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074243 - Composite Wall Panels

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SECTION 07 4243 - COMPOSITE WALL PANELS

1.1 SUMMARY

- A. Section includes metal-faced composite wall panels.

1.2 SUBMITTALS

- A. LEED Submittals:

1. Product Data for Credit MR 4.1 and Credit MR 4.2: Indicate percentages by weight of postconsumer and preconsumer recycled content for products having recycled content.
 - a. Include statement indicating costs for each product having recycled content.
2. Product Data for Credit MR 5.1 and Credit MR 5.2: For regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material.
 - a. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.3 DEFINITION

- A. Metal-Faced Composite Wall Panel Assembly: Metal-faced composite wall panels, attachment system components, miscellaneous metal framing, and accessories necessary for a complete weathertight wall system.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Metal-faced composite wall panel assemblies shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.
- B. Delegated Design: Design metal-faced composite wall panel assembly, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

1.5 QUALITY ASSURANCE

- A. Fire-Resistance Ratings: Where indicated, provide metal-faced composite wall panels identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

1.6 COORDINATION

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

1.7 PANEL MATERIALS

- A. Aluminum Sheet: Coil-coated sheet, ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
 1. Surface: Smooth, flat finish.
- B. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 temper.

1.8 METAL-FACED COMPOSITE WALL PANELS

- A. General: Provide factory-formed and -assembled, metal-faced composite wall panels fabricated from two metal facings bonded, using no glues or adhesives, to solid, extruded thermoplastic core; formed into profile for installation method indicated. Include attachment system components and accessories required for weathertight system.
 1. Fire-Retardant Core: Noncombustible, with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 450 or less.
 2. Products:
 - a. Alcan Composites USA Inc.; Alucobond.
 - b. Alcoa Inc.; Reynobond.
 - c. ALPOLIC, Division of Mitsubishi Chemical America, Inc.; ALPOLIC or ALPOLIC Copper.
- B. Aluminum-Faced Composite Wall Panels: Formed with 0.020-inch- (0.50-mm-) thick, coil-coated aluminum sheet facings.
- C. Copper-Faced Composite Wall Panels: Formed with 16-oz./sq. ft. (0.55-mm-thick) copper sheet facings.

1.9 METAL-FACED COMPOSITE WALL PANEL INSTALLATION

- A. General: Install metal-faced composite wall panels according to manufacturer's written instructions in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts and subgirts unless otherwise indicated. Anchor panels and other components of the Work securely in place, with provisions for thermal and structural movement.
- B. Fasteners:
 - 1. Aluminum Wall Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior and aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
 - 2. Copper Wall Panels: Use copper, stainless-steel, or hardware-bronze fasteners.
- C. Rainscreen-Principle Installation: Provide manufacturer's standard pressure-equalized, rainscreen-principle system with vertical channel that provides support and complete secondary drainage system, draining at base of wall. Notch vertical channel to receive support pins. Install vertical channels supported by channel brackets or adjuster angles and at locations, spacings, and with fasteners recommended by manufacturer. Attach wall panels by engaging horizontal support pins into notches in vertical channels and into flanges of wall panels. Leave horizontal and vertical joints with open reveal.

END OF SECTION 07 4243