

## **SECTION 1: GENERAL**

### **1.1. SCOPE**

**1.1.1.** These specifications cover the materials and the fabrication of building materials supplied by The Company.

**1.1.2.** The material furnished shall include the structural framing, roof panels, wall panels, bracing, fasteners, sealants, flashing, and all other parts for a complete building system (except anchor bolts and all items imbedded in the concrete.) Overhead doors, insulation, etc., are not considered part of the building system but can be apart of your building order if purchased separately in our accessory shopping cart.

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## **SECTION 2: PRIMARY FRAMING**

**2.1. PRIMARY FRAMING** shall be the main load carrying structural members. These members shall support secondary structural members.

**2.1.1. RIGID FRAME "RF":** shall be supplied with solid web beams having tapered or uniform depth rafters, rigidly connected to tapered or uniform depth columns. This system provides a clear span, single gable, or single sloped rigid frame designed to support the specified load.

**2.1.2. STRAIGHT COLUMN:** shall be uniform from top to bottom supplied with solid web members having tapered or uniform depth rafters, rigidly connected to uniform depth columns. This system provides clear span, single gable or single sloped rigid frame, straight column designed to support the specified loads.

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## **SECTION 3: BUILDING MATERIAL SPECIFICATIONS**

### **3.1. MATERIAL SPECIFICATIONS**

**General:** All materials shall be new and free from defects that would impair their strength or durability.

**Scope:** This specification applies only to Company supplied building materials including framing and bracing, wall and roof cover, connectors and fasteners required for attaching various parts to each other and to the foundation.

The following is a list of materials used in fabrication of the Company's pre-engineered steel buildings:

#### **3.1.2. ROOF AND WALL PANELS:**

26 & 24 GA. Bare Galvalum: ASTM A792, SS Grade 50 to 80, AZ55 Aluminum-Zinc alloy coated.

Painted: ASTM A792, SS Grade 50 to 80, AZ50 Aluminum-Zinc alloy coated.

Trim material only, Grade 50, AZ50 Aluminum-Zinc alloy.

Liner Panels: Low and high rib options 26 and 29 gauge.

#### **3.1.3. PURLINS, GIRTS, AND EAVE STRUTS:**

ASTM A1011 SS OR HSLAS, CLASS 1, Grade 55

#### **3.1.4. BUILT UP SECTIONS:**

Plate ASTM A572 Grade 50, Sheet ASTM A1011, Grade 50, Bar ASTM A529, Grade 55

#### **3.1.5. HOT ROLLED SECTIONS:**

ASTM A36, Grade 36, or A529, Grade 50

**3.1.6. STRUCTURAL (ROUND) TUBE:**

ASTM A500B (Fy = 42ksi)

**3.1.7. STRUCTURAL (SQUARE, RECTANGLE) TUBE:**

ASTM A500B (Fy = 46ksi)

**3.1.8. BOLTS:**

ASTM A325, Type 1 heavy hex bolt with heavy hex nut, ASTM A563, Grade C, ASTM A307, Grade A hex bolt with hex nut, ASTM A563, Grade A

**3.1.9. ANCHOR BOLTS:**

Not included with Building unless purchased separately.

**3.1.10. FASTENERS:**

All self-drilling and self-tapping sheet metal screws will conform to the following:

#12-14 x 1-1/4" Tek 2 or /Tek 3 self drill screw conforms to SAE J78-98 with sealing washer

#12-14 x 1 1/2" Tek 2 or Tek 3 self-drill screw conforms to SAE J78-98 with sealing washer

#12-14 x 1 1/4" #5 Tek self-drill screw conforms to SAE J78-98 with sealing washer

#12-14 x 3/4" Type A or AB tapping screw conforms to ANSI standard B18.6.4 with sealing washer

#17 x 3/4" Type AB tapping screw conforms to ANSI standard B18.6.4 with sealing washer

#10 x 1 1/2" woodgrip screw with sealing washer

**3.1.11. BRACING:**

CABLE: EHS (extreme high strength) 7-wire Class A galvanized steel strand.

