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SECTION 09 24 00

PORTLAND CEMENT PLASTER

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**PART 1 - GENERAL**

1.1 SUMMARY

A. Section Includes:

1. Stucco: Provide three coat Portland cement plaster (stucco) with metal lath and accessories as required for complete finished system.
2. Base for Surface Bonded Stone Masonry and Large Format Tile: Provide two coat Portland cement plaster base for surface bonded thin set veneer systems with metal lath and accessories as required for complete finished system.

B. Related Sections:

1. Section 04 42 50: Surface bonded cultured stone masonry.
2. Section 07 28 00: Weather barrier underlayment.
3. Section 09 30 90: Exterior large format wall tile.
4. Section 09 90 00: Painting of integral color plaster.

1.2 REFERENCES

- A. ASTM C926: Application of Portland Cement Based Plaster.
- B. ASTM C1063: Installation of Lathing and Furring for Portland Cement Plaster.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product information for each lathing material and accessory, and for plaster materials.
- B. Shop Drawings: Indicate locations of control and expansion joints where not shown on Drawings.
- C. Samples: Furnish 24" by 24" stucco samples using materials and methods specified including lath.

1.4 QUALITY ASSURANCE

- A. Mock-Ups: Provide not less than 100 sf mock-up of each type of plaster; approved mock-ups may be incorporated into Project.

1.5 PROJECT CONDITIONS

- A. Take precautionary measures to ensure plaster is not subjected to excessive sun and wind which could cause uneven and excessive evaporation, premature dehydration, or cracking.
- B. Cold-Weather Requirements: Do not apply plaster unless minimum ambient temperature of 40 degrees F has been and continues to be maintained for minimum 48 hours prior to application and until plaster is cured.

**PART 2 - PRODUCTS****2.1 MATERIALS**

- A. System Description: Provide three coat Portland cement plaster (stucco) and two-coat Portland cement plaster base for bonded masonry, with metal lath and accessories.
- B. Regulatory Requirements: Comply with applicable codes.
- C. Portland Cement Plaster:
  - 1. Stucco Base:
    - a. Basis of Design: Parex USA/Parex Fiber-47 Armourwall Scratch and Brown Sanded.
  - 2. Stucco Admix:
    - a. Basis of Design: Parex USA/Parex Adacryl Admix and Bonding Agent.
  - 3. Leveling and Reinforcing Coat:
    - a. Basis of Design: Parex USA/Parex 121 Basecoat and Adhesive or Parex 121 Dry Basecoat and Adhesive.
  - 4. Reinforcing Mesh:
    - a. Basis of Design: Parex USA/Parex 355 4.5 oz/sy Standard Mesh.
  - 5. Sandable Basecoat:
    - a. Basis of Design: Parex USA/Parex Sandable Basecoat.
  - 6. Acrylic Finish:
    - a. Basis of Design: Parex USA/Parex Image Smooth-thoothest Smooth Acrylic Finish.
  - 7. Clear Sealer:
    - a. Basis of Design: Parex USA/Parex Clear Sealer.
  - 8. Water: Clean, fresh and free from injurious amounts of oil, acid, alkali, organic matter or other deleterious substances.
- D. Metal Components: Comply with requirements of ASTM C1063.
  - 1. Manufacturers:
    - a. Phillips Manufacturing Company
    - b. Alabama Metal Industries Corp (AMICO).
    - c. ClarkDietrich Building Systems.
    - d. Substitutions: Refer to Section 01 25 00.

2. Exterior Components: Hot-dip galvanized finish; ASTM A924 and A653 minimum G90 for 18 gage and lighter formed metal products, ASTM A123 galvanized after fabrication for 16 gage and heavier products.
  - a. Exposed Exterior Components: At marine environments only, provide zinc accessories unless fully concealed in plaster.
3. Suspension System: Size to comply with referenced standards.
  - a. Main Runners: Hot or cold-rolled steel.
    - 1) Main Carrying Channels: Minimum 16 gage, 1-1/2" by 1/2".
    - 2) Furring Channels: Minimum 16 gage, 3/4" by 1/2".
  - b. Hangers: Size and type to suit application and to rigidly secure system in place, with maximum deflection of L/360.
    - 1) Hanger Wire: ASTM A641, Class 1 galvanized.
    - 2) Hanger Rods and Flats: Mild steel.
  - c. Lateral Bracing: Minimum 16 gage cold-rolled steel.
  - d. Anchorage and Fastening: Approved devices of type and size to suit application and to rigidly secure suspension system.
4. Exterior Metal Lath: Galvanized expanded diamond mesh; minimum 2.5 lbs per square yard at vertical applications, 3.4 lbs per square yard at horizontal applications.
  - a. Backing: Weather resistive barrier system specified in Section 07 28 00 – Weather Resistive Underlayment.
  - b. Self-Furring: Where over solid substrate, provide "V" groove type to hold lath approximately 1/4" from supporting base.
  - c. Tie Wire: ASTM A641, soft temper, Class 1 zinc coated; minimum 16 gage for tying metal lath to furring channels and metal lath to metal lath.
- E. Accessories: Provide as indicated, as recommended by referenced standards, and as required for complete installation.
  1. Manufacturers:
    - a. Keene Products from Metalex, a Division of The Koller Group.
    - b. Delta Star, Inc., Superior Metal Trim.
    - c. California Expanded Metals (CEMCO).
    - d. Amico
    - e. Lath manufacturers.
    - f. Substitutions: Refer to Section 01 25 00.
  2. Casing Beads and Base Screeds: Minimum 26 gage, square edges at casing beads, drip type base screeds; provide with expanded flanges.

3. Expansion Joints: Two-piece slip type joints; commonly referred to as No. 40.
4. Control Joints: One-piece metal joint designed to interlock with plaster similar to Keene/XJ15-3; provide with expanded flanges.
5. Aluminum Vent Strips and Channel Screeds: Extruded 6063 alloy, T5 or T6 temper aluminum, minimum 0.05" thick; with manufacturer's standard baked-on finish.

a. Manufacturers:

- 1) Fry Reglet Corp./Plaster Moldings.
- 2) Gordon Inc./Final Forms II.
- 3) Substitutions: Refer to Section 01 25 00.

b. Color: As selected by Architect.

- F. Anchorages: Tie wire, nails, screws and other approved metal supports, of type and size to suit application.

1. Staples not permitted.

## 2.2 PLASTER MIXES

- A. Provide plaster mixes in accordance with ASTM C926 as appropriate to the substrate indicated and the approved samples.
- B. Mix only as much plaster as can be used in one hour.
- C. Mix materials dry, to uniform color and consistency, before adding water.
- D. Protect mixes from frost, dust and evaporation.
- E. Do not retemper mixes after initial set has occurred.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Prior to application ensure mechanical and electrical services behind surfaces to receive cement plaster have been tested and approved.
- B. Ensure framing has been properly installed and rigidly secured.

### 3.2 INSTALLATION

- A. Install rainscreen system over underlayment in accordance with rainscreen system manufacturer recommendations and installation instructions; install using methods to minimize damage to underlayment beyond required fasteners.
- B. Erect furring and lath in accordance with ASTM C1063.

- C. Install work true to lines and levels and to provide surface flatness with maximum variation of 1/8" in 10'-0" in any direction.
- D. Isolation: Isolate lathing and metal support system where it abuts building structure horizontally, and where partition/wall work abuts overhead structure, to prevent transfer of building loads into plaster.
  - 1. Install slip or cushion type joints to absorb deflections but maintain lateral support.
- E. Frame both sides of expansion joints independently unless otherwise indicated, do not bridge joints with furring and lathing or accessories.
- F. Fixture Support Framing: Install supplementary framing, blocking and bracing where work is indicated to support fixtures, equipment, services and similar work requiring attachment and support.
- G. Coordinate installation of anchors, blocking, electrical and mechanical work which is to be placed in or behind framing; allow such items to be installed after framing is complete.
- H. Install expansion and control joints so plaster areas do not exceed 120 ft<sup>2</sup>, and with area sides having a maximum one to two and a half (1:2-1/2) ratio, unless otherwise approved by Architect.
- I. Metal Lathing: Apply lath taut, with long dimension perpendicular to supports; secure end laps with tie wire where they occur between supports; lap ends minimum 1" and sides 1/2"; secure with tie wires.
  - 1. Continuously reinforce internal angles.
  - 2. Place 6" wide x 12" long strips of metal lath diagonally at corners of openings; secure rigidly in place.
  - 3. Place 6" wide strips of metal lath at junctions of dissimilar materials; place parallel with dissimilar materials; secure rigidly in place.
- J. Installation of Metal Accessories:
  - 1. Fasten in place true to line and in correct relation to adjacent materials and as required to prevent dislodging and misalignment by subsequent operations.
  - 2. Fasten at both ends and at maximum 12" on center along sides.
  - 3. Bring grounding edge of accessories to true lines, plumb, level, and straight.
  - 4. Install accessories to provide required depth of plaster and to bring plaster surface to required plane.
  - 5. Install continuous corner reinforcement for full length of external corners.
  - 6. Install sill and drip screeds with paper sheathing and lath installed over attachment flange of screeds.

7. Beads: Use single length of metal beads wherever length of run does not exceed longest standard stock length available; miter or cope corners.
    - a. Provide casing beads where plaster abuts dissimilar construction and at perimeter of openings where edges of plaster will not be concealed by other work.
  8. Lath shall be discontinuous through control joints and wire tied to each side of joints.
- K. Portland Cement Plaster: Conform to ASTM C926.
1. Stucco: Apply three coat cement plaster system, scratch, brown, and finish coats.
  2. Base for Surface Bonded Masonry: Apply two coat cement plaster system, scratch and brown coats.
  3. Apply each base coat (scratch and brown) to minimum thickness of 3/8"; allow each coat to moist cure for minimum period of 48 hours;
    - a. Moist cure first base coat (scratch coat) during 48-hour period.
  4. Allow base coats to cure for minimum 7 days prior to application of finish coat.
  5. Evenly dampen base coat, to ensure uniform suction, and apply finish coat; apply thickness sufficient to secure required texture but in no case less than 1/8".
    - a. Apply pre-mixed finish coat in accordance with manufacturer's recommendations.
  6. Maintain surface flatness, with maximum variation of 1/8" in 10'-0".
  7. Avoid excessive working of surface, delay trowelling as long as possible to avoid drawing excess fines to surface.
- L. Finish: Provide surfaces with finish to match approved sample panel and mock-up.

### **3.3 CUTTING AND PATCHING**

- A. Cut, patch, point, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections.
- B. Repair or replace work to eliminate blisters, buckles, crazing, check cracking, dry-outs, efflorescence, sweat-outs, and similar defects.
- C. Finish cutting and patching to match undamaged plaster; patching shall not be visible in finished installation.

### **3.4 CLEANING**

- A. Promptly remove plaster from surfaces not indicated to be plastered.
- B. Repair surfaces stained, marred or otherwise damaged during plastering.

### **END OF SECTION**