MATERIAL SPECIFICATIONS

PIPE (CHORDS, STRUTS AND POSTS)
ASTM A 36 OR ASTM A 53 GRADE B, TYPE E OR S, OR A 606 GRADE 9

PLATES
ASTM A 36

SHAPES
ASTM A 36
ASTM A 992

BOLTS, NUTS, WASHERS
STD. SPEC 9-06.5.2

PIPE, PLATE & SHAPE GALVANIZING
ASHTO M 111

FASTENER GALVANIZING
ASHTO M 232

EQUAL ELEVATIONS

SPAN LENGTH S (C TO 6 OF END POSTS)

INTERIOR DIAGONAL (TYP.)

“LOWER” HORIZONTAL DIAGONAL (TYP.)

“UPPER” HORIZONTAL DIAGONAL (TYP.)

TOP

SYMMETRICAL ABOUT S SPAN (EXCEPT FRAMING WITH ODD NUMBER OF PANELS)

END POST

END TRUSS DIAGONAL (TYP.)

END TRUSS STRUT

POST BASE AND SCREEN - SEE DETAILS, SHEET 4

NUMBER OF PANELS VARIES ALTERNATE DIAGONALS TO BE PARALLEL, DIAGONAL G NOT TO EXCEED 1.25 TIMES D

1 1/4” CAPPED NERPLE - ON SIDE OPPOSITE APPROACHING TRAFFIC

ELEVATION

Y1 = HEIGHT OF SHALLOWEST SIGN ON STRUCTURE, D + 1’ - 0” MIN.

Y2 = HEIGHT OF ANY SIGN WITH HEIGHT GREATER THAN Y1.

STRUCTURE DIMENSIONS

SPAN LENGTH S | DIMENSION D | TOP AND BOTTOM CHORDS | DIAGONAL | END TRUSS POSTS | END TRUSS STRUTS AND DIAGONALS | TOTAL SIGN AREA (MAX.) (SQ. FT.)
--- | --- | --- | --- | --- | --- | ---
60’ OR LESS | 4’ - 0” | 3’ x 216” | 1 1/4” x 140” | 10’ x 279” | 2 1/2’ x 203” | 364
61’ to 90’ | 5’ - 0” | 4’ x 232” | 2’ x 154” | 10’ x 279” | 2 1/2’ x 203” | 604
91’ to 120’ | 6’ - 0” | 5’ x 256” | 2’ x 154” | 10’ x 307” | 3’ x 216” | 964
121’ to 150’ | 7’ - 0” | 6’ x 280” | 2 1/2’ x 203” | 10’ x 366” | 3 1/2’ x 226” | 1104

ALL MEMBERS ARE PIPE. VALUES SHOWN ARE NOMINAL PIPE SIZE AND WALL THICKNESS.
Hemispherical post finial, 1/8" min. thickness. Install after galvanizing.

3/8" Allen hollow set screw with dog point (Typ.) (Corrosion resistant metal or coating) at 90° intervals.

Section through finial and post

Drill and tap wall for 3/8" Allen set screw.

Plate - 1/8" min.

5/16" x 1/2" slot for 3/8" Allen set screw.

Bend for snug fit.

Final bracket

Fabricate from W8 x 40.

Elevation

Drill and tap for 1" dia. standard galvanized steel square head plug. Install plug after galvanizing truss.

Machining from W6 x 25.

Removable rain-tight hand hole cover with gasket. Fasten with two stainless steel (ASTM F 593) screws.

Hand hole frame.

Round and smooth inside edges.

1/2" dia. steel bolt. 1 1/2" long, with washer and nut for ground.

Hand hole detail (Cover not shown for clarity).

Drill per field measurement of span between completed foundations.

Symmetrical about end post and chord.

Face of post.

Chord.

End post.

Elevation

Fabricate from W6 x 40.

Horizontal diagonal connection when alternate joint detail is used - see detail sheet 3.

Connection data

<table>
<thead>
<tr>
<th>Span Length</th>
<th>A</th>
<th>B</th>
<th>Bolt Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>60' OR LESS</td>
<td>2 3/8&quot;</td>
<td>1 5/8&quot;</td>
<td>7/8&quot;</td>
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<td>4 1/16&quot;</td>
<td>3 1/4&quot;</td>
<td></td>
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</tbody>
</table>

Install bolts with head upward. Exclude bolt threading from grip.

Details not shown are same as chord to end post connection type R, omitting the 3/4" plate stiffener on the tee member.

Chord to end post connection type Q

Chord to end post connection type R

Sign bridge (Truss-type)

Standard Plan G-70.10-02

Approved for publication 6/10/13

Pasco Bakotich III
State Bridge Engineer

Washington State Department of Transportation
DRILLED HOLE IN CHORD AT EACH DIAGONAL AND STRUT SHALL BE 1" DIAMETER FOR SPANS OVER 60' - FOR SPANS 60' OR LESS, DIAMETER SHALL BE 3/4".

ENDS OF DIAGONALS SHALL BE CUT TO FIT NEATLY AGAINST CHORD OR POST. FILLET WELD SIZE TO BE DIAGONAL TUBE OR PIPE THICKNESS PLUS 1/16".

INTERIOR DIAGONAL - WHERE REQUIRED 3/4" MAX.

DIAMETER OF HOLE IN FLANGE 1 1/8" LARGER THAN CHORD OUTSIDE DIAMETER

TOP

HORIZONTAL DIAGONAL WHEN ALTERNATE JOINT DETAIL IS USED

INTERIOR DIAGONAL SHALL BE SLOTTED FOR GUSSET

3/16" GUSSET PLATE

3/4" MAX

TOP

INTERIOR DIAGONAL WHEN ALTERNATE JOINT DETAIL IS USED (SEE TRUSS ELEVATION)

BOLT K
F BOLT CIRCLE

DIAMETER OF HOLE IN FLANGE 1 1/8" LARGER THAN CHORD OUTSIDE DIAMETER

3/16" GUSSET PLATE

TOP

INTERIOR DIAGONAL WHERE REQUIRED

1/2" BOLTS & HEX NUT & WASHER (Typ.)

NOT SHOWN FOR CLARITY

END POST OR CHORD SHOP SPlice
NO POST SPLICES PERMITTED IN LOWER THIRD OF HEIGHT, NOR CLOSER THAN 3'-0" TO BOTTOM OF CHORD. NO CHORD SHOP SPLICES PERMITTED IN MIDDLE THIRD OF SPAN. MAXIMUM OF ONE SPLICE IN EACH END POST.

END POST OR CHORD SHOP SPLICE

FOR SPAN LENGTHS NOT LISTED, INTERPOLATE VALUES OF H.

FABRICATE TRUSS WITH CHORDS CURVED TO PROVIDE CAMBER. DO NOT CAMBER BY USING SHIMS BETWEEN CHORDS AT SPLICES.

DEAD LOAD CAMBER

CHORD FIELD SPLICE

(NO CHORD FIELD SPLICE PERMITTED IN MIDDLE THIRD OF SPAN LENGTH)

3/16" SHIMS ARE REQUIRED AT THE REMAINING TWO CHORD JOINTS WHEN INTERIOR DIAGONAL IS INSTALLED.
BASE PLATE HOLE = 6" DIAM.
1' - 6" BOLT CIRCLE

DRILL AND TAP FOR 1/4" DIAMETER CAP SCREW - SPACING APPROX. 8" O.C.
ASTM F 593, W/ S.S. WASHER. LIBERALLY COAT THE THREADS WITH ANTI-SEIZE COMPOUND (TYP.)

WELDED GALV. CLOTH 11/16" x 7/16" SQ. WRAP AROUND BASE PLATE WITH 3" MIN. LAP

ANCHOR ROD (TYP.)

WELDED GALV. CLOT 1/16" x 7/16" SQ. WRAP

BASE PLATE HOLE = 1 1/2" DIAM. HOLE FOR ANCHOR BOLT (TYP.)

TOP OF FOUNDATION

BASE PLATE

HAND HOLE

1/4" BACK-UP BAR

SEAL WELD

POST BASE DETAILS

VIEW C

SECTION B

SCREEN DETAIL

TOP OF BASE

ANCHOR BOLT

POST

TOP

STATE DESIGN ENGINEER

PASCO BAKOTICH

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

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