

1.1 Scope

- .1 The work covered under this project consists of the furnishing of all plant, labour, equipment and materials for "Supply and Installation of a New Marine Treated Timber Groundout Structure, including reinforced concrete footings, electrical and gravel fill. Work is located at Dipper Harbour Wharf, Charlotte County, New Brunswick, in strict accordance with specifications and accompanying drawings and subject to all terms and conditions of contract.
- .2 Mobilization and demobilization will be incidental to this contract.
- .3 Only items in the Unit Price Table will be measured for payment. All other work necessary to complete the work will be considered incidental to the project and will not be measured separately for payment.

1.2 Description of Work

- .1 The work will consist of but will not necessarily be limited to the following:
  - .1 Supply and Installation of reinforced concrete footings to the locations and dimensions indicated on the drawings.
  - .2 Supply and Installation of Marine Treated Timber longitudinal, crossties, wales, splice blocks and filler to the dimensions and locations indicated on the drawings.
  - .3 Supply and Install all electrical components as indicated on the drawings.
  - .4 Supply and Install gravel fill as indicated on the drawings.

1.3 Site Work

- .1 Work will be carried out at Dipper Harbour, Charlotte County, New Brunswick in the location as shown on the accompanying drawings.

1.4 Datum

- .1 Datum used for this project is Lowest Normal Tides (LNT) and is assumed to be 8.82 metres below the Benchmark shown on the plan. Benchmark on plan is TBM.
- .2 Bidders are advised to consult the Tide Tables issued by Fisheries and Oceans in order to make sure of the tidal conditions affecting the work.

1.5 Familiarization  
With site

- .1 Before submitting a bid, it is recommended that Bidders inspect and examine the site of work and satisfy themselves as to the form and nature of the work, materials, the means of access to the site, and the temporary facilities required for completion of the facilities required for completion of the work. Means of access to the site, severity, exposure and uncertainty of weather, soil conditions, any accommodations they may require, and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.
- .2 Obtain prior permission from the Departmental Representative before carrying out such site inspection.
- .3 Contractors, bidders or those they invite to site to review specification Section 01 35 29 - Health and Safety Requirements, before visiting site. Take all appropriate safety measures for any visit to site, either before or after acceptance of bid.
- .4 Bidders are required to wear all appropriate personnel protective equipment and take all precautionary measures necessary to ensure their safety during any pre-tender site visit.
- .5 Contractor shall make own assessment of site conditions, and difficulties in carrying out the work as specified.

1.6 Work Schedule

- .1 The work to be carried out under this contract must be completed within the time limits set out in the terms of the contract.
- .2 Prepare and submit to the Departmental Representative within 10 days of notification of Contract award, 5 copies of the construction schedule showing the dates for commencement and completion of each major activity of the work, including the work of subcontractors; dates of submissions, review and return of all drawings, etc.; the dates of Substantial Final Completion; and intended man hours of labour and equipment for each major item of work. If the schedule as submitted is unacceptable in any way, submit without delay a revised schedule satisfactory to the Departmental Representative.

- .3 The Departmental Representative is to notify the Contractor in writing of acceptance of the Construction Schedule. Comply with the Construction Schedule at all times. If, for any reason the Construction Schedule is not followed, immediately notify the Departmental Representative of the changes and submit a revised schedule for acceptance. Upon written acceptance by the Departmental Representative, this schedule will become the Construction Schedule.
- .4 Whenever required, give further written particulars concerning this schedule. The submission to and acceptance by the Departmental Representative of the Contractor's Construction Schedule or the furnishing of details and particulars thereto will not relieve the Contractor of any duties and responsibilities under the Contract.

1.7 Work  
Commencement

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

1.8 Codes and  
Standards

- .1 Perform work in accordance with the 2010 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.

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- 1.9 Measurement Responsibilities .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.
- 1.10 Contractor's Use of Site .1 Co-operate with users of existing facilities. Maintain access to the existing wharf structures during fishing season and consult with the local Harbour Authority for site access limitations.
- .2 Should interferences occur, take directions from Departmental Representative.
- .3 Do not unreasonably encumber site with materials or equipment.
- .4 Move stored products or equipment which interferes with users' operations or other Contractors.
- .5 Obtain and pay for use of additional storage or work areas needed for operations.
- .6 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.
- .7 Ensure no damage occurs to existing structures as a result of operations. Any said damage will be repaired at Contractor's expense.
- .8 Contractor will note that fishing activity in the harbour includes fishing boats, moorings, etc. The Contractor will note that fishing boats, etc. must be able to berth in the harbour during construction operations therefore Contractor must cooperate with boats and activities in the harbour. No compensation will be paid to Contractor for loss of time or any other as a result of activities in each harbour.
- 1.11 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 Provide such masts, scaffolds, batter boards, lines, straight edges, templates and other devices as may be necessary to facilitate layout, construction and inspection of the work. Whenever necessary, suspend work for such reasonable time as may be necessary to permit the Departmental Representative to check or

inspect any portion of the work. The Contactor will not be allowed any extra compensation or time for completion because of this suspension of work.

