TRAFFIC RAILING RETROFIT NOTES

CONCRETE: Concrete for Transition Blocks shall be Class II (Bridge Deck).

THRIE-BEAM PANEL: Steel Thrie-Beam Elements shall meet the requirements for Class B (10 Gauge) Guardrail of AASHTO M 180, Type II (Zinc coated). The minimum panel length for Thrie-Beam Elements shall be 12'-6". Field drilled holes for Post connections shall be 1/4" by 29/32" slotted holes.

BOLTS, NUTS AND WASHERS: Bolts, nuts and round washers shall be in accordance with AASHTO M 180. Plate Washers shall be in accordance with ASTM A 325 or ASTM A 479 Grade 56.

COATINGS: All Nuts, Bolts, Anchors, and Washers shall be hot-dip galvanized in accordance with the Specifications.

BRIDGES OR CURVED ALIGNMENTS: Details presented herein are shown for bridges on tangent alignments. Details for bridges on horizontally curved alignments are similar.

THRIE-BEAM EXPANSION SECTION: Thrie-Beam Expansion Sections shall be installed at locations shown in the Plans. Install nuts for splice bolts (finger-tight at 29/32" slots in thrie-beam expansion sections). Nuts shall fully engage bolts with a minimum of one bolt thread extending beyond the nuts. Distort the first thread on the outside of the nut to prevent loosening. Tighten bolts in 3/16" slots at guardrail post(s) that lie between the slotted expansion splice and bridge deck joint so that the bolt heads are in full contact with thrie-beam elements, but not so tight as to impede movement due to expansion.

WOOD BLOCKS: All wood blocks, including required wedge shaped blocks shall be Pressure Treated Lumber in accordance with Specifications Section 955. Bolt holes in blocks to be centered (± 1/16)

BRIDGE NAME PLATE: If a portion of the existing Traffic Railing is to be removed that carries the bridge name, number and or date, then replace the information that has been removed or obscured, with 3" tall black lettering on white nonreflective paper and Recessed Nuts (12 Required). Clip to fabricate and install the retrofit railing. Transition Blocks and Curbs, Bridge Name Plate and Reflective Railing Markers, where required, will not be paid for directly but shall be considered incidental work.

NOTE: All Thrie Beam Panels shall be lapped in the direction of adjacent traffic. At the Contractor's option, laps may be extended. Field drill holes in Trailng Thrie-Beam Panel as required.

BOLTS: (10 Gauge) Thrie-Beam Panel EXPANSION SECTION

POST BOLT EXPANSION SLOTS (2 Per Post) with Post Bolts, Recessed Nuts, Round Plate Washers and Plate Washers (2 of each required). Not required when splice is located between posts.

Coatings: All Nuts, Bolts, Anchors, and Washers shall be hot-dip galvanized in accordance with the Specifications.

Details for bridges on horizontally curved alignments are similar.

DESIGN STANDARDS

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NOTES:

1. Dimensions and elevations for existing guardrails to be verified by the Contractor before beginning construction.

2. Provide Transition Block (as shown) or Curb if existing Approach Slab Curb does not extend to end of Approach Slab. Shape and height of the traffic face of Transition Block or Curb shall match existing bridge curb. See Sheet A for Transition Block details. Block may be omitted on trailing ends with no opposing traffic.

3. Do not bolt nested rails to the blocks and posts at posts (a), (c) & (e).

(Continued on following page)
**THREE-BEAM PANEL RETROFIT (CONCRETE HANDRAIL)**

**DESCRIPTION:**

1. Post Bolts shall be 3/8" x 14" long set in 3/4" core drilled holes, see Sheet No. 1.
2. Shift Post Bolt holes minimally inward toward center of posts if existing reinforcement is encountered during drilling of holes. If reinforcement is still encountered, notify the Engineer before proceeding with drilling.
3. Post Bolt spacing not to exceed 8'-0" (± 1').

**NOTES:**

- **TYPICAL SECTION THRU RAILING POST ON BRIDGE DECK**
- **PLAN OF END POST**
- **ELEVATION VIEW A-A**
- **ELEVATION VIEW A-A (At Double Posts)**
- **ELEVATION VIEW A-A (At Single Post)**
- **ELEVATION VIEW A-A (At End Post)**

**REVISED:**

[Revision Details]

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**REVISION LAST OF DESIGN STANDARDS**

FOOT 2014

FDOT 2014

DESIGN STANDARDS

**SHEET NO.**

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**LAST REVIEW 07/01/13**
**DESCRIPTION:**

- New Guardrail Posts, positioned as required to clear Transition Block (Typ.)
- Transition Block
- #3 Stirrups (Field Bend) (Typ.)
- Edge of Existing Approach Slab (Location varies)

**ESTIMATED QUANTITIES PER TRANSITION BLOCK**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Class I2 (Bridge Deck)</td>
<td>CY</td>
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</tr>
<tr>
<td>Reinforcing Steel</td>
<td>LB</td>
<td>61</td>
</tr>
<tr>
<td>Guardrail (Reset)</td>
<td>LF</td>
<td>12.5</td>
</tr>
</tbody>
</table>

NOTES:

- **ANCHOR RODS**: Steel Anchor Rods shall be ASTM A36, ASTM A709 Grade 36 or ASTM A515 Grade 60 hot-dip galvanized in accordance with Specification Section 962.

- **ADHESIVE-BONDED DOWELS**: Adhesive Bonding Material Systems for Dowels shall comply with Specification Section 937 (Type HV) and be installed in accordance with Specification Section 416.

- Adhesive Bonded Dowels are shown installed in an existing curb or sidewalk integrally reinforced with Approach Slab, Wingwall or Bridge Deck. For installations in existing detached curbs or sidewalks, install dowels in available sound concrete. Shift bars (as needed) to install six dowels into existing bridge or approach slab mounted curb.