

- 1.1 Documents Required**
- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings;
 - .2 Specifications;
 - .3 Addenda;
 - .4 Reviewed shop drawings/submissions;
 - .5 Change Orders;
 - .6 Other modifications to Contract;
 - .7 Field test reports;
 - .8 Copy of approved work schedule;
 - .9 Manufacturer's installation and application instructions.
- 1.2 Site Conditions**
- .1 Records of existing structures and geotechnical reports may be available for inspection at the offices of Public Works and Government Services Canada, 1713 Bedford Row, Halifax, NS. This material is not necessarily up-to-date and is for information purposes only. It should be complemented with site visits and consultation with appropriate expertise.
- 1.3 Work Schedule and Completion Dates**
- .1 Prepare and submit to the Departmental Representative within five (5) days of notification of Contract award, one (1) copy of the construction schedule, in the form of a bar chart, showing the dates for commencement and completion of each major activity of the work, including: planned service disruptions; the work of subcontractors; dates of submissions, review and return of all drawings, etc.; the dates of Substantial Completion; and intended man hours of labour and equipment for each major items of work. If the schedule as submitted is unacceptable in any way, submit without delay a revised schedule satisfactory to the Departmental Representative.
 - .2 The Departmental Representative is to notify the Contractor in writing of acceptance of the Construction Schedule. Comply with the Dates of the Construction Schedule at all times. If, for any reason the Construction Schedule is not followed, immediately notify the Departmental Representative of the changes and submit a revised schedule for acceptance. Upon written acceptance by the Departmental Representative, this schedule will become the Construction Schedule.
 - .3 Whenever required, give further written particulars concerning this schedule. The submission to and acceptance by the Departmental Representative of the Contractor's Construction Schedule or the furnishing of details and particulars thereto will not relieve the Contractor of any duties and responsibilities under the Contract.
 - .4 Work is to be Substantially Complete by **March 5, 2021**.
- 1.4 Measurement Responsibilities**
- .1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment purposes.

**1.5 Contractor's
Use of Site**

- .1 Co-operate with users of existing facilities. The site is managed and operated by Department of Fisheries and Oceans Real Property Safety and Security. Contractor to coordinate work and schedule service interruptions with Departmental Representative and User(s) to avoid or minimize disruption to operations. Contractor shall provide notice, in writing to the Departmental Representative, when planning to disrupt services a minimum of one (1) week prior to de-energization of any municipal, electrical or mechanical etc. service/system.
- .2 Some dates may vary to some degree depending on openings and closings.
- .3 Should interferences occur, take directions from Departmental Representative.
- .4 Do not unreasonably encumber site with materials or equipment.
- .5 Move stored products or equipment which interfere with operations of Departmental Representative or other Contractors.
- .6 Obtain and pay for use of additional storage or work areas needed for operations.
- .7 Comply with all regulations and authorities having jurisdiction over the work, whether on land or on water.
- .8 Ensure no damage occurs to existing structures as a result of operations. Any said damage will be repaired at Contractor's expense.
- .9 Provide temporary barriers and warning signs in location where work is adjacent to areas used by public.

1.6 Codes and Standards

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

- 1.7 Project Meeting** .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.
- 1.8 Setting Out of Work** .1 Do all detail surveys necessary for the work, including locating and maintaining working points, and establishing lines and elevations. Perform all layout work, and carefully preserve benchmarks, reference points and stakes.

.2 Provide such masts, scaffolds, batter boards, lines, straight edges, templates and other devices as may be necessary to facilitate layout, construction and inspection of the work. Whenever necessary, suspend work for such reasonable time as may be necessary to permit the Departmental Representative to check or inspect any portion of the work. The contractor will not be allowed any extra compensation or time for completion because of this suspension of work.

.3 Elevations for the various features of the specified works to be referenced and properly related to a benchmark, which will be approved by the Departmental Representative.

