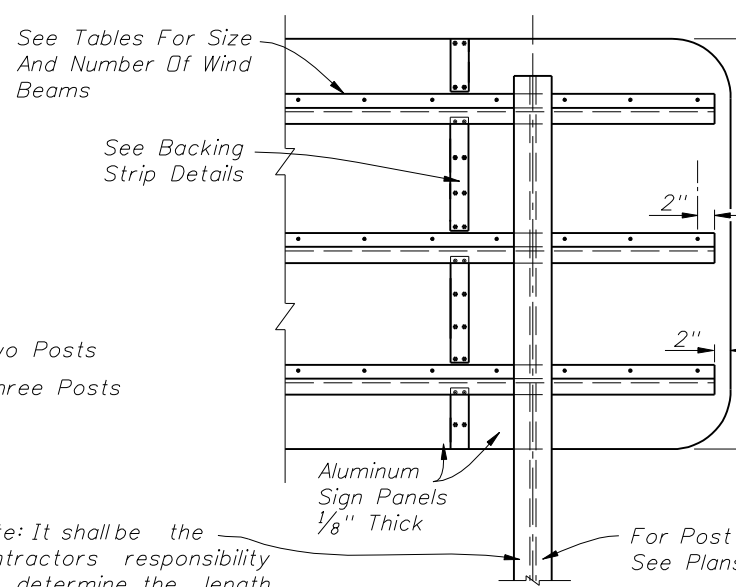
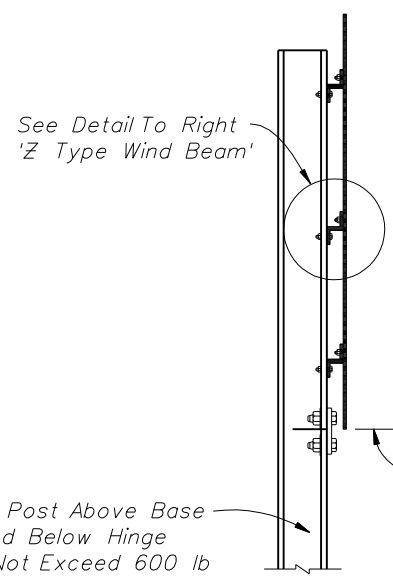


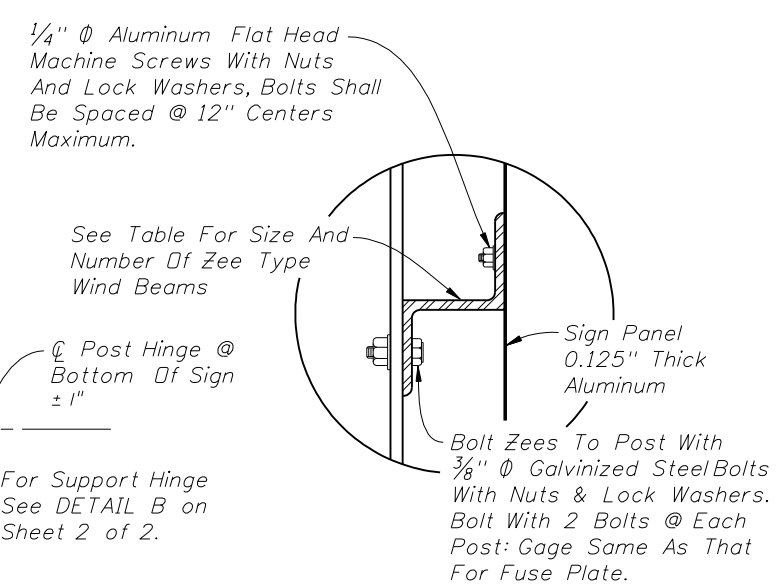
TYPICAL ELEVATION



PARTIAL REAR ELEVATION



SIDE VIEW



Z TYPE WIND BEAM

(For Notes And Dimensions Not Shown, See Plans)

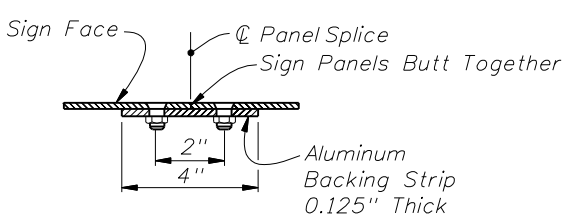
Note: It shall be the contractor's responsibility to determine the length of the column supports in the field prior to fabrication.

