

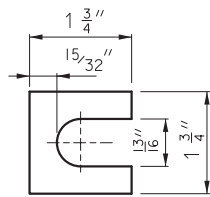
I-BEAM POST FOR GROUND MOUNTED SIGNS																	
POST		BOLT			WASHER			BASE CONNECTION DATA TABLE (IN.)									
DES. NO.	NOM SIZE (IN. X LBS)	DIA	LENGTH	TORQUE	OD	ID	THICK	A	B	C	D	E	F	G	W	R	
		IN.	IN.	IN./LB.	IN.	IN.	IN.										
1	W6x9																
2	W6x15	5/8	2 3/4	345	1 5/16	1/16	1/8	5	2	1 1/4	2 3/4	1 1/8	3/4	1/2	1/4	1 1/2	
3	W8x18																
4	W10x22																
5	W10x26	3/4	3 1/2	555	1 13/32	13/16	1/8	6	2 1/4	1 3/8	3 1/2	1 1/4	1	3/4	5/16	1 3/2	
6	W12x35																

POST AND FOOTING DATA TABLE													
POST		FOOTING											
POST DES. NO.	NOM. SIZE	WEIGHT		STUB LENGTH	DIA.	LEVEL GROUND		6:1 GRADE		4:1 GRADE		3:1 OR 2:1 GRADE	
		LBS/FT	LBS/IN			DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

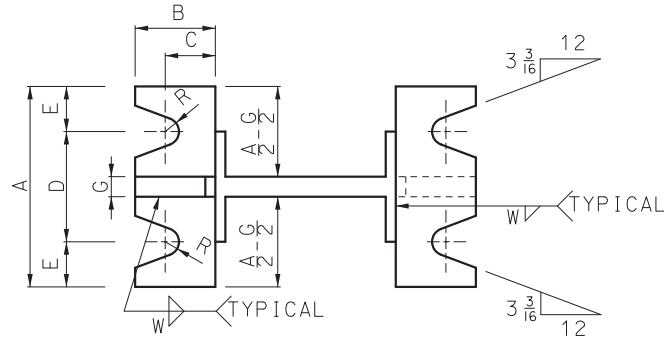
SHEET METAL BOLT RETAINER CUT FROM 30 GAGE GALVANIZED SHEET METAL. PLACE BETWEEN BASE PLATES. SIZE VARIES TO FIT PLATE. BOLT HOLES TO BE 1/16" LARGER THAN REQUIRED BOLT SIZE.



BOLT RETAINER

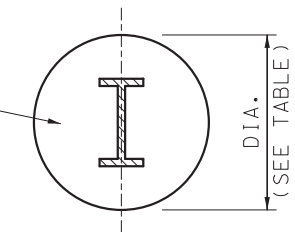


SHIM

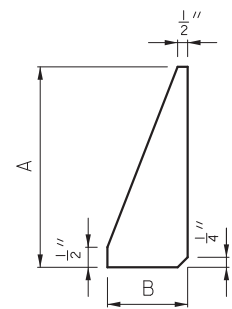


SECTION A-A

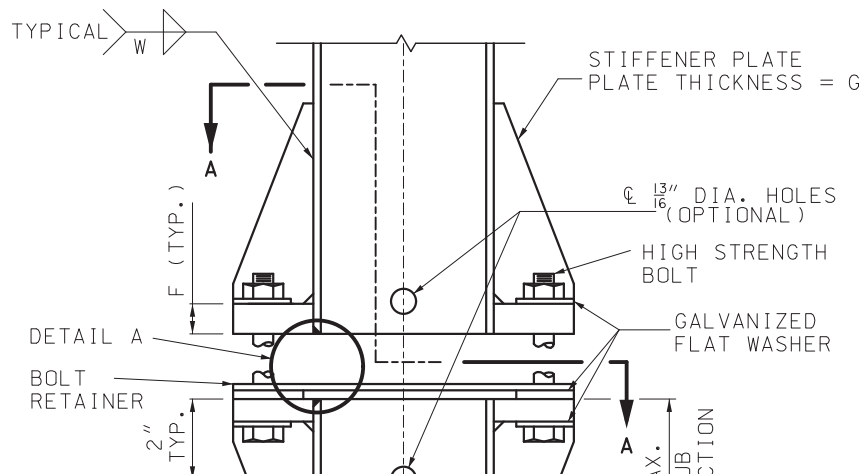
CLASS B OR B1 CONCRETE (SEE SEC 903 FOR OTHER CONCRETE OPTIONS)



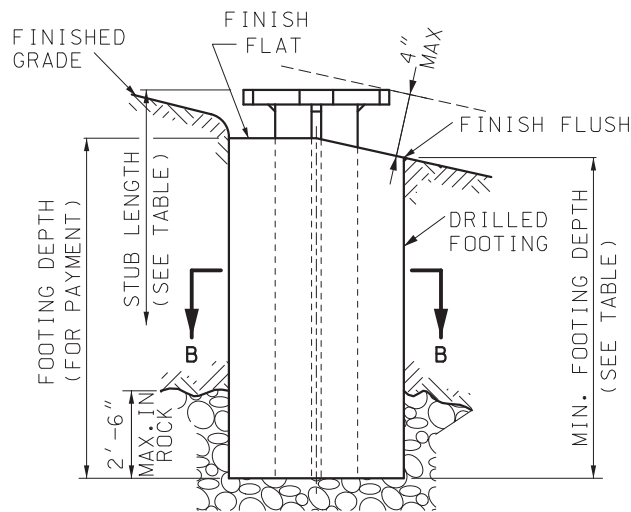
SECTION B-B



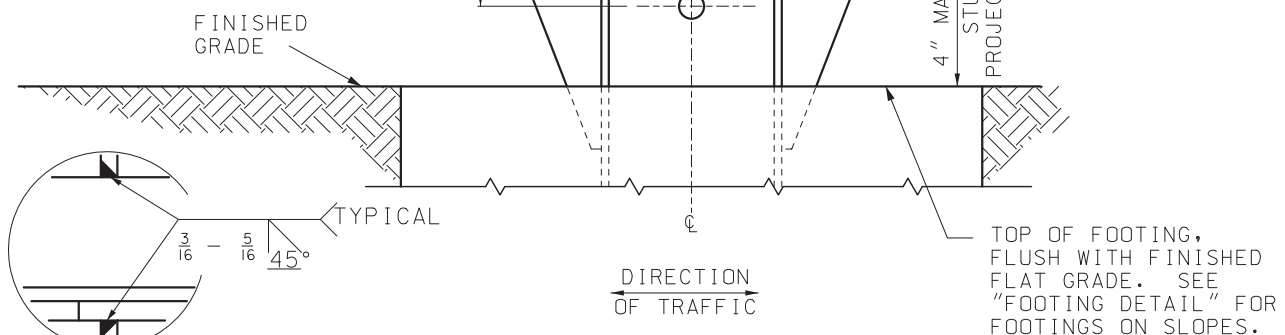
STIFFENER PLATE



ELEVATION



FOOTING DETAIL



DETAIL A

TOP OF FOOTING, FLUSH WITH FINISHED FLAT GRADE. SEE "FOOTING DETAIL" FOR FOOTINGS ON SLOPES.

GENERAL NOTES:

DESIGN SPECS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 1985 (EXCEPT 2001 AND LATEST INTERIMS FOR I-BEAM POSTS).

POSTS, PERFORATED FUSE PLATE AND SPLICE PLATE TO BE GALVANIZED AFTER FABRICATION.

METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE ALLOWED.

REMOVE ALL GALVANIZING RUNS OR BEADS IN THE WASHER AREA.

ALL I-BEAM STIFFENER PLATES AND BASE PLATES FOR GROUND MOUNTED SIGNS SHALL MEET THE REQUIREMENTS OF ASTM A 36 OR AASHTO M 270 GRADE 50, MINIMUM YIELD 50,000 PSI.

IN THE EVENT THE DISTANCE BETWEEN THE TOP OF THE FOOTING AND THE BOTTOM OF THE SIGN IS LESS THAN 7'-9", THE SIGN HEIGHT AND POST LENGTH IS TO BE INCREASED SUFFICIENTLY TO ACCOMMODATE THIS MINIMUM SPACING.

NUTS ON HINGE PLATE BOLTS SHALL BE TIGHTENED TO THE REQUIRED MINIMUM BOLT TENSION VALUES SHOWN IN TABLE 1 SEC. 1080 OF THE STANDARD SPECIFICATIONS.

THE NUT SHALL BE FREE RUNNING. IF THE NUT WILL NOT SPIN ON THE BOLT BECAUSE OF GALVANIZING IRREGULARITIES, A LUBRICANT SHALL BE APPLIED.

ALL BREAKAWAY ASSEMBLY BOLTS SHALL BE TIGHTENED IN A SYSTEMATIC MANNER TO THE PRESCRIBED TORQUE SHOWN ON THIS DRAWING.

EACH BREAKAWAY ASSEMBLY BOLT SHALL BE LOOSENED AND RE-TIGHTENED TO THE REQUIRED TORQUE IN THE SAME ORDER AS THE INITIAL TIGHTENING.

THE THREADS SHALL BE BURRED AT THE NUT USING A CENTER PUNCH TO PREVENT NUT FROM LOOSENING.

POST LENGTH QUANTITY SHOWN ON PLANS INCLUDES STUB.

1" X 2 1/2" HIGH STRENGTH BOLTS FOR PIPE POSTS SHALL BE OF THE DESIGNATION AASHTO M 164 OR ASTM A 449. ALL OTHER HIGH STRENGTH BOLTS SHALL BE OF THE DESIGNATION ASTM F3125 GRADE A325.

FURNISH TWO .012" ± AND TWO .0032" ± THICK SHIMS PER POST FROM BRASS SHIM STOCK OR STRIP, DESIGNATION ASTM B 36. SHIM AS REQUIRED TO PLUMB POST.

HIGH STRENGTH BOLTS WITH HEX NUT AND THREE WASHERS WITH EACH BOLT ARE TO BE GALVANIZED.

OPTIONAL HOLES (13/16" ROUND FOR I-BEAM POSTS AND 3/16" ROUND FOR PIPE POST BASE PLATES) AS SHOWN IN "ELEVATION" ARE TO BE USED AS AID FOR GALVANIZING ONLY.

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

**POST INSTALLATION DETAILS**

**POST AND FOOTING DETAILS**

**I-BEAM POSTS**

JONATHAN A. NELSON - CIVIL  
MO-PE-2008019578

DATE EFFECTIVE: 7/1/2026

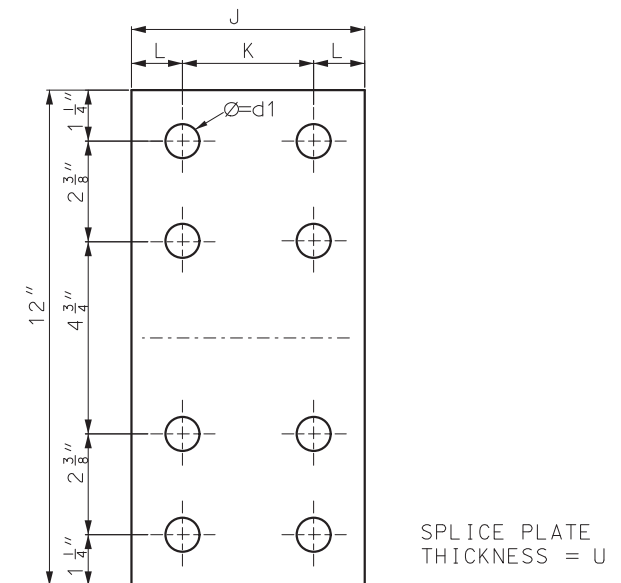
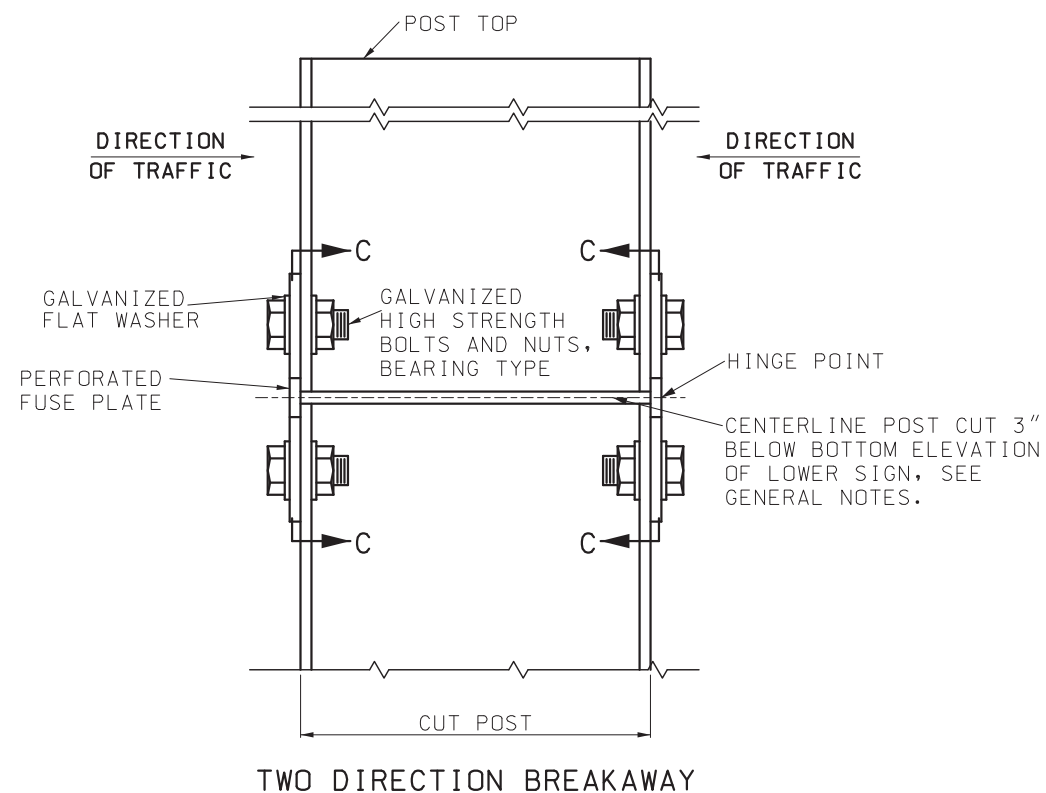
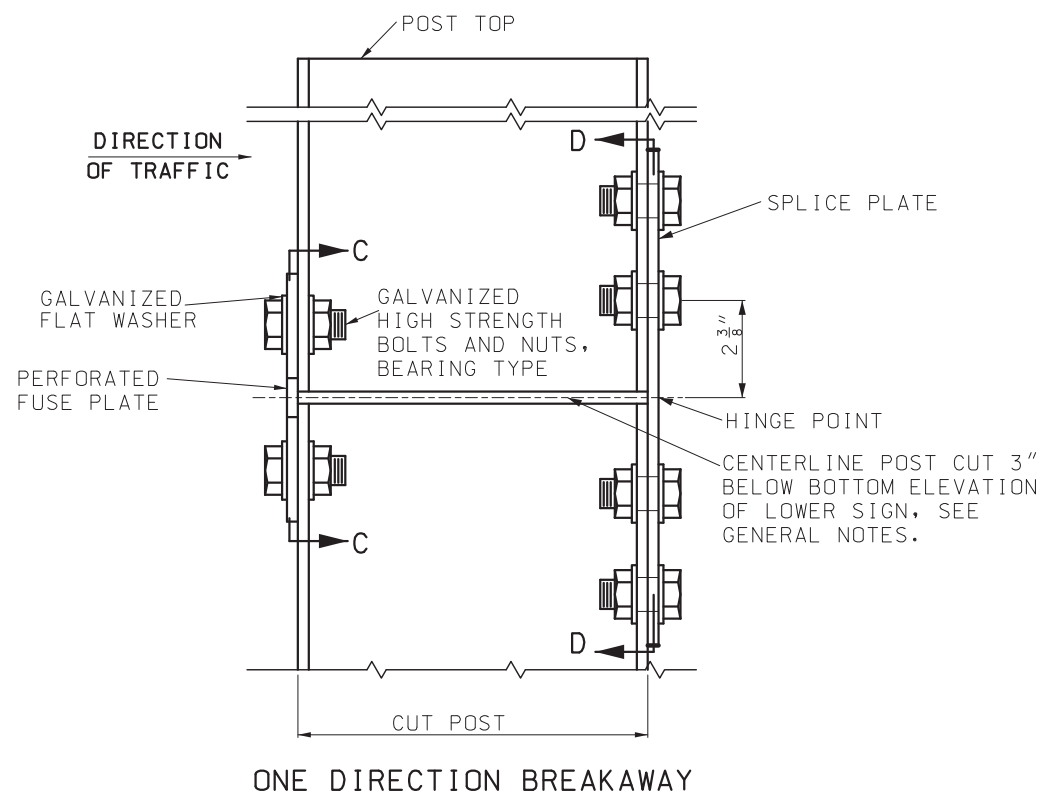
DATE PREPARED: 4/9/2026

**903.03BV**

SHEET NO.  
1 OF 12

I-BEAM POSTS DESIGN DATA								PERFORATED FUSE PLATE DATA TABLE															SPLICE PLATE DATA TABLE									
POST DES. NO.	NOM. SIZE (IN.)	WEIGHT		DEPTH (IN.)	FLANGE		WEB THICK (IN.)	POST DESIGN NO.	F (IN.)	G (IN.)	H (IN.)	J (IN.)	K (IN.)	L (IN.)	M (IN.)	N (IN.)	d1 (IN.)	d2 (IN.)	P (IN.)	BOLT DIA. (IN.)	WT. (E.A.) (LBS.)	POST DESIGN NO.	J (IN.)	K (IN.)	L (IN.)	U (IN.)	d1 (IN.)	BOLT DIA. (IN.)	WT. (E.A.) (LBS.)	WASHER		
		LB/FT	LB/IN		WIDTH (IN.)	THICK (IN.)																								OD IN.	ID IN.	THICK IN.
1	W6	9	0.75	5 7/8	4	3/16	3/16	1	4 1/4	1	1 1/8	4	2 1/4	7/8	1	1/2	9/16	3/4	3/16	1/2	0.76	1	4	2 1/4	7/8	3/16	9/16	1/2	2.45	1 3/16	5/8	1/8
2	W6	15	1.25	6	6	1/4	1/4	2	5	1 1/4	1 1/4	6	3 1/2	1 1/4	1 1/2	3/4	11/16	1 1/4	1/4	5/8	1.67	2	6	3 1/2	1 1/4	1/4	11/16	5/8	4.89	1 5/16	11/16	1/8
3	W8	18	1.50	8 1/8	5 1/4	5/16	1/4	3	5	1 1/4	1 1/4	5 1/4	2 3/4	1 1/4	1 1/4	3/4	11/16	1 1/16	1/4	5/8	1.51	3	5 1/4	2 3/4	1 1/4	5/16	11/16	5/8	5.32	1 5/16	11/16	1/8
4	W10	22	1.83	10 1/8	5 3/4	3/8	1/4	4	6	1 1/2	1 1/2	5 3/4	2 3/4	1 1/2	1 3/8	13/16	13/16	1 1/8	5/16	3/4	2.52	4	5 3/4	2 3/4	1 1/2	5/16	13/16	3/4	5.75	1 5/16	13/16	1/8
5	W10	26	2.17	10 3/8	5 3/4	7/16	1/4	5	6	1 1/2	1 1/2	5 3/4	2 3/4	1 1/2	1 3/8	13/16	13/16	1 1/8	5/16	3/4	2.52	5	5 3/4	2 3/4	1 1/2	7/16	13/16	3/4	8.04	1 5/16	13/16	1/8
6	W12	35	2.92	12 1/2	6 1/2	1/2	5/16	6	6	1 1/2	1 1/2	6 1/2	3 1/2	1 1/2	1 5/8	13/16	13/16	1 5/16	3/8	3/4	3.35	6	6 1/2	3 1/2	1 1/2	1/2	13/16	3/4	10.47	1 5/16	13/16	1/8

THE WEIGHT OF I-BEAM POSTS SHOWN IN THE CONTRACT HAS BEEN COMPUTED USING THE WEIGHTS SHOWN.



ELEVATION D-D

PERFORATED FUSE PLATE AND SPLICE PLATE DETAIL



ELEVATION C-C


ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER: FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND.

PERFORATED FUSE PLATE AND SPLICE PLATE SHALL BE FABRICATED FROM ASTM A 36 STRUCTURAL STEEL.

NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

FOR ROADWAYS WHERE TRAFFIC MAY STRIKE THE BACKSIDE OF THE POST, PERFORATED FUSE PLATES SHALL BE INSTALLED ON BOTH SIDES OF THE POST.



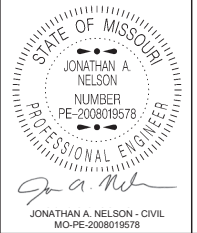
**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

**POST INSTALLATION DETAILS**

**HINGE DETAILS**

**I-BEAM POSTS**



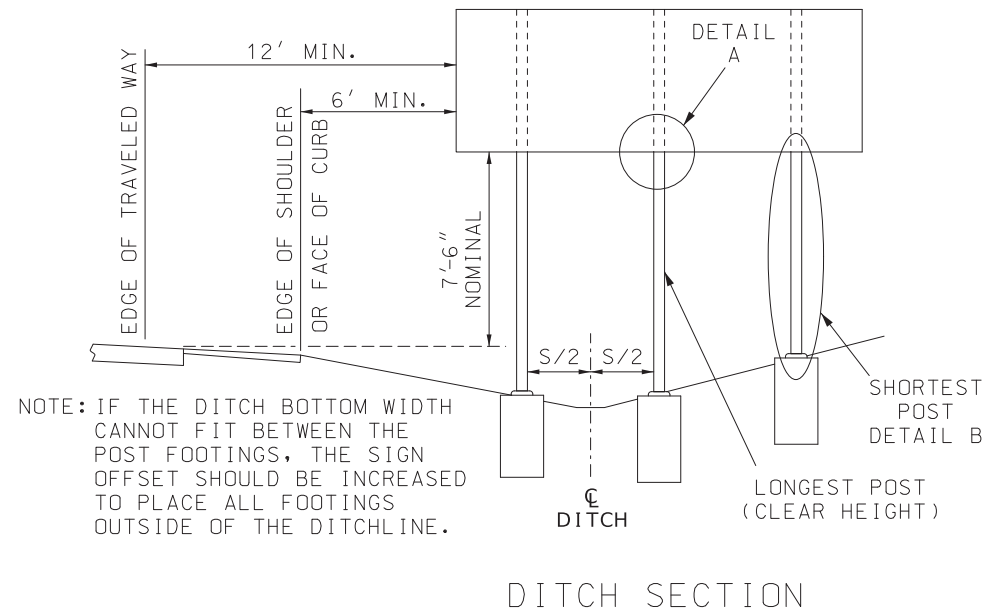
JONATHAN A. NELSON - CIVIL  
MO-PE-2008019578

DATE EFFECTIVE: 7/1/2026

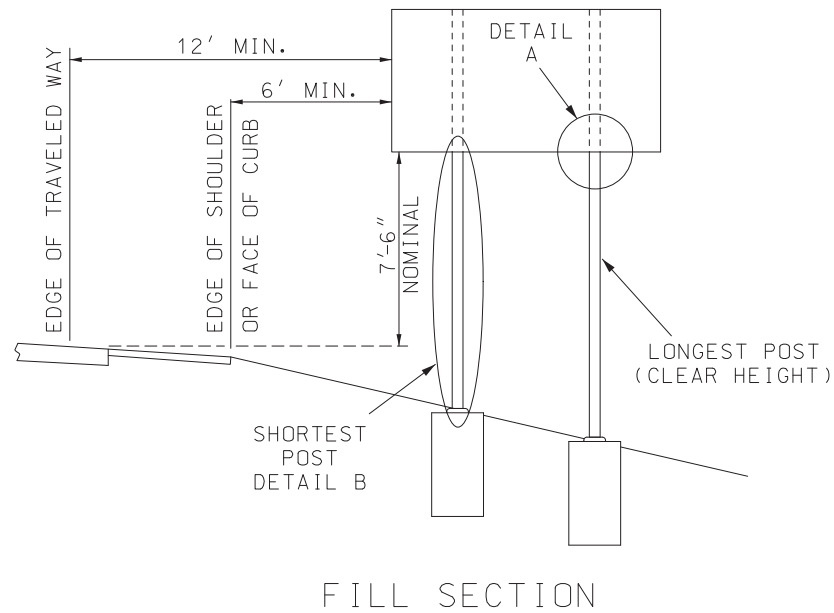
DATE PREPARED: 4/9/2026

903.03BV

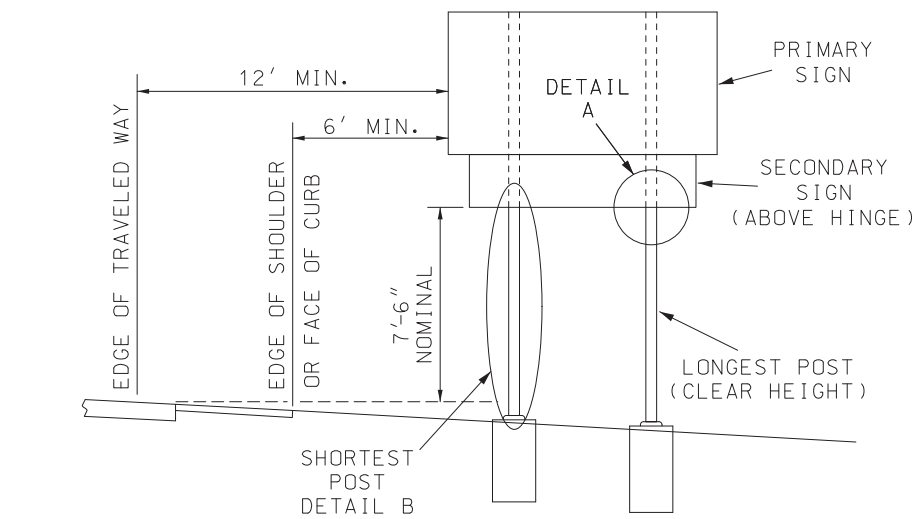
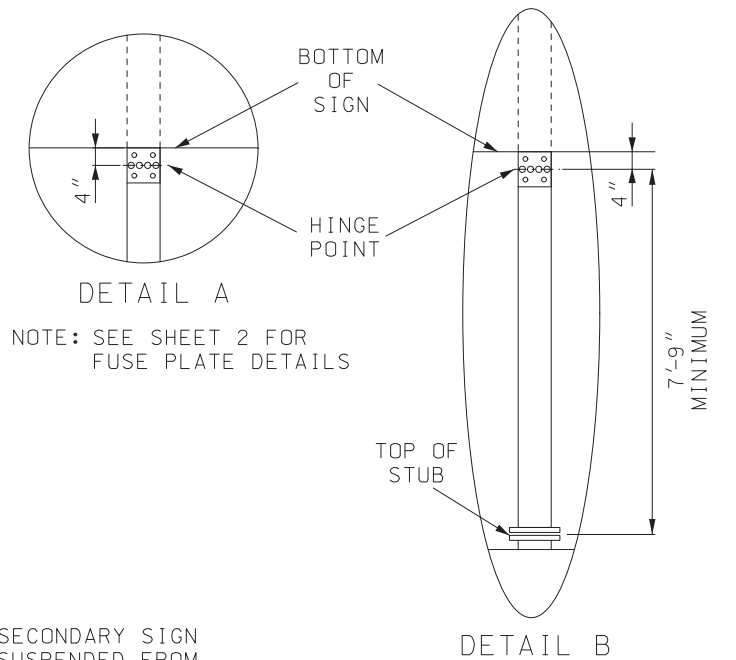
SHEET NO.  
2 OF 12



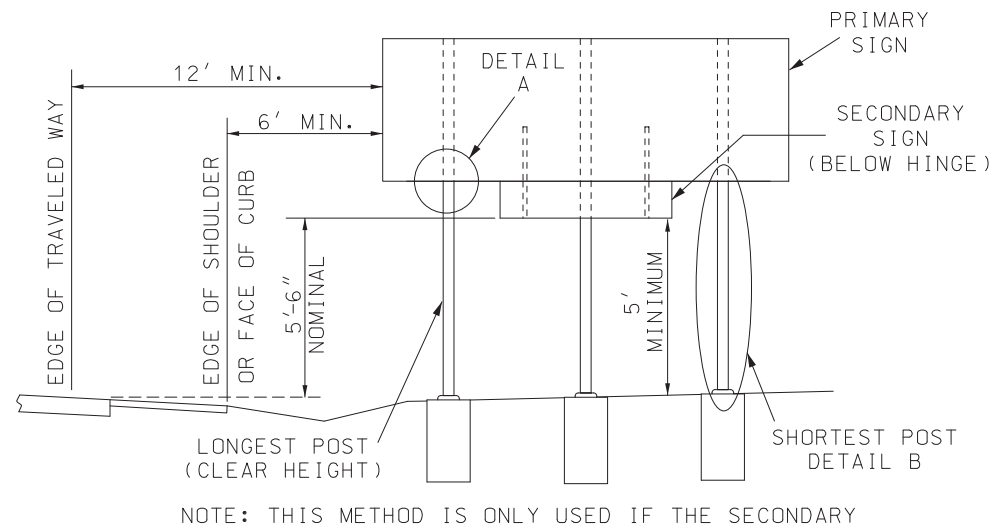
DITCH SECTION



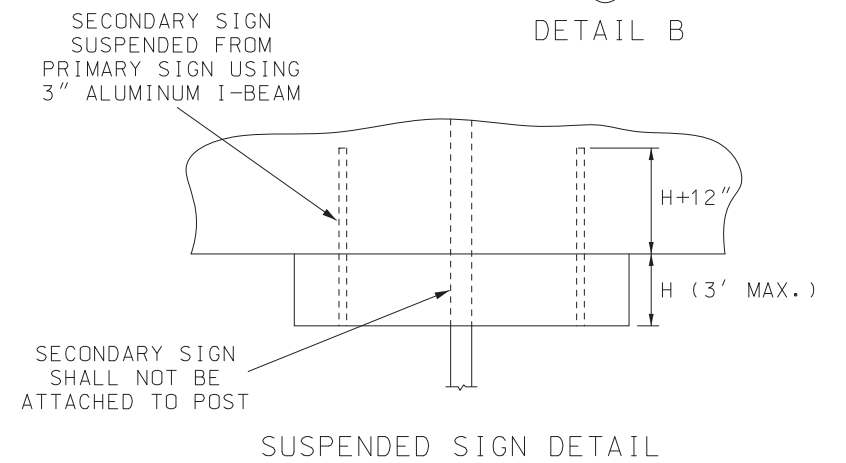
FILL SECTION



SECONDARY SIGN INSTALLATION ATTACHED TO SIGN POSTS



SECONDARY SIGN INSTALLATION SUSPENDED FROM PRIMARY SIGN

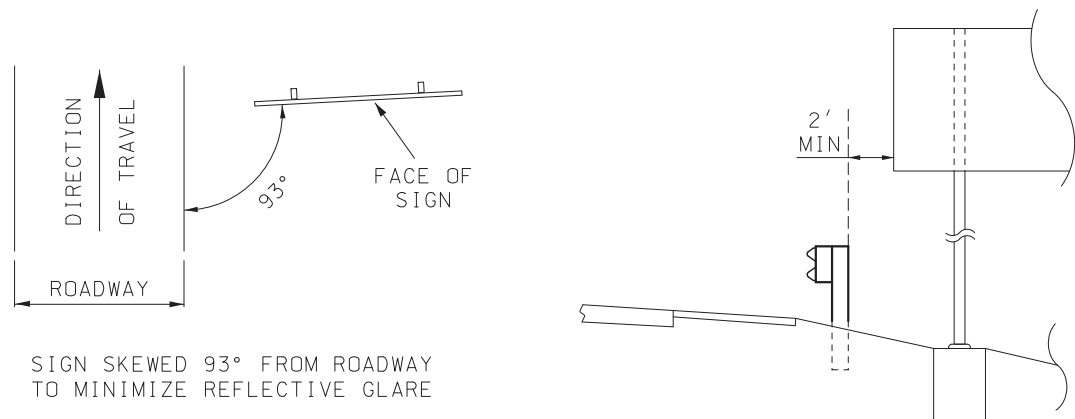


GENERAL NOTES:

FOR ADDITIONAL INFORMATION ON THE INSTALLATION OF I-BEAM POSTS, SEE SHEETS 1 AND 2.

