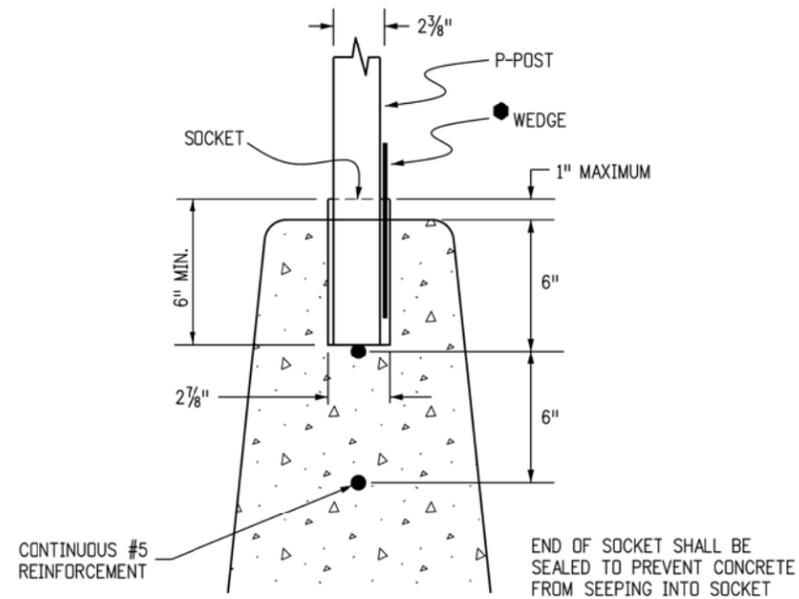


TYP. ELEVATION

POST SELECTION TABLE (90 MPH WIND LOAD DESIGN)								
SIGN PANEL HEIGHT	SIGN PANEL WIDTH							
	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
1'-6"	P	P	P	P	P	P	P1	P1
2'-0"	P	P	P	P	P	P	P1	P1
2'-6"	P	P	P	P	P1	P1	P1	P1
3'-0"	P	P	P	P	P1	P1	P1	P1
3'-6"	P	P	P1	P1	P1	P1	P1	P1
4'-0"	P	P	P1	P1	P1	P1	P1	P1
4'-6"	P1	P1	P1	P1	P1	P1	P1	P1
5'-0"	P1	P1	P1	P1	P1	P1	P1	P1
5'-6"	P1	P1	P1	P1	P1	P1	P1	P1
6'-0"	P1	P1	P1	P1	P1	P1	P1	P1
6'-6"	P1	P1	P1	P1	P1	P1	P1	P1
7'-0"	P1	P1	P1	P1	P1	P1	P2	P2
7'-6"	P1	P1	P1	P1	P2	P2	P2	P2
8'-0"	P1	P1	P1	P1	P2	P2	P2	P2

**DIAMOND PANELS (30", 36" AND 48" SIDES) - P1**

POST TYPE	P	P1	P2	FOR DETAILED POST SPECIFICATIONS SEE STANDARD PLAN S-614-8
OUTSIDE DIAMETER	2.375"	2.875"	2.875"	
WALL THICKNESS	0.080"	0.160"	0.276"	

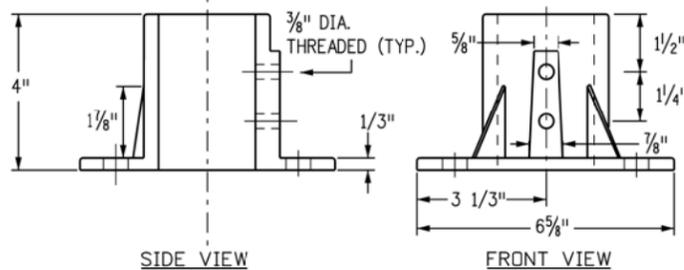
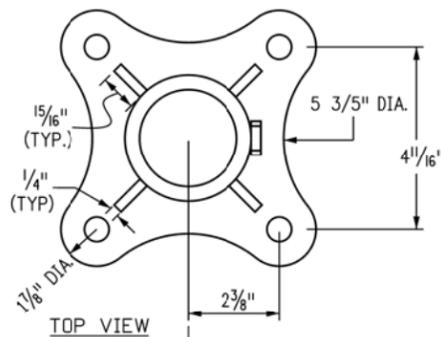


