REAL PROPERTY SERVICES
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

DISCIPLINE	SIGNATURE	DATE
Architectural Specifications:	_____ approved	
Mechanical Specifications:	_____ approved	
Electrical Specifications:	_____ approved	
Tender PWGSC Project Mgr:	_____ approved	

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1.1 DESCRIPTION OF WORK

.1 In general, work under this contract consists of: Leasehold improvements for office accommodations.

.2 Site of Work is at: Polaris Building, Bedford Institute of Oceanography, Dartmouth, NS.

1.2 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.

1.3 CODES AND STANDARDS

.1 Perform work in accordance with the 2015 National Building Code of Canada 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.

1.4 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.

1.5 TERM ENGINEER

.1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative as defined in the General Conditions of the Contract.

1.6 SETTING OUT WORK

.1 Assume full responsibility for and execute complete layout of work to locations, lines and elevation indicated.

1.7 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.

1.8 MEASUREMENT FOR PAYMENT

.1 Not Applicable

1.9 DOCUMENTS REQUIRED

.1 Maintain at job site, one copy each of the following:
.1 Contract Drawings
.2 Specifications
.3 Addenda
.4 Reviewed Shop Drawings
.5 List of outstanding shop drawings
.6 Change Orders
.7 Other modifications to Contract
.8 Field Test Reports
.9 Copy of Approved Work Schedule
.10 Health and Safety Plan and other safety related documents
.11 Other documents as stipulated elsewhere in the Contract Documents.

1.10 PERMITS

.1 In accordance with the General Conditions, obtain and pay for building permit, certificates, licenses and other permits as required by municipal, provincial and federal authorities.

.2 Provide appropriate notifications of project to municipal and provincial inspection authorities.

.3 Obtain compliance certificates as prescribed by legislative and

regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.

.4 Submit to Departmental Representative, copy of application forms and approval documents received from above referenced authorities.

1.11 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

.1 Execute work with least possible interference or disturbance to building operations, occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

.2 Where security has been reduced by work of Contract, provide temporary means to maintain security.

.3 Where elevators or escalators exist in building, only those assigned for Contractor's use may be used for moving workers and material within building. Protect walls of passenger elevators, to approval of Departmental Representative prior to use. Accept liability for damage, safety of equipment and overloading of existing equipment.

.4 Provide temporary dust screens, barriers, warning signs in locations where renovation and alteration work is adjacent to areas which will be operative during such work.

1.12 ROUGHING-IN

.1 Be responsible for obtaining manufacturer's literature and for correct roughing-in and hook-up of equipment, fixtures and appliances.

1.13 CUTTING, FITTING AND PATCHING

.1 Ensure that cutting and patching required by all trades is included in total bid price submitted for the work.

.2 Execute cutting [including excavation], fitting and patching required to make work fit properly.

.3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. [This includes patching of openings in existing work resulting from removal of existing services].

.4 Do not cut, bore, or sleeve load-bearing members, except where specifically approved by Departmental Representative.

.5 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

.6 Fit work airtight to pipes, sleeves ducts and conduits.

1.14 CONCEALMENT

.1 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

1.15 LOCATION OF FIXTURES

.1 Location of equipment, fixtures and outlets, shown or specified shall be considered as approximate. Actual location shall be as required to suit conditions at time of installation and as is reasonable.

.2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.

.3 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for actual location.

.4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

1.16 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 tenant operations.

.2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.

.3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. [This includes disconnection of electrical power and communication services to tenant's operational areas]. Adhere to approved schedule and provide notice to affected parties.

.4 Provide temporary services to maintain critical building and tenant systems.

.5 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

.6 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

1.17 BILINGUAL NOTATIONS

.1 Any items supplied and installed under this contract which have operating instructions on them such as door hardware, washroom accessories, push button activation controls powered hand dryers, mechanical equipment such as water coolers, etc., and which can be expected to be used by the building tenants, must have such operating instructions in bilingual format - English and French.

.2 Factory embossed or recessed symbols illustrating equipment operation is an acceptable alternate to lettering.

.3 Items supplied with factory - embossed or recessed lettering in one official language with an applied sticker or decal representing the second official language is not acceptable unless the Departmental Representative gives prior approval before any such items are ordered.

.4 Internationally recognized colour coding such as red and blue center pieces for plumbing brass is acceptable.

.5 No extra costs will be paid for re-stocking or re-ordering of materials and equipment due to Contractor's failure to fully meet bilingual signage requirements specified herein.

.6 Ensure that all trades are made aware of above requirements.

1.18 BUILDING SMOKING ENVIRONMENT

.1 Comply with smoking restrictions.

1.19 ASBESTOS DISCOVERY

.1 Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of work, stop work and notify Departmental Representative immediately. Do not proceed with relevant work until written instructions have been received from Departmental Representative.

1.1 SUBMITTALS

.1 Upon acceptance of bid and prior to commencement of work, submit to Departmental Representative the following work management documents:
.1 Work Schedule as specified herein.
.2 Shop Drawing Submittal Schedule specified in section 01 33 00
.3 Waste Management Plan specified in section 01 74 21
.4 Health and Safety Plan specified in section 01 35 29
.5 Hot Work Procedures specified in section 01 35 24
.6 Dust Control Plan specified in section 01 50 00.

1.2 WORK SCHEDULE

.1 Upon acceptance of bid submit:
.1 Work schedule within 7 calendar days of contract award.

.2 Schedule to indicate all calendar dates from commencement to completion of all work within the time stated in the accepted bid.

.3 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.

.4 Work schedule content to include as a minimum the following:
.1 Bar (GANTT) Charts, indicating all work activities, tasks and other project elements, their anticipated durations, planned dates for achieving key activities and major project milestones supported with;
.2 Written narrative on key elements of work illustrated in bar chart, providing sufficient details to demonstrate a reasonable implementation plan for completion of project within designated time.
.3 Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.

.5 Schedule work in cooperation with the Departmental Representative. Incorporate within Work Schedule, items identified by Departmental Representative.

.6 Completed schedule shall be approved by Departmental Representative. When approved, take necessary measures to complete work within scheduled time. Do not change schedule

without Departmental Representative's approval.

.7 Ensure that all subtrades and subcontractors are made aware of the work restraints and operational restrictions specified.

.8 Schedule Updates:
.1 Submit when requested by Departmental Representative.
.2 Provide information and pertinent details explaining reasons for necessary changes to implementation plan.
.3 Identify problem areas, anticipated delays, impact on schedule and proposed corrective measures to be taken.

.9 Departmental Representative will make interim reviews and evaluate progress of work based on approved schedule. Frequency of such reviews will be as decided by Departmental Representative. Address and take corrective measures on items identified by reviews and as directed by Departmental Representative. Update schedule accordingly.

.10 In every instance, change or deviation from the Work Schedule, no matter how minimal the risk or impact on safety or inconvenience to tenant or public might appear, will be subject to prior review and approval by the Departmental Representative.

