



**SPECIAL PROVISIONS
FOR
DECORATIVE ALUMINUM GUARD RAILING**

**Dubuque County
TAP-U-2100(683)--8I-31**

**Effective Date
November 17, 2015**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

1 GENERAL

1.1 RELATED DOCUMENTS

- A. Plans

1.2 SUMMARY

- A. Section Includes:

- 1. Guard railings (Pipe and cable style).

1.3 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

- 1. Temperature Change: 120°F, ambient; 180°F, material surfaces.

- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

- C. Cable Tension: 200 pounds (\pm 10 pounds) Cables to be incrementally tightened in rotation to result in a uniform tension.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

2 PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.2 STAINLESS STEEL

- A. Cable and components: ASTM A 554, Grade MT 304.
- B. Configurations and Dimensions: As indicated in details on drawings.
- C. Fastening: By fabricator.

2.3 ALUMINUM

- A. Pipes and plates: Clear anodized aluminum with AAM21C22A31 finish.
- B. Separation of Aluminum from incompatible surfaces: All aluminum surfaces that will be in contact with cementitious material such as concrete, mortar, or grout shall be coated with two coats of 8-12 mils per coat, Tnemec 46-465 Hi-Build Tank Coating (coal tar pitch solution). Apply with brush or roller. Place a neoprene pad between the concrete and all base plates.
- C. Configurations and Dimensions: As indicated in details on drawings.
- D. Fastening: By fabricator.

2.4 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly

mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Welding: All welding to be passivated. No field welding allowed.

2.5 ENGINEERING

- A. Fabricator shall be responsible for engineering the guard railing system and ensuring compliance with applicable building code loading requirements.

3 EXECUTION

3.1 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

3.2 ADJUSTING AND CLEANING

- A. Clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.

3.3 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. Cost for work under this Section shall be paid for in accordance with the lump sum price bid for Decorative Aluminum Guard Railing.

4.2 BASIS OF PAYMENT

- A. Prices bid shall include all labor, materials, and equipment, necessary to complete the work for the individual items as specified herein and as shown on the plans.