

Aluminum Sign Hanger
2 1/2" Wide Flange, Alloy 6061-T6
Spaced at 4'-6" O.C. Max.

Truss Chord
(Typ.)

Extruded Horizontal Alum.
Stringer, Alloy 6061-T6,
2 1/2" x 1 3/8" x 1.35" (Typ.)

Sign Panel

1/2" S.S. U-Bolts
Nuts and Lock
Washers (Typ.)

0" Min., 18'-0" ± Max. Vertical
clearance to High Point of Roadway
for the bottom chord of the
structure.

NOTE:
For Sign Panel
details, see SI
connection details
SI-16A.

$\frac{1}{2}" \varnothing$ S.S. U-Bolts, Nuts
and Lock Washers

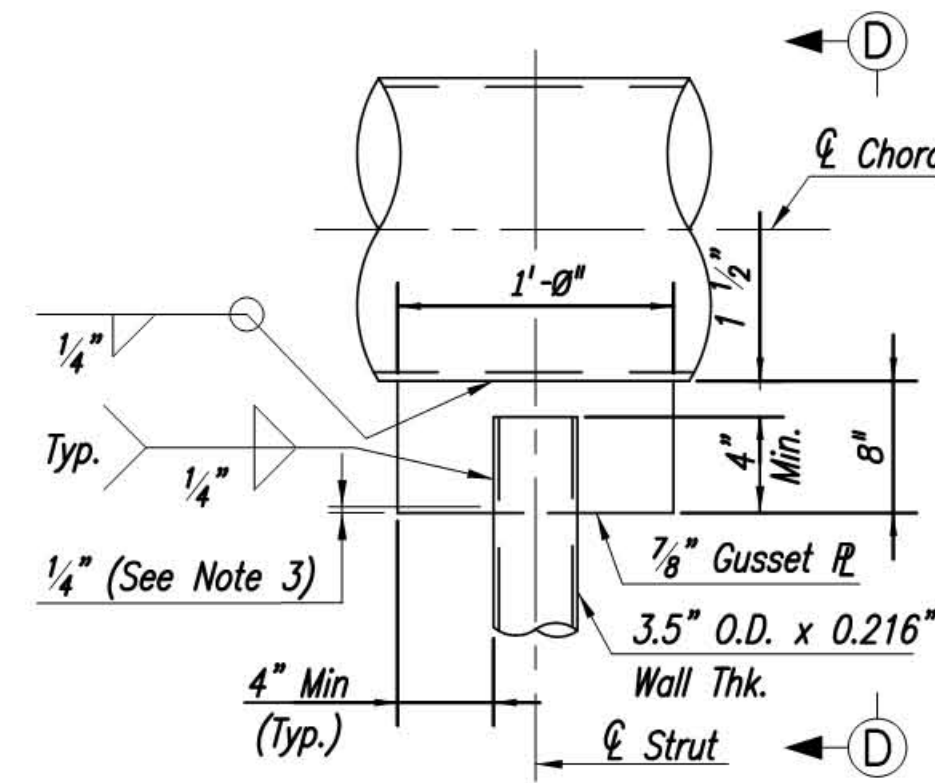
$\frac{1}{8}"$ Reinf. Fabric
Pad
 $\frac{1}{4}"$ S.S. $\varnothing$

$2 \frac{1}{4}"$

Horiz. Alum.
Stringer

$\frac{3}{8}" \varnothing$ S.S. Bolts, Nuts
and Lock Washers (Typ.)

2



Technical drawing of a wall-to-column connection showing a cross-section. The drawing includes a wall on the left and a column on the right. A vertical "Strut" is shown with a diameter "D" and a wall thickness of "3.5" O.D. x 0.216" (Typ.)". A horizontal "Diagonal" is shown with a diameter "D" and a wall thickness of "3.5" O.D. x 0.216" (Typ.)". A "Gusset" is shown with a thickness of "7/8"". Dimensions include "4" Min." for the wall thickness, "1" Min." for the diagonal thickness, "1" Min." for the gusset thickness, and "1'-7"" for the overall width. A "Chord" is shown at the bottom with a diameter "D" and a wall thickness of "3.5" O.D. x 0.216" (Typ.)". A "Typ." symbol is used for typical dimensions.

