SECTION 06 16 43

GLASS REINFORCED GYPSUM SHEATHING

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\*\* NOTE TO SPECIFIER \*\* CertainTeed Gypsum, Inc.; Glass reinforced gypsum sheathing products.
 .
 This section is based on the products of CertainTeed Gypsum, Inc., which is located at:
4300 W. Cypress St. Suite 500
Tampa, FL 33607
Toll Free Tel: 800-233-8990
Fax: 610-341-7940
Email: [request info (building.solutions@saint-gobain.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=CertainTeed+Gypsum,+Inc.&coid=40568&rep=&fax=610-341-7940&message=RE:%20Spec%20Question%20(09253cet):%20%20&mf=)
Web: [www.certainteed.com/products/gypsum](http://www.certainteed.com/products/gypsum)
[ [Click Here](http://www.arcat.com/arcatcos/cos40/arc40568.html) ] for additional information.

 CertainTeed Corporation has helped shape the building products industry for more than 100 years. Founded in 1904 as General Roofing Company, the firm made its slogan 'Quality Made Certain. Satisfaction Guaranteed,' which inspired the name CertainTeed. Today, the product offering has been expanded to include gypsum board, exterior sheathing, and finishing products. CertainTeed Gypsum operates several gypsum board plants in North America, including its newest high-speed wallboard plant in West Virginia. In addition, a new Finishing plant was built in Las Vegas at the end of 2008 to serve that market.

 This specification includes GlasRoc Weather-resistant gypsum sheathing and Weather-resistant Type X gypsum sheathing produced with BPB's proprietary Enhanced Glass Reinforced Gypsum Technology. Weather resistant gypsum sheathing is an appropriate substrate in EIF Systems, one-coat and conventional stucco systems, traditional cladding systems, exterior ceilings, soffit systems and exterior curved applications.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Glass Reinforced Gypsum Sheathing.
		2. Sheathing joint-and-penetration treatment.
	1. RELATED SECTIONS

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

* + 1. Section 05 44 00 - Cold-Formed Metal Trusses.
		2. Section 06 10 00 - Rough Carpentry.
		3. Section 06 10 00 - Rough Carpentry.
		4. Section 07 21 16 - Blanket Insulation.
		5. Section 07 90 00 - Joint Protection.
		6. Section 07 24 00 - Exterior Insulation and Finish Systems.
		7. Section 09 26 00 - Veneer Plastering.
		8. Section \_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_. (Exterior Cladding).
	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 B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
		2. ASTM C 11 - Standard Terminology Relating to Gypsum and Related Building Materials and Systems.
		3. ASTM C 473 - Standard Test Methods for Physical Testing of Gypsum Panel Products.
		4. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
		5. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
		6. ASTM C 954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 inch to 0.112 inch in Thickness.
		7. ASTM C 1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
		8. ASTM C 1280 - Standard Specification for Application of Gypsum Sheathing.
		9. ASTM 1396 - Standard Specification for Gypsum Board.
		10. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
		11. ASTM D 3274 - Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Fungal or Algal Growth, or Soil and Dirt Accumulation.
		12. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
		13. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
		14. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
		15. CAN/ULC-S101 - Fire Endurance Tests of Building Construction and Materials.
		16. CAN/ULC-S102 - Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.
		17. ANSI/UL 263 - Fire Resistance Ratings.
		18. ULI - Fire Resistance Directory.
		19. ULC - Products Certified for Canada.
		20. GA-253 Gypsum Association, Recommended Specifications, Application of Gypsum Sheathing.
	1. DESIGN / PERFORMANCE REQUIREMENTS
		1. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 (UL 263, CAN/ULC-S101) by a testing and inspecting agency acceptable to authorities having jurisdiction.
		2. Fire-Resistance Ratings: Indicated by design designations from ULI and ULC "Fire Resistance Directory" and Products Certified for Canada.
	2. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		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. Design data test reports.
			4. Installation methods.
		3. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product.
		4. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	3. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum three years documented experience.
	4. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's packaging indicating manufacturer and product name and protect until ready for installation.
		2. Store materials protected against damage from weather, direct sunlight, surface contamination, construction traffic, or other causes.
		3. Stack CertainTeed GlasRoc Sheathing flat on leveled supports off the ground, under cover, and fully protected from weather.
		4. Store and support boards in flat stacks to prevent sagging. Protect materials to keep them dry. Protect boards to prevent damage to edges and surfaces.
	5. 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: CertainTeed Gypsum, Inc., which is located at: 4300 W. Cypress St. Suite 500; Tampa, FL 33607; Toll Free Tel: 800-233-8990; Fax: 610-341-7940; Email: [request info (building.solutions@saint-gobain.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=CertainTeed+Gypsum,+Inc.&coid=40568&rep=&fax=610-341-7940&message=RE:%20Spec%20Question%20(09253cet):%20%20&mf=); Web: [www.certainteed.com/products/gypsum](http://www.certainteed.com/products/gypsum)

