

## SECTION 097813 - METAL INTERIOR WALL PANELING.

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. MCM interior wall or ceiling paneling.

#### 1.2 DEFINITIONS

- A. MCM: Composite Material is two sheets of smooth metal continuously thermo-bonded to a solid Fire Retardant (FR) core under precise temperature, pressure, and tension.

#### 1.3 PREINSTALLATION MEETINGS

##### A. Preinstallation Conference.

1. Meet with Owner, Architect, Owner's insurer if applicable, MCM panel Fabricator and Installer, MCM sheet manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects MCM panels, including installers of doors, windows, and louvers.
2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
3. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
4. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that affect MCM panels.
5. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
6. Review temporary protection requirements for MCM panel assembly during and after installation.
7. Review procedures for repair of panels damaged after installation.
8. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

##### B.

#### 1.4 ACTION SUBMITTALS

##### A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

##### B. Shop Drawings:

1. MCM system fabricator to provide shop drawings including fabrication and installation layouts of MCM panels; details of edge conditions, joints, panel profiles, corners, attachment assembly, trim, flashings, closures, and accessories.
  2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).
- C. Samples for Initial Selection: For each type of MCM panel indicated with factory-applied finishes.
1. Include Samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:
1. MCM Panels: 12 inches (305 mm) long by actual panel width. Include fasteners, closures, and other MCM panel accessories. Submit custom color samples in paint manufacturer's standard size.
- 1.5 INFORMATIONAL SUBMITTALS
- A. Product Test Reports: For each product, for tests performed by a qualified testing agency.
  - B. Field Quality Control Reports.
  - C. Sample Warranties.
- 1.6 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For MCM panels to include in maintenance manuals.
- 1.7 QUALITY ASSURANCE
- A. MCM Manufacturer Qualifications: An entity that has successfully manufactured MCM at a domestically located factory for a minimum of 5 years.
  - B. MCM Fabricator: An entity that has successfully fabricated and assembled MCM panels and approved by the MCM manufacturer.
  - C. MCM Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by MCM Fabricator.
  - D. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for MCM fabrication and installation.
    1. Build mockup of typical MCM panel assembly including supports, attachments, and accessories.
    2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, MCM panels, and other manufactured items to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they are protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes. Package MCM panels for protection during transportation and handling.
- B. Unload, store, and erect MCM panels, components, and accessories in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack MCM panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store MCM panels to ensure dryness, with positive slope for drainage of water. Do not store MCM panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on MCM panels during installation.

#### 1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not install metal interior wall paneling until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.

#### 1.10 WARRANTY

- A. Material Warranty: Submit the Manufacturer's standard form agreeing to furnish fabrication, labor and material to repair or replace MCM that that exhibits defects within specified warranty period.
  1. Coverage Includes :
    - a. Delamination of metal bond to the fire retardant core.
  2. Warranty Period: 10 years from date of Substantial Completion.
- B. Workmanship Warranty: Submit the Fabricator/Installer's standard form agreeing to furnish fabrication, labor and material required to repair or replace work which exhibits workmanship defects within specified warranty period.
- C. Warranty Period: 2 years from date of Substantial Completion

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Metal interior wall paneling to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of components, noise, or metal fatigue caused by rattle or flutter, or permanent damage to fasteners and anchors.
- B. Fire Performance: Flame spread less than 25 and smoke developed less than 450, in accordance with ASTM E84.
- C. Peel Strength: 22.5 in-lb/in. (100 N x mm/mm) when tested for bond integrity in accordance with ASTM D1781.

### 2.2 METAL INTERIOR WALL PANELING

- A. MCM Wall Panel Systems: Provide -shop formed and assembled MCM panels formed into profiles for the installation method indicated and per the construction drawings. Include attachment assembly components, panel stiffeners, and accessories required.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide MONARC manufactured by 3A Composites USA, Inc., or comparable product by:
- B. Aluminum-Faced Composite Wall Panels: Formed with 0.020-inch- (0.50-mm-) thick aluminum sheet facings.
  - 1. Panel Thickness: 3mm (0.118")
  - 2. Core: Fire retardant.
  - 3. Interior Finish:
    - a. Basis-of-design finish(es):
      - 1) Finish 1: <Insert color>.
      - 2) Finish 2: <Insert color>.
- C. Attachment Assembly Methods & Components: Assembly and components as shown on the construction drawings.

### 2.3 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Sub-framing and Furring: ASTM C645, cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A792/A792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide MCM panel manufacturer's standard sections as required for support and alignment of metal interior wall paneling.
- B. Joint Sealer, Interior: Non-sag, paintable, non-staining, latex sealant complying with ASTM C834; of type and grade required to seal joints in decorative formed metal; as recommended in

writing by decorative formed metal manufacturer and with a VOC content of not more than 250 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).AA. Joint Sealer: Clear silicone sealant approved by MCM sheet manufacturer.

- C. Fasteners: Manufacturer's standard. Use types and sizes to suit unit installation conditions.

## 2.4 FABRICATION

- A. Fabricate and finish MCM panels and accessories to meet specified performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

## 2.5 FINISHES

- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces provided by others is acceptable. Variation in appearance from different production batches of finish effects including but not limited to anodized, brushed coil, mica flake, metallic flake, and texture is expected.

## PART 3 EXECUTION

### 3.2 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, MCM panel supports, and other conditions affecting performance of the Work.
- B. Examine roughing-in for components and systems penetrating MCM panels to verify actual locations of penetrations relative to seam locations of MCM panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.3 PREPARATION

- A. Miscellaneous Supports: Install sub-framing, furring, and other miscellaneous panel support members and anchorages in accordance with MCM panel manufacturer's written instructions and approved Shop Drawings.

### 3.4 INSTALLATION

- A. Install metal interior wall paneling in accordance with approved Shop drawings and manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor MCM panels and other components of the Work securely in place.

1. Shim or otherwise plumb substrates receiving MCM panels.
  2. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  3. Align bottoms of MCM panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
- B. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by MCM panel manufacturer.
- C. Accessory Installation: Install accessories with positive anchorage to building as required for a complete MCM panel system; including trim, copings, corners, seam covers, flashings, fillers, closure strips, and similar items to provide finished appearance. Coordinate installation with flashings and other components.

### 3.5 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as MCM panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of MCM panel installation, clean finished surfaces as recommended in writing by MCM panel manufacturer. Maintain in a clean condition during construction.
- B. Remove and replace components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage, including dented and bent units.

END OF SECTION 097813