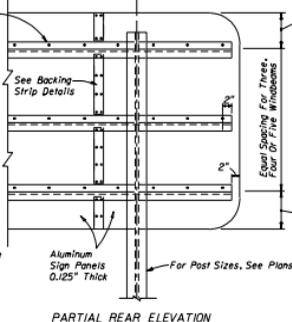


(For Notes And Dimensions Not Shown, See Plans)

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

See Tables For Size And Number Of Wind Beams



Two Wind Beams - 2" x D
Three Wind Beams - 14.5" x D
Four Wind Beams - 10.7" x D
Five Wind Beams - 6.5" x D

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

See Detail To Right 1/2 Type Wind Beam

GENERAL NOTES

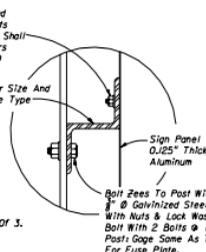


3/4" @ Aluminum Flat Head Machine Screws With Nuts And Lock Washers, Bolts Shall Be Spaced @ 12" Centers Maximum (Counter Sink)

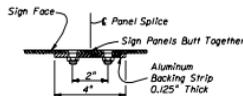
See Table For Size And Number Of Zee Type Wind Beams

6 Post Hinge @ Bottom Of Sign ± 1"

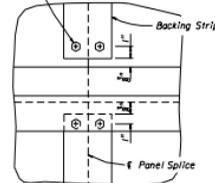
For Support Hinge See DETAIL B on Sheet 2 & 3 Of 3.



Note: If the sign panels are deeper than 14", a Horizontal Panel Splice is allowed at an interior Z bar support, shop drawings shall be required. Minimum panel section width = 2'-6".



Pairs Of 3/4" @ Aluminum Flat Head Machine Screws With Nuts And Lock Washers Spaced At 1'-0" Centers Maximum



DESIGN WIND SPEEDS BY COUNTY

- ZONE NO. 1 (60 mph)**
Alachua, Baker, Bay, Bradford, Calhoun, Clay, Columbia, Escambia, Gadsden, Gilchrist, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Lake, Leon, Liberty, Madison, Marion, Oklawaha, Putnam, Santa Rosa, Sumter, Suwannee, Union, Walton and Washington Counties.
- ZONE NO. 2 (70 mph)**
Citrus, Desoto, Dixie, Duval, Flagler, Franklin, Glades, Gulf, Hardee, Hendry, Hernando, Highlands, Hillsborough, Levy, Nassau, Duval, Orange, Osceola, Pasco, Pinellas, Polk, Seminole, St. Johns, Taylor and Volusia Counties.
- ZONE NO. 3 (80 mph)**
Brevard, Charlotte, Collier, Indian River, Lee, Manatee, Martin, Palm Beach, Sarasota, St. Lucie and Volusia Counties.
- ZONE NO. 4 (90 mph)**
Broward, Dade and Monroe Counties.

NUMBER OF WIND BEAMS FOR GIVEN DEPTH & WIND					
Wind	No. Beams	Max. Depth	Wind	No. Beams	Max. Depth
60	2	8'-0"	80	2	6'-8"
60	3	13'-4"	80	3	11'-4"
60	4	18'-0"	80	4	15'-4"
60	5	22'-0"	80	5	19'-0"
70	2	7'-0"	90	2	6'-0"
70	3	12'-0"	90	3	10'-4"
70	4	16'-4"	90	4	14'-0"
70	5	20'-8"	90	5	17'-8"

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

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

DESIGN SPECIFICATION

Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 1994. 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, and the FDOT Standard Specifications with Supplement.

DESIGN WIND LOAD

See Design Wind Speeds by County for wind in miles per hour on flat sign area. The allowable working stress shall be increased by 40% for combination dead load and wind load.

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. Sheets are to be anodized, either neutralized and treated with Aldine 1200, Iridite 14-2, Banderite 721, or equal. No stenciling permitted on sheets. Aluminum welding rods shall meet the requirements of Aluminum Association Alloy No. 5556 filler wire.

STRUCTURAL STEEL

All structural steel shall meet the requirements of ASTM A709 Grade 36.

ALUMINUM BOLTS, NUTS, & LOCKWASHERS

Aluminum bolts shall meet the requirements of Aluminum Association Alloy 2024-T4 (ASTM F468). The bolts shall have an anodic coating of least 0.0002" thick and be Chromate sealed. Lock washers shall meet the requirements of Aluminum Association Alloy 7015-T6 (ASTM B221). Nuts shall meet the requirements of Aluminum Association Alloy 6061-T6 or 6062-T5 (ASTM F467).

STEEL BOLTS, NUTS, & WASHERS

All steel bolts, nuts and washers shall meet the requirements of ASTM A325 Types 1 & 2 and shall be galvanized in accordance with Standard Specifications 962-7.

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.

TOLERANCES

All above materials shall be in accordance with the governing ASTM specifications.

GALVANIZING

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 tables on sheets 2 & 3 of 3. Overtightened base connections will not be accepted.

FUSE PLATES

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 ground. Metal projecting beyond the plane of the plate face will not be tolerated.

SIGN FACE

All sign face corners shall be rounded. See Sign Layout Sheet.

SHOP DRAWINGS

When sign shop 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 traffic plans for approval.

FABRICATOR NOTE

All bolted connections, except L₂ bolts and Zee to Post bolts, shall be high strength bolts. Bolts shall be tightened in the shop following a method approved by the engineer. Tightening shall be to such a degree so as to attain in each bolt the residual tension specified in the tabulation below.

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. The holes shall be filled with flowable concrete after the precast foundation is in place. The cost of flowable concrete, installing and removal of casing shall be included in the unit price of Sign Multi-Post.

