



Building with conscience.

# Comprehensive Repair Guide for Facade Restoration Professionals

EIFS

STUCCO

CONCRETE/MASONRY



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# The Perfect Wall

THE FIVE PLANES OF CONTROL FOR THE IDEAL BUILDING ENVELOPE

The ideal building envelope has five planes of control that must be properly connected and integrated with other building elements. All restoration should be undertaken with an understanding of how each of these layers may be affected.

FOUR LEVELS

4



FOUR LEVELS

5



### Vapor Retarder

To control the flow of water vapor from areas of high to low pressure, minimizing condensation.



### Air Barrier

To limit the uncontrolled flow of air through the wall assembly, reducing condensation and energy loss.



### Water Penetration Barrier

Barrier inboard of the cladding, flashed to the exterior, designed and installed to prevent liquid water from entering the wall cavity.



### Thermal Barrier

Insulation to significantly reduce thermal bridging.



### Durability and Water-Shedding

Functional finish surfaces connected to a resilient lamina in order to protect and divert water away from the wall.



### Fluid-Applied Air & Moisture Barrier

One layer.  
Three functions.

### Insulation Barrier

Owens Corning Thermafiber®  
CI-C SC18 Mineral Wool,  
Owens Corning Foamular  
CI-C, Dow Panel Core 20,  
or Sto EPS.

### Durability and Water-Shedding Surface

Comprised of a basecoat, mesh & finish. Additional layer of basecoat with coated glass fiber fabric for high-impact resistance optional.



# The Four Levels of reStore

DON'T IGNORE IT. RESTORE IT.



# 30

**This comprehensive repair guide offers instructions on how to remedy 30 of the most common restoration problems.**

reStore has a solution to help you regain the value of your investment no matter what the current condition of your building may be. If you discover you need help at any stage of the restoration, you'll find additional resources at the bottom of each page. If you would rather speak to a Sto associate, call **877-712-6284** anytime!



*"We wanted to again bring high-end products like the StoTherm® system to this project so we could make a positive impact for the people who live there by improving not only the comfort level for residents but also the appearance of the towers. We've worked with Sto numerous times and we have confidence in their products, expertise and support."*

*— Elli Himelstein, Project Manager with L+M Development*



# The Four Levels of reStore

DON'T IGNORE IT. RESTORE IT.

Whatever condition your building exterior is in, reStore has a solution to help you regain the value of your investment and meet new environmental regulations. The four levels of reStore cover everything from simple maintenance to remove dirt and mildew to a complete facade restoration with all the products and support you need.

## LV1 CLEAN & RECOAT



A surface-level solution to remove dirt, mold and mildew, while refreshing or updating the color of the facade.

## LV2 REPAIR & REFINISH



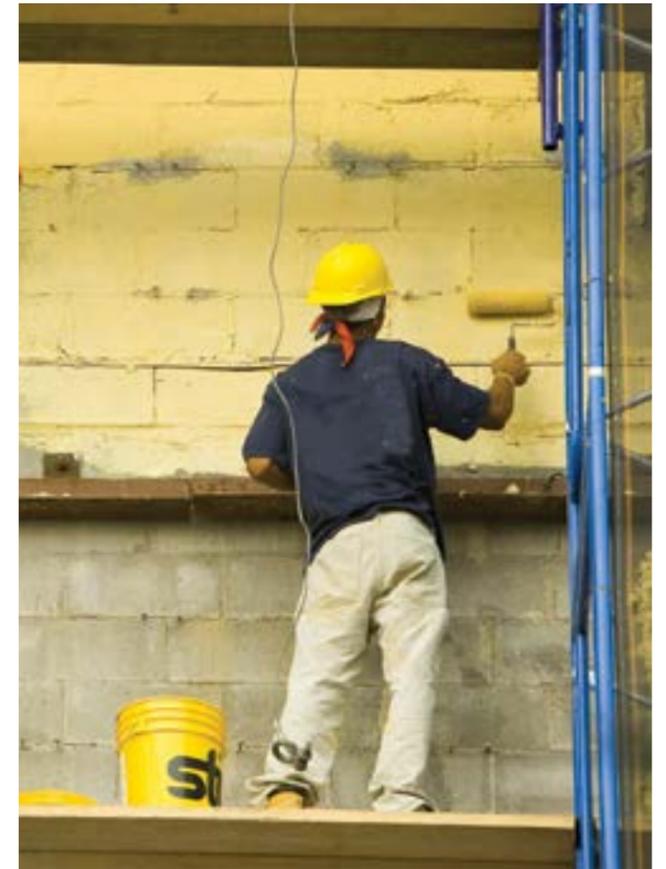
A proven solution designed to keep minor damage to EIFS, stucco, or concrete facades from becoming a major problem.

## LV3 OVERCLAD



A cost-effective solution to address moisture intrusion, energy waste, and occupant comfort, while enhancing an older building's aesthetic appeal.

## LV4 REMOVE & RECLAD



A practical solution when a replacement facade is needed to restore a building in severe distress and to cost effectively deal with all current building code requirements.

# Clean and Recoat

CONDITION



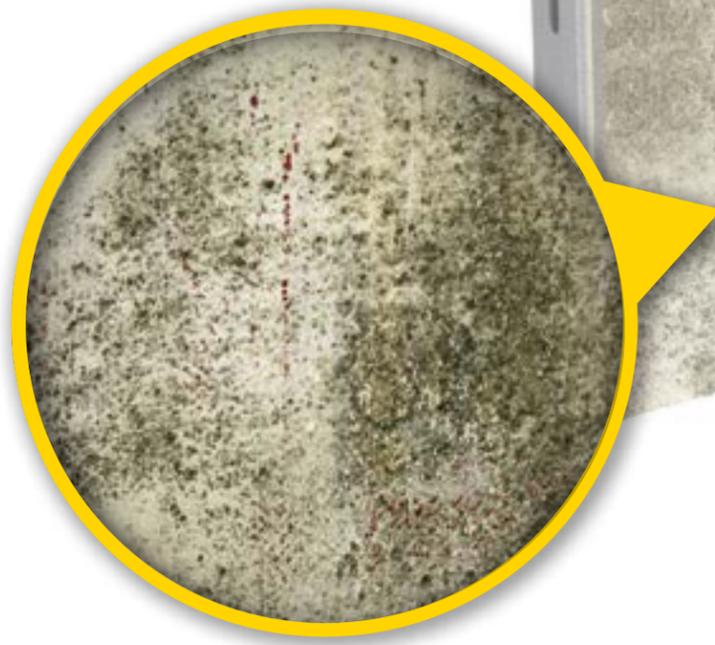
MOLD / MILDEW / ALGAE / DIRT ACCUMULATION ON WALL

**Facades are constantly exposed to weathering and run the risk of fading or being attacked by unpleasant microorganisms.** A regular program of cleaning and recoating will refresh the building's appearance and prevent more serious issues in the future.

**A Level 1 restoration is indicated when the water-shedding surface is sound but unsightly.** Proper surface preparation techniques are critical to ensure the recoat lasts for years to come.

**A clean and recoat using Sto's iQ Technology™ coatings can extend an owner's maintenance/repair cycle significantly.** Innovative formulations paired with biomimicry inspiration, iQ Technology™ coatings such as StoColor® Dryonic® offer a facade solution that starves the surface of a moist environment that promotes the growth of unwanted mold, mildew and algae.

**If there are indications of water intrusion, a more comprehensive restoration may be necessary.** A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Clean and Recoat

LV1 RESTORE – CLEAN AND RECOAT WALL

**1 Clean the surface.** If pressure washing, follow necessary safety precautions and adjust pressure to avoid damage to the substrate. For mold, algae, and mildew removal, treat surfaces with a commercial mildew removal and/or wash product, carefully following manufacturer's application and safety directions. Rinse thoroughly with clean water and allow a minimum of 24 hours to dry thoroughly before application of coating.

**2 Apply StoPrime® Conditioner** evenly with brush, roller or spray equipment to properly prepared substrates if applicable.

**3 Apply StoPrime® primer** appropriate for the coating selected.

**4 Apply tinted Sto iQ Technology™ coating** with specified Sto materials.

**Note:** Other Sto coating products outside the iQ Technology™ family are also available.



IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.01: Sto reStore - Smooth recoat 2. 72.10.00: reStore Stucco - Clean and Recoat (cracks < 1/32-in. (1 mm))



# Damage in Field of EIFS Wall

CONDITION



IMPACT DAMAGE

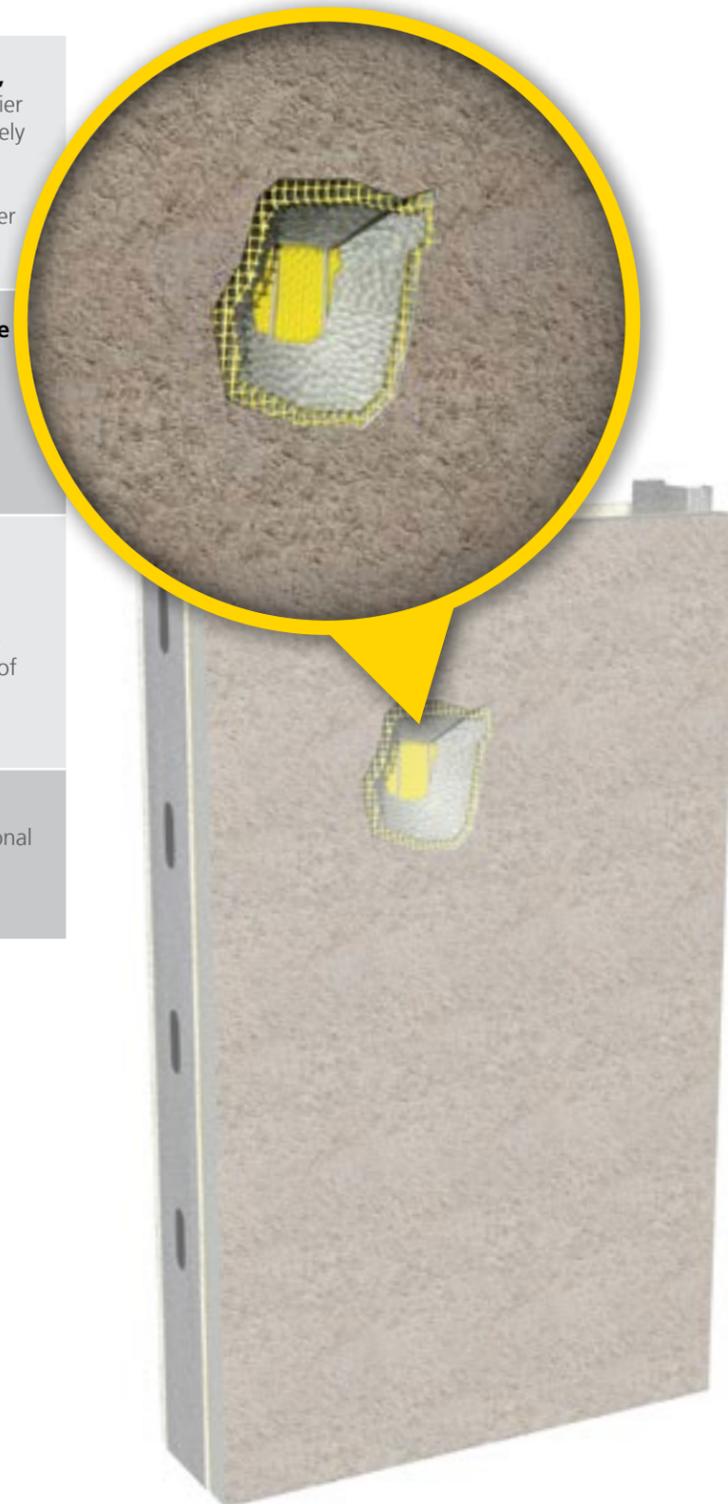
**When EIFS with standard mesh is punctured or cracked, the system is vulnerable to water intrusion.** If it is a barrier EIFS system, water penetration is challenged to drain effectively and may damage the substrate. The risk of water damage is reduced if the EIFS is a drained system in which the water-resistant barrier provides additional protection. However, either system should be repaired as soon as possible.

**A Level 2 restoration will repair the damage and restore the integrity of the water-shedding surface.**

This repair can be made either as part of regular EIFS maintenance or as preparation for refinishing. The scope of work does not address water-related damage inbound of the EIFS.

**When the damaged EIFS is cut away for repair, the underlying substrate or water-resistive barrier can be examined.** If there is no evidence of water penetration or impact damage to these layers, the repair can proceed. If the repair is part of a complete recoat, an additional application of Sto basecoat with Sto Armor Mat embedded will greatly increase impact protection.

**If there is water penetration into the wall assembly or structural impact damage,** a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Damage in Field of EIFS Wall

LV2 reStore — DAMAGE REPAIR AND APPEARANCE RESTORATION



- 1 **Cut out** the damaged portion of the EIFS.
- 2 **Repair** the EIFS as per Sto Detail 74.06.
- 3 **Optional:** For added impact resistance, recoat the wall with Sto basecoat and Sto Armor Mat. Allow to cure.
- 4 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 5 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 6 **Refinish the wall** with the specified Sto finish materials.

IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS 2. 72.03: Sto reStore – Basecoat and finish repair 3. 74.06: Sto reStore – Puncture or crack repair



# Damage to EIFS Corners

CONDITION



## IMPACT DAMAGE TO CORNERS

**Standard double-wrapped EIFS corners at grade are more vulnerable to damage and water intrusion than walls reinforced with high impact mesh.** If it is a barrier EIFS system, water penetration is challenged to drain effectively and may damage the substrate. The risk of water damage is reduced if the EIFS is a drained system. However, with either system the corner should be repaired as soon as possible.

**A Level 2 restoration will repair the damage and restore the integrity of the water shedding surface.** The repair can be made either as part of regular EIFS maintenance or as preparation for recoating. The scope of work does not address water-related damage inbound of the EIFS.

**With the damaged EIFS corner is cut away, the underlying substrate or water-resistive barrier can be examined.** If there is no evidence of water penetration or impact damage to these layers, the repair can proceed. If the repair is part of a complete recoat, an additional application of Sto basecoat with Sto Armor Mat embedded will greatly increase impact protection.

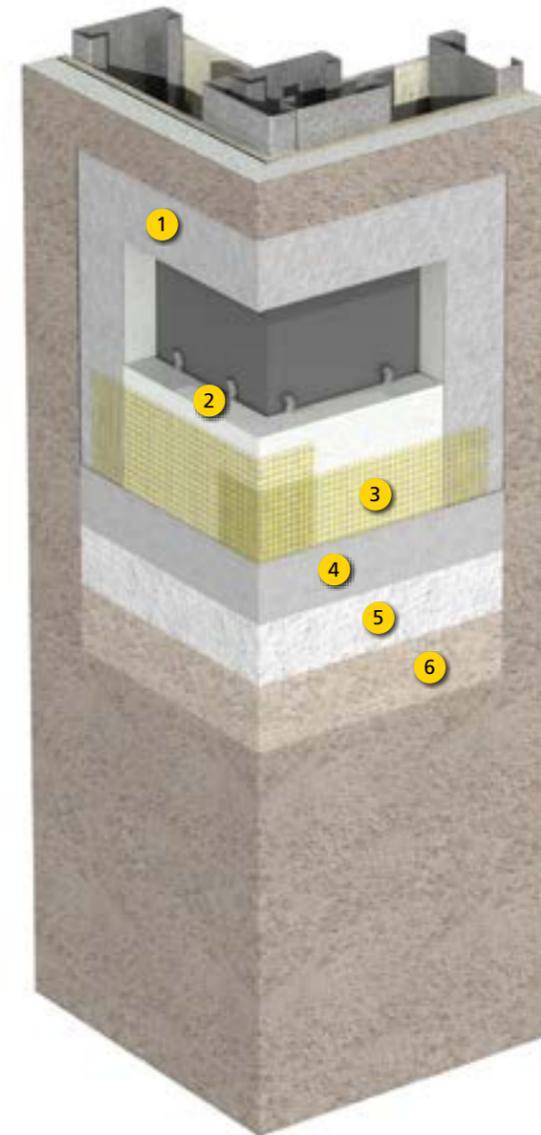
**If there is water penetration into the wall assembly or structural impact damage,** a third-party envelope professional should be retained to evaluate conditions and make recommendations.



SOLUTION

# Damage to EIFS Corners

## LV2 reStore — REPAIR AND RESTORATION OF CORNER



- 1 **Cut out** the damaged EIFS corner back to the substrate.
- 2 **Repair** the EIFS as per Sto Detail 74.08.
- 3 **Optional:** For added impact resistance, recoat the wall with Sto basecoat and Sto Armor Mat Mesh. Allow to cure.
- 4 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 5 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 6 **Refinish the wall** with the specified Sto finish materials.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS 2. 72.03: Sto reStore – Basecoat and finish repair 3. 74.06: Sto reStore – Puncture or crack repair



# Separation Between Roof and EIFS

CONDITION **reStore**

## INADEQUATE SEPARATION BETWEEN ROOFING AND EIFS

**Traditional EIFS detailing recommends that the system terminate 2" (50 mm) above finished roofing.** This clearance allows re-roofing to take place without damaging the EIFS. In addition, the clearance allows for leaves and other natural debris to be cleared by wind or regular maintenance, preventing moisture retention in the debris from staining and deteriorating the finish.

**As part of a Level 2 restoration, the EIFS will be modified in compliance with industry recommendations.** This repair may be undertaken as part of regular EIFS maintenance, as preparation for re-roofing, or as a restoration of the finish.