HILLSIDE WASHER: ASTM A48

EYEBOLTS: Zinc Coated ASTM B633 turned and welded with Grade A nut

ROD: ASTM A36

ANGLES: ASTM A36

**3.1.12. WELDING SUPPLIES BY MANUFACTURER**

**3.1.13. PRIMER PAINT:**

Water Base Red Oxide on Main Frames. Pre-Painted Secondary Framing.

**3.2. PANEL PAINTING**

**3.2.1.** The finish coat for painted panels shall be a commercial quality. F. The silicone polyester panels (except white) shall be pigmented with color pigments of a fade resistant type to help insure long color life. The painted panels shall not show excessive chalking, cracking or loss of adhesion during the warranty period.

**3.2.2.** Pre-treating and color coating process shall be applied by a reputable coating firm prior to roll forming. Warranty shall be provided upon request.

**3.3.3.** Colors shall be selected from the suppliers Standard Colors.

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**SECTION 4: STRUCTURAL FRAMING**

**4.1 GENERAL**

**4.1.1.** All framing members shall be shop fabricated for bolted assembly.

A-325 for quenched and tempered steel bolts  
A-307 for steel machine bolts

**4.1.2.** All framing members, where necessary, shall be identified with a mark corresponding to the erection drawings.

## **4.2 PRIMARY FRAMING**

**4.2.1.** All rigid frames shall be welded, built-up "I" sections (I beams).

**4.2.2.** All endwall frames and columns shall be either cold-formed, mill rolled, or built up "I" sections, depending on design requirements.

**4.2.3.** All main frame webs, baseplates, splice plates and flanges shall be shop fabricated to include holes for installation of bolts.

## **4.3. SECONDARY FRAMING**

**4.3.1.** Purlins and girts shall be "Z" shaped cold-formed sections or "C" shaped cold-formed sections with flanges of no less than 2-1/2 " and stiffener lips. Purlins shall be considered as continuous beams, lapping each other at each interior main frame. The girts shall be either continuous or simple span (flush mounted), depending on type of framing. Purlin and girt overlap shall be 2'-0" to 6"-3" (full lap) depending on design requirements.

**4.3.2.** Eave strut shall be cold-formed "C" section, rolled for appropriate roof pitch (on greater than 1:12).

**4.3.3.** Framed openings shall be made from sections adequate for the specified design loads.

**4.3.4.** A continuous base angle will be supplied for attachment of the base of the sheeting to the concrete. The base angle will be attached to the concrete slab or foundation wall. In the absence of a wall or concrete floor you must specify a base girt to support your wall panel. (fasteners to concrete not supplied by The Company.)

## **4.4. BRACING**

**4.4.1.** Diagonal cable bracing (galvanized) or rod bracing shall be used in the roof and walls to remove longitudinal loads from the structure.

**4.4.2. Portal frames:** When special conditions exist so that cable bracing/or rod bracing cannot be used, a portal frame or other type of bracing will be used between frames to remove longitudinal loads.

**4.4.3. Flange bracing:** The inside flange of all main frames shall be braced by angles connecting to the flange and web of the frame and to the web of the purlin or girt so that allowable compression is adequate for any combination of loadings.

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## **SECTION 5: PANEL DESCRIPTION**

### **5.1. PANEL DESCRIPTION**

**5.1.1.** The Company commercial high rib panels shall provide 36" net coverage on walls and roof. The panels shall have 4 major ribs, 12" on center, 1 ¼ " deep with purlin bearing leg. Two secondary ribs shall be formed between the major ribs. Panels shall be overlapped one major rib at the sides. End laps shall be a minimum of six inches. Mastic sealant shall be provided at all side laps and end laps on roof.

**5.1.2.** Concealed fastener standing seam roof systems. Standing seam is a mechanically seamed profile with Triple-Lok seam for unsurpassed strength. Factory applied sealant.

½: 12 minimum roof slope for 2" high rib.

¾: 12 minimum roof slope for 3" high rib can be installed over solid substrate or open framing.

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## **SECTION 6: MISCELLANEOUS MATERIAL SPECIFICATIONS**

### **6.1. FASTENERS**

**6.1.1.** Structural bolts shall meet the requirements of the latest issue of ASTM standards:

A-325 for Primary Framing

A-307 for Secondary Framing

**6.1.2.** Panel Fasteners: See specification section 3.1.10. Heads shall be long life coating or color coated to match sidewall or roof panel. Aluminum coated fasteners supplied with galvalume panels. Lifetime Guaranteed Fasteners (optional) also available upon request.

### **6.2 SEALANTS**

**6.2.1.** Sealant for sidelaps, endlaps, and flashing shall be a nominal 3/8 " wide by 1/8 " thick, gray Polysobutylene (butyl) Polymers pressure sensitive tape.

**6.2.2.** Solid or closed cell, pre-formed polyethylene foam closures, with self-adhesive backing on one side, matching the profile of the roof and wall panel, shall be included at the base, gable and eave, to help assure seal for weather protection or resistance and provide air infiltration stop on blanket insulated buildings.

### **6.3. FLASHING, CLOSURE AND TRIM**

**6.3.1.** Flashing and/or trim shall be furnished at the rake, corners, base and eaves; also at framed openings and wherever necessary to provide weather protection and a finished appearance. Flashing on framed openings shall conceal all exposed red iron or be of "J" trim type with exposed jambs and header.

**6.3.2.** A preformed ridge panel matching the slope and profile of adjoining roof panels shall be provided along the building ridge for all roof slopes up to 4:12. Over 4:12 pitch, a special ridge cap shall be provided.

**6.3.3.** Optional eave gutter shall be fabricated with baked on paint and supported by a gutter hanging bracket. Downspouts shall be spaced as requested by owner for the building size and expected rainfall in area.

**6.3.4.** Valley gutter, if required for multiple span building, regular parapet or mansard condition shall be 24 gauge minimum. Downspouts, outlets and elbows to be furnished by others.

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## **SECTION 7: ACCESSORIES**

**7.1.** See accessory specifications contained within accessory section.

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## **SECTION 8: ERECTION BY OTHERS-NOT THE RESPONSIBILITY OF THE COMPANY**

### **8.1 ERECTION**

**8.1.1.** The erection of the building system shall be in accordance with the appropriate erection drawings, erection guides and/or other documents furnished by manufacturer. It shall be the erector's responsibility to comply with all appropriate legal and safety requirements. It shall be the erector's responsibility to determine and provide any and all temporary bracing, shoring, blocking, bridging, and/or securing of components, etc., as required during erection of the building.

**8.1.2.** The Company is not responsible for erection.

**8.1.3.** Upon request, the Manufacturer or the supplier of the products may supply the name(s) of potential contractors to install concrete and erect the building components or to perform other work pertaining to the installation and erection of the building components. Buyer acknowledges that neither the Manufacturer nor the supplier have investigated such contractors, and that the provision of the name(s) does not constitute a recommendation of the skill or competence of any contractor. Buyer agrees to rely solely on his own investigation of such matters when selecting contractor. The Manufacturer and its supplier is not involved in construction; any representation or agreement between Dealer or Contractor and Buyer concerning delivery, construction, modifications or other items are between the parties thereto, and do not bind the Manufacturer or its supplier in any way.

### **8.2. FIELD MODIFICATION**

**8.2.1.** Field design modifications will not be made to any structural member except as authorized and specified by the building manufacturer and approved and certified by the Manufacturer's Engineer.

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## **SECTION 9: ANCHORAGE AND FOUNDATIONS**

### **9.1 ANCHOR BOLTS**

**9.1.1.** The building anchor bolts shall be designed to resist the column reaction. The sizes and design shall be as specified by The Company. The building manufacturer shall furnish anchor bolt setting plans. The anchor bolt sizes, gages, and spacing shown on the anchor setting plan are for cast in place J-bolt or stud anchors.

### **9.2. FOUNDATIONS**

**9.2.1.** The building foundations shall be designed by a qualified engineer and support the building reactions and other loads required by the occupant's usage. The foundation plans shall not be furnished by The Company.

Suggested specifications subject to change to similar, equal, or better without notice, due to our policy of continuous product improvements, fluctuations in material supply and market conditions. The Company reserves the right to assign funds to others or to substitute manufacturing, engineering and raw materials, so long as the design, certified LL/WL and material specifications are similar, equal to, or exceed order requirements.