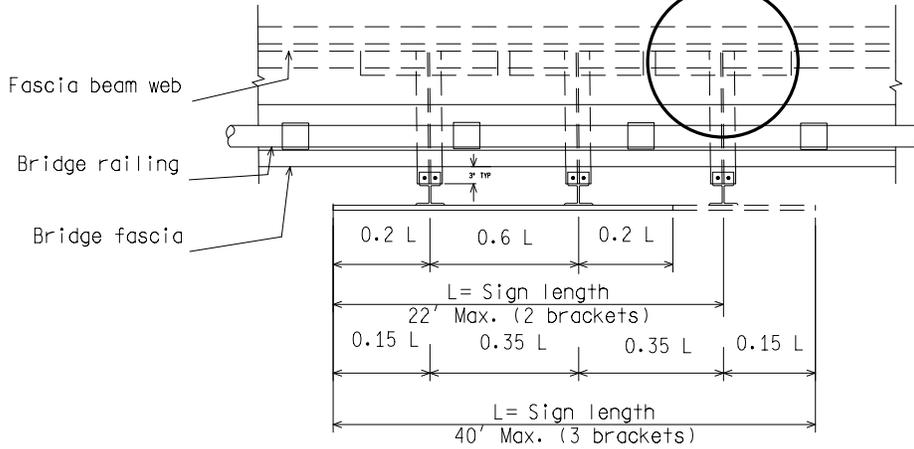
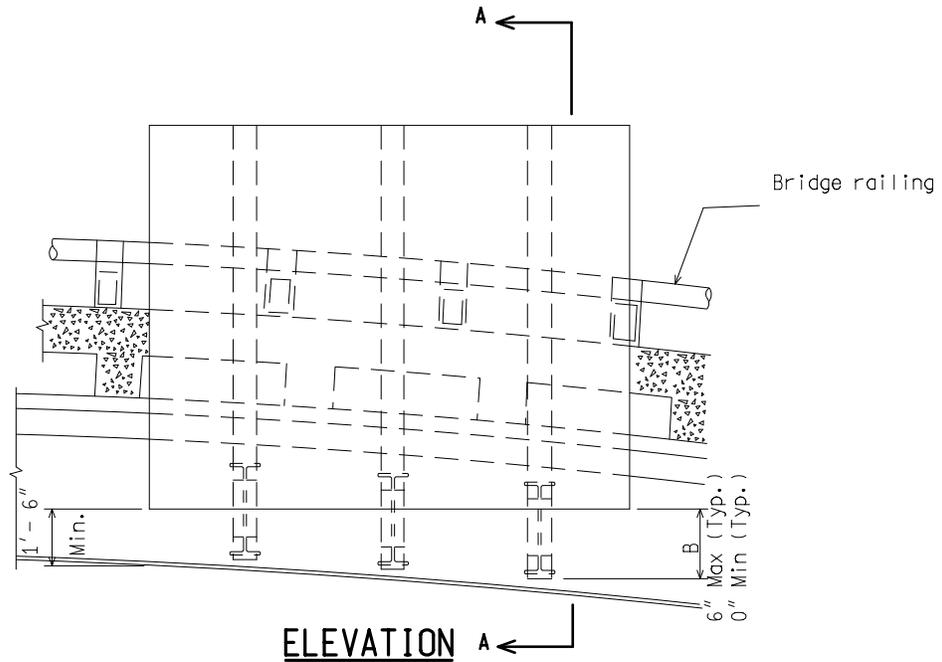


Detail B (see sheet 3)



PLAN



ELEVATION A

FOR MAINTENANCE PURPOSES ON EXISTING BRIDGE CONNECTIONS ONLY.



PREPARED BY
DESIGN DIVISION

DRAWN BY: DHD

CHECKED BY: AJU

DEPARTMENT DIRECTOR
Kirk T. Steudle

APPROVED BY: _____
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: _____
(SPECIAL DETAIL)
DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

