SECTION 07 24 00

EXTERIOR INSULATION AND FINISH SYSTEMS

StoTherm ci Mineral 5600M and StoTherm ci MVES

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

*Copyright 2018 - 2021 ARCAT, Inc. - All rights reserved*

\*\* NOTE TO SPECIFIER \*\* Sto Corporation; Integrated exterior wall systems; EIFS.
This section is based on the products of Sto Corporation, which is located at:
3800 Camp Creek Parkway
Building 1400, Suite 120
Atlanta, GA 30331
Toll Free: 800-221-2397
Phone: 404-346-3666
Fax: 404-346-3119
Email: \_\_\_\_\_\_\_\_.
Web: www.stocorp.com
[Click Here] for more information
Sto is the leading global producer of a broad range of next-generation building envelope solutions and coating systems for building construction, maintenance and restoration. For more than 35 years, we have led the way in building technology, while providing customers with the most experienced technical support in the industry.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Air and moisture barrier. (StoGuard)
		2. Air and moisture barrier with continuous mineral wool insulation. (StoTherm ci Mineral 5600M)
		3. Air and moisture barrier with continuous expanded polystyrene insulation. (StoTherm ci MVES)
	1. RELATED SECTIONS

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

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
		2. Section 04 20 00 - Unit Masonry.
		3. Section 06 16 36 - Wood Panel Product Sheathing.
		4. Section 07 27 19 - Plastic Sheet Air Barriers .
		5. Section 07 27 00 - Air Barriers.
		6. Section 07 50 00 - Membrane Roofing.
		7. Section 07 60 00 - Flashing and Sheet Metal.
		8. Section 07 90 00 - Joint Protection.
		9. Section 08 11 00 - Metal Doors and Frames.
		10. Section 08 40 00 - Entrances, Storefronts, and Curtain Walls.
		11. Section 08 50 00 - Windows.
	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 International (ASTM):
			1. ASTM B117 - Test Method for Salt Spray (Fog) Testing.
			2. ASTM C150 - Standard Specification for Portland Cement.
			3. ASTM C297 - Test Method for Tensile Strength of Flat Sandwich Constructions in Flat wise Plane.
			4. ASTM C578 - Specification for Preformed, Cellular Polystyrene Thermal Insulation.
			5. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
			6. ASTM C1177 - Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
			7. ASTM C1382 - Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints.
			8. ASTM D968 - Test Method for Abrasion Resistance of Organic Coatings by Falling Abrasive.
			9. ASTM D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
			10. ASTM D2247 - Practice for Testing Water Resistance of Coatings in 100 percent Relative Humidity.
			11. ASTM D3273 - Test for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
			12. ASTM E72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
			13. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
			14. ASTM E96 - Test Method for Water Vapor Transmission of Materials.
			15. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
			16. ASTM E330 - Test Method for Structural Performance of Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
			17. ASTM E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
			18. ASTM E1233 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Difference.
			19. ASTM E2098 - Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish System after Exposure to a Sodium Hydroxide Solution.
			20. ASTM E2134 - Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS).
			21. ASTM E2178 - Test Method for Air Permeance of Building Materials.
			22. ASTM E2273 - Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish System (EIFS) Clad Wall Assemblies.
			23. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
			24. ASTM E2430 - Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems (EIFS).
			25. ASTM E2485 - Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings.
			26. ASTM E2486 - Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS).
			27. ASTM E2568 - Standard Specification for PB Exterior Insulation and Finish Systems.
			28. ASTM E2570 - Test Method for Water-Resistive (WRB) Coatings used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage.
			29. ASTM G153 - Recommended Practice for Operating Light-and Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Nonmetallic Materials.
			30. ASTM G154 - Recommended Practice for Operating Light-and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials.
		2. American National Standards Institute (ANSI):
			1. ANSI 118 - American National Standards for the Installation of Ceramic Tile.
		3. Building Code Standards:
			1. AC 235 - Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (November, 2009).
		4. National Fire Protection Association (NFPA) Standards:
			1. NFPA 268 - Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.
			2. NFPA 285 - Standard Fire Test Method for Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies containing Combustible Components.
		5. Other Referenced Documents:
			1. American Association of Textile Chemists and Colorists AATCC-127 Water Resistance: Hydrostatic Pressure Test.
			2. APA Engineered Wood Association E 30, Engineered Wood Construction Guide.
			3. ICC-ES ESR-1233, StoGuard with Gold Coat, StoGuard with EmeraldCoat, and StoGuard VaporSeal Water-Resistive Barriers and StoEnergy Guard.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Manufacturer's code compliance report or test summary.
			3. Manufacturer's standard warranty.
			4. Applicator's industry training credentials.
			5. Preparation instructions and recommendations.
			6. Storage and handling requirements and recommendations.
			7. Typical installation methods.
			8. Sealant manufacturer's certificate of compliance with ASTM C 1382.
			9. Prepare and submit project specific details when required by contract documents.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
		2. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Requirements:
			1. Member in good standing of the EIFS Industry Members Association (EIMA).
			2. Air and moisture barrier and EIFS manufacturer for a minimum of thirty years.
			3. Manufacturing facilities ISO 9001:2008 Certified Quality System and ISO 14001:2004 Certified Environmental Management System.
		2. Contractor Requirements:
			1. Engaged in application of similar systems for a minimum of 3 years.
			2. Knowledgeable in proper use and handling of Sto materials.
			3. Employ skilled mechanics who are experienced and knowledgeable in air and moisture barrier and EIFS application, and familiar with requirements of specified work.
			4. Successful completion of minimum of 3 projects of similar size and complexity to the specified project.
			5. Provide proper equipment, manpower and supervision on job site to install system per Sto's published specifications, details, project plans, and specifications.

