TRAFFIC RAILING NOTES

This railing has been structurally evaluated to be equivalent or greater in strength to other safety shape railings which have been crash tested to NCHRP Report 330 TL-5 Criteria.

CONCRETE AND REINFORCING STEEL: See Structures Plans, General Notes.

MARKERS: Elevation Markers shall be placed on top of the Traffic Railing at the end beds. On bridges longer than 100 ft. one marker shall be placed at each end of the bridge. On bridges 100 ft. or less one marker shall be placed at one end of the bridge only. Markers shall be furnished by the Florida Department of Transportation and installed by the Contractor. The cost of installing the markers shall be included in the Contract Unit Price for the Traffic Railing. The Department will determine the vertical Datum information for the markers.

SUPERELEVATED BRIDGES: At the option of the Contractor the Traffic Railing on superelevated bridges may be constructed perpendicular to the roadway surface. If an adjoining railing is constructed plumb, transition the end of the Traffic Railing from perpendicular to plumb over a minimum distance of 20'-0". The cost of all modifications will be at the Contractor's expense.

GUARDRAIL: For Guardrail connection details, see Index No. 400.

RAILINGS ON RETAINING WALLS: If the Traffic Railing is to be provided on a retaining wall, the railing section shall be as shown on Sheet 2. All other details such as the guardrail transition, the maximum spacing of the 2" open joints and 2" V-Groove shall apply.

V-GROOVES: Construct 2" V-Grooves plumb. Space V-Grooves equally between 3" Open Joints and at V-Groove locations on Retaining Wall footings.

TRAFFIC RAILING NOTES

ELEVATION OF INSIDE FACE OF RAILING

(Railing on Bridge Deck and Approach Slab shown, Railing on Retaining Wall Similar)

REFLECTIVE RAILING MARKERS: Reflective Railing Markers shall meet Specification Section 993. Install markers on top of the Traffic Railing 2" from the face on the traffic side at the spacing shown in the table above. Reflector color (white or yellow) shall match the color of the near edgeline. The cost of the reflective markers shall be included in the Contract Unit Price for the Traffic Railing.
**NOTE:**
Begin placing Railing Bars SP and SV on Approach Slab at the railing end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars SP and SV shall be made immediately adjacent to Begin or End Bridge. Shift and rotate Bars SP and SV (see Detail "A" as required to maintain cover in Railing End Transition.

*Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck may coincide along a plane centered 1'-8" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.*

**DETAIL "A"**

**ELEVATION - RAILING END TRANSITION**
(Guardrail and back leg of Stirrups not shown for clarity)

**SECTION A-A**
(Typical Section Thru Traffic Railing (Section Thru Bridge Deck Shown - Section Thru Approach Slab Similar))

**VIEW C-C**

**VIEW B-B**
(Section thru Approach Slab Shown, Section thru Retaining Walls similar)

**REVISIONS**
2010 Interim Design Standard

**TRAFFIC RAILING - (42" F SHAPE)**
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>5</td>
<td>7'-5&quot;</td>
</tr>
<tr>
<td>S1</td>
<td>8</td>
<td>As Reqd.</td>
</tr>
<tr>
<td>S2</td>
<td>5</td>
<td>As Reqd.</td>
</tr>
<tr>
<td>T1 &amp; T2</td>
<td>8</td>
<td>1'-3&quot;</td>
</tr>
<tr>
<td>V</td>
<td>5</td>
<td>6'-2&quot;</td>
</tr>
</tbody>
</table>

REINFORCING STEEL NOTES:
1. All bar dimensions in the bending diagrams are out to out.
2. The reinforcement for the railing on a retaining wall shall be the same as detailed above for a 10" deck with ØA = ØB = 90°.
3. All reinforcing steel at the open joints shall have a 2" minimum cover.
4. Bars S51 may be continuous or spliced at the construction joints. Lap splices for Bars S51 and 552 shall be a minimum of 4'-0" and 2'-0", respectively.
5. The Contractor may utilize Welded Wire Reinforcement when approved by the Engineer. Welded Wire Reinforcement shall conform to ASTM A497.

ROADWAY CROSS-SLOPE

<table>
<thead>
<tr>
<th>MARK</th>
<th>LOW GUTTER</th>
<th>HIGH GUTTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ØA</td>
<td>ØB</td>
<td>ØA</td>
</tr>
<tr>
<td>0% to 2%</td>
<td>90°</td>
<td>90°</td>
</tr>
<tr>
<td>2% to 6%</td>
<td>93°</td>
<td>87°</td>
</tr>
<tr>
<td>6% to 10%</td>
<td>86°</td>
<td>84°</td>
</tr>
</tbody>
</table>

0% and 0% shall be 90° if contractor elects to place railing perpendicular to the deck.

ESTIMATED TRAFFIC RAILING QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>CY/LF</td>
<td>0.154</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>LB/LF</td>
<td>44.71</td>
</tr>
</tbody>
</table>

Note: The estimated railing quantities are based on a 2% deck cross slope; railing on low side of deck.

INTERMEDIATE JOINT SEAL NOTES:
1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Section 932 of the Specifications.
2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
3. The cost of the Pre-cured Silicone Sealant shall be included in the Contract Unit Price for the Traffic Railing.

SECTION THRU RECESSED "V" GROOVE TO FORM INSCRIBED LETTERS AND FIGURES

INTERMEDIATE JOINT SEAL NOTES:
1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Section 932 of the Specifications.
2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
3. The cost of the Pre-cured Silicone Sealant shall be included in the Contract Unit Price for the Traffic Railing.

TRAFFIC RAILING - (42" F SHAPE)

REVISIONS

<table>
<thead>
<tr>
<th>SHEET</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>BY</th>
</tr>
</thead>
</table>
| 01/01/11 | Changed DETAIL "B" to Pre-cured Silicone Sealant. | SJN | Interim

2010 Interim Design Standard