

PART 1 - GENERAL

- 1.1 Definitions
- .1 Sand Trap Maintenance: excavating, transporting sand which has accumulated in the sand trap, from above and below chart datum, and placing it down drift of the harbour, configured as shown on the Plan.
 - .2 Obstructions: material other than class A, having individual volumes of 1.5 m³ or more.
 - .3 SQM: area in square metres projected horizontal.
 - .4 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.
 - .5 Subgrade: plane to the elevation that material is to be excavated.
 - .6 Estimated quantity:
 - .1 Volume of material calculated to be within excavation limits, above grade and within side slopes.
 - .2 Area of the dredge limits, in square metres of material, calculated horizontally, not inclusive of side slopes.
 - .7 Side slope: inclined surface or plane from subgrade 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.
 - .8 Chart Datum: 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.
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- 1.1 Definitions (Cont'd)
- .9 Coordinates:
.1 U.T.M.: universal transverse mercator projection.
.2 U.T.M. Coordinates: plane rectangular coordinates used in grid system in which grid network is applied to U.T.M. projection. Horizontal control information as indicated.
- .10 Lowest Normal Tide (L.N.T.): plane so low that tide will seldom fall below it.
- .11 Cleared Area: area of excavation deemed to be excavated to grade, and accepted as complying with plans and specifications.
- 1.2 Quantities
- .1 Work comprises of excavating the sand trap as described on the plans and described herein.
.1 The Area of the sand trap is approximately 12000 sq metres, plus sideslopes, however, this amount varies year to year based on infilling. Available funding may affect amount of maintenance work carried out.
.2 The calculation of estimated volume will be 2.5m or 3.5m, multiplied by the call up area, plus side slopes volumes where applicable. The Contractor is advised that he is to carry out his own volume calculations based on his methods of dredging, and to advise PWGSC of significant discrepancies.
- 1.3 Work Restrictions
- .1 Sand Trap Maintenance will be carried out in the period from January 01 to April 15.
- .2 Fence installation at Pointe Sapin will be prior to April 30.
- .3 Fence Removal could be requested at any time from August to January.
- 1.4 Datum, Water Gauges and Targets
- .1 Elevations used in this specification and contract drawings are in metres referred to Chart Datum.
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- 1.4 Datum, Water Gauges and Targets (Cont'd) .2 Areas to be excavated are to be referenced to vertical bench marks for each location of dredging as indicated.
- 1.5 Measurement for Payment .1 Only material excavated above grade plane and within side slopes indicated or specified will be measured.
- .2 **Mobilization and Demobilization** of equipment and devices for the sand bypassing will be lump sum. One half of the sum allotted for mobilization and demobilizing unit price shall be payable upon commencement of excavations, and the remainder shall be payable after project completion and equipment has demobilized.
- .1 Mobilization will not be paid in subsequent call ups if equipment is still on site.
- .2 Access to a portion of the beach where sand is placed is made over private land PID 25209958, and will require payment of an annual access fee when working on the private lands. The contractor is to pay the annual lump sum amount of \$750.00 to the land owner if the property is used to access site.
- .3 **Sand By Passing:** The excavation of a 2.5 m or a 3.5 m layer of sand within the limits shown on the drawings including the transportation and configuration of the sand on the beach at disposal site "A" and disposal site "B" will be measured by the square metres (SQM).
- .1 Reshaping and maintenance of the access road along the beach during the sand trap works, transportation and upon completion of the works will be considered incidental to this item and will not be measured separately for payment.
- .2 Dredging of side slopes where required will be considered incidental to this item and will not be measured separately for payment.
- .3 The Area to be excavated will shown on a Call Up plan and the area will be calculated using the AUTOCAD's "AREA" command.
- .4 The crest height of the sand trap may vary, but typically reaches 1.0 to 2.0m above Chart Datum. Flooding of the sand trap is possible during high tides. The import and construction of fill access roads on top of
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1.5 Measurement .3
for Payment
(Cont'd)

Sand By Passing:(Cont'd)

.4 (Cont'd)

the sand trap is not permitted, rather the contractor is expected to work with tides to excavate these areas.

.5 The Area to be excavated will also include areas from Elevation +2.0m to Elevation 0.00 and beyond this contour by approximately 15m. It is expected that to reach these areas sand roads will be constructed under Excavator time.

.6 Occasionally, a layer of ice may form on the sand trap. It will be the contractor's decision to remove this ice before construction or to use the ice as a platform and remain above the high tides, managing the ice during the construction. In either situation, the removal of the ice is the Contractor's responsibility and is not measured for payment.

.4 **Excavator:** The use of an an excavator to complete work which is not paid in the above sections will be per hour of operation. The Excavator may be called to perform these tasks:

.1 construction of temporary access roads to reach remote areas of the sand trap.

.2 Removal of excessive ice ridges, ice bergs, or seaweed at the Sand Trap.

.5 The following will not be measured, but rather considered incidental to doing work:

.1 Snow and ice removal to access the sand trap and disposal site.

.2 Installation of traffic controls or delays due to interference with traffic.

.3 Down time due to flooding.

.4 The delay or cancellation of work due to presence of migratory birds at sand trap or beach.

.5 Cleaning of equipment prior to mobilization, and cleaning equipment upon completion subject to invasive species.

.6 Disposal of debris encountered in the Sand Trap

.7 All operations in connection with field positioning of excavation equipment will not be measured for payment.

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- 1.5 Measurement for Payment (Cont'd) .6 There will be no additional payment for downtime and for delays caused by weather, tides or ice conditions.
- 1.6 Excavation Equipment .1 Contractor to determine required equipment necessary to dredge material specified and to dispose of dredged material at locations specified.
- 1.7 Survey Requirements .1 No pre-dredge surveys exist. Confirmation of height of sand in sand trap will be made at the time of the call ups.
- 1.8 Surveys and Acceptance of Work .1 At the time of call up, the Departmental Representative will meet with the contractor to establish the areas to be excavated, i.e establishing low water limits and potential of over water excavation.
- .2 Excavation will be cleared on a day-to-day basis. The excavations will be deemed clear when the 2.5 m or 3.5 m layer of sand has been excavated in front of the excavator, and the side slopes stabilized so that no material is slumping into the excavation.
- .3 Contractor will not be expected to redredge areas missed or areas that did not reach grade after the area becomes inaccessible by land based equipment. However, these areas will be deducted from payment or pro-rated as to the amount of excavation completed.
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PART 2 - PRODUCTS

- .4 Not applicable.

PART 3 - EXECUTION

3.1 Sand Removal

- .1 Mark the area to be excavated with reflective tape or lights to warn of deeper water or altered ice conditions.
- .2 Place and maintain markers, ranges (marked with reflective tape) and lights required to define work and disposal areas.
- .3 Lay out work from bench marks and reference lines as shown on plan. Be responsible for accuracy of work relative to established bench marks and baseline. Provide and maintain electronic position fixing and distance measuring equipment, laser transits and such other equipment as normally required for accurate dredging control.
- .4 Dredge side slopes to 1.0 horizontal to 1.0 vertical.
- .5 Remove materials above specified grade depths, within limits indicated, and side slopes. Material removed from below subgrade depth or outside specified area or side slope is not part of work.
- .6 Immediately notify Departmental Representative upon encountering an object which might be classified as an obstruction. By-pass object after clearly marking its location and continue work.

3.2 Placing Sand on the Beach

- .1 Placement of sand on the beach is considered to be within the jurisdiction of Coastal Zone Policy of New Brunswick and will be carried out in accordance with the conditions of the policy as well as restrictions and conditions imposed by New Brunswick Department of Environment and New Brunswick Department of Natural Resources.
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3.2 Placing Sand
on the Beach
(Cont'd)

- .2 The placement of the excavated material south of the bait shed is reserved only for materials from the sand trap. The intent is to restore the beach and dune west of the bait shed, and to promote the reformation of a typical coastal environment south of the bait shed.
- .3 Prepare the site to receive the sand. Remove or open fences where traffic is expected to circulate.
- .4 Layout approved areas to be used for disposal with painted survey stakes and maintain layout at all times during work.
- .5 The excavated material from the sand trap is to be placed on the beach and shaped to emulate a natural and stable beach and dune. Grade within limits and elevations shown on the plan. Do not interrupt drainage.
- .6 The Contactor is to repair any roads that have been deemed to have been damaged as a result of this work at no extra cost to the owner. The exception to this is if the Departmental Representative authorizes the work during a period when damage is unavoidable, i.e spring thaw, late fall during freeze up or wet periods.
- .7 The contractor will be required to clean off and remove from the wharf, parking lots, lawns, ditches etc., any material that has leaked or spilled from trucks, or tracked with equipment, during the project, so as to reduce potential of blowing sand.
- .8 When debris is encountered, i.e lobster traps, nets, rope, wood, or plastics, remove this material from the excavate materials and direct this material to land fill.