

## PART 1 General

### 1.1 PROJECT ACTIVITIES

- .1 The work of this project involves reconstruction to the existing steel sheet bulkhead, wharf 412, located at Graham's Pond, Kings County, Prince Edward Island which includes but is not limited to:
  - .1 Total removal of existing SSP bulkheads, concrete decks, fill, tie rods, and other items where indicated to be replaced with new SSP bulkhead;
  - .2 Where required, excavation and removal of concrete foundations to allow construction of new wharfs;
  - .3 Provision for cast-in-place concrete decks, steel, sheet piles bulkheads, wales, ladders, wheel guards, tie rods and concrete wall, welding, underwater work, and miscellaneous work related to the construction;
  - .4 Connection to existing wharfs;
  - .5 All related site work including asphalt paving, select borrow sandstone fill, imported gravel, riprap, filter fabric and environmental protection;
  - .6 Traffic control and traffic management during construction;
  - .7 Provision for relocation or disconnection of older service and installation of new services where indicated;
- .2 All in accordance with the requirements of these specifications and drawings listed on the Index to Specifications and Drawings, construction schedule and Time and Order of Completion.

### 1.2 CODES AND STANDARDS

- .1 All work to be performed in conformity with applicable codes and standards.
- .2 Perform work in accordance with the latest editions of applicable codes, Canadian Standards Association (CSA), P.E.I. Occupational Health and Safety Act, Canada Labour Code Part II, and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements will apply.
- .3 Meet or exceed the requirement of specified Standards, Codes, and referenced documents.
- .4 Unless otherwise indicated, the latest editions of referenced Standards, Codes, and Documents will apply.

### 1.3 DOCUMENTS REQUIRED

- .1 Maintain one copy of each of the following at the job

site:

- .1 Contract drawings;
- .2 Project manual;
- .3 Addenda;
- .4 Reviewed shop drawings;
- .5 Change orders;
- .6 Test reports;
- .7 Copy of updated approved work schedule;
- .8 Manufacturers' installation and application instructions;
- .9 Health and Safety Plan and related documents;
- .10 Permits, Codes and Acts;
- .11 Specifications;
- .12 Waste Management Plan;
- .13 Fire Safety;
- .14 Other requested documents.

#### 1.4 SITE EXAMINATION

- .1 All bidders submitting tenders for this Work should first examine the site of the Work in its entirety prior to submission of tenders and make themselves acquainted with site conditions, tides and all information necessary for the proper execution of the Work covered by the tender documents. All tenders shall take into consideration all such conditions as may affect the Work under this Contract.
- .2 Must review Section 01 35 29.06 for potential hazards, wearing safety gear at site, and taking precautionary measures.
- .3 No extra payment will be made to the Contractor, above the Contract Price, for costs resultant from failure to determine the conditions that affect the work.

#### 1.5 SITE CONDITIONS

- .1 Geotechnical Investigation - Refer to reports included in the Specification following Division 31:
  - .1 Geotechnical Review, Proposed Breakwater Reconstruction (Structure 305) Graham's Pond Small Craft Harbour, Kings County, PEI, prepared by Joose Environmental, Project No. JE0160-A, dated March 29, 2016.
  - .2 Geotechnical Investigation, Graham's Pond Breakwater, (Structure 306) Graham's Pond Harbour, Gaspereaux, PE, prepared by Stantec Consulting Ltd., Project No. 121621050, dated June 25, 2018.
- .2 Underwater Inspection Report - Refer to report included in the Specification following Division 31:

- .1 Underwater Inspection Report, Graham's Pond (Section 412/306), prepared by Diversified Divers Inc., dated June 21, 2018.

1.6 CONSTRUCTION SCHEDULE AND PROGRESS REPORTS

- .1 Submit a consolidated schedule in weekly increments within ten (10) days of Contract award.
- .2 Discuss work proposed schedule with Departmental Representative to ensure incorporation of any specific scheduling requirements of Departmental Representative related to work being carried out simultaneously by Departmental Representative.
- .3 Make allowance in the construction schedule for the following specific activities:
  - .1 Deficiency review.
  - .2 Deficiency clean-up.
  - .3 Construction close-out.
  - .4 Substantial completion.
  - .5 Project Record Drawings (As-built) submission.
  - .6 Warranties submission.
- .4 Update and re-issue the work schedule as required to conform to monthly progress reviews.

1.7 COST BREAKDOWN

- .1 N/A.

1.8 PERMITS

- .1 Contractor will apply and pay for any necessary permits/certificates.
- .2 Provide notification to inspection authorities.
- .3 Compliance certificates.
- .4 Submit copies to Departmental Representative.

1.9 CONTRACTOR'S USE OF SITE

- .1 Do not unreasonably encumber site with materials or equipment.
- .2 Move stored products or equipment, which interfere with operations of Departmental Representative or other Contractors.
- .3 Obtain and pay for use of additional off-site storage or work areas needed for operations.
- .4 Maintain all roads, streets, lanes, walks, driveways free from mud and debris tracked from construction site, on a daily basis.
- .5 All structures at the harbour must be completely accessible. Any new section of structure must be substantially complete. The contractor must have all

construction materials and/or equipment stored within the lay down area or offsite during this time period.

- .6 Contractor to coordinate work schedule with Department Representative.

#### 1.10 SECURITY

- .1 Watch the site at all times including weekends and holidays. No compensation will be paid by the Departmental Representative for materials of work stolen, lost, damaged, or destroyed.

#### 1.11 PROJECT MEETINGS

- .1 Hold bi-weekly project meetings at the site and at a time approved by the Departmental Representative. In addition, hold any additional meetings as the need arises or as directed by the Departmental Representative.
- .2 Notify all parties concerned of such meetings.
- .3 Contractor will record minutes of such meetings and distribute to all parties within three (3) working days of the meetings.

#### 1.12 SETTING OUT THE WORK

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Protect and maintain all survey/reference points.
- .3 Provide devices and qualified personnel as required to layout and construct work.
- .4 Supply all stakes and markers required for laying out work.

#### 1.13 FIELD DIMENSIONS

- .1 Take all field measurements required to supplement drawing dimensions. The Departmental Representative's review of shop drawings and erection diagrams does not relieve the Contractor of this responsibility.

#### 1.14 LOCATIONS OF EQUIPMENT AND FIXTURES

- .1 Unless dimensioned, locations of equipment and systems as indicated or specified are to be considered as approximate.
- .2 Inform Departmental Representative of impending installations and obtain Departmental Representative's approval of actual locations.
- .3 When required by the Departmental Representative, submit field drawings to indicate the relative positions of various services and equipment.