- .3 Elevations for the various grades and features of the specified works to be referenced and properly related to a benchmark, which will be approved by the Departmental Representative.
- .4 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 built batter boards at all points to facilitate the progress of the work. Establish all other grades, lines, levels required to facilitate the work.

#### 1.12 Contract Documents

- .1 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 Representative 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.
  - .4 Verify all existing conditions in field prior to proceeding with work.
- .2 Contract Specifications:
  - .1 The general requirements and technical specifications are written solely for the General Contractor. They are organized into the NMS format of separate divisions and sections.
  - .2 Specification language is the "Short form Type", for example, where the word "provide" occurs, interpret it to mean "the Contractor shall furnish all labour, material and equipment necessary to complete the work".
  - .3 These Specifications and accompanying drawings are intended to describe and provide for a finished project. They are intended to be complementary, and what is called for by either will be as binding as if called for by both. The Contractor shall understand that the work herein described will be complete in every detail, notwithstanding that every item necessarily involved is not particularly mentioned, and Contractor

will be held to provide all labour, materials and equipment necessary for the entire completion of the work and will not avail himself of any errors or omissions.

1.13 Permits

- .1 Obtain and pay for all permits and certificates, licenses as required by Municipal, Provincial, Federal and other Authorities.
- .2 Provide appropriate notifications of project to municipal and provincial inspection authorities.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for above referenced authorities.
- .5 Submit to Departmental Representative, copy of quarry permit, if applicable, prior to start of quarry operations.
- .6 Comply with all requirements, recommendations and advise by all regulatory authorities unless otherwise agreed in writing by Departmental Representative. Make requests for such deviations to these requirements sufficiently in advance of related work.

1.14 Record of Construction

- .1 As work progresses, maintain accurate records to show all deviations from the contract drawings, with particular reference to work which will be concealed. Prior to the inspection of the work for the issuance of the Final Certificate of Completion, provide the Departmental Representative with one set of white prints of the drawings with all deviations shown neatly thereon.
- .2 Provide "as-built" cross sections of any excavation, dredging or fill work.

1.15 Payment

- .1 Payment for all work under this contract to be according to the "Articles of Agreement".
- .2 Dimensional changes as directed by the Departmental Representative to suit existing conditions, but not resulting in additional work or materials, will not be considered as extra to the Contract.

- 1.16 Quarry and Explosives .1 Make own arrangements with Provincial authorities and owners of private properties, for the quarrying and transportation of rock and all materials and machinery necessary for work over their property, roads or streets as case may be.
- 1.17 Maintenance of Shipping .1 Liaise with the local port officials to coordinate activities such that any interference is minimized.
- 1.18 Cooperation and Assistance to Departmental Representative .1 The datum referred to in this Specification is Chart Datum. Chart Datum is, by International Agreement, a plane below which the tide will seldom fall. The Canadian Hydrographic Service has adopted the plane of the lowest normal tide (L.N.T.) as Chart Datum. As the rise, fall and range of tides varies daily, the Canadian Tide and Current Tables, as issued by the Canadian Hydrographic Service, should be consulted for tidal predictions and other tidal information relating to work.
- 1.19 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. See General Conditions "C".
- 1.20 Workers Compensation .1 Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing.
- 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.

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- .2 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .3 Repair or replace all materials or equipment damaged in transit or storage to the satisfaction of the Departmental Representative and at no cost to Canada.
- 1.23 Location of Equipment and Fixtures
- .1 Location of equipment, fixtures or any appurtenances indicated are to be considered approximate.
- .2 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities with minimum disturbance to site operations.
- .3 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .4 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .5 Provide temporary services when directed by Departmental Representative to maintain critical facility systems.
- .6 Provide adequate bridging over trenches which cross walkways or road to permit normal traffic.
- .7 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .8 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in a manner approve by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.
- .9 The wharf shall remain in full service to the users during the duration of the construction contract.
- 1.24 Inspection and Testing
- .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms with contracts.

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- 1.25 Disposal of Debris
- .1 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 to otherwise become a menace to navigation.
- 1.26 Existing Conditions
- .1 Any information pertaining to soils and all borehole 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.
- 1.27 Relics and Antiquities
- .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.
- 1.28 Project Meetings
- .1 Contractor will arrange project meetings and assume responsibility for setting times and recording minutes.
  - .2 Project meetings will take place on site of work unless so directed by the Departmental Representative.
  - .3 Contractor will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at the meetings.
  - .4 Have a responsible member of firm present at all project meetings.



