

1 DESCRIPTION OF
WORK

- .1 The work is located at two sites within the Parks Canada National Park on Prince Edward Island, the Cavendish Campground and Brackley Day Use Area.
- .2 The work of this contract includes the provision of all materials, labour, equipment, and ancillaries, all as necessary for the completion of the work as indicated on the drawings and as described in the specifications and notes and the following.
 - .1 Demolition and removal of the above grade portion of the Cavendish Campground sewage pumping station including mechanical and electrical equipment and materials.
 - .2 Removal of the Cavendish sewage pumping station's existing forcemain, gravity sewer and power supply as identified on the drawings.
 - .3 Cutting, coring and minor demolition and removals to allow for new construction.
 - .4 Supply and installation of a new Cavendish sewage pumping station building complete with a new suction lift package, sewage pumps, mechanical and electrical controls and equipment.
 - .5 Supply and installation of a new power supply from the existing transformer location to the sewage pumping station.
 - .6 Removal and reconstruction of the exterior of the Brackley Day Use sewage pumping station plus replacement of the entrance door and gable vents.
 - .7 Removal and disposal of the Brackley Day Use Area sewage pumping station's existing suction lift package sewage pump system.
 - .8 Supply and installation of a new Brackley Day Use Area sewage pumping station suction lift package sewage pumps complete mechanical and electrical controls and equipment.
 - .9 Supply and installation of electrical panels, electrical components, control panels, conduits, wiring and appurtenances.
 - .10 Commissioning of all equipment.
 - .11 Reinstatement.
- .3 All work to be carried out in accordance with applicable federal and provincial regulations for those agencies having jurisdiction for the work. The work is subject to the National Park Act and Regulations, Canadian Environmental Protection Act, and the PEI Occupational and Safety Act and Regulations.
- .4 The Contractor is advised that other construction work may be being performed at several different locations by others during the time frame of this contract.

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- 1 DESCRIPTION OF WORK
(Cont'd)
- .5 Maintain work during construction. Undertake continuous and effective maintenance work day by day, with adequate equipment and forces so that the work is continuously kept in a condition satisfactory to Department Representatives.
- .6 Snow removal - Parks Canada removes the snow from Graham's Lane. The work of this contract includes the removal of snow from the campground road/Graham's Lane intersection to and around the site as necessary to do the construct, approximate length 500 metres and the snow removal from Gulf Shore Parkway to the Brackley Day Use Area sewage pumping station.
- 2 FAMILIARIZATION WITH SITE
- .1 Before submitting a bid, it is recommended that bidders visit the site to review and verify the form, nature and extent of the work, materials needed, the means of access and the temporary facilities required to perform the Work.
- .2 Obtain prior permission from the Departmental Representative before carrying out such site inspection.
- 3 CODES AND STANDARDS
- .1 Perform work in accordance with applicable American Water Works Association Standards, Provincial standards, and any other code of provincial or local application, including all amendments up to bid closing date, provided that in any case of conflict or discrepancy, the more stringent requirement shall apply.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.
- 4 INTERPRETATION OF DOCUMENTS
- .1 Supplementary to the Order of Precedence article of the General Conditions of the Contract, the Division 01 sections take precedence over the technical specification sections in other Divisions of the Specification Manual.
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- 5 TERM ENGINEER .1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Department Representative as defined in the General Conditions of the Contract.
- 6 SETTING OUT THE WORK .1 The Contractor is responsible for setting out the work and maintaining horizontal and vertical control for the project.
- 7 COST BREAKDOWN .1 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price. Required forms will be provided for application of progress payment.
- .2 List items of work numerically following the same division/section number system of the specification manual and thereafter sub-divide into major work components and building systems as directed by Departmental Representative.
- .3 Upon approval, cost breakdown will be used as basis for progress payment.
- 8 MEASUREMENT FOR PAYMENT .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.
- 9 MAINTENANCE OF WORK DURING CONSTRUCTION .1 Maintain work during construction. Undertake continuous and effective maintenance work day by day, with adequate equipment and forces so that the site is continuously kept in a condition satisfactory to Department Representative.
- 10 CODES .1 Perform work in accordance with National Parks Act, Code of Practice of the Department of Labour, and any other code of federal, provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Materials and workmanship must conform to or exceed applicable standards of Canadian General Standards Board (CGSB), Canadian Standards Association (CSA),
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- 10 CODES (Cont'd) .2 (Cont'd)
American Society for Testing and Materials (ASTM) and other standards organizations.
- .3 Conform to latest revision of any referenced standard as re-affirmed or revised to date of specification. Standards or codes not dated shall be deemed editions in force on date of tender advertisement.
- 11 WORK WITHIN PARK BOUNDARIES .1 The project is within a national park and it is essential that lands remain as undisturbed as possible. The Contractor will be expected to use standards and methods beyond those for normal construction in order to protect the environment and ensure the aesthetics of the work. Contract limits shall be strictly adhered to and every precaution shall be taken to minimize environmental damage and disruption to vegetation, wildlife habitat, and structures or existing services, both on construction and storage sites.
- .1 If any damage occurs during construction, the Contractor is responsible to bear the expense to immediately restore such damaged areas to the satisfaction of the Department Representative.
- .2 If Contractor fails to repair damage to the satisfaction of the Department Representative, the Department Representative may complete repairs at the Contractor's expense.
- .3 The Contractor shall ensure that contracted work meets the standards outlined in the contract specification and drawings.
- .4 The Contractor shall ensure that no damage will be done to underground telephone cables.
- .5 All sources of aggregate must be submitted to the Department Representative for approval at least two weeks prior to the start of any work.
- .6 The Contractor is responsible to follow the Provincial requirements regarding the following:
- .1 Pit and Quarry Guidelines
- .2 Environmental Construction Practice specifications
- .7 The Contractor will make arrangements with authorities or owners of private properties for quarrying and transporting materials and machinery over their properties and be responsible for obtaining and paying of fees.
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- 12 DOCUMENTS
REQUIRED .1 Maintain at job site, one copy each of following:
- .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 Change orders.
 - .6 Other modifications to Contract.
 - .7 Copy of approved work schedule.
 - .8 Health and Safety Plan.
 - .9 Other documents as specified.
- 13 SITE
CONDITIONS .1 The Contractor will be responsible to visit the site and review existing site conditions.
- 14 WORK SCHEDULE .1 Provide to the Department Representative in writing and within ten (10) working days after Contract award, a detailed construction schedule and traffic control plan. The schedule shall show proposed work to be undertaken and anticipated completion dates for each phase of the Work.
- .2 After receiving the Contractor's plan and prior to start of construction, a meeting involving Contractor, Department Representative and Parks Canada will be held at a place and time to be determined by the Department Representative. This meeting will review implications of the contract, design, schedule of work, methods of construction, environment protection methods and traffic control.
 - .3 Interim reviews of work progress based on work schedule will be conducted as decided by Department Representative and schedule updated by Contractor in conjunction with and to approval of Department Representative.
 - .4 No work will begin until the pre-construction meeting is held.
 - .5 Following the pre-construction meeting and approval of the schedule, the work will be so scheduled to meet the time restraints and have the project completed on time.
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- 15 SANITARY SERVICES .1 Supply temporary power, water and sanitary facilities necessary for the performance of the work.
- 16 CONTRACTOR'S USE OF SITE .1 The Department Representative will specify the areas for work and storage.
- 17 PROJECT MEETINGS .1 If requested, the Contractor will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
- 18 EXISTING SERVICES .1 Carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Department Representative of findings.
- .3 Submit schedule to and obtain approval from Department Representative for any shut down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Where unknown services are encountered, immediately advise Department Representative and confirm findings in writing.
- .5 Record locations of maintained, re routed and abandoned service lines.
- .6 Ensure that at least one lane of traffic is maintained at construction sites at all times.
- .7 Ensure pedestrian and other traffic is not unduly impeded, interrupted or endangered by execution or existence of work or plant.
- .8 Maintain existing signs at all times. When it is necessary to temporarily remove a sign, it shall be dismantled and re-established on a temporary post or stand set back from construction area. The work is considered to be incidental and no separate payment will be made for maintaining or moving signs.
- .9 Verify locations of any underground utilities.
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| <u>19 ADDITIONAL
DRAWINGS</u> | .1 | Department Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents. |
| <u>20 RELICS,
ANTIQUES AND
WILDLIFE HABITAT</u> | .1 | Protect relics, antiquities, wildlife habitat, items of historical or scientific interest such as cornerstones and contents, animal nesting sites, commemorative plaques, inscribed tablets, and similar objects found during course of work. |
| | .2 | Give immediate notice to Department Representative and await Department Representative's written instructions before proceeding with work in this area. |
| | .3 | Relics, antiquities and items of historical or scientific interest remain her Majesty's property. |
| <u>21 NATIONAL PARK
ACT</u> | .1 | For projects within boundaries of National Park, perform work in accordance with National Parks Act. |
| <u>22 MEASUREMENT
OF QUANTITIES</u> | .1 | Measurement of quantities shall be as indicated in the technical specifications. |
| <u>23 PERMITS/
AUTHORITIES</u> | .1 | Except where stated otherwise in the technical specifications, the Contractor shall obtain, and pay for, permits from authorities as required for all operations and construction. He shall also comply with all pertinent regulations of all authorities having jurisdiction over the work. The Contractor shall provide copies of all permits to the Departmental Representative prior to starting the work. The Contractor shall be responsible for obtaining all applicable permits, inspections and approvals required and shall pay all changes in connection therewith. |
| <u>24 EQUIPMENT
RENTAL RATES</u> | .1 | Upon written request, the Contractor will supply the Department Representative with a list of the rental equipment to be used on work beyond the scope of bid items. Equipment rental rates will be in accordance with current rates published by the PEI Department Transportation, Infrastructure and Energy. |
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25 CONTRACTOR'S
RESPONSIBILITY FOR
MATERIALS

- .1 The Contractor shall be responsible for the safe storage of all material furnished to or by him until it has been incorporated in the completed project and finally accepted by the Departmental Representative. Any material lost or stolen or that otherwise disappears from the site shall be replaced by the Contractor at his expense.
- .2 Inform Departmental Representative of any impending deliveries that may disrupt normal traffic flow.
- .3 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- .4 Contractor shall supply storage facility, unit and location shall be approved by Departmental Representative.
- .5 Prevent damage, alternation and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material/equipment from site.
- .6 Store materials and equipment in accordance with supplier's instructions.

26 WASTE
MANAGEMENT AND
DISPOSAL

- .1 Separate and recycle waste materials in accordance with the Parks Canada's policies and Municipal regulations.
- .2 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and/or recyclable materials.
- .3 Dispose of all corrugated cardboard, cardboard, paper packaging and plastic packaging material in appropriate on-site bins for recycling in accordance with Municipal regulations.
- .4 Divert used construction materials from landfill by being removed for disposal at the nearest recycling facility.
- .5 Divert unused surface coating materials from landfill through disposal at Municipal waste disposal depot.
- .6 Place materials defined as hazardous or toxic waste in designated containers.

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- 26 WASTE MANAGEMENT AND DISPOSAL
(Cont'd)
- .7 Ensure emptied containers are sealed and stored safely for disposal away from Park staff and visitors.
- .8 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- 27 CORE DRILLING, SAW CUTTING AND JACK HAMMERING
- .1 Mechanical Contractor: responsible for core drilling, saw cutting and jack hammering and containment of debris to protect existing potable water. Contractor to confirm size and locations with Departmental Representative before commencing.
- 28 CLEANING
- .1 Provide on-site containers for collection of waste materials and debris.
- .2 Remove waste unsuitable and surplus materials and debris from site and dispose of legally at a site in accordance with applicable regulations.
- .3 Maintain grounds free from accumulations of waste materials and debris.
- .4 Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as needed basis until building is complete.
- .5 Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials, from sight-exposed interior and exterior finished surfaces.
- .6 After completion of work, rake and sweep clean and smooth all surfaces around construction area.
- .7 On completion of work, remove surplus material, tools, equipment, and debris from work areas as directed and to approval of the Departmental Representative.

- 1.1 RELATED SECTIONS
- .1 Section 01 78 00 - Closeout Submittals.
 - .2 Section 01 45 00 - Testing and Quality Control.
 - .3 Division 26 - Electrical.
 - .4 Division 33 - Utilities.
 - .5 Division 40 - Process Integration.
- 1.2 SUBMITTAL GENERAL REQUIREMENTS
- .1 Submit to Departmental Representative for review requested submittals specified in various sections of the specifications including shop drawings, samples, permits, compliance certificates, test reports, work management plans and other data required as part of the work.
 - .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
 - .3 Do not proceed with work until relevant submissions have been reviewed.
 - .4 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .5 Where items or information is not produced in SI Metric units, provide soft converted values.
 - .6 Review submittals prior to submission. Ensure that necessary requirements have been determined and verified and that each submittal has been checked and coordinated with requirements of Work and Contract Documents.
 - .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
 - .7 Verify field measurements and affected adjacent Work are coordinated.
 - .8 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
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1.2 SUBMITTAL
GENERAL REQUIREMENTS
(Cont'd)

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

1.3 SHOP DRAWINGS
AND PRODUCT DATA

- .1 The term "shop drawings" means fabrication drawings, erection drawings, diagrams, illustrations, schedules, performance charts, technical product data, brochures, specifications, test reports installation instructions and other data which are to be provided by Contractor to illustrate compliance with specified materials and details of a portion of work.

PART 1 - GENERAL

- 1.1 Work Includes .1 Fire Safety Requirements
- .2 Hot Work Permit
- .3 Existing Fire Protection and Alarm Systems
- 1.2 Related Work .1 Section 01 35 29: Health and Safety
- .2 Section 01 35 25: Special Procedures on Lockout Requirements
- 1.3 References .1 Fire Protection Standards issued by Fire Protection Services, Labour Program Division of Service Canada:
- .1 FCC No. 301-June 1982 Standard for Construction Operations.
- .2 FCC No. 302-June 1982 Standard for Welding and Cutting.
- .2 FCC standards may be viewed at:
- .1 <http://www.hrsdc.gc.ca/en/lp/lo/fp/standards/commissioner.shtml>
- .2 Fire Protection Services - Atlantic Region office, Halifax, N.S, Tel. (902) 426-6053.
- 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 5 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.
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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 29.
- .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.

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- 1.6 Fire Safety & Hot Work Requirement (Cont'd) .5 Do not perform any Hot Work until receipt of Departmental Representative's written Authorization to Proceed.
- .6 In tenant occupied facilities, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed perform Hot Work during non-operative hours when Facility is vacant of employees. Follow Departmental Representative's directives in this regard.
- 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 29. 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 carry out 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 29.
- .5 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label
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- 1.8 Hot Work Procedures (Cont'd)
- .5 (Cont'd) 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 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 as 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.
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1.9 Hot Work Permit.4
(Cont'd)

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 Fire Protection.1
And Alarm Systems

Fire protection and alarm systems shall not be:

- .1 Obstructed.
 - .2 Shut-off, unless approved by Departmental Representative.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.
- .3 Costs incurred, from the fire department, building owner and tenants, resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

1.11 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.

PART 1 - GENERAL

- 1.1 Work Includes .1 Procedures to isolate and lockout electrical facility or other equipment from energy source.
- 1.2 Related Work .1 Section 01 35 29: Health and Safety
.2 Section 01 35 24: Fire Safety Requirements
- 1.3 References .1 CSA C22.1-15 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
.2 CSA C22.3 No. 1-M87 (R2001) - Overhead Systems.
.3 CSA C22.3 No. 7-94 (R2000) - Underground Systems.
.4 COSH, Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- 1.4 Definitions .1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.
.2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment is isolated.
.3 De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).
.4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
.5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or

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- 1.4 Definitions (Cont'd)
- .5 Isolate:(Cont'd)
disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.
 - .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.
- 1.5 Compliance Requirements
- .1 Perform lockouts in compliance with:
 - .1 Canadian Electrical Code
 - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in section 01 35 29.
 - .3 Regulations and code of practice as applicable to mechanical equipment or other machinery being de-energized.
 - .4 Procedures specified herein.
 - .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
- 1.6 Submittals
- .1 Submit copy of proposed Lockout Procedures and sample form of lockout permit or lockout tags for review.
 - .2 Submit documentation within 14 calendar days of contract award. Do not proceed with work until submittal has been reviewed by Departmental Representative.
 - .3 Submit above documents in accordance with the submittal - general requirements specified in section 01 33 00.
 - .4 Resubmit Lockout Procedures with noted revisions as may result from Departmental Representative's review.
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1.7 Isolation of Existing Services

- .1 Obtain Departmental Representative's written authorization prior to conducting work on an existing active, energized service or facility required as part of the work and before proceeding with lockout of such services or facility.
- .2 To obtain authorization, submit to Departmental Representative following documentation:
 - .1 Written Request for Isolation of the service or facility and;
 - .2 Copy of Contractor's Lockout Procedures.
- .3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, and as follows:
 - .1 Fill-out standard forms in current use at the Facility when so directed by Departmental Representative or;
 - .2 Where no form exist at Facility, make request in writing identifying:
 - .1 Identification of system or equipment to be isolated, including its location;
 - .2 Time duration, indicating Start time & date and Completion time & date when isolation will be in effect.
 - .3 Voltage of service feed to system or equipment being isolated.
 - .4 Name of person making the request.
 - .3 Document to be in typewritten format.
- .4 Do not proceed until receipt of written notification from Departmental Representative granting the Isolation Request and authorizing to proceed with the isolation of designated equipment or facility. Departmental Representative may designate other individual at the Facility as the person authorized to grant the Isolation Request.
- .5 Conduct safe, orderly shut down of equipment or facilities, de-energize and isolate power and other sources of energy and lockout items in accordance with requirement of clause 1.8 below.
- .6 Plan and schedule shut down of existing services in consultation with the Departmental Representative and the Facility Manager. Minimize impact and downtime of facility operations.
- .7 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require a Request for Isolation. Follow Departmental Representative's directives in this regard.

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- 1.7 Isolation of Existing Services (Cont'd)
- .8 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform to requirements outlined in the Health and Safety Section 01 35 29.
- 1.8 Lockouts
- .1 Isolate and lockout electrical facilities, mechanical equipment and machinery from all potential energy sources prior to starting work on such items.
- .2 Develop and implement lockout procedures to be followed on site as an integral part of the Work.
- .3 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
- .4 Use industry standard lockout tags.
- .5 Provide appropriate safety grounding and guards as required.
- .6 Prepare Lockout Procedures in writing. Describe safe work practices, work functions and sequence of activities to be followed on site to safely isolate all potential energy sources and lockout/tagout facilities and equipment.
- .7 Include within procedures a system of worker request and issuance of individual lockout permit by a person, employed by Contractor, designated to be "in-charge" and being responsible for:
- .1 Controlling issuance of permits or tags to workers.
- .2 Determining permit duration.
- .3 Maintaining record of permits and tags issued.
- .4 Submitting a Request for Isolation to Departmental Representative when required in accordance with Clause 1.7 above.
- .5 Designating a Safety Watcher, when one is required based on type of work.
- .6 Ensuring equipment or facility has been properly isolated, providing a Guarantee of Isolation to worker(s) prior to proceeding with work.
- .7 Collecting and safekeeping lockout tags, returned by workers, as a record of the event.
- .8 Clearly establish, describe and allocate, within procedures, the responsibilities of:
- .1 Workers.
- .2 Designated person controlling issuance of lockout tags/permits.
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- 1.8 Lockouts (Cont'd)
- .8 (Cont'd)
 - .3 Safety Watcher.
 - .4 Subcontractors and General Contractor.
 - .9 Procedures shall meet the requirements of Codes and Regulations specified in clause 1.5 above.
 - .10 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the procedures applicable to this contract.
 - .1 Incorporate site specific rules and procedures established by Facility Manager and in force at site. Obtain such procedures through Departmental Representative.
 - .11 Procedures to be in typewritten format.
 - .12 Submit copy of Lockout Procedures to Departmental Representative, in accordance with submittal requirements of clause 1.6 herein, prior to commencement of work.
- 1.9 Conformance
- .1 Ensure that lockout procedures, as established for project on site, are stringently followed. Enforce use and compliance by all workers.
 - .2 Brief all persons working on electrical facilities, mechanical and other equipment fed by an energy source on requirements of this section.
 - .3 Failure to perform lockouts in accordance with regulatory requirements or follow procedures specified herein may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.
- 1.10 Documents On Site
- .1 Post Lockout Procedures on site in common location for viewing by workers.
 - .2 Keep copies of Request for Isolation submitted to Departmental Representative and lockout permits or tags issued to workers during the course of work for full project duration.
 - .3 Upon request, make such data available to Departmental Representative or to authorized safety representative for inspection.
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PART 2 - PRODUCTS

2.1 Article .1 Paragraph
.1 Sub-Paragraph

PART 3 - EXECUTION

3.1 Article .1 Paragraph
.1 Sub-Paragraph

1.1 RELATED WORK

- .1 Section 01 35 24: Special Procedures on Fire Safety Requirements.
- .2 Section 01 35 25: Special Procedures on Lockout Requirements.

1.2 DEFINITIONS

- .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
 - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
 - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
 - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: personal protective equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00.
 - .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
 - .1 Submit within 5 work days of notification of Bid Acceptance. Provide 3 copies.
 - .2 Departmental Representative will review Health and Safety Plan and provide comments.
 - .3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
 - .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
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- 1.3 SUBMITTALS
(Cont'd)
- .2 (Cont'd)
 - .5 Submit revisions and updates made to the Plan during the course of Work.
 - .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
 - .4 Submit building permit, compliance certificates and other permits obtained.
 - .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.
 - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
 - .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
 - .7 Submit copies of incident reports.
 - .8 Submit WHMIS MSDS - Material Safety Data Sheets.
- 1.4 COMPLIANCE
REQUIREMENTS
- .1 Comply with Occupational Health and Safety Act for Province of Prince Edward Island, and Occupational Health and Safety Regulations made pursuant to the Act.
 - .2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at:
[www.http://laws.justice.gc.ca/en/L-2/](http://laws.justice.gc.ca/en/L-2/)
 - .2 COSH can be viewed at:
[www.http://laws.justice.gc.ca/eng/SOR-86-304/ne.html](http://laws.justice.gc.ca/eng/SOR-86-304/ne.html)
 - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)
 - .3 Observe construction safety measures of:
 - .1 Part 8 of National Building Code
 - .2 Municipal by-laws and ordinances.
 - .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
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1.4 COMPLIANCE
REQUIREMENTS
(Cont'd)

- .5 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

1.5 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.6 SITE CONTROL
AND ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
 - .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.
 - .2 Isolate Work Site from other areas of the premises by use of appropriate means.
 - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment.
 - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
 - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
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- 1.6 SITE CONTROL AND ACCESS
(Cont'd)
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
 - .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
 - .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.
- 1.7 PROTECTION
- .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
 - .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.
- 1.8 FILING OF NOTICE
- .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
 - .1 Departmental Representative will assist in locating address if needed.
- 1.9 PERMITS
- .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.
 - .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.
- 1.10 HAZARD ASSESSMENTS
- .1 Perform site specific health and safety hazard assessment of the Work and its site.
 - .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.
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1.13 HEALTH AND
SAFETY PLAN
(Cont'd)

- .2 Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - .2 Control measures used to mitigate risks and hazards identified.
 - .3 On-site Contingency and Emergency Response Plan as specified below.
 - .4 On-site Communication Plan as specified below.
 - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
 - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plan shall include:
 - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
 - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, location of fire fighting equipment and other related data.
 - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
 - .4 Emergency Contacts: name and telephone number of officials from:
 - .1 General Contractor and subcontractors.
 - .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
 - .3 Local emergency resource organizations.
 - .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of Departmental Representative and Facility Management contacts.
- .4 On-site Communication Plan:
 - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
 - .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address

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- 1.13 HEALTH AND SAFETY PLAN (Cont'd)
- .6 (Cont'd) emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.
 - .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
 - .8 Post copy of the Plan, and updates, prominently on Work Site.
- 1.14 SAFETY SUPERVISION
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- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
 - .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
 - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
 - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
 - .3 Conduct site safety orientation session to persons granted access to Work Site.
 - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
 - .5 Stop the Work as deemed necessary for reasons of health and safety.
 - .3 Health & Safety Site Representative must:
 - .1 Be qualified and competent person in occupational health and safety.
 - .2 Have site-related working experience specific to activities of the Work.
 - .3 Be on Work Site at all times during execution of the Work.
 - .4 All supervisory personnel assigned to the Work shall also be competent persons.
 - .5 Inspections:
 - .1 Conduct regularly scheduled safety inspections of the Work on a minimum bi-weekly basis. Record deficiencies and remedial action taken.
 - .2 Follow-up and ensure corrective measures are taken.
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- 1.14 SAFETY SUPERVISION (Cont'd)
- .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
 - .7 Keep inspection reports and supervision related documentation on site.
- 1.15 TRAINING
- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
 - .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
 - .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.
- 1.16 MINIMUM SITE SAFETY RULES
- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
 - .1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses and hearing protection.
 - .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
 - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
 - .4 Obey warning signs and safety tags.
 - .2 Brief persons of disciplinary protocols to be taken for non compliance. Post rules on site.
- 1.17 CORRECTION OF NON-COMPLIANCE
- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
 - .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
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- 1.17 CORRECTION OF NON-COMPLIANCE (Cont'd) .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.
- 1.18 INCIDENT REPORTING .1 Investigate and report the following incidents to Departmental Representative:
.1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
.2 Medical aid injuries.
.3 Property damage in excess of \$10,000.00,
.4 Interruptions to Facility operations resulting in an operational lost to a Federal department in excess of \$5000.00.
.2 Submit report in writing.
- 1.19 HAZARDOUS PRODUCTS .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
.2 Keep MSDS data sheets for all products delivered to site.
.1 Post on site.
.2 Submit copy to Departmental Representative.
- 1.20 POWDER ACTUATED DEVICES .1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.
- 1.21 CONFINED SPACES .1 Abide by occupational health and safety regulations regarding work in confined spaces.
.2 Obtain an Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.
.1 Obtain permit from Facility Manager
.2 Keep copy of permit issued.
.3 Safety for Inspectors:
.1 Provide PPE and training to Departmental Representative and other persons who require entry into confined space to perform inspections.
.2 Be responsible for efficacy of equipment and safety of persons during their entry and occupancy in the confined space.
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- 1.22 SITE RECORDS .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.
- 1.23 POSTING OF DOCUMENTS .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
- .2 Post other documents as specified herein, including:
.1 Site specific Health and Safety Plan
.2 WHMIS data sheets

1.1 REFERENCES

- .1 WHMIS: Workplace Hazardous Materials Information System, Health Canada.
- .2 Transportation of Dangerous Goods Act. Transport Canada, updated 2008-02-21.
- .3 MBCA: Migratory Birds Convention Act, Environment Canada, 1994.
- .4 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.
- .5 Canadian Shipping Act, Transport Canada, 2001.
- .6 AWPA: American Wood Preserver Association

1.2 DEFINITIONS

- .1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
 - .2 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
 - .3 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.
 - .4 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.
 - .5 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.
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- 1.3 TRANSPORTATION
- .1 Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.
 - .2 Do not overload trucks when hauling material. Secure contents against spillage.
 - .3 Maintain trucks clean and free of mud, dirt and other foreign matter.
 - .4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Take extra care when hauling dredged material and other hazardous materials. Immediately clean any spillage and soils.
- 1.4 HAZARDOUS MATERIAL HANDLING
- .1 Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.
 - .2 Store all hazardous liquids in location and manner to prevent their spillage into the environment.
 - .3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.
 - .4 Keep MSDS data sheets on site for all items.
- 1.5 PETROLEUM, OIL AND LUBRICANTS
- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
 - .2 No fuel or petroleum products shall be stored on site. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.
 - .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
 - .4 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.
 - .5 Maintain on site appropriate emergency spill response equipment consisting of at least one
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- 1.5 PETROLEUM, OIL AND LUBRICANTS (Cont'd)
- .5 (Cont'd)
250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.
 - .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
 - .7 In the event of a petroleum spill, immediately notify the Departmental Representative and the PEI Department of Environment. Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.
- 1.6 DISPOSAL OF WASTES
- .1 Do not bury rubbish, demolition debris and waste materials on site.
 - .2 Dispose and recycle demolition debris and waste materials.
 - .3 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.
 - .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
 - .5 Any construction, contaminated soil or demolition debris will be disposed of in a Provincially approved manner (Either a permit or receipts for tippage must be submitted to the Departmental representative to verify that the material was disposed of in a provincially approved manner).
- 1.7 VEGETATION
- .1 Work should be scheduled to avoid periods of heavy precipitation. Short-term erosion and sediment control measures (i.e. silt fence, straw bales, temporary matting, geotextile filter fabric) must be installed to prevent runoff from entering any adjacent waterway. These structures will remain in place until natural vegetation has been established.
 - .2 Fill material used in construction must be clean and non-toxic (free from fuel, oil, grease and/or contaminates).
 - .3 Any exposed soil area must be minimized by limiting the area that is exposed at one time and by limiting the time that any one area is exposed. All stockpiled
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1.7 VEGETATION
(Cont'd)

- .3 (Cont'd)
material must be covered and/or dyked to prevent erosion or silty runoff from leaving the site. Exposed soil should be replanted or sodded to ensure soil stabilization.
- .4 Avoid disturbance of vegetation and natural features where possible. All work is to be confined to the site limits delineated and/or directed by the Departmental Representative.
- .5 Restore disturbed areas as close as possible to natural conditions. Backfill excavate, grade and contour soil, replace topsoil, fertilize and reseed with approved seed mixture.
- .6 No staging of materials/equipment will take place on any environmentally sensitive area. All staging area sites, if required, must be approved by the Departmental Representative.
- .7 If materials of potential historical or cultural interest are encountered, work will cease at that location and the Departmental Representative will be notified.

1.8 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 Equip equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.
- .4 Adequate signage and safety measures must be supplied during transportation of materials and equipment to the harbour.

1.9 WATER QUALITY

- .1 Maintenance of equipment must be carried out on a regular basis.
- .2 The construction material must be clean and non-toxic (free of fuel, oil, grease, and/or any contaminants).

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- 1.9 WATER QUALITY (Cont'd)
- .3 Remove any accidental release of concrete on site prior to solidification.
 - .4 Ensure concrete trucks are clean and will not release any material during transport to the site.
 - .5 Do not discharge residual or rejected concrete on site. Do not wash and clean concrete vehicles on site. Carryout all dumping and cleaning operations at the concrete plant according to all provincially approved practices/regulations.
 - .6 Follow any sediment and erosion control plan and an emergency response plan provided by the Departmental Representative.
- 1.10 BIRD AND BIRD HABITAT
- .1 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 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
 - .4 Do not use natural previously undisturbed areas of the site to conduct work.
 - .5 Ensure that food scraps and garbage are not left at the work site.
- 1.11 AIR QUALITY
- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
 - .2 Apply dust control measures to roads, parking lots and work areas.
 - .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.
 - .5 All construction equipment must be fitted with standard and well-maintained noise suppression
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- 1.11 AIR QUALITY .5 (Cont'd)
(Cont'd) devices. Construction activities must respect appropriate time restriction and use smaller, less disturbing equipment where possible.
- 1.12 FIRES .1 Fires and burning of rubbish on site is not permitted.

1.1 RELATED
SECTIONS

- .1 Section 01 33 00 Submittal Procedures

1.2 INSPECTION

- .1 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
- .2 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- .3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed.
- .4 Pay costs to uncover and make good work disturbed by inspections and tests.

1.3 TESTING

- .1 Tests on materials, as specified in various sections of the Specifications is the responsibility of the Contractor except where stipulated otherwise.
.1 Provide all necessary instruments, equipment and qualified personnel to perform tests.
- .2 At completion of tests, turn over 2 sets of fully documented tests reports to the Departmental Representative. Submit in accordance with Section 01 33 00.
.1 Obtain additional copies for inclusion of a complete set in each of the maintenance manuals specified in Section 01 78 00.
- .3 Unspecified tests may also be made by Departmental Representative, at the discretion of the Departmental Representative. The costs of these tests will be paid for by the Departmental Representative.
- .4 Where tests or inspections reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests and inspections incurred by Departmental Representative as required to verify acceptability of corrected work.
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1.4 INDEPENDENT
INSPECTION AGENCIES

- .1 When specified or directed, submit Representative samples of materials, in required quantities, to Testing Agency for testing purposes. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .2 Provide labour and facilities to obtain, handle and deliver samples.
- .3 Provide sufficient space on site for Testing Agency's exclusive use to store equipment and cure test samples.

1.5 ACCESS TO WORK

- .1 Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.
- .2 Furnish labour and facility to provide access to the work being inspected and tested.
- .3 Co-operate to facilitate such inspections and tests.

1.6 REJECTED WORK

- .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.
- .2 Make good damages to new construction and finishes resulting from removal or replacement of defective work.

PART 1 - GENERAL

- 1.1 QUALITY
- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
 - .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
 - .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
 - .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
 - .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
 - .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.
- 1.2 STORAGE, HANDLING AND PROTECTION
- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
 - .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
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- 1.2 STORAGE, HANDLING AND PROTECTION
(Cont'd)
- .3 Store products subject to damage from weather in weatherproof enclosures.
 - .4 Store cementitious products clear of earth or concrete floors, and away from walls.
 - .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
 - .6 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
 - .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
 - .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
 - .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
- 1.3 TRANSPORTATION
- .1 Pay costs of transportation of products required in performance of Work.
 - .2 Transportation cost of products supplied by Departmental Representative will be paid for by Departmental Representative. Unload, handle and store such products.
- 1.4 MANUFACTURER'S INSTRUCTIONS
- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
 - .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.
 - .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require
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- 1.4 MANUFACTURER'S INSTRUCTIONS (Cont'd) .3 (Cont'd)
removal and re-installation at no increase in
Contract Price or Contract Time.
- 1.5 QUALITY OF WORK .1 Ensure Quality of Work is of highest standard,
executed by workers experienced and skilled in
respective duties for which they are employed.
Immediately notify Departmental Representative if
required Work is such as to make it impractical to
produce required results.
- .2 Do not employ anyone unskilled in their required
duties. Departmental Representative reserves right to
require dismissal from site, workers deemed
incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of
Work in cases of dispute rest solely with
Departmental Representative, whose decision is final.
- 1.6 CO-ORDINATION .1 Ensure co-operation of workers in laying out Work.
Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of
openings, sleeves and accessories.
- 1.7 CONCEALMENT .1 Before installation inform Departmental
Representative if there is interference. Install as
directed by Departmental Representative.
- 1.8 REMEDIAL WORK .1 Perform remedial work required to repair or replace
parts or portions of Work identified as defective or
unacceptable. Co-ordinate adjacent affected Work as
required.
- .2 Perform remedial work by specialists familiar with
materials affected. Perform in a manner to neither
damage nor put at risk any portion of Work.
- 1.9 LOCATION OF FIXTURES .1 Consider location of fixtures, outlets, and
mechanical and electrical items indicated as
approximate.
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1.9 LOCATION OF
FIXTURES

(Cont'd)

- .2 Inform Departmental Representative of conflicting installation. Install as directed.

1.10 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.11 FASTENINGS -
EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

- 1.12 PROTECTION OF WORK IN PROGRESS .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Departmental Representative.
- 1.13 EXISTING UTILITIES .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

- 1.1 WORK INCLUDES .1 Administrative procedures preceding inspection and acceptance of Work by Departmental Representative.
- 1.2 RELATED SECTIONS .1 Closeout Submittals: Section 01 78 00
- 1.3 INSPECTION AND DECLARATION .1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.
- .1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.
- .2 Departmental Representative's Inspection: Accompany Departmental Representative during all substantial and final inspections of the Work.
- .1 Address defects, faults and outstanding items of work identified by such inspections.
- .2 Advise Departmental Representative when all deficiencies identified have been rectified.
- .3 Note that Departmental Representative will not issue a Certificate of Substantial Performance of the work until such time that Contractor performs following work and turns over the specified documents:
- .1 Compliance certificates from applicable authorities;
- .2 Reports resulting from designated tests;
- .4 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

PART 1 - GENERAL

- 1.1 RELATED REQUIREMENTS
- .1 Section 01 33 00 - Submittal Procedures.
 - .2 Section 01 45 00 - Testing and Quality Control.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS
- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, five final copies of operating and maintenance manuals in English.
 - .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
 - .4 Provide evidence, if requested, for type, source and quality of products supplied.
- 1.3 FORMAT
- .1 Organize data as instructional manual.
 - .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
 - .3 When multiple binders are used correlate data into related consistent groupings.
 - .1 Identify contents of each binder on spine.
 - .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
 - .5 Arrange content by systems, under Section numbers and sequence of Table of Contents.
 - .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
 - .7 Text: manufacturer's printed data, or typewritten data.
 - .8 Drawings: provide with reinforced punched binder tab.
 - .1 Bind in with text; fold larger drawings to size of text pages.

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- 1.3 FORMAT
(Cont'd) .9 Provide four (4) hard copies and one (1) electronic PDF copy on CD.
- 1.4 CONTENTS - PROJECT RECORD DOCUMENTS
- .1 Table of Contents for Each Volume: provide title of project:
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Departmental Representative and Contractor with name of responsible parties.
 - .3 Schedule of products and systems, indexed to content of volume.
 - .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
 - .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
 - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
 - .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- 1.5 EQUIPMENT AND SYSTEMS
- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
 - .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
 - .3 Include installed colour coded wiring diagrams.
 - .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
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1.5 EQUIPMENT AND
SYSTEMS
(Cont'd)

- .4 Operating Procedures:(Cont'd)
 - .2 Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

1.6 DELIVERY,
STORAGE AND
HANDLING

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and for review by Departmental Representative.

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- 1.7 WARRANTIES AND BONDS
- .1 Develop warranty management plan to contain information relevant to Warranties.
 - .2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Departmental Representative approval.
 - .3 Warranty management plan to include required actions and documents to assure that Departmental Representative DCC Representative Departmental Representative receives warranties to which it is entitled.
 - .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
 - .5 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
 - .6 Except for items put into use with Departmental permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
 - .7 Conduct joint 9 month warranty inspection, measured from time of acceptance, by Departmental Representative.
 - .8 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items, to include pumps, motors, transformers, and commissioned systems.
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1.7 WARRANTIES AND .8
BONDS
(Cont'd)

(Cont'd)

- .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Starting point and duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.
 - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
 - .11 Organization, names and phone numbers of persons to call for warranty service.
 - .12 Typical response time and repair time expected for various warranted equipment.
- .4 Contractor's plans for attendance at 9 month post-construction warranty inspections.
- .5 Procedure and status of tagging of equipment covered by extended warranties.
- .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .9 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .10 Written verification to follow oral instructions.
 - .1 Failure to respond will be cause for the Departmental Representative DCC Representative Departmental Representative to proceed with action against Contractor.

1.8 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.

- 1.8 WARRANTY TAGS .3 Leave date of acceptance until project is accepted
(Cont'd) for occupancy.
- .4 Indicate following information on tag:
- .1 Type of product/material.
 - .2 Model number.
 - .3 Serial number.
 - .4 Contract number.
 - .5 Warranty period.
 - .6 Inspector's signature.
 - .7 Construction Contractor.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.