SECTION 054000

COLD-FORMED METAL FRAMING

Display hidden notes to specifier by using "Tools"/"Options"/"View"/"Hidden Text".

**** NOTE TO SPECIFIER ** Dietrich Metal Framing, Inc.; load-bearing metal studs, joists, runner track and other components for walls, floors and roofs .**

This section is based on the products of Dietrich Metal Framing, Inc., which is located at:
200 Old Wilson Bridge Rd.
Columbus, OH 43085
1-800-873-2604 phone

Email: askforhelp@dietrichindustries.com
Web: www.dietrichmetalframing.com
[Click Here] for additional information.
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Dietrich Metal Framing, a Worthington Industries Company, is the leading manufacturer of light-gauge framing and finishing products for commercial and residential construction. Dietrich Metal Framing provides a wide selection of light-gauge framing and finishing products including drywall and structural framing, floor joists, roof trusses, metal lath, fire-rated assemblies, numerous deflection systems and an extensive line of metal, vinyl, veneer, paper-faced, plaster and stucco beads and trims. Dietrich Metal Framing companies and divisions - include Dietrich Design Group, Aegis Metal Framing, Vinyl Corp., Dietrich Metal Framing Canada; operate 31 manufacturing and service locations in North America.

Dietrich Metal Framing also provides total light-gauge design services through its design services group, Dietrich Design Group. DDG is the largest group of design engineers devoted solely to light-gauge steel framing design. They can provide shop drawings, technical recommendations, and member sizing. DDG is licensed in all 50 states and now operates in three locations; Hammond, IN; McDonough, GA and Carlsbad, CA.

PART 1 GENERAL

1.1 SECTION INCLUDES

**** NOTE TO SPECIFIER ** Delete items below not required for project.**

A. Cold-formed metal framing for walls.

B. Cold-formed metal framing for floors.

1.2 RELATED SECTIONS

**** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.**

A. Section 072000 – Thermal Protection

B. Section 092216 - Non-Structural Metal Framing

C. Section 092116 - Gypsum Board Assemblies.

1.3 REFERENCES

**** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.**

A. ASTM A 780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

B. ASTM A 1003 - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.

C. ASTM B 633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.

D. ASTM C 955 - Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases.

E. ASTM C 1513 - Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections.

F. ASTM C 1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories.

G. AISI - Standard for Cold-Formed Steel Framing General Provisions.

H. AISI – North American Specification for the Design of Cold-Formed Steel Structural Members.

I. AWS D.1.3 - Structural Welding Code - Sheet Steel.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. [Product Data]: Submit manufacturer's product literature, data sheets and installation recommendations for specified products.

C. Structural Calculations: Submit structural calculations prepared by manufacturer for approval. Submittal shall be sealed by a professional engineer registered in the state of the project.
   1. Description of design criteria.
   2. Engineering analysis depicting stress and deflection (stiffness) requirements for each framing application.
   3. Selection of framing components, accessories and welded connection requirements.
   4. Verification of attachments to structure and adjacent framing components.
   5. Engineer shall have a minimum of 5 years experience with projects of similar scope.

D. Shop Drawings:
   1. Submit shop drawings prepared by the manufacturer showing plans, sections, elevations, layouts, profiles and product component locations, including anchorage, bracing, fasteners, accessories and finishes.
   2. Show connection details with screw types and locations, weld lengths and locations, and other fastener requirements.
   3. Where prefabricated or pre-finished panels are to be provided, provided drawings depicting panel configurations, dimensions and locations.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

B. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, and manufacturer's installation instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

B. Store materials protected from exposure to rain, snow or other harmful weather conditions. Products to be handled per AISI “Code of Standard Practice”

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

**** NOTE TO SPECIFIER ** The following address is that of the corporate headquarters. Dietrich has manufacturing facilities located throughout the United States.**

