

**SECTION 04100
MORTAR**

1.0 GENERAL

A. Description

Mortar shall include, but not necessarily be limited to, furnishing site mixed mortar for masonry, pipe connections, grouting, and other uses as specified in the Contract Documents or as directed by the Commission.

B. Related Work Included Elsewhere

1. Removal or Abandonment of Existing Utilities: Section 02050
2. Water Valves and Appurtenances: Section 02552
3. Water Services, Water Meter Settings, and Vaults: Section 02553
4. Sanitary Sewer Manholes: Section 02562
5. Brick Masonry: Section 04200

C. Quality Assurance

The Commission will inspect all materials before, during and after installation to ensure compliance with the Contract Documents.

2.0 MATERIALS

A. Materials Furnished by the Commission

1. The Commission will not furnish any materials for mortar.
2. The Contractor may purchase water from the Commission's potable water system in accordance with the current Commission policies and procedures.

B. Contractor's Options

None.

C. Detailed Material Requirements

1. Water shall be potable.
2. Portland Cement

Portland cement shall meet the requirements of AASHTO M 85 with the fineness determined in accordance with AASHTO T 153 and the time of setting determined in accordance with AASHTO T 131.

3. Mortar Sand

Mortar sand shall meet the requirements of AASHTO M 45 deleting the requirements for fineness modulus and deleterious substances.

4. Hydrated Lime for Masonry

Hydrated lime for masonry shall meet the chemical requirements of ASTM C 207, Type N.

5. Admixture

Only as approved by the Commission.

- D. **Material Storage Note:** Materials shall be stored in order to insure the preservation of their quantity, quality and fitness for Work. The Contractor shall place materials on wooden platforms, or other hard, clean surfaces, not on the ground, and the materials shall be placed under cover when directed by the Owner. Stored materials shall be located in order to facilitate prompt inspection by the Owner. Lawns, grass plots, or other private or public property shall not be used for storage purposes without written permission of the owner or lessee. Unless directed or noted otherwise in the Contract documents, there will be no payment for stored materials.

3.0 EXECUTION

A. Mix Requirements

1. Mortar for Masonry

Mortar used for masonry shall be composed in accordance with one of the following:

- a. One part Portland cement, or masonry cement, two parts mortar sand by dry loose volume, and hydrated lime not to exceed 20% of the cement by weight.
- b. Pointing of masonry after the masonry has been laid shall not be permitted without the approval of the Commission. The mortar used for pointing of masonry shall be composed of one part Portland cement, one part mortar sand by dry loose volume, and hydrated lime not to exceed 20% of the cement by weight.

2. Mortar for Grout

Mortar used for grouting anchor bolts, pipe handrail posts and miscellaneous items shall be composed in accordance with one of the following:

- a. One part Portland cement and one part mortar sand by dry loose volume.
- b. An epoxy or polyester anchoring system may be used as approved by the Commission and in accordance with the manufacturer's recommendations. Strength values shall be as indicated in the Contract Documents.
- c. Nonshrink grout shall be used when specified. The grout shall have a minimum compressive strength of 5,000 psi in seven (7) days when

tested with AASHTO T 106 except that the cube molds shall remain intact with a top firmly attached throughout the curing period. The nonshrink grout shall have a minimum expansion of 0.0 percent after seven (7) days when tested in accordance with AASHTO T-160.

B. Mixing

1. Mortar may be mixed in an approved mixing machine or manually in a tight box. The dry materials shall be mixed until the mixture assumes a uniform color. Water shall be added as the mixing continues until the proper consistency has been attained for the intended use.
2. Mortar shall be mixed only in quantities that satisfy immediate use. Retempering of mortar shall not be permitted.

4.0 METHOD OF PAYMENT

Mortar will not be measured.

5.0 BASIS OF PAYMENT

Mortar will not be paid for as a separate item but is considered incidental to other items of work. Payment will be included in other related items of work and will constitute full compensation for all labor, equipment, tools, and incidentals necessary to complete the required work.

****END OF SECTION 04100****