



Division 1 General Requirements

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END OF SECTION

Part 1 General

1.1 DESCRIPTION OF WORK

- .1 The Contractor is required to provide all necessary labor, supervision, materials and equipment to:
 - .1 Abate asbestos containing material at thirteen (13) steam vaults across CFB Kingston.
 - .2 All steam vaults are designated as a confined space.
 - .3 Weather depending, work in steam vaults will only be allowed during the period of May 15 to September 15 unless directed otherwise by the DCC Representative.
 - .4 Refer to Statement of Work for more details.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- .1 The Work includes but is not necessarily limited to the supply of all labour, materials and equipment necessary to complete the scope of work defined in the Contract Documents.

1.3 CODES

- .1 Perform work in accordance with National Building Code of Canada (NBC), Ministry of Labour guidelines and regulations, applicable codes and standards and any other National Defence standard procedures that may be specified, (all latest editions). In any case of conflict or discrepancy, the more stringent requirement shall apply.
- .2 Meet or exceed requirements of:
 - .1 contract documents,
 - .2 specified standards, codes and referenced documents.
 - .3 all of the above documents are latest issue, regardless of data shown in the specification.

1.4 DEFINITIONS

- .1 DCC Representative is Defence Construction Canada Ltd. DCC, as referenced in DCC General Conditions. DCC is the tendering agency and the Coordinator for the projects. DCC is the sole project authority representing National Defence and the Designer of Record for the project, during and after tender award.

- .1 DCC Representative is the sole project authority. The Designer of Record is to have the DCC Representative approval for making any changes to the design or specification.
- .2 The Contractor shall cooperate fully with the DCC Representative order that the DCC Representative and the Designer of Record may properly review the progress of the work during its execution.

1.5 SITE CONDITIONS AND INQUIRIES AT TENDER

- .1 It is highly recommended that Contractors should visit the site where possible to familiarize themselves with existing conditions and project intent during the tender. Bidders site briefing, if conducted, is not comprehensive and is not a substitute for a thorough review of the tender package by the Contractor.

1.6 SETTING OUT OF WORK

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Provide everything needed to lay out and construct work.
- .3 Supply any devices and or templates required to facilitate DCC Representative or authorized testing agencies inspection of work.
- .4 Location of non-base controlled services are the responsibility of the contractor to obtain. These are typically natural gas, telephone, cable and local utility controlled electrical. Base will locate services as follows: Base controlled electrical, sewer, steam, water and communications.
- .5 Saturday and Sunday work or work on specified Statutory Holidays is NOT permitted unless approved by the DCC Representative.
- .6 Contractor is to provide a qualified and competent superintendent and is to be present at the job site when work is being performed.

1.7 WORK SEQUENCE

- .1 Construct Work in stages to accommodate Owner's continued use of premises during construction, as applicable.
- .2 Co-ordinate Progress Schedule and co-ordinate with Owner Occupancy during construction, as applicable.
 - .1 Not Used.
 - .2 Not Used.

- .3 Maintain fire access/control.

1.8 CONTRACTOR USE OF PREMISES

- .1 Use of DND Property:
 - .1 Contractor, sub-contractor(s) and all personnel of this contract shall not use any tools, equipment, materials, buildings, structures or any other or any other property owned, rented leased by the Department of Nation Defence (DND) unless authorized in writing by the DCC Representative.
- .2 Contractor's Use of Site:
 - .1 Use of site: exclusive and complete for execution of work, within the boundaries of the Project area of work, unless otherwise stated in writing by the DCC Representative.
 - .2 Zones for exterior storage area are indicated or to be coordinated with the DCC Representative.
- .3 Co-ordinate use of premises with DCC Representative.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .5 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by DCC Representative.
- .6 At completion of operations condition of existing work shall be equal to or better than that which existed before new work started.

1.9 OWNER FURNISHED ITEMS (AS NEEDED)

- .1 Contractor Responsibilities:
 - .1 Receive and unload products at site.
 - .2 Inspect deliveries jointly with DCC Representative; record shortages, and damaged or defective items. Inform DCC Representative immediately in writing of condition of items received.
 - .3 Handle products at site, including uncrating and storage.
 - .4 Protect products from damage, and from exposure to elements.
 - .5 Assemble, install, connect, adjust, and finish products.
 - .6 Repair or replace items damaged by Contractor or subcontractor on site (under their control).

- .7 If applicable, items and all required work will be explicitly defined in the project specific Contract Documents.

1.10 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendation for safety, assess and maintenance. Advise DCC Representative of conflicts and await clarification.
- .3 Inform DCC Representative of impending installation and obtain their approval for actual location.
- .4 Submit red line drawings to indicate relative position of various services and equipment.

1.11 CONCEALMENT

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

1.12 CUTTING AND PATCHING

- .1 Cut and patch as required to make work fit. Refer to appropriate sections and details. Where no detail is given advise DCC Representative and wait until provided with written instruction.
- .2 Make cuts with clean, true, smooth edges.
- .3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work or as indicated.

1.13 ADDITIONAL DRAWINGS

- .1 DCC Representative may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

1.14 RELICS AND ANTIQUITIES

- .1 Protect relics, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.

- .2 Give immediate notice to DCC Representative and await DCC Representative written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain Crown property.

1.15 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 DCC Representative to facilitate execution of work.
- .2 Use of elevators, dumbwaiters, conveyors or escalators in building for moving workers and material is permitted, unless otherwise stated in project specific Contract Documents.
 - .1 Protect walls of passenger elevators, to approval of DCC Representative prior to use.
 - .2 Accept liability for damage, safety of equipment and overloading of existing equipment.
 - .3 Where security has been reduced by work of Contractor, provide temporary means to maintain security.
 - .4 Provide and maintain temporary dust screens, barriers, hoarding, hazardous abatement enclosures, warning signs, drop cloths etc where work is adjacent to areas used by the public or National Defence personnel.

1.16 EXISTING SERVICES

- .1 Notify, DCC Representative of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give DCC Representative at least three (3) working days of notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as approved by DCC Representative with minimum disturbance to pedestrian, vehicular traffic and tenant operations.
- .3 Provide alternative routes for personnel, pedestrian and vehicular traffic.
- .4 Submit schedule to and obtain approval from DCC Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .5 Provide temporary services to maintain critical building and tenant systems as indicated in the Contract Documents.

- .6 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- .7 Where unknown services are encountered, immediately advise DCC Representative and confirm findings in writing.
- .8 Protect, relocate or maintain existing active services. When inactive services are encountered, notify DCC Representative.
- .9 Record locations of maintained, re-routed and abandoned service lines on redline drawings.
- .10 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

1.17 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .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 specified.
 - .12 Utility locate sheets.

1.18 QUALITY ASSURANCE

- .1 The review of the work by the DCC Representative is to confirm adherence to the intent of the design. It does not release the Contractor from his responsibility for the proper execution of the work in accordance with the drawings and specifications and all governing regulations and good workmanship and established trade practices.

- .2 The sampling inspection of material installations by testing agencies will not release the Contractor from his responsibility for the thorough execution of the work in accordance with the drawings and specifications and all governing regulations, good workmanship and established trade practices.
- .3 The intermittent site reviews and subsequent reports by the Designer of Records do not constitute thorough inspection, blanket approval or comprehensive deficiency findings of the installations performed by the Contractor. They are limited to what has been witnessed and to establish adherence to the intent of the design. The Contractor is responsible for the proper execution of the work in accordance with the drawings and specifications and all governing regulations, good workmanship and established trade practices.
- .4 The Contractor is responsible for securing timely written clarifications where the intent of the design may not be clear.

1.19 COST BREAKDOWN

- .1 Within ten (10) working days of award submit breakdown of Contract price in detail as approved by DCC Representative. Cost breakdown will be used as basis for progress payment.
- .2 Itemized separate line cost for work as required by DCC Representative.

1.20 PROJECT MEETINGS

- .1 Hold construction project meetings at times and locations approved by DCC Representative.
 - .1 For bidding purposes, assume Project Meetings to be held bi-weekly.
- .2 DCC Representative will advise General Contractor of meetings. General shall be responsible for notifying sub-contractors and any other interested parties whose attendance is required.
- .3 DCC Representative will assume responsibility for recording and distributing minutes to all interested parties.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 ACCESS AND EGRESS

- .1 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders and scaffolding as required, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

1.3 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with DCC Representative to facilitate work as stated.
- .2 Maintain existing services to building and provide for personnel and vehicle access.
- .3 Where security is reduced by work provide temporary means to maintain security.
- .4 DCC Representative may, at their sole discretion assign sanitary facilities for use by Contractor's personnel. Keep facilities clean. For bidding purposes, assume that the Contractor provides sanitary facilities.
- .5 Closures: protect work temporarily until permanent enclosures are completed.

1.4 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

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

1.5 SPECIAL REQUIREMENTS

- .1 Carry out Work Monday to Friday from 07:00 to 17:00 hours, except when other hours are approved by DCC Representative. No work on statutory holidays unless approved by DCC Representative.
- .2 Interruptions and connections to the CFB Kingston Steam network will only be allowed during the period of May 15 to September 15, unless notified otherwise by the DCC Representative.
- .3 Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.

- .4 Keep within limits of work and avenues of ingress and egress.

1.6 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions. Smoking is not permitted in any building. Refer to Section 01 35 35 DND Fire Safety Requirements.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by DCC Representative are specified in Contract Documents as applicable.

1.2 APPOINTMENT AND PAYMENT

- .1 DCC Representative will appoint and pay for services of testing laboratory except as follows:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests specified to be carried out by Contractor under supervision of DCC Representative.
 - .6 Additional tests specified in paragraph 1.2.2.
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, Contractor will pay costs for additional tests or inspections as required by DCC Representative to verify acceptability of corrected work.

1.3 CONTRACTOR'S RESPONSIBILITIES

- .1 Provide labour, equipment and facilities to:
 - .1 Provide access to Work for inspection and testing.
 - .2 Facilitate inspections and tests.
 - .3 Make good Work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify DCC Representative three (3) working days minimum in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by DCC Representative.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .3 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days. No contractors are to be working on site during statutory holidays.
- .4 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .5 Milestone: significant event in project, usually completion of major deliverable.
- .6 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones.

1.3 REQUIREMENTS

- .1 Ensure Project Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to DCC Representative within ten (10) working days of Award of Contract, a detailed Project Schedule, capable of identifying, scheduling, monitoring and reporting activities related to the progress of work. Provide sufficient detail and degree of control in the schedule to the approval of the DCC Representative and such that the needs and objectives of the Contract are met.

1.5 PROJECT MILESTONES

- .1 Project milestones form interim targets for Project Schedule. Contractor to identify milestones on project schedule. Contractor to include identified milestones from Contract Documents on Project Schedule.

