

SECTION 07 42 14

FACTORY FABRICATED METAL WALL PANELS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specifications, apply to this Section.

1.2 SUMMARY

- A. This section includes the following:
 - 1. Fabricated factory formed and field assembled wall panels and accessories.
- B. Related Sections include the following:
 - 1. Division 7 Section "Composite Wall Panels".
 - 2. Division 7 Section "Sheet Metal Flashings and Trims" for copings, flashings and other sheet metal work not part of the metal wall panel assemblies.
 - 3. Division 7 Section "Joint Sealants" for field-applied sealants not otherwise specified in this Section.

1.3 DEFINITIONS

- A. Factory Fabricated Metal Wall Panel Assembly: fabricated wall panels, attachment system components, miscellaneous metal framing, and accessories necessary for a complete weather tight system.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide fabricated metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this project, by a qualified testing and inspecting agency.
- B. Air Infiltration: Air leakage through assembly of not more than .003.cfm/sq. ft. at a static pressure Differential of 20 psf when tested according to ASTM E-283-04.
- C. Water Penetration: No water penetration when tested at 5gal/hr/sf at a static pressure of 20psf for 15 minutes when tested according to ASTM E-331-0

1.5 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of Individual components and profile, and finishes for each type of factory fabricated metal wall panels and accessories.

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- B. Shop Drawings: Show fabrication and installation layouts of wall panels; details of edge conditions, joints panel profiles, corners, anchorages, trim, flashings, closures, and accessories and special details.
- C. Samples for Initial Selection: For each type of metal wall panel indicated with factory applied color finishes.
 - 1. Include similar samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish required, prepare on samples of size as indicated below.
 - 1. Metal Wall Panel: 12 inches long by actual panel width. Include fasteners, battens, closures, and any other accessories.
 - 2. Trim and Closures: 12 inches long. Include fasteners and other exposed accessories.
 - 3. Accessories: 12 inch long samples of each type of accessory.

1.6 MOCK-UP SAMPLE PANEL

- A. Before commencing any work, Contractor shall erect a 4' x 6' panel of each metal panel type. Panel is NOT PART OF BUILDING and is to remain in place until removal is authorized by the Architect.
- B. Panel face shall show all trim accessories and flashings.
- C. Approval of Architect is required before proceeding with any part of the building.
- D. Panel is to remain in place until completion of the work.
- E. Construct mock-up panel in “cut-away” view, exposing all wall assembly components. Refer to Section 01 40 00 Quality Control-Mock-Ups.

1.7 WARRANTY

- A. Galvalume Substrate Warranty: MORIN panel and accessories sold to the contractor by MORIN shall be free from defects in material for a period of TWO (2) years from the date of substantial completion.
 - 1. MORIN Corporation Galvalume / Zinalume panel material will not rupture, perforate or structurally fail for a period of TWO (2) years from date of substantial completion.
 - 2. Finish: Panel finish and protective top coating to be warrantied for a period of 20 years from date of substantial completion.

- B. Exposed Panel Finish: Deterioration includes the following:
 - 1. Color fading more than 5 numerical units when tested according to ASTM D 2244.
 - 2. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - 3. Cracking, blisters, chipping, cracks, flaking or peeling within 20 years from date of substantial completion when tested according to ASTM D 3359 or ASTM D-2798.
- B. Contractor to provide full Manufacturer's material and finish warranty to owner at project completion.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by the manufacturer.
- B. Source Limitations: Obtain each type of Metal wall panels through one source from a single manufacturer.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, metal wall panels, and other manufactured items so as not to be damaged or deformed. Package metal wall panels for protection during transportation and handling.
- B. Unload, store and erect metal wall panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal wall panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal wall panels to ensure dryness. Do not store metal wall panels in contact with other materials that might cause staining, denting, or other surface damage.

1.9 PROJECT CONDITIONS

- A. Field Measurements: Verify locations of wall framing and opening dimensions by field measurements before metal wall panel fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the work, either establish framing and opening dimensions and proceed with fabricating metal wall panels without field measurements or allow for field-trimming of panels. Coordinate wall construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.10 WARRANTY

- A. Material Warranty: Panels shall have a two (2) year manufacturer's warranty for repair or replacement due to panel failure or workmanship, including structural performance failure.

B. Finish Warranty: Panel finish shall have a manufacturer's 20 year finish warranty.

C. All warranties shall begin at date of Substantial Completion.

PART 2 PRODUCTS

2.1 PREFINISHED METAL WALL PANELS

A. Manufacturer: Subject to compliance with requirements. Provide Custom Fabricated Wall panel products by the following or approved by architect 10 days prior to bid date.

