

SECTION 074213 - METAL WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Corrugated metal panels.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's data sheets, for specified products.
1. Include data indicating compliance with performance requirements.
- B. Shop Drawings: Provide shop drawings prepared by manufacturer or manufacturer's authorized Installer. Include full elevations showing openings and penetrations. Include details of each condition of installation and attachment. Provide details at a minimum scale of 1-1/2-inch per foot (1:8) of all required trim and extrusions needed for a complete installation.
1. Indicate points of supporting structure that must coordinate with metal wall panel assembly installation.
 2. Indicate details of fastening, including clip spacing, supported by load span tables that include an evaluation of clip and panel side joint interaction.
- C. Samples for Initial Selection: For each product specified. Provide representative color charts of manufacturer's full range of colors.
- D. Samples for Verification: Provide 12-inch (300 mm) section of panel(s) showing finishes. Provide 12-inch long pieces of trim pieces and other exposed components.
- E. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency.
- F. Qualification Data: For Installer.
- G. Sample Warranties: For warranties.
- H. Maintenance Data: For metal panels to include in maintenance manuals.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Store metal panels in accordance with manufacturer's instruction and recommendations.
- D. Retain strippable protective covering on metal panels during installation.

1.5 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.6 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Minimum two years from date of Substantial Completion.
- B. Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Finish Warranty Period: Minimum 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 METAL WALL PANELS

- A. Corrugated Metal Panel:
 - 1. Product and Manufacturer – Basis of Design: CENTRIA Exposed Fastener Series BR5-36 Metal Wall Panels; CENTRIA Architectural Systems
 - a. Florida Product Approval Number: Provide current certification.

2. Panel Material: Metallic coated steel face sheet; ASTM A755.
 - a. Face Sheet: Minimum 0.030 inch/22 gage (0.76 mm) nominal uncoated thickness.
 - 1) Surface: Smooth
 - b. Finish: Fluoropolymer two-coat system; CENTRIA Fluorofinish.
 - 1) Panel Exterior Surface: To be selected by Architect from manufacturer's standard colors.
 - 2) Interior Surface: Manufacturer's standard primer color

~~2.2 INSULATED COMPOSITE BACKUP PANELS~~

- ~~A. Product and Manufacturer Basis of Design: CENTRIA MetalWrap Insulated Composite Backup Panel System; CENTRIA Architectural Systems~~
- ~~B. MetalWrap Long Span Panel Faces: Minimum 0.031 22 ga. thick metallic coated steel sheet: ASTM A 653, G90 coating designation; structural quality, with smooth surface.~~
- ~~C. Panel Face Finish: 0.2 mil thick primer coat and 0.2 mil thick primer coat on interior face.~~
- ~~D. Metal Wrap Long Span Vertical Backup Panel Thickness and Thermal Resistance: 2.75 inches; R-20, U .049.~~
- ~~E. Panel Core: Foamed in place modified polyisocyanurate, closed cell, CFC and HCFC free, with minimum density of 2.4 lb./cu. ft. and minimum compressive strength of 15 lb./sq.~~
- ~~F. Panel Width: Long Span 36 inches.~~
- ~~G. Panel Attachment Clips: Metallic coated steel sheet, ASTM A 653/A 653M, G90 (Z275) coating designation, of thickness indicated, configured to serve as attachment points for secondary metal framing where indicated, manufacturer furnished.~~
- ~~H. Self Adhering Sheet Flashing Tape: Minimum 25 mil (0.64 mm) modified bituminous sheet, recommended by panel manufacturer for application.~~
- ~~I. Joint Sealants:
 - ~~1. Concealed: Non skinning butyl sealant, AAMA 809.2.~~
 - ~~2. Exposed: Elastomeric silicone sealant, ASTM C 920, as recommended by panel manufacturer.~~~~
- ~~J. Fasteners: Corrosion resistant, self tapping and self drilling screws, bolts, nuts, and other fasteners as recommended by panel manufacturer for application.
 - ~~1. Size fasteners to prevent penetration of interior panel facing.~~~~

2.3 PERFORMANCE REQUIREMENTS – METAL WALL PANELS

- A. General: Provide metal wall panel assemblies meeting performance requirements as determined by application of specified tests by a qualified testing agency on manufacturer's standard assemblies.
- ~~B. Air Infiltration: When installed over Insulated Composite Backup Panels or Metal Liner Panels, maximum 0.06 cfm/sq. ft. per ASTM E 283 at a static air pressure difference of 1.57 lbf/sq. ft., using minimum 10 by 10 foot test panel that includes side joints.~~
- ~~C. Water Penetration, Static Pressure: When installed over Insulated Composite Backup Panels or Metal Liner Panels, no uncontrolled water penetration per ASTM E 331 at a minimum static differential pressure of 6.24 lbf/sq. ft., using minimum 10 by 10 foot test panel that includes side joints.~~
- D. Florida State Building Code Compliance: Provide wall panels that comply with the requirements for installation under Florida State Building Code.
- E. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction.

