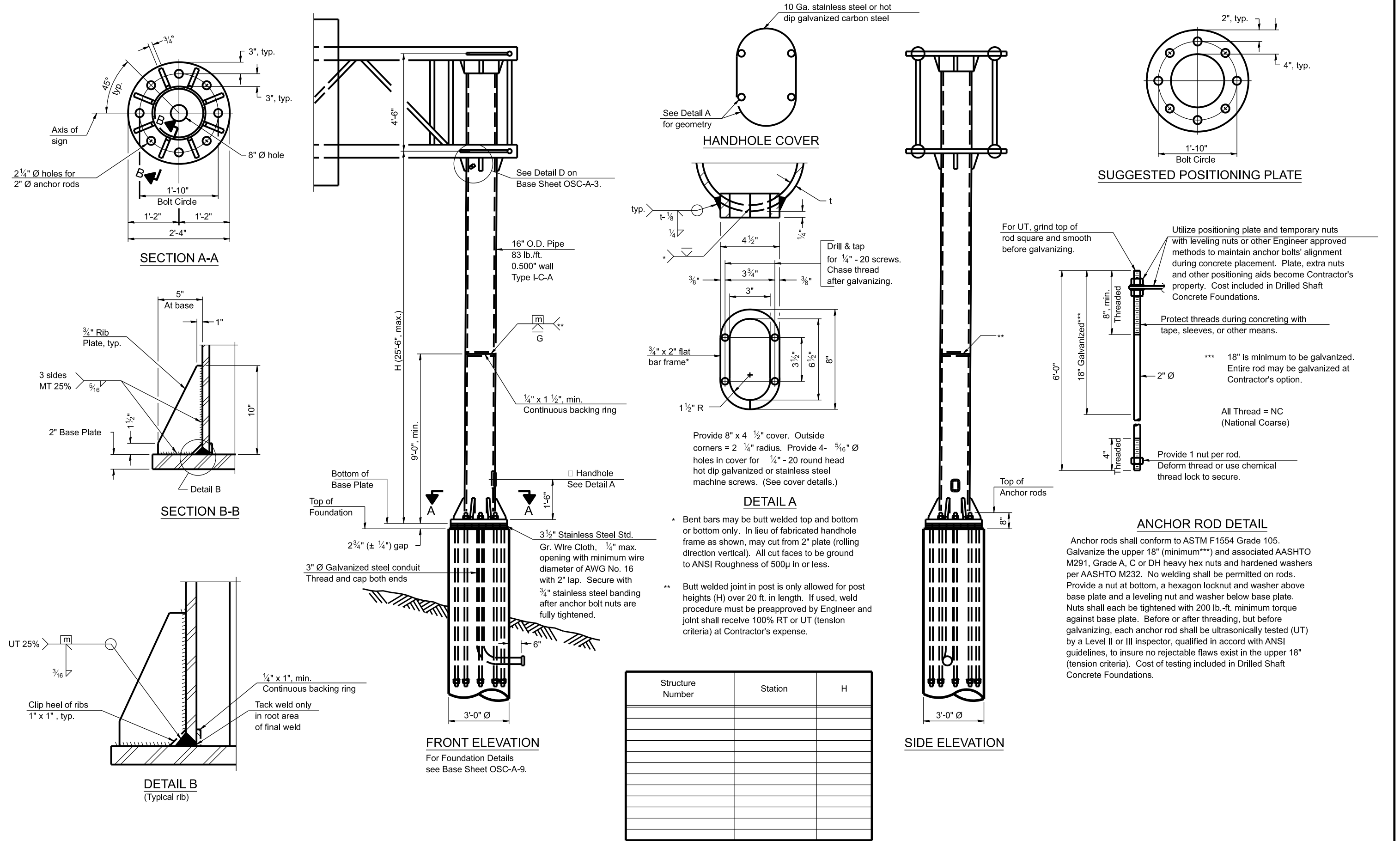
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PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	56
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				



Note: "H" based on 15'-0" or actual sign height, whichever is greater.

MODEL: SIGNELNAMES
FILE: NAME: SHEETS

OSC-A-4

5-15-2023

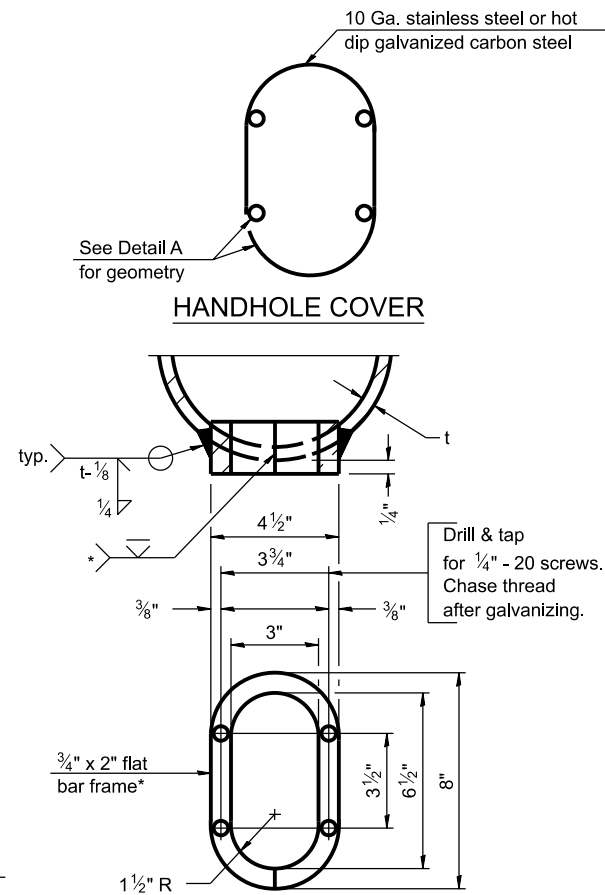
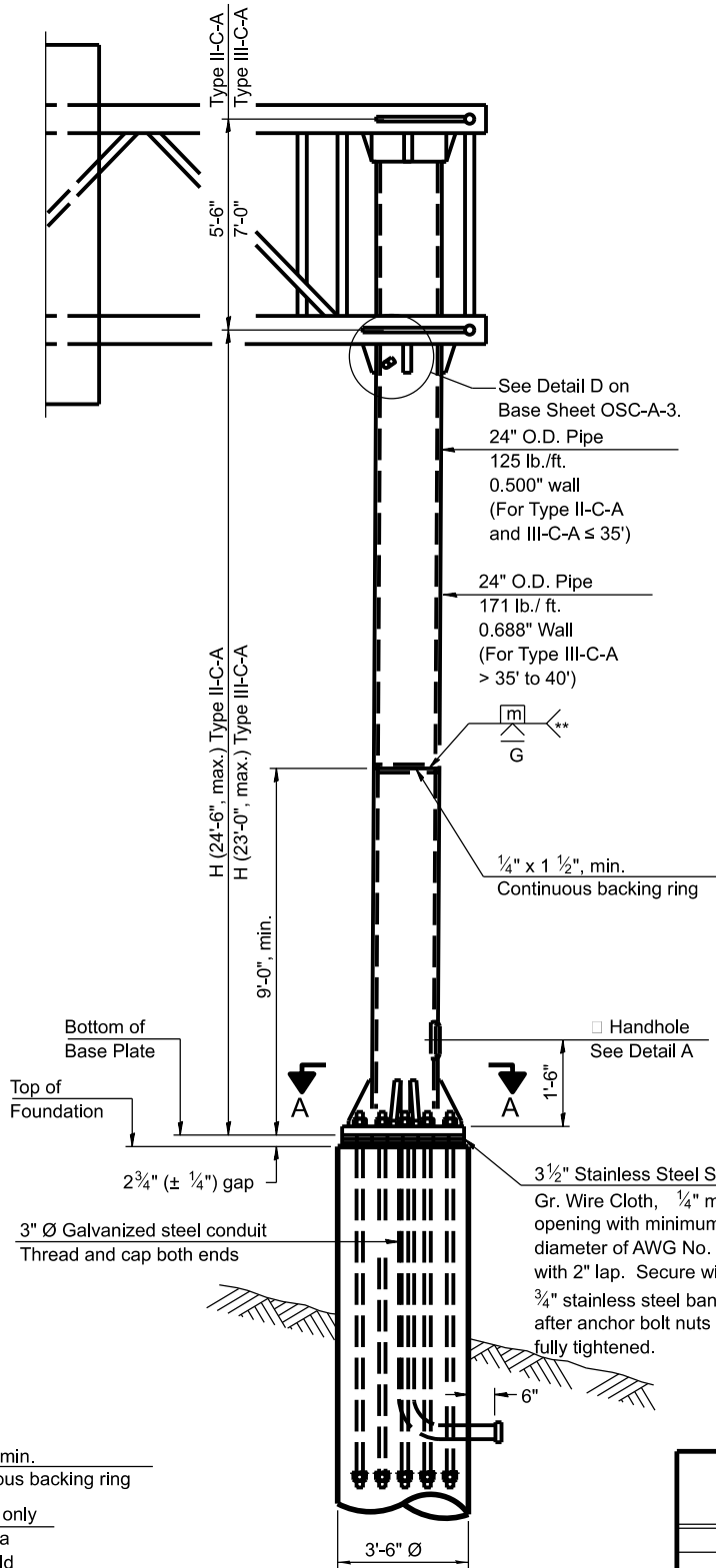
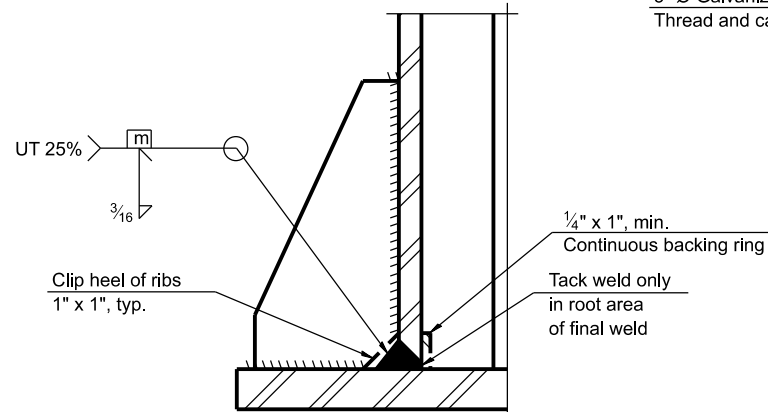
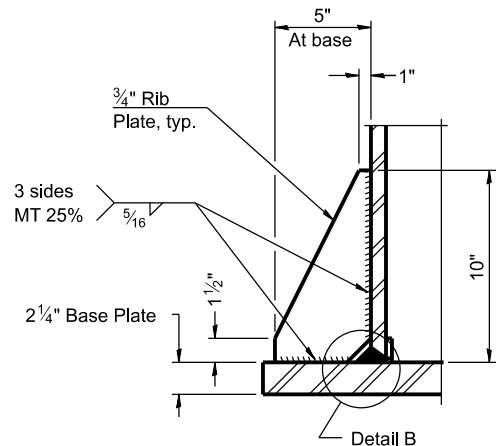
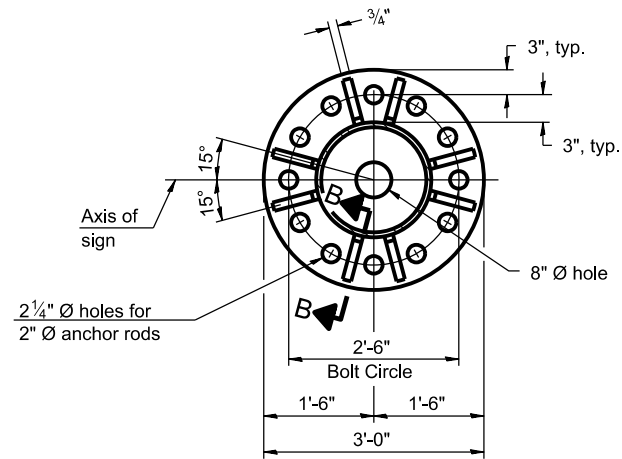
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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TYPE I-C-A TRUSS
SUPPORT POST - ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

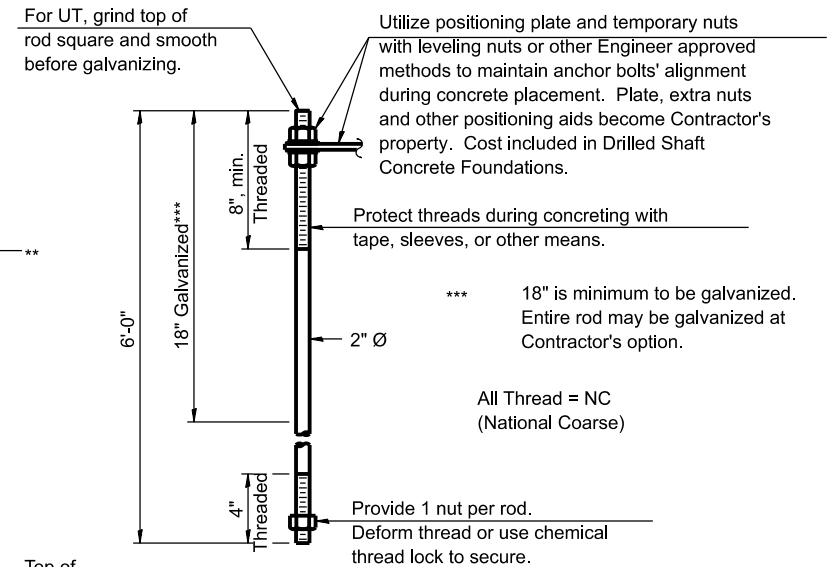
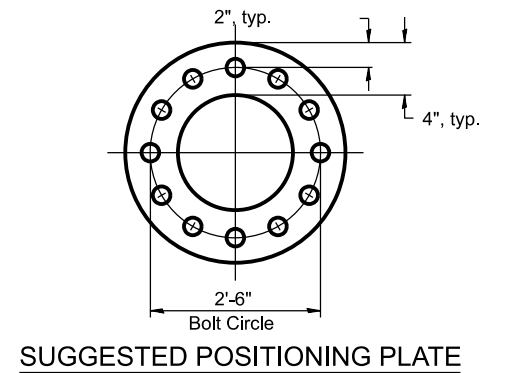
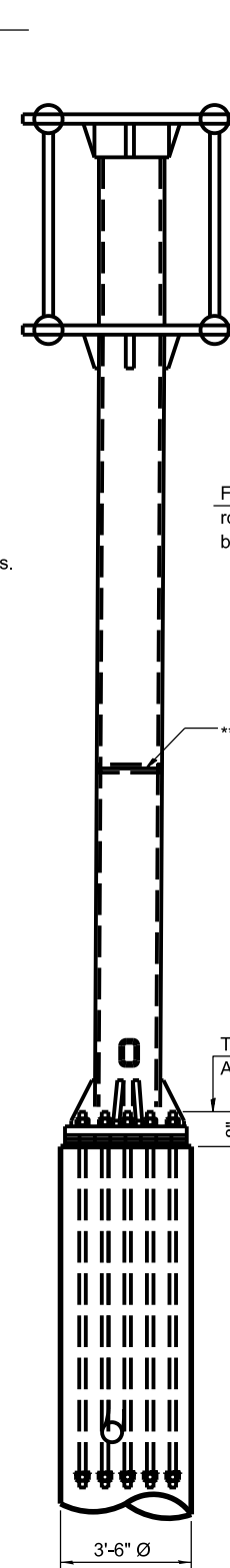
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	57
CONTRACT NO.46676				
ILLINOIS		FED. AID PROJECT		



- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500μ in or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum***) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

OSC-A-5

5-15-2023

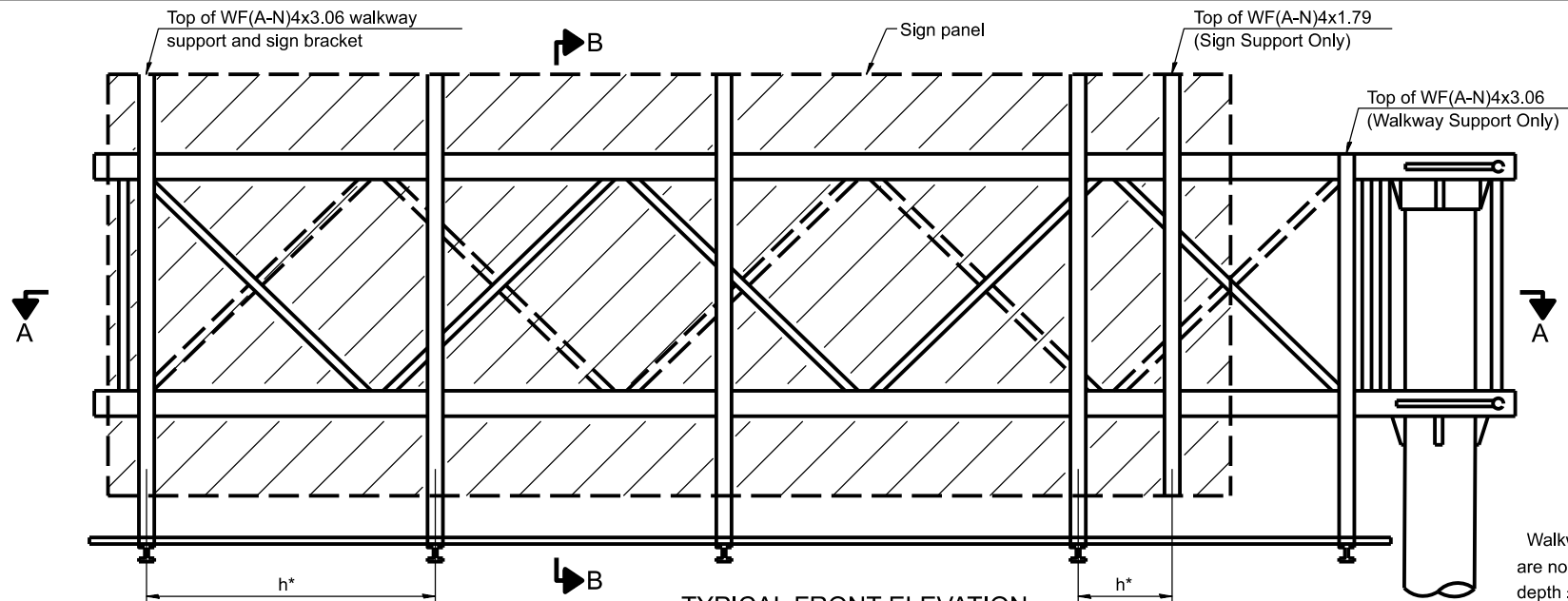
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

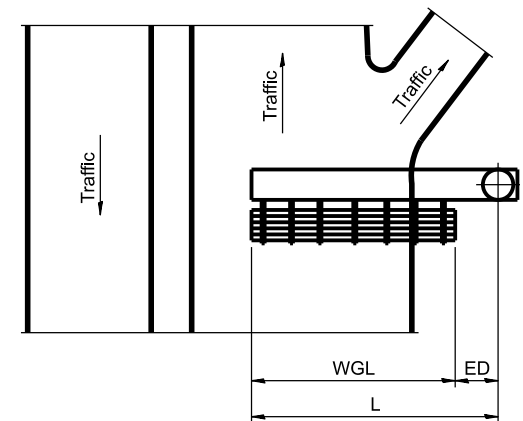
CANTILEVER SIGN STRUCTURES - TYPE II-C-A & III-C-A
TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	58
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