**The EIFS termination will be cut away and refinished with the required separation above the roofing.** The repairs may require incorporating the roof step flashing into the waterproof air barrier behind the EIFS. Modifications to the diverter flashing at the bottom of the slope may also be required.

**When the EIFS has been cut back, the substrate can be examined for signs of water penetration and damage.** If these are present, a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



# Separation Between Roof and EIFS

SOLUTION **reStore**

## LV2 reStore — RESTORE SEPARATION AND REPAIR EIFS



- 1 **Cut the EIFS back to the water-resistive barrier**, and to a height of 8" to 12" (200 to 300 mm) above the finished roof.
- 2 **Remove old adhesive** from the substrate.
- 3 **Integrate the water-resistive barrier** (or in the case of a barrier system, the substrate) with the roof step flashing by applying Sto RapidGuard® to the WRB or substrate and lapping it onto the upturned edge of the flashing.
- 4 **Cut insulation to fit the gap**, dimensioning it to leave 2" (50 mm) clearance above the roof following installation. Pre-wrap the bottom edge with Sto basecoat and mesh.
- 5 **Install the prewrapped insulation** and allow the adhesive to cure.
- 6 **Apply Sto basecoat and mesh** over the prewrapped insulation, lapping onto the old finish. Allow to cure.
- 7 **Apply a second layer of Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 8 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 9 **Refinish the wall** with the specified Sto materials.

IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS 2. 72.05



# Diverter Flashing Installed Incorrectly

CONDITION



MISSING OR INCORRECTLY INSTALLED DIVERTER FLASHING

**A diverter or 'kick-out' flashing is the termination of the roof step flashings.** If the diverter is missing, inadequate or installed incorrectly, there is a potential for water to drain off the roof into the cladding assembly below. Often, sealant is used as an inappropriate alternative to a diverter flashing.

**Installing a diverter flashing adds an essential component to the water-shedding system at the roofline.** If the repair is made in good time, i.e., before sealant fails, damage from water penetration into the wall can be avoided.

**As part of a Level 2 restoration, installation of an appropriate diverter flashing will be required.** The new flashing should be designed to accommodate the roof slope, the thickness of the insulation, and the volume of water shed from the roof. Ultimately, water diverted by the flashing should be collected in a gutter and drained away from the building. The EIFS will have to be reconfigured to fit around the diverter.

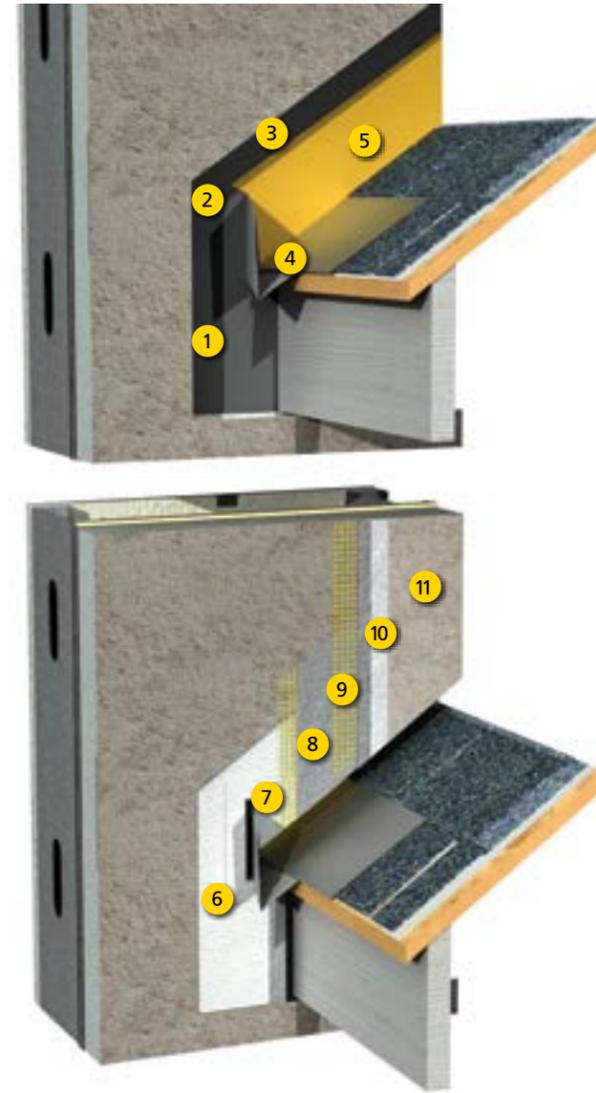
**If there is any indication that water has penetrated into the wall assembly,** a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Diverter Flashing Installed Incorrectly

LV2 reStore — DIVERTER INSTALLED AND EIFS REPAIR



- 1 **Remove EIFS** approximately 12" (300 mm) all around the position where the new diverter will be installed.
- 2 **Remove old adhesive** from the substrate.
- 3 **Repair any damage** to the water-resistive barrier.
- 4 **Slide the new diverter flashing** under the step flashing and roof edge flashing.
- 5 **Integrate the waterproof air barrier** with the roof step and diverter flashings by applying Sto RapidGuard® to the substrate and lapping it onto the upturned edge of the flashing.
- 6 **Cut a piece of insulation to fit around the diverter.** Pre-wrap the exposed edge with Sto basecoat and mesh. Leave 1/2" (13 mm) gap outbound of the flashing for backer rod and sealant.
- 7 **Install the prewrapped insulation** and allow the adhesive to cure.
- 8 **Apply Sto basecoat and mesh** over the prewrapped insulation, lapping them onto the old finish. Allow to cure.
- 9 **Apply a second layer of Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 10 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 11 **Refinish the wall** with the specified Sto materials.

IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS
	2. 72.05
	3. 52s.62: StoTherm® G – Diverter Flashing at Roof/Wall Abutment
	4. 53s.62



# Deck Connection Flashing Restored

CONDITION



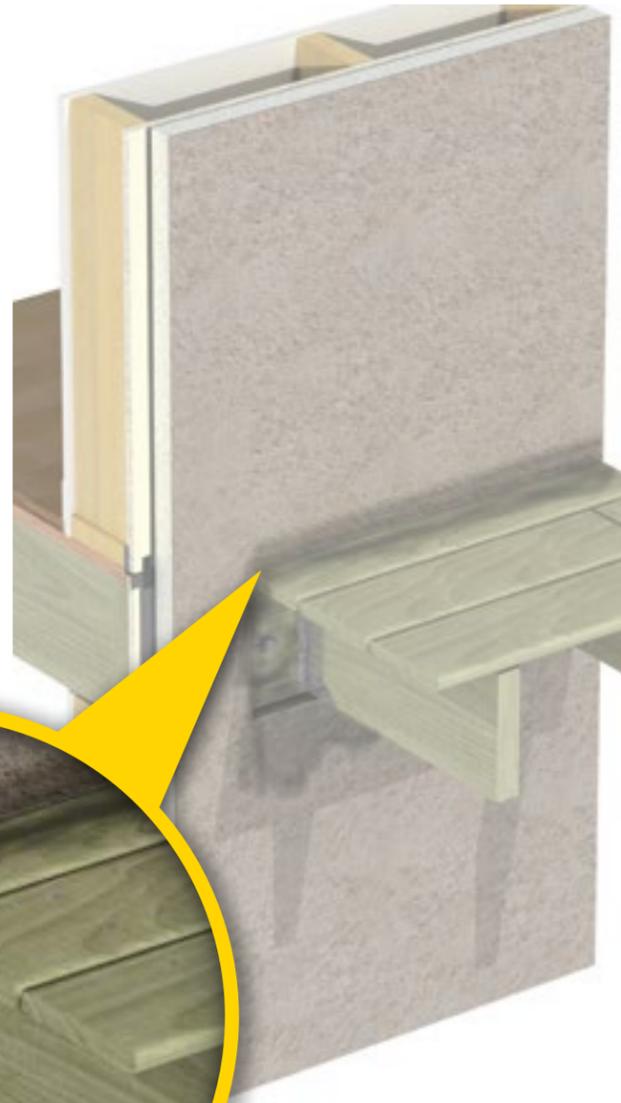
DECK ATTACHED WITHOUT FLASHING

**Wood decks installed directly against a house are extremely difficult to waterproof properly.** EIFS installed down to the deck surface may restrict ventilation and drying at the deck connection. Water accumulation in the area of the connection can result in deterioration of the deck and potential penetration into the house framing.

**A Level 2 restoration is limited to repairing the EIFS around the deck and recoating the wall.** Structural work to the deck or connections to the house are outside the scope of the EIFS restoration but should be coordinated as required with the EIFS work.

**The solution involves cutting the EIFS away from the deck and installing flashing to direct water away from structural connections.** This may require deck modifications to properly waterproof and flash the connection to the house.

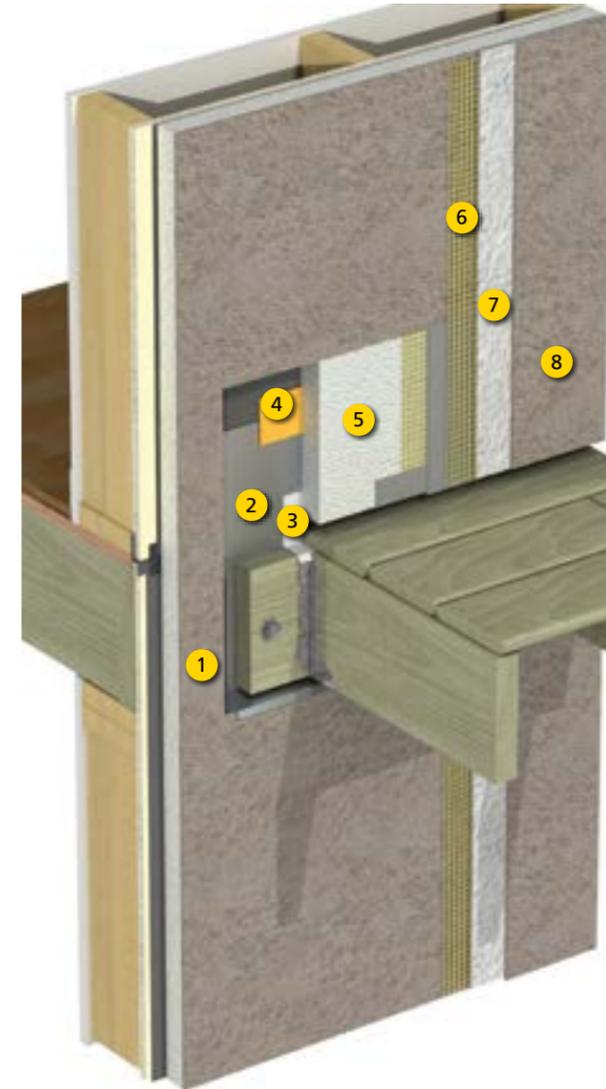
**If water has penetrated the building structure, deterioration may have resulted.** If there is indication of water penetration and damage to sheathing or house framing, a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Deck Connection Flashing Restored

LV2 reStore — FLASHING INSTALLED AND EIFS REPAIR



- 1 **Cut back** the EIFS far enough from the deck to accommodate installation of flashing and repair of the EIFS.
- 2 **Integrate the installation** of flashing with any required deck remediation.
- 3 **Install flashing** to protect the substrate and direct water away from the deck connection.
- 4 **Integrate the flashing** with the StoGuard® air and moisture barrier.
- 5 **Repair** the EIFS terminations as per Sto Detail 72.50.
- 6 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 7 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 8 **Refinish the wall** with the specified Sto materials.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 2.32: StoTherm® ci – Deck Connection over Wood Frame
	2. 2.50: StoTherm® ci – Floor Line Joint over Wood Frame
	3. 72.02: Sto reStore – Resurfacing EIFS
	4. 72.05
	5. 74.28: Sto reStore – Adding an Opening



# Repair of EIFS Parapet Cap

CONDITION



## DAMAGED PARAPET CAP

**EIFS parapet caps were popular design features when EIFS were introduced.** The sharp top edge is subject to physical damage, and the sloped surface endures more weathering than the vertical walls, increasing maintenance requirements. If this is a barrier installation, damage to the EIFS lamina could result in water penetration from the outside and increased air leakage from the interior. All damage to the cap should be repaired as soon as possible.

**A Level 2 project will repair the damage and restore the integrity of the water-shedding surface.** The repair can be made as part of either a Level 2 restoration or an integrated parapet cap replacement. The scope of work does not address water-related damage inbound of the EIFS nor does it include repairs to the roof or the roof membrane counter-flashing.

**There are two potential solutions for the parapet repair.** The preferred, long-term solution will involve replacement of the parapet cap with an airtight, waterproof membrane and metal cap flashing. The alternative is to restore the existing EIFS parapet cap with layers of water-resistant coatings that will minimize water penetration, improve durability and reduce maintenance.

**A parapet cap restored to its original appearance will require additional long-term maintenance.** Replacing the EIFS cap with a metal cap flashing will increase protection from physical damage, and reduce maintenance by deflecting water away from the wall surface. If evidence of water penetration is present or the repair is complicated by the roofing interface, a third-party envelope professional should be retained to evaluate conditions and make recommendations.



SOLUTION

# Repair of EIFS Parapet Cap

## LV2 reStore — REPLACED OR RESTORED PARAPET CAP



### PARAPET CAP REPLACEMENT

- 1 **Remove the EIFS parapet cap and cladding** to a level 8" to 12" (200 to 300 mm) below the top edges of the substrate.
- 2 **Remove old adhesive** from the substrate.
- 3 **Wrap the substrate cap** with an airtight, water-resistive barrier.
- 4 **On both sides of the parapet, install insulation**, either prewrapped or backwrapped aligned with the substrate top edges.
- 5 **Apply a layer of basecoat and mesh** over the wrapped insulation, lapping onto the old finish. Allow to cure.
- 6 **Prime the basecoat** with a tinted Sto primer appropriate for the finish coat specified.
- 7 **Install the support or blocking** for the new parapet cap flashing.
- 8 **Wrap the cap support or blocking with Sto StoGuard® Transition Membrane.** Lap onto the primed basecoat on the front and back of the parapet.
- 9 **Refinish the wall** with the specified Sto materials.
- 10 **Install cap flashing**, overlapping the EIFS face a minimum of 2.5" (65 mm). Flashing functions best with a 3/4" (20 mm) or greater drip edge.

### EIFS PARAPET CAP RESTORATION

- 1 **Clean and repair** existing parapet cap following Sto's maintenance guide.
  - 2 **Apply a layer of Sto waterproof membrane and mesh** to the exposed surface, lapping onto the vertical wall surfaces 3" to 6" (75 to 150 mm). Allow to cure.
  - 3 **Apply tinted StoPrime® primer** appropriate for the finish selected.
  - 4 **Apply Stolit® Freeform** to the primed sloped surface and trowel to a smooth finish. Protect from the elements until dry.
- Integrate the parapet cap repairs** with the restoration of the EIFS finish below the parapet.
- 5 **Coat the Stolit® Freeform** with StoColor Acryl® Plus.

### RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
2. 72.20.81: reStore Stucco – Repair of Stucco Parapets and Un-capped Walls
3. S707B - StoTherm® EIFS Reference Guide: Repair and Maintenance

**IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Overclad of Low-Porosity Surfaces

CONDITION



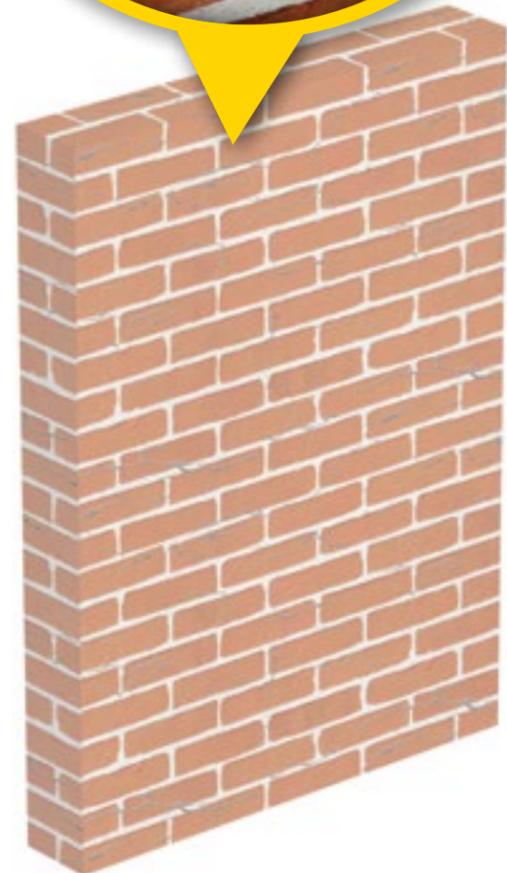
POOR THERMAL PERFORMANCE LOW-POROSITY FACADE

A building with an existing facade of low-porosity materials such as glazed masonry units, glass block, or glazed tile may require a thermal upgrade, an aesthetics upgrade, or both. Unfortunately, the smooth surface of these materials make it difficult to adhere necessary systems using standard materials.

A Level 3 overclad restoration involving a ready-mixed, acrylic-based adhesive allows for bonding of EIFS directly to low-porosity surfaces. Energy costs may have increased substantially. A planned change of use (e.g., an industrial building being repurposed to multi-family residential) may spur the decision to improve performance and occupant comfort levels.

Upgrading the appearance and performance of the facade will improve curb appeal and extend the life cycle of the building.