1.6 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - .1 Identification of work periods on a horizontal time scale, from date of award to completion. Indicated weekend or after hours work, if required.
 - .2 Submission date, review times for shop drawings, product data and samples.
 - .3 Anticipated progress of the work for each major activity by discipline. Duration of each task shall be a maximum of 10 days.
 - .4 Identification of the most critical activities throughout the course of the project.
 - .5 Major equipment/material deliveries.
 - .6 Backfill of any utilities.
 - .7 Planned shutdowns of existing systems for work requirements.
 - .8 Proposed dates(s) for commissioning, if required.
 - .9 Training for personnel on new systems.
 - .10 Submission of Redline Drawings, updated Record Drawings and Operations and Maintenance Manuals.
 - .11 Mobilization and demobilization.

1.7 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule as requested by DCC Representative relative to the complexity of the Work required.

1.8 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.
- .2 Submit progress update of activities against planned progress on a bi-weekly basis as requested by the DCC Representative. Progress update to reflect the next 2 weeks of work.
- .3 Weather related delays with their remedial measures will be discussed and negotiated.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 ADMINISTRATIVE

- .1 This section specifies general requirements and procedures for contractor submissions of shop drawings, product data, samples, mock-ups and certificates to DCC Representative for review. Additional specific requirements for submissions are specified in individual sections of the specification.
- .2 Submit to DCC Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with Work affected by submittal until review and acceptance by the DCC Representative.
- .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 converted values are acceptable.
- .6 Review submittals prior to submission to DCC Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not dated and identified as to specific project will be returned without being examined and considered rejected.
- .7 Notify DCC Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .8 Verify field measurements and affected adjacent Work are coordinated.
- .9 Contractor's responsibility for errors and omissions in submission is not relieved by DCC Representative's or Designer of Record review of submittals.
- .10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by DCC Representative or Designer of Record review.
- .11 Submitted shop drawings that do not consider the time requirement for review and or the time required to order, manufacture and deliver does not constitute justification or grounds for requesting an alternate material that is readily available for the project.

Contractor shall bear all costs associated to provide the acceptable product to deliver the project on schedule.

- .12 Keep one reviewed copy of each submission on site.

1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow ten (10) working days for DCC Representative's review of each submission.
- .4 Make changes in shop drawings as DCC Representative may require, consistent with Contract Documents. When resubmitting, notify DCC Representative in writing of revisions other than those requested.
- .5 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project Title and Building Number.
 - .3 DND Drawing Number
 - .4 DND Project Number
 - .5 DCC Project Number
 - .6 Contractor's name and address.
 - .7 Identification and quantity of each shop drawing, product data and sample.
 - .8 Other pertinent data.
- .6 Submissions include:
 - .1 Date and revision dates.
 - .2 Project Title and Building Number.
 - .3 DND Drawing Number
 - .4 DND Project Number
 - .5 DCC Project Number
 - .6 Name and address of:
 - .1 Subcontractor.

- .2 Supplier.
 - .3 Manufacturer.
- .7 Confirmation by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
- .8 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.
- .7 After DCC Representative's review, distribute copies.
- .8 Submit one electronic copy of shop drawings for each requirement requested in specification Sections and as DCC Representative may reasonably request.
- .9 Submit electronic copy of product data sheets or brochures for requirements requested in specification Sections and as requested by DCC Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .10 Submit electronic copy of test reports for requirements requested in specification Sections and as requested by DCC Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
- .11 Submit electronic copy of certificates for requirements requested in specification Sections and as requested by DCC Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
 - .2 Certificates must be dated after award of project contract complete with project name.

- .12 Submit electronic copy of manufacturer's instructions for requirements requested in specification Sections and as requested by DCC Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Safety Data Sheets concerning impedances, hazards and safety precautions.
- .13 Submit electronic copy of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by DCC Representative.
- .14 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .15 Submit electronic copy of Operation and Maintenance Data for requirements requested in specification Sections and as requested by DCC Representative.
- .16 Delete information not applicable to project.
- .17 Supplement standard information to provide details applicable to project.
- .18 If upon review by DCC Representative, no errors or omissions are discovered or if only minor corrections are made, electronic acceptance copy will be returned, and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

1.4 SAMPLES

- .1 Submit for review samples as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to DCC Representative's business address.
- .3 Notify DCC 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 Make changes in samples which DCC Representative may require, consistent with Contract Documents.
- .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.5 MOCK-UPS

- .1 Erect mock-ups in accordance with 01 45 00 - Quality Control.

- .2 Reviewed and accepted mock-ups will become standard of workmanship and materials against which installed work will be verified.

1.6 PHOTOGRAPHIC DOCUMENTATION

- .1 When called for inspections, submit electronic copy of colour digital photography in .jpg format, standard resolution and as approved by DCC Representative.
- .2 Project identification: name and number of project and date of exposure indicated.

1.7 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 CONSTRUCTION FIRE SAFETY

- .1 The Contractor shall provide construction fire safety in accordance with the National Fire Code of Canada.

1.2 FIRE DEPARTMENT BRIEFING

- .1 DCC Representative will co-ordinate arrangements for Pre-Commencement Meeting following contract award. Contractors will be briefed on Fire Safety by the Chief Fire Prevention Officer (CFPO) or his designated representative before work starts.

1.3 REPORTING FIRES

- .1 The Contractor shall inform the DCC Representative and CFPO of all fire incidents at the construction site, regardless of size.
- .2 Know location of nearest fire alarm pull station and telephone, including emergency phone number.
- .3 Report immediately fire incidents to Fire Department as follows:
 - .1 Activate nearest fire alarm pull station.
 - .2 Call 911.
 - .3 Call DCC Representative & Chief Fire Inspector by contacting 613-541-5010 x 5795 / Cell: 613-484-8166
- .4 Person activating fire alarm pull station will remain at the front entrance to direct Fire Department to scene of fire.
- .5 When reporting fire by telephone, give location of fire, name or number of building and (must give municipal address) be prepared to verify location.

1.4 FIRE SAFETY PLAN

- .1 Submit fire safety for the construction site prior to commencement of construction work. The fire safety plan shall conform to the National Fire Code of Canada.
- .2 The fire safety plan shall be limited to the area of construction only. Fire safety plan shall contain building-specific details for planned system impairments. Contractor is not responsible for amending fire safety plans in existing buildings.
- .3 The fire safety plan shall be submitted to the DCC Representative for review by Chief Fire Inspector. Allow 10 working days for DND review. Any comments by CFB Kingston Chief Fire Inspector shall be implemented by the Contractor.

- .4 Post the fire safety plan at entrance to the construction site or near construction site's health and safety board.
- .5 The fire safety plan shall conform to the National Fire Code of Canada and shall contain, at minimum:
 - .1 Emergency procedures to be used in case of fire, including:
 - .1 Sounding the fire alarm;
 - .2 Notifying the fire department;
 - .3 Instructing occupants on procedures to be followed when fire alarm sounds;
 - .4 Evacuating occupants, including special provisions for persons requiring assistance; and
 - .5 Confining, controlling and extinguishing fires.
 - .2 The appointment and organization of designated supervisory staff to carry out fire safety duties.
 - .3 The training of supervisory staff and other occupants in their responsibilities for fire safety.
 - .4 Documents including diagrams, showing type, location and operation of building fire emergency systems.
 - .5 Holding of fire drills (where applicable).
 - .6 The control of fire hazards in the building.
 - .7 The inspection and maintenance of building facilities provided for the safety of occupants.

1.5 FIRE WARNING SYSTEM

- .1 A fire warning shall be provided to notify construction personnel of a fire emergency in the construction area.
- .2 The system used shall be capable of being heard throughout building.

1.6 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

- .1 Unless authorized by the DCC Representative and the CFPO, Fire protection and alarm system will not be:
 - .1 Obstructed.
 - .2 Shut-off.
 - .3 Left inactive at the end of working day or shift without prior written authorization from the CFPO
- .2 Do not use Fire hydrants, standpipes or hose systems for other than fire-fighting purposes unless authorized by the CFPO.

1.7 FIRE PROTECTION SYSTEM IMPAIRMENT

- .1 Notify the DCC Representative and the CFPO 48 hours prior to shutting down any active fire protection system, including water supply, fire suppression, fire detection and life safety systems.
- .2 Where a fire protection system that provides fire alarm monitoring is impaired in an existing building, per the Contractor's fire safety plan a fire watch shall be required and provided by the Contractor.
- .3 The quantity of personnel involved in the fire watch is to be adequate such that the Contractor's entire area of construction work is patrolled during the fire watch.
- .4 The building shall be patrolled at least once per hour on a 24-hour basis until the fire alarm and or fire protection system has been restored to normal operation condition.
- .5 Fire watch personnel are to be familiar with facilities and procedures for sounding an alarm in the event of a fire and have a means of notifying the Emergency Services. The person(s) performing fire watch are not permitted to perform any other duties at the same time.
- .6 Fire watch personnel are to have fire-extinguishing equipment readily available and be trained in its use.
- .7 Implement all fire protection system impairments in accordance with the National Fire Code of Canada and Base Fire Orders.

1.8 FIRE EXTINGUISHERS

- .1 In addition to other requirements of this specification, supply fire extinguishers, as scaled by the CFPO, necessary to protect work in progress and contractor's physical plant on site.
- .2 Fire extinguishers may be required in the following areas as directed by the CFPO.
 - .1 Adjacent to hot works;
 - .2 In areas where combustibles are stored;
 - .3 Near or on any internal combustion engines;
 - .4 Adjacent to areas where flammable liquids or gases are stored or handled;
 - .5 Adjacent to temporary oil fired or gas fired equipment; and
 - .6 Adjacent to bitumen heating equipment.
- .3 Extinguishers shall be sized as 4-A: 40-B: C (20 lbs) unless otherwise directed by the CFPO.
- .4 Extinguishers shall be of the dry chemical type unless otherwise required by the hazard being protected.

- .5 The Contractor may assume the quantity of extinguishers based on a maximum travel distance between extinguishers of 75 feet.

1.9 INSTALLATION OR REPAIR OF ROOFS

- .1 Notify the CFPO of location of asphalt kettles and dates that kettles will be in use. Ensure personnel use and take precautions as follows:
 - .1 Use kettles equipped with thermometers or gauges in good working order.
 - .2 Locate kettles in safe place outside of building or, if approved by CFPO, on non-combustible roof. Locate to avoid danger of igniting combustible material below.
 - .3 Maintain continuous supervision while kettles are in operation and provide metal covers for kettles to smother flames in case of fire. Provide fire extinguishers as required in 1.08.
 - .4 Prior to start of work, demonstrate container capacities to CFPO.
 - .5 Use only glass fibre roofing mops.
 - .6 Do not leave used roofing mops unattended on roof. Store mops away from building and combustible materials.
 - .7 Store roofing materials no closer than 3.0 metres from structures.
 - .8 Any flammable cylinder shall be secure to prevent accidental tip over.

1.10 ACCESS FOR FIRE FIGHTING

- .1 Access for firefighting shall be provide in accordance with National Fire Code of Canada.
- .2 Advise the CFPO of work that would impede fire apparatus response. This includes violation of minimum horizontal and overhead clearances, as prescribed by the CFPO, erecting of barricades and digging of trenches.
- .3 Minimum horizontal clearance: clear width of not less than 5.0 meters or as defined by the CFPO.
- .4 Minimum vertical clearance: overhead height of not less then 6.0 meters, or as defined by the CFPO.

1.11 SMOKING PRECAUTIONS

- .1 Smoking is prohibited in all buildings. Observe posted smoking restrictions near existing buildings. Smoking areas will be IAW Base Fire Orders and will not be within 10 meters of any building entrance.

1.12 RUBBISH AND WASTE MATERIALS

- .1 Keep rubbish and waste materials at minimum quantities.
- .2 Burning of rubbish is prohibited.

- .3 Remove rubbish from work site at end of work day or shift as directed.
- .4 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
- .5 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles and remove specified.

1.13 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 Handle, store and use flammable and combustible liquids in accordance with National Fire Code of Canada.
- .2 Keep flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing Underwriters' Laboratory of Canada or Factory Mutual seal of approval. Obtain written authorization from CFPO for storage of quantities of flammable and combustible liquids exceeding 45 litres on site.
- .3 Do not transfer flammable or combustible liquids inside buildings or on jetties.
- .4 Do not transfer flammable or combustible liquids in vicinity of open flames or any type of heat-producing devices.
- .5 Do not use flammable liquids having flash point below 38 degrees C such as naphtha or gasoline as solvents or cleaning agents.
- .6 Store flammable and combustible waste liquids, for disposal, in approved containers located in safe ventilated area. Keep quantities to a minimum and notify CFPO when disposal is required.

1.14 HAZARDOUS SUBSTANCES

- .1 Work entailing use of toxic or hazardous materials, chemicals and/or explosives, or otherwise creating hazard to life, safety or health, shall be in accordance with National Fire Code of Canada.
- .2 Provide ventilation where flammable liquids, such as lacquers or urethanes are used. Eliminate all sources of ignition. Inform the CFPO prior to and at completion of such work.

1.15 HOT WORKS

- .1 The Contractor shall implement a hot works program in accordance with the National Fire Code of Canada and NFPA 51 Standard for Fire Prevention during Welding, Cutting and Other Hot Work.

- .2 The Contractor shall obtain through their DCC Representative from the CFPO a "Hot Work" permit for all hot works in the construction area. Frequency of renewal for hot works permits is at the discretion of the CFPO. Request to be submitted 48 hours in advance of any hot work.
- .3 When work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for Fire Watch is at discretion of the CFPO.
- .4 Provide fire watch service for work on scale established and in conjunction with the CFPO as defined in the Fire Department Briefing. Fire watchers shall be trained in the use of fire extinguishing equipment. The person(s) performing fire watch are not permitted to perform any other duties at the same time.
- .5 Area of hot works
 - .1 Hot works shall be carried out in an area free of combustible and flammable content.
 - .2 Where not possible,
 - .1 All flammable and combustible materials within 15m of the hot works shall be protected in accordance with the National Fire Code of Canada.
 - .2 A fire watch shall be provided during the hot work and for a period of not less than 60 minutes unless otherwise directed by the CFPO.
 - .3 A final inspection of the hot work area shall be conducted 1 hour after the completion of hot works unless otherwise directed by the CFPO.
 - .3 Where there is a possibility of sparks leaking onto combustible materials in areas adjacent to the areas where the hot work is carried out:
 - .1 Openings in walls, floors or ceilings shall be covered or closed to prevent the passage of sparks to such adjacent areas.
- .6 Protection of flammable and combustible materials.
 - .1 Any combustible or flammable material, dust or residue shall be:
 - .1 Removed from the area where hot works is carried out; or
 - .2 Protected from ignition by non-combustible materials.
- .7 Fire extinguisher
 - .1 A fire extinguisher shall be provided within 3 m of all hot works. Minimum size shall be 20lbs ABC unless otherwise directed by CFPO.
- .8 Temporary heating
 - .1 No open flame heaters can be used on construction site.
 - .2 Only forced air heaters ULC or CSA approved and rated for industrial or construction use shall be used.

- .3 All electric heaters shall be connected on a proper and individual circuit.

1.16 PARTIAL OCCUPANCY

- .1 Implement partial occupancy procedures as defined in the drawings and specifications. Partial occupancy is where construction occurs adjacent to work areas occupied by the Departmental or Canadian Forces personal. This includes:
 - .1 Phased new construction.
 - .2 Early or partial occupancy of new construction.
 - .3 New construction being added onto an existing building.
 - .4 Renovation or recapitalization of an existing building.
 - .5 Phased renovation or recapitalization of an existing building.
- .2 Where partial occupancy occurs, Contractor shall implement requirements as found in the drawings and specifications. This may include construction of a rated fire separation between occupied and construction areas as required by National Fire Code.
- .3 A watch, with tours at intervals of not more than one hour, shall be provided throughout demolition sites when there are occupants in the portion of the building not being demolished.
- .4 Except where a building is provided with a fire alarm system equipment, a watch, with tours at intervals of not more than one hour, shall be provided when a portion of the building is occupied while construction operations are taking place.

1.17 FALSE ALARM FEES

- .1 “False Alarm” is the activation of a Fire Alarm System or emergency system through a mechanical failure, equipment malfunction, improper installation of the system or failure to maintain the system as described by the Ontario Fire Code being O.Reg.388/97, under the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4, as amended.
- .2 The Contractor shall not undertake work on any Fire Alarm System that sends an alarm directly to the Kingston Fire & Rescue or a Fire Alarm Monitoring Service without the DCC Representative being notified 48 hours in advance first.

1.18 QUESTIONS OR CLARIFICATION

- .1 Direct questions or clarification on Fire Safety in addition to above requirements to the DCC Representative.
- .2 DCC Representative is responsible to obtain clarification from the CFPO. The Contractor is not to liaise directly with the CFPO for notification, authorization or any requests unless the situation constitutes an immediate emergency.

1.19 FIRE INSPECTION

- .1 Co-ordinate site inspections by CFPO through DCC Representative.
- .2 Allow CFPO unrestricted access to work site.
- .3 Co-operate with CFPO during routine fire safety inspection of work site.
- .4 Immediately remedy unsafe fire situations observed by CFPO.

END OF SECTION

1 References

FEDERAL

- .1 Applicable Base Standing Orders (BSOs) will be provided to the Contractor after award.
 - .1 BSO 16.01 – Emergency Environmental Response.
 - .2 BSO 16.06 – Hazardous Materials General Requirements.
 - .3 BSO 16.07 – Disposal of Hazardous Materials Waste.
- .2 Canadian Council of Ministers of the Environment (CCME). *Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life* 2002.
- .3 *Canadian Environmental Protection Act 1999*. Statutes of Canada 1999 Chapter 33.
- .4 PCB Regulations. SOR/2008-273.
- .4 *Canada Labour Code- Canadian Occupational Health and Safety Regulations* (SOR/86-304). 2019.
- .5 *Canada Occupational Health and Safety Regulations* (SOR/86-304). Canada Labour Code.
- .6 *Fisheries Act*. Revised Statutes of Canada 1985, Chapter F-14.
- .7 *Migratory Birds Convention Act, 1994*.
- .8 *Navigation Protection Act*. Revised Statutes of Canada 1985, Chapter N-22.
- .9 *Species at Risk Act*, 2003. Chapter 25-29, no.3.
- .10 *Transportation of Dangerous Goods Act* and pursuant regulations.

PROVINCIAL

- .11 *Ontario Water Resources Act*. Revised Statutes of Ontario 1990, Chapter O.40.
- .12 *Technical Standards and Safety Act, 2000* and pursuant regulations, codes, and standards. Statutes of Ontario 2000, Chapter 16.

- .13 *Environmental Protection Act*. Revised Statutes of Ontario 1990, Chapter E.19.
 - .5 Ontario Regulation 347. *General—Waste Management*. Revised Regulations of Ontario 1990
 - .6 Ontario Regulation 362. *Waste Management – PCB’s*.
- .14 *Occupational Health and Safety Act*. Revised Statutes of Ontario 1990, Chapter O.1.
 - .1 Ontario Regulation 490/09. *Designated Substances*.
 - .2 Ontario Regulation 278/05. *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*.
- .15 Ontario Ministry of Labour. 2011. *Lead on Construction Projects*.
- .16 Ontario Ministry of Labour. 2011. *Silica on Construction Projects*.
- .17 Ontario Provincial Standard Specifications. Ontario Ministry of Transportation.
 - .3 OPSS 518. Construction Specification for Control of Water from Dewatering Operations.
 - .4 OPSS 801. Construction Specification for the Protection of Trees.
 - .1 OPSS 805. Construction Specification for Temporary Erosion and Sediment Control Measures.

MUNICIPAL

- .18 Corporation of the City of Kingston By-Law No. 2008-192 “*A By-Law to Provide for the Regulation of Waste Water Services and Discharges to Municipal Sewers for the City of Kingston*”.
- .19 City of Kingston By-Law No. 2004-52 “*A By-Law to Regulate Noise*”.

2 Submittals

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

- .2 Prior to commencing construction activities submit an Environmental Protection Plan (EPP). The EPP must meet the intent of the contract and must be acknowledged as reviewed by the DCC Representative prior to work commencement.
- .3 The Environmental Protection Plan to include the following sub-Plans:
 - .1 Spill Prevention Response Plan (SPRP).
 - .2 Hazardous Materials Abatement and Management Plan (HMAMP).
 - .3 Waste Management and Disposal Plan (WMDP).
- .4 Submit other data, information and documentation upon request by the DCC Representative and as stipulated elsewhere in this section.

3 Designated Substances

- .5 In accordance with Section 30 of Ontario's *Occupational Health and Safety Act*, following is a list of designated substances present at the project site:
 - .1 Refer to Appendix A for a list of asbestos-containing materials within the project areas.
 - .2 Disturbance to asbestos-containing materials shall be conducted in accordance with Ontario Regulation 278/05 and Canada Labour Code – Canada Occupational Health and Safety Regulations SOR/86-304 (COHSR).
 - .3 Lead is present in all painted surfaces throughout the steam vault.
 - .1 Disturbances to lead painted surfaces shall be conducted in accordance with the Ministry of Labour Guideline "*Lead on Construction Projects*" (2011).
 - .2 Contractor is required to have painted surfaces sampled and analyzed for toxicity characteristic leaching procedure (TCLP) metals analysis in accordance with O. Reg. 347 to define the appropriate waste classification.
 - .1 For bidding purposes, lead-containing wastes are to be assumed to be non-leachate toxic, non-hazardous waste and will be transported and disposed of as regular waste.
 - .4 Silica is present in all concrete materials throughout the project site.

- .1 Disturbance of materials containing silica shall be conducted in accordance with the Ministry of Labour Guidelines “*Silica on Construction Projects*” (2011).
- .5 Inform all workers and sub trades of the presence of designated substances and hazardous materials identified in the contract documents.
- .6 Immediately notify the DCC Representative of potential asbestos containing material (ACM) discovered during the work and not apparent from the drawings, specifications, or reports pertaining to the Work.
- .7 For additional reference information, refer to report in Appendix E.

