

## SECTION 6.06 CEMENT RUBBLE MASONRY

**6.06.01--Description:** This item shall consist of approved stone, laid in full mortar beds, constructed in such shapes and at such places as indicated on the plans or where directed, and in accordance with these specifications.

**6.06.02--Materials:** The materials for this work shall conform to the requirements of Article M.11.02 for rubble masonry stone and Article M.11.04 for mortar.

**6.06.03--Construction Methods:** The masonry shall be constructed in the location and to the dimensions shown on the plans or as ordered.

**1--Dressing Stone:** All necessary dressing or shaping shall be done before the stone is laid in the wall. No dressing or hammering which will loosen the stone will be permitted after it is placed. Stone at angles or at ends of walls shall be roughly squared and dressed to the required lines.

**2--Laying Stone:** Stone shall not be laid when the air temperature in the shade and away from artificial heat is 5° C or below and falling, except with the approval of the Engineer and subject to such conditions as he may impose.

The masonry shall be laid to line and in courses roughly leveled up. The bottom or foundation courses shall be composed of large, selected stones; and all courses shall be laid with bearing beds parallel to the natural bed of the material.

Each stone shall be cleaned and thoroughly saturated with water before being set. Stone shall not be dropped or slid over the wall but shall be carefully set without jarring stone already laid. All stone shall be well bedded in freshly made mortar. The mortar joints shall be full and the stones carefully settled in place before the mortar has set. No spalls will be permitted in the beds. Joints and beds shall have an average thickness of not more than 38 mm.

Headers shall be placed in each course and shall have a width of not less than 1 1/2 times their thickness. They shall bond with the core or backing not less than 300 mm; and in walls 600 mm or less in thickness, they shall extend entirely through the wall. Headers shall occupy not less than 1/5 of the face area of the wall and shall be evenly distributed.

Whenever possible the face joints shall be properly pointed before the mortar becomes set. Joints which cannot be so pointed shall be prepared for pointing by raking them out to a depth of about 50 mm before the mortar has set. The face surfaces of stones shall not be smeared with the mortar forced out of the joints or that used in pointing.

The vertical joints in each course shall break joints with those in adjoining courses at least 150 mm. In no case shall vertical joints be so located as to occur directly above or below a header.

In case any stone is moved or the joint broken, the stone shall be taken up, the mortar thoroughly cleaned from bed and joints, and the stone reset in fresh mortar.

**3--Pointing:** Pointing shall not be done in freezing weather or when the stones contain frost.

Joints not pointed at the time the stones are laid shall be thoroughly wet with water and filled with mortar. The mortar shall be well driven into the joints and finished with an approved pointing tool. The wall shall be kept wet while pointing is being done; and in hot or dry weather, the pointed masonry shall be protected from the sun and kept wet for a period of at least three days after completion.

After the pointing is completed and the mortar set, the wall shall be thoroughly cleaned and left in a neat and workmanlike condition.

Cofferdams shall be so maintained that the masonry is not exposed to the action of running water until such time as the mortar has attained a strength sufficient, in the opinion of the Engineer, to prevent injury to the work from such exposure.

**6.06.04--Method of Measurement:** This work will be measured for payment as follows:

**1--Cement Rubble Masonry:** The quantity of cement rubble masonry shall be the actual number of cubic meters, completed and accepted, within the neat lines as shown on the plans or as ordered by the Engineer. No deduction will be made for the volume occupied by culvert or drainage pipes having an exposed surface area of less than 1 square meter for each opening. The computation of the surface area shall be based on the nominal diameter of the pipe, disregarding the thickness of the shell.

**6.06.05--Basis of Payment:** This work will be paid for as follows:

**1--Cement Rubble Masonry** will be paid for at the contract unit price per cubic meter for "Cement Rubble Masonry" complete in place which price shall include all materials, equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
Cement Rubble Masonry	m <sup>3</sup>