SECTION 09 20 00

GLASS FIBER REINFORCED PLASTER FABRICATIONS

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\*\* NOTE TO SPECIFIER \*\* Castle Access Panels & Forms Inc.; Glass Reinforced Gypsum (GRG) and Glass Fiber Reinforced Cement (GFRC) access panels, domes and column cover products.
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This section is based on the products of Castle Access Panels & Forms Inc., which is located at:
173 Adesso Dr.
Unit 2
Concord, ON, Canada L4K 3C3
Phone: 905-738-8089
Fax: 905-760-9234
www.CastleAccessPanels.com
Request Information
Basic Use: Castle Access Panels & Forms, Inc., manufactures Glass Fiber Reinforced Gypsum (GRG) & Glass Fiber Reinforced Cement (GFRC) products for interior new construction and renovation projects. The GRG product line includes Access Panels. Domes, and Column Cover that replicate the appearance of plaster, but are significantly lighter and more versatile. Castle Access Panels & Forms, Inc. has both standard and custom designs for installation within shopping malls, churches, universities, office buildings, upscale residences and other architectural applications requiring strong, lightweight, flexible and fire retardant elements. GRC is a decorative non-load bearing material and as such the manufacturer cannot be held responsible for structural, load, or seismic considerations.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Access Panels.
		2. Domes.
		3. Column Covers.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 50 00 - Metal Fabrications.
		2. Section 06 10 00 - Rough Carpentry.
		3. Section 09 24 13 - Adobe Finish Portland Cement Plaster.
		4. Section 09 23 13 - Acoustical Gypsum Plastering Gypsum Plaster.
		5. Section 09 90 00 - Painting and Coating.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board
		2. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
		3. Green Building Council.
	1. DESIGN / PERFORMANCE REQUIREMENTS
		1. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
		2. ASTM C 926 - Standard Specification for Application of Portland Cement-Based Plaster
		3. ASTM E 84 - Standard Test method for Surface Burning Characteristics.
	2. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Indicate locations, type, overall dimensions, profile and joint treatment.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
			1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
			2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Manufacturer regularly engaged in the design and fabrication of GFRG and GFRC products
		2. Installer Qualifications: Installer regularly engaged and experienced in the installation of glass fiber reinforced fabrications.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Store products under cover on a level surface protected from weather, moisture and damage. Product shall be appropriately stored until installation
		3. Handling: Handle products to prevent damage to finished surfaces.
	2. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Castle Access Panels & Forms Inc., which is located at:173 Adesso Dr., Unit 2 Concord, ON, Canada L4K 3C3Tel: 905-738-8089 Fax: 905-760-9234 Email: [request info (inquiries@castleaccesspanels.com)](https://arcat.com/rfi?action=email&company=Castle%252BAccess%252BPanels%252B%252526%252BForms%252BInc.&message=RE%253A%2520Spec%2520Question%2520(09200cas)%253A%2520&coid=46034&spec=09200cas&rep=&fax=905-760-9234%2520);Web: <https://www.castleaccesspanels.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. GLASS FIBER REINFORCED PLASTER FABRICATIONS
		1. Continuous random filament glass fiber mat reinforcing of high density gypsum or cement fabrications. Cast or molded as determined by manufacturer. Glass mat and structural reinforcing as determined by manufacturer.
		2. Finish: Unfinished to receive field joint treatment and finish as specified in Section 09 24 13 - Adobe Finish Portland Cement Plaster for exterior applications and Section 09 23 13 - Acoustical Gypsum Plastering Gypsum Plaster for Interior applications.
		3. Physical Characteristics:
			1. Shell Thickness: 1/8 inch to 3/16 inch
			2. Fastener Test Pull Out (Wood Stud): 525 lbs average.
			3. Fastener Test Pull Out (Metal Stud): 215 lbs average.
			4. Fastener Push Through Test - 350 lbs average.
			5. Fuel Contribution: ASTM E 84 - 0
			6. Flame Spread: ASTM E 84 - 0
			7. Smoke Index: ASTM E 84 - 0
			8. Combustion: ASTM E 84 - Non-Combustible Class A Non-Rated

\*\* NOTE TO SPECIFIER \*\* Select the Products required from the following paragraphs and delete those not required.

* 1. ACCESS PANELS
		1. Material:

\*\* NOTE TO SPECIFIER \*\* Select the material required and delete the one not required.

* + - 1. Glass Fiber Reinforced Gypsum, Interior use. Requires field finishing.
			2. Glass Fiber Reinforced Cement, Exterior use. Requires field finishing.

\*\* NOTE TO SPECIFIER \*\* Select the Style(s) and type(s) required from the following three paragraphs and delete those not required.

* + 1. Square or Rectangular Pop-Out Access:
			1. Type:

\*\* NOTE TO SPECIFIER \*\* Select the type required and delete the one not required.

* + - * 1. Radius Corner
				2. Square Corner:
			1. Size:

\*\*\* NOTE TO SPECIFIER \*\* Select the size required and delete those not required.

* + - * 1. 9 inches by 9 inches
				2. 12 inches by 12 inches
				3. 12 inches by 18 inches
				4. 16 inches by 16 inches
				5. 18 inches by 18 inches
				6. 20 inches by 20 inches
				7. 24 inches by 24 inches
				8. 30 inches by 30 inches
				9. 12 inches by 18 inches
				10. 18 inches by 36 inches
				11. Custom as indicated on the Drawings.
		1. Round Pop-Out Access:
			1. Diameter:

\*\* NOTE TO SPECIFIER \*\* Select the size required and delete those not required.

* + - * 1. 12 inches
				2. 16 inches
				3. 18 inches
				4. 20 inches
				5. 24 inches
				6. 30 inches
				7. 36 inches
				8. Custom as indicated on the Drawings.
		1. Hinged Opening Square or Rectangular Access:
			1. Type:

\*\* NOTE TO SPECIFIER \*\* Select the type required and delete the one not required.

* + - * 1. Radius Corner
				2. Square Corner:
			1. Size:

\*\* NOTE TO SPECIFIER \*\* Select the size required and delete those not required.

* + - * 1. 9 inches by 9 inches
				2. 12 inches by 12 inches
				3. 12 inches by 18 inches
				4. 16 inches by 16 inches
				5. 18 inches by 18 inches
				6. 20 inches by 20 inches
				7. 24 inches by 24 inches
				8. Custom as indicated on the Drawings.
			1. Latch Type

\*\* NOTE TO SPECIFIER \*\* Select the latch required and delete those not required.

* + - * 1. Slotted Cam Latch
				2. Keyed Cam Latch
				3. Standard Mount Cam Latch
				4. Flush Mount Cam Latch

\*\* NOTE TO SPECIFIER \*\* The following paragraph is optional. Delete if not required.

* + 1. Accessories:
			1. Neoprene Gasket
	1. DOMES
		1. Material:

\*\* NOTE TO SPECIFIER \*\* Select the material required and delete the one not required.

* + - 1. Glass Fiber Reinforced Gypsum - Interior use. Requires field finishing.
			2. Glass Fiber Reinforced Cement - Exterior use. Requires field finishing.
		1. Description

\*\* NOTE TO SPECIFIER \*\* Select the design and size required and delete those not required.

* + - 1. Coffered Diameter 8 foot, Rise 2 foot.
			2. Coffered Diameter 11 foot, Rise 2 foot.
			3. Coffered Diameter 15 foot, Rise 2 foot.
			4. Smooth Diameter 12 inches. Rise 12 inches.
			5. Smooth Diameter 18 inches. Rise 12 inches.
			6. Smooth Diameter 3 foot Rise 6 to 12 inches.
			7. Smooth, Diameter 4 foot, Rise 6 to 12 inches.
			8. Smooth, Diameter 5 foot, Rise 6 to 12 inches.
			9. Smooth, Diameter 6 foot, Rise 8 to 14 inches.
			10. Smooth, Diameter 8 foot, Rise 10 to 16 inches.
			11. Smooth, Diameter 11 foot, Rise 36 inches.
			12. Smooth, Diameter 10 foot, Rise 2 inches.
			13. Custom as indicated on the Drawings.
	1. COLUMN COVERS
		1. Description: Manufactured as two 180 degree split sections. Column covers are recessed for tape and bed joints; they can be made without the recess for vertical caulk joints
		2. Material:

\*\* NOTE TO SPECIFIER \*\* Select the material required and delete the one not required.

* + - 1. Glass Fiber Reinforced Gypsum - Interior use. Requires field finishing.
			2. Glass Fiber Reinforced Cement - Exterior use. Requires field finishing.
			3. Cast Stone: Glass fiber reinforced cast stone for interior use. . Color as selected from manufacturers standard selections.
			4. Polished Stone: Glass fiber reinforced cement polished stone for interior use. Color as selected from manufacturers standard selections.
		1. Diameter:

\*\* NOTE TO SPECIFIER \*\* Select the size required and delete those not required.

* + - 1. 6 inches.
			2. 8 inches.
			3. 10 inches.
			4. 12 inches.
			5. 14 inches.
			6. 16 inches.
			7. 18 inches.
			8. 20 inches.
			9. 22 inches.
			10. 24 inches.
			11. 26 inches.
			12. 28 inches.
			13. 30 inches.
			14. 32 inches.
			15. 34 inches.
			16. 36 inches.
			17. 38 inches.
			18. 40 inches.
			19. 42 inches.
			20. 44 inches.
			21. 46 inches.
			22. 48 inches.
			23. Custom as indicated on the Drawings.
		1. Height: As indicated on the Drawings.
			1. Available up to 15 feet; columns are stepped off at exact heights indicated.
			2. Columns exceeding 15 feet are made in stacking sections for field assembly.
		2. Column Cover Bases: Manufactured as two 180 degree split sections.
			1. Material:

\*\* NOTE TO SPECIFIER \*\* Select the material required and delete the ones not required.

* + - * 1. Glass Fiber Reinforced Gypsum - Interior use. Requires field finishing.
				2. Glass Fiber Reinforced Cement - Exterior use. Requires field finishing.
				3. Cast Stone: Glass fiber reinforced cast stone for interior use. . Color as selected from manufacturers standard selections.
				4. Polished Stone: Glass fiber reinforced cement polished stone for interior use. Color as selected from manufacturers standard selections.
			1. Size: To match column specified.
			2. Design:

\*\* NOTE TO SPECIFIER \*\* Select the design and size required and delete those not required.

* + - * 1. 5510: Projection 1-7/8 inches, Height 5-1/2 inches.
				2. 5520: Projection 1-3/16 inches, Height 6-7/8 inches.
				3. 5530: Projection 1-11/16 inches, Height 4-1/2 inches.
		1. Column Cover Caps: Manufactured as two 180 degree split sections.
			1. Material:

\*\* NOTE TO SPECIFIER \*\* Select the material required and delete those not required.

* + - * 1. Glass Fiber Reinforced Gypsum - Interior use. Requires field finishing.
				2. Glass Fiber Reinforced Cement - Exterior use. Requires field finishing.
				3. Cast Stone: Glass fiber reinforced cast stone for interior use. . Color as selected from manufacturers standard selections.
				4. Polished Stone: Glass fiber reinforced cement polished stone for interior use. Color as selected from manufacturers standard selections.
			1. Size: To match column specified.
			2. Design:

\*\* NOTE TO SPECIFIER \*\* Select the design and size required and delete those not required.

* + - * 1. 5470: Projection 3-1/2 inches, Height 6-3/8 inches.
				2. 5480: Projection 2-1/2 inches, Height 5-3/8 inches.
				3. 5490: Projection 5-3/16 inches, Height 7 inches.
				4. 5500: Projection 2-5/8 inches, Height 9-3/4 inches.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
		3. Verify field dimensions before beginning installation.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Install temporary and permanent supplementary supports as required for proper installation.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Install plumb and true to line. Use shims were necessary.
		3. Install access panel frames with #6 buglehead screws in countersunk holes in frame.
		4. Provide expansion joints where moving joints occur in the supporting substrate.
		5. Coordinate installation and finish with Section 09 24 13 - Adobe Finish Portland Cement Plaster for exterior applications and Section 09 23 13 - Acoustical Gypsum Plastering Gypsum Plaster for Interior applications.
		6. Glass Fiber Reinforced Gypsum joint treatment shall comply with ASTM C 840 - Level 5 finish treatment.
		7. Glass Fiber Reinforced Cement joint treatment shall comply with ASTM C 926
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION