



Sto Corp.
3800 Camp Creek Parkway
Building 1400, Suite 120
Atlanta, GA 30331
Tel: 404-346-3666
Toll Free: 1-800-221-2397
Fax: 404-346-3119
www.stocorp.com

Sto Specification R501 Guideline Specification for Repair of Portland Cement Plaster (Stucco) Wall Assemblies

Section No. 092400 Sto reStore Levels 1 and 2 projects

Note: This specification is intended to give design professionals and restoration contractors guideline instructions for the repair of distress and remediation of construction deficiencies. Each repair project is unique and may involve one, more, or all of the repairs that are presented. However, due to the uniqueness of individual projects, other conditions that require specific repair detail design may exist on any project. Conditions that are significantly different from those described herein must be addressed by the project design or construction professional. Stucco is a nonstructural element. This specification DOES NOT address correction of structural deficiencies and should not be used until any and all sources of structural cracking or other structural deficiencies are corrected.

This specification does not specifically address window replacement. However the flashing repair/replacement procedures are applicable if windows are to be removed.

The necessity for repairs are often a result of improper construction practice. Select qualified contractors for repair work and verify their references.

Notes in italics, such as this one, are explanatory and intended to guide the design/construction professional and user in the proper selection and use of materials. This specification should be modified where necessary to accommodate individual project conditions.

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PART 1 GENERAL

1.1 SUMMARY

- A. Repair distress and construction deficiencies in portland cement-based plaster (stucco) walls.
- B. Repair nonstructural cracks in stucco brown coat and finish.
- C. Repair flashing and waterproofing deficiencies at stucco system terminations.
- D. Resurface wall to provide uniform appearance in accordance with owner's requirements.

1.2 SUBMITTALS

- A. Repair and coating manufacturers' specifications, details, installation instructions and product data.
- B. Samples for approval as directed by architect, engineer, or owner.
- C. Manufacturer's standard material warranty.
- D. A list of minimum three job references.

1.3 REFERENCES

- A. ASTM Standards
 - ASTM C 926 Specification for Portland Cement Plaster
 - ASTM C 1063 Specification of Installation of Lath and Furring to Received Portland Cement-based Plaster
 - ASTM C 920 Specification for Elastomeric Joint Sealants
- B. Other References
 - Sto RC 100 reStore Guideline Cleaning Specification for Walls Surfaces
 - Sto Sto Stucco Repair and Maintenance Guide
 - Sto S103 Sto Specification S 103 Sto Powerwall Stucco
 - NWCB Northwest Wall and Ceiling Bureau (NWCB) Portland Cement Plaster Resource Guide
 - ICRI International Concrete Repair Institute (ICRI) Guidelines for Surface Preparation
 - SWRI Sealant Waterproofing and Restoration Institute (SWRI) Validation Program for Wall Coatings (<http://www.swrionline.org/validation/>)

1.4 DESIGN REQUIREMENTS

- A. A qualified engineer, architect or repair contractor shall provide the services and details listed in this section.
- B. Determine repair scope and detail design requirements based on inspection of the field conditions.
- C. Provide crack repair detail for cracks not wider than 1/16-inch (1.6 mm) nominal width

- D. Provide crack repair detail for cracks wider than 1/16-inch (1.6 mm) but not wider than 1/8-inch (3.2 mm)
- E. Provide flashing installation, repair and/or replacement details for applicable conditions listed in 1.07 of this specification and indicate locations of each repair on project drawings. Flashing remediation shall be based on standard flashing requirements listed below and indications of distress or leakage observed during inspection.
 - 1. Provide head flashing above all window and door openings.
 - 2. Provide weep screed and/or flashing at the bottom of the stucco system.
 - 3. Provide flashing at floor lines in multi-story construction.
 - 4. Terminate stucco system minimum 2-inches (51 mm) above paved grade and roofing materials.
 - 5. Terminate stucco system minimum 4-inches (102 mm) above soil and landscaped finished grades.
 - 6. Provide metal cap flashing for parapets. Cap flashing shall be sloped to drain water onto the roof system.
 - 7. Provide metal flashing for non-vertical or low slope projections to drain water away from the wall exterior.

