

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises the furnishing of all labour, materials, equipment and supervision required for RFID Infrastructure upgrade and related work as specified and/or indicated, at the Emerson Port of Entry located in Emerson, Manitoba.

- .2 It is essential that the Contractor becomes familiar with all the work described in the drawings and specifications. It is the Contractor's responsibility to read the contract documents entirely and ensure that the scope of the work, including the required planning, coordination and execution is fully understood. No consideration will be given for changes to the cost or schedule of this contract for Contractor's failure to be fully understand the scope of work.

1.2 1.2 WORK BY OTHERS

- .1 Work of Project which will be executed after completion of Work of this Contract, and which is specifically excluded from this Contract:
 - .1 CBSA will provide RFID equipment (Perceptics)

1.3 DEFINITIONS

- .1 The word "provide" means "supply and install".

- .2 The term "Occupant" means the organization who is, or will be, occupying the building site.

1.4 INTERPRETATION OF DOCUMENTS

- .1 In the event of discrepancies or conflicts in interpreting the Plans (drawings) and Specifications,
 - .1 Division 1 Sections take precedence over technical specification sections in other Divisions;
 - .2 Specifications take precedence over drawings bound with specifications;
 - .3 Specifications take precedence over room finish schedules and door schedules, whether they are bound with the specifications or integral with the drawings;
 - .4 Door schedules and room finish schedules take precedence over drawings, whether they are bound with the specifications or integral with the drawings.

- .2 Plans (drawings) and Specifications are complementary. When work is shown or mentioned on the drawings but is not indicated in the Specifications, or when work is indicated in the Specifications but is not shown or mentioned on the Drawings, it shall nevertheless be included in the Contract.

- .3 The sub-division of the Specification into sections, identified by title and number, is for convenience only and does not modify the singularity of the document, nor does it operate to make or imply that the Departmental Representative is an arbiter to establish the limits or extent of contract between Contractor and Subcontractors or to determine the limits or extents of work that may be decided by trade unions or contractors' organizations. Extras to the Contract will not be considered on the grounds of differences in interpretation of the Specification and/or Plans (drawings) as to which trade performs the work.

1.5 SUBCONTRACTORS

- .1 Within 48 hours of tender acceptance submit a list of subcontractors

1.6 SUPPLEMENTARY INFORMATION FOR PROGRESS PAYMENTS

- .1 Submit to Departmental Representative, at least 14 days before first application for payment, cost breakdown, in detail as directed, and on form approved, by Departmental Representative, for parts of Work, aggregating total amount of Contract Price, so as to facilitate evaluation of applications for payment. After approval by Departmental Representative, cost breakdown will be used as basis for progress payments.

1.7 CONTRACTOR USE OF PREMISES

- .1 Contractor shall limit use of premises for Work, for storage, and for access.
- .2 Coordinate use of premises under direction of Departmental Representative.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .4 Do not unreasonably encumber the site with materials and equipment.
- .5 Assume full responsibility for protection and safekeeping of products under this Contract.
- .6 Moved stored products or equipment which interfere with operations of Occupants or other contractors.

1.8 PRE-PURCHASED EQUIPMENT

- .1 Government Furnished Equipment: RFID system and all components will be supplied and installed by the Owner's Representative.

PART 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

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PART 3 EXECUTION

3.1 NOT USED

.1 Not Used.

End of Section

PART 1 GENERAL

1.1 EXISTING SERVICES

- .1 Notify Owner's Representative and utility companies of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give Owner's Representative a notice of three (3) working days for necessary interruption of mechanical or electrical service throughout course of work. Keep duration of interruptions minimum. Carry out interruptions after normal working hours of occupants, preferably on weekends.
- .3 Provide for pedestrian and vehicular traffic.

