

PORTLAND CEMENT-BASED PLASTER
GUIDE SPECIFICATION (with Metric analogs)
FOR HARD COAT FIBER REINFORCED STUCCO
FOR EXTERIOR APPLICATION

DIVISION 09220

1/2005

TOTAL WALL
TOTAL ONE COAT STUCCO

Note: These Specifications are also applicable to Total Wall Premium Fibered Stucco. Follow the Total Wall Premium Fibered Stucco mixing instructions available on the product data sheet and the bag label for that product.

PART I: 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
 - 2 Attachment 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 synthetic finish or elastomeric coating
- A. 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:
- Standards
- ASTM A526 Galvanized Sheet Steel
 - ASTM B69 Specification for Rolled Zinc
 - ASTM C91 Masonry Cement
 - ASTM C150 Specification for Portland cement.
 - ASTM C144 Aggregate for Masonry Mortar

ASTM C109 Compressive Strength
 ASTM C307 Tensile Strength
 ASTM C580 Flexural Strength
 ASTM D1784 Specification for rigid PVC
 ASTM C926 Application of Portland cement Plaster
 ASTM C920 Joint Sealants
 ASTM C1193 Use of Joint Sealants
 ASTM C897 Aggregate for job-mixed Portland Cement Plaster
 ASTM C778 Specification for Standard Sand
 ASTM C206 Finishing Hydrated Lime
 ASTM C207 Hydrated Lime for Masonry Mortar
 ASTM C219 Standard Terminology Relating to Hydraulic Cements
 ASTM C476 Specification for Grout for Masonry
 ASTM C595 Blended Hydraulic Cement
 ASTM C387 Specification for Dry Combined Materials (cements)
 ASTM C887 Dry Packaged Surface Bonding Cements
 ASTM C932 Surface Applied Bonding Agents
 ASTM C1116 Fiber Reinforced Concrete
 ASTM C1063 Installation of Lathing and Furring
 ASTM C1328 Specification for Plastic (stucco) Cements
 ASTM C847 Metal Lath
 ASTM C1002 Steel Screws for Attachment to Steel Studs
 ASTM C129 Specification for Non-Bearing CMU
 ASTM C90 Specification for Load Bearing CMU
 ASTM C55 Specification for Concrete Brick

D. Terms and Definitions

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, 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 a 15# 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 prior to application of the stucco.

3. OVER SHEATHINGS: Substrates such as plywood, 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 either Portland cement-based stucco, a textured synthetic acrylic finish, or an elastomeric coating.

1. Moisture Barrier

A water vapor permeable construction sheeting designed to function as a weather resistive barrier. Among acceptable moisture barrier materials are: Grade D building paper, Tyvek HouseWrap, and Tyvek StuccoWrap and RainDrop Housewrap.

2. Rigid Reinforcement

A minimum weight 2.5-pound per square yard galvanized self-furring diamond reinforcement lath. 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.

3. Fibered Reinforced Stucco Plaster

(Total Wall Total One Coat)

A dry material that is mixed with water and optional acrylic 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- 1/2". This material is also available in a concentrate, which requires the addition of sand during mixing at the job site.

4. Fibered Reinforced Stucco Plaster Finish (optional)

(Total Wall Premium Fibered Stucco Finish)

A dry material that is mixed with water and optional acrylic acrylic modifier at the job site. It has the large fibers removed so that it may 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.

5. Acrylic Modifier (Total Wall Liquid Acrylic Additive)

A liquid additive that replaces part of the mix water for a Portland cement plaster. It improves cure properties, increased strength and reduces shrinkage which also reduces 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.

6. Synthetic Acrylic Textured Finish Coat (recommended)

The Acrylic Finish is a premixed material that 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.

7. Accessories

Items such as weep bases, corner beads and casing beads and control joints that 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 shall use solid zinc or PVC accessories.

8. Sealant

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

1.02 DESIGN LIMITATIONS AND DETAILING

A. All details shall conform to TOTAL WALL recommendations and shall be consistent with the project requirements.

1. General

- a. The length and slope of inclined surfaces shall follow the guidelines listed below:
- 1 Minimum slope: 6" (152.4 mm) of rise in 12" (304.8 mm) of horizontal projection.
 - 2 Inclined surface shall not be used for areas defined by building codes.
 - 3 TOTAL WALL shall approve any use not meeting the above criteria in writing prior to installation.
 - 4 Raw aluminum metal such as aluminum flashing shall not be used adjacent to Portland cement based stucco.

