SECTION 09 2200

METAL SUPPORT ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Metal stud partition framing.
2. Metal wall furring.
3. Suspended metal channel ceiling framing.

B. Related Sections:
1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

A. ASTM International (ASTM):
1. A591/A591M - Standard Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Weight (Mass) Applications.
2. A641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
3. A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.
4. C645 - Standard Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
5. C754 - Standard Practice for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wall board, Backing Board, or Water-Resistant Backing Board.

B. Gypsum Association (GA) GA-600 - Fire Resistance Design Manual.

C. Underwriters Laboratories, Inc. (UL) - Fire Resistance Directory.

1.3 SUBMITTALS

A. Submittals for Review:
1. Product Data: Illustrate framing types, gages, and locations.

1.4 QUALITY ASSURANCE

A. Fire Resistance Ratings:
1. Construct assemblies to achieve fire resistance ratings indicated on Drawings, in accordance with applicable GA or UL design number.
2. If requirements of assembly numbers referenced conflict with Contract Document requirements, conform to assembly requirements.

B. Deflection Limits:
1. Limit deflection of partitions to following limits, based of 10 PSF uniform design load.
   a. L/240.
2. If partition height exceeds stud manufacturer's limiting height for applicable loading and deflection, install bracing above ceiling, decrease stud spacing, or increase stud gage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
1. Dietrich Metal Framing, Inc. (www.dietrichmetalframing.com)

2. Marino Ware Industries. (www.marinoware.com)
3. Unimast, Inc. (www.unimast.com)
4. Or Equal

B. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Steel: ASTM A1003/1003M, Class G40 hot dip galvanized.

2.3 COMPONENTS

A. Provide components in accordance with ASTM C645.

B. Studs: Non-load bearing rolled steel, channel shaped, punched for utility access.

C. Top and Bottom Runners:
1. Same material and finish as studs, channel shaped.
2. Deflection compensating top runners: Deep leg runners with slotted screw holes; permit plus or minus 1/2 inch movement of overhead structure without damage to partition.

D. Resilient Channels: 1/2 inch deep x 2-1/2 inches wide, 25 gage core steel.

2.4 ACCESSORIES

A. Fasteners: 1/2 inch long pan head screws.

B. Wire: ASTM A 641, galvanized steel.
1. Hanger wire: 8 gage.
2. Tie wire: 18 gage, soft annealed.

C. Wall Furring Brackets: Galvanized steel, two piece adjustable type.

D. Furring Channel Clips: Galvanized steel.

PART 3 - EXECUTION

3.1 INSTALLATION OF PARTITION FRAMING

A. Install in accordance with ASTM C754 and manufacturer's instructions.

B. Attach top and bottom runner channels at ends and 24 inches on center maximum.

C. Position studs vertically in runners, spaced maximum 16 inches on center unless indicated otherwise.

D. Install deflection compensating top runner at partitions extending to structure. Cut studs 1/2 inch shorter than required length and fit into top runner. Fasten studs to top runner in manner permitting runner movement.

E. Locate studs maximum 2 inches from door frames and abutting construction.

F. Use double studs on both sides of openings in partitions.

G. Install horizontal runner as header above openings in partitions. Install studs from header to top runner.

H. Brace furred partitions with adjustable bracket located at mid height.

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I. Provide wood or metal bracing in partitions to receive and support fixtures, trim, accessories and other applied items.

J. Brace ceiling height partitions to structure at 48 inches on center maximum. (DO NOT PENETRATE METAL ROOFING PANELS WITH FASTENERS>)

3.2 INSTALLATION OF CEILING FRAMING

A. Space hanger wires maximum 48 inches on center. Install additional hangers where required to support light fixtures and ceiling supported equipment.

B. Do not suspend hangers directly from metal deck. Attach steel channel horizontally to adjacent framing members; place hanger at regular spacing.

C. Hang suspension system independent of walls, columns, ducts, pipes, and conduit.

D. Where ducts or other equipment prevent regular spacing of hangers:
   1. Reinforce nearest related hangers to span extra distance, or:
   2. Suspend steel channel horizontally beneath duct or equipment; place hanger at regular spacing.

E. Install main tees at maximum 48 inches on center.

F. Install cross tees to form 24 x 24 inch modules. Lock cross tees to main tees.

3.3 INSTALLATION OF RESILIENT FURRING

A. Install channels perpendicular to framing spaced maximum 16 inches on center. Locate channels within 2 inches of floor and within 6 inches of ceiling.

B. Screw attach channels to each support.

C. Overlap channels minimum 2 inches at splices, centered over framing member. Screw attach to framing member through both flanges.

END OF SECTION