FRONT VIEW  
SOCKET SYSTEM (P POST ONLY)

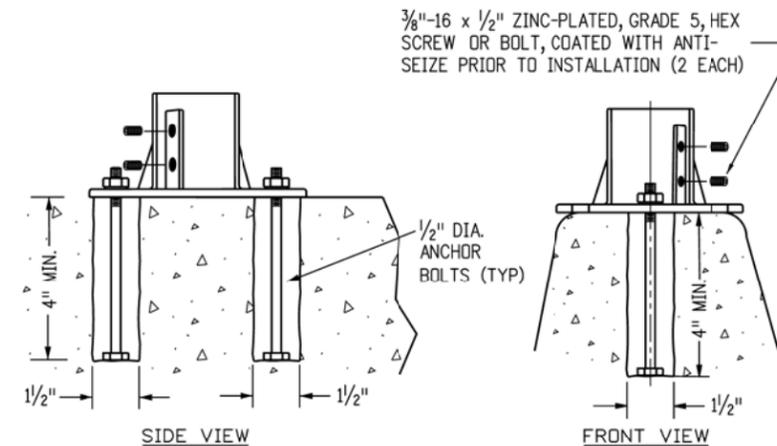
CAST-IN-PLACE CONCRETE BARRIER INSTALLATION

GENERAL NOTES

- FOR DETAILS OF GUARD RAIL-TYPE 7 CONCRETE BARRIER (CAST-IN-PLACE AND/OR PRECAST), SEE STANDARD PLANS M-606-13 AND M-606-14.
- FOR SIGN PANEL FABRICATION DETAILS, SEE STANDARD PLANS S-614-2, S-614-3 AND S-614-4.
- SOCKET SYSTEMS AND SLIP BASES SHALL BE ASSEMBLED ACCORDING TO STANDARD PLAN S-614-8.
- BARRIER WALLS SHALL BE SUPPORTED TO PREVENT DEFORMATION DURING PLACEMENT OF SLIPBASE STUB OR SOCKET ON CAST-IN-PLACE INSTALLATIONS.
- THE ENGINEER SHALL ESTABLISH LOCATIONS FOR ALL SIGN POSTS IN ACCORDANCE WITH DETAILS SHOWN ON THE PLANS.
- ALL SIGN POSTS SHALL BE MOUNTED PLUMB.
- BOLTS, NUTS, WASHERS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307. THEY SHALL ALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 OR ASTM A164.
- ALL STEEL CUTS SHALL PREFERABLY BE SAW CUTS; HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND.
- MOUNTING SYSTEM FOR EACH SIGN LOCATION SHALL BE AS SHOWN ON THE PLANS.
- ALL WELDING IS TO BE IN ACCORDANCE WITH AWS SPECIFICATIONS OF CURRENT ISSUE AND SHALL BE CONTINUOUS.
- ANCHOR BOLTS FOR RETRO-FIT INSTALLATION SHALL BE "HILTI KWIK HUS-EZ SCREW ANCHORS (DRILLED AND FILLED WITH APPROVED EPOXY GROUT IN 2" HOLES FOR 3/8" BOLTS AND 1 1/2" HOLES FOR 1/2" BOLTS
- RETRO-FIT INSTALLATION PROCEDURE SHALL NOT BE USED ON NEW CONSTRUCTION WITHOUT APPROVAL OF THE ENGINEER.
- SIGN PANELS, MOUNTED ON CONCRETE BARRIER, SHALL NOT ENCRDACH THE TRAVELED WAY.