\*\* 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. Single Source Responsibility: Obtain gypsum sheathing products, joint treatment, and accessories from a single manufacturer or from manufacturers recommended by prime manufacturer of gypsum sheathing products.
		3. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
	1. GYPSUM SHEATHING
		1. Gypsum Sheathing: Fully embedded glass mat gypsum sheathing meeting the requirements of ASTM C 1177 with water-resistant acrylic/gypsum facing.
			1. Product: GlasRoc Sheathing with EGRG technology, manufactured by CertainTeed Gypsum, Inc.
			2. Thickness: 1/2 inch (12.7 mm) thick.
			3. Properties:
				1. Flame spread: ASTM E 84 (CAN/ULC-S102): 0 maximum.
				2. Smoke developed: ASTM E 84 (CAN/ULC-S102): 0 maximum.
				3. Mold Resistance: 10 (No mold Growth) when tested in accordance with ASTM D 3273 and ASTM D 3274.
				4. Water Resistance:

Humidified Deflection (Sag), 1/16 inch (1.6 mm) as tested in accordance with ASTM C 473.

Permeance, 26 perms as tested in accordance with ASTM E 96.

* + - 1. Thermal Resistance, R 0.51 as tested in accordance with ASTM C 518.
			2. Size: 48 by 96 inches (1219 by 2438 mm); longer lengths are available to reduce number of joints.
		1. Fire Resistant Gypsum Sheathing: Fully embedded glass mat gypsum sheathing meeting the requirements of ASTM C 1177 and applicable ASTM C 931 and ASTM C 79 requirements with water-resistant acrylic/gypsum facing.
			1. Product: GlasRoc Sheathing Type X with EGRG technology, manufactured by CertainTeed Gypsum, Inc.
			2. Thickness: 5/8 inch (15.9 mm) thick where indicated and as otherwise required to meet fire rating for specific element.
			3. Properties:
				1. Flame spread: ASTM E 84 (CAN/ULC-S102): 0 maximum.
				2. Smoke developed: ASTM E 84 (CAN/ULC-S102): 0 maximum.
				3. Combustibility, noncombustible as tested in accordance with ASTM E 136.
				4. Mold Resistance: 10 (No mold Growth) when tested in accordance with ASTM D 3273.
				5. Water Resistance:

Humidified Deflection (Sag), 1/64 inch (0.4 mm) as tested in accordance with ASTM C 473.

Permeance, 21 perms as tested in accordance with ASTM E 96.

* + - 1. Thermal Resistance, R 0.51 as tested in accordance with ASTM C 518.
			2. Size: 48 by 96 inches (1219 by 2438 mm); longer lengths are available to reduce number of joints.
	1. SHEATHING JOINT-AND-PENETRATION TREATMENT MATERlALS
		1. Silicone Emulsion Sealant: Meeting ASTM C 920, Type S, Grade NS, compatible with glass fiber mesh tape and for covering exposed fasteners.
		2. Glass-Fiber Mesh Tape: Self-adhering glass-fiber tape, nominal 2 inches (51 mm) wide, 10 by 10 or 10 by 20 threads/inch (390 by 390 or 390 by 780 threads/m), of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing board and with a history of successful in-service use.
	2. ACCESSORY MATERlALS
		1. Fasteners:
			1. Sheathing: Steel drill screws or nails, in lengths recommended by sheathing manufacturer for thickness of sheathing board to be attached, with organic-polymer or other corrosion-protective coating.
			2. Ceiling/Soffits: For ceiling/soffit applications with Direct-Applied Exterior Finish Systems (DEFS) and painted ceilings/soffits, use fasteners having a salt spray resistance of more than 800 hours according to ASTM B 117 are recommended.
				1. For steel framing less than 0.0329 inch (0.835 mm) thick, attach sheathing with steel drill screws complying with ASTM C 1002.
				2. For steel framing from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick, attach sheathing with drill screws complying with ASTM C 954.
				3. For wood framing, attach with nails or screws of type and spacing as recommended by sheathing manufacturer.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until supports and substrates have been properly prepared.
		2. Verify that framing and supports are ready to receive work and opening dimensions are as indicated on the Drawings.
		3. If support and substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	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. GYPSUM SHEATHING INSTALLATION
		1. Install in accordance with manufacturer's written instructions, ASTM C 1280, GA-253 and applicable building codes.
		2. Install CertainTeed GlasRoc Sheathing with acrylic coated side (logo side) out. Boards are also printed with "This Side Out" on the face side.
		3. Cut boards at penetrations, edges, and other obstructions of work and fit tightly against abutting construction, unless otherwise indicated.
		4. Install boards with a 3/8-inch (10 mm) setback where non-load-bearing construction abuts structural elements.
		5. Install boards with a 1/4-inch (6 mm) setback where they abut masonry or similar materials that might retain moisture, to prevent wicking.
		6. Allow no joints greater than 1/8 inch (3 mm).
		7. Coordinate sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevents exterior moisture from passing through completed exterior wall assembly.
		8. Apply fasteners so screw heads bear tightly against face of sheathing boards but do not cut into facing.
		9. Do not bridge building expansion joints with sheathing; cut and space edges to match spacing of structural support elements.
		10. Horizontal Installation: Install sheathing with long edges in contact with edges of adjacent boards without forcing.
			1. Abut ends of boards over centers of stud flanges, and stagger end joints of adjacent boards not less than one stud spacing.
			2. Screw-attach boards at perimeter and within field of board to each steel stud.
			3. Space fasteners approximately 8 inches (200 mm) o.c. (or tighter spacing if recommended by manufacturer for specific application) and set back a minimum of 3/8 inch (10 mm) from edges and ends of boards.
			4. Treat board joints, when required by local building code or exterior finish system, per manufacturer's written instructions.
	4. SHEATHING JOINT-AND-PENETRATION TREATMENT
		1. Seal all sheathing joints, as required, according to sheathing manufacturer's written recommendations.
			1. If a weather seal is required before the application of a water-resistive barrier, apply silicone emulsion sealant on joints and trowel flat. Apply sufficient quantity of sealant to completely cover joints after troweling. Seal other penetrations and openings. Check with the water-resistive barrier manufacturer for installation instructions prior to the application of sealant.
			2. As an alternate to separate water-resistive barrier - Apply glass-fiber mesh tape to fiberglass reinforced gypsum sheathing board joints, and apply and trowel silicone emulsion sealant to embed sealant in entire face of tape. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.
		2. Water-Resistant Barriers: Consult building code authority having jurisdiction for requirements regarding water-resistive barrier installation, if necessary.

\*\* NOTE TO SPECIFIER \*\* Weather resistant gypsum sheathing is an appropriate substrate in EIF Systems, one-coat and conventional stucco systems, traditional cladding systems, exterior ceilings, soffit systems and exterior curved applications. Coordinate with the requirements of the Finish System manufacturer. Insert the proper section reference below.

* 1. FINISH SYSTEM
		1. Coordinated with the requirements of the exterior finish as specified in Section \_\_\_\_\_\_\_\_.
	2. PROTECTION
		1. Protect installed products until completion of project.
		2. Repair or replace damaged products before Substantial Completion.

END OF SECTION