A. Acceptable Manufacturer: Dietrich Metal Framing, Inc., which is located at: 500 Grant St. Suite 2226 ; Pittsburgh, PA 15219; Tel: 412-281-2805; Fax: 412-281-2965; Email: askforhelp@dietrichindustries.com; Web: www.dietrichmetalframing.com
   1. Dietrich Metal Framing; 8911 Bethlehem Blvd.,Baltimore, MD (410) 477-8700
   2. Dietrich Metal Framing; 4200 Cedar Blvd., Baytown, TX (281) 383-1617
   3. Dietrich Metal Framing; 100 Fulton Street, Boonton, NJ (973) 335-3240
   4. Dietrich Metal Framing; 2001 Cooley Drive, Colton, CA (909) 824-9717
   5. Dietrich Metal Framing; 6700 Franklin Street, Denver, CO (303) 289-4092
   6. Dietrich Metal Framing 978 S. Camino Oro, Goodyear, AZ (623) 932-1407
   7. Dietrich Metal Framing; 1435 165th Street, Hammond, IN (219) 931-3741
   8. Dietrich Metal Framing; 91-300 Hanua Street, Kapolei, HI (808) 682-5747
   9. Dietrich Metal Framing; 1012 W. Wintergreen Rd; Hutchins, TX ((972) 225-1100
   10. Dietrich Metal Framing; 3901 Olympic Blvd., Joliet, IL (815) 207-8110
   11. Dietrich Metal Framing; 15546 West 108th Street, Lenexa, KS (913) 599-2026
   12. Dietrich Metal Framing; 198 Summer Street, Lunenburg, MA (978) 342-9742
   13. Dietrich Metal Framing; 330 Greenwood Place, McDonough, GA (678) 304-5500
   14. Dietrich Metal Framing; 3505 NW 123rd Street, Miami, FL (305) 688-9135
   15. Dietrich Metal Framing; 420 South 53rd Avenue, Phoenix, AZ (602) 447-0204
   16. Dietrich Metal Framing; 3351 East Valley Road, Renton, WA (425) 251-1497
   17. Dietrich Metal Framing; 1345 Hall Spencer Road, Rock Hill, SC (803) 324-4144
   18. Dietrich Metal Framing; 2525 South Airport Way, Stockton, CA (209) 547-9066
   19. Dietrich Metal Framing; 1300 Phoenix Road NE, Warren, OH (330) 372-3394
   20. Dietrich Metal Framing; 721 Industrial Drive, Wildwood, FL (352) 748-7200

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with**

requirements of Division 1 section on product options and substitutions.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 COMPONENTS

**** NOTE TO SPECIFIER ** Review Dietrich Metal Framing technical literature, code requirements and load and span tables. Load carrying applications are design dependent and should be reviewed by a design professional familiar with the system and the requirements of the project. Select from the following product criteria as required for the project requirements.**

A. Studs: Cold formed galvanized steel C-studs; by Dietrich Metal Framing

**** NOTE TO SPECIFIER ** Select the designation and criteria information based upon the shape and size stud required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.**

1. Size: 1-3/8 inch (35 mm) flange width, 3/8 inch (9.5 mm) returns, and web depth as indicated on drawings; Series CWN.
2. Size: 1-5/8 inch (41 mm) flange width, 1/2 inch (12.7 mm) returns, and web depth as indicated on drawings; Series CSJ.
3. Size: 2 inches (51 mm) flange width, 5/8 inch (15.9 mm) returns, and web depth as indicated on drawings; Series CSW.
4. Size: 2-1/2 inch (64 mm) flange width, 5/8 inch (15.9 mm) returns, and web depth as indicated on drawings; Series CSE.
5. Size: 3 inch (76 mm) flange width, 1 inch (25.4 mm) returns, and web depth as indicated on drawings; Series CSS.
6. Sizes: As indicated on drawings.

**** NOTE TO SPECIFIER ** Delete all but one of the following three sub-paragraphs based on the requirements of the design. Use the third paragraph if the design engineer may choose the yield strength.**

7. Minimum Yield Strength: 33 ksi (227 MPa) (for 20 through 12 gauges only).
8. Minimum Yield Strength: 50 ksi (345 MPa) (optional for 16 gauge and heavier).
9. Minimum Yield Strength: As required for design.

**** NOTE TO SPECIFIER ** Delete all but one metal thickness (gauge). If more than one is used, identify the application or location for each.**

10. Minimum Delivered Thickness: 20 gauge, 0.0329 inch (0.84 mm).
11. Minimum Delivered Thickness: 18 gauge, 0.0428 inch (1.09 mm).
12. Minimum Delivered Thickness: 16 gauge, 0.0538 inch (1.37 mm).
13. Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm).
14. Minimum Delivered Thickness: 12 gauge, 0.0966 inch (2.45 mm).

