DIVISION 5  METALS

05100.  STRUCTURAL METAL FRAMING

05120. STRUCTURAL STEEL: Include a complete section in the specifications for this part of the work, in addition to the Structural Consultant notes on the drawings. The Consultant is responsible for complete coordination of statements in the specifications and the notes on drawings. Structural steel shall comply with the American Institute of Steel Construction (AISC), “Code of Standard Practice for Steel Buildings and Bridges.”

05120.1  AFFIDAVIT FROM ERECTOR: The General Contractor shall be required to provide an affidavit, at the completion of the job, to the effect that the structural steel frame is plumb and level within the normal tolerances specified in the code.

05200. METAL JOISTS

05200.1  MANUFACTURER’S CERTIFICATE of compliance with Steel Joist Institute Specifications is required.

05200.2  PRIME COAT AND TOUCH-UP PAINTING, complying with SJI Specifications, will be considered adequate for joists, except where subjected to moisture or where exposed to view.

05300. METAL DECKING

05300.1  MANUFACTURER’S CERTIFICATE of compliance with Steel Deck Institute Specifications is required.

05300.2  PRIME COAT AND TOUCH-UP PAINTING will be considered adequate for metal deck, except where subjected to moisture or where exposed to view. Use galvanized metal deck for all roof applications.

05200.3  VENTED METAL DECKING - shall be used, when topped with insulating concrete roof decks.

05400. COLD-FORMED METAL FRAMING

05410. COLD-FORMED METAL STUD SYSTEM: “C” shaped load bearing steel studs and furring strips shall be spaced 16 inches on center, maximum. Wind load calculations by a State of Florida registered structural engineer is required for exterior wall application. Wire tying of framing components is not permitted. Use qualified welders and comply with the American Welding Society (AWS).

05500. METAL FABRICATIONS

05500.1.  WELDER CERTIFICATION: The General Contractor or Construction Manager is responsible for obtaining and retaining welder certifications for any person performing on-site welded steel fabrication or erection. The certifications must be current and validated by welding logs or certification test(s) conducted with the last two (2) years.

05500.2  GALVANIZING REQUIREMENTS: All exterior ferrous metals shall be hot-dip galvanized after fabrication.
05500.3 MISCELLANEOUS METAL FRAMING FOR ELECTRICAL SUPPORT SYSTEMS: If electrical equipment is attached to support framing, the Electrical Contractor will provide and install that metal framing.

05500.4 USE OF INK MARKING PENS ON SURFACES of any kind of materials is prohibited. Experience has shown that such marks bleed through paint and other finishes.

05500.5 LINTELS FOR PLUMBING, HVAC, AND ELECTRICAL INSTALLATIONS: The General Contractor shall furnish lintels for all openings through walls when openings are shown on the architectural or structural (General Contract) drawings. Note all such lintels and openings to require coordination of work and exact locations, by affected contractors. All such plumbing, HVAC, electrical, and sprinkler openings must be coordinated and shown on the Architectural and/or Structural Drawings.

05510. METAL STAIRS:

05510.1 STAIR TREADS FOR PUBLIC-ACCESS STAIRWAYS shall be concrete with cast metal nosings.

05510.2 STAIRS FOR DISABLED: Shall have railings on both sides and shall comply with the latest Accessibility Codes.

05520. HANDRAILS AND RAILINGS

05520.1 Refer to ADA standards.

05520.2 Handrails to be of aluminum construction.

05530. GRATINGS: Ferrous gratings shall be hot-dip galvanized. Galvanized hardware cloth shall be installed under all areaway gratings.

05550. STAIR TREADS AND NOSINGS: Steps shall conform to existing step formulas but shall not have risers that exceed seven (7) inches or treads that exceed eleven (11) inches. Nosings shall not extend past the face of the riser.

05800. EXPANSION CONTROL

05810. EXPANSION JOINTS:

05810.1 Carefully design and locate to prevent surface damage due to expansion and contraction of building materials.

05810.2 Provide areas of intense solar exposure with joints over and above number required by standardized tables and industry standards.

05810.3 Provide joints through parapet walls near corners.

05810.4 Provide additional joints in exterior wythe of masonry cavity walls and secure to substrate with flexible anchors. Recommend to align interior wythe joints with exterior joints whenever possible.

05810.5 Provide horizontal joints for steel shelf angles in masonry walls.

05810.6 Separate partitions at top and bottom with expansion joint material in structures where deflection might cause damage to partition.

05810.7 Provide expansion joints in long linear building elements such as:
| 05810.7.1 | Handrails. |
| 05810.7.2 | Fascias. |
| 05810.7.3 | Gravel stops. |
| 05810.7.4 | Gutter System. |
| 05810.7.5 | Plate glass window walls. |
| 05810.7.6 | Paving. |
| 05810.7.7 | Where low mass meets high mass of building. |
| 05810.7.8 | At wings and intersections of “L”, “T”, and “U” shaped buildings. |
| 05810.7.9 | At long buildings, maximum length between joints two hundred (200) feet. |
| 05810.8 | Back-prime dissimilar materials in contact with each other. |