1.2 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Confirm all dimensions on site. Assume all risks associated with scaling of drawings.
- .2 Maintain integrity of exits at all times.
- .3 Maintain fire access/control.
- .4 Where security has been reduced by work of Contract, provide temporary means to maintain security.
- .5 Make good any damage to existing finishes or furniture caused by work under the contract. Making good means restoration to at least original condition in terms of strength, workmanship and appearance. Protect all furniture and belongings of Owner. Move furniture as necessary and relocate in original location upon completion of each day's work.
- .6 Execute work with least possible interference or disturbance to occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.
- .7 Existing operations must remain in service without interruption during construction period.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

- .1 Coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities, and construction Work, with progress of Work of other contractors and subcontractors under instructions of Owner's Representative.

1.2 PROJECT MEETINGS

- .1 Project meetings to be held at times and locations as determined by Owner's Representative.
- .2 Owner's Representative will arrange project meetings and record and distribute minutes.

1.3 CONSTRUCTION ORGANIZATION AND START-UP

- .1 Within five (5) working days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Establish time and location of meetings and notify parties concerned minimum 5 days before meeting.
- .3 Agenda to include following:
 - .1 Appointment of official representative of participants in Work.
 - .2 Schedule of Work, progress scheduling in accordance with Section 01 32 00 - Construction Progress Documentation.
 - .3 Schedule of submission of shop drawings, samples, colour chips in accordance with Section 01 33 00 - Submittal Procedures.
 - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 51 00 - Temporary Utilities.
 - .5 Delivery schedule of specified equipment in accordance with Section 01 32 00 - Construction Progress Documentation.
 - .6 Site security in accordance with Section 01 52 00 - Construction Facilities.
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
 - .8 Record drawings in accordance with Section 01 78 00 - Closeout Submittals.
 - .9 Maintenance manuals in accordance with Section 01 78 00 - Closeout Submittals.
 - .10 Take-over procedures, acceptance, and warranties in accordance with Section 01 77 00 - Closeout Procedures and 01 78 00 - Closeout Submittals.
 - .11 Monthly progress claims, administrative procedures, photographs, and holdbacks.

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- .12 Appointment of inspection and testing agencies or firms in accordance with Section 01 45 00 - Quality Control.
- .13 Insurances and transcript of policies.
- .4 Comply with Owner's Representative's allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.
- .5 During construction coordinate use of site and facilities through Owner's Representative's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .6 Comply with instructions of Owner's Representative for use of temporary utilities and construction facilities.

1.4 ON-SITE DOCUMENTS

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 List of outstanding shop drawings.
 - .6 Change orders.
 - .7 Other modifications to Contract.
 - .8 Field test reports.
 - .9 Copy of approved Work schedule.
 - .10 Health and Safety Plan and other Safety related documents.
 - .11 Manufacturers' installation and application instructions.
 - .12 Labour conditions and wage schedules.
 - .13 Other documents as specified.

1.5 SCHEDULES

- .1 Submit preliminary construction progress schedule to Owner's Representative coordinated with Owner's Representative's project schedule. Schedule to show anticipated progress stages and final completion of work within time period required by contract documents.
- .2 After review, revise and resubmit schedule to comply with project schedule requirements.
- .3 During progress of Work revise and resubmit at project progress meetings or as directed by Owner's Representative.

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1.6 SUBMITTALS

- .1 Make submittal to Owner's Representative for review.
- .2 Submit preliminary shop drawings, product data and samples in accordance with Section 01 33 00 – Submittal Procedures for review for compliance with Contract Documents; for field dimensions and clearances, for relation to available space, and for relation to Work of other contracts. After review, revise and resubmit for transmittal to Owner's Representative.
- .3 Submit requests for payment for review to Owner's Representative.
- .4 Submit requests for interpretation of Contract Documents, and obtain instructions through Owner's Representative.
- .5 Process change orders through Owner's Representative.
- .6 Deliver closeout submittals for review by Owner's Representative.

1.7 COORDINATION DRAWINGS

- .1 Provide information required by Owner's Representative for preparation of coordination drawings.
- .2 Review and approve revised drawings for submittal to Owner's Representative.
- .3 Owner's 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.

1.8 CLOSEOUT PROCEDURES

- .1 Notify Owner's Representative when Work is considered ready for Substantial Performance.
- .2 Accompany Owner's Representative on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with Owner's Representative's instructions for correction of items of Work listed in executed certificate of Substantial Performance and for access to Owner-occupied areas.
- .4 Notify Owner's Representative of instructions of items of Work determined in Owner's Representative's final inspection.

