

**PART 1: GENERAL****1.01. DESCRIPTION AND SCOPE**

- A. Requirements contained within Division I (General Requirements) are applicable to the work required of this section. Provide labor, materials, equipment, and supervision necessary to complete the exterior wall and finish systems including:
1. Substrate inspection and preparation and application of optional bonding agent (only for direct plaster application)
  2. Application of moisture barrier layer
  3. Attachment of PVC or zinc surface mounted v-joint and related trim accessories
  4. Attachment of reinforcing lath to the substrate
  5. Mixing Total Wall Total One Coat and addition of optional Total Wall Liquid Acrylic Additive
  6. Application of Total Wall Total One Coat mix
  7. Application of backer rod, sealant primer and caulk sealant
  8. Application of optional prime coat ahead of finish coating
  9. Application of Total Wall synthetic finish or elastomeric coating
- B. Related Sections
- |                   |  |
|-------------------|--|
| 1. Section 01010  | Summary of Work                          |
| 2. Section 01040  | Coordination of Work                     |
| 3. Section 01300  | Submittals                               |
| 4. Section 01613  | Materials Delivery, Storage and Handling |
| 5. Section 03300  | Poured-In-Place Concrete                 |
| 6. Section 03470  | Precast Concrete                         |
| 7. Section 04200  | Unit Masonry                             |
| 8. Section 05400  | Metal Framing                            |
| 9. Section 06160  | Wood Sheathing                           |
| 10. Section 07240 | Exterior Insulated and Finish Systems    |
| 11. Section 07460 | Siding                                   |
| 12. Section 07620 | Flashing and Sheet Metal                 |
| 13. Section 07901 | Joint Sealants                           |
| 14. Section 09220 | Portland Cement Plaster                  |
| 15. Section 09260 | Gypsum Sheathing                         |
| 16. Section 09820 | Cementitious Coatings                    |
| 17. Section 09830 | Elastomeric Coatings                     |
- C. Referenced Documents
1. Standards
    - (1) ASTM A526 Specification for Sheet Steel, Zinc Coated (Galvanized) by Hot-Dip Process, Commercial Quality
    - (2) ASTM B69 Specification for Rolled Zinc
    - (3) ASTM C91 Masonry Cement

- (4) ASTM C150 Specification for Portland Cement
- (5) ASTM C144 Aggregate for Masonry Mortar
- (6) ASTM C109 Compressive Strength

- (7) ASTM C307 Tensile Strength
- (8) ASTM C580 Flexural Strength
- (9) ASTM D1784 Specification for rigid PVC
- (10) ASTM C926 Application of Portland Cement Plaster
- (11) ASTM C920 Joint Sealants
- (12) ASTM C1193 Use of Joint Sealants
- (13) ASTM C897 Aggregate for job-mixed Portland Cement Plaster
- (14) ASTM C778 Specification for Standard Sand
- (15) ASTM C206 Finishing Hydrated Lime
- (16) ASTM C207 Hydrated Lime for Masonry Mortar
- (17) ASTM C219 Standard Terminology Relating to Hydraulic Cements
- (18) ASTM C476 Specification for Grout for Masonry
- (19) ASTM C595 Blended Hydraulic Cement
- (20) ASTM C387 Specification for Dry Combined Materials (cements)
- (21) ASTM C887 Dry Packaged Surface Bonding Cements
- (22) ASTM C932 Surface Applied Bonding Agents
- (23) ASTM C1116 Fiber Reinforced Concrete
- (24) ASTM C1063 Installation of Lathing and Furring
- (25) ASTM C1328 Specification for Plastic (stucco) Cements
- (26) ASTM C847 Specification for Metal Lath
- (27) ASTM C1002 Steel Screws for Attachment to Steel Studs
- (28) ASTM C129 Specification for Non-Bearing CMU
- (29) ASTM C90 Specification for Load Bearing CMU
- (30) ASTM C55 Specification for Concrete Brick

D. Terms and Definitions

1. **Fiber Reinforced Hard Coat Stucco**

A Class of plastering where a fiber reinforced Portland Cement-based stucco is applied to a substrate surface.