PART 1 - GENERAL

1.1 GENERAL

- .1 The bid item prices are full compensation for the work necessary to complete each item in the Contract in the Form of Tender. The prices bid are complete and separate from other or related bid items.
- .2 In the case of conflict between the instructions for measurement and payment contained in Section 01 22 00 and another Section of the Specifications, the requirements of Section 01 22 00 shall govern.
- .3 No separate payment will be made for:
  - .1 Unauthorized work beyond the limits shown.
  - .2 Field engineering survey and layout of work.
  - .3 Erosion and Sediment Control.
  - .4 Water Management.
  - .5 Dust Control.
  - .6 Temporary Facilities
  - .7 Temporary Barriers and Enclosures

1.2 DESCRIPTION  
OF WORK

- .1 The tendered price for work includes all items listed within the specification. Price includes all labour, materials, and equipment for complete supply and installation of the work.
- .2 Mobilization/Demobilization including all equipment, temporary facilities, security, maintenance, snow clearing, and cleaning of site and public access roads (as required), securing all necessary regulatory permits, insurance and bonding, establishing health and safety protocol, and the construction, maintenance and decommissioning of all necessary temporary access roads.
- .3 All demolition, material disposal (hazardous and non-hazardous), service disconnection/reconnection, site excavation, construction, repairs and improvements and site restoration and landscaping, as contained in the specifications.

PART 2 - PRODUCTMEASUREMENT2.1 GENERAL

.1 This section details the measurement method to be used for payment purposes. Incidental items covered in the various sections of the specification are to be allowed for in the pricing of each pay item.

2.2 MEASUREMENT FOR  
PAYMENT

.1 Measurement for payment will be as specified in the following sections:

Included:

Section 03 30 00: Supply and installation of reinforced concrete will be measured by the cubic meters (m<sup>3</sup>) as indicated.

Section 26 05 00:

Electrical: Electrical will be measured by lump sum.

Section 31 05 10:

Excavation/Backfilling/Leveling the existing ground area to facilitate the construction of the New Groundout Structure, including removal and disposal of all items required for the progress of the work will be measured by the lump sum.

Section 31 23 23:

Gravel Fill: Supply, placement, and compaction of gravel fill will be measured by the Lump sum. Include the cost of all plant, labour, equipment, and materials required to complete the work as specified.

Section 35 00 00:

.1 Treated dimension timber supplied and installed for longitudinal, crossties, wales, splice blocks, fillers and any other miscellaneous timber to complete the work as indicated on the plans, will be measured by the cubic meter. Included will be galvanized/stainless steel fastenings, plant, material, and labour.





PART 1 - GENERAL

1.1 SECTION  
INCLUDES

- .1 Shop drawings and product data.
- .2 Samples.
- .3 Certificates.

1.2 SUBMITTAL  
GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review submittals listed, including shop drawings, samples, certificates and other data, as specified in other sections of the Specifications.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work until relevant submissions are reviewed by Departmental Representative.
- .4 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission to Departmental Representative. Ensure during review that necessary requirements have been determined and verified, required field measurements or data have been taken, and that each submittal has been checked and co-ordinate with requirements of Work and Contract Documents.
  - .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
- .7 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

- .8 Verify field measurements and affected adjacent work and coordinate.
- .9 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .11 Submittal format: paper originals, or alternatively clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible photocopies or facsimiles will not be accepted and be returned for resubmission.
- .12 Make changes or revision to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, notify Departmental Representative in writing of any revisions other than those requested.
- .13 Keep one reviewed copy of each submittal document on site for duration of Work.

1.3 SHOP DRAWINGS  
AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, product data, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Number of Shop Drawings: submit sufficient copies of shop drawings which are required by the General Contractor and sub-contractors plus 4 copies which will be retained by Departmental Representative. Ensure sufficient numbers are submitted to enable one complete set to be included in each of the maintenance manuals specified, if applicable.
- .3 Shop Drawings Content and Format:
  - .1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.

- .2 Shop Drawings Format:
  - .1 Opaque white prints or photocopies of original drawings or standard drawings modified to clearly illustrate work specific to project requirements. Maximum sheet size to be 1000 x 707 mm.
  - .2 Product Data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.
  - .3 Non or poorly legible drawings, photocopies or facsimiles will not be accepted and returned not reviewed.
- .3 Supplement manufacturer's standard drawings and literature with additional information to provide details applicable to project.
- .4 Delete information not applicable to project on all submittals.
- .4 Allow ten (10) calendar days for Departmental Representative's review of each submission.
- .5 Adjustments or corrections made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.
- .6 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and comments are made, fabrication and installation may proceed upon receipt of shop drawings. If shop drawings are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected shop drawings, through same submission procedures indicated above.
- .7 Accompany each submission with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and project 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 shall include:
  - .1 Date and revision dates.
  - .2 Project title and project 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 Cross references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.
- .6 Details of appropriate portions of Work as applicable:
  - .1 Fabrication.
  - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
  - .3 Setting or erection details.
  - .4 Capacities.
  - .5 Performance characteristics.
  - .6 Standards.
  - .7 Operating weight.
  - .8 Wiring diagrams.
  - .9 Single line and schematic diagrams.
  - .10 Relationship to adjacent work.
- .9 After Departmental Representative's review, distribute copies.
- .10 The review of shop drawings by the Departmental Representative or their delegated representative is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Public Works and Government Services Canada approves the detail design inherent in the shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of the construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