4 General

- .1 Comply with all federal, provincial, and municipal regulatory requirements and guidelines for environmental protection and natural resource conservation, including in section 1.0 References, noted above.
- .2 The Work site is subject to inspection by the Base Environment Officer, or designate, as well as, the DCC Representative, without prior notice.
- .3 Failure to comply with environmental requirements may result in a stop work order or assessment of damages commensurate with repair of damage.
- .4 All references to payment referred to in OPSS references are to be disregarded and do not apply to this contract.
- .5 The Contractor will be unable to request extra funding to meet environmental requirements that are within the contract.
- .6 It is the Contractor’s responsibility to be aware of environmental requirements and the best management practices and pollution control measures necessary to meet them.
- .7 Blasting is not permitted on DND property.
- .8 Fires and burning of rubbish are not permitted on DND property.
- .9 No fixed or temporary fuel storage tanks are permitted.

5 Spill Prevention and Response Plan

- .1 A spill or release is an accidental discharge of a pollutant (solid, liquid or gas) into the environment. After a spill or release, always ensure human health and safety is protected above all else.
- .2 Submit to the DCC Representative a project-specific Spill Prevention and Response Plan (SPRP) prior to work on-site.
 - .1 The SPRP shall include environmental response measures necessary to prevent and to mitigate a pollutant release on National Defence property.
 - .2 The SPRP is to include:
 - .1 Contact information for the designated qualified individual to be the Environmental Protection Coordinator (EPC).
 - .2 Roles and responsibilities including names of those responsible for managing the SPRP.
 - .3 List of all subcontractors including contact information to support the SPRP.
 - .4 Notification to the DCC Representative for any spill.
 - .5 Emergency spill response measures, see 5.6 below.
 - .6 Project and site-specific clean up measures for spills,
 - .7 Waste disposal, including disposal procedures for materials used to contain the spill and storage location for these materials.
 - .8 Procedure to escalate for spills beyond Contractor's ability to manage the spill.
 - .9 Refueling operations shall be conducted within a secondary containment area. Refuel equipment no closer than 30 metres from water bodies. SPRP shall identify equipment fueling location, the machinery to be refueled, location of transfer area, methodology and control measures during refueling.
 - .3 Identify storage locations of materials or wastes that may require emergency spill response. Identify spill control kit inventory and location(s).

- .3 The SPRP is to be modified and updated as necessary. On-going assessments shall be performed during the progress of work identifying and documenting new or potential spill hazards and measures not previously known and identified.
- .4 Prior to starting work, provide to the DCC Representative an inventory of hazardous material to be brought to the site, including volume or mass, and Safety Data Sheets (SDS).
- .5 A CFB Kingston Pollution Incident Report Template (provided after award) shall be completed by the Contractor for all spill or release incidents and submitted to the DCC Representative.
- .6 Emergency Response:
 - .1 With respect to liquid spills, contractor shall have on-site equipment to control a liquid spill of 110% of any material brought on to—or handled at—the site for one (1) hour.
 - .2 The on-site spill control kit required to include absorbent pads, absorbent granular, nitrile gloves, garbage bags and/or pails with lids, and shovels, and applicable to the chemical used.
 - .1 A spill control kit shall be located wherever quantities of materials or wastes that may require emergency spill response are used or stored.
 - .3 In the event of a spill, invoke Contractor's SPRP Plan and make immediate notifications to the DCC Representative.
 - .4 In the event of a spill into the natural environment, do everything practicable to prevent, eliminate, and ameliorate adverse effects, and to restore the natural environment.
 - .5 Emergency response planning is to include measures to escalate the response in the event of an emergency that exceeds on-site equipment capabilities.
- .7 Display an information placard on all such material and equipment containing liquid products that will be located overnight or longer on DND property.
 - .1 Information placards to include: Contractor's name and address, contact person, emergency telephone numbers, and liquid contents.

- .2 Post the information placard either on the exterior of the container, or on the dashboard of the vehicle, where applicable.

6 Hazardous Materials Abatement and Management Plan

- .1 Prior to work onsite contractor to create and submit to the DCC Representative a Hazardous Materials Abatement and Management Plan (HMAMP).
- .2 The HMAMP will address the details of how designated substance(s) and hazardous material(s) will be abated and managed. HMAMP to include:
 - .1 Name and contact information of:
 - .1 The designated qualified individual to be the Environmental Protection Coordinator (EPC).
 - .2 All subcontractors who will support the HMAMP.
 - .2 A list of all municipal, provincial and federal permits and notifications required to complete the Work.
 - .3 A list of all hazardous materials to be brought to site.
 - .1 Include volumes and SDS, copy of placards and signage.
 - .4 Detail the approach to the execution of abatement work, including the equipment, tools, materials and actions to be employed for each type of designated substance or hazardous material.
 - .5 A drawing identifying existing conditions with the location of proposed enclosure(s), barricades and/or warning signs to restrict access, waste and personal decontamination facilities, and proposed location of waste bins.
 - .6 Proposed schedule accounting for calendar day(s) projected for enclosure set up, abatement work, cleaning and lockdown, and enclosure tear down.
 - .7 Identify number of calendar days for the shutdown of any building systems (e.g. HVAC, fire alarms, etc.).
 - .8 Detailed emergency procedures to be followed in the event of: fire, breach of the enclosure, injury or accident within the enclosure, detection of airborne asbestos fibers outside the enclosure, spilling asbestos debris on route to the waste bin.

- .9 If not defined in other Plans, provide details of waste disposal procedures for materials stored, used or abated including locations on the work site.
- .3 Contractor shall provide DCC Representative a minimum of 72-hours notice prior to request for pre-contamination inspections, abatement work, post abatement visual inspections and inspections prior to lockdown application (including both Moderate and High-Risk Abatement activities as defined of COHSR).
 - .1 Environmental consultant will be provided by the DCC Representative.
 - .2 Scheduling with the environmental consultant to be coordinated through the DCC Representative.
- .4 Contractor shall allow a minimum of 24-hours to receive results from DCC Representative for all visual inspections and clearance air testing results prior to enclosure tear-down (including both Moderate and High-Risk Abatement activities as defined of COHSR).
 - .1 Inform all workers and sub trades of the presence of designated substances and hazardous materials identified in the contract documents.
 - .2 Immediately notify the DCC Representative of potentially containing asbestos material discovered during the work and not apparent from the drawings, specifications, or reports pertaining to the Work. Do not disturb such material.
 - .3 Fire alarm suspension can be coordinated on weekdays between 7:30am and 3:30pm daily.
 - .1 Notification to DCC Representative, via submission of completed Request for Fire Alarm Shut Down form, is required a minimum of 5 days in advance of temporary fire alarm shut down.
 - .4 Written notification to DCC Representative required a minimum of 5 days prior to request to disable the mechanical ventilation system servicing the work area.

7 Waste Management and Disposal Plan

- .1 Submit a Waste Management and Disposal Plan (WMDP) to the DCC Representative before construction work begins at the site. The WMDP is to comply with legislation, best practices, and with the requirements of the specifications.

.2 The WMDP is to encompass:

- .1 Regular waste,
- .2 Construction waste,
- .3 Hazardous materials used in the course of the work, and
- .4 Hazardous materials and designated substance waste.
- .5 The WMPD shall include items below in addition to 10.3 through 10.10
 - .1 Name and contact information for the designated qualified individual to be the Environmental Protection Coordinator (EPC)
 - .2 A list of all contractors and Receiver Facilities for all waste types.
 - .1 Waste carriers' business name, address, telephone, email address, and MECP Certificate(s) of Approval listing the hazardous materials approved for transportation.
 - .3 The anticipated waste shipment frequency for all waste.
 - .4 Detailed procedures to be used to manage all waste products stored on site (petroleum, oil, lubricants and other hazardous waste to be detailed specifically). Include types of containers, labeling and segregation)
 - .5 A description of the types of waste materials and expected quantities for storage, transport and disposal. For leachate toxic waste include detailed compliance with O.Reg 347 and Transportation of Dangerous Goods Act (TDGA).
 - .1 Include procedure for notifying DCC Representative of the transport of hazardous materials and/or designated substances (including asbestos) offsite.
 - .6 Procedures for storing and release of hazardous materials to be removed from site including manifest procedures.
 - .7 Procedures that detail requirements for the below Special Substances that detail what is contained in the specification.
 - .1 Mechanical Flushing Liquids to Sanitary Sewers including lab analysis report, notifications and contacts.

.2 Polychlorinated Biphenyls (PCBs)

.3 Waste Handling:

- .1 Ensure that staff are properly trained and equipped, in accordance with regulatory requirements.
- .2 Minimize handling and exposure to hazardous materials. Use control measures such as PPE and best practice procedures to address potential risks.
- .3 All waste products will be placed in suitable containers and labeled clearly.
 - .1 Waste products are to be segregated by commodity and placed in separate containers based on class.
 - .2 Similar waste products are not to be mixed together without prior approval from the DCC Representative.

.4 Storage:

- .1 Identify location(s) on site where wastes and hazardous materials wastes will be stored.
- .2 Store all petroleum, oil, lubricants, and other hazardous materials within secondary containment, or in an appropriate metal clad storage building with containment.
- .3 Store incompatible materials separated to prevent reaction.
- .4 Access to hazardous waste storage areas must be controlled through appropriate physical barriers and limited to authorized personnel.
- .5 Site is to be kept neat and orderly at all times.

.5 Transportation:

- .1 Transportation of hazardous material must be in accordance with the *Transportation of Dangerous Goods Act*, by a licensed hauler, and in approved containers.

- .2 Hazardous Materials Waste shall **not** be released from a work site to a carrier that is not registered as a carrier for the specific Hazardous Materials Waste, nor shall it be released for delivery to a consignee that is not registered as a receiver for the specific Hazardous Materials Waste.
- .6 Disposal:
 - .1 Identify the proposed waste receiver facilities and the anticipated waste shipment frequency for all wastes.
 - .2 Contractor is required to have painted waste sampled and analyzed for toxicity characteristic leaching procedure (TCLP) metals analysis in accordance with O. Reg. 347.
 - .1 Sample(s) are to be taken by a Qualified Person (QP) (as defined in O. Reg. 153).
 - .2 Results are to be provided to DCC Representative for review prior to disposal off-site.
 - .3 Disposal of leachate toxic lead-based paint as hazardous materials must comply with legislation on transport and disposal.
 - .4 Dispose of all materials that are removed as asbestos-containing materials as asbestos waste.
- .7 Transport and Disposal of Hazardous Waste and Designated Substances:
 - .1 Provide DCC Representative written notification of intent to transport of hazardous materials or designated substances off site, including but not limited to hazardous and liquid industrial waste (i.e. oils, solvents, waste fuels, used spill clean-up materials) or designated substance waste (i.e. asbestos, leachate toxic lead paint, mercury vapour in fluorescent light tubes).
 - .2 For shipments that require a waste generator number pursuant to O. Reg. 347, the Base waste generator number is required prior to removal offsite and will be provided by the DCC Representative.
 - .3 Submit the following to the DCC Representative for review 5 days prior to transport:
 - .1 Description and approximate quantity of waste material, including substrate if applicable.

- .2 Contractor proposed date and time for hazardous waste material shipment.
- .3 Correspondence from the approved hazardous waste receiver, indicating agreement and intent to accept the specified hazardous materials waste on specified date.
- .4 Contractor will complete a "Certificate of Content for Waste Disposal" provided in Item #13 of this specification.
- .4 Coordinate with the DCC Representative so that the Base Hazardous Materials Officer or designate is present at the time of shipment to review, sign and document hazardous waste transport from the Base.
- .5 Submit the following to the DCC Representative for review within 48 hours following transport from the Base:
 - .1 Landfill weigh scale receipt/ticket for the disposal of waste.
- .8 Do not bury rubbish or waste materials on DND Property.
- .9 Do not dispose of waste into any waterways, storm or sanitary sewers, drainage system, or onto land.
- .10 Divert unused asphalt material from landfill to be reused offsite or recycled.
- .11 All solid and liquid hazardous waste material generated by work are to be taken off Base and disposed of in a lawful manner and at appropriately accredited facilities.
- .12 All expenses incurred for the handling, storage, analysis, transport and disposal/recycling of all wastes will be incurred by the Contractor.

8 Plant Protection

- .1 Protect trees and plants on site and adjacent properties as indicated.
- .2 Trees to be protected must have secure enclosures surrounding trees located a minimum of 1.5 metres from the trunk. Comply with standards in OPSS 801 "*Construction Specification for the Protection of Trees*".
- .3 Protect roots of designated trees to dripline to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.

- .4 Do not use tree protection areas for storage, stockpiling or any other purpose. Do not dump or flush any contaminants in areas of tree feeder roots.
- .5 Obtain DCC Representative's approval where it is necessary to encroach onto protected area, prior to proceeding.
- .6 Do not attach rigging cables to trees.

9 Wildlife Protection

- .1 Nesting structures in trees for birds of prey are to remain intact without harm to the tree or the nest.
 - .1 If these features are encountered the Contractor is to stop work and notify the DCC Representative immediately for direction on how to proceed;
 - .2 Depending on the nest and bird species, setbacks for disturbance zones maybe defined.
- .2 The Contractor will comply with the *Migratory Birds Convention Act*, 1994.
- .3 Prior to work commencing, conduct ground surveys to ensure that wildlife are not nesting/denning on or immediately adjacent to the project site.
 - .1 Where found, immediately notify the DCC Representative;
 - .2 Maintain a minimum setback distance of 3 m from wildlife burrows/dens and maintain markers indicating wildlife burrows/dens.

10 Pollution Prevention - Water

- .1 Protection of Storm Drains:
 - .1 Protect storm drains within work site and within roadway that borders work site (which may be outside of work site) against entry by sediment, debris, oil, or chemicals prior to any work on-site and maintain until completion of work.
 - .2 Discharge of sediment-laden water to storm sewer is not permitted.

- .3 Catch basins and catch basin manholes within work site and within roadway that borders work site (which may be outside of work site) to have a double layer of geotextile placed under lids to prevent sedimentation of storm sewer system. The geotextile shall be maintained until the completion of work.
- .4 Ditch inlets to be protected by flow check dam immediately upstream of ditch inlet until all areas draining into the ditch inlet have been permanently stabilized.
- .2 Protection of Waterbodies:
 - .1 Do not dump excavated fill, waste material or debris in waterways.
 - .2 Chlorinated drinking water is considered a deleterious substance by Environment and Climate Change Canada (ECCC).
 - .3 Discharging to land is permitted subject to the use of matting to prevent loss of soil or vegetation ensuring that items above are complied with.
 - .4 Comply with requirements of OPSS 182 "General Specification for Environmental Protection for Construction in Waterbodies and on Waterbody Banks". A written strategy is required by paragraph 182.04 to be submitted to the DCC Representative before commencing work on site. Disregard references to OPSF 182-1.

11 Pollution Prevention - Land

- .1 Take all measures necessary to prevent dust and mud tracking on adjacent roads and streets.
 - .1 Use mechanical sweepers as often as necessary to keep adjacent roads and streets clean of dust and mud that is deposited from this project.
- .2 Spray water to minimize the release of dust from paved areas or exposed soils.
 - .1 Chemical dust suppressants to be used only as approved by the DCC Representative.
- .3 Maintain temporary erosion and pollution control features installed under this Contract, and those in place pre-dating the Contract.
- .4 If materials are to be transported between sites, prevent any loss of material during transit.

- .5 Cover or wet down dry materials or rubbish to prevent blowing dust and debris.
 - .1 Cover or otherwise contain loose materials that have potential to release airborne particulates during their transport, installation or removal.
 - .2 Stabilize soil and other material storage piles against wind erosion.
 - .3 Minimize vehicle traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material.
 - .4 Avoid excavation, or other construction activity with potential to release airborne particulates, during windy and prolonged dry periods.
 - .5 Restore disturbed areas as soon as possible to minimize the duration of soil exposure.
 - .6 Lawn care pesticides are prohibited.
 - .7 Secure covers on waste bins and dumpsters at the end of each working day so as to prevent unauthorized use.
 - .8 Secure covers on waste bins and dumpsters so as to shed rain.

12 Pollution Prevention - Air

- .1 Prevent material from sandblasting, saw-cutting, and other operations from contaminating air beyond application area, by providing temporary enclosures.
- .2 Use new or well-maintained heavy equipment and machinery, preferably fitted with muffler/exhaust system baffles, engine covers.
- .3 Comply with operating specifications for heavy equipment and machinery.
- .4 Minimize the operation and idling of vehicles and avoid operating and idling vehicles and gas-powered equipment during smog advisories.
- .5 Control emissions from equipment and plant to conform with federal, provincial, and municipal requirements.

.6 Products and Materials:

- .1 Use products and materials that are as free as possible of noxious or toxic volatile emissions or emissions of irritating or toxic particles, so that the interior air of the completed building is as pollution-free as possible. For example, products emitting benzene, mercury, lead, or other known toxic compounds are not acceptable.
- .2 Where odourless products are not available, choose products where possible so that odours are minimized. Set ventilation levels during the construction period sufficiently high to encourage the off-gassing of materials to their minimum levels prior to occupancy of the building, where possible.
- .3 Choose products for installation within the air-handling and distribution systems to minimize the introduction of pollutants into the fresh air supply to the building.
- .4 Remove oily rags and other combustible debris from Site daily. Take every precaution necessary to prevent spontaneous combustion.

13 Certificate of Content for Waste

Date: _____

DCC/CE Project Number: _____

Site Location: _____

Contractor Name: _____

Address: _____

Contact Name: _____

Phone Number: _____

Brief Description of Materials Being Shipped (including quantity):

This document is to certify that the materials being shipped are as described above.

Only materials indicated on this Certificate as described above will be shipped.

For materials requiring manifests a minimum of 48 hours notice is required to coordinate Base Environment sign-off prior to material transport from site.

If applicable indicate,

Manifest #: _____

Waste Classification#: _____

Contractor Signature (print and sign): _____

DCC/CE Contract Authority (print and sign): _____

Ref.

Ontario Regulation 347/558

Transportation of Dangerous Goods Act

Submit form to DCC Representative

END OF SECTION

Part 1 GENERAL

1.1 SUMMARY

- .1 This Section references to laws, by laws, ordinances, rules, regulations, codes, orders of Authority Having Jurisdiction, and other legally enforceable requirements applicable to Work and that are; or become, in force during performance of Work.

1.2 RELATED REQUIREMENTS

- .1 Not Used

1.3 REFERENCES TO REGULATORY REQUIREMENTS

- .1 Perform Work in accordance with the latest National Building Code of Canada (NBC) including amendments up to tender closing date provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Specific design and performance requirements listed in specifications or indicated on Drawings may exceed minimum requirements established by referenced Building Code; these requirements will govern over the minimum requirements listed in Building Code
 - .1 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

1.4 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions. Refer to Section 02 35 35 DND Fire Safety Requirements..

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: Except as otherwise specified, Contractor shall apply for, obtain, and pay fees associated with, permits, licenses, certificates, and approvals required by regulatory requirements and Contract Documents, based on General Conditions of Contract and the following:
 - .1 Regulatory requirements and fees in force on date of Bid submission; and
 - .2 A change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given before date of tender submission

Part 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

2.2 EASEMENTS AND NOTICES

- .1 Contractor to confirm with DCC Representative that surrounding infrastructure is owned and operated by DND.
- .2 Contractor is not permitted to work on any infrastructure owned by municipality, other government departments, or a third-party owner (for example, utility companies).

Part 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 GENERAL

- .1 Quality control remains the responsibility of the contractor. DCC Representative provides Quality Assurance.

1.3 INSPECTION

- .1 Allow DCC Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by DCC Representative instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 DCC Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, DCC Representative will pay cost of examination and replacement.

1.4 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies may be engaged by DCC Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by DCC Representative.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by DCC Representative at no cost to DCC Representative. Pay costs for retesting and reinspection.

1.5 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.6 PROCEDURES

- .1 Notify appropriate agency and DCC Representative three (3) business days in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.7 REJECTED WORK

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by DCC Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.

1.8 REPORTS

- .1 Submit 1 electronic copy of inspection and test reports to DCC Representative.
- .2 Provide copies to Subcontractor(s) of work being inspected or tested.

1.9 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.

1.10 MOCK-UPS

- .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of Sections required to provide mock-ups.
- .2 Construct in locations as specified in related Section.
- .3 Prepare mock-ups for DCC Representative's review with reasonable promptness and in orderly sequence, to not cause delays in Work.

- .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .5 If requested, DCC Representative will assist in preparing schedule fixing dates for preparation.
- .6 Remove mock-up at conclusion of Work or when acceptable to DCC Representative.
- .7 Mock-ups may remain as part of Work if agreed to by the DCC Representative.
- .8 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.

1.11 MILL TESTS

- .1 Submit mill test certificates as required of specification Sections.

1.12 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical, electrical, and building equipment systems.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.3 INSTALLATION AND REMOVAL

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

1.4 DEWATERING

- .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.

1.5 WATER SUPPLY

- .1 Contractor is to provide all of their own potable and non-potable water as required.
- .2 DCC Representative will determine delivery points and quantitative limits. Written permission is required before any connection is made. All connections to be completed by licensed trade as required by regulatory and approval authorities.
- .3 Provide at no cost to DND, all equipment and temporary lines to bring these services to project site.
- .4 Supply of temporary services by DND is subject to DND requirements and may be discontinued by DND site representative at any time without notice, without acceptance of any liability for damage or delay, caused by such withdrawal of temporary services.

