

SECTION 055200 - METAL RAILINGS

PART 1 - PRODUCTS

1.1 RESIDENTIAL RAILING SYSTEMS

NOTE TO GENERAL CONTRACTORS: WHEN WORKING IN HISTORICAL AREAS OR ON HOMES DESIGNATED AS HAVING HISTORICAL SIGNIFICANCE, THE COJ PLANNING DEPARTMENT MAY CAUSE SOME OF THE FOLLOWING TO BE AMENDED ON A CASE BY CASE BASIS. GENERAL CONTRACTORS WILL BE NOTIFIED IF SUCH REQUIREMENTS APPLY TO ANY PARTICULAR PROJECT.

- A. Provide railings capable of withstanding a uniform load of **50 lbf/ ft.** and a concentrated load of **200 lbf** applied to handrails and top rails of guards in any direction. Uniform and concentrated loads need not be assumed to act concurrently.
- B. Provide railing infill capable of withstanding a concentrated load of **50 lbf** applied horizontally on an area of **1 sq. ft.** Infill load and other railing loads need not be assumed to act concurrently.
- C. **The height of guardrails shall be forty-two (42") inches from the floor and comply with the Florida Building Code.**
- D. **All porches and landings that are thirty (30") inches from the ground level and higher are to have handrails – or as required by the Florida Building Code.**
- E. **Install a handrail at all steps. Metal or wood can be used so long as it meets the Florida Building Code.**
- F. **The handrail on steps shall not be less than thirty (30") inches or more than thirty-six (36") inches above the surface of the ramp or steps; or as required in the Florida Building Code.**
- G. **Balusters shall be spaced as required in the Florida Building code.**

1.2 METALS

- A. Aluminum Extruded Bars and Tubing: ASTM B 221 (ASTM B 221M), Alloy 6063-T5/T52.
- B. Aluminum Castings: ASTM B 26/B 26M, Alloy A356.0-T6.
- C. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Steel Pipe: ASTM A 53, Schedule 40.
- E. Steel Tubing: ASTM A 500 (cold formed) or ASTM A 513.

- F. Iron Castings: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.
- G. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1.3 OTHER MATERIALS

- A. Wood Rails: Hardwood or Softwood rails in a profile approved by the Developer and NSP Construction Manager with manufacturer's standard transparent finish or opaque finish, and secured to recessed or exposed metal sub-rail.

1.4 FABRICATION

- A. Assemble railing systems in shop to the greatest extent possible. Use connections that maintain structural value of joined pieces.
- B. Form changes in direction of railing members by mitering at elbow bends or use of prefabricated fittings.
- C. Fabricate railing systems and handrails for connecting members by welding, brazing, or with concealed mechanical fasteners and fittings.
- D. Provide manufacturer's standard wall brackets, flanges, miscellaneous fittings, and anchors to connect handrail and railing members to other construction.
- E. Provide wall returns at ends of wall-mounted handrails.

1.5 FINISHES

- A. Aluminum Railings: Baked enamel or Powder Coated.
- B. Steel Railings: Hot-dip galvanized after fabrication, ASTM A 123; cleaned and shop primed after galvanizing.

PART 2 - EXECUTION

2.1 INSTALLATION

- A. Fit exposed connections accurately together to form tight, hairline joints.
- B. Set railings accurately in location, alignment, and elevation and free of rack.
- C. Coat concealed surfaces of aluminum that will be in contact with cementitious materials or dissimilar metals, with a heavy coat of bituminous paint.

- D. Anchor posts in concrete by forming or core-drilling holes 5 inches deep and 3/4 inch greater than OD of post. Fill annular space between post and concrete with non-shrink, nonmetallic grout.
- E. Attach handrails to wall with wall brackets.

END OF SECTION 055200