

Section 07420 – Insulated Wall Panel System

Part 1 General

1.01 Work Included

Furnish all material, labor and equipment to complete the installation of the Litecore 2000V panel system including attachment system and other system components as shown on drawings for secure anchorage to the substructure provided for this purpose.

1.02 Related Work Specified Elsewhere

- A. Section: _____ Cold Formed Metal Framing
- B. Section: _____ Building Insulation
- C. Section: _____ Flashing and Sheet Metal
- D. Section: _____ Sealant
- E. Section: _____ Aluminum Entrance and Storefronts
- F. Section: _____ Glazed Aluminum Curtain Walls
- G. Section: _____ Gypsum Drywall Systems

1.03 System Description

- A. The system shall meet the specified requirements for local wind loading, air infiltration and water penetration.
- B. The Litecore 2000V vertical panel system incorporates 2” of insulation laminated between exterior and interior face skins of pre painted galvanized steel sheet. Panel width as shown on shop drawings.
- C. The system has tongue and groove, shiplap side joint design to conceal fasteners within side joint. No exposed fasteners will be permitted.
- D. The interior female joints are factory caulked.
- E. The vertical application is designed with a flush seam vertical joint. Flashing is used at horizontal panel joints.
- F. The use of exposed silicone wet sealant will be restricted to an absolute minimum. Exposed wet sealant is not permitted at standard horizontal joinery.

1.04 Quality Assurance

- A. Manufacturer Qualifications:
Manufacturer shall have a minimum of 5 years experience in the manufacturing of architectural systems, and have completed projects of similar size and complexity.
- B. Installer Qualifications:
Installer shall have a minimum of 5 years experience in installation of architectural wall systems and be approved by the manufacturer.
- C. Sealant Applicator Qualifications:
Applicator shall have a minimum of 5 years experience in the application of sealant and be approved by the manufacturer.
- D. Equal Products:
Products equal to this specification in materials, system design, and finish shall be considered provided they are submitted to the architect for approval 10 days prior to bid date. Failure to comply with this clause will be cause for rejection.

1.05 Reference Standards

- A. AISC Code of Standard Practice, including the standard erection tolerances.
- B. AISI Specification for the Design of Cold Formed Steel Members.
- C. ACI Standard Specification for Tolerances for Concrete Construction and Materials.

1.06 Performance Requirements

Provide wall panel assembly that is similar to that tested by an independent testing laboratory in accordance with the specified test methods.

- A. ASTM E283 – Air infiltration. Air infiltration rate is not to exceed 0.06 cfm/sf of wall area when tested at 6.24 psf static air pressure differential.
- B. ASTM E331 – Water Penetration. No uncontrolled water penetration when tested at 6.24 psf inward static air pressure differential.
- C. ASTM E330 – Structural Performance. No permanent deformation or failure of structural members when tested at specified loading.

1.07 Design Criteria

- A. The panel system, connections, and related components shall be designed for the local positive and negative windload pressure specified. The panel shall have a L/180 limit and the framing system a L/180 limit. There shall be no permanent deformation when subjected to the design criteria specified.
- B. The panel system shall be designed to accommodate expansion and contraction due to the local temperature variation specified without causing buckling, delamination, excessive stress on fasteners, or any other detrimental effects.

1.08 Submittals

- A. Complete shop drawings shall be submitted by supplier for approval prior to fabrication, including elevations, sections and details of each condition. Such drawings shall also include methods of installation and anchorage.
- B. Tech Data shall be submitted for wall panel material and ancillary products provided.
- C. Finish sample shall be submitted for color approval.
- D. A 12" square sample of the panel.

1.09 Delivery, Storage And Handling

- A. Deliver panels packaged and adequately protected from damage during shipment.
- B. Protect panels from adverse job conditions prior to installation.

1.10 Limited Warranties

- A. The panel manufacturer and installer issue a one-year limited warranty on defects in materials and workmanship. This warranty shall begin with the date that the work is substantially complete.
- B. When applicable, a 20-year limited warranty against failure of the Kynar 500 finish shall be supplied. This warranty shall begin with the date of shipment.

Part 2 Products

2.01 Acceptable Manufacturer

- A. LITECORE, INC., Milwaukee, WI

2.02 Materials

- A. Exterior face skin material to be ASTM A446 Grade B, 22 gauge steel with zinc coating conforming to ASTM A525, G90, with non directional embossing.
- B. Core to be minimum 2" extruded polystyrene or expanded polyurethane foam.
- C. Adhesive for laminating core material to be a moisture cured urethane or epoxy that produces a semi-elastic bond specifically designed for that application. Adhesive to have excellent resistance to heat, cold and moisture. Contact adhesives are not an acceptable alternate.
- D. Interior liner skin material to be ASTM A446 Grade B, minimum 26 gauge steel with zinc coating conforming to ASTM A525, G90 stucco embossed.
- E. Sheet metal trim, if shown on drawings as part of this work, shall be same material and finish as exterior face skin.

2.03 Fabrication

- A. Maximum allowable panel tolerances shall be as follows:
 - 1. Width or length: +/- 1/16" (1.6mm).
 - 2. Squareness: 1/4" (6.35 mm) difference between diagonal measurements.
- B. All panels to be formed to specified dimensions with tolerances to accommodate expansion and contraction between panels. Panels will be fabricated per dimensions shown on reviewed shop drawing; unless dimensions are guaranteed by general contractor, or, if contracted and schedule permits field measurements.
- C. Corners shall be factory fabricated to produce a trimless condition.

2.04 Finishes

- A. Coating for exterior face skin shall be a Fluoropolymer coating utilizing 70% Kynar 500 resins.
- B. Color: As selected by architect from manufacturer's standard colors.
- C. Coating for interior liner skin to be epoxy primer and acrylic top coat in manufacturer's standard off white color.

Part 3 Execution

3.01 Inspection

- A. Inspect delivered materials upon receipt to insure that no damage has occurred during shipment.
- B. Inspect substrate where panels are to be installed and verify that substrate tolerances, as required in Section 1.05 Reference Standards, have been met.
- C. Do not start work until unsatisfactory conditions have been corrected.

3.02 Preparation

- A. Verify that substrate layout complies with shop drawing layout.
- B. Report any variations and potential problems to the general contractor.
- C. Do not start work until unsatisfactory conditions have been corrected.

3.03 Installation

- A. Install panel system, accessories, and trim members in accordance with shop drawings.
- B. Install sealant, infiltration barrier, insulation, and other materials if shown on shop drawings as part of this work, and in accordance with the instructions furnished by the appropriate manufacturer.

3.04 Cleaning

- A. Panel installer shall clean panel surfaces during the course of product installation.
- B. General contractor shall be responsible for final cleaning of panel surfaces at project completion, if required.

3.05 Damaged Materials

- A. Manufacturer shall repair or replace any damaged material if damage is caused by manufacturer. General contractor shall be responsible for protection of completed or installed material from all other trades.