POST CLIP DETAIL

PART PLAN

1. Panel bolt location:
- 4 extruded aluminum panel:
  - H = H1 + 12" (H applies to signs manufactured above or below the passenger plane if secondary sign is not attached to the main sign posts.)

NOTES:
- For general notes, see Sheet 1 of 16.
- For extruded aluminum panel and post clip details, see standard plans 903.02 sheet 4 of 7.

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-300-HWY (4999) 1-800-296-6985
EXTRUDED PANEL MOUNTING DETAIL

NUMBER OF BOLTS TO ATTACH STEEL CHANNEL TO PSST POST

<table>
<thead>
<tr>
<th>SIGN HEIGHT</th>
<th>NO. OF BOLTS PER PSST FOOT PIECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>2</td>
</tr>
<tr>
<td>2'</td>
<td>3</td>
</tr>
<tr>
<td>3'</td>
<td>4</td>
</tr>
<tr>
<td>4'</td>
<td>5</td>
</tr>
<tr>
<td>5'</td>
<td>6</td>
</tr>
<tr>
<td>6'</td>
<td>7</td>
</tr>
<tr>
<td>7'</td>
<td>8</td>
</tr>
</tbody>
</table>

FOR THE GENERAL NOTES, SEE SHEET 1 OF 16.

FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE SHEET 10 OF 16.

FOR POST CLIP DETAILS, SEE STANDARD PLANS 903.03 SHEET 8 OF 7.

ALTERNATE POST MOUNTING HARDWARE MAY BE ON APPROVED LIST.
4" x 4" Wood Post - No Slots or Holes Required
4" x 6" wood post - 1 1/2" x 4" Slot or 6" Wide or 1 1/2" Dia Hole on 6" Side
6" x 6" Wood Post - 2 1/2" x 4" Slot or 2 1/2" Dia Hole
Slot across neutral axis formed by successive drilling with 3/16" bit.

NUMBER OF BOLTS TO ATTACH STEEL CHANNEL TO WOOD POST

<table>
<thead>
<tr>
<th>SIGN HEIGHT</th>
<th>NO. OF BOLTS PER 4&quot; WOOD POST HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>2</td>
</tr>
<tr>
<td>2'</td>
<td>3</td>
</tr>
<tr>
<td>3'</td>
<td>4</td>
</tr>
<tr>
<td>4'</td>
<td>5</td>
</tr>
<tr>
<td>5'</td>
<td>6</td>
</tr>
<tr>
<td>6'</td>
<td>7</td>
</tr>
<tr>
<td>7'</td>
<td>8</td>
</tr>
</tbody>
</table>

PLAN VIEW
MOUNTING DETAILS FOR EXTRUDED PANELS ON WOOD POST

NOTES:
For general notes, see Sheet 1 of 16.
All posts shall be embedded a minimum of 3 feet into the ground.
H-Channel post-stub overlap shall be positioned entirely between ground line and 10' above ground line.
For post sizes, see engineering policy guide.
For post clip details, see plans 901.03 Sheet 6 of 7.
For mounting height and offset details, see Sheet 10 of 16.

POST SIZE REQUIREMENTS

POST TYPE

<table>
<thead>
<tr>
<th>SIGN AREA (SQ. FT.)</th>
<th>H-CHANNEL</th>
<th>WOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 10</td>
<td>1 - 3.0 Lb/FT.</td>
<td>1 - 4&quot; x 4&quot;</td>
</tr>
<tr>
<td>&gt; 10 ≤ 15</td>
<td>2 - 3.0 Lb/FT.</td>
<td>2 - 4&quot; x 4&quot;</td>
</tr>
<tr>
<td>&gt; 15 ≤ 24</td>
<td>2 - 3.0 Lb/FT.</td>
<td>2 - 4&quot; x 6&quot;</td>
</tr>
<tr>
<td>&gt; 24 ≤ 30</td>
<td>3 - 3.0 Lb/FT.</td>
<td>2 - 4&quot; x 6&quot;</td>
</tr>
<tr>
<td>&gt; 30 ≤ 50</td>
<td>N/A</td>
<td>2 - 6&quot; x 6&quot;</td>
</tr>
</tbody>
</table>

*Signs greater than 4 feet in width require two posts, except standard speed warning signs, yield signs, and one way signs.*
ONE POST - SINGLE SIGN

EDGE OF TRAVEL LANE OR SHOULDER

2' TO 8' TO...