\*\* NOTE TO SPECIFIER \*\* Delete insulation options not required.

* + 1. Insulation Board Manufacturer Requirements, Mineral Wool:
			1. Owens Corning Thermafiber Mineral Wool CI-C SC18 insulation board in conformance with ASTM C612, Type IV requirements, nominal 7.0 lb/ft3 density (112 kg/m3 ), 2ft x 4ft width x length (0.6 x 1.2 m), 2 inches (51 mm), 3 inches (76 mm) or 4 inches (102 mm) thick, and R4.0 per inch (RSI - 0.705).
		2. Insulation Board Manufacturer Requirements, EPS:
			1. EPS board listed by an approved agency
			2. EPS board manufactured under Sto licensing agreement and recognized by Sto as being capable of producing EPS insulation board to meet EIFS requirements
			3. EPS board labeled with information required by Sto, the approved listing agency, and the applicable building code.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if project size or quality warrant the expense. The following is one example of how a mock-up on 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: Construct a full-scale mock-up, with actual materials, of typical air and moisture barrier and EIFS, window and wall assembly in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. Test air and water infiltration and structural performance per ASTM E283, ASTM E331 and ASTM E330, respectively, through independent laboratory.
			3. Mock-up shall comply with requirements of project specifications.
			4. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			5. Where mock-up is tested at job site maintain approved mock-up at site as reference standard.
			6. If tested off-site accurately record construction detailing and sequencing of approved mock-up for replication during construction.
			7. Retain mock-up during construction as a standard for comparison with completed work.
			8. Do not alter or remove mock-up until work is completed or removal is authorized.
		2. Inspections:
			1. Provide independent third party inspection where required by code or contract documents.
			2. Conduct inspections in accordance with code requirements and contract documents.
	1. COORDINATION AND SCHEDULING
		1. Work in this section requires close coordination with related sections and trades. Sequence work to provide protection of construction materials from weather deterioration.
		2. Convene a conference approximately two weeks before scheduled commencement of Work. Attendees to include Architect, Contractor and trades involved. Agenda to include schedule, responsibilities, critical path items and approvals.
		3. Provide site grading such that the EIFS terminates above grade a minimum of 6 inches (150 mm) or as required by code.
		4. Coordinate installation of foundation waterproofing, roofing membrane, windows, doors and other wall penetrations to provide a continuously connected air and moisture barrier.
		5. Provide protection of rough openings before installing windows, doors, and other penetrations through the wall.
		6. Install window and door head flashing immediately after windows and doors are installed.
		7. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.
		8. Install splices or tie-ins from air and moisture barrier over back leg of flashings, starter tracks, and similar details to form a shingle lap that directs incidental water to the exterior.
		9. Install copings and sealant immediately after installation of the EIFS when coatings are dry, and such that, where sealant is applied against the EIFS surface, it is applied against the base coat or primed base coat surface.
		10. Schedule work such that air and moisture barrier is exposed to weather no longer than 180 days if Sto Gold Coat is used.
		11. Attach penetrations through the EIFS to structural support and provide water tight seal at penetrations.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store mineral wool and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Deliver materials in their original sealed containers bearing manufacturer's name and identification of product.
		3. Protect coatings (pail products) from freezing and temperatures in excess of 90 degrees F (32 degrees C). Store away from direct sunlight.
		4. Protect Portland cement based materials (bag products) from moisture and humidity. Store under cover off the ground in a dry location.
		5. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT AND SITE CONDITIONS

