FENCING NOTES:

FENCE INSTALLATION:
Install posts plumb (within a tolerance of ± 1/2"). Use shim plates as required to achieve plumb. The required quantity and thickness of shim plates will be determined in the field. Install chain link fence in accordance with ASTM F567 as applicable.

TRAFFIC RAILING DETAILS:
See Superstructure Sheets for Traffic Railing details.

CONCRETE PARAPET DETAILS:
See Index 521-820 - Pedestrian/Bicycle Railing for Concrete Parapet details. Provide fencing in lieu of aluminum bullet railing as shown on Index 521-820.

LIMITS OF FENCING:
Limits of fencing are from begin of approach slab at Begin Bridge to end of approach slab at End Bridge, unless otherwise shown in the plans.

PAYMENT:
Payment will be made under Fencing, Type R. Payment includes posts, horizontal and expansion rails, brace bands, rail ends, combination rail ends, boulevard clamps, chain link fabric, tension wire, ties, hog rings, tension bars and bands, pipe clamps, base plates, anchor rods, bolts, nuts, washers, shim plates, spacers, neoprene pads, miscellaneous fence fittings and hardware, and all incidental materials and labor required to complete installation of the fence.

CROSS REFERENCE:
For Table of Fence Components and Table of Post Attachment Components see Sheet 2.
For Pull Post Assembly Detail, View A-A and Detail "A" see Sheet 3.
For Detail "B" and "E" see Sheet 4.
**TABLE OF CHAIN LINK FENCE COMPONENTS**

<table>
<thead>
<tr>
<th>COMPONENT INFORMATION</th>
<th>ASTM DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posts</td>
<td>F1083</td>
</tr>
<tr>
<td>Horizontal Rails and Internal Sleeves</td>
<td>F1083</td>
</tr>
<tr>
<td>Expansion Rails</td>
<td>F1083</td>
</tr>
<tr>
<td>Chain Link Fabric (2' mesh with knuckled bottom selvages)</td>
<td>A392</td>
</tr>
<tr>
<td>Tension Wire</td>
<td>A224 &amp; A177</td>
</tr>
<tr>
<td>Tie Wires</td>
<td>F626</td>
</tr>
<tr>
<td>Hap Rings</td>
<td>F626</td>
</tr>
<tr>
<td>Brace Bands</td>
<td>F626</td>
</tr>
<tr>
<td>Tension Bars</td>
<td>F626</td>
</tr>
<tr>
<td>Miscellaneous Fence Components</td>
<td>F626</td>
</tr>
<tr>
<td>Bolts</td>
<td>A397</td>
</tr>
<tr>
<td>Nuts</td>
<td>A563</td>
</tr>
<tr>
<td>Washers</td>
<td>F436</td>
</tr>
</tbody>
</table>

**COMPONENT INFORMATION**

- **Zinc Coated Steel**: 9 gauge (Min. thickness) x 6" (Min. width) - Steel Bands (Beveled or Heavy)
- **Aluminum Coated Steel Wire**: 9 gauge (coated wire diameter), Class I Coating - Aluminum Coated Steel Wire - 9 gauge
- **Zinc Coated Steel Wire**: 12 gauge (Min. thickness) x 6" (Min. width) - Steel Bands (Beveled or Heavy)
- **Galvanized Steel Pipe**: 3" NPS, Schedule 40 Regular Grade - Galvanized Steel Pipe - 2" NPS, Schedule 40 Regular Grade
- **Polyvinyl Chloride (PVC) Coated Steel Wire**: 9 gauge Class 2b Zinc Coated Wire
- **Zinc Coated Steel Band**: 14 gage (Min. thickness) x 6" (Min. width)

**NOTES:**
- Installation of expansion rails midway between the fence posts spanning the expansion joint
- Horizontal rail post attachments

**EXPANSION RAIL DETAIL**

1. Expansion Rails are required at expansion joint locations where the total movement exceeds 1". Install expansion rails midway between the fence posts spanning the expansion joint.
2. An expansion assembly is required where the total joint movement exceeds 6". An expansion assembly includes an expansion rail and two pull posts (see Sheet 3). When the expansion joint opening is greater than 9", add an additional length to the free end of the expansion rail equal to the difference between the expansion joint opening and 9".
3. Install nut for the expansion rail finger-tight. The nut will fully engage bolts with a minimum of one bolt thread extending beyond the nuts. Distort the first thread on the outside of the nut to prevent loosening.