GROUND

+ BASED ON PLANS AND FIELD CONDITIONS

EDGE OF TRAVEL LANE OR SHOULDER

24" MIN. FROM TRAVEL LANE

6" MIN. FROM TRAVEL LANE
FROM SHOULDER

6" MIN. FROM TRAVEL LANE

ONE POST - SINGLE SIGN WITH SUPPLEMENTAL PLAQUE

EDGE OF TRAVEL LANE OR SHOULDER

4" MIN. FROM TRAVEL LANE

6" MIN. FROM TRAVEL LANE
FROM SHOULDER

6" MIN. FROM TRAVEL LANE

TWO POST

EDGE OF TRAVEL LANE OR SHOULDER

4" MIN. FROM TRAVEL LANE

6" MIN. FROM TRAVEL LANE
FROM SHOULDER

6" MIN. FROM TRAVEL LANE

GENERAL NOTES:

- SIGN MOUNTING BOLTS SHALL BE INSTALLED WITH NYLON WASHER AGAINST THE SIGN FACE WITH STEEL WASHER BETWEEN THE NYLON WASHER AND BOLT HEAD.
- A LOCKNUT SHALL BE USED TO FASTEN THE SIGN TO THE POST.
- VERTICAL CLEARANCE FROM THE ROADWAY SHALL BE MET AND INCREASED ONLY TO MEET THE MINIMUM VERTICAL CLEARANCE FROM THE GROUND.
- HORIZONTAL OFFSET MAY BE ADJUSTED BASED ON FIELD CONDITIONS.

CHEVRON SIGN

EDGE OF TRAVEL LANE OR SHOULDER

2' TO 8' TO...

GROUND

TYPE III OBJECT MARKER

EDGE OF SIGN TO LINE UP WITH THE EDGE OF OBJECT

OBJECT

EDGE OF TRAVEL LANE OR SHOULDER

ADJACENT TO CURB

GROUND

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SIGN MOUNTING DETAILS

MOUNTING HEIGHT & OFFSET
PIPE POSTS, PSST, WOOD & U-CHANNEL POSTS

MO DOT

903.03BM

SHEET NO. 10 OF 16
DELINEATORS ON CONCRETE TRAFFIC BARRIER

FOR CONCRETE BARRIER DETAILS, SEE SHEET PLANS 617.10 OF BRIDGE PLANS.

DELINEATOR CONNECTION ON CONCRETE TRAFFIC BARRIER DETAIL

NOTES:

- ONE WAY TRAFFIC
- TWO WAY TRAFFIC

LEGEND
- WHITE DELINEATOR
- YELLOW DELINEATOR
- PINK DELINEATOR

- SECONDARY DELINEATOR ON BACK SIDE NOT REQUIRED IF ROADWAY "A" HAS MORE THAN 2 LINES

ROADWAY OR BRIDGE CONCRETE TRAFFIC BARRIER DELINEATION
DELINEATORS ON GUARDRAIL

FOR GUARDRAIL DETAILS, SEE SHEET PLANS 606.00 AND 606.50.

(1) A SECONDARY DELINEATOR WITH REFLECTIVE SHEETING SHALL BE ATTACHED TO THE BACK SIDE OF THE CHANNEL WHEN THE DELINEATOR IS PLACED ALONG AN INTERCHANGE RAMPS AND SHALL BE VISIBLE BY APPROACHING TRAFFIC.

NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

RETROREFLECTIVE YELLOW, WHITE OR REFLECTIVE IN ACCORDANCE WITH 233.4.95 TYPE S OR T SHALL BE APPLIED TO ONLY ONE SIDE OF THE CHANNEL POST DELINEATOR MOUNTED TOWARDS THE CHANNEL POST.

