

**SECTION 09 24 00**  
**PORTLAND CEMENT PLASTERING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Portland cement plaster for installation over metal lath, masonry, concrete, and solid surfaces.

**1.02 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Wood stud framing for plaster.
- B. Section 07 24 00 - Exterior Insulation & Finish Systems: Mesh Reinforced Synthetic Cement Render to Cementitious Board Soffits, Concrete & Masonry.
- C. Section 08 31 00 - Access Doors and Panels: Access panels.
- D. Section 09 22 16 - Non-Structural Metal Framing: Metal stud framing and furring for plaster.
- E. Section 09 22 36.23 - Metal Lath: Metal furring and lathing for plaster.
- F. Section 09 22 36.23 - Metal Lath: Access panels.
- G. Section 09 23 00 - Gypsum Plastering.
- H. Section 09 21 16 - Gypsum Board Assemblies: Metal stud framing and furring for plaster.

**1.03 REFERENCE STANDARDS**

- A. ASTM C91/C91M - Standard Specification for Masonry Cement; 2012.
- B. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- C. ASTM C206 - Standard Specification for Finishing Hydrated Lime; 2003 (Reapproved 2009).
- D. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006 (Reapproved 2011).
- E. ASTM C926 - Standard Specification for Application of Portland Cement-Based Plaster; 2014a.
- F. ASTM C932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering; 2006 (Reapproved 2013).
- G. ICC (IBC) - International Building Code; 2012.
- H. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc.; current edition.
- I. PCA EB049 - Portland Cement Plaster/Stucco Manual; Portland Cement Association; 2003.
- J. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittals procedures.
- B. Product Data: Provide data on plaster materials, characteristics and limitations of products specified.
- C. Samples: Submit one samples of each installation type, 12 x 12 inch (300 x 300 mm) in size illustrating finish color and texture.

**1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years documented experience.
- B. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

**1.06 MOCK-UP**

- A. Construct mock-up of exterior wall, 6.5 feet (2 m) long by 6.5 feet (2 m) high, illustrating surface finish.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work.

### 1.07 FIELD CONDITIONS

- A. Do not apply plaster when substrate or ambient air temperature is under 50 degrees F (10 degrees C) or over 80 degrees F (27 degrees C).
- B. Maintain minimum ambient temperature of 50 degrees F (10 degrees C) during installation of plaster and until cured.

## PART 2 PRODUCTS

### 2.01 PORTLAND CEMENT PLASTER ASSEMBLIES

- A. Shaft Walls at HVAC Shafts: Provide completed assemblies with the following characteristics:
  - 1. Air Pressure Within Shaft: Sustained loads of 5 lbf/sq ft (0.24 kPa) with maximum mid-span deflection of L/240.
  - 2. Acoustic Attenuation: STC of 35-39 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
- B. Shaft Walls at Elevator Shafts: Provide completed assemblies with the following characteristics:
  - 1. Air Pressure Within Shaft: Intermittent loads of 5 lbf/sq ft (0.24 kPa) with maximum mid-span deflection of L/240.
  - 2. Acoustic Attenuation: STC of 35-39 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
- C. Fire Rated Assemblies: Provide completed assemblies to contractor selected UL listed assembly Nos. to hour ratings per the Architectural Drawings.
  - 1. Coordinate components of fire rated assemblies with materials specified for support of plaster in other sections.
  - 2. ICC IBC Item Numbers: Comply with applicable requirements of ICC IBC for the particular assembly.
  - 3. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.
- D. Interior wall surfaces of Services Buildings.

### 2.02 PLASTER MATERIALS

- A. Portland Cement, Aggregates, and Other Materials: In accordance with ASTM C926.
- B. Premixed Two-Coat Stucco: Mixture of Type I Portland cement, complying with ASTM C150/C150M, hydrated lime complying with ASTM C207, fibers and other approved ingredients, install in accordance with ASTM C926.
- C. Masonry Cement: ASTM C91 Type N.
- D. Aggregate: Natural sand, within the following sieve sizes and percentage retained limits:
  - 1. No. 4 (4.75 mm): 0.
  - 2. No. 8 (2.36 mm): 0 to 5.
  - 3. No. 16 (1.18 mm): 5 to 30.
  - 4. No. 30 (0.60 mm): 30 to 65.
  - 5. No. 50 (0.30 mm): 65 to 95.
  - 6. No. 100 (0.15 mm): 90 to 100.
- E. Water: Clean, fresh, potable and free of mineral or organic matter that could adversely affect plaster.
- F. Bonding Agent: ASTM C932; type recommended for bonding plaster to concrete surfaces.

### 2.03 METAL LATH

- A. Metal Lath and Accessories: As specified in Section 09 22 36.23. Use metal lath as plaster base at locations shown on Architectural Drawings.
- B. Beads, Screeds, and Joint Accessories: As specified in Section 09 22 36.23.

### 2.04 PLASTER MIXES

- A. Over Solid Bases: Two-coat application, mixed and proportioned in accordance with ASTM C926.
- B. Premixed Plaster Materials: Mix in accordance with manufacturer's instructions.

- C. Mix only as much plaster as can be used prior to initial set.
- D. Mix materials dry, to uniform color and consistency, before adding water.
- E. Add air entrainment admixtures to all coats to provide 5-7 percent entrainment.
- F. Protect mixtures from freezing, frost, contamination, and excessive evaporation.
- G. Do not retemper mixes after initial set has occurred.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify the suitability of existing conditions before starting work.
- B. Masonry: Verify joints are cut flush and surface is ready to receive work of this section. Verify no bituminous or water repellent coatings exist on masonry surface.
- C. Concrete: Verify surfaces are flat, honeycomb are filled flush, and surfaces are ready to receive work of this section. Verify no bituminous, water repellent, or form release agents exist on concrete surface that are detrimental to plaster bond.
- D. Mechanical and Electrical: Verify services within walls have been tested and approved.

#### **3.02 PREPARATION**

- A. Dampen masonry surfaces to reduce excessive suction.
- B. Clean concrete surfaces of foreign matter. Clean surfaces using acid solutions, solvents, or detergents. Wash surfaces with clean water.
- C. Roughen smooth concrete surfaces and apply bonding agent in accordance with manufacturer's instructions.

#### **3.03 PLASTERING**

- A. Apply premixed plaster in accordance with manufacturer's instructions.
- B. Apply plaster in accordance with ASTM C926.
- C. Two-Coat Application:
  - 1. Apply first coat to nominal thickness of 3/8 inch (9 mm).
  - 2. Apply finish coat to nominal thickness of 1/8 inch (3 mm).
- D. In exterior work, scribe contraction joints through entire plaster application at 10 feet (3 m) on center each way.
- E. Moist cure base coats.
- F. Apply second coat immediately following initial set of first coat.
- G. Finish Texture: Float to a consistent and smooth finish.
- H. Avoid excessive working of surface. Delay troweling as long as possible to avoid drawing excess fines to surface.
- I. Aggregate Surfacing: Hand apply to full surface coverage.
- J. Moist cure finish coat for minimum period of 48 hours.

#### **3.04 TOLERANCES**

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m).

### **END OF SECTION**