

PART 1 - GENERAL1.1 WORK COVERED
BY CONTRACT
DOCUMENTS

- .1 Work of this Contract includes, but is not necessarily limited to the following:

Demolition, excavation and dismantling

- Dismantling of existing street lights;
- Dismantling of bollards and off-site disposal ;
- Dismantling of the navigation light and keep for reinstallation at the end of the project. Advise the CCG that the lights will not be operational for the period of work and specify duration;
- Dismantling of existing electrical shed (Drawing E-2);
- Dismantling of the existing service cabinets (utility stations) and the distribution cables and conduits (Drawing E-2);
- Dismantling of existing defence system (cable and chain included). Salvage tires for their reinstallation. The system of steel fasteners will be replaced by new elements;
- Demolition of the concrete surface slab and excavation to specified level in drawings (30 cm above existing tie rods);
- Excavation of material to enable the driving of new piles. Salvage excavated material for reuse;
- Cutting of existing sheet piles as indicated on drawings;
- Dismantling of the existing surface water line and disposal of material off-site;
- Remove a portion of the riprap at the junction of the wharf and the existing riprap to allow the installation of new piles;

- N.B. The removal of service buildings belonging to fishermen or fish brokers before the beginning of the construction period will be their responsibility;

Construction :

- Installation of new sheet pile walls to enclose the existing walls;
- Backfill the space between the new and the old sheet pile up to the specified elevation with materials recovered from excavation or additional granular material if needed;
- Replace the riprap previously removed with the addition of new stones as needed to complete work;

- Fill-in the top part of the existing rip-rap by adding new stones all along the dock.
- Installation of anchoring systems for new sheet piles (steel tie rods and anchor blocks);
- Filling the dock with materials indicated on drawings, including the sub-layer of recycled materials, the layer of R5 stones and the base layer surface;
- Set-up (supply, install and hook-up) the electrical system (parallel to the backfilling), including empty conduits to each utility station (plan an access of 100 amps for one station, the others will be of 60 amps according to the standard in force);
- Installation (parallel to the backfilling) of the freshwater and saltwater distribution systems , including manholes for drainage system;
- Construction of a new 5-m wide concrete slab along docking sides;
- Installation of asphalt as specified in drawings;
- Installation of new defense systems, including salvaged tires, the addition of new tires as needed and a new fastening system;
- Reinstallation and commissioning of the navigation light (to be coordinated with CCG);
- Construction of the utility stations (electricity and water);
- Set-up (supply, install and hook-up) the new street lights;
- Construction of a new service building for electricity;
- Installation of new bollards and cleats at regular intervals, as specified in drawings;
- Supply and installation of new ladders;
- Supply and installation of new steel wheel guards and a guardrail along the approach.
- Supply and installation of protection plates and concrete fill on the steel sheet piles in the tidal zone, over the length of the exposed quay side.

1.2 SCHEDULE OF WORK

- .1 Works shall begin from the contract award and shall be completed within the timeframe of the contract.

1.3 REFERENCE DOCUMENTS

- .1 The Contractor will have available the following documents for consultation and they must be taken into account during the various stages of work:
- Subsurface Investigation – Shippagan, Gloucester County – New Brunswick – November 17, 2009 – File No. 1041315-968 – Stantec;

- Existing work plans – multiple projects available in digital format – 28 sheets.

1.4 USE OF PREMISES BY CONTRACTOR

- .1 Coordinate use of premises as directed by the Department’s Designated Representative.
- .2 Works should be coordinated with the Port Administration Manager, M. Camille-Andre Mallet

1.5 MEASUREMENT FOR PAYMENT

- .1 Items subject to an overall unity must be itemized and submitted to the Department’s Designated Representative within two weeks after contract award.

Payment items are:

.1 Item #1: Site Organization:

- .1 This item is measured as a global unity. It includes all the elements of the previous division as well as any other element that cannot be assigned to another measurement item.
- .2 The site organization during construction is paid in proportion to the monthly work estimates.
- .3 Unless mentioned otherwise in the general conditions, this item is limited to a maximum of 15% of the total bid price.

.2 Item #2: Demolition, sorting, salvaging, disposal of waste

- .1 This item is measured as a global unity. It includes without limitation to all the following elements:
 - .1 Surface concrete slab ;
 - .2 Water distribution systems (fresh and salt water) ;
 - .3 Lampposts ;
 - .4 Guardrail ;
 - .5 Electrical wires and conduits (above and underground);

- .6 Cutting of the existing steel sheet piles ;
- .7 Removal and salvaging of the fender system and salvage of the tires in good condition;
- .8 Removal of bollards ;
- .9 Removal of the existing service cabinets (islands);
- .10 Dismantling of the existing electrical building.

This item includes all other existing material to be removed that are not mentioned in the above list.

- .2 This item also includes temporary storage, transportation and disposal of material not reused in a site approved by local environmental standards.
- .3 Includes all expenses incurred to obtain operation and compliance certificates of the selected sites for disposal of these wastes.
- .4 The removal and installation of the existing riprap is not part of this item.

.3 Item #3: Excavation and disposal/salvaging

- .1 This item will be measured in cubic meters and will include all the work and precaution for the demolition in the marine environment and the excavation of the elements specified on the drawings.
 - .1 Backfill material
 - .2 Riprap (at the junction of the sheet pile wall) and along the north-west facade.
- .2 This item also includes sorting and salvage of certain backfill material (see item #11).
- .3 This item also includes temporary storage, transportation and disposal of material not reused in a site approved by local

environmental standards.

- .4 Includes all expenses incurred to obtain operation and compliance certificates of the selected sites for disposal of these wastes.

.4 Item # 4 : Supply of Steel Sheet Piling

- .1 These items will be measured in square meter of projected area of sheet pile supplied as directed on drawings. It includes the supply and transportation of steel sheet pile as indicated on drawings and specifications.

- .2 This item also includes the supply of all the additional material required in the installation of the steel sheet piling such as faceplates, ledgers, walings and other bolts for complete installation of the sheet piles.

- .3 This item also includes the supply and addition of all the equipment required to install the steel sheet piles (shoes, conduit for pressurized water injection, etc.)..

- .4 The cutting of the existing sheet piles as indicated on the drawings and specifications is not included in this item.

- .5 Tie rods are not part of this item.

- .6 This item includes the 300 mm addition for the re capping of each sheet pile.

- .7 This item will be divided as follows:

- .1 Pile Sx = 3795 cm²/m (4.a);
- .2 Pile Sx = 4595 cm²/m (4.b).

.5 Item # 5 : Installation of Steel Sheet Piling

- .1 This item will be measured in square meter of projected area of sheet pile installed as directed on drawings. It includes the installation of steel sheet pile and any other additional material required for the

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- installation such as faceplates, bolts, cross-pieces and others required for a complete installation of the sheet piles.
- .2 This item also includes the required measurements and all the driving techniques required to install the sheet piles in the conditions of the project (pre-drilling, use of explosives, use of an auger, etc.) as well as all precaution activities required to install the sheet piles.
- .3 Installation of the tie rods is not part of this item.
- .4 This item will be divided as follows:
- .1 Pile Sx = 3795 cm²/m (5.a);
 - .2 Pile Sx = 4595 cm²/m (5.b).
- .6 Item #6 – Reinstallation and addition of Riprap
- .1 This position will be measured as a global unity and will include:
- .1 The reinstallation of the riprap located in the northern corner of the wharf (6.a);
 - .2 The supply and the placement of the new 3-5 ton rock protection required to complete the riprap on the north corner as well as the loading of the riprap bank according to the limits indicated on the drawings. This item will be measured in metric tons (6.b).
 - .3 The supply and installation of extra 300-500 kg rock to complete the rock protection as indicated on drawings. This item will be measured in metric tons (6.c).
- .7 Item #7 – Supply and installation of tie rods
- .1 This item will be measured in linear meter. It includes material, labor and equipment required for the complete installation of the tie rods

(sheet pile to sheet pile and to the anchor blocks) as specified on the drawings.

.2 This item will be divided as follows:

.1 Supply and installation of 57 mm diameter tie rods (7.a);

.8 Item #8 – Supply and installation of the geotextile membrane

.1 This item is measured in square meter. It includes material, labor, equipment and services required for the installation of the geotextile membrane. The width of the membrane overlapping is not included in the quantity indicated on the price schedule and is not counted in the quantities.

.9 Item #9 – Supply and installation of the reinforced concrete anchor blocks

.1 This item will be measured in cubic meter. It includes material, labor, equipment required for the complete installation of the anchor blocks as specified on the drawings.

.10 Item #10 – Salvaging and placing of backfill material

.1 This item will be measured in cubic meter of backfill material actually incorporated in the work. It includes transportation, installation and compaction of the salvaged backfill material as specified on the drawings.

.11 Item #11 – Supply and installation of type R-5 backfill

.1 This item will be measured in metric ton. It includes supply, weighing, transportation and installation of backfill material type R-5 as specified on the drawings.

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- .12 Item #12 – Supply and placement of granular foundation
- .1 This item is measured in metric ton and weighing will be done on site. It includes weighing, transportation, placement and compaction of granular backfill material as specified on the drawings.
- .2 This item is divided as follow:
- .1 Supply and installation of crushed aggregates 0-31.5mm (12.a).
- .2 Supply and installation of crushed aggregates 0-75mm (12.b).
- .3 Supply and installation of aggregates 25mm (12.c).
- .13 Item #13 – Construction of the poured on site concrete slab
- .1 Poured on site concrete slab is measured in cubic meter of concrete poured in the work, as specified on the drawings. It includes cement, aggregates, reinforcing steel, anchors, embedded steel elements, joints, additives, formworks, equipment, material, labor and transportation. No deduction of concrete volume will be done for reinforcing steel and openings less than 0.1 square meters. Heating of water and aggregates as well as measures taken to protect concrete in cold weather, cooling and protection of concrete in hot weather are also included in this item.
- .2 Concrete required for the bollards and for their filling is not part of this item.
14. Item #14 – Supply and placement of bituminous surfacing
- .1 This item is measured in square meter of installed material as specified in drawings. It includes materials, labor, equipment required for the installation of bituminous surfacing.

15. Item #15 – Wheel guards and guard rails

- .1 This item is measured in linear meter of installed material as specified on the drawings. It includes the supply of material, labor and equipment required for the installation of wheel guards and guard rails as specified on the drawings.
- .2 This item is divided as follow:
 - .1 Supply and installation of steel wheel guard PCC (15.a);
 - .2 Supply and installation of guard rail (15.b).

16. Item #17 – Supply and installation of new steel ladders

- .1 This item will be measured in unit installed. It includes the materials, labor and equipment required for the installation of ladders.
- .2 The ladder galvanizing is included in this item.

17. Item #17 – Supply and installation of bollards and jam-cleats

- .1 This item is measured in units installed. It includes the material, labor and equipment required for the installation of bollards and jam-cleats.
- .2 All fittings, adjustments and non-shrink grout required for a complete installation are included in this item.
- .3 The painting of bollards and jam-cleats are included in this station.
- .4 The concrete required for the bollards base is included in this item.
- .5 This item is divided as follow:
 - .1 10" bollards (17.a);
 - .2 16" bollards (17.b) ;
 - .3 cleats (17.c).

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- .18 Item #18 – Salvaging, supply and installation of rubber dock fenders
- .1 This item will be measured in units installed (tires).
 - .2 It includes all the material, labor and equipment required for the installation of new rubber dock fenders (tires).
 - .3 This item includes the reinstallation of the salvaged fenders of item #2 and the supply and installation of new fenders (tires).
 - .4 This item includes the supply and installation of new fastening systems for the fenders.
 - .5 All the hardware needed for the complete installation of the fender systems is included in this item.
- .19 Item #19 – Electrical, lighting and hot-galvanized steel utility stations
- .1 This item is divided as follow:
 - .1 Electrical distribution: This item is measured as a global unit and includes without limitation to electricity and all equipments to install in the electrical building as indicated on the drawings. The concrete pull-out manholes are also included in this item (19.a).
 - .2 Lighting: This item is measured as a global unit and includes without limitation to electricity, lighting to be installed as indicated on the drawings. (19.b).
 - .3 Hot-galvanised steel utility stations (islands): This item is measured as unit installed and includes without limitation to the supply and installation of hot-galvanised steel electrical cabinets for the utility stations. This item includes the supply and installation of all the material and equipment to be installed as specified on the drawings (19.c).

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- .4 Electrical feed trunk: This item is measured as a global unit and includes without limitation to the supply and installation of all underground electrical conduits including all equipment, labor and material as specified on the drawings (19.d).
- .20 Item #20 – Water supply services (fresh and salt water)
- .1 This item is measured as a global unit and includes, without limitation all equipment and material as specified on the drawings.
- .2 This item includes the concrete manholes for the water supply.
- .21 Item #21 – Electrical building
- .1 This item is measured as a global unit and includes, without limitation all structural and architectural elements of the new electrical building. Electrical equipment to be installed inside are part of item #19.
- .2 All mechanical work like the supply and installation of the ventilation is included in this item.
- .22 Item #22 – Removal and reinstallation of the navigation light
- .1 This item is measured as a global unit and includes, without limitation all equipment and material as specified on the drawings to remove and reinstall the navigation light at the end of the construction.
- .2 The contractor is to be aware of the possibility of having to erect a temporary navigation light during the construction period.
- .23 Item #23 – Protection posts (utility stations)
- .1 This item is measured as unit installed and includes, without limitation all equipment and material required for the supply and installation

of the protection posts as specified on the drawings.

.24 Item #24 – Concrete filling of sheet piles

.1 This item will be measured in linear meter sheet piles on which will be installed the plate and concrete protection, as specified on the drawings.

.2 This item includes supply and installation of all materials needed to install the protection; main plates and adjustment steel (if required), rebar, concrete and all other material required for a complete installation.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not used.

PART 1 - GENERAL1.1 DESCRIPTION

- .1 This section describes the requirements for truck scales, unless otherwise stated, intended to weigh the materials paid in terms of mass.
- .2 The operator's supply, the scale and the cabin, its maintenance, certification, location, inspection, removal and any other cost related to the cabin and scale's operations will be included in the measured material prices and paid in terms of weight.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- .1 Before using the scale, obtain the certificate of compliance with the regulation of the Weights and Measures Act, chapter 36, and subsequent amendments of the Canadian Constitution 1976-1977. Display the certificate prominently.

PART 2 - PRODUCTS2.1 MATERIAL

- .1 Weighbridge: supply a weighbridge that can weigh in one operation all loaded vehicles and print automatically weighing coupons. Hire a qualified weighbridge operator.
- .2 On weighing coupons, the weight of the load and the truck will be provided separately.
- .3 Cabin: supply and install a cabin including a weight indicator and arranged so that the operator can carry out his work and keep his records up to date.

PART 3 - EXECUTION3.1 Installation

- .1 Remove the weighbridge and the cabin when no longer required and level access ramps.
- .2 Provide, install, and maintain the weighbridge at a suitable location. The installation site must be approved by the Department's Designated Representative.

3.2 CLEANING

- .1 The platform and the weighing mechanism must be kept clean and free of gravel, asphalt, snow, ice or debris.
- .2 Keep ramp in good condition and free of sinking or ruts.
- .3 Check the scale periodically and get another certificate if requested by the Department's Designated Representative, at no cost to the Owner.

PART 1 - GENERAL

1.1 RELATED
REQUIREMENTS
SPECIFIED ELSEWHERE

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by the Department's Designated Representative are specified under various sections of the specifications.

1.2 APPOINTMENT AND
PAYMENT

- .1 The Department's Designated Representative will appoint and pay for services of testing laboratory except in cases listed as follows:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or public authorities orders.
 - .2 Inspection and testing performed exclusively for the Department's Designated Representative's convenience.
 - .3 Testing, adjustment and balancing of material handling systems, networks, and mechanical and electrical.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests specified to be carried out by the Contractor under the Department's Designated Representative's supervision.
 - .6 Additional tests specified in the following paragraph.
- .2 When inspections or tests conducted by the testing laboratory designated reveal non-compliance with the requirements of the works contract, the Contractor shall pay the cost of additional inspections or tests as the Department's Designated Representative may request to verify if corrections are acceptable.

1.3
CONTRACTOR'S/DESIGN
-BUILDER'S
RESPONSIBILITIES

- .1 Provide the necessary labour, equipment and facilities to:
 - .1 Provide access to Work for inspection and testing.
 - .2 Facilitate inspections and tests.
 - .3 Rehabilitate structures disturbed during inspection and testing.
 - .4 Reserve on the site a place where laboratory staff can store its equipment and process samples.
- .2 Notify the Department's Designated Representative sufficiently in advance of operations so he can make an appointment with the laboratory staff and establish the scheduling of tests.
- .3 When materials have to be tested, deliver the required quantity of samples to testing laboratory.

- .4 Pay costs for works executed to uncover and repair works that were covered before the required inspection or testing is executed and approved by the Department's Designated Representative.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

1.1 DEFINITION

- .1 Activity: element of Work performed during the course of the Project. An activity normally has expected duration, cost and resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic representation of data relating to the timing of a project. In a typical bar chart, activities or other Project elements are listed down on the left side of the chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), taking into consideration the amendments approved to the project scope.
- .4 Construction Work Week: Week of five or six days, from Monday to Friday or Saturday, defining working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of required work periods (not including holidays or other nonworking periods) required to complete an activity or another project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually the completion of a major deliverable.
- .8 Project Schedule: planned dates to perform activities and to meet milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy the Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by the Department's Designated Representative to enable monitoring of project work in relation to established milestones.

1.2 REQUIREMENTS

- .1 Ensure that the Master Plan and detailed schedules are practical and remain within specified contract duration.
- .2 Plan the completion of Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to a maximum of approximately 10 working days, to allow the supply of progress reports.
- .4 The Award of Contract or the start date of work, the rate of progress, the delivery of the Interim and Final Certificate constitute defined steps of the project and are essential conditions of the contract.

1.3 SUBMITTALS

- .1 Submit to the Department's Designated Representative within 5 working days after contract award, a bar chart (Gantt chart) which will outline and will be used for planning and monitoring work, and for production of progress reports.
- .2 Submit Project Schedule to Department's Designated Representative within 5 working days of receipt of acceptance of Master Plan.

1.4 PROJECT COMPLETION

- .1 Work should begin at the contract granting and be completed within the time specified in the contract.

1.5 PROJECT MILESTONES

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 The Department's Designated Representative will review and return revised schedules to the Contractor within 4 working days.
- .3 Revise impractical schedule and resubmit within 3 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.6 PROJECT SCHEDULE

- .1 Develop a detailed implementation schedule that reflects the diverse requirements of the plan and specifications.

The presented calendar must comply with the following requirements and constraints:

1. The contractual date for the project completion is specified in paragraph 1.4 of this section;

.2 The detailed implementation schedule must cover the entire duration of the project, from the award of the contract to the final demobilization. Among important elements to include, in addition to construction activities, it must present dates relative to the production of shop drawings, product data, certificates of compliance, permits, delivery of material.

1.7 PROJECT
SCHEDULE REPORTING

.1 Update Project Schedule at least once every two weeks to reflect activity changes and completions, as well as activities in progress.

.2 Include as part of Project Schedule, a narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.8 PROJECT MEETINGS

.1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with a projected start or completion date later than current approved dates shown on baseline schedule.

.2 Weather related delays with their remedial measures will be discussed and negotiated.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not used.

PART 1 - GENERAL

- 1.1 RELATED REQUIREMENTS .1 Section 01 45 00 – Quality control
- 1.2 REFERENCES .1 Canadian Construction Documents Committee (CCDC)
- 1.3 ADMINISTRATIVE .1 In a reasonable delay and according to a predetermined order, submit to the Department's Designated Representative submittals listed for approval. Submit promptly and in orderly sequence to not cause delay in Work. A delay in this regard is not considered a sufficient reason to obtain an extension of Contract time and no such request will be accepted.
- .2 Works, for which the submittal of documents is required, shall not be undertaken before the overall verification of submitted documents is entirely completed.
- .3 Specifications identified on shop drawings, product data, and samples in SI Metric units.
- .4 Where items or information is not produced in SI Metric units, converted values are acceptable.
- .5 Review submittals and samples prior to submission to the Department's Designated Representative. By this preliminary review, the contractor confirms that the necessary requirements have been determined and verified, or will be, and that each samples submitted has been checked and coordinated 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 considered rejected.
- .6 Notify the Department's Designated Representative in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by the Department's Designated Representative's review.

1.4 SHOP DRAWINGS
AND PRODUCT DATA

- .9 Keep one reviewed copy of each document on site.

- .1 The term "shop drawings" refers to 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 Shop drawings must indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of the section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow 5 days for the Department's Designated Representative to review each batch of documents submitted.
- .4 Adjustments made on shop drawings by the Department's Designated Representative are not supposed to change the Contract Price. If so, however, notify the Department's Designated Representative in writing prior to construction.
- .5 Make changes in shop drawings that are requested by the Department's Designated Representative, in accordance with the Contract Documents requirements. When resubmitting, notify the Department's Designated Representative in writing of revisions other than those requested.
- .6 Submissions should be or indicate the following:
 - .1 Preparation and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:

- .1 Fabrication materials and details.
 - .2 Layout or configuration, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Features such as power, flow, and capacity.
 - .5 Performance characteristics.
 - .6 Reference standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Line diagrams and schematics.
 - .10 Link to adjacent work.
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- .7 After the Department's Designated Representative's review, distribute copies of shop drawings and product data.
 - .8 It is possible that the Department's Designated Representative requests certain shop drawings to be sealed by an engineer member of the Association of Professional Engineers and Geoscientist of New Brunswick.
 - .9 Submit 3 copies of shop drawings for each requirement requested in the technical sections of the specifications and as the Department's Designated Representative may reasonably request.
 - .10 If no shop drawing is required due to the use of a standard manufacture product, submit 3 copies of data sheets, or manufacturer's documentation prescribed in the technical sections of the specifications and required by the Department's Designated Representative.
 - .11 Delete information not applicable to the project.
 - .12 In addition to standard information, supply all supplementary details applying to the project.
 - .13 If upon review by Department's Designated Representative, no errors or omissions are discovered or if only minor corrections are made, one copy will be returned and fabrication and installation of Work shall proceed. If shop drawings are rejected, the noted copy will be returned and resubmission of corrected shop drawings, through the same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
 - .14 The review of shop drawings by the Department's Designated Representative has for sole purpose to verify the conformance

with the general concept. This review shall not mean that the Department's Designated Representative approves the shop drawings, as it is the responsibility of the Contractor who submits them, and does not release the Contractor from the obligation of submitting complete and exact shop drawings, and to comply with all requirements of Works and Contract documents. Without restricting generality of foregoing, the Contractor is responsible for the accuracy of dimensions confirmed on site, of the supply of information aiming shaping methods or construction techniques and the installation and the coordination of works executed by all trades.

1.5 SAMPLES

- .1 Submit for review three samples as requested in respective technical section of the specifications. Label samples with origin and intended use.
- .2 Deliver samples prepaid to the Department's Designated Representative site office.
- .3 Notify the Department's Designated Representative in writing, at the time of submission of products samples, deviations they present from requirements of Contract Documents.
- .4 When color, pattern or texture are subjected to a prescription, submit full range of samples.
- .5 Adjustments made on samples by the Department's Designated Representative are not supposed to change Contract Price. If so, notify the Department's Designated Representative prior to construction.
- .6 Make changes in samples which the Department's Designated Representative may require, while complying with the requirements of the Contract Documents.
- .7 Reviewed and accepted samples will become the reference standard from which the quality of material and execution of finished and installed works will be evaluated.

1.6 MOCK-UPS

- .1 Provide the required samples of works in accordance with Section 01 45 00 - Quality Control.

1.7 CERTIFICATES

- .1 Immediately after award of Contract, submit required documents to Workers' Compensation Board status.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

1.1 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of New Brunswick
 - .1 Occupational Health and Safety Act, S.N.B. (1983).

1.2 SUBMITTALS

- .1 Submittals and samples shall comply with Section 01 33 00 - Submittal Procedures.
- .2 Within 7 days after the date of the order of execution and before mobilization of manpower, submit a Health and Safety Plan established for the site and including the following elements:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 Submit weekly a copy of the health and safety inspection done on site by the authorized representative from the Contractor to the Department's Designated Representative.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit to the Department's Designated Representative Material Safety Data Sheets (MSDS) in accordance with the workplace hazardous material information system (WHMIS).
- .7 The Department's Designated Representative will review Contractor's Health and Safety Plan for the site and will submit comments to Contractor within 7 days after receipt of the plan. If necessary, the Contractor will revise plan as appropriate and resubmit plan within 4 days after receipt of comments from the Department's Designated Representative.
- .8 The Department's Designated Representative's review of Contractor's final Health and Safety plan should not be interpreted as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.

- .9 On-site Contingency and Emergency Response Plan: state standard security operations procedures to be implemented during on site emergency situations.
- 1.3 FILING OF NOTICE .1 Before work begins, provide the provincial authorities the necessary notices related to the project.
- 1.4 SAFETY ASSESSMENT .1 Perform site specific safety hazard assessment related to project.
- 1.5 MEETINGS .1 Schedule and administer a Health and Safety meeting with the Department's Designated Representative prior to beginning of Work.
- 1.6 GENERAL REQUIREMENTS .1 Prior to beginning of work, establish in written a site-specific Health and Safety Plan, based on a risk assessment. Implement, maintain and enforce this plan until demobilization of all staff working on site. This Health and Security Plan must take in consideration the project specifications.
- .2 The Department's Designated Representative may respond in writing, where deficiencies or concerns are noted and may request the submission of a revised plan.
- 1.7 SECURITY RELATED TO MARINE ENVIRONMENTS .1 For all works involving risks of drowning, the following requirements must be met:
- .1 Comply with article 2.10.13 from the security code for construction works
- .2 Ensure that required life jackets is in accordance with standard CAN2-65.7-M88 "Life jacket of unsinkable material" or standard CAN/CGSB-65.11-M88, from the Canadian general standards board (CGSB), entitled «Personal flotation device» published in 1988.
- .3 Ensure that a lifeboat is moored in the water and available for each work station. However, when a lifeboat is accessible by land, it can serve many work stations provided if the distance between each work station and the lifeboat is less than 100 meters.

- .4 Ensure that the lifeboat is equipped with an engine sufficiently strong to go against the water stream.
- .5 Ensure that the lifeboat has the necessary characteristics to contain people who may take part of rescue operations.
- .6 Ensure that the lifeboat is available at all time for workers in case of emergency.

1.8 RESPONSIBILITY

- .1 Assure, on site, the responsibility for health and safety of persons and property protection; act in areas adjacent to the site, protecting people and the environment.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.9 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, General Regulation, N.B. Reg.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.10 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of New-Brunswick in force and advise the Department's Designated Representative verbally and in writing.

1.11 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of New-Brunswick having jurisdiction, and in consultation with the Department's Designated Representative.

1.12 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Department's Designated Representative.
- .2 Submit a written report to the Department's Designated Representative of actions taken to correct health and safety issues identified.

- .3 The Department's Designated Representative may stop work if non-compliance of health and safety regulations is not corrected.

1.13 WORK STOPPAGE

- .1 Prioritize the safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not used.

1.1 RELATED WORK

- .1 Waste Management and Disposal, section 01 74 21.

1.2 REFERENCES

- .1 WHMIS: Information system on hazardous materials used at work, Health Canada.
- .2 Act Dangerous Goods, Transport Canada, date of update 21-02-2008.
- .3 Guidelines on the use of explosives in or near Canadian fisheries waters, Ministry of Fisheries and Oceans Canada, 1998.
- .4 MBCA Act and the Migratory Birds Convention, Environment Canada, 1994.
- .5 Regulations of the Canadian Coast Guard, Department of Fisheries and Oceans Canada.
- .6 Act Canada Shipping, Transport Canada, 2001.
- .7 AWWA: American Wood Preserver Association

1.3 DÉFINITIONS

- .1 Hazardous Waste: product, substance or organism used for the purpose for which it was originally intended and that is a good or a hazardous material may have a detrimental impact on the environment or human health, animals or plants when it is released into the environment.
- .2 Wetland: land where the water table is near or above the surface, or is saturated with water long enough to create conditions as modified by soil water and vegetation. Wetlands include bogs and wetland areas of mineral or mineral soils that are influenced by excess water but produce little or no peat.
- .3 Watercourse: designate the bed and banks of a river, stream, lake, creek, pond, marsh, an estuary or a plan of salt water that contains water in at least part of the year.
- .4 Exotic species: designate species or subspecies introduced outside their normal distribution, and whose establishment and proliferation exhibits ecosystems, habitats or species at risk of local economic or environmental harm.
- .5 Buffer zone: Land area covered with vegetation to protect waterways against the exploitation of adjacent land. This term refers to land adjacent to waterways such as creeks, rivers, streams, lakes, ponds, oceans and wetlands, including floodplains and land conversion pathway between courses water and land more arid areas.

1.4 TRANSPORTATION

- .1 Transport goods and hazardous wastes in accordance with the requirements of the Transport of Dangerous Goods Act.
- .2 Do not overload trucks during substances transportation. Protect the cargo against the risk of a spill.
- .3 Keep truck clean and free of mud, dust and other foreign materials.
- .4 Avoid any possibility of loading and discharge of any foreign material on highways, roads and access roads for the work. Be very careful when transporting dredged material and other hazardous materials. Clean up spills immediately and any contaminated soil.
- .5 Before beginning work, notify the Department representative about existing roads and temporary roads to be used to access the work site and to transport materials to sites and off-site, including roads leading to the landfill field embankments dredging.

1.5 DREDGED MATERIAL DISPOSAL

- .1 Obtain the appropriate permit from the Department of Environment of New Brunswick and comply strictly to all guidelines and procedures required in the permit for the transportation and disposal of dredged material to approved landfills.
- .2 N/A.
- .3 Eliminate spillage overboard during excavation, loading and transportation of dredged fill.
- .4 Do not overload trucks during transportation of dredged material or other hazardous materials. Protect the cargo against the risk of spills. Clean up spills on the ground as directed by competent authorities and the Department representative.
- .5 Obtain approval of the Departmental Representative for the road to be used to transport dredged material to the landfill.
- .6 Place and spread the dredged material at the landfill field uniformly and gradually. Minimize the height and fill slopes to be buried. Harmonize the slopes and contours of the surrounding terrain following, wherever possible, following the slope indicated by the Department representative.
- .7 Control the disposal and the settling of water containing suspended solids or other harmful substances in accordance with jurisdictional requirements.
- .8 Suction dredging:
 - .1 Regularly inspect the pipe to detect any possible leak in the sediment layer and hold tight at all times.
 - .2 If a leak occurs along the pipe, immediately cease all dredging and repairing the leak.

1.6 HANDLING OF
HAZARDOUS MATERIALS

- .1 Handle and store hazardous materials on site in accordance with the procedures and requirements under WHMIS.
- .2 Store all hazardous liquid at a location and manner that prevent their release into the environment.
- .3 Maintain a written inventory of all hazardous materials kept on the premises. List the products, quantities and dates of storage.
- .4 Keep a Material Safety Data Sheet on site for all relevant articles.

1.7 PETROLEUM, OILS
AND LUBRICANTS

- .1 Comply with laws, regulations, codes and federal and provincial guidelines for on-site storage of fuel and petroleum-based products.
- .2 Do not place a fuel tank and store any other products containing oil at a distance of less than 30 meters from a buffer zone of streams and rivers and wetlands. Do not refuel or oil machinery within 30 feet of this buffer zone. Obtain approval of the Departmental Representative to appoint a suitable location on site for fuel storage or refueling equipment.
- .3 Do not throw any petroleum-based product or any other toxic substance on the ground or in the water.
- .4 Demonstrate diligence and take all necessary precautions to avoid spills and contaminate soil and water (surface or underground) when handling on-site products of petroleum and vehicle refueling and equipment.
- .5 Keep appropriate emergency spill equipment on site, consisting of at least a necessary response to spills on packed 250 liters (55 gallons) for the containment and cleanup of spills.
- .6 Keep vehicles and equipment in good condition to prevent leakage at the site.
- .7 If an oil spill occurs, immediately notify a Department representative and the Coast Guard (CCG) at 1-800-565-1633 (Hotline 24-hours).

Complete cleanup in accordance with all regulations and all the procedures stipulated by the competent authority.

1.8 WASTE DISPOSAL

- .1 It is prohibited to bury waste, residue, and scrap material on site.
- .2 Dispose and bury residue and waste in accordance with the Waste Management Requirements Section, 01 74 21.
- .3 It is prohibited to dispose of hazardous materials (mineral spirits, paints, thinners, etc.) and petroleum-based products into streams, storm sewers or household or in site landfills.
- .4 Dispose of hazardous materials in compliance with Federal and Provincial

laws, regulations, codes and guidelines.

.5 Concrete residues:

- .1 Do not unload concrete residues or discharge on site.
- .2 Clean all accidental spills immediately before it solidifies.
- .3 Do not wash or clean concrete transportation vehicles on site.
- .4 Unload waste and clean trucks only at the concrete plant. Respect environmental laws and good practices by the provincial Department of Environment and any other competent authorities.

1.9 WATER QUALITY

- .1 Perform dredging of a watercourse or a wetland in order to minimize turbidity and reduce the amount of sediment suspended in water to an absolute minimum, at any time.
 - .1 Maintain suitable speed and momentum of dredging of dredging equipment. Perform necessary adjustments approved by the Department Representative.
 - .2 Install dredging equipment and transportation vehicles in a strategic position so it doesn't swing over the water.
- .2 In cases where the work could affect the water quality adjacent to the suction line of water used by lobster holding facilities, fish processing and other port operators, schedule work in cooperation with the Port Authority, as directed by the Department representative in order to minimize interference and the effects on port operators.
- .3 Visually monitor the turbidity of water in the surrounding areas adjacent to work sites and up to the limit established for dredging [200] meters.
 - .1 If the turbidity of the water changes excessively beyond the limit of dredging compared to existing conditions of water bodies nearby, such as a sharp color change, notify the Departmental Representative for the appropriate steps to follow to mitigate the situation.
- .4 Water quality during suction dredging:
 - .1 Minimize discharge points of dredged material disposal site by placing the tip of the hose to the water surface or near that point.
 - .2 Limit ships movement in the adjacent area of the disposal site to an absolute minimum to ensure that dredged material is not in suspension by the propellers wake.
- .5 Water contamination from preservative treated wood:
 - .1 Lumber or treated lumber should be allowed to harden at the plant or on site for at least 30 days from the date of the

- treatment application before it is installed near the water.
- .2 Do not cut treated wood over a watercourse or a wetland surface.
- .3 Do not apply protective products over a watercourse or a wetland surface.
- .4 Chrome plated copper arsenate wood treated (CPCA) or zinc arsenate and ammonia copper (ZAAC) must be approved by the CSA or the AWPA.
- .5 Do not use cresotic acid, petroleum or pentachlorophenol treated lumber for any part of the work.
- .6 Equipment should be rinsed in a buffer zone of least 30 meters of a wetland, watercourse or any environmentally sensitive area.

1.10 DYNAMITING

N/A

1.11 SOCIOECONOMIC RESTRICTIONS

- .1 Abide by provincial and municipal regulations regarding restrictions on night time work and artificial lighting of the premises. Obtain relevant permits.
- .2 Put the spotlight in the opposite direction of the surrounding residential and commercial areas.
- .3 Provide mufflers for the equipment and the machinery that are designed to reduce noise on site at the lowest level possible. Keep these mufflers in good working order at all times.

1.12 BIRDS AND THEIR HABITAT

- .1 Get familiarized with the Convention on Migratory Birds Laws and apply those regarding the migratory birds protection and their eggs, nests and babies found on the scene or discovered nearby.
- .2 Minimize disruptions of all birds on site and surrounding area throughout the construction period.
- .3 Do not approach seabirds, waterfowls and shorebirds concentrations during the stowage of equipment, access platforms and transport supplies.
- .4 When working at night, put the spotlight in the opposite direction of nesting birds habitats.
- .5 Do not use the beaches, dunes and other undisturbed natural areas to perform work unless the Department Representative has given its approval for these particular jobs.
- .6 If bird nests are found in wetlands on the job, notify immediately the departmental representative for guidelines to follow.
 - .1 Do not disturb the nest and surrounding vegetation until the end of the nesting period.

- .2 Minimize work in surrounding areas until the end of the nesting period.
- .3 Protect these areas by following the recommendations of the Canadian Wildlife Service.

1.13 FISH AND THEIR HABITAT

- .1 Be aware of fish habitat contamination risks resulting from the introduction of exotic species in the water.
- .2 To minimize the possibility of contamination of fish habitat, wash and clean all construction equipment that will be submerged in water from a stream, or may come into contact with such waters during the work, to ensure it is free from exotic species fouling.
 - .1 Materials shall include boats, barges, cranes, excavators, trucks, pumps, pipes and all other tools and miscellaneous equipment that previously served in a marine environment.
- .3 Washing and cleaning equipment should take place immediately upon arrival at the scene and before they are used above or in a water surface.
- .4 Perform washing and cleaning as follows:
 - .1 Scrape and remove any large accumulation of mud and dispose properly.
 - .2 Rinse all equipment surfaces with pressurized fresh water.
 - .3 Immediately after, spray a layer of pure vinegar or other cleaning agent environment friendly to completely eliminate all traces of vegetable matter, animal or sedimentary.
 - .4 Find and remove any vegetal, animal or sedimentary substances of all bilges and filters.
 - .5 Drain materials from standing water and allow time to dry completely before using.
 - .6 When removing material from the water, drain materials from standing water and allow time to dry completely before removing from the site.
- .5 Do not perform any cleaning or rinsing in a buffer zone of at least 30 meters of a wetland, a stream, or any another sensitive environmental areas.
- .6 Registry File Insurance:
 - .1 Maintain a permanent record of the uses and the past and present cleanings of all materials to illustrate the mitigation measures against contamination of fish habitats of exotic species.
 - .2 Record the information in a hardcover book.
 - .3 Include the following information:
 - .1 Date and place of the previous use of the material in a watercourse or wetland;

- .2 Type of work performed;
- .3 Rinsing dates of each piece of equipment;
- .4 Methods and cleaning agents used.
- .7 Maintain the insurance register from one project to another. Upon request, return the register to the Department representative for review.
- .8 Comply with the requirements and recommendations of the Directorate of habitat protection and sustainable development of the Federal Department of Environment and Department of Fisheries and Oceans regarding the cleaning and rinsing of equipment.

1.14 AIR QUALITY

- .1 Maintain an absolute minimum of suspended dust in the air and debris resulting from work.
- .2 Take measures to control dust on roads, parking lots, and work areas.
- .3 Sprinkle the surface with water or other environmentally friendly products. Use equipment and machinery specially designed for this purpose and apply the substance in quantity and frequency sufficient to ensure effective control of dust and constant throughout the construction period.
- .4 Do not use any oil or other petroleum-based product for dust control.

1.15 FIRES

- .1 Fires and waste burning are not permitted on site.

PART 1 - GENERAL

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| <u>1.1 RELATED SECTIONS</u> | .1 | Section 01 33 00 – Submittal procedures. |
| <u>1.2 REFERENCES</u> | .1 | Canadian Construction Documents Committee (CCDC) |
| <u>1.3 INSPECTION</u> | .1 | Allow the Department’s Designated Representative access to work site. If a part of the work is executed off site, the access to this site must also be ensured during the entire duration of these works. |
| | .2 | In the case where work must be submitted to inspections, approvals or special tests ordered by the Department’s Designated Representative or required under the local regulations terms, make the request within a reasonable delay. |
| | .3 | If Contractor has covered or allowed to cover works before they has been submitted to the required inspections, approvals or testing, he has to uncover them, execute the required inspections or testing to the satisfaction of the authorities in force, then put the works back in their original state. |
| | .4 | The Department’s Designated Representative will order that part of Work has to be examined if it is suspected to be not in accordance with Contract Documents. If, upon examination, work is found not in accordance with Contract Documents, the Contractor shall correct it and pay cost of examination and correction. |
| <u>1.4 INDEPENDENT INSPECTION AGENCIES</u> | .1 | Independent Inspection/Testing Agencies will be hired by the Department’s Designated Representative for inspection and/or testing. Cost of such services will have to be met by the Department’s Designated Representative, unless otherwise stated in other sections of specifications. |
| | .2 | Provide required equipment for executing inspection and testing by appointed agencies. |
| | .3 | The employment of inspection/testing agencies does not deny responsibility to perform Work in accordance with Contract Documents. |
| | .4 | If flaws are revealed during inspection and/or testing, appointed |

agency will request additional inspection and/or testing to evaluate their degree. The Contractor will correct flaws and irregularities as advised by the Department's Designated Representative at no cost but will assume costs for retesting and inspection.

1.5 ACCESS TO WORK

- .1 Allow inspection/testing agencies, off-site manufacturing and fabrication plants access to Work site.
- .2 Collaborate with agencies and take necessary measures to provide access to all facilities.

1.6 PROCEDURES

- .1 Notify appropriate agency and Department's Designated Representative in advance when testing is required, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit within a reasonable time delay and follow a predetermined order to avoid delay in work execution.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.7 REJECTED WORK

- .1 Remove defective items found non-compliant with the Contract Documents and rejected by the Department's Designated Representative, either because they were not executed according to the rules of art, either because they were made of defective materials or products, even if they have already been incorporated into the structure. Replace or rebuild the elements in question as required by the Contract Documents.
- .2 Immediately repair works that have been damaged during repairs or replacements mentioned above.
- .3 If the Department's Designated Representative decides that it is not required to repair defective Work or if Work is not performed in accordance with Contract Documents, the Owner will deduct from Contract Price the difference in value between Works performed and those prescribed in Contract Documents, the amount being determined by the Department's Designated Representative.

1.8 TESTS AND MIX
DESIGNS

.1 Provide the required tests reports and dosage forms.

1.9 MOCK-UPS

.1 Prepare mock-ups for Work specifically requested in specifications. Requirements of this section apply to all sections of the specifications in which it is needed to supply mock-ups. Include for Work of Sections required to provide mock-ups.

.2 Build mock-ups in locations approved by the Department's Designated Representative.

.3 Prepare mock-ups for the Department's Designated Representative's review with reasonable promptness and in orderly sequence, to not cause delays in Work.

.4 Failure to prepare mock-ups in ample time is not considered a sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.5 If necessary, the Department's Designated Representative will assist the Contractor to establish a schedule for preparing books samples.

.6 Specification section identifies whether mock-ups may remain as part of Work or when they should be removed, if necessary.

1.10 MILL TESTS

.1 Submit mill test certificates as requested in different sections of the specifications.

1.11 EQUIPMENT AND
SYSTEMS

.1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

PART 1 – GENERAL

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|--------------------------------------|----|--|
| <u>1.1 RELATED SECTIONS</u> | .1 | Section 01 52 00 – Construction Facilities. |
| | .2 | Section 01 56 00 – Temporary barriers and enclosures. |
| <u>1.2 INSTALLATION AND REMOVAL</u> | .1 | Provide temporary utilities controls in order to execute work expeditiously. |
| | .2 | Remove from site all such work after use. |
| <u>1.3 DEWATERING</u> | .1 | Provide temporary drainage and pumping facilities to keep excavations and site free from standing water. |
| <u>1.4 TEMPORARY POWER AND LIGHT</u> | .1 | No power will be provided to the Contractor on site. |
| | .2 | Assume all cost of installation, use and disconnection. |
| <u>1.5 NAVIGATION LIGHT</u> | .1 | Remove the navigation light and all equipment required for its proper functioning. Coordinate the installation with the Coast Guard. |
| | .2 | Notify Fisheries and Oceans Canada - Services to aid the navigation of the temporary removal of the navigation light. |

PART 2 – PRODUCTS

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| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

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|---------------------|----|-----------|
| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 51 00 – Temporary utilities.
- .2 Section 01 56 00 – Temporary barriers and enclosures

1.2 INSTALLATION
AND REMOVAL

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Disassemble the equipment and evacuate the site when no longer needed.

1.3 LIFTING EQUIPMENT

- .1 Provide and install the required machinery to move workers, materials, and equipment, and ensure their maintenance and operation.
- .2 Handling shall be entrusted by skilled workers.

1.4 SITE
STORAGE/LOADING

- .1 Ensure that works are performed within the limits specified in Contract Documents. Storage shall be limited to the areas specified in drawings. Do not clutter the site unreasonably with equipment and materials.
- .2 Do not overload or permit overloading of any part of the book to save in order not to compromise its integrity.
- .3 The storage should be coordinated under the guidance of Wharf manager.

1.5 CONSTRUCTION
PARKING

- .1 Parking will be permitted on site, if it does not disrupt the execution of Work. Areas provided for Works (site borders) could be used for this purpose.
- .2 If it is allowed to take existing roads to access the site. Ensure their maintenance during the complete duration of the works, and repair any damage that might be caused where necessary.
- .3 Clean lanes used by Contractor's equipment.

1.6 OFFICES

- .1 Provide ventilated and heated office (22 degrees), lighted 750 lx.

Office should be sufficient size to accommodate site meetings and furnished with a drawing table.

- .2 The Contractor shall supply temporary facilities for telecommunications, such as telephones, fax, internet, including lines, and necessary material for its own use and the Department's Designated Representative use; he must ensure the connection of all these facilities to the major networks and assume the services cost.
- .3 Provide a marked and fully stocked first-aid case in a readily available location.
- .4 Subcontractors can set up their own offices if necessary. Indicate them the location where they can settle.
- .5 Department's Designated Representative's Site office:
 - .1 Provide temporary office for Department's Designated Representative.
 - .2 Inside dimensions minimum 3.6m long x 3m wide x 2.4m high, with floor 0.3m above grade, complete with 4 50% opening windows and one lockable door.
 - .3 Insulate building and provide heating system to maintain 22 degrees C inside temperature when outside temperature is -20 degrees C.
 - .4 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colors. Finish floor with 19 mm thick plywood.
 - .5 Equip office with 1 x 2 m table, 4 chairs, 6 m of shelving 300 mm wide, one 3-drawer filing cabinet, one plan rack, and one coat rack with shelves.
 - .6 Maintain in clean condition.

1.7 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment, and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

1.8 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

1.9 CONSTRUCTION
SIGNAGE

- .2 Post notices and precautions as required by local health authorities. Keep area and premises in clean condition.
- .1 Contractor shall provide and erect sign, which must be approved by the Department's Designated Representative first.
- .2 The sign will be manufactured using plywood made of sandblasted Douglas fir 19-mm thick, of average density, and suitable for outdoor use. Edges shall be sandblasted and covered with a sealing layer or garnished with an aluminum molding. Joints between adjacent panels will be reinforced with battens 25mm x 50mm (behind panels). The panels' surfaces shall be covered with sealing coat and a primer, that are in compliance with the CGSB 1-GP-55M standard. A white exterior enamel, compliant with the CAN/CGSB - 1.59 - M89 standard, will then be applied. The sealing, priming and finishing coats shall be chemically compatible. Silicate paint shall not be used.
- .3 The Contractor will also provide and install supports and signage, as directed by the Department's Designated Representative. The supports must be manufactured from high-quality wood, either in White Spruce, Douglas Fir or in Western Red Cedar, wood being milled on its four sides.
- .4 Nails shall be in aluminum or in galvanized steel and screws shall be galvanized or in cadmium-coated steel.
- .5 Once the sign is set in place, supports shall be covered with a layer of exterior primer according to the CGSB 1-GP-55M standard and with two (2) exterior enamels, compliant to standard CAN/CGSB - 1.59 - M89, of color black.
- .6 Maintain approved signs and notices in good condition for the duration of project, and dispose off site on completion of project or earlier if directed by the Department's Designated Representative.
- .7 The vinyl material film will be set in place on plywood panels, before nailing them to the posts.
- .8 See drawing at the end of this Section.

PART 1 - GENERAL

- 1.1 RELATED SECTIONS .1 Section 01 51 00 – Temporary utilities.
.2 Section 01 52 00 – Construction facilities.
- 1.2 REFERENCES .1 Canadian General Standards Board (CGSB)
.2 Canadian Standards Association (CSA International)
- 1.3 ACCESS RESTRICTION .1 The Contractor shall install a fence around the construction area
in order to prevent access of unauthorized personnel to the site.
- 1.4 PROTECTION OF SURROUNDING PUBLIC AND PRIVATE PROPERTIES .1 Protect surrounding public and private properties against any
damage that may result from the execution of work.
.2 In damage occurs, assume full responsibility.
- 1.5 PROTECTION OF WORK FINISHED SURFACES .1 During the entire construction period, protect completely or
partially finished material and surfaces.
.2 Provide the necessary shields, tarps and fences.
.3 Assume full responsibility for damage to structures due to lack of
protection or inadequate protection.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

PART 1 - GENERAL1.1 REFERENCES

- .1 Comply with the standards outlined in the various sections of the specifications.
- .2 If there is doubt as to whether products or systems are in conformance with applicable standards, the Department's Designated Representative reserves the right to have such products or systems tested to prove conformance.
- .3 If products or systems are in compliance with the contract documents, the cost of such tests will be assumed by the the Department's Designated Representative, otherwise they will be assumed by the Contractor.
- .4 If no dates or specific editions are indicated, comply with the latest specifications in force at the time of the bid deposit.

1.2 QUALITY

- .1 Products, materials, equipment, and articles incorporated in Work shall be new, not damaged nor defective, and of best quality for purpose intended. If requested, provide evidence as to type, source and quality of products.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should disputes arise as to quality or suitability of products, decision rests strictly with the the Department's Designated Representative based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, manufacture uniformity should be maintained throughout building.

1.3 AVAILABILITY

- .1 If the Department's Designated Representative was not informed of delivery delays anticipated in early work, and it seems likely that the execution of the work could be delayed, the Department's Designated Representative reserves the right to substitute products listed with other comparable products that can be delivered more quickly, without changing the contract price.