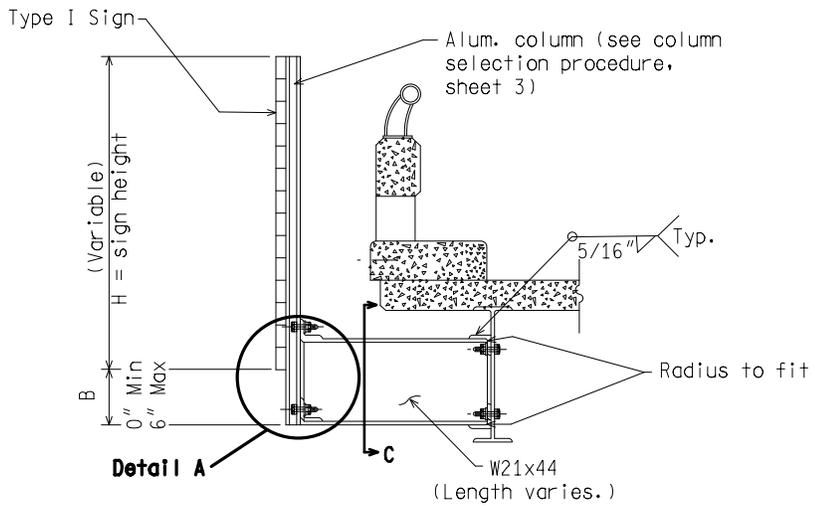
**BOLTED BRIDGE CONNECT.
OLD TYPE C & D $\theta = 0^\circ$**

(SPECIAL DETAIL)
F.H.W.A. APPROVAL

11/15/11
PLAN DATE

SIGN-821-A

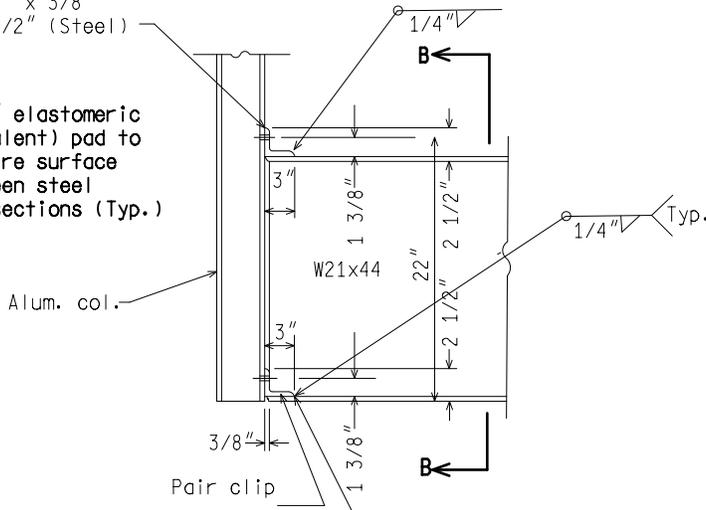
SHEET
1 OF 3



SECTION A-A

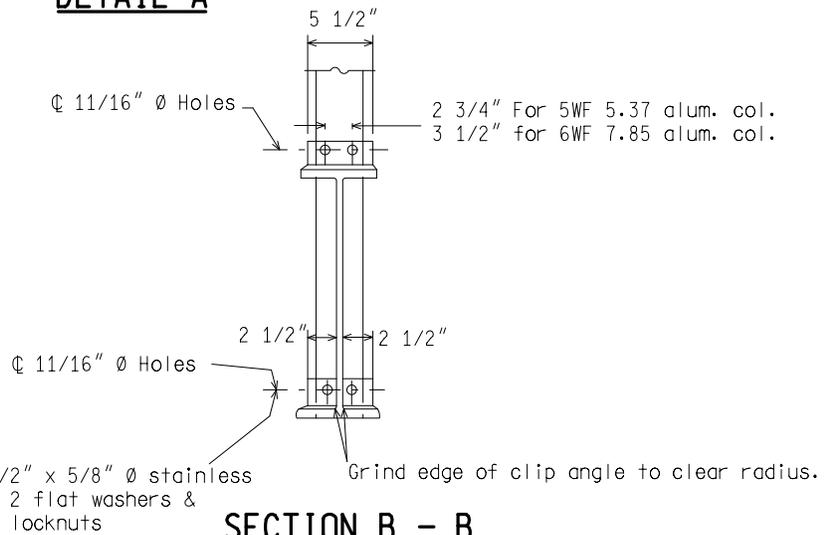
$\angle 3'' \times 2 \frac{1}{2}'' \times \frac{3}{8}''$
x 0' - 5 $\frac{1}{2}''$ (Steel)

NOTE:
Place $\frac{1}{8}''$ elastomeric
(or equivalent) pad to
cover entire surface
area between steel
aluminum sections (Typ.)



