SECTION 09235 \*GFRG- For Interior Use only\*

PART 1 GENERAL

* 1. RELATED SECTIONS

All contract documents apply to work of this section: this includes but is not limited to: Drawings, Instructions to Bidders, General and Supplementary Conditions and Division One Administrative Sections of the Specifications.

1. Section 05500 – Metal Fabrications: Supplementary supports for large Items.
2. Section 06100 – Rough Carpentry: Supplementary supports for large items.
3. Section 09220 – Plaster and Gypsum Board: Supplementary supports for glass fiber reinforced gypsum.
4. Section 09900 – Paints and Coatings: Field painting and sealing prior to painting.
	1. SECTION INCLUDES
5. Glass fiber reinforced gypsum fabrications as indicated on drawings. For interior use only.
	1. REFERENCES
6. ASTM International (ASTM)
	1. C1381 Standard Specification for Molded Glass Fiver Reinforced Gypsum Parts.
	2. C1467 Standard Specification for the Installation of Molded Glass Fiver Reinforced Gypsum Parts.
	3. C1355 Standard Specification of Glass Fiver Reinforced Gypsum composites.
	4. C754 specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
	5. C840 Specification for Application and Finishing of Gypsum Board.
	6. SUBMITTALS
7. Submit under provisions of Section 01300.
8. Product Data: Manufacturer’s data sheets on each product to be used, including dimensions, finishes, storage and handling requirements and recommendation, and installation recommendations.
9. Shop Drawings: For custom items, provide drawings showing dimensions, layout, joints, details, and interface with adjacent work: include field measured dimension of the space where items are to be installed, if critical to proper installation.
10. Selection Samples: For Each product specified, two samples representing manufacturer’s full range of available finishes and textures.
11. Verification Samples: For each custom finish specified, two samples, minimum size 6 inches (150mm) square, representing actual product, color, and patterns.
12. Quality Assurance Submittals:
	1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
	2. Manufacturers Instructions: manufacturer’s installation instructions.
	3. Manufacturers Field Reports: manufacturer’s field reports specified herein.
13. Closeout submittals: Submit manufacturer’s standard warranty documents.
	1. QUALITY ASSURANCE
14. GFRG Parts and Installation to conform to ASTM Standards governing Molded Glass Fiber Reinforced Gypsum Parts, Namely: (Place ASTM Sections Here) including physical properties and tolerances. See 1.3 References.
15. Manufacturer Qualifications: Manufacturer shall have a minimum of 5 years experience having successfully supplied GFRG parts for other projects similar in scope and complexity for the work of this contract.
16. Installer Qualifications: Installer shall have a minimum o f 5 years experience having successfully installed GFRG parts for others projects similar in scope and complexity for the work of this contract.
17. Substrates to accept GFRG parts shall be installed straight and true within 1/8 in. in 8 linear ft. (3mm in 2500mm) in accordance to ASTM C1467 and shall be free of obstructions and interference that prohibits the correct alignment and attachment of the GFRG part.
	1. DELIVERY, STORAGE, AND HANDLING
18. Transport, lift, and handle units with care, avoiding excessive stress and preventing damage: use appropriate equipment.
19. Store Products in manufacturer’s unopened packaging until ready for installation, in a clean dry area protected from weather, moisture and damage: store units upright and not stacked unless permitted by manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

1. Acceptable manufacturer: Spectis Moulders Inc.; 100 Cedar Dr.; P.O. Box 970; Niverville, MB, Canada R0A 1E0; ASD. Toll Free: 800-685-9981; Phone: 204-388-6700; Fax: 204-388-6710; Email: contactus@spectis.com ; Web Site: www.spectis.com
2. Substitutions: Not permitted.
3. Requests for substitutions will be considered in accordance with provisions of section 01600.

2.2 Physical Properties

1. Glass Fiber Gypsum Fabrications: High Density gypsum reinforced with continuous filament glass fiber mat and structural reinforcing as required.
	1. Glass content: 5 to 6 percent by weight.
	2. Density: 103 to 112 pcf (1650 to 1795 kg/cu m)
	3. Shell Thickness: 1/8” to 3/16” (3 to 5 mm), nominal.
	4. Flame Spread Index: 0, when tested in accordance with ASTM E 84.
	5. Flexural Strength: 3200 to 4000 psi (22 to 27.5 MPa), When tested in accordance with ASTM D790.
	6. Modulus of Elasticity: 2.1 to 2.2 x 10^5 psi (1450 to 1515 MPa), When tested in accordance with ASTM D 790.
	7. Tensile Strength: 1200 to 1400 psi (8.3 to 9.6 MPa), when tested in accordance with ASTM D 638.
	8. Impacted Strength: 8.0 to 8.8 ft lb/sq in (13 to 14.4 J/sq mm), when tested in accordance with ASTM D 256.
	9. Hardness: Rockwell M72
	10. Variation from Dimensions Indicated on Drawings: Plus and minus 1/8 inch (3 mm), maximum.
	11. Outside Corners Radius: 1/16 inch to 1/8 inch per linear foot (1.5mm in 300mm), maximum.
	12. Draft Angle: 3 degrees, minimum, on returns, setbacks, reveals, and grooves.
	13. Items too large of heavy to be adhesively installed: provide concealed anchorage points for plaster type wire anchors.
2. Joint Cement: Portland Cement

PART 3 EXECUTION

3.1 EXAMINATION

1. Do not begin installation until substrates have been properly constructed; verify that substrates are plumb and true.
2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
3. Check field dimensions before beginning installation. If dimensions vary too much from design dimensions for proper installation, notify Architect and wait for instructions before beginning installation.

3.2 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 projects conditions.
3. Install supplementary temporary and permanent supports as required for proper installation.

3.3 INSTALLATION

1. Install in accordance with applicable code and manufacturer’s recommendations, plumb and true to line; shim where necessary.
2. Coordinate work with related gypsum wallboard work.
3. Join pieces with cemented butt joints except at control and expansion joints.
4. Provide control joints at no more than 35 feet (10.5m) on center if not indicated on drawings.
5. Provided expansion joints where moving joints is substrate occur.
6. Finish joints the same as specified for adjacent gypsum bard work in Section 09260.
7. Finish joints as surfaces as required for Level 5 in ASTM C 840.

3.4 PROTECTION

1. Protect installed products until completion of project.
2. Touch-up, repair or replace damaged products before substantial completion.

END OF SECTION