1.6 TEMPORARY HEATING AND VENTILATION

- .1 Provide temporary heating required during construction period, including attendance, maintenance, and fuel.
- .2 All equipment shall be in good working order and approved by a recognized certification agency.
- .3 Prior to the use of any heating equipment the Chief Fire Inspector of the Base shall be notified, and the equipment and installation inspected before any use.
- .4 No temporary heating equipment utilizing an open flame will be allowed.

- .5 Unless explicitly stated elsewhere in the specifications, the contractor is responsible for all heating cost, including equipment, fuel, electricity and maintenance personnel as required for the duration of the project.
- .6 Construction heaters used inside building must be vented to outside or be flameless (vent free) type. Solid fuel salamanders are not permitted.
- .7 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.
- .8 Maintain temperatures of minimum 10 degrees Celsius in areas where construction is in progress.
- .9 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 Ventilate temporary sanitary facilities.
 - .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .10 Permanent heating system of building may be used when available. Be responsible for damage to heating system if use is permitted.
- .11 On completion of Work for which permanent heating system is used, replace filters.
- .12 When authorized by the DCC Representative, Contractor may use existing building equipment for temporary heat source.
- .13 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.
- .5 Vent direct-fired combustion units to outside.
- .14 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.7 TEMPORARY POWER AND LIGHT

- .1 Arrange and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
- .2 Contractor must provide their own temporary power as required.
- .3 DCC Representative will determine delivery points and quantitative limits. Written permission is required by DCC Representative before any connection is made. Connect to existing power supply in accordance with the Canadian Electrical Code. All connections to be completed by licensed trade as required by regulatory and approval authorities.
- .4 Provide, at no cost to DND, all equipment and temporary lines to bring these services to project site.
- .5 Supply of temporary services by DND is subject to DND requirements and may be discontinued by DND site representative at any time without notice, without acceptance of any liability for damage or delay, caused by such withdrawal of temporary services.
- .6 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Contractor based on General Conditions of Contract.
- .7 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.
- .8 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of DCC Representative provided that guarantees are not affected.
 - .1 Repair damage to electrical system caused by use under this Contract.
 - .2 Replace lamps which have been used for more than 3 months.

1.8 TEMPORARY COMMUNICATION FACILITIES

- .1 Provide and pay for temporary telephone, fax, data hook up, line[s] or equipment necessary for own use and use of DCC Representative.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 REFERENCE STANDARDS

- .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 1.189-[00], Exterior Alkyd Primer for Wood.
 - .2 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
- .2 CSA Group (CSA)
 - .1 CSA-A23.1/A23.2-[04], Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CSA-0121-[M1978(R2003)], Douglas Fir Plywood.
 - .3 CAN/CSA-S269.2-[M1987(R2003)], Access Scaffolding for Construction Purposes.
 - .4 CAN/CSA-Z321-[96(R2001)], Signs and Symbols for the Occupational Environment.
 - .5

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.4 INSTALLATION AND REMOVAL

- .1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation.
- .2 Identify areas which have to be graveled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such work after use.

1.5 SCAFFOLDING

- .1 Scaffolding in accordance with CAN/CSA-S269.2 and or Section 01 54 23.
- .2 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms, and temporary stairs.

1.6 HOISTING

- .1 Provide, operate and maintain hoists and cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.
- .2 Hoists and cranes to be operated by qualified operator.

1.7 SITE STORAGE/LOADING

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.8 CONSTRUCTION PARKING

- .1 DCC Representative will determine if Parking will be permitted on site provided it does not disrupt performance of Work. Maintain and administer these spaces as directed.
- .2 Provide and maintain adequate access to project site.

1.9 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds when required by contractor for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.
- .3 Storage location to be approved by DCC Representative.

1.10 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances, if required.
- .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 Permanent facilities may be used on approval of DCC Representative.

1.11 CONSTRUCTION SIGNAGE

- .1 Provide and erect project sign, upon Contractor's mobilization to site, in a location designated by DCC Representative.

- .2 No other signs or advertisements, other than warning signs, are permitted on site.
- .3 Direct requests for approval to erect Contractor signboard to DCC Representative. For consideration general appearance of Contractor signboard must conform to project identification site sign. Wording in both official languages.
- .4 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
- .5 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if approved by DCC Representative.

1.12 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically approved by DCC Representative.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by DCC Representative.
- .12 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.

- .13 Provide snow removal during period of Work for Contractor's Roads.
- .14 Remove, upon completion of work, haul roads designated by DCC Representative.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Occupational Health and Safety Act (OHSA)
- .1 Ontario Regulation 213/91 for Construction Projects.

1.2 INSTALLATION REMOVAL

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Coordinate with governing authorities and obtain required permits.
- .3 Remove from site all such work after use.

1.3 FUNCTIONAL REQUIREMENTS

- .1 Provide all necessary hoists for work.
- .2 Locate hoists in coordination with DCC Representative.

1.4 DESIGN CRITERIA

- .1 When required by code, scaffolding and scaffold enclosures shall be designed and certified by a Professional engineer, retained by contractor and licensed in the Province of Ontario. The same Professional engineer must approve, in writing, additions or modifications to scaffolding.
 - .1 Scaffold and enclosure must be built to withstand, and all wind, rain and snow loads applicable to construction site in accordance with NBC and OBC.
 - .2 Scaffold may be loaded up to 2.40 kPa. No more than 5 (five) working levels shall be loaded at one time.
- .2 Where scaffolding must be supported by existing structures, DCC Representative shall provide on request, information from the Owner on the condition and capacity of the existing structure in sufficient detail to allow the Contractor to complete scaffolding design.

1.5 GENERAL REQUIREMENTS FOR SCAFFOLDING

- .1 Power elevated platforms may be used as part of the access system for the work if suitable to complete the work and provide access for inspection. Use of elevated work platforms shall be subject to remaining within the load lifting limits of such machines, accommodating traffic required for operations (delivery, garbage, recycling trucks etc.) and providing ready access to both the DCC Representative and designated inspectors such that the work can be inspected while in progress and once complete. Design scaffolds as follows:

- .1 Platforms shall be prefabricated clip platforms, planks are not permitted.
 - .2 Scaffolds shall have proper stairs; ladders and trap doors are not permitted.
 - .3 Scaffolds shall be built of modular parts whenever possible.
 - .4 Scaffold accessories including braces and jackscrews shall be compatible with the capacity of frames.
 - .5 Provide internal horizontal x-bracing at all planking levels.
 - .6 Platforms shall be wide enough to circulate and temporarily store materials.
 - .7 Platforms shall be designed to support extra loads of removed materials.
 - .8 Provide steel guardrails, including toe boards, intermediate rails and handrails, at perimeter and around openings of all work platforms.
 - .9 Scaffold design and erection shall be in accordance with the "Occupational Health And Safety Act" and "Regulations For Construction Projects", and relevant municipal, provincial and federal regulations.
- .2 Scaffolding shall be tied back to the masonry using push-pull ties. Scaffolding shall be isolated from walls or surfaces with 12 mm thick rubber or neoprene pads. Show all anchor locations and ties on shop drawings. DCC Representative shall review anchor locations prior to installation.
- .3 Scaffold roofs shall be waterproof and meet Design Criteria.

1.6 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00.
- .2 Submit for review shop drawings of scaffold and weather enclosure system including:
 - .1 Scaffold assembly drawings.
 - .2 Scaffold anchoring.
 - .3 Enclosure fabric with fastening and support system if applicable.
 - .4 Waterproofing details for scaffold roof.
 - .5 Indicate on drawings distance from platforms to wall surface to be worked on.

Part 2 Products

2.1 TUBULAR SCAFFOLD

- .1 Tubular scaffold, scaffold bridge, stair, side brackets, work platforms, guardrails, barricades, and other accessories shall be an engineered type modular tubular scaffold system.
- .2 Complementary 50 mm diameter tube and clamp assemblies may be used where structural reinforcement is required and/or irregular geometry prevents use of modular parts.

- .3 All components shall be hot dip galvanized steel.
- .4 Platforms shall be clip type prefabricated platforms; wood planks are not permitted.

2.2 ACCESSORIES

- .1 Spacers and protection pads: rubber or neoprene spacers: 12 mm thick min.
- .2 Pipe fasteners: 3 mm thick min. galvanized steel fasteners designed for 25 mm and for 50 mm exterior diameter tubing.

Part 3 Execution

3.1 INSTALLATION

- .1 The erection of the scaffold cannot commence prior to review of the shop drawings.
- .2 A competent worker shall supervise erection of the scaffold.
- .3 Professional engineer that prepared shop drawings shall inspect the scaffold before it is used to ensure that it is erected in accordance with design drawings.
- .4 Scaffolds:
 - .1 Install engineered scaffold, stairs and aluminum track system in accordance with approved shop drawings and mock-ups.
- .5 Enclosure and netting:
 - .1 Use plastic wrap ties to fasten netting securely to scaffolding where applicable.

3.2 REMOVAL

- .1 Remove temporary scaffolding and enclosures when approved by DCC Representative.
- .2 Coordinate removal work DCC Representative.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 PROTECTION OF PUBLIC TRAFFIC

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2 When working on travelled way:
 - .1 Place equipment in position to minimize interference and hazard to travelling public.
 - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
 - .3 Do not leave equipment on travelled way overnight.
- .3 Close lanes of road only after receipt of written approval from DCC Representative.
 - .1 Before re-routing traffic erect suitable signs and devices to Ontario Traffic Manual, Book 7: Temporary Conditions.
- .4 Keep travelled way graded, free from pot holes and of sufficient width for required number of lanes of traffic.
 - .1 Provide 7 m wide minimum temporary roadway for traffic in two-way sections through Work and on detours.
 - .2 Provide 5 m wide minimum temporary roadway for traffic in one-way sections through Work and on detours.
- .5 Provide detours or temporary roads as indicated, and as approved by DCC Representative to facilitate passage of traffic around restricted construction area.
- .6 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of DCC Representative.

1.3 INFORMATIONAL AND WARNING DEVICES

- .1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response, as approved on traffic control plan by DCC Representative.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices to Ontario Traffic Manual, Book 7: Temporary Conditions.

- .3 Place signs and other devices in locations recommended in Ontario Traffic Manual, Book 7: Temporary Conditions.
- .4 Meet with DCC Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of DCC Representative.
- .5 Continually maintain traffic control devices in use:
 - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Remove or cover signs which do not apply to conditions existing from day to day.

1.4 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag personnel, trained in accordance with, and properly equipped to Ontario Traffic Manual, Book 7:
 - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
 - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
 - .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
 - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
 - .5 For emergency protection when other traffic control devices are not readily available.
 - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .7 At each end of restricted sections where pilot cars are required.
- .2 Where roadway, carrying two-way traffic, is restricted to one lane, for 24 hours each day, provide portable traffic signal system.
 - .1 Adjust, as necessary, and regularly maintain system during period of restriction.
 - .2 Ensure signal system meets requirements of Manual of Uniform Traffic Control Devices for Streets and Highways.