#### 1.15 COORDINATION AND COOPERATION WITH OTHER CONTRACTS

- .1 The construction scheduling for the work of this project necessitates that the Contractor for the work of this Contract should anticipate the requirement to coordinate and cooperate with the Departmental Representative and also with other independent contractors, engaged directly by the Departmental Representative, working simultaneously on other related work as may be required.
- .2 Coordination and cooperation with other contractors under the control and direction of the Departmental Representative, and with independent contractors, electric/telephone utilities and cable companies, will include, but not be limited to:
  - .1 Sharing access to site and various areas of work within and adjacent to the construction site.
  - .2 Sharing storage of reasonable quantity of materials in areas as directed by the Departmental Representative.
  - .3 Incorporating flexibility into work schedule as would normally be required to integrate Work with work of other trades working under separate contracts.
  - .4 Attend coordination meetings called by the Departmental Representative and maintain on-going consultation with on-site superintendents or foremen of other separate contracts, primarily, but not necessarily limited to, activities required to coordinate installation of services or other components proposed or built in, with the work of this Contract.
  - .5 Directly arrange for work relating to the relocation of electric and/or telephone, and/or cable poles, and/or lines to be carried out by the utility companies to meet the Contractor's schedule.
- .3 Before starting the Work of this Contract, it is the responsibility of this Contractor to confirm to the satisfaction of this Contractor, that the existing work of other contractors, whether fully completed, or being completed simultaneously with the Work of this Contract, upon which the Work of this Contract will be installed, attached to or abut against, or in any other way be affected by the condition of the existing work, is acceptable to this Contractor for the installation of the work of this Contract. If the existing work is deemed by this Contractor to be unacceptable for the installation of the Work of this Contract, this Contractor shall stop work and notify the Departmental Representative, in writing, stating clearly the conditions, which in the

opinion of this Contractor are unacceptable. If written notification of unacceptable conditions has not been received by the Departmental Representative, the commencement or continuation of the Work of this Contract, insofar as it is affected by the work of other contractors shall be considered by the Departmental Representative as an acknowledgement by this Contractor that the existing work of the other contractors is acceptable.

- .4 If required, prepare co-ordination drawings of installation for the efficient use of available space, for proper sequence of installation and to resolve conflicts. Consult with, and obtain the Departmental Representative's approval.

#### 1.16 CUTTING, FITTING AND PATCHING

- .1 Do all cutting, fitting, boring, and patching as required to complete the work of this Contract.

#### 1.17 EXISTING SERVICES

- .1 Where work involves breaking into, re-routing or connecting to existing services, submit work schedule to Departmental Representative sufficiently in advance to allow Departmental Representative to provide Owner of properties with minimum seven (7) days notice of interruption of any active service or facility. Confirm each interruption 24 hours immediately prior to scheduled date of implementation.
- .2 Obtain Departmental Representative and Departmental Representative's approval of schedule of interruptions before proceeding with work and where applicable, coordinate with Local Authority or Public Utility.
- .3 Make all required connections to existing services, carry out such operations at the times directed by governing authorities, and with minimum disturbance to facilities and vehicular traffic.
- .4 Before starting the Work establish the locations and extents of service lines in the area of the Work. Notify Departmental Representative if findings in conflict with information or intent shown on drawings or in specifications.
- .5 Submit schedules to, and obtain approval from the Departmental Representative for any shut-down or closure of active services or facilities. Adhere to approved schedules and provide notice to affected parties.
- .6 Where unknown services are encountered, immediately advise the Departmental Representative and confirm such findings in writing.

- .7 Record the locations of maintained, re-routed, and abandoned service lines. Include on the record drawings all field measurements.

#### 1.18 ADDITIONAL DRAWINGS

- .1 The Departmental Representative may furnish additional drawings to assist the proper execution of work. These drawings will be issued for clarification only. Such drawings will have the same meaning and intent as if they were included with plans referred to in the contract documents.

#### 1.19 RELICS AND ANTIQUITIES

- .1 Relics and antiquities and items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during the excavation work, shall remain property of the Government, except when excavation is on private property when items become the property of the property Owner. Protect such articles and request directives from Departmental Representative.
- .2 Give immediate notice to Departmental Representative if evidence of archaeological finds are encountered during construction, and await Departmental Representative's written instructions before proceeding with work in this area.

#### 1.20 TRAFFIC REQUIREMENTS

- .1 See Section 01 35 29.06 - Health and Safety Requirements.
- .2 See Section 01 35 14 - Special Procedures for Traffic Control.

**END OF SECTION**

PART 1 General

1.1 DESCRIPTION OF WORK

- .1 The work covered by the Plans and Specifications involves the supply of all labour, materials and equipment required for demolition and removal of existing structures, and completion of new construction as specified in the project activities and indicated on the drawings.

1.2 GENERAL

- .1 Unit and lump sum prices are full compensation for the work necessary to complete each item in the contract, in combination for all work necessary to complete the Work as a whole, and provided in accordance with the Construction Schedule and other plans indicated requiring submittal to and approval by the Departmental Representative.

1.3 MEASUREMENT FOR PAYMENT

- .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.
- .2 Items included under "Measurement for payment". All lump sum and all unit price items shall include all materials, labour, equipment and all other items necessary to complete the work.
  - .1 Project Layout and General Requirements: Project layout, Survey Control, Mobilization and Demobilization, Environmental Protection Devices and all other contract requirements not specifically measured, will be paid as a Lump Sum item.
  - .2 Selective Site Demolition: Demolition and removal of existing concrete decks, concrete foundation, total removal of existing anchored-bulkhead steel sheet piling, tie rods, anchor blocks where interfere with new work, curbing, ladders, redundant utility poles and other site items as indicated. All costs associated with environmental protection devices. Final payment for this item will only be made when all work is complete and all materials, equipment and other facilities are removed, the site cleaned and left in a condition satisfactory to the Departmental Representative. This item will be paid as a Lump Sum.
  - .3 Excavation/Dredging (channel): Excavation / dredging and disposal of excavated material from the channel to the design depth as indicated on the drawings



shall be placed on site in the designated Disposal Cell and shall be measured by cubic meter of material removed.

- .4 Excavation: Excavation and disposal of excavated material from site to the design depth as indicated on the drawings shall be measured by cubic meter of material removed. Construction, maintenance and removal of haul roads are to be considered incidental to this work.
- .5 Creosote Timber: Excavation, removal, disposal hauling and tippage of creosote timber under deck of Wharf 412 shall constitute a price per tonnes for measurement purposes.
- .6 Slab-on Grade: Cast in Place (CIP) Concrete for slab-on-grades shall include all cast in place concrete elements and shall constitute a price per cubic meter for measurement purposes, based on dimensions shown on the drawings. Item to include supply and installation of necessary formwork, steel reinforcing as detailed, excavation and backfilling.
- .7 Cast in Place Concrete for anchor blocks (walls) shall include all elements and shall constitute a price per cubic meter for measurement purposes, based on dimensions shown on drawings. Item to include supply and installation of necessary formwork, steel reinforcing, and excavation and backfilling as detailed and as required.
- .8 Double Wales: All miscellaneous metals required to install double wales along back of steel sheet piling as detailed and shall be measured for payment per linear meter. Item shall include integrated connections, splicing, and anchorage to structures, welding, bolts, washers, concrete topping. etc. Item shall include supply and installation.
- .9 Steel Angles and Plates: Supply and install of steel angles and plates along top of steel sheet piling bulkheads as detailed. This item shall be measured for payment per linear meter. Item shall include connection to structure, welding, bolts, etc. as detailed.
- .10 Ladders and Holdfasts: All miscellaneous metals to install steel ladders and associated holdfasts (including vertical members, steel rungs, holdfasts and all associated connection devices) shall constitute a price per unit for measurement purposes. Item to include supply and installation for ladders at dredge platform and steel sheet pile bulkheads.

