

**STANLEY BRIDGE HARBOUR
BREAKWATER AND BASIN EXPANSION
STANLEY BRIDGE, QUEENS CO., PE
PROJECT NO. R.064507.001**

**PREPARED FOR: PUBLIC WORKS/
GOVERNMENT SERVICES CANADA**

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- 1.1 SCOPE OF WORK .1 The work of this portion of the contract involves construction of a new rubblemound breakwater and shore protection located at Stanley Bridge Harbour, Queens County, Prince Edward Island which includes but is not limited to:
- .1 Excavation to allow construction of breakwater structure to limits and extents shown on plans;
 - .2 Removal of excavated material and placing it in designated disposal cell;
 - .3 Supply and installation of riprap, filter fabric and miscellaneous work related to the construction;
 - .4 All required environmental protection measures during the execution of work.
- .2 All in accordance with the requirements of these specifications and drawings listed on the Index to Specifications and Drawings, construction schedule and Time and Order of Completion.
- 1.2 CODES AND STANDARDS .1 All work to be performed in conformity with applicable Codes and Standards.
- .2 Perform work in accordance with the latest editions of the National Building Code of Canada, Canadian Electrical Code, Canadian Standards Association (CSA), P.E.I. Occupational Health and Safety Act, Canada Labour Code Part II, and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements will apply.
 - .3 Meet or exceed the requirement of specified Standards, Codes, and referenced documents.
 - .4 Unless otherwise indicated, the latest

editions of referenced Standards, Codes, and Documents will apply.

1.3 DOCUMENTS
REQUIRED

- .1 Maintain one copy of each of the following at the job site:
 - .1 Construction Document CCDC2
 - .2 Contract drawings
 - .3 Project manual
 - .4 Addenda
 - .5 Reviewed shop drawings
 - .6 Change orders
 - .7 Test reports
 - .8 Copy of updated approved work schedule
 - .9 Manufacturers' installation and application instructions
 - .10 Health and Safety Plan and related documents
 - .11 Permits, Codes and Acts
 - .12 Specifications
 - .13 Waste Management Plan
 - .14 Fire Safety
 - .15 Other requested documents.

1.4 SITE
EXAMINATION

- .1 All bidders submitting tenders for this Work shall first examine the site of the Work in its entirety prior to submission of tenders and make themselves acquainted with site conditions, tides and all information necessary for the proper execution of the Work covered by the tender documents. All tenders shall take into consideration all such conditions as may affect the Work under this Contract.
- .2 Before visiting the site the bidders **MUST** apply for and receive permission to visit the site from the Departmental Representative.
- .3 Must review Section 01 35 29 for potential hazards, wearing safety gear at site, and taking precautionary

measures.

- .4 No extra payment will be made to the Contractor, above the Contract Price, for costs resultant from failure to determine the conditions that affect the work.

1.5 SITE
CONDITIONS

- .1 Geotechnical Investigation: Borehole logs for this site are indicated on the design drawings. A copy of the report prepared by Stantec is available and can be obtained from the Departmental Representative for review.

1.6 CONSTRUCTION
SCHEDULE AND
PROGRESS REPORTS

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

1.7 COST
BREAKDOWN

- .1 N/A.

1.8 PERMITS

- .1 Contractor will apply and pay for any

necessary permits/certificates.

- .2 Provide notification to inspection authorities.
- .3 Compliance certificates.
- .4 Submit copies to Departmental Representative.

1.9 CONTRACTOR'S
USE OF SITE

- .1 Do not unreasonably encumber site with materials or equipment.
- .2 Move stored products or equipment, which interfere with operations of Departmental Representative or other Contractors.
- .3 Obtain and pay for use of additional off-site storage or work areas needed for operations.
- .4 Maintain all roads, streets, lanes, walks, driveways free from mud and debris tracked from construction site, on a daily basis.

1.10 SECURITY

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

1.11 PROJECT
MEETINGS

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

meetings and distribute to all parties within three (3) working days of the meetings.

1.12 SETTING OUT
THE WORK

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

1.13 FIELD
DIMENSIONS

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

1.14 LOCATIONS OF
EQUIPMENT AND
FIXTURES

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

1.15 COORDINATION
AND COOPERATION
WITH OTHER
CONTRACTS

- .1 The construction scheduling for the work of this project necessitates that the Contractors for the work of this Contract should anticipate the

requirement to coordinate and cooperate with the Departmental Representative and also with other independent contractors, engaged directly by the Departmental Representative, working simultaneously on other related work as may be required.

- .2 Coordination and cooperation with other contractors under the control and direction of the Departmental Representative, and with independent contractors, electric/telephone utilities and cable companies, will include, **but not be limited to:**

.1 Sharing access to site and various areas of work within and adjacent to the construction site.

.2 Sharing storage of reasonable quantity of materials in areas as directed by the Departmental Representative.

.3 Incorporating flexibility into work schedule as would normally be required to integrate Work with work of other trades working under separate contracts.

.4 Attend coordination meetings called by the Departmental Representative and maintain on-going consultation with on-site superintendents or foremen of other separate contracts, primarily, but not necessarily limited to, activities required to coordinate installation of services or other components proposed or built in, with the work of this Contract.

.5 Directly arrange for work relating to the relocation of electric and/or telephone, and/or cable poles, and/or lines to be carried out by the utility companies to meet the Contractor's schedule.

.3 Before starting the Work of this Contract, it is the responsibility of this Contractor to confirm to the satisfaction of this Contractor, that the existing work of other contractors, whether fully completed, or being completed simultaneously with the Work of this Contract, upon which the Work of this Contract will be installed, attached to or abut against, or in any other way be affected by the condition of the existing work, is acceptable to this Contractor for the installation of the work of this Contract. If the existing work is deemed by this Contractor to be unacceptable for the installation of the Work of this Contract, this Contractor shall stop work and notify the Departmental Representative, in writing, stating clearly the conditions, which in the opinion of this Contractor are unacceptable. If written notification of unacceptable conditions has not been received by the Departmental Representative, the commencement or continuation of the Work of this Contract, insofar as it is affected by the work of other contractors shall be considered by the Departmental Representative as an acknowledgement by this Contractor that the existing work of the other contractors is acceptable.

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

1.16 CUTTING,
FITTING AND
PATCHING

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

1.17 EXISTING
SERVICES

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

findings in writing.

- .7 Record the locations of maintained, re-routed, and abandoned service lines. Include on the record drawings specified in Section 01 78 00 - Closeout Submittals.

1.18 ADDITIONAL
DRAWINGS

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

1.19 RELICS AND
ANTIQUITIES

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

1.20 TRAFFIC
REQUIREMENTS

- .1 See Section 01 35 29 - Health and Safety Requirements
- .2 See Section 01 35 14 - Special Procedures for Traffic Control

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- 1.21 DUST CONTROL .1 See Section 32 15 60 - Dust Control and
 .2 Appendix - Environmental Protection
 Plan

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1.1 GENERAL

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

1.2 SUBMISSION
REQUIREMENTS

- .1 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.

- .2 Allow 7 working days for Departmental Representatives review of each submission.
- .3 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .4 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier
 - .3 Manufacturer
 - .4 Contractor's stamp, signed by Contractors authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Relationship to adjacent work.
- .5 After Departmental Representative's review, distribute copies.

1.3 SHOP DRAWINGS

- .1 Shop drawings: original drawings, or modified standard drawings provided by Contractor, to illustrate details of portions of Work, which are specific to project requirements.

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

1.4 PRODUCT DATA

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

1.5 SAMPLES

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

1.6 MOCK-UPS

- .1 Mock-ups: field-erected example of work complete with specified materials and workmanship.

- .2 Erect mock-ups at locations acceptable to Departmental Representative.
 - .3 Reviewed and accepted mock-ups will become standards of workmanship and material against which installed work will be verified.
- 1.7 SHOP DRAWINGS .1 The review of shop drawings by Departmental Representative is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that Departmental Representative approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents. Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of the work of all sub-trades.
- REVIEW

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1.1 REFERENCES

- .1 Manual of Uniform Traffic Control Devices for Streets and Highways (2009).

1.2 PROTECTION OF PUBLIC TRAFFIC

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

1.3 INFORMATION AND
WARNING DEVICES

- .6 As indicated, provide graveled detours or temporary roads to facilitate passage of traffic around restricted construction area.
- .7 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of Departmental Representative.
- .1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in Part D, Temporary Conditions Signs and Devices, of UTCD Manual.
- .3 Place signs and other devices in locations recommended in UTCD manual.
- .4 Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Departmental Representative.
- .5 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.

1.4 CONTROL OF PUBLIC
TRAFFIC

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

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1.1 SUBMITTALS

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

1.2 COMPLIANCE
REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, for the Province of PEI, and the Occupational Health and Safety Act Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code - Part II Canada Occupational Safety and Health Regulations made under part II of the Canada Labour Code.

- .3 Observe and enforce construction safety measures required by:
 - .1 National Building Code of Canada;
 - .2 Provincial Worker's Compensation Board;
 - .3 Municipal statutes and ordinances.
- .4 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
- .5 A copy of the Canada Labour Code Part II may be obtained by contacting:
Canadian Government Publishing
Public Works & Government Services
Canada, Ottawa, Ontario K1A 0S9
Tel: (819) 956-4800 (1-800-635-7943)
Publication No. L31-85/2000 E or F
- .6 Maintain Workers Compensation Coverage for duration of Contract. Submit letter of good standing to Departmental Representative upon request.

1.3 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to the site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.4 SITE CONTROL AND
ACCESS

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

1.5 PROTECTION

- .1 Carry out work placing emphasis on health and safety of the Public, Facility personnel, construction workers and protection of the environment.
- .2 Erect safety barricades, lights and signage on site to effectively delineate work areas, protect pedestrian and vehicular traffic around and adjacent to work and to create a safe working environment.
 - .1 Erect fences, hoarding, protective barriers and temporary lighting as required. See Section 01 56 00 for minimum acceptable barricades.
- .3 Should unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

1.6 FILING OF NOTICE

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

1.7 PERMITS

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

1.8 HAZARD ASSESSMENTS

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

1.9 PROJECT/SITE
CONDITIONS

- .1 The following are known or potential project related health, environmental and safety hazards at the site which must be properly managed if encountered during course of work:
 - .1 There are no known existing hazardous or contaminated building materials on site.
 - .2 Safety hazards due to existing site conditions and conduct of work are:
 - .1 overhead electrical wires
 - .2 tidal waters
 - .3 winter work, freezing conditions (ice, wind and water)
 - .4 unpredictable marine weather and wave conditions
 - .5 sharp or protruding objects
 - .6 heavy vehicle movement

- .7 loading and unloading materials
- .8 moving and working with large and heavy materials
- .9 creosote timber and jagged wharf materials
- .10 working over, near or on the water
- .11 falling in the water
- .12 uneven and jagged travelling and working surfaces
- .13 slippery surface conditions
- .14 slipping and falling
- .15 falling materials
- .16 unknown load carrying ability of structure and access to site
- .17 structure not posted for loads
- .18 structure partially barricaded
- .19 Harbour users, activities and traffic
- .20 pedestrians, vehicles and Harbour operation traffic

- .2 Above list shall not be construed as being complete and inclusive of potential health, and safety hazards encountered during work. Include above items into hazard assessment process.

1.10 HEALTH AND SAFETY MEETINGS

- .1 Attend pre-construction health and safety meeting, conducted by Departmental Representative. Have following persons in attendance:
 - .1 Site Superintendent
 - .2 Contractor's designated Health and Safety Site Supervisor
 - .3 Departmental Representative will advise of date, time and location.
- .2 Conduct health and safety meetings and tool box briefings on site. Hold on a regular and pre-scheduled basis during entire work in accordance with requirements and frequency as stipulated in provincial occupational health and safety regulations.

- .1 Keep workers informed of potential hazards and provide safe work practices and procedures to be followed.
 - .2 Take written minutes and post on site.
 - .3 Conduct formal meetings on a minimum monthly basis.
- 1.11 HEALTH AND SAFETY PLAN
 - .1 Develop written site-specific Project Health and Safety Plan, based on hazard assessments, prior to commencement of work.
 - .1 Submit copy to Departmental Representative within 7 calendar days of contract award.
 - .2 Submit updates as work progresses.
 - .2 Health and Safety Plan shall contain three (3) parts with following information:
 - .1 Part 1 - Hazards: List of individual health risks and safety hazards identified by hazard assessment process.
 - .2 Part 2 - Safety Measures: engineering controls, personal protective equipment and safe work practices used to mitigate hazards and risks listed in Part 1 of Plan.
 - .3 Part 3a: Emergency Response: standard operating procedures, evacuation measures and emergency response in the occurrence of an accident, incident or emergency
 - .1 Include response to all hazards listed in Part 1 of Plan.
 - .2 Evacuation measures.
 - .3 List names and telephone numbers of officials to contact including:
 - .1 General Contractor and all Subcontractors.
 - .2 Federal and Provincial Departments as stipulated by

laws and regulations and local emergency resource organizations, as needed based on nature of emergency or accident.

