

08 34 50

FIBERGLASS REINFORCED PLASTIC DOORS AND FRAMES (Add #2)

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
  - 1. Standard corrosion-resistant fiberglass reinforced plastic (FRP) doors.
  - 2. Standard corrosion-resistant fiberglass reinforced plastic (FRP) frames.
- B. Related Sections
  - 1. Section 04 22 00: Concrete Unit Masonry.
  - 2. Section 08 70 00: Hardware.
  - 3. Section 08 80 00: Glazing.
- C. System Description: Design door opening assemblies to resist failure from corrosion in natatorium and exterior environments. Chemicals to consider include chlorines, chloramines, and acids. Refer to drawings and pool specifications for further information.

1.2 REFERENCES

- A. Underwriter's Laboratories, Inc., (UL), and Factory Mutual (FM), as applicable to fire rated FRP doors.
- B. ASTM D-635 – Standard test method for rate of burning and/or extent and time of burning of self-supporting plastics in a horizontal position.
- C. ASTM E-84 – Standard test method for surface burning characteristics of building materials.
- D. ASTM D-882 – Tensile strength.
- E. ASTM D-695 – Compressive strength.
- F. ASTM D-790 – Flexural strength.
- G. ASTM D-256 – Impact resistance.
- H. ASTM D-2583 – Barcol Hardness.
- I. ASTM C-177 – Thermal properties.
- J. ASTM D-1622 – Density/specific gravity.

1.3 SUBMITTALS

- A. Submit shop drawings and product data in accordance with Section 01 33 00.
- B. Indicate general construction, configurations, manufacturing methods, reinforcements, anchorage methods, locations of hardware and cut-outs, hardware set number, and door number. Provide detailed drawings of door light and louver installation. Provide a complete set of standard available finish color samples.

1.4 PRODUCT HANDLING

- A. Deliver doors and frames factory assembled and pre-hung. Double doors may be shipped knocked-down.
- B. Store indoors in a dry location per manufacturer's recommendations. Protect from damage.

1.5 WARRANTY

- A. Submit written warranty on manufacturer's standard form signed by official of door manufacturer, agreeing to replace defective doors and frames which have:
  - 1. Damage from corrosion.
  - 2. Delamination in any degree.
  - 3. Warp or twist.
  - 4. Telegraphing of stile, rail, or core through face to cause variation in excess of 1/100" in any 3" span.
- B. Warranty shall be in full effect for a minimum of 10 years. Pro-rated warranties are not acceptable.

PART 2 PRODUCT

2.1 ACCEPTABLE MANUFACTURERS, subject to the requirements stated herein;

- A. Chem-pruf, Brownsville, Texas, 800-444-6924.
- B. Corrim Company, Oshkosh, Wisconsin, 920-231-2000.
- C. Tiger Door, Greensburg, PA, 888-891-4416

2.2 MATERIALS

- A. Fiberglass Mat: Random glass fiber mat, minimum 4.5 oz. per square foot weight of material.
- B. Polyurethane Foam: Minimum density 4 lbs. per cubic foot, maximum flame spread 25 inches in accordance with ASTM E 84.
- D. Roving: Unidirectional glass fiber mat, minimum 16 oz. per square yard material weight.
- E. Resins: Formulated for specified environment, maximum flame spread 25 inches in accordance with ASTM E 84, self-extinguishing in accordance with ASTM D 635.
- F. Frame Anchors, Supports, Inserts, Fasteners and Accessories: Manufacturer's standard, stainless steel.
- G. Transom Louvers: Molded FRP vanes angled to drain to exterior. Integral to frame. Gel coat to match frame. Size(s) per Drawings.

2.3 DOORS

- A. Thickness: 1 3/4".

- B. Stile and Rail: One piece molded U-shaped cross section or reinforced tube construction with molded-in edge strips and reinforcing as required to accept hardware without compromising strength. Seamless construction required.
- C. Faces: Two layers resin and fiberglass mat, 1 layer of roving, saturated with resins.
- D. Internal Construction
  - 1. Stiles and Rails shall be constructed of rectangular and square high modulus pultruded fiberglass tubes.
  - 2. Core material as application dictates.
    - a. PPC core; utilize unless specifically noted otherwise.
    - b. Polyurethane Foam Core, 1 ½" thick rigid block of polyurethane with an "R" factor of 11-12 shall be laminated to the interior of the face panels.
    - c. Mineral Core, fire rated up to 90 minutes where required.
  - 3. Internal reinforcements
- E. Windows: Integral molded solid window frame with profile that drains away from glazing. Gel coat to match door. Glazing held in place by retainer that matches opposite frame profile and material. Size per drawings.
- F. Door Louvers: Molded FRP vanes angled to drain to exterior. Framed similar to windows. Gel coat to match door. Size(s) per Drawings.

## 2.4 FRAMES

- A. Fabrication
  - 1. One-piece moulded frame with moulded stop of standard dimensions except as noted on drawings, minimum 2 layers of fiberglass mat, 20 mil (min.) gel coat finish.
  - 2. Provide a tested assembly commiserate with required ratings where noted. Applicable tests include: NFPA 252, ASTM E-152, UL-10(B). Place UL labels where visible when frames are installed in position. Refer to Drawings for class requirements.
  - 3. Provided integral embedded attachment for all hardware as specified.
  - 4. Hardware shall either be installed by door manufacturer or the frames shall be factory mortised as required to accept specified hardware. Field alteration is not acceptable.
  - 5. Provide wire pull/ protection voids at the top hinge location for all doors with electric mortise locksets. Provide a hole coordinated to match the door contact approximately 4 inches from the strike side of the door in the head of the frame at doors with door contacts.
  - 6. Fabricate fire-rated frames of materials in accordance with requirements of Underwriter's Laboratories, Inc., (UL). Place UL labels where visible when frames are installed in position. Refer to Drawings for class requirements.
  - 7. If hospital stops are called for typically on the project, do not provide them at exterior or fire-rated doors.
- B. Spreader: Temporary channel or angle required at bottom of door frames.
- E. Jamb Anchors
  - 1. Masonry Walls: Adjustable FRP or stainless steel (type 316.) anchors by manufacturer grouted in place.
  - 2. Metal Stud Wall Systems: Type 316 (min.) stainless steel anchors, 24" o.c. min.
  - 3. Label frames: UL certified designed.

- F. Silencers
  - 1. Factory installed.
  - 2. Coordinate hole size with silencers specified in Section 08700.
  - 3. Single Interior Doors: Three at strike jamb.
  - 4. Pair of Interior Doors: Four at header.
  - 5. Weather-stripped Doors: None required.

## 2.5 FINISH

- A. Finish: Seamless, integrally-molded color, UV-stabilized, 20-mil (min.) gel coat, smooth finish, provide custom color to match paint color(s) listed on Finish Legend/Notes on Drawings.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's printed instructions. Maintain field tolerances and conditions as required by door manufacturer.
- B. Field alteration of doors is strictly prohibited except as may be noted in manufacturer's instructions.
- C. Fit doors accurately in their respective frames, with the following clearances:
  - 1. Jambs and heads: 3/32".
  - 2. Bottom: 3/8" where no threshold occurs.
  - 3. Adjust hardware to operate correctly in accordance with hardware manufacturer's instructions.
  - 4. Clean all surfaces and hardware. Protect doors and frames from damage by subsequent construction activities until completion.

### 3.2 DOOR AND FRAME SCHEDULE

- A. Refer to Drawings.

END OF SECTION