

METALS

PART 1 – GENERAL

- 1.01 **Summary:** This section describes University specific requirements for ferrous metals. It includes structural metals for buildings, their components and accessories, handrails, railings, as well as, other exterior ferrous metal materials. Information in this section is intended to guide and supplement specifications provided by the Architect and Engineer of Record.
- 1.02 **Related Work:** Related work located elsewhere includes: fire-proofing, bike racks, tree grates, metal roofs/flashings, and painting.
- 1.03 **Use of metal materials:** The use of heavy structural steel with appropriate fire-proofing is supported. However, the use of exterior metal stud backup wall assemblies will be considered only on a project by project basis. **Masonry backup wall systems are the University's preferred method of construction.**
- 1.04 **Quality Control:**
- A. All structural steel shall comply with AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings" and applicable ASTM Standards.
 - B. Open web steel joists shall comply with Steel Joist Institute (SJI) standards.
 - C. Welding shall comply with American Welding Society (AWS) standards, including supplements and addenda. All welding shall be completed by a Certified Welder with current certification.
 - D. Steel roof and floor deck shall comply with AISC standards and standards established by the Steel Deck Institute (SDI).

PART 2 – MATERIALS

- 2.01 Refer to the USGBC LEED Reference Guide for additional requirements pertaining to LEED Certification.
- 2.02 All exterior ferrous metals shall be hot-dipped galvanized including all shelf angles and other metal used in cavity walls, whether or not it is exposed to view.
- 2.03 Use galvanized steel angles in all exterior masonry, stone, or precast concrete walls, and in all interior walls where used in conjunction with stone.
- 2.04 All metal components shall conform to ASTM requirements and shall include: gratings, castings, supports for ceiling hung equipment, framed partitions, construction inserts and fastening devices, expansion joint inserts and covers, stair nosings and access doors for both ceiling and wall applications, vertical ladders for elevator pits, elevator sump pit gratings, corner guard angles, steel angles, channels and clips, pipe sleeves for mechanical and electrical trades,

trench drain gratings and frames, galvanized steel corner guards, and miscellaneous structural shapes.

- 2.05 All steel ladders shall comply with OSHA requirements.
- 2.06 Steel grates (including storm inlets and trench drain covers) located in an exterior pedestrianway, such as a sidewalk or ramp, shall employ an ADA compliant design and incorporate openings constructed to prevent hazard and personal injury.
- 2.07 The use of tree grates shall be determined on a case specific basis in coordination with the FSU Grounds Department.
- 2.08 Handrails and railings: Utilize 1-1/2" standard steel or stainless steel pipe for horizontal rails and 2" x 2-1/2" standard steel or stainless steel pipe for posts. Comply with all applicable codes, including Florida Building Code, Accessibility Code. Do not extend handrails more than 3" into a circulation area. If a need for continuity requires the rail to end with a 90 degree angle, employ design methods which prevent hazard and preclude interference.
- 2.09 Steel expansion joints: Expansion joint assembly shall be complete and constructed of materials aesthetically compatible with surrounding construction. Provide complete waterproof assembly as required at between building areas, wall-to-wall intersections, wall-to-roof, deck-to-wall, etc. Cover finish shall be weather-resistant.

PART 3 – EXECUTION

- 3.01 Comply with all OSHA requirements for execution, including fall protection.
- 3.02 All iron and steel items must be shop primed and additional coats of primer/paint applied at the jobsite to prevent rusting.
- 3.03 Exterior ferrous metals exposed to view shall be primed and painted with a paint coating designed for compatibility with the galvanized surface on which it is applied.
- 3.04 All interior ferrous metal shall be painted with three mils of paint on all surfaces. Refer to USGBC requirements for low-VOC materials in order to promote indoor air quality.

END OF SECTION