1.3 PROJECT PHASING

.1 This project is to be completed in two separate phases. Phase 1 to include the full scope of work for the entire Level 5 renovations.

.2 Once Phase 1 has been completed, including all deficiencies corrected, and inspection completed, the Owner requires a 4 week period to allow for installation of all furniture, running of all communication cables and relocation of staff and equipment.

.3 Once this set up period is complete, the Contractor will then commence with Phase 2, which will include the full scope of work for Level 4 renovations.

.4 All shop drawing submissions will be required during Phase 1. For all products and materials that are to be used for both Phases, only one submission will be required. No products or materials are to be changed for the second phase.

1.4 OPERATIONAL RESTRICTIONS

.1 The Contractor must recognize that building occupants will be affected by implementation of this contract. The Contractor

must perform the work with utmost regard to the safety and convenience of building occupants and users, and to meet the requirements of the building landlord. All work activities must be planned and scheduled with this in mind. The Contractor will not be permitted to disturb any portion of the building without providing temporary facilities as necessary to ensure safe and direct passage through disturbed or otherwise affected areas.

.2 Departmental Representative reserves the right to stop certain daytime work activities, if the nature of that activity generates excessive noise or dust and have Contractor re-schedule that particular work to be performed during an Off-Hour period. The Contractor will be responsible for any additional costs associated with the re-scheduling of the work to Off-hours.

.3 Off Hours: Means a period of time which is outside the daily operational hours of the users of the Facility. For the purposes of this contract, “Off-Hours” are generally defined as follows:

.1 Weeknight Off-Hours: Between the hours of 18:00 and 06:00 for each weekday Monday to Thursday inclusive.

.2 Weekend Off-Hours: Between the hours of 18:00 Friday evening to 06:00 Monday morning.

.3 Dependent on the nature and location of the construction activity and due to an unanticipated operational requirement of the facility users, certain “Off-Hour” periods may be redefined by adjusting the start and end time periods or cancellation of a specific “Off-Hour” work shift during the course of the Work.

.4 Ensure that all trades are aware of the potential "Off-Hour" requirements of this contract and ensure that any extra costs incurred as a result is included in the Contractor's bid price for the work. No extra cost will be paid due to failure by General Contractor or his sub-contractors to recognize the off-hour requirements and other restrictions specified herein and to include all necessary allowances within their bids.

.5 Facility circulation maintained:

.1 Ensure that entrances, corridors, stairwells, fire exits and other circulation routes are maintained free and clear providing safe and uninterrupted passage for Facility users and public at all times during the entire work.

.2 Maintain those areas clean and free of construction materials and equipment. Provide temporary dust barriers and other suitable enclosures to ensure users are not exposed to construction activities and are protected from exposure to dust, noise and hazardous conditions.

.3 Provide temporary corridors, walkways, passageways,

access to offices, etc., when required due to nature of work. Such circulation routes must be constructed to barrier free requirements unless approved otherwise by Departmental Representative.

.4 Maintain fire escape routes accessible and fire fighting access open all times for the duration of the project.

.5 Do not under any circumstances block fire exit doors. Do not leave construction materials or debris in corridors, stairwells building entrances and exits.

.6 Safety Signage:

.1 Provide on site, and erect as required during progress of work, proper bilingual signage, mounted on self-supporting stands, warning the public and building occupants of construction activities in progress and alerting need to exercise caution in proceeding through disturbed areas of the facility, and directing building occupants through any detours which may be required.

.2 Signage to be professionally printed and mounted on wooden backing, coloured and to express messages as directed by the Departmental Representative.

.3 Generally maximum size of sign should be in the order of 1.0 square meters. Number of signs required will be dependent on number of areas in facility under renovation at any one time.

.4 Include costs for the supply and installation of these signs in the bid price.

.7 Dust and Dirt Control:

.1 See section 01 50 00 and 01 74 11 for dust control and cleaning requirements.

.8 Work in Occupied Areas:

.1 Where work must be carried out in an occupied area beyond the boundaries of the enclosed construction site, perform such work during the non-operational off-hour periods of the Facility.

.2 Ensure that all dust, dirt, debris, construction waste, materials, tools and equipment are completely removed at the end of each work shift. Clean and reinstate area ready for daytime use by tenant.

.3 Provide temporary dust barriers around immediate work areas and place fabric drop sheets over workstations, equipment and other furnishings located immediately adjacent to such work.

.4 Conduct work in such a way as to minimize the creation of dust and to avoid contaminating areas beyond the immediate location.

.5 Discuss and obtain Departmental Representative's approval beforehand on the type and extent of dust barriers, protective devices and measures needed.
.6 Be responsible for temporarily moving office furnishings, workstations, computer equipment and other objects as needed to gain access and conduct work. Reinstall all dislocated items at end of each work shift making the area operational again.
.7 Disconnect and reconnect any power and communications systems feeding workstations as required.
.8 Clean such areas as well as those corridors and routes used to gain entry and access.

.9 Cleaning of tenant occupied areas used by Contractor:
.1 Clean lobbies, corridors, stairs and other circulation routes used by workers to gain access to work by conducting cleaning, vacuuming and washing of floors, walls and other soiled surfaces.

.10 Ensure that all sub-trades are made aware of and abide by the contents of this section and in particularly the work restrictions specified herein due to tenant operational requirements.

1.5 PROJECT MEETINGS

.1 Schedule and administer project meetings, held on a minimum bi-weekly basis, for entire duration of work and more often when directed by Departmental Representative as deemed necessary due to progress of work or particular situation.

.2 Prepare agenda for meetings.

.3 Notify participants in writing 4 days in advance of meeting date.
.1 Ensure attendance of all subcontractors.
.2 Departmental Representative will provide list of other attendees to be notified.

.4 Hold meetings at project site or where approved by Departmental Representative.

.5 Preside at meetings and record minutes.
.1 Indicate significant proceedings and decisions. Identify action items by parties.
.2 Distribute to participants by e-mail within 3 calendar days after each meeting.
.3 Make revisions as directed by Departmental Representative.
.4 Departmental Representative will advise whether submission of minutes by Email is acceptable. Decision will be based on compatibility of software among participants.

1.6 WORK COORDINATION

.1 The General Contractor is responsible for coordinating the work of the various trades and predetermining where the work of such trades interfaces with each other.

.1 Designate one person from own employ having overall responsibility to review contract documents and shop drawings, plan and manage such coordination.

.2 The General Contractor shall convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required.

.1 Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.

.2 Develop coordination drawings when deemed required, illustrating potential interference between work of various trades and distribute to all affected parties including structural trade.

.1 Pay particularly close attention to overhead work above ceilings and within or near to building structural elements.

.2 Coordination drawings to identify all building elements, services lines, rough-in points and indicate from where various services are coming.

.3 Review coordination drawings at purposely called meetings. Have subcontractors sign-off on drawings and publish minutes of each meeting.

.4 Plan and coordinate work in such a way to minimize quantity of service line offsets.

.5 Submit copy of coordination drawings and meeting minutes to Departmental Representative for information purposes.

.3 Submission of shop drawings and ordering of prefabricated equipment or prebuilt components shall only occur once coordination meeting for such items has taken place between trades and all conditions affecting the work of the interfacing trades has been made known and accounted for.

.4 Work Cooperation:

.1 Ensure cooperation between trades in order to facilitate the general progress of the work and avoid situations of spatial interference.

.2 Ensure that each trade provides all other trades reasonable opportunity for the completion of the work and in such a way as to prevent unnecessary delays, cutting, patching

and the need to remove and replace completed work.

.5 No extra costs to the Contract will be considered by the Departmental Representative as a result of Contractor's failure to effectively coordinate all portions of the Work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor to be resolved at own cost.

1.7 OTHER CONTRACTS

.1 Another contract may be in progress near the site during the course of this work.

.2 The project and subject matter of this contract is:
.1 Renovations in adjacent or nearby locations that may influence the scheduling of the work.

.3 Cooperate with other Contractors in carrying out their respective works and carry out all instructions from the Departmental Representative in this regard.

.4 Connect properly and coordinate work with that of other Contractors. If any part of the work under this Contract depends for its proper execution or result upon the work of another Contractor, report promptly to the Departmental Representative, in writing, any defects in the work of such other Contractors as may interfere with the proper execution of this work.

1.1 RELATED SECTIONS

.1 Section 01 78 00 - Closeout Submittals.

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.

.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 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.

.2 Shop Drawing Submittal Schedule:
.1 Submit within 10 working days of acceptance of bid a schedule listing all shop drawings to be submitted for project.

.3 Shop Drawings Format:
.1 Electronic data files in PDF format.
.2 Product Data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.
.3 Non or poorly legible PDF files, will not be accepted and will be returned not reviewed.

.4 Shop Drawings Content:
.1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.

.2 Supplement manufacturer's standard drawings and literature with additional information to provide details applicable to project.
.3 Delete information not applicable to project on all submittals.

.5 Allow 14 calendar days for Departmental Representative's review of each submission.

.6 Adjustments or corrections made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.

.7 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and comments are made, fabrication and installation may proceed upon receipt of shop drawings. If shop drawings are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected shop drawings, through same submission procedures indicated above.

.8 Be advised that costs and expenses incurred by Departmental Representative to conduct more than one review of incorrectly prepared shop drawing submittal for a particular material, equipment or component of work may be assessed against the Contractor in the form of a financial holdback to the Contract.

.9 Accompany each submissions with transmittal letter, containing:
.1 Date.
.2 Project title and project number.
.3 Contractor's name and address.
.4 Identification and quantity of each shop drawing, product data and sample.
.5 Other pertinent data.

.10 Submissions shall include:
.1 Date and revision dates.
.2 Project title and project number.
.3 Name and address of:
.1 Subcontractor.
.2 Supplier.
.3 Manufacturer.
.4 Contractor's stamp, signed by Contractor's authorized Representative certifying approval of submissions, verification

of field measurements and compliance with Contract Documents.

.5 Cross references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.

.6 Details of appropriate portions of Work as applicable:

.1 Fabrication.

.2 Layout, showing dimensions, including identified field dimensions, and clearances.

.3 Setting or erection details.

.4 Capacities.

.5 Performance characteristics.

.6 Standards.

.7 Operating weight.

.8 Wiring diagrams.

.9 Single line and schematic diagrams.

.10 Relationship to adjacent work.

.11 After Departmental Representative's review, distribute copies.

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

1.4 SAMPLES

.1 Submit for review samples as specified in respective specification Sections. Label samples with origin and intended use.

.2 Deliver samples to Departmental Representative's office or to other address as directed. Do not drop off samples at construction site except for pre-approved circumstances previously approved by Departmental Representative.

.3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of

Contract Documents.

.4 Where colour, pattern or texture is criterion, submit full range of samples.

.5 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments will result in a cost increase to the Contract notify Departmental Representative in writing prior to proceeding with Work.

.6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.

.7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.1 SECTION INCLUDES

.1 Fire Safety Requirements

.2 Hot Work Permit

.3 Existing Fire Protection and Alarm Systems

1.2 RELATED WORK

.1 Section 01 35 29 Health and Safety 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.
.4 Use of open flame torches such as for roofing work.

1.5 SUBMITTALS

.1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 14 calendar days of acceptance of bid.

.2 Submit in accordance with section 01 33 00.

1.6 FIRE SAFETY REQUIREMENTS

.1 Implement and follow fire safety measures during Work. Comply with following:

.1 National Fire Code.
.2 Fire Protection Standards FCC 301 and FCC 302.
.3 Federal and Provincial Occupational Health and Safety Acts and Regulations.

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

1.7 HOT WORK AUTHORIZATION

.1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.

.2 To obtain authorization submit to Departmental Representative:
.1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
.2 Description of the type and frequency of Hot Work required.
.3 Sample Hot Work Permit to be used.

.3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
.1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
.2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.

.4 Requirement for individual authorization will be based on:
.1 Nature or phasing of work;
.2 Risk to Facility operations;
.3 Quantity of various trades needing to perform hot work on project or;
.4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.

.5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.

.6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during

non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.

1.8 HOT WORK PROCEDURES

.1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.

.2 Hot Work Procedures to include:
.1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section 01 35 29.
.2 Use of a Hot Work Permit system with individually issued permit by Contractor's Superintendent to worker or subcontractor granting permission to proceed with Hot Work.
.3 Permit required for each Hot Work event.
.4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of 60 minutes immediately following the completion of the Hot Work.
.5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.
.6 Site specific rules and procedures in force at the site as provided by the Facility Manager.

.3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.

.4 Procedures shall clearly establish responsibilities of:
.1 Worker performing hot work,
.2 Person issuing the Hot Work Permit,
.3 Fire Safety Watcher,
.4 Subcontractor(s) and Contractor.

.5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

1.9 HOT WORK PERMIT

.1 Hot Work Permit to include the following:

.1 Project name and project number;
.2 Building name and specific room or area where hot work will be performed;
.3 Date of issue;
.4 Description of hot work type needed;
.5 Special precautions to be followed, including type of fire extinguisher needed;

.6 Name and signature of permit issuer.
.7 Name of worker to which the permit is issued.
.8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
.9 Worker's signature with time/date of hot work completion.
.10 Stipulated time period of safety watch.
.11 Fire Safety Watcher's signature with time/date.

.2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.

.3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

1.10 FIRE PROTECTION AND ALARM SYSTEMS

.1 Fire protection and alarm systems shall not be:
.1 Obstructed.
.2 Shut-off, unless approved by Departmental Representative.
.3 Left inactive at the end of a working day or shift.

.2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.

.3 Costs incurred, from the fire department, Facility 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.

1.1 SECTION INCLUDES

.1 Procedures to isolate and lockout electrical facility and other equipment from energy sources.

1.2 RELATED WORK

.1 Section 01 35 29: Health and Safety

1.3 REFERENCES

.1 CSA C22.1-06 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.

.2 CAN/CSA C22.3 No.1-06 - Overhead Systems.

.3 CSA C22.3 No.7-06 - 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 has been 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 Comply with the following in regards to isolation and lockout of electrical facilities and equipment:
.1 Canadian Electrical Code
.2 Federal and Provincial Occupational Health and Safety Acts and Regulations.
.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.

1.6 SUBMITTALS

.1 Submit copy of lockout procedures, sample of lockout permit and lockout tags proposed for use in accordance with Section 01 33 00. Submit within 14 calendar days of acceptance of bid.

1.7 ISOLATION OF EXISTING SERVICES

.1 Obtain Departmental Representative's written authorization prior to working on existing live or active electrical facilities and equipment and before proceeding with isolation of such item.

.2 To obtain authorization, submit to Departmental Representative the following documentation:
.1 Written request to isolate the particular 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, as follows:
.1 Fill-out standard form in current use at the Facility as provided by Departmental Representative or;
.2 Where no form exist, make written request indicating:
.1 The equipment, system or service to be isolated and its' location;
.2 Duration of isolation period (ie: start time & date and completion time & date).
.3 Voltage of service feed to system or equipment being isolated.
.4 Name of person making the request.

.4 Do not proceed with isolation until receipt of written notification from Departmental Representative granting the Isolation Request and authorization to proceed with the work.
.1 Note that Departmental Representative may designate another person at the Facility being authorized to grant the Isolation Request.

.5 Conduct safe, orderly shutdown of equipment or facility. De-energize, isolate and lockout power and other sources of energy feeding the equipment or facility.

.6 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require isolation of existing services.

.7 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. Follow Departmental Representative's directives in this regard.

.8 Conduct hazard assessment as part of the process in accordance with health and safety requirements specified Section 01 35 29.

1.8 LOCKOUTS

.1 De-energize, isolate and lockout electrical facility, mechanical equipment and machinery from all potential sources of energy prior to working on such items.

.2 Develop and implement clear and specific lockout procedures to be followed as part of the Work.

.3 Prepare typed written Lockout Procedures describing safe work practices, procedures, worker responsibilities and sequence of activities to be followed on site by workforce to safely isolate an active piece of equipment or electrical facility and effectively lockout and tag out it's sources of energy.

.4 Include as part of the Lockout Procedures a system of lockout permits managed by Contractor's Superintendent or other qualified person designated by him/her as being "in-charge" at the site.
.1 A lockout permit shall be issued to specific worker providing a Guarantee of Isolation before each event when work must be performed on a live equipment or electrical facility.

.2 Duties of person managing the permit system to include:

.1 Issuance of permits and lockout tags to workers.
.2 Determining permit duration.
.3 Maintaining record of permits and tags issued.
.4 Making a Request for Isolation to Departmental Representative when required as specified above.
.5 Designating a Safety Watcher, when one is required based on type of work.
.6 Ensuring equipment or facility has been properly isolated.
.7 Collecting and safekeeping lockout tags returned by workers as a record of the event.

.5 Clearly establish, describe and allocate responsibilities of:

.1 Workers.
.2 Person managing the lockout permit system.
.3 Safety Watcher.
.4 Subcontractor(s) and General Contractor.

.6 Generic procedures, if used, must be edited and supplemented with pertinent information to reflect specific project requirements.

.1 Incorporate site specific rules and procedures in force at site as provided by Facility Manager through the Departmental Representative.
.2 Clearly label the document as being the Lockout procedures applicable to work of this contract.

.7 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.

.8 Use industry standard lockout tags.

.9 Provide appropriate safety grounding and guards as required.

1.9 CONFORMANCE

.1 Brief all workers and subcontractors on requirements of this section. Stringently enforce use and compliance.

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 forms and lockout permits and tags issued to workers on site for full duration of Work.

.3 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

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 10 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.
.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 Nova Scotia, and 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/
.2 COSH can be viewed at: www.http://laws.justice.gc.ca/eng/SOR-86-304/ n e .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.

.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. See Section 01 50 00 for minimum acceptable requirements.
.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.

.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].

.3 Record results and address in Health and Safety Plan.

.4 Keep documentation on site for entire duration of the Work.

1.11 PROJECT/SITE CONDITIONS

.1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
- .1 Existing hazardous and controlled products stored on site:
  - .1 landlord / tenant related - none
- .2 Existing hazardous substances or contaminated building materials:
  - .1 landlord / tenant related - none
- .3 Known latent site and environmental conditions:
  - .1 landlord / tenant related - none
- .4 Facility on-going operations:
  - .1 publicly accessible building.
  - .2 adjacent or nearby construction taking place simultaneously.

.2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.

.3 Include above items in the hazard assessment of the Work.

.4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.12 MEETINGS

.1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
- .1 Superintendent of Work
- .2 Designated Health & Safety Site Representative
- .3 Subcontractors

.2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.

.3 Keep documents on site.

1.13 HEALTH AND SAFETY PLAN

.1 Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.

.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 firefighting 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 PWGSC 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 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

.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.

.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.

.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 BLASTING

.1 Blasting or other use of explosives is not permitted on site.

1.21 POWDER ACTUATED DEVICES

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

1.22 CONFINED SPACES

.1 Abide by occupational health and safety regulations regarding work in confined spaces.

1.23 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.

1.24 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.

1.25 CONSTRUCTION SITE SAFETY PLAN

.1 Carry out all work of this contract placing maximum emphasis on safety for workers and other authorized persons working or circulating on the construction site.

.2 Not withstanding other safety requirements specified in this section or in any other section of the specifications, the Contractor shall prepare a written site specific construction safety plan outlining all procedures and safe work practices which must be followed by all personnel working or circulating on the construction site. This safety plan shall address and conform to the provincial safety act and regulations, except where noted in the contract documents the requirement to conform with a more stringent act or regulation develop the plan in collaboration with the various subcontractors, who will be carrying out work at the site at any time during the construction period, to ensure that all pertinent typed of work activity are addressed in the plan by related safety procedures which must be followed when carrying out such work. It is the Contractor's responsibility to ensure that all workers and authorized persons working or circulating on the construction site become familiar with all safety measures specified in the

plan. These measures and the means of communicating them to all persons must be addressed in the safety plan in a clear and specific manner.

.3 Prior to commencement of work, the safety plan must be posted on the construction site in a common location, visible for all workers and authorized persons working or circulating on the construction site to see. Ensure that all employees are advised of such safety plan and of the location where it is posted. The site specific safety plan should simply be a “One Pager” with all known hazards listed on one side of the page and the corresponding “Controls” listed on the other side. The “Controls” in some cases are from the NS OH&S Act and Regulations and / or others, and it may also include procedures, best practices, etc., from the Contractor’s safety program. (Any electrical work should include “Lockouts” – This is in the NS Acts and Regulations). It should include an emergency/communications plan with the names and phone numbers of people/emergency department, etc. to contact including the Departmental Representative. It should state the name of the person in charge and where everyone is to congregate.

.4 The construction site safety plan should also be tied to the building emergency plan where applicable.

.5 The Contractor shall use measures to ensure that all workers and any authorized persons entering onto the construction site are notified of and abide by the posted safety rules and procedures. The contractor or their representative reserves the right to demand the removal of any persons not complying with safety plan. Any person removed from the site shall not be permitted to renter in the construction site.

.6 The safety plan shall be developed immediately upon notification of the contract award and is to be completed prior to the commencement of work. Revise such plan as required when changes to planned work procedures occur or when directed by any safety officer from any authority having jurisdiction. Submit the safety plan and any revised version to the department representative for information and retention purposes only. The submission of the safety plan shall not relieve the contractor of any legal obligations as specified by the provincial safety acts or regulations.

1.1 GENERAL

.1 Due to nature of this Facility, and client operations therein, security regulations pertaining to site will be in place during the work resulting in need for:
.1 Control and limit movement of construction workers at the site;
.2 Escort and continuous supervision of workers by security personnel;
.3 Specific rules and regulations as specified in this section and as directed by the Departmental Representative to be stringently followed.

.2 It is the Contractor's responsibility to:
.1 Submit necessary documentation required and obtain security clearances for all workers;
.2 Become familiar with and abide by security rules and regulations;
.3 Brief all workers and subcontractors in respect of the security regulations and ensure that they abide by all rules and directives.

.3 The Departmental Representative will coordinate a pre-construction meeting between Contractor, Facility Management and Security Personnel who will provide details and directives on control and movement on site.
.1 Note that the building's custodial responsibilities are currently being managed by Public Services & Procurement \ Canada.

.4 Any infraction of site security regulations on the part of the Contractor, members of work force or any Subcontractor in his employ, could result in:
.1 Financial penalties in the form of progress payment reduction or holdback assessments being levied against the Contractor and;
.2 Demand immediate removal of offending party from the site.

1.2 SECURITY PERSONNEL

.1 Obtain and pay for the services of security staff / commissionaires to provide escort and security supervision of all workers during the work of this contract.

.2 Provide minimum of 1 commissionaire to be on site at all times when work is carried out, having the following responsibilities:
.1 Limit movement of workers to within the boundaries established by the Departmental Representative for each work phase;

.2 Maintain security control list of workers authorized to be on site as determined by Contractor and the Departmental Representative;
.3 Manage the distribution and control of worker ID tags;
.4 Escort workers who need to circulate on site beyond the established boundaries of work, including the corridors, stairwells and elevators used for access to and from work areas.
.5 Escort and supervise short term visitors who need access to the work site such as for material deliveries or to conduct inspections.

.3 Ensure Commissionaire(s) are present on site for entire workshift including work breaks and time period after workshifts until all workers have left site.

.4 Commissionaire must stay within the actual construction area and provide surveillance of all workers ensuring that security rules and requirements are obeyed and to limit movement to approved work areas of site.

.5 Commissionaire must also escort workers from approved entrance doors and work area(s).

.6 Escort and supervision of workers by Commissionaire is required at all times regardless as to whether workshifts are in the daytime or during Facility off hours.

.7 Commissionaire shall report directly to the Departmental Representative and to the Facility security personnel and ensure that site security directives are obeyed by all workers.
.1 Empower Commissionaire with authority to remove any worker deemed non-compliant with security directives.

.8 Ensure Commissionaire is fitted and wears approved safety hard hat, safety footwear and other personnel protective equipment appropriate to work in accordance with applicable Occupational Health and Safety requirements specified.

1.3 SECURITY REQUIREMENTS

.1 All persons employed by Contractor or by subcontractors who will be working on site shall adhere to requirements of this section, the Departmental Representative Facility Management, and Commissionaire at all times while on site.

.2 All workers shall stay within the designated areas where access is needed for work as determined by the Departmental Representative, Facility Management and Commissionaire.

.3 Definition of site area:
.1 The primary work area and adjacent areas where work related to the project is required.

1.4 SITE SECURITY

.1 Where work of this contract requires use of a permanently locked door, it is Contractor's responsibility to ensure that door is unlocked and locked after each use or provide a competent security guard, posted at door, when door must remain open for an elongated period of time during a particular workshift.
.1 Notify Departmental Representative, Facility Management and Commissionaire when security doors will be used and stringently follow all directives to ensure building security is effectively maintained.

.2 Where work of this contract results in removal of doors or walls (providing security to the exterior or between spaces and suites), erect temporary security hoarding over openings constructed in such a way to provide the same degree of security as doors/walls removed, to the approval of the Departmental Representative, Facility Management and Commissionaire.

.3 When work must be carried out during Off Hours or beyond the work hours previously agreed upon at start of work, provide notice to Departmental Representative, Facility Management and Commissionaire within 48 hours beforehand to ensure Commissionaire can be present during work and to minimize impact on Facility operations.

.4 Off Hours are defined in Section 01 14 10 – Scheduling and Management of Work.

1.1 RELATED SECTIONS

.1 All specification sections.

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, equipment and building systems 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.

1.4 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 and existing construction and finishes resulting from removal or replacement of defective work.

1.1 SITE ACCESS AND PARKING

.1 The Contractor is advised that very limited parking is available on site. Follow all instructions from the Departmental Representative in regards to parking availability.

1.2 BUILDING ACCESS

.1 Use only access doors, circulation routes and elevators within building as designated by Departmental Representative to access interior work.

1.3 CONTRACTOR'S SITE OFFICE

.1 Be responsible for and provide own site office, if required, including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative.

1.4 MATERIAL STORAGE

.1 Material storage space on site is limited. Coordinate delivery to minimize storage period on site before being needed for incorporation into work.

1.5 INTERIOR DUST CONTROL AND DUST BARRIERS

.1 Control creation and spread of dust and dirt to building interior and in particular to areas within premises still under use by occupants.

.2 Develop and implement a dust control plan, addressing effective measures to carry out work with least amount of dust being created and propagated.
.1 Carefully evaluate the type of work to be undertaken and the physical layout of each work area on site.
.2 Provide specifically tailored strategy for each work area.
.3 Pre-determine location and placement of dust barriers to confine resulting dust to immediate work area.
.4 Inform Departmental Representative of the proposed dust control measures to be followed at each work area and for each major dust generating activities. Obtain Departmental Representative's approval before proceeding with work.

.3 Dust control plan to incorporate as a minimum the following dust protection and cleaning requirements:
.1 Erect dustproof partitions completely around work area

to fully isolate construction from other parts of the building.

.2 Construct dust partitions as follows:

.1 Use 10 mm polyethylene installed and sealed tightly to abutting walls, ceilings and floor with continuous duct tape along all edges and seams. Support in position with 38 x 89 steel stud framing at 400 mm o.c. Locate seams only at framing members and overlap sheeting by minimum of 150 mm.

.2 Use 12 mm thick drywall installed to steel stud framing spaced at 400 o.c. for areas located in public and corridors in use by occupants.

.1 Erect from floor to underside of ceiling above, sheeting applied to occupied side of partition. Install polyethylene for remainder of partition height to underside of floor/roof deck above.

.2 Scribe, cut and fit sheeting tight to shape of structural steel, deck profile and to other obstructions in ceiling space and abutting walls.

.3 Use compressible neoprene gaskets around perimeter of partition and at all protrusions to achieve airtight construction.

.4 Where partition is exposed to public view, tape and finish drywall joints and paint surface to color approved by the Departmental Representative.

.3 Provide a "dust tight" and lockable access door(s) within dust partition or between rooms for worker entry into work area. This is of particular importance for situations where excessive dust will be generated.

.4 Provide additional dust barriers, placed tightly to underside of the floor/roof deck above, in locations where existing walls are used as part of the dust barrier system but simply terminate at the finished ceiling level resulting in an open space above, or other similar condition, permitting dust to migrate beyond the construction areas.

.5 Make all dust barriers airtight, effectively blocking and stopping all dust migration.

.6 Inspect dust barriers at various intervals during each work shift. Immediately fix tears, unsealed edges and maintain barriers effectively sealed for the entire work duration.

.7 Shut down existing ventilation system feeding construction space, or disconnect and seal-off supply and return air ducts to stop dust from contaminating other areas.

.8 Immediately clean areas in use by occupants and public contaminated by work.

.1 Vacuum carpets, wash floors and walls. Remove

accumulated dust from all surfaces. Clean and remove smears, scuffs and marks.

.4 Meager attempts at controlling dust will not be tolerated. Failure to provide effective dust control during work and to perform satisfactory cleaning thereafter will result in Departmental Representative to proceed and obtain a separate cleaning service agency to perform cleaning to tenant's satisfaction with cost for such services being charged against this Contract in the form of financial holdbacks.

.5 Obtain Departmental Representative's approval before erecting any dust partitions simply to underside of finish ceiling.

.6 Construction of dust barriers, enclosures and placement of temporary protective devices to be performed during Facility non-operational off-hour periods.

1.6 SANITARY FACILITIES

.1 Sanitary facilities are available at the site and may be used by Contractor's work force. Make arrangements for the use of such facilities through the Departmental Representative.

1.7 POWER

.1 Power supply is available and will be provided for construction usage at no cost.
.1 Make arrangements for the use of such services through the Departmental Representative.
.2 Departmental Representative will designate and approve each location of existing power source to which connections can be made to obtain temporary power service.
.3 Connect to existing power supply in accordance with Canadian Electrical Code.

.2 Provide and pay all costs to supply and install temporary cabling, panelboards, switching devices and other equipment as required to connect into power source, provide adequate ground fault protection and extend power supply from existing source to work areas. Perform work and make all connections in accordance with the Canadian Electrical Code, in compliance with the federal and provincial Occupational Health and Safety Regulations as specified in section 01 35 29 and to lockout requirements specified in section 01 35 25.

.3 Provide and maintain temporary lighting to conduct work. Ensure illumination level is not less than 162 lx in all locations.

.4 Electrical power and lighting systems installed under this Contract can be used for construction requirements provided that guarantees are not affected thereby. Make good damage. Replace lamps which have been used over period of 3 months.

1.8 WATER SUPPLY

.1 Water supply is available in existing building and will be provided for construction usage at no cost. Make arrangements for the use and transportation of such services to work area through the Departmental Representative.

.2 Permanent water supply system installed under this Contract can be used for construction requirements provided that guarantees are not affected thereby. Make good damage.

1.9 SCAFFOLDING

.1 Design, construct and maintain scaffolding in rigid, secure and safe manner in accordance with CAN/CSA-S269.2-M87(R2003).

.2 Erect scaffolding independent of walls. Remove when no longer required.

1.10 HEATING AND VENTILATING

.1 Provide temporary heat and ventilation in enclosed areas as required to:
.1 Facilitate progress of work.
.2 Protect work and products against dampness and cold.
.3 Prevent moisture condensation on surfaces.
.4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
.5 Provide adequate ventilation to meet health regulations for safe working environment.

.2 Ventilating:
.1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
.2 Provide local exhaust ventilation to prevent harmful

accumulation of hazardous substances into atmosphere of occupied areas.

.3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.

.4 Ventilate storage spaces containing hazardous or volatile materials.

.5 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.

.3 Maintain strict supervision of operation of temporary heating and ventilating equipment to:

.1 Conform with applicable codes and standards.

.2 Enforce safe practices.

.3 Prevent abuse of services.

.4 Prevent damage to finishes.

1.11 CONSTRUCTION SIGN AND NOTICES

.1 Upon request by Departmental Representative, erect a self supporting project sign in location to be determined.

.2 Departmental Representative will provide a vinyl sign facing for installation by Contractor on sign framework. Sign frame to be plywood face of approximately 1200 x 2400 mm in size complete with required wood framing at 400 mm o.c. and support posts.

.3 Install sign plumb and level in neat wood framework where directed.

.4 Contractor or subcontractor advertisement signboards are not permitted on site.

.5 Safety and Instruction Signs and Notices:

.1 Signs and notices for safety and instruction shall be in both official languages or commonly understood graphic symbols conforming to CAN3-Z321-96(R2006).

.6 Maintenance and Disposal of Site Signs:

.1 Maintain approved signs and notices in good condition for duration of project and dispose of off site on completion of project or earlier if directed by Departmental Representative.

1.12 REMOVAL OF TEMPORARY FACILITIES

.1 Remove temporary facilities from site when directed by Departmental Representative.

1.1 GENERAL

.1 Use new material and equipment unless otherwise specified.

.2 Within 7 days of written request by Departmental Representative, submit following information for any materials and products proposed for supply:
.1 Name and address of manufacturer.
.2 Trade name, model and catalogue number.
.3 Performance, descriptive and test data.
.4 Compliance to specified standards.
.5 Manufacturer's installation or application instructions.
.6 Evidence of arrangements to procure.
.7 Evidence of manufacturer delivery problems or unforeseen delays.

.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.

.5 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 PRODUCT QUALITY

.1 Contractor shall be solely responsible for submitting relevant technical data and independent test reports to confirm whether a product or system proposed for use meets contract requirements and specified standards.

.2 Final decision as to whether a product or system meets contract requirements rest solely with the Departmental Representative in accordance with the General Conditions of the Contract.

1.3 ACCEPTABLE MATERIALS AND ALTERNATIVES

.1 Acceptable Materials: When materials specified include trade names or trade marks or manufacturer's or supplier's name as part of the material description, select and only use one of the names listed for incorporation into the Work.

.2 Alternative Materials: Submission of alternative materials to trade names or manufacturer's names specified must be done during the bidding period following procedures indicated in the Instructions to Bidders.

.3 Substitutions: After contract award, substitution of a specified material will be dealt with as a change to the Work in accordance with the General Conditions of the Contract.

1.4 MANUFACTURERS INSTRUCTIONS

.1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods to be used. Do not rely on labels or enclosure provided with products. Obtain written instructions directly from manufacturers.

.2 Notify Departmental Representative in writing of any conflict between these specifications and manufacturers instructions, so that Departmental Representative will designate which document is to be followed.

1.5 AVAILABILITY

.1 Immediately notify Departmental Representative in writing of unforeseen or unanticipated material delivery problems by manufacturer. Provide support documentation as per clause 1.1.2 above.

1.6 WORKMANSHIP

.1 Ensure quality of work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed.

.2 Remove unsuitable or incompetent workers from site as stipulated in the General Conditions of the Contract.

.3 Ensure cooperation of workers in laying out work. Maintain efficient and continuous supervision on site at all times.

.4 Coordinate work between trades and subcontractors. See section 01 14 10 in this regard.

.5 Coordinate placement of openings, sleeves and accessories.

1.7 FASTENINGS - GENERAL

.1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work and in humid areas.

.2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood or organic material plugs not acceptable.

.3 Keep exposed fastenings to minimum, space evenly and lay out neatly.

.4 Fastenings which cause spalling or cracking of material to which anchorage is made, are not acceptable.

.5 Do not use explosive actuated fastening devices unless approved by Departmental Representative. See section on Health and Safety Requirements in this regard.

1.8 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.

.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 and, use resilient washers with stainless steel.

1.9 STORAGE, HANDLING AND PROTECTION

.1 Deliver, handle and store materials in manner to prevent deterioration and soiling and in accordance with manufacturer's instructions when applicable.

.2 Store packaged or bundled materials in original and

undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work. Provide additional cover where manufacturer's packaging is insufficient to provide adequate protection.

.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 and 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 Immediately remove damaged or rejected materials from site.

.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.

1.1 GENERAL

.1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

.2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

.3 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

1.2 MATERIALS

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

1.3 CLEANING DURING CONSTRUCTION

.1 Maintain work site in a tidy condition, free from accumulations of waste material and debris. Clean areas on a daily basis.

.2 Keep building entrances, corridors, stairwells and tenant occupied areas of building in a clean dust free condition at all times. Conduct thorough cleaning of these areas at end of each work shift when used by workers or affected by the Work.

.3 Use separate collection bins, clearly marked as to purpose, for source separation and recycling of waste and debris in accordance with waste management requirements specified and required by building landlord.

.4 Remove waste materials, and debris from site on a daily basis.

.5 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

.6 Provide dust barriers, dividers, seals on doors and employ other dust control measures as required to ensure that dust and dirt, generated by work, are not transmitted to other areas of building. Should dust migrate into tenant occupied and public areas of building, employ such means as may be necessary to immediately clean all contaminated surfaces to the satisfaction of the Departmental Representative.
.1 See Section 01 50 00 for requirements on dust control and for erection of dust partitions.

.7 Immediately clean all dust, dirt, smears, scuffs and soiled surfaces in lobbies, corridors, stairwells and within tenant occupied areas resulting from the Work.

.1 Perform cleaning, dusting and washing operations, carpet vacuuming (including shampooing if deemed required by Departmental Representative) and floor washing as necessary to thoroughly clean all soiled surfaces.

1.4 FINAL CLEANING

.1 In preparation for acceptance of the completed work perform final cleaning.

.2 Remove grease, dust, dirt, stains, labels, fingerprints, marks and other foreign materials, from interior and exterior finished surfaces. Clean and polish surfaces including glass, mirrors, hardware, wall tile, stainless steel, chrome, baked enamel, plastic laminate, mechanical and electrical fixtures.

.3 Replace items with broken pieces, scratches or disfigured.

.4 Clean lighting reflectors, lenses, and other lighting surfaces.

.5 Vacuum clean and dust building interiors, behind grilles, louvres and screens.

.6 Wax, seal, shampoo or prepare floor finishes as recommended by manufacturer.

.7 Inspect finishes, fitments and equipment. Ensure specified workmanship and operation.

.8 Clean equipment, washroom and kitchen fixtures to a sanitary condition. Replace filters of mechanical equipment.

1 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 WASTE MANAGEMENT

.1 Incorporate environmental and sustainable practices in managing waste resulting from work.

.2 Divert as much waste as possible from landfill.

.3 Coordinate work of sub-trades and sub-contractors to ensure all possible waste reduction and recycling opportunities are taken. Follow waste management requirements specified in trade sections of the Specifications.

.4 Reduce waste during installation of new materials. Undertake practices which will optimize full use of materials and minimize waste.

.5 Develop innovative procedures to reduce quantity of waste generated by construction such as by delivering materials to site with minimal packaging etc...

.6 Provide on-site facilities to collect, handle and store anticipated quantities of reusable, salvageable and recyclable materials.

.7 During demolition and removal work separate materials and equipment at source, carefully dismantling, labeling and stockpiling alike items for the following purposes:
.1 Reinstallation into the work where indicated.
.2 Salvaging reusable items not needed in project which Contractor may sell to other parties.
.3 Sending as many items as possible to locally available recycling facility.
.4 Segregating remaining waste and debris into various individual waste categories for disposal in a "non-mixed state" as recommended by waste processing/landfill sites.

.8 Isolate product packaging and delivery containers from general waste stream. Send to recycling facility or return to supplier/manufacturer.

.9 Send leftover material resulting from installation work for recycling whenever possible.

.10 Establish methods whereby hazardous and toxic materials, and their containers used on site are properly handled, stored and disposed in accordance with applicable federal, provincial and municipal laws and regulations.

3 DISPOSAL REQUIREMENTS

.1 Burying or burning of rubbish and waste materials is prohibited.

.2 Disposal of volatile materials, mineral spirits, oil, paint, and other hazardous materials into waterways, storm, or sanitary sewers is prohibited.

.3 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.

.4 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, demolition and construction waste materials have been banned from disposal in landfills and at transfer stations. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.

.5 Transport and dispose of waste intended for waste processing plant or landfill facility in separated condition and to Operator's rules and recommendations in support of their effort to recycle, reduce and divert certain waste stream from general landfill.

.6 Collect, bundle and transport salvaged materials to be recycled in separated categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities.

.7 Sale of salvaged items by Contractor to other parties not permitted on site.

1.1 SECTION INCLUDES

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

1.2 RELATED SECTIONS

.1 Section 01 78 00 - Closeout Submittals.

1.3 INSPECTION AND DECLARATION

.1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.

.1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.

.2 Departmental Representative's Inspection: Accompany Departmental Representative during all substantial and final inspections of the Work.
.1 Address defects, faults and outstanding items of work identified by such inspections.
.2 Advise Departmental Representative when all deficiencies identified have been rectified.

.3 Note that Departmental Representative will not issue a Certificate of Substantial Performance of the work until such time that Contractor performs following work and turns over the specified documents:
.1 Project record as-built documents;
.2 Final Operations and Maintenance manuals;

.3 Maintenance materials, parts and tools;
.4 Compliance certificates from applicable authorities;
.5 Reports resulting from designated tests;
.6 Demonstration and training complete with user manuals;
.7 Manufacturer's Guarantee certificates.
.8 Testing, adjusting and balancing of equipment and systems complete with submission of test reports.
.9 Commissioning of equipment and systems specified.

.4 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

1.1 SECTION INCLUDES

.1 Project Record Documents.

.2 Operations and Maintenance data.

1.2 RELATED SECTIONS

.1 Section 01 79 00 - Demonstration and Training.

1.3 PROJECT RECORD DOCUMENTS

.1 Departmental Representative will provide 2 white print sets of contract drawings and 2 copies of Specifications Manual specifically for "as-built" purposes.

.2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.

.3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative upon request.

.4 As-Built Drawings:

.1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of work, neatly transfer notations to second set (also by use of red ink).

.2 Submit both sets to Departmental Representative prior to application for Certificate of Substantial Performance.

.3 Stamp all drawings with "As-Built Drawings". Label and place Contractor's signature and date.

.4 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.

.5 Record following information:

.1 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure;

.2 Field changes of dimension and detail;

.3 Location of all capped or terminated services and utilities.

.4 Chases for mechanical, electrical and other services;

.5 Reflected ceiling plan condition showing finished layout of all ceiling-mounted services and devices;

.6 All design elevations, sections, floor plans and details dimensioned and marked-up to consistently report finished installation conditions;

.7 Any details produced in the course of the contract by the Departmental Representative to

supplement or to change existing design drawings;
.8 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and consistently depicting the changed condition as it applies to all affected drawing details.

.5 As-built Specifications: legibly mark in red each item to record actual construction, including:
.1 Changes made by Addenda and Change Orders.
.2 Mark up both copies of specifications; stamp "as-built", sign and date similarly to drawings as per above clause.

.6 Maintain As-built documents current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.

1.4 REVIEWED SHOP DRAWINGS

.1 Provide a complete set of all shop drawings reviewed for project to incorporate into each copy of the Operations & Maintenance manuals.

.2 Submit full sets at same time and as part of the contents of the Operation and Maintenance manuals specified.

1.5 UPDATING OF DIGITAL DRAWINGS

Not Applicable

1.6 OPERATIONS & MAINTENANCE MANUAL

.1 O&M Manual - Definition: an organized compilation of operating and maintenance data including detailed technical information, documents and records describing operation and maintenance of individual products or systems as specified in individual sections of the specifications.

.2 Manual Language: final manuals to be in English language.

.3 Submission Date: submit complete operation and maintenance manual to Departmental Representative 3 weeks prior to application for Certificate of Substantial Performance of the work.

.4 Binding:
.1 Assemble, coordinate, bind and index required data into

Operation and Maintenance Manual.
.2 Use vinyl, hard covered, 3 "D" ring binders, loose leaf, sized for 215 x 280 mm paper, with spine pocket.
.3 Where multiple binders are needed, correlate data into related consistent groupings.
.4 Identify contents of each binder on spine.
.5 Organize and divide data following same numerical system as the section numbers of the Specification Manual.
.6 Dividers: separate each section by use of cardboard dividers and labels. Provide tabbed fly leaf for each individual product and system and give description of product or component.
.7 Type lists and notes. Do not hand write.
.8 Drawings, diagrams and manufacturers' literature must be legible. Provide with reinforced, punched binder tab. Bind in with text; fold larger drawings to size of text pages.

.5 Manual Contents:
.1 Cover sheet containing:
.1 Date submitted.
.2 Project title, location and project number.
.3 Names and addresses of Contractor, and all Sub-contractors.
.2 Table of Contents: provide full table of contents in each binder(s), clearly indicate which contents are in each binder.
.3 List of maintenance materials.
.4 List of spare parts.
.5 List of special tools.
.6 Original or certified copy of warranties and product guarantees.
.7 Copy of approval documents and certificates issued by Inspection Authorities.
.8 Copy of reports and test results performed by Contractor as specified.
.9 Product Information (PI Data) on materials, equipment and systems as specified in various sections of the specifications. Data to include:
.1 List of equipment including manufacturer's name, supplier, local source of supplies and service depot(s). Provide full addresses and telephone numbers.
.2 Nameplate information including equipment number, make, size, capacity, model number and serial number.
.3 Parts list.
.4 Installation details.
.5 Operating instructions.
.6 Maintenance instructions for equipment.

.7 Maintenance instructions for finishes.

.6 Shop drawings:
.1 Include complete set of reviewed shop drawings into each copy of the operations and maintenance manual.
.2 Fold and bind material professionally in a manner that corresponds with the specification section numbering system.
.3 When large quantity of data is submitted, place into separate binders of same size as O&M binders.

.7 Equipment and Systems Data: the following list indicates the type of data and extent of information required to be included for each item of equipment and for each system:
.1 Description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. 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. Include regulation, control, stopping, shut-down, and emergency instructions. 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 Servicing and lubrication schedule, and list of lubricants required.
.7 Manufacturer's printed operation and maintenance instructions.
.8 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 Include test and balancing reports.
.12 Additional requirements as specified in individual specification sections.

.8 Materials and Finishes Maintenance Data:
.1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. [Provide information for re-ordering custom manufactured products.]

.2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
.3 Additional Requirements: as specified in individual specifications sections.

1.7 SPARE PARTS, TOOLS AND MAINTENANCE MATERIALS

.1 Provide spare parts, special tools and extra materials for maintenance purposes in quantities specified in individual specification sections.

.2 Tag all items with associated function or equipment.

.3 Provide items of same manufacture and quality as items in Work.

.4 Deliver to site in well packaged condition. Store in location as directed by Departmental Representative.

.5 Clearly mark as to contents indicating:
.1 Part number.
.2 Identification of equipment or system for which parts are applicable.
.3 Installation instructions or intended use as applicable.
.4 Name, address and telephone number of nearest supplier.

.6 Prepare and submit complete inventory list of items supplied within Maintenance Manual.