SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 GENERAL
1.01 SECTION INCLUDES:
The work of this section shall include all labor, materials, equipment, accessories, and services required and necessary to furnish and install non-load bearing framing and related items as indicated or specified.

1.02 SUBMITTALS
A. Submit Product Data Sheets, shop drawings, and directions for proper installation of anchorage for each component item of framing and accessories. Provide shop drawing for all components and installation instructions not fully detailed in manufacturer's product data.
B. Submit manufacturer's certification that material meets or exceeds specification requirements.
C. Submit Erection Drawings for framing members showing size and gauge designations, number, type, location and spacing. Indicate supplemental strapping, bracing, splices, bridging, accessories and details required for proper installation.

1.04 QUALITY ASSURANCE
A. Component Design - Compute structural properties of studs and joists in accordance with AISC "Specification for Design of Cold-Formed Steel Structural Members."
B. Fire-Rated Assemblies - Where framing units are components of assemblies indicated for a fire-resistance rating, including those required for compliance with governing regulations, provide units which have been approved by governing authorities having jurisdiction and/or the UBC.

1.05 DELIVERY, STORAGE AND HANDLING
Protect metal framing units from rusting and damage. Deliver to project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade. Store off ground in a dry ventilated space or protect with suitable waterproof coverings.

PART 2 PRODUCT
2.01 MATERIAL
A. General
Non-load bearing framing shall be made of light gauge materials. With each type of metal framing required, provide manufacturer's standard steel runners (tracks), blocking, lintels, clip angles, shoes, reinforcements, fasteners and accessories as recommended by manufacturer for applications indicated, as needed to provide a complete metal framing system. All metal framing components shall be galvanized complying with ASTM 525 for G60 coating.

B. Metal Studs
1. Studs shall be type "C" roll formed from galvanized steel and designed for screw attachment. Studs shall conform to ASTM C645.
2. Studs shall be at least a 25-gauge minimum, unless the manufacturer recommends a heavier gauge for the length of stud used. Use the appropriate stud size for chases and recess mounted equipment.
3. For interior studs, deflection shall not exceed 1/240 of wall height under a load of five pounds per square feet when applied perpendicular to the wall.
4. For 16-gauge and heavier units, fabricate metal framing components of structural quality steel sheet with a minimum yield strength of 50,000 psi; ASTM A446, A570 or A611.
5. For 18-gauge and lighter units, fabricate metal framing components of commercial quality steel sheet with a minimum yield strength of 33,000 psi; ASTM, A446, A570, or A611.

C. Floor and Ceiling Runners
Floor and ceiling runners shall be formed from galvanized steel in sizes to correspond with studs, complying with ASTM C645.
D. Runner Channels
Runner channels shall be 1-1/2 inches deep, cold rolled steel, weighing 475 pounds per 1,000 linear feet with black asphaltum base paint finish.

E. Furring Channels
Furring channels shall be galvanized steel, hat shaped, and 7/8 of an inch deep.

F. Backing Plates
Backing plates shall be a minimum of 14-gauge galvanized steel anchored to framing system.

PART 3 EXECUTION

3.01 INSTALLATION

A. Fabrication
1. General - Framing components may be prefabricated into panels prior to erection. Fabricate panels plumb, square, true to line and braced against racking, with joints welded. Perform lifting of prefabricated panels in a manner to prevent damage or distortion.
2. Fastenings - Attach similar components by welding. Attach dissimilar components by welding, bolting, or screw fasteners, as standard with manufacturer.
3. Wire tying of framing components is not permitted.

B. Installation of Stud System
1. Manufacturer's Instructions - Install metal framing systems in accordance with manufacturer's printed or written instructions and recommendations, unless specifically otherwise indicated.
2. Runner Tracks - Install continuous tracks sized to match studs. Align tracks accurately to layout at base and tops of studs. Secure tracks as recommended by stud manufacturer for type of construction involved, except do not exceed 24 inches on center spacing for nail or power-driven fasteners, or 16 inches on center for other types of attachment. Provide fasteners at corners and ends of tracks.
3. Stud width shall be as shown on the drawings. Spacing of studs shall not exceed 24 inches on center. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements.
4. Where stud system abuts structural columns or walls, including masonry walls, anchor ends of stiffeners to supporting structure.
5. Install supplementary framing, backing plates and bracing in metal framing system wherever walls or partitions are to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not indicated, comply with stud manufacturer's recommendations, considering weight or loading resulting from item supported.
6. Installation of Wall Stud System - Secure studs to top and bottom runner tracks by either welding or screw fastening, alternating sides, top and bottom of outside flanges. Track anchors shall be drive pins placed at a maximum of four feet on center unless noted otherwise. Anchors shall be placed at all jambs, corners, both sides of expansion and control joints, intersections and wall ends. All bottom tracks shall have a minimum of two anchors.
7. Use double stud at each jamb of frame where wall opening is larger than two feet square unless otherwise noted. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall.
8. Frame both sides of expansion and control joints with separate studs. Do not bridge the joint with components of stud system.
9. Install horizontal runner channels in stud system, spaced (vertical distance) at a maximum of four feet on center. Mechanically fasten at each intersection, providing a minimum eight inch lap.
10. At double stud partitions, such as chases, install pieces of stud to span horizontally between the vertical wall studs at a vertical spacing not to exceed four feet on center. Securely screw horizontal stud bracing to web of vertical wall studs on each side of double stud partition.

D. Installation of Metal Furring Channels
1. Attach metal furring channels, spaced vertically 24 inches on center, to masonry or concrete surfaces with hammer-set or powder-driven fasteners or concrete stub nails on opposite flanges. Nest channels eight inches at splices and anchor with two fasteners in each wing.
2. Metal furring channels shall be spaced on both sides of control joints.
3. Field Painting - Touch up shop-applied protective coatings damaged during handling and installation. Use galvanox or approved equal for repair of galvanized surfaces.
4. All welding shall be performed by welders experienced in lightgauge steel framing work.

END SECTION