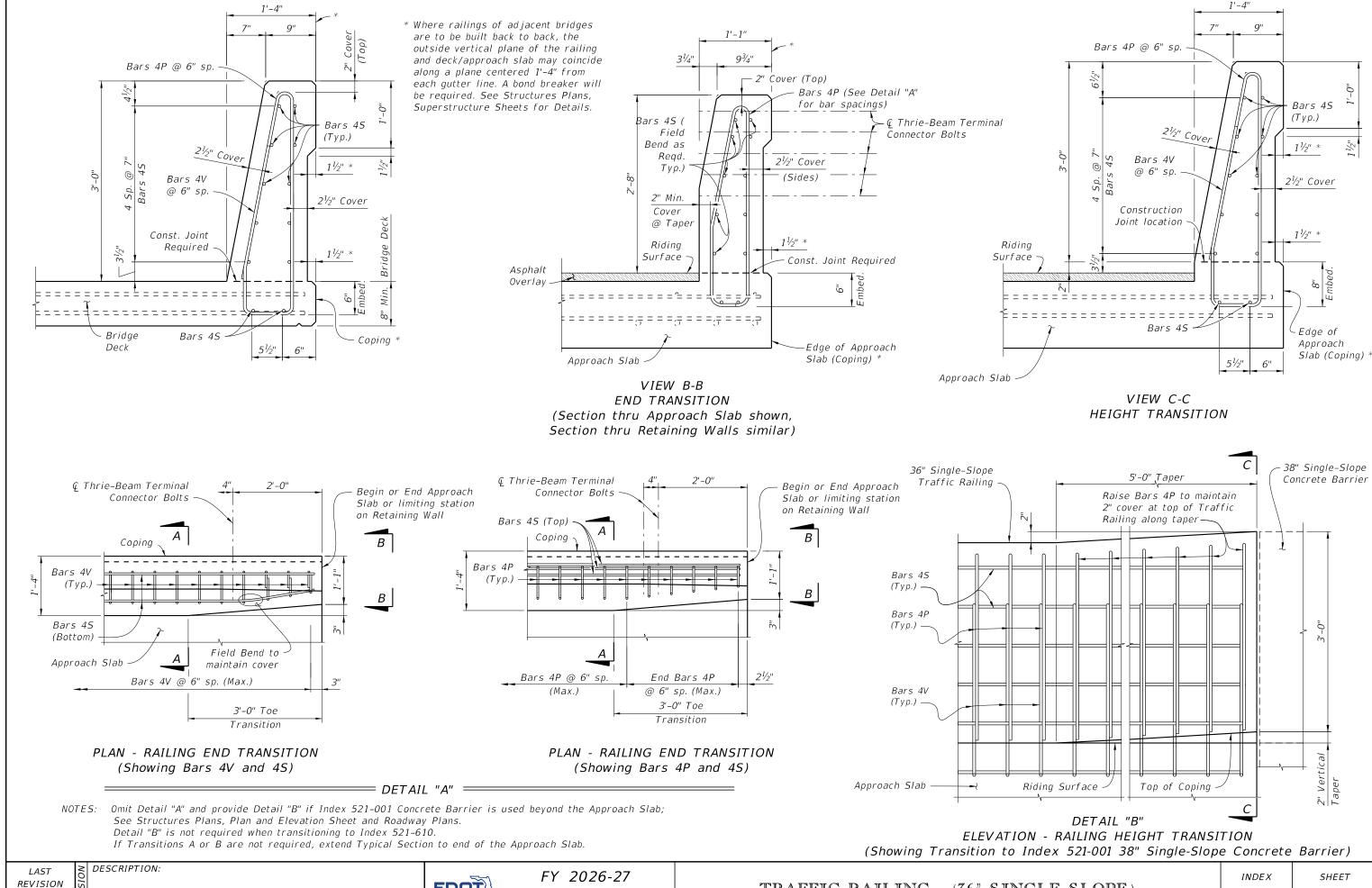


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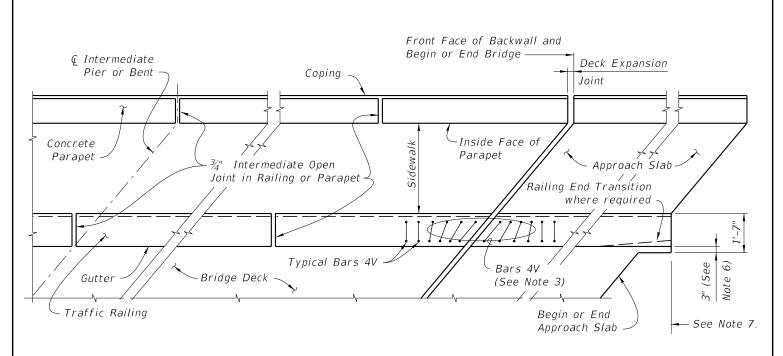
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STANDARD PLANS

TRAFFIC RAILING - (36" SINGLE-SLOPE)

*521-427* 

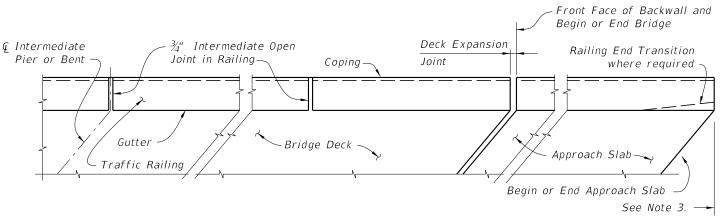
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PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SIDEWALK, SINGLE-SLOPE TRAFFIC RAILING AND PEDESTRIAN/BICYCLE RAILING INDEX 521-820 or 521-825, OTHER TRAFFIC RAILINGS SIMILAR

#### NOTES:

- 1) Concrete Parapet reinforcement is not effected by skew angle, see Index 521-820 for details.
- 2) Parapet expansion joint shall match the deck expansion joint which shall be turned perpendicular or radial to the gutter line. See Structures Plans, Superstructure Sheets for details.
- 3) Traffic Railing reinforcement vertical Bars 4V & 4P may be shifted up to 1" (Max.) and rotated up to 10 degrees as required to allow proper placement. Bars 4V adjacent to expansion joints shall be field adjusted to maintain clearance and spacing, extra Bars 4V will be required. Cut bottom horizontal portion of 4V Bars to maintain maximum horizontal length to each vertical leg being placed. Discard the remainder of the bar. Rotate cut bars to maintain clearance.
- 4) Railing ends at deck expansion joints shall follow the deck joint with allowance for joint movement. Expansion joint at the inside face of parapet shall be turned perpendicular or radial to this line. See Structures Plans, Superstructure and Approach Slab Sheets for details.
- 5) ¾" Intermediate Open Joints and V-Grooves in railing and parapet shall be placed perpendicular or radial to the gutter line or inside face of parapet line. See Structures Plans, Superstructure Sheets for locations.
- 6) At begin or end approach slab extend slab at the railing ends 3" (gutter side or back face of railing as required) as shown to provide a base for casting of the railing. Field trim toe of Bars 4V by 1 inch as required to maintain concrete cover at edge of deck.
- 7) When Guardrail is shown on the approach, begin placing Railing Bars 4P and 4V on Approach Slab at the railing end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars 4P and 4V shall be made immediately adjacent to Begin or End Bridge.



# PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SINGLE-SLOPE TRAFFIC RAILING, OTHER TRAFFIC RAILINGS SIMILAR

#### NOTES:

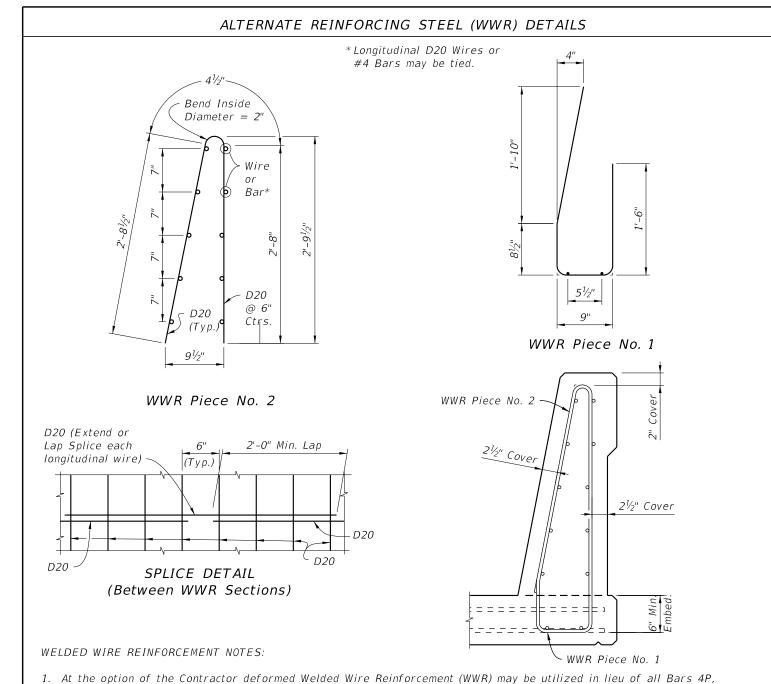
- 1) Railing expansion joint shall match the deck expansion joint which shall be turned perpendicular or radial to the gutter line. See Structures Plans, Superstructure Sheets for details.
- 2)  $\frac{3}{4}$ " Intermediate Open Joints and  $\frac{1}{2}$ " V-Grooves in railing shall be placed perpendicular or radial to the gutter line. See Structures Plans, Superstructure and Approach Slab Sheets for locations.
- 3) When Guardrail is shown on the approach, begin placing Railing Bars 4P and 4V on Approach Slab at the railing end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars 4P and 4V shall be made immediately adjacent to Begin or End Bridge.

