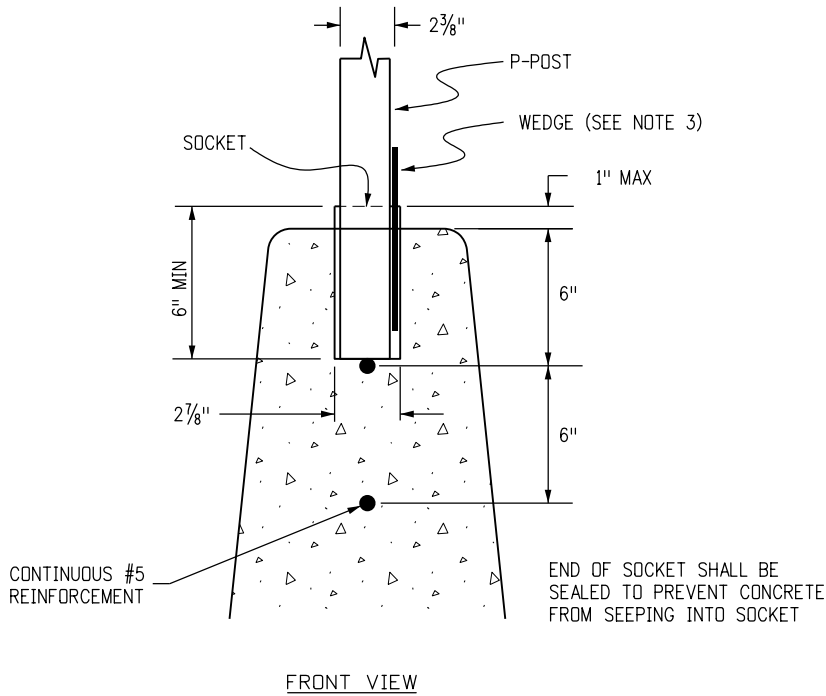


TYPICAL ELEVATION

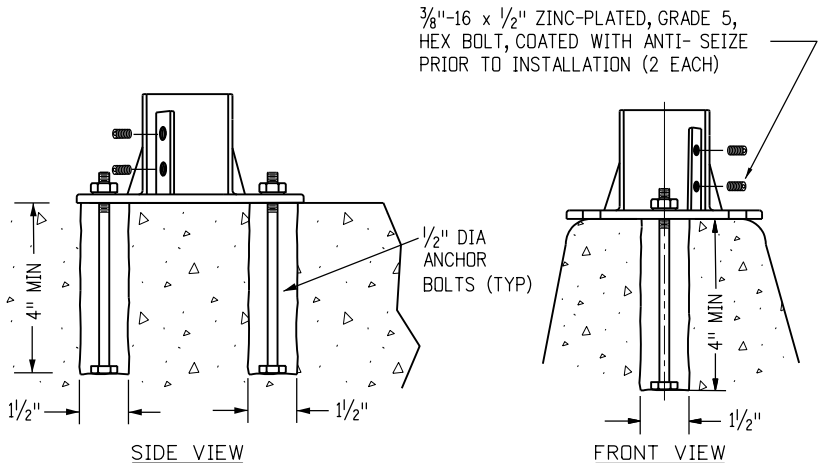
POST SELECTION TABLE (90 MPH WIND LOAD DESIGN)								
SIGN PANEL HEIGHT	SIGN PANEL WIDTH							
		1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	5'-0"
	1'-6"	P	P	P	P	P	P	P1
	2'-0"	P	P	P	P	P	P	P1
	2'-6"	P	P	P	P	P1	P1	P1
	3'-0"	P	P	P	P	P1	P1	P1
	3'-6"	P	P	P1	P1	P1	P1	P1
	4'-0"	P	P	P1	P1	P1	P1	P1
	5'-0"	P1	P1	P1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

GENERAL NOTES

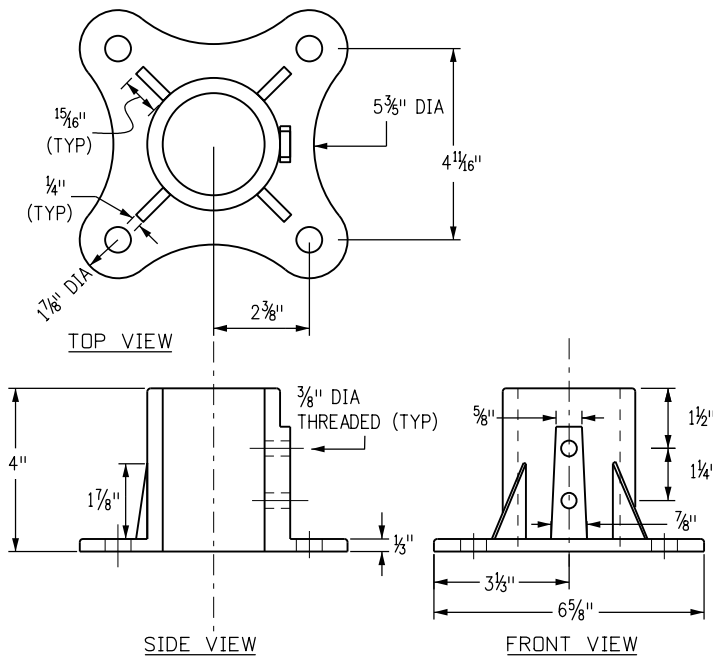
- FOR DETAILS OF CONCRETE BARRIER (CAST-IN-PLACE AND/OR PRECAST), SEE STANDARD PLANS M-606-13, M-606-14, AND M-606-15.
- FOR SIGN PANEL FABRICATION DETAILS, SEE STANDARD PLANS S-614-2, S-614-3, AND S-614-4.
- SOCKET SYSTEMS AND SLIP BASES SHALL BE ASSEMBLED ACCORDING TO STANDARD PLAN S-614-8.
- BARRIER 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 AND SHALL BE DRILLED AND FILLED WITH APPROVED EPOXY GROUT IN 2 INCH HOLES FOR 7/8-INCH BOLTS AND 1-1/2 INCH HOLES FOR 1 1/2-INCH 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 ENCROACH THE TRAVEL LANE.



FRONT VIEW
SOCKET SYSTEM (P POST ONLY)




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



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

CAST-IN-PLACE CONCRETE BARRIER INSTALLATION

RETRO-FIT CONCRETE BARRIER INSTALLATION

Computer File Information		<div>R=1</div> <div></div> <div></div> <div></div> <div></div>	Sheet Revisions		<div>Colorado Department of Transportation</div> <div><div></div><div>2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9436 FAX: 303-757-9219</div></div> <div>Traffic & Safety Engineering</div> <div>MKB</div>	<div>CONCRETE BARRIER</div> <div>SIGN POST</div> <div>INSTALLATIONS</div>	STANDARD PLAN NO.	
Creation Date: 07/04/12	Date:		Comments	S-614-21				
Created By: Lee	09/21/20		REVISION OF NOTE 13	Standard Sheet No. 1 of 2				
Last Modification Date: 09/21/2020							Issued By: Traffic & Safety Engineering Branch July 31, 2019	Project Sheet Number:
Last Modified By: DiNardo								
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English								