B. Runner Track: Cold formed galvanized steel sheet; by Dietrich Metal Framing

**** NOTE TO SPECIFIER ** Select the designation required for the project. If more than one, identify the application or location where used.**

1. Designation: TSB Standard Leg 1 1/4 inches (32 mm) high.
2. Designation: Equal Leg.
3. Designation: Unequal Leg.
4. Designation: Custom size up to 3 inches (76.2 mm) high.

**** NOTE TO SPECIFIER ** Delete all but one of the following three sub-paragraphs based on the requirements of the design. Use the third paragraph if the design engineer may choose the yield strength.**

5. Minimum Yield Strength: 33 ksi (227 MPa) (for 20 through 12 gauges only).

6. Minimum Yield Strength: 50 ksi (345 MPa) (for custom order only).
7. Minimum Yield Strength: As required for design.
8. Web Sizes: As required to match the system stud size.
9. Material thickness to match stud/joist thickness unless design dictates heavier thickness.

**** NOTE TO SPECIFIER ** SLP-TRK® Systems – Provides a positive attachment for overall strength and allows for vertical movement caused by normal head-of-wall and floor extension or compression. Delete if not required.**

C. SLP-TRK® Systems - Slotted Deflection Track by Brady Innovations, manufactured by Dietrich Metal Framing
1. Standard leg of 2 1/2 inches.
2. Standard vertical slot of 1 1/2 inches in leg.

**** NOTE TO SPECIFIER ** Delete metal thickness (gauge) not required. If more than one is used, identify the application or location for each.**

3. Thickness: 14 gage, 0.0677 inch (1.81 mm).
4. Thickness: 16 gage, 0.0538 inch (1.44 mm).
5. Thickness: 18 gage, 0.0428 inch (1.14 mm).
6. Thickness: 20 gage, 0.0329 inch (0.88 mm).
7. Thickness: 25 gage, 0.0179 inch (0.48 mm).
8. Product available with 2 1/2 drift slots in web 'special order.'

**** NOTE TO SPECIFIER ** Minimum yield strength of 33 k.s.i. in 18 gauge and lighter. Minimum yield strength of 50 k.s.i. in 16 gauge and heavier. Delete yield strength not applicable.**

9. Minimum yield strength of 33 k.s.i. in 18 gauge and lighter and
10. Minimum yield strength of 50 k.s.i. in 16 gauge and heavier.

**** NOTE TO SPECIFIER ** Deflection Clips: Used to attach exterior curtain-wall studs to the building structure and provide for vertical building movement independent of the cold-formed steel framing. Select the gauge(s) and/or sizes required for the project. If more than one size or gauge is used, identify the application or location for each product. Delete if not required for project.**

D. Deflection Clips:
1. Slide Clips: Minimum Delivered Thickness: 14gauge, 0.0677 inch (1.72 mm).
2. Slide Clips: Minimum Delivered Thickness: 12 gauge, 0.0966 inch (2.45 mm).
3. Fast Top Clip: Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm)
4. Fast Strut Clip: Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm)
5. Fast ClipSlide Clip: Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm)
6. QuickClip: Minimum Delivered Thickness: 10 gauge, 0.1180 inch (3 mm)

**** NOTE TO SPECIFIER ** Clip Angles EasyClip™ Series – Rigid connection clips and supports are used in a variety of ways to secure light-gauge framing members to each other or to the building structure. Select the gauge(s) and sizes by type required for the project. If more than one size or gauge is used, identify the application or location for each product. Delete if not required.**

E. Clip Angles (Support Clips) EasyClip™ Series:
1. Minimum Delivered Thickness: 16 gauge 0.0538 inch (1.37 mm)
2. Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm)
3. Minimum Delivered Thickness: 12 gauge, 0.0966 inch (2.45 mm).
4. EasyClip™ A Series
   a. Size: 3 by 3 by 3 inches (76.2 by 76.2 by 76.2 mm)

b. Size: 3 by 3 by 6 inches (76.2 by 76.2 by 152 mm)

