**SECTION 09 22 16**

**NON-STRUCTURAL METAL STUD FRAMING**

**PART 1 GENERAL**

1. RELATED DOCUMENTS
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work in this section.
   2. Requirements of this section apply to Gypsum Plaster and Portland Cement Plaster Work.
   3. Section 06 10 00 Rough Carpentry
   4. Section 05 40 00 Cold Formed Metal Framing
2. SYSTEM DESRIPTION
   1. See plans for and this document for the extent of the use of metal studs.
   2. See Section 05 40 00 Cold Formed Metal Framing, structural steel studs.
3. REFERENCES
   1. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members
   2. ASTM C754 – Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
   3. ASCE 7 – Minimum Design Loads for Buildings and other Structures
   4. Underwriters Laboratories (UL) - Fire Resistance Manual
   5. Gypsum Association (GA) - Fire Resistance Design Manual
   6. Florida Building Code (FBC)
4. SUBMITTALS
   1. Shop Drawings: Indicate prefabricated work, component details, stud layout, framed openings, anchorage to structure, type, location of fasteners, and accessories or items required of other related work.
   2. Describe method for securing studs to tracks, splicing, and for blocking and reinforcement to framing connections.
   3. Provide calculations, from Florida professional engineer, for loadings and stresses of exterior walls to meet or exceed the requirements of ASCE 7.
   4. Provide data describing standard framing member materials and finish, product criteria, load charts and limitations.
   5. Evaluation Reports: Submit evaluation reports certified under an independent third-party inspection program administered by an agency accredited by IAS to ICC-ES AC98 accreditation criteria for inspection agencies.
   6. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.
5. QUALITY ASSURANCE
   1. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified in accordance with the product-certification program of the Steel Framing Industry Association (SFIA) or a similar organization that provides a verifiable code-compliance program.
6. DELIVERY, STORAGE, AND HANDLING
   1. Deliver materials and store off the floor in dry area to prevent damage due to corrosion, moisture, excessive handling.
      1. When evidence of moisture occurs, immediately remove water and leave members completely dry.
   2. Installation of rusted framing members is not acceptable.

**PART 2 PRODUCTS**

1. STUD FRAMING MATERIALS
   1. Interior wall framing: Studs in interior partitions shall comply with AISI S220 and ASTM C645, Section 10.
      1. Web Size: 3-5/8 inches.
      2. Minimum Base-Steel Thickness: 0.0181 inch for 20 gauge equivalent (70 ksi) or 0.0296 inch for traditional 20 gauge.
         1. Comply with manufacturer’s limiting heights tables for proper thickness and web size.
   2. Provide 18-ga studs (min) at window and door openings.
      1. Standard: ClarkDietrich; RedHeader PRO. Header sections installed with Header Brackets (HDSC) or comparable products.
      2. Optional: conventional metal framing.
   3. Exterior wall framing:
      1. Load bearing (axially loaded) walls: Studs shall b**e** minimum 16-ga (0.0538”, 50 KSI Fy) galvanized steel studs conforming to ASTM C955 Section 8 and AISI 200.
         1. Designer may specify heavier materials when needed.
      2. Non-load (axial) bearing walls: Studs shall be minimum 20-ga. (0.0329”, 33 KSI Fy) galvanized steel material conforming to ASTM C955 Section 8 and AISI 200.
         1. Designer may specify heavier materials when needed.
      3. Comply with or exceed the manufacturer’s limit height tables for proper thickness and web size for all exterior framing.
   4. Floor and Ceiling Runners:
      1. Channel type metal runners, formed from 20-ga. galvanized steel, AISI S220.
      2. Provide and install extended leg retainer on ceiling runners.
      3. Provide same gauge runners as studs when studs exceed 20-ga. thickness.
   5. Coating:
      1. In contact with concrete or for exterior walls, provide CP 90: G90 (Z275).
      2. Not in contact with concrete or for interior walls, provide CP 40: G40 (Z140).
      3. A40 galvannealed products are not acceptable.
      4. Provide a coating evaluation report to demonstrate equivalent corrosion resistance for alternate coating systems.
   6. Fasteners:
      1. Use Hex Washer Head Screw for framing member connections.
      2. Use Pan Tex Screw for framing member connections.
      3. Use Bugle Head Screw to attach gypsum lath to studs.
      4. Use Lath Tek Screw to attach metal lath to studs.

**PART 3 EXECUTION**

1. EXAMINATION
   1. Verify that conditions are ready to receive work.
   2. Verify field measurements are as shown on drawings.
   3. Verify that rough-in utilities are in proper location.
2. INSTALLATION, GENERAL
   1. Installation will comply with ASTM C754.
3. ERECTION
   1. Align and secure top and bottom runners at 24" o.c. with .145" diameter low-velocity power driven fasteners with 1¼" penetration.
   2. Fit runners under and above openings; secure intermediate studs at spacing of wall studs.
   3. Install studs vertically at 16" o.c. unless otherwise noted.
   4. Properly install studs in channels; bottomed out, plumbed, aligned, and securely attached top, and bottom.
   5. Stud splicing will not be permissible.
   6. Construct corners to allow for installation of wall board.
   7. Double studs at wall openings, door and window jambs, and not more than 2" each side of openings.
   8. Brace stud-framing system and make rigid.
      1. Provide and install bridging not to exceed 4'-3" o.c., unless using an approved engineered system.
   9. Align stud web openings.
   10. Coordinate installation of bucks, anchors, and blocking with electrical and mechanical work placed in or behind stud framing.
   11. Blocking:
       1. Secure metal stud blocking to studs.
       2. Install blocking for support of plumbing fixtures, wall cabinets, counter tops, toilet partitions and accessories, hardware, and other items as indicated.
       3. Provide and install, minimum 20-gage, horizontal doorstop blocking spanning 3-vertical studs at door handle height on the hinged side, starting at the doorframe.
   12. All partitions shall extend through the ceiling system and be supported from the structure above.
       1. See wall types shown on the drawings for exact requirements.
4. TOLERANCES
   1. Maximum Variation from True Position is ⅛" per 10'
   2. Maximum Variation of any Member from Plane is ⅛"

END OF SECTION