

SECTION 091100

Non-Structural Metal Framing

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by one of the following methods:

Microsoft Word 2010: Display the FILE tab on the ribbon, click OPTIONS, then on left menu click on DISPLAY. Under ALWAYS SHOW THESE select or deselect HIDDEN TEXT.

Microsoft Word 2007: Click the OFFICE button, select WORD OPTIONS, select DISPLAY, then select or deselect the HIDDEN TEXT option.

Corel WordPerfect: From the pull-down menus select VIEW, then select or deselect the HIDDEN TEXT option.

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Metal stud interior partition framing.
 - 2. Metal interior wall furring.
 - 3. Suspended metal channel [soffit] [and] [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. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 4. A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.
 - 5. C635 - Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 6. C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - 7. C645 - Standard Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
 - 8. C754 - Standard Practice for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wall board, Backing Board, or Water-Resistant Backing Board.
 - 9. E90 - Standard Test Method for Airborne Sound Transmission Loss of Building Partitions.
 - 10. E413 - Standard Test Method for Classification for Rating Sound Insulation.
- B. Gypsum Association (GA) GA-600 - Fire Resistance Design Manual.
- C. Steel Stud Manufacturer's Association (SSMA)(www.ssma.com - Member Directory.)
- D. Underwriters Laboratories, Inc. (UL) - Fire Resistance Directory.

1.3 SUBMITTALS

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

- B. Sustainable Design Submittals:
 - 1. Recycled Content.
 - 2. Regional Materials.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Current member of SSMA.
- B. Installer Qualifications: Minimum [] years [documented] experience in work of this Section.
- C. Fire Resistance Ratings:
 - 1. Construct assemblies to achieve fire resistance ratings indicated on Drawings, in accordance with [applicable] [referenced] [GA] [or] [UL] design number.
 - 2. If requirements of assembly numbers referenced conflict with Contract Document requirements, conform to assembly requirements.
- D. Acoustic Ratings: Construct assemblies to achieve acoustic ratings indicated on Drawings, tested to ASTM E90 and classified in accordance with ASTM E413.
- E. Deflection Limits:
 - 1. Limit deflection of partitions to following limits, based on [5] [] PSF uniform design load.
 - a. Partitions to receive [tile:] [plaster:] [cut stone:] [L/240.] [L/360.] [].]
 - b. Other partitions: [L/120.] [].]
 - c. 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.
 - 2. Limit deflection of ceilings to [L/360.] [].]

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. SCAFCO Corporation. (www.SCAFCO.com)
 - 2. Allsteel and Gypsum Products, Inc. (www.allsteelproducts.com)
 - 3. Consolidated Fabricators Corp. (www.confabbbpd.com)
 - 4. United Metal Products, Inc. (www.unitedmetalproducts.info)
 - 5. [].
 - 6. [].
 - 7. [].
- B. Substitutions: [Under provisions of Division 01.] [Not permitted.]

2.2 MATERIALS

- A. Steel: A653/A653M or ASTM A1003/1003M, Class [G40] [] hot dip galvanized.
- B. Recycled Content: Minimum [] percent, with minimum [] percent classified as post consumer.

2.3 COMPONENTS

- A. Provide components in accordance with ASTM C645.
- B. Studs: Non-load bearing roll-formed steel, SSMA stud profile, C-shaped, punched for utility access.
- C. Top and Bottom Tracks:
 - 1. Same material and finish as studs, C-shaped.
 - 2. Standard track: SSMA stud track profile, [1-1/4] [1-1/2] [] inch legs.
 - 3. Deep leg track: SSMA deep stud track profile, [2] [] inch legs.

4. Deflection track: Deep leg track with slotted screw holes; permit plus or minus [1/2] [] inch movement of overhead structure without damage to partition.

D. Suspended Ceiling Framing:

1. Runner channels: [1-1/2] [] inches deep, cold roll formed, channel shaped, [16] [] gage base steel thickness.
2. Furring channels: Hat shaped, [7/8] [] inch deep, [25] [] gage base steel thickness.

**** OR ****

E. Suspended Ceiling Framing:

1. ASTM C635; manufactured specifically for suspended gypsum board ceiling applications.
2. Tees: Double web design; 1-1/2 inches high with 1-3/8 inch wide knurled faces, with interlocking ends and punched holes for cross tees and hanger wires.
3. Material: Galvanized steel.

F. Suspended Soffit Framing:

1. Runner channels: [1-1/2] [] inches deep, cold roll formed, [16] [] gage base steel thickness.
2. Furring channels: [3/4] [] inch deep, cold roll formed, [16] [] gage base steel thickness.

G. Resilient Channels: [1/2] [] inch deep x [2-1/2] [] inches wide, [25] [] gage base steel thickness.

H. Wall Furring Channels: [Hat shaped, [7/8] [] inch deep,] [Z-shaped, [] inches deep,] [depth as indicated,] minimum [25] [] gage base steel thickness.

I. Shaft Wall Framing: [] by [] or approved substitute, consisting of studs formed to receive gypsum liner panels and top and bottom tracks.

2.4 ACCESSORIES

A. Fasteners: [3/8] [] inch long pan head screws.

B. Wire: ASTM A 641, galvanized steel.

1. Hanger wire: [8] [] gage base steel thickness.
2. Tie wire: [18] [] gage base steel thickness, 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 tracks at ends and [24] [] inches on center maximum.

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

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

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

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

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

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

3.2 INSTALLATION OF CEILING FRAMING

- A. Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Space hanger wires [36] [48] [] inches on center maximum along runner channels and within [6] [] inches of ends of channels; secure to structure above.
- C. Space runner channels [48] [] inches on center maximum and within [6] [] inches of abutting construction.
 1. Position channels for ceiling height; level and saddle tie along channels.
 2. Provide [1] [] inch clearance between channels and abutting construction.
 3. Overlap channel ends [12] [] inches at splices; secure each end with double loop tie wire.
- D. Space furring channels [16] [] inches on center maximum, perpendicular to runners and within [6] [] inches of abutting construction.
 1. Provide [1] [] inch clearance between channels and abutting construction.
 2. Secure to runners with clips on alternate sides of runners; saddle tie if clips cannot be alternated.
 3. Overlap channel ends [8] [] inches at splices; secure each end with double loop tie wire.
- E. Where openings interrupt furring or runner channels, install reinforcing to restore stability.
- F. Provide double runner or furring channels side by side where [expansion and] control joints occur; do not continue channels over joints.

3.3 INSTALLATION OF CEILING FRAMING

- A. Install in accordance with ASTM C636 and manufacturer's instructions.
- B. Space hanger wires maximum [48] [] inches on center. Install additional hangers where required to support light fixtures and ceiling supported equipment.
- C. Do not suspend hangers directly from metal deck. Attach steel channel horizontally to adjacent framing members; place hanger at regular spacing.
- D. Hang suspension system independent of walls, columns, ducts, pipes, and conduit.
- E. 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.
- F. Install main tees at maximum [48] [] inches on center. Fully engage end locks.
- G. Install cross tees perpendicular to main tees to form [16 x 48] [24 x 48] [] x [] inch modules. Lock cross tees to main tees.

3.4 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.

3.5 INSTALLATION OF WALL FURRING

- A. Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Space channels [24] [] inches on center maximum and within [3] [] inches of corners; secure at maximum [24] [] inches on center with fasteners staggered on alternating flanges.
- C. Nest channels minimum [8] [] inches at splices; secure with two fasteners in each flange.

3.6 INSTALLATION OF SHAFT WALL SYSTEM

- A. Install in accordance with manufacturer's instructions.
- B. Position tracks at floor and ceiling with short leg toward finish side of wall; attach at ends and [24] [] inches on center maximum.
- C. If wall height exceeds maximum panel length, position panel end joints within upper or lower third of wall. Stagger joints top and bottom in adjacent panels; reinforce end joints with horizontal stud.
- D. Install stud between tracks with liner inserted into stud groove.
- E. Progressively install succeeding studs and liner panels.
- F. Install full length studs vertically at intersections, door openings, corners, and ends of partitions.
- G. Frame openings cut within a liner panel with track around perimeter.
- H. Over doors, install horizontal track; attach to studs with clip angles and screws.

END OF SECTION