

PART 1 - GENERAL

1.1 SCOPE

- .1 The work covered under this project consists of the furnishing of all plant, labour, equipment, hardware and materials, complete and in strict accordance with specifications and accompanying drawings and subject to all terms and conditions of contract. Bidders are advised that opportunities and requirements may arise that may warrant changes to the work that are in keeping with this general scope of work. Such changes will be made through the change order processes as outlined in the contract documents.

1.2 DESCRIPTION

- .1 The work will generally consist of but will not necessarily be limited to the following:
- .1 Construction and maintenance of temporary dewatering devices and structures.
 - .2 Construction of two (2) new reinforced concrete diversion walls, rock anchored into the underlying bedrock, as indicated on the drawings.
 - .3 Rock removal to facilitate diversion wall shear key installation, as indicated on the drawings.
 - .4 Installation of new stop logs, complete with steel guides and sill plate, in the new diversion wall, as indicated on the drawings.
 - .5 Installation of new attraction flow pipe, complete with concrete footing base, concrete encasement, pipe hold downs, valves, connections, fittings and all other related items, as indicated on the drawings. Coordinate installation of attraction flow pipe with Departmental Representative.
 - .6 Site clean-up.
- .2 Due to in-water working restrictions and for project continuity, work items 1,2,3, and 4 above must be completed by May 15, 2017. This includes construction and maintenance of temporary dewatering devices and structures; construction of two (2) new reinforced concrete diversion walls, rock anchored into the underlying bedrock; rock removal to facilitate diversion wall shear key installation; and installation of new stop logs, complete with steel guides and sill plate in new diversion wall.
- .3 The work description noted above and shown on the contract drawings take precedence over the work description indicated in the Canadian Environmental Assessment Act (CEAA) included in Appendix A.

1.3 FISH HABITAT/DOMESTIC
USAGE

- .1 Contractors are advised that this project is being carried out in an area where fish habitat may be affected. The contractor will perform the work to conform with all rules and regulations governing fish habitat and in accordance with governing authorities and attached Environmental approvals (Appendix A).
- .2 There shall be no fishing in and around the construction site during the regulated fishing season, even if the employees are in possession of a legal fishing license.
- .3 The Contractor shall confirm the times, dates, and extent of work required with local fish habitat authorities. Refer to sub-section 1.5
- .4 Contact the Department of Fisheries and Oceans (DFO) at least 48 hours in advance of starting any work on site.
- .5 For inquiries regarding fish habitat please contact Tilman Bieger (email: tilman.bieger@dfo-mpo.gc.ca or phone: 772-4029) with DFO Fisheries Protection Program.
- .6 The Contractor is advised that a number of restrictions exist which could affect the scheduling and completion of the work, including:
 - .1 Work affecting the fish habitat can only commence and be carried out during specific times of the year when the salmon are not moving up the river;
 - .2 The complete fishway must be fully operational during the specified migration dates;
 - .3 High flow conditions on the river could affect scheduling and dewatering requirements.

1.4 SITE OF WORK

- .1 Work will be carried out at Rocky River, NL, in the location as shown on the accompanying drawings.

1.5 SCHEDULING AND
WORK METHODOLOGY

- .1 The Contractor must arrange and schedule their construction operations to complete all work as per the completion date stipulated in the contract and maintain fish passage by means of the existing fishway during the salmon migration period. Specifically, the following measures must be taken:
 - .1 Prior to commencing any work, obtain all other required permits/approvals, not already obtained and included in Appendix A, required to carry out the work.
 - .2 Develop a detailed work schedule and methodology for all work and submit to the Departmental

Representative and applicable regulatory authorities for review and approval. Contractor's schedule and methodology shall address all restrictions placed on the work and indicate how the work plan will address such issues. Contingency plans shall also be outlined for use in the event of unexpected problems or delays.

- .3 From a fish habitat perspective, DFO policy restricts any in water work on this project during the salmon migration period between the dates of May 15, 2017 to September 30, 2017. Prior to May 15, 2017 all in water work must be completed and the fishway shall be in full and complete operation as deemed acceptable to the Departmental Representative. Therefore, as per sub-section 1.2.2, work items 1, 2, 3, and 4 must be completed by May 15, 2017. This includes construction and maintenance of temporary dewatering devices and structures; construction of two (2) new reinforced concrete diversion walls, rock anchored into the underlying bedrock; rock removal to facilitate diversion wall shear key installation; and installation of new stop logs, complete with steel guides and sill plate in new diversion wall.
- .4 The Departmental Representative may approve out of water work, during the salmon migration period, provided the following:
 - .1 All works must be completed as to not interfere with the salmon migration period. Therefore, the fishway shall be in full and complete operation as deemed acceptable to the Departmental Representative.
 - .2 Construction activities shall not interfere with the on-going day to day operations at site and coordination will be required with the on-site fishway technicians.
 - .3 The Departmental Representative reserves the right to shut down work at any time during the salmon migration period.
- .2 All work must be carried out in the dry. Where berms are required to accomplish this, the design of such berms is to be carried out by a professional engineer licensed to practice in Newfoundland and Labrador. Drawings of the berm design, stamped by the engineer, are to be submitted to the Departmental Representative before any work starts.
- .3 The completion of all work within the allocated time stated herein is of utmost importance to the overall success of this project. It is Canada's expectation that the Contractor utilizes whatever level of effort and resources that are necessary to achieve the required

completion date, which may include utilization of the following:

- .1 Longer work days, with artificial site lighting, if required;
- .2 Extra crews, personnel and equipment;
- .3 Timely ordering and delivery of long lead material items.
- .4 Winter construction utilizing temporary hoarding, heating units and snow clearing for safe site access.

1.6 DATUM

- .1 Datum used for this project is bench mark geodetic elevations, as shown on the drawings.
- .2 Bidders are advised to consult the Department of Environment and Conservation and the Government of Canada Water Office in order to make sure of changing water level conditions affecting work.

1.7 EXAMINATION OF SITE

- .1 Before submitting a bid, it is recommended that bidders visit the site and its surroundings to review and verify the form, nature and extend of work, materials necessary for the completion of the works, the means of access to the site, severity, exposure and uncertainty of weather, soil conditions, any accommodations they may require, and in general shall obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.
- .2 Contractors, bidders or those they invite to site are to review specification Section 01 35 29 - Health and Safety Requirements before visiting site. Take all appropriate safety measures for any visit to site, either before or after acceptance of bid.

1.8 TERMS

- .1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Department Representative as defined in the General Conditions of the Contract.
- .2 In cases where submittals are required to be submitted under seal of a professional Engineer licensed to practice in NL, this does refer to an Engineer, and not the Departmental Representative.

1.9 COST BREAKDOWN

- .1 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price.
- .2 Provide cost breakdown in same format as the numerical and subject title system used in this specification and thereafter sub-divided into major work components as directed by Departmental Representative.
- .3 Upon approval by Departmental Representative, cost breakdown will be used as basis for progress payment.
- .4 All work items and cost not designated in the unit price table as a measurement for payment, are to be included in the lump sum arrangement, as noted on the Bid and Acceptance Form.

1.10 WORK SCHEDULE

- .1 Submit within seven (7) working days of notification of acceptance of bid, a construction schedule showing commencement and completion of all work within the time stated on the bid and acceptance form and the date stated in the bid acceptance letter.
- .2 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
- .3 As a minimum, work schedule to be prepared and submitted in the form of bar (GANTT) charts, indicating work activities, tasks and other project elements, their anticipated durations and planned dates for achieving key activities and major project milestones provided in sufficient details and supported by narratives to demonstrate a reasonable plan for completion of project within designated time (e.g., show target dates for completion of each structure element, if applicable.

Breakdown the structure elements to indicate target dates for completion of each element. Generally, bar charts derived from commercially available computerized project management systems are preferred but not mandatory.
- .4 Submit schedule updates on a minimum monthly basis and more often, when requested by Departmental Representative, due to frequent changing project conditions. Provide a narrative explanation of necessary changes and schedule revisions at each update.

- .5 The schedule, including all updates, shall be to the Departmental Representative's approval. Take necessary measures to complete work within approved time. Do not change schedule without Departmental Representative's approval.
- .6 All work on the project will be completed within the time indicated on the Bid and Acceptance Form.
- .7 Should contractor find that he cannot maintain schedule as originally intended, he will immediately submit a revised schedule without being requested to do so by Departmental Representative.
- .8 Work schedule to be consistent with scheduling and methodology previously noted in Part 1.5.

1.11 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on drawings.

CGSB - Canadian Government Specifications Board
CSA - Canadian Standards Association
NLGA - National Lumber Grades Authority
ASTM - American Society for Testing and Materials.
- .2 Where these abbreviations and standards are used in this project, latest edition in effect on date of tender call will be considered as applicable.

1.12 LAYOUT OF WORK

- .1 Set grades and layout work in detail from control points and grades established by Departmental Representative.
- .2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated or as directed by Departmental Representative.
- .3 Provide devices needed to layout and construct work.
- .4 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.
- .5 Supply stakes and other survey markers required for laying out work.

1.13 QUARRY AND

- .1 Contractor will make own arrangements with Provincial

EXPLOSIVES

authorities and owners of private properties, for the quarrying and transportation of rock and all materials and machinery necessary for work over their property, roads, or streets as case may be.

1.14 SITE OPERATIONS

- .1 Arrange for sufficient space adjacent to project site for conduct of operations, storage of materials and so on. Exercise care so as not to obstruct or damage public or private property in area. All arrangements for space and access will be made by contractor and to the approval of the Departmental Representative. All clearing and grubbing work, including tree preservation, to be in accordance with applicable specification sections.
- .2 At completion of work, restore area to its original condition. Damage to ground and property will be repaired by contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to Departmental Representative.
- .3 Remove snow and ice as required to maintain safe access in a manner that does not damage existing structures or interfere with the operations of others.

1.15 SITE
ACCESS

- .1 It is the Contractor's responsibility to determine the appropriate method for safely accessing the site during the course of the work. The Contractor shall submit a Site Access Plan to the Departmental Representative no later than seven (7) days following the contract award.

1.16 PROJECT MEETING

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording minutes.
- .2 Project meetings will take place on site of work unless so directed by Departmental Representative.
- .3 Departmental Representative will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at meetings.
- .4 Have a responsible member of firm present at all Project Meetings.

1.17 PROTECTION

- .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair or replace all materials or equipment damaged in transit or storage to the satisfaction of, and at no cost to, the Departmental Representative.

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- 1.18 DOCUMENTS REQUIRED .1 Maintain at job site, one (1) copy each of the following:
- .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 List of outstanding shop drawings.
 - .6 Change Orders.
 - .7 Other modifications to contract.
 - .8 Field test reports.
 - .9 Copy of approved work schedule.
 - .10 Site specific Health and Safety Plan and other safety related documents.
 - .11 Permits and Regulatory Approvals and Requirements.
 - .12 Other documents as stipulated elsewhere in the Contract Documents.
- 1.19 TAXES AND PERMITS .1 Obtain and pay for all permits, certificates and licenses as required by Municipal, Provincial, Federal and other authorities.
- .2 Provide appropriate notifications of project to Municipal and Provincial inspection authorities.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of Municipal, Provincial and Federal authorities as applicable to the performance of work.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for above referenced authorities.
- .5 Submit to Departmental Representative, copy of quarry permit, if applicable, prior to start of quarry operations.
- .6 Comply with all requirements, recommendations and advice by all regulatory authorities unless otherwise agreed in writing by Departmental Representative. Make requests for such deviations to these requirements sufficiently in advance of related work.
- .7 See Appendices for Regulatory Approvals and Responses already obtained by Canada for this project.
- 1.20 EXISTING SUB-SURFACE CONDITIONS .1 Information pertaining to the existing sub-surface conditions may be available by contacting the Departmental Representative.

- .2 Contractors are cautioned that any previous investigations that may be available for review, were intended to provide general site information only. Any interpolation and/or assumption made relative to any previous investigations is the Contractor's responsibility.

1.21 CONTRACTOR'S USE
OF SITE

- .1 The contractor is advised that the construction operations, including storage of materials, for this contract must not interfere with the normal operations at the site.
- .2 The contractor will be solely responsible for arranging the storage of materials on or off the site.
- .3 Exercise care so as not to obstruct or damage public or private property in the area.

1.22 WORK COMMENCEMENT

- .1 Mobilization to project site is to commence immediately after acceptance of bid and submission of site specific Safety Plan, unless otherwise directed by Departmental Representative.
- .2 Project work on site is to commence as soon as possible with a continuous reasonable workforce unless otherwise directed by Departmental Representative.
- .3 Weather conditions, winter construction, site restrictions, delivery challenges and the location of the work site may require the use of longer working days and additional workforce to complete the project within the specified completion time.
- .4 Make every effort to ensure that sufficient material and equipment is delivered to site at the earliest possible date after acceptance of bid and replenished as required.

1.23 ACCEPTANCE

- .1 Prior to the issuance of the Certificate of Substantial Performance, in company with Departmental Representative, make a check of all work. Correct all discrepancies before final inspection and acceptance.

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- 1.24 WORKS COORDINATION .1 Responsible for coordinating the work of the various trades, where the work of such trades interfaces with each other.
- .2 Convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required. Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 Canada will not be responsible for or held accountable for any extra costs incurred as a result of the failure to carry out coordination work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor and shall be resolved at no extra cost to Canada.
- 1.25 INTERPRETATION OF DOCUMENTS .1 Supplementary to the General Conditions, the Division 01 sections of the specifications take precedence over technical specification in other divisions of the specifications.
- 1.26 BIODEGRADABLE HYDRAULIC OILS .1 Equipment working in and adjacent to water way shall be equipped with biodegradable hydraulic oils specifically intended for environmentally sensitive areas. Contractor shall submit MSDS and Technical Data sheets on hydraulic oil to be used for approval by the Departmental Representative.
- 1.27 SITE PHOTOGRAPHS .1 Photographs of the existing site are included in Appendix B. These photos are intended to give the contractors an appreciation of site conditions and general understanding of the project scope of work. These photos should in no way be considered a replacement to an actual site visit. Contractors are recommended to visit the site as per part 1.7 of this specification section. Any interpretations and/or assumptions made with respect to these photos are the contractor's responsibility.
- 1.28 MEASUREMENT FOR PAYMENT .1 No separate measurement for payment shall be made for items under this section. Include costs for General Instructions in the Lump Sum portion of the work on the Bid and Acceptance Form.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 NOT USED