

## SECTION 092400 - CEMENT PLASTERING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Nonstructural steel framing and furring.
  - 2. Exterior portland cement plasterwork (stucco) on metal lath plaster bases.
- B. Related Sections include the following:
  - 1. Division 6 Section "Rough Carpentry" for wood framing and furring included in portland cement plaster assemblies.
  - 2. Division 7 Section "Building Insulation" for thermal insulations and vapor retarders included in portland cement plaster assemblies.
  - 3. Division 7 Section "Joint Sealants".

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: 12 by 12 inches (305 by 305 mm), and prepared on rigid backing.

#### 1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For portland cement plaster assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Mockups: Before plastering, install mockups of at least 16 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Install mockups for each type of finish indicated.
  - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

## 1.6 PROJECT CONDITIONS

- A. Comply with ASTM C 926 requirements.
- B. Exterior Plasterwork:
  - 1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
  - 2. Apply plaster when ambient temperature is greater than 40 deg F (4.4 deg C).
  - 3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

### 2.2 NONSTRUCTURAL STEEL FRAMING MEMBERS, GENERAL

- A. Components, General: Comply with ASTM C 1063. For steel sheet components not included in ASTM C 1063, comply with ASTM C 645 requirements for metal, unless otherwise indicated.

### 2.3 METAL LATH

- A. Wire-Fabric Lath:
  - 1. Welded-Wire Lath: ASTM C 933; self-furring.
    - a. Weight: 20-gauge stucco netting.

## 2.4 ACCESSORIES

- A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
- B. Zinc and Zinc-Coated (Galvanized) Accessories:
  - 1. Foundation Weep Screed: Fabricated from hot-dip galvanized steel sheet, ASTM A 653/A 653M,
  - 2. Cornerite: Fabricated from metal lath with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
  - 3. External-Corner Reinforcement: Fabricated from metal lath with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
  - 4. Casing Beads: Fabricated from zinc or zinc-coated (galvanized) steel; square-edged style; with expanded flanges.
  - 5. Control Joints: Fabricated from zinc or zinc-coated (galvanized) steel; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
  - 6. Expansion Joints: Fabricated from zinc or zinc-coated (galvanized) steel; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.
  - 7. Two-Piece Expansion Joints: Fabricated from zinc or zinc-coated (galvanized) steel; formed to produce slip-joint and square-edged reveal that is adjustable from 1/4-to-5/8-inch (6.34-to-16-mm) wide; with perforated flanges.

## 2.5 MISCELLANEOUS MATERIALS

- A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch (13 mm) long, free of contaminants, manufactured for use in portland cement plaster.
- C. Bonding Compound: ASTM C 932.
- D. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of not fewer than three exposed threads.
- E. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.
- F. Isolation Strip at Exterior Walls:
  - 1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), unperforated.

## 2.6 PLASTER MATERIALS

- A. Fiber Reinforced Portland Cement Plaster Basecoat: Factory blended thin coat stucco basecoat consisting of portland cement, lime, properly graded aggregate, alkali-resistant fiberglass and acrylic fibers.
  - 1. Available Products:
    - a. El Rey Stucco; Fastwall Sanded.
    - b. Omega; Diamond Wall
- B. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems, formulated with colorfast mineral pigments and fine aggregates; for use over portland cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.
  - 1. Available Products:
    - a. El Rey Stucco; Permaflex 400.
    - b. Omega; Akrolastic
  - 2. Color: As selected by Architect from manufacturer's full range.
  - 3. The bidder shall base their price on the use of up to two (2) finish colors of stucco on the exterior of the building.

## 2.7 PLASTER MIXES

- A. Fiber Reinforced Portland Cement Plaster Basecoat: Comply with manufacturer's written instructions.
- B. Factory-Prepared Finish-Coat Mixes: For acrylic-based finish coatings, comply with manufacturer's written instructions.

## 2.8 THICKNESS

- A. Provide a minimum of 1/2 in. total thickness for the system for one-hour fire-rated assemblies.
- B. Refer to the construction drawings for location of reveals and variation of thicknesses for the stucco system.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that surfaces to be plastered are free of dust, loose particles, oil and other materials which could effect bond or proper hydration of cement plaster.

- B. Verify that lath is tight, properly secured and overlapped and that all accessories are properly set and secured.
- C. Examine substrates, grounds and accessories to insure finished plaster work will be level and plumb.
- D. Verify masonry surfaces to receive direct bond applications of plaster basecoats are rough, free of form release agents, or otherwise properly prepared to provide adequate bond.
- E. Notify Architect and Engineer in writing of any conditions detrimental to proper installation of stucco basecoat. Proceed with work after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Prepare solid-plaster bases that are smooth or that do not have the suction capability required to bond with plaster according to ASTM C 926.

### 3.3 INSTALLATION, GENERAL

- A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.

### 3.4 INSTALLING NONSTRUCTURAL STEEL FRAMING, GENERAL

- A. General: Comply with requirements in ASTM C 1063 for applications indicated.
  - 1. Comply with ASTM C 754 for installation of items not addressed in ASTM C 1063.
- B. Install supplementary framing, blocking, and bracing at terminations in plaster assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Isolate steel framing from building structure to prevent transfer of loading imposed by structural movement.
- D. Do not bridge building control and expansion joints with steel framing or furring members. Frame both sides of joints independently.
- E. Soffits: Unless otherwise detailed on Drawings, install furred or suspended soffits to comply with requirements for ceiling installation; install framed soffits to comply with requirements for partition installation.

### 3.5 INSTALLING METAL LATH

- A. Expanded-Metal Lath: Install according to ASTM C 1063.
  - 1. On Solid Surfaces, Not Otherwise Furred: Install self-furring welded-wire lath.

### 3.6 INSTALLING ACCESSORIES

- A. Install according to ASTM C 1063 and at locations indicated on Drawings.
- B. Reinforcement for External Corners:
  - 1. Install lath-type external-corner reinforcement at exterior locations.
- C. Control Joints: Install control joints at locations indicated on Drawings.
  - 1. As required to delineate plasterwork into areas (panels) of the following maximum sizes:
    - a. Vertical Surfaces: 144 sq. ft. (13.4 sq. m).
    - b. Horizontal and other Nonvertical Surfaces: 100 sq. ft. (9.3 sq. m).
  - 2. At distances between control joints of not greater than 18 feet (5.5 m) o.c.
  - 3. As required to delineate plasterwork into areas (panels) with length-to-width ratios of not greater than 2-1/2:1.
  - 4. Where control joints occur in surface of construction directly behind plaster.
  - 5. Where plasterwork areas change dimensions, to delineate rectangular-shaped areas (panels) and to relieve the stress that occurs at the corner formed by the dimension change.

### 3.7 PLASTER APPLICATION

- A. General: Comply with ASTM C 926.
  - 1. Do not deviate more than plus or minus 1/4 inch in 10 feet (6.4 mm in 3 m) from a true plane in finished plaster surfaces, as measured by a 10-foot (3-m) straightedge placed on surface.
- B. Basecoats:
  - 1. Apply basecoat to a minimum 3/8" thickness using sufficient trowel pressure to key into lath.
  - 2. Rod surface to true plane.
  - 3. Float or lightly broom surface to provide bond with finish coat.
  - 4. Tool brown coat to provide V-joint at intersection of plaster and materials which act as plaster grounds.
  - 5. Interrupt or delay plaster application only at junctions of plaster planes, openings, or expansion and control joints

- C. Finish Coat: Clear acrylic polymer-based stucco finish with colored aggregate.
  - 1. Apply surface conditioner as recommended by system manufacturer and in compliance with all applicable codes.
  - 2. Apply finish coat to thickness recommended by manufacturer using sufficient trowel pressure or spray velocity to bond finish coat to basecoat.
  - 3. Apply finish in number of coats necessary to achieve texture to match approved sample.
- D. Curing:
  - 1. Moist cure cement based basecoat with light spray of clear water with sufficient frequency to maintain uniformly moist condition for minimum of 48 hours following application.
  - 2. Moist cure cement based finish coats with light spray of clear water with sufficient frequency to maintain uniformly moist condition for minimum of 48 hours following application.
  - 3. Air cure acrylic polymer based finish coats.
- E. Acrylic-Based Finish Coatings: Apply coating system, including primers, finish coats, and sealing topcoats, according to manufacturer's written instructions.

### 3.8 CUTTING AND PATCHING

- A. Cut, patch, replace, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

### 3.9 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work. Promptly remove plaster from doorframes, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 092400