

Louisiana State University Design Standards

DIVISION 05 – METALS

1 STRUCTURAL STEEL

- 1.1 Structural steel work is defined in the American Institute of Steel Construction (AISC) “Code of Standard Practice.” Structural steel shall comply with the following
 - 1.1.1 AISC “Code of Standard Practice for Steel Buildings and Bridges”
 - 1.1.2 AISC “Specifications for Structural Steel Buildings,” including “Commentary”
 - 1.1.3 “Specifications for Structural Joints” using ASTM A325 or A490 “Bolts” approved by the Research Council on Structural Connections
 - 1.1.4 American Welding Society (AWS) D1.1 “Structural Welding Code – Steel”
 - 1.1.5 ASTM A6, “General Requirements for Delivery of Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use”
 - 1.1.6 ASTM A36 “Structural Steel Shapes, Plates, and Bars”
 - 1.1.7 ASTM A500 “Grade B Cold-Formed Steel Tubing”
 - 1.1.8 ASTM A501 “Hot-Formed Steel Tubing”
 - 1.1.9 ASTM A307 “Anchor Bolts”
 - 1.1.10 ASTM C150 “Type I or Type III, Cement Grout”

2 FIREPROOFING

- 2.1 The Contractor shall coordinate the type of fireproofing to be used with structural steel primers. Some fireproofing materials cannot be easily or economically applied to painted surfaces and some Underwriter’s Laboratories, Inc. (UL) fireproofing designs do not permit primed steel.

3 STEEL JOISTS & GIRDERS

- 3.1 Steel joist and joist girders shall comply with the following requirements
 - 3.1.1 Steel Joist Institute (SJI) for steel cord and web sections
 - 3.1.2 ASTM A36, for steel bearing plates
 - 3.1.3 ASTM A307, Grade A, for unfinished threaded fasteners, low carbon steel
 - 3.1.4 UL, for fire resistance rating

4 METAL DECKING

- 4.1 Metal Decking shall comply with the following
 - 4.1.1 Steel Deck Institute (SDI) “Design Manual”
 - 4.1.2 American Iron and Steel Institute (AISI) “Specification for Cold-Formed Steel Structural Members”
 - 4.1.3 American Welding Society (AWS) D1.1, “Structural Welding Code – Steel” and AWS D1.3, “Structural Welding Code – Sheet Steel”
 - 4.1.4 UL “Fire Resistance Directory”
- 4.2 All floor decking shall be galvanized in accordance with ASTM A 525 (ASTM A 525M). The Contractor shall provide additional reinforcement and closure pieces at openings as required for strength, continuity of decking, and support of other work

5 MISCELLANEOUS METALS

- 5.1 Miscellaneous metals typically include items of steel, and sometimes aluminum that are not specified as part of the building structure or part of ornamental metal sections. To avoid change orders, the scope of miscellaneous metals shall be carefully reviewed and itemized prior to issuing the Contract Documents.
- 5.2 Miscellaneous metal work shall be carefully reviewed to identify all items that should be galvanized and all items that should be shop-primed and shop finished. In general, all exterior ferrous metal items should be galvanized.

- 5.3 All exterior steel ladders, stairways, landings, supports, etc. shall be hot-dipped zinc coated (Galvanized). Where the architectural appearance is of great significance, alternate finishes may be considered. Ladders shall be lockable and meet all OSHA Standards.