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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 ADMINISTRATIVE

- .1 This section specifies general requirements and procedures for contractor's submissions of shop drawings, product data, samples and mock-ups to Owner's Representative 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 an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with work until relevant submissions are reviewed by Owner's Representative.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Owner's Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Owner's Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Owner's Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Owner's Representative review of submission, unless Owner's Representative gives written acceptance of specific deviations.
- .10 Make any changes in submissions which Owner's Representative may require consistent with Contract Documents and resubmit as directed by Owner's Representative. When resubmitting, notify Owner's Representative in writing of revisions other than those requested.
- .11 Notify Owner's Representative, in writing, when resubmitting, of any revisions other than those requested by Owner's Representative.
- .12 Keep one reviewed copy of each submission on site.

1.2 SUBMITTALS

- .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 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .3 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.
- .4 Allow ten (10) working days for Owner's Representative review of each submission.
- .5 Adjustments made on shop drawings by Owner's Representative are not intended to change contract price. If adjustments affect value of Work, state such in writing to Owner's Representative immediately after receipt of approval of shop drawings. If value of work is to change a change order must be issued prior to proceeding with work.
- .6 Structural Attachments:
 - .1 Make changes in shop drawings as Owner's Representative may require, consistent with Contract Documents. When resubmitting, notify Owner's Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.

- .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .9 After Owner's Representative review, distribute copies.
- .10 Submit 3 prints plus one electronic copy in PDF format of shop drawings for each requirement requested in specification Sections and as Owner's Representative may reasonably request.
- .11 Submit electronic copy in PDF format of product data sheets or brochures for requirements requested in Specification Sections and as requested by Owner's Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Delete information not applicable to project.
- .13 Supplement standard information to provide details applicable to project.
- .14 Cross-reference product data information to applicable portions of Contract Documents.
- .15 If upon review by Owner's Representative, no errors or omissions are discovered or if only minor corrections are made, copies 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.
- .16 Submit drawings stamped and signed by Professional Engineer registered or licensed in the Province of Manitoba.

1.3 PROGRESS PHOTOGRAPHS

- .1 Progress photograph to be electronically formatted and labelled as to location and view.

1.4 SHOP DRAWINGS REVIEW

- .1 The review of shop drawings by Owner's Representative is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that

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Owner's Representative approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents. Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains to fabrication processes or to techniques of construction and installation and for co-ordination of the work of all sub-trades.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 REFERENCES

1.1 GOVERNMENT OF CANADA.

- .1 Canada Labour Code - Part II
- .2 Canada Occupational Health and Safety Regulations.

1.2 NATIONAL BUILDING CODE OF CANADA (NBC):

- .1 Part 8, Safety Measures at Construction and Demolition Sites.

1.3 CANADIAN STANDARDS ASSOCIATION (CSA) AS AMENDED:

- .1 CSA Z797-2009 Code of Practice for Access Scaffold
- .2 CSA S269.1-1975 (R2003) Falsework for Construction Purposes
- .3 CSA S350-M1980 (R2003) Code of Practice for Safety in Demolition of Structures

1.4 FIRE PROTECTION ENGINEERING SERVICES, HRSDC:

- .1 FCC No. 301, Standard for Construction Operations.
- .2 FCC No. 302, Standard for Welding and Cutting.

1.5 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):

- .1 ANSI A10.3, Operations – Safety Requirements for Powder-Actuated Fastening Systems.

1.6 PROVINCE OF MANITOBA:

- .1 Workers Compensation Act Part 3-Occupational Health and Safety.
- .2 Occupational Health and Safety Regulation

1.7 CURRENT MANITOBA ELECTRICAL CODE

PART 2 SUBMITTALS

- .1 Submit to Departmental Representative submittals listed for review in accordance with Section 013300
- .2 Work effected by submittal shall not proceed until review is complete.
- .3 Submit the following:
 - .1 Health and Safety Plan.
 - .2 Copies of reports or directions issued by Federal and Provincial health and safety inspectors.
 - .3 Copies of incident and accident reports.