THE MOUNTING HEIGHT OF THE SIGN, MEASURED FROM THE ROAD SURFACE, SHALL ONLY BE INCREASED TO ENSURE THE SHORTEST POST IS A MINIMUM 7'9".

THE CORRECT NUMBER AND SIZE OF POSTS REQUIRED IS CALCULATED BASED ON THE SIGN HEIGHT, WIDTH AND THE CLEAR HEIGHT. THE CLEAR HEIGHT IS THE LENGTH OF THE LONGEST POST MEASURED FROM THE TOP OF THE STUB TO THE HINGE POINT AND DIRECTLY AFFECTS THE NUMBER AND SIZE OF POSTS REQUIRED TO SUPPORT A SIGN.



SIGN ORIENTATION

SIGN OFFSET BEHIND BARRIER

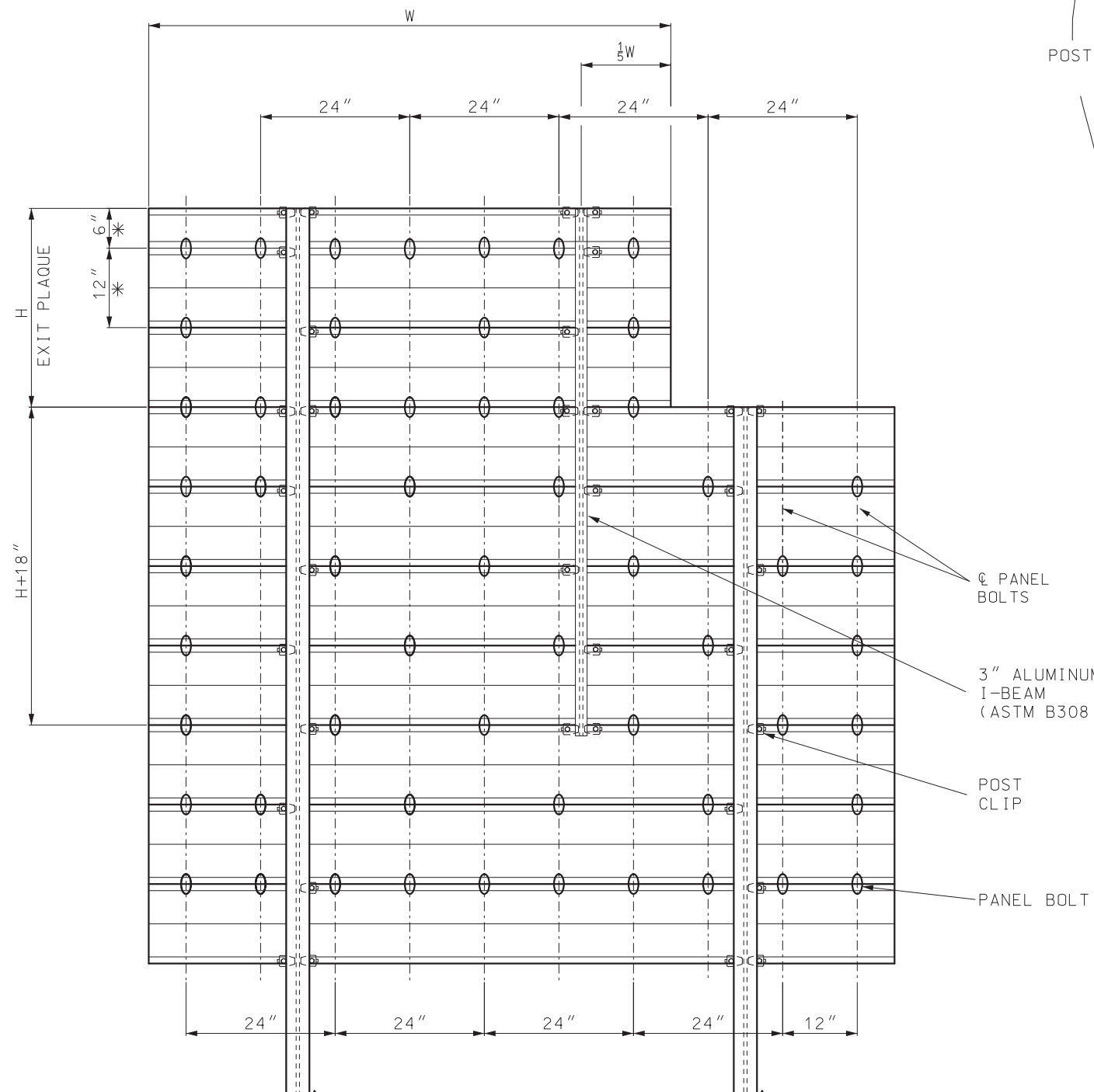
SEE SIGNPOST SELECTION TABLES IN EPG 903 FOR EXACT POST SPACING FOR EACH SPECIFIC SIGN WIDTH. POST SPACINGS GENERATED BASED ON THE FOLLOWING DESIGN REQUIREMENTS:

- POST DESIGNS 3, 4, 5 AND 6 (18 LBS/FT OR HEAVIER) - SPACE BETWEEN POSTS SHALL BE A MINIMUM OF 7'
- POST DESIGNS 1 AND 2 - SPACE BETWEEN POSTS MAY BE LESS THAN 7'
- SIGNS 6' TO 17' WIDE TYPICALLY USE TWO POSTS
- SIGNS GREATER THAN 17' TYPICALLY USE THREE POSTS

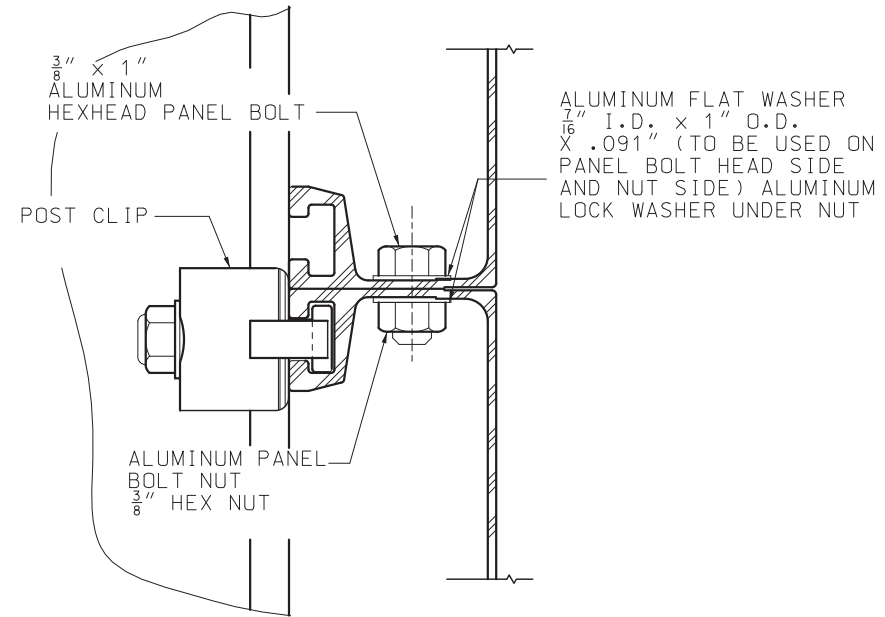
POST SPACING

<p><b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b></p> <p>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</p>	
<p>JONATHAN A. NELSON - CIVIL MO-PE-2008019578</p>	<p><b>POST INSTALLATION DETAILS</b></p> <p>TYPICAL SECTION, MOUNTING HEIGHT AND POST SPACING I-BEAM POSTS</p>
<p>DATE EFFECTIVE: 7/1/2026 DATE PREPARED: 4/9/2026</p>	<p><b>903.03BV</b></p> <p>SHEET NO. 3 OF 12</p>

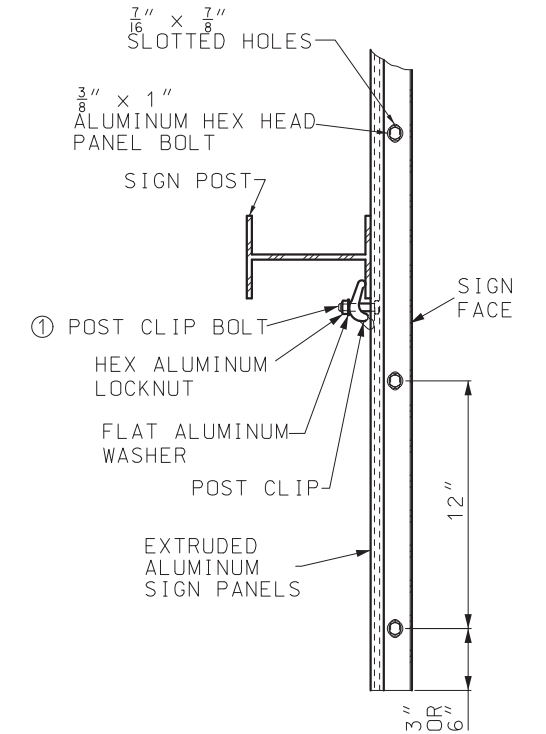
\* EXTRUDED ALUMINUM PANELS ARE 12" WITH THE EXCEPTION OF ONE 6" PANEL WHICH MAY BE PART OF THE EXIT PLAQUE.



PANEL BOLT LOCATION



POST CLIP DETAIL



PART PLAN

① SIGNS SHALL BE FIELD ATTACHED TO POSTS WITH POST CLIPS AND BOLTS, SEE POST CLIP DETAIL. THE SHANK OF THE POST CLIP BOLT SHALL FIT TIGHTLY AGAINST THE POST FLANGE AFTER THE LOCKNUTS ARE TORQUED. LOCKNUTS ON THE POST CLIP BOLTS SHALL BE TORQUED TO 225 INCH-POUNDS WHEN USING DRY, CLEAN, UNLUBRICATED THREADS.

NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

FOR EXTRUDED ALUMINUM PANEL AND POST CLIP DETAILS, SEE STANDARD PLAN 903.02.

**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
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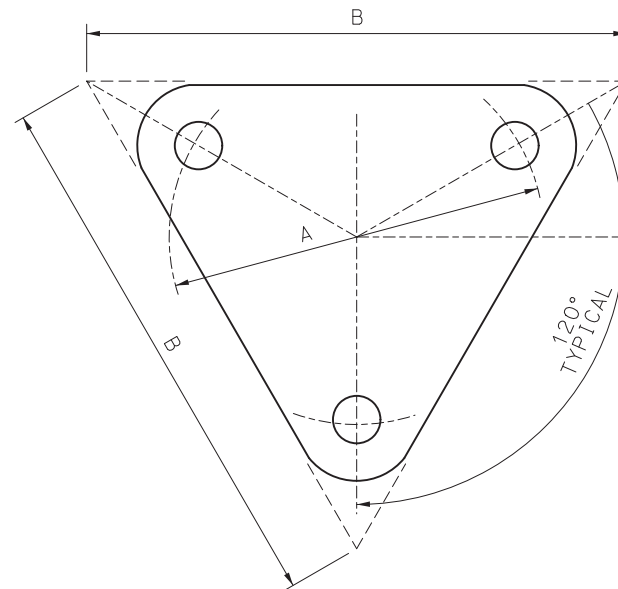
STATE OF MISSOURI  
 JONATHAN A. NELSON  
 NUMBER PE-2008019578  
 PROFESSIONAL ENGINEER  
 Jonathan A. Nelson  
 JONATHAN A. NELSON - CIVIL  
 MO-PE-2008019578

**SIGN MOUNTING DETAILS**  
**I-BEAM POSTS**

DATE EFFECTIVE: 7/1/2026	903.03BV	SHEET NO. 4 OF 12
DATE PREPARED: 4/9/2026		

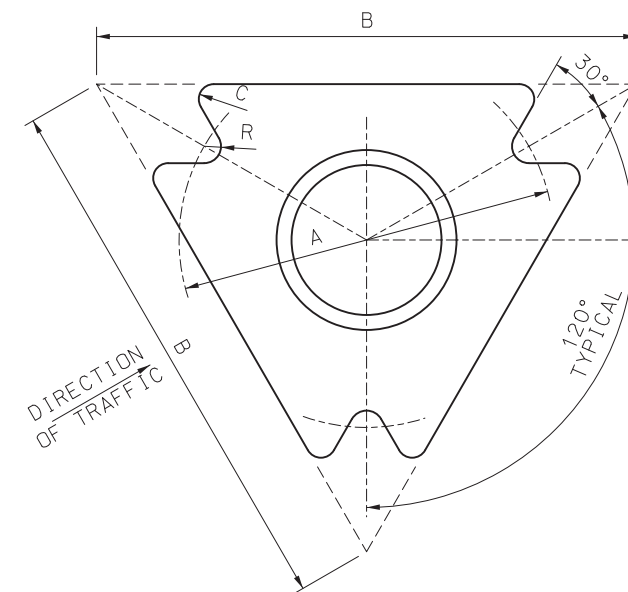
ROUND PIPE POST FOR GROUND MOUNTED SIGNS												
POST NOM SIZE (IN. - ID)	BOLT			WASHER			BASE CONNECTION DATA TABLE (IN.)					
	DIA IN.	LENGTH IN.	TORQUE IN./LB.	OD IN.	ID IN.	THICK IN.	A	B	C	R	T	W
2 1/2	1/2	3 1/2	140	1 1/16	1 7/32	1/8	6 1/4	9	1/4	9/32	1	1/4
4	5/8	3 3/4	345	1 5/16	1 1/16	1/8	7 3/16	10	1/4	3/8	1	5/16

