

Special Specification 5079

Stone Masonry Columns



1. DESCRIPTION

This Item governs for the construction of stone masonry columns consisting of approved stone, laid in lime-cement mortar, and must be constructed in accordance with these specifications, in conformity with the form, dimensions, and design shown on the plans, and to the lines and grades established by the Engineer.

2. MATERIALS

Provide new materials in accordance with the following:

- 2.1. **Stone Veneer.** The stone must be sound, durable stone, free from structural defects, uniform in color and texture, and must be clean of earth, clay, oil or other foreign substances. Stones must be of the type and thickness shown on the plans.
- 2.2. **Concrete.** Concrete must be of the class specified on the plans and comply with Item 421, "Hydraulic Cement Concrete."
- 2.3. **Sand.** Sand must be free of deleterious or organic matter and must conform to the grading requirements for Fine Aggregate, Section 421.2.6.2.
- 2.4. **Water.** Mixing water must conform to the requirements of Item 421, "Hydraulic Cement Concrete," Section 421.2.5.
- 2.5. **Lime.** Hydrated lime shall conform to ASTM C-207, Type S.
- 2.6. **Excavation and Backfill for Structures.** Excavation and backfill must comply with Item 400 (as noted or shown on plans).
- 2.7. **Reinforcing Steel.** Reinforcing steel must comply with Item 440, "Reinforcement for Concrete" (as noted or shown on the plans).

3. CONSTRUCTION

Submit samples of the stone which show the complete color range to the Engineer for approval.

Build one mockup stone masonry column to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. This may be built on site as one of the permanent columns and paid for if approved.

Verify all dimensions incidental to this work and promptly report any discrepancies to the Engineer.

Construct stone masonry column in accordance with these specifications, in conformity with the form, dimensions, and design shown on plans, and to the lines and grades established by the Engineer.

Mortar must meet the requirements of ASTM C270, Type N. Mortar must be mixed in the proportions by volume of 1 part Portland cement, 1 part hydrated lime, and 6 parts of sand; or, 1 part of Type N masonry cement and 3 parts of sand.

Water content in the mortar mix must be the amount required to obtain a workable plastic mortar. Mixture must be mixed for a minimum period of three minutes in a drum type batch mixer and used within one hour after mixing. Mortar not used within that time must be discarded (retempering will not be permitted). The mortar boxes will be cleaned at the end of each day's work.

Stone masonry must be set by competent, experienced masons. Each stone must be cleaned, sponged, and drenched with clean water just before setting. Each stone must be set in a full bed of plastic mortar.

Face joints of Stone Veneer may vary from 1/2 in. to 2 in. in thickness. Joints must be uniform and raked out 1/4 in. deep for face pointing. Where necessary to prevent crushing mortar, small lead pads the thickness of the joint and set 1/2 in. back of the face must be used. Wood wedges will not be allowed. Joints not pointed at the time the stone is laid must be thoroughly wet with clean water and filled with mortar. The mortar must be well driven into the joints and finished with an approved pointing tool. The wall must be kept wet while the pointing is being done.

After the pointing is completed and the mortar set, all showing surfaces must be cleaned of loose mortar and cement stains. Just prior to the completion of the contract, the showing surfaces must again be cleaned in a manner satisfactory to the Engineer.

4. MEASUREMENT

This Item will be measured as each column, complete in place.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Stone Masonry Columns." This price is full compensation for furnishing and hauling all materials; for all freight involved; for excavation; for preparing and placing all materials, including concrete for footing; and for all labor, tools, equipment and incidentals.