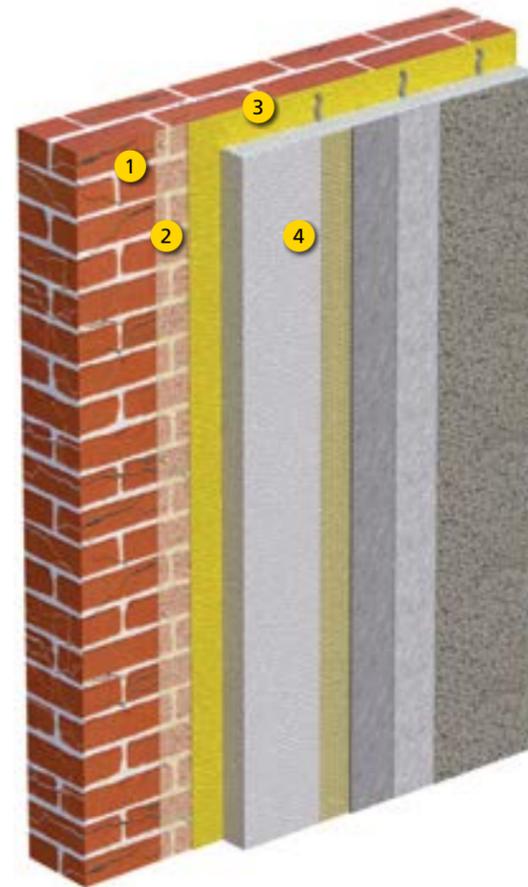
Compatibility of the adhesive and the substrate should be confirmed via testing through a third-party professional.



SOLUTION

# Overclad of Low-Porosity Surfaces

LV3 RESTORE – STOTHERM® CI OVERCLAD USING DISPERSION ADHESIVE



- 1 Clean and prepare surface as needed to ensure a proper bond.
- 2 Apply diluted Sto Dispersion Adhesive in a 15 wet mil coat to substrate with a ½ inch (13 mm) nap roller and let dry.
- 3 Cover the wall with StoGuard® air and moisture barrier.
- 4 Install StoTherm® ci insulated wall cladding, ensuring that all the planes of protection are properly connected.

RESOURCES

IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES

1. Series 19.xx StoTherm ci over Masonry



# Overclad using Pre-Fabricated StoLite™ Panels

CONDITION **reStore**

POOR THERMAL PERFORMANCE; SHORT CONSTRUCTION SCHEDULE AND LOW JOBSITE WASTE REQUIREMENTS

**A building may require a thermal upgrade utilizing a continuous insulation system.** However, certain projects may have a shortened schedule, lower waste requirements, or extreme weather conditions that make field-applied EIFS difficult or impossible.

**A Level 3 restoration involving a lightweight, pre-manufactured panel will provide all the benefits of typical field-applied EIFS.** At the same time, pre-fabrication addresses the short schedules, low waste requirements, and extreme weather concerns that certain projects face.

**StoLite Panels will add effective insulation to the building enclosure.** All envelope control layers—vapor barrier, waterproof air barrier, thermal barrier and water-shedding surface—are shifted to the exterior cladding. The design professional must ensure that all planes of protection in the EIFS are properly connected to other elements in the building enclosure (e.g., windows, roof) to form continuous barriers.

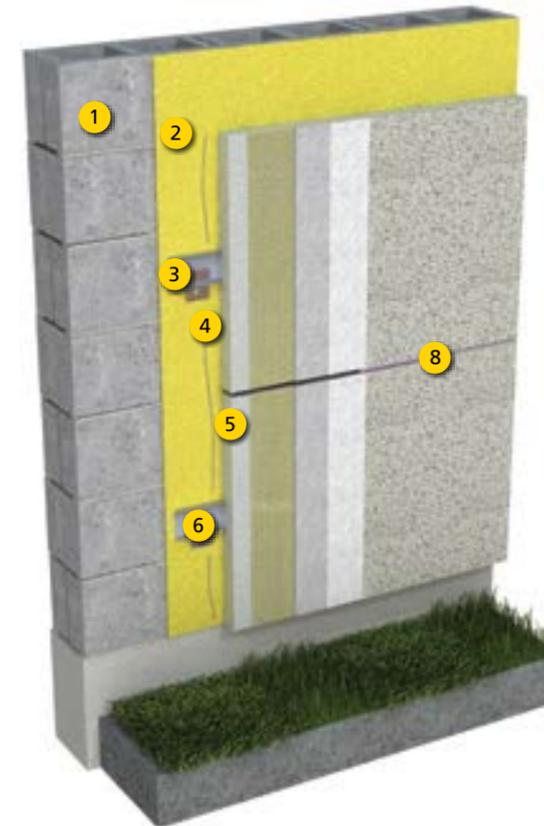
**If water penetration into the wall assembly or structural impact damage are present,** a third-party envelope professional should be retained to evaluate conditions and make recommendations.



# Overclad using Pre-Fabricated StoLite™ Panels

reStore SOLUTION

LV3 OR LV4 RESTORE – STOTHERM® CI OVERCLAD OR RECLAD USING PRE-FABRICATED STOLITE PANELS



- 1 **Clean and prepare surface** as needed to ensure a proper bond.
- 2 **Apply StoGuard®** air and moisture barrier.
- 3 **Install clips** that will give the panel the initial support that is needed.
- 4 **Apply approved adhesive** to the back of the panel.
- 5 **Install panel onto clips.** Clips should slide into pre-cut grooves on the C-channel attached to the back of the panel.
- 6 **Fasten StoLite panel to the wall** through C-channel and clip using appropriate fasteners.
- 7 **Allow adhesive to set.**
- 8 **Install backer rod and sealant** per manufacturer's instructions.

**Note:** StoLite Panels can be manufactured using any aesthetic the architect pleases whether it be a StoSignature™ texture or iQ Technology™ coating.

RESOURCES	<b>IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES</b>
	1. Series 50s.xx - StoLite™ Panel



# Horizontal Reglets

CONDITION



## DETERIORATED STUCCO AT HORIZONTAL REGLET INTERFACE

28

**Metal one-piece reglets, designed to be decorative elements, have no movement capability and cannot be used as stress relief joints in stucco.** If used for this function, cracking will occur at the stucco/reglet interface. In addition, these metals (anodized aluminum or galvanized steel) are vulnerable to corrosion, especially in coastal environments, if the protective coating is damaged.

**The purpose of this repair, as part of a Level 2 restoration, is to protect the stucco around the reglets from further deterioration.** There should be no sign of water penetration into the cladding assembly. Deterioration of the reglets should be cosmetic only (i.e., surface corrosion or discoloration, but no cracking or splitting).

**A foam build-out overclad will avoid removal and replacement of the horizontal reglet while extending the life cycle of the stucco cladding assembly.** Repair should be undertaken in conjunction with the Level 2 restoration of the stucco wall to ensure protection of the water-shedding surface. If both horizontal and vertical one-piece reglets were utilized then a Level 3 overclad is recommended.

**If there are indications of water intrusion, removing the reglet and replacing it with a functional joint may be necessary.** A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



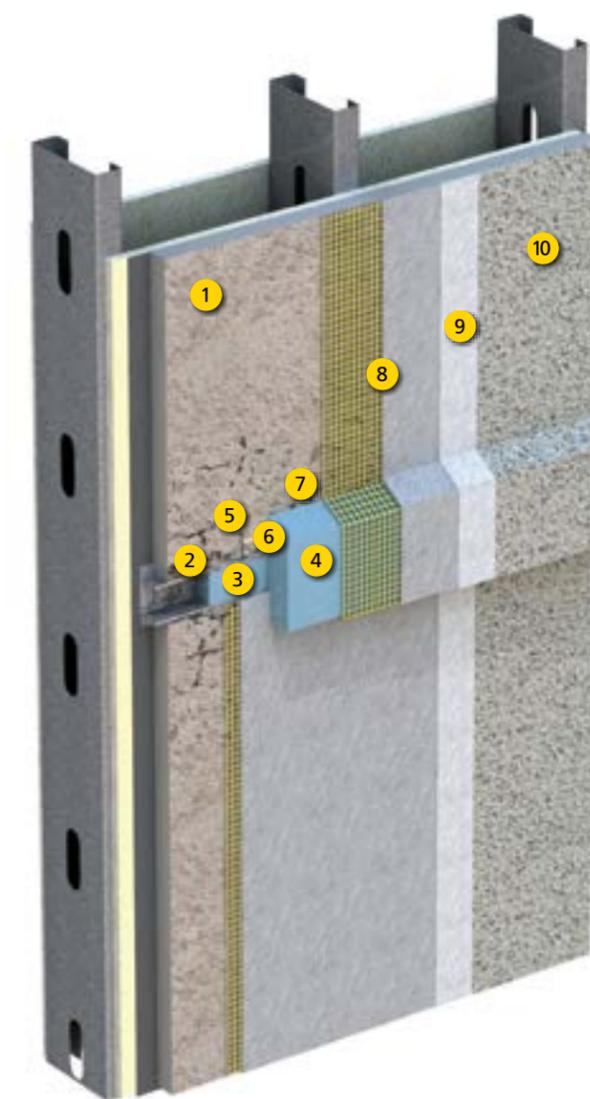
SOLUTION

# Horizontal Reglets

## LV2 reStore — FOAM BUILD-OUT OVERCLAD

STUCCO

29



- 1 **Clean entire stucco surface** to remove all contaminants and loose materials.
- 2 **Seal stucco cracks** along the reglet with an acrylic sealant.
- 3 **Install a tightly fitting foam insert** into the reglet cavity so that it fits flush with the existing surface.
- 4 **Prepare a protective build-out** as per Sto Detail 72.20.71 to be installed over the reglet.
- 5 **Mark horizontal lines** on either side of the reglet to define the outer edge of the foam build-out.
- 6 **Apply primer and sealant** inside the marked horizontal lines, following sealant manufacturer's instructions.
- 7 **Press the new joint cover batten into the sealant.** Tool any excess sealant to provide a neat seal at the foam build-out/wall surface interface. Control the amount of sealant so the stucco can still move at the joint under the foam build-out.
- 8 **Apply Sto basecoat and mesh** to the prepared surface, overlapping the new foam build-out. Allow to cure.
- 9 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 10 **Refinish the wall** with the specified Sto materials.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS
	2. 72.05
	3. 72.20.70: reStore Stucco – Adding foam Architectural Shapes
	4. 72.20.71: reStore Stucco – Horizontal Reglet Repair
	5. 72.20.72: reStore Stucco – Vertical Reglet Repair
	6. 53s.04: StoTherm® ci XPS – Aesthetic Feature Band
	7. ASTM C 926: Standard Specification for Application of Portland Cement-Based Plaster
	8. ASTM C 1063: Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster



# Vertical Reglets

CONDITION



## DETERIORATED STUCCO AT REGLET INTERFACE

**Metal one-piece reglets, designed to be decorative elements, have no movement capability and cannot be used as stress relief joints in stucco.** If used for this function, cracking will occur at the stucco/reglet interface. In addition, these metals (anodized aluminum or galvanized steel) are vulnerable to corrosion, especially in coastal environments, if the protective coating is damaged.

**The purpose of this repair, as part of a Level 2 restoration, is to protect the stucco around the reglets from further deterioration.** There should be no indication of water penetration into the cladding assembly. Deterioration of the reglets should be cosmetic only (i.e., surface corrosion or discoloration without evidence of cracking or splitting).

**A foam build-out overclad will avoid removal and replacement of the vertical reglet while extending the life cycle of the stucco cladding assembly.** Repair should be undertaken in conjunction with the Level 2 restoration of the stucco wall to ensure protection of the water-shedding surface. If both horizontal and vertical one-piece reglets were utilized then a Level 3 overclad is recommended.

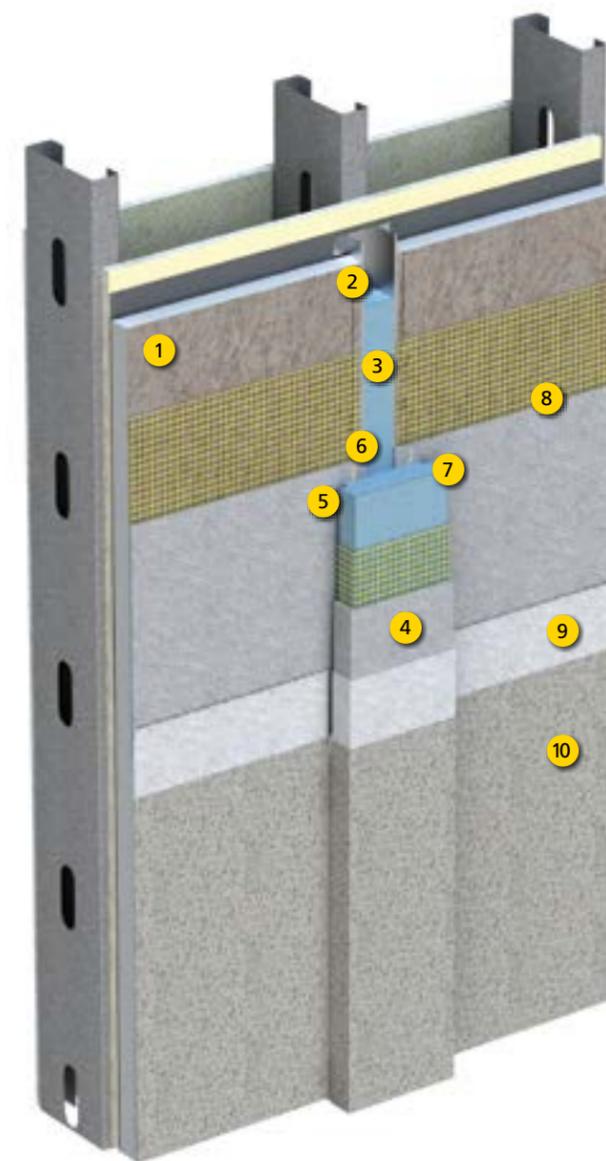
**If there are indications of water intrusion, removing the reglet and replacing it with a functional joint may be necessary.** A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Vertical Reglets

## LV2 reStore — FOAM BUILD-OUT OVERCLAD



- 1 **Clean entire stucco surface** to remove all contaminants and loose materials.
- 2 **Seal stucco cracks** along the reglet with an acrylic sealant.
- 3 **Install a tightly fitting foam insert** into the cavity of the reglet so that it fits flush with the existing surface.
- 4 **Prepare a protective foam build-out** as per Sto Detail 72.20.72 to be installed over the reglet.
- 5 **Mark vertical lines** on either side of the reglet to define the outer edge of the foam build-out.
- 6 **Apply primer and sealant inside** the marked horizontal lines, following sealant manufacturer's instructions.
- 7 **Press the new joint cover foam build out into the sealant.** Tool any excess to provide a neat seal at the foam build-out/wall surface interface. Control the amount of sealant so the stucco can still move at the joint under the foam build-out.
- 8 **Apply Sto basecoat and mesh** to the prepared surface, overlapping the new foam build-out.
- 9 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 10 **Refinish the wall** with the specified Sto materials.

**Note:** Where both vertical and horizontal reglets are being covered, a Level 3 Sto ci overclad is recommended.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.02: Sto reStore – Resurfacing EIFS
	2. 72.05
	3. 72.20.70: reStore Stucco – Adding foam Architectural Shapes
	4. 72.20.71: reStore Stucco – Horizontal Reglet Repair
	5. 72.20.72: reStore Stucco – Vertical Reglet Repair
	6. 53s.04: StoTherm® ci XPS – Aesthetic Feature Band
	7. ASTM C 926: Standard Specification for Application of Portland Cement-Based Plaster
	8. ASTM C 1063: Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster



# Horizontal and Vertical Reglets

CONDITION



DETERIORATED STUCCO AT REGLET INTERFACE

**Metal one-piece reglets, designed to be decorative elements, have no movement capability and cannot be used as stress relief joints in stucco.** If used for this function, cracking will occur at the stucco/reglet interface. In addition, these metals (anodized aluminum or galvanized steel) are vulnerable to corrosion, especially in coastal environments, if the protective coating is damaged.

**The purpose of this repair, as part of a Level 3 restoration, is to protect the stucco from further deterioration around the reglets.** This repair is indicated where deterioration of the reglets is cosmetic only (i.e., surface corrosion or discoloration without evidence of cracking or splitting), and there is no indication of water penetration into the cladding assembly.

**A StoTherm® ci overclad will avoid removal and replacement of the reglet while extending the life cycle of the cladding assembly.** StoTherm® ci will also enhance the wall's thermal control by reducing thermal bridging and air leakage. The repair must link to the corresponding protection planes of adjacent enclosure assemblies.