**HIGH STRENGTH BOLTS (A-325)
MINIMUM RESIDUAL TENSION
BOLT SIZE TENSION (lb)**

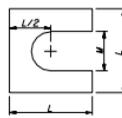
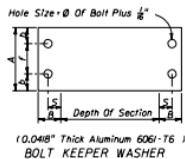
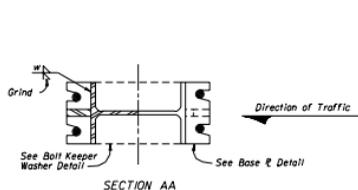
3/8"	19,200
1/2"	28,400
5/8"	39,250
3/4"	51,500
1"	56,450
1 1/4"	71,700

SIGN PANEL AND WIND BEAMS

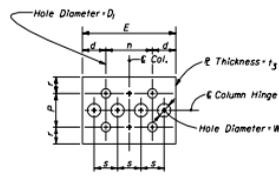
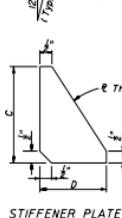
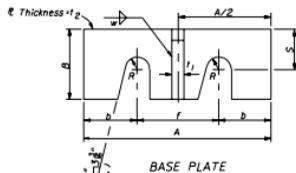
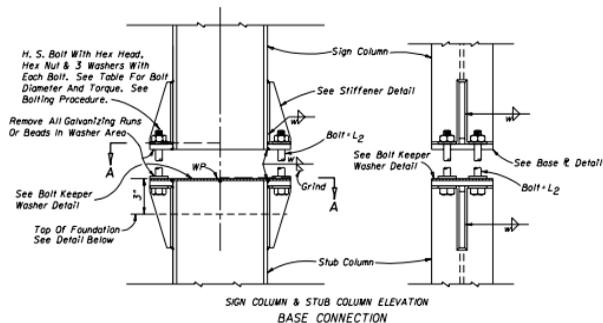
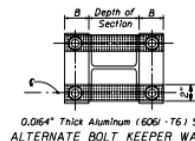
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN

**STANDARD ROADSIDE SIGN
BREAK-AWAY PANEL DETAIL**

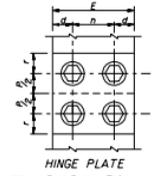
Revised By	Date	Approved By
Designed By	002 11-94	
Drawn By	1603 11-94	
Checked By	002 11-94	
Scale	1" = 1'-0"	
Sheet No.		1 of 3
Project No.		95350



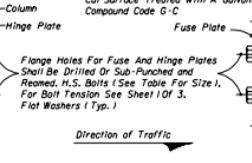
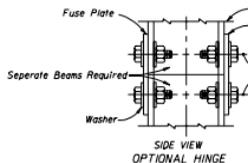
SHIM DETAIL
Provide 2 - 0.049" Thick and 2 - 0.0329" Thick Shims Per Post



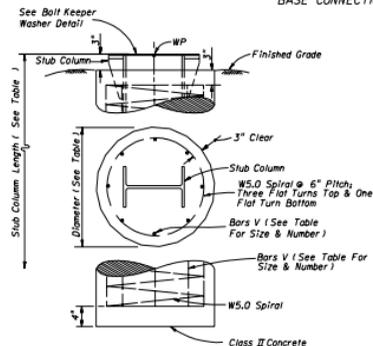
FUSE PLATE



(Match Post Flange Thickness)



(See Fabricator Note On Sheet 1 of 3)
FUSE & HINGE PLATES
DETAIL B



FOUNDATION DETAIL

NOTE: All Reinforcing To Be Grade 60.

Section*	BASE CONNECTION DATA												FUSE (HINGE) PLATE DATA												FOUNDATION DATA				SHIM			
	A	B	C	D	Bolt Size L ₁ L ₂ W ₁ Typical In. 33	R	F	S	T	U	V	W	Bolt Size	E	P	D ₁	d	n	r	s	t ₁	t ₂	W	Dia.	Depth	Sub Length	Reinf. Bars	V	L	M		
W 6x12	42	2"	54	2"	Ø 345	11"	11"	24"	12"	24"	12"	24"	Ø 44	3"	18"	2"	18"	10"	10"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
W 8x18	54	24"	64	24"	Ø 550	12"	12"	24"	12"	24"	12"	24"	Ø 54	3 1/2"	21"	2 1/2"	21"	12"	12"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
W 10x22	64	24"	84	24"	Ø 640	13"	13"	30"	13"	30"	13"	30"	Ø 64	4"	24"	2 1/2"	24"	12"	12"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
W 10x33	84	24"	84	24"	Ø 780	14"	14"	36"	14"	36"	14"	36"	Ø 74	5"	27"	2 1/2"	27"	12"	12"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
W 12x40	84	3"	84	3"	Ø 780	15"	15"	36"	15"	36"	15"	36"	Ø 84	5 1/2"	27"	2 1/2"	27"	12"	12"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	

* Designations Give (Nominal Depth) x (ID/11)

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

1. Assemble post to stub with bolts and with one flat washer on each end bolt between plates.
2. Shim as required to plumb post (see shim detail).
3. Tighten all 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 prescribed torque (see table).
4. Burr threads at junction with nut using a center punch to prevent nut loosening.

NOTE:

Sections shown are for installation on right shoulder and in gore. Plate slot bevets are opposite hand from that shown for installations in the median.

STEEL POST, BASE, FOUNDATION & FUSE & DETAILS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN

STANDARD ROADSIDE SIGN
BREAK-AWAY POST DETAILS

Designed By	102	11-76	Approved By	[Signature]	
Drawn By	102	11-76	Checked By	[Signature]	
Erased By	102	11-76	Scale	00 3 of 3	