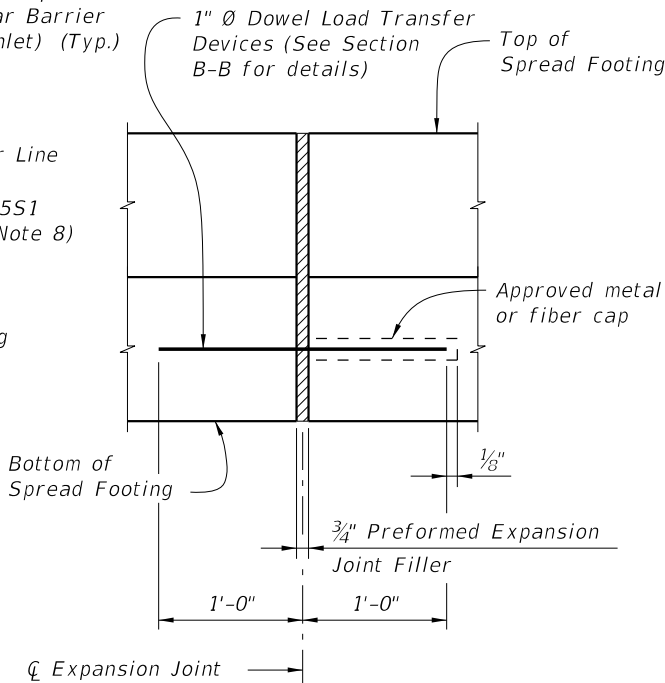
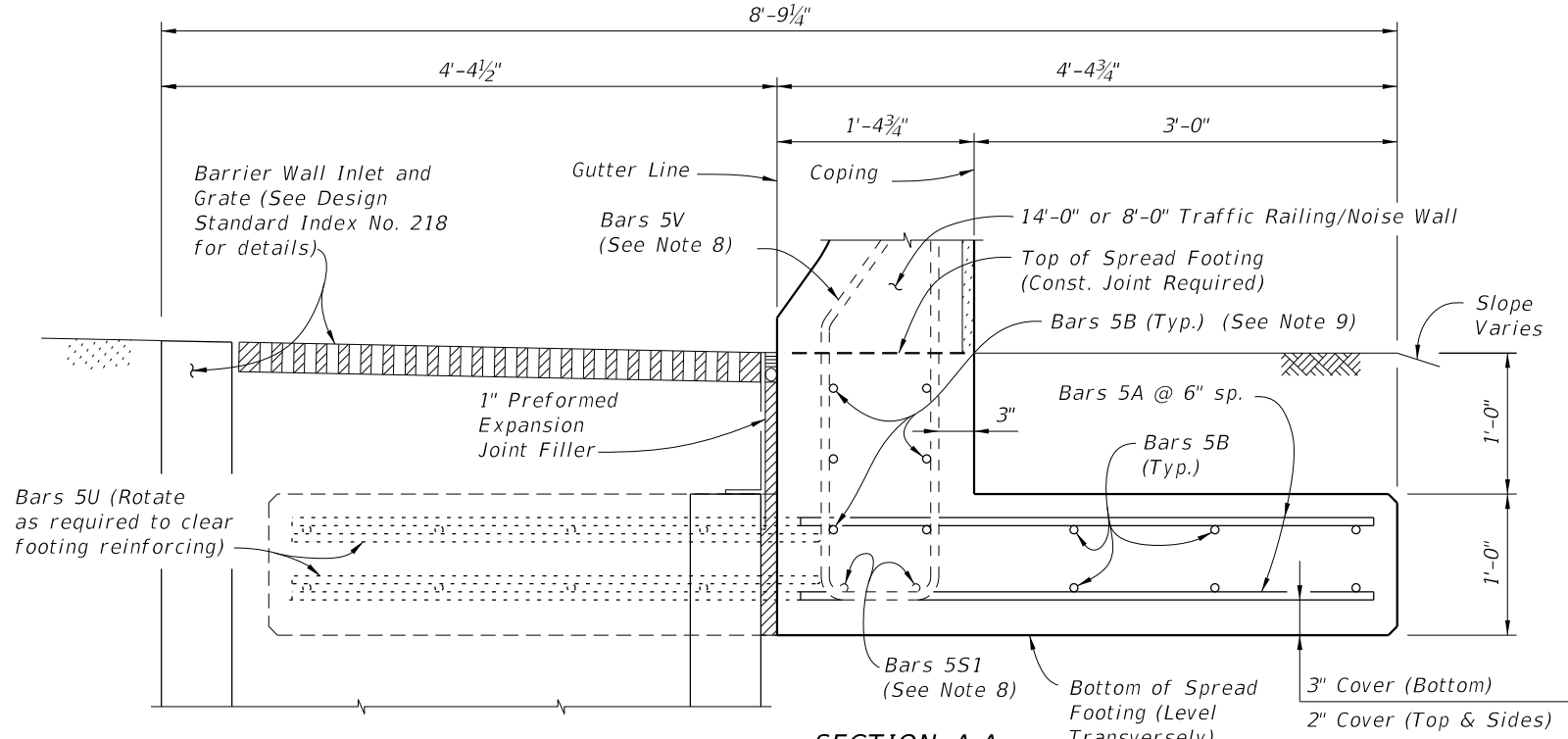


PLAN
SPREAD FOOTING ADJACENT TO SKEWED APPROACH SLAB AND WITH BARRIER WALL INLET



EXPANSION JOINT DETAIL
 (Spread Footing expansion joints are required at 3/4" open joints in Traffic Railing/Noise Wall)



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

- 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. Slip 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 3/4" 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 3/4" 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 or Fill is required on top (1'-0" minimum depth) for the entire length of the spread footing on both sides of the Railing/Noise Wall. See Section B-B for details.
 8. See Index No. 5210 for Bars 5V and 5S1.
 9. Place 6 ~ Bars 5B inside Stirrup Bars 5V as shown.
 10. Spacing shown is along the Gutter Line.
 11. 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 Section B-B and Detail "A", see Sheet No. 2.

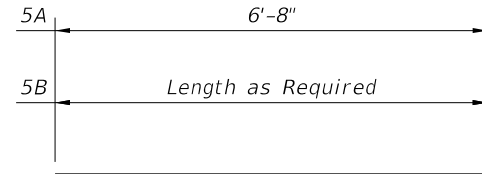
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LAST REVISION 07/01/13	DESCRIPTION:	 2016 DESIGN STANDARDS	TRAFFIC RAILING/NOISE WALL T-SHAPED SPREAD FOOTING	INDEX NO. 5213	SHEET NO. 1 of 2
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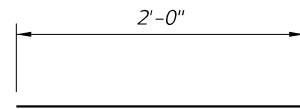
REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

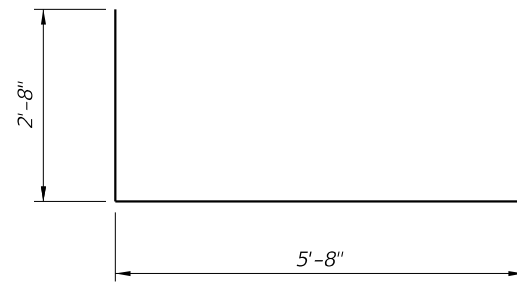
MARK	SIZE	LENGTH
A	5	6'-8"
B	5	AS REQD.
U	5	11'-0"
DOWEL	1" Ø Smooth Bar	2'-0"



BARS 5A & 5B



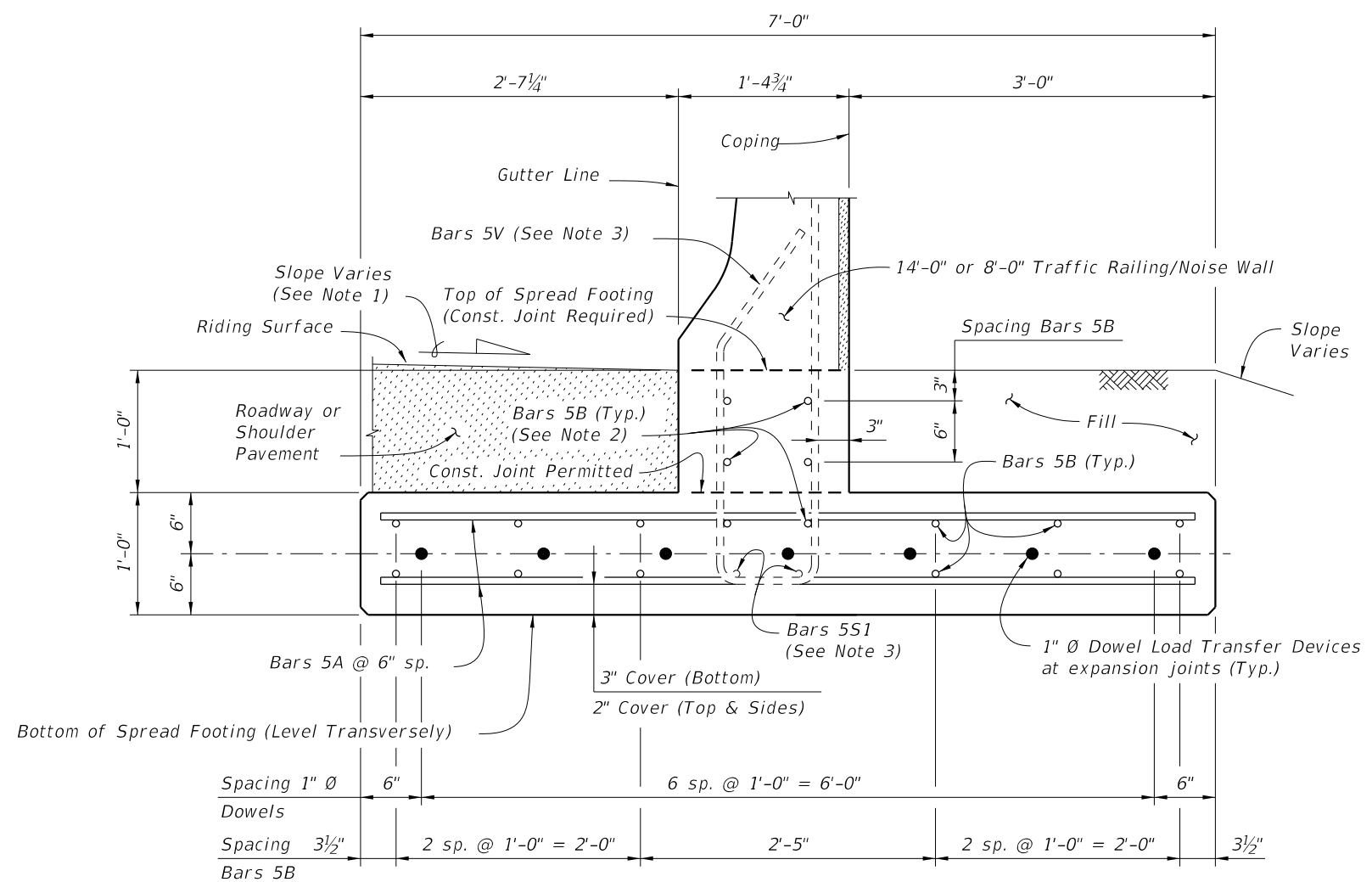
1" Ø DOWEL



BAR 5U

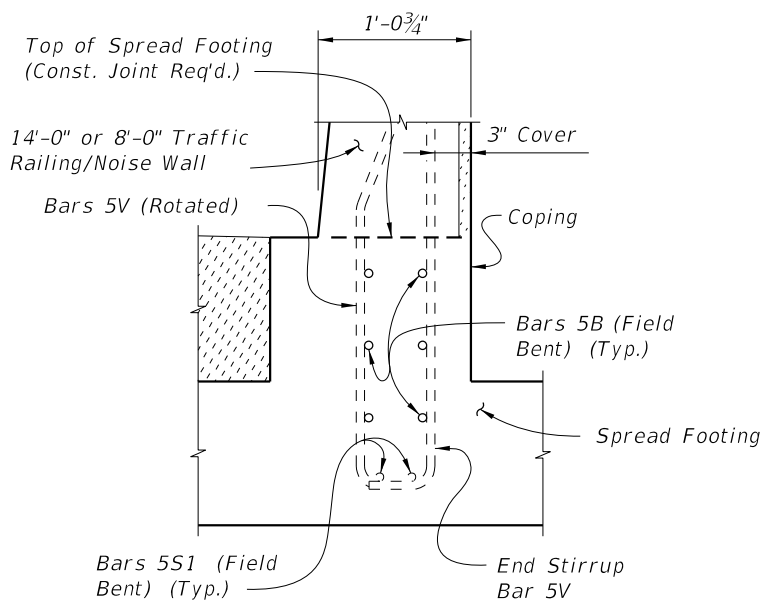
REINFORCING STEEL NOTES:

- All bar dimensions in the bending diagrams are out to out.
- All reinforcing steel at the open joints will have a 2" minimum cover.
- Lap splices for Bars 5B will be a minimum of 2'-2".
- 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.



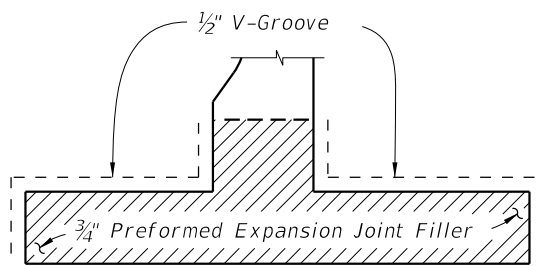
**SECTION B-B
TYPICAL SECTION THRU SPREAD FOOTING
(Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)**

- NOTES:**
- Match Cross Slope of Travel Lane or Shoulder.
 - Place 6 ~ Bars 5B inside Stirrup Bars 5V as shown.
 - See Index No. 5210 for Bars 5V and Bars 5S1.



**PARTIAL END VIEW OF RAILING END TRANSITION FOR GUARDRAIL ATTACHMENT
(Showing Bars 5V, Bars 5S1 and Bars 5B inside of Stirrup Bars 5V)**

NOTE: See Index No. 5210, Detail "A" for details.



DETAIL "A"
(Showing Locations of 1/2" V-Grooves and 3/4" Preformed Expansion Joint Filler)

ESTIMATED T-SHAPED SPREAD FOOTING QUANTITIES		
ITEM	UNIT	QUANTITY
Concrete (Footing)	CY/FT	0.311
Reinforcing Steel (Typical)	LB/FT	51.80
Additional Reinf. @ Expansion Joint	LB	37.38

Note: The reinforcing steel quantity accounts for the difference between the shorter Stirrup Bars 5V for junction slabs or bridges and the longer Stirrup Bars 5V for spread footings.

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

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LAST REVISION	DESCRIPTION:
07/01/13	