

**SECTION 05400**  
**COLD FORMED METAL FRAMING**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

**A. Section Includes:**

1. Load-bearing and non-load-bearing metal stud wall framing.
2. Anchorage, bridging and bracing.
3. Metal joint framing with anchorage and bridging.

**B. Related Work:**

1. Section 05120 - Structural Steel.
2. Section 05210 - Steel Joists.
3. Section 05300 - Metal Decking.
4. Section 09260 - Gypsum Board Systems: Interior non-load bearing studs.

**C. LEED MRc5: Regional Materials**

Provide a statement from the manufacturer stating that materials provided were manufactured within a 500 mile radius of the project. Include location.

**D. LEED MRc4: Recycled Content**

Provide a statement from the manufacturer including recycled content percentage, by weight, and whether the recycled content is post-industrial or post-consumer.

**1.2 REFERENCES:**

A. Design and Manufacturers: Meet requirements of AISC Specification for the Design of Light Gage Cold Formed Steel Structural Members, latest edition.

B. Welding: Meet requirements of AWS D1.1.

**1.1 SUBMITTALS:**

**A. Product Data:** Copies of manufacturer's specifications covering all materials to be used with all materials and accessories plainly identified.

B. Detailed erection procedures.

ENGINEER TO ADEQUATELY DETAIL MEMBERS AND CONNECTIONS SUCH THAT IF SHOP DRAWINGS ARE NECESSARY FOR LAYOUT NO ADDITIONAL ENGINEER'S STAMP WILL BE REQUIRED.

**1.2 QUALITY ASSURANCE:**

- A. Erector Qualifications: Minimum of three years successful experience on comparable cold-formed metal framing work.
- B. Welder Qualifications: Currently qualified in accordance with AWS D1.1. Certification required.

PART 2 - PRODUCTS

2.1 MATERIAL:

A. Framing Members:

- 1. Studs and Track: Head and sill track and header members to be unpunched track, same gage as studs or one gage heavier.
  - a. All studs to be stamped or marked with ASTM standard, Grade, and gage.

- 1. Steel: All framing members to be formed from steel conforming to the following:

<p>GALVANIZED STUDS ARE GENERALLY RECOMMENDED FOR EXTERIOR WALLS, ESPECIALLY MASONRY CAVITY WALLS.</p>
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- a. 18 Gage and Lighter Galvanized: ASTM A446, Grade A.
- b. 18 Gage and Lighter Painted: ASTM A611, Grade C, 33 ksi yield.
- c. 16 Gage and Heavier, Galvanized: ASTM A446, Grade D, 50 ksi yield.
- d. 16 Gage and Heavier, Painted: ASTM A570, Grade E, 50 ksi yield.
- e. LEED MRc4: Recycled Content  
Steel shall contain recycled content.

2. Stud Bridging:

- a. 18 gage or heavier channel studs of same width as studs noted on the drawings.
- b. Continuous minimum 1-1/2" cold-rolled channels positioned through stud punch-outs.

2.2 FASTENERS:

- A. Self-Drilling, Self-Tapping Screws, Bolts, Nuts and Washers: ASTM A90, Hot-Dip Galvanized.

B. Anchorage Devices: Powder driven or powder actuated; drilled expansion bolts; screws and sleeves.

C. Welding: Comply with AWS D1.3.

## PART 3 - EXECUTION

### 3.1 ERECTION:

A. Align head and sill tracks according to wall or partition location. Secure with screws, powder driven fasteners or welding at 24" on center.

B. Studs:

1. Place studs 16" on center, minimum, or at tighter spacing as noted, and not more than 2" from abutting walls and at each side of openings.
2. Provide deflection allowance below supported horizontal building framing in ceiling or head track for non-load-bearing framing.

C. Joists: Weld all joints and connections in accordance with drawings and manufacturer's recommendations.

D. Bridging and Diagonal Bracing: Attach all bridging and diagonal bracing by welding capable of resisting a transverse lateral load force of 500 lbs. minimum.

E. Miscellaneous Framing and Furring:

1. Provide all necessary framing, furring, etc., for special framing at specialty items.
2. Attach cross studs or furring channels to studs for attachment of fixtures behind lavatory basins, toilet and bathroom accessories, grab bars and other items anchored to partitions or walls.
3. Install framing between studs for attachment of electrical boxes and other mechanical and electrical items.

**END OF SECTION 05400**