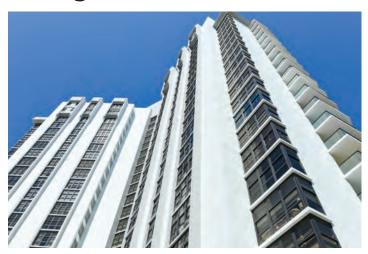


Building with conscience.





## **Design Guide**



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#### **ATTENTION**

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#### Sto Corp.

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#### StoPowerwall®

StoPowerwall® is a portland cement stucco wall covering that is intended for use over code compliant concrete, concrete masonry, and frame wall construction. It incorporates a fluid applied air and water-resistive barrier, code compliant paper or felt water-resistive barrier (WRB), code compliant metal plaster base, portland cement stucco, Sto primers, and Sto textured or StoCast finishes.

StoPowerwall stucco is ASTM C926 compliant and is installed in two coats in conformance with ASTM C926 practices. StoPowerwall stucco is available as a concentrate to which graded sand is added at the job site, or pre-sanded to simplify mixing in the field. Sto proprietary integrally colored textured finishes or Sto custom cast finishes are used in lieu of portland cement stucco finish to achieve brighter, richer colors and textures, and offer a wide variety of finish looks such as stone, brick, or wood on a single substrate. Aside from Sto proprietary blends of stucco, Sto Corp. also maintains a list of stucco vendors, whose products are suitable for use and warranted in StoPowerwall stucco wall assemblies. Refer to the **Addendum to StoPowerwall Specifications** for a listing of vendors, stucco types, information on building code compliance, and any limitations that may apply.

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.

#### **Components**

### Fluid Applied Air and Water-Resistive Barrier Products



**Sto Gold Coat®** - Roller or spray applied vapor-permeable air & water-resistive barrier designed for use in StoPower-wall® DrainScreen® Systems.



**Sto AirSeal®** - Roller or spray applied, medium-to-high build, vapor-permeable air & water-resistive barrier for use behind siding, brick, stone, adhered veneer, StoPowerwall® DrainScreen® systems, and other claddings.



**StoGuard VaporSeal®** - Roller or spray applied high build air barrier and Class 1 vapor retarder (< 0.1 perms). Provides superior protection against vapor diffusion, moisture intrusion, and air leakage.



**Sto Gold Coat® TA** - Trowel applied vapor-permeable air & water resistive barrier for use behind siding, brick, stone, adhered veneer, and StoPowerwall® systems.

#### **Detail Component Products**



**Sto Gold Fill**® - Trowel applied joint treatment and air barrier material used to treat rough openings, corners, and sheathing joints with StoGuard® Mesh or Sto Detail Mesh.



**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® Fabric** - Non-woven cloth reinforcement to treat joints, inside and outside corners and rough openings when embedded in Sto Gold Coat, Sto Emerald Coat, Sto AirSeal or Sto VaporSeal.



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



**StoGuard® Mesh** - Glass fiber, self-adhesive mesh for use with Sto Gold Fill and Sto Gold Coat TA as part of the StoGuard assembly.

**Sto Mesh & Sto Detail Mesh** - A variety of designed coated glass fiber meshes used to provide reinforcement and impact resistance in Sto claddings.

**Sto Armor Mat & Sto Armor Mat XX** - A heavy, specifically designed coated glass fiber mesh used to provide ultra-high impact resistance in Sto claddings.

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

**StoGuard® Transition Membrane** - Flexible air barrier material used to make connections with adjoining construction to achieve continuity of the air barrier assembly at dynamic joints and dissimilar materials.

**StoGuard® Tape** - A self-adhering membrane composed of spun bond polyester fabric laminated to rubberized asphalt adhesive for use as rough opening protection at windows and doors. StoGuard® Primer required.

#### Stucco

**StoPowerwall® Stucco** - is a controlled blend of Portland cement, that performs like traditional stucco when combined with sand and water at the jobsite.

**StoPowerwall® Pre-Blended** - is a pre-blend of Portland cement with graded sand that performs like traditional stucco when combined with sand and water at the jobsite.

**StoPowerwall® Scratch & Brown** - is an ASTM 926 compliant, factory prepared portland cement stucco base coat to which sand and water are added at the job site. It is an integral component of a conventional one hour fire-rated stucco assembly.

#### Adhesives, Basecoats and Crack Defense System (optional)

**Sto Stucco Mesh** - is a tri-directional weave, flexible treated glass fiber mesh for use with portland cement stucco brown coats in vertical above grade wall construction.

**Sto BTS® Plus** - A trowel or spray applied, one-component, polymer-modified, high build cement based, dry powder material used as an adhesive and base coat.

**Sto BTS® Xtra** - A trowel or spray applied, lightweight factory blended one component polymer modified portland cement based extra high build base coat.

**Sto Primer/Adhesive** - A trowel or spray applied, two-component, polymer-modified, cement based, dry powder material used as a base coat.



#### Crack Defense System (continued)



**Sto Primer/Adhesive-B** - A trowel or spray applied, one-component, polymer-modified, cement based, dry powder material used as a base coat.



**Sto RFP** - A trowel or spray applied, ready mixed acrylic based fiber reinforced base coat material used as an adhesive and base coat.



**Sto Flexyl** - A trowel or spray applied, ready mixed acrylic based fiber reinforced base coat material used as an adhesive and base coat.

#### **Primer** (optional)



**StoPrime® Hot** - A roller, brush or sprayed applied primer that is alkali resistant and is used over prepared vertical above grade wall surfaces. This primer is required for some specialty finishes.



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

#### **Finishes**

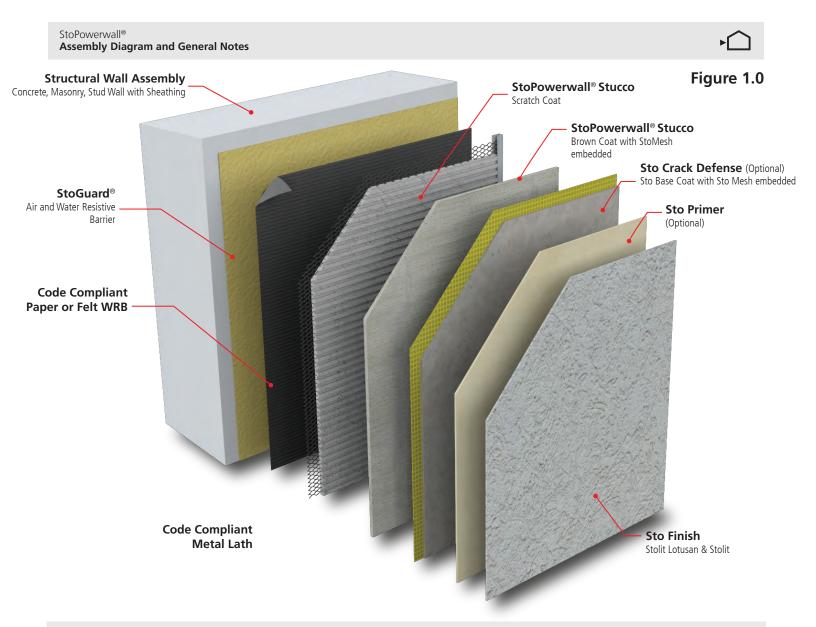


**Sto Powerflex Silco**® - A trowel or sprayed applied, ready-mixed and integrally colored, factory blended, silicone enhanced elastomeric textured wall finish with graded marble aggregate. Available in standard and specialty textures.



**StoLit® Lotusan®** - A trowel or sprayed applied, ready-mixed, acrylic-based wall finish with Lotus-Effect® Technology for highest water repellency and resistance to soiling. Available in a variety of graded marble aggregates, as well as standard and specialty textures.

NOTE: Please visit www.stocorp.com for more information on a wide range of available Sto Finish options for StoPowerwall® including; StoSignature, StoCast (Wood and Brick), Stolit®, Stolit® X, Sto Powerflex, StoPowerwall®, Sto Essence DPR, and Sto Powercryl finishes.



#### **Structural Loads**

- 1. <u>Racking Loads, Load Bearing Walls</u>: racking resistance in StoPowerwall wall assemblies is provided by the structural backup wall of concrete, masonry, or frame wall construction. When the structural backup wall is load bearing it must carry roof and floor loads. In all cases, stresses from racking and gravity loads are not to be transferred to the portland cement stucco wall covering, as they can cause cracking in the stucco.
- 2. <u>Wind Loads</u>: StoPowerwall transfers positive wind loads to the supporting wall construction and resists negative wind loads via mechanical attachment to the structural wall. The pull-out or withdrawal capacity of fasteners (not furnished by Sto Corp.) used to attach lath into supporting wall construction must be verified to ensure adequate attachment relative to design wind pressures. Design for maximum allowable deflection, normal to the plane of the wall of L/360, and in conformance with applicable building code requirements. Consult Sto ICC ESR-2323 or the applicable evaluation report listed in the **Addendum to StoPower-wall Specifications** for allowable wind pressures (in general, published values in ICC-ES reports have a safety factor of 3 applied to ultimate loads).
- 3. <u>Fixture Attachments</u>: StoPowerwall should not be used as a base for mechanical anchoring of attachments such as signage or light fixtures.



#### **Fire Protection**

- 1. <u>Noncombustible Construction</u>: StoPowerwall can be used on Types I, II, III, and IV noncombustible wall construction. It is also suitable for use on Type V, combustible wall construction.
- 2. <u>Fire Resistance-Rated Wall Assemblies</u>: In general, ¾ or 7/8-inch (19 or 22 mm) thickness of StoPowerwall stucco will achieve a 1-hour fire-resistance rating. The Gypsum Association Fire Resistance and Sound Control Design Manual and the 2021 IBC Table 721.1 (2) list stucco wall assemblies in which StoPowerwall Stucco can be substituted for the generic portland cement stucco component called out in the assembly. Proprietary StoPowerwall fire-resistance rated wall assemblies are published in ICC ESR-2323. Also see evaluation reports maintained by Sto listed stucco vendors in the **Addendum to StoPowerwall Specifica tions.**

Engineering judgments, modeling, or rational analysis by qualified fire protection engineers can also be used to determine if a particular wall assembly that includes StoPowerwall will achieve an hourly rating.

#### **Moisture Protection**

#### 1. General:

Do not use StoPowerwall on roofs or roof-like conditions. Do not use StoPowerwall on parapets, weather exposed projecting ledges, sills, or other projecting features, unless supported by framing or other structural support and protected with metal coping or flashing. Refer to Sto Details.

Do not use StoPowerwall on surfaces subject to continuous or intermittent water immersion or hydrostatic pressure. Prevent the accumulation of water behind StoPowerwall, 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.01001-BSc, **Effects of Temporary Heating on Construction Materials in Cold Weather**.

#### 2. Air Barrier and Water-Resistive Barrier:

StoGuard® is the air and water-resistive barrier component in StoPowerwall. It is installed over wood-based sheathing, glass mat gypsum sheathing, cementitious sheathing, concrete, and concrete masonry substrates. StoGuard provides protection against moisture damage during the construction process and in the event of a breach in StoPowerwall while in service. It is not intended to correct faulty workmanship such as the absence or improper integration of flashing in the wall assembly, nor is it intended to correct defective components of construction such as windows that leak into the wall assembly. Flashing should always be integrated in the wall assembly to direct water to the exterior, not into the wall assembly, particularly at potential leak sources such as windows.

As a component of an air barrier assembly StoGuard minimizes the risk of condensation within the building envelope by resisting mass transfer of moisture in the air to a cold surface in the wall assembly. A complete air barrier system consists of individual air barrier materials and the connections between them. The air barrier materials must be <u>continuously connected</u> with compatible air barrier components such that walls, roof, foundation, windows, doors, and other penetrations through the wall perform as an effective air barrier <u>system</u> to minimize condensation caused by air movement. The design/construction professional must take construction sequencing into account when designing an "airtight" assembly to ensure continuity and long-term durability. The effects of air tightness on mechanical ventilation should also be included in the overall project design.



#### Moisture Protection (cont'd)

#### 2. Air Barrier and Water-Resistive Barrier: (cont'd)

An air barrier should not be confused with a vapor retarder, which may also be used in the wall assembly to retard water vapor diffusion and reduce the risk of condensation. Generally, a vapor retarder is placed on the warm side of the insulation. Specifically, it is placed on the interior side of the insulation in cold climates. A vapor retarder may not be necessary, or appropriate, depending on the wall components and the range of temperature/humidity conditions inside and outside. A vapor retarder should not be used on the inside of walls in hot, humid climates. A dew point analysis and/or dynamic hygrothermal modeling should be performed to determine whether a vapor retarder is appropriate. Sto manufactures vapor permeable, vapor retarder, and vapor impermeable air barriers/water-resistive barriers for use in StoPowerwall.

#### 3. Flashing:

Flashing is required to direct water to the exterior where it is likely to penetrate components in the wall assembly and to divert water away from, not into, the exterior wall, 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.

#### 4. Grade Condition:

Stucco is required to terminate minimum 4-inches (102mm) above earth grade, and minimum 2-inches above hardscape (pavers/sidewalk). Increased clearance should be provided in freeze/thaw climate zones where snow drifts can accumulate against the wall surface. Do not specify StoPowerwall for use below grade.

#### Thermal Insulation

1. StoPowerwall assemblies are insulated in the stud cavity of frame walls with batt insulation. For more effective and efficient thermal insulation and where continuous insulation is required by building codes, refer to StoPowerwall ci, an exterior insulated stucco wall assembly with continuous XPS (Extruded Polystyrene) insulation.

#### **Impact Resistance**

StoPowerwall is an impact resistant wall system, often specified for use on ground floors and other areas where abuse and impact resistance are important. A proprietary hurricane impact resistant StoPowerwall stucco wall assembly is listed by Miami-Dade County for large and small missile impact resistance (**StoPowerwall HI, Miami-Dade NOA 21-0708.09**).

#### **Color Selection**

- 1. Certain highly saturated colors such as dark blue, violet, or fire engine red require the use of organic tints to achieve their color. Organic tints are more prone to fade than inorganic tints. See Sto Tech Hotline No. 0893-EC, **Fading in EIFS and Architectural Coatings**, for further information on this topic and how to avoid color problems.
- 2. Surface alkalinity (pH) can also affect final color of finishes and is an important consideration for stucco surfaces that will receive acrylic or acrylic elastomeric finishes, such as those specified for use in StoPowerwall. A surface pH of less than 10 is recommend -ed. pH should be checked at multiple locations on the wall before primer or finish is applied. A minimum cure time of 28 days is generally recommended before applying finishes to allow the pH of the stucco surface to neutralize. StoPrime Hot is the preferred primer for use on stucco surfaces as it "masks" surface alkalinity and reduces the time period between application of stucco and finish, allowing for finish application in less than 28 days. Refer to Sto Tech Hotline No. 1202-CF, **Alkaline Substrates and Polymeric Finishes**.



#### **Joints**

- 1. Expansion and control joints are required in stucco wall assemblies to prevent or minimize the risk of cracking. Below is a list of general rules for the use of joints and accessories. Also, refer to Sto Details.
- · Provide two-piece expansion joints in the stucco assembly where building movement is anticipated: at joints in the substrate or supporting construction, where the system is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, and at columns and cantilevered areas.
- Provide one piece expansion joints every 144 ft² (13 m²). Cut and wire tie lath to the expansion joint accessory so lath is discontinuous at or beneath the accessory. Do not exceed length to width ratio of 2-1/2:1 in expansion joint layout and do not exceed more than 18 feet (5.5 m) in any direction without an expansion joint. Where casing bead is used back-to-back as the expansion joint, back the joint with the appropriate StoGuard transition detail component.
- · Provide one piece expansion joints at through wall penetrations, for example, at corners above and below doors and windows.
- Provide minimum 3/8 inch (9 mm) wide sealant joints where the stucco abuts windows, doors and other through wall penetrations, and terminate the stucco with casing bead.
- · Provide appropriate accessories at stucco terminations and joints.
- · Avoid the use of channel reveal accessories which can interfere with proper drainage and proper stress relief (channel reveal accessories do not function as control or expansion joints, unless specifically designed to accommodate movement; nor can they drain incidental water unless specifically designed and detailed for this purpose).
- · Provide appropriate sealant at stucco terminations and at stucco accessory butt joints.
- · Indicate location of joints, accessories, and accessory type on architectural drawings.
- · Maintain air and water-resistive barrier continuity at joints with the appropriate StoGuard detail component.

### Trim, Reveals, and Projecting Architectural Features

In general, trim around windows, at floor lines, and other areas of construction is simpler and faster to achieve with EPS foam trim than forming it with stucco. All foam trim and projecting architectural features should have a minimum 1:2 [27°] slope along their top surface. Minimum ¾-inch (19 mm) foam thickness must remain beneath all finished reveals. All horizontal reveals should have a minimum 1:2 [27°] slope along their bottom surface. Slope should be increased for northern climates to prevent accumulation of ice/snow and water on the sloped surface. Where foam trim or the bottom surface of reveals project more than 2-inches (51 mm) from the face of the StoPowerwall wall plane, the top surface should be protected with waterproof base coat. Periodic inspections and increased maintenance may be required to maintain appearance and surface integrity of finishes installed on weather exposed sloped surfaces. Limit projecting features to easily accessible areas and limit total area to facilitate and minimize maintenance. Refer to Sto Details.

#### **Efflorescence**

Efflorescence is a normal occurrence in portland cement-based products and can affect final appearance of finish products installed over stucco. Efflorescence is generally caused by water getting into or behind the stucco and migrating to the exterior while carrying soluble salts that are within concrete, masonry, stucco and other portland cement-based materials. To prevent or minimize efflorescence proper proportioning of stucco ingredients, proper placement of stucco, and moist curing of the stucco to fully hydrate the portland cement in the stucco mix, will provide a stucco that is resistant to water penetration. The use of a primer such as StoPrime

StoPowerwall®

General Notes



### Cracking

Some degree of cracking is normal in portland cement stucco and should be expected. Cracking is generally not caused by a material defect in the stucco and can be minimized by following sound design and construction practice such as: proper installation of lath, proper incorporation of stress relief joints in the construction, the use of properly graded sand, proper proportioning of stucco mix ingredients, use of the minimum amount of water in the stucco mix for placement and avoiding the use of excess water, moist curing of the stucco after it has been applied, and proper sequencing of construction to avoid stresses in the freshly placed stucco. For example, roof loads should be in place before stucco is applied to exterior load bearing frame walls, and interior drywall should be installed on exterior walls before the stucco is installed to avoid stress transfer to freshly placed stucco.

Additional protection against cracking can be achieved by adding Sto Crack Defense, a Sto glass fiber mesh reinforced layer embedded in Sto base coat, to the outer surface of the cured stucco brown coat, before the exterior finish is installed. Refer to Sto Details.



### Table 1.1 - StoGuard® Product Use Chart

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



## **Design Details**

| System Components System Components with StoCast Brick System Components with StoCast Wood System Components with Sto Crack Defense System over Concrete/CMU System Components with Sto Crack Defense System System Components with MVES (Masonry Veneer Engineered System) |                            |
|---|----------------------------|
| Installation at Grade  Termination at Grade: Sheathing Flush with Foundation  |                            |
| Installation at Windows  Rough Opening Protection with StoGuard Fabric  Rough Opening Protection with StoGuard Mesh  Box Window at Sill, Jamb, Head   | 66s.04M                    |
| Installation at Soffits Soffit Return   | 66s.07                     |
| Installation at Floor Line Floor Line without Deflection Track Floor Line with Deflection Joint   |                            |
| Installation at Joints and Corners  Horizontal Joint at Dissimilar Material  Vertical Joint at Dissimilar Material  Vertical Joint at Inside Corner: Common Substrate  Vertical Joint at Inside Corner: Different Substrate  Outside Corner: Common Substrate               | 66s.11<br>66s.12<br>66s.13 |
| Installation at Parapet, Roof/Wall Abutment and Saddle Flashing  Termination at Parapet  Roof/Wall Abutment  Saddle Flashing at Lower to Higher Wall Abutment   | 66s.16                     |
| Penetrations, Attachments and Buildouts  Penetrations Through Wall (Pipe or Scupper)  Sign Attachment  Foam Buildout  | 66s.19                     |
| Fire Protection Fire Protection Assembly  | 66s.FP                     |





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## StoPowerwall® System Components

ATTENTION

Metal Frame Insulation Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Detail Component (See Note 1) StoGuard® Air and Water Resistive Barrier Code Compliant Paper or Felt WRB (water-resistive barrier) Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath) StoPowerwall® Scratch Coat StoPowerwall®Brown Coat Sto Textured Finish Sto Primer

#### **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.: 66s.00

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. 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 Sto's 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.

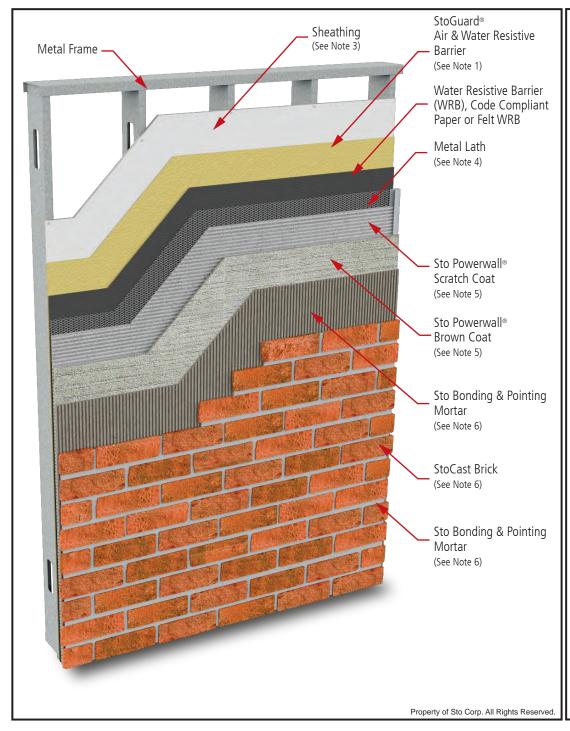




#### Sto Powerwall® with StoCast Brick

Detail No.: 66s.01 SCB

Date: July 2022



#### 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. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Refer to the StoCast Brick Application Guide for more information.
- 7. 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.

#### ATTENTION

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 Sto's 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.

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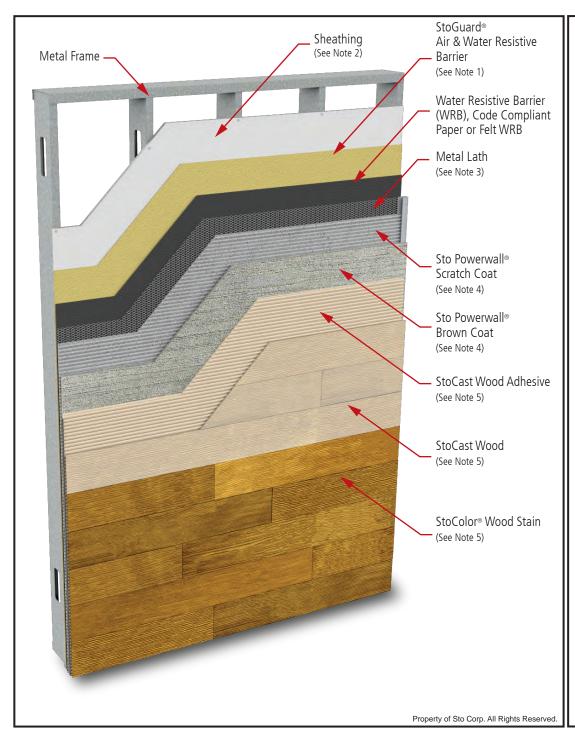




#### Sto Powerwall® with StoCast Wood

Detail No.: 66s.01 SCW

Date: July 2022



#### 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. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Refer to the StoCast Wood Application Guide for more information.
- 7. 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.

#### ATTENTION

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 Sto's 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.

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# **Sto Powerwall® with Sto Crack Defense System System Components on Concrete or CMU**

StoPowerwall® Concrete or CMU Scratch Coat (See Note 2) StoPowerwall® **Brown Coat** (See Note 2) Sto Crack Defense: Sto Basecoat with Sto Mesh embedded Sto Primer Sto Textured Finish

#### Notes:

1. Sto Components:

Date: July 2022

- a. Sto Powerwall® Scratch Coat
- b. StoPowerwall® Brown Coat

Detail No.: 66s.01 CMU

- c. Sto Crack Defense: Sto Basecoat with Sto Mesh embedded.
- d. Sto Primer
- e. Sto Textured Finish Coat
- 2. Stucco Scratch and Brown Coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 3. Construct a site built mock-up using materials and sub-trades associated with the project to verify installation sequencing, detailing, and aesthetics.
- 4. Refer to applicable Sto guide specifications, product bulletins, Tech Hotlines, and other Sto guide details for additional information.
- 5. 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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# **StoPowerwall®**System Components with Sto Crack Defense System

Metal Frame Insulation Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Detail Component (See Note 1) StoGuard® Air and Water Resistive Barrier Code Compliant Paper or Felt WRB (water-resistive barrier) Metal Lath (Expanded Galvanized Self-Furred Diamond Mesh) StoPowerwall® Scratch Coat StoPowerwall® **Brown Coat** Sto Crack Defense: Sto Base Coat with Sto Mesh embedded Sto Textured Finish Sto Primer (optional)

## Detail No.: 66s.01 CDS

#### Date: July 2022

#### Notes:

- 1. See StoGuard Chart (66s.SG) for transition component, joint treatment, and rough opening protection product options.
- 2. See General Notes (66s.GN) 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 Powerwall® MVES Components

Sheathing StoGuard® (See Note 2) Metal Frame -Air & Water-Resistive Barrier (See Note 1) Water Resistive Barrier (WRB), Code Compliant Paper or Felt WRB Metal Lath (See Note 3) Sto Powerwall® Scratch Coat (See Note 4) Sto Powerwall® Brown Coat (See Note 4) StoColl KM Adhesive Mortar Masonry Veneer (See Note 5) Masonry Veneer Grout (See Note 5)

#### 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.: 66s.01 MVES

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 3. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 4. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 5. Veneer options: thin brick, thin stone, ceramic tile or cultured stone in conformance with applicable building code requirements.
- 6. Portland cement-based grout / pointing mortar in compliance with ANSI 118.7
- 7. 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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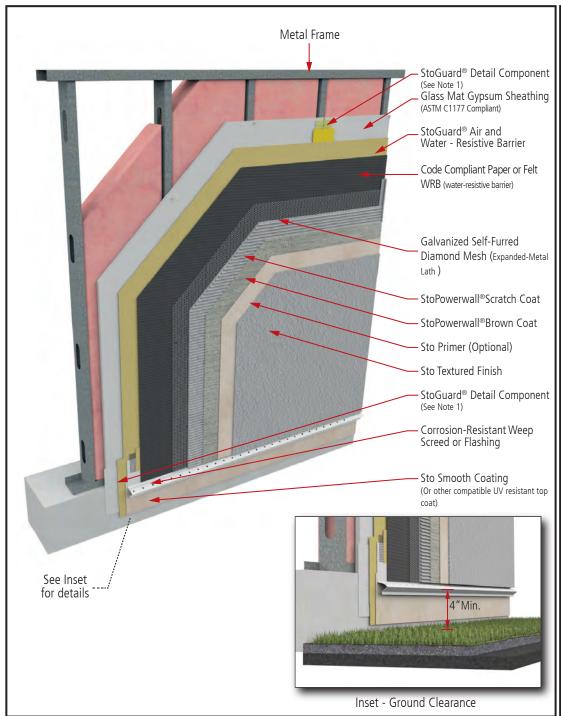




### **StoPowerwall®**

ATTENTION

## **Termination at Grade: Sheathing Flush with 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.: 66s.02

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Cladding termination minimum 4" (102mm) above grade.
- 7. 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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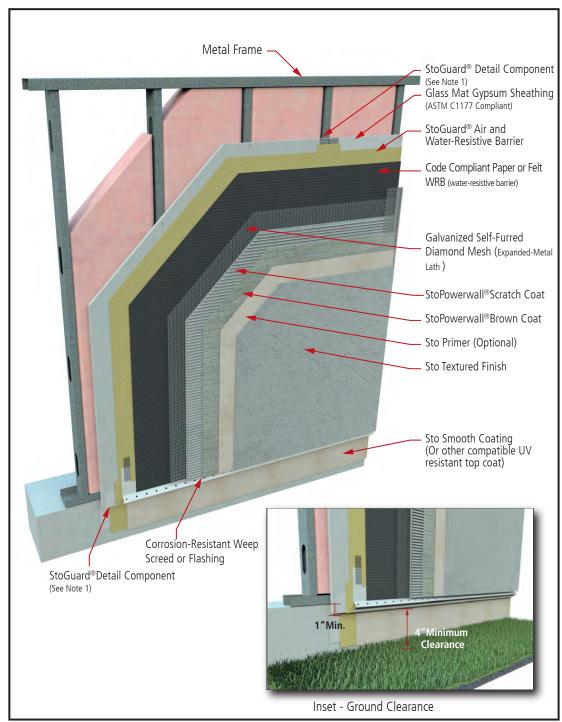




### **StoPowerwall®**

ATTENTION

### **Termination at Grade: Sheathing over 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.: 66s.03

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Cladding termination minimum 4" (102mm) above grade.
- 7. 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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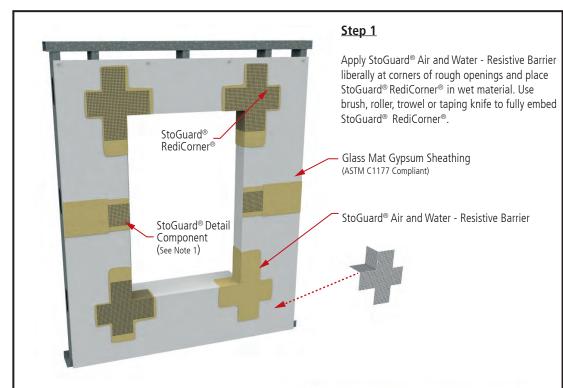


# **StoPowerwall®**Rough Opening Protection with StoGuard®Fabric

Detail No.: 66s.04F Date: July 2022 Page 1 of 2

#### 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.

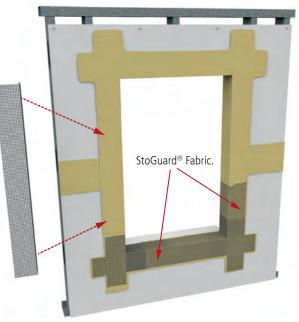


#### Step 2

ATTENTION

Immediately apply StoGuard® Air and Water - Resistive Barrier liberally to inside of opening and around outside of head, sill and jambs.

Center 6"(150 mm) wide StoGuard®Fabric on outside corners and press into wet membrane along the head, jambs, and sill with minimum 2" (50 mm) overlaps of adjacent fabric. Use brush, roller, trowel or taping knife to fully embed.



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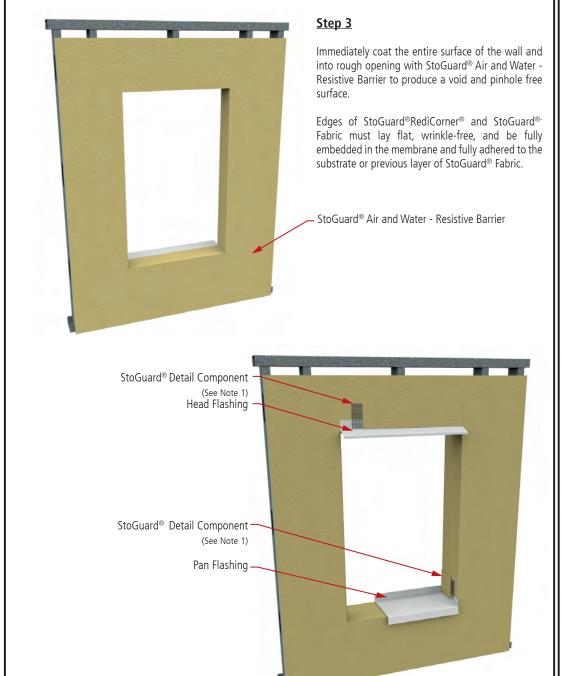


# **StoPowerwall®**Rough Opening Protection with StoGuard®Fabric

Detail No.: 66s.04F Date: July 2022 Page 2 of 2

#### || 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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# **StoPowerwall®**Rough Opening Protection with StoGuard®Mesh

Step 1 Place 2"(50mm) wide strip of StoGuard® Mesh lapping onto face of wall diagonally at corners of opening. Step 2 Wrap sill with 9"(230mm) wide StoGuard® Mesh StoGuard® Mesh returning up the jambs a minimum of 4"(100mm). Step 3 Wrap jambs with minimum (3) 9"(230mm) wide StoGuard® Mesh, lapping minimum 2.5" (64mm) over extension from sill, then wrap head. StoGold Fill® (2) Step 4 Coat StoGuard® Mesh with Sto Gold Fill®. StoGold Fill® Glass Mat Gypsum Sheathing (ASTM C1177 Compliant)

Detail No.: 66s.04M Date: July 2022 Page 1 of 2

#### 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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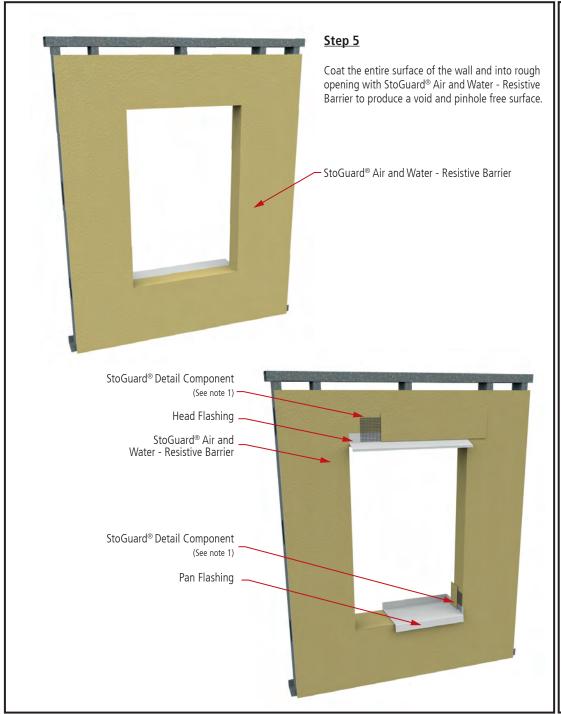


# **StoPowerwall®**Rough Opening Protection with StoGuard®Mesh

Detail No.: 66s.04M Date: July 2022 Page 2 of 2

#### 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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## StoPowerwall® Box Window at Sill, Jamb, and Head

One-piece Expansion/ Control Joint (typical) Metal Frame Head Flashing Sealant dab at control joint termination (to divert water to exterior) Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Air and Water-Resistive Barrier Code Compliant Paper or Felt WRB (water-resistive barrier) See Page 2 for details Window Galvanized Self-Furred Diamond Mesh See Page 3 (Expanded-Metal Lath) for details StoPowerwall®Scratch Coat StoPowerwall®Brown Coat Sto Primer Sill Flashing Sto Textured Finish

Detail No.: 66s.05 Date: July 2022

Page 1 of 3

#### 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. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Consult with window and sealant manufacturers to verify window installation and detailing to assure no leakage into the wall assembly. Consult with window manufacturer regarding window and flashing assemblies with thermal breaks to avoid condensation. Test the final assembly using materials and sub-trades associated with the project to verify performance.
- 7. 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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## StoPowerwall® Box Window at Head/Jamb

Code Compliant Paper or Felt WRB (water-resistive barrier) One piece Expansion/ Control Joint (typical) Flashing End Dam StoGuard® Detail Component (See Note 1) Head Flashing Flashing Inset 1 - Head & Jamb & End Dam Detail End Dam Sto Textured Finish Sealant dab at control joint termination (to divert water to exterior) StoGuard® Detail Component (See Note 1) StoGuard® Detail Component (See Note 1) Backer Rod & Backer Rod & Sealant Sealant

Detail No.: 66s.05 Date: July 2022

Page 2 of 3

#### 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. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Consult with window and sealant manufacturers to verify window installation and detailing to assure no leakage into the wall assembly. Consult with window manufacturer regarding window and flashing assemblies with thermal breaks to avoid condensation. Test the final assembly using materials and sub-trades associated with the project to verify performance.
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Inset 2 - Head & Jamb Detail

with Sto Textured Finish

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## StoPowerwall® Box Window at Sill/Jamb

Detail No.: 66s.05 Date: July 2022 Page 3 of 3

### 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.

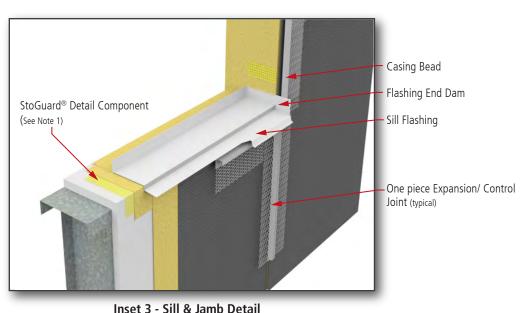
3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.

4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.

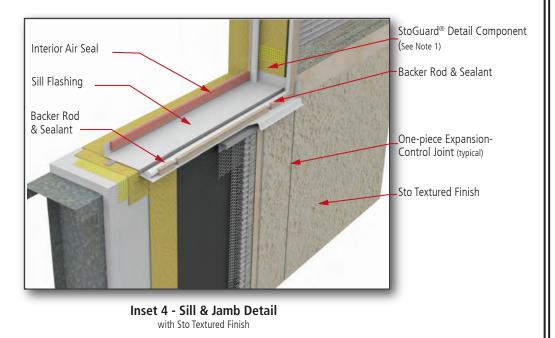
5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.

6. Consult with window and sealant manufacturers to verify window installation and detailing to assure no leakage into the wall assembly. Consult with window manufacturer regarding window and flashing assemblies with thermal breaks to avoid condensation. Test the final assembly using materials and sub-trades associated with the project to verify performance.

7. 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.



Inset 3 - Sill & Jamb Detail
without Sto Textured Finish



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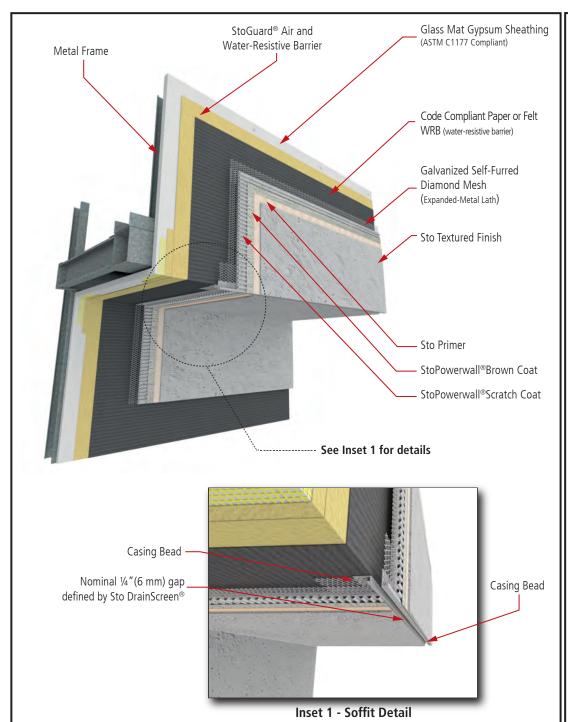
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## StoPowerwall® Soffit Return

ATTENTION



#### **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.: 66s.07

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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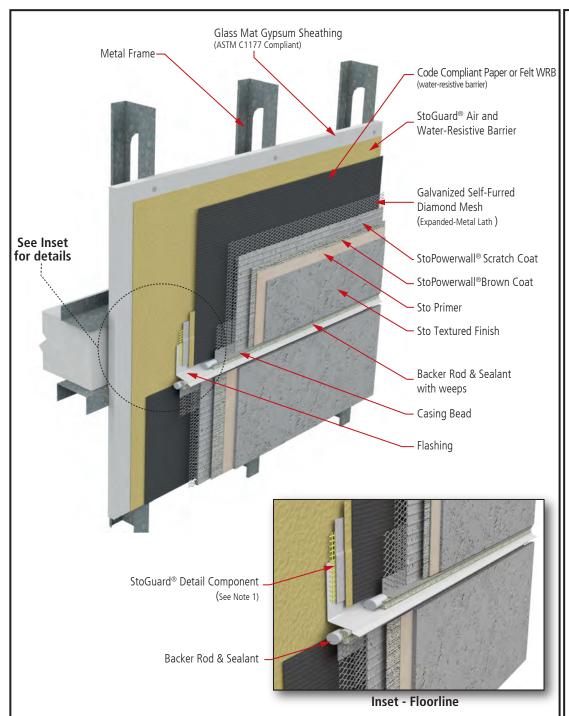
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## StoPowerwall® Floorline without Deflection Track



#### 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.: 66s.08

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. 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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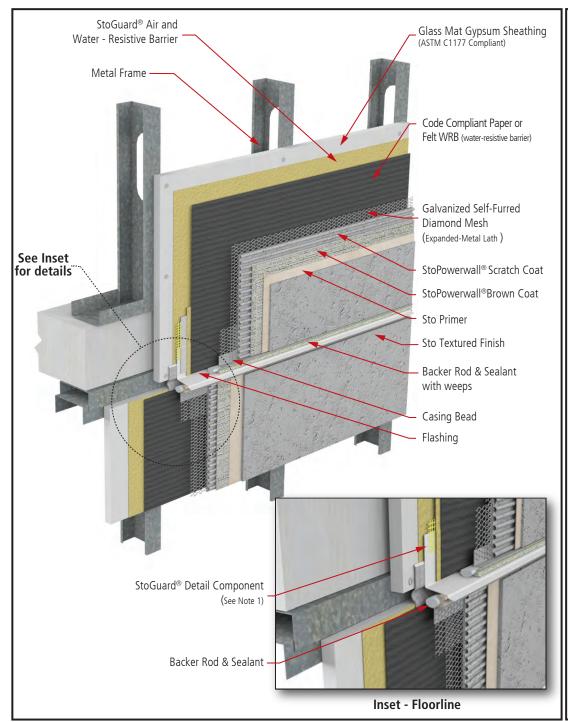


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## StoPowerwall® Floorline with Deflection Track

ATTENTION



#### 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.: 66s.09

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. Attach assembly components above floorline joint to deep leg track. Attach assembly components below floor line joint to embedded track with sufficient distance from deep leg track to allow for unimpeded floorline deflection.
- 7. 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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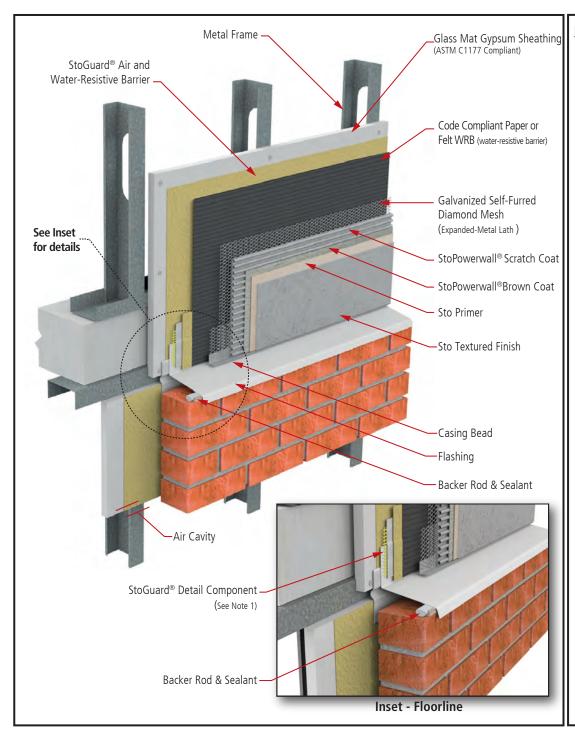
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## StoPowerwall® Horizontal Joint at Dissimilar Material



#### 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.: 66s.10

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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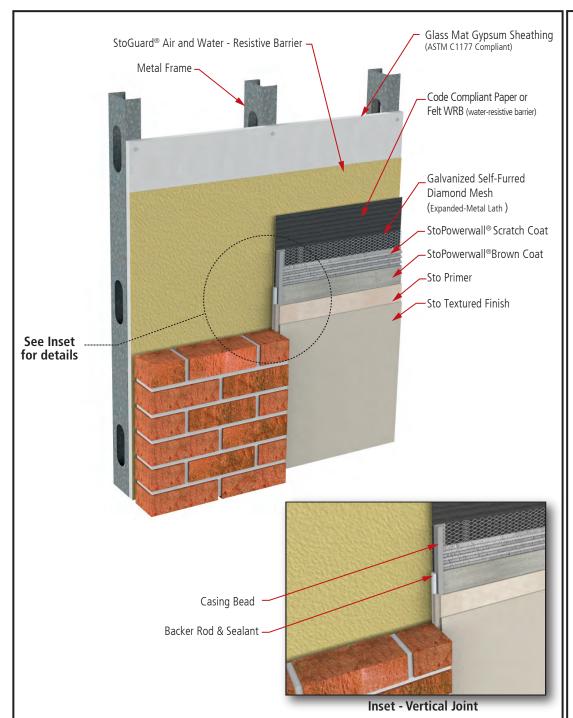
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## StoPowerwall® Vertical Joint at Dissimilar Material

ATTENTION



#### 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.: 66s.11

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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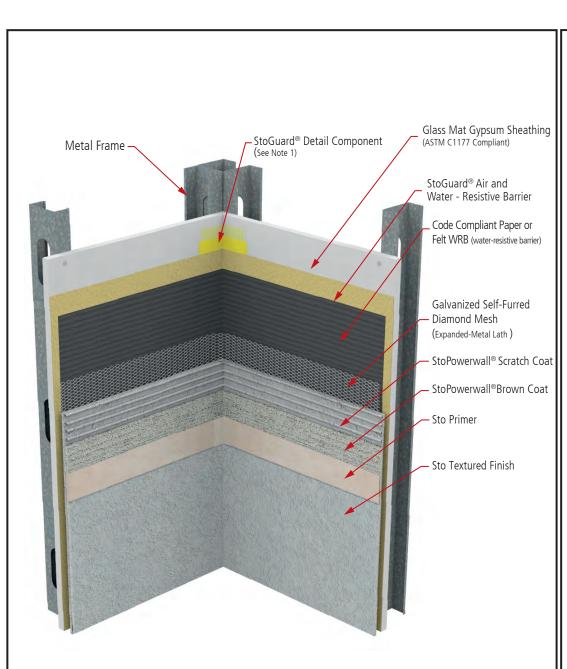
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## StoPowerwall® Inside Corner: Common Substrate



#### **Notes:**

1. See StoGuard Chart (66.SG) for transition component, joint treatment, and rough opening protection product options.

Detail No.: 66s.12 Date: July 2022

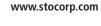
- 2. See General Notes (66s.GN) for specific information and design guidance on wall assembly components.
- 3. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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## **StoPowerwall® Vertical Joint at Inside Corner: Different Substrate**

## Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Detail Component (See Note 1) CMU Substrate Code Compliant Paper or Felt WRB (water-resistive barrier) StoGuard® Air and Water - Resistive Barrier Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath) StoPowerwall® Scratch Coat StoPowerwall®Brown Coat Sto Primer Sto Textured Finish Inside Corner Control Joint Accessory

#### 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.: 66s.13

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd2 (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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## StoPowerwall® Outside Corner: Common Substrate

Metal Frame StoGuard® Detail Component (See Note 1) Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Air and Water-Resistive Barrier Code Compliant Paper or Felt WRB (water-resistive barrier) Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath ) StoPowerwall® Scratch Coat StoPowerwall®Brown Coat Sto Primer Sto Textured Finish

#### 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.: 66s.14

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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### **StoPowerwall®**

ATTENTION

Termination at Parapet

## Cap Flashing Cap Attachment Cleat & Sealant Roof Membrane Blocking StoGuard® Detail Component (See Note 1) Code Compliant Paper or Felt WRB (water-resistive barrier) Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Air and Water - Resistive Barrier Metal Frame Sto Textured Finish Sto Primer Galvanized Self-Furred Diamond Mesh StoPowerwall®Brown Coat-(Expanded-Metal Lath) StoPowerwall® Scratch Coat

#### 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.: 66s.15

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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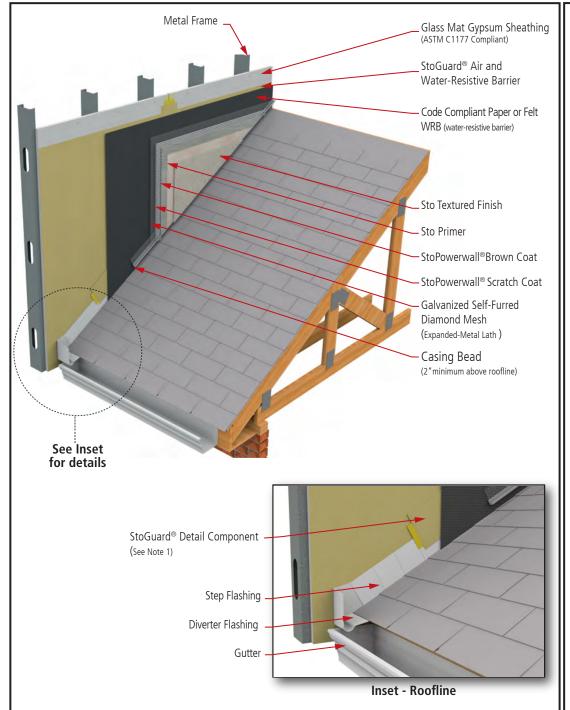
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## StoPowerwall® Roof / Wall Abutment

ATTENTION



#### 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.: 66s.16

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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## **StoPowerwall®** Saddle Flashing

ATTENTION

Glass Mat Gypsum Sheathing Metal Frame (ASTM C 1177 Compliant) StoGuard® Detail Component (See Note 1) StoGuard® Air and Water -Resistive Barrier See Page 2 for Flashing Assembly details Code Compliant Paper or Felt WRB (water-resistive barrier) Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath ) StoPowerwall® Scratch Coat StoPowerwall®Brown Coat Sto Primer Sto Textured Finish Weep Screed Saddle Flashing Assembly (see Page 2) Membrane Waterproofing Parapet Cap Flashing StoGuard® Detail Component (See Note 1) Casing Bead See Page 2 for StoGuard® Installation on Parapet details Casing Bead Backer Rod and Sealant

Detail No.: 66s.17 Date: July 2022 Page 1 of 2

#### 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 quidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd2 (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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## StoPowerwall® Saddle Flashing

Step 1 Turnout Flanges (to match the thickness of the component layers to the finished surface plus 1/4" (6mm)) Upturned Flange Step 2 Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) Interlocking Legs StoGuard® Air and Water - Resistive Barrier StoGuard® Detail Component (See Note 1)

Detail No.: 66s.17 Date: July 2022 Page 2 of 2

#### 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. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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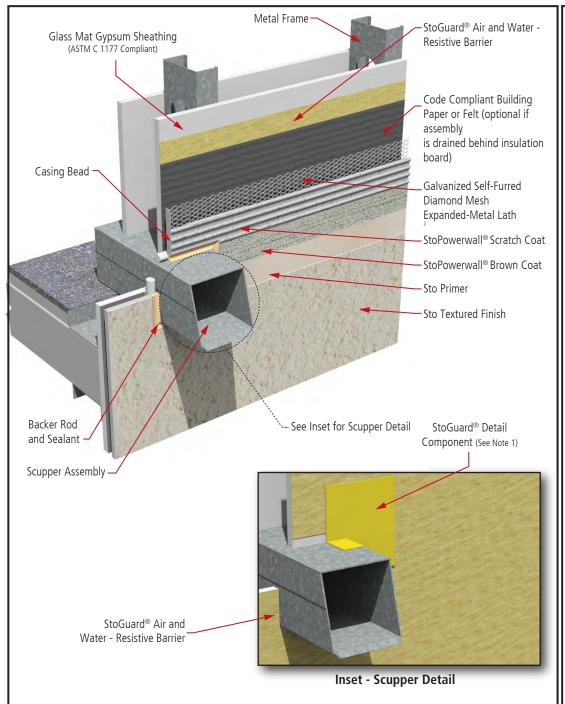
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## Sto Powerwall® Scupper Penetration Through Wall



#### 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.: 66s.18

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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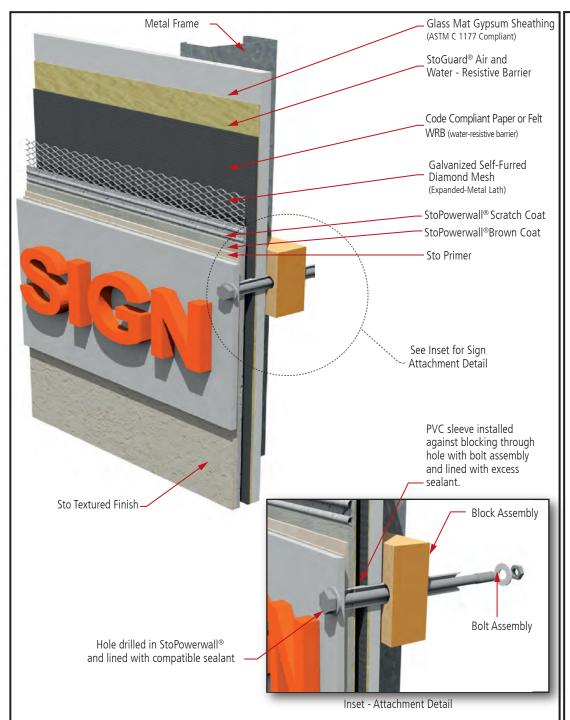
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## Sto Powerwall® Sign Attachment



#### 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.: 66s.19

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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## Sto Powerwall® Foam Buildouts

ATTENTION

Metal Frame Sto Guard Detail Component (See Note 1) Glass Mat Gypsum Sheathing (ASTM C 1177 Compliant) StoGuard® Air and Water - Resistive Barrier Code Compliant Paper or Felt WRB (water-resistive barrier) Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath) StoPowerwall® Scratch Coat Sto Primer Sto Flexyl® and Sto Mesh on upper surface -Sto Base Coat with Sto Mesh embedded. (minimum 2 1/2"[64mm] onto stucco surface) Foam Build-Out StoPowerwall®Brown Coat Foam Build-Out Less than 2"thick (50mm) Sto Textured Finish

#### 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.: 66s.20

Date: July 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. 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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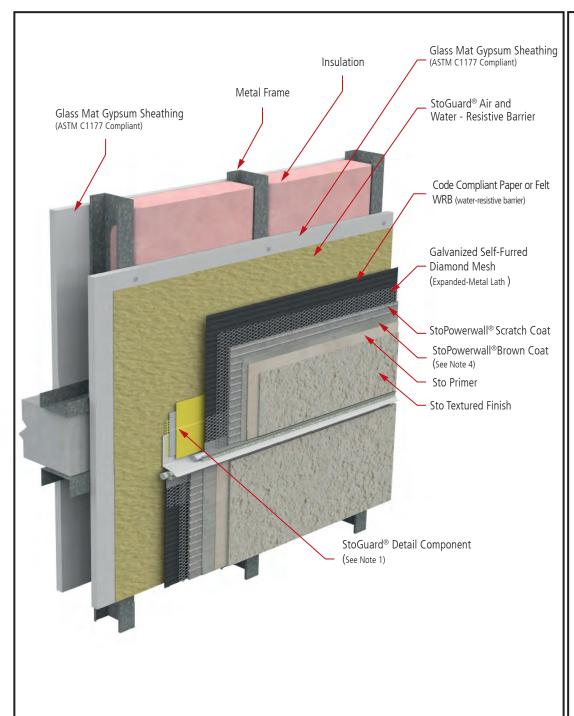




### Sto Powerwall®

ATTENTION

Fire Protection - Noncombustible Type Construction (NFPA 285) and 1 Hour Non-Load Bearing Fire-Resistive Rated Wall Assembly (ASTM E 119)



#### 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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- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 5. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 6. StoPowerwall Scratch Coat and Brown Coat minimun 3/4" (19 mm) Thick, maximun 7/8" (22 mm) Thick.
- 7. 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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