SIDE VIEW FRONT VIEW  
SURFACE MOUNT CASTING DETAIL (P POST ONLY)



SIDE VIEW FRONT VIEW  
SURFACE MOUNT CASTING (P POST ONLY)

RETRO-FIT CONCRETE BARRIER INSTALLATIONS

Computer File Information		Sheet Revisions		Colorado Department of Transportation 4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9219	CONCRETE BARRIER SIGN POST INSTALLATIONS	STANDARD PLAN NO. S-614-21
Creation Date: 07/04/12	Initials: SCL	Date: 05/24/16	Comments: NEW SHEET, INCLUDES SLIP BASE DETAILS PLUS 4" BASE PLATE DETAIL			

### 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 5/2" 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

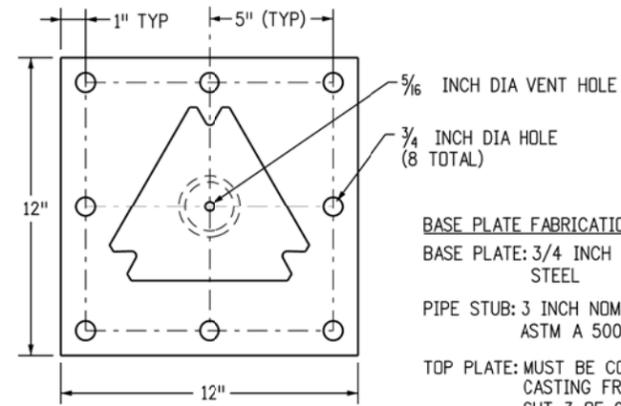
ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.

#### 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.

### SURFACE MOUNT SLIPBASE TUBULAR STEEL SIGN BASE NOTES

1. REFER TO SIGNING PLANS FOR SIGN LOCATIONS AND HEIGHT
2. MINIMUM ALLOWABLE TENSION CAPACITY FOR WEDGE ANCHORS = 3000 LBS.
3. MAXIMUM ALLOWABLE MOMENT FOR SIGN BASE = 5.13 kip-ft.

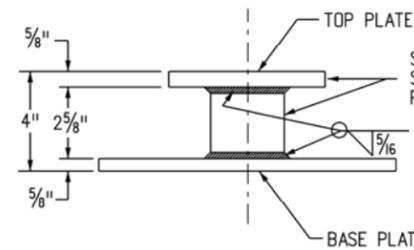


TOP VIEW

#### BASE PLATE FABRICATION REQUIREMENTS:

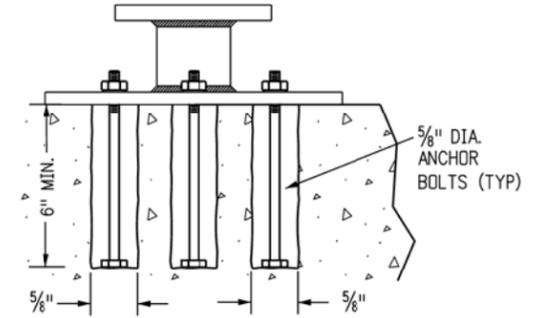
- BASE PLATE: 3/4 INCH ASTM A 36 PLATE STEEL
- PIPE STUB: 3 INCH NOMINAL SCHEDULE 80, ASTM A 500 GR B
- TOP PLATE: MUST BE COMPATIBLE WITH SLIPBASE CASTING FROM STD PLAN NO. S-614-8, SHT 3 OF 6

MEET ASTM A 123 GALVANIZING AFTER FABRICATION IS COMPLETED.



SIDE VIEW

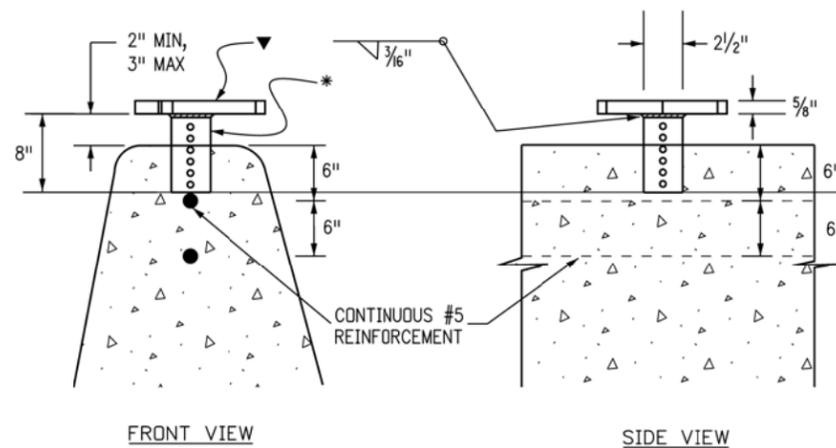
SLIPBASE WILL MEET REQUIREMENTS OF STD PLAN NO. S-614-8 SLIPBASE STUB POST DETAIL EXCEPT FOR OVERALL HEIGHT