\*\* NOTE TO SPECIFIER \*\* Weather conditions affect application and drying time of most products. Hot or dry conditions limit working time and accelerate drying and may require adjustments in the scheduling of work to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing.

* + 1. Maintain ambient and surface temperatures above 40 degrees F (4 degrees C) during application and drying period, minimum 24 hours after application of air and moisture barrier and EIFS products.
		2. Provide supplementary heat for installation in temperatures less than 40 degrees F (4 degrees C).
		3. Provide protection of surrounding areas and adjacent surfaces from application of products.
	1. WARRANTY
		1. Provide manufacturer's standard warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturers: Sto Corporation which is located at: 3800 Camp Creek Parkway, Building 1400, Suite 120; Atlanta, GA 30331; ASD Toll Free: 800-221-2397; Phone: 404-346-3666; Fax: 404-346-3119; Email: \_\_\_\_\_\_\_\_; Web: www.stocorp.com
		2. Substitutions: Not permitted.
		3. Owens Corning - Specially designed mineral wool insulation board for compatibility with Sto materials.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. AIR AND MOISTURE BARRIER
		1. StoGuard as manufactured and supplied by the Sto Corporation.
		2. Joint Treatment, Rough Opening Protection of Frame Walls, and Detail Components:

\*\* NOTE TO SPECIFIER \*\* Select any of the listed joint treatment/rough opening protection/detail component options and top coat with one of the listed air barrier coatings. Delete joint treatments not required.

* + - 1. StoRapidGuard: One component STPE rapid drying gun-applied treatment.
				1. For Sheathing joints, seams, cracks, penetrations and other transitions in above grade wall construction.
			2. Sto Gold Coat: Ready mixed coating. Ready mixed, brush, roller or spray applied.
				1. For sheathing when used with StoGuard Fabric.
				2. A detail component with StoGuard Fabric to splice over back flange of starter track, flashing, and similar ship lap details.
		1. Waterproof Coating: Ready mixed waterproof coating.

\*\* NOTE TO SPECIFIER \*\* Delete waterproof coating not required.

* + - 1. Sto Gold Coat: For concrete, concrete masonry, wood-based and glass mat gypsum sheathing.
		1. Transition Detail Components:

\*\* NOTE TO SPECIFIER \*\* Delete detail components not required.

* + - 1. StoGuard Transition Membrane: Flexible air barrier.
				1. For continuity at static transitions such as sheathing to foundation, dissimilar materials (CMU to frame wall), wall to balcony floor slab or ceiling, and shingle lap transitions to flashing.
				2. Dynamic Joints: Floor line deflection joints, masonry control joints, and through wall joints in masonry or frame construction.
			2. Sto RapidGuard: One component STPE rapid drying gun-applied treatment:
				1. For sheathing joints, rough openings, seams, cracks, penetrations and other static transitions in above grade wall construction.

Shingle laps to flashing; wall to balcony floor slab or ceiling.