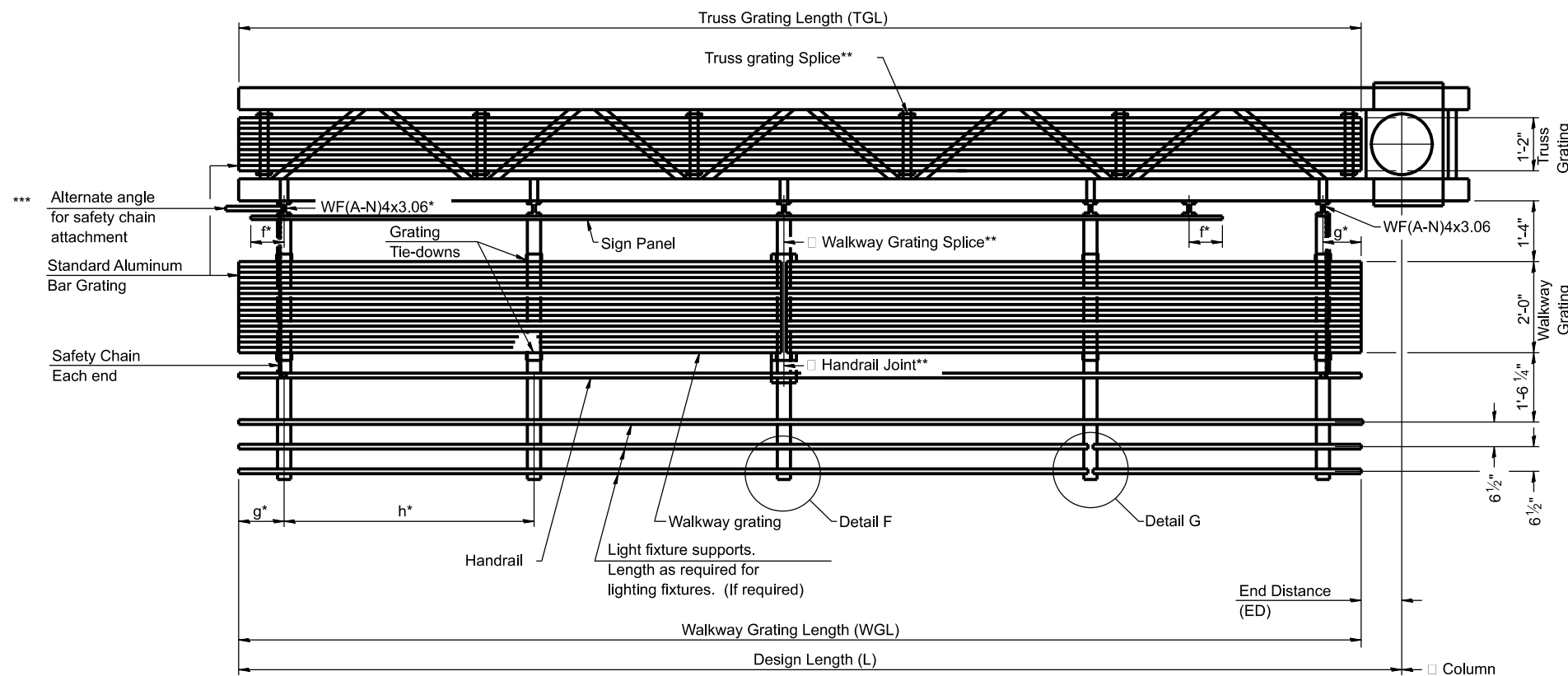


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

Walkway and truss grating dimensions are nominal and may vary (width $\pm \frac{1}{2}$ ", depth $\pm \frac{1}{2}$ ") based on available standard widths.



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6'' \right)$$

- Notes:
- * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 - f = 12" maximum, 4" minimum (End of sign to j of nearest bracket)
 - g = 12" maximum, 4" minimum (End of walkway to j of nearest bracket)
 - h = 6'-0" maximum (j to j sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 - *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8
- For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

OSC-A-6

5-15-2023

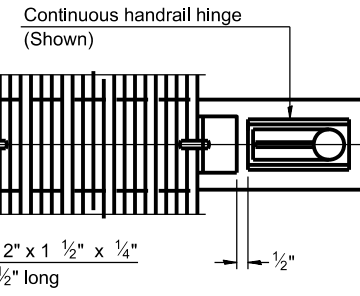
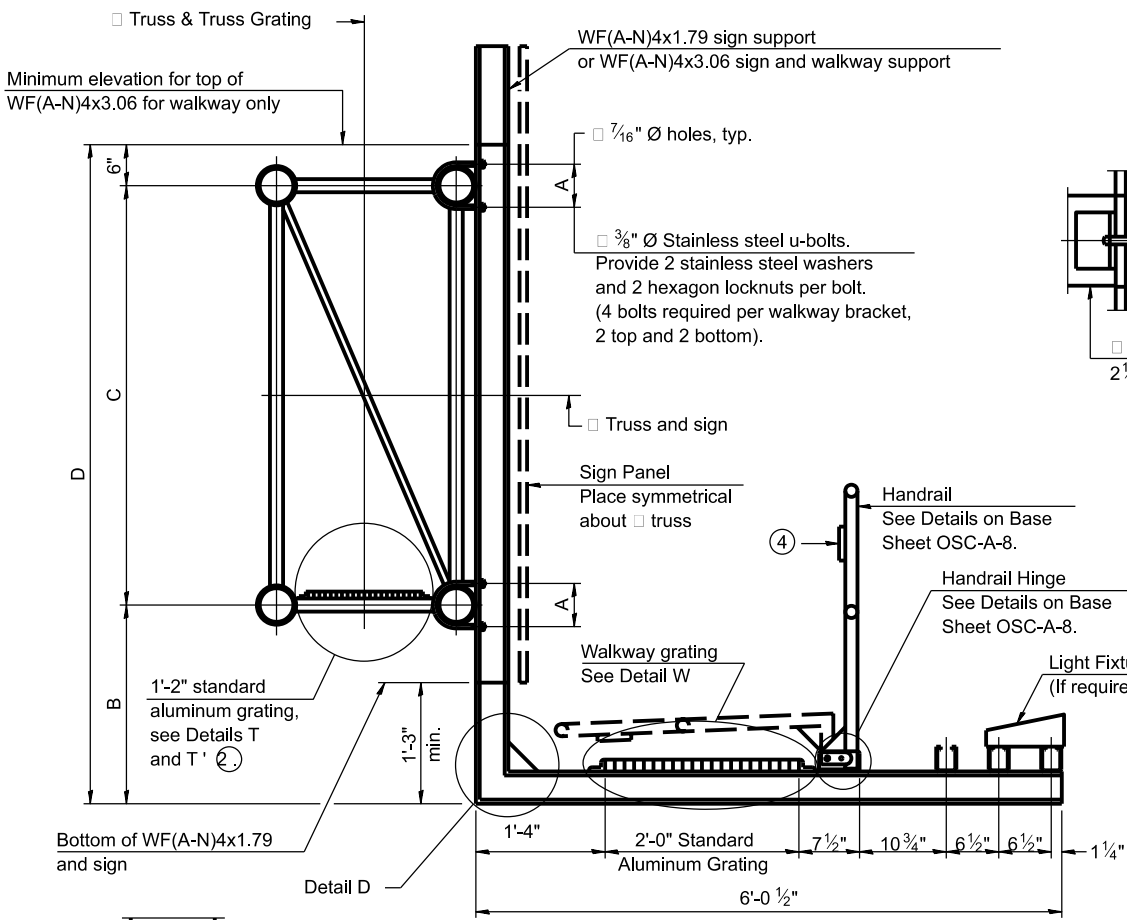
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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - ALUMINUM WALKWAY
DETAILS - ALUMINUM TRUSS & STEEL POST

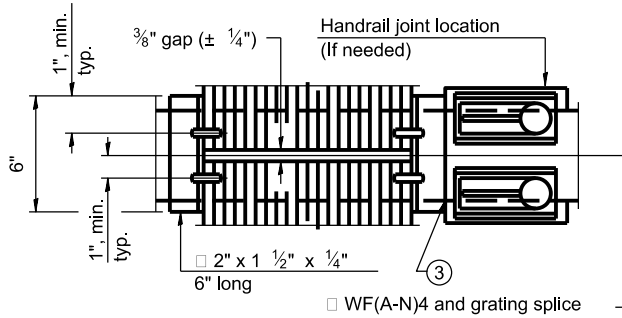
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	59
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

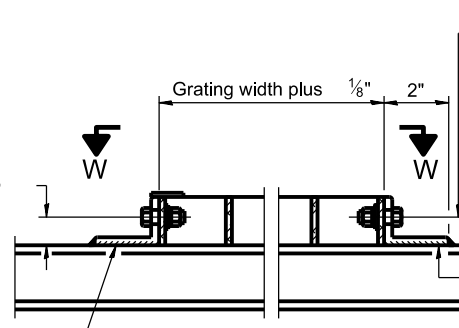


(CONTINUOUS WALKWAY GRATING)

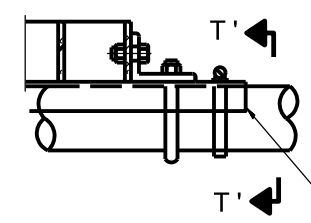
SECTION W-W



(AT WALKWAY GRATING SPLICE)

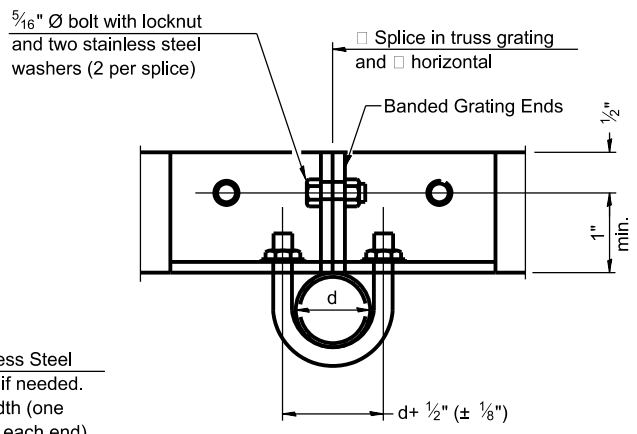


DETAIL W
(Walkway grating)

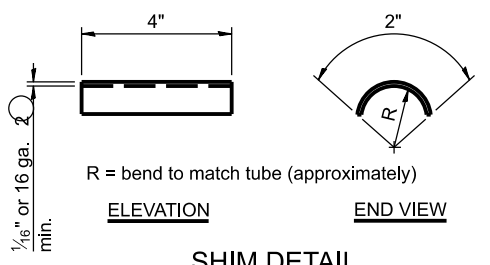


DETAIL T'

(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.

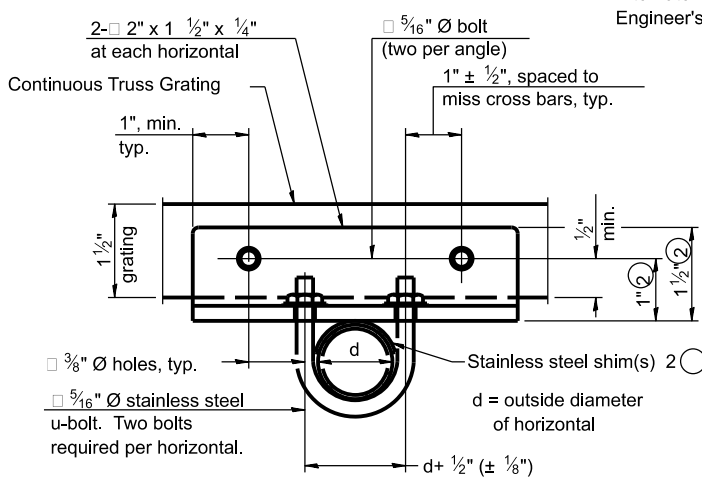


SECTION T-T'



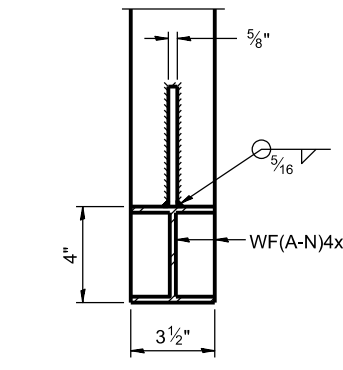
SHIM DETAIL

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and $\frac{1}{4}$ " extension bars. (See Base Sheet OSC-A-8.)
- ④ $\frac{1}{8}$ " x $\frac{1}{2}$ " x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to $\frac{1}{2}$ ", max. to align walkway, allow for camber, etc.
- ⑥ Based on actual sign height, Ds, given on OSC-A-1.