- (1) Over raw masonry: If the substrate is clean, sound, raw masonry, then the stucco may be applied directly to the surface. The masonry surface may require use of a bonding agent and/or scoring in addition to cleaning by pressure washing. The use of rigid reinforcement such as lath, or a combination of lath and a moisture barrier, over raw masonry is optional. If rigid reinforcement (lath) is used on raw masonry, scoring, etching or use of a bonding agent is typically omitted. Although, use of a moisture barrier, such as a grade "D" felt paper is permitted as a layer between the lath and the masonry substrate, it is optional over masonry and not required as part of this system.
- (2) Over painted, sealed, or deteriorated masonry: The use of lath reinforcement over painted or deteriorated masonry is required. The inclusion of a moisture barrier layer is optional. The lath, or combination of lath and moisture barrier, is mechanically fastened to the masonry substrate. It is optional over masonry and not required as part of this system.
- (3) Over sheathings: Substrates such as plywood, cement board, oriented strand board and exterior gypsum board receive a layer of moisture barrier followed by mechanically fastened lath reinforcement. The stucco is then applied over the lath. In all instances, accessories, such as control joint or stop bead, are installed prior to plastering in accordance with lath and plastering guidelines. A finish coat may be Portland cement-based stucco, or textured synthetic acrylic finish or an elastomeric coating.

**2. Moisture Barriers**

Water vapor permeable construction sheeting designed to function as a weather resistive barrier. Recommended drainable sheet-applied moisture barrier materials are:

- (1) Grade D building paper
- (2) Tyvek StuccoWrap
- (3) RainDrop HouseWrap
- (4) Weather Trek Wrap

**3. Rigid Reinforcement**

A minimum weight of 2.5 pound per square yard galvanized, self-furring diamond reinforcement lath is recommended. A paper backed lath may be used if a moisture barrier is required. Also, a PVC lath, Ultra Lath from Plastic Components, may be used instead of metal lath.

**4. Fiber Reinforced Stucco Plaster (Total Wall Total One Coat)**

A dry material mixed with water and optional acrylic modifier at the job site. It is trowel applied to the concrete substrate in multiple passes, or lifts, in a thickness from 3/8" to a maximum of 1.5". This material is also available in a concentrate, which requires the addition of sand during mixing at the job site.

**5. Fiber Reinforced Stucco Plaster Finish (optional) (Total Wall Premium Fibered Stucco Finish)**

A dry material mixed with water and optional acrylic modifier at the job site. The large fibers are removed to function as a finished outer layer of plaster and ready to receive the elastomeric topcoat after proper cure time has elapsed. This material is also available in a concentrate, which requires the addition of sand during mixing at the job site.

**6. Acrylic Modifier (Total Wall Liquid Acrylic Additive)**

A liquid additive which replaces part of the mix water for a Portland cement plaster creating improved cure properties, increased strength, reduced shrinkage, and reduced cracking. This product is also used as a surface applied bonding agent when such a material is required over masonry to improve bond of the stucco.

**7. Synthetic Acrylic Textured Finish Coat (recommended)**

The Acrylic Finish is a premixed material which functions to provide a decorative color and additional weather resistance. The finish may be a trowel applied textured synthetic finish or a roller applied elastomeric coating.

**8. Accessories**

Items such as weep bases, corner beads, casing beads and control joints are utilized in the assembly of the system. These materials may be either solid zinc, G90 galvanized metal or PVC. Coastal applications exposed to salt water must use solid zinc or PVC accessories.

**9. Sealant**

A permanently flexible, self-sticking compound used to seal seams in the system.

**10. Bonding Agent (Total Wall Stucco Bond)**

A liquid applied polymer coating for use over raw concrete to improve the bond of direct application Portland cement stucco to the masonry substrate.

**1.02. DESIGN LIMITATIONS AND DETAILING**

A. All details must conform to Total Wall, Inc. I recommendations and must be consistent with the project requirements.

1. General

- (1) The length and slope of inclined surfaces must follow the guidelines listed below:
  - (a) Minimum slope: 6" (152.4 mm) of rise in 12" (304.8 mm) of horizontal projection
  - (b) Inclined surfaces must not be used for areas defined as roofs by building codes.
  - (c) Uses not meeting the above criteria must be approved in writing by Total Wall, Inc. prior to installation.

- (d) Raw aluminum metal such as aluminum flashing must not be used adjacent to Portland cement-based stucco.
- 2. Substrate System
  - (1) Must be engineered to withstand all applicable loads. Including live, dead, positive and suction wind; seismic activity; etc.
- 3. Substrates
  - (1) Application of the *TOTAL ONE HS* system must be to one of the following substrates:
    - (a) Poured in place concrete masonry
    - (b) Precast concrete masonry
    - (c) Concrete masonry unit construction
    - (d) Brick
    - (e) Plywood
    - (f) Oriented strand board (OSB)
    - (g) Gypsum sheathing
    - (h) Any other sheathing as approved in writing by Total Wall, Inc.
  - (2) The substrate must not have any planar irregularities greater than 1/4" (6.35 mm) in 10 lineal feet (3.04 m)
- 4. Expansion Joints and Control Joints
  - (1) Continuous expansion joints and control joints must be installed at the following locations:
    - (a) Where expansion joints occur in the substrate
    - (b) Where building expansion joints occur
    - (c) Where the system abuts other materials
    - (d) Where the substrate changes
  - (2) Expansion and contraction of the system and adjacent materials must be taken into account in the design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficient of expansion of materials, joint width-to-depth ratios, etc. Expansion joints must be constructed using back to back casing bead with a minimum separation of 3/4" separation to receive backer rod and sealant.
  - (3) Continuous control joints must be constructed of back to back casing bead with a minimum 3/8" separation to receive backer rod and sealant, or may be constructed from a single component accessory. Control joints must be installed at the following locations:
    - (a) Where significant structural movements occur, i.e.:
      - 1. Changes in roofline
      - 2. To limit panel sizes to 144 sq. ft over sheathing and limit panel size to 250 sq. ft over masonry
      - 3. To limit panel shapes to length to width ratio 2.5:1
      - 4. At stress points such as door and window corners
      - 5. At floor lines in wood frame construction unless engineered lumber is employed
      - 6. Changes in building shape and structural system
    - (4) Isolation joints are required around all wall penetrations, including doors and windows.
- 5. Details
  - (1) Total Wall, Inc.'s latest published information must be followed for standard detail treatments.
  - (2) Non-standard detail treatments must follow the recommendations of Total Wall, Inc.
- B. The use of dark colors must be considered in relation to estimated wall surface temperatures as a function of local climate conditions.

**1.03. QUALITY ASSURANCES**

- A. Contractor  
The contractor must have a minimum of two years experience in the wall construction trades, be licensed by Total Wall, Inc. for application of Total Wall, Inc. systems, demonstrate the ability to install the system based on projects of similar size and complexity, and meet the approval of the construction manager.
- B. The contractor must provide the equipment, manpower and supervision necessary to install the system in compliance to the project plans and specifications.

**1.04. SUBMITTALS**

- A. Total Wall, Inc.'s literature, including application instructions, specifications, and details.
- B. The optional synthetic finish topcoat or elastomeric topcoat documentation and specifications
- C. Sealant and related components documentation and specifications

**1.05. PRODUCT DELIVERY AND STORAGE**

- A. Delivery  
Deliver all materials supplied by Total Wall, Inc. in original, unopened containers with legible manufacturer's identification intact.
- B. Storage
  1. Store all products off the ground, under cover and protected from dampness and sunlight.
  2. All liquid products must be stored at 40° F (4.4° C) or above and protected from freezing and below 120 F maximum temperatures. Protect from exposure to direct sunlight during storage.

**1.06. JOB CONDITIONS**

- A. Install all materials in strict accordance with all safety and weather conditions required by the product literature, and in accordance with ASTM C926, paragraph 7, and as modified by the applicable standards of authorities having jurisdiction.
- B. Apply all coatings when the ambient temperature is 40° F (4.4° C) and rising. A minimum temperature of 40° F (4.4° C) must be maintained 24 hours after completion of work. Supplementary heat must be provided if stated temperature conditions do not exist. Do not apply coatings to a frozen surface.
- C. Avoid application in high wind and avoid application in direct sunlight. High substrate surface temperatures, warm moving air, and direct sunlight are conditions can cause rapid dehydration of stucco which can reduce strength and increase the risk of cracking.
- D. Protect surrounding areas and surfaces during application of the wall system.
- E. Protect system from precipitation during application and for at least 24 hours after application.

**1.07. COORDINATION AND SCHEDULING**

- A. Closely coordinate work with related sections and trades.
- B. Protect the tops of walls to prevent water from entering behind the system. Any required cap flashing, overhangs or drip edges must be installed as soon as possible after the finish coat has been applied.
- C. Install all sealants in a timely fashion. Protect open joints from water intrusion with backer rod or other means until the sealant has been installed.

**1.08. SYSTEM WARRANTY**

- A. A Total Wall, Inc. warranty application form must be completed and submitted to Total Wall, Inc.
- B. Upon completion of the EIFS installation in accordance with specifications and payment of monies due Total Wall, Inc. Total Wall, Inc. will issue a warranty.

**PART 2: PRODUCTS**

**2.01. MANUFACTURERS**

- A. All materials related to the stucco system including: the optional acrylic admixture, the Portland cement stucco, the optional bonding agent, the optional synthetic finish coat, and any optional EIFS trim panels must be obtained from:

Total Wall, Inc.  
PO Box 366  
Rio, WI 53960  
(888) 702-9915

**2.02. PORTLAND CEMENT PLASTER SYSTEM COMPONENTS**

- A. The recommended rigid reinforcement is minimum 2.5-pound galvanized, self-furring diamond lath or a paper backed version of this grade lath. An acceptable alternative is: Ultra-Lath, a PVC lathing supplied by Plastic Components.
- B. The recommended sheet applied drainable moisture barrier may be:
  - 1. Grade D building paper
  - 2. Tyvek StuccoWrap
  - 3. RainDrop HouseWrap
  - 4. Weather Trek Wrap
  - 5. Equivalent complying with ASTM E1677 for Type I Air Retardants and meeting 15-minute water resistance IAW ASTM E331 at 27 Pound pressure differential.
- C. The fasteners must be exterior grade climate protected metal screws or pins of proper length and design for the substrate. The fastening system must be field tested on the substrate to determine the proper fastener length and to confirm suitability of the fastening system. The washers must be 7/16" minimum diameter exterior grade corrosion resistant metal or plastic plates.
- D. The trim accessories must be solid zinc metal, galvanized metal or UV resistance PVC as manufactured by Vinyl Corporation, Plastic Component, or other approved source. Galvanized metal accessories must not be used where there is exposure to salt water. The trim accessories may consist of the following:
  - 1. Starter track with weeps, weep base or drainage track
  - 2. Casing bead or stop bead with proper thickness ground
  - 3. Drip casing bead
  - 4. Control joint (v-joint) with proper thickness ground
  - 5. Corner bead
- E. Fibered Reinforced Stucco must be Total Wall Total One Coat or Total Wall Total One Coat Concentrate. This product is a dry stucco product, available in 80-pound bags and designed to be mixed in the field with water and optional acrylic admixture. Please note that the concentrate product also required the addition of sand during mixing.

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- F. The Acrylic Admixture must be Total Wall Liquid Acrylic Additive. The acrylic admixture replaces a portion of the mix water for Total One Coat. Total Wall Stucco Bond may also be used as a surface applied bonding agent when such an agent is required.
- G. Sand must be good quality silica, clean and free of debris and contaminants, such as iron. The sand must meet ASTM C897 or ASTM C144 guidelines as applicable. Recommended sand size is 45 – 75 mesh.
- H. Water must be clear, potable, and free of foreign matter.
- I. Sealant Systems
  - 1. Must be one of the following:
    - (1) Tremco, Inc.
      - (a) Sealant: “Dymeric”
      - (b) Primer: use manufacturer’s recommended primer
      - (c) Backer rod: Dow “Ethafoam”
      - (d) Bond breaker: 3M #226, 480, 481, 710
    - (2) Pecora Corporation
      - (a) Sealant: 890 Silicone
      - (b) Primer: use manufacturer’s recommended primer
      - (c) Backer rod: Dow “Ethafoam”
      - (d) Bond breaker: 3M 480 or Valley Industrial Products #90
    - (3) Dow Corporation
      - (a) Sealant: Dow 790 series sealants (790, 791, 795)
      - (b) Primer: use manufacturer’s recommended primer
      - (c) Backer rod: Dow “Ethafoam”
    - (4) Sonneborn Corporation
      - (a) Sealant: Sonnelastic 150 and 150LM sealants
      - (b) Primer: use manufacturer’s recommended primer
      - (c) Backer rod: Dow “Ethafoam”
    - (5) Sika Corporation
      - (a) Sealant: Sika LM 15
      - (b) Primer: use manufacturer’s recommended primer
      - (c) Backer rod: Dow “Ethafoam”
    - (6) Other sealants as approved in writing by Total Wall, Inc.
  - 2. Sealant must be bonded to trim accessories and not to the stucco unless a fillet bead is constructed as isolation joint.
  - 3. System materials must be dried prior to sealant installation.
  - 4. Color must be selected by the architect.
  - 5. Backer rod is not required when filling v-joint.
  - 6. Sealant is supplied and warranted by others. Other sealants may be eligible as approved in writing by Total Wall, Inc.
- J. Primer (optional)