1.4 STORAGE,
HANDLING AND
PROTECTION

- .1 Handle and store products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in its original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Keep sand clean and dry when used for grout or mortar materials. Store sand on wooden platforms and cover with waterproof tarp during inclement weather.
- .5 Remove and replace damaged products at own expense and to satisfaction of the Department's Designated Representative.
- .6 Touch-up damaged factory finished surfaces to the Department's Designated Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.5 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.

1.6 MANUFACTURER'S
INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify the Department's Designated Representative in writing of conflicts between specifications and manufacturer's instructions, so that he will establish course of action.
- .3 Improper installation of products due to failure in complying with these requirements, authorizes the Department's Designated Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.7 QUALITY OF WORK

- .1 Ensure Quality of Work of highest standard, executed by experienced workers and skilled in respective duties for which they are employed. Notify the Department's Designated Representative if works to be executed are such that they will presumably not give the predicted results.

- .2 Do not hire unqualified personnel in their required duties. The Department's Designated Representative reserves the right to require dismissal from site of workers deemed incompetent, careless or insubordinate.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with the Department's Designated Representative whose decision is final.

1.8 COORDINATION

- .1 Ensure that workers work together for the realization of Works. Exert a close and constant supervision of their work.
- .2 The Contractor is responsible for the work coordination.

1.9 REHABILITATION

- .1 Execute rehabilitation works required to repair or replace parts of elements found defective or unacceptable. Coordinate tasks to be executed on affected contiguous works, if required.
- .2 Rehabilitation works must be carried out by specialists with knowledge of the material used; these works must be realized in a way to avoid all risks of damage.

1.10 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour, and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .4 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .5 Fastenings which cause crumbling or cracking of material to which anchorage is made are not acceptable.

1.11 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Bolts may not project more than one diameter beyond nuts.

1.12 PROTECTION OF
WORK IN PROGRESS

- .1 Do not overload any part of Works. Unless otherwise stated, obtain written authorization of the Department's Designated Representative before cutting or drilling a structural member or to install sleeves.

1.13 EXISTING UTILITIES

- .1 When connecting to existing networks, execute them at hours fixed by local governing authorities, with minimum disturbance to Work.
- .2 Protect, relocate or maintain existing active services. If pipes are uncovered during Works, obstruct them for approval of responsible authorities, stake and record location of capped service.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

PART 1 - GENERAL1.1 QUALIFICATIONS OF SURVEYOR

- .1 Qualified registered land surveyor, licensed to practice on work site, and acceptable to the Department's Designated Representative.

1.2 SURVEY REFERENCE POINTS

- .1 Existing base horizontal and vertical control points are designated on drawings.
- .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction, except if they are in a demolition zone.
- .3 Make no changes or relocations without prior written notice to the Department's Designated Representative.
- .4 Report to the Department's Designated Representative when reference point is lost or destroyed.
- .5 The contractor shall pay for the replacement of lost or destroyed reference point.

1.3 SURVEY REQUIREMENTS

- .1 Stake out the site for Works.
- .2 Establish pipe invert elevations.
- .3 Establish lines and levels for mechanical and electrical work.

1.4 EXISTING SERVICES

- .1 Before beginning work, establish location and extent of service lines in area of Work and notify the Department's Designated Representative of findings.
- .2 Remove abandoned service lines. Cap or seal lines at cut-off points as directed by the Department's Designated Representative.

1.5 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures, and outlets indicated or specified are to be considered as approximate.
- .2 Inform the Department's Designated Representative of impending installation and obtain approval for actual location.

- .3 Submit field drawings to indicate relative position of various services and equipment when required by the Department's Designated Representative.

1.6 RECORDS

- .1 Maintain a complete and accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

1.7 SUBSURFACE
CONDITIONS

- .1 Promptly notify the Department's Designated Representative in writing if subsurface conditions on the work site differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should the Department's Designated Representative determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

PART 1 – GENERAL

- 1.1 RELATED SECTIONS .1 Section 01 74 21 – Construction/Demolition Waste Management and Disposal
- 1.2 REFERENCES .1 Canadian Construction Documents Committee (CCDC)
- 1.3 PROJECT CLEANLINESS
- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including those caused by sub-contractors.
- .2 Remove waste materials from site at predetermined intervals or dispose of as directed by the Department's Designated Representative. Do not burn waste materials on site.
- .3 Keep access roads to the site free of ice and snow.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Remove debris and on-site waste materials and place in appropriate containers at the end of each shift.
- .6 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .7 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- 1.4 FINAL CLEANING
- .1 At substantial completion, remove surplus products, tools, construction machinery and equipment not required for execution of remaining Work.
- .2 Remove waste products and debris, and leave premises clean and ready for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4 Inspect finish, fixtures and equipment to ensure they meet requirements prescribed in the operation and quality of execution.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

1.1 WASTE REDUCTION
WORKPLAN (WRW)

- .1 Prepare the waste disposal plan (WDP) before work begins.
- .2 WDP should include but not limited to:
 - .1 Destination of listed materials;
 - .2 Demolition techniques and sequence;
 - .3 Deconstruction/disassembly schedule;
 - .4 Location;
 - .5 Security;
 - .6 Protection;
 - .7 Clear labeling of storage areas;
 - .8 Details on materials handling and removal procedures;
 - .9 Quantities for materials to be salvaged for reuse or recycled, and materials sent to landfill.

1.2 MATERIALS SOURCE
SEPARATION PROGRAM (MSSP)

- .1 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
- .2 Take necessary measures not to cause contamination of soils and aquatic environments. The Engineer reserves the right to verify the quality of the soil after construction. Any contamination resulting from works will be at the expense of the Contractor.
- .3 Provide locations for each type of waste, according to their disposal site.
- .4 Provide locations that will facilitate deposit of materials without affecting daily operations.
- .5 Locate separated materials in an area which minimize material damage.
- .6 Wastes must be transported to a site operated under a certificate of approval from the New Brunswick Department of Environment.

1.3 DISPOSAL OF WASTES

- .1 Do not bury rubbish or waste materials unless the Engineer gives his authorization.
- .2 Do not dispose waste into waterways, and domestic and sanitary sewers.

.3 Remove materials from deconstruction as deconstruction/disassembly Work progresses.

.4 It is prohibited to burn waste on site.

1.4 STORAGE, HANDLING
AND PROTECTION

.1 Store materials intended for off-site disposal in areas specified by the Engineer.

.2 Unless otherwise specified, materials for removal do not become the Contractor's property.

.3 Non-demolished elements must be left in place to the Engineer's satisfaction.

.4 Protect affected structures. If safety of building is endangered, cease operations and immediately notify the Engineer.

.5 Protect surface drainage, mechanical, and electrical from damage and blockage.

.6 Separate and store materials produced during dismantling of structures in designated areas.

.7 Store temporarily on site wood treated with creosote in an adequate containment structure so that water runoff does not reach the aquatic environment or soil.

1.5 SCHEDULING

.1 Coordinate waste management with other activities to ensure the orderly flow of work.

PART 2 – PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 – EXECUTION

3.1 GENERAL

.1 Handle in accordance with codes and regulations relevant to waste, and according to their level of contamination.

3.2 CLEANING

- .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
- .2 Clean-up work areas as work progresses.