Through wall penetrations; pipes, electrical boxes, and scupper penetrations.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. AIR AND MOISTURE BARRIER WITH CONTINUOUS MINERAL WOOL INSULATION
		1. StoTherm ci Mineral as manufactured and supplied by the Sto Corporation.
		2. Joint Treatment, Rough Opening Protection of Frame Walls, and Detail Components:

\*\* NOTE TO SPECIFIER \*\* Select any of the listed joint treatment/rough opening protection/detail component options and top coat with one of the listed air barrier coatings. Delete joint treatments not required.

* + - 1. StoRapidGuard: One component STPE rapid drying gun-applied treatment.
				1. For Sheathing joints, seams, cracks, penetrations and other transitions in above grade wall construction.
			2. Sto Gold Coat: Ready mixed coating. Ready mixed, brush, roller or spray applied.
				1. For sheathing when used with StoGuard Fabric.
				2. A detail component with StoGuard Fabric to splice over back flange of starter track, flashing, and similar ship lap details.
		1. Air and Moisture Barrier Coating: Sto Gold Coat. For concrete, concrete masonry, wood-based and glass mat gypsum sheathing.
		2. Static or Dynamic Transition Detail Components:
			1. StoGuard Transition Membrane: Flexible air barrier.
				1. For continuity at static transitions such as sheathing to foundation, dissimilar materials (CMU to frame wall), wall to balcony floor slab or ceiling, and shingle lap transitions to flashing.
				2. Dynamic Joints: Floor line deflection joints, masonry control joints, and through wall joints in masonry or frame construction.
		3. Adhesive: Sto BTS Plus: Factory blended one-component polymer-modified Portland cement based high build adhesive.
		4. Insulation Board: Owens Corning Thermafiber Mineral Wool CI-C SC18, conforming with ASTM C612,
			1. Type IV Requirements:
				1. Density: 7.0 lb per cu ft (112 kg per cu m).
				2. Dimensions (WxL): 2 x 4 ft (0.6 x 1.2 m).

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

Thickness: 2 inches (51 mm).

Thickness: 3 inches (76 mm).

Thickness: 4 inches (102 mm).

* + - * 1. R-Value: 4.0 per inch (RSI - 0.705).
		1. Thermal Dowel and Fasteners: Sto Thermo Dowel, 2-3/8 inch (60 mm) diameter with 1/4 inch (6 mm) corrosion resistant star head type screw fastener for wood frame, steel frame, or masonry wall construction.
		2. Base Coat:
			1. Sto BTS Plus: Factory blended one component polymer modified Portland cement based high build base coat. Also used as a leveler for concrete and masonry surfaces
			2. Waterproof Base Coat:

\*\* NOTE TO SPECIFIER \*\* For use as a waterproof base coat over Sto BTS Plus for foundations, parapets, splash areas, trim and other projecting architectural features. Delete the following base coat option not required.

* + - * 1. Sto Flexyl. Fiber reinforced acrylic based waterproof base coat mixed with Portland cement.
				2. Sto Watertight Coat. Pre-packaged two component fiber reinforced acrylic based waterproof base coat.
		1. Reinforcing Meshes:
			1. Glass fiber fabric with alkaline resistant coating for compatibility with Sto materials.

\*\* NOTE TO SPECIFIER \*\* Delete mesh options not required.

* + - 1. Medium Impact Resistance: 25 to 49 in-lb (2.83 to 5.54 J). Symmetrical, interlaced open-weave.
				1. Sto Mesh 4.5 oz: 4.5 oz per sq yd (153 grams per sq m).
			2. High Impact Resistance: 90 to 150 in-lbs (10.2 to 17 J). Symmetrical, interlaced open-weave.
				1. Sto Mesh 6 oz: 6.0 oz per sq yd (203 grams per sq m).
			3. Ultra-High Impact Resistance: Greater than 150 in-lbs (17 J). Ultra-high impact, interwoven, open weave.

\*\* NOTE TO SPECIFIER \*\* Recommended to a minimum height of ft (1.8 m) above finished grade at all areas accessible to pedestrian traffic and other areas exposed to abnormal stress or impact.

* + - * 1. Sto Intermediate Mesh: 11.0 oz per sq yd (373 grams per sq m).
			1. Specialty Meshes: Flexible, symmetrical, interlaced.

\*\* NOTE TO SPECIFIER \*\* Used for standard back wrapping, pre-wrapping, and aesthetic detailing such as reveals, chamfers, and trim.

* + - * 1. Sto Detail Mesh: 4.2 oz per sq yd (143 grams per sq m).
		1. Primer:

\*\* NOTE TO SPECIFIER \*\* Delete primer option not required.

* + - 1. StoPrime Sand: Acrylic based, tintable, with sand for roller application.
			2. StoPrime Smooth: Acrylic based tintable, smooth.
		1. Finish Coat: Stolit Series textured finishes and Sto Specialty textured finishes.

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required.

* + - 1. Stolit: Acrylic based, integrally colored textured finish.
			2. Stolit X: Acrylic-based, integrally colored textured finish for superior fade resistance.
			3. Stolit Lotusan: Integrally colored textured finish with Lotus-Effect technology.
			4. Sto Decocoat: Acrylic based, textured finish with variegated aggregate for superior abrasion resistance.
			5. StoCreativ Granite: Acrylic based, textured finish providing the look of cut or polished granite.
			6. StoCreativ Lux: Acrylic based, textured finish providing a modern look with the added luster of reflective materials.
			7. Sto GraniTex: Acrylic based, textured finish in a range of color combinations designed to look and feel like natural stone.
		1. Job Mix Ingredients: Potable water.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + 1. Accessories:
			1. Sto-Mesh Corner Bead Standard: One component PVC (polyvinyl chloride) with integral reinforcing mesh for outside corner reinforcement.
			2. Sto Drip Edge Profile: One component PVC (polyvinyl chloride) with integral reinforcing mesh creating a drip edge and plaster return.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. AIR AND MOISTURE BARRIER WITH CONTINUOUS EPS INSULATION
		1. Performance and Design Requirements:
			1. Maximum Thickness in Type I, II, III, or IV Construction: 4 inches (102 mm).
			2. EIFS assembly shall not detract from hourly rating of concrete or concrete masonry wall assembly.
			3. Maximum Allowable Deflection: L/360.
			4. Design Wind Load: In accordance with code requirements.
			5. Prevent the accumulation of water behind the EIFS or into the wall assembly, either by condensation or leakage through the wall construction, in the design and detailing of the wall assembly.
			6. Provide expansion, control, and cold joints, where they exist in supporting construction.
			7. Do not install below grade.
			8. Air and Moisture Barrier Performance:
				1. Weathering, AATCC 127: No cracking, bond failure or water penetration after 210 hours UV exposure, 25 wet to dry cycles, and 21.6 inch (550 mm) water column.
				2. Durability, ASTM E1233, ASTM E72, and ASTM E331: No cracking or water penetration at sheathing joints after 10 cycles transverse loading, 1 cycle racking, 5 cycles environmental conditioning, and 15 minute water spray at 2.86 psf (137 kPa) pressure differential.
				3. Water Resistance, ASTM D2247: Absence of deleterious effects after 14 day exposure.
				4. Water Vapor Transmission, ASTM E96: 10 perms.
				5. Air Leakage, Material, ASTM E2178: Maximum 0.004 cfm/sq.ft. at 1.57 psf (0.02 L/s.sq.m. at 75 Pa).
				6. Air Leakage, Assembly, ASTM E2357: Maximum 0.04 cfm/sq.ft. (0.2 L/s.sq.m.).
				7. Freeze-Thaw, ASTM E2485: No delamination or surface changes after 10 cycles when viewed under 5X magnification.
				8. Surface Burning, ASTM E84:

Flame Spread: Less than 25.

Smoke Developed: Less than 450.

* + - * 1. Tensile Bond, ASTM C297: Greater than 15 psi (103 kPa).
			1. Air and Moisture Barrier and EIFS with AMV Fire Performance:
				1. Fire Endurance, ASTM E119: Pass, 1-hour, with 4 inches (102 mm) insulation.
				2. Intermediate Scale Multi-Story Fire Test, NFPA 285: Pass with 4 inches (102 mm) insulation.
				3. Radiant Heat Ignition, NFPA 268: Pass with 1 and 4 inches (25 and 102 mm) insulation.
			2. EIFS Component Performance:
				1. Alkali Resistance of Reinforcing Mesh, ASTM E2098: Greater than 120 pli (21 dN/cm) retained tensile strength.
				2. Requirements for Rigid PVC Accessories, ASTM D1784: Meets cell classification 13244C.
		1. Basis of Design: StoTherm ci MVES as manufactured and supplied by the Sto Corporation.
		2. Joint Treatment, Rough Opening Protection of Frame Walls, and Detail Components:

\*\* NOTE TO SPECIFIER \*\* Select any of the listed joint treatment/rough opening protection/detail component options and top coat with one of the listed air barrier coatings. Delete joint treatments not required.

* + - 1. Sto Gold Fill: Ready mixed coating applied by trowel or knife.
				1. For sheathing when used with StoGuard Mesh.
				2. A detail component with StoGuard Mesh to splice over back flange of starter track, flashing, and similar ship lap details.
			2. Sto Gold Coat: Ready mixed coating applied by brush, roller or spray applied.
				1. For sheathing when used with StoGuard Fabric.
				2. A detail component with StoGuard Fabric to splice over back flange of starter track, flashing, and similar ship lap details.
			3. StoRapidGuard: One component STPE rapid drying gun-applied treatment.
				1. For Sheathing joints, seams, cracks, penetrations and other transitions in above grade wall construction.
		1. Air and Moisture Barrier Coating: Sto Gold Coat. For concrete, concrete masonry, wood-based and glass mat gypsum sheathing.
		2. Transition Detail Components:
			1. StoGuard Transition Membrane: Flexible air barrier.
				1. For continuity at static transitions such as sheathing to foundation, dissimilar materials (CMU to frame wall), wall to balcony floor slab or ceiling, and shingle lap transitions to flashing.
				2. Dynamic Joints: Floor line deflection joints, masonry control joints, and through wall joints in masonry or frame construction.
			2. Sto RapidGuard Transition Membrane: One component STPE rapid drying gun-applied treatment.
				1. For sheathing joints, rough openings, seams, cracks, penetrations and other static transitions in above grade wall construction.
		3. Adhesive: Sto TurboStick: One-component polyurethane spray foam adhesive.
		4. Insulation Board: EPS Insulation Board, conforming with ASTM C2430 and ASTM C578 Type I, nominal density of 1.0 lb per cu ft (16 kg per cu m).
		5. Base Coat: Acrylic based base coat mixed with Portland cement.
		6. Reinforcing Meshes:
			1. Glass fiber fabric with alkaline resistant coating for compatibility with Sto materials.

\*\* NOTE TO SPECIFIER \*\* Delete mesh options not required.

* + - 1. Standard Mesh: 90 to 150 in-lbs (10.2 to 17 J). Symmetrical, interlaced open-weave.
				1. Sto Mesh 6 oz: 6.0 oz per sq yd (203 grams per sq m).
			2. Specialty Meshes: Flexible, symmetrical, interlaced.

\*\* NOTE TO SPECIFIER \*\* Used for standard back wrapping, pre-wrapping, and aesthetic detailing such as reveals, chamfers, and trim.

* + - * 1. Sto Detail Mesh: 4.2 oz per sq yd (143 grams per sq m).
		1. AMV Adhesive: StoColl KM, polymer modified portland cement adhesive mortar.
		2. AMV Grout and Pointing Mortar: A.Polymer modified portland cement grout in conformance with ANSI 118.7.
		3. Fasteners:
			1. Wind-lock corrosion resistant fastener with 1-1/4 inch (32mm) diameter galvanized steel lath-platem legless, washer.
			2. Fastener type and length sufficient for minimum 3 thread penetration into steel studs and minimum 1 inch (25mm) penetration into concrete or CMU construction.
		4. Fasteners:
			1. Wind-lock corrosion resistant fastener with 1-1/4 inch (32mm) diameter galvanized steel lath-platem legless, washer.
			2. Fastener type and length sufficient for minimum 3 thread penetration into steel studs and minimum 1 inch (25mm) penetration into concrete or CMU construction.
	1. JOB MIXED INGREDIENTS
		1. Water: Clean and potable.
		2. Portland Cement: Type I, Type II, or Type I-II in conformance with ASTM C 150.
	2. ACCESSORlES

\*\* NOTE TO SPECIFIER \*\* Delete any paragraphs not required or keep all.