$\varnothing$ Diagonal or Strut
and Gusset P.

Chord (Truss)

$\frac{7}{8}$ " Gusset P.

1"

4" Min.

$\frac{5}{8}$ "

$R = \frac{7}{8}$ "

$\varnothing$ Cope Hole

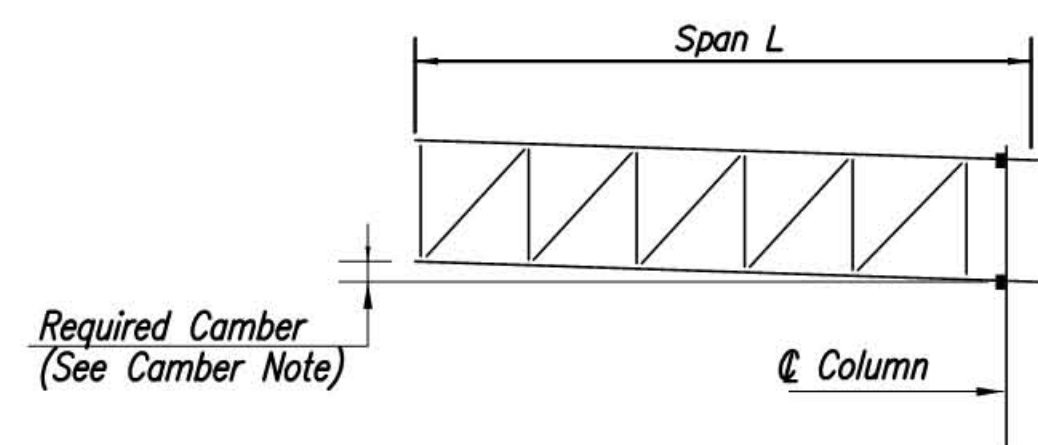
$\frac{1}{4}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ " (Typ.)

(See Note 3)

SECTION A-A

$$1'' = 1' - 0''$$


The diagram illustrates a welded moment-resisting joint between a truss and a column. The truss members are labeled: Top Chord, Truss, and Bottom Chord. The column is labeled: Column. The joint shows two types of flange plates: Cambered (top) and Uncambered (bottom). The cambered flange plates are shown with a curved profile, while the uncambered flange plates are shown with a straight profile. The joint is welded to the column.

Technical drawing showing a cross-section of a truss chord and vertical stiffener connection. The drawing includes the following components and dimensions:

- Truss Chord:** 12.75" O.D. x 0.500" Wall Thk.
- 1/2" Bracket Plate:** Attached to the chord.
- 2" Flange Plate:** Attached to the chord.
- 1" Vertical Stub Stiffener (Typ.):** Attached to the flange plate.
- Hole Dimensions:**
 - 5/8" holes in the chord and flange plate.
 - 7/16" holes in the flange plate and stiffener.
 - 1/4" hole in the bracket plate.
- Spacings:**
 - 2" spacing between stiffeners.
 - 7/16" spacing between holes.
- Note:** 12- $\varnothing$ 1 5/16" hole for 1 1/4" $\varnothing$

6" O.D. x $\frac{3}{8}$ " A709 Grade 36
Galvanized Circular Plate
Washer with 2 $\frac{9}{16}$ " ϕ Hole
for Anchor Bolt (Typ.)

2" Thk. Base Plate

Elevation "A"

3"

1"

6'-0" Bolt Embedment

8"

2" Max.
1" Min.

2 $\frac{1}{2}$ " F1554 Anchor Bolt
(Fully Galvanized) (See Note 4)
1" Max.
 $\frac{1}{2}$ " Min.

Threaded Length

2 $\frac{5}{8}$ " ϕ Max. Hole
Diameter in Base
Plate

$\frac{3}{4}$ " Anchor Plate
(See Anchor Plate
Detail)

Technical drawing of a circular anchor plate. The drawing shows a circular plate with a central hole and eight surrounding holes. The central hole is labeled "2'-10\"

Camber shall be obtained by shortening the length of the top chord stub and extending the length of the bottom chord stub. Chord flange plates shall be skewed accordingly before being welded to the chords. The required camber shall be $L/1000$ plus the dead load camber. No force shall be applied in providing the camber. An alternate method of cambering may be used as approved by the Engineer.

