**SECTION 07 42 96**

**HIGH-PRESSURE LAMINATE PHENOLIC WALL PANELS**

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word:

 Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT.

This guide specification section has been prepared by CEI Materials, LLC for use in the preparation of a project specification section covering the Inoveze pressure equalized high-pressure laminate phenolic exterior wall panel system.

The following should be noted in using this specification:

Hypertext links to specific websites are included after manufacturer names and names of organizations whose standards are referenced within the text, to assist in product selection and further research. Hypertext links are contained in parenthesis and shown in blue, e.g.:

 [(www.astm.org](http://(www.astm.org))

Optional text requiring a selection by the user is enclosed within brackets and as red text, e.g.: “Color: [Red.] [Black.]"

Items requiring user input are enclosed within brackets and as red text, e.g.: "Section [\_\_\_\_\_ - \_\_\_\_\_\_\_\_]."

Optional paragraphs are separated by an "OR" statement included as red text, e.g.:

\*\*\*\* OR \*\*\*\*

For assistance on the use of the products in this section, contact CEI Materials, LLC by calling 734-212-3006 or visit their website at [www.CEIMaterials.com](http://www.ceimaterials.com).

 GENERAL

 SUMMARY

Edit the following to include only those items specified in this section.

 Section Includes:

 High-pressure laminate drained and backed ventilated phenolic wall panel system. Facia, wall panels, and soffit panels.

Coordinate the following with other sections in the Project Manual.

 Related Requirements:

 Division 01 - General Requirements: Administrative, procedural, and temporary work requirements.

 Section [05 40 00 - Cold-Formed Metal Framing.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [06 11 00 - Framing and Sheathing.] [06 16 43 - Gypsum Sheathing.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [07 28 00 - Moisture Barriers.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [07 62 00 - Sheet Metal Flashing and Trim.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [07 92 00 - Joint Sealants.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [08 51 13 - Aluminum Windows.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 Section [08 44 13 - Glazed Aluminum Curtain Walls.] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_.]

 REFERENCES

* + 1. ASTM International (ASTM) [(www.astm.org](http://www.astm.org)):
			1. B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
			2. D 1929 – Standard Test Method for Ignition Temperature.
			3. D 2244 – Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
			4. D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
			5. E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
			6. E 119 – Standard Test Method for Fire Rated or Fire Resistive Construction.
			7. E 330 – Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors Under the Influence of Wind Loads.

 SYSTEM DESCRIPTION

 Performance Requirements: Provide installed system designed to withstand specified loadings while maintaining allowable deflection, thermal movement performance without defects, damage, or failure.

 Deflection and Thermal Movement: Provide system designed to resist to positive and negative wind loading in accordance with Building Code.

 Panel deflection: Maximum L/60.

 Anchor deflection: Maximum 0.0625 inch (1.6 mm) at connection points of framing members to anchors.

 At 150 of design pressure, no permanent deformation exceeding L/1000 or failure to structural members.

 Thermal movement:

* + - * 1. Allow for horizontal and vertical thermal movement over temperature range of minus 20 to plus 180 degrees F (minus 29 to 82 degrees C.
				2. Not permitted: Buckling, opening of joints, undue stress on fasteners, failure of sealants, or other detrimental effects.

 SUBMITTALS

 Action Submittals:

 Shop Drawings: Include elevations, layout, profiles, and components including:

* + - * 1. Details showing thickness and dimensions of system parts, edge conditions, attachments, corners, fastening and anchoring methods, locations of joints and gaskets, location and configuration of joints necessary to accommodate thermal movement, and trim and flashings.
				2. Signed and sealed by qualified Design Professional in Project jurisdiction.

 Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each material and accessory.

 Samples:

* + - * 1. Selection samples: Manufacturer’s color charts or chips illustrating full range of available colors, finishes, and patterns.
				2. Verification samples:
				3. System assembly: 12 × 12 inches (300 × 300 mm) samples including anchors, supports, fasteners, closures and other accessories.
				4. Each color or finish selected, minimum 3 x 4 inches (75 x 100 mm).

 Informational Submittals:

 System calculations: System fabricator’s system design and engineering analysis/calculations including:

* + - * 1. Mounting system including anchorages, connections, and fasteners.
				2. Location, type magnitude, and direction of loads imposed on building structural frame.
				3. Signed and sealed by qualified Design Professional in Project jurisdiction.

 Material test reports: Certified test reports showing compliance with specified performance requirements, and third-party listing documenting compliance to comparable code section.

 Certificates: Product certificates signed by manufacturer certifying that materials comply with specified performance requirements.

 System fabricator’s certified system test reports: Certify system compliance with specified performance characteristics or third-party listing documenting compliance to comparable code section.

 Closeout Submittals:

 Warranty: Executed system warranty.

 QUALITY ASSURANCE

 Qualifications:

 Manufacturer qualifications:

* + - * 1. Minimum 10 years continuous experience manufacturing wall panel systems.
				2. Provide list of previous projects of similar scope, including date of installation and name of Architect.

 Installer qualifications:

* + - * 1. Minimum 5 years continuous experience installing wall panel systems.
				2. Provide list of previous projects of similar scope, including date of installation and name of Architect.

 Regulatory Requirements: Wall panel system evaluated and in compliance with applicable building code.

Retain the following for a field mockup for review of construction and conformance testing.

 Mockup:

 Size: Minimum [8 x 8] [\_\_ x \_\_] feet.

 Locate [\_\_\_\_.] [where directed.]

 Approved mockup may [not] remain as part of the Work.

Retain the following for a pre-installation conference.

 Pre-Installation Conference:

 Convene at Project site [2] [\_\_] weeks prior to beginning installation.

 Attendance: [Owner,] [Architect,] [Contractor,] [Construction Manager,] system fabricator, system installer, and related trades.

 Review and discuss Contract Documents, system manufacturer's literature, project conditions, scheduling, and other matters affecting application.

 Tour representative areas for installation; discuss installation construction, related work, work conditions, and materials compatibility.

 WARRANTY

 Panels: Provide manufacturer’s 10 year warranty against defective materials.

 PRODUCTS

 MANUFACTURERS

 Contract Documents are based on Inoveze system by CEI Materials, LLC. [www.CEIMaterials.com](http://www.CEIMaterials.com)

 MATERIALS

 High-Pressure Laminate Phenolic Wall Panels:

 Material: Solid panel manufactured using high pressure and temperature to create flat panels from thermosetting phenolic resins, homogenously reinforced with natural wood-based fibers and integrated electron beam cured decorative surface or printed décor.

 Color: [\_\_\_\_.] [To be selected from manufacturer’s full color range.]

 Finish: Satin.

 Panel core: Fire-retardant treated.

 Panel thickness: 5/16 inch (8 mm).

 Fire hazard classification: Flame spread/smoke developed rating of 25/450, tested to ASTM E84.

Retain the following for a concealed mounting system. Inoveze panels are available from 6 to 24 inches (150 to 600 mm) wide and in 60 and 120 inch (1.5 and 3.0 m) lengths. Panels may be oriented either horizontally or vertically.

 Mounting System:

 Plank system concealed fastening.

 Type: Drained back-ventilated rainscreen with panels pre-drilled to receive hander clips.

 System depth: 1-5/8 inches (41 mm).

 Aluminum extrusions: 6063-T6 alloy and temper.

 Finish: [Mill.] [Black anodized.]

\*\*\*\* OR \*\*\*\*

Retain the following for an exposed mounting system. Inoveze panels are available from 6 to 24 inches (150 to 600 mm) wide and in 60 and 120 inch (1.5 and 3.0 m) lengths. Panels may be oriented either horizontally or vertically.

 Mounting System:

 Plank system exposed fastening.

 Type: Drained back-ventilated rainscreen.

 System depth: 1-5/16 inches (33 mm).

 Aluminum extrusions: 6063-T6 alloy and temper.

 Finish: [Mill.] [Black anodized.]

 ACCESSORIES

 Provide fabricator’s standard system accessories, including fasteners, anchorage devices, and attachments for specific applications indicated.

 Flashing and Trim: Match material, finish, and color of adjacent wall panels, minimum 0.040 inch (1.0 mm) thick.

 Panel Fasteners: Series 300 stainless or approved corrosion-resistant coated steel, type recommended by system manufacturer.

 Subgirts: Specified in Section [05 40 00.] [\_\_ \_\_ \_\_.]

 Wall Sheathing: Specified in Section [06 11 00.] [06 16 43.] [\_\_ \_\_ \_\_.]

 Moisture Barrier: Specified in Section [07 28 00.] [\_\_ \_\_ \_\_.]

 Joint Sealants: Specified in Section [07 92 00.] [\_\_ \_\_ \_\_.]

 FABRICATION

 System Type: Back drained ventilated rainscreen; open joint design with allowance for ventilation while preventing excessive water to contact air/water barrier.

 Shop fabricate panels to dimensions and joint configurations indicated based on assumed design temperature of 70 degrees F (21 degrees C).

 Form panel lines, breaks and angles sharp and true, with surfaces free from warp and buckle.

 Provide integral drainage system to route entrapped moisture to exterior of wall assembly.

 Welding to conform to AWI D1.1/D1.1M and D1.2/D1.2M.

 Fabrication Tolerances:

 Width: Plus or minus 0.079 inch (Plus or minus 2 mm).

 Length: Plus or minus 0.079 inch (Plus or minus 2 mm).

 Squareness: Plus or minus 0.079 inch (Plus or minus 2 mm).

 EXECUTION

 PREPARATION

* + 1. Prepare surfaces to receive wall panel system in accordance with manufacturer’s instructions,

 INSTALLATION

 Install system in accordance with manufacturer’s instructions and approved Shop Drawings.

 Install system support members and anchorage devices.

 Install system plumb, level, and true to line.

 Do not cut, trim, weld, or braze components in manner that could damage finish, decrease strength, or result in visual imperfection or failure in performance.

 Install flashings and trim to maintain visual continuity of system.

 Separate dissimilar metals with bituminous paint, plastic shims, or other approved methods as defined by AA DM. Use gasketed or corrosion-resistant coated fasteners to corrosive or electrolytic action between metals.

 Install joint sealants as specified in Specified in Section [07 92 00.] [\_\_ \_\_ \_\_.]

 Installation Tolerances:

 Maximum deviation from horizontal and vertical alignment of installed panels: 0.25 inch in 20 feet (6.4 mm in 6.1 m), noncumulative.

 FIELD QUALITY CONTROL

 Conduct water spray tests on mockup of panel system to AAMA 501.2.

 ADJUSTING

 Remove and replace system components damaged beyond repair.

 Adjust panels to provide uniform, even panel joints.

 CLEANING

 Remove protective films immediately after installation.

 Ensure that weep holes and drainage channels are unobstructed.

 PROTECTION

 Protect installed panel system from damage during remainder of work on Project.

END OF SECTION