5. EasyClip™ U Series
   a. Size: 1-1/2 by 1-1/2 by 3-3/8 inches (38.1 by 38.1 by 85.7 mm)
   b. Size: 1-1/2 by 1-1/2 by 5-3/4 inches (38.1 by 38.1 by 146 mm)
   c. Size: 1-1/2 by 1-1/2 by 7-3/4 inches (38.1 by 38.1 by 197 mm)
   d. Size: 1-1/2 by 1-1/2 by 9-3/4 inches (38.1 by 38.1 by 248 mm)
6. EasyClip™ X Series
   a. Size: 2 by 2 by 3-3/8 inches (50.8 by 50.8 by 85.7 mm)
   b. Size; 2 by 2 by 5-3/4 inches (50.8 by 50.8 by 146.0 mm)
   c. Size: 2 by 2 by 7-3/4 inches (50.8 by 50.8 by 196.8 mm)
   d. Size: 2 by 2 by 9-3/4 inches (50.8 by 50.8 by 247.6 mm)
7. EasyClip™ S Series
   a. Size: 1-1/2 by 1-1/2 by 3 inches (38.1 by 38.1 by 76.2 mm)
   b. Size: 1-1/2 by 1-1/2 by 5 inches (38.1 by 38.1 by 127 mm)
   c. Size: 1-1/2 by 1-1/2 by 7 inches (38.1 by 38.1 by 178 mm)
   d. Size: 1-1/2 by 1-1/2 by 9 inches (38.1 by 38.1 by 229 mm)
   e. Size: 1-1/2 by 1-1/2 by 11 inches (38.1 by 38.1 by 279 mm)
8. EasyClip™ E Series
   a. Size: 4 by 1-1/2 by 3 inches (101 by 38.1 by 76.2 mm)
   b. Size: 4 by 1-1/2 by 5 inches (101 by 38.1 by 127 mm)
   c. Size: 4 by 1-1/2 by 7 inches (101 by 38.1 by 178 mm)
   d. Size: 4 by 1-1/2 by 9 inches (101 by 38.1 by 229 mm)
   e. Size: 4 by 1-1/2 by 11 inches (101 by 38.1 by 279 mm)

**** NOTE TO SPECIFIER ** Select the sizes required for the project. If more than one size or gauge is used, identify the application or location for each product. Delete if not required.**

F. U-Channel:
   1. Size: 3/4 inches (19.1 mm).
   2. Size: 1-1/2 inches (38 mm).
   3. Size: 2 inches (51 mm).
   4. Length: Manufacturer's standard length.
   5. Minimum Delivered Thickness: 16 gauge, 0.0538 inch (1.37 mm)

**** NOTE TO SPECIFIER ** Bridging/Spacer Bar TradeReady Spazzer – Pre-notched bridging and bracing bar for structural walls to provide resistance to stud rotation and minor axis bending under wind and axial loads. The Spazzer 5400 bridging and spacer bar uses shear to bridge steel studs and is used as an alternative to U-channel and clip angle attachments. Delete if not required.**

G. Bridging/Spacer Bar: Dietrich TradeReady® Spazzer® 5400 Bridging and Bracing Bar.
   1. Minimum Delivered Thickness: 16 gauge, 0.0538 inch (1.37 mm).
   2. 1-1/4 by 1-1/4 by 50 inches (32 by 32 by 1270 mm) long pre-notched at 12, 16 or 24 inches (406 by 610 mm) centers.
   3. Dietrich TradeReady® Spazzer® Bar Guard: Minimum Delivered Thickness: 20 gauge, 0.0329 inch (0.84 mm)
   4. Dietrich TradeReady® Grommet

H. Web Stiffeners:
   1. Subject to compliance with requirements, provide Dietrich Metal Framing; EasyClip™ Quick Twist: Minimum Delivered Thickness: 12 gauge 0.0966 inch (2.45 mm)
   2. Width: 4 inches (102 mm). Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm)

**** NOTE TO SPECIFIER ** Lengths may range from 5-3/4 inches to 11-3/4 inches (146 to 299 mm)**

3. Length: As shown on drawings.
4. ** NOTE TO SPECIFIER ** TradeReady® Floor System – Comprised of the TradeReady® Joist with large extruded holes, the TradeReady® Rim Joist with pre-punched layout tabs and embedded stiffening ribs, and pre-cut structural blocking. Select the size required for the project. Delete if not required.