ROUND PIPE POST AND FOOTING DATA TABLE						
NOM. SIZE (IN.)	WEIGHT		STUB LENGTH	FOOTING		CONCRETE C.Y.
	LBS/FT	LBS/IN		DIA.	DEPTH	
2 1/2	5.79	0.48	4' - 3 1/2"	12"	4'-6"	0.13
4	10.79	0.90	5' - 3 1/2"	18"	5'-6"	0.36

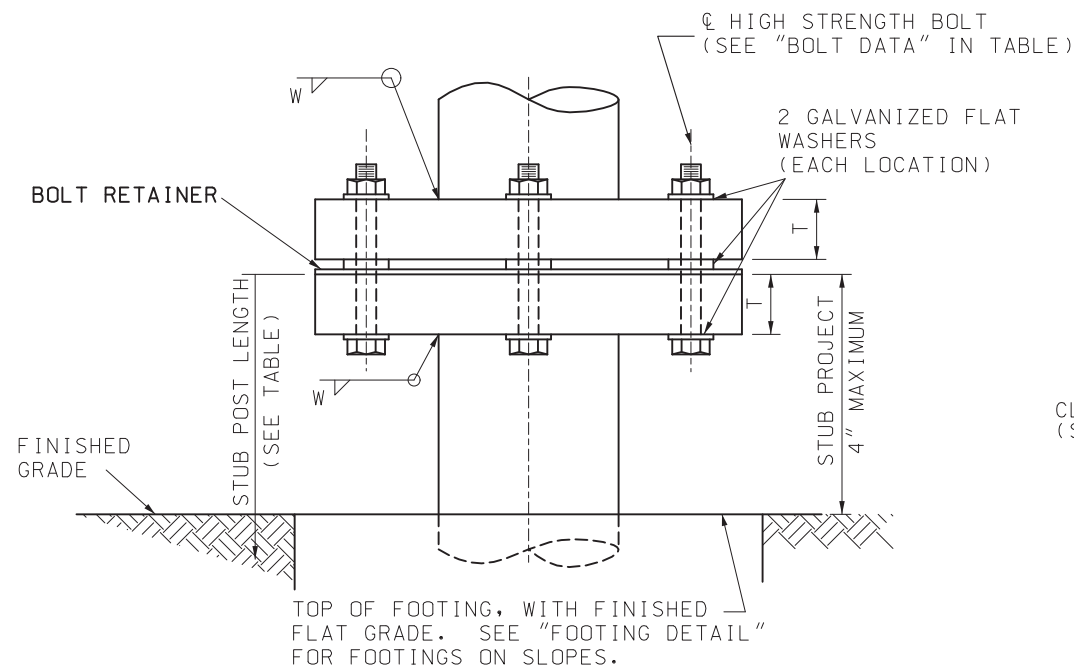


**BOLT RETAINER**

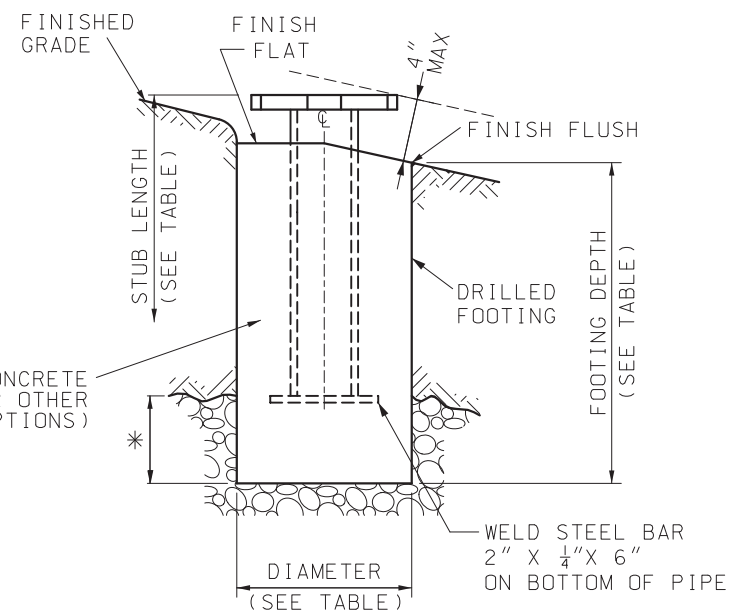
SHEET METAL BOLT RETAINER CUT FROM 30 GAUGE GALVANIZED SHEET METAL. PLACE BETWEEN BASE PLATES. SIZE VARIES TO FIT PLATE. BOLT HOLES SHALL BE 1/16" LARGER THAN REQUIRED BOLT SIZE.



**PLAN VIEW**



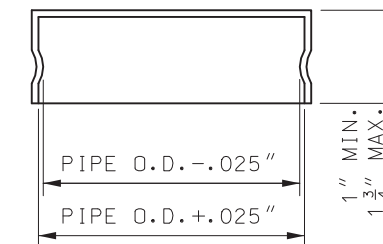
**ELEVATION**  
(STEEL PIPE POST BASE CONNECTION)  
**MULTI-DIRECTION SLIP BASE**



\* 2' MAXIMUM IN ROCK FOR 2" DIA. PIPE,  
3' MAXIMUM IN ROCK FOR 4" DIA. PIPE.

**FOOTING DETAIL**

ROLLED CRIMP TO ENGAGE PIPE O.D.



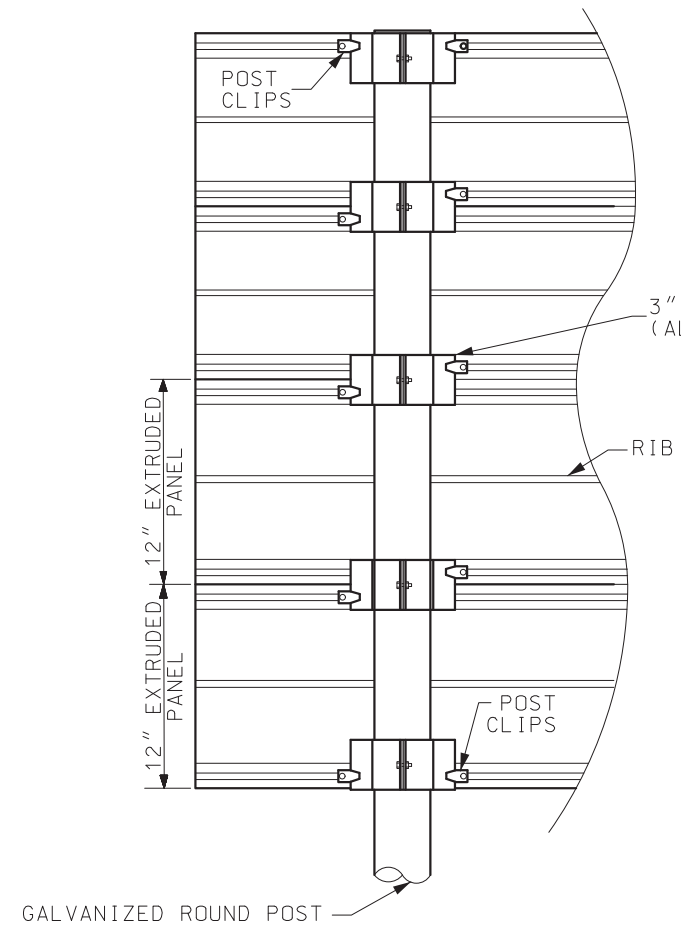
**FRICTION CAP**

NOTE:

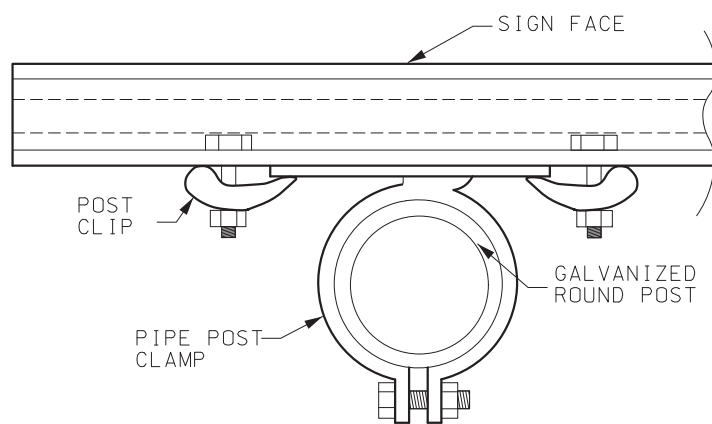
FOR GENERAL NOTES, SEE SHEET 1.

FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE SHEET 11.

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<b>POST INSTALLATION DETAILS</b>  <b>PIPE POST</b>
DATE EFFECTIVE: 7/1/2026 DATE PREPARED: 4/9/2026	<b>903.03BV</b>	SHEET NO. <b>5 OF 12</b>



PROFILE VIEW



PLAN VIEW

EXTRUDED PANEL MOUNTING DETAIL

3" WIDE PIPE POST CLAMPS  
(ALUMINUM EXTRUDED)

RIB

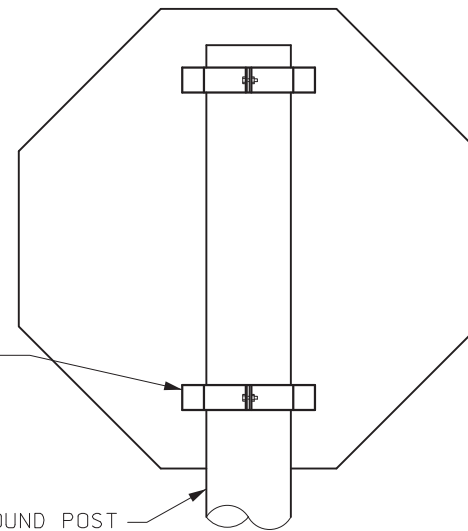
POST CLIPS

12" EXTRUDED PANEL  
12" EXTRUDED PANEL

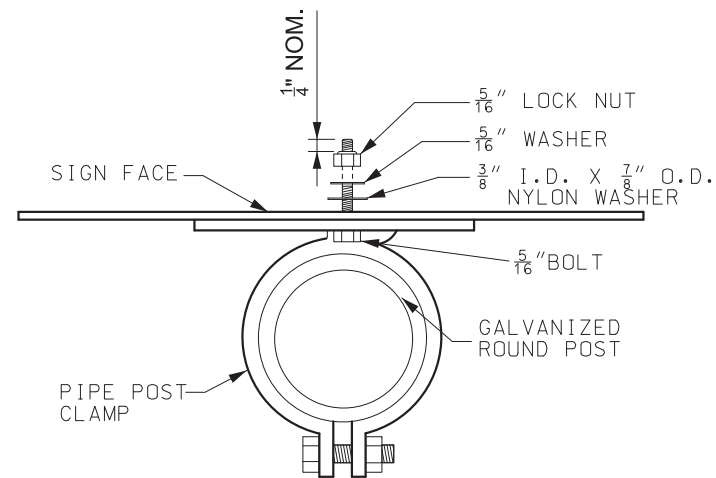
GALVANIZED ROUND POST

1 1/4" WIDE PIPE POST CLAMPS  
(ALUMINUM FLAT SHEET)

GALVANIZED ROUND POST

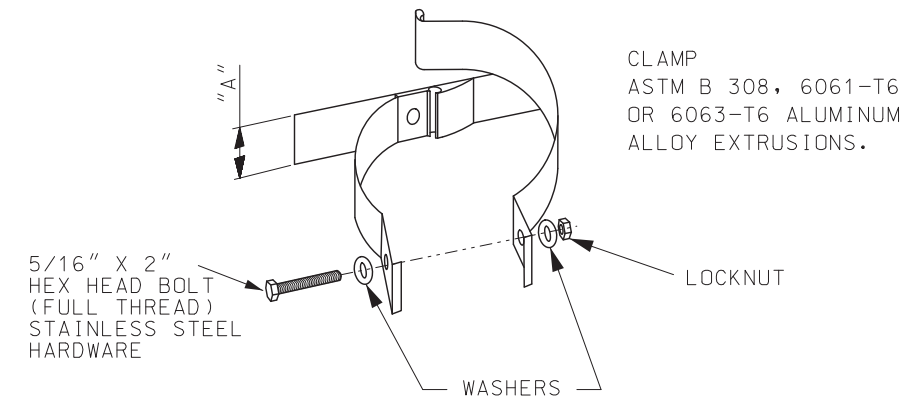


PROFILE VIEW



PLAN VIEW

FLAT SHEET MOUNTING DETAIL



CLAMP TYPE SIGN SUPPORT  
FOR PIPE POST


WIDTH OF PIPE POST CLAMP	
SIGN TYPE	MINIMUM "A"
FLAT	1 1/4"
STRUCTURAL	3"

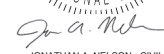
NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

FOR MOUNTING HEIGHT AND OFFSET DETAILS,  
SEE SHEET 11.

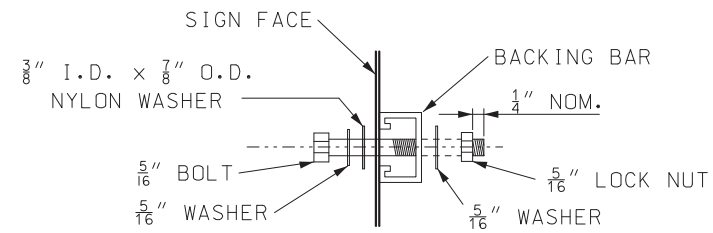
FOR DETAILS OF EXTRUDED ALUMINUM PANEL AND  
POST CLIP DETAILS, SEE STANDARD PLAN 903.02.

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
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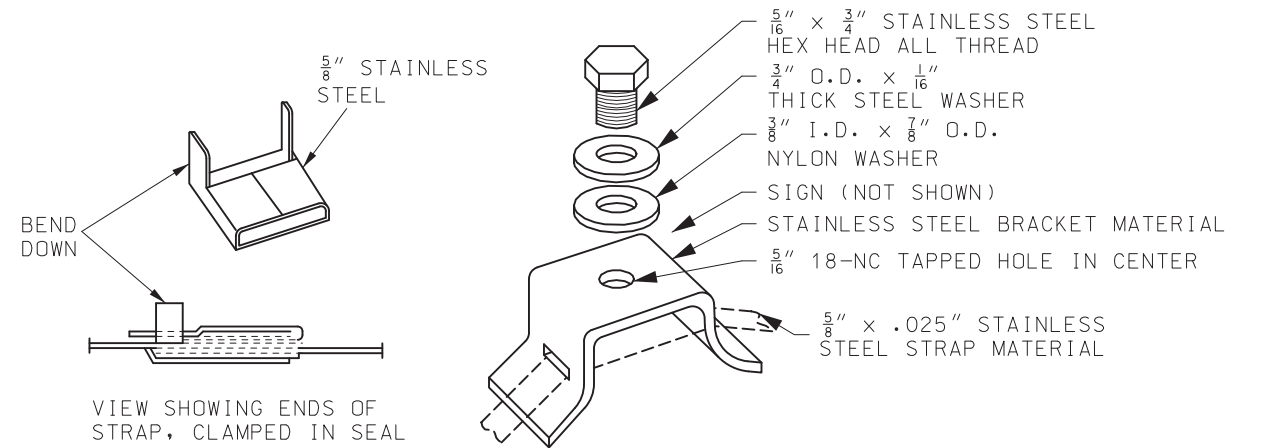
STATE OF MISSOURI  
 JONATHAN A. NELSON  
 NUMBER  
 PE-2008019578  
 PROFESSIONAL ENGINEER  
  
 JONATHAN A. NELSON - CIVIL  
 MO-PE-2008019578

**SIGN MOUNTING DETAILS  
PIPE POST**

DATE EFFECTIVE:	7/1/2026	903.03BV	SHEET NO. 6 OF 12
DATE PREPARED:	4/9/2026		

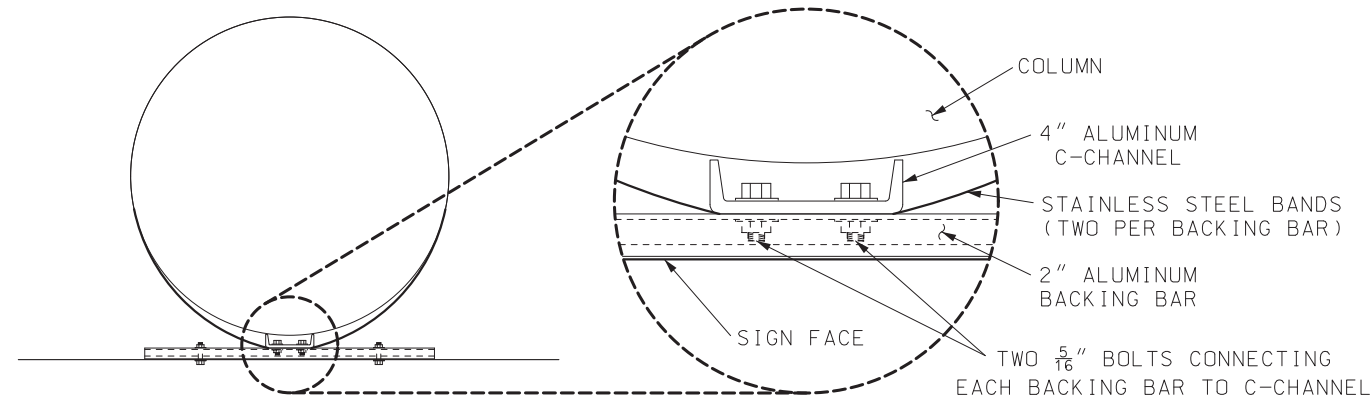


SIGN ATTACHMENT DETAIL



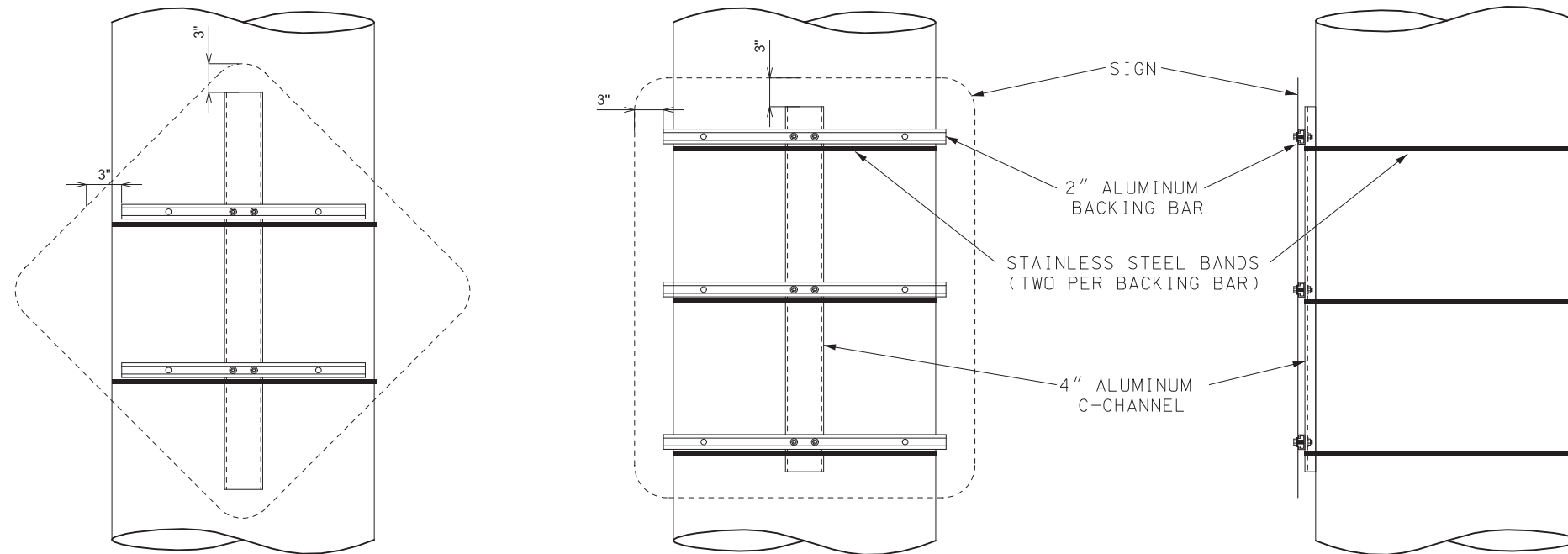
STRAP SEAL

FLARED LEG SIGN BRACKET



PLAN

COLUMN MOUNTING DETAILS FOR  
FLAT SHEET SIGNS < 48" WIDE



ELEVATIONS

SIDE

COLUMN MOUNTING ASSEMBLY FOR FLAT SHEET  
48" DIAMOND AND 48" x 60-96" RECTANGLE SIGNS

NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

FOR SIGN MOUNTING HEIGHT, SEE SHEET 11.

COLUMNS INCLUDE BRIDGE COLUMNS, OVERHEAD SIGN TRUSS UPRIGHTS, SIGNAL COLUMNS, ETC. SIGNS SHALL NOT BE ATTACHED TO ROADWAY LIGHTING OR UTILITY POLES.

FOR SIGNS WITH SUPPLEMENTAL PLAQUES, THE C-CHANNEL WILL NEED TO BE LENGTHENED AND ADDITIONAL BACKING BARS ADDED TO SUPPORT THE SUPPLEMENTAL SIGN.

BACKING BAR PLACEMENT ON C-CHANNEL BASED ON SIGN HOLE PUNCHING, SEE STANDARD PLAN 903.02.

SEE STD PLAN 903.02 FOR ALUMINUM BACKING BAR DETAILS.

C-CHANNEL SHALL BE STRUCTURAL 6061-T6 ALUMINUM, MINIMUM 2.50 LBS/FT.

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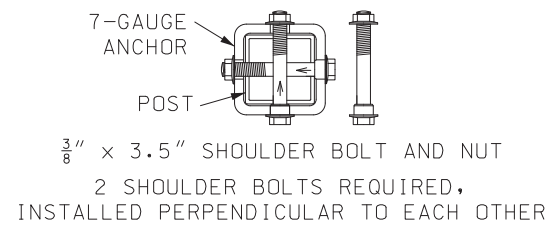
STATE OF MISSOURI  
JONATHAN A. NELSON  
NUMBER  
PE-2008019578  
PROFESSIONAL ENGINEER  
*Jonathan A. Nelson*  
JONATHAN A. NELSON - CIVIL  
MO-PE-2008019578

SIGN MOUNTING DETAILS  
COLUMN MOUNTING ASSEMBLY

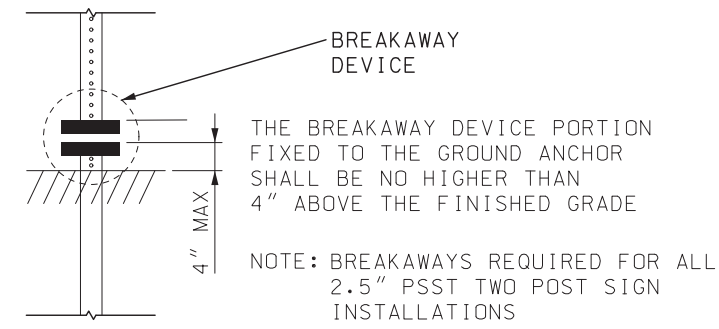
DATE EFFECTIVE: 7/1/2026  
DATE PREPARED: 4/9/2026

903.03BV

SHEET NO.  
7 OF 12



7-GAUGE ANCHOR  
ANCHOR BOLT DETAIL



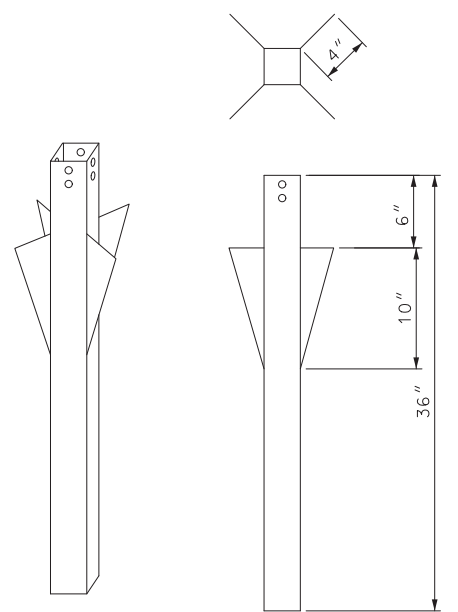
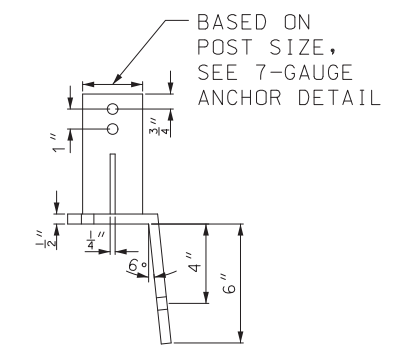
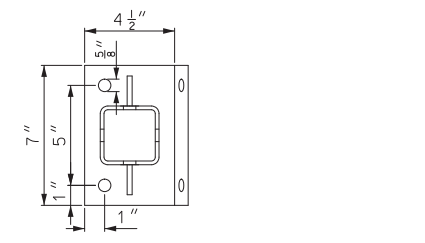
BREAKAWAY DETAIL

ANCHOR TUBE SHALL BE 7-GAUGE  
1/2" X 4 1/2" GALVANIZED MECHANICAL  
FASTENERS SHALL BE USED TO ATTACH  
ANCHOR TO BARRIER WALL

SHOULDER BOLTS SHALL BE USED  
TO ATTACH PSST POST TO ANCHOR  
(SEE ANCHOR BOLT DETAIL)

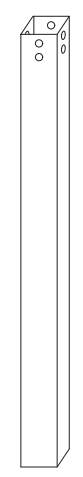
ANCHOR SHALL BE HOT DIPPED GALVANIZED  
AFTER FABRICATION PER SECTION 1080

FURNISHING AND INSTALLATION OF  
BARRIER WALL POST ANCHOR  
FOR PSST SHALL BE PAID PER  
EACH AS CONCRETE POST ANCHOR



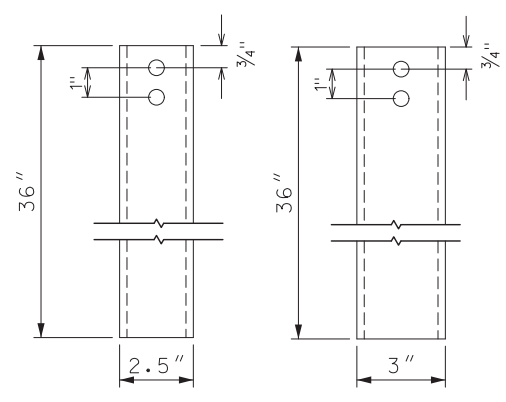
7-GAUGE

DRIVEN ANCHOR DETAIL



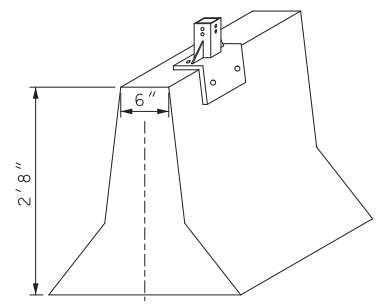
7-GAUGE

CONCRETE ANCHOR DETAIL

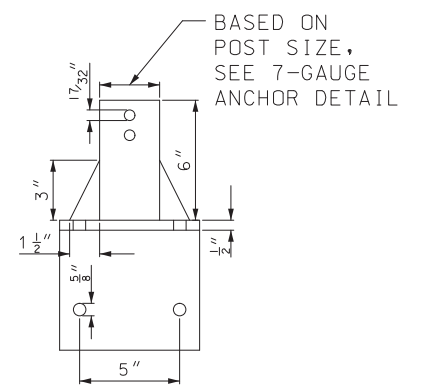


BOLT HOLE DIAMETER - 17/32"  
2 PER SIDE ON ALL 4 SIDES

7-GAUGE ANCHOR  
FABRICATION DETAIL



BARRIER WALL MOUNTING DETAIL

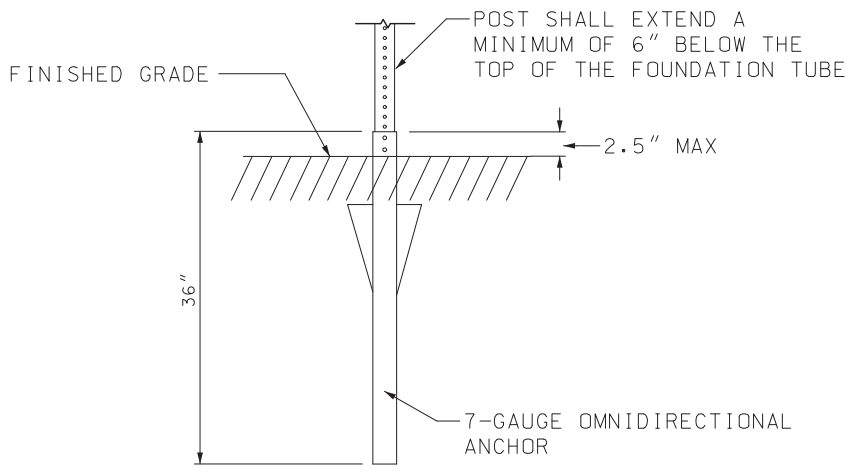


NOTES:

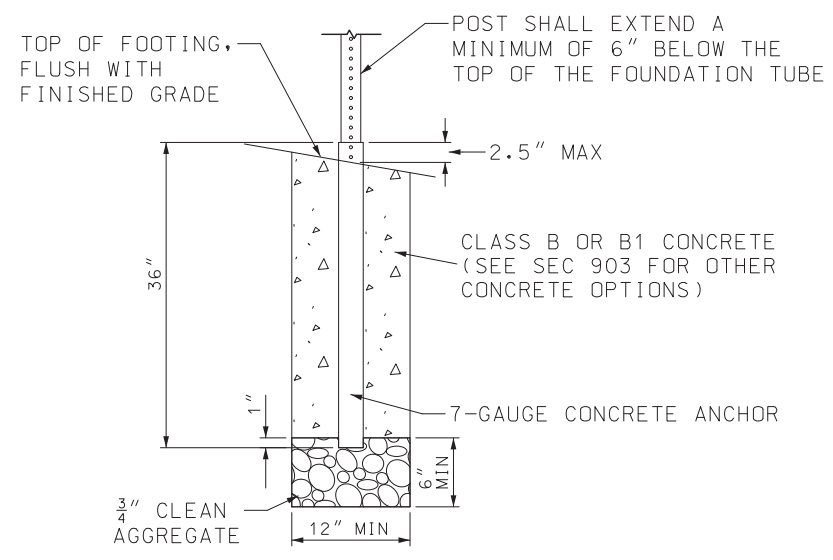
FOR GENERAL NOTES, SEE SHEET 1.

FOR MOUNTING HEIGHT AND OFFSET DETAILS,  
SEE SHEET 11.

ANY BREAKAWAY DEVICES USED ON AN INSTALLATION  
SHALL BE LISTED ON THE TRAFFIC PRE-ACCEPTED  
PRODUCTS LIST.



DRIVEN ANCHOR INSTALLATION DETAIL



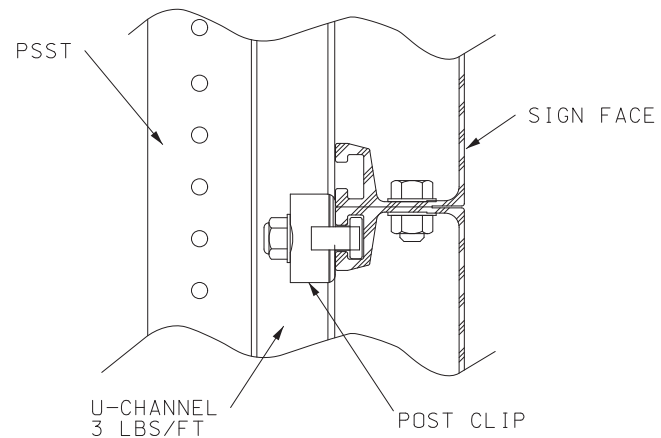
CONCRETE FOOTING INSTALLATION DETAIL

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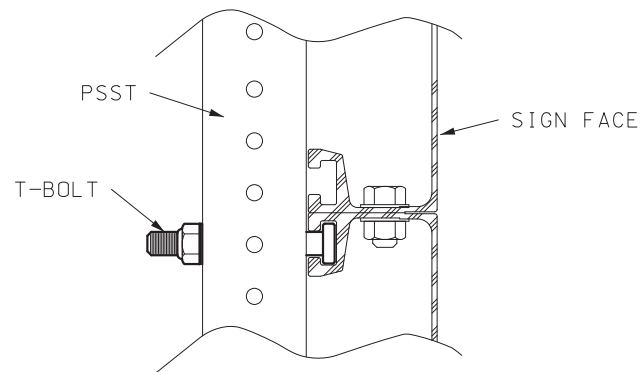
STATE OF MISSOURI  
JONATHAN A. NELSON  
NUMBER  
PE-2008019578  
PROFESSIONAL ENGINEER  
*Jonathan A. Nelson*  
JONATHAN A. NELSON - CIVIL  
MO-PE-2008019578

**POST INSTALLATION  
DETAILS**  
PERFORATED SQUARE  
STEEL TUBE (PSST)

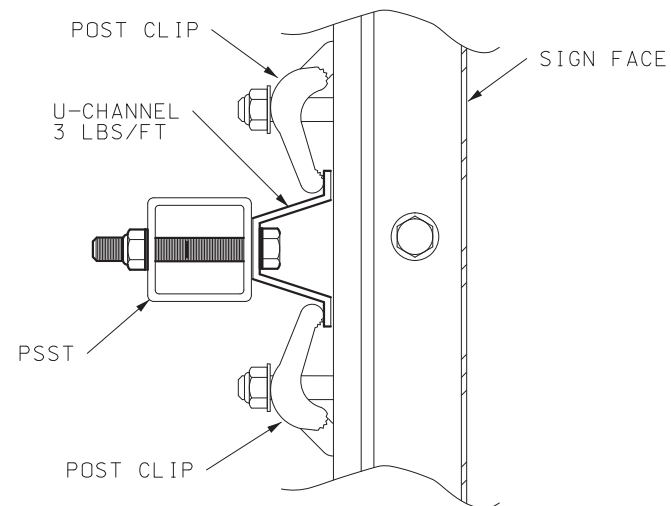
DATE EFFECTIVE:	7/1/2026	903.03BV	SHEET NO. 8 OF 12
DATE PREPARED:	4/9/2026		



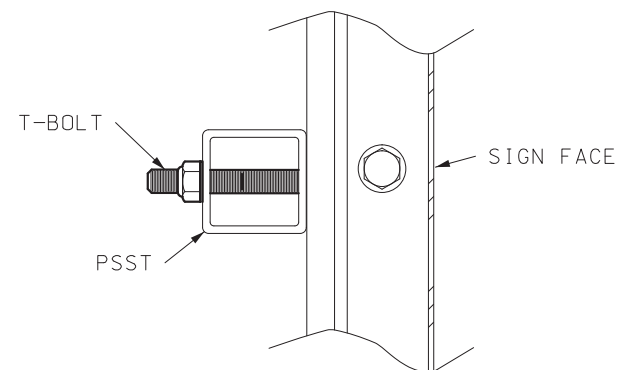
PROFILE



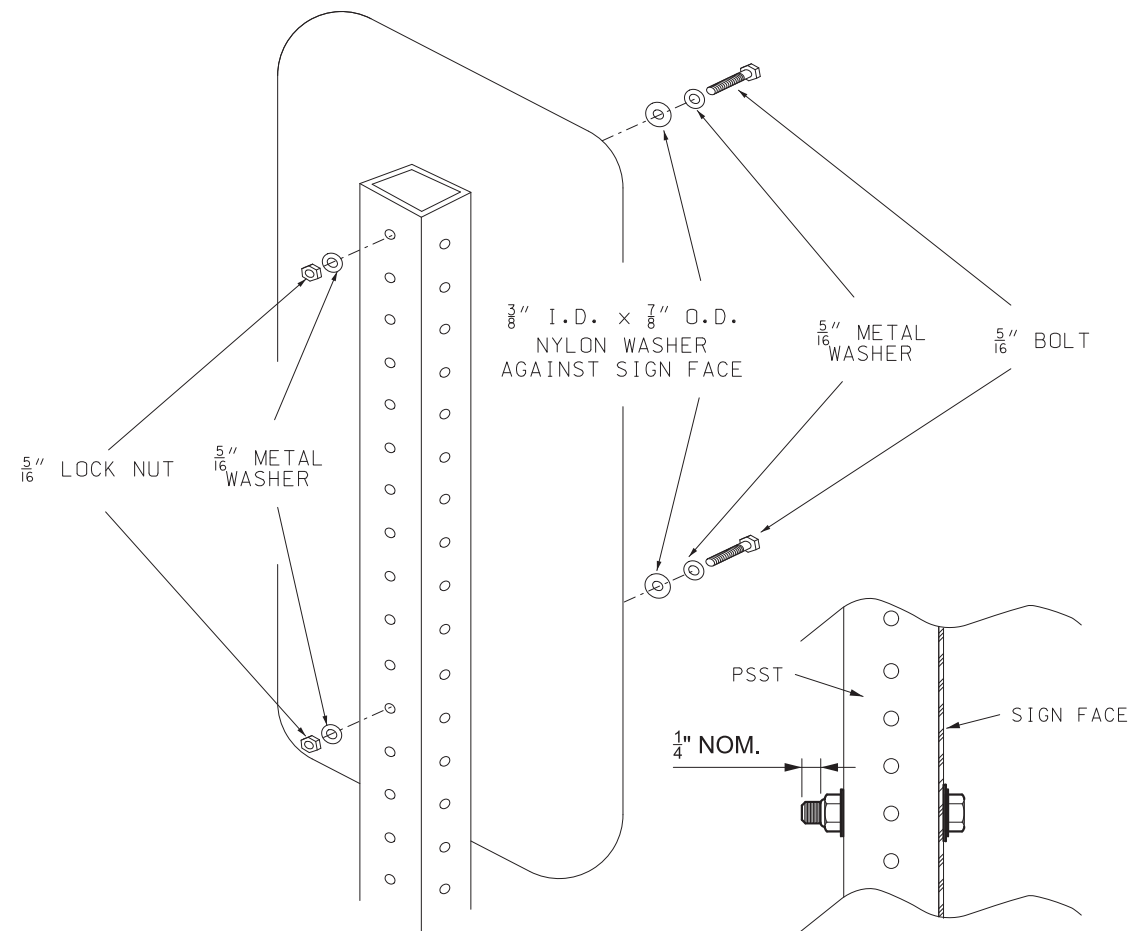
PROFILE



PLAN



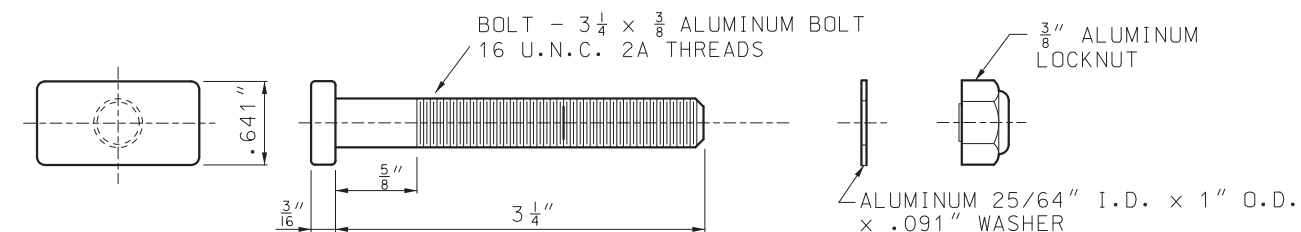
PLAN



FLAT SHEET MOUNTING DETAIL

NUMBER OF BOLTS TO ATTACH U-CHANNEL TO PSST POST	
SIGN HEIGHT	BOLTS REQUIRED
1'	2
2'	3
3'	4
4'	5
5'	6
6'	7
7'	8

POST CLIP METHOD



- NOTES:
- ALUMINUM BOLTS SHALL BE ASTM B 211, 2024-T4 OR 6061-T6
  - ALUMINUM FLAT WASHERS SHALL BE ASTM B 209, ALCLAD 2024-T4 OR 2024-T4
  - ALUMINUM LOCK NUTS (NYLON INSERT) SHALL BE ASTM B 211 OR 2017-T4

T-BOLT METHOD

NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

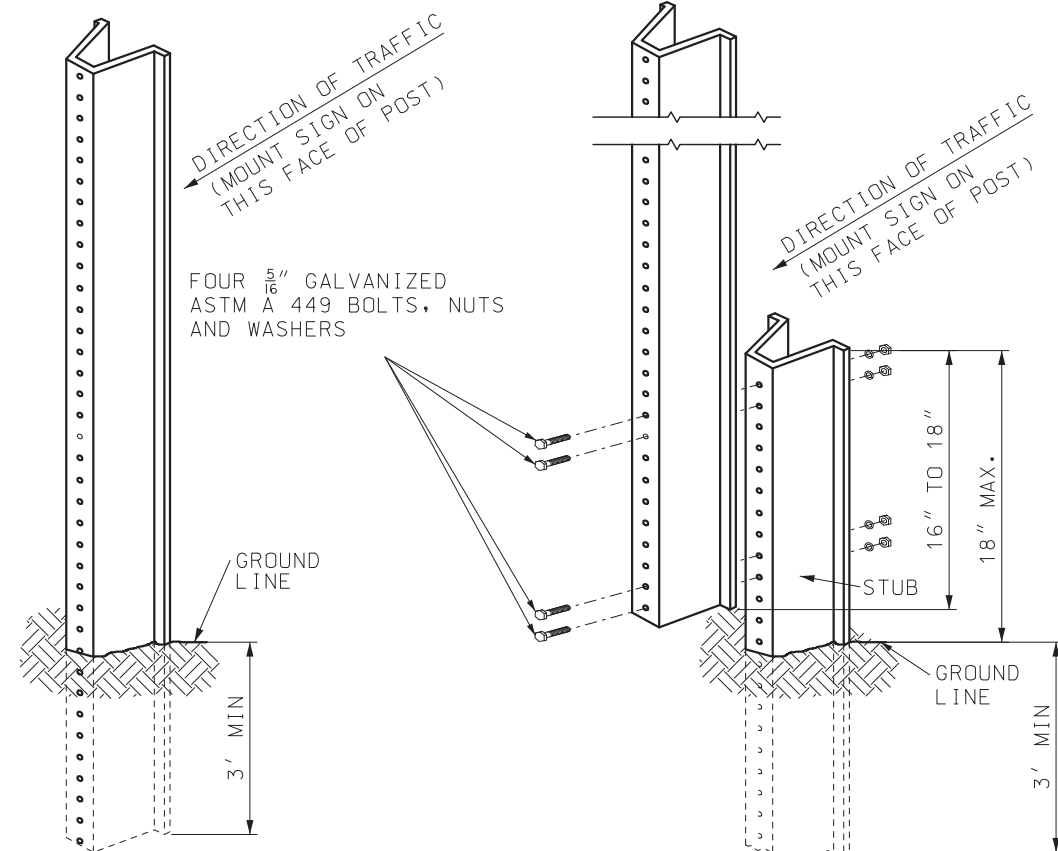
FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE SHEET 11.

FOR POST CLIP DETAILS, SEE STANDARD PLAN 903.02.

ALTERNATE PSST MOUNTING HARDWARE USE SHALL BE ON APPROVED LIST.

