

Building with conscience.





## **Design Guide**



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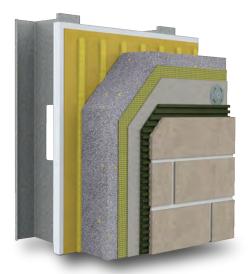
#### **ATTENTION**

The final design of any project is the sole responsibility of the Design Professional, with considerations for compliance of local building and design codes and requirements. Sto Corp. accepts no liability for design, engineering, or workmanship of any project. The information provided herein is in addition to other technical data provided by Sto Corp. (System Bulletin, Specification, Guide Details, etc). For more information, please visit www.stocorp.com

#### Sto Corp.

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#### StoTherm®ci MVES

StoTherm®ci MVES (Masonry Veneer Engineered System) is an exterior insulated wall cladding with adhered masonry veneer and is intended for use on vertical above grade exterior walls. It incorporates an air and water-resistive barrier (AWRB) and continuous exterior insulation attached with vertical ribbons of adhesive to the AWRB, which forms a drainage cavity. A glass fiber mesh reinforced base coat is installed over the continuous insulation, which serves as a base to attach thin brick, thin natural stone, ceramic tile, or manufactured stone with Sto high performance masonry veneer adhesive. The system combines seamlessly with other Sto decorative and protective architectural finishes on a single substrate to facilitate design and installation detailing.

NOTE: Sto documents referenced in this booklet are in **bold** and can be viewed or downloaded by visiting the documentation center at www.stocorp.com, where other information - Guide Specification, System Bulletin, and Product Bulletins – is also available.

#### **Fluid-Applied Membranes**



**Sto Gold Coat®** - Spray or roller applied vapor-permeable air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.



**Sto Gold Coat® TA** - Trowel applied vapor-permeable air and water-resistive barrier for use with StoTherrm®ci, StoPowerwall® and StoQuik® systems.



**Sto AirSeal®** - Spray or roller applied vapor-permeable air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.



**StoGuard VaporSeal®** - Spray or roller applied Class 1 vapor retarder. Also functions as an air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.

#### **Detail Component Products**



**Sto RapidGuard®** - One component air barrier and waterproof material used to protect rough openings, sheathing joints, seams, cracks, penetrations, and other transitions in above grade wall construction.



**StoGuard® Conformable Membrane** - A versatile, easy to install membrane that simplifies detailing of transitions for air barrier continuity in Sto proprietary wall systems and other wall assemblies.



**StoGuard® Fabric** - Non-woven cloth reinforcement used to treat sheathing joints and rough openings when embedded in Sto Gold Coat®, Sto AirSeal® or StoGuard® VaporSeal.



#### **Detail Component Products** (cont'd)



**StoGuard® RediCorner** - A preformed StoGuard® fabric piece used in the corners of rough openings for quicker installation.



**Sto Gold Fill®** - Trowel applied compound used with StoGuard® Mesh or StoGuard® Detail Mesh to treat rough openings and sheathing joints.



**Sto Detail Mesh** - Glass fiber reinforcement mesh used with Sto Gold Fill and Sto Gold Coat TA.



**StoGuard® Transition Membrane** - Flexible air barrier material used to make connections with adjoining construction and dissimilar materials, and to bridge dynamic joints.

#### Adhesives and Insulation



**Sto TurboStick®** - is a ready-to-use, single component polyurethane foam adhesive used for securing insulation panels to the substrate and filling seams and gaps in insulation board surface.



**StoColl** - polymer modified portland cement adhesive mortar for installing Adhered Masonry Veneer (AMV) - thin brick, thin stone, ceramic tile, and manufactured stone.



**Sto GPS Board**: Graphite enhanched polystyrene insulation (GPS) board for higher R-value per thickness, in conformance with ASTM E2430 and ASTM C578, Type I.



**Sto EPS Insulation Board**: Expanded polystyrene insulation (EPS) board in compliance with ASTM E2430 and ASTM C578, Type I.

#### **Base Coats**



**Sto Primer/Adhesive** - A two-component polymer modified, trowel applied base coat consisting of an acrylic admixture mixed with Type I portland cement.



#### **Primers**



**StoPrime® Sand** - A roller, brush or sprayed applied, tintable, sanded primer used to reduce surface water absorption of the base coat, and to enhance finish color, texture, and coverage of finishes.



**StoPrime®** - A roller, brush or sprayed applied, tintable, used to reduce surface water absorption of the base coat, and to enhance finish color, texture, and coverage of finishes.



**StoPrime® UV** - A roller, brush or sprayed applied primer used for prepared concrete, masonry, plaster, EIFS base coat, or drywall surfaces prior to application of Sto Finishes and Coatings

#### **Finishes**

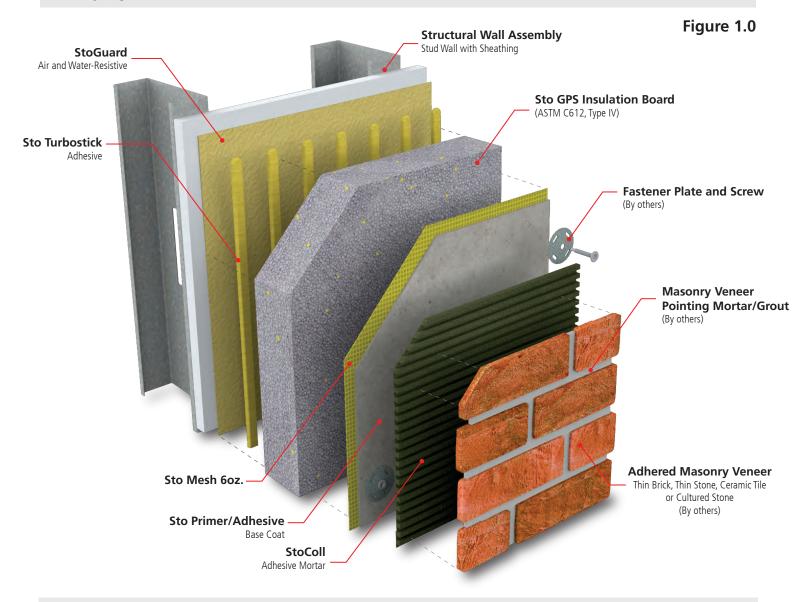


**Masonry Veneer Pointing Mortar/Grout** - Joint filler, polymer modified portland cement pointing mortar or grout in conformance with ANSI 118.7. (furnished by others).



**Adhered Masonry Veneer** - Masonry veneer wall cladding: thin brick, thin stone, ceramic tile, or cultured stone, in conformance with applicable building code requirements (furnished by others).





#### **Structural Considerations**

- 1. StoTherm®ci MVES is a non-structural exterior wall cladding. It is non-load bearing and does not provide racking resistance, nor is it to be used as a base for mechanical anchoring of attachments such as signage or light fixtures. The structural backup wall, typically concrete, concrete masonry, or a frame wall with sheathing, must be designed and built for these purposes in accordance with the applicable building code.
- 2. <u>Wind Loads</u>: Design deflection criteria for StoTherm ci® MVES is L/360. StoTherm®ci MVES transfers positive wind loads to the supporting wall construction and resists negative wind loads via adhesive attachment to a substrate.

Frame Wall Construction: The system requires minimum 2x4 wood studs or minimum 18 gage steel studs with maximum stud spacing of 16 inches (406mm) on center.

Generally, StoTherm®ci MVES is not the determinant of ultimate wind load capacity on frame walls. The supporting frame wall construction, or sheathing attachment, typically dictates ultimate load capacity of the assembly. Consult ICC ESR-1748 for allowable wind loads (published values have a safety factor of 3 applied to ultimate loads). In some cases, such as painted wall substrates, where adhesion may not be possible, full mechanical attachment is necessary. Refer to ICC ESR-1030 for information on allowable wind loads of mechanically attached StoTherm® ci systems.



#### **Fire Protection**

StoTherm®ci MVES uses combustible foam plastic insulation as its insulating component. Use of foam plastics on exterior walls is covered in Chapter 26 of the IBC (International Building Code), which requires certain tests to allow use of foam plastics on noncombustible construction. Based on testing and evaluation of StoTherm ci MVES in accordance with NFPA 285 and NFPA 268 (and other fire tests and criteria listed in the code), the system complies with requirements for use on noncombustible construction (Types I, II, III, and IV). The system may also be used on combustible (Type V) construction.

Where a fire resistance rating is required, in general, StoTherm®ci MVES does not add to nor detract from the rating of an hourly rated load bearing or non-load bearing concrete, concrete masonry, or steel frame base wall assembly, based on testing in accordance with ASTM E119.

Refer to ICC ESR-1748 for more information on tested assemblies. Note that certain assemblies may be extended beyond the recognition provided in the ICC evaluation report through engineering judgments on file at Sto Corp., or by way of modeling or rational analysis applied to the particular product or assembly in question.

#### **Moisture Protection**

<u>General</u>: StoTherm®ci MVES has redundant built-in moisture protection with StoGuard®, the air and water-resistive barrier component in the assembly. StoGuard® is applied to the structural backup wall and protects against water damage from rain during construction when the building is "closed-in," and in the event of a breach in the wall cladding while in service. StoGuard® is available as a vapor permeable or vapor impermeable fluid-applied membrane.

The system also has built-in drainage capability. When properly combined with flashing, the system effectively drains water, based on testing in accordance with ASTM E2273.

StoGuard® is not intended to correct faulty design or workmanship, such as the absence or improper integration of flashing, roofing, copings, and sealants in the construction, which shed water and prevent water entry into wall construction. StoGuard® is not intended to correct defective components of construction such as windows that leak into the wall assembly. Basic principles that should be followed in the design, detailing, and construction of the wall assembly include:

- 1. <u>Flashing</u>: Provide flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, at floor lines, and at the base of the wall.
- 2. <u>Air Leakage Prevention</u>: Provide continuity of the air barrier assembly at foundation, roof, windows, doors, and other penetrations through the wall with connecting and compatible air barrier components, to minimize condensation caused by air movement. In most cases StoGuard® Detail Components will facilitate detailing at these transitions. Take into account construction sequencing when designing an airtight assembly and the effects of airtightness on mechanical ventilation in the overall project design.
- 3. <u>Water Vapor Diffusion</u>: Perform a dew point analysis and/or dynamic hygrothermal modeling of the wall assembly to determine the potential for accumulation of moisture by diffusion of water vapor. Adjust insulation thickness and/or other wall assembly components accordingly to eliminate or minimize the risk of a dew point in the wall assembly. Avoid the use of vapor retarders on the interior side of the wall in hot, humid climates.



#### Moisture Protection (cont'd)

4. <u>Terminations and Sealants:</u> Provide minimum 1/2 inch (13 mm) wide perimeter sealant joints at all penetrations through StoTherm®ci MVES (windows, doors, scuppers, mechanical, electrical, and plumbing penetrations, etc.).

Size joints at terminations based on anticipated movement and specify sealant and backer rod that is compatible with StoTherm® ci MVES, supported by the sealant manufacturer's certificate of compatibility. Typically, sealant is adhered to the StoTherm®ci MVES reinforced base coat or primed base coat, or to the masonry veneer unit.

Arrange for field adhesion testing to verify adhesion compatibility and obtain the sealant manufacturer's adhesion data to the sealant substrate(s).

Maintain air barrier continuity across joints. Drain joints to the exterior or provide other means to prevent or control water infiltration at joints.

- 5. <u>Grade Condition:</u> Provide minimum 6-inch (152mm) clearance above grade or as required by code. Do not specify StoTherm® ci MVES for use below grade.
- 6. <u>Testing:</u> Conduct mock-up testing of the opaque wall-to-window assembly and other critical construction details to verify performance air leakage resistance (ASTM E283), resistance to wind-driven rain (ASTM E331), and wind load resistance (ASTM E330).

Do not use StoTherm®ci MVES on surfaces subject to continuous or intermittent water immersion or hydrostatic pressure. Prevent the accumulation of water behind StoTherm ci MVES, either by condensation or water leakage into the wall construction, in the design and detailing of the wall assembly, and with proper sequencing and protective measures during construction.

For further information see Sto Tech Hotline No. 0403-BSc, Critical Detail Checklist for Wall Assemblies, Sto Tech Hotline No. 0603-BSc, Moisture Control Principles for Design and Construction of Wall Assemblies, and Sto Tech Hotline No. 1001-BSc, Effects of Temporary Heating on Construction Materials in Cold Weather.

#### **Impact Resistance**

The adhered masonry veneer provides resistance to impacts from blunt and sharp objects and is often specified for use at ground floors, areas with high pedestrian traffic, and other areas that are susceptible to damage from impacts.

StoTherm®ci MVES meets FBC (Florida Building Code) and Miami-Dade County test protocols for large and small missile impact resistance.

#### **Acoustics**

Acoustical controls are achieved primarily in the base wall assembly, for example, in frame wall construction through the use of batt insulation in the stud wall cavity, gypsum sheathing, and wood or metal stud configuration. Refer to the Gypsum Association Fire Resistance and Sound Control Design Manual for technical data on performance of base wall assemblies.



#### **Aesthetics**

A wide variety of aesthetic choices exist with thin brick, thin natural stone, ceramic tile, and manufactured stone that integrate seamlessly with Sto architectural finishes. Dark colored veneer units [LRV (Light Reflectance Value) less than 20] are not recommended unless reviewed by the design professional with regard to service temperature limitations of the foam plastic insulation [(limited to a maximum service temperature of 165°F (74.8°C)] and anticipated in-service temperatures on the facade.

Do not use StoTherm®ci MVES on top of parapets or on large weather exposed projecting ledges, sills, or other projecting features unless supported by framing or other structural support and protected with metal coping or flashing.

Adhered masonry veneer units are limited in thickness, size and weight by the IBC (International Building Code) and IRC (International Residential Code). For example, maximum allowable weight is 15 lb/ft2 (73.2 kg/m2). Maximum size is not to exceed 24 inches (610mm) in any face dimension and total area of the face dimension is not to exceed 3 ft2 (0.28m2). Refer to **Sto Tech Hotline No. 0821-M, Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction**, for additional information.

#### **Joints**

Joints are required at:

- · Joints in the supporting wall construction such as expansion joints, control joints, and cold joints
- · Perimeters of windows, doors, scuppers, fixture attachments, and similar objects in the wall construction
- · Changes in substrate or support construction (e.g., masonry to frame wall) or other junctures with dissimilar construction
- · Floor lines in multi-story wood frame wall construction
- · Floor line deflection joints
- · Changes in building height and other areas of stress concentration
- · Areas of not greater than 144 ft2 (13.4m²) with length or height not exceeding 12 ft (3.6m) for ceramic tile, and not more than 18 ft (5.5m) for brick or stone, and with length/height or height/length ratio not greater than 2-1/2 to 1. Note: dark colored veneer units may require closer spacing due to increased thermal movement.

Do not bridge expansion joints, control joints, or cold joints in wall construction with StoTherm ci MVES.

Mortar Joints in adhered masonry veneer: must be grouted / pointed with grouting mortar in compliance with ANSI 118.7, except where open joints are permitted for manufactured stone. Refer to **Sto Tech Hotline No. 0821-M, Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction**. Note: grout is furnished by others.

#### **Regulatory Compliance**

The StoTherm®ci MVES System complies with the weather resistance requirements of the 2018 IBC Sections 1407.2 and 1407.4 and complies with requirements of Chapter 26 for use on noncombustible construction (Types I, II, II, and IV), and in fire-resistance rated wall assemblies. The system also complies with ASHRAE 90.1-2019 Section 5, Building Envelope, air barrier and continuous insulation requirements.



#### **Regulatory Compliance**

StoGuard® complies with IBC (International Building Code), IRC (International Residential Code), and IECC (International Energy Conservation Code) requirements as an air barrier material and water-resistive barrier (WRB). It meets requirements as an air barrier material based on testing in accordance with ASTM E2178 and as an air barrier assembly based on testing in accordance with ASTM E2357. Refer to ICC ESR-1233.

The adhered masonry veneer mortar component of the system complies with the shear bond strength requirements of IBC Section 1404.10 (as explained in Section 12.3 of TMS 402, The Masonry Society, Building Code Requirements and Specifications for Masonry Structures).

All Sto architectural coatings, textured and specialty finishes, primers, sealers, waterproofers, and underlayments comply with South Coast Air Quality Management District (South Coast AQMD) volatile organic compound (VOC) requirements.

Masonry veneer units are supplied by others and must be in compliance with applicable regulatory requirements (ASTM C1088 for thin brick, ICC AC 51 for manufactured stone, ASTM C1242 for natural stone, and ANSI 137.1 for ceramic tile), while being certified for exterior use by the manufacturer and for the climate zone in which they are intended to be used. Refer to **Sto Tech Hotline**No. 0821-M, Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction, for more information.

#### Thermal Insulation

StoTherm®ci MVES uses graphite enhanced expanded polystyrene (GPS) or expanded polystyrene (EPS) insulation board as the thermal insulating component. The insulation board is applied adhesively to StoGuard on a supporting substrate to create a continuous exterior insulating thermal barrier. Thickness is limited based on structural considerations and fire testing.

One of two types of insulation board can be used:

- 1. Sto GPS Board in conformance with ASTM E2430 and ASTM C578 Type I requirements. R-value is R-4.7 F•ft²•h/Btu per inch thickness at 75°F (RSI-0.83 K•m²/W per 25mm at 24°C). Minimum thickness is 1-1/16 inch (27mm). Maximum thickness is 12 inches (305mm). If walls are required to have an hourly fire-resistance rating, maximum thickness is 4 inches (102mm).
- 2. Sto EPS Insulation Board in conformance with ASTM E2430 and ASTM C578 Type I requirements. R-value is 3.6 F-ft²-h/Btu per inch thickness at 75°F (RSI-0.634 K-m²/W per 25mm at 24°C). Minimum thickness is 1 inch (25mm) and maximum thickness is 12 inches (305mm). If walls are required to have an hourly fire-resistance rating, maximum thickness is 4 inches (102mm).

Refer to ICC ESR-1748 for additional information and verification of building code compliance.

Insulation material is flammable and must be kept away from flame, ignition sources, high heat and temperatures in excess of 165°F [74.8° C]).



#### **Sustainability**

StoTherm® ci MVES has high potential for LEED and other sustainability program credits based on efficient and effective use of a continuous air barrier, continuous exterior insulation, and the resulting energy savings and reductions in greenhouse gas emissions. The system also has positive impacts on life cycle energy use based on reduced dead load, which permits the use of lighter gage metal studs, and supporting structural members and foundation footings, when compared to full thickness/weight masonry veneer units. The use of light gage metal framing with recycled content and StoPanel prefabricated wall construction offers additional means to obtain credits. Refer to StoPanel Technology information and ICC ESR-4500.

#### Accessories

- 1. Fasteners (by others) Wind-lock corrosion resistant fastener with 1-1/4 inch (32mm) diameter galvanized steel lath-plate (legless) washer. Fastener type and length must be sufficient for minimum 3 thread penetration into steel studs and minimum 1 inch (25mm) penetration into concrete or CMU wall construction. Fasteners are not required at ground floors up to a height of 10ft (3m) above grade.
- 2. StoSeal STPE Sealant, a high-movement, low modulus, non-sag one-component silyl-terminated polyether joint sealant in compliance with ASTM C920 and tested in accordance with ASTM C1382.

Table 1.1 - StoGuard® Air & Water-Resistive Barrier Product Applications

StoGuard <sup>®</sup> Detail Component	Sheathing Joints and Corners	Flashing and Rough Opening Protection	Penetrations	Static Joints and Seams	Dynamic Joints
Sto RapidGuard®	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>	
StoGuard <sup>®</sup> Conformable Membrane	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
StoGuard® Fluid Applied Air & Water-Resistive Barrier with StoGuard® Fabric	<b>✓</b>	✓	<b>✓</b>		
StoGuard® Transition Membrane embedded with any StoGuard® Fluid Applied Air & Water-Resistive Barrier				<b>√</b>	<b>√</b>
Sto Gold Fill with StoGuard® Mesh (or Sto Detail Mesh embedded)	<b>√</b>	<b>√</b>	<b>√</b>		
Sto Gold Coat® TA with StoGuard® Mesh	<b>√</b>	<b>√</b>	<b>√</b>		

¹ StoGuard® Fluid Applied Air & Water-Resistive Barriers: Sto AirSeal®, Sto Gold Coat®, Sto Gold Coat®TA, StoGuard®VaporSeal®



#### **Additional Information**

Refer to Sto product bulletins, guide specifications and guide details, technical hotlines, ICC Evaluation Reports, and other sources of information available at www.stocorp.com for more details on specific Sto products, features, benefits, and limitations that apply to StoTherm® ci wall systems and components.

#### References:

- 1. American Society of Testing and Materials International (ASTM), Standard Specification for Rigid Cellular Polystyrene Thermal Insulation, ASTM C578.
- 2. American Society of Testing and Materials International (ASTM), Standard Specification for Thin Brick Veneer Units Made from Clay or Shale, ASTM C1088.
- 3. American Society of Testing and Materials International (ASTM), Standard Guide for Selection, Design, and Installation of Dimension Stone Attachment Systems, ASTM C1242.
- 4. American Society of Testing and Materials International (ASTM), Standard Test Methods for Fire Tests of Building Construction and Materials, ASTM E119.
- 5. American Society of Testing and Materials International (ASTM), Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen, ASTM E283.
- 6. American Society of Testing and Materials International (ASTM), Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, ASTM E330.
- 7. American Society of Testing and Materials International (ASTM), Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference, ASTM E331.
- 8. American Society of Testing and Materials International (ASTM), Standard Test Method for Determining Rate of Air Leakage Rate and Calculation of Air Permeance of Building Materials, ASTM E2178.
- 9. American Society of Testing and Materials International (ASTM), Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish System (EIFS) Clad Wall Assemblies, ASTM E2273.
- 10. American Society of Testing and Materials International (ASTM), Standard Specification for Expanded Polystyrene ("EPS") Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems ("EIFS"), ASTM E2430.
- 11. American Society of Testing and Materials International (ASTM), Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies, ASTM E2357.
- 12. American Society of Refrigeration and Air Conditioning Engineers (ASHRAE), Energy Efficiency Standard for Buildings Except Low-Rise Residential Buildings, ANSI/ASHRAE/IES Standard 90.1-2019.
- 13. American National Standards Institute, High Performance Cement Grouts for Tile Installation, ANSI 118.7
- 14. American National Standards Institute, Standard Specification for Ceramic Tile, ANSI 137.1.
- 15. Gypsum Association, Fire Resistance and Sound Control Design Manual, GA-600-2021.
- 16. International Code Council Evaluation Service, Acceptance Criteria for Adhered Manufactured Stone Masonry Veneer, AC 51, 2018.
- 17. International Code Council Evaluation Service, Sto Rainscreen and Sto Rainscreen II Class PB Exterior Insulation and Finish Systems with Drainage, ICC ESR-1030.
- 18. International Code Council Evaluation Service, StoGuard with Sto Gold Coat, StoGuard with Sto EmeraldCoat, and StoGuard VaporSeal Air Barriers and Water-resistive Barriers, and StoEnergy Guard (StoGuard with Continuous Insulation), ICC ESR-1233.
- 19. International Code Council Evaluation Service, StoTherm ci, StoTherm ci MVES, and StoTherm ci with StoCast Finishes, ICC ESR-1748.
- 20. International Code Council Evaluation Service, StoPanel Classic ci, StoPanel Impact ci, StoPanel XPS, StoPanel Classic NEXT ci, and StoPanel Backup, ICC ESR-4500.
- 21. International Code Council, Inc., 2018 International Building Code (IBC).
- 22. International Code Council, Inc., 2018 International Energy Conservation Code (IECC).
- 23. International Code Council, Inc., 2018 International Residential Code (IRC).
- 24. The Masonry Society, Building Code Requirements and Specification for Masonry Structures, TMS 402/602-16, 2016.
- 25. National Fire Protection Association (NFPA), Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source, NFPA 268.
- 26. National Fire Protection Association (NFPA), Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components, NFPA 285.
- 27. Sto Corp., Critical Detail Checklist for Wall Assemblies, TH-0403-BSc.
- 28. Sto Corp., Moisture Control Principles for Design and Construction of Wall Assemblies, TH-0603-BSc.
- 29. Sto Corp., Quick Reference Guide on Adhered Masonry Veneer in Exterior Wall Construction, TH-0821-M.
- Sto Corp. Effects of Temporary Heating on Construction Materials in Cold Weather, TH-1001-BSc.