- .11 Wheel Guards: All miscellaneous metals required to install Wheel Guards as detailed and shall be paid for per linear meter of installed wheel guards. Item shall include hot dipped galvanizing, integrated ladder holdfasts, legs, base plates and anchorage to concrete deck as detailed and shall be considered incidental to this work. Item shall include supply and installation.
- .12 Structural Fill: Structural fill (select sandstone) shall constitute a price per metric tonne for measurement purposes. Scale tickets shall be provided for each load entering the site. Item to include supply and installation.
- .13 Class "A" Gravel: Imported Class "A" Gravel shall constitute a price per metric tonne for measurement purposes. Scale tickets shall be provided for each load entering the site. Item to include supply and installation.
- .14 Clear Stone: Imported Rock fill shall constitute a price per metric tonne for measurement purposes. Scale tickets shall be provided for each load entering the site. Item to include supply and installation.
- .15 Geotextile: Geotextiles shall constitute a price per square meter for measurement purposes. Measurement to be based on slope/surface coverage not usage (i.e. required overlaps are not measured for payment). Item to include supply and installation.
- .16 Steel Sheet Piles (Supply) shall constitute a price per square meter for measurement purposes. This item includes all supply and onsite storage of all piles and any other associated products required in the work, including steel channel wales, steel angles, welding, and other miscellaneous steel associated with the installation and as indicated. Price quoted in tender to account for any necessary variation in required supply length to provide full length piles (no splices) in finished work, with allowance for cut-off, trimming during installation or achievement of required driving resistance into sandstone bedrock or other foundation strata.
- .17 Steel Sheet Piles (Install) shall constitute a price per square meter for measurement purposes. Item includes installation of steel sheet piles to lines, grades, limits and resistance criteria as specified in the contract documents.
- .18 Tie-Rods shall include the tie rod, standard or bevelled nuts and washers as detailed, the indicated

embedded connection to the wharf rear, washer plates on the back of the deadmen, including all reinforcing steel and pipe sleeve assemblies and shall constitute a price per unit for measurement purposes. Item to include supply and installation. Excavation for tie-rods shall be included under this item.

- .19 Asphalt Paving: Asphalt paving shall constitute a price per square meter installed and compacted as indicated on the drawings and specified. This item shall include all materials and equipment required to construct the specified asphalt structure including necessary prime coat, A-Base, and B-Seal layers.

## PART 2 Products

### 2.1 NOT USED

- .1 Not used.

## PART 3 Execution

### 3.1 NOT USED

- .1 Not used.

**END OF SECTION**

## PART 1 General

### 1.1 GENERAL

- .1 This section specifies general requirements and procedures for contractor's submissions of shop drawings, product data, samples and mock-ups to Departmental Representative for review.
- .2 Do not proceed with work until relevant submissions are reviewed by Departmental Representative.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submissions.
- .5 Notify Departmental Representative in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .6 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review of submission, unless Departmental Representative gives written acceptance of specific deviations.
- .7 Make any changes in submissions which Departmental Representative may require consistent with Contract Documents and resubmit as directed by Departmental Representative.
- .8 Notify Departmental Representative, in writing, when resubmitting, of any revisions other than those requested by Departmental Representative.

### 1.2 SUBMISSION REQUIREMENTS

- .1 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .2 Allow 10 working days for Departmental Representatives review of each submission.
- .3 Accompany submissions with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .4 Submissions shall include:
  - .1 Date 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 Contractors 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.
  - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
  - .3 Setting or erection details.
  - .4 Capacities.
  - .5 Performance characteristics.
  - .6 Standards.
  - .7 Relationship to adjacent work.
- .5 After Departmental Representative's review, distribute copies.

#### 1.3 SHOW DRAWINGS

- .1 Shop drawings: original drawings, or modified standard drawings provided by Contractor, to illustrate details of portions of Work, which are specific to project requirements.
- .2 Maximum sheet size: 850 x 1050mm
- .3 Submit shop drawings as follows:
  - .1 Opaque diazo prints or photocopies of number Contractor requires for distribution plus 4 copies which will be retained by Departmental Representative.
  - .2 Indicate materials, methods of construction, connection details, etc.
- .4 Cross-reference shop drawing information to applicable portions of Contract documents.

#### 1.4 PRODUCT DATA

- .1 Product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
- .2 Submit 6 copies of product data.
- .3 Sheet size: 215x280mm, maximum of 3 modules.
- .4 Delete information not applicable to project.
- .5 Supplement standard information to provide details

applicable to project.

- .6 Cross-reference product data information to applicable portions of Contract Documents.

#### 1.5 SAMPLES

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

#### 1.6 MOCK-UPS

- .1 Mock-ups: field-erected example of work complete with specified materials and workmanship.
- .2 Erect mock-ups at locations acceptable to Departmental Representative.
- .3 Reviewed and accepted mock-ups will become standards of workmanship and material against which installed work will be verified.

#### 1.7 SHOP DRAWINGS REVIEW

- .1 The review of shop drawings by Departmental Representative is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that Departmental Representative approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents. Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of the work of all sub-trades.

**END OF SECTION**

## PART 1 General

### 1.1 REFERENCES

- .1 Manual of Uniform Traffic Control Devices for Streets and Highways - 2014.

### 1.2 PROTECTION OF PUBLIC TRAFFIC

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2 Review with Departmental Representative all precautions to be taken and safety measures to be put in place and obtain acceptance before proceeding with work.
- .3 When working on traveled way:
  - .1 Place equipment in position to present minimum of interference and hazard to traveling public.
  - .2 Keep equipment units as close together when working conditions permit and preferably on same side of traveled way.
  - .3 Do not leave equipment on traveled way overnight.
- .4 Do not close any lanes of road without approval of Departmental Representative. Before re-routing traffic erect suitable signs and devices in accordance with instructions contained in Part D of UTCD.
- .5 Keep traveled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.
  - .1 Provide minimum 7m wide temporary roadway for traffic in two-way sections through Work and on detours.
  - .2 Provide minimum 5m wide temporary roadway for traffic in one-way sections through Work and on detours.
- .6 As indicated, provide graveled detours or temporary roads to facilitate passage of traffic around restricted construction area.
- .7 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of Departmental Representative.

### 1.3 INFORMATION AND WARNING DEVICES

- .1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and

- miscellaneous warning devices as specified in Part D, Temporary Conditions Signs and Devices, of UTCD Manual.
- .3 Place signs and other devices in locations recommended in UTCD manual.
  - .4 Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Departmental Representative.
  - .5 Continually maintain traffic control devices in use by:
    - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
    - .2 Removing or covering signs which do not apply to conditions existing from day to day.

#### 1.4 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag persons, trained in accordance with, and properly equipped as specified in, UTCD manual in following situations:
  - .1 When public traffic is required to pass working vehicles or equipment that block all or part of traveled roadway.
  - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
  - .3 When workmen or equipment are employed on traveled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
  - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
  - .5 For emergency protection when other traffic control devices are not readily available.
  - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
  - .7 Delays to public traffic due to contractor's operators: maximum 10 minutes.
  - .8 Flag person to have two-way radio communications at all times.

**END OF SECTION**



PART 1 General

1.1 RELATED WORK

- .1 Section 01 35 29.06 - Health and Safety Requirements.

1.2 REFERENCES

- .1 National Fire Code 2015.
- .2 National Building Code 2015.

1.3 DEFINITIONS

- .1 Hot Work defined as:
  - .1 Welding work.
  - .2 Cutting of materials by use of torch or other open flame devices.
  - .3 Grinding with equipment which produces sparks.
  - .4 Use of open flame torches such as for roofing work.

1.4 SUBMITTALS

- .1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 14 calendar days of acceptance of bid.
- .2 Submit in accordance with Section 01 33 00 - Submittal Procedures.

1.5 FIRE SAFETY REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
  - .1 National Fire Code 2015.
  - .2 National Building Code 2015.
  - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.6 HOT WORK AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
  - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
  - .2 Description of the type and frequency of Hot Work required.

- .3 Sample Hot Work Permit to be used.
- .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
  - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
  - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
- .4 Requirement for individual authorization will be based on:
  - .1 Nature or phasing of work;
  - .2 Risk to Facility operations;
  - .3 Quantity of various trades needing to perform hot work on project or;
  - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- .6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.

