

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work

All interior and exterior load-bearing and non load-bearing light gauge steel and wood studs, track, joists, trusses, bridging, headers and related accessories are as indicated on the Contract Drawings and specified herein.

B. Related work specified elsewhere.

1.2 SUMMARY

A. This Section includes the following:

1. Exterior and Interior load-bearing headers.

1.3 PERFORMANCE REQUIREMENTS

A. Engineering Responsibility: Engage a fabricator who assumes undivided responsibility for engineering FLEX-C HEADER metal framing by employing a qualified professional engineer to prepare design calculations, shop drawings, and other structural data.

B. All Exterior and Interior load-bearing applications are to be engineered by a qualified professional Engineer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed coldformed metal framing similar in material, design, and extent to that indicated for this project and with a record of successful in-service performance.

B. Standard

1. Work shall meet the requirements of the following standards:
 - a. American Iron and Steel Institute (A.I.S.I.) "Design of Cold Formed Steel Structural Members," January 2002 edition.
 - b. American Society for Testing Materials (A.S.T.M.)
 - c. American Institute of Steel Construction (A.I.S.C.) "Manual of Steel Construction," 9th edition.
 - d. All pertinent Federal, State, and Local codes.
2. The most stringent requirements shall govern in conflicts between specified codes and standards.

C. Inspection

1. As directed by Architect, Owner's testing agency may inspect the maintenance of a quality control program.
2. Full responsibility for quality control shall remain with the Contractor.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect FLEX-C HEADER metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.

B. To store FLEX-C HEADER metal framing, protect with waterproof covering, and ventilate to avoid condensation.

1.6 SUBMITTALS

A. Structural Calculations

1. Submit structural calculations prepared by the Professional Engineer of record. Calculations shall include, but are not limited to:
 - a. Description of design criteria.
 - b. Engineering analysis depicting stress and deflection (stiffness) requirements for each framing application.
 - c. Selection of framing components and accessories.
 - d. Verification of attachments to structure and/or adjacent framing components.

B. Drawings

1. Submit drawings prepared by the manufacturer for approval by the Project Architect and Engineer. These drawings should include:
 - a. Component cross-sections, plans and/or elevations depicting component assembly.
 - b. Component assembly details showing screw types and locations and other related fastener requirements of component.

PART 2- PRODUCTS

2.1 AVAILABLE MANUFACTURERS:

A. Manufacturers offering FLEX-C HEADER metal framing that may be incorporated in the work include, and are limited to, the following:

FLEX-ABILITY CONCEPTS

5500 W. Reno Ave., Ste. 300, Oklahoma City, OK 73127

(405) 996.5343 FAX (405)996.5353

www.flexabilityconcepts.com

2.2 MATERIALS

A. Galvanized – 20 Ga. Steel Sheet Track for (3 1/2" & 3 5/8"):

ASTM A 653, and as follows:

1. Coating Designation: Hot Dipped Galvanized Steel equal or superior to ASTM A653 G60 or A60.
2. Grade: Structural Grade 33

B. Galvanized – 20 Ga. Steel Sheet Track (for 5 1/2" & 6" track): ASTM A653, and as follows:

1. Coating Designation: Hot Dipped Galvanized Steel equal or superior to ASTM A653 G60 or A60.
2. Grade: Structural Grade 33

C. Galvanized – Sliding Steel Strap (for all headers): ASTM A653

1. Coating Designation: Hot Dipped Galvanized Steel Strapping equal or superior to ASTM A653 G60 or A60.
2. Grade: Structural Grade 80

D. Galvanized – 16 Ga. side sheet metal (for all FLEX-C HEADERS): ASTM 653

1. Coating Designation: Equal or superior to ASTM A653 G60 or A60.
2. Grade: Structural Grade 50.

E. Wood Internal Components:

1. Fire Treated (Commercial); Non Fire Treated (Residential)
2. Grade: #2 or better.

F. Nails (pre-installed):

1. 0.104" dia. Shank knurled nail or equal.

2.3 HEADER FRAMING

A. FLEX-C HEADER: manufacturer's standard rectangular flexible steel header with 3 1/2", 3 5/8", 5 1/2" or 6" FLEX-C TRAC flanges and nail attachments at every flange, fasteners penetrating top and bottom flanges at every wood support.

