

**Section 09841 – Site-Built Stretched-Fabric Wall System [Classic StretchWall®]****Part 1 – General****1.1 Related Documents**

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

**1.2 Summary**

- A. This Section includes pre-fabricated, flame-resistant (FR), wood-framed, fabric-covered, demountable, acoustical, and/or acoustical and/or tackable panels for walls and/or ceilings as shown on the Architects drawings.
- B. Related Sections include the following:
  - 1. Division 1 Section "LEED® Requirements" for additional LEED® requirements.
  - 2. Division 9 Section "Acoustical Panel Ceilings" for acoustical ceiling panels supported by an exposed suspension system and tested for noise reduction.
  - 3. Division 9 Section "Acoustical Tile Ceilings" for acoustical ceiling tiles supported by a concealed suspension system and tested for noise reduction.
  - 4. Division 9 Section "Wall Coverings" for adhesively applied textile wall coverings.
  - 5. Division 9 Section "Stretched-Fabric Wall Systems" for a site-upholstered system for ceilings and walls.
  - 6. Division 9 Section "Acoustical Wall Panels" for acoustical wall panels tested for noise reduction.

**1.3 Submittals**

- A. Product Data: For each type of panel edge, core material, and mounting indicated.
- B. Shop Drawings: To include mounting devices and details at panel head, base, joints, corners, floor base, ceiling, and wall intersections. To indicate panel edge and core materials.
  - 1. To include elevations and reflected ceiling plans if applicable, indicating panel sizes and direction of fabric weave and pattern matching.
- C. Coordination Drawings: To indicate intersections with any adjacent work—wall base, shelves, countertops, drawers, doors, chart rails, chalk rails, electrical outlets and switches, thermostats, lighting fixtures, air supply and returns, audio speakers, sprinklers, access panels, and any other related divisions of the scope. To indicate the operation of casework doors and drawers, and interior doors.
- D. Samples for Verification: Prepare Samples from the same specified materials shall be used for the Work.

1. Fabric: A Sample, which is full-width x 36-in. (914mm) long, from the same dye lot shall be used for the Work, and as follows:
    - a. With specified treatments applied.
    - b. To indicate complete pattern repeat.
    - c. To mark the top and face of fabric.
  2. Panel Edge: A Sample, which is 12-in. (300mm) long, showing the edge profile, corner, and finish.
  3. Core Material: A Sample, which is 12-in. (300mm) square, showing the corner.
  4. Mounting Device: Full-size Sample.
  5. Sample Panels: No larger than 36 x 36 in. (914 x 914mm), showing the joints and mounting methods.
- E. LEED<sup>®</sup> Submittals:
1. Credit EQ 4.1: Manufacturer's product data for the installation adhesive, including a printed statement of the VOC content.
  2. Credit EQ 4.4: Medium-density fiberboard and manufacturer's Particleboard (if used) product data, indicating that the bonding agent used contains no urea formaldehyde. To coordinate the first paragraph below with the qualification requirements in Division 1 Section "Quality Requirements" and as supplemented in the "Quality Assurance" Article.
- F. Maintenance Data: For fabric-wrapped panels, to include in the maintenance manuals the fabric manufacturer's written cleaning and stain-removal recommendations.

#### 1.4 Quality Assurance

- A. Fabricator Qualifications: The Work shall be performed by a Fabricator, which employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a ten-year record of successful in-service performance.
- B. Source Limitations: To obtain fabric-wrapped panels through one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: To provide fabric-wrapped panels with the following surface-burning characteristics as determined by the testing of identical products per ASTM E84, UBC Standard 8-1, and/or by UL, or another testing and inspecting agency, which is acceptable to authorities having jurisdiction:
1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 75 or less.
- D. Acoustical Performance: Shall provide acoustical panels with the noise-reduction coefficient (NRC) value stated on the Architect's Drawings.
- E. Mockups: To build mockups, which verify selections made under the sample submittals and to demonstrate the aesthetic effects and set the quality standards for the materials, fabrication, and installation.
1. Shall install mockups in the location of the size indicated on the Drawings or, if not indicated, as directed by the Architect.

