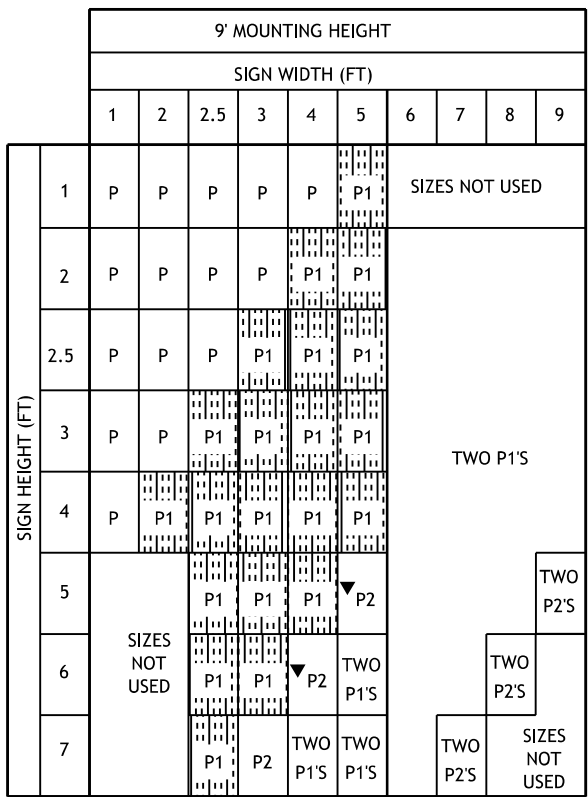


Signpost Selection Guide (90 MPH Wind Load Design)
(for Socket System and Slipbase Installations Using P, P1 or P2 Posts)



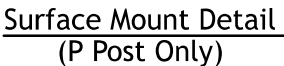
General Notes

- ## Post Specifications

✱✱ COLOR POWDER COATING MAY BE ADDED ACCORDING TO MANUFACTURER SPECIFICATIONS FOR SPECIAL LOCATIONS WHEN SHOWN ON THE PLANS.

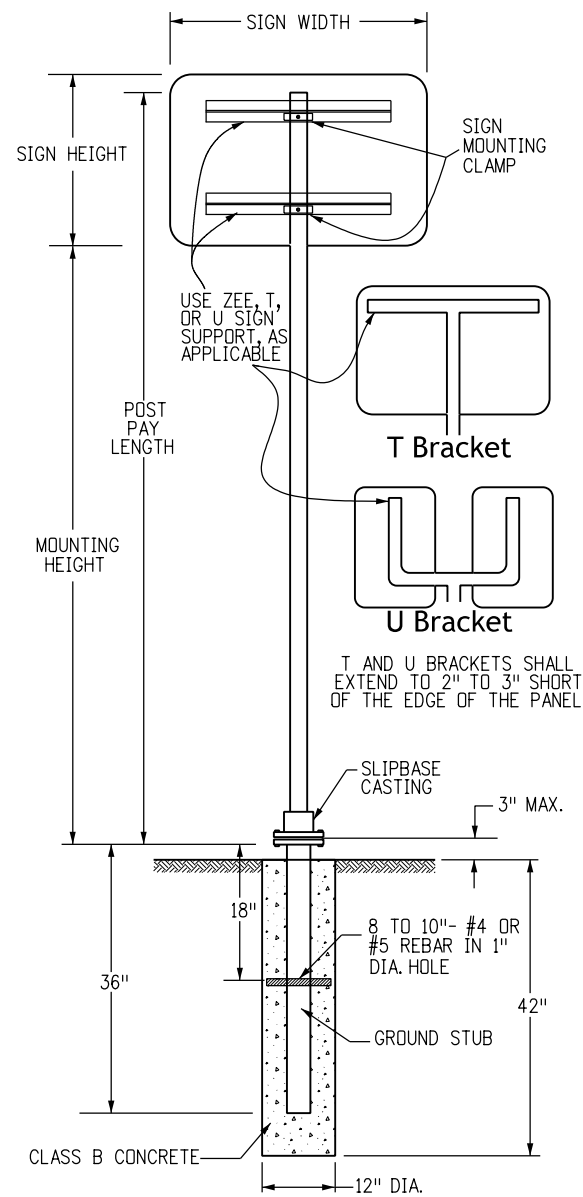
The post may be pre-punched with $\frac{3}{8}$ " diameter holes and the sign mounted directly to the post, or an approved mounting clamp may be used to mount the sign to the post. If the post is pre-punched, the holes shall be spaced the following distances from the top:

1", 3", 10", 16", 21", 23", 24", 27", 33", 37", 39", AND 45"



The post may be surface mounted when approved by the Engineer

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Creation Date: 07/04/12 Created By: KEN Last Modification Date: 07/01/26 Last Modified By: YSP CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English		Date: Comments						S-614-8	
								Standard Sheet No. 1 of 7	
						Issued by the Traffic Safety & Engineering Services: July 01, 2026		Project Sheet Number:	

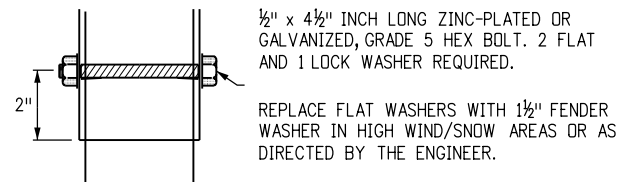


**Tubular Steel Post
(with Slipbase)
(for Use with All P1 and
(See Sheet 1 for P-Post Installations)**

Dimensions For Mounting Clamp (all Dimension Are In Inches)

