

# **StoPowerwall**<sup>®</sup> Commercial

Design Guide and Detail Booklet Series 66s.xx | July 2022



Stucco Systems

StoPowerwall<sup>®</sup> is a stucco wall assembly with continuous air and water resistve barrier and moisture drainage. It combines the strength and durability of traditional stucco with StoGuard<sup>®</sup> moisture protection and Sto high performance finishes.

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StoPowerwall<sup>®</sup> can be used in residential or commercial wall construction.











# **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

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#### StoPowerwall® System Overview and Components



#### **StoPowerwall**®

StoPowerwall<sup>®</sup> 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**<sup>®</sup> - Roller or spray applied vapor-permeable air & water-resistive barrier designed for use in StoPowerwall<sup>®</sup> DrainScreen<sup>®</sup> Systems.



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



**StoGuard VaporSeal**<sup>®</sup> - 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**<sup>®</sup> **TA** - Trowel applied vapor-permeable air & water resistive barrier for use behind siding, brick, stone, adhered veneer, and StoPowerwall<sup>®</sup> systems.

#### **Detail Component Products**



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



**Sto RapidGuard**<sup>®</sup> - 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**<sup>®</sup> - 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**

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**Sto Powerflex Silco**<sup>®</sup> - 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**<sup>®</sup> Lotusan<sup>®</sup> - A trowel or sprayed applied, ready-mixed, acrylic-based wall finish with Lotus-Effect<sup>®</sup> 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<sup>®</sup> including; StoSignature, StoCast (Wood and Brick), Stolit<sup>®</sup>, Stolit<sup>®</sup> X, Sto Powerflex, StoPowerwall<sup>®</sup>, Sto Essence DPR, and Sto Powercyl 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. Wind Loads: 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 StoPowerwall 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.
- <u>Fire Resistance-Rated Wall Assemblies</u>: In general, <sup>3</sup>/<sub>4</sub> 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.</u>

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. <u>General</u>:

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<sup>®</sup> 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 ft<sup>2</sup> (13 m<sup>2</sup>). 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

#### 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.

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#### Table 1.1 - StoGuard<sup>®</sup> Product Use Chart

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

# **Design Details**

Components         System Components         System Components with StoCast Brick         System Components with StoCast Wood         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 Sto Crack Defense System         System Components with MVES (Masonry Veneer Engineered System)	66s.01 SCB 66s.01 SCW 66s.01 CMU 66s.01 CDS
Installation at Grade Termination at Grade: Sheathing Flush with Foundation Termination at Grade: Sheathing over 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 66s.12 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

### Detail No.: 66s.00 Date: July 2022



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## Sto Powerwall<sup>®</sup> with StoCast Brick

### Detail No.: 66s.01 SCB Date: July 2022



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## Sto Powerwall® with StoCast Wood

### Detail No.: 66s.01 SCW Date: July 2022



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

### Detail No.: 66s.01 CMU Date: July 2022



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### **StoPowerwall**<sup>®</sup> System Components with Sto Crack Defense System

### Detail No.: 66s.01 CDS Date: July 2022



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### Sto Powerwall® MVES Components

### Detail No.: 66s.01 MVES Date: July 2022



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### **StoPowerwall**<sup>®</sup> **Termination at Grade: Sheathing Flush with Foundation**

### Detail No.: 66s.02 Date: July 2022



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### StoPowerwall® Termination at Grade: Sheathing over Foundation

### Detail No.: 66s.03 Date: July 2022



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Detail No.: 66s.04F

Date: July 2022 Page 1 of 2

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



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1. Refer to StoGuard Product StoGuard detail components; joint treatment, rough opening protection, backing for masonry dissimilar materials, joints and

2. Refer to General Notes for specific information and design guidance on wall assembly

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







Detail No.: 66s.04F

Date: July 2022 Page 2 of 2

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



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



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# Page 1 of 2

### 1. Refer to StoGuard Product StoGuard detail components; joint treatment, rough opening protection, backing for masonry dissimilar materials, joints and

Detail No.: 66s.04M

Date: July 2022

2. Refer to General Notes for specific information and design guidance on wall assembly

3. Components not identified as manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract





### StoPowerwall<sup>®</sup> Rough Opening Protection with StoGuard<sup>®</sup>Mesh

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



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

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

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### StoPowerwall® Box Window at Head/Jamb

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

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### **StoPowerwall®** Box Window at Sill/Jamb

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

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### **StoPowerwall®** Soffit Return

### Detail No.: 66s.07 Date: July 2022



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### StoPowerwall® Floorline without Deflection Track

### Detail No.: 66s.08 Date: July 2022



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### **StoPowerwall**<sup>®</sup> Floorline with Deflection Track

### Detail No.: 66s.09 Date: July 2022



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### **StoPowerwall®** Horizontal Joint at Dissimilar Material

### Detail No.: 66s.10 Date: July 2022



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### **StoPowerwall®** Vertical Joint at Dissimilar Material

### Detail No.: 66s.11 Date: July 2022



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### StoPowerwall® Inside Corner: Common Substrate

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



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

### Detail No.: 66s.13 Date: July 2022



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### **StoPowerwall® Outside Corner: Common Substrate**

### Detail No.: 66s.14 Date: July 2022



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### **StoPowerwall**<sup>®</sup>

Termination at Parapet

### Detail No.: 66s.15 Date: July 2022



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## **StoPowerwall® Roof / Wall Abutment**

### Detail No.: 66s.16 Date: July 2022



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## StoPowerwall® Saddle Flashing

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



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## **StoPowerwall®** Saddle Flashing

ATTENTION

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



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/m<sup>2</sup>) 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® **Scupper Penetration Through Wall**

### Detail No.: 66s.18 Date: July 2022



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### **Sto Powerwall® Sign Attachment**

### Detail No.: 66s.19 Date: July 2022



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### Sto Powerwall® Foam Buildouts

### Detail No.: 66s.20 Date: July 2022



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### **Sto Powerwall®**

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

### Detail No.: 66s.FP Date: July 2022



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