**TYPE I - CONCRETE TRAFFIC SEPARATOR**

1. Separators Type I and IV are to be used with flexible pavement. Separators Types II and V are to be used with rigid pavement.

2. Either Option I or Option II may be used for Types I and IV separators except when a specific option is called for in the Plans.

3. For all separators provide 1/2" contraction joints at 20' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves to match the pavement joints, with intermediate joints not to exceed 10' centers.

**OPTION I**

- Pitch: 1/2" for 4' separator
- 3/8" for 6' separator
- 3/8" for 8'-6" separator

**OPTION II**

- Pitch: 1/2" for 4' separator
- 3/8" for 8'-6" separator

**TYPE IV - CONCRETE TRAFFIC SEPARATOR**

- Pitch: 1/2" for 4' separator
- 3/8" for 8'-6" separator

**OPTION I**

- Pitch: 1/2" for 4' separator
- 3/8" for 6' separator
- 3/8" for 8'-6" separator

**OPTION II**

- Pitch: 1/2" for 4' separator
- 3/8" for 6' separator
- 3/8" for 8'-6" separator

**NOTES:**

- Separators Types I and IV are to be used with flexible pavement. Separators Types II and V are to be used with rigid pavement.

- Either Option I or Option II may be used for Types I and IV separators except when a specific option is called for in the Plans.

- For all separators provide 1/2" contraction joints at 20' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves to match the pavement joints, with intermediate joints not to exceed 10' centers.
LONGITUDINAL SECTION (NOSE)

Pitch:
- ¼" For 4' Separator
- ½" For 6' Separator
- ¾" For 8'-6" Separator

Concrete Pavement

⁵⁄₁₆" Expansion Joint
(Preformed Filler & Joint Sealant)

LONGITUDINAL SECTION (NOSE)

Pitch:
- ¼" For 4' Separator
- ½" For 6' Separator
- ¾" For 8'-6" Separator

Concrete Pavement

⁵⁄₁₆" Expansion Joint
(Preformed Filler & Joint Sealant)

TRANSVERSE SECTION

520-020

ROADWAY INSTALLATIONS - RIGID PAVEMENT

TRAFFIC SEPARATORS

INDEX

520-020

SHEET 2 of 5
**Notes:**

1. Traffic Separator transverse reinforcement adjacent to deck expansion joints shall be field adjusted to maintain clearance and spacing. Bars shall be field cut as shown. Bars may be rotated to maintain clearance.

2. Traffic Separator ends at deck expansion joints shall follow the deck joint limits. Drainage joints and V-Grooves shall be placed perpendicular or radial to the E of the Traffic Separator. See Structures Plans, Superstructure and Approach Slab Sheets for details.


4. Option II is not permitted on bridge decks with prestressing steel.

5. Bar Spacing:
   - 4'-0" @ 7 equal spaces (continuous)
   - 6'-0" @ 5 equal spaces (continuous)
   - 8'-0" @ 3 equal spaces (continuous)

6. At the Contractor's option, a one piece bar may be substituted for Bars 4B and 4E.

7. Field bend and cut rebar as required to maintain cover.

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**Reinforcing Steel**

(Bridge Deck Shown, Approach Slab Similar)

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**Option I**

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**Option II**

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**Skewed Bridge Deck and Approach Slab With Traffic Separator**

(Deck Expansion Joint at Begin or End Bridge Shown, Expansion Joint at Pier or Intermediate Bents Similar)

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**Bridge Installations - Type "E" Curb**

DESIGNER:

LAST REVISION 11/01/17

REVISION 3 0F 5

INDEX 520-020
Notes:
1. Treatment of separators on straight bridges shown. For additional notes and treatment of separators on skewed bridges, see Sheet 2.
2. Option II is not permitted on bridge decks with prestressing steel.
3. Bar Spacing:
   - 8'-6" @ 7 equal spaces (continuous)
   - 6'-0" @ 5 equal spaces (continuous)
   - 4'-0" @ 3 equal spaces (continuous)
4. At the Contractor's option, a one piece bar may be substituted for Bars 4B and 4E.
5. Field bend and cut rebar as required to maintain cover.

Traffic Separator (Typ.)

<table>
<thead>
<tr>
<th>Pitch</th>
<th>1/2&quot; for 4&quot; Separator</th>
<th>1/2&quot; for 6&quot; Separator</th>
<th>1/2&quot; for 8&quot;-6&quot; Separator</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSVERSE SECTION</td>
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<tr>
<td>LONGITUDINAL SECTION (NOSE)</td>
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<tr>
<td>OPTION I</td>
<td></td>
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<tr>
<td>OPTION II</td>
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</tbody>
</table>

REINFORCING STEEL

(Bridge Deck Shown, Approach Slab Similar)

<table>
<thead>
<tr>
<th>Expansion joint Assembly</th>
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<tbody>
<tr>
<td>(See Expansion Joint Details)</td>
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</table>

| Traffic Separator (Typ.) |

DETAIL AT EXPANSION JOINTS

(Strip Seal Shown, Other Armored Joint Types Similar)

<table>
<thead>
<tr>
<th>Poured joint with Backer Rod Expansion Joint</th>
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</thead>
<tbody>
<tr>
<td>(See Expansion Joint Details)</td>
</tr>
</tbody>
</table>

| Traffic Separator (Typ.) |

DETAIL AT Poured joint with BACKER ROD EXPANSION JOINTS
**REINFORCING STEEL NOTES:**

1. All dimensions are out to out.

2. The 8" vertical dimension shown for Bars 4B and 4D are based on a slab 8½" thick or greater without a wearing surface. If slab thickness is less than 8½", decrease this dimension by an amount equal to the difference in thickness. If a wearing surface is to be provided, increase this dimension by an amount equal to the wearing surface thickness.

3. The dowel hole diameter is to meet adhesive bonding material system manufacturer's requirements.

4. Provide and install an adhesive bonding material system in accordance with Specifications 416 and 937.

5. Shift Dowel Holes to clear if existing reinforcement is encountered.

**CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS**

See Structures Plans, Superstructure Sheets for location(s) of drainage joints. Locations for drainage joints shall be limited to the constant width section of separator.

**DRAINAGE JOINT DETAIL**

(For 5" Opening Or Less)

**DOWEL NOTES:**

1. Shift Dowel Holes to clear if existing reinforcement is encountered.

2. Provide and install an adhesive bonding material system in accordance with Specifications 416 and 937.

3. The dowel hole diameter is to meet adhesive bonding material system manufacturer's requirements.

**DOWEL DETAIL**

**ESTIMATED TRAFFIC SEPARATOR QUANTITIES:**

| CONCRETE |
|-----------------|-----------------|-----------------|
| Width = 0.006 CY per Ft. | 0.072 CY per Ft. |
| Width = 0.089 CY per Ft. | 0.112 CY per Ft. |
| Width = 0.133 CY per Ft. | 0.164 CY per Ft. |

| NOSE |
|-----------------|-----------------|-----------------|
| Width = 0.080 CY | 0.109 CY |
| Width = 0.237 CY | 0.275 CY |
| Width = 0.381 CY | 0.536 CY |

**REINFORCING STEEL:**

(All quantities are based on an 8½" slab.)

| OPTION I |
|-----------------|-----------------|-----------------|
| Width = 6.37 Lbs. per Ft. |
| Width = 8.60 Lbs. per Ft. |
| Width = 11.95 Lbs. per Ft. |

| OPTION II |
|-----------------|-----------------|-----------------|
| Width = 4.77 Lbs. per Ft. |
| Width = 7.00 Lbs. per Ft. |
| Width = 9.45 Lbs. per Ft. |

**BRIDGE INSTALLATIONS - TYPE "E" AND "F" CURB**

**CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS**

See Structures Plans, Superstructure Sheets for location(s) of drainage joints. Locations for drainage joints shall be limited to the constant width section of separator.