NOTES:
1. Work with Index 11860.
2. Shop Drawings: Not required.

3. Materials:
   A. Steel Plate: ASTM A36 or ASTM A709 Grade 36
   B. Steel Pipe (Support Post): ASTM A501 Schedule 40
   C. Aluminum Pipe: ASTM B210 Alloy 6061-T6
   D. Galvanized U-Bolts, Nuts and Plate Washer
      a. U-Bolts: ASTM A449
      b. Hex Nuts: ASTM A 563 Lock Nuts
   E. Plate Washer: ASTM A 36 or ASTM A709 Grade 36 or 50
   F. Galvanized Anchor Bolts, Nuts and Washers:
      a. Anchor Rod: ASTM F1554 Grade 55 fully threaded (for Adhesive Anchors)
      b. Anchor Bolt: ASTM F1554 Grade 55 Grade A Hex
      c. Nuts: ASTM A563 Heavy Hex Locking
   G. Washers: ASTM F436
   H. Adhesive Anchor Bonding Material: Specification Section 931 Type HV Adhesive.
   I. Weld Material: E70XX
   J. Snap-In Post Cap: UV and weather-resistant glass-filled polyester cap

4. Coating:
   A. U-Bolts, Threaded Rods, Nuts and Washers: ASTM F2329
   B. Other Steel: ASTM A123

5. Fabrication:
   A. Weld: Specification Section 460-6.4
   B. Not dip galvanize after fabrication

6. Construction:
   A. Locate Sign Support a minimum of 5 feet from an open joint or transition (sign stationing may be adjusted to accommodate this requirement)
   B. Base plate must be flush with back of Traffic Railing
   C. Anchors in Traffic Railings:
      a. Install Adhesive anchors in accordance with Specification section 416 except perform field test on one anchor per sign support location.
      b. Use templates and tie anchors as necessary to maintain correct placement of C-I-P Embedded Anchors
      c. Do not drill into existing conduit
   D. Temporary Signs on Permanent Traffic Railings: Same as Permanent except Field testing of anchors is not required

7. Removal of Temporary Signs on Permanent Traffic Railings:
   A. Cut anchor rods flush with the top of the traffic railing
   B. Coat anchors with Type F-1 epoxy to prevent corrosion
      a. Extend coating 2 inches beyond edge of cut anchor rods
      b. Epoxy coating 1/16" thick minimum

8. Payment:
   Include the cost of all materials and labor in the cost of the single post sign assembly.

<table>
<thead>
<tr>
<th>SIGN LIMITATIONS TABLE</th>
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</thead>
<tbody>
<tr>
<td>MAX. SIGN AREA (SF)</td>
</tr>
<tr>
<td>2'</td>
</tr>
<tr>
<td>9'-7&quot;</td>
</tr>
</tbody>
</table>

Dimension A = Distance from centerline of the Support Post to the bottom of the sign or sign cluster.

Dimension C = Vertical distance from the bottom of the sign or sign cluster to the centroid of the sign or sign cluster.
**NOTES:**

1. **Existing Traffic Railings:**
   - A. Locate existing conduct prior to drilling and adjust placement of base plate as necessary to avoid damaging existing conduct. Base plate must be flush with back of traffic railing. Maintain a minimum cover 2” from face of traffic railing to tip of Adhesive Anchor.
   - B. For concrete parapets less than 1/2” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. For through bolting, cut front face of the traffic railing so that washer is flush with the concrete.

2. **New Traffic Railings:**
   - A. Optional Couplers are shown for slipforming; keep Anchor Bolt coupler threads free of concrete.
   - B. For concrete parapets less than 10” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. Through bolting, cut front face of traffic railing so that washer is flush with the concrete.

3. **Sign Support Bracket:**
   - A. Locate existing conduit prior to drilling and adjust placement of base plate as necessary to avoid damaging existing conduit. Base plate must be flush with back of traffic railing. Maintain a minimum cover 2” from face of traffic railing to tip of Adhesive Anchor.
   - B. For concrete parapets less than 1/2” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. For through bolting, cut front face of the traffic railing so that washer is flush with the concrete.

4. **Bridge Deck Shown:**
   - A. Through bolting, cut front face of the traffic railing so that washer is flush with the concrete.
   - B. For concrete parapets less than 10” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. Through bolting, cut front face of traffic railing so that washer is flush with the concrete.

5. **Sign Support Bracket:**
   - A. Locate existing conduit prior to drilling and adjust placement of base plate as necessary to avoid damaging existing conduit. Base plate must be flush with back of traffic railing. Maintain a minimum cover 2” from face of traffic railing to tip of Adhesive Anchor.
   - B. For concrete parapets less than 1/2” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. For through bolting, cut front face of the traffic railing so that washer is flush with the concrete.

6. **Bridge Deck Shown:**
   - A. Through bolting, cut front face of the traffic railing so that washer is flush with the concrete.
   - B. For concrete parapets less than 10” thick, through bolt 3/8” Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1/8” beyond traffic face of railing.
   - C. Through bolting, cut front face of traffic railing so that washer is flush with the concrete.

**TYPICAL SECTION - NEW CONSTRUCTION**

**TYPICAL SECTION - EXISTING RAILING**

**TYPICAL SECTION - NEW CONSTRUCTION**
**SIGN SUPPORT ASSEMBLY**

- **5" NPS Schedule 40 Aluminum**
- **Bridge Deck**
- **Traffic Railing**
- **End Plate and U-Bolt Plate Washer**

**SIGN SUPPORT WELDMENT DETAIL**

- **Support Post (5" NPS Schedule 40 Steel Pipe)**
- **Base Plate**
- **End Plate**
- **U-Bolt Plate Washer**

**BASE PLATE**

- **17/8" Hole (Typ.)**
- **1" Hole (Typ.)**

**SIDE**

- **17/8" Hole (Typ.)**
- **1" Hole (Typ.)**

**FRONT**

- **17/8" Hole (Typ.)**
- **1" Hole (Typ.)**

**END PLATE**

- **17/8" Hole (Typ.)**
- **1" Hole (Typ.)**

**U-BOLT PLATE WASHER**

- **17/8" Hole (Typ.)**
- **1" Hole (Typ.)**

**SIGN SUPPORT ASSEMBLY**

- **10"**
- **1/2" Hole (Typ.)**

**SIDE**

- **10"**
- **1/2" Hole (Typ.)**

**FRONT**

- **10"**
- **1/2" Hole (Typ.)**

**U-BOLT PLATE WASHER**

- **17/8" Hole (Typ.)**

**SIGN SUPPORT ASSEMBLY**

- **10"**
- **1/2" Hole (Typ.)**