1. **Band Addition:**

- a. MWP-1, horizontal metal wall panel, 22 GA. Concealed fastener with factory caulked side joint panel. Smooth surface texture, nominal coverage 12", panel depth 7/8" ribbed style profile
 - 1) Morin's MX-12, color – Zinc Grey
- b. MWP-2, horizontal metal wall panel, 22 GA. Concealed fastener with factory caulked side joint panel. Smooth surface texture, nominal coverage 12", panel depth 7/8" ribbed profile
 - 1) Morin's MX-12, color – Zinc Grey

2. **Locker Room Building:**

- a. MWP-1, vertical metal wall panel, 22 GA. Concealed fastener with factory caulked side joint panel. Smooth surface texture, nominal coverage 12", panel depth 7/8" ribbed style profile
 - 1) Morin's MX-10, color – white
- b. MWP-2, horizontal metal wall panel, 22 GA. Concealed fastener with factory caulked side joint panel. Smooth surface texture, nominal coverage 12", panel depth 7/8", smooth with ribbed profile
 - 1) Morin's MX-10, color – Zinc Grey

3. Alternate manufacturers to match profile and characteristics of panels above

- a. Berridge
- b. Fabral
- c. Flexospan

B. Materials: Wall panels shall be fabricated from Galvalume 40 ksi pre-finished steel per ASTM A792.

C. Trim and flashing shall be fabricated from the same material type and finish as the wall panels.

D. Fluorocarbon Coating/Finish:

1. Prepare Galvalume steel coil in accordance with manufacturer's recommendations to properly bond factory applied and baked on coating systems.
2. Apply manufacturer's roll-coated chemically resistant primer to the exposed side of the Galvalume steel and dry to a minimum of 0.20 to 0.25 mil.
3. Apply manufacturer's roll-coated fluorocarbon finish top coat organically pigmented with a minimum 70% Kynar 500 resins to primer at a dry film thickness of a minimum of 0.70 to 0.90 mil to the exposed side of the galvalume steel sheet.

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4. Apply manufacturer's roll-coated polyester off-white primer to dry thickness to a minimum of 0.45 mil to the backside of the Galvalume steel sheet.
 5. Exterior color shall be selected by the architect.
- E. Accessories: Provide manufacturer's standard accessories of the following type designed and manufactured and finished to match wall panels.
1. Fabricated corner flashings for outside and inside corners.
 2. Wall cap of profile and size indicated.
 3. Fabricated base flashing.
 4. Fabricated window flashing.

2.2 MISCELLANEOUS MATERIALS

- A. Fasteners: Concealed fasteners shall be carbon steel with 100NR Dyna-Coat coating.
- B. Accessories: Except as indicated as work of another specification section, provide components required for a complete metal wall panel system, including trim, and copings. Match materials/finishes of preformed panels.

2.2 PANEL FABRICATION: PERFORMANCES

- A. General: Fabricate and finish panels and accessories at the factory to the greatest extent possible, by manufacturer's standard procedures and processed, and as required to fulfill indicated performance requirements which have been demonstrated by factory testing. Comply with indicated profile and dimensional requirements.
- B. Metal Gauges: Thickness required for structural performances, but not less than manufacturer's recommended minimum for profiles and applications indicated, and not less than 22 Gauge, for exterior panels.
- C. Apply bituminous coating or other permanent separation materials on concealed panel surfaces where panels would otherwise be in direct contact with substrate materials which are non-compatible or could result in corrosion or deterioration of either material or finishes.
- D. Condensation: Fabricate panels for control of condensation, including vapor inclusion of seals and provisions for breathing, venting, weeping and draining.

PART 3 EXECUTIONS

3.1 INSTALLATION

- A. General: Comply with panel fabricator's and material manufacturer's instructions and recommendations for installation, as applicable to project conditions and supporting substrates. Anchor panels and other components of the work securely in place, with provisions for thermal/structural movement.

- B. Install panels with concealed fasteners per manufacturer's recommendations.
- C. Panel end closures shall be installed, closures to be metal only, NO foam closures are to be used. Secure per manufacturer's instructions. Seal completely around perimeter of each closure to provide weathertight fit.
- D. Installation Tolerances: Shim and align panel units within installed tolerances of 1/4" in 20'-0" on level/plumb/slope and location/line as indicated, and within 1/8" of adjoining faces and of alignment of matching profiles.

3.2 CLEANING AND PROTECTION

- A. Damaged Units: Replace panels and other components of the work which have been damaged or have deteriorated beyond successful repair by means of finish touch-up or similar minor repair procedures.
- B. Cleaning: Remove temporary protective coverings and strippable films (if any) as each panel is installed. Upon completion of panel installation, clean finished surfaces as recommended by panel manufacturer, and maintain in clean condition during construction.

END OF SECTION

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