## **Design Details**

Components System Components	57s.00
Installation at Grade  Termination at Grade - Sheathing Flush with Foundation or Slab Edge  Termination at Grade - Sheathing Overlapping Slab or Foundation	
Installation at Windows  Receptor-Type Window Sill - Step 1  Receptor-Type Window Sill - Step 2  Receptor-Type Window Sill - Step 3  Receptor-Type Window Head - Step 1  Receptor-Type Window Head - Step 2  Receptor-Type Window Head - Step 3  Flanged Window-Sill - Step 1  Flanged Window-Sill - Step 2  Flanged Window-Sill - Step 3  Flanged Window-Head - Step 3  Flanged Window-Head - Step 1  Flanged Window-Head - Step 1  Flanged Window-Head - Step 2  Flanged Window-Head - Step 3	57s.23A-2 57s.23A-3 57s.23B-1 57s.23B-2 57s.23B-3 57s.24A-1 57s.24A-2 57s.24A-3 57s.24B-1
Installation at Soffit Insulated and Unvented Insulated and Unvented with StoCast Wood Uninsulated and Vented Uninsulated and Vented with StoCast Wood	57s.30 SCW
Installation at Floor Line  Floor Line Without Deflection	57s.41A 57s.41B
Installation at Balcony Ceiling, Floor, Wall  Balcony Floor/Wall  Balcony Ceiling/Wall	
Installation at Dissimilar Materials  Horizontal Termination at Dissimilar Cladding	57s.51A 57s.51B 57s.52A
Installation at Corners Inside Corner with Dissimilar Backup Inside and Outside Corner with Common Substrate and Sto Mesh Corner Bead Reinforcement Inside and Outside Corner with Common Substrate and Sto Mesh Reinforcement	57s.54A

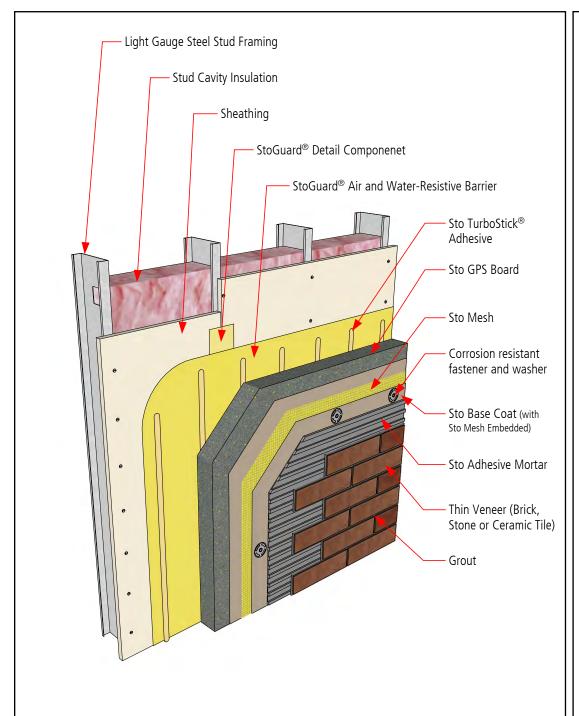


## Design Details (cont'd)

Installation at Joints Thin Veneer Expansion Joint	57s.55
Installation at Parapet  Termination at Parapet - Front  Termination at Parapet - Back  Parapet with Cornice Feature	57s.60B
Installation at Roof/Wall Abutment  Diverter Flashing at Roof/Wall Abutment  Gravel Stop  Saddle Flashing at Lower/Higher Wall Abutment -Step 1  Saddle Flashing at Lower/Higher Wall Abutment -Step 2  Saddle Flashing at Lower/Higher Wall Abutment -Step 3	57s.63 57s.64-1 57s.64-2
Installation at Penetrations Scupper Penetration Pipe Penetration - Precision Cut Sheathing Pipe Penetration - Rough Cut Sheathing Sign Attachment Fixture Attachment Deck Connection over Steel Frame	57s.70A 57s.70B 57s.71 57s.73



## StoTherm® ci MVES System Components



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.00

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

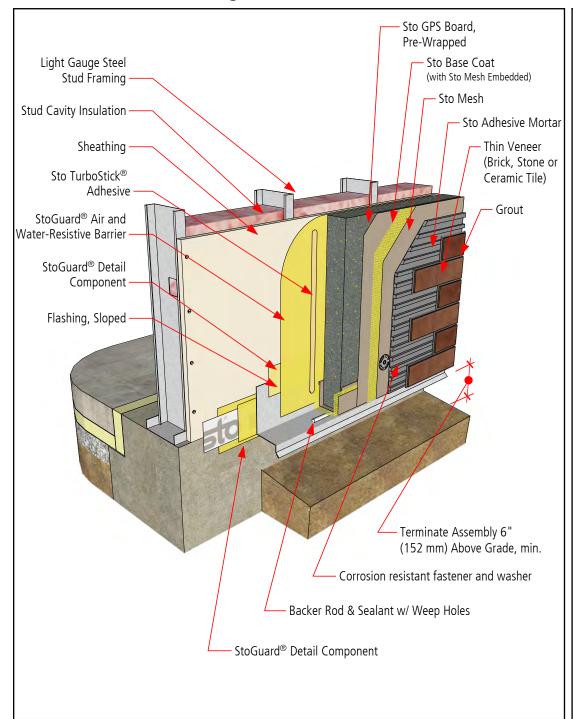
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Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sts instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, of for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to Sto products, and to the structure of the building or its components.



# StoTherm® ci MVES Termination at Grade - Sheathing Flush with Foundation or Slab Edge



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.03A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

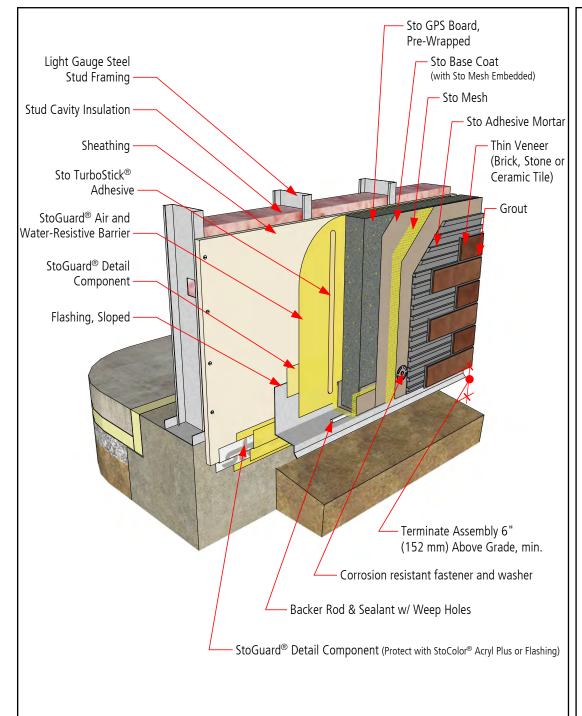
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## StoTherm® ci MVES Termination at Grade - Sheathing Overlapping Slab or Foundation



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.03B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

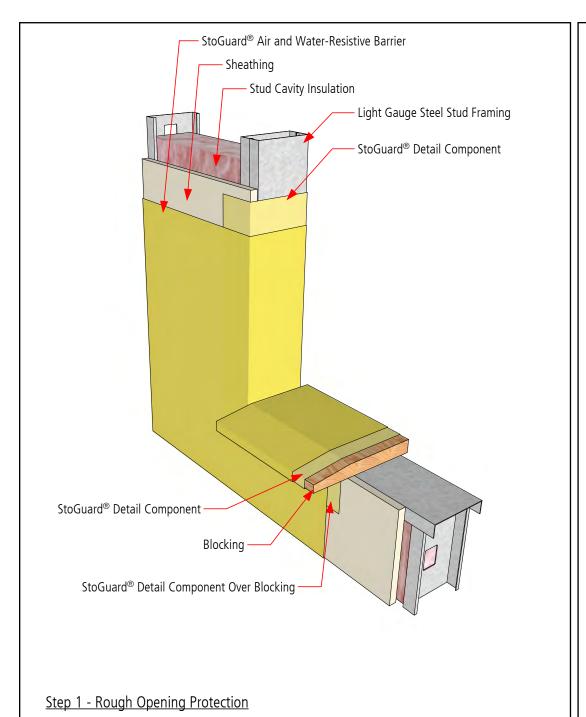
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## StoTherm® ci MVES Receptor-Type Window Sill



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.23A-1

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

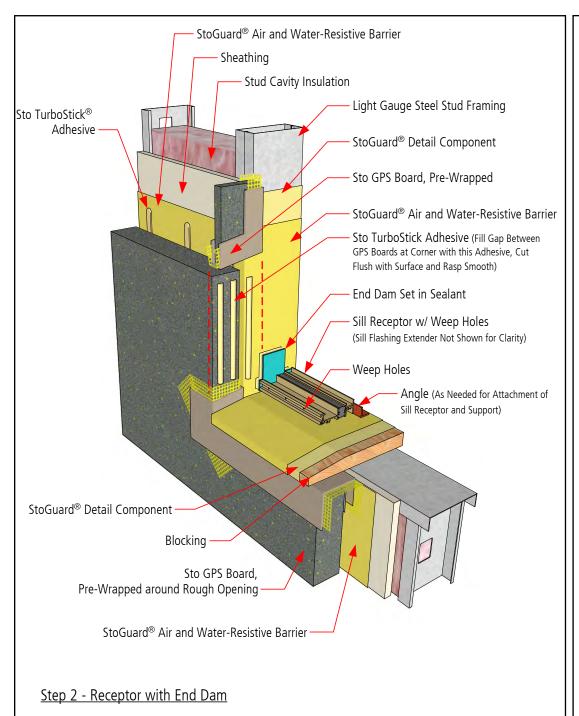
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## StoTherm® ci MVES Receptor-Type Window Sill



