

1.1 Documents

Required

- .1 Maintain at job site, one copy each of the following:
  - .1 Contract drawings;
  - .2 Specifications;
  - .3 Addenda;
  - .4 Reviewed shop drawings/submissions;
  - .5 Change Orders;
  - .6 Other modifications to Contract;
  - .7 Field test reports;
  - .8 Copy of approved work schedule;
  - .9 Manufacturer's installation and application instructions.

1.2 Site

Conditions

- .1 Records of existing geotechnical reports maybe available for inspection at the offices of Public Works and Government Services Canada, 1713 Bedford Row, Halifax, NS. This material is not necessarily up-to-date and is for information purposes only. It should be complemented with site visits and consultation with appropriate expertise.

1.3 Work Schedule  
and Completion  
Dates

- .1 Prepare and submit to the Departmental Representative with five (5) days of notification of Contract award, one (1) copy of the construction schedule, in the form of a bar chart, 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 Completion; and intended man hours of labour and equipment for each major items of work. If the schedule as submitted is unacceptable in any way, submit without delay a revised schedule satisfactory to the Departmental Representative.
- .2 The Departmental Representative is to notify the Contractor in writing of acceptance of the Construction Schedule. Comply with the Dates of 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.

.3 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.

.4 All Work of this Contract must be installed and operational by **June 30, 2018**.

1.4 Measurement Responsibilities

.1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.

1.5 Contractor's Use of Site

.1 Co-operate with users of existing facilities and as per direction of the Departmental Representative.

.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 interfere with operations of Departmental Representative 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 must be repaired at Contractor's expense.

.8 Provide temporary barriers and warning signs in location where work is adjacent to areas used by public.

1.6 Codes and Standards

- .1 Perform work in accordance with National Building Code of Canada (NBC) and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements will apply.
- .2 Meet or exceed requirements of specified standards, codes and referenced documents. When a standard or code is outdated, the latest edition will supersede the referenced date.
- .3 Observe and enforce construction safety measures by Canadian Construction Safety Code and Construction Safety Code of Nova Scotia. In the event of conflict between any provisions of above authorities, the most stringent provision will apply.

1.7 Project Meeting

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

1.8 Setting Out of 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 contractor will not be allowed any extra compensation or time for completion because of this suspension of work.
- .3 Reference elevations for the various 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. Establish all grades, lines, levels required to facilitate the work.

1.9 Contract Documents

- .1 Contract Drawings:
  - .1 The drawings listed in these "Plans and Specifications" marked "A" 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.

1.10 Permits and Regulations

- .1 Apply for, obtain and pay for all necessary permits, approvals and other authorizations required for the work.
- .2 Comply with all by-laws, ordinances and regulations of all authorities having jurisdiction.
- .3 Pay for any Municipal permits as required.

1.11 Cutting, Fitting & Patching

- .1 Execute cutting (including excavation), fitting and patching required to make work fit properly.
- .2 Make cuts with clean, true, smooth edges. Make patched inconspicuous in final assembly.
- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.
- .4 Obtain Departmental Representative's approval before cutting, boring or sleeving, or excavating adjacent to load-bearing members.

1.12 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.

1.13 Payment

- .1 No separate payment will be made for work specified under General Conditions, Supplementary Conditions or any sections of Specification under Division 01. The cost of this work is to be considered as overhead and to be included in the unit prices of the Contract.
- .2 Dimensional changes are 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.

- 1.14 Maintenance of Shipping .1 Liaise with the local port officials to coordinate activities such that any interference is minimized.
- 1.15 Cooperation and Assistance to Departmental Representative .1 Co-operate with Departmental Representative on inspection of work.  
.2 Provide assistance when requested.  
.3 Provide small motor boat with operator for Departmental Representative's use when requested.
- 1.16 Datum .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.
- 1.17 Contractor's Representative .1 Continuously maintain on the site an authorized representative to whom communication may be addressed and who will be competent to speak for the Contractor in discussing work methods.
- 1.18 Workers' Compensation .1 Contractor and all sub-contractors must be registered under the Workers Compensation Act and provide evidence of good standing.  
.2 At completion of Contract and before final payment is made, the Contractor will present to the Departmental Representative a Letter of Certification from the Workers Compensation Board, showing that all required assessments are paid in connection with all trades.
- 1.19 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.

- 1.20 Protection and Repair .1 Repair any damage resulting from operations under this contract.
- 1.21 Location of Equipment Fixtures .1 Location of equipment, fixtures or any and appurtenances indicated are to be considered approximate.
- 1.22 Inspection and Testing .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms with contracts.
- 1.23 Existing Soils Conditions .1 Any information pertaining to soils and all boreholes logs are furnished by the Departmental Representative as a matter of general information only and borehole descriptions or logs are not to be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves.

**END OF SECTION**

PROJECT PARTICULARS1.1 Description  
of Work

- .1 The Work includes reconstruction of the west breakwater structure at New Harbour, Guysborough County, NS. Work specifically includes, but is not limited to:
- .1 Dredging of harbour as per Project Drawings.
  - .2 Demolition and removal of existing failing ballasted timber crib block and span wharf and deck.
  - .3 Construction of new rubble-mound shore protection and retaining walls.
  - .4 Construction of new timber crib inner wharf complete with crushed rock mattress, rock ballast as noted, reinforced concrete deck.
  - .5 Construction of new steel pile outer wharf complete with concrete deck and closed faced pile sheathing.

PRODUCT MEASUREMENT1.2 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.

1.3 Measurement  
for Payment

- .1 **Lump Sum Items: the following items (1 - 3) are to measured separately for costing purposes, then combined and submitted in as one item under the Lump Sum items in the tender documents:**
- .1 Site Orientation: Project Management, construction site control and coordination, plan and schedule submissions, assistance to the Departmental Representative, mobilization and demobilization, Departmental Representative's and Contractor's site offices as required, permitting and/or permissions in accordance with requirements of Authorities having jurisdiction, regulatory requirements, coordination of work by external utilities (ex - NS Power), safety, environmental protection, pollution and sedimentation control, water quality monitoring Quality Control, Independent laboratory testing and reporting, Preconstruction Condition Survey and Post-Construction Condition Survey,

reports as specified, inspections as specified, selective site demolitions and removals not covered in item 1.2 herein, security provisions and allowances, traffic control, temporary works, temporary roads and access as required, snow clearing, any site modifications including temporary power/utilities, filling, grading, site improvements and reinstatement required to perform the work, construction hoarding, shoring, dewatering, disposal of surplus materials, disposal of wastes, marker tape, marker stakes, abandonment of any affected underground utilities and works, reinstatement of disturbed surfaces with matching materials and thicknesses, interim record and topographic survey data submissions, field records and topographic survey, record drawings, warranties, cleaning, and all incidentals.

#### **Division 26**

- .2 Electrical Work: this item includes all Work as shown on Electrical Drawings E01 through E8 and as specified in Division 26 herein.

