

Exhibit A

13 300

METAL BUILDING SYSTEM GENERAL

Part 1 GENERAL

1.1 ERECTION INCLUDES

- A. This section includes metal building systems designed by the manufacturer and supplied by a single source and includes building frames, steel wall and roof systems and covers the materials and the fabrication of metal buildings designed, fabricated, and readily erected to be weather tight. Structural steel main building frames and secondary framing including purlins and girts, engineered and fabricated by the building systems supplier.
- B. These specifications are an outline of performance to insure that the architect, engineer, and/or building owner understands the basis for design, manufacture, and application of all the manufacturer's metal building systems.
- C. Specifications for doors, windows, and other fenestrations are included. This specification does not include foundations, floor slab, plumbing, electrical, HVAC, or interior finishing.

RELATED SECTIONS

02 300	Earthwork
03 100	Concrete Forms
03 200	Concrete Reinforcement
03 300	Cast-in-Place Concrete

REFERENCES

- AISI - Specification for the Design of Cold Formed Steel Structural Members – 1986 Edition with 1989 Addendum.
- AISC – Specification for Structural Steel Buildings – 1989
- AISC – Steel Design Guide 3 – Serviceability Design Considerations for Low-Rise Buildings 1990
- ASTM A36-92 - Specification for Structural Steel
- ASTM A153-82 (1987) – Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- ASTM A307-92A- Specification for Carbon Steel bolts and Studs, 60,000psi Tensile.
- ASTM A325-92A – Specification for High Strength Bolts for Structural Steel Joints
- ASTMA123-89A – Specification for Zinc (Hot -Dip Galvanized) by the Hot-Dip Process on Iron and Steel Products
- ASTM A4496-91 – Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural (Physical Quality)
- ASTM A463-88 – Specification for Steel Sheet Cold Rolled Aluminum Coated Type 1 and Type 2.
- ASTM A490-92A – Specification for Quenched and Tempered Alloy Steel Bolts for Structural Steel Bolts.
- ASTM A501-92 – Hot Formed Welded and Seamless Carbon Steel Structural Tubing.
- ASTM A525-91B – Sheet Steel Zinc Coated (Galvanized) by the Hot-Dip Process, General Requirements.
- ASTM A529-92A – Structural Steel with 50,000 psi Minimum Yield Strength
- ASTM 570-92 – Specification for Hot Rolled Carbon Sheet Steel and Strip, Structural Quality.
- ASTM 572-92B – Specification for High-Strength Low Alloy Columbium-Vanadium Steels of Structural Quality.

ASTM A792-89 – Specification for Steel Sheet Aluminum Zinc Alloy Coated by the Hot Dip Process, General Requirements.
ASTM C665-91 – Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
ASTM D1494-92 – Test Method for Diffused Light Transmission Factor of Reinforced Plastic Panels.
ASTM E1514-93 – Specification for Structural Standing Seam Steel Roof Panel Systems.
AWS A2.4-93 – Standard Welding Symbols
AWS D1.1-94 – Structural Welding Code – Steel
AWS D1.3-89 – Structural Welding Code – Sheet Steel.
MBMA Low Rise Building Systems Manual – 1996 Edition.
NAIMA 202-92 – Standard for Flexible Fiberglass Insulation Systems in Metal Buildings.

1.2 SYSTEM DESCRIPTION

A. Gable symmetrical continuous frame building with the ridge in the center of the building consisting of tapered or straight columns and tapered rafters. Sidewall girts may be continuous, by-passing the columns or simple span, flush in the column line as indicated on the drawings.

1.3 DESIGN REQUIREMENTS

- A. Members to withstand building system dead and live loads of as required by location and local codes.
- B. Deflection requirements shall be in accordance with the applicable provisions of the AISC Steel Design Guide Series 3 – Serviceability Design Considerations for Low Rise Buildings in the local building code.
- C. Secondary roof framing for gravity load L/150 for dead load; but not less than that required to maintain positive drainage for the greater of dead load + ½ roof deadload + 5 PSF.
- D. Assembly to permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of 100 degrees.

1.4 SUBMITTALS

- A. Drawings: Manufacturer shall furnish complete erection drawings for the proper identification and assembly of all building components. These drawings will show column reactions, anchor bolt settings, transverse cross-sections, sidewall, end wall, and roof framing, flashing and sheeting, and accessory installation details.
- B. Submit product data on profiles, finishes, and fasteners.
- C. Submit manufacturer Installation instructions. Indicate preparation requirements and assembly sequence.
- D. Certifications: Standard drawings and design analysis shall be on file and furnished by manufacturer upon request.

1.5 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with MBMA Low Rise Building Systems Manual, and, for items not covered, AISC – Specification for Structural Steel for Buildings.

1.6 QUALIFICATIONS

- A. Manufacturer: The company manufacturing the products specified in this section shall have a minimum of 5 years experience in the manufacture of steel building systems. The manufacturing company shall be certified under the American Institute of Steel Construction's MB Certification Program.

- B. Approved Manufacturers

- 1. Butler Buildings

- West Coast Regional Office

- Visalia, CA 93291

- 559-651-5355

- 2. Metal Building Outlet

- Littleton, CO 80127

- Contact: Dustin Foged

- 303-948-2038

Addendum#1

- 3. Varco Pruden Buildings
3200 Players Club Circle
Memphis, TN 38125
1-901-748-8000
vpsales@vp.com

- 4. Or Approved Equal

- C. Structural framing and covering shall be the design of a licensed Professional Engineer experienced in this work.

1.7 FIELD MEASUREMENTS

- A. Metal building contractor shall verify that field measurements are as indicated on contract.

1.8 WARRANTY

- A. Building manufacturer shall provide manufacturer's standard material warranty. Metal building contractor shall provide a workmanship warranty of two (2) years.

PART 2 PRODUCTS

- A. Primary Framing Steel

- 1. Steel for hot rolled shapes shall conform to the requirements of ASTM Specifications A-36, with minimum yield of 36, 42, or 50 psi.
 - 2. Steel for built-up sections shall generally conform to the physical requirements of ASTM D529, ASTM 572, or ASTM A36 as applicable, with minimum yield of 42,000, 55,000, or 55,000 psi as indicated by the design requirements.

3. Steel for endwall "C" sections shall generally conform to the physical requirements of ASTM A607, GR55M or equivalent, and have a minimum yield of 55,000 psi.
- B. Secondary Framing Steel
1. Steel used to form purlins, girts, eave struts and "C" sections shall be Republic Steel P-55 or equivalent, comparable to the requirements of ASTM A607 Grade 55. Minimum yield shall be 55,000 psi
- C. Roof and Wall Panel Material
1. Panel material as specified shall be 26 gauge Galvalume as manufactured by Bethlehem Steel Corporation, or equal, conforming to the requirements of ASTM A792 Grade 80 or Grade 50. Minimum yield stress shall be 80,000 ksi for Grade 80 and 50,000 ksi for Grade 50.
 2. Panel material as specified shall be 24 gauge Galvalume, conforming to the requirements of ASTM A792 Grade 50 or Grade 80. Minimum yield stress shall be 50,000 ksi for Grade 50.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify site conditions.
- B. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position.
- C. Provide access to the work as scheduled for Owner provided inspections, if required. The cost of any required inspections is the responsibility of the Owner.

3.2 ERECTION – FRAMING

- A. Erect framing in accordance with MBMA Low Rise Building Systems Manual, Common Industry Practices.
- B. The erector shall furnish temporary guys and bracing where needed for squaring, plumbing, and securing the structural framing against loads, such as wind loads acting on the exposed framing and seismic forces, as well as loads due to erection equipment and erection operation, but not including loads resulting from the performance of work by others. Bracing furnished by the manufacturer of the metal building system cannot be assumed to be adequate during erection. The temporary guys, braces, falseworks, cribbing are the property of the erector, and the erector shall remove them immediately upon completion of erection.
- C. Do not field cut or alter structural members without approval of the metal building manufacturer.
- D. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized.

3.3 ERECTION – WALL AND ROOFING SYSTEMS

- A. Install in accordance with manufacturer's instructions.

B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finished surface.

C. Fasten cladding system to structural supports, aligned level and plumb.

3.4 ERECTION – GUTTER AND DOWNSPOUT

A. Install gutters and downspouts in strict accordance with manufacturer's instructions.

3.5 TOLERANCES

A. All work shall be performed in a workmanlike manner.

B. Install Framing in accordance with MBMA Low Rise Building Systems Manual, Common Industry Practices.

END OF SECTION