

**SECTION 09 24 00
PORTLAND CEMENT PLASTER**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 - General Requirements, apply to work specified in this Section.

1.2 SECTION INCLUDES

- A. See plans and schedules for the extent of plasterwork.
- B. The type of plastering required includes:
 - 1. Portland Cement Plaster (Stucco)
 - 2. Smooth, aggregate and special rendered surface finishing.

1.3 REFERENCES

- A. ASTM C11 Standard Terminology Relating to Gypsum and Related Building Materials and Systems
- B. ASTM C91/C91M – Standard Specification for Masonry Cement
- C. ASTM C150/C150M – Standard Specification for Portland Cement
- D. ASTM C206 – Standard Specification for Finishing Hydrated Lime
- E. ASTM C207 – Standard Specification for Hydrated Lime for Masonry Purposes
- F. ASTM C631 – Standard Specification for Bonding Compounds for Interior Gypsum Plastering
- G. ASTM C665 – Standard Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
- H. ASTM C897 – Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters
- I. ASTM C926 – Standard Specification for Application of Portland Cement-Based Plaster
- J. ASTM E119 – Standard Test Methods for Fire Tests of Building Construction and Materials
- K. PCA (Portland Cement Association) – Portland Cement Plaster/Stucco Manual
- L. Florida Building Code (FBC)

1.4 SYSTEM DESCRIPTION

- A. Fabricate vertical elements to limit finish surface to 1/180 deflection under lateral point load of 100 lbs.
- B. Fabricate horizontal elements to limit finish surface to 1/260 deflection under superimposed dead loads and wind uplift loads.

1.5 QUALITY ASSURANCE

- A. Cement Plaster: Perform work in accordance with ASTM C926.
- B. Allowable Tolerances: For flat surfaces, do not exceed 1/8" to 10'-0" for bow, warp, plumb, or level, including surfaces to receive applied finishes (tile, etc.).
- C. This Contractor shall make sample panels at the site at least 4' x 4' of each type of plasterwork.
 - 1. The Architect and Owner shall accept the panels before Contractor starts plastering.
 - 2. The accepted panels will be a basis for all work.
- D. Applicator shall show proof of specializing in lath and plaster work for a minimum of 5-years.

1.6 SUBMITTALS

- A. Submit under the provisions of Section 01 33 00.
- B. Manufacturer's Data Plaster:
 - 1. For information only, submit copies of the manufacturer's product specifications and installation instructions for each material, and include other data as may be required to

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show compliance with these specifications.

2. Distribute an additional copy of each installation instruction to the Installer.

1.7 REGULATORY REQUIREMENTS

- A. Conform to ASTM E119 and applicable code for fire rated assemblies as follows:
 1. Fire Rated Partitions: Listed assembly by UL or FM.
 2. Fire Rated Ceiling and Soffits: Listed assembly by UL or FM
 3. Fire Rated Structural Column Framing: Listed assembly by UL or FM.
 4. Fire Rated Structural Beam Framing: Listed assembly by UL or FM.

1.8 PRODUCT HANDLING

- A. Except for sand and water, deliver materials to the site in sealed containers or bags fully identified with manufacturer's name, brand, type, and grade.
- B. Store all materials in a dry, well-ventilated space, under cover and off the ground.

1.9 JOB CONDITIONS

- A. Installer must examine surfaces that are to receive plaster, repair, alter, and prepare surfaces to insure a timely completion of the work.
 1. Do not start the plasterwork until any unsatisfactory conditions are corrected in an acceptable manner to the Installer and Architect.
- B. Temporary Heat and Ventilation: Comply with ANSI A42.1 and A42.2 as applicable to the work.
- C. Do not apply plaster when ambient temperature is less than 50°F both during installation and until cured.
- D. Protect contiguous work from soiling, spattering, moisture deterioration, and other harmful effects, which might result from plastering.

PART 2 PRODUCTS

2.1 PLASTER BASE COAT MATERIALS

- A. Cement: ASTM C150/C150M, Type I Portland
- B. Lime: ASTM C206, Type S
- C. Aggregate: In accordance with ASTM C897
- D. Water: Clean, fresh, potable, and free of mineral or organic material that may affect plaster.
- E. Bonding Agent
- F. Bonding Agent: ASTM C631; type recommended for bonding plaster to concrete and concrete masonry surfaces
- G. Admixtures: Air entrainment

2.2 PLASTER FINISH COAT MATERIALS

- A. Cement: As specified for plaster base coat
- B. Lime: As specified for plaster base coat
- C. Color Pigment: Mineral oxide
- D. Water: Clean, fresh, potable, and free of mineral or organic matter that can affect plaster.

2.3 CEMENT PLASTER MATERIALS (STUCCO)

- A. Job mixed Stucco - Mix bondcrete or mortaseal mason's lime with Portland cement and sand according to ASTM C926, in Portland cement: lime: sand ratios (bags: bags: cu ft) as follows:
 1. Basecoat - Scratch coat 1:1:8 and Brown coat 1:1:10.
 2. Finish - Apply exterior stucco finish in accordance with U.S. Gypsum data sheet.
 3. Skim Coat: Provide smooth textured skim coat where scheduled on drawings.
 4. Finish Texture: As shown on the drawings and/or finish schedule.

PART 3 EXECUTION

3.1 PREPARATION FOR PLASTERING

- A. Clean plaster bases and substrates to be plastered, removing loose materials, coatings, and other substances that might impair the work.
- B. Etch concrete and masonry surfaces indicated for direct plastering.
 - 1. Wet surface, scrub with acid etch solution, and rinse thoroughly; repeat if necessary for adequate plaster bond.
- C. Apply dash-coat on concrete surfaces receiving direct plastering, and moisture-cure for 2-days.
- D. Apply bonding agent on interior concrete surfaces indicated for direct plastering; comply with manufacturer's instructions.
- E. Cover chases and similar openings in the surfaces to receive plaster with metal lath strip reinforcing, extending not less than 6" beyond edges of opening.
 - 1. Securely fasten lath along edges.
- F. Install temporary grounds and screeds as required to control plaster thickness and comply with tolerances.
- G. Install plastering accessories, anchored to substrates 8" o. c. along each flange.
 - 1. Miter corners and spline joints to form tight accurate joints without offsets.
 - 2. Install screws in all accessories at a maximum of 4'0" o. c. as well as clinched into place.
 - 3. Install resilient-edged casing beads for interior work against exterior-wall door and window frames, and at similar locations as indicated.
 - 4. Control Joints: Install control joints at locations indicated, or if not indicated, at locations complying with the following criteria and approved by Architect.
 - a. Where an expansion or control joint occurs in the construction surface directly behind the plaster membrane, continue the joint through the plaster.
 - b. Where distance between control joints exceed 10' in either direction.
 - c. Where plaster panels exceed an area of 100 sq ft.
 - d. Where panel sizes or dimensions change, extend joints full width or height.
- H. Surface Conditioning: Immediately before applying plaster to concrete or masonry, except when using a bonding agent, dampen the surfaces sufficiently to obtain optimum plaster suction.

3.2 INSTALLATION OF PLASTER

- A. General: Comply with ASTM C926, except comply with manufacturer's instructions where more detailed or more stringent.
- B. Plaster Thickness and Number of Coats:
 - 1. Thickness on Vertical Surfaces: Except as otherwise indicated or specified, the minimum thickness of plaster as measured from face of lath, masonry, or concrete to finished plaster surfaces shall be as follows:
 - a. Exterior Portland Cement Plaster: $\frac{5}{8}$ ".
 - b. Interior Portland Cement Plaster: $\frac{7}{8}$ ".
 - c. Plaster on unit masonry surfaces: $\frac{1}{2}$ ".
 - d. Plaster on concrete surfaces: $\frac{5}{8}$ ".
 - e. Plaster skim coat on interior masonry surfaces: $\frac{1}{4}$ ".
 - 2. Thickness on Horizontal Surfaces: Per ASTM C926
 - 3. Number of Coats: Plaster on unit masonry surfaces 2-coats; on concrete or applied over bonding agents, 3-coats; doubling back with brown coat over scratch coat before it is

partially dry and set will not be permitted on 3-coat work.

- C. Mechanically mix plaster materials at the project site; do not hand mix except when requiring amounts of less than 1-bag.
- D. Sequence the plaster installation properly with the installation and protection of other work, to prevent damage to either installation.
- E. Apply skim-coat plaster with a minimum thickness scratch and leveling coat and a normal minimum thickness finish coat.
- F. Cure Plaster by maintaining each coat in a moist condition for 2-days following application; keep enclosed and fog-spray (after initial set) as required to prevent dry-out.

3.3 CUTTING AND PATCHING

- A. Cut, patch, point-up, 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, excessive crazing and check crackling, dry-outs, efflorescence, sweat-outs, and similar defects, including areas of the work which do not comply with specified tolerances, and where bond to the substrate has failed.
- C. Sand smooth-trowel finishes lightly removing trowel marks and arises.

3.4 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work.
 - 1. Promptly remove plaster from doorframes, windows, and other surfaces not requiring plaster.
 - 2. Repair floors, walls, and other surfaces stained, marred, or damaged from plastering work.
 - 3. When plastering work is complete, remove unused materials, containers, and equipment, clean floors of plaster debris.
- B. Installer shall advise the Contractor of requirements for the protection of plaster from deterioration and damage during the remainder of the construction period.

END OF SECTION