

PART 1 - GENERAL

1.1 Definitions

- .1 Dredging: excavating, transporting and disposing of underwater materials.
- .2 Class 'B' Material: loose or shale rock, silt, sand, quick sand, mud, shingle, gravel, clay and sand, gumbo, boulders, hardpan, or debris.
- .3 Debris: pieces of wood, wood chips, bark, logs, submerged logs, tree branches, scrap vehicle tires, concrete, steel cable, steel chain, wire rope, scrap steel, etc.
- .4 Grade: plane above which all material is to be dredged.
- .5 Estimated Quantity: volume in cubic metres of material calculated to be above dredge grade and within side slopes, unless otherwise specified.
- .6 Sideslope: inclined surface or plane from grade at side limit of dredging area to intersect original ground line outside of side limit and to be expressed as a ratio of horizontal to vertical. All material above side slopes is to be dredged.
- .7 Chart Datum: by international agreement, a plane below which the tide will seldom fall. The Canadian Hydrographic Services has adopted the plane of Lowest Normal Tide (LNT) as Chart Datum. As the rise, fall and ranges of tides varies daily, The Canadian Hydrographic Services should be consulted for tidal prediction and other tidal information relating to the work.
- .8 CPM: cubic metres place measurement.
- .9 CMTM: cubic metres truck measurement.

- 1.2 Description of Work
- .1 The work is to include but not to be limited to the following:
 - .1 Phase 1 - Removal of dredge spoils from on-site containment cell and disposal at the off-site designated disposal site.
 - .2 Phase 2 - Class 'B' dredging of basin.
 - .3 Phase 3 - Class 'B' dredging of channel.
 - .2 Excavation of existing dredge spoils material from on-site containment cell and Class 'B' dredging of basin and channel to lines and grades as shown on the drawings.
- 1.3 Related Work
- .1 Refer to **Environmental Protection Procedures for Marine Work - Section 01 35 44** for related information.
 - .2 Refer to **Section 01 33 00** for Shop Drawing/Submission requirements.
- 1.5 Submissions
- .1 Certificates:
 - .1 Provide copies of all permits and licenses required to carry out the work.
 - .2 Methodology:
 - .1 Provide methodology for carrying out the work.
 - .3 Provide submissions in accordance with **Section 01 33 00**.
- 1.6 Schedule of Work
- .1 Submit to Departmental Representative within 5 working days after award of contract, a schedule of work including time periods during which each operation involved in work will be undertaken.
- 1.7 Interference to Navigation
- .1 Be familiar with vessel movements and fishery activities in area affected by dredging operations. Plan and execute work in a manner that will not unnecessarily

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- impede navigation and fishing operations including movement of vessels at adjacent structures.
- .2 Keep Canadian Coast Guard informed of dredging operations in order that necessary Notices to Shipping will be issued.
- 1.8 Requirements of Regulatory Agencies
- .1 Comply with municipal, provincial and national codes and regulations relating to project.
- .2 Mark floating equipment with lights in accordance with Regulations for the Prevention of Collisions, as required by Transport Canada.
- 1.9 Datum, Water Gauges and Targets
- .1 All elevations used in this specification and contract drawings are in metres referred to Chart Datum.
- 1.12 Equipment
- .1 Determine the equipment required to dredge the area and material specified.
- 1.13 Site Information
- .1 Results of prior soundings, soil borings and soil investigations may be available for inspection at offices of Public Works and Government Services Canada, P.O. Box 2247, 1713 Bedford Row 2nd Floor, Halifax, N.S. B3J 3C9
- .2 Results of most recent soundings are included with the drawings. This data is made available for tendering purposes only. It should be noted that this information may differ from present site conditions.
- .3 The Contractor will be responsible for making his own interpretation of soil conditions at any location.
- 1.14 Measurement for Payment
- .1 Only material excavated above grade plane and within side slopes indicated or specified will be measured for payment.

- .2 Excavation and Dredging will be measured in accordance with **Section 01 29 00**.
- .3 Material removed and dumped in the absence of the Department's Inspector will not be considered for payment.
- .4 There will be no additional payment for delays incurred as a result of weather conditions.
- .5 There will be no additional payment for delays caused by vessel traffic in and out of the harbour.
- .6 There will be no additional payment for down time.
- .7 The Contractor will adhere to the schedule and take immediate action to correct any shortfall, by effectively altering existing dredging operations or mobilizing other equipment. The Departmental Representative is to be notified of the corrective action to be taken.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

3.1 General

- .1 Mark floating equipment with lights in accordance with International Rules of Road and maintain a radio watch on board.
- .2 Lay out work from bench marks and base lines established by Departmental Representative. Be responsible for accuracy of work relative to established bench marks. If applicable, provide and maintain electronic position fixing and distance measuring equipment, laser transits and such other equipment as normally required for accurate dredging control.

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- .3 Establish and maintain water level gauges in order that proper depth of dredging can be determined. Locate gauges so as to be clearly visible.
 - .4 Establish and maintain on-land targets for location and definition of designated dredge area limits. Targets to be suitable for control of dredging operations and locating soundings. Remove targets on completion of work.
 - .5 Dredge area to the grade depths indicated on the plan.
 - .6 Dredging is to take place during the time periods indicated in these specifications.
 - .7 Dredge side slope to allow material to freely fall inwards to form natural side slope.
 - .8 Use extreme caution when dredging adjacent to existing structures. Damages are to be repaired at contractor's expense.
 - .9 Remove materials above specified grade depths, within limits indicated. Material removed from below grade depth or outside specified area or side slope is not part of work.
 - .10 Remove shoaling which occurs as a result of work. Once dredged, maintain dredged area at grade.
 - .11 Remove material cast-over on surrounding area and dispose of it as dredged material. Do not cast-over material unless authorized by Departmental Representative.
 - .12 Immediately notify Departmental Representative upon encountering an object which might be classified as an obstruction. By-pass the object after clearly marking its location and continue work.

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- .13 It will be the Contractor's responsibility to gain access to the dredge area. The construction of causeways, roads, etc., will be at the Contractor's expense and will be removed at the completion of the project. Any derricks, power lines, etc., which will require removal will be done so at the Contractor's expense and will be replaced to satisfaction of the Departmental Representative. Contractor to advise Departmental Representative of his proposed method to carry out dredging and disposal of the material.
- 3.2 Disposal of Material
- .1 Refer to In-water Environmental Mitigation Measures - Section 01 44 29 for related information.
- .1 The Contractor shall excavate and remove the material from the on-site containment cell and dispose of the material at the off-site designated disposal site as indicated on the contract drawings and in such a manner as approved by the Departmental Representative.
- .2 The material dredged from the basin and channel is to be disposed at the on-site containment cell as indicated on the contract drawings and in such a manner as approved by the Departmental Representative.
- .2 All materials deposited on private or public roads or properties in vicinity of site or as a result of trucking material to dump site will be removed by Contractor to satisfaction of owners involved at no additional cost to Department.
- .3 Unless directed otherwise by Departmental Representative, dispose of all dredged material off department property to the satisfaction of the Departmental Representative.

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- .4 The contractor shall ensure that trucks used in the transportation of dredge spoils are roadworthy and have tight fitting gates to prevent spillage on the road. Trucks not meeting this criteria may be removed from the project by the Department Representative.
- .5 Clean truck boxes and wheels of dredge spoils before moving onto provincial roads. Vehicle wash down stations may be required at both the loading and offloading sites to ensure the above requirements are met.
- 3.3 Final Dredge Grade
- .1 The Contractor is to verify the final grade in the dredged area by an acceptable method.
- .2 If, as a result of incomplete work, additional verification of depths by sounding or sweeping becomes necessary, additional costs involved shall be paid by Contractor.
- .3 Dredge area to lines and grades specified as shown on the drawings. Material removed from outside specified limits is not considered part of work and will not be measured for payment.
- 3.4 Co-operation and work assistance to Departmental Representative
- .1 Co-operate with Departmental Representative for inspection of and assistance requested.
- .2 On request of Departmental Representative, furnish use of such boats, equipment, labour and materials forming ordinary and usual part of dredging operation as may be reasonably necessary to inspect and supervise work.
- 3.5 Rock Removal
- .1 Blasting not permitted.