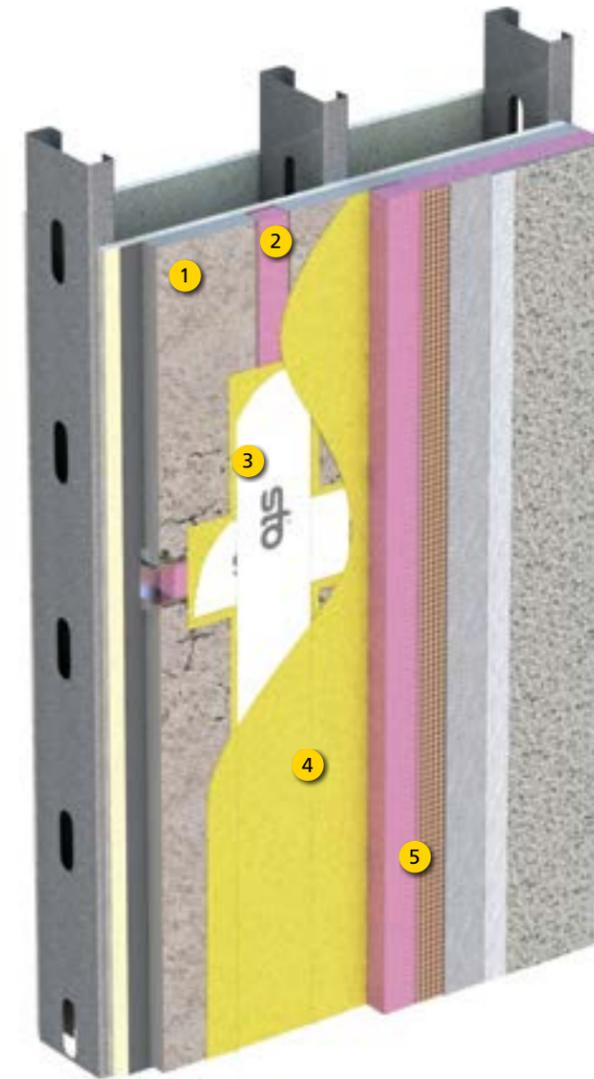
**If there are indications of water intrusion, a more comprehensive restoration may be necessary.** A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Horizontal and Vertical Reglets

LV3 reStore — STOTHERM CI OVERCLAD



- 1 **Clean entire stucco surface** to remove all contaminants and loose materials.
- 2 **Install a tightly fitting foam insert** into the cavity of the reglet so that it fits flush with the existing surface.
- 3 **Install StoGuard® Transition Membrane** over the reglets as per Sto specifications and details.
- 4 **Apply StoGuard® air and moisture barrier system** over the stucco surface.
- 5 **Install StoTherm ci®** over the wall surface with the specified Sto decorative finish.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.20.71: reStore Stucco – Horizontal Reglet Repair 2. 72.20.72: reStore Stucco – Vertical Reglet Repair 3. 21.00a: StoGuard® Waterproof Air Barrier Masonry Construction Components and Surface Preparation: Option 1 4. 21.00b: StoGuard® Waterproof Air Barrier Masonry Construction Components and Surface Preparation: Option 2
	5. 21.00e: StoGuard® Waterproof Air Barrier Masonry Construction – Continuous Insulation 6. ASTM C 926: Standard Specification for Application of Portland Cement-Based Plaster 7. ASTM C 1063: Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster



# Restore Cracked Stucco Facade

CONDITION



CRACKED DETERIORATED APPEARANCE OF THE WALL

**A stucco facade will show the effects of wear and tear over time.** Environmental conditions and product failure contribute to the unsatisfactory appearance of the stucco facade.

**A Level 2 restoration** involving a ready-mixed, acrylic-based restoration coat is easy to apply and provides a long-lasting fix.

**Upgrading the appearance and performance** of the facade will improve curb appeal and extend the life cycle of the building.

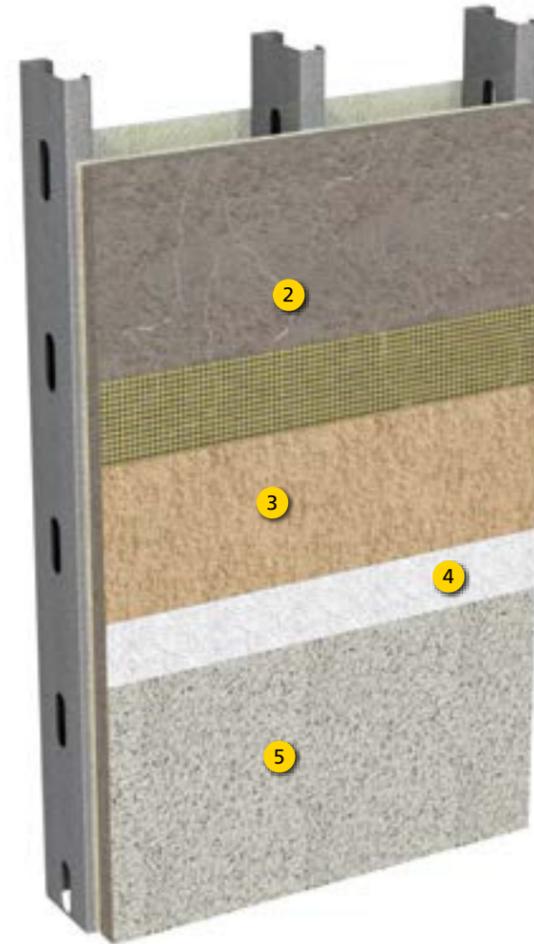
**If there are signs of water penetration or deterioration behind the stucco,** repairs to the substrate may be required before proceeding. A third-party professional should be retained to evaluate conditions and make the necessary repair recommendation



SOLUTION

# Restore Cracked Stucco Facade

LV2 reStore — MAINTENANCE AND AESTHETIC UPGRADE



- 1 Remove and replace** delaminated stucco as indicated by project engineer after inspection.
- 2 Clean and repair cracks** >1/32 inch to 1/8 inch using Sto Flexible Crack Filler
- 3 Apply Sto RFP and mesh** to the prepared surface and allow to cure.
- 4 Apply tinted StoPrime® primer** appropriate for coating or finish selected.
- 5 Recoat or refinish the wall** with the specified Sto materials.

**Note:** Seal around all penetrations, attachments, conduit, pipes and other items attached to the building. Use backer-rod where required by geometry and depth requirements. Follow manufacturer's written recommendations on sealant application. Insure substrates are clean of all bond-inhibiting materials. Primer may need to be used to insure proper sealant bond. If primer is used follow manufacturer's written recommendations on which primer to use and how to apply. Sealant must be paintable and fully cured prior to painting. Sto RFP may be substituted with alternative Sto basecoat products.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 4.70: StoPowerwall® - Buildouts
	2. 72.10.00: reStore Stucco – Clean and Recoat (cracks ≤ 1/32-in. (1 mm))
	3. 74.03a: Sto reStore – Cracks in reveals - hairline
	4. 72.20.70: reStore Stucco – Adding foam Architectural Shapes



# Corner Repair

CONDITION



## DETERIORATION OF CORNER

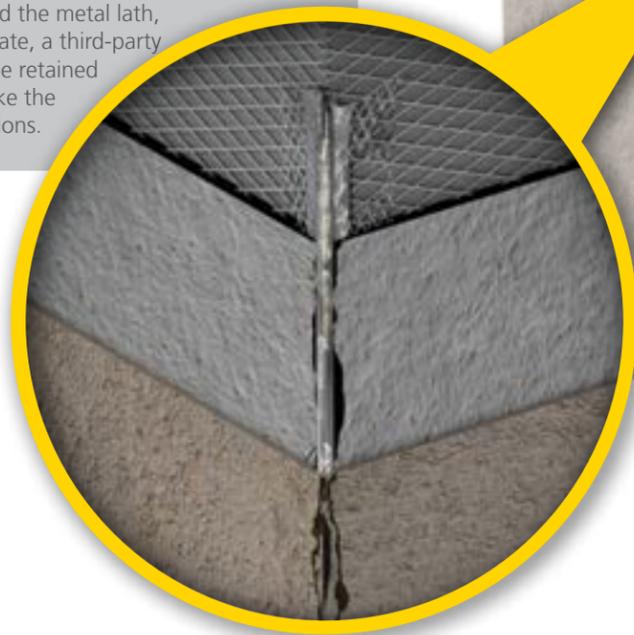
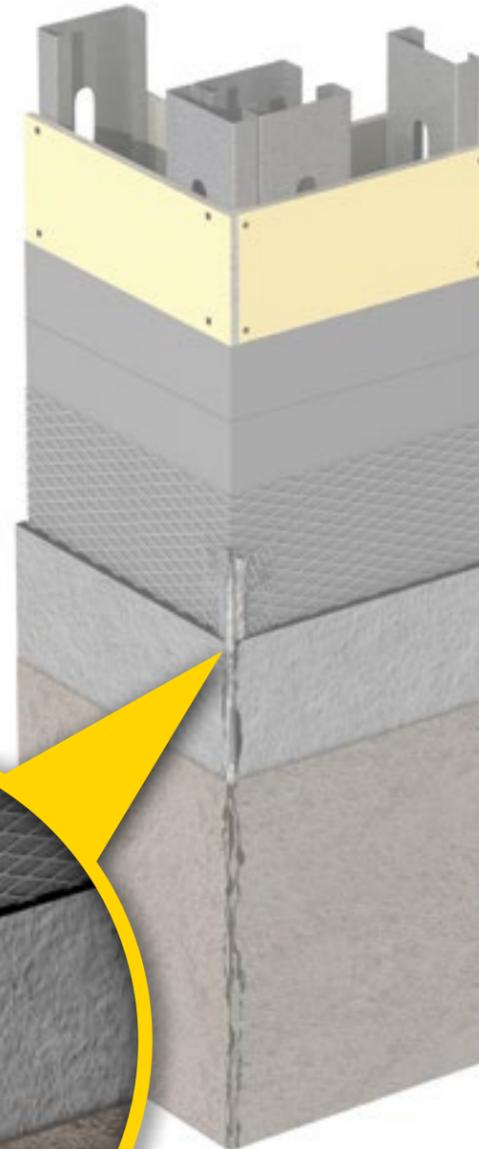
36

**Impact damage to stucco and corner beads is normal in high traffic areas.** Once exposed to the environment, the steel bead is vulnerable to corrosion, especially in a salty coastal climate. The bead will corrode more rapidly if its galvanized finish has been damaged during installation or service.

**A Level 2 restoration of the corner will repair the damage and prevent further deterioration.** This repair is normally undertaken either as part of regular stucco maintenance or as preparation for recoating. The scope of work does not address water-related damage inbound of the stucco.

**The damaged corner bead will require replacement. The bead must be removed without damage to underlying layers of lath and WRB.** The new overlaid of basecoat, reinforcing mesh and finish will provide added protection to the replacement corner bead and improve the appearance of the cladding.

**Care should be taken to ensure that the layers inbound of the corner bead are sound.** If water penetration behind the stucco has damaged the metal lath, air & moisture barrier or substrate, a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



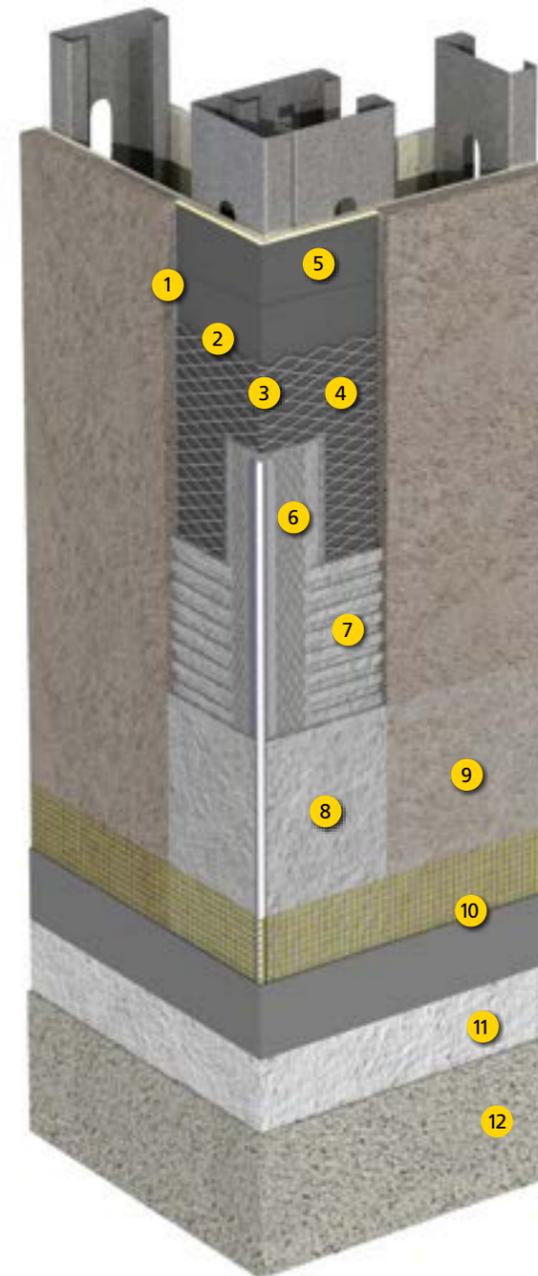
SOLUTION

# Corner Repair

## LV2 reStore — CORNER BEAD RESTORATION

STUCCO

37



- 1 **Cut the stucco back** to the lath approximately 6" (150 mm) on each side of the corner. Remove the stucco down to the lath.
- 2 **Carefully remove fasteners** or ties supporting the corner bead.
- 3 **Remove the damaged corner bead and the stucco** behind the bead, leaving the underlying lath exposed.
- 4 **Clean all loose materials** from the lath.
- 5 **Repair any holes** in the water-resistive barrier and sheathing.
- 6 **Apply fresh stucco** onto the corner and immediately embed the new corner bead. Fasten in accordance with ASTM C1063. Allow to cure.
- 7 **Install a stucco scratch coat** to the lath, lapping onto the new corner bead. Allow to cure.
- 8 **Install stucco brown coat**, leveling the surface of the repair. Allow to cure.
- 9 **Clean and prepare the wall surface** for recoating as per Sto detail 72.10.00 reStore Stucco - Clean and Recoat.
- 10 **Apply Sto basecoat and mesh** to the prepared surface, wrapping over the new corner. Allow to cure.
- 11 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 12 **Refinish the wall** with the specified Sto materials.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat (cracks ≤ 1/32-in. (1 m))
2. 72.20.20: reStore Stucco – Corner Bead Repair

**IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Stucco on Frame Wall at Grade

CONDITION



INCORRECT STUCCO TERMINATION BELOW FINISHED GRADE

**Code requires stucco to be flashed and drained near the top of the foundation, with finished grade terminating below.** Stucco that laps onto a foundation wall cannot be properly flashed and drained. In addition, differential movement between the structural frame and the foundation will cause cracks in the stucco through which water may penetrate. If landscaping was backfilled against the stucco, it will obscure the damage and may contribute to water entry.

**A minimum Level 2 restoration will bring the stucco termination into code compliance.** This repair requires that the stucco on the frame is in good condition with the exception of cracking at the foundation, and there is no evidence of water damage inbound of the stucco. Lowering the finished grade is mandated, and may require other trades to remove the soil to provide access for the stucco repair contractor.

**With landscaping removed, the stucco and sheathing can be cut away from the base of the wall and the stucco termination repositioned.** Repairs will use more damage-resistant materials and incorporate the required flashing. The repair will create a drainage path from behind the stucco and increase protection against water penetration.

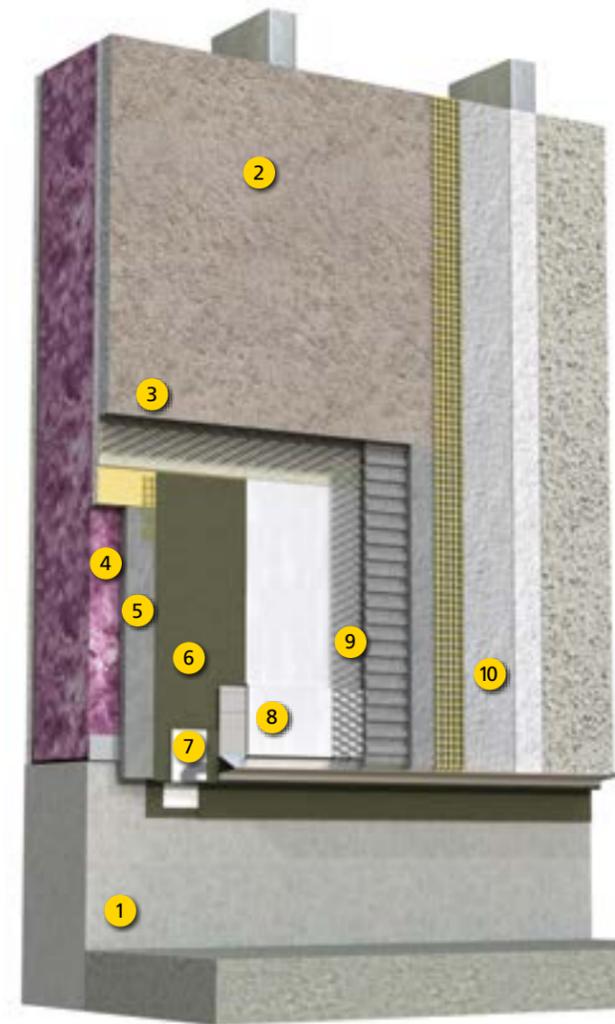
**If there is water damage inbound of the sheathing, or if it is not possible to maintain effective drainage away from the building after finished grade is lowered,** a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Stucco on Frame Wall at Grade

LV2 reStore — STUCCO RESTORED ABOVE GRADE



- 1 **Clear away landscaping and soil** from the stucco and foundation.
- 2 **Remove loose finish and repair cracks** and surface damage as per Sto Repair and Maintenance Guide.
- 3 **At the foundation repair site, make a straight cut through stucco**, then lath, then WRB, leaving enough of each layer to tie in new materials.
- 4 **Cut away sheathing to expose studs and track**, leaving a strip between the WRB and the cut to allow for application of a new WRB. While the wall is open, inspect for damage.
- 5 **Install cement board**, covering the exposed studs and slightly overlapping the foundation.
- 6 **Coat the exposed sheathing**, cement board and foundation with Sto waterproofing membrane and mesh.
- 7 **Waterproof the sheathing-to-foundation interface** with StoGuard® Transition Membrane, which accommodates the irregular interface of sheathing to foundation. Embed the StoGuard® Transition Membrane in Sto Flexyl.
- 8 **Install flashing.** Follow with isolation sheet applied in shiplap manner between WRB and flashing.
- 9 **Install new lath.** Apply stucco scratch and brown coats.
- 10 **Refinish the wall** with the specified Sto materials.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
	2. 72.20.30: reStore Stucco – Through-Wall Flashing Repair/Installation



# Stucco on CMU Termination at Grade

CONDITION



## STUCCO TERMINATION BELOW FINISHED GRADE

**Code requires stucco directly applied to masonry to be terminated above grade.** Without correct preparation, stucco that laps onto a foundation wall cannot be properly flashed, and differential movement between the masonry and foundation can cause cracking and potential water penetration. Landscaping, if backfilled against the foundation, will obscure the condition and may contribute to water entry.

**A minimum Level 2 restoration is necessary to place the stucco termination in code compliance.** This repair requires the stucco on the masonry to be in good condition with the exception of fine cracking at the foundation, and no evidence that might indicate the masonry has been damaged. Lowering the finished grade is mandated and may require other trades to remove the soil to provide access by the stucco repair contractor.

**With landscaping removed and the stucco termination cut away, the repair can be made as an integral part of refinishing the wall or as a stand-alone repair.** The new termination will include waterproofing layers and code-compliant flashing to direct water away from the wall. Keeping water away from the foundation is outside the scope of the repair, but will require regrading the landscape away from the building or adding drains.

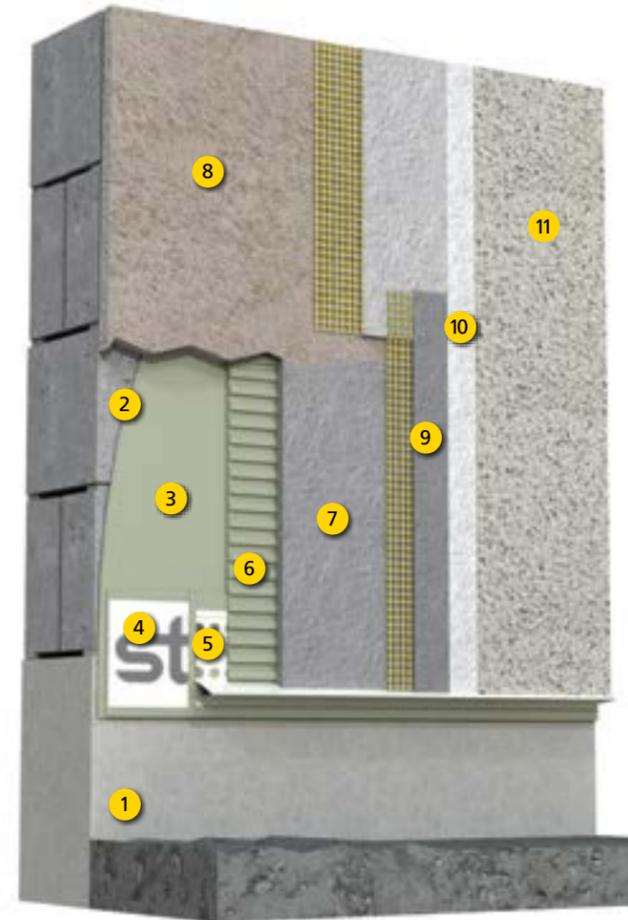
**If there is damage from water penetration inbound of the masonry, or if it not possible to maintain effective drainage away from the building after finished grade is lowered,** a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Stucco on CMU Termination at Grade

## LV2 reStore — FLASHING INSTALLATION AND IMPROVED WATER RESISTANCE



- 1 **Clear landscaping and soil** a minimum of 8" (200 mm) below the top of the foundation.
- 2 **Remove the stucco from the base of the wall** to a height of approximately 16" (400 mm) above the foundation. Remove all loose material and dust from the surface of the CMU and concrete foundation.
- 3 **Trowel a parge coat** of Sto ExtraSeal® onto the exposed masonry and lapping onto the foundation.
- 4 **Embed Sto Transition Membrane** into the wet ExtraSeal® at the transition between the wall and the foundation. Coat the membrane with ExtraSeal.
- 5 **Install stucco flashing** or weep screed at the new stucco termination.
- 6 **Apply a scratch coat** of Sto ExtraSeal over the parge coat and upturned leg of the flashing. Allow to cure.
- 7 **Level the repaired section of the wall** with a brown coat of stucco. Allow to cure.
- 8 **Clean the surface of the wall** above the repair area where new finish will be applied.
- 9 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 10 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 11 **Refinish the wall** with the specified Sto materials.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
2. 72.20.30: reStore Stucco – Through-Wall Flashing Repair/Installation

**IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Concrete Parapet Cap

CONDITION



STAINING AT PARAPET CAP MORTAR JOINT

Masonry walls are often topped with concrete parapet caps, mortared together and secured by underlying pins. If the slope of the cap is inadequate, water will pool on top and collect dirt. At mortar joints, the low points along the cap, increased water flow can carry accumulated dirt down onto the wall surface. The cap overhang prevents dirt deposits from being washed away by rain.

A Level 2 restoration will increase protection for the wall and parapet. The cap will be modified to direct water away from the facade. This repair requires that the pins or attachment mechanisms for the parapet cap are sound. Accumulation of dirt on the facade is cosmetic only.

The slope of the cap can be modified so water drains towards the roof. Waterproof coatings, integrated with the new wall finish, will further improve the parapet's water resistance. Where specified, the inner face of the parapet wall may be refinished, integrating the waterproofing with roof membranes and flashings.

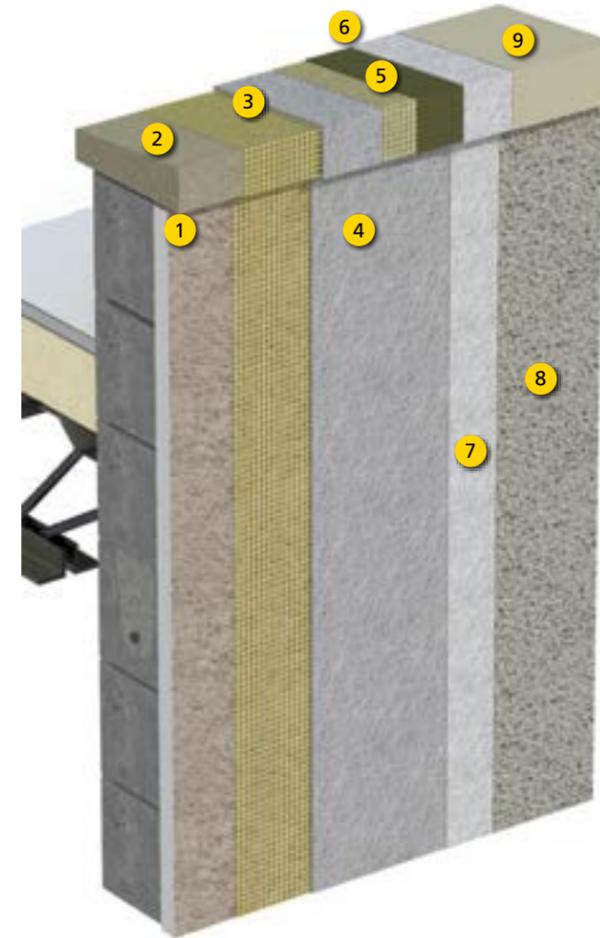
An escalation of the repair will be advisable if water penetration at the cap joints or through the parapet wall has led to deterioration of the cap connections. If the cap is loose or connections show signs of deterioration (e.g., spalling or rust staining), a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Concrete Parapet Cap

LV2 reStore — SEALING AND PROTECTING THE PARAPET CAP



- 1 Remove dirt accumulations on the parapet cap and on the face of the wall.
- 2 Clean and repair the cap mortar joints.
- 3 Using additional applications of Sto basecoat, increase the slope of the parapet cap towards the roof.
- 4 Apply Sto basecoat and mesh to the prepared surface, wrapping over the parapet cap and, ideally, terminating at the roof flashing. Allow to cure.
- 5 Install an application of Sto waterproofing membrane and Sto Mesh over the recoated parapet cap.
- 6 Where specified, continue the Sto waterproofing membrane to the back side of the masonry parapet and integrate with the roof membrane and flashing.
- 7 Apply tinted StoPrime® primer appropriate for the finish selected.
- 8 Refinish the wall with the specified Sto materials.
- 9 Coat the parapet cap with two coats of appropriate StoColor® coating.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
2. 72.20.80: reStore Stucco – Parapet Cap Repair

IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES



# Feature Profile

CONDITION



DECORATIVE PROFILE STAINED OR DAMAGED

44

**Profiles added to stucco walls often have flat horizontal ledges that collect dirt and retain snow and rainwater.**

The acrylic finish on this ledge will soften and deteriorate if it retains standing water. Where dirt accumulates on the ledge, water run-off will carry the dirt onto the profile and create streaks down the face of the wall.

**This project is part of a Level 1 aesthetic upgrade and restoration of the water-shedding surface of the wall.** No stucco modifications or replacement of profiles are planned. Only the water-shedding capability of the existing profile will be improved.

**The profile and wall will be cleaned and any loose finish removed prior to refinishing.** A simple foam wedge will be added to the top edge of the profile and incorporated into the new finish.

**If the profile is damaged or its bond to the stucco is compromised, the profile may require removal and replacement.** If the profile is large and unprotected, extending out from the stucco more than 4" (100 mm), a water-resistant base coat such as Sto Flexyl or a metal flashing may be required to improve long-term durability. Refer to Sto detail 72.20.73.



SOLUTION

# Feature Profile

LV2 reStore — PROFILE REPAIR AND WALL REFINISHING

STUCCO

45



- 1 **Clean the wall**, removing all dirt and loose material.
- 2 **Bond a foam wedge** to the top of the profile with Sto adhesive, increasing the slope to a minimum 1:2 (27°). In climates where snow and ice may accumulate, increase the slope to 1:1 (45°).
- 3 **Allow the adhesive to cure for 24 hours**, then rasp the foam wedge so that it is even with the face of the profile.
- 4 **Apply Sto basecoat and mesh** to the prepared surface and foam profile. Allow to cure.
- 5 **Apply tinted StoPrime® primer** appropriate for the finish selected..
- 6 **Refinish the wall** with the specified Sto materials.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
2. 72.20.73: reStore Stucco – Projecting Feature – Flat Slope Repair

**IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Crack Through Stucco

CONDITION



STRAIGHT VERTICAL OR HORIZONTAL CRACKS

**A straight crack through stucco typically indicates stress relief.** Often the crack, whether vertical or horizontal, signals that a functional joint should have been installed at that location. If not repaired, the stucco will continue to deteriorate, creating an enlarged path for water intrusion.

**A Level 2 restoration is required to preserve the integrity of the water-shedding surface.** If the repair is made promptly, damage from water penetration will be minor, avoiding deterioration of the lath, mechanical connections or water-resistive barrier.

**It is likely that a functional joint will be required.** The joint, which will run the full height or width of the stucco panel, may be installed as a stand-alone repair or as part of a complete facade restoration.

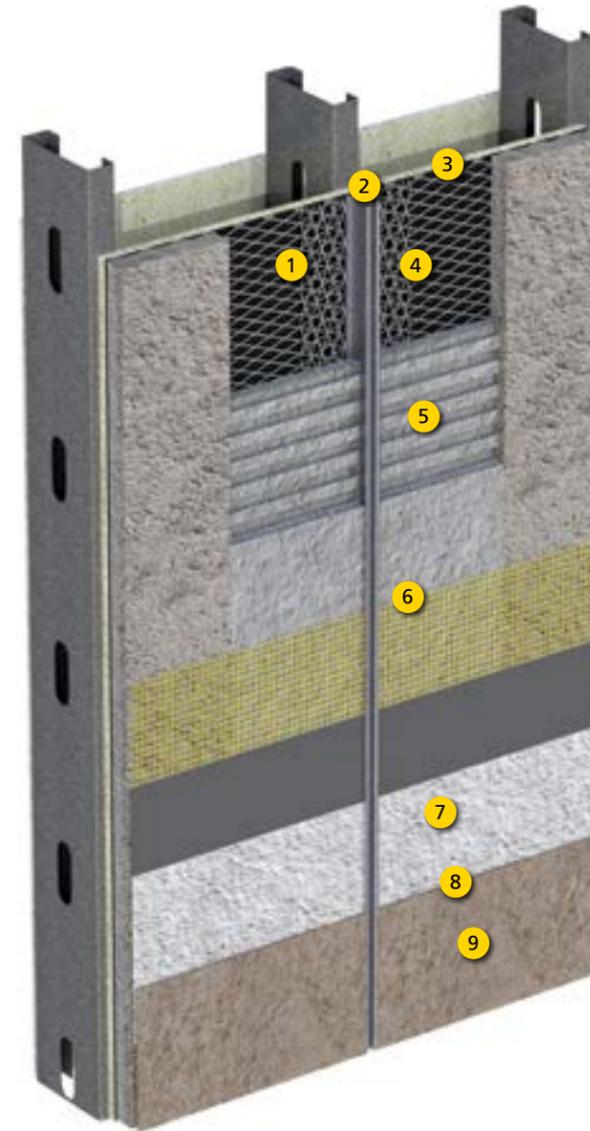
**A more extensive problem exists if there is damage to the water-resistive barrier, or corrosion of the lath or mechanical connections.** If the damage has progressed beyond a Level 2 repair, a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Crack Through Stucco

LV2 reStore — INSTALLATION OF EXPANSION JOINT IN EXISTING STUCCO



**1** **Between horizontal joints,** remove stucco to a minimum width of 4" (100 mm) on each side of the crack, exposing the lath.

**2** **Cut the lath vertically** where the new joint is to be installed.

**3** **Repair any damage** to the water-resistive barrier that may have occurred during stucco removal and lath cutting.

**4** **Tie in the new joint accessory** as per ASTM C1063. Set the joint terminations in sealant to prevent water penetration.

**5** **Install stucco scratch and brown coats** flush with the existing stucco and the joint accessory.

**6** **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.

**7** **Apply tinted StoPrime® primer** appropriate for the finish selected.

**8** **If only the crack repair is being undertaken,** apply Sto basecoat, mesh and matching finish between existing joints or architectural breaks.

**9** **Refinish the wall** with the specified Sto materials.

RESOURCES

- 1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
- 2. 72.20.20: reStore Stucco – Corner Bead Repair

**IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Floor-Line Joints and Flashing

CONDITION



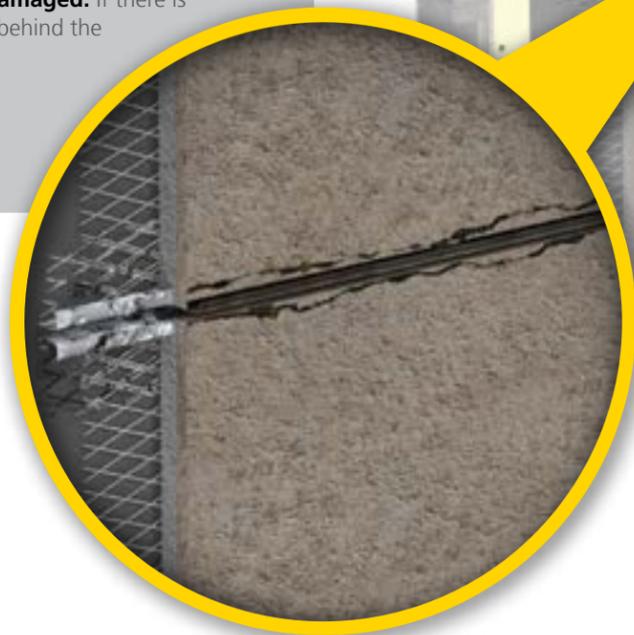
LACK OF FUNCTIONAL JOINT CAUSES DAMAGE

**Fully functional stucco joints are required at floor lines to accommodate structural movement.** If a shallow 'V' joint is used, floor line deflection can crush the joint, damaging the stucco. Moreover, without through-wall flashing, water penetration can drain only at the bottom of the wall.

**A Level 2 restoration will include replacing the damaged joint and stucco and installing flashing for drainage.** This level of repair is appropriate where the lath and water-resistive barrier are not damaged by water intrusion.

**An effective functional joint option is back-to-back casing beads with integrated flashing to direct water to the exterior.** The stucco and failed joint must be removed, and the lath cut for insertion of flashing behind the water-resistive barrier. The new joint can then be installed.