2.4 FRAMING ACCESSORIES

A. Fabricate steel-framing accessories of the same material and finish used for framing members, with a minimum yield strength of 33,000 psi.

B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated.

2.5 FASTENERS (for installation)

A. Mechanical Fasteners:

1. Single Openings: Screws: #10 x11/4 Corrosion-resistant coated, self-drilling screws. Pan-head or low-profile head beneath sheathing, manufacturer's standard elsewhere.
2. Multiple Openings: Screws: #8 x11/4 Corrosion-resistant coated, self-drilling screws. Pan-head or low-profile head beneath sheathing, manufacturer's standard elsewhere.
3. Nails: Positive Placement™ type. 11/2" x 0.131" heat treated.

2.6 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: SSPC-Paint 20 of DOD-P-21035, with dry film containing a minimum of 94 percent zinc dust by weight.

2.7 FABRICATION

A. Fabricate FLEX-C HEADER metal framing and accessories plumb, square, true to line, true to radius, and with connections securely fastened, according to manufacturer's recommendations and the requirements of this Section.

1. Fabricate assemblies in jig templates or free form scribed radiuses.
 2. Cut FLEX-C HEADER metal framing by sawing or shearing; do not torch cut.
 - a. Extreme care should be taken when handling or cutting any metal products. Observe all safety precautions when handling, cutting or fastening FLEX-C HEADER.
 3. Fasten FLEX-C HEADER metal framing by screw fastening as standard with fabricator. Wire tying of FLEX-C HEADER framing members is not permitted.
 - a. Locate and install mechanical fasteners according to FLEX-C HEADER manufacturer's instructions with screws or nails penetrating banding at every wood support; 2 (two) penetrating top and bottom bands at every wood header block and 1 (one) penetrating each sheet metal side midpoint at every wood header block.
 4. Splice per manufacturer's specifications.
 5. Fasten other materials to FLEX-C HEADER metal framing by bolting, or screw fastening, according to manufacturer's recommendations.
- B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or distortion.
- C. Fabrication Tolerances: Fabricate assemblies as required.

PART 3- EXECUTION

3.1 INSTALLATION, GENERAL

A. FLEX-C HEADER metal framing may be shop or field fabricated for installation, or it may be field assembled.

B. Install FLEX-C HEADER metal framing and accessories plumb, square, true to line, true to radius, and with connections securely fastened, according to manufacturer's recommendations and the requirements of this Section.

1. Cut FLEX-C HEADER members by sawing or shearing; do not torch cut.
 - a. Extreme care should be taken when handling or cutting any metal products. Observe all safety precautions when handling, cutting or fastening FLEX-C HEADER.
2. Fasten FLEX-C HEADER members by screw fastening as standard with fabricator. Wire tying of FLEX-C HEADER members is not permitted.
 - a. Locate and install mechanical fasteners according to FLEX-C HEADER manufacturer's instructions with screws or nails penetrating banding at every wood header block; 2 (two) penetrating top and bottom bands at every wood header block and 1 (one) penetrating each sheet metal side midpoint at every wood header block.
3. Splice per manufacturer's specifications.

C. Install FLEX-C HEADER members in one or multi-piece lengths as specified.

D. Verify splicing of FLEX-C HEADER with Engineer of record. See Manufacturer's standard splicing instructions to verify overlap requirements.

E. Provide temporary bracing and leave in place until framing is permanently stabilized.

F. Do not bridge building expansion and control joints with FLEX-C HEADER metal framing. Independently frame both sides of joints.

G. Fasten reinforcement plate over web penetrations that exceed size of manufacturer's standard punched openings.

3.2 REPAIRS AND PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed FLEX-C HEADER metal framing with galvanizing repair paint according to ASTM A 780 and the manufacturer's instructions.

B. Touchup painting: Wire brush, clean, and paint scarred areas, welds, and rust spots on fabricated and installed prime-painted FLEX-C HEADER metal framing.

1. Touchup painted surfaces with same type of shop paint used on adjacent surfaces.

C. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer to ensure that FLEX-C HEADER metal framing is without damage or deterioration at the time of Substantial Completion.

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