PLAN - OPTION B
SPREAD FOOTING ADJACENT TO SKewed APPROACH SLAB AND WITH BARRIER WALL INLET
(Option A Similar)

NOTES:

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

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 1/2" Expansion Joint as plum 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 plum 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 Fll 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 No. 5210 - Traffic Railing/Noise Wall (8'-0')
   b. Index No. 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.
NOTES:
1. Match Cross Slope of Travel Lane or Shoulder.
2. Place 10 ~ Bars 5B inside Bars S51 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.
5. For construction details, see Design Standard Index No. 218.

TYPICAL SECTION THRU SPREAD FOOTING - OPTION A
(Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

TYPICAL SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET - OPTION A
(Reinforcing Steel not shown for clarity (See Note 3))
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 SU1 as shown.
3. Provide 3" lip when optional construction joint is used.

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

DETAIL "A"
(Option A Shown, Option B Similar)
(Showig Locations of 1/2 V-Grooves and 1/2 Preformed Expansion Joint Filler)
Additional Reinf. @ Expansion Joint

Reinforcing Steel  (Typical)

Concrete (Footing)

BAR 5U2

BAR 5U3

BAR 553

BAR 554

BAR 5T

BAR 5V

BAR 5U1

REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

MARK  SIZE  LENGTH

B  5  AS REQ'D.

C  5  5'-6"

S3  5  3'-10"

S4  5  4'-3"

T  5  8'-3"

U1  5  8'-0"

U2  5  17'-11"

U3  5  12'-10"

REINFORCING STEEL 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.

SECTION A-A
TYPICAL SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET - OPTION B
(Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

NOTES:

1. Place 10 ~ Bars 5B inside Bars 5U1 as shown.

2. For Reinforcing Steel spacing, see Typical Section Thru Spread Footing - Option B on Sheet 3.

3. Provide 3" lip when optional construction joint is used.

ESTIMATED L-SHAPED SPREAD FOOTING QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<tbody>
<tr>
<td>Concrete (Footing)</td>
<td>CF/FT/</td>
<td>0.414</td>
</tr>
<tr>
<td>Reinforcing Steel (Typical)</td>
<td>LB/FT</td>
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</tr>
<tr>
<td>Additional Reinf. @ Expansion Joint</td>
<td>LB</td>
<td>48.06</td>
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</tbody>
</table>

(Subtract 12.69 lb/ft from typical reinforcing steel quantity shown on Index No. 5210 to account for the absence of Stirrup Bars 5V and 5S1 in L-Shaped Spread Footings.)

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

TRAFFIC RAILING/NOISE WALL
L-SHAPED SPREAD FOOTING

LAST REVISION: 07/01/13

DESCRIPTION: FY 2016-17

DESIGN STANDARDS

INDEX NO. 5214

SHEET NO. 4 of 4