When a primer ahead of the finish coat is specified, the primer must be Total Prime. Total prime is a water-based acrylic that may be applied by spray or roller application.
- K. Topcoat/Finish Coat

The stucco may be finished with any combination of the following:

  - 1. Premium Fibered Stucco Finish – This Portland cement-based stucco is available in grey or white and has the large fibers omitted for ease in finishing and texturing.
  - 2. Total Wall Acrylic Finish – This premixed and pre-textured material is available in any color and six different textures and may be trowel or spray applied. This option is recommended for best performance and appearance.

### 2.03. MIXING AND PREPARATION

- A. Total Wall Liquid Acrylic Additive or Total Wall Stucco Bond
  - 1. Slow speed mix for 30 seconds
- B. Total Wall Total One Coat (pre-sanded mix)
  - 1. Use a clean mortar mixer
  - 2. Charge materials to the mixer in the following ration
    - (1) Water - 1.75 gallons per 80 lbs. of dry powder
    - (2) Total Wall Liquid Acrylic Additive (optional) – replace 1-2 quarts of mix water per 80 lbs. of dry mix
    - (3) Total Wall Total One Coat – charge to mixer
  - 3. Mix for 3 minutes or until homogeneous
  - 4. Let stand for 5 – 10 minutes
  - 5. Mix again for 3 minutes, making sure to scrape any caked or unmixed material into the main mix. Add up to 2 additional quarts of water per 80 lbs. of dry mix. If mix is too wet, add dry Total One Coat dry powder to decrease slump.
  - 6. Begin using product immediately
- C. Total Wall Total One Coat Concentrate
  - 1. Use a clean mortar mixer
  - 2. Charge the materials in the following ratio:
    - (1) Water – 6.75 gallons
    - (2) Total Wall Liquid Acrylic Additive (optional) – replace 1 gallon of mix water
    - (3) Sand – 220 pounds dry weight
    - (4) Total Wall Total One Coat Concentrate – 80 lb. bag
  - 3. Mix for 3 minutes or until homogeneous
  - 4. Let stand 5 – 10 minutes
  - 5. Mix again for 3 minutes, making sure to scrape any caked or unmixed material into the main mix. Add up to 2 additional quarts of water to adjust consistency. If mix is too wet, add dry components in the proper ratios to decrease slump.
  - 6. Begin using product immediately
- D. Sealant
  - 1. Follow manufacturer instructions
- E. Topcoat/Finish coat
  - 1. Follow manufacturer instructions

## PART 3: EXECUTION

### 3.01. Installation

- A. The installation must be performed strictly in accordance with Total Wall, Inc.'s current literature and current job specifications.
- B. Lathing must be installed in accordance with job specifications, Total Wall, Inc.'s literature and ASTM C1063.
- C. Plastering must be conducted in accordance with job specifications, Total Wall, Inc. instructions and ASTM C926.