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- .4 Complete set of Material Safety Data Sheets (MSDS), and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.
- .5 Emergency Procedures.
- .4 The Departmental Representative will review the Contractor's site-specific project Health and Safety Plan and emergency procedures, and provide comments to the Contractor within 10 days after receipt of the plan. Revise the plan as appropriate and resubmit to Departmental Representative after receipt of the plan.
- .5 Medical surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of work, and submit additional certifications for any new site personnel to Departmental Representative.
- .6 Submission of the Health and Safety Plan, and any revised version, to the Departmental Representative is for information and reference purposes only. It shall not:
 - .1 Be construed to imply approval by the Departmental Representative.
 - .2 Be interpreted as a warranty of being complete, accurate and legislatively compliant.
 - .3 Relieve the Contractor of his legal obligations for the provision of health and safety on the project.

PART 3 RESPONSIBILITY

- .1 Assume responsibility as the Prime Contractor for work under this contract.
- .2 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .3 Comply with and enforce compliance by employees with safety requirements of Contract documents, applicable Federal, Provincial, Territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

PART 4 HEALTH AND SAFETY COORDINATOR

- .1 The Health and Safety Coordinator (Appointed by the General Contractor) must:
 - .1 Be responsible for completing all health and safety training, and ensuring that personnel that do not successfully complete the required training are not permitted to enter the site to perform work.
 - .2 Be responsible for implementing, daily enforcing, and monitoring the site-specific Health and Safety Plan.
 - .3 Be on site during execution of work.

PART 5 GENERAL CONDITIONS

- .1 Provide safety barricades and lights around work site as required to provide a safe working environment for workers and protection for pedestrian and vehicular traffic.
- .2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.
 - .1 Provide appropriate means by use of barricades, fences, warning signs, traffic control personnel, and temporary lighting as required.
 - .2 Secure site at night time as deemed necessary to protect site against entry.

PART 6 PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
 - .1 CBSA Local Representative.
 - .2 PWGSC Departmental Representative identified in the contract award letter.

PART 7 REGULATORY REQUIREMENTS

- .1 Comply with specified codes, acts, bylaws, standards and regulations to ensure safe operations at site.
- .2 In event of conflict between any provision of the above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, the Departmental Representative will advise on the course of action to be followed.

PART 8 FILING OF NOTICE

- .1 The General Contractor is to complete and submit a Notice of Project as required by Safe Work Manitoba.
- .2 Provide copies of all notices to the Departmental Representative.

PART 9 HEALTH AND SAFETY PLAN

- .1 Conduct a site-specific hazard assessment based on review of Contract documents, required work, and project site. Identify any known and potential health risks and safety hazards.
- .2 Prepare and comply with a site-specific project Health and Safety Plan based on hazard assessment, including, but not limited to, the following:
 - .1 Primary requirements:
 - .1 Contractor's safety policy.
 - .2 Identification of applicable compliance obligations.
 - .3 Definition of responsibilities for project safety/organization chart for project.

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- .4 General safety rules for project.
 - .5 Job-specific safe work, procedures.
 - .6 Inspection policy and procedures.
 - .7 Incident reporting and investigation policy and procedures.
 - .8 Occupational Health and Safety Committee/Representative procedures.
 - .9 Occupational Health and Safety meetings.
 - .10 Occupational Health and Safety communications and record keeping procedures.
- .2 Summary of health risks and safety hazards resulting from analysis of hazard assessment, with respect to site tasks and operations which must be performed as part of the work.
 - .3 List hazardous materials to be brought on site as required by work.
 - .4 Indicate Engineering and administrative control measures to be implemented at the site for managing identified risks and hazards.
 - .5 Identify personal protective equipment (PPE) to be used by workers.
 - .6 Identify personnel and alternates responsible for site safety and health.
 - .7 Identify personnel training requirements and training plan, including site orientation for new workers.
- .3 Develop the plan in collaboration with all subcontractors. Ensure that work/activities of subcontractors are included in the hazard assessment and are reflected in the plan.
 - .4 Revise and update Health and Safety Plan as required, and re-submit to the Departmental Representative.
 - .5 Departmental Representative's review: the review of Health and Safety Plan by Public Works and Government Services Canada (PWGSC) shall not relieve the Contractor of responsibility for errors or omissions in final Health and Safety Plan or of responsibility for meeting all requirements of construction and Contract documents.

PART 10 EMERGENCY PROCEDURES

- .1 List standard operating procedures and measures to be taken in emergency situations. Include an evacuation plan and emergency contacts (i.e. names/telephone numbers) of:
 - .1 Designated personnel from own company.
 - .2 Regulatory agencies applicable to work and as per legislated regulations.
 - .3 Local emergency resources.
 - .4 Departmental Representative [site staff].
- .2 Include the following provisions in the emergency procedures:
 - .1 Notify workers and the first-aid attendant, of the nature and location of the emergency.
 - .2 Evacuate all workers safely.
 - .3 Check and confirm the safe evacuation of all workers.
 - .4 Notify the fire department or other emergency responders.

- .5 Notify adjacent workplaces or residences which may be affected if the risk extends beyond the workplace.
- .6 Notify Departmental Representative [site staff].
- .3 Provide written rescue/evacuation procedures as required for, but not limited to:
 - .1 Work at high angles.
 - .2 Work in confined spaces or where there is a risk of entrapment.
 - .3 Work with hazardous substances.
 - .4 Underground work.
 - .5 Work on, over, under and adjacent to water.
 - .6 Workplaces where there are persons who require physical assistance to be moved.
- .4 Design and mark emergency exit routes to provide quick and unimpeded exit.
- .5 At least once each year, emergency drills must be held to ensure awareness and effectiveness of emergency exit routes and procedures, and a record of the drills must be kept.
- .6 Revise and update emergency procedures as required, and re-submit to the Departmental Representative.

PART 11 HAZARDOUS PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials, and regarding labelling and provision of Material Safety Data Sheets (MSDS) acceptable to the Departmental Representative and in accordance with the Canada Labour Code.
- .2 Where use of hazardous and toxic products cannot be avoided:
 - .1 Advise Departmental Representative beforehand of the product(s) intended for use. Submit applicable MSDS and WHMIS documents as per Section 013300.
 - .2 In conjunction with Departmental Representative, schedule to carry out work during "off hours" when tenants have left the building.
 - .3 Provide adequate means of ventilation in accordance with Section 015100.

PART 12 ELECTRICAL SAFETY REQUIREMENTS

- .1 Comply with authorities and ensure that, when installing new facilities or modifying existing facilities, all electrical personnel are completely familiar with existing and new electrical circuits and equipment and their operation.
 - .1 Before undertaking any work, coordinate required energizing and de-energizing of new and existing circuits with Departmental Representative.
 - .2 Maintain electrical safety procedures and take necessary precautions to ensure safety of all personnel working under this Contract, as well as safety of other personnel on site.

PART 13 ELECTRICAL LOCKOUT

- .1 Refer to Section 01 35 24.

PART 14 POWDER-ACTUATED DEVICES

- .1 Use powder-actuated devices in accordance with ANSI A10.3 only after receipt of written permission from the Departmental Representative.

PART 15 FIRE SAFETY AND HOT WORK

- .1 Refer to Section 01 35 24.

PART 16 FIRE SAFETY REQUIREMENTS

- .1 Store oily/paint-soaked rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.
- .2 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

PART 17 FIRE PROTECTION AND ALARM SYSTEM

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut off.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting.
- .3 Be responsible/liable for costs incurred from the fire department, the building owner and the tenants, resulting from false alarms.

PART 18 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard or condition become evident during performance of the work, immediately stop work and advise the Departmental Representative verbally and in writing.

PART 19 POSTED DOCUMENTS

- .1 Post legible versions of the following documents on site:
 - .1 Health and Safety Plan.
 - .2 Sequence of work.