I. Floor Joists: Cold formed Galvanized Steel C-Joist, Dietrich TradeReady® Floor System:
1. Size: 7-1/4 inches (184 mm) deep, with 1-3/4 inches (45 mm) flange, and 4-1/4 by 7 inches (108 by 178 mm) oval holes.
2. Size: 8 inches (203 mm) deep, with 1-3/4 inches (45 mm) flange, and 4-1/4 by 7 inches (108 by 178 mm) oval holes.
3. Size: 9-1/4 inches (235 mm) deep, with 1-3/4 inches (45 mm) flange, and 6-1/4 by 9 inches (159 by 229 mm) oval holes.
4. Size: 10 inches (254 mm) deep, with 2 inches (51 mm) flange and 6-1/4 by 9 inches (159 by 229 mm) oval holes.
5. Size: 11-1/4 inches (286 mm) deep, with 1-3/4 inches (45 mm) flange, and 8 inches (203 mm) diameter round holes.
6. Size: 12 inches (305 mm) deep, with 2 inches (51 mm) flange, and 8 inches (203 mm) diameter round holes.
7. Size: 14 inches (356 mm) deep, with 2 inches (51 mm) flange, and 10 inches (254 mm) diameter round holes.

**** NOTE TO SPECIFIER ** Load Bearing Headers – Structural components or assemblies that carry and redistribute loads over door, window or other wall, floor or roof openings. The TradeReady® Header is a one-piece header that slips over the top track. It is easily insulated after installation due to its U-shaped configuration. Select header size based on wall cavity requirements.**

J. Load-Bearing Headers:
1. Dietrich Metal Framing Heavy Duty Stud (HDS) and Header Bracket (HDSC) (Cold-formed galvanized one-piece load-bearing header).
   a. Size: 3-5/8 by 3 by 1-1/16 by 3/4 inches (92.1 by 76.2 by 27.0 by 19.1 mm).
   b. Size: 6 by 3 by 2-1/4 by 3/4 inches (152 by 76.2 by 57.2 by 19.1 mm)
   c. Size: 3-1/2 by 3-1/16 by 2 inches (88.9 by 77.8 by 50.8 mm)
   d. Size: 5-7/8 by 3-1/16 by 2 inches (149 by 77.8 by 50.8 mm)
   e. Minimum Delivered Thickness: [0.0329 (0.84 mm)] [0.0428 (1.09 mm)] [0.0538 (1.37 mm)] [0.0677 (1.72 mm)] [0.0966 (2.45 mm)] [Matching Steel Studs]

2. Dietrich TradeReady® Load-Bearing Header (Cold-formed galvanized one-piece load-bearing header).
   a. Size: 3-7/8 inches (98 mm) wide with 8 inch (203 mm) legs.
   b. Size: 3-7/8 inches (98 mm) wide with 12 inch (305 mm) legs.
   c. Size: 6-1/4 inches (159 mm) wide with 8 inch (203 mm) legs.
   d. Size: 6-1/4 inches (159 mm) wide with 12 inch (305 mm) legs.
   e. Minimum Delivered Thickness: 14 gauge, 0.0677 inch (1.72 mm), minimum.

K. Framing Component Accessories: Provide the following accessories as required for a complete system.
1. Flat strapping.
2. Angles, plates, sheets.

3. Custom brake-formed shapes.

L. Fasteners: Self-drilling, self-tapping screws; Steel, complying with ASTM C1513; Galvanized coating, plated or oil-phosphate coated complying with ASTM B 633 as needed for required corrosion resistance.

M. Touch-Up Paint: Zinc rich, containing 95-percent metallic zinc, ZRC 350 as manufactured by ZRC Worldwide, Marshfield, MA.

2.3 MATERIALS

A. Cold-Formed Steel Sheet: Complying with ASTM A 1003/A 1003M; unless indicated otherwise.

**** NOTE TO SPECIFIER ** Select G60 coating weight for typical structural applications. Select G 90 coating weight where additional protective coating is required for the project. Note that G 90 is a special order and may result in additional cost and extended delivery times and should be specified in severely corrosive environments.**

B. Galvanized Coating: G60 coating weight minimum, complying with ASTM C 955.
1. Where required: G90 coating weight minimum, complying with ASTM C955.