.4 Verify all grades, lines, levels, and dimensions shown on the drawings and report any errors or inconsistencies to the Departmental Representative before commencing work. Establish all grades, lines, levels required to facilitate the work.
- 1.9 Existing Services** .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, 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 acceptance from Departmental 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 the Departmental Representative and confirm findings in writing.
- 1.10 Contract Documents** .1 Contract Drawings:
 - .1 The drawings listed in these "Plans and Specifications" marked "A" and any additional drawings issued at a later date by the Departmental Representative.
 - .2 Departmental Representative may furnish additional drawings to assist in proper execution of work. These drawings will be issued for clarification only. Such drawings

will have same meaning and intent as if they were included with plans referred to in Contract Documents.

- .3 The drawings indicate the extent and general dimensions of the work. Make all necessary measurements to ensure that the result of the work is in accordance with the intent.
- .4 Verify all existing conditions in field prior to proceeding with work.

.2 **Contract Specifications:**

- .1 The general requirements and technical specifications are written solely for the General Contractor. They are organized into the NMS format of separate divisions and sections.
- .2 Specification language is the "Short Form Type", for example, where the word "provide" occurs, interpret it to mean "the Contractor shall furnish all labour, material and equipment necessary to complete the work".
- .3 These Specifications and accompanying drawings are intended to describe and provide for a finished project. They are intended to be complementary, and what is called for by either will be as binding as if called for by both. The Contractor shall understand that the work herein described will be complete in every detail, notwithstanding that every item necessarily involved is not particularly mentioned, and Contractor will be held to provide all labour, materials and equipment necessary for the entire completion of the work and will not avail himself of any errors or omissions.

1.11 Permits and Regulations

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

1.12 Cutting, Fitting & Patching

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

1.13 Record of

- Construction**
- .1 As work progresses, maintain accurate records to show all deviations from the contract drawings, with particular reference to work which will be concealed. Prior to the inspection of the work for the issuance of the Final Certificate of Completion, provide the Departmental Representative with one set of white prints of the drawings with all deviations shown neatly thereon.
 - .2 Provide "as built" cross sections of any excavation, dredging or fill work.
- 1.14 Payment**
- .1 No separate payment will be made for work specified under General Conditions, Supplementary Conditions or any sections of Specification under Division 01. The cost of this work is to be considered as overhead and to be included in the unit prices of the Contract.
 - .2 Dimensional changes directed by the Departmental Representative to suit existing conditions, but not resulting in additional work or materials, will not be considered as extra to the Contract.
- 1.15 Site Examination**
- .1 All parties tendering should visit the site of the work prior to submission of tenders and make themselves thoroughly acquainted with site conditions, conditions of existing objects to be removed, tides, degree of exposure and all information necessary for the proper carrying out of the work covered by the drawings and this Specification. Submission of Tender will be deemed that Contractor is conversant with site conditions.
 - .2 The Departmental Representative will give no consideration whatsoever to any claim by the Contractor resulting from Failure to have made all the necessary investigations prior to tendering.
- 1.16 Cooperation and Assistance to Departmental Representative**
- .1 Co-operate with Departmental Representative on inspection of work.
 - .2 Provide assistance when requested.
 - .3 Provide small motor boat with operator and sounding chain for Departmental Representative's use when requested.
- 1.17 Datum**
- .1 The datum referred to in this Specification is Chart Datum. Chart Datum is, by International Agreement a plane below which the tide will seldom fall. The Canadian Hydrographic Service has adopted the plane of the lowest normal tide (L.N.T.) as Chart Datum. As the rise, fall and range of tides varies daily, the Canadian Tide and Current Tables, as issued by the Canadian Hydrographic Service, should be consulted for tidal predictions and other tidal information relating to work.

- 1.18 Contractor's Representative** .1 Continuously maintain on the site an authorized representative to whom communication may be addressed and who will be competent to speak for the Contractor in discussing work methods.
- 1.19 Workers' Compensation** .1 Prior to commencement of Work, at the time of Substantial Performance of the Work, and prior to issuance of the Certificate of Completion, the Contractor shall provide evidence of compliance with workers' compensation legislation applicable to the place of the Work, including payments due thereunder.
2. At any time during the term of the Contract, when requested by Canada, the Contractor shall provide such evidence of compliance by the Contractor, its subcontractors and any other person at any tier and any other person performing part of the Work who is required to comply with such legislation.
- 1.20 Laws, Standards Taxes and Fees** .1 Comply with all laws and standards governing all or any part of the work, pay all applicable taxes and pay for all permits and certificates required in respect of the execution of the work. Where variances exist between the requirements of agencies governing all or any part of the work, the most restrictive will govern, but in no instance will the standards established by the drawings and this Specification, which exceed such requirements, be reduced.
- 1.21 Protection and Repair** .1 Repair any damage resulting from operations under this contract.
- 1.22 Location of Equipment Fixtures** .1 Location of equipment, fixtures or any and appurtenances indicated are to be considered approximate.
- 1.23 Inspection and Testing** .1 The Departmental Representative may employ an Inspector and/or Testing Company to ensure work conforms with contracts.
- 1.24 Disposal of Debris** .1 Dispose of debris, including construction materials not incorporated in the work, oil products and containers and other materials of this nature in suitable locations off the site.
- .2 Material from the work will not be permitted to go adrift or otherwise become a menace to navigation.
- 1.25 Relics and** .1 Protect relics, antiquities, items of historical

Antiquities

or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.

.2 Give immediate notice to Departmental Representative and await written instructions before proceeding with work in this area.

.3 Relics, antiquities and items of historical or scientific interest remain Departmental Representative's property.

**1.26 Operations and
Maintenance Data**

.1 Submit Operations and Maintenance data in accordance with the requirements set forth in Section 01 33 00 – Submissions/Shop Drawing; 26 05 00 – Common Work Results for Electrical and for any Section in these Specifications that require operation and maintenance data to be submitted.

END OF SECTION

PROJECT PARTICULARS

- 1.1 Description of Work** .1 The work includes but is not limited to:
1. Partial demolition and removal of existing electrical systems and structure as indicated on drawings.
 2. Provision of new slab on grade electrical building including all related architectural, structural, electrical, mechanical and site work.
 3. Provision of new concrete slab and related site work for outdoor emergency generator equipment.
 4. Provision of protection fence for outdoor electrical equipment.
 5. Site work and trenching for new underground electrical systems.
 6. Excavate and backfill for new electrical installations as required, including asphalt and landscape reinstatement.
 7. Provision of new electrical service to be located inside a new electrical building.
 8. Provision of new indoor and outdoor electrical raceway. Provision of new underground and above ground electrical services.
 9. Electrical upgrade into the existing Search and Rescue Station.
 10. Reconfiguration of existing electrical system to suit the new electrical and structural additions.
 11. Provision of new grounding system.
 12. Coordination with local electrical utility and other authority having jurisdiction.
 13. Commissioning of electrical and mechanical systems.
 14. Refer to drawings and specification for additional information.

PRODUCT MEASUREMENT

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

- 1.3 Measurement for Payment** .1 **Lump Sum Items: the following items are to measured separately for costing purposes, then combined and submitted in as one item under the Lump Sum items in the tender documents:**

Division 01

- .1 **Site Work, Demolition and Removals:** This item includes all work required to demolish, remove and reinstate, where required, existing structures and electrical services as indicated on the drawings.

- .2 Mobilization/Demobilization/Site Office: This item includes all Work required to get the Contractor's equipment and forces on-site. This item also includes all Work required for the Contractor's forces and equipment to leave the site, including the final cleanup of the site to the Departmental Representative's satisfaction. This item includes provision of a Contractor's site office – refer to 01 51 00 Temporary Facilities for site office requirements.

