1. Shop Drawings are required.
2. Work this Index with Index 515-062 Aluminum Bicycle/Pedestrian Railing Details and Specification Section 515. Refer to the IDS for Design Criteria and Limits of Use.
3. Materials:
   A. Galvanized Steel Fasteners: Hex Head Bolt ASTM A307, Hex Nuts ASTM A563, Washers ASTM F436
   B. Aluminum:
      a. Support Bracket (Scheme 3): L-shape and Stiffener Plate: ASTM B209, Alloy 6061-T6
      b. Bottle-guard (Schemes 1 & 3): L-shape: ASTM B209, Alloy 6061-T6 or 6063-T5
   C. Concrete: Same as bridge deck
   D. Pre-cured Silicone Sealant: Specification Section 932
   E. Bearing Pads: Provide 1/3" thick Plain, Fabric Reinforced or Fabric Laminated pads meeting the requirements of Specification Section 932 for Ancillary Structures.
4. See Structures Plans, Superstructure Sheets for bridge information including concrete type, deck expansion joint locations and orientations, and thermal movement.
5. Railings:
   A. For thermal movement greater than 4" (up to a maximum of 5"), clear opening between adjacent pickets, or panels at Rail Expansion Joints above Deck Joints must be reduced to 3½".
   B. For treatment of railings on skewed bridges see Index 521-427.
6. Curbs:
   A. Match open curb joints at Deck Expansion Joint locations to the deck joint dimension.
   B. Construct Concrete Curb (Scheme 2) vertical with the top surface finished level transversely.
   C. Provide 1/2" Intermediate open joints in curbs coinciding with the 1/2" joints in the traffic railing.
7. Payment: Support Bracket (Scheme 3) is incidental to the cost of railing. Curb concrete and reinforcing steel (Scheme 2) are included in the bridge deck quantities.
Traffic Railing required for all Schemes (Type Varies, Single Slope shown, see Plans).

Index 515-062, Pedestrian/Bicycle Railing (Aluminum)

Bottle-Guard (See Detail on Sheet 3)

Bridge Deck Sidewalk Slope 2% Max. (away from Coping)

Thru-Bolt Plate Washer Detail

Cross Reference: See Sheet 1 for Bridge Railing Notes.

Scheme 1 - Typical Section Through Deck Mounted Railing

Scheme 2 - Typical Section Through Curb Mounted Railing

Scheme 3 - Side Mounted Railing (Retrofit)

Thru-Bolt Plate Washer Detail

Plan View

Plate Washer Detail

Elevation View

Typical Section

Scheme 3 - Side-Mounted Support Bracket Details
**Bridge Pedestrian/Bicycle Railing (Aluminum)**

**DETAIL "B" - EXPANSION JOINT (FIELD SPLICE SIMILAR)**

**NOTE:** Place wire panels to minimize the end overhang. End overhangs greater than 4\(\frac{3}{4}\)" are not permitted.

**ALTARNE REINFORCING (WWR) DETAILS**

1. All bar dimensions in the bending diagrams are out to out.
2. The reinforcement for the curb on a retaining wall shall be the same as detailed for an 8" deck.
3. All reinforcing steel at the open joints shall have a 2" minimum cover.
4. Bars 4S may be continuous or spliced at the construction joints. Bar splices for Bars 4S shall be a minimum of 1'-8".
5. Deformed WWR meeting the requirements of Specifications Section 931 may be used in lieu of all Bars 4P and 4S.

**CURB REINFORCING STEEL NOTES:**

- Pre-cured Silicone Sealant (4" wide)
- Rebar laps each longitudinal wire

**BILL OF REINFORCING STEEL**

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<tr>
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**DETAIL "A" - SECTION AT INTERMEDIATE OPEN JOINT**

**CONCRETE CURB QUANTITIES (SCHEME 2)**

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**SCHEME 1 - BOTTLE GUARD DETAIL**

**SCHEME 2 - CONCRETE CURB DETAILS**

**SCHEME 3 - BOTTLE GUARD DETAIL**

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**Intermediate Joint Seal Note:**
At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant. 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.