.3 Officials from PWGSC and site facility management. Departmental Representative will provide list.

.3 Part 3b: Site Communications:

.1 Procedures used on site to share work related safety issues between workers, subcontractors, and General Contractor.

.2 List of critical tasks and work activities, to be communicated with the Facility Manager, which has risk of affecting tenant operations, or endangering health and safety of Facility personnel and the general public. Develop list in consultation with the Departmental Representative.

.3 Prepare Health and Safety Plan in a three column format, addressing the three parts specified above, as follows:

Column 1	Column 2	Column 3
Part 1	Part 2	Part 3a/3b
Identified	Safety	Emergency Response
Hazards	Measures	Site Communications

.4 Develop Plan in collaboration with subcontractors. Address work activities of all trades. Revise and update Plan as Sub-Contractors arrive on site.

.5 Implement and enforce compliance with requirements of Plan for full duration of work to final completion and demobilization from site.

- .6 As work progresses, review and update Plan. Address additional health risks and safety hazards identified by on-going hazard assessments.
- .7 Post copy of Plan, and updates, on site.
- .8 Submission of the Health and Safety Plan, and updates, to the Departmental Representative is for review and information purposes only. Departmental Representative's receipt review and any comments made of the Plan shall not be construed to imply approval in part or in whole of such Plan by Departmental Representative and shall not be interpreted as a warranty of being complete and accurate or as a confirmation that all health and safety requirements of the Work have been addressed and that it is legislative compliant. Furthermore, Departmental Representative's review of the Plan shall not relieve the Contractor of any of his legal obligations for Occupational Health and Safety provisions specified as part of the Work and those required by provincial legislation.

1.12 SAFETY SUPERVISION
AND INSPECTION

- .1 Designate one person to be present on site at all times, responsible for supervising health and safety of the work.
 - .1 Person to be competent in Occupational Health and Construction Safety as defined in the Provincial Occupational Health and Safety Act.
- .2 Assign responsibility, obligation and authority to such designated person to stop work as deemed necessary for reasons of health and safety.

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

1.13 TRAINING

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

1.14 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding the requirement to abide by federal and provincial health and safety regulations, the following safety rules shall be considered minimum requirements to be obeyed by all persons granted site access:

- .1 Wear personal protective equipment (PPE) appropriate to function and task on site; the minimum requirements being hard hat, safety footwear, and eye protection.
 - .2 Immediately report unsafe activity or condition at site, near-miss accident, injury and damage.
 - .3 Maintain site in tidy condition.
 - .4 Obey warning signs and safety tags.
- .2 Brief workers on site safety rules and on disciplinary measures to be taken by Departmental Representative for violation or non compliance of such rules. Post rules on site.
- .3 The following actions or conduct by Contractor, workers and sub-contractors will be considered as non conformance with the health and safety requirements of the contract for which a Non-Compliance Notification will be issued to the General Contractor by the Departmental Representative.
- .1 Failure to follow the minimum site safety rules specified above.
 - .2 Negligence resulting in serious injury or major property damage.
 - .3 Deliberate non-compliance with federal and Provincial Acts and Regulations.
 - .4 Falsification of information in Workers Compensation Reports, safety reports and other health and safety related documents submitted to Departmental Representative or to Authority having jurisdiction.
 - .5 Possession of firearms on site.
 - .6 Possession of non-prescriptive illegal drugs or alcohol.
 - .7 Action, or lack thereof, resulting in the issuance of Warning, Fines or Stop Work Orders from a

Provincial Authority having jurisdiction.

.8 Violation of other specified health and safety rules and requirements as determined by Departmental Representative.

.4 See elsewhere in this section for details on Non-Compliance Notifications and resulting disciplinary measures.

1.15 ACCIDENT REPORTING

.1 Investigate and report the following incidents and accidents:

.1 Those as required by Provincial Occupational Safety and Health Act and Regulations.

.2 Injury requiring medical aid as defined in the Canadian Dictionary of Safety Terms - 1987, published by the Canadian Society of Safety Engineers (C.S.S.E.) as follows:

.1 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by province in which the injury was incurred.

.3 Property damage in excess of \$5,000.00.

.4 Interruption to Facility operations with potential loss to a Federal Department in excess of \$5000.00.

.5 Those which require notification to Workers Compensation Board or other regulatory agencies as stipulated by applicable law or regulations.

.2 Send written report to Departmental Representative for all above cases.

1.16 TOOLS AND EQUIPMENT SAFETY

.1 Routinely check and maintain tools, equipment and machinery for safe operation.

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| | .2 | Conduct checks as part of site safety inspections. When requested, submit proof that checks and maintenance have been carried out. |
| | .3 | Tag and immediately remove from site items found faulty or defective. |
| <u>1.17 HAZARDOUS PRODUCTS</u> | .1 | Comply with requirements of Workplace Hazardous Materials Information System (WHMIS). |
| | .2 | Keep MSDS data sheets for all products delivered to site. Post on site. Submit copy to Departmental Representative. |
| <u>1.18 BLASTING</u> | .1 | Blasting or other use of explosives is not permitted. |
| <u>1.19 POWDER ACTUATED DEVICES</u> | .1 | Use powder actuated fastening devices only after receipt of written permission from Departmental Representative. |
| <u>1.20 POSTING OF DOCUMENTS</u> | .1 | Post on site a copy of all health and safety documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction. |
| <u>1.21 SITE RECORDS</u> | .1 | Maintain on Site a copy of all health and safety related documentation and reports specified to be produced as part of the work and received from authorities having jurisdiction. |
| | .2 | Upon request, make available to Departmental Representative, or authorized Safety Representative, for review. Provide copy when directed by Departmental Representative. |
| <u>1.22 NON COMPLIANCE AND DISCIPLINARY MEASURES</u> | .1 | Immediately address and correct health and safety violations and non-compliance issues. |

- .2 Negligence or failure to follow occupational health and safety provisions specified in the Contract Documents and of those of applicable laws and regulations could result in disciplinary measure taken by the Departmental Representative against the General Contractor.
- .3 PWGSC uses a system of Non-compliance Notifications and Disciplinary Measures on project as follows:
 - .1 A non-compliance notification is issued to the General Contractor, by the Departmental Representative, whenever there is a violation of non compliance of the project's health and safety requirements and of those of Provincial and Federal regulations by any worker, subcontractor or other person to whom the Contractor has granted access to the work site.
 - .2 Non-Compliance notifications are progressive in nature resulting in disciplinary measures imposed depending on the frequency, nature and severity of the infraction.
 - .3 Disciplinary measures could include:
 - .1 Removal of the offending person or party from site;
 - .2 Financial penalties in the form of progress payment reduction or holdback assessments made against the Contract and;
 - .3 Taking the Work out of Contractor's hands in accordance with the General Conditions.
- .4 Departmental Representative will make final decision as to what constitutes a violation and when to issue a Non-Compliance Notification.

- .5 Non-Compliance Notifications issued by Departmental Representative shall not be construed as to overrule or disregard warning, orders and fines levied against Contractor by a regulatory agency having jurisdiction.
- .6 Each non-compliance notification issued is given a numerical rating based on a three level numbering system. Each level is progressive in nature to reflect:
 - .1 The seriousness of the infraction as viewed by the Departmental Representative.
 - .2 The degree of disciplinary action which will be taken by the Departmental Representative.
- .7 Numerical ratings are as follows:
 - .1 Non-Compliance Notification - Level No. 1 Rating:
 - .1 Situation: Occurrence of a first time infraction by a person or party on site.
 - .2 Action: Verbal warning to general contractor, documented in departmental files and copy sent to the general contractor.
 - .2 Non-Compliance Notification - Level No. 2 Rating:
 - .1 Situation:
 - .1 The second occurrence of a previous infraction by the same person or party on site or;
 - .2 Accumulation of several level-1 notifications for different infractions by the same person or party on site or;
 - .3 Non-action on the part of the Contractor or subcontractor to rectify non-compliance infractions previously

identified in one or several
Level-1 notifications or;

.4 Violation or non observance
of a Federal or Provincial
Safety law or Regulation by
subcontractor or Contractor or;

.5 Negligence by a person or
party resulting in injury or
major property damage.

.2 Action: written notice to
General Contractor complete with an
order for immediate remedial action
to be taken. Depending on the
severity of the offense, the order
may include request for the
immediate removal of the offending
person or party from site.

.3 Non-Compliance Notification - Level
No. 3 Rating:

.1 Situation:

.1 Continued and repeated non-
compliance with health and
safety requirements by the
General Contractor or by
subcontractor(s) or;

.2 The occurrence of a serious
accident on site resulting in
serious bodily or death.

.2 Action:

.1 Formal letter issued to
General Contractor with an
order to "Immediately Stop
Work" until so notified to
proceed.

.2 Review of all non compliance
and/or accident occurrences in
the project with possible
investigation by the Department
of PWGSC.

.3 Based on outcome of the
review/investigation, work
could be suspended or taken out
of the Contractor's hands in
accordance with the General
Conditions.

.3 The term "serious accident" used herein shall have the same meaning as defined in the Canadian Dictionary of Safety Terms - 1987 issue from the Canadian Society of Safety Engineers (C.S.S.E.)

.8 Decision on which rating level to be placed on any given Non-Compliance Notification will be determined solely by Departmental Representative.

.9 Be responsible to fully brief workers and subcontractors on the operation and importance of this system.

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| <u>1.1 RELATED WORK</u> | .1 | Waste Management and Disposal: Section 01 74 21. |
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 | | |
| <u>1.2 DEFINITIONS</u> | .1 | Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment. |
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| <u>1.3 FIRES</u> | .1 | Fires and burning of rubbish on site not permitted. |
| | .2 | Where fires or burning permitted, prevent staining or smoke damage to structures, materials or vegetation which is to be preserved. Restore, clean and return to new condition stained or damaged work. Be responsible for obtaining all necessary burning permits. Be responsible for any damage which may result from such fires. |
| | .3 | Provide supervision, attendance and fire protection measures as directed. |
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| <u>1.4 HAZARDOUS MATERIAL HANDLING</u> | .1 | Store and handle hazardous materials in accordance with applicable federal and provincial laws, regulations, codes and guidelines. Store in location that will prevent spillage into the environment |
| | .2 | Label containers to WHMIS requirements and keep MSDS data sheets on site for all hazardous materials. |
| | .3 | Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when storage began. |

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

1.7 SITE AND
PLANT PROTECTION

- .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- .3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas indicated or designated by Departmental Representative.

1.8 WORK ADJACENT
TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with provincial, federal and environmental regulations.
- .5 Do not skid logs or construction materials across waterways.
- .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.

- .7 Do not blast under water or 100 m of spawning beds.
- .8 Do not refuel any type of equipment within 100 meters of a water body. Maintain equipment in good working condition with no fluid leaks, loose hoses or fittings.
- .9 Construct, install and maintain in-water silt containment devices (silt booms) around the construction site to prevent sediment laden water from seeping out beyond the silt boom. Provide suitable anchors, chairs, and other devices. Maintain and repair silt boom on a regular basis and in a like new condition.

1.9 POLLUTION
CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
- .5 Have appropriate emergency spill response equipment and rapid clean-up kit on site located adjacent to hazardous materials storage area. Provide personal protective equipment required for clean-up.

- .6 Report, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment to Federal and Provincial Department of the Environment.

- .1 Notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

1.10 WILDLIFE
PROTECTION

- .1 Should nests of migratory birds in wetlands be encountered during work, immediately notify Departmental Representative for directives to be followed.

- .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.

- .2 Minimize work immediately adjacent to such areas until nesting is completed.

- .3 Protect these areas by following recommendations of Canadian Wildlife Service.

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1.1 WATER QUALITY .1
MITIGATION

- Visual monitoring of the turbidity near the work site must be undertaken. If any changes occur in the turbidity of the water produced by this activity, the work must be immediately stopped and Mrs. Delephina Keen, Oceans and Habitat Area Chief, DFO, Charlottetown, PE, must immediately be contacted (902) 566-7823. (NOTE: Ms. Delephina Keen must be notified a minimum of 48 hours prior to the commencement of any project works.)
- .2 The construction material used must be clean and non-toxic (free of fuel, oil, grease, and/or any contaminants).
- .3 Any debris entering the marine environment will be immediately retrieved when it is safe to do so.
- .4 All work equipment shall be free from loose petroleum fluid or lubricants harmful to the marine environment.
- .5 Any equipment that has been in the marine environment will be cleaned of any sediments, plants or animals and pressure washed with freshwater and/or sprayed with undiluted vinegar prior to being mobilized, and prior to leaving, the project site.
- .6 To minimize and control the release or resuspension of sediments or contaminants resulting from in-water activities the following measures shall be implemented:
- .1 Work is scheduled so as to avoid periods of heavy precipitation.
- .2 Any disturbed areas along the shoreline are to be stabilized to prevent erosion.
- .7 Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refuelling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill

clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633).

- .8 Machinery and equipment fuel level must be inspected on a daily basis to ensure there is no leakage to the surrounding environment.
- .9 Storage of fuels and petroleum products shall comply with safe operating procedures, including facilities in case of a spill.
- .10 Careful maintenance and monitoring of all equipment must be carried out to minimize the risk of spills or leaks of petroleum based products.
- .11 Do not use creosote, petroleum and pentachlorophenol timbers. Timber treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or AWPA approved. Freshly treated wood should be seasoned for at least 30 days before they are to be in contact with water. All newly treated wood must be treated in accordance with the methods outlined in the most recent Canadian version of the document entitled 'Best Management Practices for the Use of Treated Wood in Aquatic Environments'.

1.2 WASTE
MANAGEMENT
MITIGATION

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

1.3 NOISE AND
DISTURBANCE
MITIGATION

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

1.4 OTHER
MITIGATION

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

- .11 Any and all federal, provincial, or municipal legislation and regulations and their authorities or their officers must be strictly followed. Any discrepancies must be successfully resolved before the pertinent work may begin.
- .12 Construction will be carried out during daylight hours unless special arrangements are made with the Harbour Authority/Departmental Representative to facilitate work at night.
- .13 Contractor to co-ordinate construction activities with Harbour Authority/Departmental Representative to mitigate any impact to function of Harbour.

-----END-----

1.1 RELATED WORK

- .1 Special Procedures for Traffic Control: Section 01 35 14
- .2 Health and Safety Requirements: Section 01 35 29

1.2 DESCRIPTION OF WORK

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

1.3 MATERIALS

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

1.4 INSTALLATION

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

1.5 REMOVAL

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

-----END-----

1.1 GENERAL

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

1.2 MATERIALS

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

1.3 CLEANING DURING CONSTRUCTION

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

1.4 FINAL CLEANING

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

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1.1 DEFINITIONS

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

1.2 DOCUMENTS

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

1.3 USE OF WORK SITES AND FACILITIES

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

1.4 SUBMITTAL

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

.2 Submit 2 copies of Materials Source Separation Program description.

1.5 WASTE REDUCTION
WORKPLAN

- .1 Prepare WRW prior to project start-up.
- .2 Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle.
- .3 Describes management of waste.
- .4 Identify opportunities for reduction, reuse, and/or recycling (3Rs) of materials. Based on information acquired from WA.
- .5 Post workplan or summary where workers at site are able to review its content.

1.6 MATERIALS SOURCE
SEPARATION PROGRAM

- .1 Prepare MSSP and have ready for use prior to project start-up.
- .2 Implement MSSP for waste generated on project in compliance with approved methods and as approved by Departmental Representative.
- .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and/or recyclable materials.
- .4 Provide containers to deposit reusable and/or recyclable materials.
- .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .6 Locate separated materials in areas which minimize material damage.
- .7 Collect, handle, store on-site, and transport off-site, salvaged materials

in separate condition. Transport to approved and authorized recycling facility to users of material for recycling.

- .8 Collect, handle, store on-site, and transport off-site, salvaged materials in combined condition. Ship materials to site operating under Certificate of Approval premises of Departmental Representative. Materials must be immediately separated into required categories for reuse of recycling.

1.7 WASTE PROCESSING SITES

- .1 Province of Prince Edward Island
 - .1 Name: Island Waste Management Corporation
 - .2 Telephone: 1-888-280-8111
 - .3 Fax: 1-902-436-8401

- .2 Burning of waste is not permitted.

1.8 DISPOSAL OF WASTES

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

1.9 STORAGE, HANDLING AND PROTECTION

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

disposal facility.

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

1.10 SCHEDULING

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

1.11 APPLICATION

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

1.12 CLEANING

- .1 Remove tools and waste materials on completion of work, and leave work area in clean and orderly condition.
- .2 Clean-up work areas as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

1.13 DIVERSION OF MATERIALS

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

.3 Demolition Waste

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

.4 Construction Waste

Material Type	Recommended Diversion%	Actual Diversion%
Cardboard	100	
Plastic Packaging	100	
Rubble	100	
Steel	100	
Wood (uncontaminated)	100	
Other		

1.14 WASTE REDUCTION WORKPLAN

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

1.15 CANADIAN GOVERNMENT DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT

.1 Province: Prince Edward Island
 Department of Fisheries, Aquaculture
 and Environment, 11 Kent Street, PO
 Box 2000, Charlottetown, PEI C1A 7N8
 General Inquiries: (902) 368-5000 Fax:

Stanley Bridge Harbour	CONSTRUCTION/	
Breakwater and Basin Expansion	DEMOLITION	
Stanley Bridge, Queens Co., PE	WASTE MANAGEMENT	Section 01 74 21
Project No. R.064507.001	AND DISPOSAL	Page 6

(902) 368-5830

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|------------------------------------|----|---|
| <u>1.1 RELATED WORK</u> | .1 | Health and Safety Requirements: Section 01 35 29 |
| | .2 | Temporary Barriers and Enclosures: Section 01 56 00 |
| <u>1.2 DESCRIPTION OF WORK</u> | .1 | The work of this Section comprises the furnishing of all labour, materials and equipment necessary for all demolition work required to complete the Work of this Contract in accordance with the requirements of this Section and as shown on the Drawings. |
| <u>1.3 PROTECTION</u> | .1 | Protect existing items designated to remain. In event of damage, immediately replace such items or make repairs to approval of Departmental Representative and at no additional cost to the Owner. |
| | .2 | Prevent movement, settlement or damage of adjacent utilities and structures. Provide bracing, shoring and underpinning required. Make good damage and be liable for injury caused by demolition. |
| | .3 | If safety of structure being demolished or adjacent structure appear to be endangered, cease operations and notify Departmental Representative. Take precautions to support structures. |
| <u>1.4 SAFETY CODE</u> | .1 | Carry out demolition work in accordance with ALL applicable codes and regulations and as outlined in Section 01 35 29 Health and Safety Requirements. |
| <u>1.5 MEASUREMENT FOR PAYMENT</u> | .1 | Demolition and removal of all items indicated shall be paid as a lump sum. |
| <u>1.6 PREPARATION</u> | .1 | Inspect site and verify items designated for removal and items to be preserved. |
| | .2 | Locate and protect all utility services. |
| | .3 | Protect and provide temporary shoring to existing wharf structure and adjacent |

structures prior to and during the execution of work.

- .4 Any damage to existing structures and utilities and services shall be immediately repaired to the satisfaction of the Departmental Representative and Owner.

1.7 REMOVAL OF SALVAGED ITEMS

- .1 Remove items designated for salvage and stockpile on site as designated by Departmental Representative. The Departmental Representative is responsible for the removal of these items off site at its convenience.

- .2 Items not designated for salvage and re-use shall be removed and dispose of off-site.

1.8 DISPOSAL OF MATERIAL

- .1 Dispose of all removed materials off-site.

- .2 Pay all fees that may be charged to dispose of materials at licensed disposal sites.

- .3 Remove all soil contaminated with oil, gasoline, calcium chloride or other toxic or dangerous materials and dispose of in manner to minimize danger at site and to a location off site approved by Provincial Authority governing such disposal.

1.9 RESTORATION

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

- .2 Reinstate areas and existing works outside areas of demolition to conditions that existed prior to commencement of work.

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PART 1 - GENERAL

**1.1 MEASUREMENT FOR
PAYMENT**

- .1 Measurement for payment under this section shall be paid for as Lump Sum with the price shall include excavation, hauling, shaping, placement, compaction, equipment, labour and incidentals necessary to complete the work.

1.2 RELATED WORK

- .1 Submittal Procedures: Section 01 33 00
- .2 Health and Safety Requirements: Section 01 35 29
- .3 Construction/Demolition Waste Management and Disposal: Section 01 74 21
- .4 Environmental Procedures: Section 01 35 43
- .5 Environmental Protection Plan: Section 01 35 44.

1.3 DESCRIPTION OF WORK

- .1 The work of this Section comprises the furnishing of all labour, materials and equipment necessary for all excavation, trenching, backfilling, compaction including saw cutting of existing asphalt paving and concrete surface, required to complete the work of this Contract, as specified in this Section and as shown on the Drawings.
- .2 The requirements of the Prince Edward Island Department of Transportation and Infrastructure Renewal General Provisions and Contract Specifications for Highway Construction are to be followed for all work relating to the material specifications for fill materials and bedding sand.

1.4 REFERENCES

- .1 ASTM C117-13, Standard Test Method for Material Finer Than: 0.075mm Sieve in Mineral Aggregates by Washing.

- .2 ASTM C136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .3 ASTM D698-12E1, Test Method for Laboratory Compaction Characteristics of Soil using Standard Effort.
- .4 ASTM D1557-09, Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- .5 CAN/ULC -S701-11, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- .6 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .7 CAN/CGSB-71-GP-24M Adhesive, Flexible for Bonding Cellular Polystyrene Insulation

1.5 DEFINITIONS

- .1 Rock excavation: excavation of material from solid masses of igneous, sedimentary or metamorphic rock which, prior to its removal, was integral with its parent mass and was unable to be removed by a Caterpillar 235 Excavator, or equivalent, machine.
- .2 Common excavation: excavation of materials of whatever nature, which are not included under the definition of rock excavation, including dense tills, hardpan, frozen materials and partially cemented materials which can be ripped and excavated with heavy construction equipment.
- .3 Top Soil: Material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping and seeding.

1.6 PROTECTION OF
EXISTING FEATURES

- .4 Cohesionless soil: For compaction purposes, cohesionless soil is materials having less than 20% passing 75 micrometres sieve, regardless of plasticity of fines.
- .5 Cohesive soil: For compaction purposes, cohesive soil is soil not having properties to be classified as cohesionless.
- .1 Existing buried utilities and structures:
 - .1 Size, depth and location of existing utilities and structures as indicated are for guidance only; completeness and accuracy are not guaranteed.
 - .2 Prior to commencing any excavation work, notify applicable Departmental Representative or authorities, establish location and state of use of buried utilities and structures. Clearly mark such locations to prevent disturbance during work.
 - .3 Confirm locations of buried utilities by careful test excavation.
 - .4 Maintain and protect from damage, water, sewer, gas, electric or other utilities encountered. Obtain direction of Departmental Representative before moving or otherwise disturbing utilities or structures.
 - .5 Where indicated re-route existing lines in area of excavation. Pay costs for such work.
 - .6 Remove abandoned utility lines to distance of 1.5m from foundations. Cap or otherwise seal lines at cut-off points.
 - .7 Record in accordance with requirements of Section 01 33 00 - Submittals Procedures, locations of maintained, re-routed and abandoned underground lines.

.8 Make good and pay for damage to any lines resulting from work.

.2 Existing surface features:

.1 Protect existing surface features which may be affected by work from damage while work is in progress and repair damage resulting from work.

.2 Where excavation necessitates root or branch cutting do so only under direct control of Departmental Representative.

.3 Provide adequate protection around bench markers, layout markers, survey markers, geodetic monuments and signage.

1.7 SHORING, BRACING AND
UNDERPINNING

.1 Comply with Section 01 35 29 - Health and Safety Requirements and applicable local regulations and to protect existing features.

.2 Whenever shoring, sheeting, timbering and bracing of excavations or underpinning is required engage services of a Professional Engineer registered in PEI, to design and assume responsibility for adequacy of shoring, bracing and underpinning.

.3 Design and supporting data submitted to bear the stamp and signature of qualified Professional Engineer registered in PEI.

1.8 COMPACTION DENSITIES

.1 Compaction densities indicated are Standard Proctor Maximum Dry Densities.

1.9 SITE CONDITIONS

.1 The Contractor is responsible to visit the site, assess the setting and become familiar with the existing site conditions.

.2 Before visiting the site the bidders **MUST** apply for and receive permission to visit the site from the Project Officer at Departmental Representative office.

- .3 No extra payment will be made to the Contractor, above the Contract Price, for costs resultant from failure to determine the conditions that affect the work.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Type 1 Fill: Crushed rock composed of hard sound, durable uncoated, cubical fragments of consistent quality produced from non-sedimentary bedrock or non-sedimentary boulders, to comply with the P.E.I. Department of Transportation and Public Works Specification 401 - Aggregate, for Class "A" material graded within the following limits:

ASTM Sieve Size	Percent Passing
31.5mm	100
25.0mm	95-100
12.5mm	50-83
4.75mm	30-60
1.18mm	15-40
600um	10-32
300um	5-22
75um	3-9

- .2 Type 2 Fill: Crushed rock composed of hard sound, durable uncoated, cubical fragments of consistent quality produced from non-sedimentary bedrock or non-sedimentary boulders, to comply with the P.E.I. Department of Transportation and Public Works Specification 401 - Aggregate, for Class "B" material graded within the following limits:

ASTM Sieve Size	Percent Passing
31.5mm	100
25.0mm	95-100
12.5mm	50-83
4.75mm	30-60
1.18mm	15-40
600um	10-32
300um	5-26

75um

3-7

- .3 Type 3 Fill: imported, classified as Common Fill, or material from excavation or other sources, approved by Departmental Representative for use intended, unfrozen, free from rocks larger than 75mm, cinders, ashes, sods, refuse or other deleterious materials.

- .4 Type 4 Fill: natural sand or crushed rock screening, free from clay, shale or organic matter, to comply with P.E.I. Department of Transportation and Public Works Specification 402 - Bedding Sand, graded with the following limits.

ASTM Sieve Size	Percent Passing
9.5mm	100
4.75mm	87-98
2.36mm	55-95
1.18mm	30-90
600um	10-70
300um	0-35
150um	0-15
75um	0-8

- .5 Type 5 Fill: to requirements of Prince Edward Island, Department of Transportation and Public Works Specification #206.02.02 - Select Borrow as follows:

Borrow shall be non-plastic and composed of clean, uncoated particles free from lumps of clay or other deleterious material with a maximum particle size of 100mm, and a maximum of 30% of the material passing the 4.75 sieve shall pass the 0.075 mm sieve.

- .6 Type 6 Fill: clean, washed coarse sand free from clay, shale and organic matter and graded within the following limits:

ASTM Sieve Size	Percent Passing
12.5mm	100
4.75mm	90-100

0.85mm	40-100
0.35mm	0-75
0.25mm	0-38
0.75mm	0-8

- .7 Type 7 Fill: Crushed rock, composed of hard, sound, durable, uncoated, cubical fragments of consistent quality produced from non-sedimentary bedrock or non-sedimentary boulders, graded within the following limits, to comply with the P.E.I. Department of Transportation and Public Works Specification 401 - Aggregate for Class "D" Material.

ASTM Sieve Size	Percent Passing
50.0mm	100
38.0mm	60-100
31.5mm	50-100
25.0mm	35-70
19.0mm	20-50
12.5mm	10-35
9.5mm	5-25
4.75mm	0-10

- .8 Geotextile filter fabric: Refer to Section 31 32 21.

PART 3 - EXECUTION

3.1 SITE PREPARATION

- .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.
- .2 Where applicable, strip topsoil from within limits of excavation and stockpile as directed by Departmental Representative, for re-spreading.
- .3 Sawcut pavement or concrete neatly along limits of proposed excavation in order that surface may break evenly and cleanly.

3.2 STOCKPILING

- .1 Stockpile fill materials in areas designated by Departmental Representative. Stockpile granular

materials in manner to prevent segregation.

- .2 Protect fill materials from contamination and freezing.

3.3 DEWATERING OF EXCAVATIONS

- .1 Keep excavations free of water while work is in progress.

- .2 Protect open excavations, trenches and completed installations against damage due to rainwater, surface run-off, spring water, groundwater, backing up of drains, sewers, flooding from watermain and all other water. Provide pumps, equipment and enclosures required for such protection.

- .3 Dispose of water in a manner not detrimental to public and private property, or any portion of work completed or under construction, and in accordance with the requirements of the Environmental Protection Plan.

- .4 All new and existing work damaged by failure to provide protection shall be removed and replaced with new work at the expense of the Contractor.

3.4 SAW CUTTING

- .1 Existing pavement to be saw cut to produce neat, straight vertical cuts at interface between existing asphalt roadway and new pavement, where excavation meets with asphalt driveways, and at limits of Contract, or as directed by Departmental Representative.

3.5 EXCAVATION

- .1 Excavate to lines, grades, elevations and dimensions indicated or required to construct roadways and to install site services.
- .2 Remove demolished foundations, rubble and other obstructions encountered during excavation.

- .3 Excavations must not interfere with normal 45° splay of bearing from bottom of any footing.
- .4 Do not obstruct flow of surface drainage or natural watercourses.
- .5 Earth bottoms of excavations to be dry undisturbed soil, level, free from loose or organic matter.
- .6 Notify Departmental Representative when soil at bottom of excavation appears unsuitable and proceed as directed by Departmental Representative.
- .7 Obtain Departmental Representative's approval of completed excavation.
- .8 Remove unsuitable material from bottom of excavation to extent and depth directed by Departmental Representative.
- .9 Where required due to unauthorized over-excavation, correct as follows:
 - .1 Fill under other areas with Type 2 compacted to 98% density.
- .10 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed compact foundation soil to density at least equal to undisturbed soil.
- .11 Rock excavation: For the purpose of bidding it is to be assumed that solid sandstone bedrock, as defined under Par. 1.4 above, will not be encountered during the work of this Section.

3.6 FILL TYPES AND
COMPACTION

- .1 Dimensions specified in following paragraphs are minimum dimensions of fill after compaction.
- .2 Paved areas:

.1 Use fill types and thickness as indicated on drawings. Compact top 100 mm of sandstone sub-base directly under granular base to 100% density.

.3 Underground services:

.1 Use Type 4 Fill (bedding sand) to provide bedding and cover as indicated compacted full width of trench to minimum 95% density.

.2 Use Type 3 Fill to underside of topsoil at landscaped areas compacted to density at least equal to adjacent undisturbed soil or minimum 95%.

3.7 BACKFILLING

.1 Do not proceed with backfilling operations until Departmental Representative has inspected and approved installations.

.2 Areas to be backfilled to be free from debris, snow, ice, water or frozen ground.

.3 Do not use backfill material which is frozen or contains ice, snow, or debris.

.4 Backfilling around site installations.

.1 Place bedding and surround material as specified and indicated in applicable Section for service or utility to be installed.

.2 Do not backfill around or over cast-in-place concrete within 24 hours after placing.

.3 Place layers simultaneously on both sides of installed work to equalize loading.

.4 Where temporary unbalanced earth pressures are liable to develop on walls or other structures:

.1 Permit concrete to cure for minimum of 14 days or until it has sufficient strength to withstand earth and compaction pressure and approval has been obtained from Departmental

Representative or:

.2 If approved by Departmental Representative erect bracing or shoring to counteract unbalance, and leave in place until removal is approved by Departmental Representative.

.5 Place material by hand under, around and over installations until 600mm of cover is provided, except where specifically permitted otherwise. Dumping material directly on installations will not be permitted.

.5 Place backfill material in uniform layers up to grades indicated. Compact each layer before placing succeeding layer. Use methods to prevent damage to installations.

3.8 RESTORATION

.1 Upon completion of work, remove surplus materials and debris, trim slopes and correct defects noted by Departmental Representative.

.2 Clean and reinstate areas affected by work to satisfaction of Departmental Representative.

3.9 SURPLUS MATERIAL

.1 Remove all surplus material from site, and pay all fees as may be charged at disposal site.

.2 Remove all soil contaminated with oil, gasoline, calcium chloride or other toxic or dangerous materials and dispose of in manner to minimize danger at site and in a manner and to a location off site approved by Provincial Authority governing such disposal.

-----END-----

PART 1 - GENERAL

1.1 RELATED WORK

- .1 Rip Rap: Section 31 37 10

1.2 REFERENCES

- .1 CAN/CGSB-4.2-M88, Textile Test Methods.
- .2 CAN/CGSB-148.1-M85, Methods of Testing Geotextiles and Geomembranes.
- .3 ASTM D4595-86, Test Method for Tensile Properties of Geotextiles by the Wide Width Strip Method.
- .4 ASTM D4751-87, Test Method for Determining the Apparent Opening Size of a Geotextile.

1.3 DELIVERY AND STORAGE

- .1 During delivery and storage, protect geotextiles from direct sunlight, ultraviolet rays, excessive heat, mud, dirt, dust, debris and rodents.

1.4 MEASUREMENT FOR PAYMENT

- .1 Geotextile filter fabric will be measured in square metres of material incorporated in this work.
- .2 Supply and installation of accessories and other attachments will not be measured but considered incidental to work.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Geotextile: non-woven synthetic fibre fabric, supplied in rolls of minimum 3.5 meters width and in one length.
.1 Standard of Acceptance: Synthetic Industries 1001 or an approved equal.
- .2 Synthetic fibre to be rot proof, unaffected by action of oil or salt water and not subject to attack of insects or rodents.

- .3 Seams or joints to be constructed in accordance with manufacturer's recommendations.
- .4 Thread for sewn seams: equal or better resistance to chemical and biological degradation than geotextile.
- .5 Physical properties:
 - .1 Thickness: minimum 2.54 mm.
 - .2 Mass per unit area: minimum 600 g/m².
 - .3 Tensile strength and elongation (in any principal direction):
 - .1 Tensile strength: minimum 1000 N, wet condition.
 - .2 Elongation at break: 50%.
 - .3 Mullen burst strength: minimum 3600 kPa.
 - .4 Apparent opening size (AOS): 50 to 250 micrometres.
- .6 Securing pins and washers: to CAN/CSA-G40.21, Grade 300W, hot-dipped galvanized with minimum zinc coating of 600 g/m² to CSA G164.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Place geotextile material by unrolling onto graded surface and against panels in orientation, manner and locations indicated and retain in position with weights.
- .2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
- .3 Place geotextile material on sloping surfaces in one continuous length from toe of slope to upper extent of geotextile.

- .4 Overlap each successive strip of geotextile 600 mm over previously laid strip.
- .5 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material layers.
- .6 Replace damaged or deteriorated geotextile to approval of Departmental Representative.

3.2 PROTECTION

- .1 Do not permit passage of any vehicle directly on geotextile at any time.

-----END-----

PART 1 - GENERAL

1.1 RELATED WORK

- .1 Geotextiles: Section 31 32 21

1.2 DESCRIPTION OF WORK

- .1 The work of this Section comprises the furnishing of all labour, materials and equipment necessary for the supply and installation of imported riprap on slopes as indicated, as specified and to lines, grades and typical cross sections shown on drawings.
- .2 Do not remove harbour material from water during shaping and construction of Rip Rap slope protection.

1.3 MEASUREMENT FOR PAYMENT

- .1 Rip Rap material will be paid for at the unit bid price in tonne and this shall be full compensation for supplying and placing rocks, hauling, shaping of underlying material, equipment, tools, labour and incidentals necessary to complete the work in acceptable manner to Departmental Representative.
- .2 Toeing in of the stone will be incidental to the supply and placement of the Stones.

1.4 MATERIALS

- .1 To requirements of Prince Edward Island, Department of Transportation and Public and Infrastructure Renewal, "General Provisions and Contract Specifications For Highway Construction" Section 213 (2014) as it relates to various Classes of imported metamorphic or igneous or local sandstone rocks including material selection and testing.
- .2 Stone Class 1: Imported metamorphic or igneous stones. Random rip rap shall consist of clean hard, durable quarried stone, free from seams,

cracks or other structural defects having a density of not less than 2.65 tonne/m³. The rock material is subject to Los Angeles Abrasion Test (ASTM C131), shall have a loss not greater than 35%. When tested for soundness, five cycles of magnesium sulphate (ASTM C88), the rock material shall have a loss not greater than 15%.

.3 Stone Class 2: Local sandstones shall consist of clean hard, durable field or quarry stone, free from overburden and organic soil and approved for use by the Engineer. Rock with visible planes of weakness and/or subject to distinct deterioration by water or weather will not be accepted.

.4 Geotextile in accordance with Section 31 32 21 - Geotextiles.

1.5 PLACING

.1 Where rip-rap is to be placed on slopes, excavate toe in slope in accordance with dimensions as indicated or as directed by Departmental Representative.

.2 Fine grade area to be rip-rapped to uniform, even surface. Fill depressions with suitable material and compact to provide firm bed.

.3 Place geotextile on prepared surface. Place Rip Rap on geotextile so as to avoid puncturing geotextile. Do not drive vehicles directly on geotextiles.

.4 Place Rip Rap in accordance with thickness and details as indicated or as directed by Departmental Representative.

.5 Place stones in manner approved by

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Departmental Representative to secure
surface and create a stable mass.
Place larger stones at bottom of
slopes and face of slopes.

-----END-----

PART 1 - GENERAL

1.1 MEASUREMENT FOR PAYMENT .1 Dust Control will be considered incidental to the work and not measured separately for payment.

1.2 DESCRIPTION OF WORK .1 The work of this Section comprises the furnishing of all labour, materials and equipment necessary for the supply and application of water for prevention of dust nuisance caused by traffic, and/or weather conditions.

PART 2 - PRODUCTS

2.1 MATERIALS .1 Water: to Departmental Representative's approval.

2.2 SUPPLY .1 At least one mobile unit of at least 4.5 KL capacity for applying water shall be available on the project at all times.
.2 The intake hose to the tank shall be equipped with a device satisfactory to the Departmental Representative to prevent fish from being pumped into the tank.

PART 3 - EXECUTION

3.1 APPLICATION .1 Apply water, when and where required, in location directed by Departmental Representative, with distributors equipped with a spray system that will ensure uniform application and with positive means of shut-off.

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