#### 1.7 HOT WORK PROCEDURES

- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
- .2 Hot Work Procedures to include:
  - .1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section 01 35 29.06.
  - .2 Use of a Hot Work Permit system with individually written permit issued by Contractor's Superintendent to specific worker or subcontractor granting permission to proceed with Hot Work.
  - .3 Permit required for each Hot Work event.
  - .4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of 60 minutes immediately following the completion of the Hot Work.
  - .5 Compliance with fire safety codes, standards and occupational health and safety regulations

specified.

- .6 Site specific rules and procedures in force at the site as provided by the Facility Manager.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.
- .4 Procedures shall clearly establish responsibilities of:
  - .1 Worker performing hot work,
  - .2 Person issuing the Hot Work Permit,
  - .3 Fire Safety Watcher,
  - .4 Subcontractor(s) and Contractor.
- .5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.
- .6 Failure to comply with fire safety procedures may result in the issue of a Non-Compliance notification as specified in Section 01 35 29.06 Health and Safety Requirements.

#### 1.8 HOT WORK PERMIT

- .1 Hot Work Permit to include the following:
  - .1 Project name and project number;
  - .2 Date of issue;
  - .3 Description of hot work type needed;
  - .4 Special precautions to be followed, including type of fire extinguisher needed;
  - .5 Name and signature of permit issuer.
  - .6 Name of worker to which the permit is issued.
  - .7 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
  - .8 Worker's signature with time/date of hot work completion.
  - .9 Stipulated time period of safety watch.
  - .10 Fire Safety Watcher's signature with time/date.
- .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.
- .3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

#### 1.9 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, and Facility owner, 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.

1.10 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.

**END OF SECTION**

## PART 1 General

### 1.1 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures and copies of the following documents, including updates:
  - .1 Submit site-specific Health and Safety Plan;
  - .2 Submit site-specific Dive Plan;
  - .3 Building permit, compliance certificate and other permits required to complete the work.
- .2 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.
- .3 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .4 Submit copies of incident and accident reports.
- .5 Submit WHMIS MSDS - Material Safety Data Sheets.
- .6 Name of contractor's representative designated to perform full time health and safety supervision on site.

### 1.2 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, for the Province of PEI, and the Occupational Health and Safety Act Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code - Part II Canada Occupational Safety and Health Regulations made under Part II of the Canada Labour Code.
- .3 Observe and enforce construction safety measures required by:
  - .1 National Building Code of Canada;
  - .2 Provincial Worker's Compensation Board;
  - .3 Municipal statutes and ordinances.
- .4 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
- .5 The Canada Labour Code can be viewed at: <http://laws-lois.justice.gc.ca/eng/>
- .6 Maintain Workers Compensation Coverage for duration of Contract. Submit letter of good standing to Departmental Representative upon request.

### 1.3 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to the site and environment to extent that they may be affected by conduct of Work.
- .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.

### 1.4 SITE CONTROL AND ACCESS

- .1 Control work site and entry points to construction areas.
  - .1 Delineate and isolate construction areas from other areas of site by use of appropriate means.
  - .2 Post notices and signage at entry points and at other strategic locations identifying entrance onto site to be restricted to authorized persons only.
  - .3 Signage must be professionally made, bilingual in both official languages or display internationally understood graphic symbols.
- .2 Approve and grant access to site only to workers and authorized persons.
  - .1 Immediately stop non-authorized persons from circulating in construction areas and remove from site.
  - .2 Provide site safety orientation to all persons before granting access. Advise of site conditions, hazards and mandatory safety rules to be observed on site.
- .3 Secure site at night time to the extent required to protect against unauthorized entry. Provide security guard where protection cannot be achieved by other means.
- .4 Ensure persons granted access to site wear appropriate personal protective equipment (PPE) suitable to work and site conditions.
  - .1 Provide such PPE to authorized persons who require access to perform inspections or other approved purposes.
- .5 Ensure persons granted access are familiar with the Health and Safety Plan defined in sub-section 1.2

### 1.5 PROTECTION

- .1 Carry out work placing emphasis on health and safety of the Public, Facility personnel, construction workers and protection of the environment.
- .2 Erect safety barricades, lights and signage on site to

effectively delineate work areas, protect pedestrian and vehicular traffic around and adjacent to work and to create a safe working environment.

- .1 Erect fences, hoarding, protective barriers and temporary lighting as required. See Section 01 56 00 - Temporary Barriers and Enclosures for minimum acceptable barricades.
- .3 Should unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

#### 1.6 FILING OF NOTICE

- .1 File Notice of Project and other Notices with Provincial authorities prior to commencement of Work.
  - .1 Departmental Representative will assist in locating address for Filing Notice of Project if needed.

#### 1.7 PERMITS

- .1 Post on site permits, licenses, compliance certificates specified in Section 01 10 10 - Instructions to Bidders.
- .2 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain his/her approval to proceed before carrying out that portion of work.

#### 1.8 HAZARD ASSESSMENTS

- .1 Conduct site specific health and safety hazard assessment before commencing project and during course of work identifying risks and hazards resulting from site conditions, weather conditions and work operations.
  - .1 Perform on-going assessments addressing new risks and hazards as work progresses including when new sub-trade or sub-contractor arrives on site.
  - .2 Also, conduct assessment when the project activities has been changed by Change Order and when potential hazard or weakness in current health and safety practices are identified by Departmental Representative or by an authorized safety Representative.
- .2 Record results in writing and address in Health and Safety Plan.
- .3 Keep copy of all assessments on site.

#### 1.9 PROJECT/SITE CONDITIONS

- .1 The following are known or potential project related

health, environmental and safety hazards at the site which must be properly managed if encountered during course of work:

- .1 There are no known existing hazardous or contaminated building materials on site.
- .2 Safety hazards due to existing site conditions and conduct of work are:
  - .1 overhead electrical wires
  - .2 tidal waters
  - .3 winter work, freezing conditions (ice, wind and water)
  - .4 unpredictable marine weather and wave conditions
  - .5 sharp or protruding objects
  - .6 heavy vehicle movement
  - .7 loading and unloading materials
  - .8 moving and working with large and heavy materials
  - .9 creosote timber and jagged wharf materials
  - .10 working over, near or on the water
  - .11 falling in the water
  - .12 uneven and jagged travelling and working surfaces
  - .13 slippery surface conditions
  - .14 slipping and falling
  - .15 falling materials
  - .16 unknown load carrying ability of structure and access to site
  - .17 Harbour users, activities and traffic
  - .18 pedestrians, vehicles and Harbour operation traffic
- .2 Above list shall not be construed as being complete and inclusive of potential health, and safety hazards encountered during work. Include above items into hazard assessment process.

#### 1.10 HEALTH AND SAFETY MEETINGS

- .1 Attend pre-construction health and safety meeting, conducted by Departmental Representative. Have following persons in attendance:
  - .1 Site Superintendent.
  - .2 Contractor's designated Health and Safety Site Supervisor.
  - .3 Departmental Representative will advise of date, time and location.
- .2 Conduct health and safety meetings and tool box briefings



on site. Hold on a regular and pre-scheduled basis during entire work in accordance with requirements and frequency as stipulated in provincial occupational health and safety regulations.

- .1 Keep workers informed of potential hazards and provide safe work practices and procedures to be followed.
- .2 Take written minutes and post on site.
- .3 Conduct formal meetings on a bi-weekly basis.

#### 1.11 HEALTH AND SAFETY PLAN

- .1 Develop written site-specific Project Health and Safety Plan, based on hazard assessments, prior to commencement of work.
  - .1 Submit copy to Departmental Representative within 7 calendar days of contract award.
  - .2 Submit updates as work progresses.
- .2 Health and Safety Plan shall contain three (3) parts with following information:
  - .1 Part 1 - Hazards: List of individual health risks and safety hazards identified by hazard assessment process.
  - .2 Part 2 - Safety Measures: engineering controls, personal protective equipment and safe work practices used to mitigate hazards and risks listed in Part 1 of Plan.
  - .3 Part 3a: Emergency Response: standard operating procedures, evacuation measures and emergency response in the occurrence of an accident, incident or emergency.
    - .1 Include response to all hazards listed in Part 1 of Plan.
    - .2 Evacuation measures.
    - .3 List names and telephone numbers of officials to contact including:
      - .1 General Contractor and all Subcontractors.
      - .2 Departmental Representatives and site facility management. Departmental Representative will provide list.
  - .4 Part 3b: Site Communications:
    - .1 Procedures used on site to share work related safety issues between workers, subcontractors, and General Contractor.
    - .2 List of critical tasks and work activities, to be communicated with the Facility Manager, which has risk of affecting tenant operations, or endangering health and safety of Facility

personnel and the general public. Develop list in consultation with the Departmental Representative.

- .3 Prepare Health and Safety Plan in a three column format, addressing the three parts specified above, as follows:
- | Column 1           | Column 2        | Column 3                               |
|--------------------|-----------------|--|
| Part 1             | Part 2          | Part 3a/3b                             |
| Identified Hazards | Safety Measures | Emergency Response Site Communications |
- .4 Develop Plan in collaboration with subcontractors. Address work activities of all trades. Revise and update Plan as Sub-Contractors arrive on site.
- .5 Implement and enforce compliance with requirements of Plan for full duration of work to final completion and demobilization from site.
- .6 As work progresses, review and update Plan. Address additional health risks and safety hazards identified by on-going hazard assessments.
- .7 Post copy of Plan, and updates, on site.
- .8 Submission of the Health and Safety Plan, and updates, to the Departmental Representative is for review and information purposes only. Departmental Representative's receipt review and any comments made of the Plan shall not be construed to imply approval in part or in whole of such Plan by Departmental Representative and shall not be interpreted as a warranty of being complete and accurate or as a confirmation that all health and safety requirements of the Work have been addressed and that it is legislative compliant. Furthermore, Departmental Representative's review of the Plan shall not relieve the Contractor of any of his legal obligations for Occupational Health and Safety provisions specified as part of the Work and those required by provincial legislation.

#### 1.12 SAFETY SUPERVISION AND INSPECTION

- .1 Designate one person to be present on site at all times, responsible for supervising health and safety of the work.
- .1 Person to be competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health and Safety Act.
- .2 Assign responsibility, obligation and authority to such designated person to stop work as deemed necessary for reasons of health and safety.
- .3 Conduct regularly scheduled informal safety inspections of work site on a minimum bi-weekly basis.
- .1 Note deficiencies and remedial action taken in a log

book or diary.

- .4 Conduct Formal Inspections on a minimum monthly basis.
  - .1 Use standardized safety checklist forms.
  - .2 Prepare written report of each inspection. Document deficiencies, remedial action needed and assign responsibility for rectification to appropriate subcontractor or worker.
  - .3 Distribute monthly reports to subcontractors for their pursuance.
  - .4 Follow-up and ensure appropriate action and corrective measures are taken.
  - .5 Keep inspection reports on site.

#### 1.13 TRAINING

- .1 Ensure that all workers and other persons granted access to site are competently trained and knowledgeable on:
  - .1 Safe use of tools and equipment.
  - .2 How to wear and use personal protective equipment (PPE).
  - .3 Safe work practices and procedures to be followed in carrying out work.
  - .4 Site conditions and minimum safety rules to be observed on site, as given at site orientation session.
- .2 Maintain evidence and records of worker training.

#### 1.14 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding the requirement to abide by federal and provincial health and safety regulations, the following safety rules shall be considered minimum requirements to be obeyed by all persons granted site access:
  - .1 Wear personal protective equipment (PPE) appropriate to function and task on site; the minimum requirements being hard hat, safety footwear, and eye protection.
  - .2 Immediately report unsafe activity or condition at site, near-miss accident, injury and damage.
  - .3 Maintain site in tidy condition.
  - .4 Obey warning signs and safety tags.
- .2 Brief workers on site safety rules and on disciplinary measures to be taken by Departmental Representative for violation or non compliance of such rules. Post rules on site.
- .3 The following actions or conduct by Contractor, workers and sub-contractors will be considered as non conformance with the health and safety requirements of the contract for which a Non-Compliance Notification will be issued to

the General Contractor by the Departmental Representative.

- .1 Failure to follow the minimum site safety rules specified above.
  - .2 Negligence resulting in serious injury or major property damage.
  - .3 Deliberate non-compliance with Federal and Provincial Acts and Regulations.
  - .4 Falsification of information in Workers Compensation Reports, safety reports and other health and safety related documents submitted to Departmental Representative or to Authority having jurisdiction.
  - .5 Possession of firearms on site.
  - .6 Possession of non-prescriptive illegal drugs or alcohol.
  - .7 Action, or lack thereof, resulting in the issuance of Warning, Fines or Stop Work Orders from a Provincial Authority having jurisdiction.
  - .8 Violation of other specified health and safety rules and requirements as determined by Departmental Representative.
- .4 See elsewhere in this section for details on Non-Compliance Notifications and resulting disciplinary measures.

#### 1.15 ACCIDENT REPORTING

- .1 Investigate and report the following incidents and accidents:
  - .1 Those as required by Provincial Occupational Safety and Health Act and Regulations.
  - .2 Injury requiring medical aid as defined in the Canadian Dictionary of Safety Terms - 1987, published by the Canadian Society of Safety Engineers (C.S.S.E.) as follows:
    - .1 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by province in which the injury was incurred.
  - .3 Property damage in excess of \$5,000.00.
  - .4 Interruption to Facility operations with potential loss to a Federal Department in excess of \$5,000.00.
  - .5 Those which require notification to Workers Compensation Board or other regulatory agencies as stipulated by applicable law or regulations.
- .2 Send written report to Departmental Representative for all above cases.

1.16 TOOLS AND EQUIPMENT SAFETY

- .1 Routinely check and maintain tools, equipment and machinery for safe operation.
- .2 Conduct checks as part of site safety inspections. When requested, submit proof that checks and maintenance have been carried out.
- .3 Tag and immediately remove from site items found faulty or defective.

1.17 HAZARDOUS PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site. Post on site. Submit copy to Departmental Representative.

1.18 BLASTING

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

1.19 POWDER ACTUATED DEVICES

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

1.20 POSTING OF DOCUMENTS

- .1 Post on site a copy of all health and safety documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction.

1.21 SITE RECORDS

- .1 Maintain on Site a copy of all health and safety related documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction.
- .2 Upon request, make available to Departmental Representative, or authorized Safety Representative, for review. Provide copy when directed by Departmental Representative.