1.4 SCHEDULES,  
PERMITS AND  
CERTIFICATES

- .1 Upon acceptance of bid, submit to Departmental Representative copy of Work Schedule and various other schedules, permits, certification documents and project management plans as specified in other sections of the Specifications.
- .2 Submit copy of permits, notices, compliance Certificates received by Regulatory Agencies having jurisdiction and as applicable to the Work.
- .3 Submission of above documents to be in accordance with Submittal General Requirements procedures specified in this section.



1.5 Hot Work  
Authorization

- .1 Obtain Departmental Representative's "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
  - .1 Contractor's Hot Work Procedures to be followed on site to ensure fire safety.
  - .2 Description of the type and frequency of Hot Work required.
  - .3 Completed Hot Work Permit.
- .3 Upon review and confirmation that effective fire safety measures will be implemented during performance of hot work, Departmental Representative will provide "Authorization to Proceed" as follows:
  - .1 Issue one (1) written Authorization to Proceed covering the entire project and duration of work or;
  - .2 Issue individual Authorization to Proceed for specific items of work by requiring Contractor to fill out individual Hot Work Permit for each hot work event as determined by Departmental Representative.
- .4 Frequency for Hot Work Permit based on:
  - .1 Nature of phasing of work;
  - .2 Risk to facility operations;
  - .3 Quantity of various trades needing to perform hot work on project or;
  - .4 Other situations 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.
- .6 Hot work to be performed inside building can only be done during Facility non-operational periods. Coordinate with Facility Manager through the Departmental Representative in this regard.
- .7 Failure to comply with the established hot work procedures may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.

- 1.6 Hot Work Procedures
- .1 Develop and implement safety procedures and work practices to be followed during the performance of hot work.
  - .2 Procedures to include:
    - .1 Requirement to perform hazard assessment of site and immediate hot work area for each hot work event in accordance with Hazard Assessment and Safety Plan requirements of Section 01 35 29.
    - .2 Use of a Hot Work Permit system for each event when Hot Work event.
    - .3 Permit shall be issued by Contractor's Superintendent granting permission to worker or subcontractor to proceed with hot work.
    - .4 Provision of a designated person(s) to carryout a Fire Safety Watch for a minimum of 60 minutes immediately upon completion of the hot work.
    - .5 Compliance with fire safety codes and standards specified herein and occupational health and safety regulations specified in Section 01 35 29.
  - .3 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the Hot Work Procedures applicable to this contract.
  - .4 Hot Work Procedures to be in typewritten format, listing step by step procedures and worker instructions, clearly establishing and allocating responsibilities of:
    - .1 Worker(s),
    - .2 Designated person authorized to issue the Hot Work Permit,
    - .3 Fire Safety Watcher,
    - .4 Subcontractors and Contractor.
  - .5 Brief all workers and subcontractors on Hot Work Procedures and Permit system.
- 1.7 Fire Protection and Alarm Systems
- .1 Fire protection and alarm systems shall not be:
    - .1 Obstructed.
    - .2 Shut-off, unless approved by Departmental Representative.
    - .3 Left inactive at the end of a working day or shift.
  - .2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.

- .3 Costs incurred, from the fire department, building owner and tenants, resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

1.8 Documents  
on Site

- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
- .2 Upon request, make available to Departmental Representative or to authorized safety representative for inspection.

1.1 SECTION  
INCLUDES

- .1 Procedures to isolate and lockout electrical facility and other equipment from energy sources.

1.2 RELATED WORK

- .1 Section 01 35 29: Health and Safety.
- .2 Section 01 35 24: Special Procedures on Fire Safety Requirements.

1.3 REFERENCES

- .1 CSA C22.1-06 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
- .2 CAN/CSA C22.3 No.1-06 - Overhead Systems.
- .3 CSA C22.3 No.7-06 - Underground Systems.
- .4 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.

1.4 DEFINITIONS

- .1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.
- .2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment has been isolated.
- .3 De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).
- .4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
- .5 Isolate: means that an electrical facility, mechanical

equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.

- .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

#### 1.5 COMPLIANCE REQUIREMENTS

- .1 Comply with the following in regards to isolation and lockout of electrical facilities and equipment:
  - .1 Canadian Electrical Code
  - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations.
  - .3 Regulations and code of practise as applicable to mechanical equipment or other machinery being de-energized.
  - .4 Procedures specified herein.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply.

#### 1.6 SUBMITTALS

- .1 Submit copy of lockout procedures, sample of lockout permit and lockout tags proposed for use in accordance with Section 01 33 00. , Submit within 14 calendar days of acceptance of bid.

#### 1.7 ISOLATION OF EXISTING SERVICES

- .1 Obtain Departmental Representative's written authorization prior to working on existing live or active electrical facilities and equipment and before proceeding with isolation of such item.
- .2 To obtain authorization, submit to Departmental Representative the following documentation:
  - .1 Written request to isolate the particular service or facility and;
  - .2 Copy of Contractor's Lockout Procedures.

- .3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, as follows:
  - .1 Fill-out standard form in current use at the Facility as provided by Departmental Representative or;
  - .2 Where no form exist, make written request indicating:
    - .1 The equipment, system or service to be isolated and its location;
    - .2 Duration of isolation period (ie: start time & date and completion time & date).
    - .3 Voltage of service feed to system or equipment being isolated.
    - .4 Name of person making the request.
- .4 Do not proceed with isolation until receipt of written notification from Departmental Representative granting the Isolation Request and authorizing to proceed with the work.
  - .1 Note that Departmental Representative may designate another person at the Facility being authorized to grant the Isolation Request.
- .5 Conduct safe, orderly shut down of equipment or facility. De-energize, isolate and lockout power and other sources of energy feeding the equipment or facility.
- .6 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require isolation of existing services.
- .7 Plan and schedule shut down of existing services in consultation with the Departmental Representative and the Facility Manager. Minimize impact and downtime of Facility operations. Follow Departmental Representative's directives in this regard.
- .8 Conduct hazard assessment as part of the process in accordance with health and safety requirements specified Section 01 35 29.

1.8 LOCKOUTS

- .1 De-energize, isolate and lockout electrical facility, mechanical equipment and machinery from all potential sources of energy prior to working on such items.
- .2 Develop and implement clear and specific lockout procedures to be followed as part of the Work.
- .3 Prepare typed written Lockout Procedures describing safe work practices, procedures, worker responsibilities and sequence of activities to be followed on site by workforce to safely isolate an active piece of equipment or electrical facility and effectively lockout and tagout it's sources of energy.
- .4 Include as part of the Lockout Procedures a system of lockout permits managed by Contractor's Superintendent or other qualified person designated by him/her as being "in-charge" at the site.
  - .1 A lockout permit shall be issued to specific worker providing a Guarantee of Isolation before each event when work must be performed on a live equipment or electrical facility.
  - .2 Duties of person managing the permit system to include:
    - .1 Issuance of permits and lockout tags to workers.
    - .2 Determining permit duration.
    - .3 Maintaining record of permits and tags issued.
    - .4 Making a Request for Isolation to Departmental Representative when required as specified above.
    - .5 Designating a Safety Watcher, when one is required based on type of work.
    - .6 Ensuring equipment or facility has been properly isolated.
    - .7 Collecting and safekeeping lockout tags returned by workers as a record of the event.
- .5 Clearly establish, describe and allocate responsibilities of:
  - .1 Workers.
  - .2 Person managing the lockout permit system.
  - .3 Safety Watcher.
  - .4 Subcontractor(s) and General Contractor.
- .6 Generic procedures, if used, must be edited and supplemented with pertinent information to reflect specific project requirements.
  - .1 Incorporate site specific rules and procedures in force at site as provided by Facility Manager through the Departmental Representative.

.2 Clearly label the document as being the Lockout procedures applicable to work of this contract.

.7 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.

.8 Use industry standard lockout tags.

.9 Provide appropriate safety grounding and guards as required.

### 1.9 CONFORMANCE

.1 Brief all workers and subcontractors on requirements of this section. Stringently enforce use and compliance.

### 1.10 DOCUMENTS ON SITE

.1 Post Lockout Procedures on site in common location for viewing by workers.

.2 Keep copies of Request for Isolation forms and lockout permits and tags issued to workers on site for full duration of Work.

.3 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

- 
- 1.1 RELATED WORK
- .1 Section 01 35 24: Special Procedures on Fire Safety Requirements.
  - .2 01 35 25: Special Procedures on Lockout Requirements
- 1.2 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.
- 1.3 SUBMITTALS
- .1 Make submittals in accordance with Section 01 33 00.
  - .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
    - .1 Submit within 10 work days of notification of Bid Acceptance. Provide 3 copies.
    - .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.

- .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 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.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident reports.
- .8 Submit WHMIS MSDS - Material Safety Data Sheets.