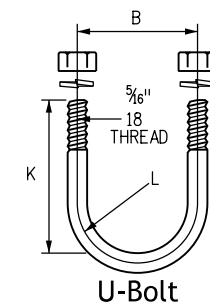
STANDARD PIPE SIZE	A	B	C	D	E	F	G	K	L	R ₁	R ₂
2	3 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	1 ¹ / ₈	1 ¹ / ₂	3 ¹ / ₁₆	1	2 ¹ / ₁₆	1 ¹ / ₃₂	1 ¹ / ₄	1 ³ / ₁₆
2 ¹ / ₂	4 ¹ / ₄	3 ³ / ₄	2	1 ¹ / ₄	1 ¹ / ₂	1 ¹ / ₄	1	3 ³ / ₁₆	1 ¹ / ₃₂	1 ¹ / ₂	1 ⁷ / ₁₆

T and U Bracket Attachment



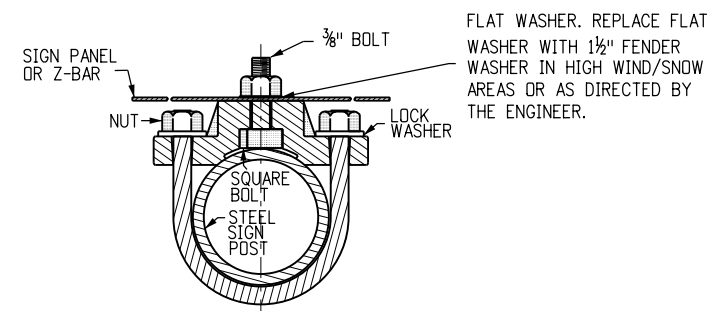
Pipe Clamp Casting

PIPE CLAMP CASTING SHALL BE ASTM B26 OR B108 ALUMINUM ALLOY A444.0-T4 OR 356.0-F. ALL SIGN MOUNTING CLAMP PARTS NOT MADE FROM ALUMINUM SHALL BE GALVANIZED STEEL IN CONFORMANCE WITH ASTM A153 OR STAINLESS STEEL.

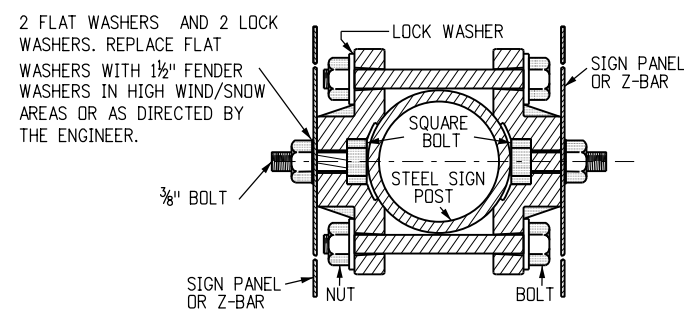


U-BOLT TO BE MADE IN ACCORDANCE WITH STANDARD MANUFACTURING PROCEDURE. 1/4" OR 5/8" DIAMETER STOCK IS PERMISSIBLE. AMERICAN STANDARD REGULAR SEMI-FINISHED HEX NUTS AND SPRING LOCKWASHERS.