1.22 NON COMPLIANCE AND DISCIPLINARY MEASURES

- .1 Immediately address and correct health and safety violations and non-compliance issues.
- .2 Negligence or failure to follow occupational health and safety provisions specified in the Contract Documents and of those of applicable laws and regulations could result in disciplinary measure taken by the Departmental Representative against the General Contractor.
- .3 Non-compliance Notifications and Disciplinary Measures on project are as follows:

- .1 A non-compliance notification is issued to the General Contractor, by the Departmental Representative, whenever there is a violation of non compliance of the project's health and safety requirements and of those of Provincial and Federal regulations by any worker, subcontractor or other person to whom the Contractor has granted access to the work site.
- .2 Non-Compliance notifications are progressive in nature resulting in disciplinary measures imposed depending on the frequency, nature and severity of the infraction.
- .3 Disciplinary measures could include:
  - .1 Removal of the offending person or party from site;
  - .2 Financial penalties in the form of progress payment reduction or holdback assessments made against the Contract and;
  - .3 Taking the Work out of Contractor's hands in accordance with the General Conditions.
- .4 Departmental Representative will make final decision as to what constitutes a violation and when to issue a Non-Compliance Notification.
- .5 Non-Compliance Notifications issued by Departmental Representative shall not be construed as to overrule or disregard warning, orders and fines levied against Contractor by a regulatory agency having jurisdiction.
- .6 Each non-compliance notification issued is given a numerical rating based on a three level numbering system. Each level is progressive in nature to reflect:
  - .1 The seriousness of the infraction as viewed by the Departmental Representative.
  - .2 The degree of disciplinary action which will be taken by the Departmental Representative.
- .7 Numerical ratings are as follows:
  - .1 Non-Compliance Notification - Level No. 1 Rating:
    - .1 Situation: Occurrence of a first time infraction by a person or party on site.
    - .2 Action: Verbal warning to general contractor, documented in departmental files and copy sent to the general contractor.
  - .2 Non-Compliance Notification - Level No. 2 Rating:
    - .1 Situation:
      - .1 The second occurrence of a previous infraction by the same person or party on site or;
      - .2 Accumulation of several level-1

- notifications for different infractions by the same person or party on site or;
- .3 Non-action on the part of the Contractor or subcontractor to rectify non-compliance infractions previously identified in one or several Level-1 notifications or;
- .4 Violation or non observance of a Federal or Provincial Safety law or Regulation by subcontractor or Contractor or;
- .5 Negligence by a person or party resulting in injury or major property damage.
- .2 Action: written notice to General Contractor complete with an order for immediate remedial action to be taken. Depending on the severity of the offense, the order may include request for the immediate removal of the offending person or party from site.
- .3 Non-Compliance Notification - Level No. 3 Rating:
  - .1 Situation:
    - .1 Continued and repeated non-compliance with health and safety requirements by the General Contractor or by subcontractor(s) or;
    - .2 The occurrence of a serious accident on site resulting in serious bodily or death.
  - .2 Action:
    - .1 Formal letter issued to General Contractor with an order to "Immediately Stop Work" until so notified to proceed.
    - .2 Review of all non compliance and/or accident occurrences in the project with possible investigation by the Department of PWGSC.
    - .3 Based on outcome of the review/ investigation, work could be suspended or taken out of the Contractor's hands in accordance with the General Conditions.
  - .3 The term "serious accident" used herein shall have the same meaning as defined in the Canadian Dictionary of Safety Terms - 1987 issue from the Canadian Society of Safety Engineers (C.S.S.E.)
- .8 Decision on which rating level to be placed on any given Non-Compliance Notification will be determined solely by Departmental Representative.
- .9 Be responsible to fully brief workers and subcontractors on the operation and importance of this system.

### 1.23 HEALTH AND SAFETY SITE COORDINATOR

- .1 Obtain and employ, as part of the Work, the services of a competent person to be designated as the Health and Safety Site Coordinator.
- .2 Health and Safety Site Coordinator shall have the following duties and responsibilities:
  - .1 Monitor activities of other General Contractors, and their subcontractors, who are performing work concurrently at the site or Facility to ensure a continued safe work environment on site at all times.
  - .2 Verify that activities of a particular contractor do not conflict with other contractors, posing a health risk or creating a safety hazard to workers, Facility employees and the general public at the site.
  - .3 Assist Departmental Representative and Contractors in the coordination of various on-going construction activities as they relate to maintaining health and safety on site. Follow Departmental Representative's directives in this regard.
  - .4 Communicate pertinent and critical information between various Contractors, Building Manager and Tenant Representatives to maintain a safe workplace.
  - .5 Report to Departmental Representative outstanding health and safety issues and concerns, not addressed by Contractor(s).
  - .6 Assist Departmental Representative and Contractors in the process of granting and controlling site access to only persons so authorized. Help Contractors in the provision of site safety orientation sessions.
  - .7 Report incidents and accidents to Departmental Representative. Assist with investigations of accidents and incidents when directed by Departmental Representative.
  - .8 When delegated by Departmental Representative, review and issue to requesting Contractors the following:
    - .1 Written authorization to proceed with Hot Work in accordance with requirements of section 01 35 24 and;
  - .9 Assist Contractors on site in the development and functioning of a joint site specific health and safety committee, with representation from all Contractors on site. Committee structure, function and activities to meet with Provincial Occupational Health & Safety legislated requirements.



- .1 Provide support to committee by preparing agenda items, notifying participants, taking and distributing minutes and carrying out other assigned secretarial duties.
- .10 Attend Federal Employee Workplace Occupational Safety & Health committee meetings, when directed by Departmental Representative, as the Representative of Contractors, and their workers, conducting work on site.
- .3 Health and Safety Site Coordinator knowledge and qualifications requirements:
  - .1 Have minimum 2 years site related working experience specific to activities associated with construction safety,
  - .2 Have working knowledge of occupational health and safety act and regulations,
  - .3 Successful completion of an oral interview and/or written exam given DFO to evaluate qualifications as deemed required by Departmental Representative.
  - .4 Be present on site at frequency intervals during execution of work, and report to Departmental Representative.
- .4 Within (7) days after contract award, submit to Departmental Representative for review, Site Coordinator's name, and information to substantiate qualifications specified in above clause.
- .5 The following are construction or maintenance Contracts that have or will be awarded during the period of this contract, by Departmental Representative or by Facility Manager which will have work (or parts thereof) carried out at the project site concurrently with Work of this Contract:

Project Name & Description	Start and Completion Dates or Months Duration
-------------------------------	--

- .1
- .2
- .3
- .6 Departmental Representative will provide full description of Contracts listed above, complete with drawings and specifications, and name of each General Contractor prior to commencement of Work or immediately upon award of future contracts.

**END OF SECTION**

## PART 1 General

### 1.1 RELATED WORK

- .1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

### 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.
- .2 Where fires or burning permitted, prevent staining or smoke damage to structures, materials or vegetation which is to be preserved. Restore, clean and return to new condition stained or damaged work. Be responsible for obtaining all necessary burning permits. Be responsible for any damage which may result from such fires.
- .3 Provide supervision, attendance and fire protection measures as directed.

### 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 21 - Construction/Demolition Waste Management and Disposal.
- .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 SITE AND PLANT PROTECTION

- .1 N/A.

#### 1.8 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, federal and environmental regulations.
- .5 Blasting is not permitted.
- .6 Do not refuel any type of equipment within 30 meters of a water body. Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.
- .7 Construct, install and maintain in-water silt containment devices (silt booms) around the construction site to prevent sediment laden water from seeping out beyond the silt boom. Provide suitable anchors, chairs, and other devices. Maintain and repair silt boom on a regular basis and in a like new condition.

#### 1.9 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. 24 hour environment emergencies reporting system 1-800-565-1633
  - .1 Notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

#### 1.10 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 neighbouring vegetation until nesting is completed.
  - .2 Minimize work immediately adjacent to such areas until nesting is completed.
  - .3 Protect these areas by following recommendations of Canadian Wildlife Service.

**END OF SECTION**

## PART 1 General

### 1.1 WATER QUALITY MITIGATION

- .1 Visual monitoring of the turbidity near the work site must be undertaken. If any changes occur in the turbidity of the water produced by this activity, the work must be immediately stopped and must notify the Departmental Representative.
- .2 The construction material used must be clean and non-toxic (free of fuel, oil, grease, and/or any contaminants).
- .3 Any debris entering the marine environment will be immediately retrieved when it is safe to do so.
- .4 All work equipment shall be free from loose petroleum fluid or lubricants harmful to the marine environment.
- .5 Any equipment that has been in the marine environment will be cleaned of any sediments, plants or animals and pressure washed with freshwater and/or sprayed with undiluted vinegar prior to being mobilized, and prior to leaving, the project site.
- .6 To minimize and control the release or resuspension of sediments or contaminants resulting from in-water activities the following measures shall be implemented:
  - .1 Work is scheduled so as to avoid periods of heavy precipitation.
  - .2 Any disturbed areas along the shoreline are to be stabilized to prevent erosion.
- .7 Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refuelling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633).
- .8 Machinery and equipment fuel level must be inspected on a daily basis to ensure there is no leakage to the surrounding environment.
- .9 Storage of fuels and petroleum products shall comply with safe operating procedures, including facilities in case of a spill.
- .10 Careful maintenance and monitoring of all equipment must be carried out to minimize the risk of spills or leaks of petroleum based products.
- .11 Do not use creosote, petroleum and pentachlorophenol timbers. Timber treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA

or AWP approved. Freshly treated wood should be seasoned for at least 30 days before they are to be in contact with water. All newly treated wood must be treated in accordance with the methods outlined in the most recent Canadian version of the document entitled 'Best Management Practices for the Use of Treated Wood in Aquatic Environments'.

## 1.2 WASTE MANAGEMENT MITIGATION

- .1 Any construction or demolition debris will be disposed of in a Provincially approved manner.

## 1.3 NOISE AND DISTURBANCE MITIGATION

- .1 All machinery shall be well muffled.
- .2 The contractor must supply adequate signage and safety measures during transportation of materials and equipment to the harbor.

## 1.4 OTHER MITIGATION

- .1 During the proposed project activities, if hydrocarbon fumes are detected as a result of soil disturbance in the vicinity of Structures being repaired, then PWGSC-ES should be contacted for further advice.
- .2 If any material is excavated (i.e. in the vicinity of repaired structures) then the material shall be tested before it leaves DFO-SCH property.
- .3 Workers who may come in contact with hazardous materials or soil must be provided with and use appropriate personal protective equipment.
- .4 Site access must be restricted to authorized workers only.
- .5 Concentrations of seabirds, waterfowl, or shorebirds shall not be approached when anchoring equipment, accessing wharves, or ferrying supplies.
- .6 Contractors shall ensure that food scraps and garbage are not left at the work site.
- .7 All work to be conducted in accordance with the Migratory Birds Convention Act, which outlines that no migratory bird nests or eggs will be moved or obstructed during the construction or operational phase of the project.
- .8 Project vehicles will keep to Harbour Authority/ Departmental Representative designated transportation routes.
- .9 No staging of vehicles or equipment/material storage will take place on any beach or dune.
- .10 Employees will be trained in health and safety protocols (e.g. safe work practices, emergency response).
- .11 Any and all federal, provincial, or municipal legislation

and regulations and their authorities or their officers must be strictly followed. Any discrepancies must be successfully resolved before the pertinent work may begin.

- .12 Construction will be carried out during daylight hours unless special arrangements are made with the Harbour Authority/Departmental Representative to facilitate work at night.
- .13 Contractor to co-ordinate construction activities with Harbour Authority/Departmental Representative to mitigate any impact to function of Harbour.

**END OF SECTION**

PART 1 General

1.1 TESTING REQUIREMENTS SPECIFIED ELSEWHERE

- .1 Additional and particular requirements for inspection and testing to be carried out and paid for by the Departmental Representative are specified under various technical Sections of the Specification.

1.2 APPOINTMENT AND PAYMENT

- .1 The Departmental Representative will arrange and pay for the services of an independent testing firm to carry out all inspection and testing in accordance with the requirements of Paragraph 1.4 below.

1.3 CONTRACTOR'S RELATED RESPONSIBILITIES

- .1 Contractor to furnish labour and facilities to:
  - .1 Provide access to work to be inspected and tested.
  - .2 Facilitate inspections and tests.
  - .3 Make good work disturbed by inspection and test.
- .2 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .3 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and accepted by Departmental Representative.
- .4 Provide Departmental Representative with test reports carried out by the Contractor, submitted immediately following the testing operations.

1.4 MISCELLANEOUS INSPECTION & TESTING REQUIREMENTS

- .1 Sandstone Sub-base Material:
  - .1 Testing of material at source, including collection of sample materials by testing firm, to verify compliance with material specifications.
  - .2 Follow up testing of material delivered to site.
  - .3 Monitoring placement and verifying compaction.
- .2 Granular Base:
  - .1 Testing of material at source, including collection of sample materials by testing firm, to verify compliance with material specifications.
  - .2 Follow up testing of material delivered to site.
  - .3 Monitoring placement and verifying compaction.
- .3 Concrete Testing:
  - .1 Review of concrete mix design submitted by Contractor.
  - .2 Monitoring placement of concrete including but not limited to slump, air content, water content and as



- required in CAN-A23.2.
- .3 Include for representative from testing firm to be on-site full-time during placement of concrete panels and blocks.
- .4 Testing of concrete for compliance with material specifications from samples taken by testing firm.
- .4 Asphalt pavement testing for compliance with material specifications.
- .5 Other tests as required.
- .6 Note: Specification Sections referred to above designate Section under which the requirements are specified. The work, however, may occur under various Sections of the Specifications.

## PART 2 Products

### 2.1 NOT USED

- .1 Not used.

## PART 3 Execution

### 3.1 NOT USED

- .1 Not used.

**END OF SECTION**

PART 1 General

1.1 RELATED WORK

- .1 Section 01 35 14 - Special Procedures for Traffic Control.
- .2 Section 01 35 29.06 - Health and Safety Requirements.

1.2 DESCRIPTION OF WORK

- .1 The work of this Section comprises the supply, installation, maintenance and removal of temporary barricades to isolate the work sites, for the work of this Contract, from both public streets and private property.

1.3 MATERIALS

- .1 Barricades:
  - .1 All pedestrian or vehicular traffic control devices required by Municipal Regulations, as interpreted by the Authority having jurisdiction, to safely direct and/or control all traffic in the areas of construction.
  - .2 All pedestrian or vehicular traffic control devices as required to safely direct and/or control all traffic in the areas of construction on the wharf and as directed by the Departmental Representative.

1.4 INSTALLATION

- .1 Erect temporary barricades as directed and where required before any construction work takes place.
- .2 Barricades to remain in place and be maintained by Contractor during entire construction period, except as noted in Par. 1.5 below.

1.5 REMOVAL

- .1 Barricades may be removed in areas of work where all site work restitution is completed and the area has been accepted by the Departmental Representative.

**END OF SECTION**

PART 1 General

1.1 GENERAL

- .1 Conduct cleaning, dust control and dirt disposal operations during construction to comply with local ordinances and anti-pollution laws.
- .2 Store volatile wastes in covered metal containers, and remove from premises at end of each working day.
- .3 Prevent accumulation of wastes, which create hazardous conditions.
- .4 Provide adequate ventilation during use of volatile or noxious substances.

1.2 MATERIALS

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 CLEANING DURING CONSTRUCTION

- .1 Maintain the site free from accumulations of waste materials and debris on a daily basis.
- .2 Provide on-site metal containers for collection of waste materials, and debris.
- .3 Remove waste materials and rubbish from site on a daily basis.
- .4 Wash down new paved surfaces as required or directed by Departmental Representative to remove mud, dirt and other debris and also existing paved surfaces where mud and dirt has been tracked on to existing roads from the construction area.
- .5 Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.4 FINAL CLEANING

- .1 Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials from exposed finished surfaces.
- .2 Broom clean and wash all paved surfaces, rake clean other areas.
- .3 Clean catch basin sediment traps affected by construction activity.

**END OF SECTION**

## PART 1 General

### 1.1 DEFINITIONS

- .1 Waste Reduction Workplan (WRW): Written report which addresses opportunities for reduction, reuse, or recycling of materials.
- .2 Materials Source Separation Program (MSSP): Consists of a series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .3 Waste Management Coordinator (WMC): Designate individual who is in attendance on-site, full-time. Designate, or have designated, individuals from each Subcontractor to be responsible for waste management related to their trade and for coordinating activities with WMC.
- .4 Separate Condition: Refers to waste sorted into individual types.

### 1.2 DOCUMENTS

- .1 Maintain at job site, one copy of following documents:
  - .1 Waste Reduction Workplan.
  - .2 Material Source Separation Plan.

### 1.3 USE OF WORK SITES AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises.
- .2 Maintain security measures established by existing facility provide temporary security measures approved by Departmental Representative.

### 1.4 SUBMITTAL

- .1 Submit requested submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prepare and submit the following submittals prior to project start-up:
  - .1 Submit 2 copies of completed Waste Reduction Workplan (WRW).
  - .2 Submit 2 copies of Materials Source Separation Program description.

### 1.5 WASTE REDUCTION WORKPLAN

- .1 Prepare WRW prior to project start-up.
- .2 Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle.
- .3 Describes management of waste.
- .4 Identify opportunities for reduction, reuse, and/or

recycling (3Rs) of materials. Based on information acquired from WA.

- .5 Post workplan where workers at site are able to review its content.

#### 1.6 MATERIALS SOURCE SEPARATION PROGRAM

- .1 Prepare MSSP and have ready for use prior to start-up.
- .2 Implement MSSP for waste generated on project in compliance with approved methods and as approved by Departmental Representative.
- .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and/or recyclable materials.
- .4 Provide containers to deposit reusable and/or recyclable materials.
- .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .6 Locate separated materials in areas which minimize material damage.
- .7 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition. Transport to approved and authorized recycling facility to users of material for recycling.
- .8 Collect, handle, store on-site, and transport off-site, salvaged materials in combined condition. Ship materials to site operating under Certificate of Approval premises of Departmental Representative. Materials must be immediately separated into required categories for reuse of recycling.

#### 1.7 WASTE PROCESSING SITES

- .1 Province of Prince Edward Island
  - .1 Name: Island Waste Management Corporation
  - .2 Tel: 1-888-280-8111 / Fax: 1-902-882-0520
- .2 Burning of waste is not permitted.

#### 1.8 DISPOSAL OF WASTES

- .1 Burying of rubbish and waste materials is prohibited unless approved by Departmental Representative
- .2 Disposal of waste volatile materials mineral spirits oil paint thinner into waterways, storm, or sanitary sewers is prohibited.

#### 1.9 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal do become Contractor's property.

- .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.
- .5 Protect structural components not removed for demolition from movement or damage.
- .6 Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .7 Protect surface drainage, mechanical and electrical from damage and blockage.

#### 1.10 SCHEDULING

- .1 Coordinate work with other activities at site to ensure timely and orderly progress of the work.

#### 1.11 APPLICATION

- .1 Do work in compliance with WRW.
- .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

#### 1.12 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.
- .3 Source separate materials to be reused/recycled into specified sort areas.

#### 1.13 DIVERSION OF MATERIALS

- .1 From following list, separate materials from general waste stream 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 recyclable materials is permitted is not permitted.
- .3 Demolition Waste

Material Type	Recommended Diversion%	Actual Diversion%
-----		
Metals	100	
Rubble	100	
Wood (treated)	100	
Other		

- .4 Construction Waste
- |          |             |        |
|----------|-------------|--------|
| Material | Recommended | Actual |
|----------|-------------|--------|

Type	Diversion%	Diversion%
-----		
Cardboard	100	
Plastic Packaging	100	
Rubble	100	
Steel	100	
Wood (uncontaminated)	100	
Other		

#### 1.14 WASTE REDUCTION WORKPLAN

.1	(1)	(2)	(3)	(4)	(5)	(6)
	Material Responsible	Total	Actual	Actual	Material	
	Category	Persons	Quant.	Reused	Recycled	Destination
			of	Amount	Amount	
			Waste	(Units)	(Unit)	
			(Unit)	Projected	Projected	
	Wood and					
	Plastic					
	Material					
	Descrip.					
	Chutes					
	Warped					
	Pallet					
	Forms					
	Plastic					
	Packaging					
	Cardboard					
	Packaging					
	Other					
	Doors and					
	Windows					
	Material					
	Descrip.					
	Painted					
	Frames					
	Glass					
	Wood					
	Metal					
	Other					

#### 1.15 CANADIAN GOVERNMENT DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT

- .1 Province: Prince Edward Island Department of Agriculture and Fisheries, 11 Kent Street, PO Box 2000, Charlottetown, PEI C1A 7N8 General Inquiries: (902) 368-4800 Fax: (902) 368-4857.

**END OF SECTION**

PART 1 General

1.1 CONTENT

- .1 Administrative procedures preceding inspection and acceptance of Work by Departmental Representative.

1.2 RELATED SECTIONS

- .1 Section 01 78 00 - Closeout Submittals.

1.3 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.
  - .1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.
- .2 Departmental Representative's Inspection: Accompany Departmental Representative during all substantial and final inspections of the Work.
  - .1 Address defects, faults and outstanding items of work identified by such inspections.
  - .2 Advise Departmental Representative when all deficiencies identified have been rectified.
- .3 Note that Departmental Representative will not issue a Certificate of Substantial Performance of the work until such time that Contractor performs following work and turns over the specified documents:
  - .1 Project record as-built documents;
  - .2 Reports resulting from designated tests;
  - .3 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

**END OF SECTION**



PART 1 General

1.1 CONTENT

- .1 Project Record Documents.

1.2 PROJECT RECORD DOCUMENTS

- .1 Departmental Representative will provide 2 white print sets of contract drawings and 2 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 upon request.
- .4 As-Built Drawings:
  - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of work, neatly transfer notations to second set (also by use of red ink).
  - .2 Submit both sets to Departmental Representative prior to application for Certificate of Substantial Performance.
  - .3 Stamp all drawings with "As-Built Drawings". Label and place Contractor's signature and date.
  - .4 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
  - .5 Record following information:
    - .1 Horizontal and vertical location of various elements in relation to chart Datum;
    - .2 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure;
    - .3 Field changes of dimension and detail;
    - .4 Location of all capped or terminated services and utilities.
    - .5 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings;
    - .6 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 Changes made by Addenda and Change Orders.
  - .2 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. 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 Provide a complete set of all shop drawings reviewed for project to incorporate into each copy of the Operations & Maintenance manuals.
- .2 Submit full sets at same time and as part of the contents of the Operation and Maintenance manuals specified.

**END OF SECTION**