2. Substrate System

- a. Shall be engineered to withstand all applicable loads, including live, dead, positive and suction wind, seismic, etc.

3. Substrates

- a. Application of the Hard Coat Stucco System shall be limited to 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
 - G. Exterior Gypsum Sheathing
 - H. Any other substrate as approved in writing by Total Wall

- b. The substrate shall not have any planar irregularities of greater than ¼ " (6.35 mm) in 10 lineal feet (3.04 M).

4. Joints

- a. Continuous expansion joints shall be installed at the following locations:
1. Where expansion joints occur in the substrate.
 2. Where building expansion joints occur.
 3. Where the system abuts other materials.
 4. Where the substrate changes.

Expansion and contraction of the system & adjacent materials shall 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 shall be constructed using

back to back

casing bead with a minimum separation of ¾ " to receive backer rod and sealant.

- b. Continuous control joints shall 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 shall be installed at the following locations:
1. Where significant structural movements occur, i.e.:

- (a) Changes in roofline.
- (b) To limit panel sizes to 144 sf.
- (c) To Limit panel shapes to length to width ratio 2.5:1.
- (d) At stress points such as door and window corners.
- (e) At floor lines in wood frame construction unless engineered lumber is employed
- 2. Changes in building shape and structural system.
- c. Isolation joints are required around all wall penetrations, including doors and windows.
- 5. Details
 - a. TOTAL WALL's latest published information shall be followed for standard detail treatments.
 - b. Non-standard detail treatments shall follow the recommendations of TOTAL WALL.
- 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 The contractor shall have a minimum of two years experience in the wall construction trades, be qualified by TOTAL WALL for application of Total Wall 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 shall provide the equipment, manpower and supervision necessary to install the system in compliance the project plans and specifications.

1.04 SUBMITTALS

- A TOTAL WALL's literature, including application instructions and specifications.
- 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 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 shall be stored at 40 F (4.4 C) or above and protected from freezing. Protect from exposure to direct sunlight during storage and temperatures exceeding 110 F.

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 the 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) should be maintained twenty-four 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 that 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 2 hours after application. (Sealant and finish may require different protection parameters.)

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 dip edges shall 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 Warranty application for warranty form shall be completed prior to completion of the installation.
- B. Upon completion of the installation in accordance with specifications and payment of monies due TOTAL WALL, TOTAL WALL shall issue a project specific 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 shall be obtained from:
Total Wall, PO Box 8098, Madison, WI 53708
[888-702-9915] or a Total Wall approved supplier.
- B. An optional elastomeric topcoat may be obtained from Total Wall or may be supplied by others.

2.02 PORTLAND CEMENT PLASTER SYSTEM COMPONENTS

- A The rigid reinforcement shall be minimum 2.5 pound galvanized, self-furring diamond lath or a paper-backed version of this grade lath. Ultra-Lath, a PVC lathing supplied by Plastic Components is an acceptable alternate.
- B The moisture barrier shall be minimum Grade D building paper, Tyvek HouseWrap, Tyvek StuccoWrap, RainDrop House wrap or equal complying with ASTM E1677 for Type I Air Retarders and meeting 15-minute water resistance IAW ASTM E331 at 27 Pa pressure differential.
- C The fasteners shall be exterior grade climate protected metal screws or pins of proper length and design for the substrate. The fastening system should be field tested on the substrate to determine the proper fastener length and to confirm suitability of the fastening system. The washers shall be 7/16" minimum diameter exterior grade metal or plastic plates.
- D The Trim Accessories shall be solid zinc metal, galvanized metal or UV resistant PVC as manufactured by Vinyl Corporation (800-648-4695), Plastic Components (800-327-7077) or other approved source. Galvanized metal accessories shall 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 shall 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 requires the addition of sand during mixing.
- F The Acrylic Admixture and Bonding Agent shall be Total Wall Liquid Acrylic Additive. The Acrylic Admixture replaces a portion of the mix water for Total Wall Total One Coat. Total Wall Liquid acrylic Additive may also be used as a surface applied bonding agent when such an agent is required.
- G Sand shall be good quality silica; clean and free of debris and contaminants such as iron. The sand shall meet ASTM C897 or ASTM C144 guidelines as applicable. Recommended sand size is 45-75mesh.
- H Water - Shall be clear, potable and free of foreign matter.
- I Sealant Systems:
1. Shall be one of the following:
 - a. Tremco, Inc.:
 1. Sealant: "Dymeric"
 2. Prime: Use manufacturer's recommended Primer.
 3. Backer Rod: Dow "Ethafoam"
 4. Bond Breaker: 3M#226, 481, 710
 - b. Pecora Corporation:
 1. Sealant: "890"
 2. Prime: Use manufacturer's recommended Primer.
 3. Backer Rod: Dow "Ethafoam"
 4. Bond Breakers: 3M #480 or Valley Industrial Products #90
 - c. Dow Corporation:
 1. Dow 790 series sealants (790, 791, 795)
 2. Prime: Use manufacturer's recommended Primer.
 3. Backer Rod: Dow "Ethafoam"
 - d. Sonneborne Corporation:
 1. Sonnelastic 150 and 150LM sealants
 2. Prime: Use manufacturer's recommended Primer.
 3. Backer Rod: Dow "Ethafoam"
 - e. Sika Corporation:
 1. Sikaflex 15LM sealants
 2. Prime: Use manufacturer's recommended Primer.
 3. Backer Rod: Dow "Ethafoam"
 - f. Total Wall, Inc.:
 1. Total Wall #11 Sealant
 2. Backer Rod: Dow "Ethafoam"
 - 2 Sealant shall be bonded to trim accessories and not to the stucco unless a fillet bead is constructed as an isolation joint. System materials must be dry prior to sealant application.
 - 1 Color shall be selected by the architect.
 - 2 Backer rod is not required when filling v-joint.
 - 3 Sealant is supplied and warranted by others. Other sealants may be eligible as approved in writing by Total Wall.