#### 1.4 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act for Province of New Brunswick, and Regulations made pursuant to the Act.
- .2 Comply with Occupational Health and Safety Act for Province of Prince Edward Island, and Occupational Health and Safety Regulations made pursuant to the Act.
- .3 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:  
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)
  - .2 COSH can be viewed at:  
[www.http://laws.justice.gc.ca/eng/SOR-86-304/n e.html](http://laws.justice.gc.ca/eng/SOR-86-304/n_e.html)
  - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)
- .4 Observe construction safety measures of:
  - .1 Part 8 of National Building Code
  - .2 Municipal by-laws and ordinances.

- .5 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .6 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .7 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

#### 1.5 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.

#### 1.6 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. See Section

01 50 00 for minimum acceptable requirements.

.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. Provide security guard where adequate protection cannot be achieved by other means.

### 1.7 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.

### 1.8 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.

### 1.9 PERMITS

.1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.

.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.

### 1.10 HAZARD ASSESSMENTS

.1 Perform site specific health and safety hazard assessment of the Work and its site.

- .2 Carryout 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.

1.11 PROJECT/SITE  
CONDITIONS

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
  - .1 Known latent site and environmental conditions:
    - .1 Working near watercourse.
    - .2 Working with tides.
    - .3 Working on unsteady platform
    - .4 Working in adverse weather conditions
  - .2 Facility on-going operations:
    - .1 The Contractor will co-operate with users of existing facilities. Maintain access to the existing wharf structures during fishing season and consult with the Departmental Representative for site access limitations.
    - .2 Should interference occur, take directions from Departmental Representative.
    - .3 Do not unreasonably encumber site with materials.
    - .4 Move stored products or equipment which interfere with operations.
    - .5 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.
    - .6 Contractor will note that fishing activity in the harbour includes fishing boats, moorings, etc.
- .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 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.12 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.

### 1.13 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 firefighting 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 Manager 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 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

1.14 SAFETY  
SUPERVISION

- occupational health and safety.
- .2 Have site-related working experience specific to activities of the Work.
- .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum bi-weekly basis. Record deficiencies and remedial action taken.
  - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized safety inspection forms. Distribute to subcontractors.
  - .3 Follow-up and ensure corrective measures are taken.
- .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
- .7 Keep inspection reports and supervision related documentation on site.

#### 1.15 TRAINING

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
- .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related 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 Province having jurisdiction and advise Departmental Representative verbally and in writing.

#### 1.16 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
  - .1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses and hearing protection.
  - .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. Post rules on site.

1.17 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.

1.18 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.

1.19 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.  
.3 For interior work in an occupied Facility, post additional copy in one or more publicly accessible locations.

1.20 BLASTING

- .1 Blasting or other use of explosives is not permitted

on site without prior receipt of written permission and instructions from Departmental Representative.

.2 Do blasting operations in accordance with section.

#### 1.21 POWDER ACTUATED DEVICES

.1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.

#### 1.22 CONFINED SPACES

.1 Abide by occupational health and safety regulations regarding work in confined spaces.

.2 Obtain an Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.

.1 Obtain permit from Facility Manager

.2 Keep copy of permit issued.

.3 Safety for Inspectors:

.1 Provide PPE and training to Departmental Representative and other persons who require entry into confined space to perform inspections.

.2 Be responsible for efficacy of equipment and safety of persons during their entry and occupancy in the confined space.

#### 1.23 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.

#### 1.24 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
- .3 Fire and Safety Requirements
- .4 Special Procedures on Lockout Requirements

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- 1.1 RELATED WORK .1 Construction/Demolition Waste Management and Disposal: Section 01 74 19.
- 1.2 DEFINITIONS .1 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.
- 1.3 FIRES .1 Fires and burning of rubbish on site not permitted.
- 1.4 HAZARDOUS MATERIAL HANDLING .1 Store and handle hazardous materials in accordance with applicable federal and provincial laws, regulations, codes and guidelines. Store in location that will prevent spillage into the environment
- .2 Label containers to WHMIS requirements and keep MSDS data sheets on site for all hazardous materials.
- .3 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when storage began.
- .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- .5 Transport hazardous materials in accordance with federal Transportation of Dangerous Goods Regulations and applicable Provincial regulations.
- 1.5 DISPOSAL OF WASTES .1 Do not bury rubbish and waste materials on site. Dispose in accordance with project waste management requirements specified in Section 01 74 19.
- .2 Do not dispose of hazardous waste or volatile materials, such as mineral spirits, paints, thinners, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.

- .3 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.

1.6 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing regulations and requirements.
- .4 Provide control devices such as filter fabrics, sediment traps and settling ponds to control drainage and prevent erosion of adjacent lands. Maintain in good order for duration of work.

1.7 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with provincial and federal environmental regulations.
- .5 Do not skid logs or construction materials across waterways.
- .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
- .7 Do not blast under water or 100 m of spawning beds.
- .8 Do not refuel any type of equipment within 100 meters of a water body. Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.

1.8 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local

authorities emission requirements.

- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
- .5 Have appropriate emergency spill response equipment and rapid clean-up kit on site located adjacent to hazardous materials storage area. Provide personal protective equipment required for clean-up.
- .6 Report, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment to Federal and Provincial Department of the Environment.
  - .1 Notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

1.9 WILDLIFE  
PROTECTION

- .1 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 neighboring 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.

1.1 RELATED  
SECTIONS

- .1 Section 03 01 00 - Concrete Forming and Accessories
- .2 Section 03 20 00 - Concrete Reinforcing
- .3 Section 03 30 00 - Cast-in-Place Concrete
- .4 Section 05 50 00 - Miscellaneous Metals
- .5 Section 31 23 25 - Gravel Fill
- .6 Section 35 00 00 - Dimension Timber

1.2 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 make good work disturbed by inspections and tests.

1.3 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.
  - .1 Provide all necessary instruments, equipment and qualified personnel to perform tests.
- .2 At completion of tests, turn over 2 sets of fully documented tests reports to the Departmental Representative. Submit in accordance with Section 01 33 00.
  - .1 Obtain additional copies for inclusion of a complete set in each of the maintenance manuals specified in Section 01 78 00.

- .3 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.
- .4 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 to verify acceptability of corrected work.

1.4 INDEPENDENT  
INSPECTION AGENCIES

- .1 Departmental Representative may engage and pay for service of 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 Testing, adjustment and balancing of mechanical and electrical equipment and other building systems.
  - .4 Performance verification tests before building commissioning procedures commences.
  - .5 Mill tests and certificates of compliance.
  - .6 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative.
  - .7 Additional tests as specified in Clause 1.3.4 above.
- .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.

#### 1.5 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.

#### 1.6 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.

#### 1.7 MOCK-UPS

- .1 Prepare mock-ups of certain work as specified in various sections of the Specifications. Include in each mock-up all related work components representative of final assembly.
- .2 Construct in locations acceptable to Departmental Representative.
- .3 Prepare mock-ups for Departmental Representative's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups 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.
- .5 If requested, Departmental Representative will assist in preparing a schedule fixing dates for preparation.



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- 1.1 ACCESS
- .1 Provide and maintain adequate access to project site.
  - .2 Maintain access roads for duration of contract and make good damage resulting from Contractors' use of roads.
- 1.2 CONTRACTOR'S SITE OFFICE
- .1 Be responsible for and provide own site office, if required, including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative.
  - .2 The Contractor shall retain a qualified electrician to perform the electrical hook-up to conform to the requirements of the Canadian Electrical Code.
- 1.3 SANITARY FACILITIES
- .1 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.
- 1.4 POWER
- .1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
  - .2 Supply and install all temporary facilities for power such as pole lines and underground cables to approval of local power supply authority.
- 1.5 WATER SUPPLY
- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.
- 1.6 CONSTRUCTION SIGN AND NOTICES
- .1 Contractor or subcontractor advertisement signboards are not permitted on site.
  - .2 Only notices of safety or instructions are permitted on site.

- .3 Safety and Instruction Signs and Notices:
    - .1 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall conform to CAN/CSA-Z321-96 (R2006).
  - .4 Maintenance and Disposal of Site Signs:
    - .1 Maintain approved signs and notices in good condition for duration of project and dispose of off site on completion of project or earlier if directed by Departmental Representative.
- 
- .1 Remove temporary facilities from site when directed by Departmental Representative.

1.7 REMOVAL OF  
TEMPORARY  
FACILITIES

PART 1 - GENERAL

- 1.1 SECTION INCLUDES .1 Barriers.  
.2 Traffic Controls.
- 1.2 INSTALLATION AND REMOVAL .1 Provide temporary controls in order to execute work expeditiously.  
.2 Remove from site all such work after use.
- 1.3 HOARDING .1 Erect temporary site enclosure using new 1.2 m high snow fence wired to rolled steel "T" bar fence posts spaced at 2.4 m centers. Provide one lockable truck gate. Maintain fence in good repair.
- 1.4 GUARD RAILS AND BARRICADES .1 Provide secure, rigid guard rails and barricades around open excavations.  
.2 Provide barricades along wharf structure when wheel guard is removed.  
.3 Provide as required by governing authorities.
- 1.5 ACCESS TO SITE .1 Provide and maintain access to adjacent harbour facilities.
- 1.6 PUBLIC TRAFFIC FLOW .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform work and protect the public.

- 1.7 FIRE ROUTES .1 Maintain access to property including overhead clearances for use by emergency response vehicles.
  
- 1.8 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY .1 Protect surrounding private and public property from damage during performance of work.
- PROPERTY .2 Be responsible for damage incurred.





lay out neatly.

- .3 Fastenings which cause spalling or cracking are not acceptable.

