



- A C 25 – Test Methods for Chemical Analysis of Limestone, Quicklime and Hydrated Lime.
- B C 926 – Application of Portland Cement-Based Plaster.
- C C 897 – Aggregate for Job-Mixed Portland Cement-Based Plaster.
- D C150 – Portland Cement.
- E C91 – Masonry Cement
- F C109 – Test Method for Compressive Strength of Hydraulic Cement Mortars.
- G C 206 –Finishing Hydrated Lime.
- H C 1177 - Glass Mat Gypsum for Use as Sheathing
- I C 1278 Fiber-Reinforced Gypsum Panel

B. Portland Cement Association

- a. PCA – Portland cement Plaster (Stucco) Manual.

#### 1.04 DESIGN REQUIREMENTS

A Structural (wind and axial loads)

1. Design for maximum allowable deflection, normal to the plane of the wall, of  $L/360$
2. Design for wind load in conformance with code requirements.

B Moisture Control

1. Prevent the accumulation of water into or behind the stucco, either by condensation or leakage into the wall construction, in the design and detailing of the wall assembly.
  - a. Provide corrosion resistant flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall.
  - b. Air Leakage Prevention—prevent excess air leakage in the design and detailing of the wall assembly. Provide continuity between air barrier components in the wall assembly.

- c. Vapor Diffusion and Condensation—perform a dew point analysis of the wall assembly to determine the potential for accumulation of moisture in the wall assembly as a result of water vapor diffusion and condensation. Adjust insulation thickness and/or other wall assembly components accordingly to minimize the risk of condensation.
  - d. Waterproofing/Air Barrier over sheathing, concrete and masonry.
  - e. At expansion joints, back joints with barrier membrane.
- C. Grade Condition
- 1. Do not specify the stucco for use below grade or on surfaces subject to continuous or intermittent water immersion or hydrostatic pressure. Provide minimum 4 inch (100 mm) clearance above earth grade, minimum 2 inch (51 mm) clearance above finished grade (pavers/sidewalk). Provide increased clearance in freeze/thaw climate zones.
- D. Sloped surfaces, including Foam Trim and Projecting Architectural Features attached to stucco.
- 1. Avoid the use of stucco on build-outs or weather exposed sloped and horizontal surfaces (refer to 2 and 3 below).
  - 2. Build out trim and projecting architectural features from the stucco wall surface with code compliant EPS foam. All foam trim and projecting architectural features must have a minimum 1:2 [27°] slope along their top surface. All foam horizontal reveals must have a minimum 1:2 [27°] slope along their bottom surface. Increase slope for northern climates to prevent accumulation of ice/snow and water on surface. Where trim/feature or bottom surface of reveal projects more than 2 inches (51 mm) from the face of the wall plane, protect the top surface with waterproof base coat. Avoid the use of trim and features that exceed the maximum allowable thickness of EPS permitted by code (typically 4 inches [100 mm]) unless approved by the code official. Periodic inspections and increased maintenance may be required to maintain surface integrity of finishes on weather exposed sloped surfaces. Limit projecting features to easily accessible areas and limit total area to facilitate maintenance and minimize maintenance burden.
  - 3. Do not use EPS foam on weather exposed projecting ledges, sills, or other projecting features unless supported by framing or other structural support and protected with metal coping or flashing.

## E. Joints

1. Provide two piece expansion joints in the stucco system where building movement is anticipated: at joints in the substrate or supporting construction, where the system is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, at columns and cantilevered areas. Provide one piece expansion/control joints every 144 ft<sup>2</sup> (13 m<sup>2</sup>)\*. Do not exceed length to width ratio of 2-1/2:1 in expansion joint layout and do not exceed more than 18 feet (5.5 m) in any direction without an expansion joint. Cut and wire tie lath to the expansion/control joint accessory so lath is discontinuous beneath the accessory. At expansion joints, back the joint with barrier membrane.