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.23A-2

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

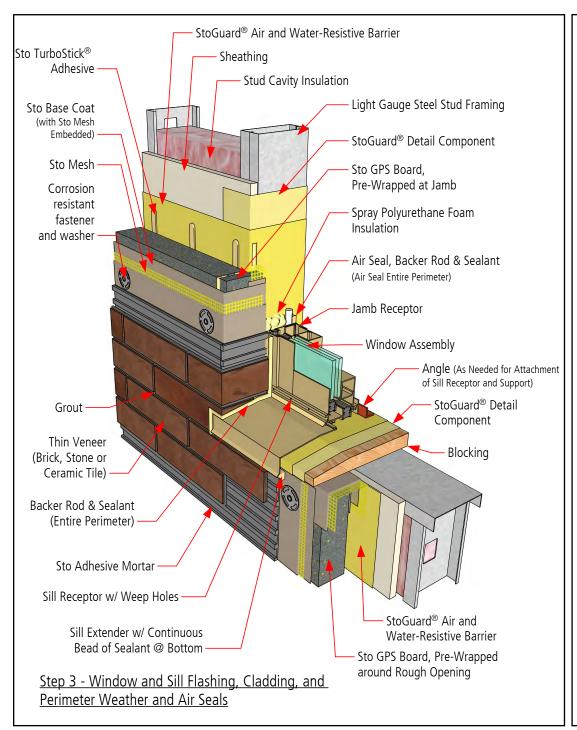
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## StoTherm® ci MVES **Receptor-Type Window Sill**



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.23A-3

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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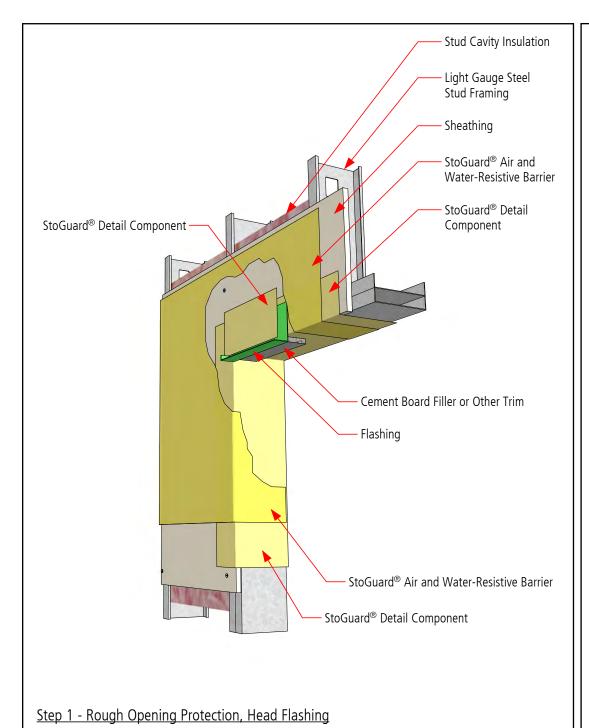
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Detail No.: 57s.23B-1

Date: August 2023

## StoTherm® ci MVES Receptor-Type Window Head



#### Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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## StoTherm® ci MVES Receptor-Type Window Head

Stud Cavity Insulation Light Gauge Steel Stud Framing Sheathing StoGuard® Air and Sto GPS Corner Board, Pre-Wrapped Water-Resistive Barrier around Rough Opening StoGuard® Detail Component Spray Polyurethane Foam Insulation **Head Receptor** Window Assembly Cement Board Filler or Other Trim Flashing Jamb Receptor Sto GPS Board, Pre-Wrapped Sto TurboStick Adhesive (Fill Gap Between GPS Boards at Corner with this Adhesive, Cut Flush with Surface and Rasp Smooth, Reinforce Top Corner with Sto TurboStick® Sto Mesh or Sto Detail Mesh Embedded in Base Coat) Adhesive StoGuard® Air and Water-Resistive Barrier Stud Cavity Insulation StoGuard® Detail Component Step 2 - Receptor and Window

#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.23B-2

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

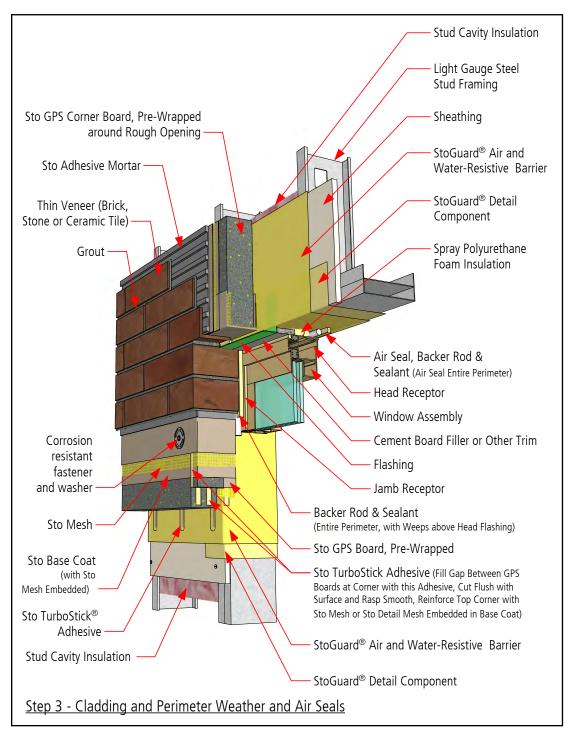
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## StoTherm® ci MVES **Receptor-Type Window Head**



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.23B-3

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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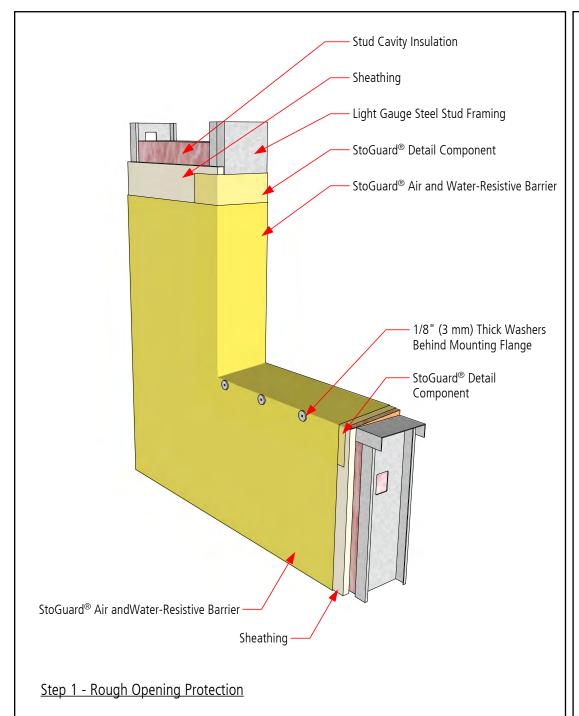




Detail No.: 57s.24A-1

Date: August 2023

## StoTherm® ci MVES Flanged Window-Sill



#### Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

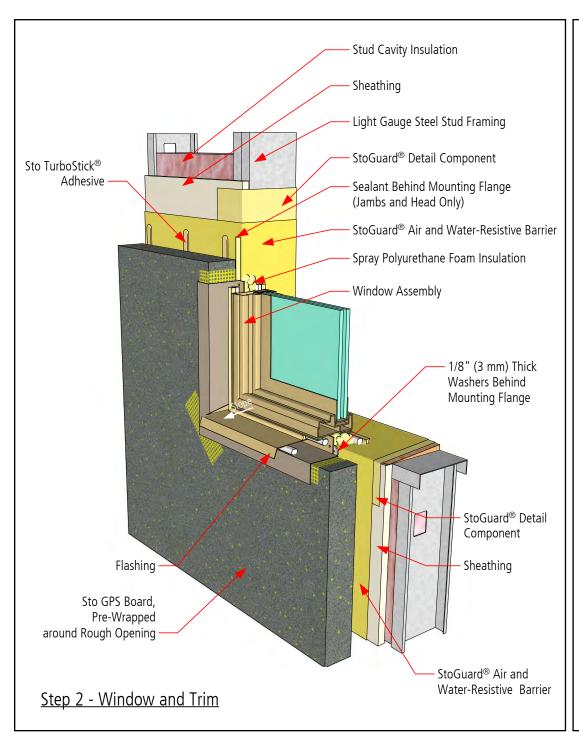
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## StoTherm® ci MVES Flanged Window-Sill



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.24A-2

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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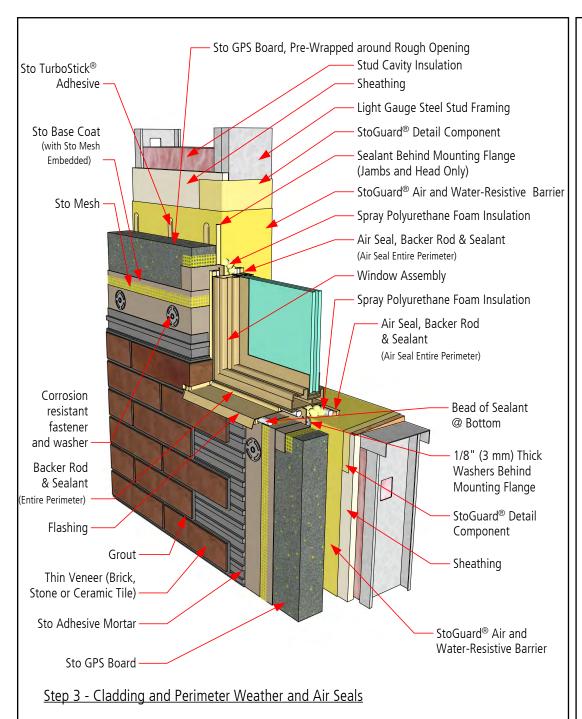
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## StoTherm® ci MVES Flanged Window-Sill



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.24A-3

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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#### **ATTENTION**

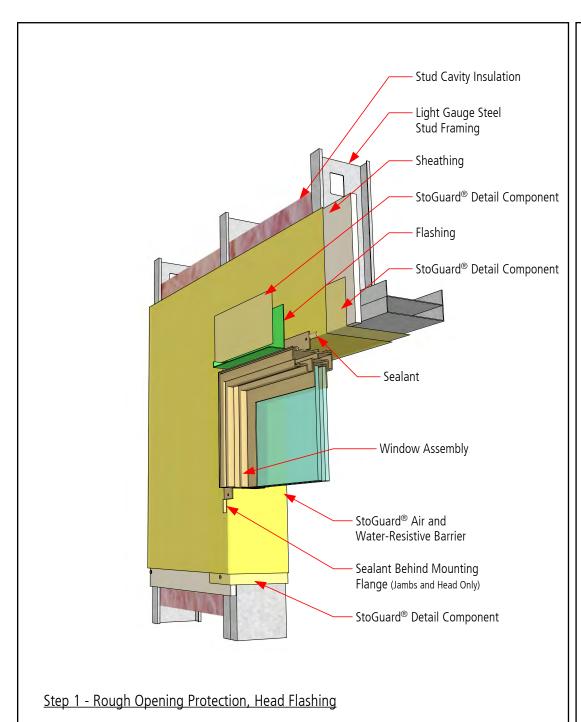
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## StoTherm® ci MVES Flanged Window-Head



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.24B-1

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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## StoTherm® ci MVES Flanged Window-Head

Stud Cavity Insulation Light Gauge Steel Stud Framing Sheathing StoGuard® Detail Component Sto GPS Corner Board. Flashing Pre-Wrapped around Rough Opening StoGuard® Detail Component Sealant Spray Polyurethane Foam Insulation Backer Rod & Sealant Weather Seals (Entire Perimeter with Weeps Between Underside of Thin Veneer & Flashing Leg) Window Assembly StoGuard® Air and Water-Resistive Barrier Spray Polyurethane Foam Insulation Sealant Behind Mounting Flange (Jambs and Head Only) Sto TurboStick® StoGuard® Detail Component Adhesive Step 2 - Window and Trim

