

ITEM 07560.1396 M - NON-STRUCTURAL STONE MASONRY VENEER

DESCRIPTION

The work shall consist of furnishing and installing non-structural stone masonry veneer in accordance with this specification and the contract plans.

MATERIALS

The new stone masonry shall match or replicate the existing stone masonry as closely as possible in kind, sizes, quality, color, texture, and finish. It shall be obtained from an approved quarry and it shall be free from minerals which, by weathering, would cause discoloration or deterioration. The Contractor shall submit samples of the new stone masonry to the Engineer for approval.

Wire anchors shall be of chromium-nickel stainless steel, ASTM A167, Type 302 or 304, and provided as shown in the contract plans or as directed by the Engineer. Anchors shall be positioned within masonry joints under individual stones and shall be fully covered by masonry mortar. Drilling of stones will be permitted only when such work is authorized by and performed to the approval of the Engineer. The Contractor shall submit samples of the anchors to the Engineer for approval.

The cement used in the mortar shall be a type which is non-staining to the new and existing stone masonry. The color of the new mortar shall match the existing mortar. The masonry mortar shall conform to the requirements of the following Subsection of the Standard Specifications:

Subsection 705-21; Masonry Mortar

All cementitious materials and aggregates shall be mixed in a mechanical batch mixer for at least three (3) minutes after sufficient water has been added to obtain a workable consistency. Hand mixing of mortar may be permitted only for small quantities and as approved by the Engineer. No retempering of mortar will be allowed. Mortar shall be applied within twenty (20) minutes of reaching the required consistency.

Coloring agents shall make up no more than ten (10) percent of the cement content as measured by volume.

Plastic or lead "stand-offs" may be used during assembly in order to ensure a controlled and consistent mortar joint and prevent unset mortar from being compressed out of the joints.

Caulking compound shall conform to the requirements of Section 705-06, "Caulking Compound for Structures".

Joint filler shall conform to the requirements of Section 705-07, "Premoulded Resilient Joint Filler".

CONSTRUCTION DETAILS

The stone masonry shall be subject to the restrictions of Subsection 560-3.01, General, in the Standard Specification Manual, except as modified herein or in the contract plans.

The new stone masonry shall be placed in a pattern which matches or replicates the existing stone masonry as closely as possible and laid in masonry mortar.

ITEM 07560.1396 M - NON-STRUCTURAL STONE MASONRY VENEER

The surface finish of the stone masonry shall be rock-faced and shall not have any tool marks. Irregular projections shall be limited to a maximum of 75 mm for any one stone measured from the pitch line. There shall be no indentations.

The new stone masonry shall be laid on a line which matches or replicates the existing stone masonry as closely as possible. The bottom stones shall be the full size of the stone, and hollow or overhanging stones shall not be permitted.

The Contractor shall use extreme care when placing the mortar within the boundaries of the stone masonry to avoid causing air pockets or staining the face of the stone.

The stone masonry surface shall be thoroughly cleaned and the receiving surface shall be well-cleaned prior to placing the stone. The thickness of all joints and beds shall be uniform throughout. Spalls shall not be used as panners in mortar beds or joints. When any stone is disturbed or mortar joint broken, the stone shall be removed; after all mortar has been cleaned from the stone, bed, and joints, it shall be reset in fresh mortar. All stones shall be well-bedded, with the face joints properly raked before the mortar has set.

A sample wall shall be constructed by the Contractor (using stone masonry and masonry mortar conforming to this specification) at a location approved by the Engineer. The wall shall be 1.8 m in height and 1.8 m in length. The width of the sample wall shall match the width of proposed structure shown in the contract plans. This procedure shall be repeated by the Contractor until a sample wall is approved by the Engineer. The sample wall shall remain intact until the Engineer directs its removal.

The Contractor shall keep the masonry wet during pointing and in hot and dry weather, as determined by the Engineer, and shall protect it from the sun and keep it wet for a period of three (3) days after completion of work, unless otherwise permitted or directed. Face surfaces of the stone masonry shall not be smeared with mortar, and after pointing has been completed and set, they shall be thoroughly cleaned as directed by the Engineer.

Construction of the stone masonry shall not take place when the ambient temperature is less than 5°C, or when the stones contain frost, except by written permission from the Engineer. The provision of Subsection 560-3.01 of the Standard Specification pertaining to ambient temperature shall apply.

Stone shall not be dropped upon or slid over existing or new stone masonry, nor shall hammering or cutting of stones on existing or new stone masonry be allowed. Stones shall be carefully set without jarring stone masonry already placed, and they shall be handled in such a manner so as not to cause disfigurement.

The following are general requirements which will apply to the placing of the stone masonry:

Preparation of Stone and Bed - Each stone shall be cleaned and thoroughly saturated with water before being set. The surface which is to receive the masonry shall also be cleaned and moistened.

Spalls not Permitted in Mortar Beds - No pinning up of stones with spalls will be permitted and no spalls will be permitted in beds. Stones may only be supported by

ITEM 07560.1396 M - NON-STRUCTURAL STONE MASONRY VENEER

mortar beds with plastic or lead "stand-offs" and anchors and dovetails as called for in the contract plans or as approved by the Engineer.

Stone Shapes - There shall be no unusually shaped stone. This determination will be made by the Engineer.

Clusters - There shall be no clusters of stone of the same length and height.

Vertical Joints - There shall be no more than two (2) stones abutting any one (1) vertical joint. Vertical joints shall be at least 150 mm or more from each other.

Stone Proportions - All stones shall be proportioned as described in the Materials Section of this specification. The stones shall decrease in thickness from the bottom to the top of the wall. Cutting and shaping of the stone masonry may be performed by the Contractor in order to achieve the desired appearance.

METHOD OF MEASUREMENT

This work will be measured as the number of square meters (including joints) measured on the project plane of all exposed surfaces of the non-structural stone masonry veneer included in the contract plans.

BASIS OF PAYMENT

The unit price bid per square meter for this item shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work. All mortar joints between the non-structural stone masonry and concrete, metal dowels, ties, anchors, "stand-offs", or any other materials included in the construction of the non-structural stone masonry veneer shall be included in the unit price bid.

The cost of erecting and disposing of the sample wall shall be included in the unit price bid.