- J. Topcoat / finish coat - - The stucco may be finished with any combination of the following:
- A 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.
 - B **Total Wall Acrylic Finish** – this premixed and pre-textured material is available in any color and six different textures and may be trowel applied or spray applied. This option is recommended for best performance and appearance.
 - C Elastomeric coating – this premixed roller-applied coating is available from Total Wall or may be supplied by others.

2.03 MIXING AND PREPARATION

- A. TOTAL WALL Liquid Acrylic Additive
 - 1. No mixing is required for this product.
- B. TOTAL WALL Total One Coat (pre-sanded mix)
 - 1. Use a clean mortar mixer.
 Charge materials to the mixer in the following ratio:
 Water – 1.75 gallon per 80 lbs of dry powder
 Total Wall Liquid acrylic Additive (optional) – replace 1-2 quarts of mix water per 80 lbs of dry mix
 Total Wall Total One Coat – charge to mixer
 Mix for 3 minutes or until homogeneous. Turn off mixer for 5 – 10 minutes. Scrape any caked or unmixed material into the main mix.
 - 2. Turn on mixer for 3 minutes. 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.
 - 3. Begin using product immediately.
- C. TOTAL WALL Total One Coat **Concentrate**
 - 1. Use a clean mortar mixer.
 Charge materials to the mixer in the following ratio:
 Water – 6.75 gallons
 Total Wall Liquid Acrylic Additive (optional) – replace 1 gallon of mix water.
 Sand – 220 pounds dry weight
 Total Wall Total One Coat Concentrate – 1 - 80 lb bag
 Mix for 3 minutes or until homogeneous. Turn off mixer for 5 – 10 minutes. Scrape any caked or unmixed material into the main mix.
 - 2. Turn on mixer for 3 minutes. 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.
 - 3. 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 shall be performed strictly in accordance with TOTAL WALL current literature and current job specifications. Lathing shall be installed in accordance with job specifications, Total Wall literature and ASTM C1063. Plastering shall be conducted in accordance with job specifications, Total Wall 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 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.
 - a. If lathing is not being used: 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 bond. In addition, if the surface is very dense and smooth, mechanical etching may be required. A bonding agent consisting of Total Wall Liquid Acrylic Additive shall be applied to the surface of the wall at a rate of approximately 100 square feet per gallon immediately prior to stucco application. The milky color in the bonding shall begin to become clear at the time of stucco application (about 10 – 15 minutes after application of the bonding agent).
 - b. If lathing is being used: The use of a moisture barrier is optional. The substrate shall receive a cleaning consisting of power washing. Etching the surface and the use of a bonding agent are not required.
 - c. Lath and accessories shall be installed as follows:
 1. The moisture barrier (if used) shall be the first layer over the substrate and may be a combined with the lath (paper-backed lath). If paper-backed lath is used, the vertical and horizontal joints shall be paper on paper and metal on metal. The lath shall be installed in such a way so that a layer of moisture barrier rests against the substrate. The moisture barrier is lapped so that water flows to the exterior.
 2. All stop bead and casing bead trim accessories shall be installed over the moisture barrier (if used).
 3. Lath shall be installed with the long dimension at right angles to the supports.
 4. Lath shall not be continuous through joints.
 5. Lath sections shall be lapped a minimum of 2 inches. Lath edges shall fully cover accessory flanges. Where end laps occur between framing attachment members on non-screwable sheathing, the sheets of lath

shall be wire tied with 0.0475 inch galvanized, annealed steel wire.

- 6 Joint Construction shall 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 shall 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 shall be installed as follows:
 - a. The moisture barrier (if used) shall be the first layer over the substrate and may be a combined with the lath (paper-backed lath). If paper-backed lath is used, the vertical and horizontal joints shall be paper on paper and metal on metal. The lath shall be installed in such a way so that a layer of moisture barrier rests against the substrate. The moisture barrier is lapped so that water flows to the exterior.
 - b. All stop bead and casing bead trim accessories shall be installed over the moisture barrier (if used).
- 4 Lath shall be installed with the long dimension at right angles to the supports.
- 5 Lath shall not be continuous through joints.
- 6 Lath sections shall be lapped a minimum of 2 inches. Lath edges shall fully cover accessory flanges. Where end laps occur between framing attachment members over non-screwable sheathing, the sheets of lath shall be wire tied with 0.0475 inch galvanized, annealed steel wire.
- 7 The masonry fasteners and plates shall be corrosion resistant materials and capable of 3/4 inch penetration into the substrate. The selected fastener assembly and installation method must be field tested for suitability and pullout strength prior to job startup.
- 8 Joint Construction shall 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, and Gypsum products.

1. The substrate shall receive a layer of moisture barrier as follows:
 - A The moisture barrier shall be lapped such that water running the wall will not come in contact with the substrate.
 - B If a drainage track is used, the moisture barrier shall be lapped over the back of the drainage track. The drainage track shall be carried over the framing onto the concrete foundation a minimum of one inch. The system shall be held above raw earth a minimum of four inches.
 - C Overlap runs of moisture barrier a minimum of two inches.
 - D Install moisture barrier to meet local code requirements, job specifications or as follows, whichever is greater:
 - i. two layers of 15 # Grade D paper, or
 - ii. one layer of 30 lb Grade D 60-minute paper, or
 - iii. one layer of Tyvek HouseWrap, or
 - iv. one layer of Tyvek StuccoWrap.
 - E Mechanically fasten the moisture barrier to the substrate with staples.

- F Avoid creating creases, rips or waves in the moisture barrier. Any damage to the moisture barrier should be repaired with the same material.
 - G When possible, backwrap the moisture barrier into raw window and door openings.
 - H Lap the outer layer of moisture barrier over the back of any flashing including head flashing.
 - I Where possible, carry the moisture barrier onto the masonry foundation by at least one inch.
 - J 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.
 - K Mechanically fasten the lath to the substrate using the proper length corrosion resistant fastener and plate. The target fastener density is an average one fastener per square foot. Screws and plates shall be corrosion resistant and shall penetrate not less than 5/8 inch into wood framing member or screwable sheathing. Screws used to attach lath to metal framing shall penetrate the metal framing member not less than 3/8 inch. The screw head and plate shall engage not less than three strands of lath and have a minimum diameter of 7/16 inch.
2. Joint Construction shall 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 shall be labeled accordingly; the contractor shall follow all instructions.
- B. Weep base or drainage track, if specified, shall be installed at the lower termination below any framing and onto the masonry foundation by at least one inch. The lower system termination shall be kept above raw earth by at least four inches.
- C. If specified, install a layer (or layers) of moisture barrier. Runs of moisture barrier shall lapped a minimum of two inches at horizontal joints and a minimum of six inches at vertical joints and installed so that water running down the wall will flow toward the exterior. Moisture barrier shall lap over the back vertical flange of drainage track or weep base. Moisture barrier shall be wrapped over the top of parapets and continuous behind joints.
- D. System Terminations - At appropriate locations, the system shall be terminated or interrupted with the proper PVC (or metal) accessory including control joint. Control joints shall 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 inch. Where vertical and horizontal joints intersect, the vertical joint shall be continuous and the intersection shall be sealed. Expansion joints shall be constructed from two casing beads installed back to back with a separation of not less than 3/4 inch. Isolation joints shall be constructed with casing bead around the penetration. Control joints shall be installed in walls to limit panel sizes to 144 square feet. The maximum panel length or height shall not exceed 18 feet. Panel dimensions shall be limited to a 2 1/2 to 1 length to height dimension ratio. Control joints shall be installed at floor lines in wood frame construction. Expansion joints shall be placed where there is a change in substrate construction and where expansion joints already exist in the wall base assembly.
- E Installation of Rigid Reinforcement (if specified)

Attach the metal lath (or paper-backed metal lath) using proper length and type corrosion resistant fasteners and plates for the substrate. Overlap the lath with the trim accessory flanges a minimum of two inches. If paper-backed lath is used, orient the lath to properly lap the moisture barrier edges. Avoid rough handling of paper-backed lath, as this will damage the moisture barrier. Lap metal lath edges a minimum of two inches. Keep the lath tight and even with an approximate average fastener density of 1 fastener and plate per square foot. 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
Using a trowel, apply the stucco mix to the wall surface. Use multiple passes or lifts to achieve the desired thickness. Apply stucco mix in accordance with ASTM C926 in either a two-coat process or a three-coat process. Remember to gauge thickness to allow for a 1/8 inch final pass and texturing of the stucco finish coat (the finish coat has no large fibers). 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. The scratch coat or initial pass of stucco application should be allowed to stiffen before the second pass or brown coat is applied. The time elapsed between passes or coats is variable and is influenced by weather conditions and manpower constraints.
- G Application of Total Wall Premium Fibered Stucco Finish mix may commence once the combination of the scratch and brown coat base is firm and relatively dry. Final stucco thickness should meet job specifications.
- H Curing of coats will depend upon environmental conditions and job conditions. Moist curing or fog curing will be used if sufficient moisture is not being maintained in the stucco mix due to weather and job conditions. Moist curing is not required if Total Wall Liquid Acrylic Additive is being used in the stucco mix.
- I Textured Synthetic Finish Coat (recommended).
Apply Total Wall 100% Acrylic Finish Coat in full accordance with manufacturer's specifications. The stucco must be dry and cured for a minimum of 24 hours before application of the textured finish coat.
- J Elastomeric as a primer or topcoat (if specified)
Apply elastomeric topcoat in full accordance with manufacturer's specifications. Elastomeric may be supplied by Total Wall or by others.
- K Sealant
Insure that 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. Allow to dry.
 4. Measure and cut a piece of 4.5-ounce Total Wall Hard Coat fiberglass mesh the size of the repair area including most of the 2" additional ground down radius.
 5. Apply Total Wall Liquid Acrylic Additive bonding agent to the repair surface and the additional radius by brush, roller or spray.

6. 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. Apply in ½” 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.
 7. Embed the Total Wall fiberglass Hard Coat mesh in the final lift and carry the plaster onto the ground down radius. Level, float and texture the plaster to mimic the surrounding area. Moist cure or damp fog the repair shortly after drying, at least once per day, for a minimum of two days. 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 area by an additional 2” by grinding away the top ¼” of surface of the surrounding adjacent plaster.
 3. Repair any damaged framing, including sole plates, king studs and other supporting members that may be damaged. Replace any sheathing that may be damaged.
 4. Replace any moisture barrier by fastening it to the sheathing with galvanized staples. Properly shingle-lap the moisture barrier to keep incidental moisture on the outside surface. Use weatherproofing tape to seal the new moisture barrier to existing runs of moisture barrier.
 5. Measure and cut a section of 2.5 pound per square 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.
 6. Remove dust and debris by cleaning the repair area by wiping with a damp rag.
 7. Mechanically fasten the 2.5 pound 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 should be one fastener per square foot of repair area. If the repair area abuts wall terminations or outside corners, use appropriate trim accessories to properly facilitate the termination or corner.
 8. Trowel apply Total One Coat mix prepared with Total Wall Liquid Additive as an admixture to repair area directly over the metal lath. Apply in ½” lifts, permitting the plaster set up prior to the next lift. Scratch the surface of the first lift to provide mechanical key for the following brown coat. Moist cure or damp fog the repair shortly after drying, at least once per day, for a minimum of two days.
 9. 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 T -WALL system materials shall be removed from the job site by the applicator.
- B. All surrounding areas where T -WALL materials have been applied shall be left free of debris and foreign substances.

3.06 INSPECTION

A Total Wall Representative will visit the job and inspect the application a minimum of two times. The first visit will be prior to or during the surface preparation / trim accessory and lath installation phase. The second visit will be during the stucco mixing and plastering phase or at job completion.

END OF SPECIFICATION