SECTION 09 7720 – DECORATIVE FIBERGLASS REINFORCED WALL PANELS

PART 1 - GENERAL

1.1   SUMMARY

A.   Section Includes: Prefinished polyester glass reinforced plastic sheets and adhered to unfinished [gypsum] [cementitous] [untreated plywood] [existing flat, smooth, clean surfaces] wallboard.
 [PVC] trim.

B.   Products Not Furnished or Installed under This Section:
 Gypsum [Cementitious] substrate board.

1.2   RELATED SECTIONS

A.   Section [____] – Gypsum [Cementitious] substrate board.

B.   Section [____] - Wood [Metal] Stud Framing

C.   Section [____] - Painting & Transparent Finishes.

D.   Section [____] - Resilient Base.

1.3   REFERENCES

A.   American Society for Testing and Materials: Standard Specifications (ASTM)
 ASTM D 790 – Flexural Strengths (psi)
 ASTM D 790 – Flexural Modulus (psi)
 ASTM D 638 – Tensile Strengths (psi)
 ASTM D 638 – Tensile Modulus (psi)
 ASTM D 2583 – Barcol Hardness
 ASTM D 256 - Izod Impact Strengths (ft #/in)
 ASTM D 696 – Thermal Coefficient of Lineal Expansion (in/in/F)
 ASTM D 570 – Water Absorption (%)
 ASTM D 792 – Specific Gravity
 ASTM D 3359 – Cross-cut Adhesion
 ASTM D 3273 – Mold & Mildew
 ASTM D 5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels.
 ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4   SUBMITTALS

A.   Product Data: Submit manufacturer's data to indicate compliance with these specifications, including:

Storage, handling and preparation instructions and recommendations.
Installation instructions.

B.   Shop Drawings: Submit elevations of each wall showing location of paneling and trim members with respect to all discontinuities in the wall elevation.

C.   Selection Samples: Submit manufacturer's standard color pattern selection samples representing manufacturer's full range of available colors and patterns.

D.   Samples for Verification: Submit appropriate section of panel for each finish selected indicating the color, texture, and pattern required.
Submit complete with specified applied finish.
For selected patterns show complete pattern repeat.
Exposed Trim Molding: Provide samples of each type, finish, and color.

E.   Manufacturers Safety Data Sheets (SDS) for adhesives, sealants and other pertinent materials prior to their delivery to the site (available as downloads for most Marlite's products at http://www.marlite.com/tech-details.aspx or by contacting Marlite at info@marlite.com).

1.5   QUALITY ASSURANCE

A.   Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
ASTM E 84 (Method of test for surface burning characteristics of building Materials)
Wall Required Rating – Class [C].

B.   Sanitary Standards: System components and finishes to comply with:
United States Department of Agriculture (USDA) / Food Safety & Inspection Services (FSIS) requirements for food preparation facilities, incidental contact.
Food and Drug Administration (FDA) 2013 Food Code 6-101.11.
Canadian Food Inspection Agency (CFIA) requirements.

1.6   DELIVERY, STORAGE AND HANDLING

A.   Deliver materials factory packaged on strong pallets.

B.   Store panels and trim lying flat, under cover and protected from the elements. Allow panels and adhesive to acclimate to room temperature (range of 60 to 75°F) for 48 hours prior to installation.

1.7   PROJECT CONDITIONS

A.   Environmental Limitations: Building are to be fully enclosed prior to installation with heat (70° or similar room temperature) and ventilation consistent with good working conditions for finish work.

B.   During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used and recommendation of adhesive manufacturer.

Provide ventilation to disperse fumes during application of adhesive as recommended by the adhesive manufacturer.

1.8 WARRANTY

A. Furnish one-year guarantee against defects in material.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. Marlite; 1 Marlite Drive, Dover, OH 44622. 800-377-1221 FAX (330) 343-4668 Email: info@marlite.com www.marlite.com.