C.

2.4 FABRICATION

A. General: Framing components may be pre-assembled into panels prior to erecting.

B. Fabricate panels square, with components attached in a manner so as to prevent racking or distortion.

C. Cut all framing components squarely for attachment to perpendicular members, or as required for an angular fit against abutting members. Hold members positively in place until properly fastened.

D. Provide insulation as specified elsewhere in all double jamb studs and double header members, which will not be accessible to the insulation contractor.

E. Axially Loaded Studs:
1. Install studs to have full bearing against inside track web (1/8 inches (3.2 mm) maximum gap) prior to stud and track attachment.
2. Splices in axially loaded studs are not permitted.

F. Fasteners: Fasten components using self-tapping screws or welding.

**** NOTE TO SPECIFIER ** Delete references to welding connections when framing components are lighter than 18 gauge.**

G. Welding: Welding is permitted on 18 gauge or heavier material only.
1. Specify welding configuration and size on the Structural Calculation submittal.
2. Qualify welding operators in accordance with Section 6.0 of AWS D.1.3.
3. Touch up all welds with zinc-rich paint in compliance with ASTM A 780.

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to installation, inspect previous work of all other trades. Verify that all work is complete and accurate to the point where this installation may properly proceed in strict accordance with framing shop drawings.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 ERECTION

A. General Erection Requirements:
1. Install cold-formed framing in accordance with requirements of ASTM C1007.

**** NOTE TO SPECIFIER ** Delete references to welding connections when framing components are lighter than 16 gauge.**

2. Weld in compliance with AWS D.1.3.
3. Install in compliance with applicable sections of the AISI Standard for Cold-Formed Steel Framing General Provisions.

B. Wall Systems:
1. Erect framing and panels plumb, level and square in strict accordance with approved shop drawings.
2. Handle and lift prefabricated panels in a manner so as not to cause distortion in any member.
3. Anchor runner track securely to the supporting structure as shown on the erection drawings. Install concrete anchors only after full compressive strength has been achieved. Provide a sill sealer or gasket barrier between all concrete and steel connections.
4. Butt all track joints. Securely anchor abutting pieces of track to a common structural element, or butt-weld or splice them together.
5. Align and plumb studs, and securely attach to the flanges or webs of both upper and lower tracks except when vertical movement is specified.
6. Install jack studs or cripples below window sills, above window and door heads, at freestanding stair rails and elsewhere to furnish support, securely attached to supporting members.
7. Attach wall stud bridging in a manner to prevent stud rotation. Space bridging rows according to manufacturer's recommendations.
8. Frame wall openings to include headers and supporting studs as shown in the drawings.
9. Provide temporary bracing until erection is completed.
10. Provide stud walls at locations indicated on plans as "shear walls" for frame stability and lateral load resistance.
11. Where indicated in the drawings, provide for structural vertical movement using a vertical slide clip or other means in accordance with manufacturer's recommendations.

C. Steel Joists:
1. Locate joists directly over bearing studs within 3/4" or provide a suitable load distribution member at the top track.
2. Provide web stiffeners at reaction points where indicated in drawings.
3. Provide joist bridging as shown in drawings.
4. Provide end blocking where joist ends are not otherwise restrained from rotation.

**** NOTE TO SPECIFIER ** Include the following article when a project is located in seismic resistance or high wind exposure category zones as defined by the authority having code jurisdiction; thereby requiring Special Inspections for the structural system. Coordinate this provision with any Special Inspections requirements stipulated in Section 01400 - Quality Requirements. The inspection is conducted by the Owner's Special Inspector (IBC 2000 chapter 17 and BOCA 96 chapter 17) but must be scheduled by the Contractor.**

3.3 FIELD QUALITY CONTROL

A. Inspection: Periodic special inspections are required by local code authorities.
   1. Owner will hire and pay inspection agency.
   2. Submit schedule showing when the following activities will be performed and resubmit schedule when timing changes.
   3. Notify inspection agency not less than 3 days before the start of any of the following activities.
   4. Inspections are required during welding operations, screw attachment, bolting, anchoring and other fastening of components within the force resisting structural system, including struts, braces, and hold-downs.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION