**SECTION 08 17 43**

**Double-Acting FRP Traffic Doors**

**PART 1 GENERAL**

1. **SECTION INCLUDES**
	1. DA-20 Sandstone Texture FRP Double-Acting Traffic Door
2. **RELATED SECTIONS**
	1. Section 08 01 17 – Operation and Maintenance of Integrated Door Opening Assemblies.
	2. Section 08 06 71 – Door Hardware Schedule.
	3. Section 08 06 80 – Glazing Schedule.
	4. Section 08 71 00 – Door Hardware.
3. **SUBMITTALS**
	1. Must comply with Section 01 33 00 – Submittal Procedures.
	2. Action Submittals/ Informational Submittals.
		1. Product Data.
			1. Submit manufacturer’s product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.
		2. Shop Drawings.
			1. Submit manufacturer’s shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.
		3. Samples.
			1. Submit manufacturer’s door sample composed of door face sheet, core, and finish.
			2. Submit manufacturer’s sample of standard colors for door face.
		4. Manufacturer Reports.
			1. Manufacturer’s Project References.
				1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.
	3. Closeout Submittals.
		1. Operation and Maintenance Manual.
			1. Submit manufacturer’s maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.
		2. Warranty Documentation.
			1. Submit manufacturer’s standard warranty.
4. **QUALITY ASSURANCE**
	1. Manufacturer’s Qualifications.
		1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.
		2. Evidence of a documented complaint resolution quality management system.
5. **DELIVERY, STORAGE, AND HANDLING**
	1. Delivery.
		1. Deliver materials to site in manufacturer’s original, unopened, containers and packaging.
		2. Labels clearly identifying opening, door mark, and manufacturer.
	2. Storage.
		1. Store materials in a clean, dry area, indoors in accordance with manufacturer’s instructions.
	3. Handling.
		1. Protect materials and finish from damage during handling and installation.
6. **WARRANTY**
	1. Warrant doors, and factory installed hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.
	2. Standard Period.
		1. Two years starting on date of shipment.

**PART 2 PRODUCTS**

1. **Double-Acting FRP Traffic Doors**
	1. Manufacturer.
		1. Special-Lite, Inc.
			1. PO Box 6, Decatur, Michigan 49045.
			2. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.
			3. Web Site [special-lite.com](http://www.special-lite.com).
			4. E-Mail info@special-lite.com.
2. **DESCRIPTION**
	1. Model.
		1. Double-Acting FRP Traffic Door
	2. Door Opening Size.
		1. Click or tap here to enter text.
	3. Construction.
		1. Door Thickness.
			1. 1-1/4”.
		2. Stiles & Rails.
			1. Aluminum extrusions made from 6063 aluminum alloys with a minimum temper of T5.
			2. Minimum 1-9/16” deep one-piece extrusion with integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.
			3. Screw or snap in place applied caps are not acceptable.
		3. Corners.
			1. Mitered.
			2. 1-1/2”x1-1/2”x1/8” 6061 aluminum angle reinforcement at corner.
			3. Weld, glue, or other methods of corner joinery are not acceptable.
		4. Core.
			1. Poured-in-place polyurethane foam.
			2. Laid in foam cores are not acceptable.
		5. Face Sheet.
		6. Face Sheet.
			1. 0.120” thick, Sandstone texture, through color FRP sheet.
			2. Optional painted finish consult manufacturer.
			3. Class C standard.
			4. Attachment of face sheet.
				1. Extruded stiles and rails to have integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.
				2. Use of glue to bond face sheet to core or extrusions is not acceptable.
		7. Cutouts.
			1. Manufacture doors with cutouts for required vision lites, louvers, and panels.
		8. Hardware.
			1. Pre-machine doors in accordance with templates from specified hardware manufacturers.
			2. Factory install door hardware.
		9. Reinforcements.
			1. Aluminum extrusions made from 6061 or 6063 aluminum alloys.
			2. Sheet and plate to conform to ASTM-B209.
			3. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.
			4. Bars and tubes to meet ASTM-B221.
	4. Fasteners.
		1. All exposed fasteners will have a finish to match material being fastened.
		2. 410 stainless steel or other non-corrosive metal.
		3. Must be compatible with items being fastened.
3. **PERFORMANCE**
	1. Face Sheet.
		1. Standard Class C 0.120” thick, Sandstone texture, through color FRP sheet.
			1. Flexural Strength, ASTM-D790: 27 x 103 psi.
			2. Flexural Modulus, ASTM-D790: 0.7 x 106 psi.
			3. Tensile Strength, ASTM-D638: 18 x 103 psi.
			4. Tensile Modulus, ASTM-D638: 1.0 x 106 psi.
			5. Barcol Hardness, ASTM-D2583: 40.
			6. Izod Impact, ASTM-D256: 7.0 ft-lb/in.
			7. Gardner Impact Strength, ASTM-D5420: 30 in-lb.
			8. Water Absorption, ASTM-D570: 0.16%/24hrs at 77°F.
			9. Surface Burning, ASTM-E84: Flame Spread ≤ 200, Smoke Developed ≤ 450.
			10. Chemical Resistance.
				1. Excellent Rating.