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- .3 Emergency procedures.
 - .4 Site drawing showing project layout, locations of the first-aid station, evacuation route and marshalling station, and the emergency transportation provisions.
 - .5 Notice of Project.
 - .6 Floor plans or site plans.
 - .7 Notice as to where a copy of the Workers' Compensation Act and Regulations are available on the work site for review by employees and workers.
 - .8 Workplace Hazardous Materials Information System (WHMIS) documents.
 - .9 Material Safety Data Sheets (MSDS).
 - .10 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.
- .2 Post all Material Safety Data Sheets (MSDS) on site, in a common area, visible to all workers and in locations accessible to tenants when work of this Contract includes construction activities adjacent to occupied areas.
 - .3 Postings should be protected from the weather, and visible from the street or the exterior of the principal construction site shelter provided for workers and equipment, or as approved by the Departmental Representative.

PART 20 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by the Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance with health and safety issues identified.
- .3 The Departmental Representative may issue a "stop work order" if non-compliance of health and safety regulations is not corrected immediately or within posted time. The General Contractor/subcontractors will be responsible for any costs arising from such a "stop work order".

END OF SECTION

PART 1 GENERAL

1.1 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.2 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.3 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.4 NOTIFICATION

- .1 Owner's Representative will notify Contractor in writing of observed non-compliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of environmental protection. Contractor: after receipt of such notice, inform Owner's Representative of proposed corrective action and take such action as approved by Owner's Representative.
- .2 Owner's Representative may issue stop order of work until satisfactory corrective action has been taken.
- .3 No time extensions will be granted or equitable adjustments allowed to Contractor for such suspensions.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 REFERENCES AND CODES

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including all amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

1.2 FEES, PERMITS AND CERTIFICATES

- .1 Submit applications to and provide authorities having jurisdiction with information requested.
- .2 Pay fees and obtain certificates and permits required.
- .3 Furnish certificates and permits.

1.3 CONSTRUCTION SAFETY MEASURES

- .1 Without restricting other provisions or requirements of the Contract, observe construction safety measures of National Building Code 2010 Part 8, Provincial Government, Workers' Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2 Comply with requirements of FCC No. 301.
- .3 Provide fire extinguishers necessary to protect the work in progress and the Contractor's physical plant on site. Do not use specified permanent fire extinguishers for this purpose.

1.4 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions.

1.5 TAXES

- .1 Pay applicable Federal, Provincial and Municipal taxes.

PART 2 PRODUCTS (NOT APPLICABLE)

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PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 WATER SUPPLY

- .1 Continuous supply of water is available for use.

1.2 TEMPORARY HEATING AND VENTILATION

- .1 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 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .2 Permanent heating system of building, may be used when available. Be responsible for damage to heating system if use is permitted.
- .3 On completion of Work for which permanent heating system is used, replace filters.

1.3 TEMPORARY POWER AND LIGHT

- .1 Departmental Representative may permit connection to existing power supply without disturbing CBSA operations.
- .2 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of Owner's Representative provided that guarantees are not affected. Make good damage to electrical system caused by use under this Contract. Replace lamps which have been used for more than 3 months.

1.4 TEMPORARY COMMUNICATION FACILITIES

- .1 Provide and pay for temporary telephone and data for own use.

1.5 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies and governing codes, regulations and bylaws.

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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 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.189M-2000, Primer, Alkyd, for Wood, Exterior.
 - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association (CSA International)
 - .1 CAN3-A23.1-/A23.2-04, Concrete Materials and Methods for Concrete Construction/Method of Test for Concrete.
 - .2 CSA-0121-M1978(R1998), Douglas Fir Plywood.
 - .3 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.

1.2 INSTALLATION AND REMOVAL

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

1.3 CONSTRUCTION PARKING

- .1 Parking is available on site.

1.4 OFFICES

- .1 An office is not required however no office space will be provided by Departmental Representative.
- .2 Provide a clearly marked and fully stocked first-aid case in a readily available location.

1.5 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in a clean and orderly condition, lockable boxes storage of tools, equipment and materials.

1.6 SANITARY FACILITIES

- .1 Contractor to provide for work force as per governing regulations and ordinances.

1.7 CONSTRUCTION SIGNAGE

- .1 No contractor/consultant signboard will be permitted for the project.
- .2 Signs and notices for safety shall be in both official languages Graphic symbols shall conform to CAN3-Z321.

