**TYPICAL ELEVATION**

Note: All horizontal/vertical splices are to be connected using a minimum of 7/8" washers spaced at 1'-0" centers maximum plus lock washers, bolts shall be tightened only to the torque shown in the plans.

**TYPICAL ELEVATION**

**PARTIAL REAR ELEVATION**

**SIDE VIEW**

**GENERAL NOTES**

**DESIGN WIND SPEEDS BY COUNTY**

<table>
<thead>
<tr>
<th>Wind Speeds</th>
<th>County</th>
</tr>
</thead>
</table>

**SIZE OF WIND BEAMS**

<table>
<thead>
<tr>
<th>Size of Zee</th>
<th>Length of Sign (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; x 2.69 x 2.33</td>
<td>11'-0&quot; - 29'-6&quot;</td>
</tr>
<tr>
<td>2&quot; x 2.69 x 3.38</td>
<td>19'-0&quot; - 29'-6&quot;</td>
</tr>
</tbody>
</table>

**NUMBER OF WIND BEAMS FOR GIVEN DEPTH & WIND**

<table>
<thead>
<tr>
<th>Wind Speeds</th>
<th>Max Depth</th>
<th>Wind Speeds</th>
<th>Max Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>2'-0&quot;</td>
<td>110 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>3'-0&quot;</td>
<td>110 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>4'-0&quot;</td>
<td>105 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>5'-0&quot;</td>
<td>105 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
</tbody>
</table>

**SIGN FACE**

<table>
<thead>
<tr>
<th>Sign Face</th>
<th>Panel Splice</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.125&quot; Thick</td>
<td>Aluminum Backing Strip</td>
</tr>
</tbody>
</table>

**BACKING STRIP DETAILS**

<table>
<thead>
<tr>
<th>Backing Strip</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.125&quot; Thick</td>
<td>Aluminum Backing Strip</td>
</tr>
</tbody>
</table>

**MULTI-COLUMN GROUND SIGN**

**2010 Interim Design Standard**

**REASONS**

- Dated: 20/01/08
- Version: Final
- Designation: AASHTO Standard Specifications for Highway Bridges
- Fabricator Notes:
  - All bolts, except L-2 bolts and Zees to post bolts, shall be tightened to the torque shown in the plans.
  - Shop drawings will be required for approval when the column length exceeds the length shown in the plans by more than 2'-0".

**GENERAL NOTES**

- **Wind Beams:**
  - Steel bolts, nuts, and washers shall be galvanized in accordance with the latest edition of ASTM A325.
  - **Aluminum:**
    - All aluminum shapes, angles, plates, bolts, nuts, and washers shall be galvanized in accordance with ASTM F2329.
  - **Welding:**
    - Refer to the latest editions of the AWS Structural Welding Codes for Steel and Aluminum.
  - **Steel:**
    - All steel shapes, angles, plates, bolts, nuts, and washers shall meet the requirements of ASTM A36.
  - **Aluminum:**
    - All aluminum shapes, angles, plates, bolts, nuts, and washers shall meet the requirements of ASTM B209.
  - **Welding Requirements:**
    - Refer to the latest editions of the AWS Structural Welding Codes for Steel and Aluminum.
  - **Fabricator Notes:**
    - All bolts, except L-2 bolts and Zees to post bolts, shall be tightened to the torque shown in the plans.

**Foundation Details**

- **Foundation:**
  - Foundation details are provided in accordance with the latest edition of the AASHTO Standard Specifications for Highway Bridges.
  - **地下水fixing:**
    - Foundation details are provided in accordance with the latest edition of the AASHTO Standard Specifications for Highway Bridges.

**For Further Information:**

- **Foundation Drawings:**
  - See Z Type Wind Beam Detail.
  - See Two Type Wind Beam Detail.

**Table for Size and Number of Wind Beams**

<table>
<thead>
<tr>
<th>Wind Speeds</th>
<th>Max Depth</th>
<th>Wind Speeds</th>
<th>Max Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>2'-0&quot;</td>
<td>110 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>3'-0&quot;</td>
<td>110 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>4'-0&quot;</td>
<td>105 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>130</td>
<td>5'-0&quot;</td>
<td>105 - 29'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
</tbody>
</table>

**For Support Hinge:**

- See Detail B on Sheet 2 of 2.

**For Post Sizes:**

- See Plans.

**For All Posts:**

- See Table for Size and Number of Wind Beams.

**For Post Hinge:**

- See Table for Size and Number of Wind Beams.

**For Fuse Plate:**

- See Backing Strip Details.

- **For Post Hinge:**
  - See Table for Size and Number of Wind Beams.

**For Z Type Wind Beam:**

- See Z Type Wind Beam Detail.

**For Two Type Wind Beam:**

- See Two Type Wind Beam Detail.
PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

1. Assemble post to stub with bolts and flat washers as shown.
2. Shim as required to align post with stub.
3. Tighten all bolts the maximum feasible 1/4 turn to 1/2 turn wrench to bed washers and shims and to clean bolt threads.
4. Grub screws at junction of post with stub using a center punch to prevent nut loosening.

DETAIL A-A

BOSS PLATE

SHIM DETAIL

BOLT KEEPER PLATE

FUSE PLATE (Typ)

Hinge Plate

Shims as Required

Column

SEE BOLT KEEPER PLATE DETAIL

Washer

Flange Plate

Washer

Bolt Plate Detail

See Bolt Keeper Plate Detail

Scale: 1-1/2" = 1'

Optional Hinge

Typical Hinge

Saw Cut Plate Flange and Web.

If post is cut after galvanizing, repair the Cut Surface in accordance with Section 562.

Foundation Elevation

NOTE: All reinforcing to be Grade 260.

** At the option of the Contractor, 1/2" Spiral Wire @ 6" Pitch, Three Flat Turns Top and One Flat Turn Bottom may be substituted in lieu of Specified.

Shop-welded assemblies of foundation shroud reinforcing bars are permitted in reinforced concrete foundations provided that:

1. The reinforcing bars conform to ASTM Specification A416 or A495.
2. The heading wires conform to ASTM Specification A495 or A496.
3. The Shop welding is performed by machinists under a continuous, controlled process, approved by the Engineer.
4. Quality control tests are performed on shop-welded specimens and the test results are available upon request to the Engineer.

BASE CONNECTION DATA

<table>
<thead>
<tr>
<th>Section</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>L (Typ)</th>
<th>M</th>
<th>Gsys Depth (in)</th>
<th>Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3/4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Foundation Details

Multi-Column Ground Sign

Steel Post, Base, Foundation & Hinge Plate Details

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>Base Plate</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>Screw</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>Washer</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>Nut</td>
</tr>
</tbody>
</table>

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