#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.24B-2

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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## StoTherm® ci MVES Flanged Window-Head

Stud Cavity Insulation Sto GPS Corner Board. Light Gauge Steel Pre-Wrapped around Stud Framing Rough Opening Sheathing StoGuard® Detail Component Sto Adhesive Mortar Flashing Thin Veneer (Brick, StoGuard® Detail Component Stone or Ceramic Tile) Sealant Grout Spray Polyurethane Foam Insulation Backer Rod & Sealant Weather Seals (Entire Perimeter with Weeps Between Underside of Thin Veneer & Flashing Leg) Corrosion Window Assembly resistant fastener and washer StoGuard® Air and Water-Resistive Barrier Sto Mesh Spray Polyurethane Foam Insulation Sto Base Coat Sealant Behind Mounting (with Sto Mesh Flange (Jambs and Head Only) Embedded) StoGuard® Detail Component Sto TurboStick® Adhesive

#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.24B-3

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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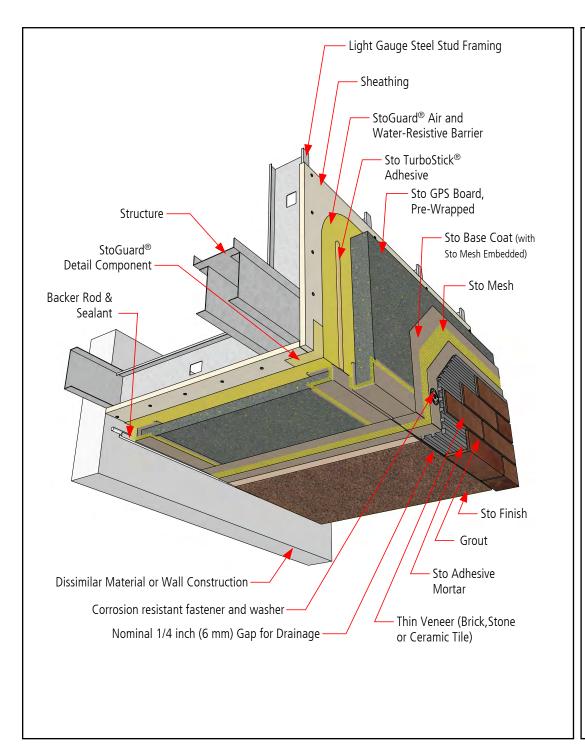
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Step 3 - Cladding and Perimeter Weather and Air Seals

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## StoTherm® ci MVES Soffit: Insulated and Unvented



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.30

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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## StoTherm® ci MVES Soffit: Insulated and Unvented

Light Gauge Steel Stud Framing Sheathing StoGuard® Air and Water-Resistive Barrier Sto TurboStick® Adhesive Sto GPS Board, Pre-Wrapped Structure · Sto Base Coat (with Sto Mesh Embedded) StoGuard® Sto Mesh **Detail Component** Backer Rod & Sto Adhesive Sealant Mortar Grout Thin Veneer (Brick, Stone or Ceramic Tile) StoCast Wood StoColor® Wood Stain Dissimilar Material or Wall Construction StoCast Wood Adhesive Corrosion resistant fastener and washer Nominal 1/4 inch (6 mm) Gap for Drainage

### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.30 SCW

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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## StoTherm® ci MVES Soffit: Uninsulated and Vented

Light Gauge Steel Stud Framing Sheathing StoGuard® Air and Water-Resistive Barrier Sto TurboStick® Adhesive StoGuard® Detail Component Sto GPS Board, Pre-Wrapped Structure Sto Base Coat (with Soffit Vent Sto Mesh Embedded) Casing Bead Sto Mesh Backer Rod & Sealant Sto Finish Grout Sto Adhesive Dissimilar Material or Wall Construction Mortar Corrosion resistant fastener and washer Thin Veneer (Brick, Stone Nominal 1/4 inch (6 mm) Gap for Drainage or Ceramic Tile)

## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.31

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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## StoTherm® ci MVES Soffit: Uninsulated and Vented

Light Gauge Steel Stud Framing Sheathing StoGuard® Air and Water-Resistive Barrier Sto TurboStick® Adhesive StoGuard® Detail Component Sto GPS Board, Pre-Wrapped Structure Sto Base Coat (with Soffit Vent Sto Mesh Embedded) Casing Bead Sto Mesh Sto Adhesive Backer Rod & Mortar Sealant Grout Thin Veneer (Brick, Stone or Ceramic Tile) StoCast Wood StoColor® Wood Stain Dissimilar Material or Wall Construction StoCast Wood Adhesive Corrosion resistant fastener and washer Nominal 1/4 inch (6 mm) Gap for Drainage

#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.31 SCW

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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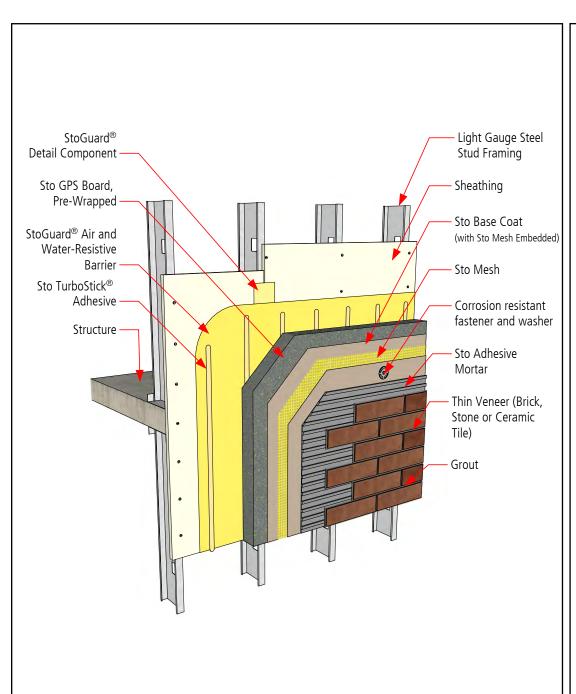
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Detail No.: 57s.40

Date: August 2023

### StoTherm® ci MVES Floor Line Without Deflection



#### Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

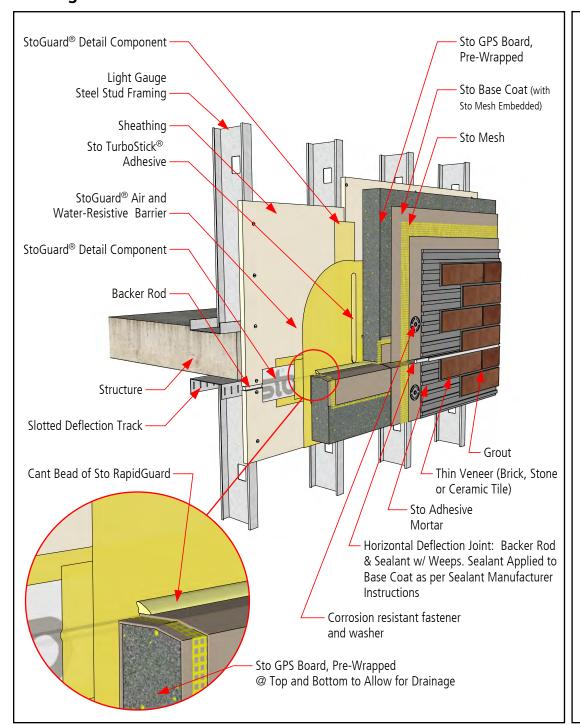
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### StoTherm® ci MVES Floor Line With Deflection - Concealed Flashing and Drainage at Floor Line



#### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.41A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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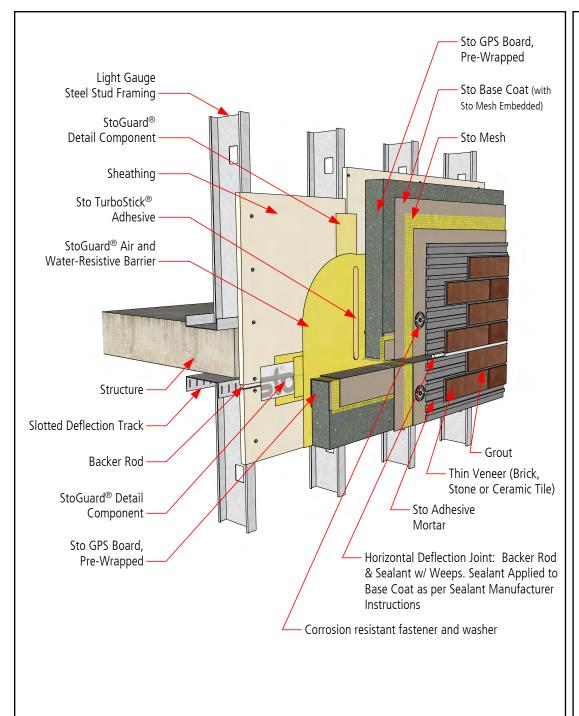
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Detail No.: 57s.41B

Date: August 2023

## StoTherm® ci MVES Floor Line With Deflection - No Drainage at Floor Line



#### Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

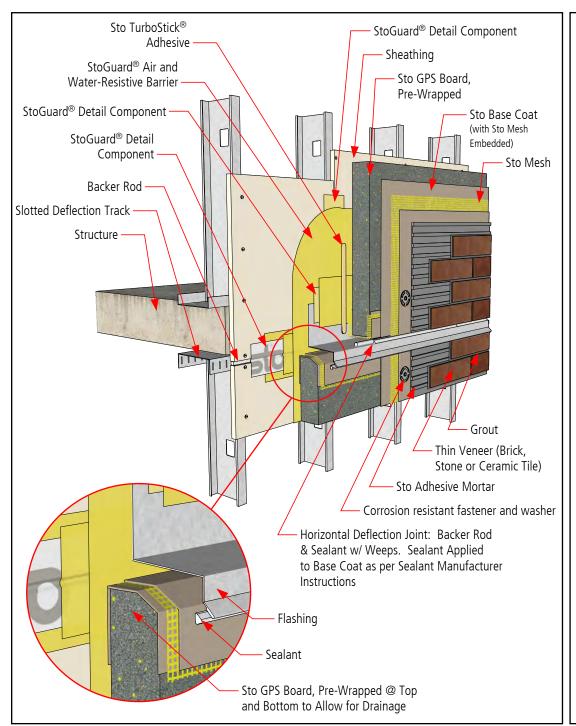
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# StoTherm® ci MVES Floor Line With Deflection - Flashing and Drainage at Floor Line



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.41C

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

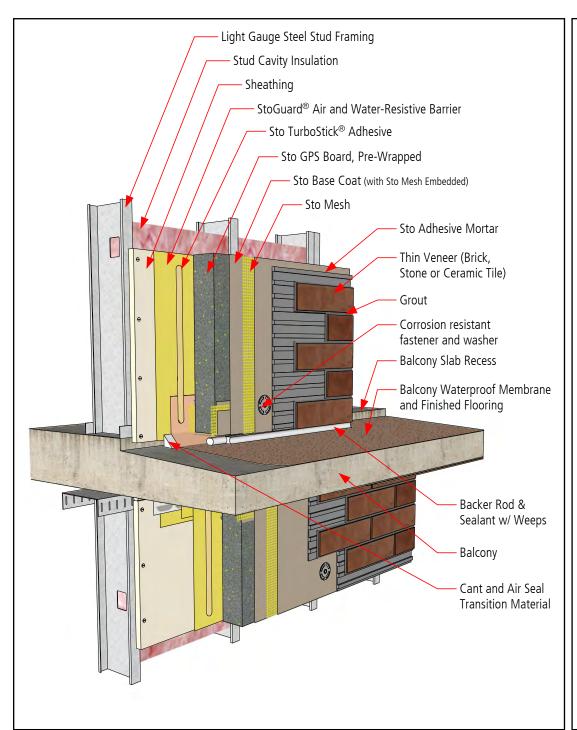
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# StoTherm® ci MVES Balcony Floor/Wall



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.42A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

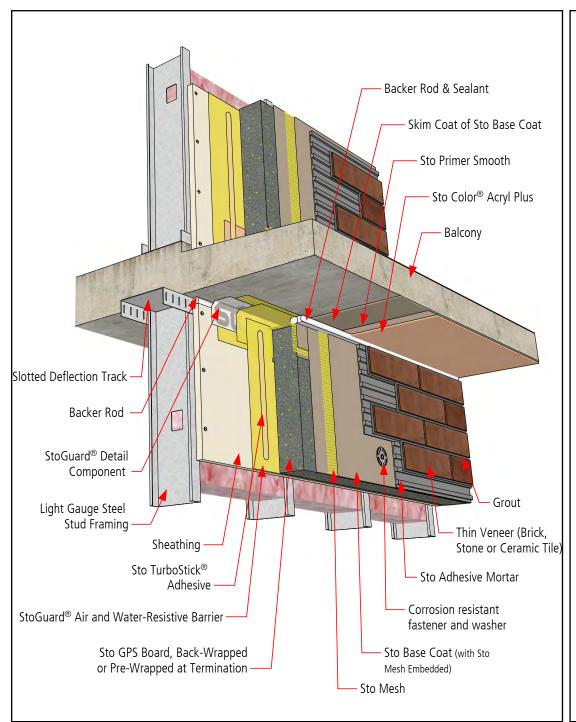
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# StoTherm® ci MVES Balcony Ceiling/Wall



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.42B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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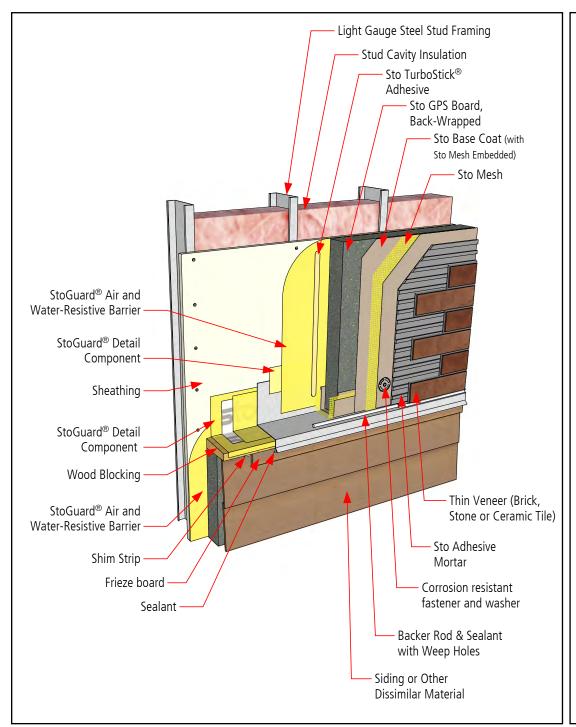
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Sto



# StoTherm® ci MVES Horizontal Termination at Dissimilar Cladding



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.50

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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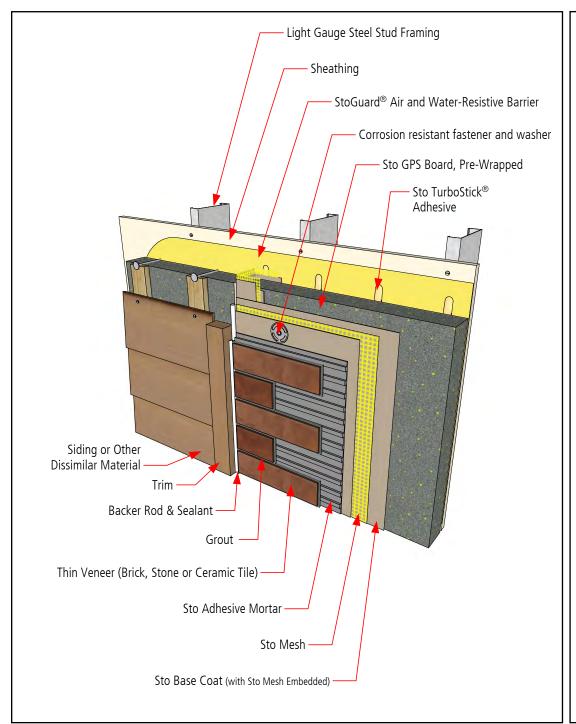
sto .



Detail No.: 57s.51A

Date: August 2023

# StoTherm® ci MVES Vertical Termination at Dissimilar Cladding



## Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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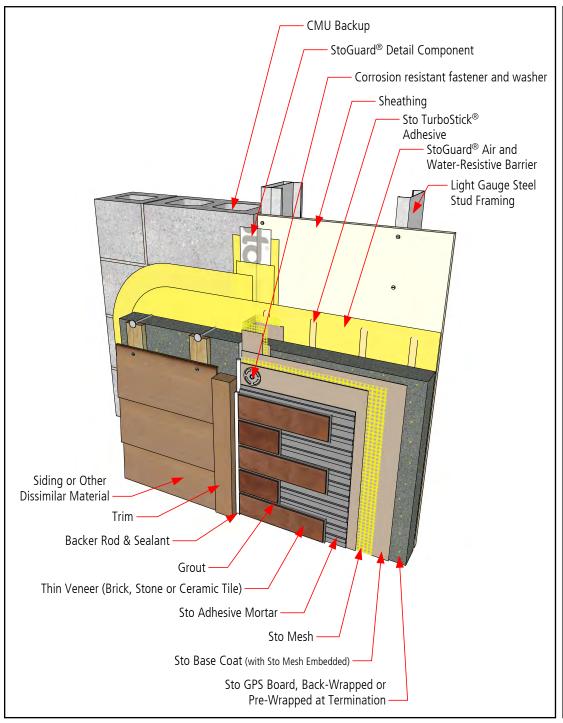
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sto A



# StoTherm® ci MVES Vertical Termination at Dissimilar Backup Wall Construction



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.51B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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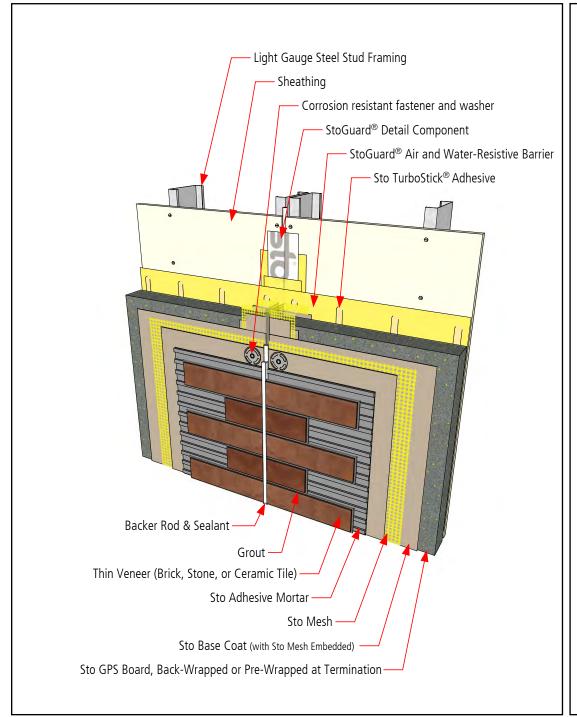
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Detail No.: 57s.52A

Date: August 2023

# StoTherm® ci MVES Vertical Expansion Joint in Back-Up Wall



## Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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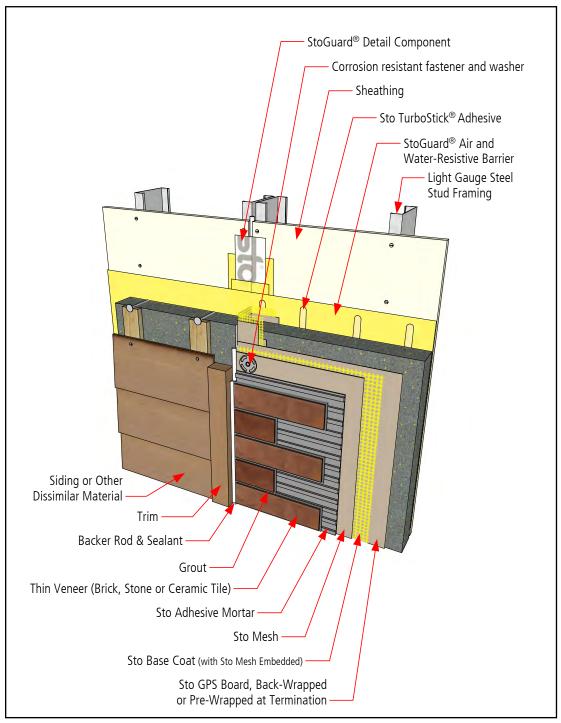
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# StoTherm® ci MVES Vertical Expansion Joint in Back-Up Wall, StoTherm ci and Dissimilar Cladding



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.52B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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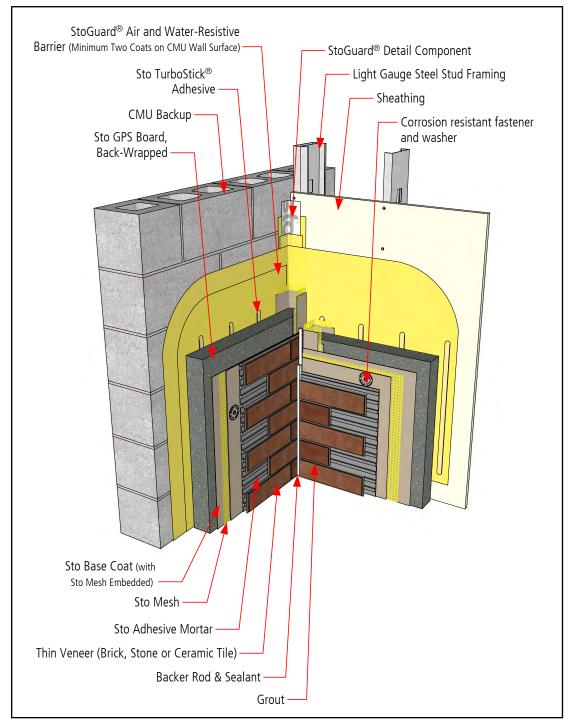
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# StoTherm® ci MVES Inside Corner with Dissimilar Backup Wall



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.53

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

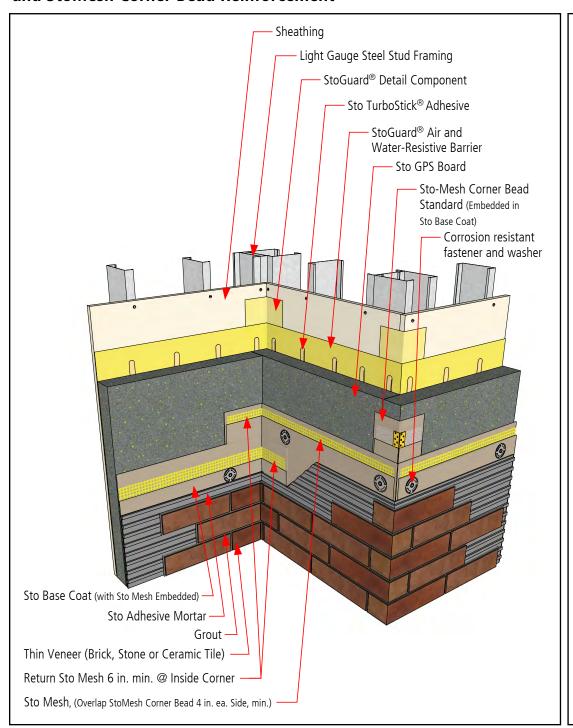
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# StoTherm® ci MVES Inside and Outside Corner with Common Substrate and StoMesh Corner Bead Reinforcement



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.54A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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### **ATTENTION**

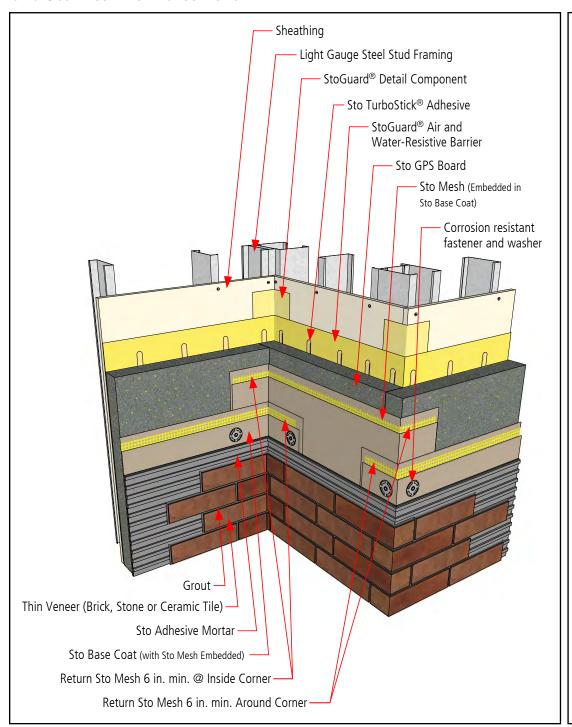
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# StoTherm® ci MVES Inside and Outside Corner with Common Substrate and Sto Mesh Reinforcement



# Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.54B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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# StoTherm® ci MVES Expansion Joint

Light Gauge Steel Stud Framing Stud Cavity Insulation StoGuard® Air and Water-Resistive Barrier StoGuard® Detail Component Sto TurboStick® Adhesive Sheathing "U" Shaped Min. 3/4"(19mm) **GPS Thickness at Joint** Sto GPS Board Sto Mesh Corrosion resistant fastener and washer Sto Base Coat (with Sto Mesh Embedded) Sto Adhesive Mortan Thin Veneer (Brick, Stone, or Ceramic Tile) Sealant & Backer Rod min.12.7mm Grout

# Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.55

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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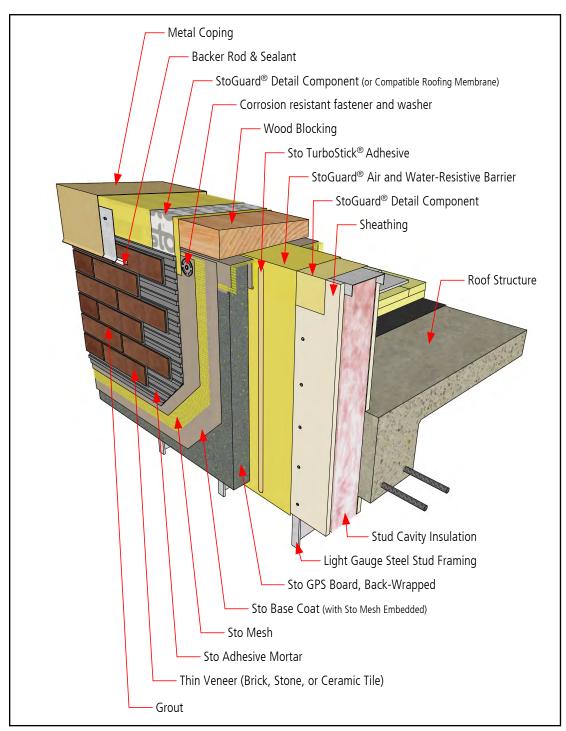
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# StoTherm® ci MVES Termination at Parapet - Front



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.60A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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### **ATTENTION**

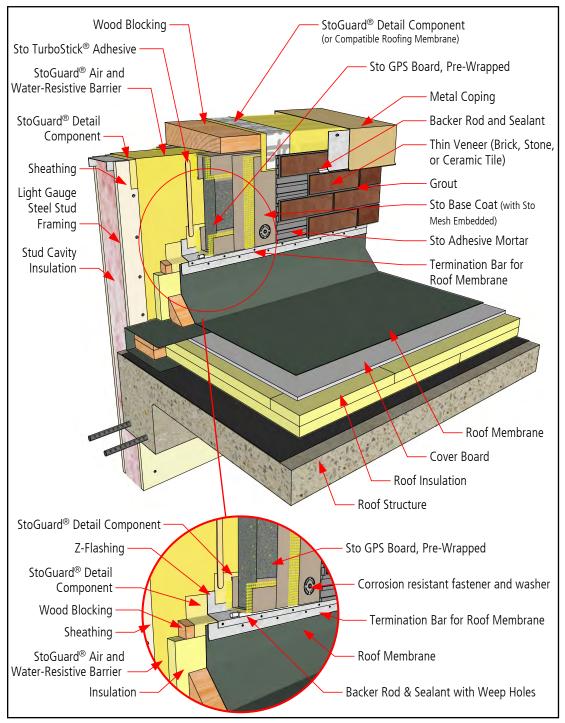
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sto 4



# StoTherm® ci MVES Termination at Parapet - Back



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.60B

Date: August 2023

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# StoTherm® ci MVES Parapet with Cornice Feature

StoGuard® Detail Component Wood Construction as Required Extends 2 in. (51 mm) min. at StoGuard® Detail (or Compatible Roofing Membrane) Vertical and Horizontal Surfaces Pre-Wrapped Cornice Metal Coping 1/2 in. (13 mm) min. Gap Between Top Surface of Cornice Feature Backer Rod and Underside of & Sealant Wood Construction Sto Finish Sto Primer (Optional) Sto GPS Board. Back-Wrapped Sto Base Coat (with or Pre-Wrapped Sto Mesh Embedded) at Termination Backer & Sealant Grout StoGuard<sup>®</sup> Thin Veneer (Brick, Air and Stone, or Ceramic Tile) Water-Resistive Sto Adhesive Mortar Barrier Sto Mesh Light Gauge Steel Sheathing Stud Framing Corrosion resistant fastener and washer Stud Cavity Insulation Sto GPS Board Cornice Feature Cornice Feature Pre-Wrapped with Sto Base Coat (with Sto Mesh Embedded) Sto Mesh Embedded in Base Coat Laps Sto Mesh on Cornice 2 1/2 in. (64 mm) min. View of Mesh Overlap View of Pre-Wrapped Cornice

## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.61

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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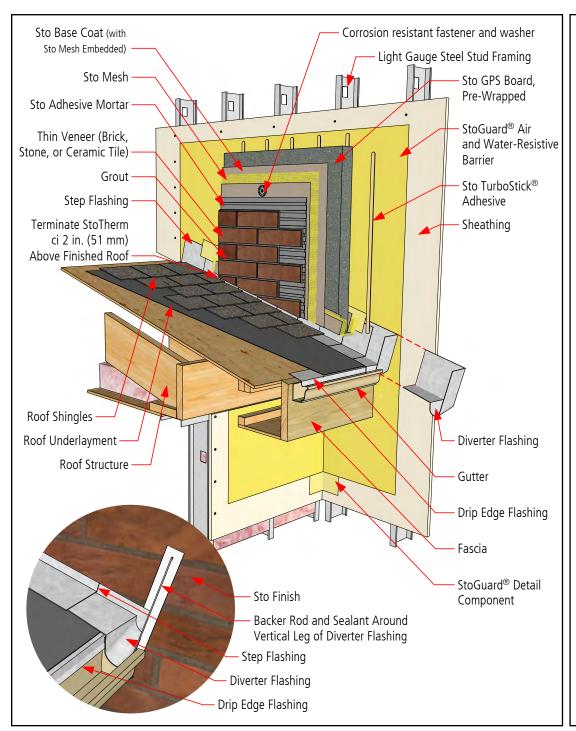
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Detail No.: 57s.62

Date: August 2023

# StoTherm® ci MVES Diverter Flashing at Roof/Wall Abutment



## Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
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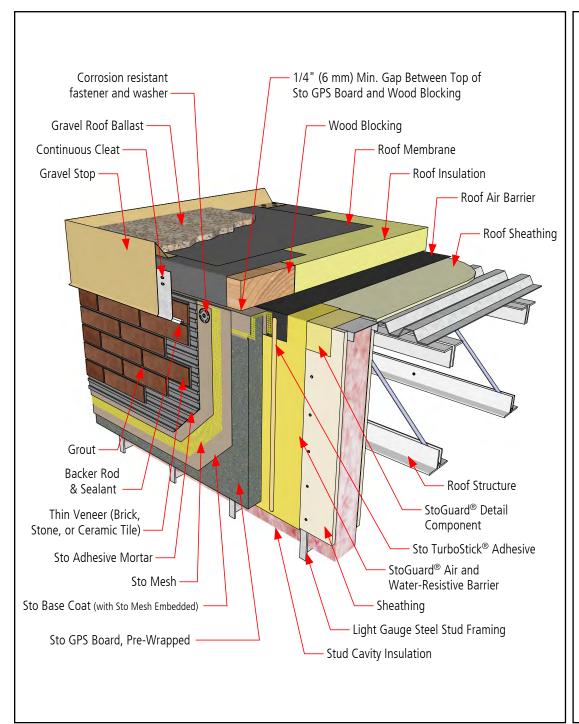
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# StoTherm® ci MVES Gravel Stop



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.63

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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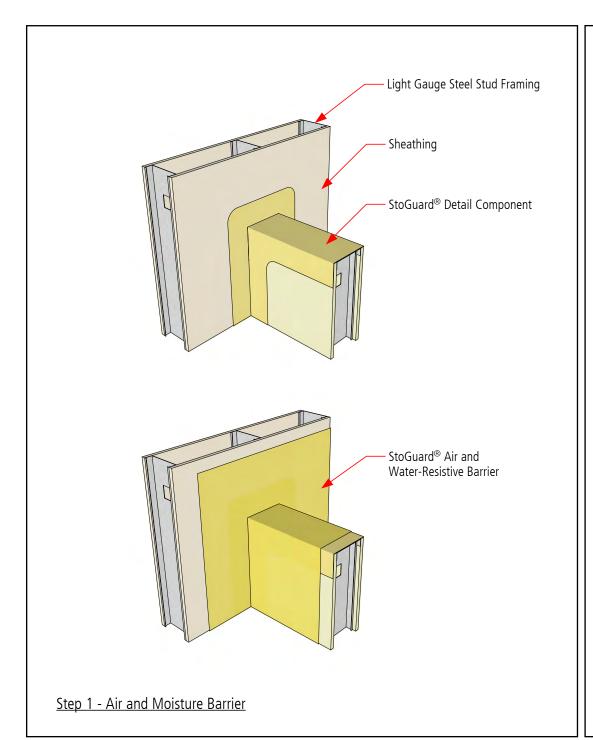
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Detail No.: 57s.64-1

Date: August 2023

# StoTherm® ci MVES Saddle Flashing at Lower/Higher Wall Abutment



## Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
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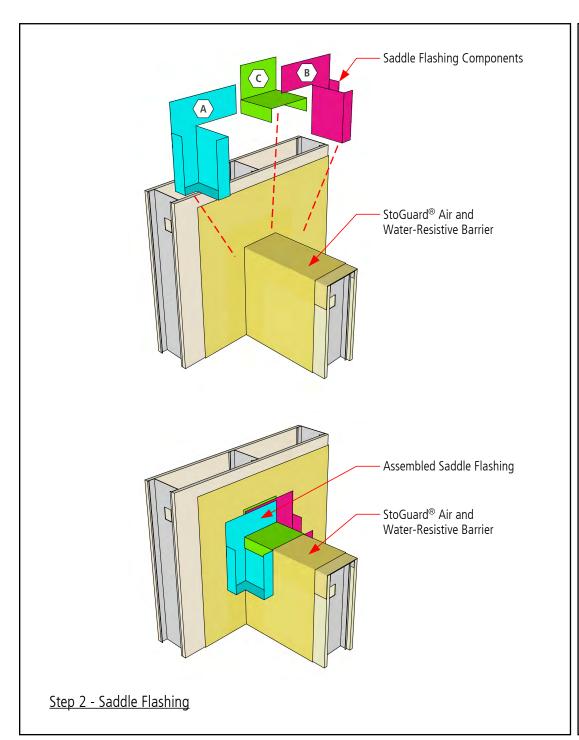
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sto .



# StoTherm® ci MVES Saddle Flashing at Lower/Higher Wall Abutment



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.64-2

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

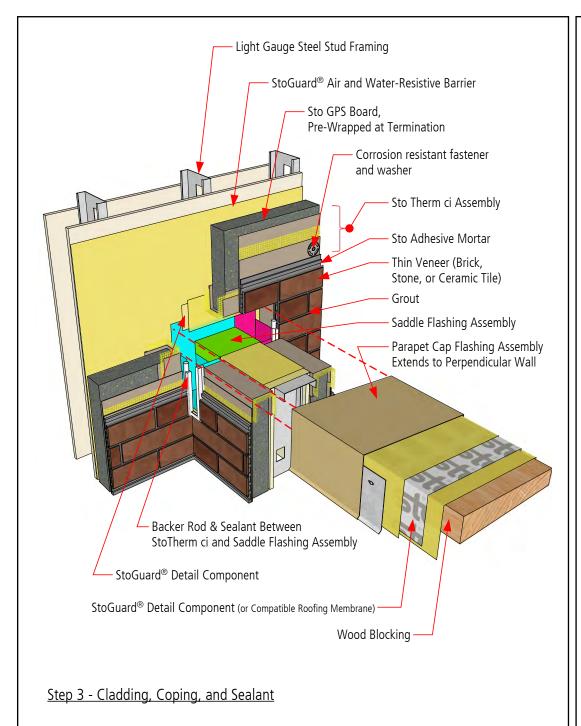
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# StoTherm® ci MVES Saddle Flashing at Lower/Higher Wall Abutment



### Notes:

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Detail No.: 57s.64-3

Date: August 2023

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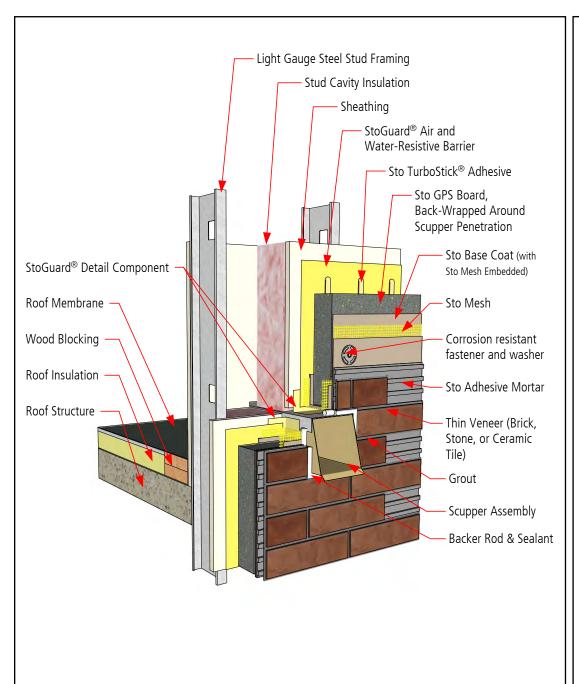
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# StoTherm® ci MVES **Scupper Penetration**



## Notes:

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Detail No.: 57s.65

Date: August 2023

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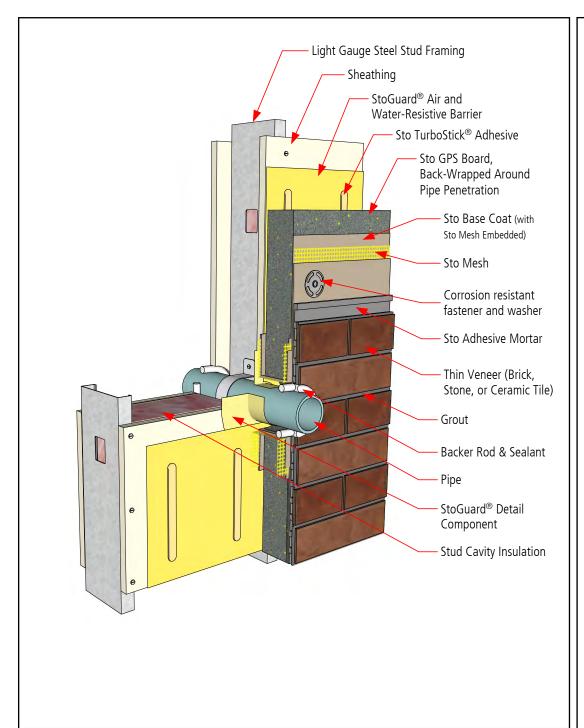
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# StoTherm® ci MVES Pipe Penetration - Precision Cut Sheathing



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.70A

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
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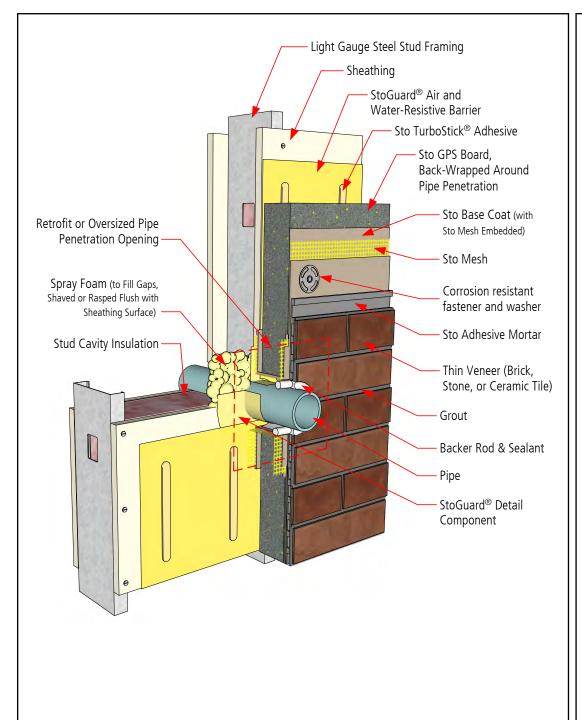
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# StoTherm® ci MVES Pipe Penetration - Rough Cut Sheathing



### Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.70B

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

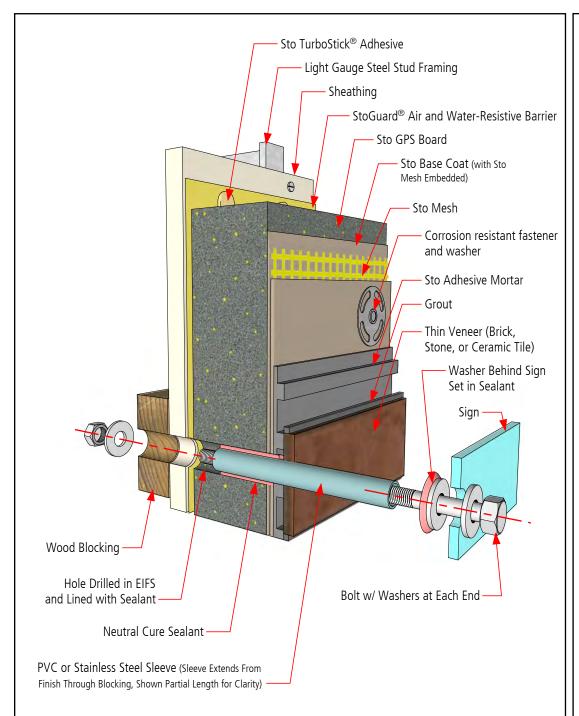
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# StoTherm® ci MVES Sign Attachment



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.71

Date: August 2023

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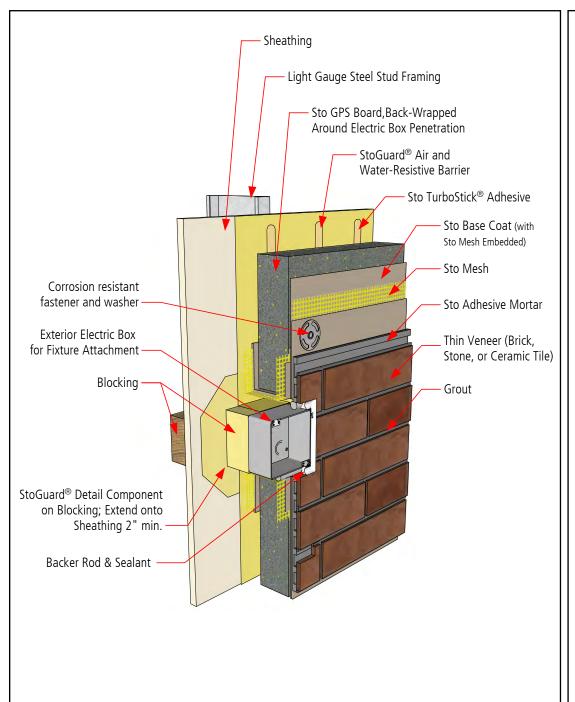
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# StoTherm® ci MVES **Fixture Attachment**



## Notes:

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Detail No.: 57s.73

Date: August 2023

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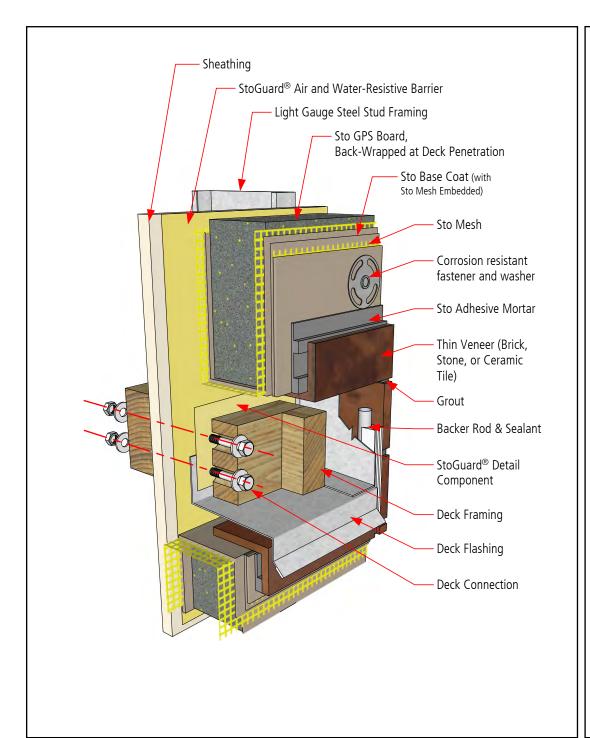
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# StoTherm® ci MVES Deck Connection over Steel Frame



## Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 57s.74

Date: August 2023

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