PART 1 - GENERAL

1.1 DESCRIPTION

.1 This section specifies requirements for cribseat excavation as required for crib placement.

1.2 RELATED SECTIONS

.1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.3 DEFINITIONS

.1 Cribseat excavation: excavating, transporting and disposing of above and below water materials.

.2 Class A material: solid rock requiring drilling and blasting to loosen, and boulders or rock fragments of individual volumes 4 m^3 or more.

.3 Class B material: loose or shale rock, silt, sand, quick sand, mud, shingle, gravel, clay, sand, gumbo, boulders, hardpan and debris of individual volumes less than 4 m^3.

.4 Obstructions: material other than Class A, having individual volumes of 4 m^3 or more.

.5 CMPM: cubic metres place measurement.

.6 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.

.7 Grade: plane above which material is to be excavated (hard bottom).

.8 Side slope: inclined surface or plane from subgrade at side limit of excavated area to intersect original ground line outside of side limit and to be expressed as ratio

of horizontal to vertical.

.9 Chart Datum: permanently established plane from which soundings or tide heights are referenced, usually Lowest Normal Tide (LNT).

.10 Coordinates:
.1 U.T.M.: universal transverse mercator projection.
.2 M.T.M.: modified transverse mercator projection.
.3 U.T.M. or M.T.M. Coordinates: plane rectangular coordinates used in grid system in which grid network is applied to U.T.M. or M.T.M. projection. Horizontal control information as indicated.

.11 Minimum Mode: mode of operation of hydrographic survey equipment where minimum sounding over length of travel between position updates will be retained in memory. Soundings taken in this mode may be shallower than actual bottom elevations due to variations in water depths due to wave action.

.12 Matrix Block: each excavated area is presented as number of 1.2 x 3.0 m long blocks. Dependent on position of sounding, block may have 0 to 4 soundings contained within it.

.13 Least of Minimum Plan: hydrographic survey plan in which least sounding in grouping of matrix blocks is plotted.

.14 Instanteous Mode: mode of operation of hydrographic survey equipment where only sounding observed at predetermined distance interval is retained in memory.

.15 Average of Instanteous Plan: hydrographic survey plan in which average sounding in

appropriate grouping of matrix blocks is plotted.

.16 Lowest Normal Tide (LNT): plane so low that tide will seldom fall below it.

1.4 REGULATORY REQUIREMENTS

.1 There are strict environmental procedures that must be followed during the Work.

.2 Comply with municipal, provincial and national codes and regulations relating to project.

.3 Mark floating equipment with lights in accordance with the provisions of the Canada Shipping Act Collision Regulations and Notices to Mariners.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

.2 All excavated material must be disposed of at an authorized landfill facility, using water tight trucks, as directed by the Departmental Representative.

.3 Contaminated sediments must be disposed of in confined disposal facility or capped disposal site.

.4 Metals, wood and recyclable materials removed during excavation activities must be diverted appropriate recycling facilities.

1.5 SCHEDULING

.1 Submit to Departmental Representative, within 2 weeks after acceptance of bid, schedule of work including time periods during which each operation involved in Work will be undertaken. At time of

submission of schedule, meet with Departmental Representative to review schedule.

.2 Adhere to schedule and take immediate action to correct any slippage by effectively altering existing excavating operations or mobilizing other equipment. Notify Departmental Representative of corrective action to be taken.

1.6 LOCATION

.1 Work comprises of the removal of Class “B” material to approximately 1000 mm to the refusal layer defined by the probing information provided on the drawings.

1.7 INTERFERENCE TO NAVIGATION

.1 Be familiar with vessel movements and fishery activities in area affected by excavating operations. Plan and execute Work in manner that will not interfere with fishing operations, marine operations and construction activities at wharf sites, or access to wharves by land or water.

.2 Departmental Representative will not be responsible for loss of time, equipment, material or any other cost related to interference with moored vessels in harbour or due to other Contractor's operations.

.3 Keep the Marine Communications and Traffic Services' Centre, Fisheries and Oceans Canada, informed of excavating operations in order that necessary Notices to Mariners will be issued.

1.8 DATUM, WATER GAUGES AND TARGETS

.1 Elevations used in this specification and contract drawings are in metres referred to Canadian Hydrographic Services Survey

datum.

.2 Areas to be excavated are to be referenced to vertical bench marks for each location of excavation as indicated.

.3 Chart datum for soundings indicated is assumed to be + 2.120 m below Bench Mark PWC 2-95.

1.9 FLOATING PLANT

.1 Floating plants to be employed on this Work, to be of Canadian registry, make or manufacture, or, must receive certificate of qualification from Industry Canada, Aerospace, Defence and Marine Branch and this certificate to accompany bid submission.

.2 Requests for certification in format of form PWGSC-TPSGC 2843 (06/2007) attached to the Bid and Acceptance Form to be directed to Mr. Emile Rochon, Aerospace, Defence and Marine Branch, Industry Canada, CD Howe Building - Room 733C, 235 Queen Street, Ottawa, Ontario, K1A 0H5, and to be received there not less than 14 days prior to bid closing.

1.10 INSPECTION OF SITE

.1 Contractor to visit site of Work and become thoroughly familiar with extent and nature of Work and conditions affecting Work before bidding.

1.11 SITE INFORMATION

.1 Results of most recent geotechnical investigations are shown on the drawings. Additional information pertaining to sub-surface conditions may be available for inspection by contacting the Contracting Officer.

.2 Results of most recent soundings are

included on the drawings. This data will be used for all calculations for quantity purposes. If the contractor wishes to perform own survey, a written notice must be submitted to the Departmental Representative (at least 7 days notice) so PWGSC can verify the sounding survey before the commencement of any work.

.3 Results of prior soundings and geotechnical investigations are made available for bidding purposes only. It should be noted that this information may differ from site condition. Take this into consideration when submitting bid.

.4 Contractor is responsible for his own assumptions and interpretations of the information provided in determining its method of work and associated pricing of the bid.

.5 Take necessary steps to become fully familiar with potential inclement weather and sea conditions in this area.

1.12 SURVEY REQUIREMENTS

.1 Provide, at own expense, survey vessel, equipment and crew to set up and maintain control for location of excavation limits and to sound areas immediately after excavation to verify that grade depth has been attained. Areas are to be sounded to provide sounding printout display of at least 1 x 1 m UTM grid to approval of Departmental Representative.

.2 In the event that the approximate excavation limits to reach hard bottom, as shown on the drawings, are not achieved, the contractor, in consultation with the Departmental Representative, is to demonstrate through the use of excavation equipment or other means, that sufficient

overburden material has been removed to ensure cribwork will come to rest on hard bottom, prior to any placement of any cribwork.

1.13 MEASUREMENT FOR PAYMENT

.1 No separate measurement shall be made for cribseat excavation. Include all costs incidental to the unit price for timber cribwork as per Section 31 53 13.

PART 2 - PRODUCTS

2.1 EXCAVATING EQUIPMENT

.1 Contractor to determine required equipment necessary to excavate material specified and to dispose of excavated material at locations specified or indicated.

PART 3 - EXECUTION

3.1 GENERAL

.1 Mark floating equipment with lights in accordance with the provisions of the Canada Shipping Act Collision Regulations and maintain radio watch on board.

.2 Place and maintain buoys, markers and lights required to define work and disposal areas.

.3 Lay out Work from control points and baselines established by Departmental Representative. 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 excavation control.

.4 Establish and maintain water level gauges

or tide boards in order that proper depth of excavation can be determined. Locate gauges tide boards so as to be clearly visible.

.5 Establish and maintain on-land targets for location and definition of designated excavation area limits. Targets to be suitable for control of excavating operations and locating soundings. Remove targets on completion of Work.

.6 Excavate to requirements of the contract.

.7 Excavate side slopes to 1.5 horizontal to one vertical in Class B material.

.8 Remove materials above hard bottom, within limits indicated. Material removed from below hard bottom or outside specified area or side slope is not part of Work.

.9 Remove shoaling which occurs as result of Work at no expense to Canada.

.10 Remove material cast-over on surrounding area and dispose of it as excavated material. Do not cast-over material unless authorized by Departmental Representative.

.11 Remove infilling in excavated areas which occurs prior to acceptance by Departmental Representative.

.12 Immediately notify Departmental Representative upon encountering object which might be classified as obstruction. By-pass object after clearly marking its location and continue Work.

.13 No excavation will be permitted from the existing wharf.

3.2 DISPOSAL OF EXCAVATED MATERIAL

.1 All excavated material must be disposed of at an authorized landfill facility, using water tight trucks, as directed by the Departmental Representative.

.2 Dispose of excavated material to approval of Departmental Representative, using water tight truck boxes.

3.3 EXCAVATING IN VICINITY OF STRUCTURES

.1 Do not excavate material from areas lying within 1 m of existing structure unless authorized by Departmental Representative.

3.4 RE-EXCAVATING

.1 Re-excavate unsatisfactory Work and verify depths with additional sounding or sweeping to approval of Departmental Representative.

3.5 CO-OPERATION AND ASSISTANCE TO DEPARTMENTAL REPRESENTATIVE

.1 Co-operate with Departmental Representative on inspection of Work and provide assistance requested.

.2 On request of Departmental Representative, furnish use of such boats, equipment, labour and materials forming ordinary and usual part of excavating plant as may be reasonably necessary to inspect and supervise Work. Volume of material transported in partially filled scows will be determined by Departmental Representative.