Division 26

- .1 Electrical Work: All electrical work, including all ancillary costs related to power utility permits and inspections, shall be measured for payment by lump sum.

Division 31

- .1 Excavation and Backfilling: Excavation and backfilling shall be measured for payment by the lump sum.

Division 32

- .1 Granular Base: Supply and installation of granular base, including compaction, shall be measured for payment by the lump sum.
- .2 Granular Sub-Base: Supply and installation of Type 2 granular sub-base, including compaction, shall be measured for payment by lump sum.
- .3 Hot Mix Asphalt Paving: Supply and placement of hot mix asphalt paving shall be measured for payment by lump sum.

END OF SECTION

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| 1.1 General | .1 | Submit to Departmental Representative, for review, shop drawings, product data, samples and other information specified. |
| | .2 | Until submission is reviewed, work involving relevant product may not proceed. |
| 1.2 Shop Drawings | .1 | Drawings to be originals prepared by contractor, subcontractor, supplier or distributor, which illustrate appropriate portion of work, showing fabrication, layout, setting or erection details as specified in appropriate sections. |
| | .2 | Identify details by reference to sheet and detail numbers shown on Contract Drawings. |
| | .3 | Maximum sheet size 860mm X 1120 mm. |
| 1.3 Product Data | .1 | Certain specification sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams schedules, performance chart, illustrations and other standard descriptive data will be accepted in lieu of shop drawings. |
| 1.4 Samples | .1 | Submit samples in sizes and quantities specified. |
| | .2 | Construct field samples and mock-ups at locations acceptable to Departmental Representative. |
| | .3 | Accepted samples will become standards of workmanship and material against which, installed work will be checked on project. |
| 1.5 Miscellaneous Data | .1 | Provide certificates, methodologies, design and test results as required. |
| 1.6 Coordination of Submissions | .1 | Review shop drawings, product data, samples and miscellaneous data prior to submissions. |
| | .2 | Verify: <ul style="list-style-type: none">.1 Field Measurements..2 Field Construction Criteria..3 Catalogue numbers and similar data. |
| | .3 | Coordinate each submission with requirements of work and contract documents. Individual submissions will not be reviewed until all related information is available. |
| | .4 | Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submissions. |

1.7 Submission Requirements

- .5 Contractor's responsibility for deviations in submission from requirements in Contract documents is not relieved by Departmental Representative's review of submission, unless Departmental Representative gives written acceptance of specified deviations.
- .6 Notify Departmental Representative, in writing at time of submission, of deviations from requirements of contract documents stating reasons for deviations.
- .7 After Departmental Representative's review, distribute copies.
- .1 Schedule submissions at least 14 days before dates reviewed submissions will be needed.
- .2 Submit number of opaque diazo copies of shop drawings, product data which Contractor requires for distribution, plus two (2) copies which will be retained by Departmental Representative.
- .3 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample submitted.
 - .5 Other pertinent data.
- .4 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Separate details when pertinent.
 - .4 Identification of product or material.
 - .5 Relation to adjacent structure or materials.
 - .6 Field dimensions, clearly identified as such.
 - .7 Specification Section Number.
 - .8 Applicable standards such as CSA or CGSB numbers.
 - .9 Contractor's stamp, initialed or signed, certifying review of submission, verification of field measurements and compliance with contract documents.

1.8 Shop Drawings

Review

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

1.9 Other Reviews

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

END OF SECTION

PART 1 – GENERAL

- 1.1 **Work Included**
 - .1 Fire Safety Requirements
 - .2 Hot Work Permit
 - .3 Existing Fire Protection and Alarm Systems
- 1.2 **Related Work**
 - .1 Section 01 35 28: Health and Safety
 - .2 Section 01 35 25: Special Procedures on Lockout Requirements
- 1.3 **References**
 - .1 FCC No. 301-June 1982 Standard for Construction Operations.
 - .2 FCC No. 302-June 1982 Standard for Welding and Cutting.
- 1.4 **Definitions**
 - .1 Hot Work defined as:
 - .1 Welding work
 - .2 Cutting of materials by use of torch or other open flame devices
 - .3 Grinding with equipment which produces sparks.
- 1.5 **Submittals**
 - .1 Submit copy of Hot Work Procedures, to Departmental Representative for review, within 14 calendar days after contract award.
 - .2 Include sample of Hot Work Permit.
 - .3 Submit above documents in accordance with the submittal general requirements specified in Section 01 33 00.
- 1.6 **Fire Safety & Hot Work Requirement**
 - .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code, 2010.
 - .2 Fire Protection Standards FCC 301, Standard for Construction Operations and FCC 302, Standard for Welding and Cutting as issued by the Fire Protection Services of Human Resources Development Canada
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 28.
 - .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
 - .3 FCC standards, noted above, may be viewed at the Regional Fire Protection Services office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8th floor, Dartmouth, NS; Tel: (902) -426-6053.
 - .4 Hot Work Requirements:

- .1 Obtain Departmental Representative's written Authorization to Proceed for the performance of Hot Work on site as may be required in the course of Work.
- .2 To obtain authorization submit to Departmental Representative for review:
 - .1 Contractor's Hot Work Procedures to be followed on site in accordance with clause 1.8 below.
 - .2 Type of work and frequency of situations which will require Hot Work.
 - .3 Upon confirmation that effective fire safety measures will be implemented for hot work, Departmental Representative will grant Authorization to Proceed.
 - .4 In most cases, Departmental Representative will issue only one written authorization covering the entire construction project and duration of work. However in some cases, depending on the nature or phasing of work, the quantity of various trades needing to perform welding and cutting on site, or other deemed situation, Departmental Representative might designate certain portions of the work as separate entities, each entity requiring individual written authorization to proceed. Follow Departmental Representative's directives in this regard.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written Authorization to Proceed.

1.7 Conformance

- .1 Stringently follow Hot Work Procedures, as established for project and agreed upon with Departmental Representative. 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 carryout a Fire Safety Watch for a minimum of 30 minutes immediately upon completion of the hot work.
- .4 Procedures to comply with fire safety codes and standards specified herein and specified in Section 01 35 29.
- .5 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the Hot Work Procedures applicable to this contract.
- .6 Include within procedures the step by step process on how to prepare and issue the Hot Work Permit.
- .7 Hot Work Procedures to be in typewritten format, listing step by step procedures and worker instructions, clearly establishing and allocating responsibilities of:
 - .1 Worker (s)
 - .2 Designated person authorized to issue the Hot Work Permit,
 - .3 Fire Safety Watcher,
 - .4 Subcontractors and Contractor.

1.9 Hot Work Permit

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

- .3 Only use Industry Standard forms if all data specified above is included on form.
- .4 Each Hot Work Permit to be completed in full and signed as follows:
 - .1 Authorized person issuing Permit before hot work commences;
 - .2 Worker(s) upon completion of Hot Work;
 - .3 Fire Safety Watcher upon termination of safety watch and;
 - .4 Returned to Contractor's Site Superintendent for safe keeping.

1.10 Documents on Site

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

END OF SECTION

PART 1 - GENERAL

- 1.1 **Work Included** .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: Special Procedures in Fire Safety Requirements
- 1.3 **References** .1 CSA C22.1-15, Canadian electrical code, part I (22nd edition), safety standard for electrical installations.
.2 CAN/CSA-C22.3 NO. 1-15, Overhead systems.
.3 CAN/CSA-C22.3 NO. 7-15, 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 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 30.
- .3 Regulations and code of practise as applicable to mechanical equipment or other machinery being de-energized.
- .4 Procedures specified herein.

- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.
- .3 Coordination with electric power utility.

- 1.6 Submittals**
 - .1 Submit copy of proposed Lockout Procedures and sample form of lockout permit and 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.