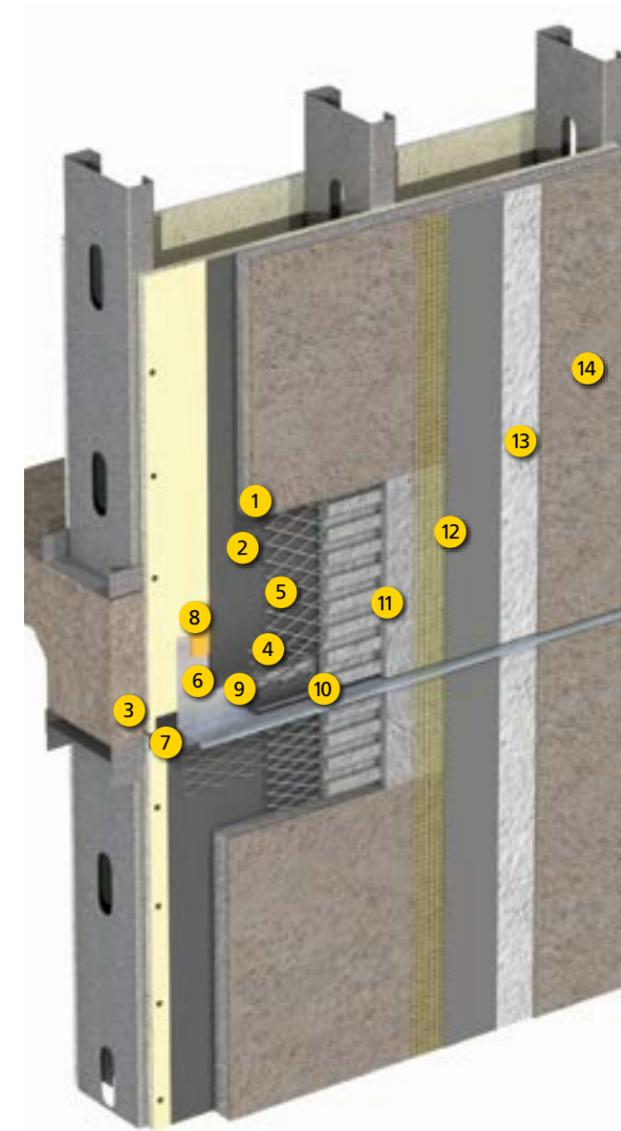
**If water has intruded behind the cladding, further evaluation is necessary to ensure that the lath and water-resistive barrier are not damaged.** If there is any evidence of water penetration behind the water-resistive barrier, a third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Floor-Line Joints and Flashing

LV2 reStore — ADDING A FUNCTIONAL JOINT AND FLASHING



- 1 **Cut the stucco** approximately 6" (150 mm) above and 4" (100 mm) below the joint. Do not cut the lath at these points.
- 2 **Remove the stucco** around the joint, leaving the lath intact.
- 3 **Remove** the shallow 'V' joint.
- 4 **Cut the lath** where the new stucco casing beads are to be installed.
- 5 **Remove any fasteners** securing the lath above the cut.
- 6 **Cut the water-resistive barrier** and remove any fasteners directly above the cut.
- 7 **Tape the cut edge** of the lower section of water-resistive barrier to the substrate.
- 8 **Hold the upper lath and water-resistive barrier** out from the wall and install a flashing against the substrate. Coat the top edge of the flashing with Sto RapidGuard™.
- 9 **Reposition the lath and water-resistive barrier** over the upturned leg of the flashing in a shiplap manner.
- 10 **Install new stucco casing beads** above and below the flashing in accordance with ASTM C1063. Seal any holes with Sto RapidGuard™.
- 11 **Install stucco scratch and brown coats** between the casing beads and cut edges of the stucco in accordance with Sto installation instructions.
- 12 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 13 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 14 **Refinish the wall** with the specified Sto materials.

IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES	
RESOURCES	1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m)) 2. 72.20.20: reStore Stucco – Corner Bead Repair 3. 72.20.30: reStore Stucco – Through-Wall Flashing Repair/Installation



# Refinishing with StoSignature™ Brick

CONDITION



DETERIORATED APPEARANCE OF STUCCO WALL SURFACE

Surface deterioration, patches and superficial cracking can give a dull or shabby look to a sound stucco wall. In a commercial property, surface repairs and an updated finish, in combination with regular maintenance, will improve the curb appeal of the building.

A Level 2 restoration is indicated when the water-shedding surface is basically sound. Surface cracking and minor repairs have not affected the performance of the cladding and the stucco wainscot is undamaged.

Recoating and adding a new finish will extend the life cycle of the cladding. A StoSignature texture applied below the feature band and a new color above will deliver a cost-effective way of achieving a contemporary look.

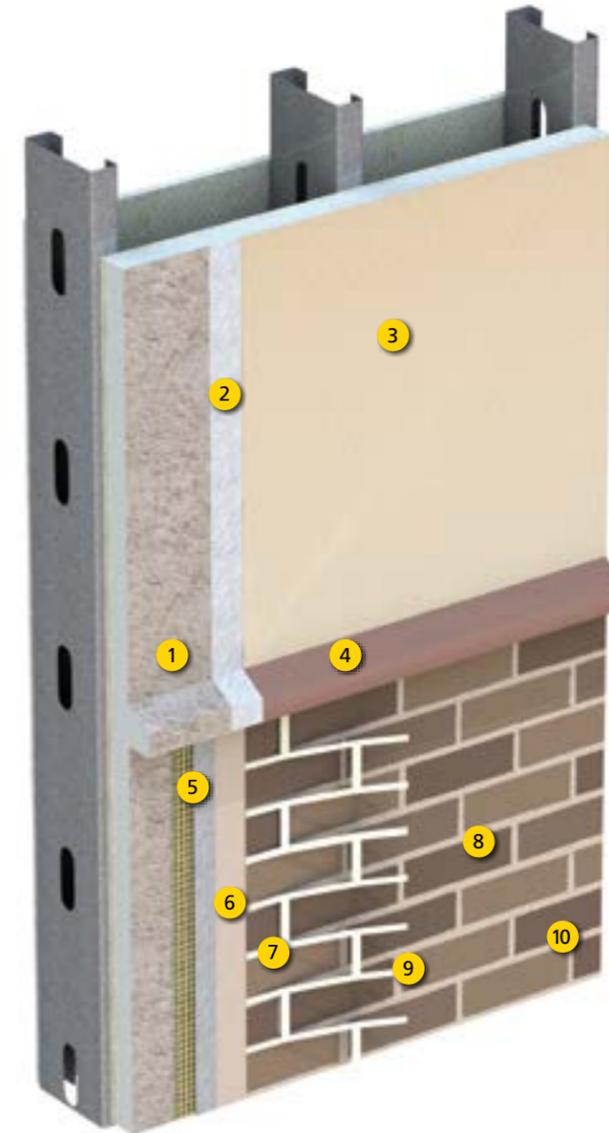
Delayed maintenance can result in deterioration of the stucco's integrity and damage to the inner layers of protection of the wall. If there are signs of water penetration or deterioration behind the stucco, repairs to the substrate may be required before proceeding. A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Refinishing with StoSignature™ Brick

LV2 reStore — REJUVENATION WITH STOSIGNATURE BRICK



- 1 **Repair cracks and damage** as per Sto specifications and details. Clean the surface and remove loose or damaged finish.
- 2 **In the area above the wainscot**, prime the wall with Sto Primer tinted appropriately for the new finish color.
- 3 **Recoat the selected area** with StoColor® Lotusan or StoColor® Acryl Plus.
- 4 **Protect the exposed surface** of the wainscot with StoColor® Acryl Plus.
- 5 **Apply Sto basecoat and mesh** to the prepared surface below the wainscot. Allow to cure.
- 6 **Apply StoPrime® UV tinted** to match the selected mortar color.
- 7 **Position the brick** template on the StoPrime® UV.
- 8 **Trowel on the selected** StoSignature Brick texture to match appearance desired.
- 9 **Remove** the brick template.
- 10 **Tint the finish** to match the selected color and appearance using StoTique®.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat (cracks ≤ 1/32-in. (1 m))
2. 72.20.73: reStore Stucco – Projecting Feature – Flat Slope Repair

**IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Stucco Parapet Cap

CONDITION



CRACKED AND DETERIORATED CAP OVER MASONRY WALL

**In hot, dry climates, rounded 'adobe style' parapets are popular but require additional maintenance.** The exposed horizontal surfaces withstand greater than normal solar radiation and heat build-up, conditions that are hard on acrylic coatings. Cracks can result from differential movement between the masonry and the stucco 'cap' rounding the top of the wall.

**A Level 1 repair should be undertaken with special attention to the horizontal parapet top.**

Deterioration of the coating, dirt accumulation and cracking are generally cosmetic conditions that require standard maintenance.

**The curvature of the parapet cap is easily modified with additional stucco so water and dirt will drain towards the roof and away from the visible wall.** Layers of water-resistant coatings (e.g., Sto Flexyl, StoColor Acryl Plus) will minimize water penetration, improve durability and reduce maintenance.

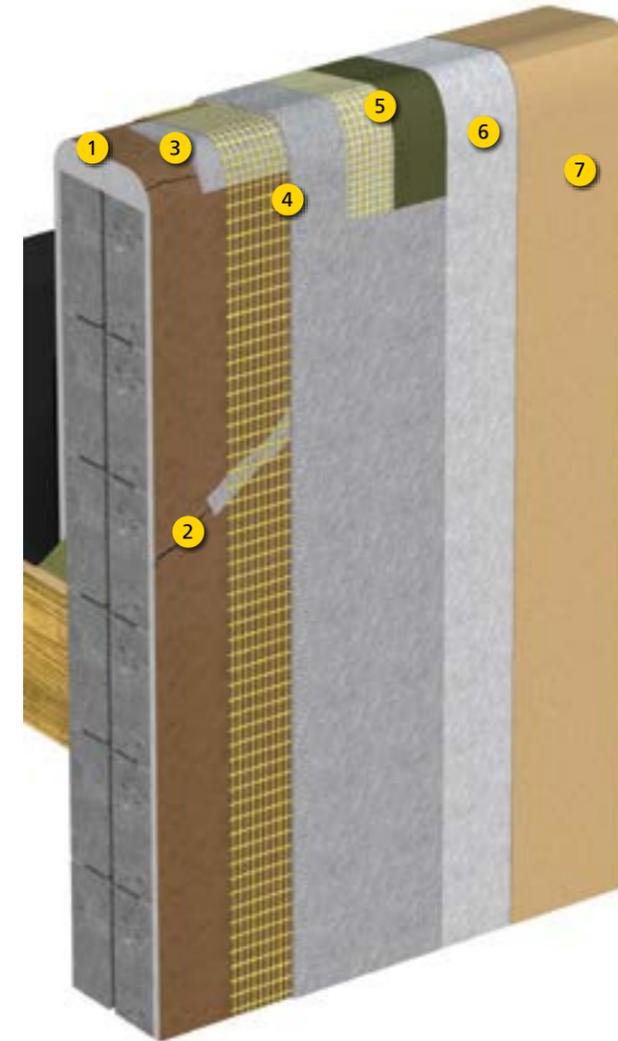
**This type of parapet cover should only be used in hot, dry climates and only under advisement.** For long-term durability and performance, a metal cap flashing is the preferred solution. Walls should be refinished with vapor-permeable materials. It is essential that stucco and masonry be dry before refinishing.



SOLUTION

# Stucco Parapet Cap

LV2 reStore — IMPROVED WATER RESISTANCE AND DURABILITY



- 1 **Remove all loose material and finish** from the top of the parapet and clean the wall.
- 2 **Repair** cracks.
- 3 **Direct drainage toward the roof** by modifying the slope of the cap, using additional stucco.
- 4 **Apply Sto basecoat and mesh** to the prepared surface and over the modified parapet. Allow to cure.
- 5 **Install Sto waterproofing membrane and mesh** over the parapet cap and down 6" (150 mm) on each face of the wall, feathering out the edges. Allow to cure.
- 6 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 7 **Refinish the wall** with the specified Sto materials.
- 8 **For increased durability**, apply two coats of appropriate StoColor® coating to the exposed top surface of the parapet.

RESOURCES

1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))
2. 72.20.81: reStore Stucco – Repair of Stucco Parapets and Un-capped Walls

**IMPORTANT : REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**



# Concrete Repair - Hand Application

CONDITION



DETERIORATED CONCRETE/MASONRY

Damage to concrete and masonry walls are typically caused by corrosion of embedded metals, disintegration from freezing and thawing cycles, or deterioration from chemical attack.

A Level 2 restoration using a non-sag, structural repair mortar and choice of finish or coating system can be used to make the surface aesthetically pleasing and structurally sound.

According to ICRI (International Concrete Repair Institute), there are five basic requirements that must be met for a successful concrete repair:

- Deteriorated and contaminated concrete must be removed
- Corrosion on embedded steel must be removed.
- Deteriorated or damaged reinforcement must be repaired or replaced.
- The new repair material must bond to the existing concrete.
- The new repair material must be correctly selected, mixed, installed, finished, cured, and protected.

If conditions are extreme or unknown, the root cause of the damage should be determined by a third-party professional to evaluate conditions and make the necessary recommendations.

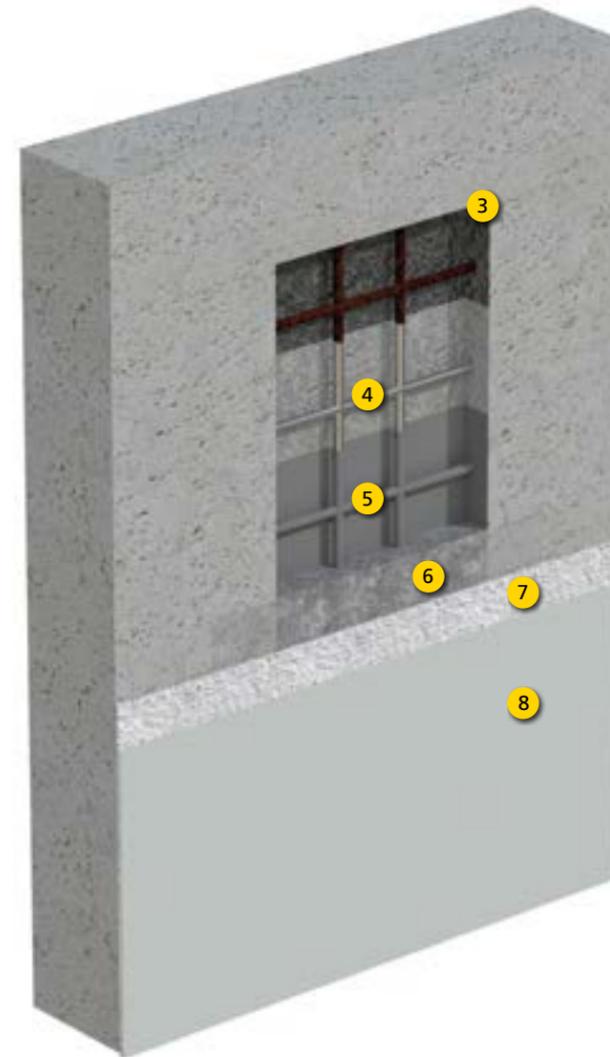


# Concrete Repair - Hand Application

SOLUTION



LV2 RESTORE – REPAIR AND AESTHETIC UPGRADE



- 1 Remove** deteriorated or contaminated concrete.
- 2 Remove or replace** deteriorated or damaged reinforcement.
- 3 Cut the perimeter of the repair area** to the desired, optimal geometry at a 90° angle using a concrete/masonry cutting tool. **Caution:** Repair areas with complicated shapes with reentrant corners are likely to crack. Ideally, all repair areas should be rectangular in shape.
- 4 Prepare the surface of the repair area** to the appropriate CSP (Concrete Surface Profile) for the repair material selected. Refer to ICRI Guideline No. 310.2R "Selecting and Specifying Concrete Surface Preparation..." for information on Concrete Surface Profiles and equipment used to achieve them.
- 5 Apply bond coat** using a scrub coat of the selected repair material or appropriate Sto bonding agent.
- 6 Apply repair material** using a trowel making sure to fully encapsulate reinforcement if applicable. If a second lift is required, score the first lift before it is set using the trowel to create a profile similar to the prepared substrate. Apply second lift after the first lift has reached final set using a scrub coat of repair material, not bonding agent. Allow repair material to properly cure.
- 7 Apply tinted StoPrime® primer appropriate for the coating or finish selected.**
- 8 Coat or Finish** with the specified Sto materials.

**Note:** Refer to ACI's "Field Guide to Concrete Repair Application Procedures – ACI RAP Bulletin 6" for a more detailed application procedure.



# Concrete Repair - Form and Pour Application

CONDITION **reStore**

DETERIORATED CONCRETE/MASONRY

Damage to concrete and masonry walls are typically caused by corrosion of embedded metals, disintegration from freezing and thawing cycles, or deterioration from chemical attack.

A Level 2 restoration using a pourable, structural repair mortar and choice of finish or coating system may be used to make the surface aesthetically pleasing and structurally sound.

According to ICRI (International Concrete Repair Institute), there are five basic requirements that must be met for a successful concrete repair:

- Deteriorated and contaminated concrete must be removed
- Corrosion on embedded steel must be removed.
- Deteriorated or damaged reinforcement must be repaired or replaced.
- The new repair material must bond to the existing concrete.
- The new repair material must be correctly selected, mixed, installed, finished, cured, and protected.

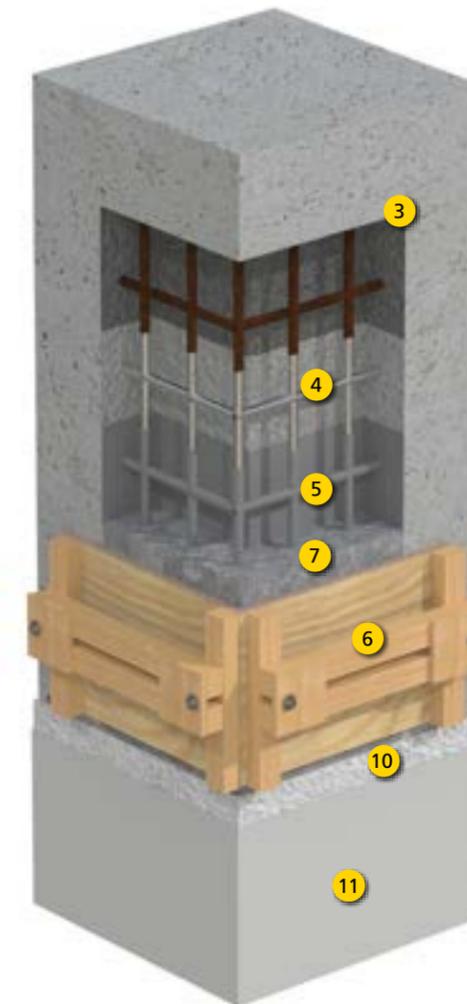
If conditions are extreme or unknown, the root cause of the damage should be determined by a third-party professional to evaluate conditions and make the necessary recommendations.



# Concrete Repair - Form and Pour Application

SOLUTION **reStore**

LV2 RESTORE – REPAIR AND AESTHETIC UPGRADE



- 1 Remove** deteriorated or contaminated concrete.
- 2 Remove or replace** deteriorated or damaged reinforcement.
- 3 Cut the perimeter of the repair area** to the desired, optimal geometry at a 90° angle using a concrete/masonry cutting tool. **Caution:** Repair areas with complicated shapes with reentrant corners are likely to crack. Ideally, all repair areas should be rectangular in shape.
- 4 Prepare the surface of the repair area** to the appropriate CSP (Concrete Surface Profile) for the repair material selected. Refer to ICRI Guideline No. 310.2R "Selecting and Specifying Concrete Surface Preparation..." for information on Concrete Surface Profiles and equipment used to achieve them.
- 5 Apply bond coat** using an appropriate Sto bonding agent. **Note:** A scrub coat of the repair material itself will likely dry out during formwork installation causing an inadequate bond. Therefore, a bonding agent with a longer open time is required for form-and-pour and form-and-pump applications.
- 6 Design and Construct formwork** around repair area to ensure accommodation of the potential outward pressure of the repair material.
- 7 Pour and consolidate repair material** in lifts of approximately 2 to 3 feet (0.7 to 1.0 meters) using vibration and/or rodding. **Note:** Vibration or rodding may not be necessary if using self-consolidating repair materials.
- 8 Allow to properly cure.**
- 9 Remove formwork.**
- 10 Apply tinted StoPrime® primer** appropriate for the coating or finish selected.
- 11 Coat or Finish** with the specified Sto materials.

**Note:** Refer to the ACI's "Field Guide to Concrete Repair Application Procedures – ACI RAP Bulletin 4" for a more detailed application procedure.

# Concrete Repair - Form and Pump Application

CONDITION **reStore**

DETERIORATED CONCRETE/MASONRY

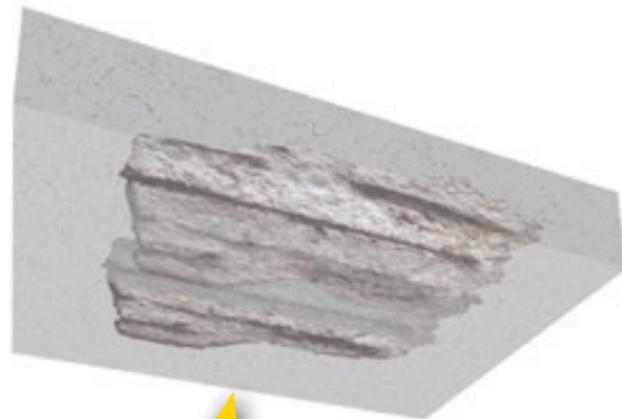
Damage to concrete and masonry walls are typically caused by corrosion of embedded metals, disintegration from freezing and thawing cycles, or deterioration from chemical attack.

A Level 2 restoration using a pumpable, structural repair mortar and choice of finish or coating system may be used to make the surface aesthetically pleasing and structurally sound.

According to ICRI (International Concrete Repair Institute), there are five basic requirements that must be met for a successful concrete repair:

- Deteriorated and contaminated concrete must be removed
- Corrosion on embedded steel must be removed.
- Deteriorated or damaged reinforcement must be repaired or replaced.
- The new repair material must bond to the existing concrete.
- The new repair material must be correctly selected, mixed, installed, finished, cured, and protected.

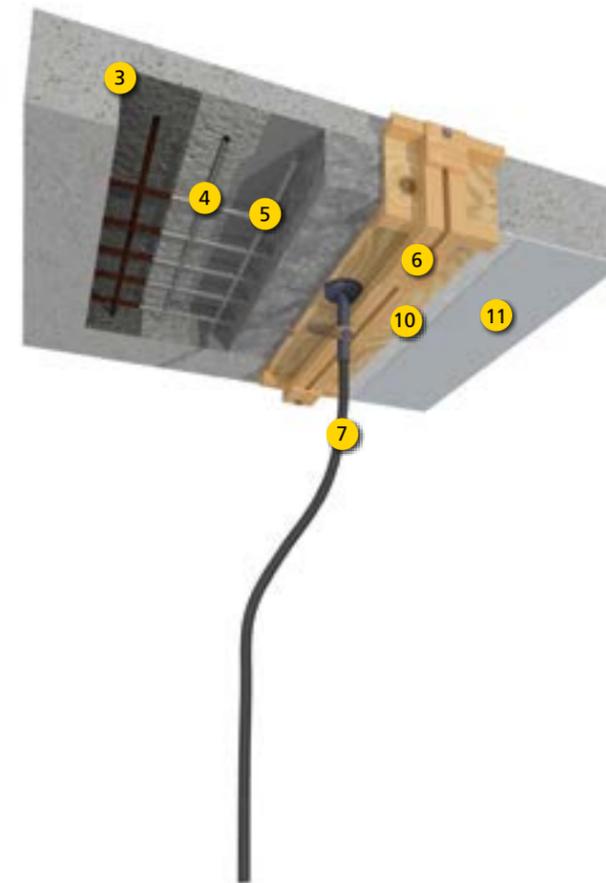
If conditions are extreme or unknown, the root cause of the damage should be determined by a third-party professional to evaluate conditions and make the necessary recommendations.



# Concrete Repair - Form and Pump Application

SOLUTION **reStore**

LV2 RESTORE – REPAIR AND AESTHETIC UPGRADE



- 1 Remove** deteriorated or contaminated concrete.
- 2 Remove or replace** deteriorated or damaged reinforcement.
- 3 Cut the perimeter of the repair area** to the desired, optimal geometry at a 90° angle using a concrete/masonry cutting tool. **Caution:** Repair areas with complicated shapes with reentrant corners are likely to crack. Ideally, all repair areas should be rectangular in shape.
- 4 Prepare the surface of the repair area** to the appropriate CSP (Concrete Surface Profile) for the repair material selected. Refer to ICRI Guideline No. 310.2R "Selecting and Specifying Concrete Surface Preparation..." for information on Concrete Surface Profiles and equipment used to achieve them.
- 5 Apply bond coat** using an appropriate Sto bonding agent. **Note:** A scrub coat of the repair material itself will likely dry out during formwork installation causing an inadequate bond. Therefore, a bonding agent with a longer open time is required for form-and-pour and form-and-pump applications.
- 6 Design and Construct formwork** around repair area to ensure accommodation of the potential outward pressure of the repair material.
- 7 Pump repair material** into place using appropriate equipment for the repair material selected.
- 8 Allow to properly cure.**
- 9 Remove formwork.**
- 10 Apply tinted StoPrime® primer** appropriate for the coating or finish selected.
- 11 Coat or Finish** with the specified Sto materials.

**Note:** Refer to ACI's "Field Guide to Concrete Repair Application Procedures – ACI RAP Bulletin 5" for a more detailed application procedure.

# Replacement of Sealant Joints

CONDITION



BARRIER JOINTS REQUIRING MAINTENANCE

**Sealant joints in all claddings require replacement at the end of service life.** Barrier joints—a single bead of sealant with backer rod—connect all five planes of protection in the wall assembly. The sealant bead is both a water-shedding surface to keep rainwater out and an air barrier that keeps the interior environment in. The backer rod also provides some thermal protection. When the sealant fails, all planes of protection in the wall are compromised.

**Replacement of barrier sealant joints is an important component of a Level 2 restoration.**

As the sealant joints have not yet failed, the presence of water in the joint from leaking or condensation is minimized. Deterioration from freeze/thaw cycles or reinforcement corrosion remains minimal.

**The joints should be replaced with two-stage, drained rainscreen seals.** This will entail installation of a thermal, air and water barrier inbound of the wall surface to maintain the interior environment. A new exterior seal aligned with the restored exterior finish will maintain the water-shedding surface. A cavity between the two seals will allow any water penetration to drain to the exterior.

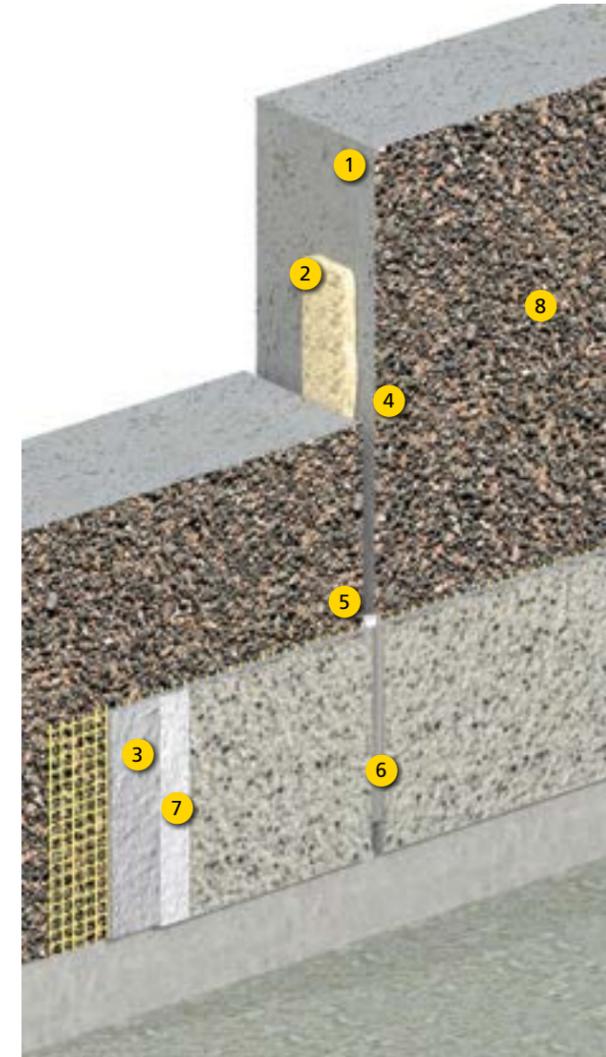
**If water penetration and condensation at the joint have resulted in deterioration of the concrete, the reinforcing steel may be compromised.** If there are signs of rust or distress in the concrete, further repairs may be required. A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Replacement of Sealant Joints

LV2 reStore — AIR BARRIER AND DRAINED JOINTS INSTALLED



- 1 **Remove all old sealant and backer rod.** Prepare the surface to receive new sealant as per the recommendations of the sealant manufacturer.
- 2 **Install a spray polyurethane foam interior barrier** as per foam manufacturer's instructions.
- 3 **Apply Sto basecoat and mesh** to the prepared surface. Allow to cure.
- 4 **Prime the joint surface** as specified by the sealant manufacturer.
- 5 **Install the backer rod** as recommended, leaving a cavity between the airtight interior barrier and the backer rod.
- 6 **Install the sealant** as per sealant manufacturer's instructions, leaving a gap to allow water to drain to the exterior and the cavity to pressure-moderate.
- 7 **Apply tinted StoPrime® primer** appropriate for the finish selected.
- 8 **Refinish the wall** with the specified Sto materials.

RESOURCES	<b>IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES</b>
	1. 72.10.00: reStore Stucco – Clean and Recoat ( cracks ≤ 1/32-in. (1 m))



# Masonry Wall out of Tolerance or Plumb

CONDITION 

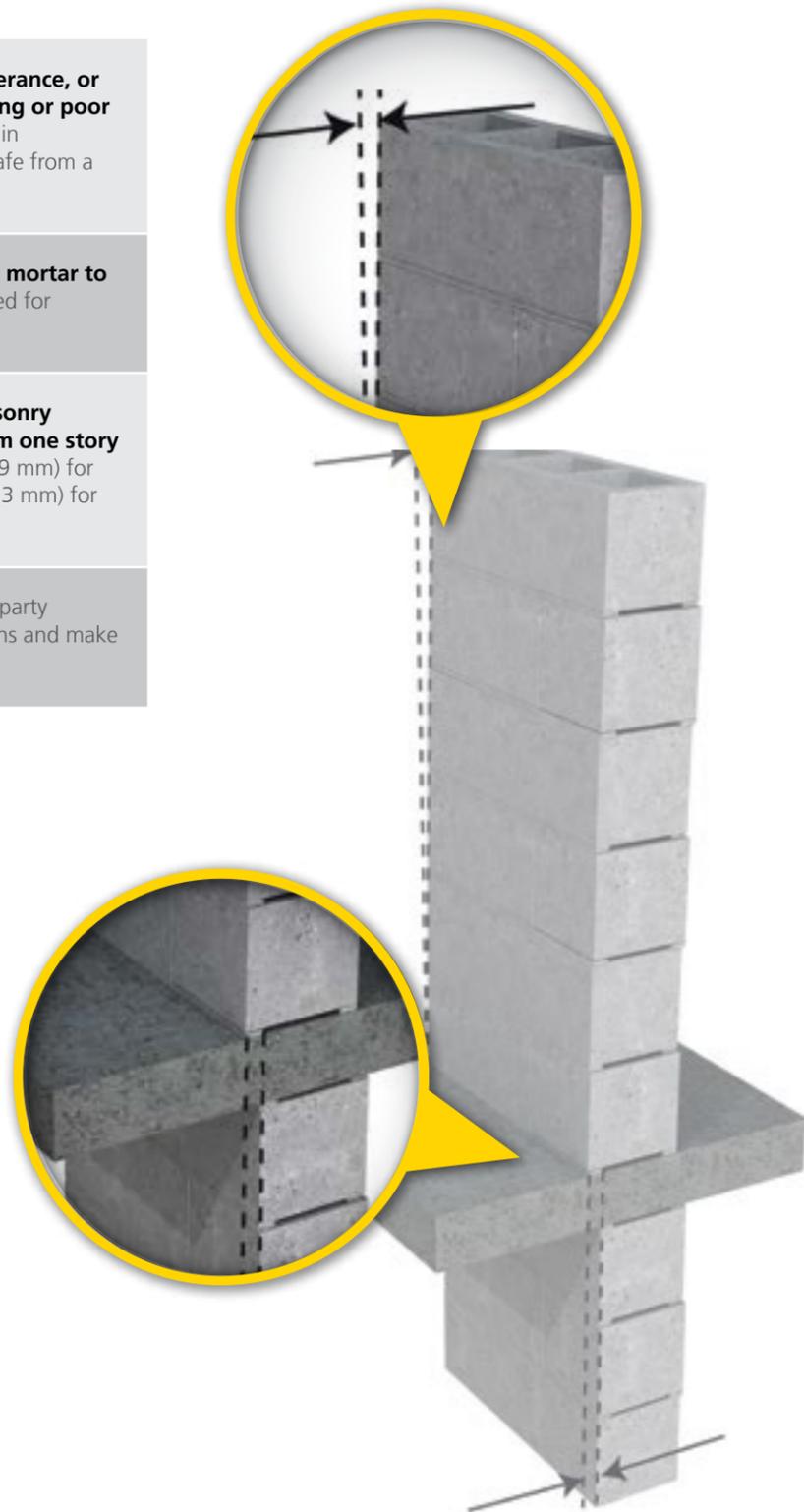
UNLEVEL APPEARANCE AND STRUCTURALLY DEFICIENT

Concrete and masonry walls that are out of tolerance, or out of plumb, can be caused by abnormal loading or poor workmanship during construction. The variation in alignment can be aesthetically unsatisfactory or unsafe from a structural standpoint.

A Level 2 restoration using a structural leveling mortar to bring the wall back into alignment may be desired for aesthetics or necessary for structural reasons.

According to the NCMA (National Concrete Masonry Association), columns and walls continuing from one story to another may vary in alignment by  $\pm 3/4$  in. (19 mm) for nonloadbearing walls or columns and by  $\pm 1/2$  in. (13 mm) for loadbearing walls or columns.

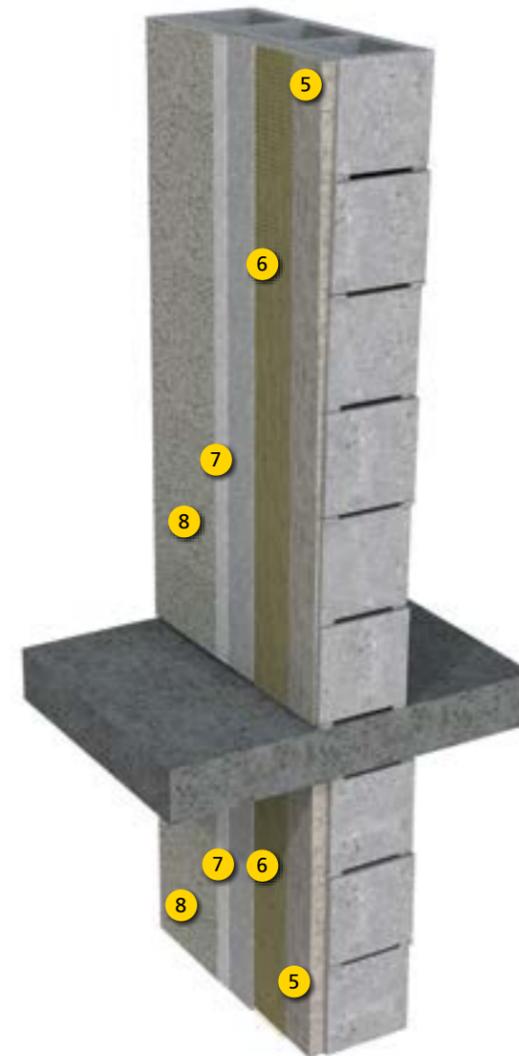
If conditions for tolerances are extreme, a third-party professional should be retained to evaluate conditions and make the necessary recommendations.



 SOLUTION

# Masonry Wall out of Tolerance or Plumb

LV2 RESTORE – MAINTENANCE AND AESTHETIC UPGRADE



- 1 **Make any necessary repairs** to wall per Sto product instructions.
- 2 **Clean and prepare the surface** to achieve the required CSP (Concrete Surface Profile) as stated in the instructions for Sto Wall Leveler & Patch.
- 3 **Mix Sto wall leveling material to the desired consistency.**
- 4 **Apply a scrub coat of the material** using a sturdy stiff-bristled brush by working the material into the wall. **Note:** Take caution not to apply the scrub coat in too large an area before applying the rest of the Sto Wall Leveler & Patch. Scrub coat must be wet when repair mortar is placed.
- 5 **Apply Sto Wall Leveler & Patch** with a trowel to achieve desired level in lifts of 1/8" (3 mm) to 2" (50 mm) while scrub coat is still wet. Allow to cure.
- 6 **Apply Sto basecoat and mesh** to the prepared surface.
- 7 **Apply tinted StoPrime® primer** appropriate for the selected coating or finish.
- 8 **Recoat or refinish the wall** with the specified Sto materials.

# Repair and Waterproof Balcony/Deck

CONDITION **reStore**

DAMAGED BALCONY OR WALKING DECK

**Balconies are an extension of a building's facade. Unfortunately, they are also one of the first areas to show signs of damage.** Unlike the wall, balconies are often subjected to traffic, standing water if not sloped properly, and de-icing salts in colder climates. Stress, water and salts on balconies often lead to corrosion of reinforcing steel.

**Corrosion is the leading cause of damage to concrete. A Level 2 restoration using materials to repair the damaged balcony deck and waterproof the surface will provide a long-lasting solution to this common problem.**

**Sto provides complete restoration solutions that repair, waterproof, and beautify balconies.** The balcony restoration solution should provide occupants with a safe and aesthetically pleasing outdoor space.

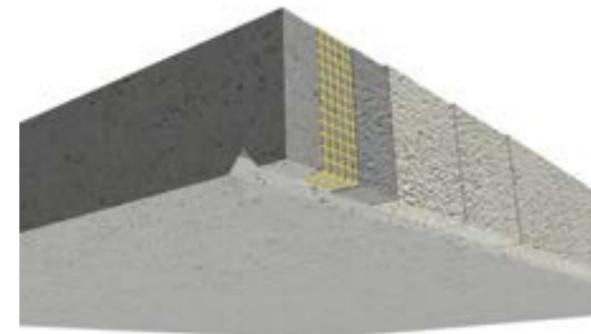
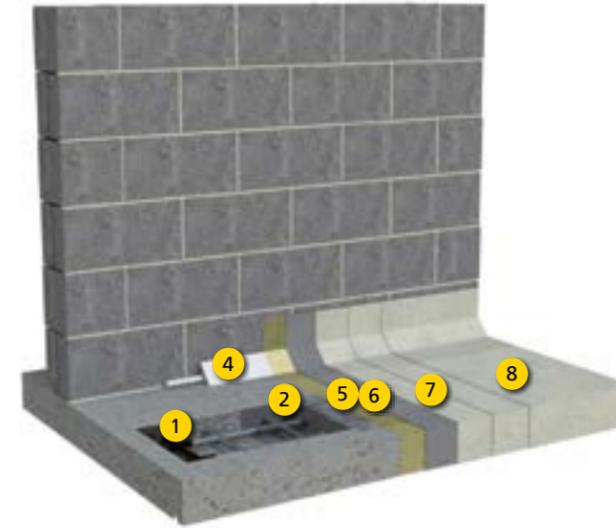
**Damage to reinforcing steel and chloride content of the concrete may be extreme.** If conditions are extreme, a third-party structural and/or corrosion professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION **reStore**

# Repair and Waterproof Balcony/Deck

REPAIR AND WATERPROOF THE BALCONY OR DECK



- 1 **Clean and prepare surface** to receive repair material.
- 2 **Make any necessary repairs** to wall and deck using appropriate application method depending on extent of damage as necessary per Sto product instructions.
- 3 **Clean and prepare surface** to receive waterproof coating.
- 4 **Install bond breaker and sealant to wall/deck interface.** Allow to properly cure.
- 5 **Apply Sto waterproofing membrane** onto balcony deck surface and up the wall a minimum of 3 inches (76 mm).
- 6 **Embed Sto Repair Mesh** into wet Sto waterproofing membrane.
- 7 **Apply two (2) coats of appropriate StoColor® coating.**
- 8 **Apply protective seal coat of appropriate Sto sealer.**

**Note:** Return system to the drip reveal on the underside of balcony/deck.

# Re-Pitch and Waterproof Balcony/Deck

CONDITION **reStore**

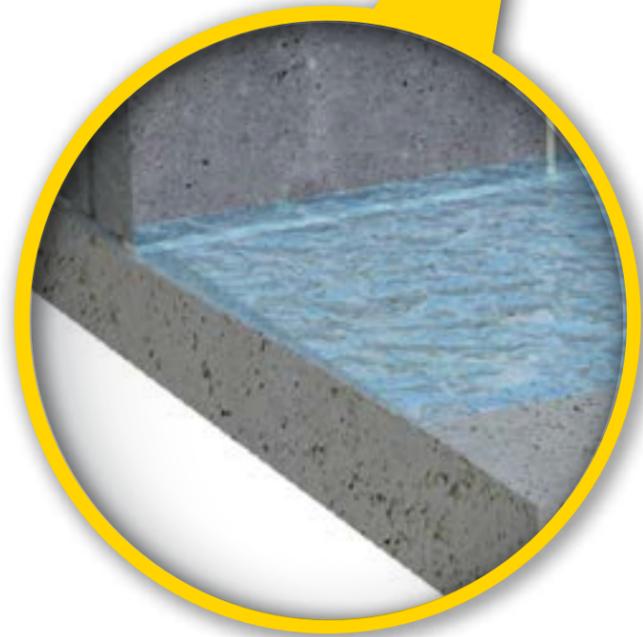
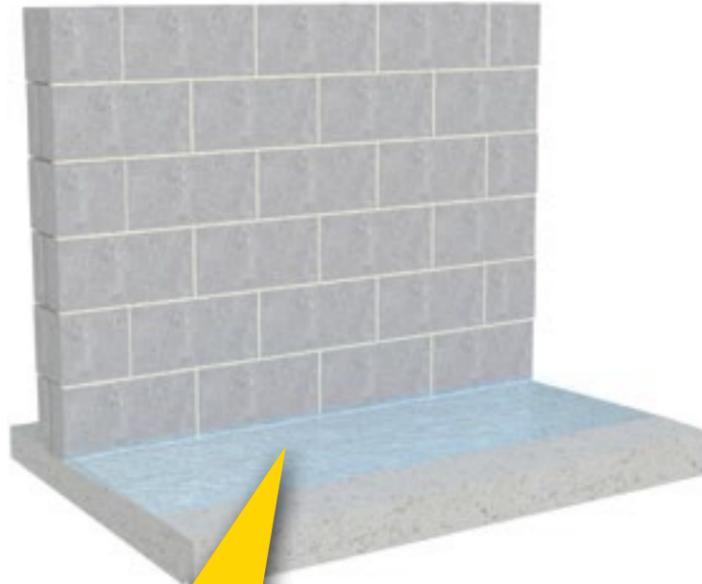
UNLEVEL HORIZONTAL SURFACE SLOPED TOWARDS THE BUILDING

**Balconies are an extension of a building's facade. Unfortunately, they are also one of the first areas to show signs of damage.** Unlike the wall, balconies are often subjected to traffic, standing water if not sloped properly, and de-icing salts in colder climates. Stress, water and salts on balconies often lead to corrosion of reinforcing steel.

**Corrosion is the leading cause of damage to concrete. A Level 2 restoration using materials to provide positive slope toward drainage and waterproof the surface will provide a long-lasting solution to this common problem.**

**Sto provides complete restoration solutions that re-pitch, waterproof, and beautify balconies.** The balcony restoration solution should provide occupants with a safe and aesthetically pleasing outdoor space.

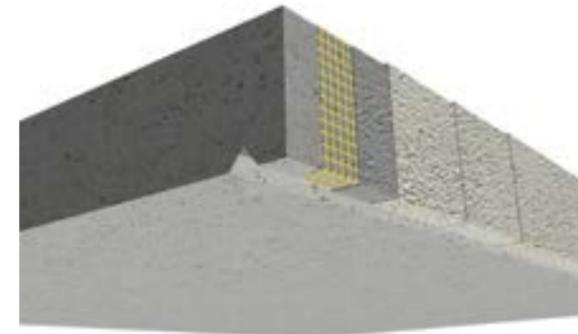
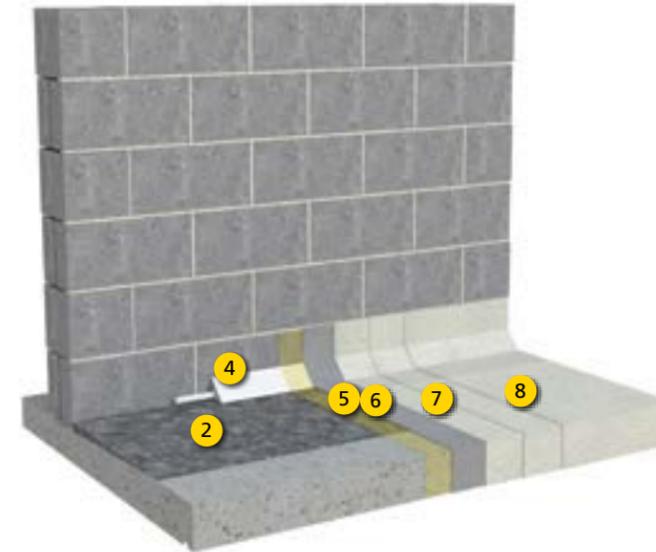
**Damage to reinforcing steel and chloride content of the concrete may be extreme.** If conditions are extreme, a third-party structural and/or corrosion professional should be retained to evaluate conditions and make the necessary repair recommendations.



# Re-Pitch and Waterproof Balcony/Deck

SOLUTION **reStore**

LV2 RESTORE – POSITIVELY SLOPE AND WATERPROOF THE BALCONY OR DECK



- 1 Make any necessary repairs** to wall and deck using appropriate application method depending on extent of damage as necessary per Sto product instructions.
- 2 Apply the leveling material** selected per Sto product instructions to provide a positive slope away from the building and towards drainage.
- 3 Clean and prepare surface** to receive waterproof coating.
- 4 Install bond breaker and sealant to wall/deck interface.** Allow to properly cure.
- 5 Apply Sto waterproofing membrane** onto balcony deck surface and up the wall a minimum of 3 inches (76 mm).
- 6 Embed Sto Repair Mesh** into wet Sto waterproofing membrane.
- 7 Apply two (2) coats of appropriate StoColor coating.**
- 8 Apply protective seal coat of appropriate Sto sealer.**

**Note:** Return system to the drip reveal on the underside of balcony/deck.

# Thermal Upgrade of Precast

CONDITION



UNINSULATED CONCRETE PROVIDES POOR THERMAL PERFORMANCE

**Energy conservation can be the tipping point when restoration of a concrete wall is being considered.**

Whether the discussion is about regular maintenance, an aesthetic upgrade or a full-out change of use, recladding with StoTherm ci EIFS will answer the purpose while moving the project towards 'net-zero'.

**Recladding the exterior is a Level 3 project.**

The concrete requires maintenance but has not reached the point where structural restoration is necessary. Energy costs may have increased substantially. A planned change of use (e.g., an industrial building being repurposed to multi-family residential) may spur the decision to improve thermal performance and occupant comfort levels.

**StoTherm® ci will add effective insulation to the building enclosure.**

All envelope control layers—vapor barrier, waterproof air barrier, thermal barrier and water-shedding surface—are shifted to the exterior cladding. The design professional must ensure that all planes of protection in the EIFS are properly connected to other elements in the building enclosure (e.g., windows, roof) to form continuous barriers.

**Damage and deterioration of the concrete may have progressed to the steel reinforcement.**

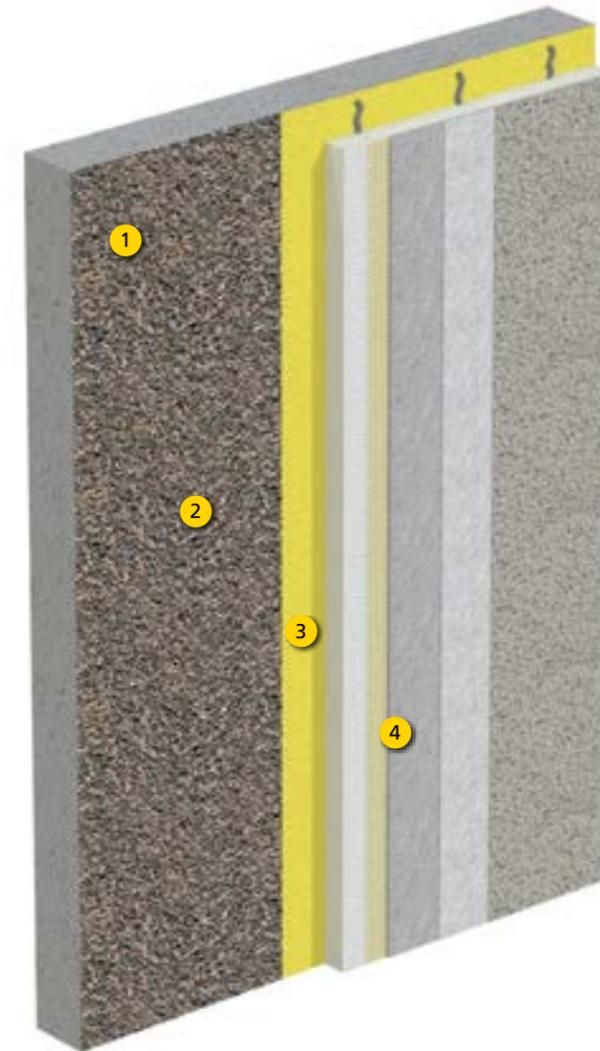
Signs of rust or spalling are indications of deteriorated rebar. If these are present, A third-party envelope professional should be retained to evaluate conditions and make the necessary repair recommendations.



SOLUTION

# Thermal Upgrade of Precast

LV3 reStore — STOTHERM® CI OVERCLAD



**1 Pressure wash** the wall to remove dirt and loose finish.

**2 Seal all penetrations** through the cladding as per Sto details.

**During window replacement,** protect the rough openings with StoGuard® air and moisture barrier and an insulated buck.

**3 Cover the wall** with StoGuard® air and moisture barrier.

**Incorporate flashings** with the StoGuard where required at terminations and openings.

**4 Install StoTherm® ci insulated wall cladding,** ensuring that all the planes of protection are properly connected.

RESOURCES

**IMPORTANT: REPAIRS SHOULD FOLLOW STO CORP. PUBLISHED GUIDELINES**

- 1. Series 19.xx StoTherm ci over Masonry





## At Sto<sup>®</sup>, there's an art to it.

Inspiration favors the open mind. With Sto, your creative exploration can take you anywhere. Our proven products give you unmatched freedom and the ability to achieve your vision in any color, any form, any texture, any material.

Now, with The A.R.T. of reStore, Sto provides a comprehensive solution that focuses on maintenance, repair, and energy improvements that safeguard the long term value of your investment. Whether it requires simple maintenance, or a complete facade restoration, Sto helps you update and repair your building's exterior with any aesthetic that you desire. Follow your inspiration, and Sto will provide everything your building design needs: products, support, services and surfaces.

Get inspired @ [www.stocorp.com/the-art-of-restore](http://www.stocorp.com/the-art-of-restore).

A	Aesthetics
R	Repair
T	Transformation

Creativity Begins. **Sto Finishes.**<sup>®</sup>

### You have questions. We have answers.

Whether you have a general question about our products or require technical assistance, we're here for you! Call us anytime between the hours of 8-5 pm EST, Monday through Friday.

**STO CORP. (USA)** ..... **877 712 6284**  
**STO CANADA** ..... **416 855 0460**  
**STO TECHNICAL SUPPORT** ..... **800 221 2397**

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#### Sto Americas

**Sto Corp.**  
 3800 Camp Creek Pkwy  
 Building 1400, Suite 120  
 Atlanta, GA 30331  
 USA

Phone 1-800-221-2397  
[www.stocorp.com](http://www.stocorp.com)

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