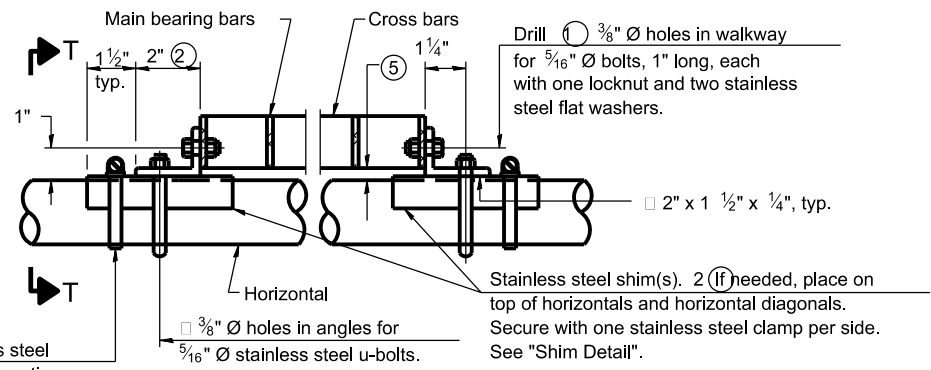


SECTION T-T

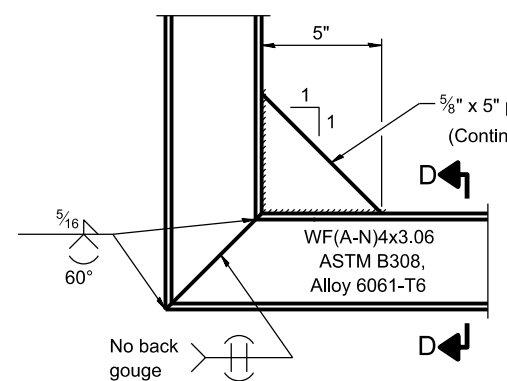
Structure Number	Station	A	⑥ B	C	⑥ D



SECTION B-B



Screw type stainless steel tube clamp at shim location



DETAIL D

DETAIL T

OSC-A-7

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
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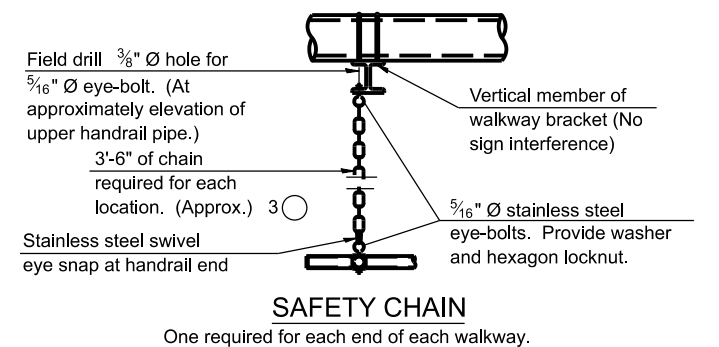
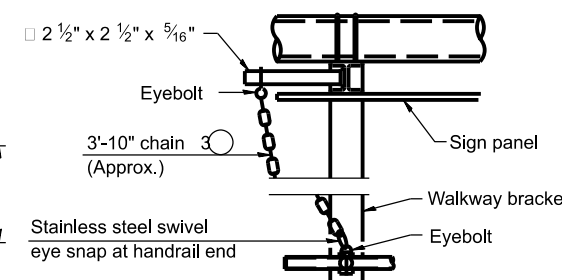
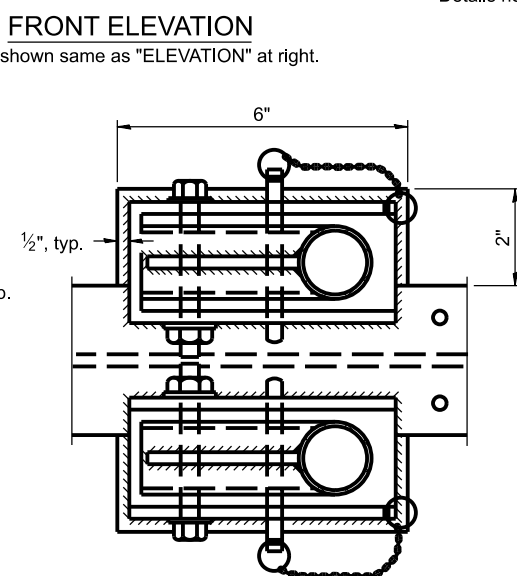
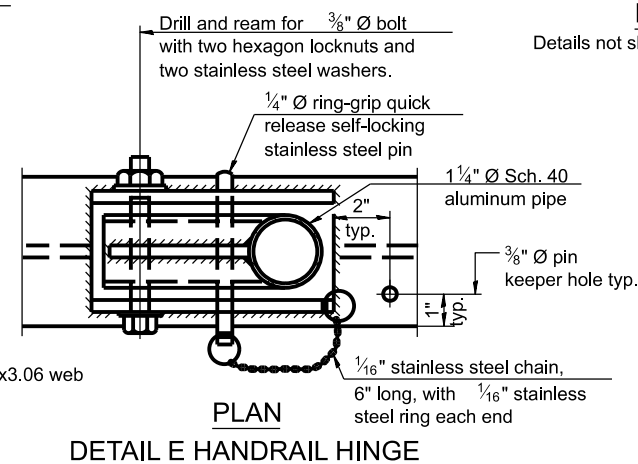
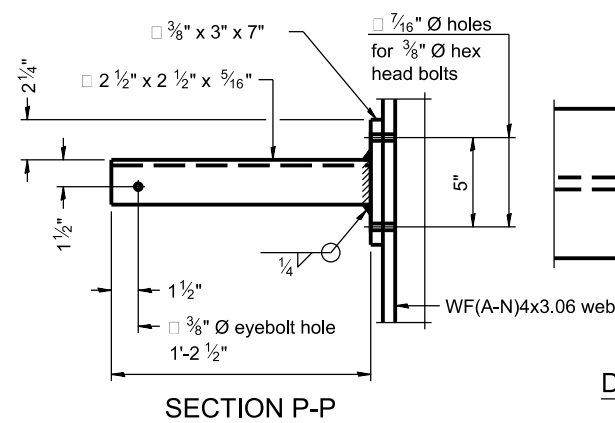
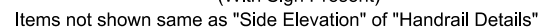
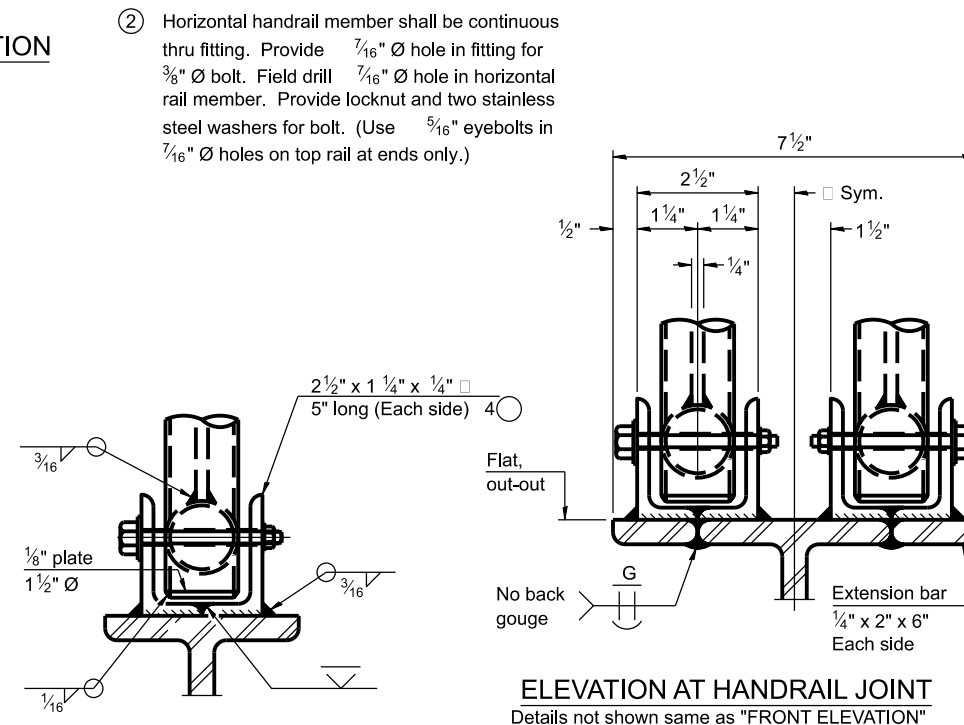
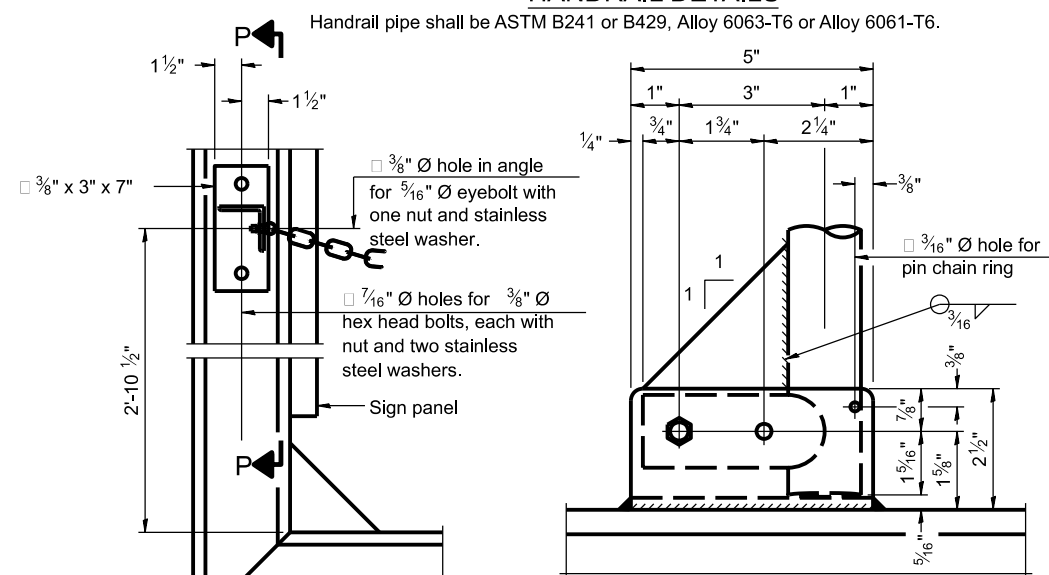
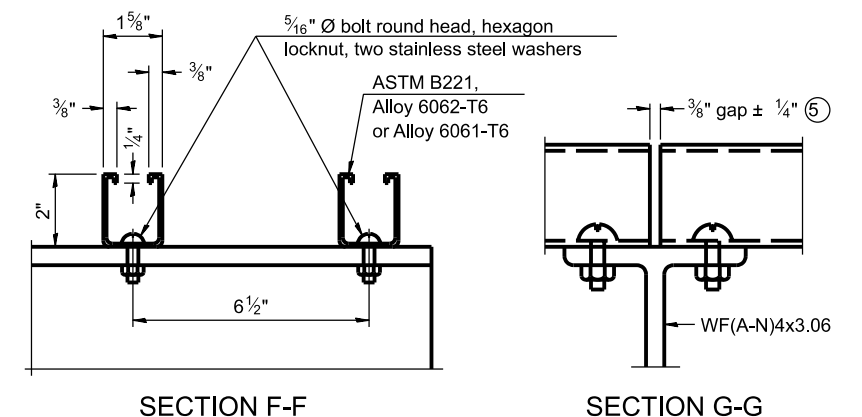
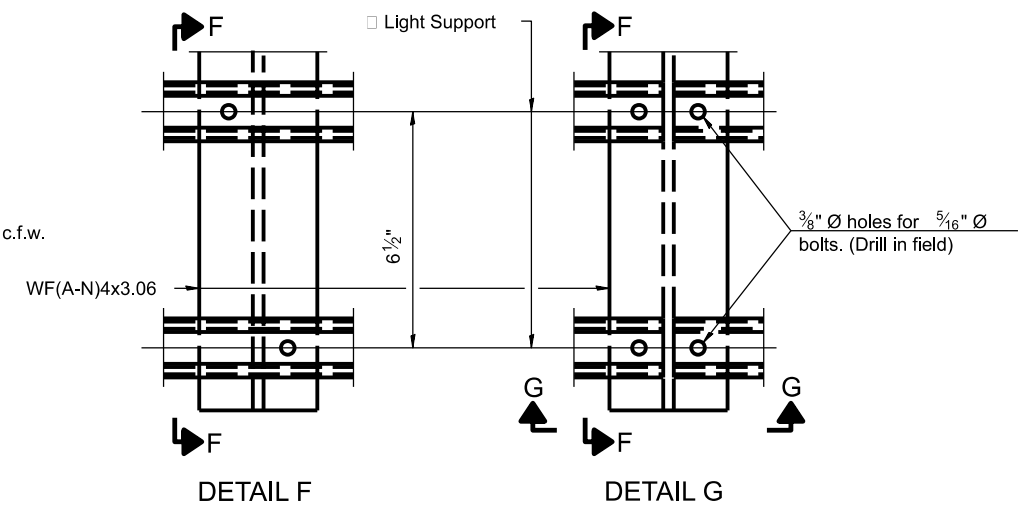
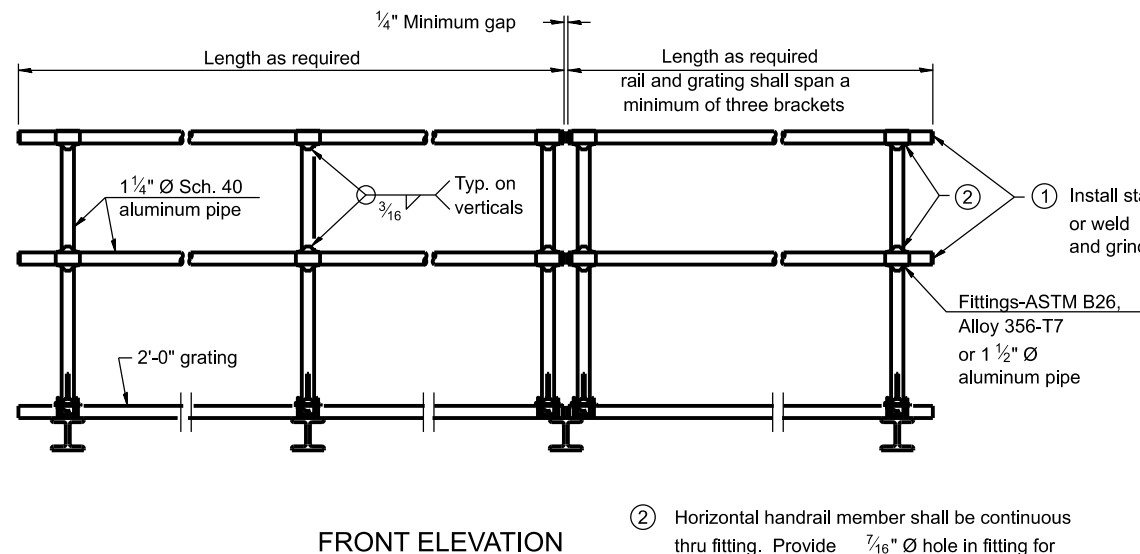
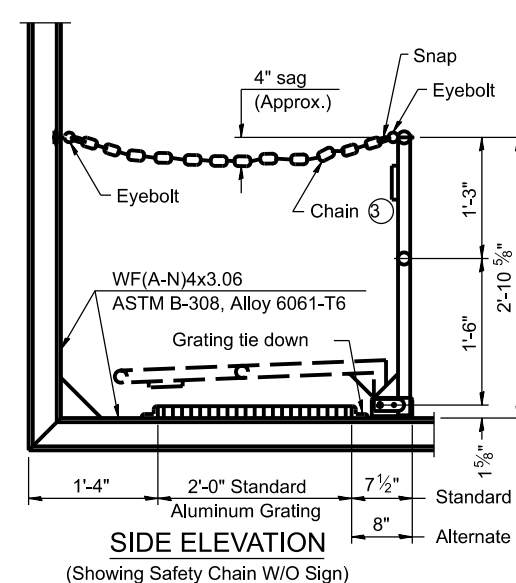
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