B. Product:
Symmetrix™ SmartSeam FRP Panels with Sani-coat Sealer

2.2 PANELS

A. Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM D 5319.
Finishing: BlueSky™ Advanced Finishing System: Spray-applied Sani-coat Sealer covers entire panel including grooves and features water-based coatings and controlled, low-temperature inline curing.
Dimensions:

Thickness – 0.090" (2.29mm) nominal
Width – [4'-0" (1.22m)] nominal
Length – [4'-0" (1.22m)] [8'0" (2.44m)] [As indicated on the drawings] nominal
Tolerance:
Length and Width: +/-1/8" (3.175mm)
Square - Not to exceed 1/8" for 4' (1.2m) panels, 8' (2.4m) panels or 5/32" (3.96mm) for 10' (3.0m) panels

B. Properties: Resistant to rot, corrosion, denting, peeling, and splintering.
1. Flexural Strength – 0.9×10^4 psi per ASTM D 790.
2. Flexural Modulus – 6.0×10^6 psi per ASTM D 790.
3. Tensile Strength – 11.5×10^3 psi per ASTM D 638.
4. Tensile Modulus – 0.45×10^6 psi per ASTM D 638.
5. Barcol Hardness (scratch resistance) – 28 per ASTM D 2583.
6. Izod Impact Strength – 6.0 ft. lbs./in ASTM D 256
7. Thermal Coefficient of Lineal Expansion – 2.22×10^{-5} in/in/F per ASTM D 696
8. Water Absorption – 0.15% per ASTM D 570.
9. Specific Gravity – 1.8 per ASTM D 792.
10. Cross-cut Adhesion – 0 removed per ASTM D 3359
11. Mold & Mildew – Pass per ASTM D 3273.
Standard Specification for FRP Wall Panels – per ASTM D 5319
Standard Test Method Surface Burning Characteristics of Building Materials – Class C per ASTM E 84.

C. Back Surface: Smooth. Imperfections which do not affect functional properties are not cause for rejection.

D. Front Surface: Smooth [As Indicated on the Drawings] [In accordance with pre-approved sample. Information available from the Architect's Office] [_____]. Marlite Symmetrix SmartSeam FRP Panels with Sani-coat Sealer are available in a variety of panel colors, groove colors, finishes, tile patterns, groove directions, tile sizes and panel sizes.

> **Specifier Note: Symmetrix SmartSeam FRP Panels with BlueSky Advanced Finishing are available in Class C (III) Fire-ratings. Symmetrix SmartSeam FRP Panels can be made available with standard surface groove and customized groove layouts to match architectural specifications.**

E. Panel Color and Groove Color: [Specifier to choose.]

   1. SYM SS100 White Panel and White Grooves
   2. SYM SS105 Black Panel and White Grooves
   3. SYM SS916 White Panel and Black Grooves
   4. SYM SS917 White Panel and Grey Grooves
   5. SYM SS920 Grey Panel and White Grooves
   6. SYM SS _____ Solid Color Panel [enter Sherwin Williams color number and name] and White Grooves
   7. SYM SS _____ Solid Color Panel [enter Sherwin Williams color number and name] and Grooves (monochromatic)
   8. SYM SS _____ BlueSky Digital Print Panel [enter BlueSky digital print number and name] and White Grooves
   9. SYM SS _____ BlueSky Digital Print Panel [enter BlueSky digital
   10. print number and name] and Grey Grooves
   11. SYM SS _____ BlueSky Digital Print Panel [enter BlueSky digital print number and name] and Black Grooves
   12. SYM SS _____ BlueSky Digital Print Panel [enter BlueSky digital print number and name] and Tan Grooves
   13. SYM SS _____BlueSky Digital Print Panel [enter BlueSky digital
   14. print number and name] and Grooves (monochromatic)

F. Finish Gloss Level: [Specifier to choose.]

   1. High Gloss (not available on BlueSky Digital Print Panels)

   2. Satin

G. Tile Pattern, Groove Direction, Tile Size & Panel Size: [Specifier to choose.]

   1. Subway Horizontal Direction

      a) 6" x 3" tiles, panel size 4' x 4' nominal

      b) 8" x 4" tiles, panel size 4' x 4' nominal

      c) 24" x 12" tiles, panel size 5' x 3' nominal

   2. Subway Vertical Direction

      a)   3" x 6" tiles, panel size 4' x 8' nominal

      b)   4" x 8" tiles, panel size 4' x 8' nominal

      c)   12" x 24" tiles, panel size 4' x 8' nominal

   3.   Square

      a)   4" x 4" tiles, panel size 4' x 8' nominal

      b)   8" x 8" tiles, panel size 4' x 8' nominal

      c)   16" x 16" tiles, panel size 4' x 8' nominal

   4.   Rectangle Horizontal Direction

      a)   6" x 3" tiles, panel size 4' x 8' nominal

      b)   12" x 6" tiles, panel size 4' x 8' nominal

      c)   24" x 12" tiles, panel size 4' x 8' nominal

   5.   Rectangle Vertical Direction

      a)   3" x 6" tiles, panel size 4' x 8' nominal

      b)   6" x 12" tiles, panel size 4' x 8' nominal

      c)   8" x 24" tiles, panel size 4' x 8' nominal

   6.   Linear

      a)   4" tiles, panel size 4' x 8" nominal

      b)   8" tiles, panel size 4' x 8' nominal

      c)   16" tiles, panel size 4' x 8' nominal

   7.   Beaded panel size 4' x 4' nominal

   8.   Chevron panel size 4' x 8' nominal

   9.   Cinnamon Roll panel size 4' x 4' nominal

   10.   Diamond panel size 4' x 4' nominal

   11.   Double Hexagon panel size 4' x 4' nominal

   12.   Hexagon panel size 4' x 4' nominal

   13.   Parquet panel size 4' x 8' nominal

   14.   Plaid panel size 4' x 8' nominal

   15.   Skinny Horizontal panel size 4' x 8' nominal

   16.   Skinny Vertical panel size 4' x 8' nominal

   17.   Square Parquet panel size 4' x 8' nominal

   18.   Stained Glass panel size 4' x 4' nominal

  H.   Fire Rating: Class C (III) Fire Rating.

2.3   TRIM MOLDING

  A.   PVC Trim: Thin-wall semi-rigid extruded PVC. Use only as needed.
  M 350 Inside Corner, [8' length][10' length]

M 360 Outside Corner, [8' length][10' length]
M 370 Edge, [8' length][10' length]
V 177 135° Inside Corner [8' length]
V 179 135° Outside Corner [8' length]
Color: [White] [extruded custom harmonizing color]

2.4   ACCESSORIES

   A.   Adhesive: Either of the following construction adhesives complying with ASTM C 557.
   Marlite C-551 FRP Adhesive - Water- resistant, non-flammable adhesive. [3.5 gallon can]. Use over porous subwall only, such as unfinished drywall.
   Titebond Advanced Polymer Panel Adhesive – VOC compliant, non-flammable, environmentally safe adhesive. [3.5 gallon can]. Use over non-porous subwall.
   Marlite C-109 Low VOC Cartridge Adhesive required for interlocking SmartSeam Panels. [28-ounce cartridge]
   Marlite MS-250 Clear Silicone Cartridge Sealant for interlocking SmartSeam Panels. [10-ounce cartridge]

PART 3 - EXECUTION

3.1   PREPARATION

   A.   Examine sub wall to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.
   Verify that stud spacing does not exceed 24" (61cm) on-center.

   B.   Repair defects prior to installation.
   Level wall surfaces to panel manufacturer's requirements. Remove protrusions and fill indentations.

3.2   INSTALLATION

   A.   Comply with manufacturer's recommended procedures and installation sequence.

   B.   Cut panels to meet supports allowing 1/8" (3 mm) clearance for every 8 feet (2.4m) of panel.
   Cut and drill with carbide tipped saw blades or drill bits or cut with shears.

   C.   Apply panels to board substrate, above base, vertically oriented with seams plumb and pattern aligned with adjoining panels.
   Install panels with manufacturer's recommended gap for panel field and corner joints.
                        Adhesive trowel and application method to conform to adhesive manufacturer's recommendations.
                        For interlocking SmartSeam Panels (non-continuous vertical joints, i.e. subway groove configuration), apply Marlite C-109 Low VOC Cartridge adhesive using swirl technique at jagged panel edges.

D.   Apply panel moldings to all panel edges using silicone sealant providing for required clearances.

All moldings must provide for a minimum 1/8" (3mm) of panel expansion at joints and edges, to insure proper installation.

Apply sealant to all moldings, channels and joints between the system and different materials to assure watertight installation.

3.3   CLEANING

A.   Remove excess sealant from panels and moldings. Wipe panel down using a damp cloth and mild soap solution or cleaner.

B.   Refer to manufacturer's specific cleaning recommendations Do not use abrasive cleaners.

END OF SECTION 09 7720