1.8 Fastenings -  
Equipment

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.9 Storage,  
Handling and  
Protection

- .1 Deliver, handle, store and maintain in manner to prevent deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled materials in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in work. Provide additional cover where manufacturer's packaging is insufficient to provide adequate protection.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Store sheet materials on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .6 Immediately remove damaged or rejected materials from site.
- .7 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.10 Construction  
Equipment and Plant

- .1 On request, prove to the satisfaction of Departmental Representative that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
  
- .2 Maintain construction equipment and plant in good operating order. Prevent oil and other contaminant leaks. Should any contaminant leak onto ground or into the water, take immediately and appropriate measures to contain, cleanup and dispose in an environmentally responsible manner.

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- 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.
  - .3 Prevent accumulation of waste which creates hazardous conditions.
- 2 Cleaning During Construction
- .1 Maintain the work, at least on a daily basis free from accumulations of waste material and debris.
  - .2 Provide on-site containers for collection of waste materials, and debris.
  - .3 Remove waste materials, and debris from site.
  - .4 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces.
- 3 Final Cleaning
- .1 In preparation for acceptance of the project on an interim or final certificate of completion perform final cleaning.
  - .2 Remove grease, dust, dirt, stains, and other foreign materials, from interior and exterior finished surfaces.

PART 1 - GENERAL

1.1 RELATED  
SECTIONS

- .1 Section 02 41 16 - Sitework, Demolition and Removal.

1.2 DISPOSAL  
OF WASTE

- .1 Separate and recycle waste materials designated for disposal.
- .2 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, and packaging material in appropriate on-site bins for recycling.
- .3 Place materials defined as hazardous or toxic in designated containers.
- .4 Divert unused metal materials from landfill to metal recycling facility as approved by Departmental Representative.
- .5 Fold up metal banding, flatten and place in designated area for recycling.
- .6 Unused paint or coating material must be disposed of at an official hazardous material collections site as approved by Departmental Representative.
- .7 Do not dispose of unused paint material into sewer system, streams, lakes, onto ground, or in any other location where it will pose a health or environmental hazard.
- .8 Disposal of waste volatile materials, mineral spirits, oil, and paint thinner into waterways, storm, or sanitary sewers is strictly prohibited.
- .9 Do not dispose of preservative treated wood through incineration.
- .10 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
- .11 Dispose of treated wood, end pieces, wood scraps and sawdust at a sanitary landfill.
- .12 Dispose of unused preservative material at an official hazardous material collections site. Do not dispose of unused preservative material into the sewer system, streams, lakes, on ground or in any other location where

they will pose a health or environmental hazard.

- .13 Burying of rubbish and waste materials is prohibited.
- .14 All waste material not designated for recycle to be disposed of at an approved waste disposal site in accordance with appropriate environmental guidelines.

1.3 STORAGE AND  
HANDLING OF WASTE

- .1 Store materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become property of Contractor.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 APPLICATION .1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

- 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 area as work progresses.
  - .3 Source separate materials to be reused or recycled into specified sort areas.

3.3 DIVERSION OF MATERIALS

- .1 Separate materials from general waste and stockpile in separate piles or containers, to approval of Departmental Representative, and consistent with applicable fire regulations. Mark containers or stockpile areas. Provide instruction on disposal practices.
- .2 On-site sale of salvaged, recovered, reusable, or recyclable materials is not permitted.

PART 1 - GENERAL

1.1 SECTION  
INCLUDES

- .1 Project Record Documents as follows:
- .1 As-built drawings;
- .2 As-built specifications;
- .3 Reviewed shop drawings.

1.2 PROJECT RECORD  
DOCUMENTS

- .1 Departmental Representative will provide two white print sets of contract drawings and two copies of Specifications Manual specifically for "as-built" purposes.
- .2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.
- .3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative at any time during construction.
- .4 As-Built Drawings:
  - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set (also by use of red ink). Submit both sets to Departmental Representative. All drawings of both sets shall be stamped "As-Built Drawings" and be signed and dated by Contractor.
  - .2 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
  - .3 Record following information:
    - .1 Horizontal and vertical location of various elements in relation to Geodetic Datum.
    - .2 Field changes of dimension and detail.
    - .3 All design elevations, sections, and details dimensioned and marked-up to consistently report finished installation conditions.
    - .4 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings must also be marked-up and dimensioned to reflect final as-built conditions and appended to the as-built drawing document.
    - .5 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and

consistently depicting the changed condition as it applies to all affected drawing details.

- .5 As-built Specifications: legibly mark in red each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly items substituted from that specified.
  - .2 Changes made by Addenda and Change Orders.
  - .3 Mark up both copies of specifications; stamp "as-built", sign and date similarly to drawings as per above clause.
  
- .6 Maintain As-built documents current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Frequency of reviews will be subject to Departmental Representative's discretion. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.

1.3 REVIEWED  
SHOP DRAWINGS

- .1 Compile 2 full sets of all reviewed shop drawings.