2.4 METAL WALL PANEL ACCESSORIES

- A. Metal Wall Panel Accessories, General: Provide complete metal wall panel assembly incorporating trim, copings, fasciae, parapet caps, soffits, sills, inside and outside corners, and miscellaneous flashings. Provide manufacturer's factory-formed clips, shims, flashings, lap tapes, and closure strips for a complete installation. Fabricate and install accessories in accordance with SMACNA Manual.
- B. Mitered Corners: Structurally-bonded horizontal interior and exterior trimless corners matching metal wall panel material, profile, and factory-applied finish, fabricated and finished by metal wall panel manufacturer.
 - 1. Welded, riveted, fastened, or field- fabricated corners do not meet the requirements of this specification.
 - 2. Basis of Design: CENTRIA, MicroSeam Corners.
- C. Formed Flashing and Trim: Match material, thickness, and color of metal wall panel face sheets.
- D. Sealants: Type recommended by metal wall panel manufacturer for application, meeting requirements of Division 07 Section "Joint Sealants."
- E. Flashing Tape: 4-inch wide self-adhering butyl flashing tape.
- F. Fasteners, General: Self-tapping screws, bolts, nuts, and other acceptable fasteners recommended by panel manufacturer. Where exposed fasteners cannot be avoided for miscellaneous applications, supply corrosion-resistant fasteners with heads matching color of metal wall panels by means factory-applied coating.

- G. Concealed Clips: Galvanized steel, 0.06 inch/16 ga. (1.52 mm) nominal thickness, designed to allow unimpeded thermal movement of panel and configured to hold panel minimum 1/2 inch (12.7 mm) from substrate.

2.5 SECONDARY METAL SUBGIRT FRAMING – FOR METAL WALL PANELS

- A. Miscellaneous Framing Components, General: Cold-formed metallic-coated steel sheet, ASTM A 653, G90.
 - 1. Hat Channels: 0.06 inch/16 ga. minimum – nominal thickness.

2.6 FABRICATION

- A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine metal wall panel substrate with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal wall panels.
- B. Confirm that wall substrate is within tolerances acceptable to metal wall panel system manufacturer.
- C. Inspect framing that will support metal wall panels to determine if support components are installed as required. Confirm presence of acceptable framing members at recommended spacing to match installation requirements of metal wall panels.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install metal wall panels and insulated-composite metal wall backup panels in accordance with shop drawings and manufacturer's instructions and recommendations. Install metal wall panels in orientation, sizes, and locations indicated. Anchor metal wall panels and other components securely in place. Provide for thermal and structural movement.

- B. Attach panels to metal framing using recommended clips, screws, fasteners, sealants, and adhesives indicated on approved shop drawings.
 - 1. Fasten metal wall panels to supports with concealed clips at each joint at location, spacing, and with fasteners recommended by manufacturer. Install clips to supports with self-tapping fasteners.
 - 2. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.
- C. Fasteners: Types recommended by the panel manufacturer for installations indicated.
- D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- E. Accessory Installation: Install metal wall panel accessories with positive anchorage to building and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install related flashings and sheet metal trim per requirements of Division 07 Section "Sheet Metal Flashing and Trim."
 - 2. Install components required for a complete metal wall panel assembly, including trim, copings, corners, lap strips, flashings, sealants, fillers, closure strips, and similar items.
 - 3. Comply with performance requirements and manufacturer's written installation instructions.
 - 4. Provide concealed fasteners except where noted on approved shop drawings.
 - 5. Set units true to line and level as indicated.

3.3 CLEANING AND PROTECTION

- A. Remove temporary protective films. Clean finished surfaces as recommended by metal wall panel manufacturer. Clear weep holes and drainage channels of obstructions, dirt, and sealant. Maintain in a clean condition during construction.
- B. Replace damaged panels and accessories that cannot be repaired by finish touch-up or minor repair.

END OF SECTION 074213.13