#### **Division 31**

- .3 Demolition of Existing Wharf: this item includes all Work required to demolish and dispose of the existing wharf. Dispose of timber, concrete, steel and any other non-granular material at an approved construction and demolition waste disposal site. Salvage all ballast material that meets the specifications for ballast material and stockpile for incorporation into the Work. Dispose of ballast stone not meeting specification, excavated granular material and dredging spoils at the designated on site disposal area indicated on the Project Drawings.
- .2 **Unit Price Items**: the following outlines the unit of measurement of the unit price items as indicated in the tender documents:

**Division 03**

- .1 Reinforced Concrete Retaining Walls: supply and construction of the concrete retaining wall, including footing, will be paid for by the cubic metre place measurement (CMPM). Price to include supplying and installing concrete, formwork, reinforcement, concrete quality testing, and all supplementary materials considered incidental to the work.
- .2 Reinforced Concrete Pile Caps: supply and construction of the reinforced concrete pile caps will be paid for by the cubic metre place measurement (CMPM). Price to include all costs associated with supplying and installing the pile caps complete with concrete, formwork, reinforcement, and all supplementary materials considered incidental to the work.
- .3 Concrete Deck - At Cribwork Structure: supply and construction of the cast-in-place reinforced concrete deck installed on the timber cribwork structure, including concrete curb, will be measured by the square metre based on the dimensions indicated on the drawings. Concrete placed beyond the dimension shown will not be measured for payment. Concrete, formwork, reinforcement, concrete quality testing, inserts, and all supplementary materials will be considered incidental to the work.
- .4 Concrete Deck - At Pilework Structure: supply and construction of the cast-in-place reinforced concrete deck installed at the pilework structure, including concrete curb, will be measured by the square metre based on the dimensions indicated on the drawings. Concrete placed beyond the dimension shown will not be measured for payment. Concrete, formwork, reinforcement, concrete quality testing, inserts, and all supplementary materials will be considered incidental to the work.
- .5 Concrete Pile Jackets: supply and construction of concrete pile jackets will be paid for on a per each basis. Price to

include all costs associated with supplying and installing the pile jackets complete with concrete, formwork, reinforcement, concrete quality testing, and all supplementary materials considered incidental to the work.

- .6 Reinforced Concrete Pile Infill: supply and construction of reinforced concrete pile infill will be paid for by the cubic metre place measurement (CMPM). This price includes costs associated with supplying and installing the concrete pile infill complete with concrete, formwork, reinforcement, concrete quality testing, and all supplementary materials considered incidental to the work.

#### DIVISION 06

- .7 Dimension Timber: supply and installation will be measured for payment per cubic metre place measurement (CMPM). This will include all dimension timber, preservative treatment, bolts, hardware and all other supplementary materials considered incidental to work.

#### Division 31:

- .8 Crushed Rock Mattress: supply and placement of the crushed rock mattress will be paid for by the cubic metre place measurement (CMPM) as confirmed by survey cross sections before and after placement. Any material placed beyond the lines and grade shown on the Project Drawings will not be measured for payment. Survey costs are considered incidental to work.
- .9 Timber Crib: supply and construction of the timber crib will be measured for payment by the cubic metre place measurement (CMPM) and includes all timber components (longitudinals, cross ties, binder posts, ballast floor, fillers, splice blocks, fendering, etc.), fasteners, hardware, ballast (salvaged to the greatest extent possible and supplemented with new), filter fabric, levelling course gravels and all associated appurtenances to underside of

concrete deck. Volume of cribwork will be determined as follows:

.1 Height: average of measurements taken at each vertical from the bottom of the lowest timber to the top of the uppermost timber.

.2 Width: average of two measurements taken between the outside faces of exterior longitudinal timbers, each width measured on the top ties of each row of cross ties.

.3 Length: measured horizontally along the centreline of crib between the outside faces of exterior cross ties.

.10 Supply of Pipe Piles: supply of steel pipe piles will be paid by the linear metre. This price includes the piles, transportation and all supplementary materials will be considered incidental to the work.

.11 Installation of Bearing Piles: will be paid by per each basis. This price includes the installation of bearing piles complete with all accessories and hardware and all supplementary materials. Testing will be considered incidental to work.

.12 Installation of Batter Piles: will be paid by per each basis. This price includes the installation of batter piles complete with all accessories and hardware and all supplementary materials. Testing will be considered incidental to work.

.13 Supply of Timber Fender and Sheathing Piles: will be paid by the linear metre. This price includes the piles, transportation, and all supplementary materials will be considered incidental to the work.

.14 Installation of Timber Fender and Sheathing Piles: will be measured for payment by per each basis. All hardware, fasteners, bolts, pile shoes, and all other materials will be considered incidental to work.

.15 Rock Socket: will be paid per unit supplied and installed. Removal of material from interior of pipe piles, drilling of

sockets, socket clean out, sounding, re-driving, pile shoes, sounder and dive inspection, grout, concrete, reinforcement and testing will all be considered incidental to the work.

- .16 Type 1 Granular (Approach Service Area): supply, installation and compaction of Type 1 Granular will be paid for by the square metre. Price to include entire cost of supply and placement of material and blending into existing service area as specified.
- .17 Type 2 Granular (Approach Service Area): supply, installation and compaction of Type 2 granular will be paid for by the square metre. Price to include entire cost of supply and placement of material and blending into existing service area as specified.
- .18 Excavation and Backfill (Approach Service Area): this item will be measured for payment by the square metre. Price to include all excavation and backfill (supply, placement and compaction) of material to complete work as shown, and to blend new work into existing service area as specified.

**Division 35:**

- .19 Dredging Class 'A': This item will be measured for payment by the cubic metre place measurement (C.M.P.M.) of Class "B" material removed. This unit price will include the provision of a boat, motor and survey equipment as specified. The unit price will also include the cost of disposal at the designated on site disposal area as shown on the Project Drawings as well as the supply, installation and removal of access roads or other means of accessing dredge areas.
- .20 Dredging Class 'B': This item will be measured for payment by the cubic metre place measurement (C.M.P.M.) of Class "B" material removed. This unit price will include the provision of a boat, motor and

survey equipment as specified. The unit price will also include the cost of disposal at the designated on site disposal area as shown on the Project Drawings as well as the supply, installation and removal of access roads or other means of accessing dredge areas.

- .21 Filter Stone: supply and installation of filter stone is to be paid for by the cubic metre place measurement (CMPM). Price to include entire cost of supply and placing the material in the Work.
- .22 Armourstone: supply and installation of armourstone is to be paid for by the cubic metre place measurement (CMPM). Price to include entire cost of supply and placing the material in the Work.
- .23 Scour Protection: supply and installation of scour protection rock will be paid for by the cubic metre place measurement (CMPM). Price to include entire cost of supply and placing the material in the Work.
- .24 Mooring Cleats and Rings: will be measured for payment per each. Cleats, mooring rings, hardware, and all other supplementary materials will be considered incidental to work.
- .25 Ladder: supply and installation of ladders will be paid by per each basis. This price includes the galvanized steel components, all associated dimension timber, and required hardware as shown on the Project Drawings.

**END OF SECTION**

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| 1 | <u>General</u>                     | .1 | Submit to Departmental Representative, for review, shop drawings, product data, samples and other information specified.  |
|   |                                    | .2 | Until submission is reviewed, work involving relevant product may not proceed.  |
|   |                                    | .3 | Provide all submittals electronically, in pdf file format.  |
| 2 | <u>Shop Drawings</u>               | .1 | Drawings to be originals prepared by contractor, subcontractor, supplier or distributor, which illustrate appropriate portion of work, showing fabrication, layout, setting or erection details as specified in appropriate sections.         |
|   |                                    | .2 | Identify details by reference to sheet and detail numbers shown on Contract Drawings.   |
| 3 | <u>Product Data</u>                | .1 | Certain specification sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams schedules, performance chart, illustrations and other standard descriptive data will be accepted in lieu of shop drawings. |
| 4 | <u>Samples</u>                     | .1 | Submit samples in sizes and quantities specified.   |
|   |                                    | .2 | Construct field samples and mock-ups at locations acceptable to Departmental Representative.  |
|   |                                    | .3 | Accepted samples will become standards of workmanship and material against which, installed work will be checked on project.  |
| 5 | <u>Miscellaneous Data</u>          | .1 | Provide certificates, methodologies, design and test results as required.   |
| 6 | <u>Coordination of Submissions</u> | .1 | Review shop drawings, product data, samples and miscellaneous data prior to submissions.  |
|   |                                    | .2 | Verify: <ul style="list-style-type: none"><li>.1 Field Measurements.</li><li>.2 Field Construction Criteria.</li><li>.3 Catalogue numbers and similar data.</li></ul>   |
|   |                                    | .3 | Coordinate each submission with requirements of work and contract documents. Individual   |
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submissions will not be reviewed until all related information is available.

- .4 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submissions.
- .5 Contractor's responsibility for deviations in submission from requirements in Contract documents is not relieved by Departmental Representative's review of submission, unless Departmental Representative gives written acceptance of specified deviations.
- .6 Notify Departmental Representative, in writing at time of submission, of deviations from requirements of contract documents stating reasons for deviations.
- .7 After Departmental Representative's review, distribute copies.

7 Submission Requirements

- .1 Schedule submissions at least 14 days before dates reviewed submissions will be needed.
- .2 Submit all shop drawings and product data electronically in pdf file format. Files must be legible and below 10Mb in size or broken into multiple pdf files.
- .3 Accompany submissions with transmittal letter, in duplicate, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample submitted.
  - .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 Separate details when pertinent.
  - .4 Identification of product or material.

- .5 Relation to adjacent structure or materials.
- .6 Field dimensions, clearly identified as such.
- .7 Specification Section Number.
- .8 Applicable standards such as CSA or CGSB numbers.
- .9 Contractor's stamp, initialed or signed, certifying review of submission, verification of field measurements and compliance with contract documents.

8 Shop Drawings Review

- .1 The review of shop drawings by Public Works and Government Services Canada or its authorized Departmental Representative, is for the sole purpose of ascertaining conformance with the 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 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.

9 Other Reviews

- .1 As for shop drawings above, other reviews are for the sole purpose of ascertaining the general concept.

**END OF SECTION**

PART 1 - GENERAL

- 1.1 Section Includes
- .1 Fire Safety Requirements
  - .2 Hot Work Permit
  - .3 Existing Fire Protection and Alarm Systems
- 1.2 Related Work
- .1 Section 01 35 28: Health and Safety
  - .2 Section 01 35 25: Special Procedures on Lockout Requirements
- 1.3 References
- .1 FCC No. 301-June 1982 Standard for Construction Operations.
  - .2 FCC No. 302-June 1982 Standard for Welding and Cutting.
- 1.4 Definitions
- .1 Hot Work defined as:
    - .1 Welding work
    - .2 Cutting of materials by use of torch or other open flame devices
    - .3 Grinding with equipment which produces sparks.
- 1.5 Submittals
- .1 Submit copy of Hot Work Procedures, to Departmental Representative for review, within 14 calendar days after contract award.
  - .2 Include sample of Hot Work Permit.
  - .3 Submit above documents in accordance with the submittal general requirements specified in Section 01 33 00.
- 1.6 Fire Safety & Hot Work Requirement
- .1 Implement and follow fire safety measures during Work. Comply with following:
    - .1 National Fire Code, 2005
    - .2 Fire Protection Standards FCC 301, Standard for Construction Operations and FCC 302, Standard for Welding and Cutting as issued by the Fire Protection Services of Human Resources Development Canada
    - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 28.

- .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.
- .3 FCC standards, noted above, may be viewed at the Regional Fire Protection Services office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th floor, Dartmouth, NS; Tel: (902) -426-6053.
- .4 Hot Work Requirements:
- .1 Obtain Departmental Representative's written Authorization to Proceed for the performance of Hot Work on site as may be required in the course of Work.
  - .2 To obtain authorization submit to Departmental Representative for review:
    - .1 Contractor's Hot Work Procedures to be followed on site in accordance with clause 1.8 below.
    - .2 Type of work and frequency of situations which will require Hot Work.
    - .3 Upon confirmation that effective fire safety measures will be implemented for hot work, Departmental Representative will grant Authorization to Proceed.
    - .4 In most cases, Departmental Representative will issue only one written authorization covering the entire construction project and duration of work. However in some cases, depending on the nature or phasing of work, the quantity of various trades needing to perform welding and cutting on site, or other deemed situation, Departmental Representative might designate certain portions of the work as separate entities, each entity requiring individual written authorization to proceed. Follow Departmental Representative's directives in this regard.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written Authorization to Proceed.
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- 1.7 Conformance
- .1 Ensure that Hot Work Procedures, as established for project and agreed upon with Departmental Representative, are stringently followed. Enforce use and compliance by all workers.
  - .2 Brief all workers and subcontractors on Hot Work Procedures and Permit system.
- 1.8 Hot Work Procedures
- .1 Develop Hot Work Procedures, to be followed when Hot Work is required as part of the work.
  - .2 Describe safe work practices and sequence of activities to be followed on site by Contractor and workers to minimize the potential occurrence of a fire resulting from Hot Work.
  - .3 Hot Work Procedures to include:
    - .1 Requirement to perform hazard assessment of the site or immediate work area, based on type and extent of Hot Work required, in accordance with Hazard Assessment and Safety Plan requirements of Section 01 35 28. Carry out hazard assessment for each hot work event.
    - .2 Use of a Hot Work Permit system, issued by an authorized person in Contractor's employ, for each event when Hot Work is required, granting permission to carry out hot work.
    - .3 Provision of a designated person (s) to carryout a Fire Safety Watch for a minimum of 30 minutes immediately upon completion of the hot work.
  - .4 Procedures to comply with fire safety codes and standards specified herein and specified in Section 01 35 28.
  - .5 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.
  - .6 Include within procedures the step by step process on how to prepare and issue the Hot Work Permit.
  - .7 Hot Work Procedures to be in typewritten format, listing step by step procedures and worker
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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.

1.9 Hot Work  
Permit

- .1 Develop "Hot Work Permit" form in typewritten format.
- .2 Hot Work Permit form to include, as a minimum, the following data:
  - .1 Project name and project number.
  - .2 Building name, address and specific floor, room or area where hot work will be performed.
  - .3 Date when permit issued.
  - .4 Description on type of hot work to be carried out.
  - .5 Special precautions required, including type of fire extinguisher needed.
  - .6 Name and signature of authorized person, designated by Contractor, to issue the permit
  - .7 Name of worker (s) (clearly printed) to which the permit is being issued.
  - .8 Time duration of permit (not to exceed 8 hours) indicating "Start" time & date and "Completion" time & date when Hot Work permit will be in effect.
  - .9 Worker signature with date and time when hot work terminated.
  - .10 Specified period of time requiring Safety Watch.
  - .11 Name and signature of person designated Fire Safety Watcher, complete with time & date when safety watch terminated, certifying that the surrounding area was under his continual watch and inspection for the minimum time period specified in Permit and commenced immediately upon the completion of Hot Work.
- .3 Industry Standard forms shall only be used if all data specified above is included on form.
- .4 Each Hot Work Permit to be completed in full and signed as follows:
  - .1 Authorized person issuing Permit before hot work commences;
  - .2 Worker(s) upon completion of Hot Work;

.3 Fire Safety Watcher upon termination of safety watch and;

.4 Returned to Contractor's Site Superintendent for safe keeping.

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 Related Work .1 Section 01 35 24: Special Procedures on Fire Safety Requirements.
- 1.2 Submittals .1 Submit to Departmental Representative copies of the following documents, including updates issued:  
.1 Site Specific Health and Safety Plan.  
.2 Building Permit, compliance certificates and other permits obtained.  
.3 Reports or directions issued by Federal, Provincial inspectors or other Authority having jurisdiction.  
.4 Formal Safety Inspection Reports.  
.5 Accident or Incident Reports.  
.6 MSDS data sheets.  
.7 Name of person(s) designated to perform full time health and safety site supervision.
- .2 Medical Surveillance: Where prescribed by federal or provincial legislation and regulations, and upon request by Departmental Representative, obtain and submit certification of medical surveillance for site personnel prior to commencement of work.
- .3 Submit other data, information and documentation upon request as stipulated elsewhere in this section.
- .4 Submit above documents in accordance with the submittal general requirements specified in Section 01 33 00.
- 1.3 Compliance Requirements .1 Comply with the Occupational Health and Safety Act for the Province of Nova Scotia, and the Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code Part II, and the Canada Occupational Safety and Health Regulations made under Part II of the Canada Labour Code.
- .3 Observe and enforce construction safety Requirements measures required by:  
.1 2015 National Building Code of Canada, Part 8;  
.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 A copy of the Canada Labour Code Part II may be obtained by contacting:  
Canadian Government Publishing  
Public Works & Government Services Canada  
Ottawa, Ontario, KIA OS9  
Tel: (819) 956-4800 (1-800-635-7943)  
Publication No. L31-85/2000 E or F)
- .6 Maintain Workers' Compensation Coverage for duration of Contract. Submit Letter of Good Standing to Departmental Representative upon request.

1.4 Responsibility

- .1 Be responsible for safety of persons and property on work site and for protection of building employees and general public circulating adjacent to work operations to extent that they may be affected by conduct of Work.
- .2 Enforce compliance by workers and other persons granted access to work site with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.5 Site Control and Access

- .1 Control work site and entry points. Grant and allow entry to only workers and other persons so authorized. Immediately stop non-authorized persons from circulating within construction areas and remove from site.
- .2 Implement procedures for granting permission to enter onto work site to all persons who require access. Procedures to include the provision of a site safety orientation session.
- .3 Delineate and isolate construction areas from other areas of site by use of appropriate means. Erect barricades, fences, hoarding and temporary

lighting as required. See Section 01 50 00 for minimum type of barriers acceptable.

- .4 Erect signage at entry points and at other strategic locations around site, clearly identifying construction area(s) as being "off-limits" to non-authorized persons. Signage must be professionally made in both official languages or by use of well understood graphic symbols.
- .5 Secure site at night time or provide security guard as deemed necessary to protect site against entry.
- .6 Ensure persons granted access are fitted and wear appropriate personal protective equipment (PPE). Be responsible for the provision of such PPE to persons who require access to conduct work or perform inspections.

1.6 Protection

- .1 Provide temporary facilities for protection and safe passage of public pedestrians and vehicular traffic around and adjacent to work site.
- .2 Provide safety barricades, lights and signage on work site as required to provide a safe working environment for workers.
- .3 Carry out work placing emphasis on health and safety of public, building employees, site personnel and protection of the environment.
- .4 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.

1.7 Filing of Notice

- .1 File Notice of Project and other Notices with Provincial authorities prior to commencement of Work.
- .2 Upon request, Departmental Representative will provide name and mailing address of provincial department to whom the Notice of Project must be sent.

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- 1.8 Permits
- .1 Obtain building permit related to project prior to commencement of Work.
  - .2 Obtain permits, licenses and compliance certificates, at appropriate times and frequency as stipulated by authorities having jurisdiction.
  - .3 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify Departmental Representative in writing and obtain Departmental Representative's approval to proceed prior to carrying out that portion of work.
  - .4 Post all permits on site. Submit copies to Departmental Representative.
- 1.9 Hazard Assessments
- .1 Implement and carry out a health and safety hazard assessment program as part of the work. Program to include:
    - .1 Initial hazard assessment carried out immediately upon notification of contract award and prior to commencement of work.
    - .2 On-going hazard assessments performed during the progress of work identifying new or potential health risks and safety hazards not previously known. As a minimum hazard assessments shall be carried out when:
      - .1 New subtrade work, new subcontractor(s) or new workers arrive at the site to commence another portion of the work.
      - .2 The scope of work has been changed by Change Order.
      - .3 Potential hazard or weakness in current health and safety practices are identified by Departmental Representative or by an authorized safety representative.
    - .3 Hazard assessments to be project and site specific, based on review of contract documents, site and weather conditions.
    - .4 Each hazard assessment to be made in writing. Keep copies of all assessments on site for duration of work. Upon request, make available to Departmental Representative for inspection.
- 1.10 Safety Meetings
- .1 Prior to commencement of work attend health and safety meeting conducted by Departmental
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Representative. Have Contractor's Site Superintendent in attendance. Departmental Representative will advise of time and location.

- .2 Provide site safety orientation session to all workers and other authorized persons prior to granting them access to work site. Brief persons on site conditions and on the minimum site safety rules in force at site.
- .3 Conduct site specific occupational health and safety meetings during the entire work as follows:
  - .1 Formal meetings on a minimum monthly basis
  - .2 Informal tool box meetings on a regular basis from a predetermined schedule.
- .4 Keep workers informed of anticipated hazards, on safety practices and procedures to be followed and of other pertinent safety information related to:
  - .1 Progress of Work;
  - .2 New sub-trades arriving on site and;
  - .3 Changes in site and project conditions.
- .5 Record and post minutes of meetings. Make copies available to Departmental Representative upon request.

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. Submit plan to Departmental Representative within seven (7) calendar days of Contract Award date.
- .2 Health and Safety Plan shall contain the following three (3) parts:
  - .1 Part 1: List of individual health risks and safety hazards identified by hazard assessment (s).
  - .2 Part 2: List of specific measures to control or mitigate each hazard and risk identified in part one of Plan. Describe the engineering controls, personal protective equipment and safe work practices to be implemented and followed when performing work related to each identified hazard or risk.
  - .3 Part 3: Emergency Measures and Communications Procedures as follows:

.1 Emergency Measures: on-site operating procedures, evacuation measures and emergency response to be implemented in the occurrence of an accident or incident. Procedures to be specific and relevant to identified hazards. Measures to complement and be integrated with the Facility Emergency Response Plans in place at site. Obtain information on existing emergency and evacuation plans from Departmental Representative and incorporate appropriate data.

.2 Communication Procedures:

.1 list of names and telephone numbers of designated official(s), to be contacted should an incident or emergency situation occur, including the following:

.1 General Contractor and all Subcontractors.

.2 Federal and Provincial Departments and local emergency resources organizations, as applicable to the hazards identified and type of accident or incident which might occur, in accordance with applicable laws and regulations.

.3 Officials from PWGSC, Facility Management and Tenant Departments, housed in building located in vicinity, where work is carried out. Departmental Representative will provide list of names to be included.

.2 Procedures implemented at site to communicate and share information between workers, subcontractors, and General Contractor on work activities, and in particular those which might endanger workers and Facility employees.

.3 List of critical construction activities to be communicated with the Facility Manager representative (s) which could affect facility operations, or pose a risk to the health and safety of their employees and to 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:

<u>Column 1</u>	<u>Column 2</u>	<u>Column 3</u>
Identified Hazard	Control Measures	Emergency Measures & Communications Implemented Procedures

- .4 Develop Health and Safety Plan in collaboration with all subcontractors. Address all work and activities of subcontractors as they arrive on site. Immediately update Plan and submit to Departmental Representative.
- .5 Implement, maintain and enforce compliance with requirements of the Health and Safety Plan until final completion of work and demobilization from site.
- .6 As work progresses, review and update Plan addressing additional health risks and safety hazards identified by on-going hazard assessments.
- .7 Submit revised versions of Plan to Departmental Representative.
- .8 Post a typed written copy, including all Safety Plan updates, of the Health and Safety Plan in a common visible location at work site.
- .9 Submission of the Health and Safety Plan, and updates, to the Departmental Representative is for review and information purposes only. It's submission shall not be construed to imply approval by Departmental Representative, be interpreted as a warranty of being complete, accurate and legislative compliant and shall not relieve Contractor of his legal obligations for the provision Health and Safety on the construction project.

1.12 Safety Supervision And Inspections

- .1 Designate competent person or persons to be present on site at all times during work,

responsible for supervising health and safety and conducting safety inspections of work site.

- .2 Assign responsibility, obligation and authority to such designated person(s) to stop and start work as deemed necessary for reasons of health and safety.
- .3 Provide names of designated individuals to Departmental Representative.
- .4 Cooperate with Health and Safety Site Coordinator responsible for the entire site or facility, should one be designated by Departmental Representative.
- .5 Conduct regularly scheduled safety inspections of work site as follows:
  - .1 Informal Inspections: carry out on a minimum bi-weekly basis. Note deficiencies and remedial action taken in a log book or diary.
- .6 Distribute monthly reports to subcontractors for their pursuance. Follow-up and ensure appropriate action and corrective measures are taken.
- .7 Maintain safety inspection documentation on site. Submit copies of formal inspection reports to Departmental Representative.
- .8 All persons in Contractor's employ responsible for health and safety requirements specified in the Contract Documents to be Inspections competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health And Safety Act.

### 1.13 Training

- .1 Ensure that workers, subcontractors and other authorized persons granted access to site are trained and have been fully instructed, by a competent instructor, on:
  - .1 Safe operation of tools and equipment.
  - .2 Proper wearing and use of personal protective equipment (PPE) as applicable to the purpose and activities to be conducted on site.
  - .3 Safe work practices and procedures to be followed during the performance of their given work tasks or function on site.
  - .4 Site Conditions and minimum site safety rules provided through site orientation sessions.

- .2 Make training records readily available for review by Departmental Representative upon request.

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 at the work site and obeyed by all persons granted 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 activities, conditions, near-miss accidents, injuries and damages.
  - .3 Maintain site in tidy condition.
  - .4 Obey warning signs and safety tags.
- .2 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 Warnings, 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.

- .3 The final decision as to what constitutes a safety violation or non-compliance issue will be made by Departmental Representative.
- .4 Non-Compliance Notifications may result in disciplinary measures taken as specified under the Non-Compliance Disciplinary Measures specified elsewhere in this section.
- .5 Brief workers on site safety rules, and on the disciplinary measures to be taken for violation or non compliance of such rules. Post such information on site.

1.15 Accident  
Reporting

- .1 Investigate and report incidents and accidents as outlined in Provincial Occupational Safety and Health Act and Regulations.
- .2 Investigate and immediately report to Departmental Representative incidents and accidents which results, or has the potential of resulting in:
  - .1 Injuries requiring medical aid,
  - .2 Property damage in excess of \$5000.00,
  - .3 Interruption to facility operations with potential loss to Departmental Representative in excess of \$5000.00,
  - .4 Required notification to Workers' Compensation Board or other regulatory agencies as stipulated by applicable regulations.
- .3 Medical aid in above clause shall have the same meaning as the term "medical aid injury" as defined in the Canadian Dictionary of Safety Terms from 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 Workers' Compensation Board of the province in which the injury was incurred.

1.16 Tools and  
Equipment Safety

- .1 Implement and follow a scheduled tool and equipment inspection/maintenance program at work site. Regularly check tools, equipment and machinery for safe operation and perform maintenance at pre-established time and frequency intervals as recommended by manufacturer. Include

subcontractor's equipment as part of the inspection process.

- .2 Use standardized checklists to ensure established safety checks are stringently followed.
- .3 Immediately tag and remove items found faulty or defective off site.
- .4 Maintain written documentation on each inspection. Make available to Departmental Representative upon request.

1.17 Hazardous  
Products

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets on site. Provide copies of all data sheets to Departmental Representative upon receipt of materials on site.
- .3 Post all MSDS data sheets on site, in a Products common area, visible to workers.

1.18 Powder Actuated  
Devices

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

1.19 Posting of  
Documents

- .1 Post documents indicated herein and as required by Authority having jurisdiction.

1.20 Records  
on Site

- .1 Maintain on site copy of safety documentation as specified in this section and other safety related reports and documents issued to or received from authorities having jurisdiction.
- .2 Make available to Departmental Representative, or authorized safety representative, for inspection upon request.

**END OF SECTION**

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PART 1 – GENERAL

1.1 References

- .1 Canada Shipping Act, Transport Canada, 2001, amended 2013-12-01
- .2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada
- .3 Canadian Environmental Assessment Act, 2012, amended 2013-11-25
- .4 Canadian Environmental Protection Act, 1999, amended on 2014-03-28
- .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2013-11-25
- .6 Migratory Birds Convention Act, 1994, Environment Canada, amended 2010-12-10
- .7 Navigation Protection Act, 1985. Transport Canada, amended 2014-04-01
- .8 Nova Scotia – Environment Act
- .9 Species at Risk Act, 2002, amended 2013-03-08
- .10 The Federal Policy on Wetland Conservation, 1991, Environment Canada
- .11 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2009-06-16
- .12 Workplace Hazardous Materials Information System, Health Canada.

1.2 Definitions

- .1 Archaeological Resources: all tangible evidence of human activity that is of historical, cultural or scientific interest. Examples include features, structures, archaeological objects or remains at or from an archaeological site, or an object recorded as an isolated archaeological find.
- .2 Buffer zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.
- .3 Deleterious substance: (a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water, or (b) any water that contains a substance in such quantity or

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concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

- .4 Fish habitat: spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.
- .5 Hazardous material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .6 Invasive or alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.
- .7 Navigable water: a canal and any other body of water created or altered as a result of the construction of any work.
- .8 Surface watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
- .9 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands," and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.

1.3 Transportation

- .1 Transport hazardous materials and hazardous waste in compliance with the Transportation of Dangerous Goods Act.

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- .2 Eliminate free board spillage when excavating, loading and hauling dredged/excavated material.
- .3 Trucks transporting dredged/excavated material will have watertight boxes.
- .4 Do not overload trucks when hauling dredged/excavated material.
- .5 Maintain trucks clean and free of mud, dirt and other foreign matter.
- .6 Secure contents against spillage. Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the work. Immediately clean any ground spills and soils to extent as directed by authority having jurisdiction.
- .7 Prior to commencement of work, advise and seek approval from the *Departmental Representative* of the existing roads and temporary routes / roads (including the construction of any temporary causeways or access roads for the purposes of the project) proposed to be used to access work areas and to haul material to and from the site, including roads to the excavated material disposal site.
- .8 Construction material and debris is not to become waterborne.
- .9 Any tools, equipment, vehicles, temporary structures or parts thereof used or maintained for the purpose of building or placing a work in navigable water are not to remain in place after the completion of the project.
- .10 Vessels are to be permitted safe access through the worksite at all times, and assisted as necessary.
- .11 All materials and equipment used in construction must be marked in accordance with the Collision Regulations of the *Canada Shipping Act, 2001* when located on the waterway.
- .12 Advise the Canadian Coast Guard, Marine Communication and Traffic Services (MCTS) at (902) 564-7751 or toll free at 1-800-686-8676 sufficiently in advance of commencement of work or when

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deploying or removing site markings in order to allow for appropriate Notices to Shipping/Mariners action.

- .13 Work activities must comply with all / any conditions of the **Navigation Protection Act (NPA) approval issued by Transport Canada**. A copy of the NPA approval will be provided to the Contractor and must be kept on-site while the work is in progress.

