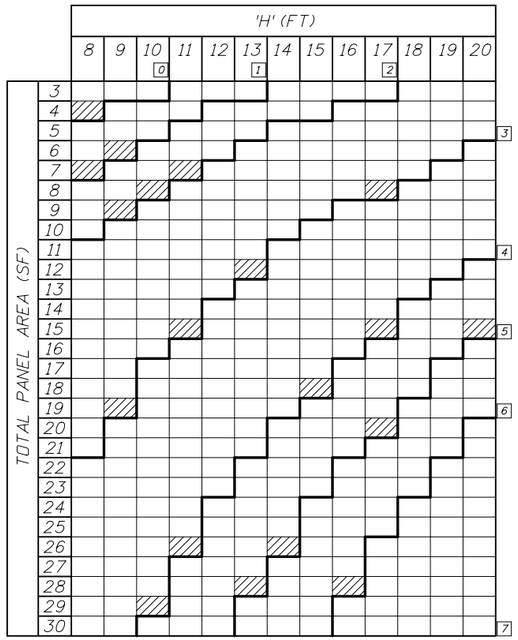
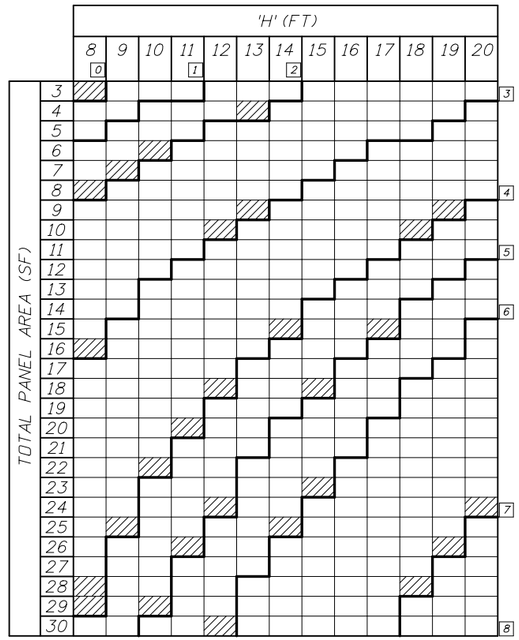
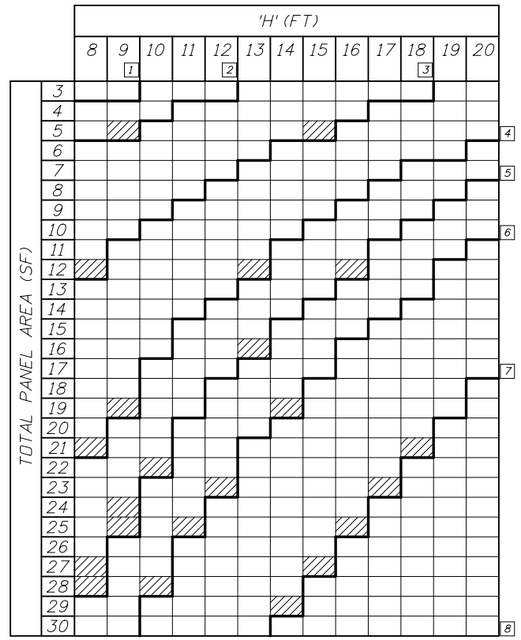
ALUMINUM COLUMN (POST) SELECTION TABLE (WIND SPEED = 110 MPH)



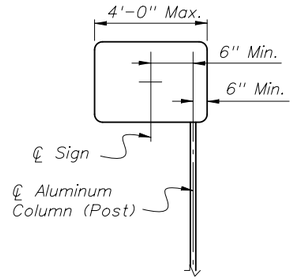
ALUMINUM COLUMN (POST) SELECTION TABLE (WIND SPEED = 130 MPH)



ALUMINUM COLUMN (POST) SELECTION TABLE (WIND SPEED = 150 MPH)



▨ = If CANTILEVER SIGN configuration (see Cantilever Sign Details) falls in this region, use next larger post size than that indicated.



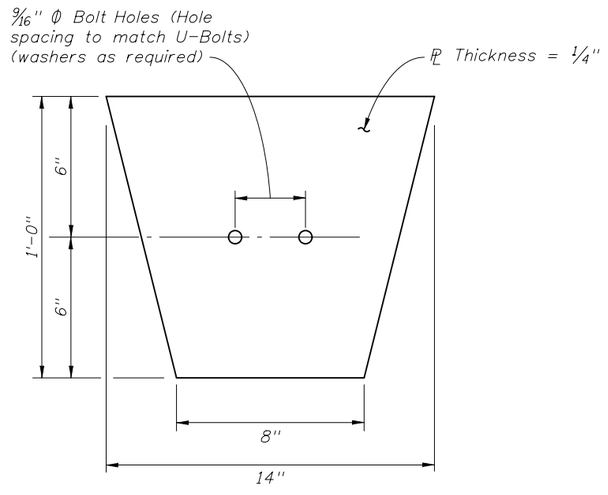
CANTILEVER SIGN

NOTE:
All cantilever sign installations shall comply with Standard Index 17302.

POST AND FOUNDATION TABLE

	Foundation Alternatives						
	Post Size		Driven Post *		Concrete (Class I)		
			Depth (FT)				
	Diameter (IN)	Wall (IN)	without Soil Plate	with Soil Plate	Diameter (FT)	Depth (FT)	Stub Length (FT)
0	2.0	1/8	4.5	2.5	2.0	2.0	2.0
1	2.5	1/8	5	3	2.0	2.0	2.0
2	3.0	1/8	5	3.5	2.0	2.5	2.5
3	3.5	3/16	6	4.5	2.0	3.0	3.0
4	4.0	1/4	---	---	2.0	4.0	3.0
5	4.5	1/4	---	---	2.0	4.0	3.0
6	5.0	1/4	---	---	2.0	4.5	3.0
7	6.0	1/4	---	---	2.0	5.0	3.0
8	8.0	5/16	---	---	2.0	5.5	3.0

* INSTALLING FRANGIBLE COLUMN SUPPORTS:
Columns (posts) may be installed by driving the columns in accordance with this Index, or as an alternate method, the columns (posts) may be set to the depth indicated in preformed holes backfilled with suitable material tamped in layers not thicker than 6" to provide adequate compaction or filled with flowable fill or bagged concrete.



ALUMINUM SOIL PLATE DETAILS

NOTES:
1. Align Soil Plate bottom at 2/3 of foundation depth.
2. Slot up to 1" long is allowed to accommodate various post sizes.
3. Rectangular soil plate of size 1'-2" x 1'-0" may be used as an alternative.

POST AND FOUNDATION TABLES

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/11	DYW	Added Stub Length to POST AND FOUNDATIN TABLE and Note 3.			

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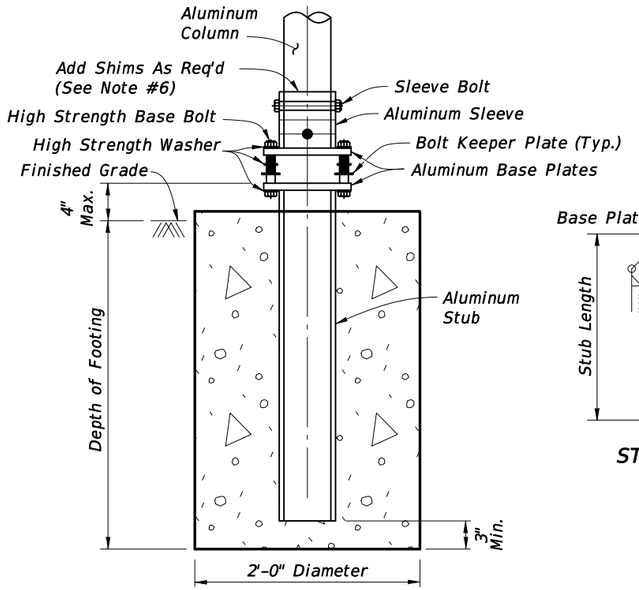
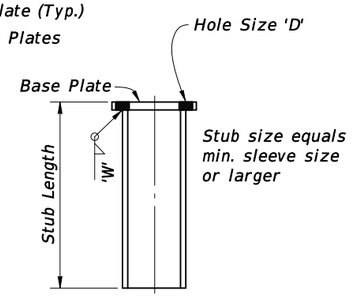


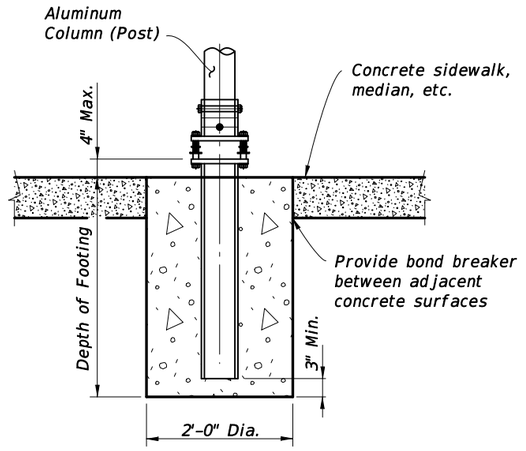
SLIP BASE AND FOOTING DETAIL
(non-frangible post)



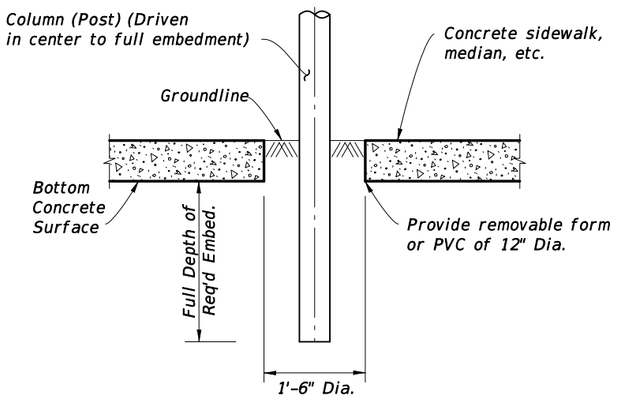
STUB DETAIL

SLIP BASE NOTES:

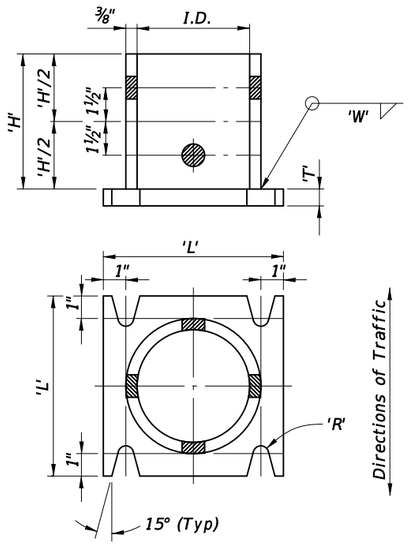
1. Use sleeves with an inside diameter (I.D.) no more than 1/16" larger than the outside diameter (O.D.) of the column.
2. Sleeve Bolts: ASTM A-307, ½" Ø galvanized steel bolt (with lock nuts) or Alloy 2024-T4 or 6061-T6 (ASTM B-211).
3. Base bolts, Nuts, and Washers: high strength ASTM A-325 with ASTM B633 SC3, Type II electroplated zinc coating.
4. Base plates may have either single or double beveled slots.
5. An alternate cast base plate of aluminum alloy 356 and T6 temper in lieu of the fabricated base plate may be submitted for approval. If a cast base plate is used, the stub will be the same size as the column and will be bolted to the casting.
6. Assemble the slip base connection in the following manner:
   a. Connect column to sleeve using two ½" Ø machine bolts.
   b. Assemble top base plate to stub base plate using high strength bolts with three hardened washers per bolt. One of the three washers per bolt and two bolt keeper plates go between the base plates. Orient the bolt keeper plates in the Directions of Traffic.
   c. Use shim stock as required to plumb the column.
   d. Tighten all bolts to the maximum possible with a 12" to 15" wrench. (This will bed the washers and shims and clear the bolt threads.)
   e. Loosen each bolt one turn and using a calibrated wrench retighten to the prescribed torque (see table) under the supervision of the Project Engineer.
   f. Burr threads at junction with nut using a center punch to prevent nut loosening.
7. Use galvanized steel shims to obtain a tight fit between the column face and the sleeve. Place shims in all quadrants between the ½" Ø sleeve bolts. Use shims that are 1" shorter than the height of the sleeve.
8. Both fabricated and cast base assemblies were impact tested by the Texas Transportation Institute, College Station, TX on February 10, 2003, and both alternate assemblies were determined to be compliant with the performance recommendations of the National Cooperative Highway Research Program (NCHRP) report 350.



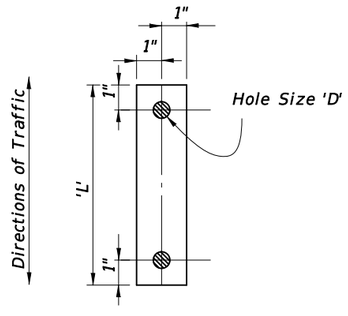
SLIP BASE AND FOOTING DETAIL IN CONCRETE
(non-frangible post in crossovers, medians, & sidewalks)



DRIVEN POST DETAIL IN CONCRETE
(frangible post in crossovers, medians, & sidewalks)



ALUMINUM SLEEVE & BASE PLATE DETAILS
(DOUBLE BEVELED SLOTS)



0.0149" Thick Alum. Strip - 2 Req'd Per Base

BOLT KEEPER PLATE DETAIL

SLIP BASE DETAILS

Column Size	Sleeve I.D. (Max)	Sleeve Height 'H'	Weld 'W'	Base Plate 'L'	Base Plate 'T'	Radius 'R'	Base Bolt Size	Base Bolt Length	Base Plate Torque ft-lbs	Base Plate Torque in.-lbs	Hole Size 'D'
4 x ¼	4 1/16	6	5/8	8	¾	11/32	5/8	3	29	345	1 1/16
4½" ¼	4 9/16	6	5/8	8	7/8	11/32	5/8	3¼	29	345	1 1/16
5 x ¼	5 1/16	7	5/8	8	7/8	11/32	5/8	3¼	29	345	1 1/16
6 x ¼	6 1/16	8	11/16	9	1	13/32	¾	3½	46	554	1 3/16
8 x 5/16	8 1/16	10	¾	11	1	15/32	7/8	3¾	53	640	1 5/16

Note: Unless noted otherwise, all dimensions are in inches.

BASE AND FOUNDATION DETAILS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/10	DYW	Changed Note 6.b.			
07/01/10	DYW	Added 8" column to SLIP BASE DETAILS table.			
01/01/11	DYW	Changed dimensions in details.			

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