*\*Note: the requirement for a one piece expansion/control joint every 144 ft<sup>2</sup> (13 m<sup>2</sup>) may be waived when two-piece expansion joints exist every 144 ft<sup>2</sup> (13 m<sup>2</sup>).*

2. Provide one piece expansion/control joints at through wall penetrations, for example, above and below doors or windows.

*Note: the requirement for one piece expansion/control joints at through wall penetrations may be waived in the following case: when another type of expansion joint is provided in lieu of the one piece expansion/control joint, for example, back-to-back casing beads.*

3. Provide minimum 3/8 inch (9 mm) wide joints where the system abuts windows, doors and other through wall penetrations.
4. Provide appropriate accessories at stucco terminations and joints.
5. Provide appropriate sealant at stucco terminations.
6. Indicate location of joints, accessories and accessory type on architectural drawings.

## F. Fire Protection

1. Do not use foam trim in excess of 4 inches (100 mm) thick unless approved by the code official.
2. Refer to the applicable code compliance report for other limitations and fire-resistive assemblies that may apply.

## G. Stucco Thickness: General

1. Application to Metal Plaster Bases:

- a. Woven wire fabric lath: stucco thickness shall be 3/4 inch (19 mm) applied in two coats
  - b. Galvanized diamond mesh metal lath: Minimum 2.5 lb/yd<sup>2</sup> (1.4 kg/m<sup>2</sup>): stucco thickness shall be 3/4 to 7/8 inch (19 to 22 mm) applied in two coats.
2. Thickness shall be uniform throughout the wall area.

#### **1.05 SUBMITTALS**

- A Certification of compliance of materials with product specifications.
- B Manufacturer's written specifications, proportion mixes, and installation instructions for factory-prepared finish materials.
- C Evidence of applicator's experience including project identification with names of Owner and Architect/Engineer.
- D Samples for approval as directed by architect or owner.

#### **1.06 QUALITY ASSURANCE**

- A Manufacturer requirements
  1. Perform work in accordance with manufacturer's instructions.
- B Contractor requirements
  1. Insured and engaged in application of Portland cement stucco for a minimum of three (3) years.
  2. Knowledgeable in the proper use and handling of eco stucco™ materials.
  3. Employ skilled mechanics who are experienced and knowledgeable in waterproofing/air barrier, lathing and furring, Portland cement stucco application, and familiar with the requirements of the specified work.
  4. Successful completion of minimum of three (3) projects of similar size and complexity to the specified project.
  5. Provide the proper equipment, manpower and supervision on the job site to install the system in compliance the project plans and specifications.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A Deliver manufactured materials in original packages or containers, fully identified with manufacturer's labels intact and legible.
- B Inspect materials upon delivery and immediately report to Architect any damaged or defective materials.
- C Store materials in a sheltered area with minimum ambient temperature of 45° F (7° C).

## 1.08 PROJECT CONDITIONS

*(Weather conditions affect application, drying time and curing requirements. Hot or dry conditions limit working time and accelerate drying and may require adjustments in application, scheduling and curing to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing.)*

- A Maintain ambient and surface temperatures above 40°F (4°C) during application and drying period of waterproofing/air barrier. Maintain ambient and surface temperatures above 40°F (4°C) during application and for 24 hours after set of stucco.
- B Prevent uneven or excessive evaporation of moisture from stucco during hot, dry or windy weather. For installation under any of these conditions provide special measures to properly moist cure the stucco.
- C Provide protection of surrounding areas and adjacent surfaces from application of materials.
- D Prevent excess interior humidity (for example, caused by the use of temporary interior propane heaters) during and after construction.