RETROREFLECTIVE SHEETING SHALL FOLLOW GUIDELINES OUTLINED IN 233.4.2 FOR CORRECT APPLICATION OF SHEETING TO DELINEATOR BODY. THE COLOR OF THE SHEETING SHALL MATCH THE CLOSEST ADJACENT PAVEMENT MARKING.
**LEGEND**

- **White Delineator**
- **Yellow Delineator**
- **Red Delineator**

**DELINERATOR SPACING ON CURVES**

<table>
<thead>
<tr>
<th>Radius of Curve (Feet)</th>
<th>Spacing On Curve (Feet)</th>
<th>Spacing in Advance &amp; Before Curve (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>200</td>
<td>30</td>
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<td>850</td>
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<td>950</td>
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<tr>
<td>1000</td>
<td>190</td>
<td>100</td>
</tr>
</tbody>
</table>

**NOTES:**

- FOR GENERAL NOTES: SEE SHEET 1 OF 16.
- THE CONTRACT UNIT PRICE FOR EACH CHANNEL POST DELINERATOR SHALL INCLUDE THE REFLECTOR, FASTENERS AND POSTS.

**SIGN MOUNTING DETAILS**

**INTERCHANGE DELINERATION:**

- Use Yellow Double-Headed Delineators for Left Hand Acceleration Lanes.
- Delete if Emergency Reference Markers are used.
- Extent of Delineator on Ramps with Emergency Reference Markers.
- On Ramps without Emergency Reference Markers, Delineators shall be installed between interchanges every 500 feet.

*Missouri Highways and Transportation Commission*

**DATE EFFECTIVE:** 3/1/2009

**DATE ISSUED:** 7/16/2010

**SHEET NO.:** 903.03BM

**SHEET 14 OF 16**
TYPE 4 OBJECT MARKER INSTALLATION

TYPICAL ROAD CLOSURE

NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

TYPE D GUARDRAIL IS ACCESS RESTRAIN AND VISUAL TARGET VALUE ONLY. IT HAS NO WERIFICATIVE CAPABILITY.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-MO-DOT-Help (1-888-663-6838)

SIGN MOUNTING DETAILS
OBJECT MARKERS FOR ROAD CLOSURE

DATE IN EFFECTIVE: 9/24/2001
DATE REVISED: 9/24/2001
SHEET NUMBER: 0350.03BM
15 OF 16
BARRIER WALL INSTALLATION

1. Perforated square steel tube 2" x 2" x 0.12" x 0.25". Tube shall extend a minimum of 6" below the top of the formation tree.

2. Time to extend above foundation only enough to allow bolt to be inserted 3-4" maximum.

3. Concrete mix to hold formation tube flush with soil, shall have a minimum of 5 lbs of standard per cubic yard and a maximum slump of 2".

4. 2" x 2" No. 7 rebar shall be used with 18 ga. rebar in each plate. 2" x 2" x 0.25" square steel tube galvanized tube with 1/2" diameter holes in each face for rebar cage.

5. 2" x 2" x 0.12" x 0.25" rebar shall be used with 18 ga. rebar in each plate. 2" x 2" x 0.25" square steel tube galvanized tube with 1/2" diameter holes in each face for rebar cage.

6. bolts used to retain fall arrest cable shall be a 3/8" diameter with a 1" shoulder bolt and washers through both sides of tube.

MOUNTING PLATE DETAIL

NOTES:

1. For general notes, see Sheet 1 of 16.

2. Perforated square steel tube shall be secured to formation tree or barrier wall mounting plate with a shoulder bolt per perforated square steel tube manufacturer's specification.

3. Missouri Highways and Transportation Commission

4. PERIODICAL MOUNTING DETAILS EMERGENCY REFERENCE MARKERS

5. SIGN MOUNTING DETAILS EMERGENCY REFERENCE MARKERS

6. SIGN MOUNTING DETAILS EMERGENCY REFERENCE MARKERS