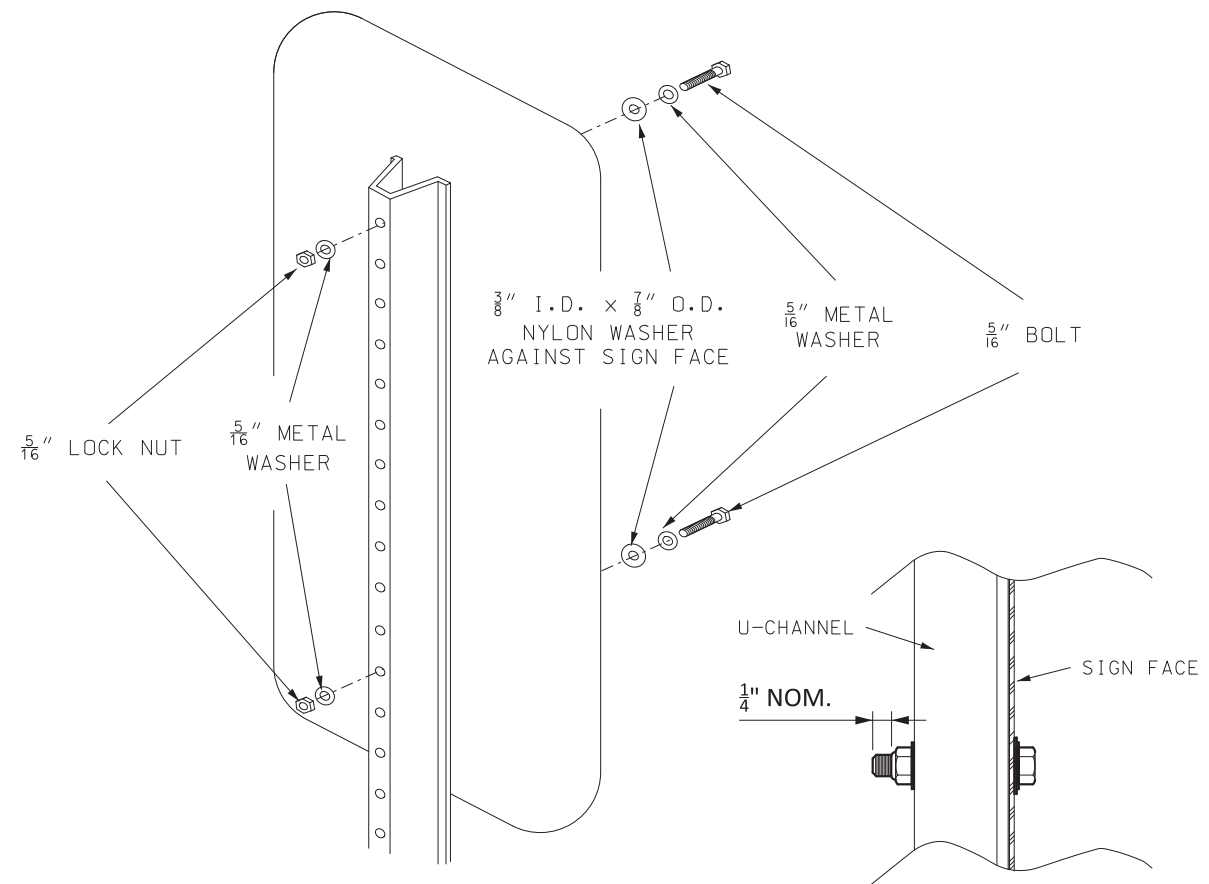
EXTRUDED PANEL MOUNTING DETAIL

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<b>SIGN MOUNTING DETAILS</b> <b>PERFORATED SQUARE STEEL TUBE (PSST)</b>
DATE EFFECTIVE: 7/1/2026 DATE PREPARED: 4/9/2026	<b>903.03BV</b>	SHEET NO. <b>9 OF 12</b>



U-CHANNEL POST DETAIL

U-CHANNEL STUB DETAIL OPTIONAL INSTALLATION



SIGN MOUNTING DETAIL

NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

POSTS AND STUBS SHALL BE EMBEDDED A MINIMUM OF 3 FEET INTO THE GROUND.

U-CHANNEL POST-STUB OVERLAP SHALL BE POSITIONED ENTIRELY BETWEEN GROUND LINE AND 18" ABOVE GROUND LINE.

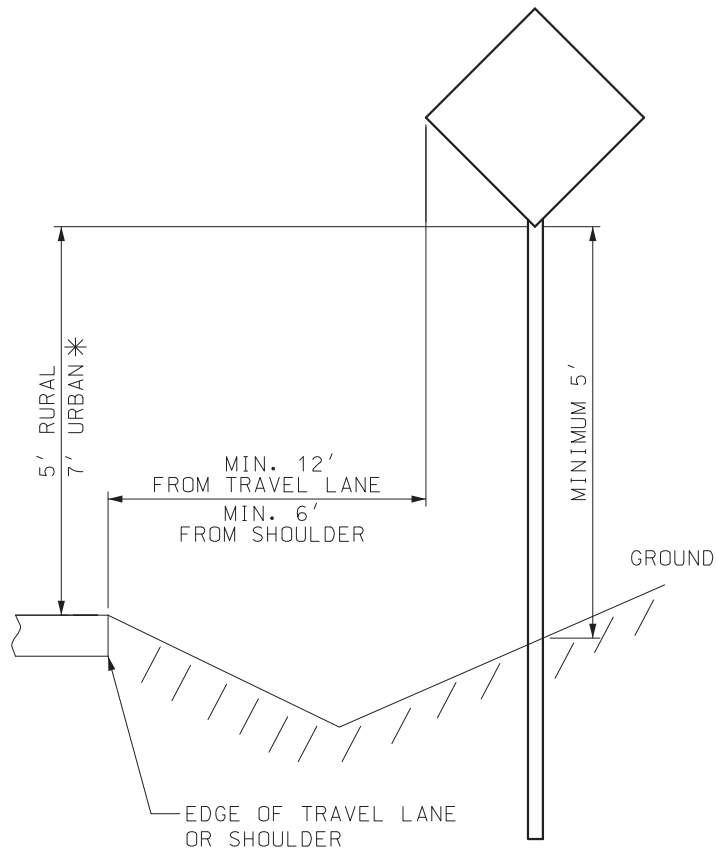
FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE SHEET 11.

SIGN AREA (SQ.FT.)	U-CHANNEL
≤ 10	1 - 3.0 LB./FT.*
> 10 ≤ 16	2 - 3.0 LB./FT.
> 16 ≤ 24	2 - 3.0 LB./FT.
> 24 ≤ 30	3 - 3.0 LB./FT.
> 30 ≤ 50	N/A

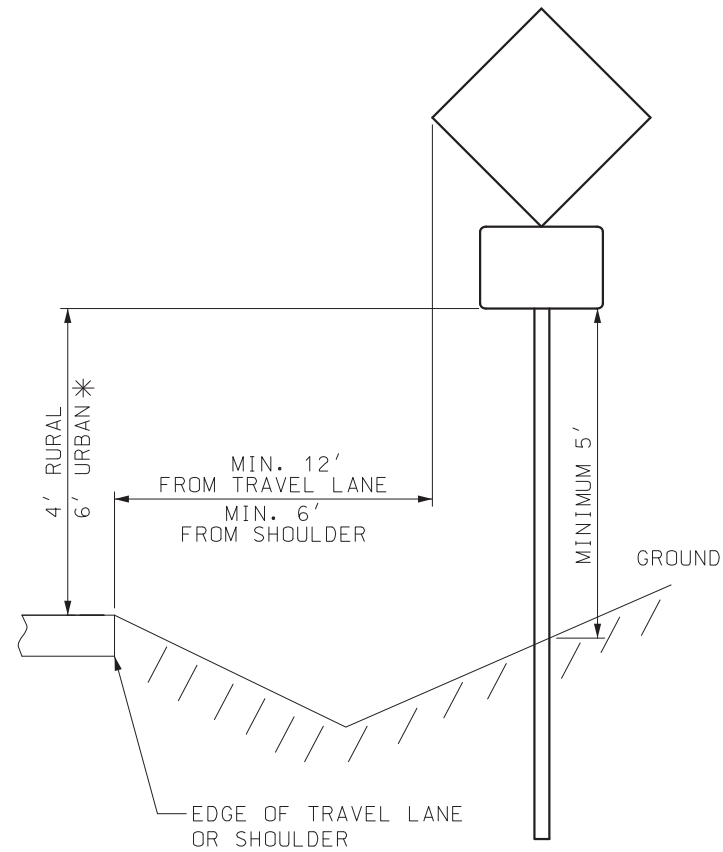
\* SIGNS GREATER THAN 4 FEET IN WIDTH REQUIRE TWO POSTS, EXCEPT DIAMOND SHAPED WARNING SIGNS, YIELD SIGNS, AND ONE WAY SIGNS.

POST SIZE REQUIREMENTS

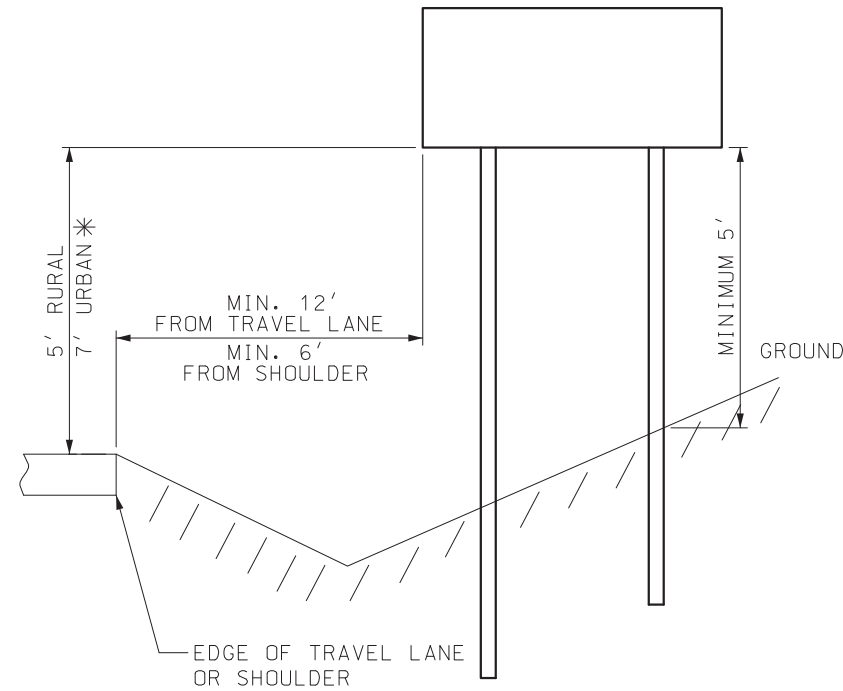
	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<p align="center"><b>POST INSTALLATION DETAILS</b></p> <p align="center"><b>U-CHANNEL POST</b></p>
DATE EFFECTIVE: 7/1/2026 DATE PREPARED: 4/9/2026	<p align="center"><b>903.03BV</b></p>	SHEET NO. 10 OF 12



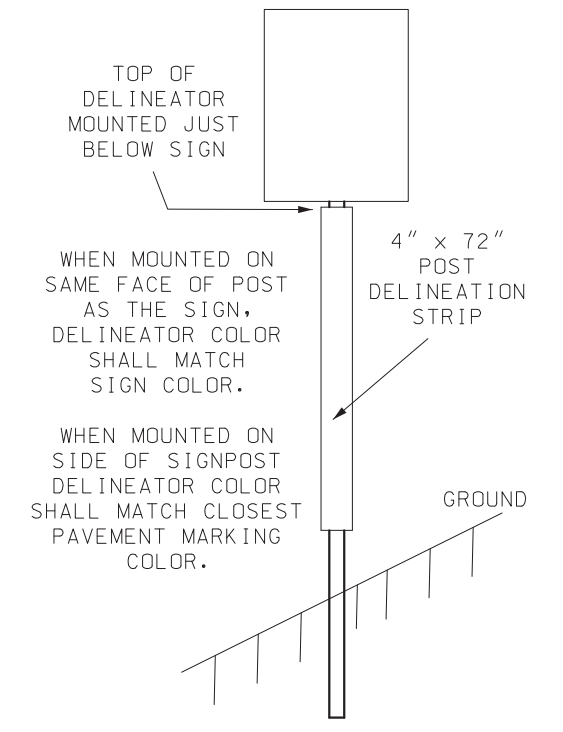
ONE POST - SINGLE SIGN



ONE POST - SINGLE SIGN WITH SUPPLEMENTAL PLAQUE



TWO POST



POST DELINEATOR STRIP

\* URBAN MOUNTING HEIGHT APPLIES TO SIGNS INSTALLED ON FREEWAYS AND EXPRESSWAYS, INCLUDING RURAL.

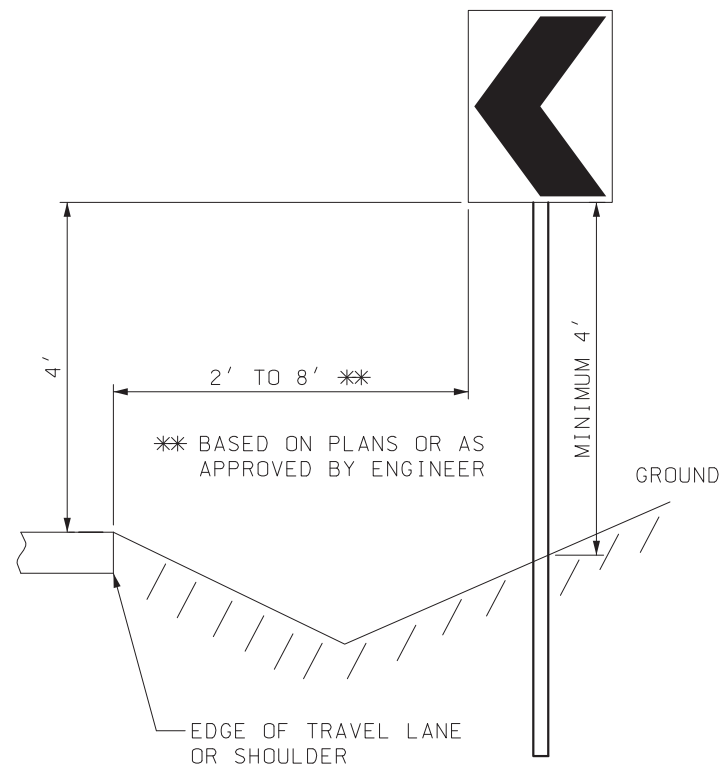
GENERAL NOTES:

SIGN MOUNTING BOLTS SHALL BE INSTALLED WITH A NYLON WASHER AGAINST THE SIGN FACE WITH A STEEL WASHER BETWEEN THE NYLON WASHER AND BOLT HEAD.

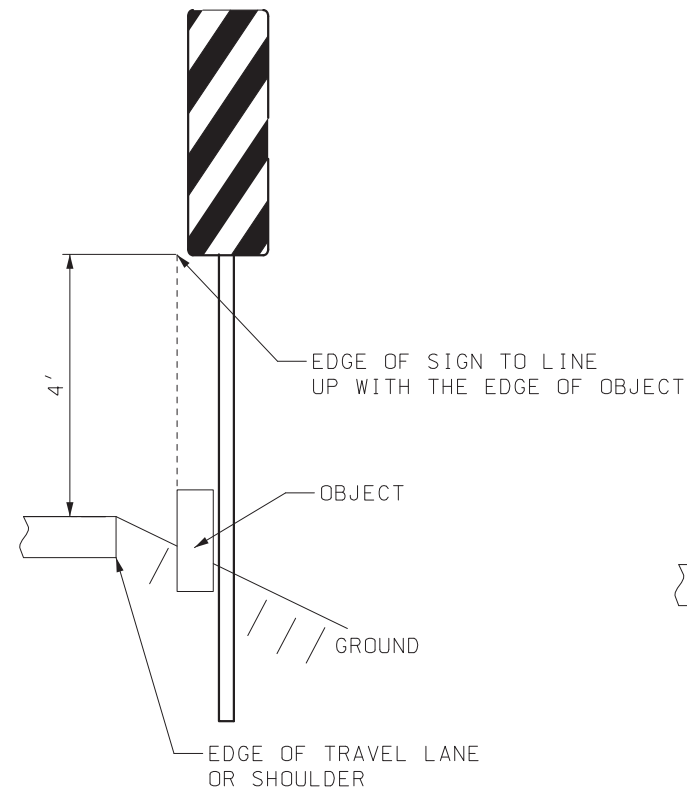
A LOCKNUT SHALL BE USED TO FASTEN THE SIGN TO THE POST.

VERTICAL CLEARANCE FROM THE ROADWAY SHALL BE MET AND INCREASED ONLY TO MEET THE MINIMUM VERTICAL CLEARANCE FROM THE GROUND.