* + 1. Starter Track: Rigid polyvinyl chloride plastic track Part No. STDE as furnished by Plastic Components, Inc., 9051 NW 97th Terrace, Miami, FL 33178.
		2. Sto-Mesh Corner Bead Standard: One component polyvinyl chloride accessory with integral reinforcing mesh for outside corner reinforcement.
		3. Sto Drip Edge Profile: One component polyvinyl chloride accessory with integral reinforcing mesh that creates a drip edge and plaster return.
1. EXECUTION
	1. EXAMINATION
		1. Inspect concrete and masonry substrates prior to start of application.
			1. No Contamination: Algae, chalkiness, dirt, dust, efflorescence, form oil, fungus, grease, laitance, mildew or other foreign substances.
			2. Surface absorption and chalkiness.
			3. Cracks: Measure crack width and record location of cracks.
			4. Damage and deterioration such as voids, honeycombs and spalls.
			5. Moisture Content and Moisture Damage: Use moisture meter to determine if surface is dry enough to receive products and record any areas of moisture damage.
			6. Compliance with Specification Tolerances: Record areas out of tolerance greater than 1/4 inch (6 mm) in 96 inch (2438 mm) deviation in plane.
		2. Inspect sheathing application for compliance with applicable requirement and installation in conformance with specification and manufacturer requirements.
			1. Glass mat faced gypsum sheathing per ASTM C 1177.
			2. Exterior grade and exposure 1 wood based sheathing per APA Engineered Wood Association E 30.
			3. Cementitious Sheathing: Consult manufacturer.
			4. Attachment into structural supports with adjoining sheets abutted, gapped if wood-based sheathing, and fasteners at required spacing to resist design wind pressures as determined by design professional.
			5. Fasteners seated flush with sheathing surface and not over-driven.
		3. Report deviations from requirements of project specifications or other conditions that might adversely affect the Air and Moisture Barrier and the EIFS installation to the General Contractor. Do not start work until deviations are corrected.
	2. SURFACE PREPARATION
		1. Remove surface contaminants on concrete, concrete masonry, gypsum sheathing, or coated gypsum sheathing surfaces.
		2. Repair cracks, spalls or damage in concrete and concrete masonry surfaces and level concrete and masonry surfaces to comply with required tolerances.
		3. Apply conditioner (consult Sto) by spray or roller to chalking or excessively absorptive surfaces or pressure wash to remove surface chalkiness.
		4. Remove fasteners that are not anchored into supporting construction and seal holes with air barrier material.
		5. Seal over-driven fasteners with air barrier material and install additional fasteners as needed to comply with fastener spacing requirement.
		6. Fill large gaps between sheathing or voids around pipe, conduit, scupper, and similar penetrations with spray foam and shave flush with surface (refer to Sto Details).
		7. Replace weather-damaged sheathing and repair or replace damaged or cracked sheathing.
	3. MIXING

\*\* NOTE TO SPECIFIER \*\* Delete mixing requirements not required.

* + 1. Sto Gold Fill: Mix with a clean, rust-free high speed mixer to a uniform consistency.
		2. Sto Gold Coat: Mix with a clean, rust-free high speed mixer to a uniform consistency.
		3. Stolit X: Mix with a clean, rust-free high speed mixer to a uniform consistency.
		4. Sto Prime Sand: Mix in accordance with manufacturer's recommendations.
		5. Sto BTS Plus:
			1. Mix Ratio with Water: 5 to 6.5 quarts (4.7 to 6.2 L) of water per 47 lb (21.3 kg) bag of Sto BTS Plus.
				1. Pour water into a clean mixing pail. Add Sto BTS Plus and mix to a uniform consistency and allow to set for approximately 5 minutes.
				2. Adjust mix if necessary with additional Sto BTS Plus or water and remix to a uniform trowel consistency.
				3. Avoid retempering. Keep mix ratio consistent. Do not exceed maximum water amount in mix ratio.
		6. Sto Flexyl: Waterproof base coat.
			1. Mix Ratio with Portland Cement: 1:1 by weight.
				1. Pour Sto Flexyl into a clean mixing pail. Add portland cement, mix to a uniform consistency and allow to set for approximately five minutes.
				2. Adjust mix if necessary with additional Sto Flexyl and remix to a uniform trowel consistency.
				3. Avoid retempering. Keep mix ratio consistent.
		7. Sto Watertight Coat:
			1. Pour liquid component into a clean mixing pail.
			2. Add dry component, mix to a uniform consistency and allow to set for approximately five minutes.
			3. Adjust mix if necessary and remix to a uniform trowel consistency.
			4. Avoid retempering. Keep mix ratio consistent.
		8. Sto Primer: Mix with a clean, rust-free high speed mixer to a uniform consistency.
		9. Sto Primer/Adhesive: Mix ratio with portland cement is 1:1 by volume
			1. Pour Sto Primer/Adhesive into a clean mixing pail.
			2. Add portland cement, mix to a uniform consistency and allow to set for approximately five minutes.
			3. Adjust mix if necessary by adding up to 8 fluid ounces (0.24L) of potable water per pail and remix to a uniform trowel consistency.
			4. Avoid retempering.
			5. Keep mix ratio consistent.
		10. StoColl KM, mix ratio with water: 8.5 quarts (8.1L) potable water to one 55 lb. (25kg) bag of adhesive.
			1. Mix with a slow speed electric drill and paddle.
			2. Pour water into a clean mixing container.
			3. Mix while slowly adding the product to the water.
			4. Mix for approximately 2 minutes, allow to set for approximately 5 minutes, then re-mix for approximately 30 seconds to achieve a uniform, lump-free consistency.
			5. Avoid retempering.
			6. Do not overmix.
			7. Keep mix ratio consistent
		11. Stolit Lotusan: Mix with a clean, rust-free high speed mixer to a uniform consistency. Small amounts of water may be added to adjust workability. Limit addition of water to amount needed to achieve the finish texture.
		12. Stolit: Mix with clean, rust-free high speed mixer to a uniform consistency. Small amounts of water may be added to adjust workability. Limit addition of water to amount needed to achieve the finish texture.
		13. Stolit X: Mix with clean, rust-free high speed mixer to a uniform consistency. Small amounts of water may be added to adjust workability. Limit addition of water to amount needed to achieve the finish texture.
		14. Grout / Pointing Mortar - mix in conformance with manufacturer's written instructions.
		15. Mix only as much material as can readily be used.
		16. Do not use anti-freeze compounds or other additives.
	1. INSTALLATION

\*\* NOTE TO SPECIFIER \*\* Delete installation options not required.

* + 1. Install in accordance with StoTherm ci Mineral Design Guide, StoTherm ci Mineral Install Guide, approved submittals, and in proper relationship with adjacent construction.
		2. Install in accordance with StoTherm ci MVES Design Guide, StoTherm ci MVES Install Guide, approved submittals, and in proper relationship with adjacent construction.
	1. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Provide protection of installed materials from water infiltration into or behind them.
		2. Provide protection of installed materials from dust, dirt, precipitation, freezing and continuous high humidity until they are fully dry.
		3. Clean and maintain the EIFS for a fresh appearance and to prevent water entry into and behind the system. Repair cracks, impact damage, spalls or delamination promptly.
		4. Maintain adjacent components of construction such as sealants, windows, doors, and flashing, to prevent water entry into or behind the EIFS and anywhere into the wall assembly.
		5. Refer to Sto reStore Repair and Maintenance Guide, reStore Program, for detailed information on restoration; cleaning, repairs, recoating, resurfacing and refinishing, or re-cladding

END OF SECTION