NOTE: best practice where no sill flashing is present beneath windows is to remove the window and properly install a sill pan flashing.

- F. Integrate all flashing repair and replacement with the water-resistive barrier system to provide direct and continuous drainage to the exterior of the wall.
- G. Terminate stucco system using casing bead around perimeters of windows and doors. Provide minimum ½-inch-wide (12.5 mm) space between casing and window frame. Install sealant joint at perimeters of window, doors and mechanical penetrations.
- H. Indicate on the project drawings locations where resurfacing, refinishing, and/or recoating is required.
- I. Provide detail drawings consistent with Sto guideline details and Sto product installation instructions.
- J. Where lath is cut to facilitate repairs, wire-tie replacement lath to surrounding lath with 1/2-inch (12.5 mm) overlap.
- K. As an option to flashing as noted in 1.04 D7, apply waterproof base coat with reinforcing mesh to stucco brown coat on the top surfaces of projecting elements and immediately above and below Projecting elements shall be sufficiently sloped to provide drainage to the exterior. Protect these surfaces with horizontal grade coating.

IMPORTANT: Limit this option by area and to easily accessible areas for ongoing maintenance, as dirt pick-up, bird droppings, excess wear, and other issues may occur that necessitate frequent maintenance.

1.5 QUALITY ASSURANCE

- A. Manufacturer's requirements

1. Stucco and finish material manufacturer shall be experienced provider of cementitious and polymer-based materials for use in stucco construction and repair for minimum 25 years.
 2. Stucco and finish manufacturer shall have a manufacturing quality control system that is certified to comply with ISO 9001-2015 and an environmental quality management system certified to comply with ISO 14001-2015.
- B. Contractor requirements**
1. Contractor shall be licensed and insured and shall have been engaged in stucco and stucco repair construction for minimum three years.
 2. Contractor shall be knowledgeable in the proper handling, use and installation of Sto materials..
 3. Contractor shall employ skilled mechanics who are experienced and knowledgeable in the repair procedures and requirements of the specified project.
 4. Contractor shall have completed minimum three projects of similar size, scope and complexity to the project being specified.
 5. Contractor shall provide the proper equipment, manpower and supervision on the job site to perform the repair procedures in accordance with Sto's published repair specifications, applicable Sto details and the contract documents.
- C. Inspection requirements**
1. Quality control inspections shall be provided for by the owner or owner's representative.
 2. Inspectors shall be qualified by experience to evaluate field conditions before and during the repair process and shall be familiar with the specified repair procedures prior to commencement of work.
 3. Inspections shall be provided at key intervals during each repair.
 4. Inspect locations for flashing repair and other locations where existing stucco must be removed after demolition of the cementitious stucco is completed; before any existing flashing is removed; and before any new materials are installed. Verify that the proposed repair is constructible and will function in the manner intended based on the visible conditions. Resolve any visible construction detail conflicts with the repair designer before allowing the contractor to proceed with the repair.
 5. Inspect the condition of the water-resistive barrier and transition elements for visible evidence of material integrity and continuity of the system.
 6. Inspect the conditions of newly installed or replaced flashing, water-resistive barrier components and replacement lath (if applicable) before installing the replacement scratch coat. Verify that flashing and water-resistive barrier installation is in accordance with the repair detail design. Verify visible continuity of the water-resistive barrier system to direct water to the exterior of the wall via the flashing.
 7. Inspect the final appearance of each repair location to verify compliance with owner requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- A.** Deliver all materials in their original sealed containers bearing manufacturer's name and product identification.