## 1.09 PROJECT COORDINATION

- A Protect [sheathing] [straw bale] [adobe/cob] substrate from climatic conditions to prevent weather damage until the installation of the waterproofing/air barrier.
- B Provide protection of the waterproofing/air barrier installation with stucco no later than 60 days after installation.
- C Commence the stucco installation after completion of all floor, roof construction and other construction that imposes dead loads on the walls to prevent excessive deflection (and potential cracking) of the stucco.
- D Sequence interior work such as drywall installation prior to stucco installation to prevent stud distortion (and potential cracking) of the stucco.
- E Provide site grading such that the stucco terminates above earth grade minimum 4 inches (100 mm) and above finished grade (pavers/sidewalk) minimum 2 inches (51 mm). Provide increased clearance in freeze/thaw climate zones.
- F Coordinate installation of foundation waterproofing, roofing membrane, windows, doors and other wall penetrations to provide a continuous air barrier. Provide protection of rough openings before installing windows, doors, and other penetrations through the wall and provide sill flashing. Coordinate installation of waterproofing/air barrier components with

window and door installation to provide weather proofing of the structure and to prevent moisture infiltration and excess air infiltration.

- G Install window and door head flashing immediately after windows and doors are installed.
- H Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.
- I Install copings and sealant immediately after installation of the stucco and when finish coatings are dry.
- J Attach penetrations through stucco to structural support and provide air tight and water tight seals at penetrations.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A Mediterranean Colors, LLC
- B Substitutions: To insure the quality of each system is maintained, no substitute should be permitted.

### **2.02 LATH** *(supplied by others)* Select one:

- A Minimum No. 17 gauge 1.5 inch (38 mm) self-furred galvanized steel woven wire fabric in compliance with ASTM C 1032.
- B Minimum 2.5 lb./yd<sup>2</sup> (1.4 kg/m<sup>2</sup>) self-furred galvanized steel diamond mesh metal lath in compliance with ASTM C 847

*(Metal lath is susceptible to corrosion in coastal environments. Provide weather protection to prevent moisture entry into wall construction.)*

### **2.03 MECHANICAL FASTENERS** *(supplied by others)*

- A Appropriate non-corroding fasteners, depending on the type framing.
  1. Wood Framing--minimum 11 gauge, 7/16 inch (11 mm) diameter head galvanized roofing nails with minimum ¾ inch (19mm) penetration into studs or minimum #8 Type S wafer head fully threaded corrosion resistant screws with minimum ¾ inch (19 mm) penetration into studs.
  2. Steel Framing—minimum #8 Type S or S-12 wafer head fully threaded corrosion resistant screws with minimum ⅜ inch (10 mm) penetration into studs.

*(Pull-out or withdrawal capacity of the selected fastener must be verified with respect to anticipated wind load, desired safety factor and building code requirements. Consult applicable code compliance report for specific assemblies and fastening schedules.)*

- B Tie Wire—18 gauge galvanized and annealed low-carbon steel in compliance with ASTM A 641 with Class I coating.

#### **2.04 ACCESSORIES** *(supplied by others, select one type)*

- A Weep screed, casing bead, corner bead, corner lath, expansion and control joint accessories. All accessories shall meet the requirements of ASTM C 1063 and its referenced documents:
- B PVC plastic in compliance with ASTM D 1784, cell classification 13244C.
- C Zinc in compliance with ASTM B 69.
- D Galvanized metal in compliance with ASTM A 653 with G60 coating.

*(All accessories shall have perforated or expanded flanges and shall be designed with grounds for the specified thickness of stucco.)*

#### **2.05 JOB-MIX MATERIALS**

- A Water—clean and potable.
- B Clean, well graded sand free of deleterious materials in compliance with ASTM C 897 or ASTM C 144.

#### **2.06 STUCCO** *(supplied by others) (select one)*

- A Common Scratch and Brown Coat Stucco — job-site proportioned, Portland cement based stucco for trowel or pump application, field mixed with graded sand (ASTM C 897 or C 144), and water.
- B Proprietary Scratch and Brown Coat Polymer Modified Stucco - factory proportioned, fiber reinforced Portland cement based stucco, field mixed with graded sand (ASTM C 897 or C 144) and water.

#### **2.07 BASE COAT**

- A eco stucco™ UNILIME – Lime base coat capable of achieving nominal 1/8 inch (3 mm) thickness in one pass.