1.4 Temporary Causeways  
and Access Roads

- .1 It will be the Contractor's responsibility to gain access to the construction and dredging area(s). The construction and removal of temporary causeways and access roads will be at the Contractor's expense and will be removed immediately after clearance of the project area.
- .2 It will be the Contractor's responsibility to identify an off-site location for the disposal of material imported by the Contractor for the construction of temporary causeways and access roads.
- .3 All rock material used for construction of temporary causeways and access roads must be clean and free from excessive fines, organics, debris and non-toxic (i.e., free of fuel, oil, grease and/or any other contaminants), non-ore bearing and from a provincially approved, non-water source.
- .4 Material is to be screened, if required, to ensure that no fines or stones less than 0.2 kilograms are placed in the work.
- .5 Heavy machinery and equipment will not be allowed in the water and must be operated from a dry platform only. Temporary causeways and access roads shall be constructed at an elevation such that machinery and equipment is operating completely out of the water at all stages of the tide. If tidal work is being carried out, machinery and equipment shall be relocated back to a suitable elevation to prevent operating in submerged waters.
- .6 The Contractor is to maintain temporary buoys to mark the position of any access road including the outer toe as construction proceeds. All buoys are to meet requirements of the applicable Canadian Coast Guard standard and be equipped with radar reflectors.

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- 1.5 Operation of Machinery
- .1 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
  - .2 Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the water body.
  - .3 Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
- 1.6 Disposal of Dredged and Excavated Material
- .1 All dredged material must be disposed of at the designated disposal site, as indicated on tender documents and drawings, not including any temporary road material.
  - .2 All excavated and removed rock material from the existing structures will be salvaged and reused where possible, as indicated in the tender documents and drawings. All excavated and removed rock material not reused in the new construction is to be disposed of at the designated disposal site, not including any temporary road material.
  - .3 The contractor will be responsible to develop a **Site Management Plan (SMP)** for the designated disposal site, including final site plan and cross-sections of berms.
  - .4 The contractor will be responsible to construct berms at the designated disposal site to contain dredged material and un-salvaged excavated and removed rock material. The contractor will not be permitted to transport any material to the disposal site until the SMP is accepted by the *Departmental Representative*.
  - .5 Place and spread disposed material at the designated disposal site in a uniform and well graded manner. Minimize height and slopes of the disposed material, matching slopes and contours of the existing surrounding terrain as much as possible.
  - .6 Water that decants from the disposed dredge spoil shall not enter any freshwater water bodies.

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- .7 Items such as rubber tires, bottles, cans and other debris or litter must be removed from the disposal site following regrading. Failure to remove such debris may constitute a littering offence under applicable regulations.
  - .8 Control runoff of water containing suspended materials or other harmful substances in accordance with requirements of all federal, provincial and municipal authorities having jurisdiction.
- 1.7 Containment and Spill Management
- .1 Comply with Federal (CEPA *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*) and Provincial regulations, codes, standards and guidelines for the storage of fuel and allied petroleum products on site.
  - .2 Do not dump petroleum products or any other deleterious substances on ground or in the water.
  - .3 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
  - .4 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
  - .5 Maintain vehicles and equipment in good working order to prevent leaks on site.
  - .6 In the event of a petroleum spill, immediately notify the *Departmental Representative* and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.
  - .7 Materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals are not to enter the watercourse.
  - .8 Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance.

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- 1.8 Hazardous  
Material Handling
- .1 Store and handle hazardous materials in accordance with applicable federal and provincial regulations, codes, standards and guidelines. Store in a 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.
  - .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- 1.9 Disposal of Wastes
- .1 Do not bury rubbish, construction and demolition debris (i.e., concrete, creosote timbers, steel, impacted soil materials etc.) and waste materials on site.
  - .2 Construction material and debris are not allowed to become waterborne.
  - .3 No person shall permit any tools, equipment, vehicles, temporary structures or parts thereof used or maintained for the purpose of building or placing a work in a navigable water to remain in such water after the completion of the project.
  - .4 All work(s) and associated equipment shall be removed from the waterway at Contractor's expense in the event the operation of the work(s) is terminated.
  - .5 Dispose and recycle construction and demolition debris and waste materials in accordance with Provincial Waste Management Regulations.
  - .6 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc.) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.

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- .7 Dispose of hazardous waste in accordance with applicable federal and provincial, regulations, codes, standards and guidelines.
- .8 Daily clean-up of floating or sinking construction materials, litter, and other debris arising from the work site will be conducted to ensure protection of the marine environment. Any construction debris/material that enters the marine environment should be removed immediately and be disposed of in a provincially approved manner.
- .9 Concrete waste:
  - .1 Do not discharge residual or rejected concrete on site.
  - .2 Immediately clean any accidental release of concrete on site prior to solidification.
  - .3 Do not wash and clean concrete vehicles on site.
  - .4 Perform dumping of residual material and truck cleaning operations only at the concrete plant. Follow environmental regulations and good practices as approved by the Provincial Department of the Environment and other authorities having jurisdiction.

1.10 Water Quality

- .1 Conduct dredging/excavation in the watercourse in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times.
  - .1 Maintain appropriate production speed and momentum of the excavation equipment. Make adjustments as required and as approved by *Departmental Representative*.
  - .2 Strategically position excavation equipment and haul vehicles to avoid over the water swings of excavated material whenever possible.
  - .3 Restrict the amount of material excavated to the area and depth required for the project.
  - .4 Dredged/excavated material must not re-enter the waterway.
  - .5 Avoid bottom stockpiling, dragging, or side casting material during dredging/excavation.
- .2 Turbidity levels shall not exceed 8 Nephelometric Turbidity Units (NTUs) above background levels at 100 m from the nearest edge of the in-water work area over a 24 hour period when background levels are between 8 and 80 NTUs. Turbidity levels shall not increase more than 10% above background levels at 100 m from

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the nearest edge of the work area when background is > 80 NTUs. Background levels shall be measured at least 500 m from the project site in a non-disturbed area and upstream from any sediment movement. The Contractor must:

- a) employ suitable operational and engineering controls (e.g. silt curtain), as approved by the *Departmental Representative*, around all in-water work or dredge/removal areas, **and/or**;
  - b) hire a qualified professional to develop a **Water Quality Monitoring (WQM)** program for the site. The Contractor will not be permitted to start any in-water work or dredging/removals until the WQM program is approved by the *Departmental Representative*. The WQM program will include a minimum of collection points from which data shall be collected, at least twice daily, within 100 meters of the in-water work or dredge/removal area while the equipment is operating, for the first five (5) days of each in-water work activity (i.e., dredging, removals, excavation, etc). Sample results must be provided daily to the *Department Representative* and additional days of sampling may be required, based on results from first five (5) days. If turbidity results at any of the collection points exceed the 8 NTU's over a 24 hour period, the Contractor shall cease all in-water work activities immediately and DFO Fisheries Protection Program (FPP) Biologist, Shannan Murphy must be contacted at 902-401-5094 to determine what adaptive measures shall be employed including additional operational and engineering controls (e.g. silt curtains, methodology, etc).
- .3 After daily turbidity monitoring has ceased, visual monitoring for suspended solids must still occur daily during remaining periods of in-water works, dredging and other related work. These findings must be recorded and provided to the *Department Representative* weekly. If any significant changes occur in the turbidity of the water in the vicinity of the work area as a result of construction activities, the work should immediately stop and turbidity monitoring outlined in the accepted WQM program resumed.

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- .4 On days when weather is poor and sediment generated by the work could impact the upstream environment in New Harbour River, work should be conducted preferentially on outgoing tides where possible to reduce potential impacts of sedimentation and turbidity on eelgrass that may be present in the vicinity and diadromous species that may be migrating through the harbour.
  - .5 Creosote timbers are to be removed in a manner that minimizes the remobilization and re-suspension of sediment. Floating booms are to be used to catch any debris and absorbent booms to collect any creosote sheen during removals. Buckets must be used to store used booms in on site.
  - .6 Do not wash down equipment within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
  - .7 All soils resulting from the construction must be stabilized as soon as possible in order to control sediment runoff during and after construction.
  - .8 Contractor will be required to develop and implement an **Erosion and Sediment Control Plan** for the construction and disposal sites that minimizes risk of sedimentation of the water body during all phases of the work. Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the water body or settling basin and runoff water is clear. The plan should, where applicable, include:
    - a) Installation of effective erosion and sediment control measures before starting work to prevent sediment from entering the water body.
    - b) Measures for managing water flowing onto the site, as well as water being pumped / diverted from the site such that sediment is filtered out prior to the water entering a water body. For example, pumping / diversion of water to a vegetated area, construction of a settling basin or other filtration system.
    - c) Site isolation measures (e.g., silt boom or silt curtain) for containing suspended sediment where in-water work is required (e.g., dredging, construction,).

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- d) Measures for containing and stabilizing waste material (e.g., dredge material/excavated material, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high water mark of nearby water bodies to prevent re-entry.
- e) Regular inspection and maintenance of erosion and sediment control measures and structures during the course of the work.
- f) Repairs to erosion and sediment control measures and structures if damage occurs.
- g) Removal of non-biodegradable erosion and sediment control materials once site is stabilized.

- .9 Water contamination by preservative treated wood:
  - .1 Preservative treated lumber and timber, whether plant or site treated, shall be cured for a minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.
  - .2 Do not cut treated wood lumber over the surface of a watercourse or wetland.
  - .3 Do not use liquid applied preservative products over the surface of a watercourse or wetland.
  - .4 Wood treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or American Wood Preserver Association (AWPA)
  - .5 Do not use timber and lumber treated with creosote, petroleum and pentachlorophenol for any part of the work.

1.11 Blasting .1 Blasting is **NOT** permitted for this project.

- 1.12 Socioeconomic Restrictions
- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
  - .2 Place flood lights in opposite direction of adjacent residential and business areas.
  - .3 Work equipment and machinery must be equipped with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

Environmental Protection Procedures  
for Marine Work

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- 1.13 Bird and Bird Habitat
- .1 Become knowledgeable with and abide by the Migratory Birds Convention Act (MBCA) in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
  - .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
  - .3 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
  - .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
  - .5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the *Departmental Representative*.
  - .6 Should nests of migratory birds in wetlands be encountered during work, immediately notify *Departmental Representative* for directives to be followed.
    - .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
    - .2 Minimize work immediately adjacent to such areas until nesting is completed.
    - .3 Protect these areas by following recommendations of Canadian Wildlife Service.
- 1.14 Fish Protection
- .1 Timing of activities should not coincide with periods of increased sensitivity (e.g., spawning, migration, etc.) for fish.
  - .2 Weather conditions are to be assessed on a daily basis to determine the potential risk of extreme weather in the project area. Avoid work during periods which Environment and Climate Change Canada (ECCC) has issued rainfall or wave warning for the work area that may increase erosion and/or sedimentation.

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- .3 Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.
- .4 Screen any water intakes or outlet pipes to prevent entrainment or impingement of fish. Entrainment occurs when a fish is drawn into a water intake and cannot escape. Impingement occurs when an entrapped fish is held in contact with the intake screen and is unable to free itself.
- .5 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
- .6 To minimize the possibility of fish habitat contamination and the spread of aquatic invasive (alien species), all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
  - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
- .7 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .8 Conduct cleaning and washing operations as follows:
  - .1 Scrape and remove heavy accumulation of mud and dispose appropriately.
  - .2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
  - .3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
  - .4 Check and remove all plant, animal and sediment matter from the all bilges and filters.
  - .5 Drain standing water from equipment and let fully dry before use.

Environmental Protection Procedures  
for Marine Work

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- .6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
  - .9 Do not perform cleaning and washdown within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
  - .10 Record of Assurance Logbook:
    - .1 Maintain an on-going log of past and present usage and washdowns of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
    - .2 Write data in a hard cover bound logbook to include the following:
      - .1 Date and location where equipment was previously used in a watercourse or wetland;
      - .2 Type of work performed.
      - .3 Dates of wash down for each piece of equipment;
      - .4 Cleaning method and cleaning agent(s) used.
  - .11 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to the *Departmental Representative* for review.
  - .12 Abide by requirements and recommendations from Fisheries and Oceans Canada – Fisheries Protection Program in cleaning and wash down of equipment.
  - .13 Work activities must comply with all conditions of the DFO Letter of Advice (LOA) issued on April 20, 2017. The *Departmental Representative* shall provide a copy of the LOA, which must remain onsite at all times, while work is in progress.
  - .14 All project works and mitigation measures shall be implemented to the satisfaction of PWGSC.
  - .15 The deposition of a deleterious substance in water frequented by fish is not permitted. The *Fisheries Act* prohibits the deposit of any deleterious substance into waters frequented by fish.
- 1.14 Air Quality
- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.

Environmental Protection Procedures  
for Marine Work

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- .2 Dust suppression by the application of water must be employed, when required. Apply dust control measures to roads, parking lots and work areas. The *Departmental Representative* shall determine locations where water is to be applied, the amount of water to be applied, and the times at which it shall be applied. Waste oil must not to be used for dust control under any circumstances.
  - .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
  - .4 Do not use oil or any other petroleum products for dust control.
- 1.15 Fires
- .1 Fires and burning of rubbish on site is not permitted.
- 1.16 Archaeological
- .1 All construction personnel are responsible for reporting any unusual materials unearthed during construction to the construction supervisor. If the find is believed to be an archaeological resource, the Construction Supervisor will immediately stop work in the vicinity of the find and notify *Departmental Representative*.
  - .2 If an archaeological and / or historically significant item is discovered during the work activities, work in the area will be stopped immediately and the *Departmental Representative* will be contacted as well as the provincial Archaeological Services unit.
    - a) Nova Scotia – NS Department of Communities, Culture and Heritage, Special Places Program, telephone: (902) 424-6475
  - .3 Work can only resume in the vicinity of the find when authorized by the PWGSC *Departmental Representative* and Construction Supervisor, after approval has been granted by the Nova Scotia Department of Communities, Culture and Heritage.

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- 1     Related Requirements                     .1     Particular requirements for inspection and testing of concrete to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.
- 2     Appointment and Payment                     .1     Departmental Representative will appoint and pay for services of testing laboratory except for the following:  
   .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 conveying systems, mechanical and electrical equipment and systems.  
   .4     Mill tests and certificates of compliance.  
   .5     Tests specified to be carried out by the Contractor under the supervision of Departmental Representative.  
   .2     Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work.
- 3     Contractor's Responsibilities                     .1     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.  
   .4     Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.  
   .2     Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.  
   .3     Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
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- .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Departmental Representative.

**END OF SECTION**

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|---|----------------------------|----|---|
| 1 | <u>Access</u>              | .1 | Provide and maintain adequate access to project site.   |
|   |                            | .2 | If authorized to use existing roads or structures for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads.   |
|   |                            | .3 | The Contractor is to maintain full access to the work site. Should a court injunction be required ordering a person or group to refrain from impeding access to the site, such as a demonstration, picketing or union action, then obtaining the injunction and any associated costs will be considered incidental to this Contract. Any delays associated with such activity will be considered incidental to this Contract. |
| 2 | <u>Storage Sheds</u>       | .1 | Provide adequate weather tight sheds with raised floors, for storage of materials, tools and equipment which are subject to damage by weather.  |
|   |                            | .2 | Contractor to make his own arrangements for on-site storage areas.  |
| 3 | <u>Sanitary Facilities</u> | .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.   |
| 4 | <u>Parking</u>             | .1 | Contractor to make own arrangements to provide parking space for work force.  |
| 5 | <u>Power</u>               | .1 | Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.  |
|   |                            | .2 | Install temporary facilities for power such as pole lines and cables to approval of local power supply authority.   |
| 6 | <u>Barricades</u>          | .1 | Provide and maintain sufficient barricades, fencing, notices, warning signs, light signals, etc. for the protection of adjoining property and to warn others and workmen engaged on the job of the dangers caused by the work.  |
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- .2 Types and location of barricades, etc. to be in accordance with local regulations and to the satisfaction of Departmental Representative.
    - .3 The presence of such barricades, lights, etc. shall not relieve the Contractor of the responsibility for any damages.
- 7 Security
  - .1 Contractor to make his own arrangements for security of his equipment, materials, damages resulting from fire and theft.
- 8 Site Signs and Notices
  - .1 Only Project Identification and Departmental Representative/ Contractor signboards and notices for safety or instruction are permitted on site.
  - .2 Format, location and quantity of site signs and notices to be accepted by Departmental Representative.
  - .3 Signs and notices for safety or instruction to be in English and French languages, or commonly understood graphic symbols.
- 9 Removal of Temporary Facilities
  - .1 Remove temporary facilities from site when directed by Departmental Representative.
  - .2 When project is closed down for a period of time, keep temporary facilities operational until no longer required by Departmental Representative.

**END OF SECTION**

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- 1.1 General
- .1 Use new material and equipment unless otherwise specified.
  - .2 Submit following information for any or all materials and products proposed for supply within seven (7) days of request by Departmental Representative:
    - .1 Name and address of manufacturer
    - .2 Trade name, model and catalogue number
    - .3 Performance, descriptive and test data
    - .4 Manufacturer's installation or application instructions
    - .5 Evidence of arrangements to procure.
  - .3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
  - .4 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
- 1.2 Manufacturer's Instructions
- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
  - .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturers' instructions. Departmental Representative will designate which document is to be followed.
- 1.3 Fastenings - General
- .1 All fastenings are to be the sizes indicated on the contract plans and are to be hot dipped galvanized to ASTM A123 unless otherwise noted.
- 1.4 Delivery and Storage
- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seal and labels intact.
  - .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
  - .3 Store material and equipment in accordance and Storage with supplier's instructions.
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- 1.5 Conformance .1 When material or equipment is specified by standard or performance specifications, upon request of Departmental Representative, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.
- 1.6 Substitution .1 Proposals for substitution may be submitted only after award of Contract. Such requests must include statements of respective costs of items originally specified and proposed substitutions.
- .2 Proposals will be considered by Departmental Representative if:
- .1 Products selected by tenderer from those specified, are not available, or
- .2 Delivery date of products from those specified would unduly delay completion of Contract, or
- .3 Alternative products to those specified, which are brought to attention of, and considered by Departmental Representative as equivalent to those specified and will result in a credit to Contract amount.
- .3 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
- .4 Amounts of all credits arising from approval of substitutions will be determined by Departmental Representative. No substitutions will be permitted without prior written approval of Departmental Representative.
- .5 Departmental Representative reserves the right for acceptance or rejection of substitution of materials.
- 1.7 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.
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.2 Maintain construction equipment and plant in good operating order.

1.8 Damaged and Rejected  
Materials

.1 Immediately replace, repair or otherwise make good any material damaged, broken or defaced during construction to the satisfaction of Departmental Representative.

.2 Remove rejected materials from site.

**END OF SECTION**

1.1 Record

Drawings

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

**END OF SECTION**

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- 1     General
  - .1    Conduct cleaning and disposal operations to comply with local ordinances and antipollution 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 exterior finished surfaces.

**END OF SECTION**

PART 1 - GENERAL

- 1.1 Definitions
- .1 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
  - .2 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
  - .3 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
  - .4 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
    - .1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project.
    - .2 Returning reusable items including pallets or unused products to vendors.
  - .5 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
  - .6 Separate Condition: refers to waste sorted into individual types.
  - .7 Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.
  - .8 Waste Management Coordinator (WMC): Contractor representative responsible for supervising waste management activities.
- 1.2 Waste Management Workplan
- .1 Prior to commencement of work, prepare a Waste Management Workplan.
  - .2 Workplan to include:
    - .1 Waste reduction practices.
    - .2 Material source separation process.
    - .3 Procedures for sending recyclables to recycling facilities.
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- .4 Procedures for sending non-salvageable items and waste to approved waste processing facility or landfill site.
  - .5 Training and supervising workforce on waste management at site.
  - .6 Descriptions of and anticipated quantities in percentages of materials to be salvaged reused, recycled and landfilled.
  - .7 Schedule of selective demolition.
  - .8 Number and location of dumpsters.
  - .9 Anticipated frequency of tippage.
  - .10 Name and address of haulers, waste facilities and waste receiving organizations.
- .3 Develop Workplan in collaboration with all subcontractors to ensure all waste management issues and opportunities are addressed.
  - .4 Implement and manage all aspects of Waste Management Workplan for duration of work.
  - .5 Revise Workplan as work progresses addressing new opportunities for diversion of waste from landfill.
  - .6 Workplan to identify a Waste Management Coordinator. This individual will be the Contractor's representative responsible for supervising all waste management activities as well as coordinating related required submittals and reporting.
- 1.3 Submittals
- .1 Provide submittals, including the Waste Management Work Plan, in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Submit copies of certified receipts from authorized disposal sites and reuse and recycling facilities for material removed from site on a weekly basis.
    - .1 Written authorization from the Departmental Representative is required to deviate from haulers, facilities and receiving organizations listed in Waste Management Workplan.
    - .2 Include copy of weigh bills, scale tickets and disposal receipts for all waste disposed.
- 1.4 Storage, Handling And Protection
- .1 Store materials to be reused, recycled and salvaged in locations as directed by the Departmental Representative.
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- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Handle, stockpile and protect material destined for removal off Site in accordance with Section 01 35 44, subsection 1.6.
- 1.5 Disposal Requirements
- .1 Burying or burning of waste materials on site is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, paint, paint thinner or unused preservative material into waterways, storm, or sanitary sewers is prohibited.
- .3 Do not dispose of preservative treated wood through incineration.
- .4 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
- .5 Dispose of treated wood, end pieces, wood scraps and sawdust at a construction and demolition waste approved facility.
- .6 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.
- .7 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, demolition and construction waste materials have been banned from disposal in landfills and at transfer stations. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
- .8 Transport waste intended for landfill in separated condition, following rules and recommendations of Landfill Operator in support of their effort to divert, recycle and reduce amount of solid waste placed in landfill.
- .9 Sale of salvaged items is not permitted on site.
- .10 Remove materials from deconstruction as deconstruction/disassembly work progresses.
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1.6 Tipping Fees .1 All tipping fees are to be covered in the Stipulated Price provided. No additional payments will be made to cover waste disposal.

1.7 Scheduling .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

PART 2 - PRODUCTS Not Applicable

PART 3 - EXECUTION

3.1 Application .1 Dispose of all materials as required by regulatory codes, regulations, acts and municipal by-laws.

.2 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 Separate materials to be reused/recycled into specified sort areas.

3.3 Diversion Of Materials .1 Separate materials from general waste stream and stockpile in separate piles or containers, as approved by the Departmental Representative, and consistent with applicable fire regulations.

.1 Mark containers or stockpile areas.

.2 Provide instruction on disposal practices.

**END OF SECTION**