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

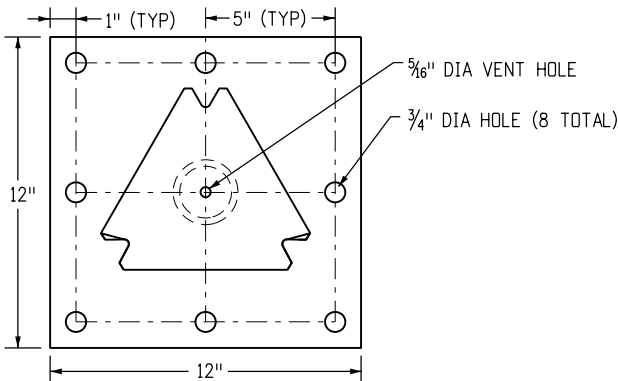
MOUNTING HARDWARE

- 8 - EACH 5/8" x 5 1/2" 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

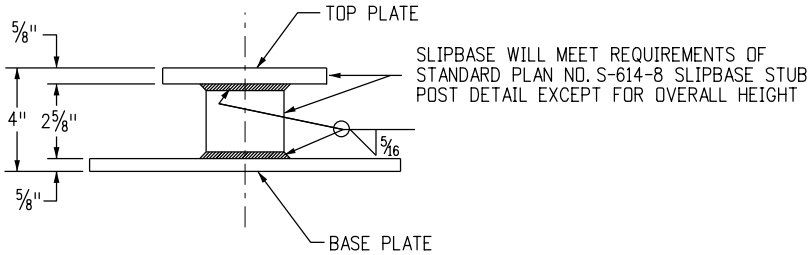
ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.

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.



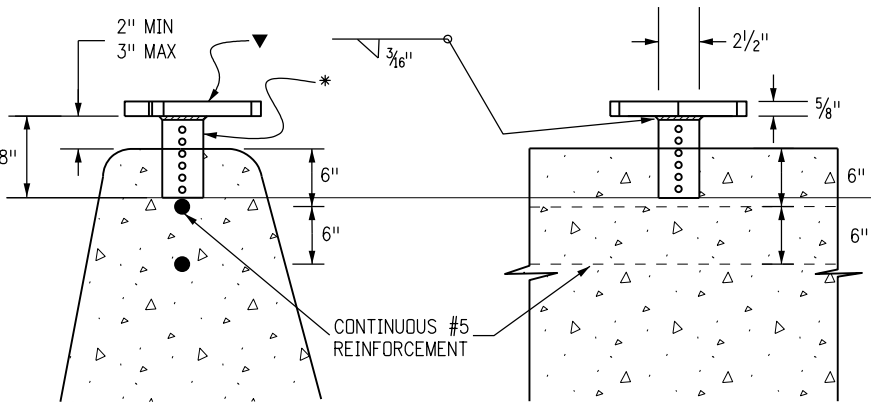
TOP VIEW



SIDE VIEW

SURFACE MOUNT SLIPBASE TUBULAR STEEL SIGN BASE NOTES

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



FRONT VIEW

SIDE VIEW

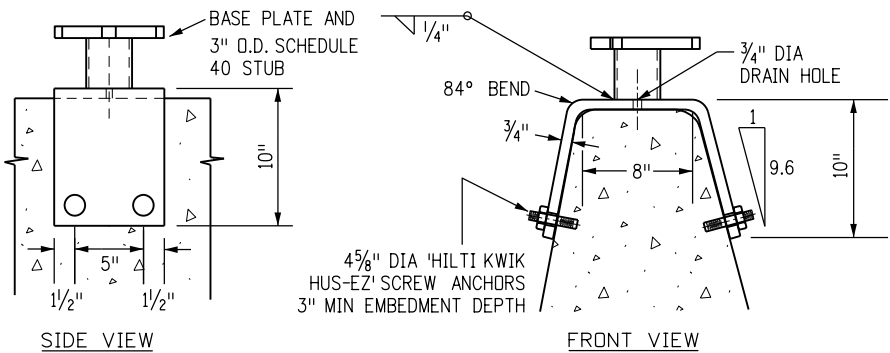
▼ BASE PLATE SHALL BE 5/8" ASTM A-36, 441 OR 572 STEEL PLATE. SEE STANDARD PLAN S-614-8 FOR DIMENSIONS.

* 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)

CAST-IN-PLACE CONCRETE BARRIER INSTALLATION

SURFACE MOUNT CASTING DETAIL (P1 & P2 POSTS)

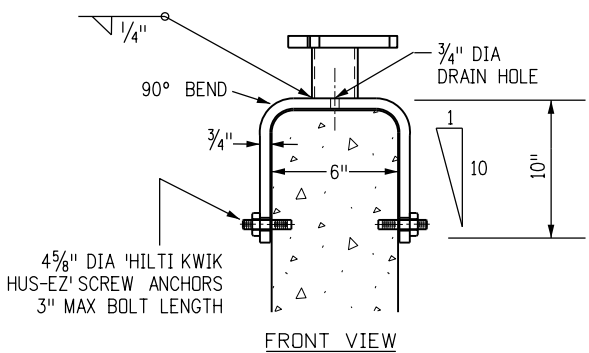


SIDE VIEW

FRONT VIEW

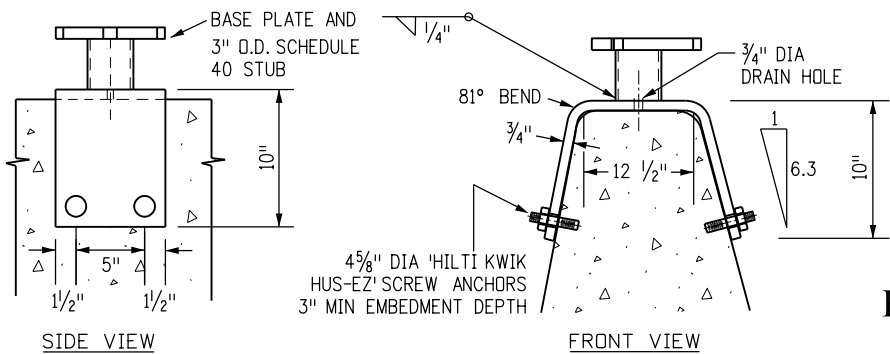
TYPE 7 INSTALLATION

SURFACE MOUNT CASTING (P1 & P2 POSTS)



FRONT VIEW

CONCRETE GLARE SCREEN INSTALLATION



SIDE VIEW

FRONT VIEW

TYPE 9 INSTALLATION

SADDLE BRACKET (P1 & P2 POSTS)

RETRO-FIT CONCRETE BARRIER INSTALLATION

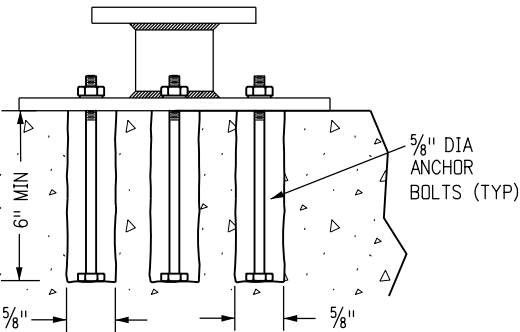
BASE PLATE FABRICATION REQUIREMENTS:

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 STANDARD PLAN NO. S-614-8

MEET ASTM A 123 GALVANIZING AFTER FABRICATION IS COMPLETED.



SIDE VIEW

Computer File Information		<div>R-1</div> <div></div> <div></div> <div></div> <div></div>	Sheet Revisions		<div>Colorado Department of Transportation</div> <div><div></div><div>2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9436 FAX: 303-757-9219</div></div> <div>Traffic & Safety Engineering</div> <div>MKB</div>	<div>CONCRETE BARRIER</div> <div>SIGN POST</div> <div>INSTALLATIONS</div>	STANDARD PLAN NO.
Creation Date: 07/04/12	Date:		Comments	S-614-21			
Created By: Lee	09/21/20		CREATED NEW BRACKET DETAILS AND ANGLE FOR TYPE 9 BARRIER	Standard Sheet No. 2 of 2			
Last Modification Date: 09/21/2020				Project Sheet Number:			
Last Modified By: KERSHNER							
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							