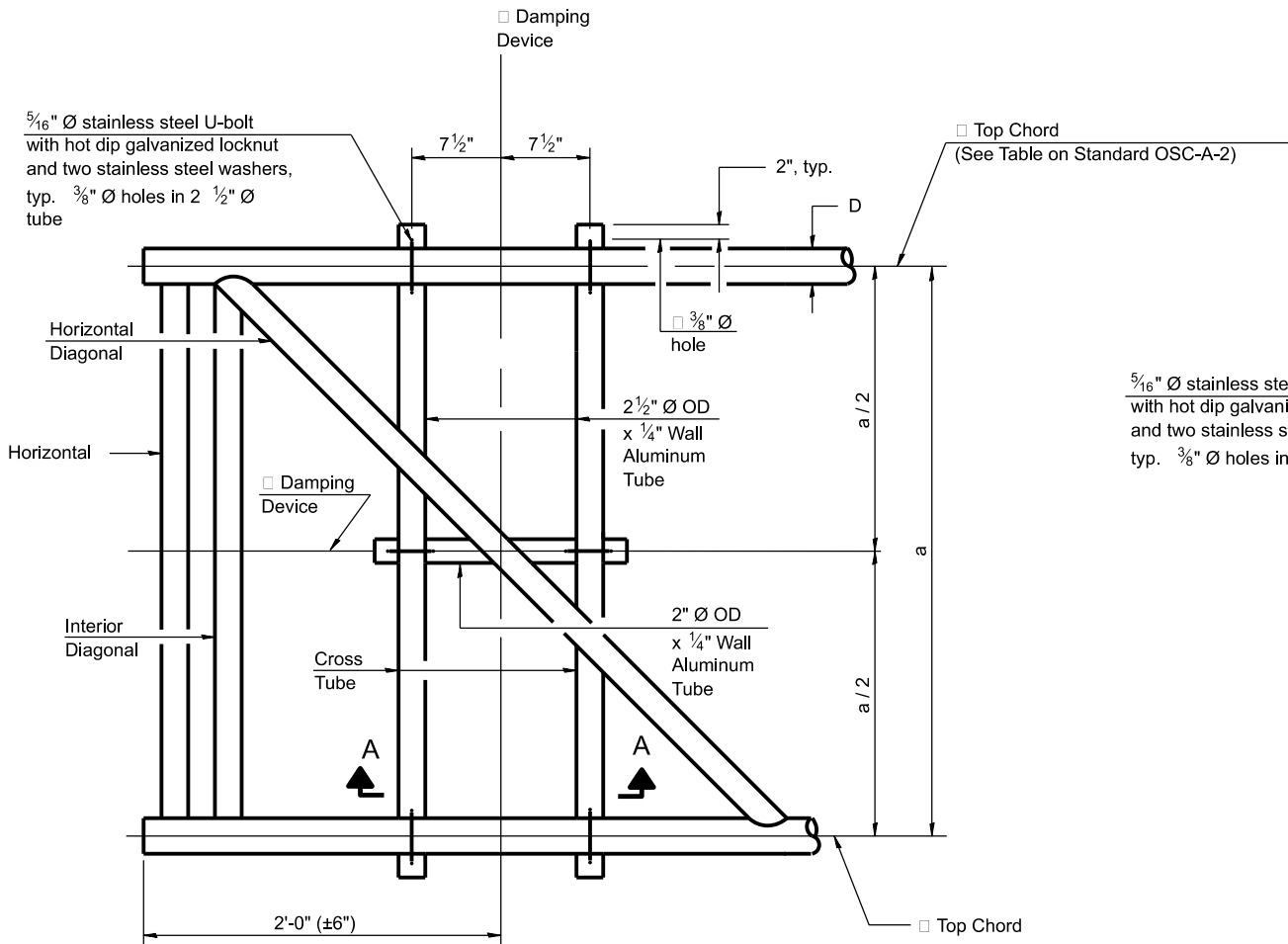
CANTILEVER SIGN STRUCTURES - WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