PART 2 PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 EXECUTION

3.1 NOT USED

.1 Not Used.

PART 1 GENERAL

1.1 INSTALLATION AND REMOVAL

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

1.2 DUST TIGHT SCREENS

- .1 Provide dust tight screens or partitions 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.

1.3 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 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .4 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.

PART 1 GENERAL

1.1 REFERENCES

- .1 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .2 The cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .3 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

1.2 DEFINITIONS

- .1 Workplace Hazardous Materials Information System (WHMIS): A Canada-wide system designed to give employers and workers information about hazardous materials used in the workplace. Under WHMIS, information on hazardous materials is to be provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by a combination of federal and provincial laws.
- .2 Comply with Workplace Hazardous Materials Information System Regulation (WHMIS) Certified in accordance with the applicable legislation of the authority having jurisdiction.

1.3 QUALITY

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- .2 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.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.4 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 Within 7 days of written request by Departmental Representative, submit following information for materials and equipment proposed for supply:
 - .1 name and address of manufacturer,
 - .2 trade name, model and catalogue number,
 - .3 performance, descriptive and test data,
 - .4 manufacturer's installation or application instructions,
 - .5 evidence of arrangements to procure.
- .3 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.5 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 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.6 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Environment Canada. Unload, handle and store such products.

1.7 MANUFACTURER'S INSTRUCTIONS

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

1.8 QUALITY OF WORK

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

1.9 CO-ORDINATION

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

1.10 CONCEALMENT

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

1.11 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate 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.

1.12 LOCATION OF FIXTURES

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

1.13 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 Generally, conceal fasteners. 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.
- .7 Obtain Departmental Representative's approval before using explosive actuated fastening devices.

1.14 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.

1.15 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Departmental Representative.
- .2 Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by Departmental Representative, at no increase in Contract Price or Contract Time.

1.16 EXISTING UTILITIES

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

1.17 CONTRACTOR'S OPTIONS FOR SELECTION OF MATERIALS

- .1 When materials are specified by referenced standard, select any material that meets or exceeds the specified standard.
- .2 The terms "Acceptable Material", "Acceptable Product" and "Standard of Acceptance" are each deemed to be a complete and working commodity as described by a manufacturer's name, catalogue number, trade name or any combination thereof. Any such named materials may be selected by the Contractor.
- .3 Where materials are required to be listed on the "Canadian General Standards Board, Qualified Products List" select any manufacturer so listed.
- .4 Materials specified by "Prescriptive" or "Performance" specification, select any material meeting or exceeding specification.
- .5 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the Departmental Representative, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.

1.18 SUBSTITUTION

- .1 No substitutions will be permitted without prior written approval of Departmental Representative.

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- .2 Proposals for substitution, submitted after award of contract, must include statements of respective costs of items originally specified and the proposed substitution. Proposals will only be considered by Departmental Representative if:
 - .1 materials selected by tenderer from those specified, are not available;
 - .2 delivery date of materials selected from those materials specified would unduly delay completion of contract, or
 - .3 alternative material to those specified, which are brought to the attention of and considered by Departmental Representative as equivalent to the material specified and will result in a credit to the Contract amount.
- .3 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
- .4 Amounts of all credits arising from approval of substitutions will be determined by Departmental Representative and Contract Price will be reduced accordingly.

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 EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .2 Before commencing work, establish location and extent of service lines in area of Work and notify Owner's Representative of findings.
- .3 Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by Owner's Representative.

1.2 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 Owner's Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Owner's Representative.

1.3 RECORDS

- .1 Record locations of maintained, re-routed and abandoned service lines.

1.4 SUBSURFACE CONDITIONS

- .1 Promptly notify Consultant 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 Owner's Representative determine that conditions do differ materially, instructions will be issued for changes in Work.

PART 2 PRODUCTS (NOT APPLICABLE)

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PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 SUBMITTALS

- .1 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of any element of Project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.
- .2 Include in request:
 - .1 Identification of Project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.2 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 may be exposed by uncovering work; maintain excavations free of water.
- .6 Obtain Owner's Representative's approval before cutting, boring or sleeving load-bearing members.