### 3.02. NEW CONSTRUCTION OR LARGE AREA RENOVATION

- A. Raw Masonry: including precast concrete, poured in place concrete, brick or CMU construction.
1. If the concrete is in sound condition with an absence of structural cracking, the lathing and moisture barrier components are optional and may be omitted. The stucco may be applied directly to the prepared substrate with use of a bonding agent on the prepared substrate.
    - (1) If lathing is not being used:
      - (a) The surface must be prepared to receive the stucco. Surface preparation requires the removal of any form release oils, resins or debris that may interfere with bonding.
      - (b) If the surface is very dense and smooth, mechanical etching may be required.
      - (c) A bonding agent consisting of Total Wall Stucco Bond must be applied to the surface of the wall at a rate of approximately 100- sq. ft per gallon immediately prior to stucco application.
      - (d) The bonding agent must be allowed to dry, and plaster application must begin within 24 hours.
    - (2) If lathing is being used:
      - (a) The use of a moisture barrier is optional.
      - (b) The substrate must receive a cleaning consisting of power washing.
      - (c) Etching the surface and the use of a bonding agent are not required.
    - (3) Lath and accessories must be installed as follows:
      - (a) The moisture barrier (if used)
        1. Must be the first layer of the substrate and may be combined with the lath (paper backed lath).
        2. If paper backed lath is used, the vertical and horizontal joints must be paper on paper and metal on metal.
        3. The lath must be installed in such a way so that a layer of moisture barrier rests against the substrate.
        4. The moisture barrier is lapped so water flows to the exterior.
      - (b) All stop bead and casing bead trim accessories
        1. Must be installed over the moisture barrier (if used)
      - (c) Lath
        1. Must be installed with the long dimension at right angles to the supports
        2. Must not be continuous through joints
        3. Must be lapped a minimum of 2".
        4. Edges must fully cover accessory flanges
        5. Where end laps occur between framing attachment members on non-screwable sheathing, the sheets of lath must be wire tied with 0.0475" galvanized, annealed steel wire.
      - (d) Joint Construction
        1. Must be performed in accordance with Sections 1.02 and 3.03.D and related sections of this specification and job documents.
- B. Coated, sealed, or deteriorated masonry
1. The substrate must receive a cleaning consisting of power washing. Etching the surface and the use of a bonding agent are not required.
  2. Use of a moisture barrier is optional.
  3. Lath and accessories must be installed as follows:
    - (1) The moisture barrier (if used)
      - (a) Must be the first layer over the substrate and may be combined with the lath paper (paper backed lath).

- (b) If paper backed lath is used, the vertical and horizontal joints must be paper on paper and metal on metal.
- (c) The lath must be installed in such a way so a layer of moisture barrier rests against the substrate.
- (d) The moisture barrier is lapped so water flows to the exterior.
- (2) All stop bead and casing bead trim accessories must be installed over the moisture barrier. (if used)
- 4. Lath
  - (1) Must be installed with the long dimension at right angles to the supports
  - (2) Must not be continuous through joints
  - (3) Sections must be lapped a minimum of 2"
  - (4) Where end laps occur between framing attachment members over non-screwable sheathing, the sheets of lath must be wire tied with 0.0475" galvanized, annealed steel wire.
- 5. The masonry fasteners and plates must be corrosion resistant materials and capable of 3/4" penetration into the substrate. The selected fastener assembly and installation method must be field tested for suitability and pullout strength prior to job startup.
- 6. Joint construction must be performed in accordance with Sections 1.02 and 3.03.D and related sections of this specification and job documents.
- C. Sheathing: Plywood, Oriented Strand Board (OSB) and Gypsum products
  - 1. The substrate must receive one or two layers of moisture barrier as follows:
    - (1) The moisture barrier must be lapped so water running in the wall will not encounter the substrate.
    - (2) If a drainage track is used, the moisture barrier must be lapped over the back of the drainage track. The drainage track must be carried over the framing onto the concrete foundation a minimum of 1". The system must be held above raw earth a minimum of 4".
    - (3) Overlap runs of moisture barrier of minimum of 2".
    - (4) Install moisture barrier to meet local code requirements, job specifications or as follows, whichever is greater:
      - (a) Two layers of 15 lb. Grade D paper
      - (b) One layer of 30 lb. Grade D 60-minute paper
      - (c) One layer of Tyvek HouseWrap
      - (d) One layer of Tyvek StuccoWrap
    - (5) Mechanically fasten the moisture barrier to the substrate with staples.
    - (6) Avoid creating creases, rips, or waves in the moisture barrier. Any damage to the moisture barrier must be repaired with the same material.
    - (7) When possible, back wrap the moisture barrier into raw window and door openings.
    - (8) Lap the outer layer of moisture barrier over the back of any flashing including head flashing.
    - (9) Where possible, carry the moisture barrier onto the masonry foundation by at least 1".
    - (10) Install proper ground casing bead, stop bead, and corner bead trim accessories by mechanically fastening with the proper corrosion resistant fastener and plate. If gypsum sheathing is the substrate, fastening will be into the studs.
    - (11) Mechanically fasten the lath to the substrate using the proper length corrosion resistant fastener and plate. The target fastener density is an average of 1 fastener per sq. ft. Screws and plates must be corrosion resistant and must penetrate not less than 5/8" into wood framing or screwable sheathing. Screws used to attach lath to metal framing must penetrate the metal framing member not less than 3/8". The screw head and plate must engage not less than 3 strands of lath and have a minimum diameter of 7/16".

2. Joint construction must be performed in accordance with Sections 1.02 and 3.03.D and related sections of this specification and job documents.

### 3.03. PRODUCT PREPARATION AND INSTALLATION

- A. Mixing - all materials requiring preparation must be labeled; accordingly, the contractor must follow all instructions.
- B. Weep base drainage track
  1. Must be installed at the lower termination below any framing and onto the masonry foundation by at least 1".
  2. The lower system termination must be kept above raw earth by at least 4".
- C. Moisture barrier.
  1. Runs of sheet applied moisture barrier must be lapped a minimum of 2" at horizontal joints and a minimum of 6" at vertical joints and installed so water running down the wall will flow toward the exterior.
  2. Moisture barrier must lap over the back vertical flange of drainage track or weep base.
  3. Moisture barrier must be wrapped over the top of parapets and continuous behind joints.
- D. System terminations
  1. At appropriate locations, the system must be terminated or interrupted with the proper PVC (or metal) accessory including control joint.
  2. Control joints must be constructed using a single prefabricated accessory or from two casing beads installed back to back with a separation of not less than 3/8".
    - (1) Where vertical and horizontal joints intersect, the vertical joint must be continuous, and the intersection must be sealed.
  3. Expansion joints
    - (1) Expansion joints must be constructed from 2 casing beads installed back to back with a separation of not less than 3/4" or with a single piece slip joint accessory.
    - (2) Expansion joints must be placed where there is a change in substrate construction and where expansion joints already exist in the wall base assembly.
  4. Isolation joints
    - (1) Isolation joints must be constructed with casing bead around the penetration.
  5. Control joints
    - (1) Must be installed in walls to limit panel sizes to 144 sq. ft.
    - (2) The maximum panel length or height must not exceed 18'.
    - (3) Panel dimensions must be limited to a 2.5:1 length to height dimension ration.
    - (4) Control joints must be installed at floor lines in wood frame construction.
- E. Installation of rigid reinforcement (if specified)
  1. Attach the metal lath using proper length and type of corrosion resistant fasteners and plates for the substrate.
  2. Overlap the lath with the trim accessory flanges a minimum of 2".
  3. Lap metal lath edges a minimum of 2".
  4. Keep the lath tight and even with an approximate average fastener density of 1 fastener and plate per sq. ft.
  5. Do not coincide lath joints with sheathing joints or with the corners of openings either horizontally or vertically.
- F. Application of Total Wall Total One Coat Mix –
  1. Using a trowel, apply the stucco mix to the wall surface. Use multiple passes or lifts to achieve the desired thickness.
  2. Apply stucco mix in accordance with ASTM C926 in either a 2-coat process or a 3-coat process.
  3. Remember to gauge thickness to allow for a final pass and texturing of the synthetic finish.

4. Keep a wet edge and work to natural stops such as corners or joints. A darby, slicker or rod can be used to assist in leveling the applied stucco.
  5. The scratch coat or initial pass of stucco application must be allowed to stiffen before the second pass or brown coat is applied. The time elapsed between passes or coats are variable and are influenced by weather conditions and manpower constraints.
- G. Application of Total Wall Premium Fibered Stucco Finish
1. May commence once the combination of the scratch and brown coat base is cured and relatively dry.
  2. Final stucco thickness must meet job specifications.
- H. Curing of coats
1. Depends upon environmental and job conditions
  2. Moist curing for 48 hours followed by an additional 24 hours drying time minimum is recommended for Total Wall Portland cement-based plaster materials, such as Total One Coat and Premium Fibered Stucco.
- I. Textured Synthetic Finish Coat and optional primer
1. Apply Total Wall 100% Acrylic Finish Coat in full accordance with manufacturer's specifications.
  2. The stucco must be dry and cured for a minimum of 72 hours before application of the textured finish coat.
- J. Sealant
1. Ensure sealant is installed at all required locations in accordance with sealant manufacturer specifications.

**3.04. PATCHING AND REPAIR INSTALLATIONS – SMALL OR ISOLATED AREA RESTORATION WORK USING TOTAL ONE COAT**

- A. Spalled or broken areas of plaster on concrete and concrete masonry
1. Remove all loose or broken plaster in the immediate area of the repair.
  2. Extend the radius of the repair area by an additional 2" by grinding away the top 1/4" of surface.
  3. Remove dust and debris by cleaning the repair area with water.
  4. Allow to dry.
  5. Measure and cut a piece of 4.3 oz Total Wall Hard Coat fiberglass mesh the size of the repair area including most of the 2" additional ground down radius.
  6. Apply Total Wall Liquid Acrylic Additive bonding agent to the repair surface and the additional radius by brush, roller, or spray.
  7. When the bonding agent begins to turn from milky to a bluish clear appearance, immediately trowel apply Total One Coat mix prepared with Total Wall Liquid Additive as an admixture.
  8. Apply in 1/2" lifts, permitting the plaster set up prior to the next lift. Scratch the surface of earlier lifts to provide mechanical key for the following lifts.
  9. Embed the Total Wall fiberglass Hard Coat mesh in the final lift and carry the plaster onto the ground down radius.
  10. Level, float and texture the plaster to mimic the surrounding area.
  11. Moist cure or damp fog the repair shortly after drying, at least once per day, for a minimum of 2 days.
  12. If a textured or smooth synthetic finish is to be used, float the plaster to permit the finish to simulate the surrounding texture and appearance.
- B. Spalled or broken areas of plaster over sheathing
1. Remove all loose and broken plaster, in the immediate area of the repair. If the sheathing or framing is damaged, remove enough of the cladding in a rectangular section to facilitate a repair of the area.
  2. Extend the radius of the repair by an additional 2" by grinding away the top 1/4" of surface of the surrounding adjacent plaster.

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3. Repair any damaged framing, including sole plates, king studs and other supporting members. Replace any damaged sheathing.
4. Replace any moisture barrier by fastening it to the sheathing with galvanized staples.
5. Properly shingle-lap the moisture barrier to keep incidental moisture on the outside surface.
6. Use weatherproofing tape to seal the new moisture barrier to existing runs of moisture barrier.
7. Measure and cut a section of 2.5 pound per sq. yard minimum weight, galvanized, self-furring lath in an area the size of the repair plus most of the additional 2" ground down in the perimeter.
8. Remove dust and debris by cleaning the repair area by wiping with a damp rag.
9. Mechanically fasten the metal lath to the repair area using corrosion resistant metal screw-type fasteners. If the sheathing is non-screwable, the fasteners will need to be secured to studs or other furring supports installed to receive the fasteners. Minimum fastener density must be 1 fastener per sq. ft of repair area. If the repair area abuts wall terminations or outside corners, use appropriate trim accessories to properly facilitate the termination or corner.
10. Trowel-apply Total One Coat mix prepared with Total Wall Liquid Additive as an admixture to repair area directly of the metal lath. Apply in 1/2" lifts, permitting the plaster set up prior to the next lift.
11. Scratch the surface of the first lift to provide mechanical key for the following brown coat.
12. Moist cure or damp fog the repair shortly after drying, at least once per day, for a minimum of 2 days.
13. If a textured or smooth synthetic finish is to be used, float the plaster to permit the finish to simulate the surrounding texture and appearance.

**3.05. JOB SITE CLEANUP**

- A. All excess Total Wall system materials must be removed from the job site by the applicator
- B. All surrounding areas where Total Wall, Inc. materials have been applied must be left free of debris and foreign substances.

**3.06. INSPECTION**

- A. The Total Wall, Inc. applicator, a representative of the property owner's team and a Total Wall representative must inspect the installation and prepare an inspection summary with a copy to Total Wall.
- B. If an independent inspector is used, a copy of the final report must be submitted to Total Wall, Inc.

END OF SPECIFICATION