**TABLE OF POST ATTACHMENT COMPONENTS**

<table>
<thead>
<tr>
<th>COMPONENT INFORMATION</th>
<th>ASTM DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Clamps</td>
<td>A36 or A709 Grade 36</td>
</tr>
<tr>
<td>Base Plates</td>
<td>A36 or A709 Grade 36</td>
</tr>
<tr>
<td>Shim Plates</td>
<td>A36 or A709 Grade 36 or B209 Alloy 6061-T6 or B221 Alloy 6063-T6</td>
</tr>
<tr>
<td>Spacers</td>
<td>-</td>
</tr>
<tr>
<td>Bolts</td>
<td>A307</td>
</tr>
<tr>
<td>Washers</td>
<td>A563</td>
</tr>
<tr>
<td>Bearing Pads (Plain)</td>
<td>-</td>
</tr>
</tbody>
</table>

**POST ATTACHMENT NOTES**

ANCHOR RODS, NUTS AND WASHERS:
- After the nuts have been tightened, distort the Anchor Rod threads to prevent removal of the nuts. Coat distorted threads and exposed trimmed ends of anchors with a galvanizing compound in accordance with Specification Section 562.
- All welding will be in accordance with the American Welding Society Structural Welding Code (Steel) AWS/D1.1 (current edition). Weld metal will be E60XX or E70XX. Nondestructive testing of welds is not required.

COATINGS:
- Adhesive Bonding Material Systems for Anchors and Dowels will comply with Specification Section 933.

ADHESIVE-BONDED ANCHORS AND DOWELS:
- Welding:
  - All welding will be in accordance with the American Welding Society Structural Welding Code (Steel) AWS/D1.1 (current edition). Weld metal will be E60XX or E70XX. Nondestructive testing of welds is not required.

ADHESIVE BONDING:
- After the nuts have been tightened, distort the Anchor Rod threads to prevent removal of the nuts. Coat distorted threads and exposed trimmed ends of anchors with a galvanizing compound in accordance with Specification Section 562.

MATERIALS:
NOTES:
1. For treatment at the bridge ends, see Sheet 1.
2. Expansion Rails are required at expansion joint locations where the total movement exceeds 1". See Sheet 2 for Expansion Rail Detail and notes.
3. An Expansion Assembly is required where the total joint movement exceeds 6". Expansion Assembly includes Expansion Rails and two pull posts (as shown). When the Expansion Joint Opening is greater than 9" add an additional length to the free end of the Expansion Rail equal to the difference between the Expansion Joint Opening and 9".
4. Install the post on the fixed (bolted) side of the Expansion Rail 1'-6" from the center of the expansion joint. Install the post on the slip (unbolted) side of the Expansion Rail 1'-6" from the edge of the expansion joint unless the Expansion Joint Opening is greater than 9". When the Expansion Joint Opening exceeds 9" increase the 1'-6" dimension by the difference between the Expansion Joint Opening and 9".

EXPANSION ASSEMBLY DETAIL
(Required only at expansion joint locations where total movement exceeds 6")

PIECE CLAMP CONNECTION DETAIL
(Connection without spacer shown. Connection with spacer similar)

CROSS REFERENCE:
For location of View A-A and Detail "A" see Sheet 1.
PIPE CLAMP DETAIL

SPACER DETAIL
(Must be manufactured from an incompressible material (i.e., steel or aluminum))

BASE PLATE DETAIL

POST A DETAIL

POST B DETAIL

POST C DETAIL

BASE PLATE DETAIL

DETAIL "B"

DETAIL "C"

DETAIL "D"

DETAIL "E"

INTERNAL SLEEVE DETAIL

NOTES:
1. Values shown for Dim. H are for a 5'-0" clear sidewalk width. Adjust as required for clear sidewalk widths greater than 5'-0".
2. For clear sidewalk widths greater than 5'-0" increase radius and height by 6" for every one foot increase in sidewalk width.

CROSS REFERENCE:
For location of Details "B" and "E" see Sheet 1.