1.3 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 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .8 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .9 Restore work with new products in accordance with requirements of Contract Documents.
- .10 Fit Work to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .11 Refinish surfaces to match adjacent finishes: For continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.
- .12 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.
- .13 Make cuts with clean, true, smooth edges.
- .14 Where new work connects with existing, and where existing work is altered, cut, patch and make good to match existing work.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 GENERAL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers and remove from premises at end of each working day.
- .3 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

1.2 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials and debris from site at the end of each working day. Do not burn waste materials on site.
- .3 Clear snow and ice from access to building.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site containers for collection of waste materials and debris.
- .6 Clean interior areas prior to start of finish work, 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.

1.3 FINAL CLEANING

- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

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- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 When the Work is Totally Performed, remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the Owner or other Contractors.
- .4 Remove waste materials from the site at regularly scheduled times or dispose of as directed by the Owner's Representative. 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 Leave the work broom clean before the inspection process commences.
- .7 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, floors and ceilings.
- .8 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .9 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .10 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .11 Remove dirt and other disfiguration from exterior surfaces.
- .12 Clean roofs, gutters, downspouts and drainage systems. Clean areaways and sunken wells.
- .13 Sweep and wash clean paved areas.
- .14 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 FINAL INSPECTION AND DECLARATION PROCEDURES

- .1 Contractor's Inspection: The Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects; repair as required. Notify the Owner's Representative in writing of satisfactory completion of the Contractor's Inspection and that corrections have been made. Request an Owner's Representative's Consultant's Inspection.
- .2 Owner's Representative's Inspection: Owner's Representative and the Contractor will perform an inspection of the Work to identify obvious defects or deficiencies. The contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that the following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Certificates required by Fire Commissioner, Utility companies have been submitted.
 - .5 Operation of systems have been demonstrated to Owner's personnel.
 - .6 Work is complete and ready for Final Inspection.
- .4 Final Inspection: When items noted above are completed, request final inspection of Work by the Owner's Representative, representative of DTW and the Contractor. If Work is deemed incomplete by the Owner's Representative, complete outstanding items and request a reinspection.
- .5 Declaration of Substantial Performance: When the Owner's Representative considers deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for Certificate of Substantial Performance. Refer to General Conditions for specifics to application.
- .6 Commencement of Lien and Warranty Periods: The date of DTW acceptance of the submitted declaration of Substantial Performance shall be the date for commencement for the warranty period and commencement of the lien period.
- .7 Declaration of Total Performance: When the Owner's Representative considers final deficiencies and defects have been corrected and it appears requirements of the Contract have been totally performed, make application for certificate of Total Performance. Refer to General Conditions for specifics to application. If Work is deemed incomplete by the Consultant, complete the outstanding items and request a reinspection.

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1.2 REINSPECTION

- .1 Should status of work require reinspection by Owner's Representative due to failure of work to comply with Contractor's claims for inspection, Owner will deduct amount of compensation for reinspection services from payment to Contractor.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

PART 1 GENERAL

1.1 AS-BUILTS

- .1 In addition to requirements in General Conditions, maintain at the site for Owner's Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents available for inspection by Owner's Representative.

1.2 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of blue line opaque drawings, provided by Owner's Representative.
- .2 Provide felt tip marking pens, maintaining red color pens for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.

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- .5 Changes made by change orders.
- .6 Details not on original Contract Drawings.
- .7 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: submit manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 At completion of project, provide all recorded information on print drawings. Transfer recorded information to AutoCAD files in DWG format. Submit DWG files, also with electronic files in PDF format as part of the Closeout Submittals.

1.3 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 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 coordination drawings, with installed colour coded piping diagrams.

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- .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.
- .14 Include test and balancing reports
- .15 Additional requirements: As specified in individual specification sections.

1.4 MATERIALS AND FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 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.

1.5 SPECIAL TOOLS

- .1 Provide special tools, in quantities specified in individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Deliver to project site place and store.
- .4 Receive and catalogue all items. Submit inventory listing to Owner's Representative. Include approved listings in Maintenance Manual.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION