

Metal Wall Panels

Pre-Finished Stucco Building Panels

Specification

Part 1 – General

1.1 Summary

A. Section Includes:

1. Pre-finished, prefabricated metal wall panels with interlocking seams.
2. Coordinate with fabrication of wall area substructure.
3. Provide color coordinated start, end, and corner flashings.

1.2 System Description

A. Design Requirements:

1. Provide 16" wide module factory preformed wall panel system that has been pretested and certified by the manufacture to comply with specified requirements under installed conditions.
2. Provide one piece, single length panels where possible.
3. Provide panel with continuous interlocking side joints and stackable end joints for vertical application.
4. Panel side joint design must conceal panel attachment fasteners.
5. Panel ends should be notched and returned 90 degrees to provide for panel stacking conditions.
6. Air Infiltration- Provide wall system that has been tested in accordance with DCBCCD PA 202 test procedure with a test pressure of 1.57 PSF. Measured result .03 CFM/SF.
7. Water Infiltration – When tested in accordance with DCBCCD PA 202 at a test pressure of 7.5 PSF, no water infiltration.
8. Large Missile Impact – When tested in accordance with DCBCCD PA 201 at approximately 50 FT/Sec, passed.
9. Fatigue Load Testing – Provide panels that have been tested for a minimum of 500 cycles in accordance with DCBCCD PA 203 at a design load of +25 PSF and -25 PSF with no panel or fastener failure.
10. Provide factory preformed panel system that has been pre-tested and certified by manufacturer to comply with specified requirements under installed conditions.

1.3 SUBMITTALS

- A. Product Data:* Submit manufacturer's product literature, standard color chart, standard detail drawings, and installation instructions.

1.4 Quality Assurance

A. Manufacturer's Qualifications:

1. Five years minimum experience in factory fabrication of metal wall panel systems.

2. Products listed in this specification section are as specified by **Custom Panel Systems (St. Louis, MO)**.
3. No other bidder of metal wall systems will be accepted without prior written approval of Architect based upon alternate products meeting specified requirements.
4. Substitution request must be submitted in writing minimum of ten days prior to bid date accompanied by product literature, technical information, and product sample. Approved substitutions will be set forth in an addendum.
5. No substitutions will be permitted after bid date.

1.5 DELIVERY, STORAGE and HANDLING

- A. Protect products and accessories from damage and discolorization during transit and at project site. Store sheets and components in a dry storage area to prevent condensation.

1.6 WARRANTY

- A. Panel shall be warranted against cracking, checking, peeling, chipping, flaking or excessive fading for a period of 20 years.
- B. The panel is warranted to be free of defect in material or factory workmanship for a period of 20 years from the date of shipment.

Part 2 – Products

2.1 MATERIALS

- A. *Panels:*
 1. Pre-finished G-90 galvanized steel sheet, per ASTM A653 as described in ASTM specification A924.
 2. Panels shall be a minimum 20 gauge nominal thickness.
- B. *Fasteners:*
 1. Fasteners shall be 12-14 x 1 ¼" long, self-drilling, self-tapping, hex head, coated carbon screws with washers for panel attachment. (not supplied by manufacturer)
- C. *Accessories:*
 1. Provide manufacturer's standard trim and accessories and other items essential to completeness of wall system.
 2. Contiguous flashings shall be factory fabricated by panel manufacturer from 24 gauge nominal thickness G90 galvanized steel with textured pre-finished factory applied coating to match panels.

2.2 FABRICATION

- A. *Panels:*
 1. Provide factory formed panel module of 16" with nominal ¾" depth.
 2. Maximum panel length 29'-8". Provide panels in longest length possible.
- B. *Joints:*
 1. Provide continuous interlocking panel side joints and end joints notched and returned 90 degrees to provide for panel stacking conditions.

2.3 FINISH

A. *Special Coating:*

1. Epoxy primer coat shall be factory applied to face and back of panel to a dry film thickness of 1 to 1.5 mils.
2. Factory applied finish coat consisting of a fiber reinforced polymer/aggregate and oven cured.
3. Color: As selected by Architect from manufacturer's standard colors. Special match or custom colors are also available, consult manufacturer.

B. *Coating Performance:*

1. Coating shall be tested by an independent laboratory to meet the following criteria:
 - a. Condensing Humidity – When tested in accordance to ASTM 04585-97 for 1000 Hours at 120 degrees F. Result -10, No Change.
 - b. QUV Weatherometer – When tested in accordance with ASTM G 154-00- for 1000 hours (500 light hours), Result -10, No Change.
 - c. Cyclic Freeze – Thaw with Humidity – When tested in accordance with ASTM 04585-97-2 Hours Humidity @ 120 Degree F. 2 Hours Freezer @ 10 degrees F, Total Exposure 50 Cycles, result -10, No Change.
 - d. Salt Spray Resistance – When tested in accordance with ASTM B 117-97 for 1000 hours, 5% Salt Fog @ 95 degrees F, Result -10, No Change.
 - e. Coating Test Evaluation – Procedure shall be in accordance with ASTM D 1654-92 (2000), Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

PART 3- EXECUTION

3.1 EXAMINATION

A. *Substrate:*

1. Examine substrate or secondary framing to ensure that it is properly secured and prepared to receive wall panels.
2. Ensure substrate or secondary framing is installed flat, free from objectionable warp, wave, and buckle.

3.2 INSTALLATION

A. *Comply with manufacturer's instructions for assembly, installation, and erection.*

B. *Metal Wall Systems:*

1. Install panels in accordance with manufacturer's Instruction and recommendations.
2. Anchor securely in place using fasteners spaced in accordance with manufacturer's recommendations.
3. Fully seat adjacent panel to achieve continuous engagement in interlocking seams.

C. *Dissimilar Metals:*

1. Where sheet metal is in contact with dissimilar metals, execute juncture to facilitate drainage and minimize possibility of galvanic action.

2. At point of contact with dissimilar metal, coat metal with protective paint or tape, which can be placed between metals.

3.3 CLEANING

- A. *Clean exposed surfaces of work promptly. Clean with water under pressure and/or a light soap solution.*

End of Section