SPAN SIGN STRUCTURE NOTES

1. Work this Index in conjunction with SPAN SIGN STRUCTURE DATA TABLES in the Plans and Index 11300.

2. Handholes at the pole base are required for DMS Structures. Refer to Index 18300 for Handhole Details.

3. Shop Drawings are required. Obtain Shop Drawing approval prior to fabrication. Include the following:
   a. Field verification of all upright heights.
   b. Foundation elevations. Ensure minimum vertical clearances of the sign panel over the roadway.
   c. Height of the foundation above adjacent ground.
   d. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   e. Method to be used to provide the required parabolic camber (see Camber Diagram).
   f. Handholes at pole base (when required).

4. Materials:
   a. Upright and Chords (Steel Pipe): API-5L-X42, 42 ksi yield or ASTM A500, Grade B (Min.)
   b. Steel Angles and Plates: ASTM A572 grade 50
   c. Weld Material: E70XX
   d. Anchor Bolts, Nuts and Washers:
      i. High Strength Bolts: ASTM A325, Type 1
      ii. Nuts: ASTM A563, Grade D Heavy-Hex
      iii. Washers: ASTM F436, Type 2, one under turned element
   e. Plate Washers: ASTM A36 (2 per bolt)
   f. Concrete: Class IV (Drilled Shaft)
   g. Rebar:
      i. Stress Rated: AASHTO Grade 60
      ii. Durability: ASTM A416
   h. Disassemble as necessary and secure components for shipment.

5. Fabrication:
   a. Welding: Specification Section 460-6.4
   b. Chord Splices: Minimum splice opening is three chord panel lengths apart along three chord panel lengths from the
      uprights. Chord Splices may be either the Standard Splice or the Alternate Splice but not both on the same
      structure.
   c. Bar Splices: Not allowed
   d. Structural bolt hole diameters: Bolt diameter plus 16 g.
   e. Anchor bolt hole diameters: Bolt diameter plus 16 g.
   f. Not Dip Galvanize after fabrication.
   g. Shop assemble the entire structure after galvanizing to validate/document alignment and clearance for bolted
      connections as well as contact between connecting plates. Take remedial action, if necessary, prior to
      shipment.
   h. Disassemble as necessary and secure components for shipment.

6. Coatings:
   a. Anchor Bolts, Nuts and Washers: ASTM F1554
   b. All other steel, including Plate Washers, hot dip galvanize: ASTM A123

7. Construction:
   a. Construct foundation in accordance with Specification Section 455 Drilled Shaft, except payment is included in
      the cost of the structure.
   b. Prior to erection, record the as-built anchor locations and submit to the Engineer.
   c. Provide a parabolic camber with the maximum upward deflection as shown on the Camber Diagram.
   d. Enter the field and install anchor bolts in accordance with Specification Section 700. Split-Lock Washers are not permitted.
   e. Install Aluminum Sign Panels as shown on the Elevation drawing.
   f. After installation, place wire screen between top of foundation and bottom of baseplate in accordance with
      Specification Section 649-6.
Anchor Bolts
Equally Spaced between 'BD' Stiffner Plates
For Left Upright
and Upright Center of Drilled Shaft
Equally Spaced
Anchor Bolts
'CB' For Right Upright
'BB' For Left Upright
Bolt Circle
'CH' For Right Upright
'BH' For Left Upright
See Upright Cap Detail
1.5 x 'F' OD + 7"
Bottom Truss Chord
45° 1"
(Typ.)
(Right Upright Similar)
2 Bolt Dia.
(Body)
BOLT OR RIVET
2 Bolt Dia.
CENTER DIST:
2 Bolt Dia.
'CA' Ø Bolt, Right Upright
'BA' Ø Bolt, Left Upright
See Detail D
Truss Web Angle
Gusset Circle
Chord &
Bottom of Circle
Wrap Fillet Weld Around Stiffener Termination on the Tube Wall (Typ.).
5/8" For an Odd Number of Bolts Per Row
5/8" For an Even Number of Bolts Per Row
See Detail D
10" for Truss Depths less than 7'-0"
1/2" for Truss Depths 7'-0" or Greater
TOP TRUSS CHORD
1.5 x 'F' OD + ('H' or 'J') OD + 2"
'F' OD ~ Outside Diameter
Abbreviation
NOTE:
'F' OD + 7"
Bottom Truss Chord
'F' OD + 2"
'F' OD + 7"
'F' OD + 1"
1"
45°
1"
(Typ.)
1"
(Typ.)
4"
(Typ.)
4"
(Typ.)
TOP TRUSS CHORD
1.5 x 'F' OD + ('H' or 'J') OD + 2"
'F' OD ~ Outside Diameter
Abbreviation
NOTE:
'F' OD + 7"
Bottom Truss Chord
'F' OD + 2"
'F' OD + 7"
'F' OD + 1"
1"
45°
1"
(Typ.)
1"
(Typ.)
4"
(Typ.)
4"
(Typ.)
TOP TRUSS CHORD
1.5 x 'F' OD + ('H' or 'J') OD + 2"
'F' OD ~ Outside Diameter
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NOTE:
1.5 x 'F' OD + ('H' or 'J') OD + 2"
'F' OD ~ Outside Diameter
Abbreviation
NOTE:
SPAN SIGN STRUCTURE

VIEW F-F

Front of Truss Elevation

1/2 the number of panels for an even number of panels
1/2 the number of panels rounded down to the closest whole number for an odd number of panels

2-1/2 Ø Bolts (Typ.)

Aluminum Zee Sign Hanger

Attach Luminaire to angle with 4-1/2 Ø bolts at each location where required

BACK-SIDE SIGN MOUNTING DETAIL
Truss Chord "F" (Typ.)
'GA' ℅ 'GD' x 'GC'
See Detail I For Edge Distance

DETAIL H

Truss Web Angles (Typ.)

See Detail I

DETAIL I

Truss Chord "F" (Typ.)
'GA' ℅ 'GF' x 'GE'
Centroids of Angles and Chords Intersect (Typ.)

DETAIL K

Truss Web Angles (Typ.)

'GA' ℅ 'GF' x 'GC'
Connection Detail
See Upright-Truss plane of view Plate is skewed to plane of view

DETAIL L

Truss Web Angles (Typ.)

'GA' ℅ 'GF' x 'GC'
Connection Detail
See Upright-Truss plane of view Plate is skewed to plane of view

DETAIL M

SECTION N-N

1/2" Plate (Cap)
1/4" x 1/2" x 1/2"
9/16" Ø Hole
Tack Weld 9/16 Hex Nut (Chase Threads after Galvanizing)

SECTION O-O

1/2" Plate (Cap)
1/4" Thick Neoprene Gasket (Glued to Cap)
1/2" Hex Head Bolt w/ Rubber Washer (Top)

UPRIGHT CAP DETAIL

1/2" OD 2
1/4" Bar

PLUG DETAIL

(Each end of Back Truss Chord)