

Drainage structures abandoned will be paid for at the contract unit price each under the item for Drainage Structures Abandoned.

Drainage structures removed will be paid for at the contract unit price each under the item for Drainage Structures Removed.

140.82 Payment Items.

140.	Bridge Excavation	Cubic Meter
140.1	Bride Excavation Within Cofferdam	Cubic Meter
141.	Class A Trench Excavation	Cubic Meter
142.	Class B Trench Excavation	Cubic Meter
143.	Channel Excavation	Cubic Meter
144.	Class B Rock Excavation	Cubic Meter
145.	Drainage Structure Abandoned	Each
146.	Drainage Structure Removed	Each
121.	Class A Rock Excavation	Cubic Meter
999.141	Extra Depth Class A Trench Excavation	Cubic Meter
999.143	Test Pit Excavation	Cubic Meter
999.144	Cofferdam Class B Rock Excavation	Cubic Meter

SECTION 148

DREDGING

DESCRIPTION

148.20 General.

Dredging shall consist of the removal and disposal of all materials within the limits shown on the plan, or as laid out in the field. Materials shall be removed to the depths shown on the plan. All dredging material will be classified as "Material, Dredged and Disposed", "Rock, Removed from Dredged Area and Disposed", and "Ledge, Removed from Dredged Area and Disposed".

The Contractor's attention is directed to the requirements of Section 7.00 concerning Prevention of Water Pollution and Erosion.

148.21 Material, Dredged and Disposed.

Material, Dredged and Disposed, shall consist of all material removed from the dredging area and placed in scows and disposed of where and as directed in the Special Provisions; not included are Rocks, Removed from Dredged Area and Disposed, and Ledge, Removed from Dredged Area and Disposed.

148.22 Material, Dredged and Disposed (Hydraulic Method).

Material, Dredged and Disposed (Hydraulic Method), shall consist of all material removed from the dredging area and disposed of by Hydraulic dredging methods where and as described in the Special Provisions; not included are Rocks, Removed from Dredged Area and Disposed, and Ledge, Removed from Dredged Area and Disposed.

148.23 Rocks, Removed from Dredged Area and Disposed.

Rocks in excess of 1 cubic meter in volume, and less than 4 cubic meters in volume, which are entirely removed from the dredged areas and deposited at a location approved by the Engineer, will be paid for under this item. No compensation will be made for rocks which are lowered so that they are below the depths of the proposed work.

148.24 Ledge, Removed from Dredged Area and Disposed.

Ledge or Rocks (including masonry) in excess of 4 cubic meters in volume encountered within the dredging limits shall be removed and disposed of, upon the direction of the Engineer.

148.25 Mobilization and Demobilization.

Mobilization and Demobilization shall consist of the mobilization of all the Contractor's dredging plant, including tugs, scows, pipe lines, pontoons, and all equipment at the site of the work prepared to commence dredging operations: and upon completion of dredging operations the demobilization and removal of all aforesaid plant and equipment.

CONSTRUCTION METHODS

148.60 General.

The material shall be removed by dredging plant and equipment either by the Hydraulic Method or by placing the material in scows and disposing of it outside of the dredging areas. The method(s) to be used will be specified in the Special Provisions.

If no area for the disposal of material is stated in the Special Provisions, it shall be the Contractor's responsibility for the negotiations necessary to furnish all required areas for disposal of materials.

In the dredging and disposal of dredged material, the Contractor will be required to observe all laws of the United States, all requirements of the U.S. Corps of Engineers and all local or state authorities in relation thereto. The Contractor's attention is directed to the fact that material disposal of below mean high water requires a permit from the U.S. Corps of Engineers and a license from the Commonwealth.

The areas shown on the plans, or as laid out in the field, shall be dredged so that they shall have throughout upon completion of the work the specified depths over their whole extent as shown on the plans, with the banks at the sides sloped at an angle of approximately 1 vertical to 3 horizontal, unless otherwise shown on the plan. The Contractor shall make the bottom of the dredged areas as smooth and level as possible to or slightly below the required depths.

The Contractor shall exercise extreme caution in any location in which the dredging operations are in close proximity to structures. The Contractor shall bear full responsibility for damage of any nature to structures caused by dredging beyond the limits shown on the plan or as laid out in the field and such damage shall be satisfactorily remedied at the sole expense of the Contractor.

The Contractor shall conduct his/her dredging and disposal operations so as to cause a minimum of interference with navigation.

The Contractor shall furnish regularly to inspectors on board the dredge or other craft upon which they are employed, when transportation ashore is impracticable, a suitable room for office and sleeping purposes. The room shall be properly heated, ventilated and lighted and shall have a desk which can be locked, a comfortable bed and chair for each Inspector, and washing conveniences. If such quarters and conveniences are not provided, or the work is so located that transportation ashore can be furnished without interference with the work, the Contractor shall provide the Inspector with transportation to and from such points ashore as the Engineer may from time to time designate.

If the Contractor maintains on his/her work an establishment for the subsistence of his/her own employees, he/she shall furnish to Inspectors and survey parties when employed on the work, meals of satisfactory quality.

Each Bidder shall state in his/her Proposal whether the plant proposed to be used on the work has facilities for furnishing the meals and accommodations required.

The entire cost to the Contractor for furnishing, equipping and maintaining the foregoing accommodations, providing transportation ashore, and furnishing meals, shall be included in the price bid for dredging.

COMPENSATION

148.80 Method of Measurement.

The amount of material dredged and disposed of will be determined by preliminary and final cross sections taken by the Engineer in the dredging area. If this method is impracticable, the Engineer will determine the method of measurement.

If the alternate method of measurement is by measuring the dredging materials in the scows in which it is placed for disposal, such actual scow quantities as determined by the measurements shall be divided by 1.15 to compensate for bulking or swelling. The quotient for this division shall then be the quantity to be paid for.

The quantity of materials shown in the Proposal has been computed to the payment limits.

The Engineer may take additional soundings before the work is started, which soundings shall be the preliminary soundings for payment purposes.

Pay limits for material actually dredged and disposed will be as follows:

A. Bottom – Depth up to and including 8 meters below mean low water plus 300 millimeters below the required depths. Depths more than 8 meters below mean low water plus 600 millimeters below the required depths.

B. Side slopes shall be as shown on the plans.

Rocks. Removed from Dredged areas and Disposed will be determined by measurement made by the Engineer.

Ledge. Removed from Dredged Areas and Disposed will be determined by preliminary and final cross sections taken by the Engineer in the dredging area. The overlying material shall be removed prior to the Engineer taking preliminary cross sections. If this method of measurement is impracticable, the Engineer will determine the method of measurement.

Mobilization and Demobilization will be paid for at the contract lump sum price. The Contractor will be paid sixty percent of the lump sum price upon completion of his/her mobilization at the work site. The remaining forty percent will be included in the final payment for work under the Contract.

148.81 Basis of Payment.

All classes of dredged material will be paid for at the contract unit price per cubic meter for the particular type of material removed and disposed as defined hereinbefore.

148.82 Payment Items.

148	Dredging and Disposing of Material	Cubic Meter
148.1	Dredging and Disposing of Material (Hydraulic Method)	Cubic Meter
148.2	Removal and Disposal of Rock from Dredged Areas	Cubic Meter
148.3	Removal and Disposal of Ledge from Dredged Areas	Cubic Meter
148.4	Dredging, Mobilization and Demobilization	Lump Sum

SECTION 150

EMBANKMENT