

## SECTION 02810 – BRIDGE RAIL

*(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)*

Replace Section 02810 of the Standard Specifications except for the Section number and title with the following:

### Description

**02810.00 Scope** - This Section includes the requirements for the steel in railings for Bridges.

### Materials

**02810.10 Shapes, Plates, and Bars** - Furnish shapes, plates and bars meeting the following, or as shown or specified:

- ASTM A36
- ASTM A572 Grade 50
- ASTM F1554 Grade 105

Provide the silicon content of all exposed shapes, plates and bars that are called out on drawings as "Galvanize - Control Silicon", according to 02530.70.

**02810.15 Anchor Adhesive** - Use one of the following epoxy adhesives from the QPL:

- Hilti HIT-HY200-A
- Hilti HIT-RE 500v3, Red Head C6+
- Ultrabond HS-1CC

**02810.20 Structural Steel Tubing** - Furnish structural steel rail members complying with ASTM A500, Grade B, or ASTM A501. Steel meeting the requirements of ASTM A513 or ASTM A618 may be substituted for ASTM A500 tubing subject to the following limitations:

- Provide chemical and tensile properties test results.
- Provide silicon content according to 02530.70.
- Strength and elongation requirements of ASTM A513 tubing meets the requirements of ASTM A500 tubing.

**02810.30 Steel Pipe** - Furnish metal parapet rail members that are standard steel pipe complying with ASTM A53, Grade B or ASTM A500, Grade B.

**02810.40 Cast Steel Posts** - Furnish cast steel posts that are carbon steel castings complying with AASHTO M 103 (ASTM A27), Grade 65-35.

**02810.50 Metal Thrie Beam Rail** - Galvanize steel thrie beam rail according to AASHTO M 180, Class A rail, Type II coating after fabrication and subject to the single spot test. Backup plates are accepted with ungalvanized edges and bolt holes, provided these areas are field-coated with an approved galvanizing substitute according to 02530.71. Provide metal posts and hardware meeting the requirements of 02820.20 and 02820.30.

**02810.60 Incidentals** - Furnish plates, caps and miscellaneous pieces necessary to complete the rail as shown or specified.

**02810.70 Acceptance** - Bridge rail Materials are accepted according to 00165.35 and this Section.