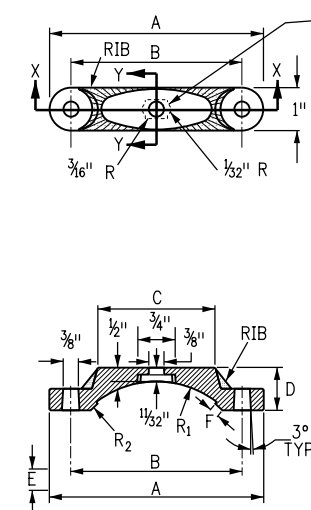
Typical Single Bracket



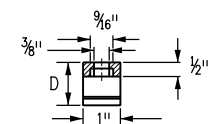
Typical Back To Back



Details for Sign Panel Attachment



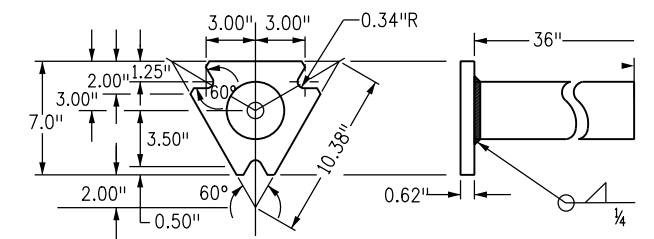
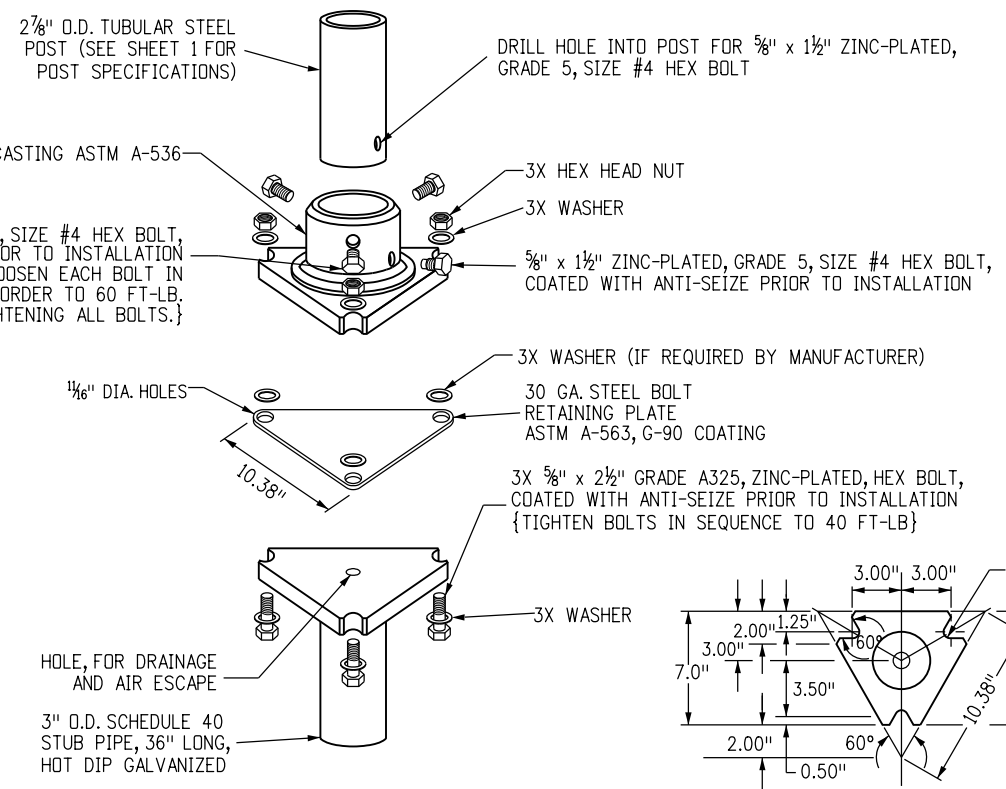
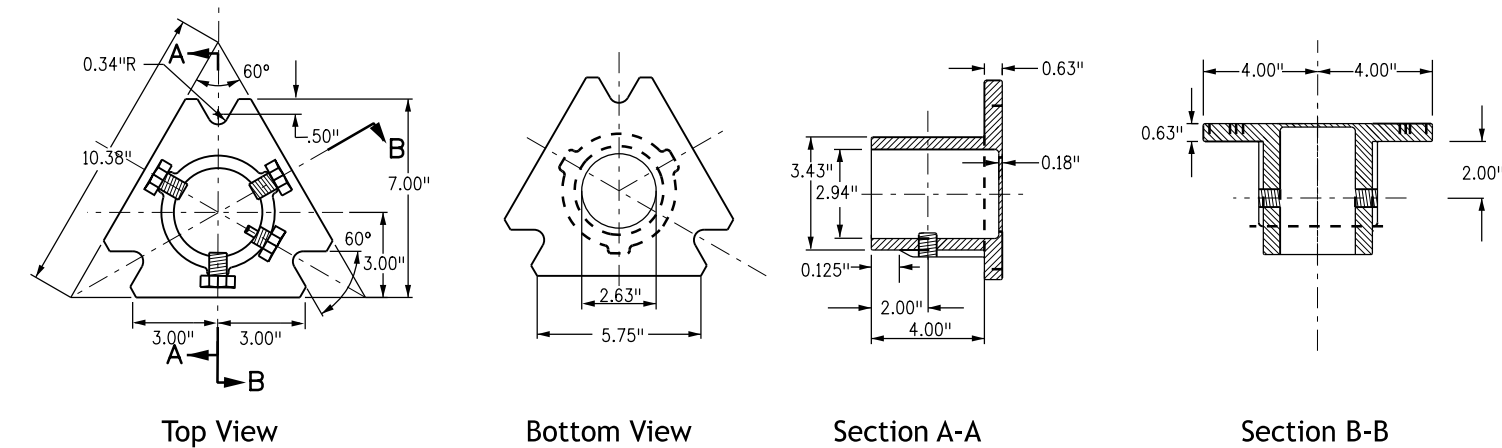
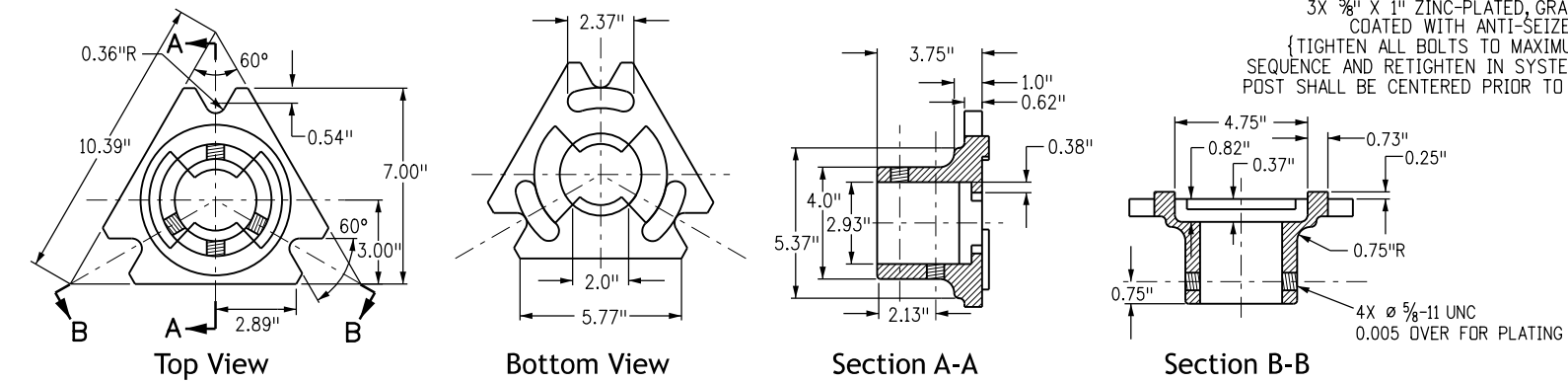
Section X-X



Section Y-Y

Mounting Clamp for Socket Or Slipbase

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Created By: SCL									
Last Modification Date: 07/01/26									
Last Modified By: YSP								Standard Sheet No. 2 of 7	
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English								Project Sheet Number:	
						Issued by the Traffic Safety & Engineering Services: July 01, 2026			



Slipbase Casting Requirements

For 2-7/8 inch posts (P1 or P2 posts)
galvanized steel slipbase casting ASTM-536

Mounting Hardware

- 3 - Each $\frac{5}{8}$ x $2\frac{1}{2}$ inch long hex bolt
- 3 - Each $\frac{5}{8}$ x 1 inch long zinc-plated, grade 5 size #4 hex bolt
- 1 - Each $\frac{5}{8}$ x $1\frac{1}{2}$ inch long zinc-plated, grade 5 size #4 hex bolt
- 1 - Each 30 gauge steel bolt retaining plate ASTM A-563, G-90 coating

Installation Requirements

All hex bolts shall be coated with anti-seize prior to installation.

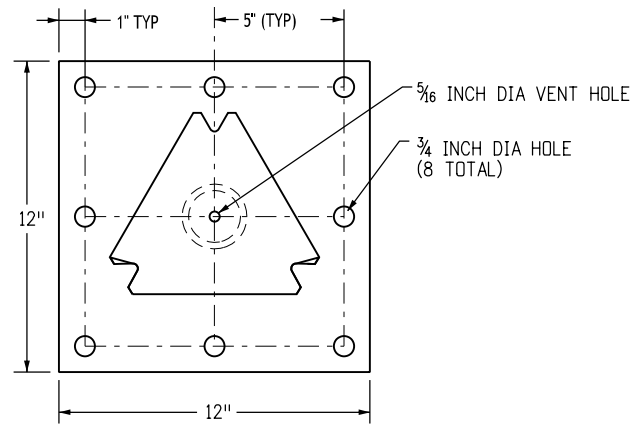
All hardware will be galvanized or zinc plated.

Tubular Steel Sign Support Slipbase Notes

1. Refer to signing plans for sign locations and height.
2. Minimum allowable tension capacity for wedge anchors = 3,000 pounds.
3. Maximum allowable moment for sign base = 5.13 kip-feet.
4. Pay item "Steel Sign Support(X-Inch Round)(Slipbase)" shall include stub base, casting and necessary hardware (slipbase casting mounting hardware as shown on this sheet).
5. Pay item "Steel Sign Support Casting" shall include casting and necessary mounting hardware (slipbase casting mounting hardware as shown on this sheet).
6. Pay item "Steel Sign Ground Stub Base (36 Inch)" shall include slipbase stub base.

Cast-in-place Slipbase For New Installations

Computer File Information			Sheet Revisions		 Colorado Department of Transportation Traffic Safety & Engineering Services 2829 West Howard Place Denver, CO 80204 EB 		Tubular Steel Sign Support Details		Standard Plan No.	
Creation Date: 07/04/12			Date:						S-614-8	
Created By: KEN										
Last Modification Date: 07/01/26									Standard Sheet No. 3 of 7	
Last Modified By: YSP										
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English									Project Sheet Number:	



Surface Mount Slipbase Base Plate Fabrication Requirements

Base Plate - 3/4 inch ASTM A 36 plate steel
Pipe Stub - 3 inch Nominal Schedule 80, ASTM A-500 Grade B
Top Plate - meet requirements of sheet 3

Meet ASTM A-123 galvanizing after fabrication is complete

Surface Mount Slipbase Tubular Steel Sign Base Requirements

For 2-7/8 inch posts (P1 or P2 Posts)
For concrete surfaces greater than 7 inches thick
For concrete surfaces greater than 12 inches in width

Mounting Hardware

- 8 - each 5/8 x 5 59/64 inch long "Hilti Kwik HUS-EZ Screw Anchors
- 16 - each 5/8 inch flat washers
- 8 - each 5/8 inch lock washers
- 8 - each 5/8 inch nuts

Installation Requirements:

Drill: (8) - 5/8 inch holes 6 inch deep, clean hole prior to installing anchors

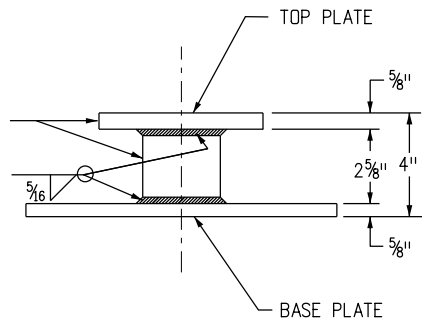
Use additional washers for shimming to level base plate.

All hardware will be galvanized or zinc plated.

Tubular Steel Sign Support Surface Mount Slipbase Notes

- 1. Refer to signing plans for sign locations and height
- 2. Refer to Sheet 3 for slipbase casting information
- 3. Minumum allowable tension capacity for wedge anchors = 3000 pounds
- 4. Maximum allowable moment for sign base = 5.13 kip-feet
- 5. Pay item "Steel Sign Surface Mount Base Plate (Slipbase)" shall include base plate, casting and all necessary hardware (slipbase casting mounting hardware as shown on Sheet 3 and surface mount slipbase mounting hardware as shown on this Sheet)
- 6. Pay item "Steel Sign Surface Mount Base Plate" shall include base plate and necessary hardware (surface mount slipbase mounting hardware as shown on this Sheet)

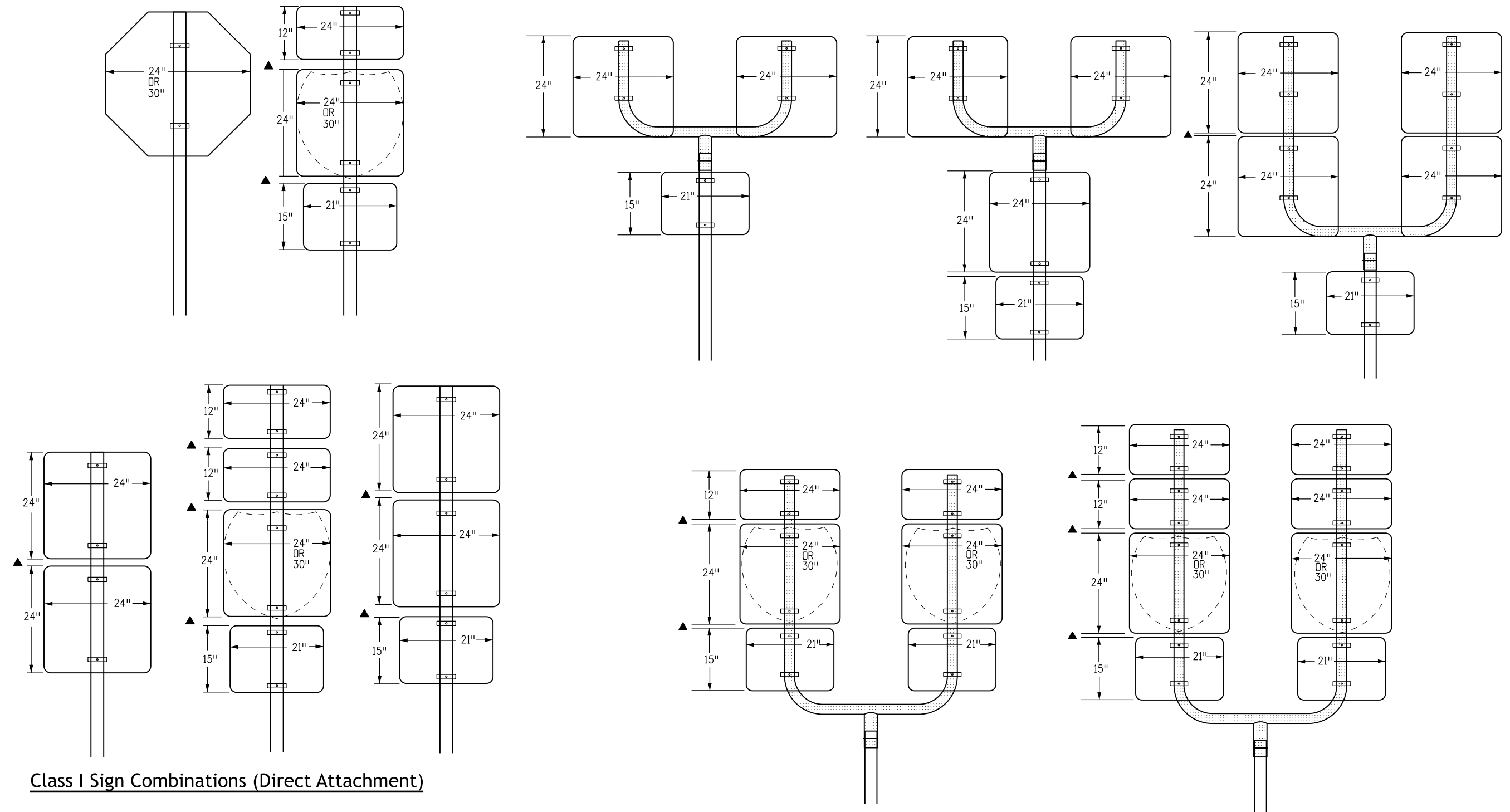
SLIPBASE WILL MEET REQUIREMENTS OF STD PLAN NO. S-614-8 SLIPBASE STUB POST DETAIL EXCEPT FOR OVERALL HEIGHT



Surface Mount Slipbase Base Plate

Surface Mount Slipbase for Retrofit Installations

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Creation Date: 07/04/12		Date:	Comments			S-614-8
Created By: DiNardo						Standard Sheet No. 4 of 7
Last Modification Date: 07/01/26						Project Sheet Number:
Last Modified By: YSP					Issued by the Traffic Safety & Engineering Services: July 01, 2026	
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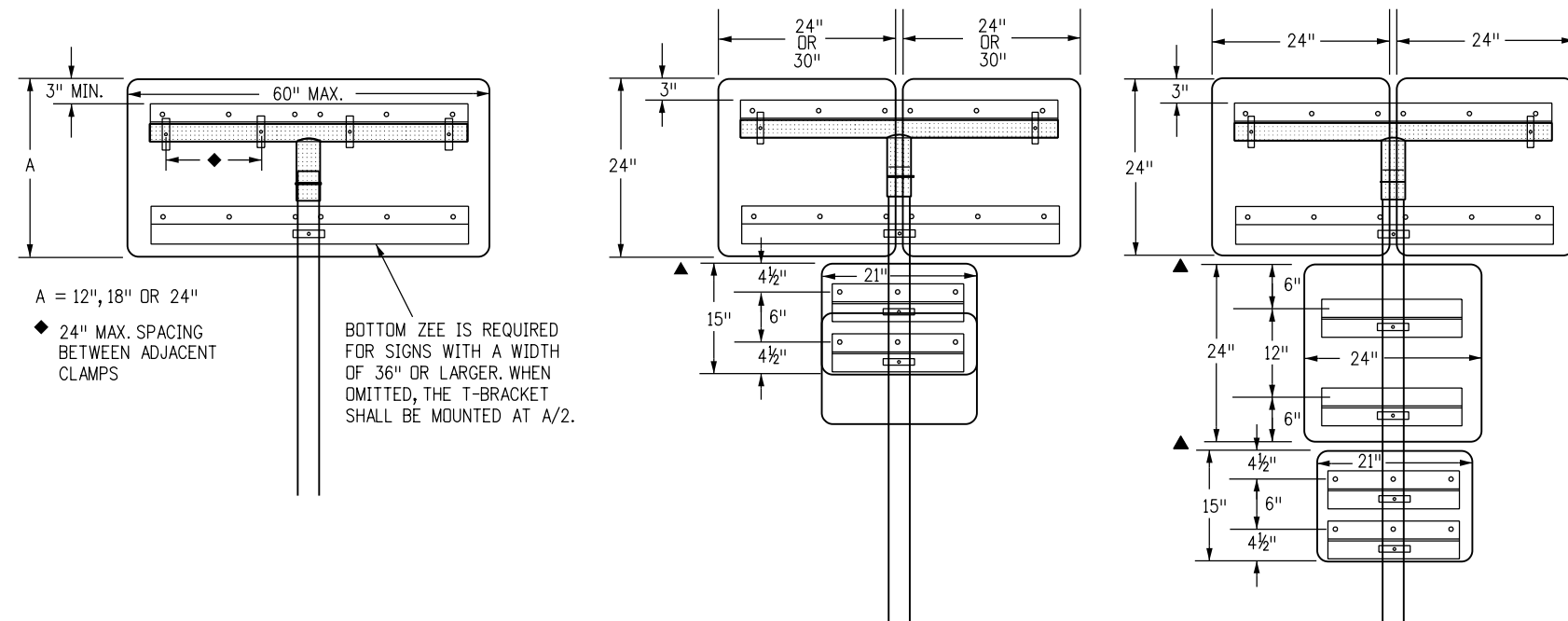


Class I Sign Combinations (Direct Attachment)

Class I Sign Combinations Using U-Brackets

▲ SEE NOTE 6 ON SHEET 6

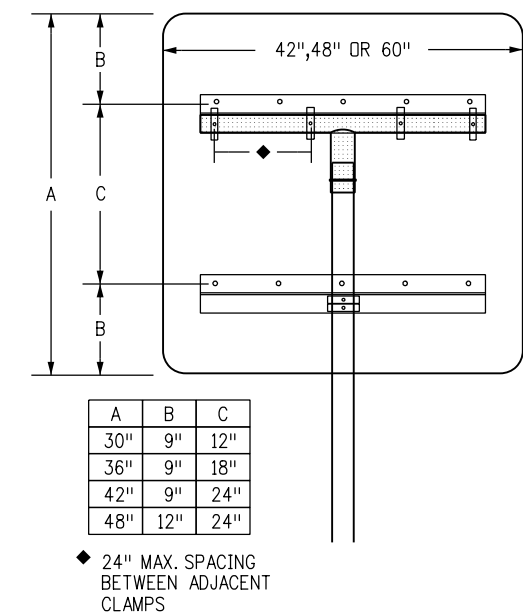
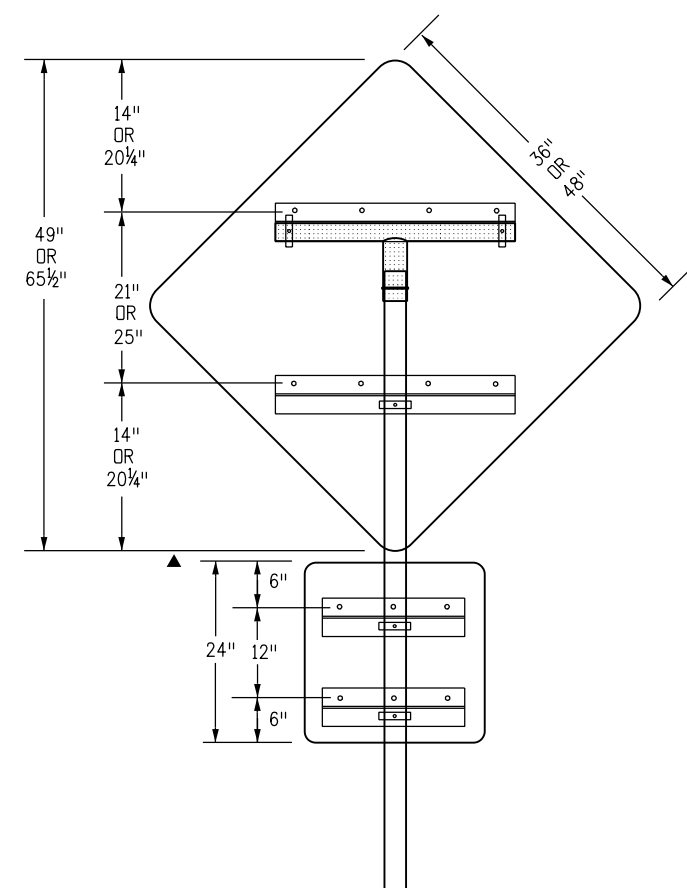
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Creation Date: 07/04/12	Date:		Comments	S-614-8				
Created By: KEN				Standard Sheet No. 5 of 7				
Last Modification Date: 07/01/26								
Last Modified By: YSP								
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English				Project Sheet Number:				



A = 12", 18" OR 24"

◆ 24" MAX. SPACING BETWEEN ADJACENT CLAMPS

BOTTOM ZEE IS REQUIRED FOR SIGNS WITH A WIDTH OF 36" OR LARGER. WHEN OMITTED, THE T-BRACKET SHALL BE MOUNTED AT A/2.



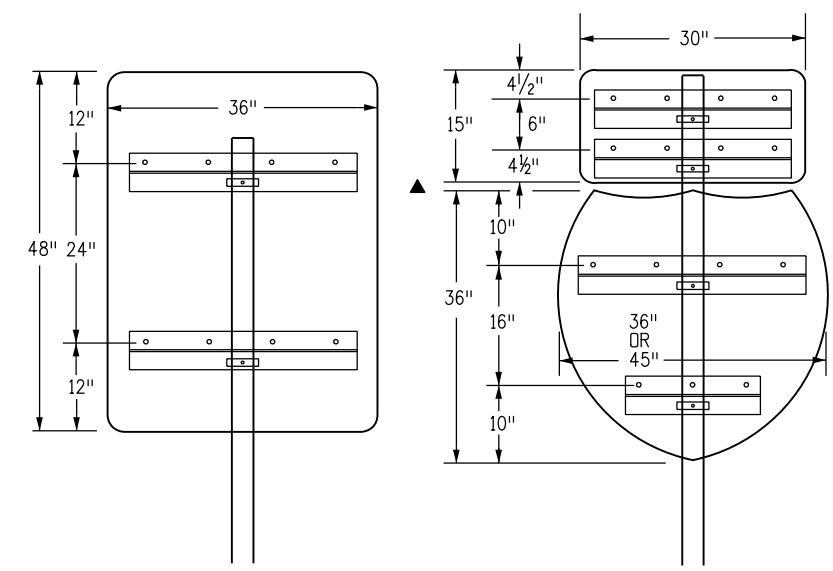
A	B	C
30"	9"	12"
36"	9"	18"
42"	9"	24"
48"	12"	24"

◆ 24" MAX. SPACING BETWEEN ADJACENT CLAMPS

PANEL WIDTH	ZEE LENGTH
21"	15"
24"	18"
30"	24"
36"	30"
42"	36"
45"	39"
48"	42"
54"	48"
60"	54"
36" DIAMOND	22"
48" DIAMOND	36"
24" & 24"	43"
24" & 30"	49"
30" & 30"	55"
36" & 36"	67"
45" & 36"	76"
24" & 24" & 24"	68"
24" & 24" & 30"	74"
24" & 30" & 24"	74"
30" & 24" & 30"	80"
24" & 30" & 30"	80"
30" & 30" & 30"	86"

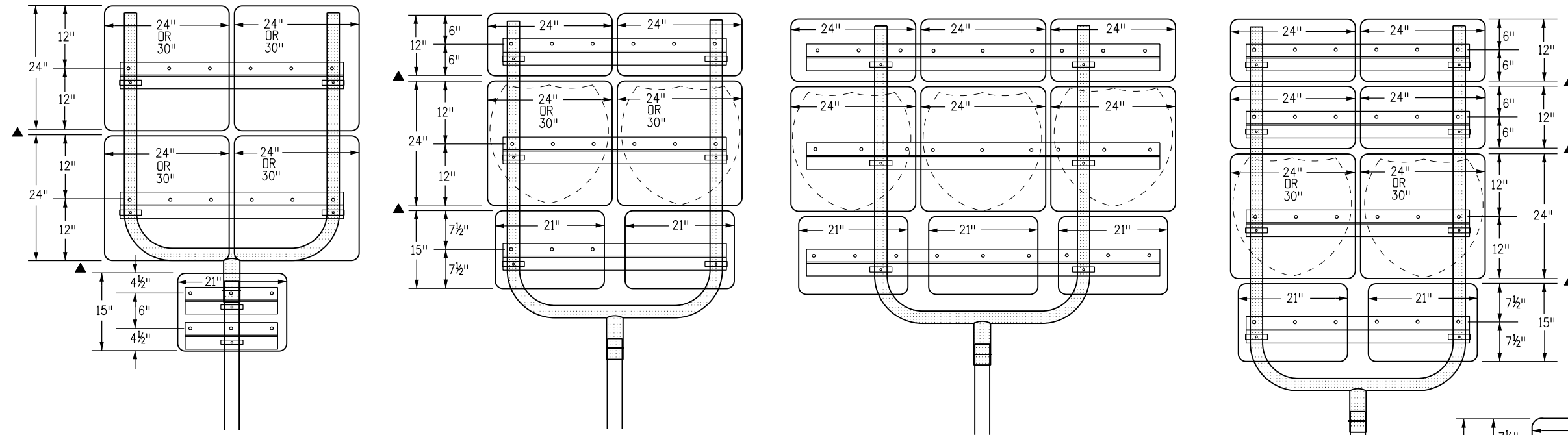
NOTES

1. Z-Bar length shall be 3 inch ($\pm \frac{1}{2}$ inch) short of the edge of the sign or row of signs on both sides. The accompanying table gives the z-bar length for most typical panel combinations.
2. First and last holes shall be 2 inch from edge of z-bar. The holes in between shall be 6 inch to 8 inch apart.
3. T and U brackets shall terminate 2 inches to 3 inches from edge of sign panel. When a zee is connected to a T-bracket, they shall be the same length except when the zee must extend beyond the maximum length of a T-bracket.
4. Two mounting clamps are required on zeos where there is only one zee for the panel and the zee is attached to only one post.
5. Zeos shall be attached to T-brackets and U-brackets with U-bolts or mounting clamps.
- ▲ 6. Vertical spacing between sign panels shall be 1 inch to 1½ inch typical.
7. In special cases U-brackets may be used to mount signs that face different directions. The Engineer shall determine the orientation of the sign panels and verify that the maximum allowable wind loads for the post are not exceeded.

