

**SECTION 05521 - PIPE AND TUBE RAILINGS**

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Steel pipe and tube handrails, balusters, and fittings.

1.02 RELATED WORK

- A. Section 05510 - Metal Stairs: Handrailing at stairs.

1.03 REFERENCES

- A. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.
- B. FS TT-P-31 - Paint, Oil: Iron Oxide, Ready Mix, Red and Brown.

1.04 STRUCTURAL REQUIREMENTS

- A. Railing assembly, wall rails, and attachments to resist lateral force of 50 lbs. at any point without damage or permanent set.

1.05 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Indicate component details, materials, finishes, connection and joining methods, and the relationship to adjoining work.
- C. Submit manufacturer's installation instructions under provisions of Section 01300.
- D. Submit samples under provisions of Section 01300.

PART 2 PRODUCTS

2.01 STEEL RAILING SYSTEM

- A. Rails and Posts 1-1/2 inches diameter steel pipe welded jointing.
- B. Posts: 12 inches diameter steel pipe welded jointing.

- C. Fittings: Elbows, Tee-shapes, wall brackets, escutcheons; cast steel.
- D. Mounting: Adjustable brackets and flanges, with steel inserts for casting in concrete where required.
- E. Splice Connectors: Steel concealed spigots.
- F. Primer: FS TT-P-31, brown; one coat.

## 2.02 FABRICATION

- A. Verify dimensions on site prior to shop fabrication.
- B. Fit and shop assemble sections in largest practical sizes, for delivery to site and installation.
- C. Supply components required for secure anchorage of handrails and railings.
- D. Grind exposed welds smooth and flush with adjacent surfaces.
- E. Make exposed joint butt tight, flush, and hairline.
- F. Accurately form components required for anchorage of railings to each other and to building structure.

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. Supply items to be cast into concrete embedded in masonry or placed in partitions with setting templates and erection drawings to appropriate Sections.

### 3.02 INSTALLATION

- A. Install in accordance with shop drawings and manufacturer's instructions.
- B. Erect work square and level, free from distortion or defects detrimental to appearance or performance.
- C. Anchor handrailings to structure.
- D. Weld field connections and grind smooth to complete assembly. Touch-up welds with primer.