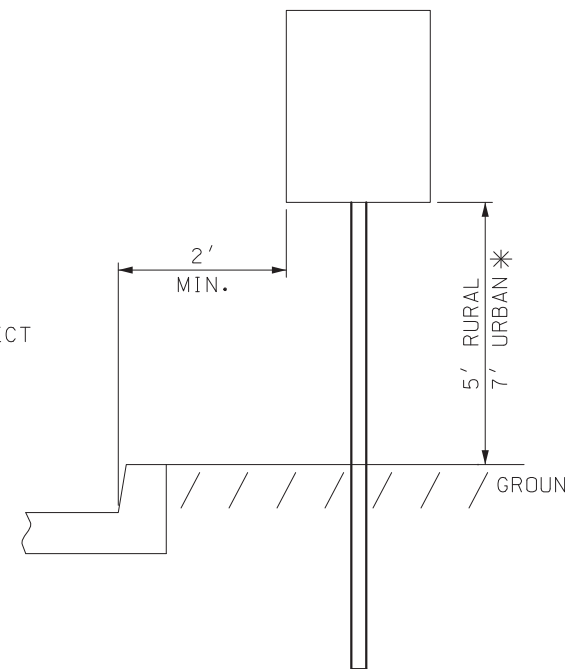
HORIZONTAL OFFSET MAY BE ADJUSTED BASED ON FIELD CONDITIONS.



CHEVRON SIGN



TYPE 3 OBJECT MARKER



ADJACENT TO CURB

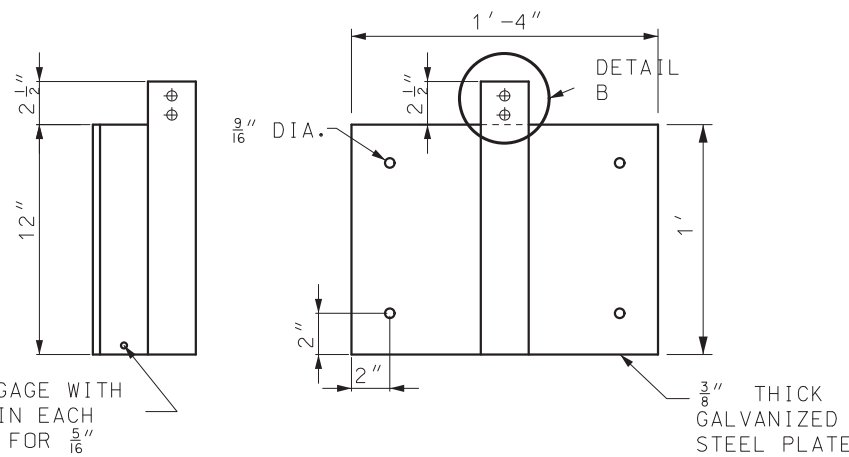
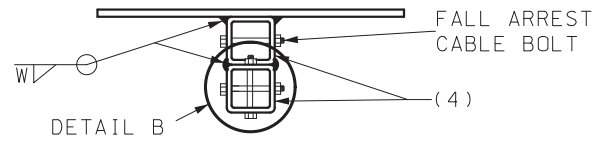
MOUNTING HEIGHT DETAILS

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STATE OF MISSOURI  
 JONATHAN A. NELSON  
 NUMBER PE-2008019578  
 PROFESSIONAL ENGINEER  
 Jonathan A. Nelson  
 JONATHAN A. NELSON - CIVIL  
 MO-PE-2008019578

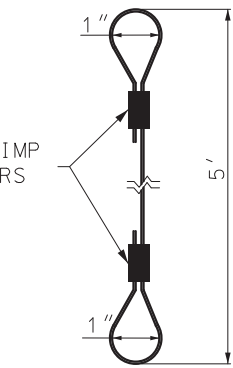
**SIGN MOUNTING DETAILS**  
 MOUNTING HEIGHT & OFFSET  
 PIPE POSTS, PSST, WOOD  
 & U-CHANNEL POSTS

DATE EFFECTIVE: 7/1/2026	903.03BV	SHEET NO. 11 OF 12
DATE PREPARED: 4/9/2026		



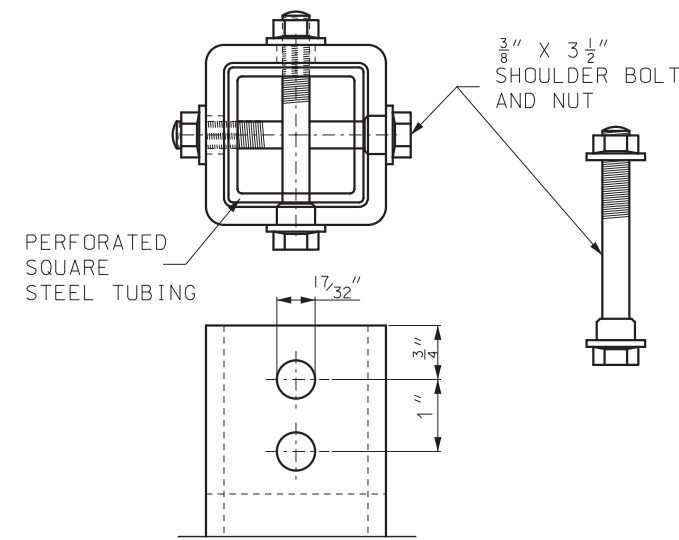
2 1/2" X 2 1/2" 7 GAGE WITH 5/16" DIA HOLE IN EACH SIDE OF TUBE FOR 5/16" THROUGH BOLT TO RETAIN FALL ARREST CABLE

MOUNTING PLATE DETAIL

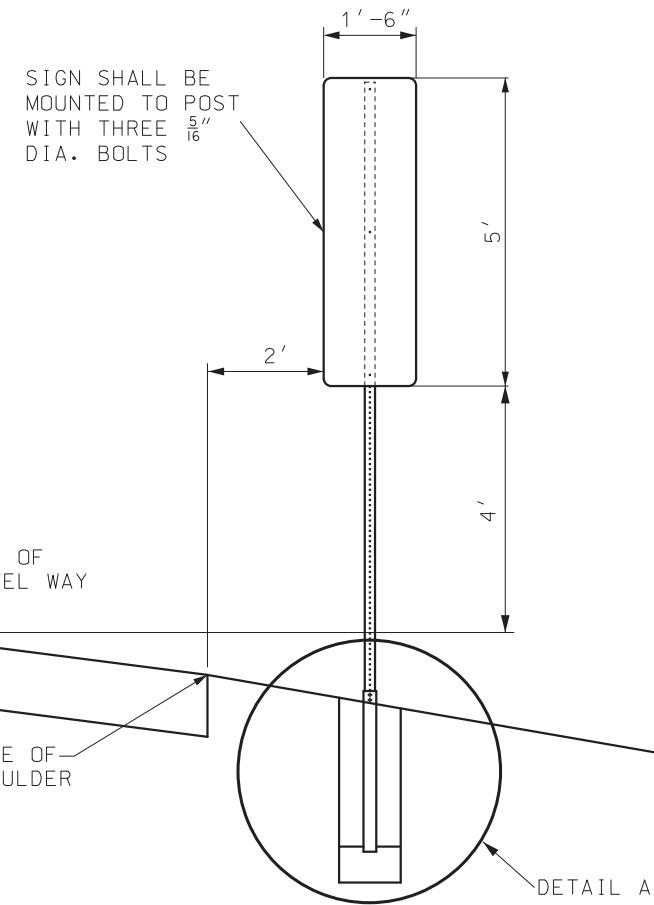


MECHANICAL CRIMP TYPE CONNECTORS

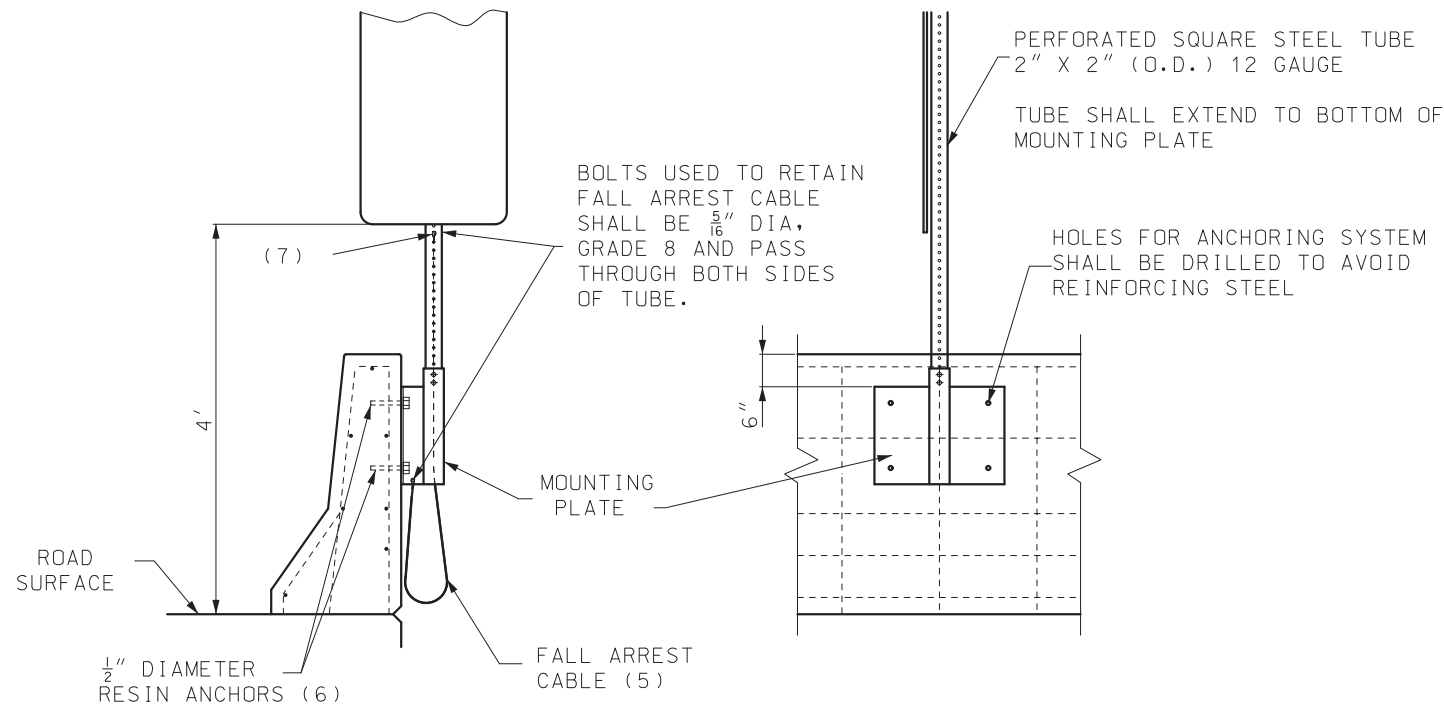
FALL ARREST CABLE DETAIL



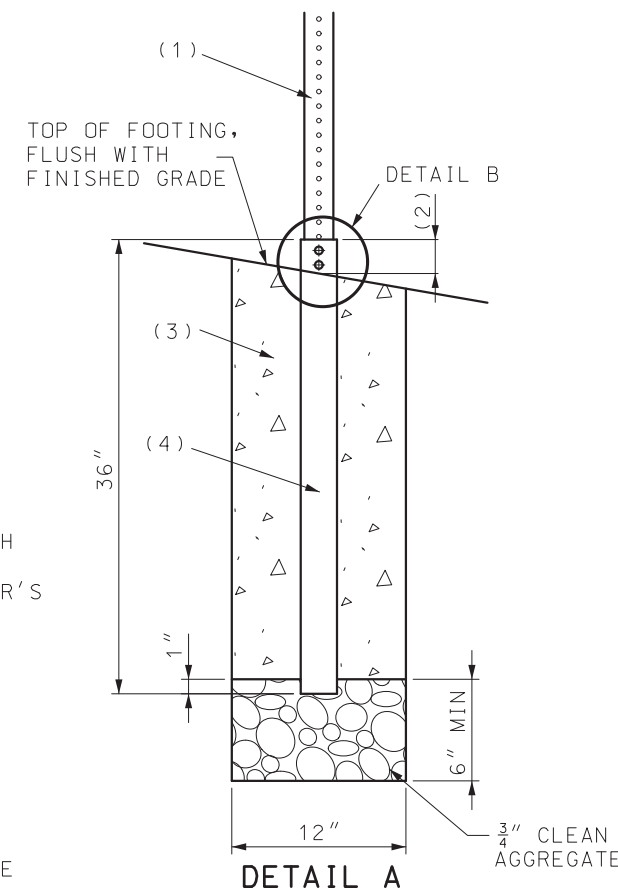
DETAIL B SHOULDER BOLT



GROUND INSTALLATION



BARRIER WALL INSTALLATION



DETAIL A



NOTES:

FOR GENERAL NOTES, SEE SHEET 1.

FOR SIGN MOUNTING DETAILS, SEE SHEET 9.

PERFORATED SQUARE STEEL TUBE SHALL BE SECURED TO FOUNDATION TUBE OR BARRIER WALL MOUNTING PLATE WITH A SHOULDER BOLT PER PERFORATED SQUARE STEEL TUBE MANUFACTURER'S SPECIFICATION.

- (1) PERFORATED SQUARE STEEL TUBE 2" X 2" (O.D.) 12 GAUGE. TUBE SHALL EXTEND A MINIMUM OF 6" BELOW THE TOP OF THE FOUNDATION TUBE.
- (2) TUBE TO EXTEND ABOVE FOUNDATION ONLY ENOUGH TO ALLOW BOLT TO BE INSERTED, 2 1/2" MAXIMUM.
- (3) SEE SEC 903 FOR CONCRETE MATERIAL REQUIREMENTS.
- (4) 2 1/2" x 2 1/2" (O.D.) SQUARE TUBE GALVANIZED 7 GAGE WITH TWO 17/32" DIAMETER HOLES IN EACH FACE 3/4" BELOW TOP OF TUBE.
- (5) 1/8" x 5' LONG STAINLESS STEEL CABLE (ASTM A 492 TYPE 304 MINIMUM BREAKING STRENGTH 200 LBS.) WITH A 1" DIA. LOOP AT EACH END LOOPS FORMED BY MECHANICAL CRIMP TYPE CONNECTION PER MANUFACTURER'S SPECIFICATIONS. CABLE IS TO BE RUN INSIDE PERFORATED SQUARE STEEL TUBE. CABLE IS TO BE USED ONLY WHEN SIGN MOUNTING LOCATION IS OVER ANOTHER TRAVELED WAY.
- (6) 1/2" DIAMETER RESIN ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH SEC 1039. AN APPROVED MECHANICAL TYPE ANCHOR MAY BE USED IF THE DEVICE EQUALS OR EXCEEDS THE PULL TEST REQUIREMENTS OF SEC 1039.
- (7) FALL ARREST CABLE TO BE SECURED TO NEXT FULL HOLE BELOW SIGN.

 <b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<b>SIGN MOUNTING DETAILS</b> <b>EMERGENCY REFERENCE MARKERS</b>
DATE EFFECTIVE: 7/1/2026 DATE PREPARED: 4/9/2026	<b>903.03BV</b> SHEET NO. 12 OF 12