

**Department of Fisheries and Oceans
Small Craft Harbours
Containment Cell
Malagash, Cumberland County, N.S.
Project No. 722273**

Index of Clauses

<u>Section No.</u>	<u>Title</u>	<u>Pages</u>
<u>Division 01</u>		
01 10 10	GENERAL INSTRUCTIONS	10
01 14 10	SCHEDULING AND MANAGEMENT OF WORK	5
01 33 00	SUBMITTAL PROCEDURES	6
01 35 24	SPECIAL PROCEDURES ON FIRE SAFETY REQUIREMENTS	6
01 35 29	HEALTH AND SAFETY REQUIREMENTS	15
01 35 44	ENVIRONMENTAL PROTECTION PROCEDURES FOR MARINE WORK	14
01 45 00	TESTING AND QUALITY CONTROL	4
01 45 01	WEIGH SCALES	3
01 52 00	TEMPORARY FACILITIES	2
01 71 00	PROJECT RECORD DOCUMENTS	1
01 74 11	CLEANING	1
01 74 21	CONSTRUCTION/DEMOLITION, WASTE MANAGEMENT AND DISPOSAL	3
<u>Division 31</u>		
31 32 21	GEOTEXTILES	2
<u>Division 35</u>		
35 31 24	CONTAINMENT CELL	5

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Location of Work .1 In general, work under this contract consists of the furnishing of all plant, labour, equipment, hardware and materials for the construction of a containment cell at the public wharf in Malagash, NS. The work is to be completed in strict compliance with specification and accompanying drawings and subject to all terms and conditions of contract.
- 1.2 Description of Work .1 In general, work under this Contract shall consist of, but not be limited to, the following:
- .1 Mobilization to the site.
 - .2 Construction of the containment cell in the water on the west side of the approach and seaward of the high water mark, within the federal property.
 - .3 Relocation of existing dry dredge spoils on adjacent lands into the containment cell.
 - .4 Demobilization.
- 1.3 Codes and Standards .1 Perform work in accordance with National Building Code of Canada (NBCC) and any other code of provincial or local application, provided that in any case of conflict or discrepancy, the more stringent requirements will apply.
- .2 Meet or exceed requirements of specified standards, codes and referenced documents. When a

standard or code is outdated, the latest edition will supersede the referenced date.

- .3 Observe and enforce construction safety measures as referenced in the Nova Scotia Occupational Health and Safety Act and its regulations.
- 1.4 Work Schedule .1 Prepare submit to the Departmental Representative work Schedules as per Section 01 14 10 Scheduling.
- 1.5 Project Meetings .1 Departmental Representatives will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
- 1.6 Measurement Responsibilities .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.
- 1.7 Familiarization With Site .1 Before submitting this tender, the Contractor will familiarize themselves with existing conditions and to examine all other details which could affect the cost of the work.
 - .2 Contractor shall make own assessment of the site conditions, wharf structures, and the difficulties in carrying out the work as specified.
 - .3 Tenderers must have personal protection equipment and take all the safety precautions necessary to assure their safety during the site visit.

- .4 The site is exposed to the marine environment, tidal waters, currents in the channel and severe weather. For these reasons bidders should become familiar with the marine conditions at the site.
- .5 Tenderers are advised to consult the Tide Tables issued by the Canadian Hydrographic Services as a guide to the tidal conditions affecting the work.
- 1.8 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 other activities on or off the water. Plan and execute work to minimize interferences. Consult Harbour Authority and follow their directions.
- Clarence Duggan,
Harbour Authority of Malagash
902-257-2201 home;
902-890-1640 cell
- .2 The Contractor will be solely responsible for arranging the storage of materials on or off the 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 Exercise care so as not to obstruct or damage public and private property in the area.

- 1.9 Setting out Work
- .1 Do all detail surveys necessary for the work, including locating and maintaining working points, and establishing lines and elevations. Perform all layout work, and carefully preserve benchmarks, reference points and stakes.
 - .2 Elevations for the various grades and features of the specified works to be referenced and properly related to a benchmark, as shown on the plans.
 - .3 Verify all grades, lines, levels, and dimensions shown on the drawings and report any errors or inconsistencies to the Departmental Representative before commencing work. Provide and maintain well protected control points batterboards at all points to facilitate the progress of the work. Establish all other grades, lines, levels required to facilitate the work.
- 1.10 Measurement Procedures
- .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.
 - .2 Items to be measured for payment are the following:
 - .1 **Filter Fabric**: Section 31 32 21- Geotextiles
 - .2 **Mobilization and Demobilization**: Section 35 31 24 - Containment Cell.
 - .3 **Salvage and Relocation of Materials** Section 35 31 24 -

Containment Cell.

.4 **Water Quality Monitoring Program:** Section 01-35-44
Environmental Protection
Measures for Marine Work.

.5 **Sandstone Core:** Section 35 31
24 Containment Cell.

.6 **Filter Stone:** Section 35 31 24
- Containment Cell.

.7 **Armour Stone:** Section 35 31 24
- Containment Cell.

.3 There will not be any separate payments made for the cost of snow and ice removal at the construction site, for access roads and storage sites or extra payment due to delays caused by ice movements and winter storms or because of interference by the operation of the harbour.

.4 Pay applicable federal, provincial and municipal taxes.

1.11 Documents
Required

.1 Maintain at job site, one copy each of the following:

- .1 Contract Drawings
- .2 Specifications
- .3 Addenda
- .4 Reviewed Shop Drawings
- .5 Change Orders
- .6 Other Modifications to Contract
- .7 Field Test Reports
- .8 Copy of Approved Work Schedule
- .9 Health and Safety Plan and other safety related documents
- .10 Copy of Nova Scotia

Occupational Health and Safety Act.

- .11 Fire Safety Hot Work Permit.
- .12 Permits, Codes and Acts
- .13 Waste Management Plan.
- .14 Other documents as stipulated elsewhere in the Contract Documents.

1.12 Permits

- .1 The following permits and approvals have been obtained in advance of the construction by Small Craft Harbours for work in water:
 - .1 Fisheries Act - Authorization 18-HMAR-00050;
 - .2 Navigation Protection Act - Approval 2018-200025
- .2 In accordance with the General Conditions obtain and pay for building permit, certificates, licenses and other permits as required by municipal, provincial and other federal authorities.
- .3 Provide appropriate notifications of project to municipal and provincial inspection authorities.
- .4 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .5 Submit to Departmental Representative, copy of application forms and approval documents received from above-referenced authorities.