$\angle s 3'' \times 2 \frac{1}{2}'' \times \frac{3}{8}'' \times 0' - 2 \frac{1}{2}''$ (Steel)

DETAIL A



SECTION B - B

FOR MAINTENANCE PURPOSES ON EXISTING BRIDGE CONNECTIONS ONLY.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

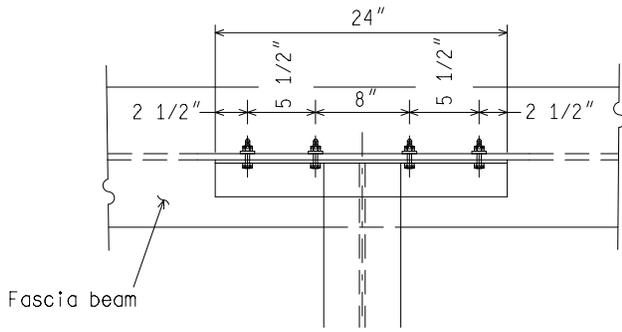
(SPECIAL DETAIL)
F.H.W.A. APPROVAL

11/15/11
PLAN DATE

SIGN-821-A

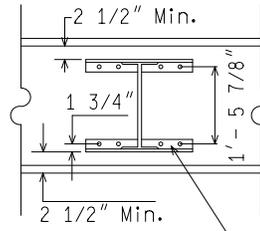
SHEET
2 OF 3

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



If beam web is less than 7/16" thick add 3/8" x 3" x 2'-0" steel \mathbb{E} on inside face.

DETAIL B

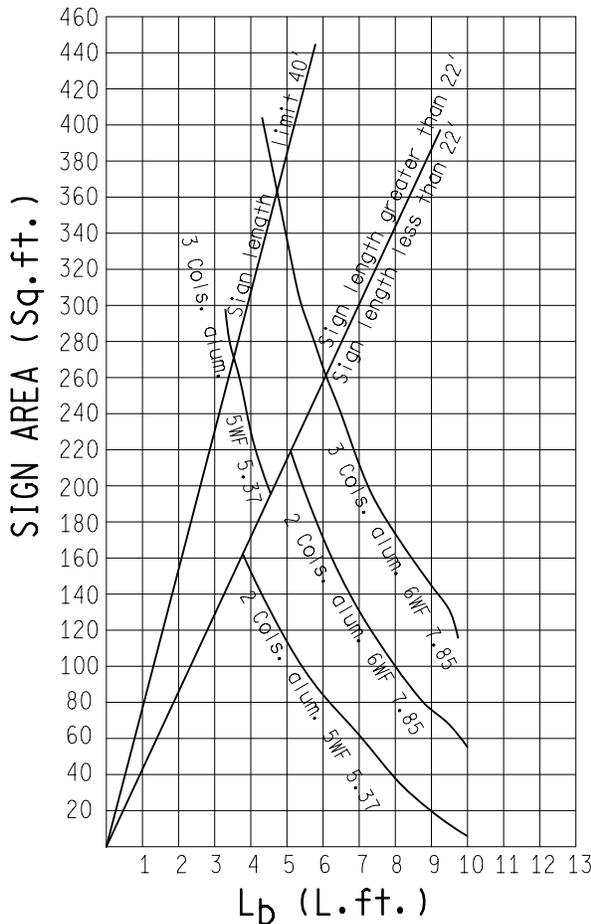


Steel $\angle 3" \times 3" \times 38" \times 2'-0"$ (Typ.)
Drill 11/16" \emptyset holes to template for 2 1/2" x 5/8" \emptyset bolts, nuts, flat washers and lock washers.

DETAIL C - C

COLUMN SELECTION PROCEDURE:

- 1.) Determine B using the longest required column. (B = 0" min)
- 2.) $L_b = 1/2$ of the distance between the top of the sign and the top clip angle bolt
 $L = 1/2 (h + b - 2.0)$
- 3.) Determine the sign area. (sq.ft.)



NOTES:

1. All bolts shall be galvanized high strength bolts (ASTM A-325). (Unless otherwise noted) all bolts, nuts and washers shall be hot dip galvanized according to ASTM A-153. Nuts shall be tapped 0.015 oversize.
2. All alum. components shall be 6061-T6 alum. alloy. All steel components shall be A-36 and shall be hot-dip galvanized according to ASTM A-123.
3. Sign location may be shifted to avoid joints or stiffeners.
4. Bottom edge of sign shall be horizontal when erected and shall be a minimum of 1'-6" above the lower bridge beam flange at all points.
5. Type C connection denotes a two-bracket sign connection.
6. Type D connection denotes a three-bracket sign connection.
7. Sign connections to mounting support columns shall have the same bolt arrangement as shown for connections for sign to mounting supports for cantilevers and trusses. (Typical Plan VIII-700)

FOR MAINTENANCE PURPOSES ON EXISTING BRIDGE CONNECTIONS ONLY.

NOT TO SCALE

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BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

(SPECIAL DETAIL)
F.H.W.A. APPROVAL

11/15/11
PLAN DATE

SIGN-821-A

SHEET
3 OF 3