1. APPLICATIONS: This junction slab is only applicable for a TL-4 crash test rating. For TL-5 crash test rating increase Expansion Joint Spacing to 60'-0" minimum and provide Bars 5C at 6" max. spacing within 6'-0" of open joints for precast coping with the 42" F-Shape Traffic Railing.

2. CONSTRUCTION REQUIREMENTS: Construct the Junction Slab level transversely and expansion joints plumb; build downslope toward Traffic Railings. Expansion Joint Spacing 1'-0", V-Grooves 30'-0" max. (See Note 7).

3. Provide Class II concrete for slightly aggressive environments or Class IV for moderate or extremely aggressive environments.

4. Dowel Load Transfer Devices will be ASTM A36 smooth round bar and hot-dip galvanized in accordance with Specification Section 932. Dowel Load Transfer Devices (Typ.) (See Note 9). Dowel Bars 4D (Typ.) (Required only when Junction Slab is skewed).

5. Dowel Load Transfer Devices (Typ.) (Required only when Junction Slab is skewed).

6. Field cut reinforcing as required to maintain minimum cover to the top of the buildup concrete. See Wall Company Drawings for dowel locations.

7. EXPANSION JOINT DETAIL (Junction Slab expansion joints are to coincide with ½" open joints in Traffic Railings)


9. Expansion Joint Spacing ~ 30'-0", 90'-0" max. (See Note 5).

10. Expansion Joint in Precast Coping and C-I-P Traffic Railing to coincide with ½" Expansion Joint in Junction Slab.

11. PARTIAL PLAN VIEW FOR F-SHAPE TRAFFIC RAILING (Skewed Approach Slab Shown, Perpendicular Approach Slab Similar) (Precast Coping Shown, C-I-P Coping Similar) Traffic Railing not Shown for Clarity)

12. PARTIAL ELEVATION VIEW (Precast Coping and Junction Slab Reinforcing not Shown for Clarity)
PARTIAL END VIEW OF TRAFFIC RAILING END TRANSITION FOR GUARDRAIL ATTACHMENT
(Showing Bars SV and Bars SS)
(Precast Coping Shown. C-I-P Coping Similar)

NOTE: See Index No. 420 and Index No. 425, Detail "A" for details.

ESTIMATED QUANTITIES FOR PRECAST COPING

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete (Precast Coping Only)</td>
<td>CY/LF</td>
<td>0.079</td>
</tr>
<tr>
<td>Concrete (Precast Barrier &amp; Coping)</td>
<td>CY/LF</td>
<td>0.165</td>
</tr>
<tr>
<td>Concrete (C-I-P Junction Slab)</td>
<td>CY/LF</td>
<td>0.185</td>
</tr>
<tr>
<td>Reinforcing Steel (Precast Coping &amp; Traffic Railing)</td>
<td>LB/1F</td>
<td>52.67</td>
</tr>
<tr>
<td>Reinforcing Steel (C-I-P Junction Slab) (Typ.)</td>
<td>LB/1F</td>
<td>12.52</td>
</tr>
<tr>
<td>Additional Reinfl. @ Expansion Joints</td>
<td>LB</td>
<td>21.36</td>
</tr>
</tbody>
</table>

(The above concrete quantities are based on a max. superelevation of 6.25% and a 32" F-Shape Traffic Railing)

DETAIL "A"
(Showing Locations of 1/2" V-Grooves and 1/2" Preformed Expansion Joint Filler)

TYPICAL SECTION THRU PRECAST* 32" F-SHAPE TRAFFIC RAILING AND COPING WITH C-I-P JUNCTION SLAB

* C-I-P Traffic Railing and Coping Sections using precast dimensions and reinforcement are permitted at End Sections, Drainage Inlets and Light Pole Pedestals if slip forming is not used.

NOTES:
1. Match Cross Slope of Travel Lane or Shoulder.
2. The 32" dimension corresponds to a maximum superelevation of 6.25%.
3. For steeper superelevations increase this dimension to match roadway superelevation.
4. For Rigid Pavement (Concrete), Junction Slab may be thinned to match finish grade.
5. Minimum length of Junction Slab between expansion joints is 30'-0".
6. At the Contractor's option, mechanical couplers may be used to splice reinforcing. Complete details, including reinforcement lengths are required in the Shop Drawings. Provide mechanical couplers in accordance with Specification Section 415. Mechanical couplers shall develop 125% of the bar yield strength.
7. Contractor to maintain stability of precast coping/traffic railing prior to junction slab completion. In the Shop Drawings, show reinforcement for optional extension required for stability, shipping and handling. Maintain 2" minimum concrete cover.
8. Angle varies ~ 0° min., 20° max.
### BILL OF REINFORCING STEEL

