1. CONSTRUCTION REQUIREMENTS: Construct the Spread Footing level transversely and expansion joints plumb; do not construct the spread footing perpendicular to the roadway surface.

2. CONCRETE: Use Class II concrete for slightly aggressive environments. Use Class IV concrete for moderately or extremely aggressive environments. Concrete will be in accordance with Specification Section 346.

3. DOWELS: Dowel Load Transfer Devices will be ASTM A 36 smooth round bar and hot-dip galvanized in accordance with Specification Section 962. Install Dowel Load Transfer Devices in accordance with Specification Section 350.

4. Construct 2" Expansion Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown.

5. Provide and install Preformed Expansion Joint Filler in accordance with Specification Section 932.

6. Construct 1/2" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between 1/2" Expansion Joints and/or Begin or End Spread Footing. V-Groove locations are to coincide with V-Groove locations in the Railing/Noise Wall.

7. FILL REQUIREMENTS: Shoulder or Roadway Pavement and Fill is required on the traffic side of the spread footing for a distance of 4'-0" and the full length of the spread footing (3'-0" minimum depth) on the backside of the spread footing for Option A. Fill is required for a distance of 4'-0" on the backside of the spread footing and the full length of the spread footing (3'-0" minimum depth) on the traffic side of the spread footing for Option B. See Typical Sections on Sheet Nos. 2 and 3 for details.

8. Spacing shown is along the Gutter Line.

9. Work this Standard Drawing with one or both of the following:
   a. Index 5210 – Traffic Railing/Noise Wall (8'-0').
   b. Index 5211 – Traffic Railing/Noise Wall (14'-0').

CROSS REFERENCE:
For Detail "A", see Sheet 3.
For Section A-A and Estimated Quantities, see Sheet 4.
TYPICAL SECTION THRU SPREAD FOOTING - OPTION A
(Bars SP, SR and SS1 in Traffic Railing/Noise Wall not shown for clarity)

NOTES:
1. Match Cross Slope of Travel Lane or Shoulder
2. Place 10 ~ Bars SB inside Bars SU1 as shown.
3. For Reinforcing Steel spacing, see Typical Section Thru Spread Footing - Option A This Sheet.
4. Provide 3" lip when optional construction joint is used.
TYPICAL SECTION THRU SPREAD FOOTING - OPTION B
(Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

NOTES:
1. Match Cross Slope of Travel Lane or Shoulder.
2. Place 10 ~ Bars 5B inside Bars 5U1 as shown.
3. Provide 3" lip when optional construction joint is used.

EXPANSION JOINT DETAIL
(Spread Footing expansion joints are required at 1/8 open joints in Traffic Railing/Noise Wall)

DETAILED "A"
(Option A Shown, Option B Similar)
(Shewing Locations of 1/8 V-Grooves and 1/8 Preformed Expansion Joint Filler)
ITEM | UNIT | QUANTITY
--- | --- | ---
Concrete (Footings) | CY/FT | 0.414
Reinforcing Steel (Typical) | LB/FT | 85.53
Additional Rein. @ Expansion Joint | LB | 48.06

CROSS REFERENCE: For location of Section A-A, see Sheet 1.

REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>LENGTH</th>
</tr>
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<tbody>
<tr>
<td>B</td>
<td>5</td>
<td>AS REQD.</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>S3</td>
<td>5</td>
<td>3'-10&quot;</td>
</tr>
<tr>
<td>S4</td>
<td>5</td>
<td>4'-7&quot;</td>
</tr>
<tr>
<td>T</td>
<td>5</td>
<td>4'-7&quot;</td>
</tr>
<tr>
<td>U1</td>
<td>5</td>
<td>8'-0&quot;</td>
</tr>
<tr>
<td>U2</td>
<td>5</td>
<td>17'-11&quot;</td>
</tr>
<tr>
<td>U3</td>
<td>5</td>
<td>12'-10&quot;</td>
</tr>
</tbody>
</table>

NOTES:
1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at the open joints will have a 2" minimum cover.
3. Lap splices for Bars 5B will be a minimum of 2'-2".
4. Lap splices Bars 5T and 5V with 5U1 will be a minimum of 2'-2".
5. The Contractor may use Welded Wire Reinforcement (WWR) when approved by the Engineer. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.

TRAFFIC RAILING/NOISE WALL
L-SHAPED SPREAD FOOTING

REVISED 07/01/13

DESIGN STANDARDS

FY 2017-18

INDEX NO. 5214

SHEET NO. 4 of 4