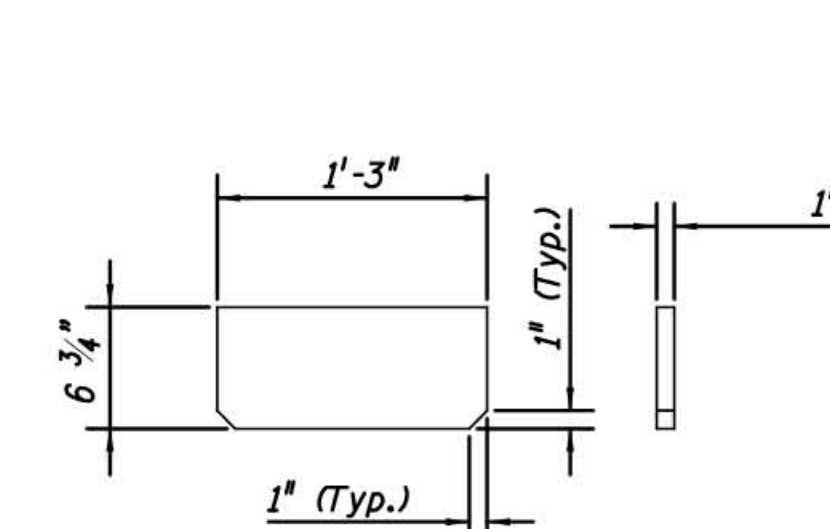
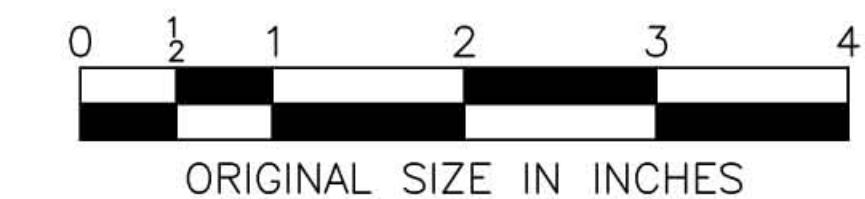


Figure 10.10 is a technical drawing showing the detail of a column base plate. The drawing includes the following dimensions and specifications:

- Top flange thickness: $1''$
- Main plate thickness: $1''$
- Bottom flange thickness: $1''$
- Vertical dimension from top flange to main plate: $6 \frac{3}{4}''$
- Horizontal dimension from main plate to bottom flange: $1' - 5''$
- Horizontal dimension from main plate to column centerline: $1''$
- Column diameter specifications:
 - $2' - 3''$ for $24'' \varnothing$ Column
 - $2' - 2''$ for $22'' \varnothing$ Column
- Fillet radius $R = \frac{O.D. \text{ Column}}{2}$
- Vertical dimension from bottom flange to main plate: $1 \frac{1}{8}'' \text{ Min.}$

1. *Sign support structures shall conform to Section A06.*
2. *For other details and notes for cantilever sign structures, see Standard Drawing SI-18A.*
3. *Welds for 3.5" O.D. with 0.216" wall thickness pipe to gusset plate connections shall be terminated 1/4 inch from the edge of the gusset plate.*
4. *2 1/2" diameter anchor bolts shall be provided with heavy hexagon nuts and washers.*
5. *For Elevation "A," see Note 2 on Standard Drawing SI-18A.*
6. *Anchor plate and template shall conform to the requirements of ASTM A709 Grade 36.*
7. *Structural steel plates and shapes shall conform to the requirements of ASTM A709, Grade 50W unless otherwise noted.*
8. *1 1/4" diameter A325 splice bolts shall be required to have 71 kips in tension.*
9. *All bolts shall be provided with heavy hexagon nuts and washers.*
10. *Sign panels shall not cantilever more than 2'-3" past the centerline of the aluminum sign hanger.*



CANTILEVER SIGN SUPPORT STRUCTURES TRUSS AND POST DETAILS-2

2009 STANDARD
DRAWING SI-18B

	2	5/14	REVISED BUTTERFLY STRUCTURE SIGN HANGERS
	1	12/09	REVISED ANCHOR BOLT ASTM STANDARD
		04/09	ORIGINAL DRAWING
APP.	NO.	DATE	REVISION

SHEET NO. OF