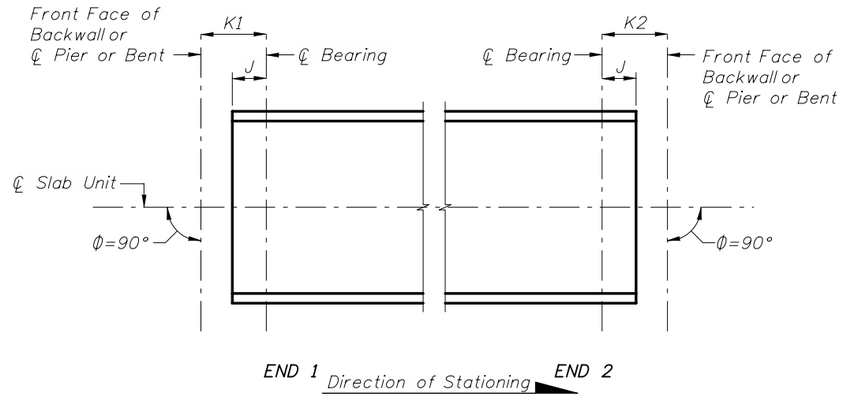
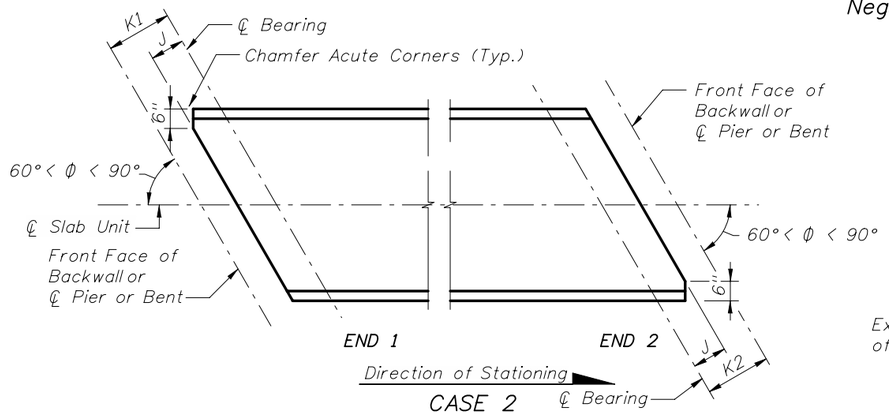
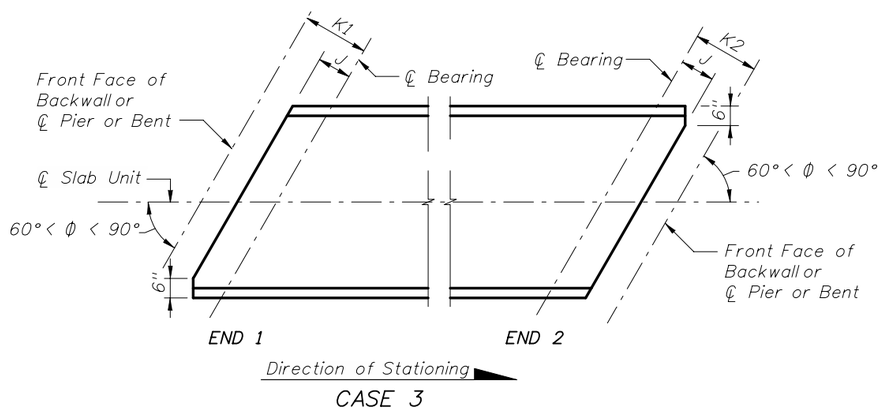


CASE 1

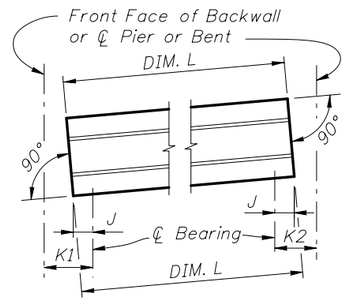


CASE 2

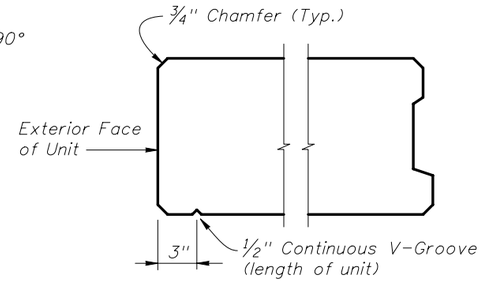


CASE 3

SCHEMATIC PLAN VIEWS AT SLAB ENDS



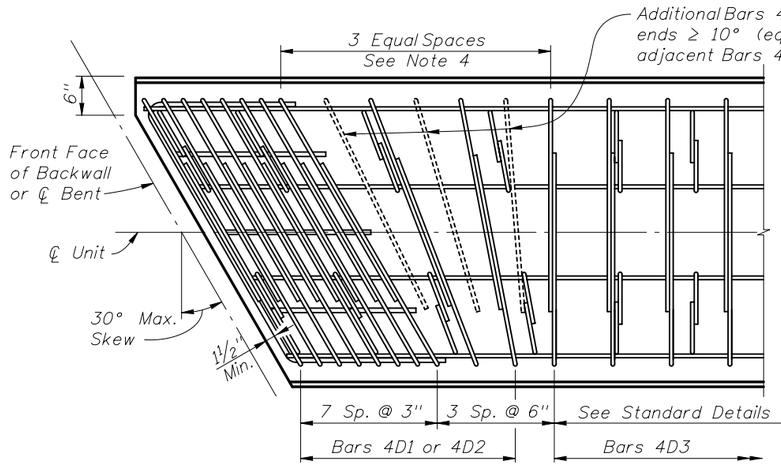
SCHEMATIC SIDE ELEVATION OF SLAB UNITS
(Positive Grade shown, Negative Grade or Horizontal Grade similar)



V-GROOVE DETAIL
(Exterior Units)

GENERAL NOTES

1. All bar dimensions are out-to-out.
2. Strands N shall be ASTM A416, Grade 250 or 270, ⅜" ϕ or larger, stressed to 10,000 lbs. each.
3. Unless otherwise noted, the minimum concrete cover for reinforcing steel shall be 2".
4. For slab units with skewed end conditions, the end reinforcement, defined as Bars 4D1, 4D2, 4K and Y within the limits of the first 2'-0", shall be placed parallel to the skewed ends of the slab unit. The next two sets of Bars 4D1 or 4D2 & 4K shall be fanned to provide equal spacing. Provide additional Bars 4D1 or 4D2 for end skews ≥ 10°. See "SKEWED END TREATMENT DETAIL".
5. Bars 4D1, 4D2, 4D3 & 4K shall be placed and tied to Strands N and a fully bonded strand in the bottom row. See "STRAND PATTERNS".
6. At the Contractor's option, deformed welded wire reinforcement may be used in lieu of Bars 4D and 4K. Submit details to the Engineer for approval.
7. For referenced Dimensions, Angles and Case Numbers, see Table of Variables in Structures Plans.
8. Top surface of the slab units shall be raked transversely to provide a roughened surface with ¼" amplitude. For proper bonding of the deck overlay, clean the top surface of the Prestressed Slab Units and thoroughly soak with potable water for a minimum of 4 hrs. then remove all excess surface water immediately prior to placement of the overlay.
9. Cut strands 1" beyond the face of the slab unit.
10. Bars 4D1, 5Y1 & 6Y1 correspond to END 1, and 4D2, 5Y2 & 6Y2 correspond to END 2.



SKEWED END TREATMENT DETAIL

INSTRUCTIONS TO DESIGNER:

1. To limit horizontal splitting forces, the maximum prestress force at the slab unit ends from fully bonded strands must be limited to the following:

Slab Unit Type	Max. Bonded Prestress Force	Index No.	Last Revision Date
12" or 15" X Custom Width	910 Kips	20353 & 20363	01/01/09 or later
12" or 15" X 48"	1110 Kips	20354 & 20364	01/01/09 or later
12" or 15" X 60"	1440 Kips	20355 & 20365	01/01/09 or later

No losses shall be applied when calculating the Bonded Prestress Force. The reinforcing in the ends of the slabs must not be modified without the approval of the State Structures Design Engineer.

