

PART 1 - GENERAL

1.1 SCOPE

- .1 The scope of work for this project is as described in the Description of Work and the Drawings and Specifications. The work covered consists of the furnishing of all plant, labour, equipment and material for Salt Water Supply System Repairs - NAFC, St. John's, Newfoundland and Labrador, in strict accordance with specifications and accompanying drawings and subject to all terms and conditions of the 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 In general, the work under this contract consists of, but will not necessarily be limited to, the following:
 - .1 Site erosion and sediment control measures as required, maintained for the duration of the project.
 - .2 Diversion and maintenance of public traffic flow around work site.
 - .3 Protection and maintenance of features designated to remain.
 - .4 Installation of Crown-supplied HDPE pipe bypass (approx. 400 m long) with connections to existing saltwater main.
 - .5 Installation of Crown-supplied ball valves on new and existing saltwater mains at connection points with bypass.
 - .6 Removal and extension of culvert ends within bypass alignment, including end treatments.
 - .7 Reinstatement of rock-lined ditches within bypass alignment.
 - .8 All excavation and backfilling as required, including reinstatement of gravel access road at locations of bypass crossings.
 - .9 Pressure testing of pipe bypass.
 - .10 Construction of cast-in-place concrete curb around existing degasser units, sealed to existing floor and wall of degasser building.
 - .11 Supply and installation of polymeric floor grating within new curbed area.
 - .12 Supply and installation of floor drains within new curbed area, and new drainage piping to reservoir below.
 - .13 Supply and installation of total dissolved gas, pressure sensor and level detection control devices, including connection to existing local PLC.
 - .14 Commissioning, as required, of all installed works.
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1.3 IMPLEMENTATION

- .1 This contract shall be planned and implemented by the Contractor, such that all work is carried out within the specified time frame. All measures necessary to meet this deadline including cold weather concreting, shall be considered when bidding for this project.

1.4 SITE OF WORK

- .1 Work will be carried out at the Northwest Atlantic Fisheries Center (NAFC), St. John's, Newfoundland and Labrador in the locations as shown on the accompanying drawings.

1.5 DATUM

- .1 Datum used for this project is as shown on the drawings.

1.6 FAMILIARIZATION WITH 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 extent of the 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.

1.7 CODES AND STANDARDS

- .1 Perform work in accordance with the following codes and legislative requirements:
 - .1 Environment Act of the Province of Newfoundland and Labrador.
 - .2 Environmental Control (Water and Sewer) Regulations of the Province of Newfoundland and Labrador.
 - .3 Waste Material Disposal Act of the Province of Newfoundland and Labrador.
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- .4 Canadian Environmental Protection Act.
 - .5 Transportation Dangerous Goods Act.
 - .6 Canadian Fisheries Act.
 - .7 Canadian Council of Ministers of the Environment (CCME). National Guidelines for Decommissioning Industrial Sites.
 - .8 Canada Labour Code Occupational Health and Safety Standards.
 - .9 National Building Code of Canada, latest edition.
 - .10 National Fire Code of Canada, latest edition.
 - .11 Newfoundland Occupational Health and Safety Act and Regulations.
 - .12 The Storage and Handling of Gasoline and Associated Products Regulations by the Province of Newfoundland and Labrador.
 - .13 Any other Federal, Provincial, Municipal and Local Code, Standard, Regulation, Guideline, By-Law or Ordinance having jurisdiction.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

1.8 **TERMS**

- .1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative (DR) as defined in the General Conditions of the Contract.

1.9 **SETTING OUT WORK**

- .1 Employ a qualified registered land surveyor, licensed to practice in Place of Work, to mark out services and utilities, 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.

1.10 **COST BREAKDOWN**

- .1 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price.
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- .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 costs 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.

1.11 WORK SCHEDULE

- .1 Submit within five (5) 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 work item, if applicable). Breakdown 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 an as-required basis and when requested by Departmental Representative. 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.
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1.12 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on the 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 bid call will be considered applicable.

1.13 QUARRY AND EXPLOSIVES

- .1 Make own arrangements with Provincial Authorities and Crowns of 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, etc. Exercise care so as not to obstruct or damage public or private property in area. Do not interfere with normal day-to-day operations in progress at site. All arrangements for space and access will be made by Contractor.
- .2 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 PROJECT MEETINGS

- .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.
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1.16 PROTECTION

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

1.17 EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to site operations, pedestrian, vehicular traffic, and tenant operations.
- .2 Before commencing work, establish locations and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental Representative for any shutdown or closure of active service or facility. This includes disconnection of electrical power and communication services to tenants operational areas. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide temporary services to maintain critical facility systems.
- .5 Provide adequate bridging over trenches which cross walkways or roads to permit normal traffic.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

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.
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- .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 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.

1.20 CUTTING, FITTING AND PATCHING

- .1 Execute cutting, including excavation, fitting and patching required to make work fit properly.
 - .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. This includes patching of openings in existing work resulting from removal of existing services.
 - .3 Do not cut, bore, or sleeve load-bearing members.
 - .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
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1.21 EXISTING SUB-SURFACE CONDITIONS

- .1 No information pertaining to the existing sub-surface conditions is available.

1.22 LOCATION OF EQUIPMENT

- .1 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .2 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for actual location.
- .3 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

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.

1.24 WORKS COORDINATION

- .1 Contractor to be 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 The Crown 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 the Crown.
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1.25 CONTRACTOR'S USE OF SITE

- .1 Construction operations, including storage of materials, for this contract not to interfere with the operations at this facility. Provide access for vehicles to and from the saltwater pumphouse at all times during construction.
- .2 Responsible for arranging the storage of materials on or off site and any materials stored at the site which interfere with any of the day-to-day activities at or near the site will be moved promptly at the Contractor's expense, upon request by the Departmental Representative.
- .3 Contractor will take adequate precautions to protect existing structures when operating tracked equipment.
- .4 Exercise care so as not to obstruct or damage public or private property in the area.
- .5 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.

1.26 WORK COMMENCEMENT

- .1 Mobilization to project site is to commence immediately after acceptance of bid and submission of site specific Safety Plan and insurance documentation, unless otherwise agreed by Departmental Representative.
- .2 Project work on site is to commence as soon as possible with a continuous reasonable workforce unless otherwise agreed by Departmental Representative.
- .3 Weather conditions, short construction season, 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.

1.27 FACILITY SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions.
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1.28 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.

1.29 ADDITIONAL REFERENCE DOCUMENTS

- .1 Existing SCADA and PLC information is available for viewing at the PWGSC Office by contacting the contracting officer to make arrangements.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable
