TRAFFIC RAILING - (32" VERTICAL SHAPE)

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

MARKERS: Elevation Markers shall be placed on top of the Traffic Railing at the end bents. 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 are to 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 marker.

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

PEDESTRIAN/BICYCLE RAILING AND SPECIAL HEIGHT BICYCLE RAILING DETAILS: See Index No. 822 for Post, Rail and Rail Expansion Joint Fabrication and installation Details and Notes.

V-GROOVES: Construct ½" V-Groove plum. Space V-Grooves equally between ½" Open Joints and/or Post Spacing (Typ.) and ½" V-Groove shall apply. Space V-Grooves equally between ½" Open Joints and/or Post Spacing (Typ.) and ½" V-Groove shall apply.

REFLECTIVE RAILING MARKERS: Reflective Marking 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. Reflective 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.

RAILINGS ON RETAINING WALLS: If the Traffic Railing is to be provided on a retaining wall, the railing section will be the same as shown on Sheet 2. All other details such as the guardrail transition attachment, the maximum spacing of the ½" Open Joints and ½" V-Groove shall apply.

NAME, DATE, AND BRIDGE NUMBER: The Name and Bridge Number shall be placed on the Traffic Railing so as to be seen on the driver's right side when approaching the bridge. The Date shall be placed on the driver's left side when approaching the bridge. The Name shall be as shown in the General Notes of the Structures Plans. The Date shall be the year the bridge is completed. For a widening when the existing railing is removed, use both the existing date and the year of the widening. Black plastic letters and figures 3" in height may be used, as approved by the Engineer, in lieu of the letters and figures formed by ½" V-Grooves. V-Grooves shall be formed by preformed letters and figures.


Provide ½" Intermediate Open Joints as:
1) Superstructure supports where slab is continuous and/or Deck Joints and at V-Groove locations on Retaining Wall footings.
2) Each of approach slabs and at V-Groove locations on retaining walls and at expansion joints on retaining wall junction slabs.

CROSS REFERENCE: For Section A-A and View B-B, see Sheet 2.

This railing has been structurally evaluated to be equivalent or greater in strength to other safety shape railings which have been crash tested to WCHRP Report 350 FL 4 Criteria.

TRAFFIC RAILING NOTES

07/01/10 01/01/11

For Railing End Transition see Railing End Detail (Typical except as noted)

2'-0" Intermediate Open Joint (see Notes)

3'-0" V-Groove in both faces and top of Traffic Railing

1'-0" Spacing b-V-Groove

Deck Joint (see Notes)

Gutter

Approach Thrie-Beam Guardrail Transition (When called for in Plans)

Approach & End Approach Slab (Flexible Pavement Approach Slab Shown. Rigid Pavement Approach Slab Similar)

For Section A-A and View B-B, see Sheet 2.

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 WCHRP Report 350 FL 4 Criteria.

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

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2) Each of approach slabs and at V-Groove locations on retaining walls and at expansion joints on retaining wall junction slabs.

CROSS REFERENCE: For Section A-A and View B-B, see Sheet 2.

This railing has been structurally evaluated to be equivalent or greater in strength to other safety shape railings which have been crash tested to WCHRP Report 350 FL 4 Criteria.

TRAFFIC RAILING NOTES
CROSS REFERENCE:
For location of Section A-A and View B-B see Sheet 1.

NOTE: For Post "B1", Post "C" and Rail Details, see Sheet 1.

For location of Section A-A and View B-B see Sheet 1.

NOTE: Omit Railing End Taper and Guardrail if Concrete Barrier Wall is used beyond the Approach Slab. See Structures Plans, Plan and Elevation Sheet and Roadway Plans. If Railing End Taper is omitted, extend Typical Section to the end of the Approach Slab. Begin placing Railing Bars 5T and 5X 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 5T and 5X shall be made immediately adjacent to Begin or End Bridge. Shift and rotate Bars 5T and 5X on Approach Slab in end section as required to maintain cover.

RAILING END DETAIL

Additional Rail required for Special Height Bicycle Railing

Post "B1" Special Height Bicycle Railing

Post "C" Pedestrian/Bicycle Railing

Bars 5X @ 1'-0" sp. (max) (Alternate with Bars 5T)

3 Cover (Sides)

2 Cover (Top)

Slope Varies

Const. Joint

Coping

Steel in Deck (Rotate to maintain cover)

Additional Rail required for Special Height Bicycle Railing

Post "B1" Special Height Bicycle Railing

Post "C" Pedestrian/Bicycle Railing

Bars 5X @ 1'-0" sp. (max) (Alternate with Bars 5T)

3 Cover (Sides)

2 Cover (Top)

Slope Varies

Const. Joint

Coping

Steel in Deck (Rotate to maintain cover)
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

<table>
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<th>BILL OF REINFORCING STEEL</th>
<th>ROADWAY CROSS-SLOPE</th>
<th>0A.</th>
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<th>HIGH GUTTER</th>
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<td>SIZE</td>
<td>LENGTH</td>
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<td>90°</td>
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<td>5</td>
<td>As Req.</td>
<td>2% to 6%</td>
<td>87°</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>5'-9&quot;</td>
<td>6% to 10%</td>
<td>84°</td>
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REINFORCING STEEL NOTES:

1. All bar dimensions in the bending diagrams are out to out.
2. The 2'-8" vertical dimensions shown for Bars 5T and 5X are based on a bridge deck with a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and a counter 2% raised sidewalk cross slope. If the raised sidewalk thickness, width or cross slopes vary from the above amounts, adjust these vertical dimensions accordingly to achieve a 6" minimum embedment into the bridge deck.

STIRRUP BAR 5T

STIRRUP BAR 5X

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

ESTIMATED TRAFFIC RAILING QUANTITIES

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<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
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</tr>
<tr>
<td>Reinforcing Steel</td>
<td>LB/LF</td>
<td>25.90</td>
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</tbody>
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(The above quantities are based on a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and counter 2% sidewalk cross slope.)