*(UNILIME is recommended to provide uniform substrate absorption and finish color, to improve adhesion, and to retard efflorescence).*

*(UNILIME may be mixed with pigments and specified as a single finish coat application with a nominal thickness of 1/8")*

## 2.08 REINFORCING MESH

- A eco stucco™ GMESH-nominal 260 g/m<sup>2</sup>, symmetrical, interlaced open-weave glass fiber fabric made with alkaline resistant coating for compatibility with eco stucco™ materials.
- B eco stucco™ COMBO 90 nominal 160 g/m<sup>2</sup> – woven glass fiber mesh factory-bended over 90 degree PVC bead designed to reinforce outside corners.
- C eco stucco™ ARROW 45- nominal 260 g/m<sup>2</sup> - Woven factory pre-cut 45 degree angle designed to provide reinforcement at corners of windows and doors

## 2.09 FINISH COAT *(select one)*

- A eco stucco™ TRADILIME –job-mix lime plaster – 1/8” -1/4” nominal thickness The grade of the sand contributes to final appearance. [limestone] [sandstone] [travertine]
- B eco stucco™ MURALIME – ready-mix lime paint – Applied in a two-coat brush application.
- C eco stucco™ MINERA – ready-mix lime plaster – 1/8” nominal thickness. [fossil] [marble] [sandstone]
- D eco stucco TRADILIME ST – ready-mix lime plaster – 1/8” nominal thickness. [travertine] [limestone] [sandstone]
- E eco stucco TRADILIME SF ready-mix lime plaster – 1/8” nominal thickness. [limestone] [sandstone] [fossil]

## 2.10 COLOR *(as shown on drawings)*

- A Standard Color: [ ] as selected by architect.
- B Custom Color: [ ] as selected by architect.

## 2.11 MIXING

- A UNILIME: Ready-mix lime base plaster - mix ratio with water: 7 to 8 quarts of water per 55 pound (25 kg) bag of UNILIME. Mix half a bag at a time by pouring 3 to 4 quarts of clean potable water into a clean mixing pail. Add approximately half a bag of UNILIME. Mix to a uniform consistency and allow setting for approximately 15 minutes. Adjust mix if necessary with additional UNILIME or water and remix to a uniform trowel consistency.

- B TRADILIME: Job-mix lime plaster – 33 lb. bag:
1. 16 Mesh Sand: Mix 1 part lime to 1 part by volume of sand and 1 part water to 5 parts by volume of lime. Let set 15 minutes and briefly remix before use.
  2. 20 Mesh Sand: Mix 1 part lime to 1.5 parts by volume of sand and 1 part water to 5 parts by volume of lime. Let set 15 minutes and briefly remix before use.
  3. 30 Mesh Sand: Mix 1 part lime to 2 parts by volume of sand and 1 part water to 5 parts by volume of lime. Let set 15 minutes and briefly remix before use.
- C MURALIME: Ready-mix lime paint – Mix 1 part water to 2 parts by volume of lime or 4 to 5 quarts of water per 22 lb. pail. Let set for 15 minutes and remix with 4 to 8 quarts of water depending on desired effects.
- D MINERA – Ready-mix lime plaster – Mix 1 part water to 5 parts by volume of lime or 5 to 6 quarts of water for 55 lb. bag. Let set for 15 minutes and remix briefly before use.
- E TRADILIME ST/SF: Ready-mix lime plaster – Mix 1 part water to 5 parts by volume of lime or 4 to 5 quarts of water per 44 lb. pail. Let set for 15 minutes and remix briefly before use.

*Note: Dry mix for 5 minutes after all materials (including color) are in the mixer. Add the required water to achieve a uniform mix of workable consistency. Keep mix ratio consistent from batch to batch and mix each batch separately. Use only the minimum amount of water necessary for a workable mix. Retemper as needed. Use of excess water is detrimental to performance. Mix only as much material as can readily be used.*

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A Inspect surfaces for:
1. Contamination—algae, chalkiness, dirt, dust, efflorescence, fungus, grease, laitance, mildew or other foreign substances.
  2. Surface absorption and chalkiness.
  3. Cracks—measure crack width and record location of cracks.
  4. Damage and deterioration.
  5. Moisture damage—record any areas of moisture damage.