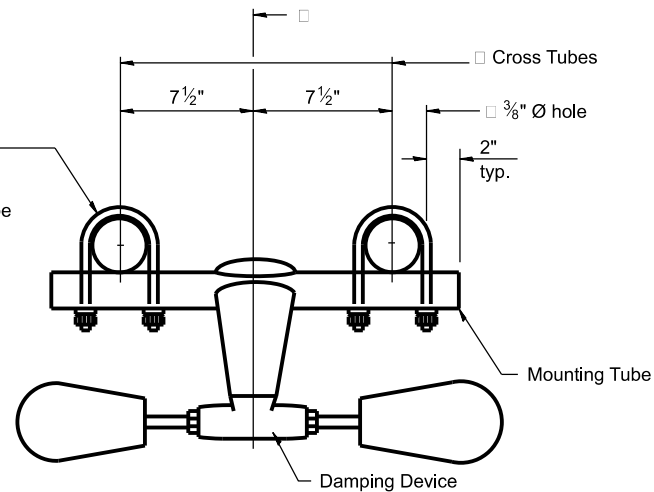
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	60
CONTRACT NO.46676				
ILLINOIS FED. AID PROJECT				

MODEL: \$MODELNAME\$
FILE NAME: \$FILES\$

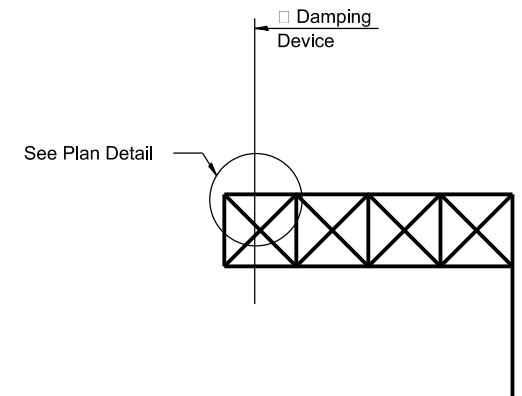




PLAN DETAIL



TRUSS DAMPING
DEVICE CONNECTION DETAIL

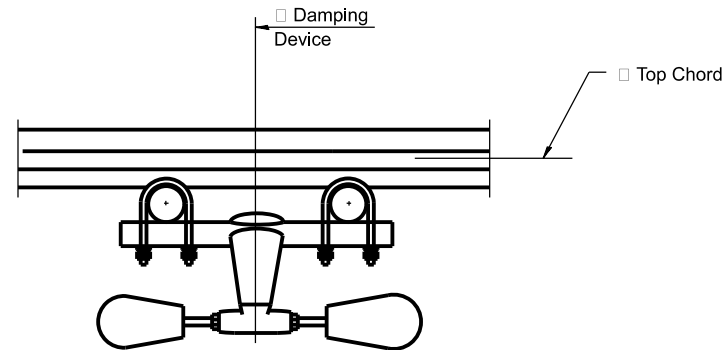


ELEVATION
Aluminum Cantilever
Sign Structure

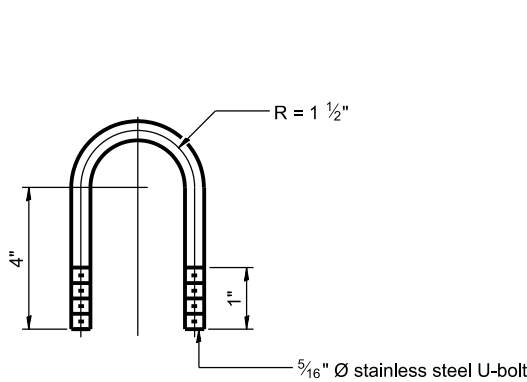
GENERAL NOTES

Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)

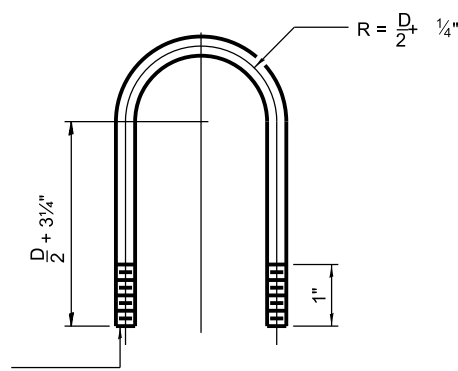
Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE
U-BOLT DETAIL
(Typical)

MODEL: S:\MODEL\NAMES
FILE: NAMES: SHEETS

OSC-A-D

5-15-2023

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	STATEWIDE FREEWAY SIGN MAINT 26-13	VARIOUS	63	63
				CONTRACT NO.46676
ILLINOIS FED. AID PROJECT				