2. Use the same thickness of slab units within each span.
3. If the cross slope of the slab exceeds 3%, provide a project specific keeper block design for the low side of the slabs to prevent sliding. See "KEEPER BLOCK DETAILS" on Sheet 3.
4. If the grade of the slab exceeds 3%, provide a project specific design in the Structures Plans to prevent sliding.
5. Avoid placing slab units within the limits of superelevation transitions, because the cross slope for individual and adjacent slab units must be constant from begin span to end span. Slight superelevation transitions may be accommodated by increasing the slab overlay thickness across the width of the span.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/10	TJB	New Design Standard			

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PRESTRESSED SLAB UNITS DETAILS AND NOTES

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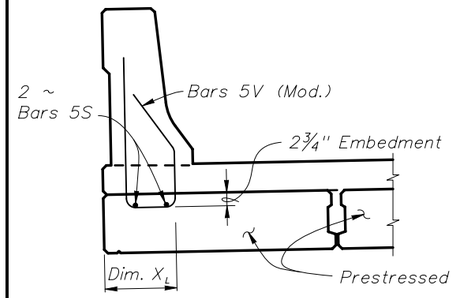
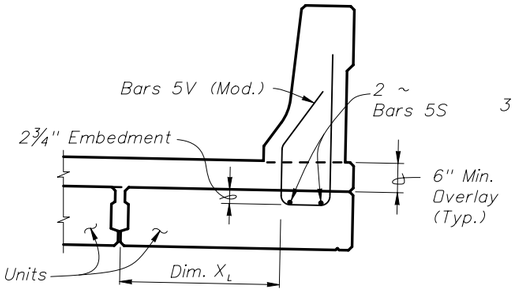
Index No. 20350

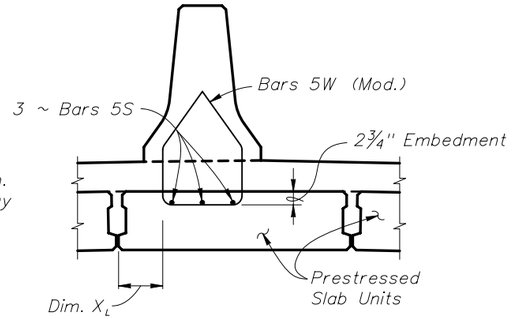


CASE "LEFT"



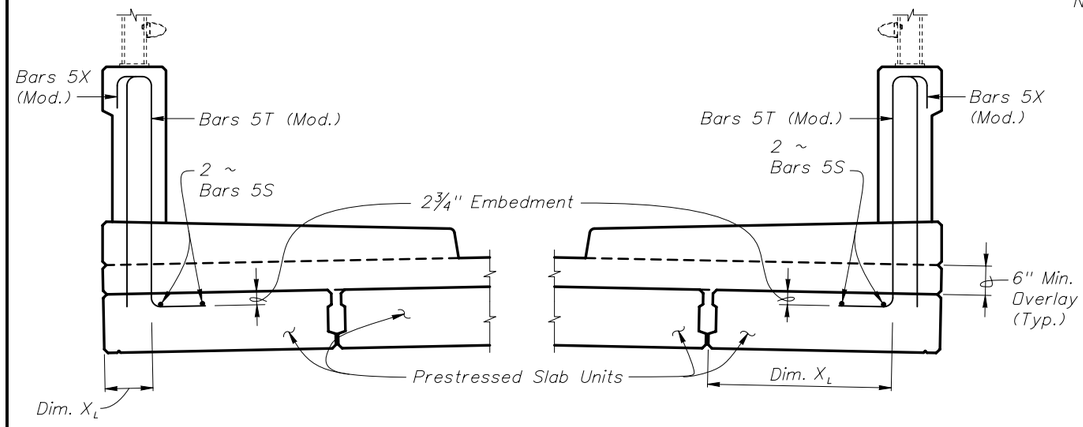
CASE "RIGHT"

F SHAPE TRAFFIC RAILING (LOOKING AHEAD STATION)
(Index No. 420 - 32" F Shape shown)
(Index No. 425 - 42" F Shape similar)
(Railing on Exterior Units shown, Railing on Interior Units similar)



CASE "INTERIOR"

TRAFFIC RAILING (MEDIAN 32" F SHAPE)
(Index No. 421)



CASE "LEFT"

CASE "RIGHT"

VERTICAL SHAPE TRAFFIC RAILING (LOOKING AHEAD STATION)
(Index No. 423 - 32" Vertical Shape shown)
(Index No. 422 - 42" Vertical Shape similar)

NOTES:

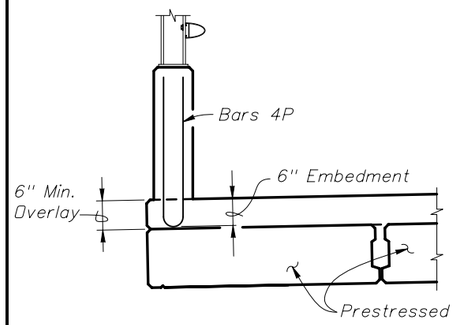
Work this sheet with the Prestressed Slab Unit - Table of Variables and Prestressed Slab Unit - Traffic Railing Reinforcement Layout Table (if required) in the Structures Plans.

Contractor shall direct the Precaster on how the Traffic Railing bars are to be placed, either vertical (plumb) or perpendicular to the cross slope to allow proper placement of the modified railing bars.

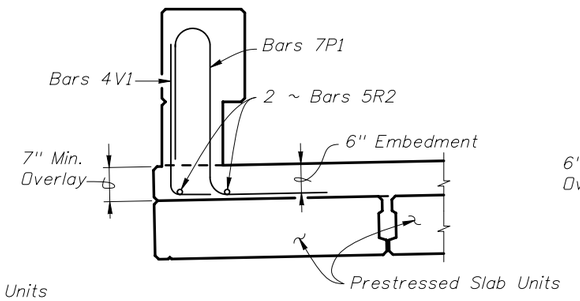
Modified Bars 5T & 5X for Index Nos. 422 & 423 shall be placed vertical (plumb).

For skewed Prestressed Slab Units, place the bottom leg of vertical railing bars parallel to transverse slab reinforcement bars at unit ends. See Partial Plan View on Sheet 3.

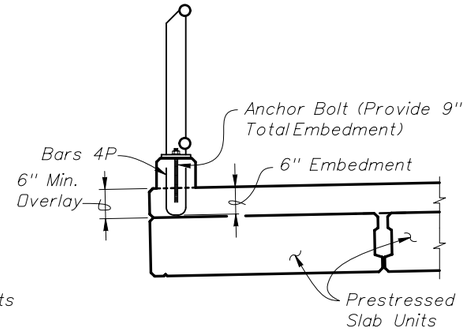
Concrete cover at top of railings may be increased up to 1" to accommodate camber of prestressed slab units.



PEDESTRIAN/BICYCLE RAILING DETAIL
(Index No. 820)

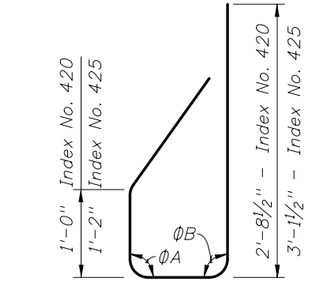


TRAFFIC RAILING - (CORRAL SHAPE)
(Index No. 424)

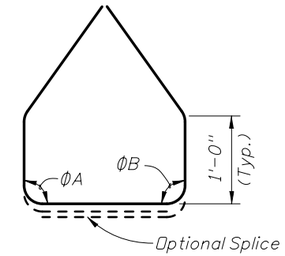


BRIDGE PEDESTRIAN/BICYCLE PICKET RAILING
(Index Nos. 851 & 861)

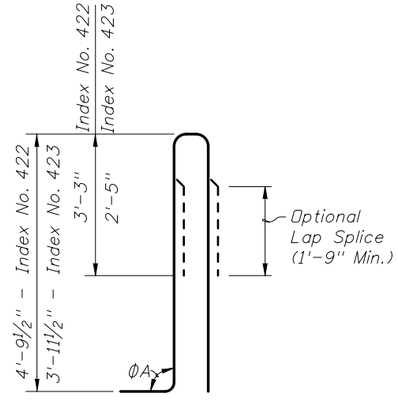
RAILING REINFORCING MODIFIED BAR LAYOUT



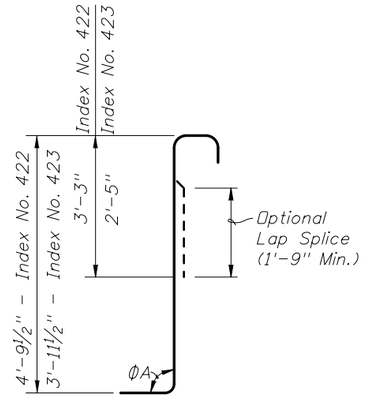
STIRRUP
BAR 5V (MOD.)
INDEX NOS. 420 OR 425



STIRRUP
BAR 5W (MOD.)
INDEX NO. 421



STIRRUP
BAR 5T (MOD.)
INDEX NOS. 422 OR 423



STIRRUP
BAR 5X (MOD.)
INDEX NOS. 422 OR 423

REINFORCING STEEL NOTES:

1. Bar dimensions shown are out to out.
2. For the other dimensions and angles ΦA and ΦB, see the referenced Index.
3. Adjust the dimension shown for Bars 5V, 5T, 5W, 5X, 4V & 7P as required when the 6" Min. Overlay is thickened to accommodate superelevation transition.
4. The 4'-9" (Index No. 422), 3'-11½" (Index No. 423) vertical dimension shown for Bars 5T and 5X is based on a 6" thick deck overlay with a 6" thick x 6' wide raised sidewalk on low side of the deck with a 2% deck cross slope and a counter 2% raised sidewalk cross slope. If the raised sidewalk thickness, width, or cross slope varies from the above amounts, adjust this dimension accordingly to achieve a 2¾" embedment (± ½") into the slab units. See Structures Plans, Superstructure and Approach Slab Sheets.
5. All reinforcing steel at the open joints shall have a 2" minimum cover.
6. Bars 5S may be continuous or spliced at the mid point of the slab unit. Bar splices for Bars 5S shall be a minimum of 2'-0".
7. Welded Wire Reinforcement is not permitted for Bars 5W (Mod.) on precast slab units.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/10	TJB	New Design Standard			