2. Shall install mockups of typical wall and ceiling areas as shown on the Drawings.

a. To include the intersection at the walls and ceiling, corners, casework doors and drawers, and base-building door openings.

F. Pre-installation Conference: General contractor will conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

### **1.5 Delivery, Storage, and Handling**

A. To comply with the written instructions of the manufacturer's fabric and fabric-wrapped panel for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.

B. To deliver materials and panels in unopened bundles and store in a temperature-controlled dry place with adequate air circulation.

C. To protect panel edges from crushing and impact.

### **1.6 Project Conditions**

A. Environmental Limitations: Do not install fabric-wrapped panels until spaces are enclosed and weatherproofed, wet work in spaces is complete and dry, work above the ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for the Project when occupied for its intended use.

B. Lighting: Do not install fabric-wrapped panels until the permanent level of lighting for the space is provided on surfaces to receive fabric-wrapped panels.

C. Air-Quality Limitations: Do not install fabric-wrapped panels if they are being exposed to airborne odors such as tobacco smoke and until conditions are free from the odor contamination of ambient air.

D. Field Measurements: Locations of fabric-wrapped panels shall be verified by field measurements before fabrication, and measurements shall be indicated on Shop Drawings.

### **1.7 Warranty**

A. Shall be provided in the Manufacturer's standard form in which the Manufacturer agrees to repair or replace components of fabric-wrapped panels, which fail in materials or workmanship within the specified warranty period.

1. Failures: To include fabric sagging, distorting, or releasing from the panel edge, or warping of the core.

2. Warranty Period: Two years from the date of Substantial Completion.

**1.8 Extra Materials**

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Fabric: For each fabric color and pattern installed, provide length equal to 5 percent of amount installed, but no fewer than 10 yards (9 m).

**Part 2—Products****1.9 Core Materials**

- A. Glass Fiberboard: ASTM C 612, Type IA or Types IA and IB; density as specified, un-faced, dimensionally stable, molded rigid board with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- B. Glass-Fiber Blanket: ASTM C 612, Type IA; ASTM C 553, Types I, II, and III; or ASTM C 665 [Type I—unfaced] [with tackable, thermally bonded white glass-fiber mesh facing] flexible, with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- C. Mineral Fiberboard: With maximum flame-spread and smoke-developed indexes of 15 and 5, respectively.
  - 1. Product: To provide Micore<sup>®</sup> mineral fiberboard by United States Gypsum Company, subject to compliance with requirements.
- D. Tackable, Impact-Resistant, High-Density Face Layer: 1/8 in. (3.2mm) thick layer of compressed, molded, glass fiberboard with a minimum nominal density of 16 to 18 lb./cu. ft. (256 to 288 kg/cu. m), laminated to the face of the core.
- E. Tackable Cork-Sheet-Face Layer: 1/8 in. (3.2mm) thick, seamless, single layer of compressed, fine-grain cork sheet of bulletin-board quality.
- F. Polyester Batting Core Overlay: Flame-retardant, compressible, fiberfill.
- G. Medium-Density Fiberboard: ANSI A208.2, Grade [MD] [MD-Exterior Glue], manufactured without urea formaldehyde.
  - 1. Fire-Retardant Medium-Density Fiberboard: Flame-spread index of 25 or less and smoke-developed index of 200 or less per [ASTM E 84] [UBC Standard 8-1].
- H. Particleboard: ANSI A208.1, Grade [M-2] [M-2-Exterior Glue][, manufactured without urea formaldehyde.
  - 1. Fire-Retardant Particleboard: Flame-spread index of 25 or less and smoke-developed index of 25 or less per [ASTM E 84] [UBC Standard 8-1].
- I. Plywood: DOC PS 1; AWPA C27, Interior Type A, fire-retardant treated, low-hygroscopic-type formulation. To provide fire-retardant-treatment formulations, which do not bleed through or otherwise adversely affect finishes, and a kiln-dry material after treatment.

- J. Wood: Clear, vertical-grain, straight, kiln-dried hardwood of the Manufacturer's standard species, AWPA C20, Interior Type A, fire-retardant-treated, low-hygroscopic-type formulation. To provide fire-retardant-treatment formulations, which do not bleed through or otherwise adversely affect finishes, and a kiln-dry material after treatment to 5 to 10% moisture content.

#### 1.10 SITE – BUILT STRETCHED FABRIC WALL SYSTEM

- A. Basis of Design: Fire-resistant, wood-frame “Classic StretchWall” system shall be site-built and installed in accordance with the Drawings by StretchWall Installations, Inc. Contact: Contact: <Insert manufacturer/installer name, address>.
- B. Extruded Plastic Site-Built Track and/or AFG Panels: They do not meet the intent of this specification. Any alternate products must be submitted to the Architect for review and comment at least two weeks prior to the bid date. If the Architect accepts an alternate product, all bidders shall be informed and given an opportunity to bid the alternate system.
- C. Fabric: Shall be provided from the same dye lot, color, and pattern as that selected by the Architect from Manufacturer's full range, as indicated on the Drawings and matching the samples approved by the Architect for use in the Work. Shall be purchased by the panel fabricator/installer for the Owner upon receipt of the Owner's deposit for the full amount of fabric(s).
1. Manufacturer: <Insert manufacturer's name>.
  2. Product Line/Pattern: <Insert product name or designation>.
  3. Style Number: <Insert number>.
  4. Color: <Insert name or number or both>.
  5. Fiber Content: <Insert content by percentage>.
  6. Width: [54 in. (1371 mm)] [66 in. (1676mm)] <Insert width>.
  7. Applied Treatments: [Stain resistance] [Polymer flame resistance] [Acrylic backing, single coated] [Acrylic backing, double coated] [Latex backing] [Foam backing] [Knit backing] <Insert treatment>.
  8. Fabric Application: [Railroaded—width-for-length] [Up the bolt].
  9. Pattern Repeat Distance: <Insert dimension, measured vertically>.
  10. Source: <Insert fabric vendor's name>.
- D. Lining Material: If recommend by the Mill manufacturing the fabric and/or specified by the Architect, a lining material appropriate for the specified fabric(s) shall be purchased by the Panel Fabricator/installer for the Owner upon receipt of the Owner's deposit for the full amount of lining material(s) and installed as the panels are constructed.
- E. Nominal Overall Panel Thickness: Shall be [1 in. (25 mm)] <Insert thickness>. Retain one option in paragraph above and below; coordinate with core density. Options in paragraph below assume that overlays and fabric facing do not diminish typical NRC of core board. Revise if other than Type A mounting is required to suit product.
- F. Noise Reduction Coefficient (NRC): For Type A mounting per ASTM E 795, [NRC 0.50 to NRC 0.90] [NRC 0.60 to NRC 0.70] [NRC 0.65 to NRC 0.75] <Insert NRC range>.
- G. Panel Width and Height: Shall be as indicated on the Drawings.
- H. Panel Frame: Shall be fire-retardant MDF, rabbeted, and splined with glued joints and machined corners.

- I. Panel Edge:
  1. Edge Detail: [Square] [Bullnose—radius] [Chamfered—beveled] [Mitered] [Custom configured as indicated on the Drawings]
  2. Corner Detail: [Square] [Round—radius as indicated] [Off square—dimensions as indicated] to form continuous profile to match edge detail.

### 1.11 Fabrication

- A. Wood grounds: Installer shall provide fire-retardant wood grounds and tacking strips in accordance with approved Shop Drawings. Ground and tacking strips shall be installed around the perimeter of each elevation, specified to receive fabric. All grounds and tacking strips shall have smooth edges; to the fullest extent practical, shall be in one piece; shall be shimmed, plumbed, scribed and made true to conform with adjacent surfaces of related Work, and shall prevent sagging and movement after the fabric facing is stretched. All penetrations of the fabric elevation—electrical outlets, switches, thermostats, base building communication devices, etc.—shall be outlined with wood stripping, installed flush with wood grounds and tacking strips.
- B. Core: Shall be closely fitted to the frame and the openings for penetrations of the electrical outlets, switches, and similar.
- C. Lining Material: Shall be evenly stretched over the core face and edges and mechanically fastened onto the back of the frame, free from puckers, ripples, wrinkles, and sags.
- D. Cutting and sewing of fabric:
  1. Fabrics shall be cut either on the thread or by pattern, whichever is applicable.
  2. Fabrics shall be tabled and cut square in the shop and trimmed to the sizes required.
  3. Fabric panels shall be laid out and sewn together so that the panels are uniform in width within an elevation.
  4. Seams shall be sewn straight and parallel to each other and, in the same elevation, to other edges, jambs, corners, etc..
  5. Seams shall be pressed flat into an open position or frenched, as required.
- E. Fabric Facing: Stretched fabric shall be mechanically fastened to the wood grounds with sufficient tension to eliminate sagging, rippling, denting, and distortion.
  1. Fabric shall be demountable, providing access to the core's surface behind the fabric.
  2. Fabric shall be installed with the warp (vertical) and weft (horizontal) threads plumb, level, and true. Pattern, texture, and grain of fabric shall align at any/all seams and throughout the entire elevation (if seamed) without distortion of the fabric's geometry and pattern.
- F. Dimensional Tolerances of Finished Units: Shall be +/- 1/16 in. (1.6mm) within a foot, up to 1/8 in. over ten feet for the following:
  1. Thickness.
  2. Edge straightness.
  3. Overall length and width.
  4. Square from corner to corner.
  5. Chords, radii, and diameters.

**Part 2—Execution****1.12 Examination**

- A. Fabric, substrates, blocking, and conditions shall be examined, with Installer present, to assure compliance with requirements, installation tolerances, and other conditions affecting performance of fabric-wrapped panels. The installer shall verify that the substrate is able properly to receive the Classic Site-Built StretchWall cleanly, true, and free from defects with all openings in the substrate sealed air-tight and, if not, shall notify the General Contractor of any defects.

**1.13 Installation**

- A. Wall Panels: Fabric-wrapped panels shall be installed in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other panels, faces flush, and scribed to conform accurately at the border and penetrations of the adjoining Work.
  - 1. Cut units shall be at least 50% of the unit width with facing material extended over the cut edge to match the uncut edge. Acoustical wall panels shall be scribed to conform to the adjacent work. Butt joints shall be tight.
- B. Ceiling Panels: Fabric-wrapped panels shall be installed in locations indicated with surfaces and edges plumb to surface, edges level and in alignment with other panels, faces flush, and scribed to conform accurately to the adjoining work at the borders and penetrations of the adjoining Work.
  - 1. Cut units shall be at least 50% of the unit width with the face fabric extended over the cut edge to match the uncut edge. Acoustical wall panels shall be scribed to fit adjacent work. Butt joints shall be tight.
- C. Shall comply with the fabric-wrapped panel Manufacturer's written instructions for the installation of panels using the type of concealed mounting accessories indicated or, if not indicated, as recommended by the Manufacturer. Anchor panels shall be secured onto the supporting substrate.
- D. Fabric pattern and grain shall be matched and leveled to conform to the adjacent panels.
- E. Installation Tolerances: As follows:
  - 1. Variation from Plumb and Level: Shall be +/- 1/16 in. (1.6mm) within one foot (304.8mm), up to 1/8 in. over ten feet.
  - 2. Variation of the Panel Joints from the Hairline: Shall be not more than 1/16 in. (1.6mm) within one foot (304.8mm) up to 1/8 in. over ten feet.

**1.14 Cleaning**

- A. Loose threads shall be clipped, and pills and extraneous materials shall be removed.

- B. Panels shall be cleaned with the fabric facing, on completion of installation, to remove dust and other foreign materials according to Manufacturer's written instructions.

**1.15 Protection**

- A. Final protection and maintain conditions shall be provided, in a manner acceptable to the Manufacturer and Installer, to ensure that the fabric-wrapped panels are absent of damage or deterioration at the time of Substantial Completion.
- B. Panels, which cannot be cleaned and repaired, shall be replaced in a manner approved by the Architect before the time of Substantial Completion.

**End of Section 09841**