- B. Protect liquid products (pails) from freezing and temperatures greater than 90 degrees F (32 degrees C). Do not store in direct sunlight.
- C. Protect portland cement based materials (bag products) from moisture and humidity. Store under cover and off of the ground in a dry location.

1.7 PROJECT/SITE CONDITIONS

- A. Apply materials only when surface and ambient temperatures are above 40 degrees F (4 degrees C) and are expected to remain above 40 degrees F (4 degrees C) for 24 hours after application.
- B. Provide supplementary heat for installation in temperatures less than 40 degrees F (4 degrees C).
- C. Provide protection of surrounding areas and adjacent surfaces from spillage, splatter, overspray or other unintended contact with the materials that are being applied.

1.8 COORDINATION AND SCHEDULING

- A. Schedule repairs to permit inspections where specified in Section 1.05.
- B. Do not start repairs in an area unless sufficient work can be completed such that the area is weather-tight at the end of the work shift. Alternatively allow sufficient time before the end of the work shift to provide weather protection until work can resume.
- C. Coordinate with all trades involved to schedule work to result in the proper sequencing of materials within the repair (proper lapping of water resistive system components and flashing).
- D. Schedule finish and coating application to large areas such that each day's application will end at an architectural break.

1.9 WARRANTY

- A. Provide manufacturer's standard warranty for products used.

PART 2 PRODUCTS

NOTE: Detailed product information is available at www.stocorp.com. Many different products options are presented below. All products may not be required. Product selection assistance is available from your local Sto representative and Sto Corp. Technical Services.

2.1 MANUFACTURERS

- A. Provide stucco, surface leveling, primer, waterproofing, and coatings (as applicable) from single manufacturer:
 - 1. Sto Corp., 3800 Camp Creek PKWY, Building 1400, Suite 120, Atlanta, GA 30331; www.stocorp.com, 1-800-221-2397
- B. Provide galvanized metal lath and stucco accessory components from qualified manufacturer.

2.2 SURFACE CONDITIONER

- A. Provide acrylic polymer surface conditioner for pretreatment of friable, chalking, or heavily weathered existing coating surfaces.
 - 1. Product: Sto Plex W – acrylic surface conditioner for preparation existing painted or finished surfaces that exhibit chalking or are heavily weathered.

2.3 GLASS FIBER MESH REINFORCEMENT

- A. Provide alkali resistant, open weave glass fiber mesh reinforcing for surface leveling and waterproof base coat.
 - 1. Products:
 - a. Sto Mesh – alkali-resistant, glass-fiber reinforcing mesh for use with Sto base coat products to provide crack resistance.
 - b. Sto Detail Mesh – alkali-resistant, glass-fiber reinforcing mesh for use with Sto base coats to provide crack resistance and at system terminations.
 - c. StoGuard Mesh – self-adhesive mesh for use with Sto Gold Fill water resistive barrier joint and transition treatment.

2.4 ACRYLIC CRACK FILLER

- A. Provide acrylic crack filler.
 - 1. Products:
 - a. Sto Flexible Crack Filler – acrylic-based crack filler packaged in sealant tube for use (unreinforced) in repair of cracks not wider than 1/16-inch (1.6 mm) and up to 1/8-inch (3.2 mm) wide with mesh reinforcement.

2.5 LEVELER/BASE COAT/SKIM COAT

NOTE: Products used to level or skim the surface of existing finish should have similar properties to the finish. Sto recommends using Sto flexible skim coat over elastomeric finish; Sto RFP over acrylic finish; and Sto BTS Xtra over cementitious finish.

- A. Provide high-build polymer-modified portland cement-based base coat for surface leveling over cementitious finishes and brown coat.
 - 1. Products:
 - a. Sto BTS Xtra – lightweight polymer-modified cementitious base coat used with or without mesh reinforcement to smooth and fill existing textured surfaces or to correct planar irregularities up to 1/4-inch (6.4 mm).
 - b. Sto Leveler – normal-weight polymer-modified cementitious leveling coat used to correct planar irregularities up to 1/4-inch (6.4 mm).
- B. Provide acrylic surface leveler/base coat for surface leveling over elastomeric finishes.
 - 1. Products:
 - a. Sto RFP – acrylic base coat used with or without mesh reinforcement to smooth and fill existing textured elastomeric, acrylic or cementitious finish surfaces.

- b. Sto Flexible Skim Coat – acrylic base coat used with or without mesh reinforcement to smooth and fill existing textured elastomeric, acrylic, or cementitious finish coats and with mesh reinforcement for repair of cracks up to 1/8-inch (3.2 mm) wide.
- C. Provide waterproof polymer-modified portland cement-based base coat.
 - 1. Products (*Choose one*)
 - a. Sto Flexyl – Field-mixed waterproof base coat. Combine with portland cement in the field to provide a waterproof base coat. Use with reinforcing mesh to skim areas and features that require waterproofing.
 - b. Sto Watertight Coat – Pre-packaged, two component cementitious waterproof base coat. Combine two components in field to provide a waterproof base coat. Use with reinforcing mesh to skim areas and features that require waterproofing, as designated on project drawings or by the repair design professional (see 3.09.C of this specification).

2.6 WATER-RESISTIVE BARRIER

- A. Provide water-resistive barrier coating and transition membrane system.
 - 1. Products:
 - a. Sto Gold Coat – ready mixed vapor permeable air and water-resistive barrier coating for moisture protection of sheathing, masonry and concrete substrates behind stucco cladding.
 - b. StoGuard Fabric – non-woven fabric for use with Sto Gold Coat as a transition material and rough opening protection by embedment of the StoGuard Fabric into wet Sto Gold Coat.
 - c. Sto RapidGuard: single component rapid drying gun-applied treatment for static joint transitions to dissimilar construction (i.e., masonry to frame wall), balcony floor slab-to-ceiling, wall sheathing to foundation, and for protection of rough openings.
 - d. StoGuard Conformable Membrane: self-adhered membrane flashing for use over prepared vertical above-grade concrete, concrete masonry, brick masonry, wood sheathing, glass mat gypsum sheathing, and cementitious sheathing used to:
 - Seal joints and seams in wall sheathing
 - Seal static joints between dissimilar materials
 - Flash exterior wall openings and protect rough openings
 - Seal between window flange and wall sheathing
 - Connect to above grade foundation waterproofing
 - Connect to roof membrane
 - Seal around wall penetrations such as pipes, scuppers, vents
 - Back masonry wall ties
 - Seal dynamic joints in wall construction
 - e. Sto Gold Fill – knife-grade, trowel-applied material with StoGuard Mesh, topcoated with Sto Gold Coat, as transition at flashing, windows, mechanical penetrations, at system terminations, and as protection of rough openings.
- B. Provide ASTM D 226 compliant asphalt saturated kraft building paper, Grade D, No. 15 (where required) over Sto Gold Coat.

2.7 PORTLAND CEMENT PLASTER

- A. Provide portland cement stucco scratch and brown coat.
 - 1. Products: *(Choose one)*
 - a. StoPowerwall Stucco (80103) – portland cement-based stucco, field-mixed with water and sand in accordance with product instructions.
 - b. StoPowerwall Stucco Pre-Blended (80102) – factory proportioned portland cement-based stucco combined with water in the field.
 - c. ASTM C 926-compliant field-mixed stucco
 - d. ASTM C 926-compliant pre-packaged stucco mix

2.8 PORTLAND CEMENT

- A. Provide ASTM C 150 Type I, Type II, or Type I-II cement for mixing with Sto Flexyl.

2.9 PRIMER

- A. Provide pH resistant acrylic primer to be used on stucco brown coat.
 - 1. Product: Sto Hot Prime

2.10 POLYMERIC FINISH

- A. Provide polymeric elastomeric or acrylic finish. Color and texture to be determined based on mockup. *(Choose one)*
 - 1. Elastomeric Finish products
 - a. Sto Powerflex – Elastomeric acrylic textured stucco finish
 - b. Sto Powerflex Silco – Elastomeric acrylic textured stucco finish with silicone enhancement.
 - c. Sto Powerwall Finish – Elastomeric acrylic textured stucco finish
 - 2. Acrylic Finish Products
 - a. Stolit – Acrylic textured finish (better than industry standard acrylic finish)
 - b. Sto Essence DPR – Acrylic textured finish (industry standard acrylic finish)
 - c. Stolit Lotusan – Acrylic textured finish with Lotus-Effect Technology (*maximum water repellency, significantly reduced cleaning requirements over time*)
 - 3. Specialty Acrylic Finishes

NOTE: *These finishes are accent or nontraditional stucco finishes. These products require application of mesh-reinforced base coat prior to finish installation and may require significant additional surface preparation and clear sealer for exterior use. See written installation instructions for the specified product and specify accordingly.*

- a. Sto Decocoat – trowel or spray-applied colored aggregate textured finish
- b. Sto Granitex – spray applied colored aggregate finish with coarse texture
- c. StoCreativ Granite – trowel applied colored aggregate faux granite finish

- d. StoCreative Lux – trowel applied colored aggregate faux granite finish with reflective accent
- e. StoTique – faux finish translucent surface application for smooth or textured Sto acrylic finishes to produce mottled color and old-world appearance.

2.11 ARCHITECTURAL COATING

- A. Provide architectural coating to provide uniform appearance to repaired walls. (Choose one)
 - 1. Elastomeric Coating Products:
 - a. Stolastic Smooth – elastomeric architectural coating for stucco, masonry and concrete. Complies with and is listed by SWRIstitute Validation Program for Wall Coatings.
 - b. Stolastic Sand – elastomeric architectural coating with fine sand texture for stucco, masonry and concrete.
 - c. StoSilco Lastic – silicone-enhanced elastomeric architectural coating for stucco, masonry and concrete. Complies with and is listed by SWRIstitute Validation Program for Wall Coatings.
 - 2. Acrylic Coating Products:
 - a. StoCoat Lotusan – smooth acrylic architectural coating with Lotus Effect and pronounced self-cleaning performance.
 - b. StoCoat Acryl – smooth acrylic architectural coating
 - c. StoCoat Acryl Plus – smooth acrylic premium horizontal or vertical grade architectural coating
- B. Provide horizontal-rated coating for additional weather resistance to top surfaces of projecting elements where Sto waterproof base coat has been applied.
 - 1. StoCoat Acryl Plus – smooth acrylic premium horizontal or vertical grade architectural coating

2.12 MIXING

- A. Mix in accordance with manufacturer's printed instructions.
- B. Mix cementitious products with clean, potable water.

PART 3 EXECUTION

3.1 ACCEPTABLE INSTALLERS

- A. Prequalify repair contractor under Quality Assurance requirements of this specification (section 1.05.B).

3.2 EXAMINATION

- A. Inspect locations identified on the project drawings for repair.
- B. Establish clear understanding of the repair scope and process with the mechanics that will perform the work for each individual location.

3.3 SELECTIVE DEMOLITION

- A. Use hearing, eye, ear and respiratory personal protective equipment when performing demolition.
- B. Provide adequate protection to persons and property from potential falling debris from demolition and repair construction.
- C. Stucco Removal:
 - 1. Saw cut perimeter of repair area with a masonry blade set to a depth that will not cut into the sheathing.
 - 2. Chip stucco at the edges of the saw cut to provide a minimum ½-inch perimeter of exposed lath where lath is to be repaired or replaced.
 - 3. Remove stucco such that patches will be square or rectangular shaped. Avoid re-entrant corners within patches and constructing patches with greater than 2.5: 1 length-to-width ratios.
- D. Finish removal:
 - 1. Remove finish where required to cosmetically match finish texture with surrounding unaltered stucco. Finish shall be removed minimum 1-inch (25mm) around the perimeter of saw-cut or chipped areas, and on both sides of cracks to be repaired using crack-filling and bridging techniques. (Note: removal of finish can be omitted along crack repairs. However, a trial area should be done to verify that the finished appearance will comply with owner requirements because the crack repair will likely be visible.)
 - 2. Finish removal shall be by grinding, scraping, or chemical stripping product approved by the design professional.
 - 3. Use chemical stripping products in accordance with the product manufacturer's written instructions.
 - 4. Dispose of waste and rinse water from chemical stripping of finish in accordance with local regulations.

3.4 REPAIR OF CRACKS 1/16-INCH (1.6 mm) WIDE AND SMALLER

- A. Cracks not wider than 1/32-inch (0.8 mm) (hairline cracks).
 - 1. Clean existing surface in accordance with Sto reStore Cleaning Specification RC100
 - 2. Coat wall surface with Sto Elastomeric Coating (Stolastic or StoSilco Lastic) in accordance with written product instructions.
- B. Cracks not wider than 1/16-inch (1.6 mm)
 - 1. Remove finish along crack as specified in section 3.03.C.
 - 2. Clean crack using oil-free compressed air.
 - 3. Seal crack with Sto Flexible Crack Filler and tool surface flush with brown coat.
 - 4. Apply new finish to match surrounding texture and color.

3.5 REPAIR OF CRACKS 1/16-INCH (1.5mm) WIDE TO MAXIMUM 1/8-INCH (3.2mm) WIDE

- A. Remove finish along crack as specified in section 3.03.C.
- B. Clean crack using oil-free compressed air.
- C. Fill crack with Sto Flexible Crack Filler and tool surface flush.
- D. Apply Sto skim coat material (selected from section 2.05 of this specification) along both sides of crack and tool flat. Embed 2-inch wide (50 mm) strip Sto Detail Mesh generally centered on crack and tool into fresh Sto skim coat material using taping knife. Tool smooth to the thickness required to fully embed the mesh (approximately 1/16-inch (1.6 mm) thick). Allow skim coat to dry completely before applying finish.
- E. Apply new finish to match surrounding texture and color.

3.6 FLASHING REPLACEMENT

- A. Repair flashing and/or correct conditions in locations indicated on the project drawings and as described in section 1.04 of this specification.
- B. Remove stucco in accordance with section 3.01 of this specification.
- C. Remove enough area to permit proper installation of flashing as detailed in Sto Corp. guideline details for stucco construction (available at www.stocorp.com).
- D. Inspect the condition of the water-resistive barrier membrane and transition materials.
- E. Repair or replace damaged water resistive barrier system components.
- F. Install replacement components in a sequence and manner to provide shingle-laps and provide a continuous path for moisture drainage to the exterior of the wall via the flashing.
- G. Install new flashing components such that finished repair will comply with Sto Corp. guideline details for stucco construction.
- H. Mix and apply stucco scratch and brown coats in accordance with ASTM C 926 to match existing stucco thickness. Cover with polyethylene sheeting or otherwise moist-cure for minimum 48-hours.
- I. Where finish is specified directly to new stucco, prime the new stucco brown coat surfaces with Sto Hot Prime prior to finish application.
- J. Where further surface leveling or surface applied waterproofing is specified, apply leveler or waterproof base coat after completion of the 48-hour cure period.

3.7 SURFACE DEFECT REPAIR

- A. Localized finish repair
 - 1. Remove affected finish in accordance with section 3.03.C of this specification.
 - 2. Clean exposed brown coat surface to remove all dust, dirt, and other bond-inhibiting materials.
 - 3. Apply Sto Hot Prime in accordance with written product instructions.