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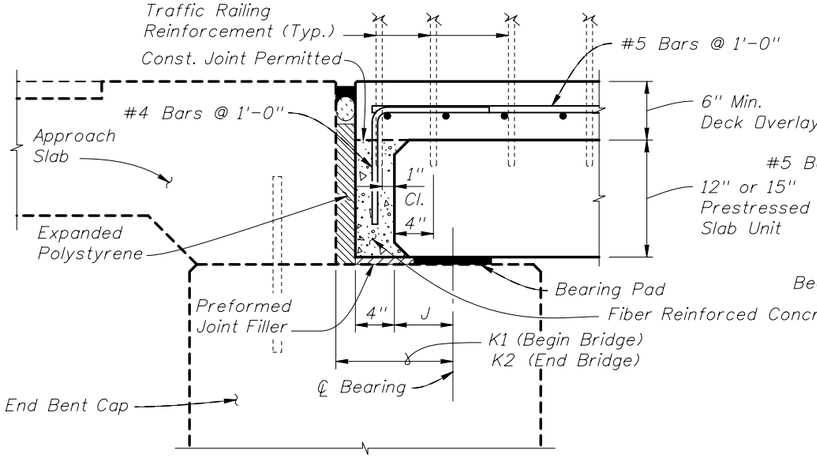
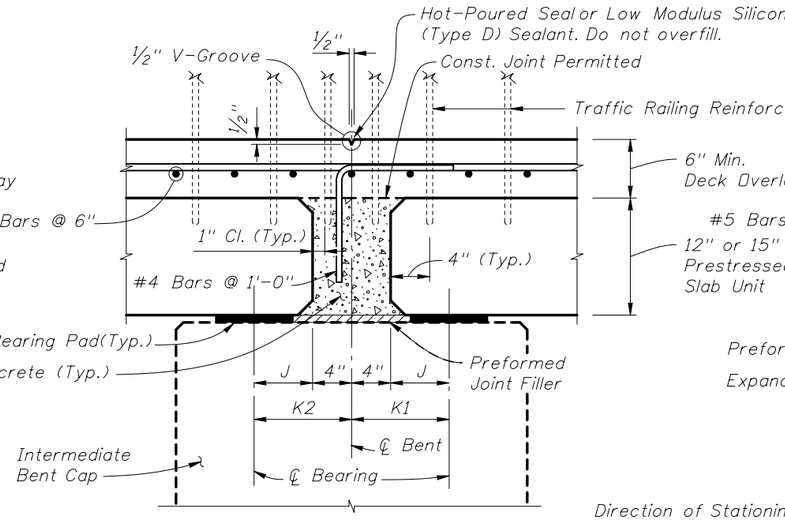
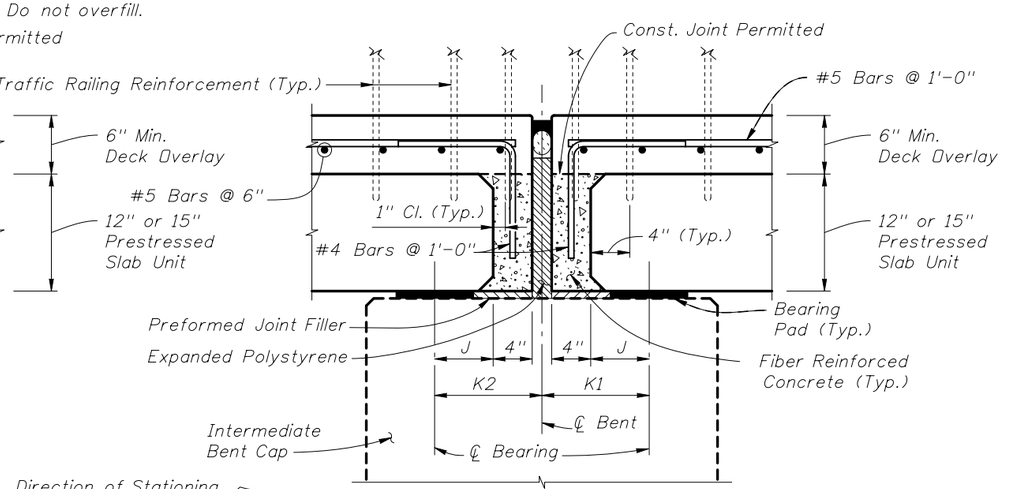
Index No. 20350



JOINT DETAIL AT
BEGIN/END BRIDGE

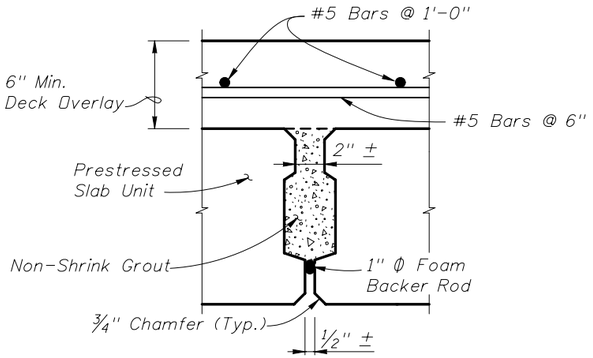


JOINT DETAIL AT
INTERMEDIATE BENTS ON CONTINUOUS UNITS

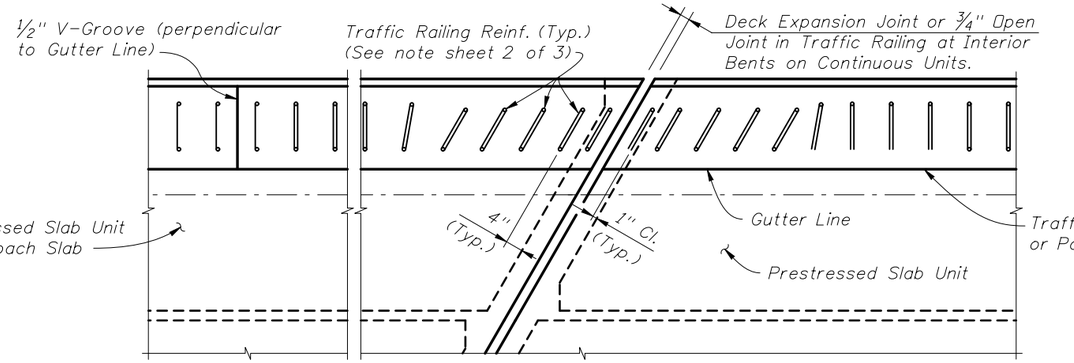


JOINT DETAIL AT
EXPANSION INTERMEDIATE BENTS

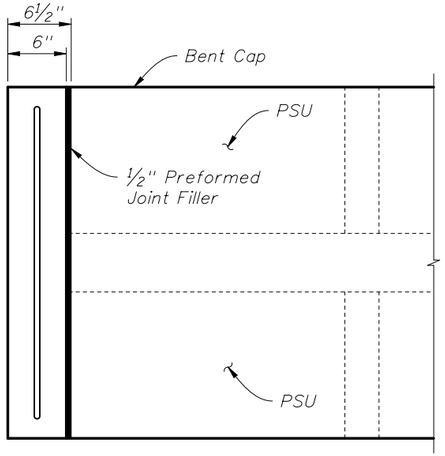
NOTE:
Deck overlay reinforcing is shown at nominal spacing. See Structures Plans for actual spacing and orientation on skewed bridges.



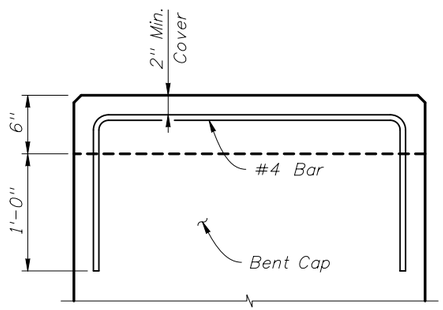
KEYWAY DETAIL



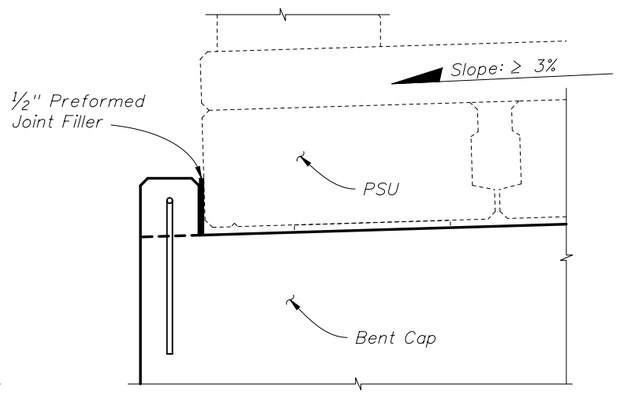
PARTIAL PLAN VIEW OF JOINTS ON SKEWED BRIDGES
(EXPANSION JOINT SHOWN, INTERMEDIATE JOINT SIMILAR)



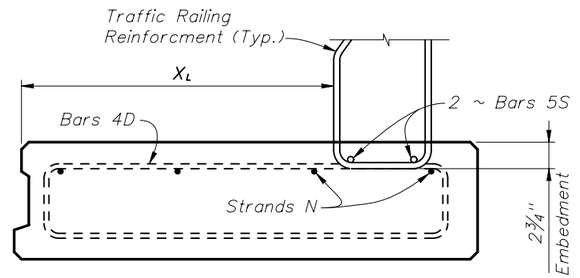
PARTIAL PLAN



END VIEW



PARTIAL ELEVATION



TRAFFIC RAILING REINFORCMENT
EMBEDMENT DETAIL
(Bars 5V Shown, Bars 5T, 5X & 5W Similar)

KEEPER BLOCK DETAILS

Use keeper blocks on low end of bent caps when cross slope is ≥ 3%.

REVISIONS

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