GENERAL NOTES:

- 1) Work this Sheet with Traffic Railing, Pedestrian/Bicycle Railing, and Approach Slab Indexes as applicable.
- 2) Deck Expansion Joint at begin or end bridge shown. Deck Expansion Joints at © Pier or Intermediate Bents are similar.
- 3) Partial Plan Views shown are intended as guides only. See Structures Plans, Superstructure and Approach Slab Sheets for skew angles, joint orientation, dimensions and details.
- 4) Railings on Raised Sidewalks shall be treated similar to the Partial Plan View of Bridge Deck with Traffic Railing.
- 5) If Welded Wire Reinforcement is used in lieu of conventional reinforcement, placement of the WWR vertical elements shall be similar to those shown above. Clipping of horizontal elements to facilitate placement shall be minimized where possible. When clipping is required, supplement horizontal elements by lap splicing with deformed bars having an equivalent area of steel.

5 3:17:31 PM

DESCRIPTION:



2. WWR at Railing End Transition shall be field bent inward as required (Piece 2) to maintain cover. The bottom of the vertical wires (D20) in Piece 2 shall be cut a maximum of 4 inches and the gutter side portion bent inward as required to allow placement.

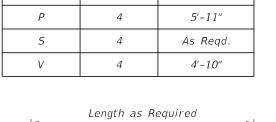
4S and 4V. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.

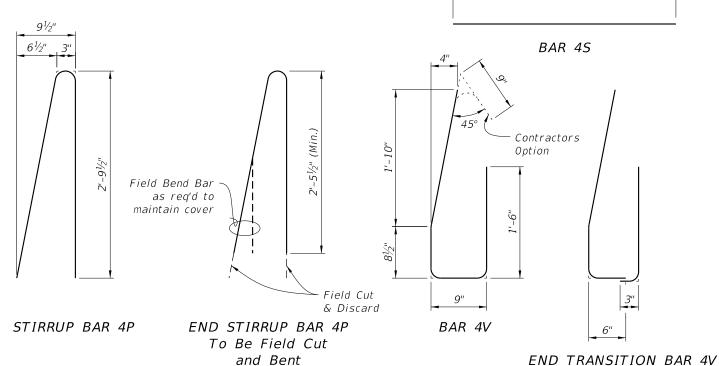
## CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

ROADWAY	LOW GUTTER	HIGH GUTTER
CROSS-SLOPE	ØB	ØB
0% to 2%	90°	90°
2% to 6%	87°	9 <i>3</i> °
6% to 10%	84°	96°

BILL OF REINFORCING STEEL				
MARK	SIZE	LENGTH		
Р	4	5'-11"		
S	4	As Reqd.		
V	4	4'-10"		

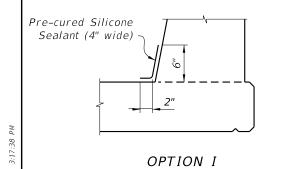
ØB shall be 90° if Contractor elects to place railing perpendicular to the deck and approach slabs.

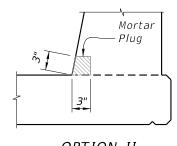




REINFORCING STEEL NOTES:

- 1. All bar dimensions in the bending diagrams are out to out.
- 2. The  $8\frac{1}{2}$ " vertical dimensions shown for Bar 4V is based on a 6" embedment into the bridge deck without a raised sidewalk. If a raised sidewalk is to be provided, increase this dimension to achieve a 6" minimum embedment into the bridge deck. See Structures Plans, Superstructure and Approach Slab Sheets.
- 3. All reinforcing steel at the open joints shall have a 2" minimum cover.
- 4. Bars 45 may be continuous or spliced at the construction joints. Bar splices for Bars 45 shall be a minimum of 2'-0".



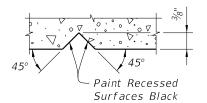


OPTION II (Alternative Mortar Plug at Open Joint)

DETAIL "C" =

## INTERMEDIATE JOINT SEAL NOTES:

- 1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Specification Section 932.
- 2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
- 3. Include the cost of the Pre-cured Silicone Sealant in the Contract Unit Price for the Traffic Railing.
- 4. As an alternative option, a mortar plug may be used to seal the joint as shown in the mortar plug detail and in accordance with Specification Section 400.



SECTION THRU RECESSED "V" GROOVE TO FORM INSCRIBED LETTERS AND FIGURES

ESTIMATED TRAFFIC RAILING QUANTITIES				
ITEM	UNIT	QUANTITY		
Concrete	CY/LF	0.107		
Reinforcing Steel	LB/LF	24.78		

(The above quantities are based on a 2% deck cross slope; railing on low side of deck.)

DESCRIPTION:

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FY 2026-27 STANDARD PLANS

TRAFFIC RAILING - (36" SINGLE-SLOPE)

INDEX *521-427* 

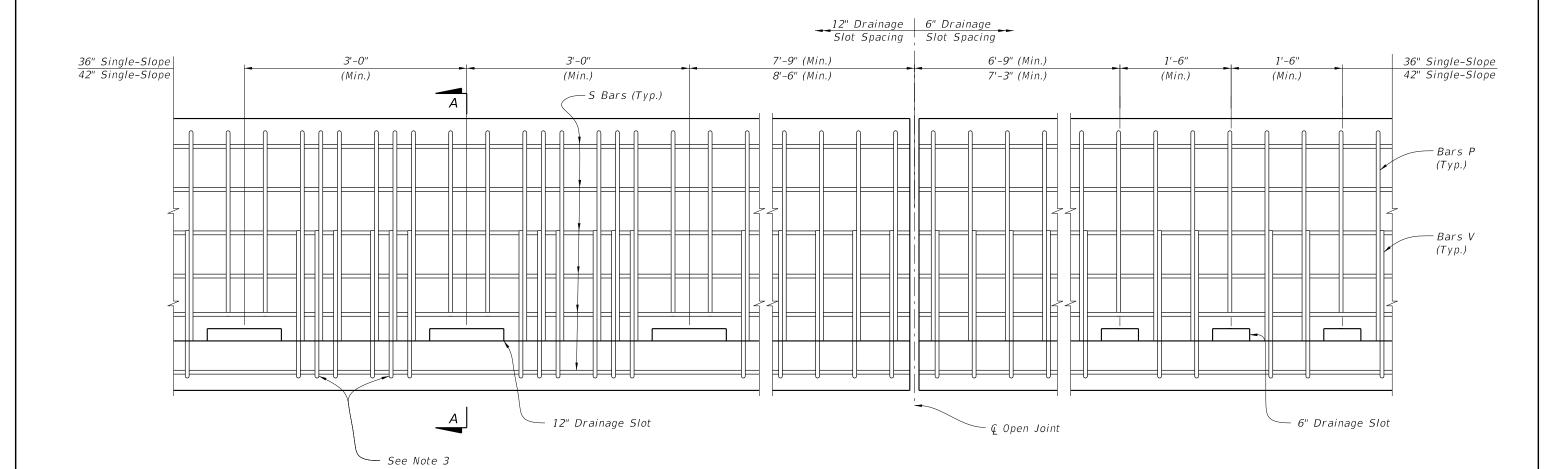
Field Cut and Lapped

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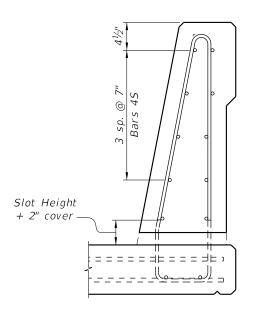
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11/01/25



ELEVATION



SECTION A-A 36" Single-Slope Shown Other traffic railings similar

### DRAINAGE SLOT NOTES:

- 1. Use only when required for safety. See Plans for locations and size of drainage slots.
- 2. Maintain 2" minimum cover to all reinforcing. Trim P Bars over drainage slots and raise bottom S bars as necessary to maintain cover.
- 3. For slots greater than 6" in length, add additional vertical bars (V & P) on each side of
- 4. Drainage slot heights are 2" or 3". See the plans for size and location details.

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FY 2026-27 STANDARD PLANS

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