- 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 it's 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.
- .8 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform to requirements of 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.

**Special Procedures
on Lockout Requirements**

- .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 Confirming 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.
 - .3 Safety Watcher.
 - .4 Subcontractors and General Contractor.
- .9 Procedures must 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 Provide procedures in typewritten format.
 - .12 Submit a 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.

PART 2 – PRODUCTS

Not applicable

PART 3 – EXECUTION

Not applicable

END OF SECTION

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| 1.1 | Related Requirements | .1 | Particular requirements for inspection and testing of concrete to be carried out by testing laboratory designated by the Contractor are specified under various sections. |
| 1.2 | Appointment and Payment | .1 | Contractor will appoint and pay for services of a materials/systems testing. |
| | | .2 | Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements. Pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work. |
| 1.3 | Contractor's Responsibilities | .1 | Furnish labour and facilities to: <ul style="list-style-type: none">.1 Provide access to work to be inspected and tested..2 Facilitate inspections and tests..3 Make good work disturbed by inspection and test..4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples. |
| | | .2 | Provide Departmental Representative material(s) and laboratory testing results. Failure to provide testing results may result in rejection of the work. |
| | | .3 | Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory. |

- .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Departmental Representative.

END OF SECTION

Temporary Facilities

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|-------------------------------------|----|--|
| 1.1 Access | .1 | Provide and maintain adequate access to project site. |
| | .2 | If authorized to use existing roads or structures for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads. |
| | .3 | Maintain full access to the work site. Should a court injunction be required ordering a person or group to refrain from impeding access to the site, such as a demonstration, picketing or union action, then obtaining the injunction and any associated costs will be considered incidental to this Contract. Any delays associated with such activity will be considered incidental to this Contract. |
| 1.2 Contractor's Site Office | .1 | Establish on the site of the work and keep open at all times during the execution of the work an office where all letters, orders, notices and other communications may be received or acknowledged either by the Contractor or his authorized agent or representative. Provide a telephone and fax machine in the office. |
| | .2 | Keep one up-to-date copy of the Contract Documents, bulletins and other materials as specified under Section 01 10 10 – General Instructions. |
| 1.3 Storage Sheds | .1 | Provide adequate weather tight sheds with raised floors, for storage of materials, tools and equipment which are subject to damage by weather. |
| | .2 | Make arrangements with the Departmental Representative for on-site storage areas. |
| 1.4 Sanitary Facilities | .1 | Provide sanitary facilities for work force in accordance with governing regulations and ordinances. |
| | .2 | Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition. |
| 1.5 Parking | .1 | Make arrangements with the Departmental Representative to provide parking space for work force. |
| 1.6 Power | .1 | Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances. |
| | .2 | Install temporary facilities for power such as pole lines and cables to approval of local power supply authority. |
| 1.7 Water Supply | .1 | Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances. |
| 1.8 Barricades | .1 | Provide and maintain sufficient barricades, fencing, notices, warning signs, light signals, etc. for the protection of adjoining |

Temporary Facilities

property and to warn others and workmen engaged on the job of the dangers caused by the work.

- .2 Types and location of barricades, etc. to be in accordance with local regulations and to the satisfaction of Departmental Representative.
- .3 The presence of such barricades, lights, etc. will not relieve the Contractor of the responsibility for any damages.

1.09 Security

- .1 Make arrangements with the Departmental Representative for security of equipment, materials, damages resulting from fire and theft.

1.10 Site Signs and Notices

- .1 Only Project Identification and Consultant/ Contractor signboards and notices for safety or instruction are permitted on site.
- .2 Format, location and quantity of site signs and notices to be accepted by Departmental Representative.
- .3 Signs and notices for safety or instruction to be in English and French languages, or commonly understood graphic symbols.

1.12 Removal of Temporary Facilities

- .1 Remove temporary facilities from site when directed by Departmental Representative.
- .2 When project is closed down for a period of time, keep temporary facilities operational until no longer required by Departmental Representative.

END OF SECTION

- 1.1 General**
 - .1 Use new material and equipment unless otherwise specified.
 - .2 Submit following information for any or all materials and products proposed for supply within seven (7) days of request by Departmental Representative:
 - .1 name and address of manufacturer
 - .2 trade name, model and catalogue number
 - .3 performance, descriptive and test data
 - .4 manufacturer's installation or application instructions
 - .5 evidence of arrangements to procure.
 - .3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
 - .4 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
- 1.2 Manufacturer's Instructions**
 - .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
 - .2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturers' instructions. Departmental Representative will designate which document is to be followed.
- 1.3 Fastenings - General**
 - .1 All fastenings are to be the sizes indicated on the contract plans and are to be hot dipped galvanized to ASTM A123 unless otherwise noted.
- 1.4 Delivery and Storage**
 - .1 Deliver, store and maintain packaged material and equipment with manufacturer's seal and labels intact.
 - .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
 - .3 Store material and equipment in accordance and Storage with supplier's instructions.
- 1.5 Conformance**
 - .1 When material or equipment is specified by standard or performance specifications, upon request of Departmental Representative, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.
- 1.6 Substitution**
 - .1 Proposals for substitution may be submitted only after award of Contract. Such requests must include statements of respective costs of items originally specified and proposed substitutions.
 - .2 Proposals will be considered by Departmental Representative if:

- .1 Products selected by tenderer from those specified, are not available, or
- .2 Delivery date of products from those specified would unduly delay completion of Contract, or
- .3 Alternative products to those specified, which are brought to attention of, and considered by Departmental Representative as equivalent to those specified and will result in a credit to Contract amount.

- .3 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.

- .4 Amounts of all credits arising from approval of substitutions will be determined by Departmental Representative and Contract price will be reduced accordingly. No substitutions will be permitted without prior written approval of Departmental Representative.

- .5 Departmental Representative reserves the right for acceptance or rejection of substitution of materials.

- 1.7 Construction Equipment and Plant**
 - .1 On request, prove to the satisfaction of Departmental Representative that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
 - .2 Maintain construction equipment and plant in good operating order.

- 1.8 Damaged and Rejected Materials**
 - .1 Immediately replace, repair or otherwise make good any material damaged, broken or defaced during construction to the satisfaction of Departmental Representative.
 - .2 Remove rejected materials from site.

END OF SECTION

1.1 Record Drawings

- .1 Departmental Representative will provide the following for drawing record purposes:
 - .1 One (1) set of hard copy drawings.
 - .2 A copy of the .dwg files.
- .2 Maintain hard copy project record drawings on site and accurately record deviations from contract documents caused by site conditions and changes ordered by Departmental Representative.
- .3 Mark changes, on hard copy set, in red colored ink.
- .4 Record following information:
 - .1 Elevations of various elements in relation to Chart Datum.
 - .2 Field changes in dimensions and details.
 - .3 Changes made by Change Order.
- .5 At completion of project and prior to final inspection/issuance of Certificate of Completion, neatly transfer notations to .dwg file and submit electronic files in .dwg and PDF format to Departmental Representative.

END OF SECTION

Cleaning

- 1.1 General**
 - .1 Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws.
 - .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
 - .3 Prevent accumulation of waste which creates hazardous conditions.

- 1.2 Cleaning During Construction**
 - .1 Maintain the work, at least on a daily basis free from accumulations of waste material and debris.
 - .2 Provide on-site containers for collection of waste materials, and debris.
 - .3 Remove waste materials, and debris from site.
 - .4 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces.

- 1.3 Final Cleaning**
 - .1 In preparation for acceptance of the project on an interim or final certificate of completion perform final cleaning.
 - .2 Remove grease, dust, dirt, stains, and other foreign materials, from exterior finished surfaces.

END OF SECTION