

**SECTION 07 42 13
METAL WALL PANELS**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the general Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SECTION INCLUDES

- A. A Preformed metal siding system for walls, soffits, and fascia, which includes the insulation, related flashings, and accessory components.

1.3 REFERENCES

- A. ASTM A167 – Standard Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate, Sheet, and Strip
- B. ASTM A606/A606M – Standard Specification for Steel, Sheet, and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled with Improved Atmospheric Corrosion Resistance
- C. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- D. ASTM A755/A755M – Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil Coating Process For Exterior Exposed Building Products
- E. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
- F. ASTM C665 – Standard Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
- G. ASTM D226/D226M – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
- H. FBC - Florida Building Code
- I. ASCE 7 – Minimum Design Loads for Buildings and Other Structures

1.4 DESIGN REQUIREMENTS

- A. Design and size all of the system components to withstand the dead and live loads in accordance with ASCE 7.
- B. Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
- C. Provide continuity of thermal barrier at building enclosure elements in conjunction with thermal insulating materials.
- D. Provide continuity of vapor retarder at building enclosure elements in conjunction with vapor retarders specified.
- E. Provide continuity of air barrier seal at building enclosure elements in conjunction with air seal materials specified.

1.5 SUBMITTALS FOR REVIEW

- A. Section 01 33 00: Submittals Procedures
- B. Provide shop drawings indicating dimensions, layout, joints, construction details, and methods of anchorage.
- C. Submit two samples of siding, 24" x 24" in size illustrating finish color, sheen, and texture.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum 3-years documented experience.

- B. Installer: Company specializing in performing the work of this section with minimum 5-years of documented experience and approved by manufacturer.
 - 1. Job Supervisor shall have at least 5-years of documented experience supervising projects of this type and scope.
 - C. Manufacturers Installation Instructions: Indicate special handling criteria, installation sequence, and cleaning procedures.
- 1.7 DELIVERY, STORAGE, AND PROTECTION
- A. Section 01 60 00 - Material Equipment and approved equals: Transport, handle, store, and protect products
 - B. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
 - C. Store pre-finished material off the ground and protect them from the weather.
 - 1. This is to help prevent twisting, bending, or abrasion, and to provide ventilation.
 - 2. Slope metal sheets to ensure drainage.
 - D. Prevent contact with materials that may cause discoloration or staining.
- 1.8 COORDINATION
- A. Coordinate work under provisions of Section 01 31 00.
 - B. Coordinate the Work for installation of vapor retarder and air barrier seals.
 - C. Coordinate the Work with installation doors, windows, louvers, and other components or materials.
- 1.9 WARRANTY
- A. Section 01740 - Warranties and Bonds
 - B. Correct any defective work within a five-year period after Substantial Completion for degradation of panel finish including color fading caused by exposure to weather.
 - C. Correct any defective work within a five-year period after Substantial Completion for water tightness, integrity of seals, and air infiltration.
 - D. Warranty shall include coverage for damage to building resulting from failure of metal siding system to resist penetration of water with no dollar limit to the value of repairs or replacements covered.

PART 2 PRODUCTS

2.1 EXTERIOR SHEET MATERIALS

- A. Pre-coated Galvanized Steel: ASTM A755/A755M; Grade D, Coating Designation G-90; shop pre-coated with silicone polyester coating.
- B. Contractor shall provide exposed exterior material in color as selected by the Architect from manufacturer's standard range.

2.2 PANEL INTERIOR AND OTHER SHEET MATERIALS

- A. Provide galvanized steel meeting ASTM A653/A653M Grade D, and Coating Designation G-90.
- B. Pre-coated Surfaces shall be color as selected by the Architect from manufacturer standard range.

2.3 INSULATION

- A. Provide foamed-in-place urethane type thermal insulation of a resistance R-Value as shown on the drawings.

2.4 ACCESSORIES

- A. Gaskets shall be Manufacturer's standard type suitable for use with panel system, permanently resilient; ultraviolet and ozone resistant; and color as selected.

- B. Sealants shall be Manufacturer's standard type suitable for use with installation of panel system; non-staining, skinning, non-shrinking and non-sagging; ultra-violet and ozone resistant; and color as selected.
- C. Fasteners shall be Manufacturer's standard type to suit application.
- D. Field Touch-up Paint shall be as recommended by panel manufacturer.
- E. Bituminous Paint: Asphalt base

2.5 COMPONENTS

- A. Expansion Joints: Same material, thickness and finish as exterior sheets; manufacturer's standard brake formed type, of profile to suit system. Exposed fasteners same finish as panel system.
- B. Trim, Closure Pieces, Caps, Flashings, Fascias, and Infills: Same material, thickness and finish as exterior sheets; brake formed to required profiles.
- C. Anchors: Stainless steel

2.6 FABRICATION

- A. Do not fabricate component profiles on site.
- B. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- C. Form pieces in longest practicable lengths.
- D. Fabricate corners in one continuous piece with minimum 18" returns.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify substrate framing under provisions of Section 01 31 00.
- B. Verify that framing members are ready to receive panel system.

3.2 INSTALLATION

- A. Install composite metal building panel system on walls and soffits in accordance with manufacturer's instructions.
- B. Protect panel surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.
- C. Locate panel joints over supports.
- D. Provide expansion and control joints where indicated.
- E. Use concealed fasteners unless otherwise approved by the Architect.
- F. Seal and place required gaskets to prevent weather penetration and maintain a neat appearance.

3.3 TOLERANCES

- A. Maximum Offset from True Alignment between Adjacent Members Butting or In Line: 1/16".
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4".

3.4 CLEANING

- A. Clean work under provisions of Section 01 77 00.
- B. Remove site cuttings from finish surfaces.
- C. Clean and wash pre-finished surfaces with mild soap and water; rinse with clean water.

END OF SECTION