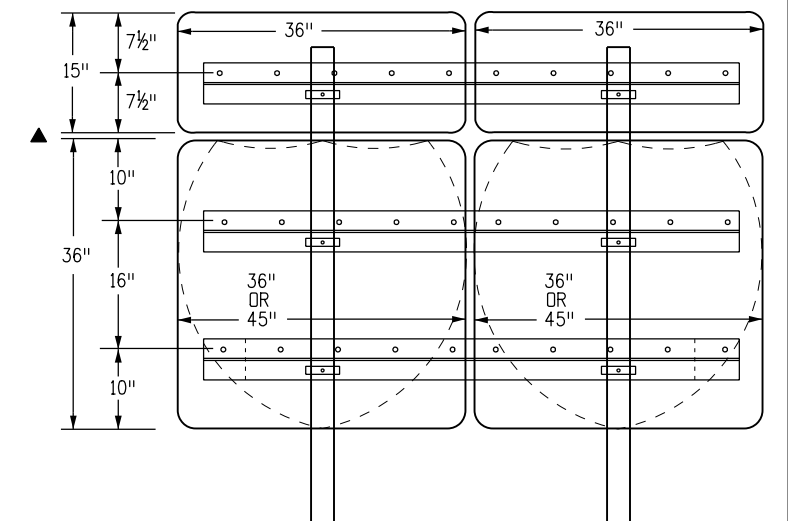
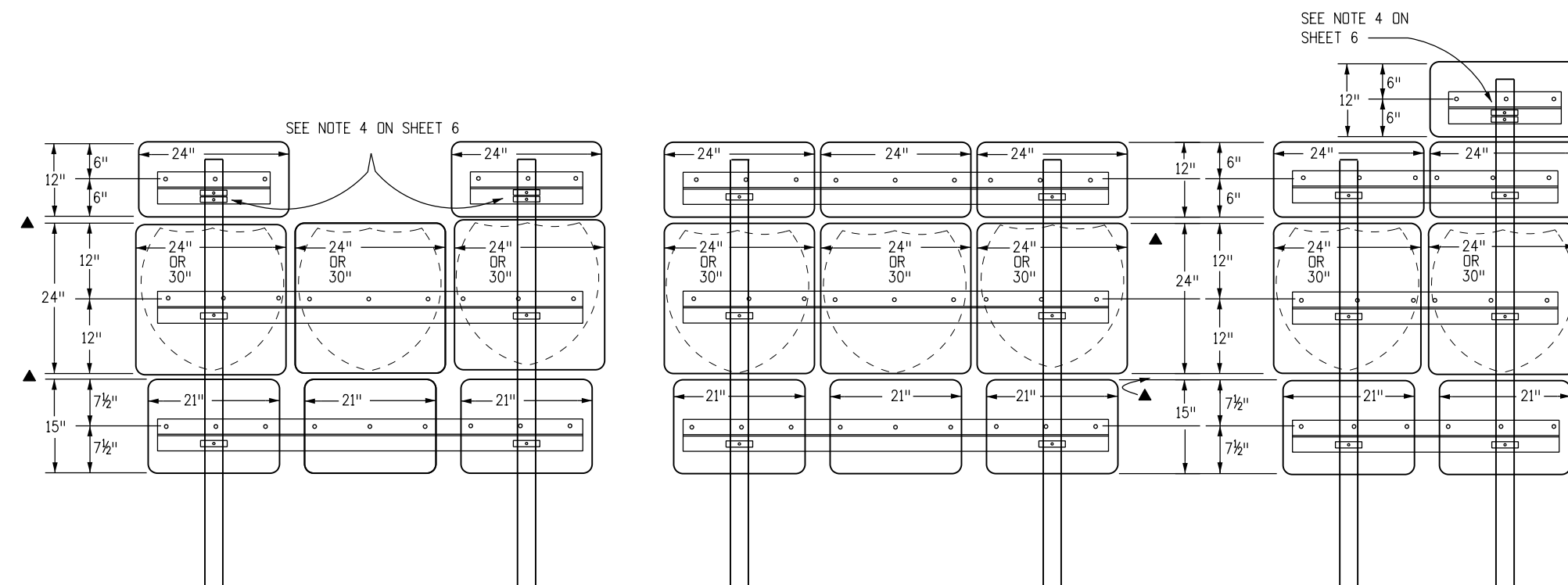


Class II Sign Combinations Using T-Brackets With Z-Bar

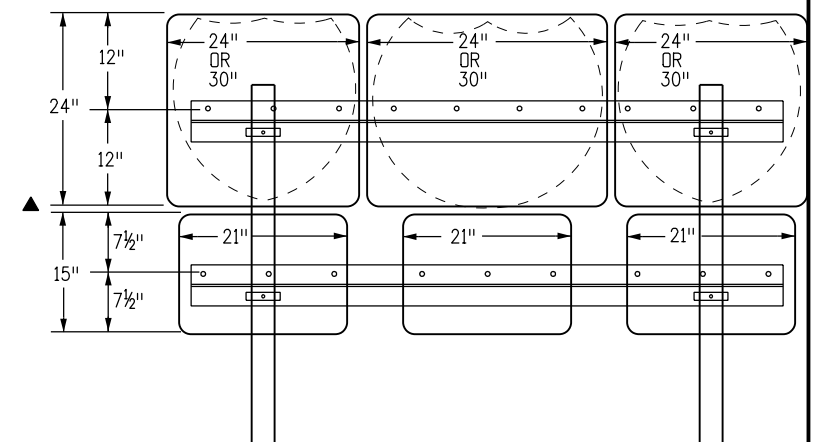
Single Post Class II Signs Using Z-Bar



Class II Sign Combinations Using U-Brackets



NOTE: THIS CONFIGURATION IS PREFERABLE TO USING TWO SEPARATE SIGNS.



▲ SEE NOTE 6 ON SHEET 6

Class II Sign Combinations Using Two Posts

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Last Modified By: YSP				Issued by the Traffic Safety & Engineering Services: July 01, 2026				
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English								