SIDE VIEW

SURFACE MOUNT CASTING DETAIL (P1 & P2 POSTS)

SURFACE MOUNT CASTING (P1 & P2 POSTS)



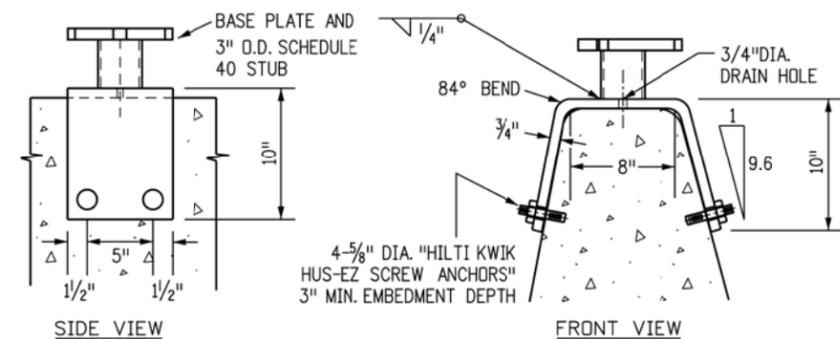
FRONT VIEW

SIDE VIEW

▼ BASE PLATE SHALL BE 5/8" ASTM A-36, 441 OR 572 STEEL PLATE. SEE STANDARD PLAN S-614-8 FOR DIMENSIONS.

\* BASE STUB SHALL BE 2 1/2" SQUARE 10 GAGE PERFORATED TUBING, FABRICATED AND GALVANIZED CONFORMING TO ASTM A-153

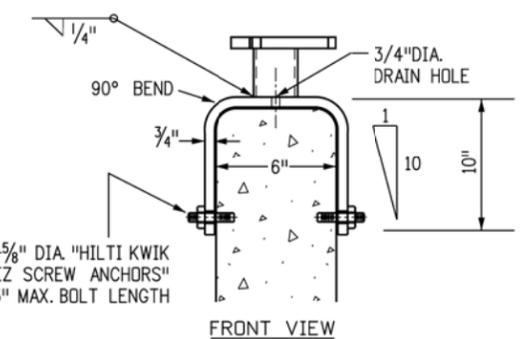
SLIPBASE BARRIER STUB (P1 & P2 POSTS)



SIDE VIEW

FRONT VIEW

TYPE 7 INSTALLATION



FRONT VIEW

CONCRETE GLARE SCREEN INSTALLATION

SADDLE BRACKET (P1 & P2 POSTS)

### CAST-IN-PLACE CONCRETE BARRIER INSTALLATION

### RETRO-FIT CONCRETE BARRIER INSTALLATIONS

<b>Computer File Information</b> Creation Date: 07/04/12 Initials: SCL Last Modification Date: 01/06/16 Initials: TCD Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans Drawing File Name: S-614-21_2of2.dgn CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>05/24/16</td> <td>NEW SHEET. INCLUDES SLIP BASE DETAILS, 4" BASE PLATE DETAIL, &amp; CONCRETE GLARE SCREEN INSTALL</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		Date:	Comments	05/24/16	NEW SHEET. INCLUDES SLIP BASE DETAILS, 4" BASE PLATE DETAIL, & CONCRETE GLARE SCREEN INSTALL							Colorado Department of Transportation 4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9219 Safety & Traffic Engineering Branch KCM/TCD		<b>CONCRETE BARRIER SIGN POST INSTALLATIONS</b> Issued By: Safety & Traffic Engineering Branch July 4, 2012		<b>STANDARD PLAN NO.</b> S-614-21 Sheet No. 2 of 2	
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