Mass Of Post Above Base Plate And Below Hinge Should Not Exceed 600 lb

For Support Hinge See DETAIL B on Sheet 2 of 2.

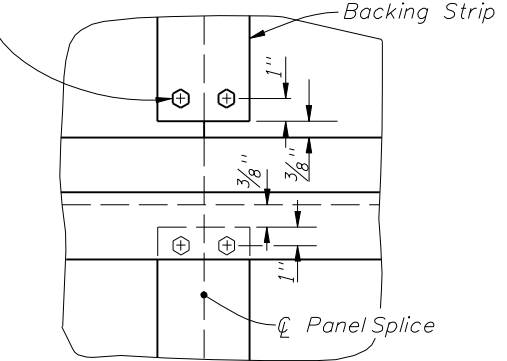
Bolt Zees To Post With 3/8" Ø Galvanized Steel Bolts With Nuts & Lock Washers. Bolt With 2 Bolts @ Each Post: Gage Same As That For Fuse Plate.

Note: If the sign panels are deeper than 10', a Horizontal Panel Splice is allowed at an interior Z bar support, shop drawings shall be required. Minimum panel section width = 2'-6".



BACKING STRIP DETAILS

Pairs Of 1/4" Ø Aluminum Flat Head Machine Screws With Nuts And Lock Washers Spaced At 1'-0" Centers Maximum



GENERAL NOTES

DESIGN SPECIFICATIONS: Design according to FDOT Structures Manual (current edition). Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 2001.
 WELDING: For welding refer to the latest editions of the AWS Structural Welding Codes for Steel and Aluminum, the AASHTO Standard Specifications for Welding Structural Steel Highway Bridges.
 ALUMINUM MATERIALS: All aluminum materials shall meet the requirements of the Aluminum Association's Alloy 6061-T6 and also the following ASTM specifications: Sheets and plates, B209; extruded tube, bars, rods & shapes, B221; and standard structural shapes, B308. No stenciling permitted on sheets. Aluminum welding rods shall meet the requirements of Aluminum Association Alloy No. 5556 filler wire.
 ALTERNATE MATERIAL: Material meeting the requirements of ASTM B209 or Aluminum Association Alloys 5154-H38 or 5052-H38 may be used for sheet and plate. Material meeting the requirements of Aluminum Association Alloy 6351-T5 and ASTM B221 may be used for extruded bars, rods, shapes and tubes.
 STRUCTURAL STEEL: All structural steel shall meet the requirements of ASTM A36.
 ALUMINUM BOLTS, NUTS, & LOCK WASHERS: Aluminum bolts shall meet the requirements of Aluminum Association Alloy 2024-T4 (ASTM F468). The bolts shall have an anodic coating at least 0.0002" thick and be Chromate sealed. Lock washers shall meet the requirements of Aluminum Association Alloy 7075-T6 (ASTM B221). Nuts shall meet the requirements of Aluminum Association Alloy 6061-T6 or 6262-T9 (ASTM F467).
 STEEL BOLTS, NUTS, & WASHERS: All steel bolts, nuts and washers shall meet the requirements of ASTM A325.
 TOLERANCES: All above materials shall be in accordance with the governing ASTM specifications.
 GALVANIZED: All steel shapes, angles, tees, plates, bolts, nuts and washers shall be galvanized in accordance with Standard Specifications 962-7.
 BASE CONNECTION: High strength bolts L₂ in the base connection shall be tightened only to the torque shown in the table on sheet 2 of 2. Overtightened base connections will not be accepted.
 FUSE PLATE: All holes in fuse plates shall be drilled. All plate cuts shall, preferably, be saw cuts; however, flame cutting will be permitted provided all edges are round. Metal projecting beyond the plane of the plate face will not be allowed.
 SIGN FACE: All sign face corners shall be rounded.
 SHOP DRAWINGS: When ground sign supports are fabricated in accordance with these plans no shop drawings are required. Shop drawings will be required for approval when the column length exceeds the length shown in the plans by more than 2'-0". However, shop drawings for sign panels, messages, lettering and quantities shall be submitted to the Engineer of Record for approval.
 FABRICATOR NOTE: All bolts, except L₂ bolts and zee to post bolts, shall be tightened in accordance with Section 700 of the Specifications.
 FOUNDATION: Contractor may use precast foundations in pre-drilled holes a minimum of 12" larger than the foundation indicated on the plans in either wet or dry conditions. The holes shall be clean and without loose material. Temporary casing shall be required if the soil is unstable. Fill the void around the precast foundation with flowable fill meeting the requirements of Section 121 or clear sand placed using hydraulic methods. The cost of flowable fill, installing and removal of casing shall be included in the unit price of Sign Multi-Post.

NUMBER OF WIND BEAMS FOR GIVEN DEPTH & WIND					
Wind	No. Beams	Max. Depth	Wind	No. Beams	Max. Depth
110	2	7'-0"	150	2	6'-0"
110	3	12'-0"	150	3	10'-4"
110	4	16'-4"	150	4	14'-0"
110	5	20'-8"	150	5	17'-8"
130	2	6'-8"			
130	3	11'-4"			
130	4	15'-4"			
130	5	19'-0"			

DESIGN WIND SPEEDS BY COUNTY

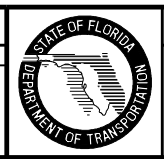
- 110 mph Alachua, Baker, Bradford, Clay, Columbia, Gadsden, Gilchrist, Hamilton, Hardee, Jackson, Jefferson, Lafayette, Lake, Leon, Madison, Marion, Polk, Putnam, Sumter, Suwannee, and Union Counties.
- 130 mph Bay, Brevard, Calhoun, Charlotte, Citrus, DeSoto, Dixie, Duval, Flagler, Franklin, Glades, Gulf, Hendry, Hernando, Highlands, Hillsborough, Holmes, Lee, Levy, Liberty, Manatee, Nassau, Okaloosa, Okeechobee, Orange, Osceola, Pasco, Pinellas, Sarasota, Seminole, St. Johns, Taylor, Volusia, Wakulla, Walton, and Washington Counties.
- 150 mph Broward, Collier, Escambia, Indian River, Martin, Miami-Dade, Monroe, Palm Beach, Santa Rosa, and St. Lucie Counties.

SIZE OF WIND BEAMS		
Size Of Zee*	Length Of Sign (Feet)	
	2 Posts	3 Posts
Z 1.75 x 1.75 x 1.08	0 - 11'-0"	0 - 17'-4"
Z 3 x 2.69 x 2.33	11'-1"-19'-0"	17'-5"-29'-6"
Z 3 x 2.69 x 3.38	19'-1"-20'-8"	29'-7"-31'-6"

*Note: Zees Are Aluminum - No Steel Equivalent Available Designation Gives (Member Depth) x (Flange=Width) x (lb/ft)

REVISIONS

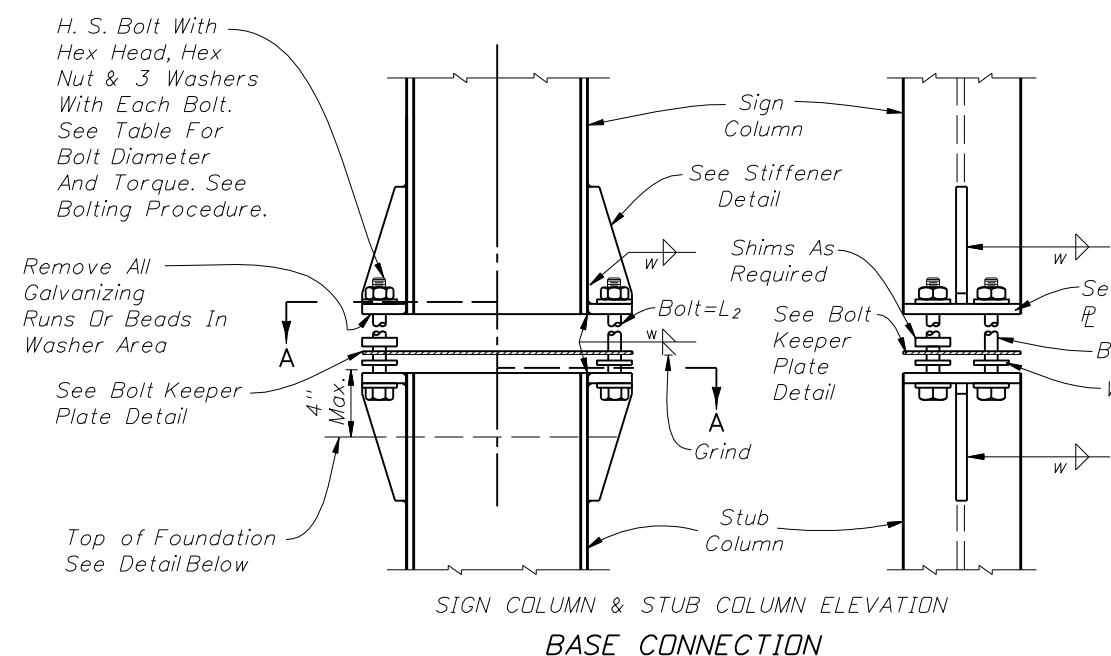
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/01/07	L.W.	Deleted High Strength Bolt Table A-325. Note revised to 10' instead of 12' in BACKING STRIP DETAIL.	07/01/08	DYW	Provided Specifications reference for bolt tightening. Changed bolt keeper plate, base connection and shim details. Index Completely revised changed from three sheets to two sheets.



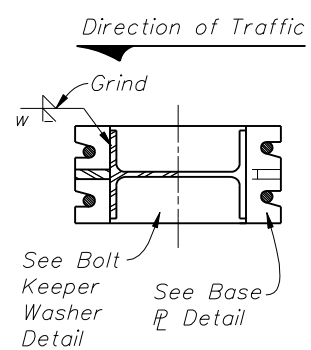
2008 Interim Design Standard

MULTI-COLUMN GROUND SIGN

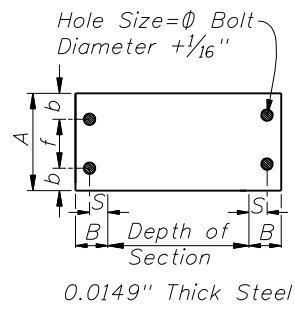
Interim Date 07/01/08
 Sheet No. 1 of 2
 Index No. 11200



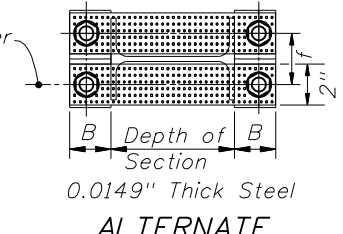
SIGN COLUMN & STUB COLUMN ELEVATION
BASE CONNECTION



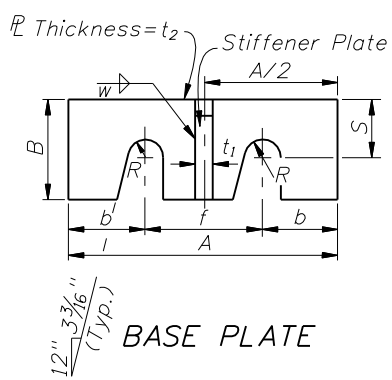
SECTION A-A



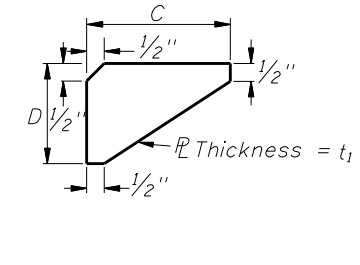
BOLT KEEPER PLATE



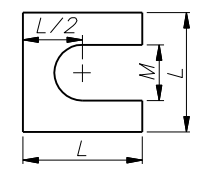
ALTERNATE BOLT KEEPER PLATE



BASE PLATE

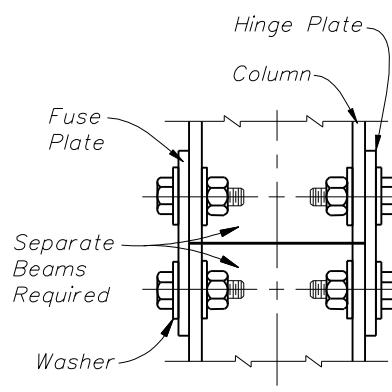


STIFFENER PLATE



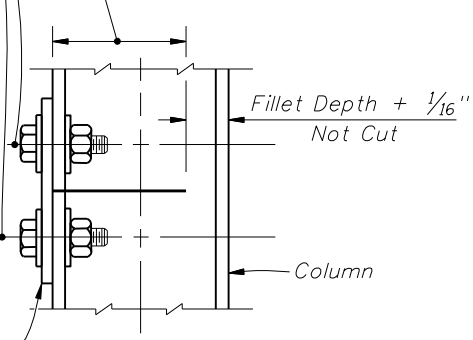
SHIM DETAIL
Provide 2 - 0.0149" Thick and 2 - 0.0329" Thick Brass Shims (ASTM B36) Per Post

Flange Holes For Fuse And Hinge Plate Shall Be Drilled Or Sub-Punched and Reamed. H.S. Bolts (See Table For Size), For Bolt Tension See the Specification. Flat Washers (Typ.)



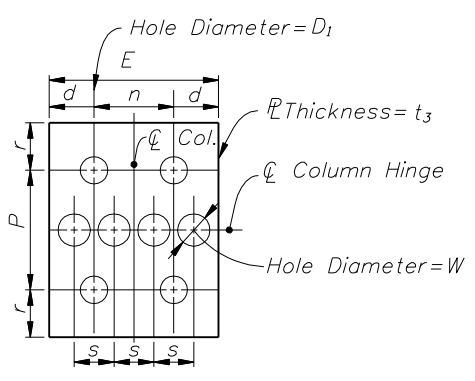
OPTIONAL HINGE

Saw Cut Post Flange And Web. If Post Is Cut After Galvanizing, Repair The Cut Surface In Accordance With Section 562.

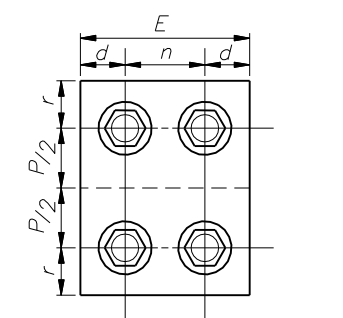


TYPICAL HINGE

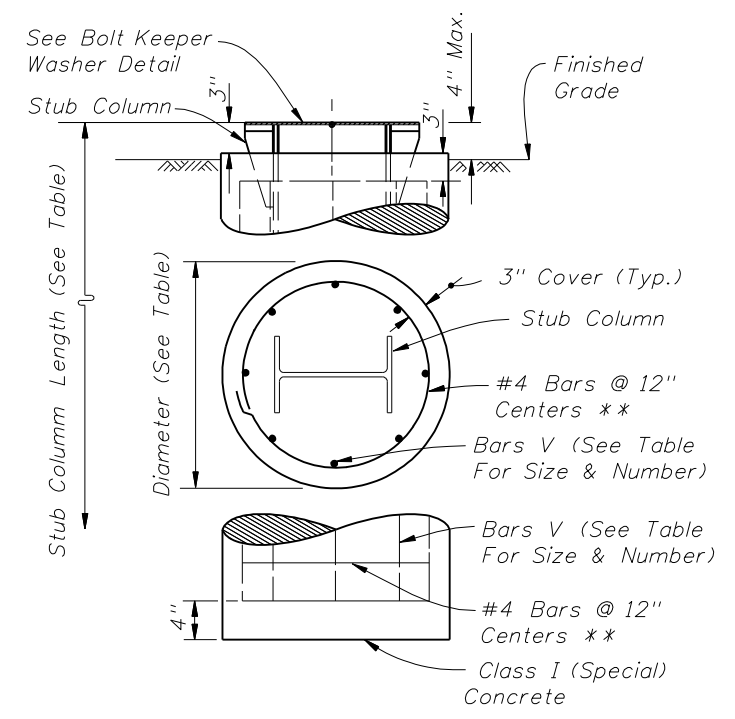
FUSE & HINGE PLATES
(See Fabricator Note on Sheet 1 of 2)
DETAIL B



FUSE PLATE



HINGE PLATE



FOUNDATION ELEVATION

NOTE: All Reinforcing To Be Grade 60.

** At the Option of the Contractor, D10 Spiral Wire @ 6" Pitch, Three Flat Turns Top and One Flat Turn Bottom may be Utilized in Lieu of Specified.

Shop-weld assemblies of foundation stirrup reinforcing bars are permitted in reinforced concrete foundation provided that:

1. The reinforcing bars conform to ASTM Specification A706/706M.
2. The holding wires conform to ASTM Specification A82 or A496.
3. The Shop welding is performed by machines under a continuous, controlled process, approved by the Engineer.
4. Quality control test are performed on shop-welded specimens and the test results are available, upon request, to the Engineer.

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

1. Assemble post to stub with bolts and with one flat washer on each bolt between plates.
2. Shim as required to plumb post (see shim detail).
3. Tighten all L2 bolts the maximum possible with 1'-0" to 1'-3" wrench to bed washers and shims and to clean bolt threads. Then loosen each bolt in turn and retighten in a systematic order to the torque specified in the table.
4. Burr threads at junction with nut using a center punch to prevent nut loosening.
5. Sections shown are for installation on right shoulder. For left shoulder plate slot bevels are opposite hand from that shown.

Section*	BASE CONNECTION DATA											SHIM		FUSE (HINGE) PLATE DATA										FOUNDATION DATA				
	A	B	C	D	Bolt Size(L2) & Torque(in-lb)	R	b	f	S	t1	t2	w	L	M	Bolt Size	E	P	D1	d	n	r	s	t3	W	Dia.	Depth	Stub Length	Reinf. Bars V
W 6x12	4 3/4"	2"	5 1/8"	2"	5/8" \phi 345	3/8"	1 1/8"	2 1/2"	1 3/16"	1/2"	1/2"	1/4"	1 3/8"	1 1/16"	5/8"	4 1/4"	3"	1 1/16"	1 1/8"	2"	1 3/16"	1"	1/4"	1 3/16"	2'-0"	5'-6"	2'-4"	10-#6
W 8x18	5 3/4"	2 3/16"	6 1/4"	2 3/16"	3/4" \phi 550	7/16"	1 1/2"	2 3/4"	1 3/8"	1/2"	5/8"	1/4"	1 3/4"	1 3/16"	7/8"	5 1/2"	3 3/4"	1 5/16"	1 1/2"	2 1/2"	1 3/8"	1 5/16"	3/8"	1 1/16"	2'-0"	7'-6"	2'-10"	10-#6
W 10x22	6 1/8"	2 3/8"	8"	2 3/8"	7/8" \phi 640	1/2"	1 9/16"	3"	1 3/8"	1/2"	3/4"	5/16"	2"	1 5/16"	1"	6 3/8"	4 5/16"	1 1/16"	1 3/4"	2 7/8"	1 3/4"	1 1/2"	3/8"	1 3/16"	2'-4"	8'-6"	3'-4"	8-#8
W 10x33	8"	2 3/4"	8"	2 3/4"	1 1/8" \phi 780	5/8"	2"	4"	1 9/16"	1/2"	3/4"	5/16"	2 3/8"	1 3/16"	1 1/8"	7 7/8"	5 5/16"	1 3/16"	2 1/4"	3 3/8"	2"	1 7/8"	1/2"	1 9/16"	2'-4"	10'-3"	4'-0"	8-#8
W 12x40	8"	3"	8"	3"	1 1/8" \phi 780	5/8"	2"	4"	1 9/16"	1/2"	3/4"	5/16"	2 3/8"	1 3/16"	1 1/4"	8 3/8"	5 3/4"	1 5/16"	2 1/4"	3 7/8"	2 3/16"	2"	1/2"	1 11/16"	2'-8"	11'-3"	4'-8"	10-#8

* Designations: Normal Depth in inches and weight in pounds per linear foot.

STEEL POST, BASE, FOUNDATION & FUSE PLATE DETAILS

DATE		BY		DESCRIPTION		DATE		BY		DESCRIPTION		2008 Interim Design Standard				Interim Date	Sheet No.
11/27/07		L.W.		Notes added to FOUNDATION DETAIL.												07/01/08	2 of 2
7/1/08		D.Y.W.		Provided Specification reference for bolt tightening. Changed bolt keeper plate, base connection and shims detail. Index Completely revised changed from three sheets to two sheets								MULTI-COLUMN GROUND SIGN				Index No.	11200