4. Apply finish to match surrounding stucco texture and color.
- B. Localized brown coat repair within field of wall
1. Remove stucco in accordance with section 3.03 for this specification.
 2. Remove stucco minimum 2-inch (50 mm) in all directions beyond area of concern where lath replacement is required.
 3. Remove and replace damaged or corroded lath.
 - a. Remove damaged lath minimum 1-inch (25 mm) in all directions beyond area of concern.
 - b. Repair water-resistive barrier system as necessary to correct any damage that is either existing or caused by stucco and lath removal actions.
 - c. Cut replacement lath to provide minimum 1/2-inch (12.5 mm) overlap on all sides.
 - d. Wire tie new lath to existing lath at maximum spacing of 8-inches (203 mm).
 - e. Provide minimum 4 wire ties for small lath replacements.
 4. Mix and apply stucco scratch and brown coats in accordance with ASTM C 926 to match existing stucco thickness. Cover with polyethylene sheeting or otherwise moist-cure for minimum 48-hours.
 5. Where finish is specified directly to new stucco, prime the new stucco brown coat surfaces with Sto Hot Prime prior to finish application.
 6. Where further surface leveling or surface applied waterproofing is specified, apply leveler or waterproof base coat after completion of the 48-hour cure period.
- C. Remedial accessory installation
1. Remove stucco in accordance with section 3.03 of this specification.
 2. Remove stucco a sufficient distance from accessory to permit removal of the existing accessory and wire-tie connection of new accessory.
 3. Remove and replaced damaged accessories
 - a. Cut damaged section of existing accessory and remove from wall.
 - b. Repair water-resistive barrier system if damage is present or occurs as a result of the accessory removal.
 - c. Wire tie new accessory to existing lath at maximum spacing of 8-inches (203 mm).
 - d. Provide minimum 4 wire ties for small lengths of replacement.
 4. Align new sections of corner and casing beads carefully to match adjacent accessories.
 5. Set both ends of all accessory replacements pieces in wet sealant. Mix and apply stucco scratch and brown coats in accordance with ASTM C 926 to match existing stucco thickness. Cover with polyethylene sheeting or otherwise moist-cure for minimum 48-hours.
 6. Where finish is specified directly to new stucco, prime the new stucco brown coat surfaces with Sto Hot Prime prior to finish application.
 7. Where further surface leveling or surface applied waterproofing is specified, apply leveler or waterproof base coat after completion of the 48-hour cure period.
- D. New accessory installation



1. Remove stucco in accordance with section 3.03 of this specification in locations where required accessories are not present.
2. Install new corner beads, casing beads, weep screeds or other accessories in accordance with ASTM C 1063.
3. Set ends of accessories in wet sealant.
4. Mix and apply stucco scratch and brown coats in accordance with ASTM C 926 to match existing stucco thickness. Cover with polyethylene sheeting or otherwise moist-cure for minimum 48-hours.
5. Where finish is specified directly to new stucco, prime the new stucco brown coat surfaces with Sto Hot Prime prior to finish application.
6. Where further surface leveling or surface applied waterproofing is specified, apply leveler or waterproof base coat after completion of the 48-hour cure period.

3.8 STUCCO DELAMINATION FROM CONCRETE SUBSTRATES

- A. Define repair area based on sounding and remove stucco to sound substrate.
- B. Extend repairs laterally to adjacent well-bonded material.
- C. Scarify or chip concrete substrates to provide a surface profile sufficient for bonding of new stucco application.
- D. ICRI surface profile minimum SP-3
- E. Clean prepared surface to remove all dust, dirt, laitance, oils and other potentially bond inhibiting materials.
- F. Check ability of surface to receive directly bonded stucco by checking for absorption of water into the concrete. If water does not readily absorb into concrete, provide additional surface preparation or mechanical anchorage for stucco.
- G. Install stucco in accordance with product instructions.

NOTE: *A surface-applied bonding agent may be used, however, use of a bonding agents is not a substitute for mechanical surface preparation of cast-in-place or pre-cast concrete surfaces to receive directly bonded stucco. In all cases, with or without a bonding agent, verify adhesion of the stucco with adequate field testing after at least 28 day age of repair. Conduct field adhesion verification tests throughout the course of the project with agreed upon frequency established by the design professional and owner or owner's representative.*

3.9 SURFACE SKIM COAT

- A. Surface leveling
 1. Apply unreinforced polymer modified cementitious leveling coat to correct for profile variations of 1/8-inch (3.2 mm) to 1/4-inch (6.4 mm). (*choose one*)
 - a. Sto Leveler: Mix and apply in accordance with Sto written instructions.
 - b. Sto BTS Xtra: Mix and apply in accordance with Sto written instructions.

2. Apply unreinforced skim coat to existing finish surfaces to level surface in preparation for new finish application. (*choose one*)
 - a. Sto Flexible Skim Coat:
 - i. Apply Sto Flexible Skim Coat to existing elastomeric finish and pull tight to fill low areas in finish and provide flat surface to receive new textured finish.
 - ii. Allow Sto Flexible Skim Coat to fully dry before applying finish.
 - b. Sto BTS Xtra
 - i. Apply Sto BTS Xtra over textured cementitious finish and pull tight to fill low areas in finish and provide flat surface to receive new textured finish.
 - ii. Allow Sto BTS Xtra to fully dry before applying finish.
- B. Skim Coat for Crack remediation
 1. Apply glass-fiber mesh reinforced base coat to remediate frequent fine cracks (less than 1/16-inch (1.6 mm) wide) and provided additional crack prevention. (*choose one*)
 - a. Sto Flexible Skim Coat
 - i. Apply Sto Flexible Skim Coat over stucco surfaces with existing elastomeric finishes by trowel to a nominal thickness of 1/16-inch (1.6 mm).
 - ii. Use trowel to fully embed Sto Mesh in the freshly applied Sto Flexible skim coat. Overlap runs of mesh minimum 2 1/2-inches (62.5 mm).
 - iii. Allow Sto Flexible Skim Coat to fully dry before applying finish.
 2. Sto BTS Xtra
 - a. Apply Sto BTS Xtra over prepared cementitious base coat and cementitious finish surfaces by trowel to a nominal thickness of 1/16-inch (1.6 mm).
 - b. Use trowel to fully embed Sto Mesh in the freshly applied Sto BTS Xtra skim coat. Overlap runs of mesh minimum 2 1/2-inches (62.5 mm).
 - c. Allow Sto BTS Xtra to fully dry before applying finish.
- C. Skim Coat Surface-Applied Waterproofing
 1. Apply glass fiber mesh reinforced waterproof base coat to areas specified on the project drawings. (*Choose one*)
 - a. Sto Flexyl
 - i. Mix Sto Flexyl with portland cement in accordance with Sto written instructions.
 - ii. Apply Sto Flexyl to prepared base coat or finish to a nominal 1/16-inch (1.6 mm) thickness.
 - iii. Fully embed Sto Mesh into Sto Flexyl
 - iv. Allow Sto Flexyl to dry completely before finish application.
 - b. Sto Watertight Coat
 - i. Mix Sto Watertight Coat components A and B in accordance with Sto written instructions.
 - ii. Apply Sto Watertight Coat to prepared base coat or finish to a nominal 1/16-inch (1.6 mm) thickness.

- iii. Fully embed Sto Mesh into Sto Watertight Coat.
- iv. Allow Sto Watertight Coat to dry completely before finish application.

3.10 FINISH

- A. Apply Sto finish in accordance with Sto written instructions for the specified product.

3.11 COATING

- A. Prepare surface to receive Sto coating in accordance with Sto reStore Cleaning specification RC100.
- B. Apply Sto coating in accordance with Sto written instructions for the specified product.

END OF SECTION

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