- A. Inspect sheathing application for compliance with applicable requirement:
  - 1. Exterior Gypsum Sheathing—GA-253
  - 2. Glass Mat Faced Gypsum Sheathing—Refer to manufacturer's instructions.
  - 3. Exterior Grade and Exposure 1 wood based sheathing—APA Engineered Wood Association E 30.

*Note: wood-based sheathing must be gapped 1/8 inch (3mm) at edge and end joints to prevent cracking in the stucco.*

- B. Report deviations from the requirements of project specifications or other conditions that might adversely affect the stucco installation to the General Contractor.

### 3.02 PREPARATION

#### A Concrete (Cast-in-Place)

- 1. Provide a surface that is slightly scarified, water absorbent, straight and true to line and plane. Remove form ties and trim projecting concrete so it is even with the plane of the wall. Remove form release agents by washing with a trisodium phosphate detergent and rinsing with clean water. Establish surface profile by sandblasting, water-blasting, wire brushing, chipping or other appropriate means. Remove all dust, dirt, grease, laitance or other bond inhibiting material. Pre-moisten absorbent surfaces with water prior to placement of stucco.

#### B Concrete Masonry Units

- 1. Remove projecting joint mortar so it is even with the plane of the wall. Remove surface contaminants such as efflorescence, existing paint or any other bond inhibiting material by sandblasting, water blasting, wire brushing, chipping or other adequate means. Pre-moisten the surface with water just prior to placement of stucco, or apply one uniform coat of bonding agent by brush or roller.

*(Note: bonding agent is recommended over CMU surfaces to minimize the risk of mortar joints telegraphing through the finished wall surface. For A and B above, where bond inhibiting material cannot be removed, where concrete or masonry surface irregularities are such that more than 1/2 inch (13 mm) of stucco must be applied, or where the surface is too dense or non-absorbent to receive the stucco, install furred or self-furred lath.*

- C Gypsum Sheathing in compliance with ASTM C1396, Glass Mat Faced Gypsum Sheathing in compliance with ASTM C 1177, and Exterior or Exposure 1 wood-based sheathing (plywood and OSB [Oriented Strand Board]):

1. Verify installation of sheathing in compliance with applicable requirement.
2. Protect the substrate with a moisture barrier as required by the applicable code and install lath and accessories.

*(Note: wood-based sheathing must be gapped 1/8 inch (3mm) at edge and end joints to prevent cracking in the stucco).*

### **3.03 INSTALLATION**

*Apply the stucco in discrete panels without interruption to avoid cold joints and differences in appearance. Abut wet stucco to set stucco at natural or architectural breaks in the wall such as expansion joints, pilasters, terminations, or changes in plane. Hot or dry conditions accelerate drying and moisture loss from stucco which can affect strength and resistance to cracking. Adjustments in the application, scheduling and curing of stucco to prevent rapid loss of moisture are necessary to achieve a satisfactory stucco installation. Cold temperatures retard drying and strength gain and adjustments may have to be made in the application, scheduling and curing of stucco to prevent damage from frost and other trades. Do not install stucco during extremely hot, dry and/or windy conditions. Do not install stucco during freezing conditions or on frozen substrates. Do not install stucco onto grounds of accessories. Completely embed lath and flanges of accessories and completely cover attachments with stucco. Moist cure stucco minimum 48 hours for optimum strength gain and resistance to cracking. Allow final stucco application to completely dry before applying finish. The finished installation must be true, plumb and square. Should stucco get into control or expansion joints, remove the stucco from within the joint before the stucco sets.*