- 1.13 Codes and Standards
- .1 Perform work in accordance with the National Building Code of Canada and any other code of provincial or local application including all amendments up to project tender closing date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
 - .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.
- 1.14 Abbreviations
- .1 Following abbreviations of standard specifications have been used in this specification and on drawings.
CSA - Canadian Standards Association
NLGA - National Lumber Grades Authority
ASTM - American Society for Testing and Materials
NBC - National Building Code
ACI - American Concrete Institute.
- 1.15 Contractor's Representative
- .1 Continuously maintain on the site an authorized representative to whom communication may be addressed and who will be competent to speak for the Contractor in discussing work methods.
- 1.16 Contract Documents
- .1 The drawings for the Work consist of all drawings listed in these "Plans And Specifications" and any additional drawings issued at a later date by the Departmental Representative.
 - .2 Departmental Representatives may furnish additional drawings to assist in proper execution of work.

These drawings will be issued for clarification only. Such drawings will have same meaning and intent as if they were included with plans referred to in Contract Documents.

- .3 The drawings indicate the extent and general dimensions of the work. Make all necessary measurements to ensure that the result of the work is in accordance with the intent.

1.17 Interpretation of Documents

- .1 Supplementary to the Order of Precedence article of the General Conditions, the Division 01 Sections take precedence over the technical division sections of these Specifications.

1.18 Existing Services

- .1 Before commencing work, establish locations and extent of any service lines in area of work and notify Departmental Representative of findings.
- .2 Be aware that the harbour facilities must be kept operational for the full duration of Work of this Contract. Services to areas used by the public, fishers and harbour users must also be maintained at all times as directed.
- .3 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

1.19 Site Conditions

- .1 Records of existing structures and geotechnical reports may be available for inspection at the offices of Fisheries and Oceans

Canada. This material is not necessarily up to date and is for information purposes only. It should be complemented by site visits and consultant with appropriate expertise.

- 1.20 Chart Datum .1 All elevations used in this specification and accompanying drawings are referred to the chart datum which is Lowest Normal Tides (L.N.T.) for the purpose of the contract. The value of the benchmark (B.M.) as shown on the drawings indicates elevations above chart datum.
- 1.21 Laws, Standards, Taxes and Fees .1 Comply with all laws and standards governing all or any part of the work, pay all applicable taxes and pay for all permits and certificates required in respect of the execution of the work. Where variances exist between the requirements of agencies governing all or any part of the work, the most restrictive will govern, but in no instance will the standards established by the drawings and this Specification, which exceed such requirements, be reduced.
- 1.22 Protection and Repair .1 Repair any damage resulting from operations under this contract.
- 1.23 Inspection and Testing .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms to contract.
- 1.24 Disposal of Debris .1 The debris, including construction materials not incorporated in the work, oil products and containers, and other materials of this nature

will be disposed of in suitable locations off the site. Disposal is the responsibility of the Contractor

- .2 Material from the work will not be permitted to go adrift or otherwise become a menace to navigation.
- 1.25 Existing Soils Conditions
- .1 Any information pertaining to soils and all boreholes logs are furnished by the Departmental Representative as a matter of general information only and borehole descriptions or logs are not to be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves.
- 1.26 Relics and Antiquities Laws, Standards
- .1 Protect relics, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.
 - .2 Give immediate notice to Departmental Representative and await written instructions before proceeding with work in this area.
 - .3 Relics, antiquities and items of historical or scientific interest remain Her Majesty's property.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Submittals
- .1 Upon acceptance of bid and prior to commencement of work, submit to Departmental Representative the following work management documents:
 - .1 Work Schedule as specified herein.
 - .2 Shop Drawing Submittal Schedule specified in section 01 33 00.
 - .3 Health and Safety Plan specified in section 01 35 29.
- 1.2 Work Schedule
- .1 The contractor will coordinate his work with the Harbour Authority's activities.
 - .2 Upon acceptance of bid submit:
 - .1 Detail work schedule within seven (7) calendar days of contract award.
 - .2 Schedule to indicate all calendar dates from commencement to completion of all work within the time stated in the accepted bid.
 - .3 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 Work schedule content to include as a minimum the following:

- .1 Bar (GANTT) Charts, indicating all work activities, tasks and other project elements, their anticipated durations, planned dates for achieving key activities and major project milestones.
- .4 Work schedule must take into consideration and reflect the work phasing, and operational restrictions as indicated on drawings.
- .5 Schedule work in cooperation with the Departmental Representative. Incorporate within Work Schedule, items identified by Departmental Representative during review of schedule.
- .6 Completed schedule shall be approved by Departmental Representative. When approved, take necessary measures to complete work within scheduled time. Do not change schedule without Departmental Representative's approval.
- .7 Ensure that all sub trades and subcontractors are made aware of the work restraints and operational restrictions specified.
- .8 Schedule Updates:
 - .1 Submit on a weekly basis.
 - .2 Provide information and pertinent details explaining reasons for necessary changes to implementation plan.

- .3 Identify problem areas, anticipated delays, impact on schedule and proposed corrective measures to be taken.
- .9 Departmental Representative will make interim reviews and evaluate progress of work based on approved schedule. Frequency of such reviews will be as decided by Departmental Representative. Address and take corrective measures on items identified by reviews and as directed by Departmental Representative. Update schedule accordingly.
- .10 In every instance, change or deviation from the Work Schedule, no matter how minimal the risk or impact on safety or inconvenience to tenant or public might appear, will be subject to prior review and approval by the Departmental Representative.
- 1.2 Operational Requirements
 - .1 The harbour is an active fishing harbour used for commercial fishing.
 - .2 The harbour serves as a home port for fishing vessels, majority of activity is for Lobster Area 26A. There is an aquaculture operation at this site.
- 1.4 Project Meetings
 - .1 Departmental Representative will arrange project meetings.
 - .2 Departmental Representative will assume responsibility for setting times and recording minutes.
 - .3 All project meetings will take place on site of work unless otherwise directed by the Departmental Representative.
 - .4 The Contractor's superintendent and

sub-contractors are to be present at all project meetings.

1.5 Work
Coordination

.1 The General Contractor is responsible for coordinating the work of the various trades and predetermining where the work of such trades interfaces with each other.

.1 Designate one person from own employ having overall responsibility to review contract documents and shop drawings, plan and manage such coordination.

.2 Work Cooperation:

.1 Ensure cooperation between trades in order to facilitate the general progress of the work and avoid situations of spatial interference.

.2 Ensure that each trade provides all other trades reasonable opportunity for the completion of the work and in such a way as to prevent unnecessary delays, cutting, patching and the need to remove and replace completed work.

.3 No extra costs to the Contract will be considered by the Departmental Representative as a result of Contractor's failure to effectively coordinate all portions of the 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 to be resolved at own cost.

1.6 Other Contracts

1. Further contracts may be let during the period that this Contract is in progress.
- .2 Cooperate with other Contractors in carrying out their respective work and carry out all instructions from the Departmental Representative in this regard.
- .3 Connect properly and coordinate work with that of other Contractors

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Administrative
- .1 Submit to Departmental Representative submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Work affected by submittal shall not proceed until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units, converted values are acceptable.
 - .5 Review, stamp, sign and date submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
 - .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations. Identify variations from Contract Documents and Product or system

limitations, which may be detrimental to successful performance of the complete Work.

- .7 Verify the precision of field measurements related to the adjacent works affected by this job.
 - .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submissions.
 - .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review of submission, unless Departmental Representative gives written acceptance of specific deviations.
 - .10 Make any changes in submissions which Departmental Representative may require consistent with Contract Documents and resubmit as directed by Departmental Representative.
 - .11 Notify Departmental Representative, in writing, when resubmitting, of any revisions other than those requested by Departmental Representative.
 - .12 Keep one reviewed copy of each submission on site
- 1.2 Shop Drawings and Product Data
- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.

- .2 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .3 Utilize Submittal Register and Transmittal Form. Exact format of Submittal Form will be agreed upon by the Contractor and Departmental Representative.
- .4 Identify Project, Contractor, sub-contractor or supplier, pertinent drawing and detail number and specification Section number, as appropriate.
- .5 Provide space for Contractor's and Departmental Representative's review stamps.
- .6 Allow at least ten (10) working days for Departmental Representative's review of each submission.
- .7 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date
 - .2 Project title and number
 - .3 Contractor's name and address
 - .4 Identification and quantity of each shop drawing, product data and sample
 - .5 Other pertinent data.

- .8 Submissions include:
 - .1 Date and revision dates
 - .2 Project title and number
 - .3 Name and address of:
 - .1 Subcontractor
 - .2 Supplier
 - .3 Manufacturer
 - .9 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .10 After Departmental representative's review, distribute copies. Instruct parties to promptly report any inability to comply with provisions.
 - .11 Submittals not requested will not be recognized or processed.
 - .12 Cross-reference shop drawing information to applicable portions of Contract Documents.
- 1.3 Samples
- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
 - .2 Deliver samples prepaid to Departmental representative's business address.
 - .3 Notify Departmental Representative in writing, at time of submission, of deviations in samples from requirements of Contract Documents.

- .4 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
 - .5 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
 - .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.
- 1.4 Pit Photographs
- .1 Submit progress photographs in accordance with paragraph 1.4 of present section.
 - .2 The Contractor shall take photographs documenting progress during the stone production.
 - .3 The Departmental Representative shall be provided one set of all photographs taken. The Contractor shall obtain, from the photographer, a written release stipulating that the Departmental Representative shall have unrestricted use of all photography provided as specified herein. Copies of the written release shall be provided to the Departmental Representative.
 - .4 Photography of pit and work site documenting major production events and stone piling progress shall be taken at a minimum of once every week. Ground photography shall include a date stamp on the face of the photo.

- 1.5 Certifications and Transcripts
- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
 - .2 The Contractor shall:
 - .1 When specified in individual Specification Sections, submit certification by manufacturer to Departmental Representative, in quantities required.
 - .2 Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - .3 Certificates may be recent or previous test results on material or Product, but must be acceptable to Departmental Representative.
 - .3 Submit copies of the insurance policies immediately after the aware of the contract.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Section Includes .1 Fire Safety Requirements.
.2 Hot Work Permit.
- 1.2 Related Work .1 Section 01 35 29 Health and Safety Requirements.
- 1.3 References .1 Fire Protection Standards issued by Fire Protection Services, Labour Program Division of Service Canada:
.1 FCC No. 301-June 1982 Standard for Construction Operations.
.2 FCC No. 302-June 1982 Standard for Welding and Cutting.
.3 FCC standards, may be viewed at the Regional Fire Protection Services' office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th Floor, Dartmouth, NS, Tel: (902) 426-6053.
- 1.4 Definitions .1 Hot Work defined as:
.1 Welding work
.2 Cutting of materials by use of torch or other open flame devices
.3 Grinding with equipment, which produces sparks.
.4 Use of open flame torches.
- 1.5 Submittals .1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 14 calendar days after contract award.

1.6 Fire Safety Requirements

- .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code.
 - .2 Fire Protection Standards FCC 301 and FCC 302.
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.7 Hot Work Authorization

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
 - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
 - .2 Description of the type and frequency of Hot Work required.
 - .3 Sample Hot Work Permit to be used.
- .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental

Representative will give authorization to proceed as follows:

- .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
 - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
 - .4 Requirement for individual authorization will be based on:
 - .1 Nature or phasing of work;
 - .2 Risk to Facility operations;
 - .3 Quantity of various trades needing to perform hot work on project or
 - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
 - .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- 1.8 Hot Work
Procedures
- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work
 - .2 Hot Work Procedures to include:
 - .1 Requirement to perform hazard assessment of site and immediate

work area before hand for each hot work event in accordance with Safety Plan specified in section 01 35 29.

- .2 Use of a Hot Work Permit system with individually written permit issued by Contractor's Superintendent to specific worker or subcontractor granting permission to proceed with Hot Work.
 - .3 Permit required for each Hot Work event.
 - .4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of 60 minutes immediately following the completion of the Hot Work.
 - .5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.
 - .4 Procedures shall clearly establish responsibilities of:
 - .1 Worker performing hot work,
 - .2 Person issuing the Hot Work Permit,
 - .3 Fire Safety Watcher,

- .4 Subcontractor(s) and Contractor.
 - .5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.
 - .6 Failure to comply with fire safety procedures may result in the issue of a Non-Compliance notification as specified in Section 01 35 29
- 1.9 Hot Work
Permit
- .1 Hot Work Permit to include the following:
 - .1 Project name and project number;
 - .2 Area where hot work will be performed;
 - .3 Date of issue;
 - .4 Description of hot work type needed;
 - .5 Special precautions to be followed, including type of fire extinguisher needed;
 - .6 Name and signature of permit issuer.
 - .7 Name of worker to which the permit is issued.
 - .8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
 - .9 Worker's signature with time/date of hot work completion.
 - .10 Stipulated time period of safety watch.
 - .11 Fire Safety Watcher's signature with time/date.
 - .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.

- 3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.
- 1.10 Documents
on Site
- .1 Keep Hot Work Permits and Hazard Assessment documentation on site for duration of Work.
 - .2 Upon request, make these available to Departmental Representative or to authorized safety Representative for inspection.

-----END OF SECTION-----

PART 1 - GENERAL

1.1 Definitions

- .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
 - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
 - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
 - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: Personal Protective Equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

1.2 Submittals

- .1 Submit site-specific Health and Safety Plan prior to commencement of Work.
 - .1 Submit within 5 work days of notification of Bid Acceptance.

- .2 Departmental Representative will review Health and Safety Plan and provide comments.
 - .3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
 - .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
 - .5 Submit revisions and updates made to the Plan during the course of Work.
-
- .2 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
 - .3 Submit building permit, compliance certificates and other permits obtained.
 - .4 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.
 - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
 - .5 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
 - .6 Submit copies of incident reports.

- .7 Submit WHMIS MSDS - Material Safety Data Sheets.
- 1.3 Compliance Requirements
 - .1 Comply with Occupational Health and Safety Act for Province of Nova Scotia, and all Regulations made pursuant to the Act.
 - .2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at:
<http://laws-lois.justice.gc.ca/eng/acts/L-2/>
 - .2 COSH can be viewed at:
<http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/>
 - .3 A copy may be obtained at: The Publishing and Depository Services Directorate, Ottawa, Ontario, K1A 0S5 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)
 - .3 Observe construction safety measures of:
 - .1 Part 8 of National Building Code
 - .2 Municipal by-laws and ordinances
 - .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
 - .5 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance

- through submission of Letter in Good Standing.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.
- 1.4 Responsibility .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.
- 1.5 Site Control and Access .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
- .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.

- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
 - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment.
 - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
 - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
 - .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
 - .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
 - .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm.
- 1.6 Protection
- .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
 - .2 Should unforeseen or peculiar safety related hazard or condition become

- evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.
- 1.7 Filing of Notice .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
- .1 Departmental Representative will assist in locating address if needed.
- 1.8 Permits .1 Post permits, licenses and compliance certificates.
- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.
- 1.9 Hazard Assessments .1 Perform site specific health and safety hazard assessment of the Work and its site.
- .2 Carry out initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.
- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.
- 1.10 Project/Site Conditions .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
- .1 Existing hazardous and controlled

- products stored on site:
 - .1 Gasoline dispensing station.
 - .2 Waste oil storage tank.
- .2 Existing hazardous substances or contaminated materials:
 - .1 to be determined.
- .3 Known latent site and environmental conditions:
 - .1 Soft soils
 - .2 Potential mud wave
 - .3 Marine environment.
 - .1 Work above and in the water.
 - .2 Strong currents in channel.
 - .3 Site exposed to waves.
 - .4 Site exposed to marine storms.
 - .4 Seasonal conditions:
 - Winter.
 - .1 Cold weather, freezing rain and snow.
 - .2 Working surfaces, equipment and materials covered in ice.
 - .3 Ice in harbour.
 - .4 Hypothermia.
- .4 Rusty nails, spikes, metal parts and bolts.
- .4 Facility on-going operations:
 - .1 Vessel movement.
 - .2 Loading and unloading on wharf.
 - .3 Fishers attending their vessels.
 - .4 Wharf traffic.
- .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards

encountered during Work.

- .3 Include above items in the hazard assessment of the Work.
- .4 Material Safety Data Sheets (MSDS) Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.11 Meetings

- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
 - .1 Superintendent of Work
 - .2 Designated Health & Safety Site Representative
 - .3 Subcontractors
- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.

- .3 Keep documents on site.

1.12 Health and Safety Plan

- .1 Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
- .2 Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - .2 Control measures used to mitigate risks and hazards identified.

- .3 On-site Contingency and Emergency Response Plan as specified below.
 - .4 On-site Communication Plan as specified below.
 - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
 - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plan shall include:
- .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
 - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, location of fire fighting equipment and other related data.
 - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
 - .4 Emergency Contacts: name and telephone number of officials from:
 - .1 General Contractor and subcontractors.
 - .2 Pertinent Federal and Provincial Departments and

- Authorities having jurisdiction.
- .3 Local emergency resource organizations.
- .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of PWGSC and Facility Management contacts.
- .4 On-site Communication Plan:
 - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
 - .2 List of critical work activities to be communicated with facility authority which have a risk of endangering health and safety of facility users.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at work site.
- .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

- 1.13 Safety
Supervision
- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
 - .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
 - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work.
 - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
 - .3 Conduct site safety orientation session to persons granted access to Work Site.
 - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
 - .5 Stop the Work as deemed necessary for reasons of health and safety.
 - .3 Health & Safety Site Representative must:
 - .1 Be qualified and competent person in occupational health and safety.
 - .2 Have site-related working experience specific to activities of the Work.

- .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
 - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
 - .4 Obey warning signs and safety tags.
- .2 Brief persons of disciplinary protocols to be taken for non-compliance.
- 1.16 Correction of Non-Compliance
- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
 - .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
 - .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.
- 1.17 Incident Reporting
- .1 Investigate and report the following incidents to Departmental Representative:
 - .1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
 - .2 Medical aid injuries.
 - .3 Property damage in excess of \$10,000.00,
 - .4 Interruptions to facility

- operations resulting in an operational lost to a Federal department in excess of \$5000.00.
- .2 Submit report in writing.
- 1.18 Hazardous Products
- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
 - .2 Keep MSDS data sheets for all products delivered to site.
 - .1 Post on site.
 - .2 Submit copy to Departmental Representative.
- 1.19 Blasting
- .1 Blasting or other use of explosives is not permitted on site without prior receipt of written permission from Departmental Representative.
- 1.20 Powder Actuated Devices
- .1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.
- 1.21 Confined Spaces
- .1 Abide by occupational health and safety regulations regarding work in confined spaces.
- 1.22 Site Records
- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
 - .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

- 1.23 Posting of Documents
- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
 - .2 Post other documents as specified herein, including:
 - .1 Site specific Health and Safety Plan.
 - .2 WHMIS data sheets.

-----END OF SECTION-----

PART 1 - GENERAL

1.1 General

- .1 All mitigation measures outlined in this section are the Contractor's responsibility under this contract. All measures to mitigate deleterious material from entering the watercourse, and all acts and regulations and mitigation measures listed under this section are the Contractor's responsibility to follow for the duration of this contract.
- .2 Construction work will be monitored regularly on established mitigation measures. Adjust and upgrade items as required to meet the municipal, provincial and federal Acts as required.

1.2 Submittal Requirements

- .1 Contractor is responsible to develop a Site-Specific Erosion and Sediment Control Plan that will minimize the risk of sediment in the water body during all phases of the work. Plan is to be submitted as per Section 01 14 10, for review by the Departmental Representative.
- .2 Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the water body or settling basin and runoff water is clear.
- .3 The Plan should, where applicable, include:
 - .1 Effective sediment control measures (e.g. silt fencing, check dams) must be an initial step in the construction sequence to prevent

the entry or re-suspension of sediment in the water body.

- .2 Inspection procedures for sediment control measures to ensure they are functioning properly, and actions to make all necessary repairs if any damage occurs. Upon completion of use, remove these control measures in a way that prevents the escape of settled sediment.
- .3 Measures for managing water flowing onto the site, as well as water being pumped / diverted from the site such that sediment is filtered out prior to the water entering a water body. For example, pumping / diversion of water to a vegetated area, construction of a settling basin or other filtration system. The water will be pumped to a sediment pond or into a filter bag to ensure that the concentration of sediment is below regulated discharged criteria before it reaches a water body.
- .4 Site isolation measures (e.g., silt boom or silt curtain) for containing suspended sediment. This should include measures for material stockpiles (e.g. tarps).
- .5 Measures for containing and stabilizing waste material (e.g., dredged/excavated material, construction waste and materials, grubbing, uprooted or cut aquatic plants, accumulated debris, etc.) above the high water mark of nearby water bodies to prevent re-entry.

- .6 Description of approach for managing potential impacts to the local environment including silt curtains, sediment fence, hay bales, treatment, etc.
 - .7 Methodology for monitoring weather, specifically rainfall and storms and altering work plan for inclement weather.
- 1.3 Measurement Procedures
- .1 There will no measurement for payment for any items in this section with the exception of the Water Quality Program Monitoring Program outlined in Section 1.10
 - .2 **Water Quality Monitoring Program** will be paid as lump sum.
- 1.4 References
- .1 Canada Shipping Act, Transport Canada, (CSA) 2001, amended [2017-12-12
 - .2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada.
 - .3 Canadian Environmental Assessment Act, 2012, amended [2017-06-22].
 - .4 Canadian Environmental Protection Act, 1999, amended [2018-04-04].
 - .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended [2016-04-05].
 - .6 Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, [1998] - Fisheries and Oceans Canada
 - .7 Migratory Birds Convention Act, 1994, Environment Canada, amended [2017-12-12].

- .8 Navigation Protection Act, 1985.
Transport Canada, amended
[2017-06-22].
- .9 Species at Risk Act, 2002, amended
[2018-05-30].
- .10 The Federal Policy on Wetland
Conservation, [1991], Environment and
Climate Change Canada.
- .11 Transportation of Dangerous Goods Act,
[1992], Transport Canada, amended
[2017-01-01].
- .12 Nova Scotia Cemeteries and Monuments
Protection Act. Nova Scotia
Communities, Culture and Heritage
- .13 Nova Scotia Environment Act. Nova
Scotian Department of Environment
- .14 WHMIS: Workplace Hazardous Materials
Information System, Health Canada.

1.4 Definitions

- .1 Archaeological Resources: all tangible
evidence of human activity that is of
historical, cultural or scientific
interest. Examples include features,
structures, archaeological objects
(artifacts) or remains at or from an
archaeological site, or an object
recorded as an isolated archaeological
find. An "artifact" is any object
manufactured, used, moved or otherwise
modified by human beings, including all
waste materials and by-products of
these processes.
- .2 Buffer zone: a vegetated land that
protects watercourses from adjacent
land uses. It refers to the land
adjacent to watercourses, such as
streams, rivers, lakes, ponds, oceans,

and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.

- .3 Deleterious substance:
 - (a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water,
 - Or
 - (b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.
- .4 Fish habitat: spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.
- .5 Hazardous material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.

- .6 Invasive or alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.
 - .7 Navigable water: a canal and any other body of water created or altered as a result of the construction of any work.
 - .8 Surface watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
 - .9 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands", and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.
- 1.5 Transportation
- .1 Transport hazardous materials and hazardous waste in compliance with Transportation of Dangerous Goods Act.
 - .2 Do not overload trucks when hauling material. Secure contents against spillage.
 - .3 Maintain trucks clean and free of mud, dirt and other foreign matter.
 - .4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Immediately clean any spillage and soils.

- .5 Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site.
- 1.6 Hazardous Material Handling
- .1 Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.
 - .2 Store all hazardous liquids in location and manner to prevent their spillage into the environment.
 - .3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.
 - .4 Keep MSDS data sheets on site for all items.
- 1.7 Petroleum, Oil and Lubricants
- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
 - .2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
 - .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
 - .4 Be diligent and take all necessary precautions to avoid spills that may

contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.

- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
- .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
- .7 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

1.8 Disposal
of Wastes

- .1 Do not bury rubbish, demolition debris and waste materials on site.
- .2 Dispose and recycle demolition debris and waste materials to Waste Facility.
- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners, etc.) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.
- .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.

1.9 Water Quality

- .1 Conduct work in or near a watercourse or wetland in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times.
 - .1 Maintain appropriate production speed and momentum of the excavation equipment. Make adjustments as required and as approved by Departmental Representative.
 - .2 Strategically position excavator equipment and haul vehicles to avoid over the water swings of excavated material whenever possible.
- .2 Where work may affect the water quality adjacent to water intake lines used by lobster holding facilities, fish processing facilities and other harbor users, schedule work in corporation with the Harbour Authority as directed by Departmental Representative to minimize interference and impact to harbour users.
- .3 Contractor is responsible to hire/appoint a qualified professional to develop and implement a Water Quality Monitoring (WQM) program for the watercourse adjacent to the Work site. The WQM Program must include a fixed collection point from which data shall be collected at 100 meters from the work area while in-water works are being conducted and the equipment is operating, and a fixed background collection point at least 500 meters from the project site in a undisturbed area and up-current from any sediment movement. Sample results must be

recorded and submitted to the Departmental Representative 2 times per day while in-water works are being conducted. Turbidity level shall not exceed 8 Nephelometric Turbidity Units (NTUs) above background levels at 100 m from the nearest edge of the work area over a 24 hour period when background levels are between 8 and 80 NTU. Turbidity levels shall not increase more than 10% above background levels at 100 m from the nearest edge of the work area when background is >80 NTU. If turbidity exceeds limits, Contractor shall cease work immediately. The Departmental Representative and Fisheries & Oceans Canada (DFO) - Fisheries Protection Program (FPP) Biologist, Colleen Smith, must be contacted at (902)-293-7834 to determine what adaptive measures shall be employed including additional operational and engineering controls (e.g. silt curtains).

- .4 Contractor must submit the WQM program design to the Departmental Representative and will not be permitted to start any in-water work until the WQM program is approved by the Departmental Representative.
- .5 Do not wash down equipment within a 30 meter buffer zone of a wetland, watercourse or other identified environmentally sensitive area.

1.10 Socioeconomic
Restrictions

- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.

- .2 Place flood lights in opposite direction of adjacent residential and business areas.
 - .3 Equip equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.
- 1.11 Bird and Habitat
- .1 Become knowledgeable with and abide by the Migratory Birds Convention Act (MBCA) in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
 - .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
 - .3 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
 - .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
 - .5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.
 - .6 Should nests of migratory birds in wetlands be encountered during work, immediately notify Departmental Representative for directives to be followed.
 - .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.

- .2 Minimize work immediately adjacent to such areas until nesting is completed.
 - .3 Protect these areas by following recommendations of Canadian Wildlife Service.
- 1.12 Fish and Fish Habitat
 - .1 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
 - .2 To minimize the possibility of fish habitat contamination, all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
 - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
 - .3 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
 - .4 Conduct cleaning and washing operations as follows:
 - .1 Scrape and remove heavy accumulation of mud and dispose appropriately.

- .2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
- .3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
- .4 Check and remove all plant, animal and sediment matter from the all bilges and filters.
- .5 Drain standing water from equipment and let dry before use.
- .6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
- .5 Do not perform cleaning and wash down within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .6 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.
- .7 Abide by requirements and recommendations of the Environment and Climate Change Canada and Fisheries and Oceans - Fisheries Protection Program in cleaning and wash down of equipment.

1.13 Air Quality

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
- .4 Do not use oil or any other petroleum products for dust control.

1.14 Fires

- .1 Fires and burning of rubbish on site is not permitted.

-----END OF SECTION-----

PART 1 - GENERAL

1.1 Inspection

- .1 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
- .2 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- .3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed.
- .4 Pay costs to uncover and rectify work disturbed by inspections and tests.

1.2 Testing

- .1 Tests on materials, equipment and building systems as specified in various sections of the Specifications is the responsibility of the Contractor except where stipulated otherwise.
- .2 Unspecified tests may also be made by Departmental Representative, at the discretion of the Departmental Representative. The costs of these tests will be paid for by the Departmental Representative.

- .3 Where tests or inspections reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests and inspections incurred by Departmental Representative as required verifying acceptability of corrected work.
- 1.3 Independent Inspection and Testing Agencies
- .1 Departmental Representative may engage independent inspection and testing agencies for purpose of inspecting and testing portions of Work except for the following which remain part of Contractor's responsibilities:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative.
 - .2 Provide sufficient advance notice to Departmental Representative of time when the Work will be ready for testing by designated Testing Agency in order for Departmental Representative to make attendance arrangements with such Agency. When directed by Departmental Representative notify the Agency directly.
 - .3 When specified or directed, submit representative samples of materials,

in required quantities, to Testing Agency for testing purposes. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.

- .4 Provide labour and facilities to obtain, handle and deliver samples.
- .5 Provide sufficient space on site for Testing Agency's exclusive use to store equipment and cure test samples.
- .6 Employment of Independent Inspection and Testing Agencies by Departmental Representative does not relax responsibility to perform Work in accordance with Contract Documents

1.4 Access to Work

- .1 Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.
- .2 Furnish labour and facility to provide access to the work being inspected and tested.
- .3 Co-operate to facilitate such inspections and tests.

1.5 Rejected Work

- .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.

- .2 Make good damages to new and existing construction and finishes resulting from removal or replacement of defective work.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Requirements of Regulatory Agencies .1 Prior to use, have weigh scales certified as meeting requirements of Statutes of Canada, Chapter 36, Weights and Measures Act 1970-71-72 and subsequent amendments. Display certificate in a prominent position.
- 1.2 Measurement Procedures .1 Include cost of certification, installation, maintenance and removal of scales or use of local commercial scales in items of work to be measured by mass (Section 35 31 24).
- 1.3 Equipment .1 Weigh scales: electronic truck scale of sufficient capacity to weigh loaded vehicles in a single operation.
- .2 Existing certified commercial scales may be utilized if available and approved by Engineer.
- .3 The supply of labor, materials, tools, equipment, protection, transportation, administration fees, profits and necessary financing, etc., to complete the work stipulated in this project, shall be included in each of the items at the locations.
- 1.4 Scale House .1 To enclose mass indicator and in which Engineer's representative can perform work and maintain records.
- .2 To be weatherproof and have minimum 750 lx of illumination, one sliding window facing scale platform, one other window for cross ventilation, shelf desk at least 0.6 x 1.8 m, and heat to maintain inside temperature at 20°C. The Entrance door is not to face onto scale platform.

- 1.5 Operation
- .1 Engineer's representatives at scales will monitor weighing of materials when available.
 - .2 Provide sufficient number of weigh tickets in triplicate, with consecutive serial numbers. Obtain Engineer's approval of design.
- 1.6 Maintenance
- .1 Maintain scale platform and scale mechanism clean and free from gravel, asphalt, snow, ice and debris.
 - .2 Maintain approach and exit ramps in good condition free from sags and ruts.
 - .3 Have scales recertified if requested by Departmental Representative.
- 1.7 Weigh Scales
- .1 The following specifies requirements for materials measured by mass:
 - .1 No weigh scales required on site.
 - .2 The Contractor to use scale on route to the work site.
 - .3 Weigh scale used or proposed for the work shall be approved by the Departmental Representative and certified as meeting the requirements of Weights and Measures Act Statutes of Canada 1976-77, chapter 36.
 - .4 Departmental Representative may weigh materials to be measured by mass.
 - .5 Provide approved weigh slips in quadruplicate with consecutive serial numbers.

- .6 Weigh slips to be signed by the
Departmental Representative at
time of delivery.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Access .1 Provide and maintain adequate access to project site.
- .2 If authorized to use existing roads or structures for access to project site, maintain such roads for duration of Work and make good, any damage resulting from Contractor's use of roads.
- 1.2 Contractor's Site Office .1 Site office trailer not required.
- 1.3 Departmental Representative Site Office .1 Site office trailer not required.
- 1.4 Storage Sheds .1 Provide adequate weather tight sheds with raised floors, for storage of materials, tools and equipment which are subject to damage by weather.
- .2 Contractor to make arrangements for on-site storage areas.
- 1.5 Sanitary Facilities 1 Contractor to provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- 1.6 Parking .1 Contractor to make arrangements to provide parking space for work force.
- 1.7 Power .1 Arrange, pay for and maintain temporary electrical power in accordance with governing regulations and ordinances.

- .2 Install temporary facilities for power such as pole lines and cables to approval of local power supply authority.
- 1.8 Water Supply .1 If Contractor elects, arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.
- 1.9 Barricades .1 Provide and maintain sufficient barricades, fencing, notices, warning signs, light signals, etc. for the protection of adjoining property and to warn others and workers engaged on the job of the dangers caused by the Work.
- .2 Types and location of barricades, etc., to be in accordance with local regulations and to the satisfaction of Departmental Representative.
- .3 The presence of such barricades, lights, etc. shall not relieve the Contractor of the responsibility for any damages.
- 1.10 Security .1 Contractor to make his own arrangements for security of his equipment, materials, damages resulting from fire and theft.
- 1.11 Site Signs .1 Signs and notices for safety or instruction to be in English or commonly understood graphic symbols.
- 1.12 Removal of Temporary Facilities .1 Remove all temporary facilities and structures at end of Work.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Record
Drawings
- .1 Departmental Representative will provide the Contractor with two sets of white prints for record drawing purposes.
 - .2 Maintain project record drawings and accurately record deviations from contract documents caused by site conditions and changes authorized by Departmental Representative.
 - .3 Mark changes in red coloured ink.
 - .4 Record following information:
 - .1 Elevations of various elements in relation to Chart Datum.
 - .2 Field changes in dimensions and details.
 - .3 Changes made by Change Orders.
 - .5 At completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to Departmental Representative.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 General
- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- 1.2 Cleaning During Construction
- .1 Maintain work site in a tidy condition, free from accumulations of waste material and debris. Clean areas on a daily basis.
 - .2 Provide on-site containers for collection of waste materials and debris.
 - .3 Use separate collection bins, clearly marked as to purpose, for source separation and recycling of waste and debris in accordance with waste management requirements specified.
 - .4 Remove waste materials, and debris from site on a daily basis.
- 1.2 Final Cleaning
- .1 In preparation for acceptance of the project on an interim or final certificate of completion perform final cleaning.
 - .2 Broom clean and wash exterior paved surfaces and walks affected by the work; rake clean other surfaces of grounds.
 - .3 Ensure work site and adjacent access and wharf structures are returned to pre-construction conditions.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Related Work .1 Section 01 35 44 - Environmental Protection Procedures for Marine Work.
- 1.2 General .1 Carry out work placing maximum emphasis on the areas of:
.1 Waste reduction;
.2 Reuse;
.3 Diversion of waste from landfill and;
.4 Material Recycling.
- 1.3 Waste Reduction .1 Develop waste reduction strategy for work.
.2 Structure program to prioritize actions, with waste reduction as first priority, followed by salvage and recycling effort, then disposal as solid waste.
.3 Identify materials and equipment to be:
.1 Reuse within new work;
.2 Salvaged for resale by Contractor;
.3 Sent to recycling facility;
.4 Sent to waste processing/landfill site for their recycling effort;
.5 Disposed of in approved landfill site.
.4 Reduce construction waste during installation work. Undertake practices which will minimize waste and optimize full use of new materials on site, such as:
.1 Use of a central cutting area to allow for easy access to off-cuts;
.2 Use of off-cuts for blocking and bridging elsewhere;
.3 Use of effective and strategically placed facilities on site for storage and staging of left-over or partially cut materials (such as

plywood, dimension timber, etc.)
to allow for easy incorporation
into work whenever possible
avoiding unnecessary waste.

- .5 Develop other strategies and innovative procedures to reduce waste.
- 1.4 Material Source Separation Process
 - .1 Develop and implement material source separation process at commencement of work as part of mobilization and waste management at site.
 - .2 Provide on-site facilities to collect, handle and store anticipated quantities of reusable, salvageable and recyclable materials.
 - .3 Establish methods whereby hazardous and toxic waste materials, and their containers, encountered or used in the course work are properly isolated, stored on site and disposed in accordance with applicable laws and regulations from authorities having jurisdiction.
- 1.5 Disposal Requirements
 - .1 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.
 - .2 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, construction waste materials have been banned from disposal in landfills. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
 - .3 Collect, bundle and transport salvaged materials to be recycled in separated

categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities.

- .4 Sale of salvaged items by Contractor to other parties not permitted on site.
- 1.6 Removal
 - .1 Removal in entirety items designated for removal.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Description .1 This section specifies requirements for the supply and installation of synthetic non-woven geotextile (also referred to as filter fabric) to be used on the side slopes of the containment cell.
- 1.2 Samples .1 Submit to the Departmental Representative at least 2 weeks prior to commencing work: manufacturer's specifications on the geotextile proposed to be used.
- 1.3 Storage and Delivery .1 Store, handle and protect geotextile in accordance with manufacturer's instructions and in such a manner that will not cause damage to material.
- 1.4 Measurement Procedures .1 **Geotextile**: The supply and installation of geotextile will be paid by lump sum of geotextile installed on the side slope of the berm.

PART 2 - PRODUCTS

- 2.1 Materials .1 Geotextile to be synthetic fiber and be rot proof, unaffected by action of oil or salt water and not subject to attack by marine life, insects, or rodents.
- .2 Geotextile to be of non-woven construction supplied in rolls of minimum 3.0 metres width with the following characteristics:
- .1 Mass(g/m²) 210
 - .2 Grab tensile strength (N) 712
 - .3 Grab elongation (%) 50
 - .4 Tear resistance (N) 267
 - .5 CBR puncture (N) 1820
 - .6 Opening size (mm) 0.212

- .3 Contractor shall note that the material may become buoyant.

PART 3 - EXECUTION

3.1 Geotextile
Installation

- .1 Place geotextile material by unrolling in orientation, manner and locations indicated and retain in position with securing pins and washers, weights or other method as approved by Departmental representative.
- .2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
- .3 Overlap each successive strip of geotextile minimum of 600 mm over previously laid strip.
- .4 Pin successive strips of geotextile with securing pins or fasteners as recommended by manufacturer.
- .5 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material.
- .6 Replace damaged or deteriorated geotextile to approval of Departmental Representative.

-----END OF SECTION-----

PART 1 - GENERAL

- 1.1 Description .1 This section specifies the requirements for the placement of fill, geotextile and rock protection to construct a containment cell at Malagash, NS, as shown on the plans.
- 1.2 Related Work .1 Section 01 45 01 Weigh Scales.
.2 Section 31 32 21 Geotextiles.
- 1.3 Existing Haul Roads .1 It is important that persons intending to bid on this work visits the site and a certain what preparatory work will be required for the following:
.1 Access to site via public roads.
.2 Access to site via wharf approach road and parking areas.
.2 The Contractor will be responsible to make good any damage to public or private roads and structures.
- 1.4 Measurement Procedures .1 **Mobilization/demobilization** of construction equipment to be paid as lump sum.
.2 **Sandstone Core Fill** will be measured in tonnes of imported sandstone fill supplied and acceptably placed in the works to the lines and grades specified.
.3 **Filter Stone** will be measured in tonnes of material supplied and acceptably placed in the works to the lines and grades specified.
.4 **Armour Stone** will be measured in tonnes of material supplied and acceptably placed in the works to the lines and grades specified.

- .5 **Salvage and Relocate Materials** will be lump sum and include excavation, placement, grading and site restoration of former disposal site.
- .6 Haulage will be incidental to the work.
- .7 Construction and maintenance of haul roads will not be measured for payment.

PART 2 - PRODUCTS

2.1 Materials

- .1 Sandstone Core Fill: To be of good durability course sandstone rock that is of approved quality, sound, hard, dense, angular, resistant to weathering and salt water, free from overburden, spoils, and organic material. Free from cracks, seams or other defects which may impair durability.
- .2 Salvaged Armour Stone: 25Kg to 500Kg stones, on the side slope of the approach, within the reach of the excavator, to a depth of +1.0m. Estimate pieces - 25.
- .2 Existing Dredged materials: Class "B" material dredged in the early spring 2018, silt, sand, quick sand, mud, shingle, gravel, clay, sand, gumbo, boulders volumes less than 1.5 m³. Some debris, tires, bottles, Styrofoam, may be encountered. Quantity is estimated to be in the order of 500 CMPM.
- .3 Rock Protection to be hard, dense rock or sandstone with a specific gravity not less than 2.50 durable quarry stone, free from seams, cracks or other structural defects. Rock is to be clean, durable free from mud, dirt, organic and other deleterious materials.

- .3 Individual pieces of rock protection are to be angular and greatest dimensions of each stone is not to exceed two times least dimension.
- .4 Sizes:
 - .1 Filer Rock, stone sizes to range 100Kg to 400 Kg.
 - .2 Armour Rock, stone sizes to range 2 tonnes to 4 tonnes.

PART 3 - EXECUTION

- 3.1 Preparation
 - 1 Protect existing parking surfaces and asphalt from damage from of tracked equipment and rock materials prior to mobilization to the site.
 - .2 Remove ice and snow that may affect placement of rock.
- 3.3 Salvage
 - .1 Salvage rock from approach road where the rock has potential to be buried by containment cell.
- 3.4 Sandstone Fill
 - .1 Place sandstone fill by end dumping and grading sandstone fill to lines, grades and dimensions as indicated on the plan.
 - .2 Place materials on the seabed when tide is at its lowest. Spread the sandstone in 250 mm layers and compact above water with tracked equipment.
 - .3 Execute work in a manner to protect core material from storm and erosion damage. Replacement of material lost due to storm or erosion damage will be the contractor's responsibility.
 - .4 Excavate for toe of rock and place excavated materials within containment cell.

- .5 Notwithstanding 3.4.4, do not extend excavation of toe more than 10 metres beyond filter fabric and rock protection work.
- 3.3 Geotextile .1 As per Section 31 32 21 Geotextiles
- 3.4 Rock Protection .1 Place each rock unit individually using an excavator or other mechanical means to the lines and grades and dimensions shown on plan. Commence placing at the toe of slope and proceed up the slope. Place each unit so that it is stable, secure on slope and supported by units below. Control placement of rock protection so as to produce a uniform and continuous cover.
- .2 Place stones in manner approved by the Departmental Representative to secure surface and create a stable mass.
- 3.5 Relocation Existing Dredged Materials .1 Once the containment cell is completed and adequately protected, move existing dredged materials to the new cell, by side casting or trucking or pushing dredged materials as approved by Departmental Representative.
- .2 Grade dredge spoils as much as can be reached from containment cell, in a manner that graded configuration does not pond water.
- .3 Former site of dredged materials is to be rehabilitated by fine grading as directed by the Departmental Representative. Divert surface water from draining into the containment cell.
- 3.6 Protection .1 Take into account anticipated weather conditions and degree of exposure of site and tidal conditions in setting

requirements for protection.

- .2 Schedule and carry out construction so that each phase of work is not left longer than necessary.
 - .3 Replacement of sandstone core or rock protection, lost due to storm or tidal erosion will be the responsibility of the Contractors.
- 3.7 Inspection
- .1 Provide inspector with equipment to assist in inspection to prove no stones have been placed outside the containment cell limits.
- 3.8 Tolerances
- .1 Complete component layers to be within following tolerances of lines and grades as indicated:
 - .1 Sandstone Core Stone: plus or minus 50mm.
 - .2 Rock Protection: plus or minus 200mm.

-----END OF SECTION-----