

DIVISION 5 - METALS

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05000 METALS - GENERAL

05010 Metal Materials

05030 Metal Finishes

05050 Metal Fastening

Special Inspection requirements per code requirements in Division 1.

05100 STRUCTURAL METAL FRAMING

05110 Metal Studs

In general, 25 gauge studs are acceptable at 16" centers for walls not exceeding 10' in height. Specification of 25 gauge studs is preferred on smaller "task order" type jobs, due to availability and cost issues.

05120 Structural Steel

05200 METAL JOISTS

05210 Steel Joists

05300 METAL DECKING

05310 Steel Deck

Steel Floor Deck

Steel Roof Deck

05400 COLD-FORMED METAL FRAMING

05500 METAL FABRICATIONS

General

This section applies to all metal fabrications that will be used by the DP that have a visual aesthetic impact both interior and exterior. Great care should always be exercised by the DP in the design and detailing of metal fabrication in that they strictly comply to all applicable codes, are relatively easy to construct and maintain (finishes) and do not create potential hazards due to inconsistent heights, surface textures, harsh protrusions or "blend" to well with adjacent surfaces or finishes that could create a special hazard to the visually impaired and physically handicapped.

Design Standard

Applicable Items: Rough Hardware, Ladders, Nosings, Trim, Pipe Railings, Stairs, Bollards and Architectural Features.

Welds should be smoothly ground to match surface texture of parent metal. All gaps, holes and gouges should be filled with a permanent material (solder or brazing). Design limitations of grinders, files etc., dictate that adjoining metal tubing pieces at angles less than 125° generally need a minimum of 1/4" radius butt weld in order to grind smooth.

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Adjoining railing splices shall be fully concealed in runs that appear constant.. At elbow bends, the design should facilitate metered joints.

Metal used for railings should be tube stock, not solid stock, and conform to ASTM A 500. Limiting unsupported length should not exceed 6' for diameters 2" or less. Cable used as railing intermediates is not allowable.

The use of expansion bolts to secure railing assemblies to vertical or horizontal surfaces is not allowable. Anchorage systems should consist of direct imbeds (sleeved or plates) and/or welding.

Exterior exposed metal fabrications shall have a spray applied epoxy-polymide type primer paint and spray applied finish paint-epoxy based and/or electrostatically applied. A color should be chosen that does not easily fade when exposed to sunlight and hides hand prints. Ladders shall be a minimum width of 18", 3/4" diameter rungs spaced 12" o.c., braced a minimum of 5' o.c. Rungs should have a non-slip type finish.

All stair nosings shall have a permanently applied non-slip surface, either integral or imbedded, 2" wide minimum the width of the tread.

Where metal stair risers are exposed (not covered), they shall have spray applied epoxy-polymide type primer paint and spray applied finish paint-epoxy based and/or electrostatically applied. A color should be chosen that does not easily fade when exposed to sunlight and hides the shoe-scuff marks.

At the top and bottom of stair landings, a contrasting color and texture to the normal stair treads shall be used to facilitate the blind and visually impaired.

Expansion joints should be provided in continuous runs at a minimum interval of 40 feet.

All exposed to public fabrications with right angles corners shall be radiused a minimum of 1/8".

Metal bollards shall be a minimum of 6" square or 4" diameter round and be directly or sleeve set a minimum of 1/3 the exposed height below the finished adjacent surface.

Metal trim in continuous runs shall have concealed splices and be of sufficient gauge that natural distortions are not visually apparent. All exposed edges to the public shall be radiused or sharp edges eased.

05510

Metal Stairs

Metal pan stairways are the preferred product to be specified for interior locations. Alternatives shall require prior approval by Facility Services, Planning & Construction. Open risers are not permitted. Provide colored safety edge at the top and bottom steps, color as selected by the Owner. All stair nosings shall have a permanently applied non-slip surface, either integral or imbedded, 2" wide minimum the width of the tread.

Metal pan stairways shall not be specified for unprotected exterior locations.

05520

Handrails and Railings

In general, handrails shall be specified for both sides of all stairs, ramps, etc. Handrail design shall conform to the latest edition of the IBC adopted by the University and all designs shall be cross-referenced to the Americans With Disabilities Act Accessibility Guidelines referenced in Division 1.

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Sheet Metal Fabrications

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05584	Heating-Cooling Unit Enclosures

***** END OF SECTION *****