#### **A Installation over cast-in-place concrete or concrete masonry units:**

*(Note: concrete and concrete masonry units require minimum 28 day cure before the installation of stucco. The requirement for an expansion joint every 144 ft<sup>2</sup> (13 m<sup>2</sup>) may be waived on solid substrates without metal lath such as cast-in-place concrete and concrete masonry units provided joints in the supporting construction exist at appropriate intervals and they are reflected in the stucco. In such cases joint spacing in the stucco shall not exceed 250 ft<sup>2</sup> (23 m<sup>2</sup>).*

1. Install foundation weep screed at the base of the wall.
2. Install casing beads at stucco terminations—doors, windows and other through wall penetrations. Install two piece expansion joints (or back-to-back casing beads) at joints in the supporting construction, building expansion joints, where the stucco is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, columns, and cantilevered areas. Install one piece

- expansion joints at corners of windows, doors and similar through wall penetrations, and every 250 ft<sup>2</sup> (23 m<sup>2</sup>). Install corner bead at outside corners and corner lath at inside corners. Install full accessory pieces where possible and avoid small pieces. Seal adjoining pieces by embedding ends in sealant. Abut horizontal into vertical joint accessories. Attach at no more than 7 inches (178 mm) on center into concrete/masonry with appropriate fasteners.
3. Pre-moisten concrete masonry units and absorbent concrete prior to the placement of stucco (unless bonding agent has been applied to the CMU surface).
  4. Scratch Coat: apply the stucco with sufficient pressure to ensure intimate contact with the substrate and complete coverage to an approximate thickness of 1/4 inch (6 mm). Score horizontally the stucco upon completion of each panel in preparation for a second coat.
  5. Brown Coat: as soon as the first coat is firm enough to receive the second coat without damage, apply the second coat. Alternatively, moist cure the first coat up to 48 hours and dampen the scratched surface with water immediately before applying the second coat. Apply the second coat with sufficient pressure to ensure intimate contact with the first coat to an approximate thickness of 1/8 or 1/4 inch (3 or 6 mm) and as needed to bring the stucco to the desired thickness. Use a rod or straight edge to bring the surface to a true, even plane. Fill depressions in plane with stucco.
  6. After the stucco has lost sufficient moisture so that the surface sheen has disappeared, float the surface lightly with a darby or wood float to compress the surface and to provide a smooth, yet open, even surface.
  7. Moist cure after the stucco has set by lightly fogging the surface for at least 48 hours. Fog as frequently as required during the 48 hour period to prevent loss of moisture from the stucco. Avoid eroding the stucco surface with excess moisture. If relative humidity exceeds 75% the frequency of moist-curing can be diminished.

*(\*Note: for one coat installation of stucco follow the procedure described above, except apply the stucco in one coat up to 1/2 inch (13 mm) thickness, and eliminate scoring and the application of brown coat).*

B. Installation over frame construction with sheathing:

1. Weep Screed Installation

- a. Install foundation weep screed at the base of the wall securely to framing with the appropriate fastener. Locate foundation weep screed so that it overlaps the

joint between the foundation and framing by a minimum of 1 inch (25 mm). Locate the foundation weep screed minimum 4 inches (100 mm) above earth grade, 2 inches (51 mm) above finished grade

## 2. Weather Protection

- a. Protect sills of rough openings with barrier membrane.
- b. Apply moisture barrier in compliance with the applicable building code. Wrap paper into rough opening and lap over barrier membrane at jambs. Lap paper over foundation weep screed attachment flange and window/door head flashings.

*(Note: code requirements for weather protection vary. Always consult the applicable code. Typically asphalt felt in compliance with the code is attached directly to sheathing and lapped shingle style, upper courses over lower courses, by minimum 2 inches (51 mm), with vertical laps of minimum 6 inches (150 mm). Courses are staggered so that vertical joints do not align. Two layers of asphalt felt are required over wood based and gypsum based sheathing i under IBC (International Building Code) jurisdiction. If paper-backed lath is used, the water resistant backing serves as the weather protection or as one of the two layers of felt required over wood based or gypsum based sheathing. Care must be taken to prevent tears in the paper and to limit penetrations to only those required for attachment. Flashing must be in place and properly integrated with the moisture barrier at sills, above windows and doors, decks and at roof/wall intersections such that water is directed to the exterior).*

## 3. Casing Bead and Expansion Joint Installation

- a. Install casing beads at stucco terminations—doors, windows and other through wall penetrations. Install expansion joints (or back-to-back casing beads) at building expansion joints, where the stucco is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, columns, and cantilevered areas. Install one piece expansion joints at corners of windows, doors, and similar through wall penetrations, and every 144 ft<sup>2</sup> (13 m<sup>2</sup>). Install full accessory pieces where possible and avoid small pieces. Seal adjoining pieces by embedding ends in sealant. Abut horizontal into vertical joint

accessories. Attach at no more than 7 inches (178 mm) into framing with appropriate fasteners.

*Note: refer to architectural drawings for joint locations and accessory type. Moisture protection must be continuous behind joints and accessories.*

#### 4. Lath Installation

##### a. Diamond Mesh Metal Lath

- i). General--install metal lath with the long dimension at right angles to structural framing. Terminate lath at expansion joints. Do not install continuously beneath joints.
- ii). Seams/Overlaps--overlap side seams minimum 1/2 inch (13 mm) and end seams minimum 1 inch (25 mm). Stagger end seams. Overlap casing beads and expansion joints minimum 1 inch (25 mm) over narrow wing accessories, minimum 2 inches (51 mm) over expanded flange accessories. Do not install lath continuously beneath expansion joints.
- iii). Attachment--fasten securely through sheathing into structural framing at 7 inches (178 mm) on center maximum vertically and 16 inches (406 mm) on center horizontally\*. Wire tie at no more than 9 inches (225 mm) on center at: side laps, accessory overlaps, and where end laps occur between supports.

b. Woven wire fabric lath—follow installation as for metal lath except overlap all seams by one mesh minimum.

c. Paper-backed lath—follow installation as for metal lath. Lap lath over lath, not paper to lath overlap. For horizontal overlaps the paper backing must lap shingle style behind the lath to lath overlap.

*(\*Note: the type fastener selected, its layout and pullout or withdrawal value from the supporting construction must be verified and approved by the project engineer/architect with respect to design wind load and local building code requirements).*

#### 5. One Piece Expansion Joint Installation

- a. Install one piece expansion joints over lath at through wall penetrations, for example, above and below doors or windows (unless another type of expansion joint is already provided at these locations or one piece

expansion joints are already provided). Install one piece expansion joints over lath every 144 ft<sup>2</sup> (13 m<sup>2</sup>) (unless already provided). Wire tie one piece expansion joints to lath at no more than 7 inches (178 mm) on center. Make certain lath is discontinuous beneath joints.

6. Inside and Outside Corners

- a. Install corner lath at inside corners and corner bead at outside corners over lath. Attach through lath into framing at no more than 7 inches (178 mm) on center with appropriate fasteners.

7. Stucco Installation

- a. Scratch Coat: apply stucco with sufficient pressure to key into and embed the metal lath. Apply sufficient material, 3/8—1/2 inch (9—13mm), to cover the metal lath and to permit scoring the surface. Score horizontally the stucco upon completion of each panel in preparation for a second coat.
- b. Brown Coat: as soon as the first coat is firm enough to receive the second coat without damage, apply the second coat. Alternatively, moist cure the first coat up to 48 hours and dampen the scratched surface with water immediately before applying the second coat. Apply the second coat with sufficient pressure to ensure intimate contact with the first coat and as needed to bring the stucco to a uniform thickness that matches the grounds of the accessories. Use a rod or straight edge to bring the surface to a true, even plane. Fill depressions in plane with stucco. Final thickness of stucco shall be minimum 3/4 inch (19 mm), maximum 7/8 inch (22 mm).
- c. After the stucco has become slightly firm float the surface lightly with a darby or wood float to compress the surface and to provide a smooth, even surface.

*(Note: The proper time to float is when the wood float no longer sticks to the surface of the stucco).*

- d. Moist cure after the stucco has set by lightly fogging for at least 48 hours. Fog as frequently as required during the 48 hour period to prevent loss of moisture from the stucco. Avoid eroding the stucco surface

with excess moisture. If relative humidity exceeds 75% the frequency of moist curing can be diminished.

C. Foam Build-Outs

1. Where foam build-outs terminate at a dissimilar material such as a window, door or other non-stucco surface, back-wrap the foam build-out by installing detail mesh onto the terminating edge of the stucco. Embed the mesh in the foam adhesive. Allow the mesh to dangle until the back wrapping procedure is completed.
2. Install foam build-outs directly over hardened stucco with foam adhesive. Apply adhesive with the appropriate size notched trowel to the back of the insulation board and immediately place build-out in the proper location on the wall. Press firmly into place.
3. As soon as the foam build-out is firmly attached rasp the entire surface smooth.
4. Complete the back-wrapping procedure by applying the foam base coat to the exposed edges of the foam build-out and minimum 2-1/2 inches (64 mm) onto the face. Pull the back-wrap mesh around the foam build-out and fully embed it into the foam base coat. Use a corner trowel for neat straight corners.
5. Apply the foam base coat to the foam build-out and approximately 3 inches (76 mm) onto the adjacent stucco surfaces to an approximate thickness of 1/8 inch (3 mm).

Immediately embed the reinforcing mesh in the wet base coat. Trowel from the center to the edges of the mesh to avoid wrinkles and remove excess base coat. Overlap mesh seams minimum 2-1/2 inches (64 mm). Overlap mesh onto adjacent stucco wall surfaces minimum 2-1/2 inches (64 mm) at terminations of the foam build-out and feather onto the stucco wall surface.

*(Note: do not install foam build-outs over joints in the stucco wall assembly. Terminate foam build-outs and back-wrap in accordance with instructions above).*

D. Base Coat Installation

1. eco stucco™ UNILIME—Wait until stucco is at least 7 days old or the pH level of the surface is below 10 before applying

base coat. Moist cure stucco beforehand and allow the surface to dry before applying finish.

E. Finish Installation

1. Apply finish directly over the stucco or the base coat when dry. Apply finish by troweling with a stainless steel trowel according to the finish specified. Follow these general rules for application of finish:
  - a. Moist cure the stucco or the base coat before the finish installation.
  - b. Avoid application in direct sunlight.
  - c. Apply finish in a continuous application, and work a wet edge towards the unfinished wall area. Work to an architectural break in the wall before stopping to avoid cold joints.
  - d. Weather conditions affect application and drying time. Hot or dry conditions limit working time and accelerate drying. Adjustments in the scheduling of work may be required to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing. Adjust work schedule and provide protection.
  - e. Do not install separate batches of finish side-by-side.
  - f. Do not apply finish into or over joints or accessories. Apply finish to outside face of wall only.
  - g. Do not apply finish over irregular or unprepared surfaces, or surfaces not in compliance with the requirements of the project specifications.
  - h. In hot weather conditions saturate the brown coat with water the night preceding the finish installation.

**3.04 CLEANING AND PROTECTION**

- A Provide protection of installed materials from water infiltration into or behind them.
- B Provide protection of installed stucco from dust, dirt, precipitation, and freezing.
- C Point up around trim and other locations where plaster abuts dissimilar materials.
- D Remove temporary coverings used to protect adjacent surfaces.
- E Clean and repair adjacent surfaces and items soiled or damaged during work in this Section.

*eco stucco™ products are intended for use by qualified professionals as a component of a construction assembly and as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Mediterranean Colors' LLC instructions. Mediterranean Colors, LLC disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Mediterranean Colors, LLC control. Improper use of eco stucco™ products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to eco stucco's products, and to the structure of the building or its components.*