

ITEM 03560.01 M - REPAIRING ERIE CANAL STONE WALL WITH LIMESTONE CAP

DESCRIPTION:

This work shall consist of repairing sections of the Old Erie Canal stone wall that have collapsed due to structural instability, as shown on the plans or as directed by the Engineer. The contractor shall carefully remove existing dry laid stone masonry from its existing position, clean, and reset the stone in accordance with these specifications. Additional stone may be required. The top course shall be one size cut limestone set on a mortar bed as specified.

MATERIALS:

Stone:

The provisions of Section 560-2, Materials, and 704-09, Stone Blocks, shall apply with the following additions and modifications:

The existing stone masonry shall be used as approved by the Engineer. The contractor shall supply additional stone, if necessary, to complete the wall to the payment lines shown on the plans. Additional stone shall be shaley limestone from a local quarry. Stone shall be stockpiled at the site and approved by the Engineer. The stone shall resemble existing stone in size, shape and color. Only smaller sized stones shall be accepted and shall have the following approximate dimensions: length - 300 to 500 mm; width - 400 mm; and depth - 150 to 200 mm. Rectangular shapes with slight variations shall be accepted.

The limestone cap shall match lower course stone in type and color. Stone shall be cut with the following dimensions: length - 0.9 m; width - 400 mm; and depth - 200 mm.

Mortar:

The cement mortar shall be proportioned as follows:

Portland Cement, Type 2	1 Part by Weight
Masonry Cement	1 Part by Weight
Mortar Sand	4 ½ to 6 Parts by Weight

The ingredients for the cement mortar shall comply with the following:

Portland Cement, Type 2	701-01
Masonry Cement	701.02
Mortar Sand	703-03

CONSTRUCTION DETAILS:

No work shall begin until the coffer dam and turbidity curtain are in place, the work area is dewatered and the canal towpath is closed to public access. All work shall be completed within 45 calendar days from commencing work.

The contractor shall remove the existing stone masonry as shown on the plans or as ordered by the Engineer. Additional stone may be located in the canal bed and retrieved for use. All existing masonry to be reset shall be cleaned of any old mortar and all other foreign substances to the satisfaction of the Engineer. If a stone is damaged and cannot be reset, the contractor shall supply additional stone as needed.

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The base course of stone shall be set at the same elevation as the existing base course. Care shall be taken not to penetrate the clay liner of the canal. Any damage to the clay liner shall be repaired at the contractor's expense.

The existing stone shall be reset in accordance with the requirements of Subsection 560-3.04, Stone Masonry, except Stone Proportions do not apply and the sample wall shall not be required. All stone shall be laid in a pattern that closely resembles the existing configuration. Larger stone shall be placed in the lower courses and stones shall abut each other with minimal joints. The top course shall have an elevation as shown on the plans. Variations in depth greater than 50 mm between abutting stones in the next to last upper course shall not be permitted. The top course shall utilize a mortar setting bed with a minimum depth of 25 mm and a maximum thickness of 75mm. The top course stones shall abut each other with minimal joints. No mortar shall be used in these joints.

METHOD OF MEASUREMENT:

This work will be measured by the number of square meters measured along the plane of the exposed surface of the stone masonry, reset in its final location. Stone masonry shown on the plans below the water level shall be considered exposed in computing the payment area for this item.

BASIS OF PAYMENT:

The unit price bid per square meter shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work as shown on the plans. Select Structure Fill, Item 203.21 M; Structure Excavation, Item 206.01 M; Geotextile Bedding, Item 207.01 M; Turbidity Curtain, Item 209.07 M; and Cofferdams (Type 2), Item 553.02nnnn M, as shown on the details, shall be paid for under their respective items.