Acetic Acid, Concentrated.

Acetic Acid, 5%.

Bleach Solution.

Detergent Solution.

Distilled Water.

Ethyl Acetate.

Formaldehyde.

Heptane.

Hydrochloric Acid, 10%.

Hydrogen Peroxide, 3%.

Isooctane.

Lactic Acid, 10%.

* 1. Door Core.
		1. Density, ASTM-D1622: ≤ 5.0 pcf.
		2. Compressive Properties, ASTM-D1621: Compressive Strength ≥ 60 psi, Compressive Modulus ≥ 1948 psi.
		3. Tensile and Tensile Adhesion Properties, ASTM-D1623: Tensile Adhesion, 3” x 3” FRP Facers ≥ 53 psi, Tensile Adhesion, 1” x 1” Foam ≥ 104 psi.
		4. Thermal and Humid Aging, ASTM-D2126: Volume Change at 158 °F, 100% humidity, 14 days ≤ 13%.
		5. Thermal Conductivity, ASTM-C518, Thermal Resistance ≥ 0.10 m2K/W.
1. **FABRICATION**
	1. Factory Assembly.
		1. Required size for door units, shall be as indicated on the drawings.
		2. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
		3. All cut edges to be free of burs.
		4. Welding of doors is not acceptable.
		5. Maintain continuity of line and accurate relation of planes and angles.
		6. Secure attachments and support at mechanical joints with hairline fit at contact surfaces.
	2. Shop Fabrication
		1. All shop fabrication to be completed in accordance with manufacturer’s process work instructions.
		2. Quality control to be performed before leaving each department.
2. **FINISHES**
	1. Door.
		1. Aluminum Perimeter Frame.
			1. Anodizing.
				1. Class 1 Anodizing, minimum 0.7 mils thick.
				2. Clear 215 R1, AA-M10C12C22A41.
		2. FRP Face Sheets
			1. Through color.
				1. [Color.](https://special-lite.com/downloads/sandstone-textured-frp-standard-color-selection/)

Choose an item.

* + - 1. Painted.
				1. [Color.](https://special-lite.com/downloads/painted-finish-selections-color-chart/)
				2. Choose an item.
				3. Custom colors available consult manufacturer.
1. **ACCESSORIES**
	1. Vision Lites
		1. 14” x 9” Thermoplastic vulcanizates gasket with 1/4” acrylic, clear.
		2. 15” Round thermoplastic vulcanizates gasket with 1/4” acrylic, clear.
	2. Hardware.
		1. Pre-machine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
		2. Factory install hardware.
		3. Hardware Schedule.
			1. ABH 8500 Gravity Pivot Set

**PART 3 EXECUTION**

1. **EXAMINATION**
	1. Examine areas to receive doors.
	2. Notify architect of conditions that would adversely affect installation or subsequent use.
	3. Do not proceed with installation until unsatisfactory conditions are corrected.
2. **PREPARATION**
	1. Ensure openings to receive frames are plumb, level, square, and in tolerance.
3. **ERECTION**
	1. Install doors in accordance with manufacturer’s instructions.
	2. Install doors plumb, level, square, true to line, and without warp or rack.
	3. Anchor frames securely in place.
	4. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.
	5. Repair minor damages to finish in accordance with manufacturer’s instructions and as approved by architect.
	6. Remove and replace damaged components that cannot be successfully repaired as determined by architect.
4. **FIELD QUALITY CONTROL**
	1. Manufacture’s Field Services.
		1. Manufacturer’s representative shall provide technical assistance and guidance for installation of doors.
5. **ADJUSTING**
	1. Adjust doors, and hinges for smooth operation without binding.
6. **CLEANING**
	1. Clean doors promptly after installation in accordance with manufacturer’s instructions.
	2. Do not use harsh cleaning materials or methods that would damage finish.
7. **PROTECTION**
	1. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

**END OF SECTION**