**MARK** | **SIZE** | **LENGTH** | **COATING** | **C-I-P** | **Precast**
---|---|---|---|---|---
A | 4 | 5'-7" | - | - | 5'-7"
B | 5 | 11'-6" | N/A | 9'-6" | 9'-6"
B2 | 5 | AS REGD. | AS REGD. | AS REGD. | AS REGD.
C | 5 | 8'-8" | N/A | 8'-8" | 8'-8"
F | 4 | 4'-8" | 4'-8" | 4'-8" | 4'-8"
I | 4 | 4'-5" | 4'-5" | 4'-5" | 4'-5"
L | 4 | 2'-6" | N/A | N/A | N/A
P | 5 | 9'-7" | 9'-7" | 9'-7" | 9'-7"
S | 5 | 11'-6" | N/A | N/A | N/A
S1 | 8 | N/A | AS REGD. | 9'-6" | 9'-6"
V2 | 5 | 9'-10" | 9'-10" | 9'-10" | 9'-10"
V3 | 5 | 2'-0" | 2'-0" | 2'-0" | 2'-0"

**REINFORCING STEEL NOTES:**
1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at expansion and open joints will have a 2" minimum cover.
3. Lap splices for Bars 5B & 5S will be a minimum of 2'-0".
4. For Precast Copings only, lap splice Bars 4A with Bars 5C. Lap splice will be a minimum of 2'-0".
5. The Contractor may use either Full length Bars 4A or lap splice with Bars 5C at alternate Bars 4A for C-I-P Copings.
6. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 1'-0" (32" F-Shape) or 1'-1" (42" F-Shape).
7. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 1'-0" (32" F-Shape) or 1'-1" (42" F-Shape).

**STIRRUP BAR 4L**

**STIRRUP BAR 5P**

**STIRRUP BAR SV2**

**BARS 5B, 5C, 5F & 5S**

**BARS 4L**

**BARS 5B & 5S**

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**TYPICAL SECTION THRU C-I-P TRAFFIC RAILING WITH C-I-P JUNCTION SLAB AND C-I-P COPING (PRECAST COPING SIMILAR WITH C-I-P BUILDUP)**

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**ESTIMATED QUANTITIES FOR C-I-P COPING AND C-I-P COPING**

**ITEM** | **UNIT** | **QUANTITY**
---|---|---
Concrete (Traffic Railing not Included) | CY/WF | 0.264
Reinforcing Steel (Typical) excluding Bars SV2 and 5S (Typ.) | LB/WF | 30.89
Additional Rein. @ Expansion Joint | LB/WF | 21.36

*(The above concrete quantities are based on a max. superellipse of 6.25%, beneath a 32" F-Shape Traffic Railing on an MSE Wall.)*

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**NOTES:**
1. Match Cross Slope of Travel Lane to Shoulder.
2. The 32" dimension corresponds to a maximum superellipse of 6.25%. For steeper supererevolutions, increase this dimension to match roadway superellipse.
3. For Rigid Pavement (Concrete), 5" Spacing Slab may be thickened to match finish grade.
4. Minimum length of Junction Slab between expansion joints is 30'-0".
5. See Index No. 828 for additional Traffic Railing Details.
6. Contractor to maintain stability of precast coping prior to junction slab completion. In the Shop Drawings, show reinforcement for optional extension required for stability, shipping and handling.
7. Maintain 2' minimum concrete cover.
8. Thickness varies - 0' min., 17" max.

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**BUILD FOR STEPPED MSE WALL PANELS**

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**F-SHAPE TRAFFIC RAILINGS**

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**WALL COPING WITH TRAFFIC RAILING/JUNCTION SLAB**

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**INDEX NO.** | **SHEET NO.**
---|---
6110 | 3
CROSS REFERENCES:
1. For Detail "A" see Sheet 2.
2. For "Expansion Joint Detail" see Sheet 1.
3. For "Junction Slab Notes" see Sheet 2.

1.  For Detail "A" see Sheet 2.
2.  For "Expansion Joint Detail" see Sheet 1.

1.  For Detail "A" see Sheet 2.
2.  For "Expansion Joint Detail" see Sheet 1.
3.  For "Junction Slab Notes" see Sheet 2.
**JOINT NOTE:**
Joint sealant required at all expansion joints and between precast and C.I.P. curb openings.

1. See Sheets 2 & 3 for Junction Slab and additional Coping details.
3. Actual width varies depending on type of Retaining Wall used.
4. See Index No. 424 for Traffic Railing details and Bars 7P1, 4P5, 4R3, 4S3 & 4V1. Bars 5R2 and 5U are not required in Retaining Wall Coping.
5. Bars 5C are required at all expansion joints and between precast and C.I.P. curb openings.

**NOTES:**
1. See Sheets 2 & 3 for Junction Slab and additional Coping details.
3. Actual width varies depending on type of Retaining Wall used.
4. See Index No. 424 for Traffic Railing details and Bars 7P1, 4P5, 4R3, 4S3 & 4V1. Bars 5R2 and 5U are not required in Retaining Wall Coping.

**CORRALL SHAPE TRAFFIC RAILINGS**

**WALL COPING WITH TRAFFIC RAILING/JUNCTION SLAB**

**INDEX NO.**

**SHEET NO.**

**DESCRIPTION:**

**FDOT DESIGN STANDARDS**

**FY 2012/2013**

**LAST REVISION:**

**01/01/12**