1.5 OPERATIONAL REQUIREMENTS

- .1 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified and approved by DCC Representative to protect and control public traffic.

1.6 TRAFFIC CONTROL PLAN

- .1 Traffic control plan must be submitted and approved by DCC Representative prior to the commencement of work affecting traffic.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 REFERENCE STANDARDS

- .1 Canadian General Standards Board (CGSB)
 - .1 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
 - .2 CAN/CGSB 1.189-[00], Exterior Alkyd Primer for Wood.
- .2 CSA Group (CSA)
 - .1 CSA-O121-[M1978(R2003)], Douglas Fir Plywood.

1.3 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

1.4 HOARDING

- .1 Erect temporary site enclosures using 38 x 89 mm construction grade lumber framing at 600 mm centers and 1200 x 2400 x 13 mm exterior grade fir plywood to CSA O121.
- .2 Apply plywood panels vertically flush and butt jointed.
- .3 Erect and maintain pedestrian walkways including roof and side covers, complete with signs and electrical lighting as required by law.
- .4 Paint public side of site enclosure in selected colours with one coat primer to CAN/CGSB 1.189 and one coat exterior paint to CGSB 1.59. Maintain public side of enclosure in clean condition.
- .5 Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

1.5 GUARD RAILS AND BARRICADES

- .1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
- .2 Provide as required by governing authorities.

1.6 WEATHER ENCLOSURES

- .1 Provide weather tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.
- .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Design enclosures to withstand wind pressure and snow loading.

1.7 DUST TIGHT SCREENS

- .1 Provide dust control measures to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such work is complete.

1.8 ACCESS TO SITE

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

1.9 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.10 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred by Work, to previous or better condition.

1.11 PROTECTION OF BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Be responsible for damage incurred due to lack of or improper protection.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 REFERENCE STANDARDS

- .1 Conform to latest date of issue of referenced standards in effect on date of submission of Tender, except where specific date or issue is specifically noted.

1.3 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Within 7 Calendar days of written request by DCC Representative, submit following information for materials and equipment proposed for supply:
- .1 Name and address of manufacturer.
 - .2 Trade name, model catalogue number.
 - .3 Performance and test data.
 - .4 Manufacturers installation instructions.
 - .5 Evidence of arrangement to procure.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with DCC Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.4 CONTRACTOR'S OPTIONS FOR SELECTING MATERIALS FOR TENDERING

- .1 Products specified by naming three or more, select any product named. Materials listed as "Acceptable Products" within the contents of this specification identify products known to meet the specified criteria. Other products may exist which meet the requirements specified but have not been listed as "Acceptable Products".

1.5 SUBSTITUTION

- .1 No substitutions will be permitted after tender award except under special circumstances described herein.
- .2 A substitution request must include statements of respective costs of items originally specified and the proposed substitution and itemize any differences in quality, performance and warranty.
- .3 A substitution request may be considered by the DCC Representative if:
 - .1 materials selected from those specified are not available, discontinued; or
 - .2 delivery date of materials selected from those specified would unduly delay completion of contract; and
 - .3 alternative material to those specified is equivalent in quality, performance and warranty to the material specified and will result in a credit to the Contract amount.
- .4 Should substitution be accepted either in part or in whole, assume full responsibility and cost when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
- .5 Amounts of all credits arising from approval of substitution will be determined by DCC Representative and Contract Price will be reduced accordingly.

1.6 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Touch-up damaged factory finished surfaces to DCC Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.7 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Products supplied by Owner will coordinated by DCC Representative, unless otherwise noted in Contract Documents.

1.8 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify DCC Representative in writing, of conflicts between specifications and manufacturer's instructions, so that DCC Representative will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes DCC Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.9 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify DCC Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. DCC Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with DCC Representative, whose decision is final.

1.10 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.11 CONCEALMENT

- .1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform DCC Representative if there is interference. Install as approved by DCC Representative.

1.12 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.13 LOCATION OF FIXTURES

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform DCC Representative of conflicting installation. Install as approved by DCC Representative.

1.14 FASTENINGS

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

1.15 FASTENINGS - EQUIPMENT

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

1.16 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of DCC Representative.

1.17 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times approved by DCC Representative, with minimum of disturbance to Work, building occupants, pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered notify DCC Representative, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 SUBMITTALS

- .1 Submit to the DCC representative copies of the following documents, including updates issued:
 - .1 Health and Safety Policy & Program as indicated in paragraph 1.9, prior to commencement of work on the work site.
 - .2 Reports or directions issued by authorities having jurisdiction, immediately upon issuance from that authority.
 - .3 Accident or Incident Reports, within 24 hrs of occurrence.
- .2 Submit other data, information and documentation upon request by the DCC representative as stipulated elsewhere in this section.

1.2 COMPLIANCE REQUIREMENTS

- .1 Comply with the latest edition of the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act.
- .2 Observe and enforce construction safety measures required by:
 - .1 National Building Code of Canada (latest edition).
 - .2 The Ontario Workplace Safety & Insurance Board (WSIB).
 - .3 Municipal statutes and ordinances.
- .3 In event of conflict between any provisions of above authorities the most stringent provision shall apply.
- .4 Provide and maintain WSIB worker's compensation coverage for all employees for the duration of the contract. Prior to commencement of the work, at the time of Interim Completion and prior to final payment, provide to the DCC representative a clearance certificate from the WSIB indicating that the Contractor's account is in good standing.

1.3 RESPONSIBILITY

- .1 The Contractor is responsible for safety of persons and property on the work site and for protection of federal employees and the general public circulating adjacent to work site operations to extent that they may be affected by conduct of work.
- .2 The Contractor is to enforce compliance by workers and other persons granted access to work site with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with the Contractor's Health and Safety Program.

- .3 Should an unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise the DCC representative verbally and in writing of the hazard or condition.

1.4 SITE CONTROL AND ACCESS

- .1 Delineate and isolate the work area(s) from adjacent and surrounding areas to maintain control of all work area access points so that access to the project site work areas is restricted to authorized personnel only. The public way site delineation requirements shall meet or exceed the prescribed requirements specified in the Ontario Occupational Health and Safety Act & Regulations, specifically Section 64-65 (O. Reg. 213/91).
- .2 Make provisions for granting permission to access onto work site to all persons who require access. Procedures for granting permission to access are to be in accordance with the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act and the Contractor's Health and Safety Program.
- .3 Ensure persons granted access to the work site are in possession of and wear the minimum personal protective equipment (PPE) designated by the Contractor's Health and Safety Program. Ensure persons granted access to the work site are provided with, trained in the use of, and wear, appropriate PPE that are required above and beyond the designated minimums previously noted and as specifically related to the work site activity that they are involved in. Be responsible for the efficacy of the PPE that is provided above and beyond the designated minimums.
- .4 For the purpose of this contract, the following are activities that will be required to be performed on the work site by DND forces and other Contractor(s). Control of the work site access and activities remain the responsibility of the Contractor as detailed within this specification section.
 - .1 Real Property Operations Detachment Kingston, throughout the project where required (for example, base issued permits, service shut-downs, locates, etc.)
- .5 Erect signage at access points and at other strategic locations around the work site clearly identifying the work site area(s) as being "off-limits" to non-authorized persons. Signage must be professionally made with well understood graphic symbols and is not to be used as advertising but for the specific use as related to site safety and key contact information.
 - .1 Information to be provided on the signage is as follows:
 - .1 Project Name/Description:
 - .2 Contractor Company Name:
 - .3 Project Superintendent's Name/Phone No.:
 - .4 DCC Point of Contact Name/Phone No.:
- .6 Secure the work site at all times to protect against un-authorized access.

1.5 FILING OF NOTICE

- .1 File Notice of Project and any other required Notices with the Ontario Ministry of Labour prior to commencement of the work. Provide the DCC representative with a copy of the filed Notice(s) prior to commencement of the work.

1.6 PERMITS

- .1 Obtain permits, licenses and compliance certificates at appropriate times and frequencies as required by the authorities having jurisdiction, for example CFB Kingston Hot Work Permit.
- .2 Post all permits, licenses and compliance certificates on work site and provide copies to the DCC representative.

1.7 PROJECT/SITE CONDITIONS

- .1 DND has provided the following list of known hazardous substances and/or hazardous conditions at the work site which should be considered for inclusion on the Constructor's hazard assessment, as health or environmental hazards and shall be properly managed should they be encountered as part of the work:
 - .1 General construction type hazards;
 - .2 Designated substances and hazardous materials, where applicable;
 - .3 Working at heights;
 - .4 Mechanical hazards;
 - .5 Electrical hazards;
 - .6 Excavation and trenching hazards;
 - .7 Confined Space Entry hazards – please ensure any confined spaces are entered with precautions that meet or exceed the prescribed requirements of the Ontario Occupational Health and Safety Act & Confined Space Regulation O. Reg. 632/05.
 - .8 Contractors are required to be aware of the known hazardous substances and/or hazardous conditions and are to include in their tender price all work associated in working with, in and around the hazards.
- .2 The above lists shall not be construed as being complete and inclusive of all safety and health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

1.8 MEETINGS

- .1 Prior to commencement of work attend a pre-commencement meeting conducted by the DCC representative. Ensure minimum attendance by contractor's site superintendent. The DCC representative will advise of time, date and location of the meeting and will be responsible for recording and distributing the minutes.

- .2 Conduct site specific occupational health and safety meetings as required by the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act.
- .3 Record and post minutes of all meetings in plain view on the work site. Make copies available to the DCC representative upon request.

1.9 HEALTH AND SAFETY POLICY & PROGRAM

- .1 Contractors are required under the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act to have in place a Health and Safety policy and program to support the policy. Compliance requirements for the content, detail and implementation of the policy and program resides with the Ontario Ministry of Labour. For the purpose of this contract the Health and Safety policy & program shall include, a signed / dated (current) safety policy statement and a program to support the policy (safe work procedures & practices, etc.) a site-specific hazard assessment that acknowledges, assesses and addresses the hazardous substances and/or hazardous conditions known and identified in paragraph 1.7 above, and on-going hazard assessment(s) shall be performed during the progress of work identifying and documenting new or known & potential health risks and safety hazards not previously known and identified.
- .2 Provide a copy of the Health and Safety Policy & Program to the DCC representative prior to commencement of work on the work site. The copy provided to the DCC representative is for the purpose of review against the contract requirements related to the known hazardous substances and/or hazardous conditions. The review is not to be construed to imply approval by the DCC representative that the program is complete, accurate and legislatively compliant with the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act, and shall not relieve the Contractor of their legal obligations under such legislation.

1.10 ACCIDENT REPORTING

- .1 Investigate and report incidents and accidents as required by the Ontario Occupational Safety and Health Act, and the Regulations made pursuant to the Act.
- .2 For the purpose of this contract immediately notify DCC representative, investigate and provide a report within 24 hours to the DCC representative on incidents and accidents that involve:
 - .1 A resulting injury that may or may not require medical aid but involves lost time at work by the injured person(s).
 - .2 Exposure to toxic chemicals or substances.
 - .3 Property damage.
 - .4 Interruption to adjacent and/or integral infrastructure operations with potential loss implications.

- .3 In the investigation and reporting of incidents and accidents, the Contractor is required to respond in a timely fashion to correct the action that was deemed to have caused the incident and/or accident and advise in writing on the action taken to prevent a re-occurrence of the incident and/or accident.

1.11 RECORDS ON SITE

- .1 Maintain on site a copy of the safety documentation as specified in this section and any other safety related reports and documents issued to or received from the authorities having jurisdiction.
- .2 Upon request, make copies available to the DCC representative.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section Not Used.

1.2 REFERENCE STANDARDS

- .1 This section to be followed if indicated in contract documents.
- .2 Owner's identification of existing survey control points and property limits.

1.3 QUALIFICATIONS OF SURVEYOR

- .1 Qualified registered land surveyor, licensed to practice in Place of Work, acceptable to DCC Representative.

1.4 SURVEY REFERENCE POINTS

- .1 Use when applicable.
- .2 Existing base horizontal and vertical control points are designated on drawings.
- .3 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .4 Make no changes or relocations without prior written notice to DCC Representative.
- .5 Report to DCC Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .6 Require surveyor to replace control points in accordance with original survey control.

1.5 SURVEY REQUIREMENTS

- .1 Use when applicable.
- .2 Establish two permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .3 Establish lines and levels, locate and lay out, by instrumentation.
- .4 Stake for grading, fill, topsoil placement and landscaping features.
- .5 Stake slopes and berms.
- .6 Establish pipe invert elevations.

- .7 Stake batter boards for foundations.
- .8 Establish foundation column locations and floor elevations.
- .9 Establish lines and levels for mechanical and electrical work.

1.6 EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in area of Work, all Base and Provincial Locates must be in hand before work may commence.
- .2 Remove abandoned service lines within 2m of structures. Cap or otherwise seal lines at cut-off points as approved by DCC Representative.
- .3 Notify DCC Representative prior to backfill or capping of any utilities below grade.

1.7 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .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 DCC Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment to DCC Representative.

1.8 RECORDS

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 Record locations of maintained, re-routed and abandoned service lines.

1.9 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit name and address of Surveyor to DCC Representative.
- .2 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

1.10 SUBSURFACE CONDITIONS

- .1 Promptly notify DCC Representative in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should DCC Representative determine that conditions do differ materially; instructions may be issued for changes in Work as provided in Changes and Change Orders.

Part 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

Part 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Notify DCC Representative in advance of cutting or alteration which affects structural integrity of elements of project.

1.3 MATERIALS

- .1 Required for original installation.

1.4 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- .5 Provide protection from elements for areas which are to be exposed by uncovering work.

1.5 EXECUTION

- .1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.
- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

- .7 Restore work with new products in accordance with requirements of Contract Documents.
- .8 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .9 Provide firestopping in to maintain the integrity of fire separations, including:
 - .1 Protecting penetrations at fire-resistance rated wall, ceiling or floor construction.
 - .2 Using construction joint fire stops and building perimeter fire stops to protect gaps at fire separations and between fire separations and other construction assemblies.
- .10 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection or as indicated in contract documents. Refinish assemblies by refinishing entire unit.
- .11 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 00 – Cleaning and Waste Management.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Not Used.

1.2 REFERENCE STANDARDS

- .1 Conduct cleaning and disposal operations in accordance with all Federal, Provincial or Municipal regulatory requirements and guidelines for environmental protection.
- .2 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation system is not permitted for this purpose.
- .3 This section does not apply to cleaning associated with hazardous material removal and disposal operations. Cleaning of these areas is covered in other sections. Once certified as safe by DCC Representative cleaning methods specified herein are applicable.

1.3 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.
 - .1 Remove construction debris, waste materials, packaging from work site daily.
 - .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .2 Clear snow and ice from access to building, bank/pile snow in designated areas only.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Dispose of waste materials and debris at regulated waste facility off site.
- .6 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .8 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .10 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.4 FINAL CLEANING

- .1 When Work is Substantially Completed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Do not burn waste materials on site.
- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass if damaged by the Work.
- .7 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors, if caused by the Work.
- .8 Clean lighting reflectors, lenses, and other lighting surfaces.
- .9 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .10 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .11 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .12 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .13 Remove dirt and other disfiguration from exterior surfaces.
- .14 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .15 Sweep and wash clean paved areas.
- .16 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .17 Clean roofs, downspouts, and drainage systems.
- .18 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

- .19 Remove snow and ice from access to building.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Complete in accordance with 01 35 43 - ENVIRONMENTAL PROTECTION section.

Part 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

Part 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 DEFINITIONS

- .1 Redline Drawings are those prepared by the Contractor as it constructs the project and upon which it documents the actual locations of the building components and site components and changes to the original contract.
- .2 Record Drawings are prepared by the Consultant or Designer of Work based on information taken from the Contractors Redline Drawings, are not included in the scope of work unless stated in the contract documents

1.2 GENERAL

- .1 The following shall be submitted in the close out package for approval in folders described in this divisional section.
 - .1 Scanned Redline Drawings
 - .2 Field Survey Data
 - .3 O&M Manual
 - .4 Approved Shop Drawings
 - .5 Warranty Information and if available;
 - .6 Reports
 - .7 Spare parts, special tools and maintenance materials, as indicated in contract documents.

1.3 FORMAT

- .1 The main folder structure for the closeout package submittal is to be organized as follows;
 - .1 Redline Drawings
 - .2 Field Survey Data
 - .3 O&M Manual
 - .4 Approved Shop Drawings
 - .5 Warranty Information
 - .6 Reports
 - .7 Spare parts, special tools and maintenance materials, as indicated in contract documents.
- .2 Only electronic format is to be submitted.
- .3 Allow ten (10) working days for closeout package to be reviewed by DCC Representative.

- .4 All Cover Sheets: Project Title, Building Number, Drawing Number, Project Number, DCC KN Number and identify subject matter of contents.
- .5 Arrange content by Specification Section numbers and sequence of Table of Contents.
- .6 Provide separate sections for each separate product and system, with typed description of product and major component parts of equipment.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Three weeks prior to Substantial Completion of the Work, submit to the DCC Representative, an electronic copy of operating and maintenance manuals in English.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.

1.5 REDLINE DRAWINGS

- .1 As-Built, Field Record Drawings and Redlines are interchangeable terms meaning Redlines.
- .2 Contractor is to provide a printed copy of the drawing set for the intended purpose of creating redline drawings with the words "Redlines" in red written on each page.
- .3 Contractor to record changes in red as made and authorized on one set of prints referred to as "Redline Drawings" and at substantial completion of project and prior to final inspection scan and submit drawings to DCC Representative. DCC Representative will review and initial to concur with the content of the final markups.
- .4 All Site Instruction Numbers and Change Order Numbers are to be annotated on the Redline Drawing set.
- .5 Contractor to maintain information on project site drawings and record accurately, deviations of newly installed or existing plant works from Contract documents during construction.
- .6 The Contractor shall ensure but not limit to the recording of the following information on the original Redline drawings:
 - .1 Depths of various elements of foundation in relation to first floor level or finished grade elevation.
 - .2 Horizontal and vertical locations of existing and new underground utilities and appurtenances as well as the alignment, bend and curves of buried utilities such as communication, power, water, sewer, storm and natural gas ducts, pipes and lines shall be surveyed and be geographically referenced to the coordinate system

of the drawing or accurately dimensioned to surfaces features shown in the drawing.

- .3 Locations of internal utilities and appurtenance concealed in construction, referenced to visible and accessible features of structure.
- .4 Field changes of dimension and detail, such as but not limited to:
 - .1 For Buildings: Door locations, duct sizes, piping valve, and equipment layout, cable tray alignment.
 - .2 For Civil/Utilities: road widths, curve radii, alignment, curb radii, sidewalk extents, conduit/pipe sizes.
- .5 Changes made by Change Order.
- .6 Utilities shall be identified as abandoned, existing or new.

1.6 FIELD SURVEYING & DATA FILE

- .1 Contractor to notify the DCC Representative with two (2) working days notice if any buried utility or infrastructure is being exposed to allow DND Surveyor to survey.
- .2 DND surveyor is allowed access to site to survey.
- .3 Should DND surveyor require special site safety training, the Contractor will notify DCC Representative prior to allow time to be trained.
- .4 Should the Contractor have their own Surveyor, and data is collected, it will be submitted with the closeout package.
- .5 Field survey performed for Municipal/Civil/Marine Works forming Part of Project shall:
 - .1 Be collected in ASCii format and shape file.
 - .2 ASCii file (Test File) shall contain point ID, Northing, Easting, Elevation and Descriptor.
 - .3 Shape files (.shp, ESR1 format) shall include point ID, Northing, Easting, Elevation and Descriptor.

1.7 O&M MANUALS

- .1 Electronic files are to be arranged and indexes into the same numerical order as the contract Specification Section. A maximum of 300 pages per file.
- .2 The use of Bookmarks within PDF is an acceptable practice.
- .3 Warranties are to remain in the Manual under each section.
- .4 Table of Contents for Each Volume: provide Project Title, Building Number, Drawing Number, DND Project Number, DCC KN Number;
 - .1 Date of submission; names.

- .2 Addresses, and telephone numbers of Contractor with name of responsible parties.
- .3 List of products and systems, indexed to content of volume.
- .5 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .6 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .7 Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

1.8 APPROVED SHOP DRAWINGS

- .1 Only copies of approved shop drawings and product data are to be submitted. Rejected and non-approved shop drawings and product data are not to be included.
- .2 Approved shop drawings for temporary works required to facilitate construction and that will be removed during or at the completion of construction are not required to be submitted in the closeout package.

1.9 WARRANTY

- .1 A Cover Sheet and Table of Contents containing all project related warranties with each item's expiry date is to be created.
- .2 All project related warranties are to be copied into this folder listed by specification section.
- .3 Submit a summary of warranty information to DCC Representative for any warranties.
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.

- .10 Organization, names and phone numbers of persons to call for warranty service.

1.10 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

1.11 MATERIALS AND FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
 - .1 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 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

1.12 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual specification sections to DCC Representative.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as approved by DCC Representative; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to DCC Representative.
 - .2 Include approved listings in Maintenance Manual.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections to DCC Representative.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as approved by DCC Representative; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to DCC Representative.
 - .2 Include approved listings in Maintenance Manual.
- .3 Special Tools:
 - .1 Provide special tools, in quantities specified in individual specification section to DCC Representative.
 - .2 Provide items with tags identifying their associated function and equipment.
 - .3 Deliver to location as approved by DCC Representative; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to DCC Representative.

- .2 Include approved listings in Maintenance Manual.

1.13 DELIVERY, STORAGE AND HANDLING

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

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION