

Specifications for submittals

Architecture

Canadian Space Agency

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John H. Chapman Space Centre

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Replacement of doors 2G-110 and 2B-200.1

The logo for CIMaISe, featuring the company name in a red, sans-serif font. The letters are spaced out, and the 'i' and 's' have a unique, rounded design.

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PART 1 **GENERAL**

1. DESCRIPTION

1. The goal for this division is to complete all clauses and general conditions of this contract.
2. Unless stated otherwise and being a particular case written on the drawings, drawings or other documents being part of the contract, these conditions and these complementary requirements are applicable without condition and according to the case, to the Contractor and sub-contractors of all trades, concerning the specified divisions in the present specification or for the whole architectural, structural, mechanical, and electrical works, that must be done to complete the construction.
3. For interpretation or contradiction of document, French documents take precedence on English documents.

2. COOPERATION AND COORDINATION WITH OTHER TRADES

1. Ensure the entire cooperation of all trades, without exception, pertaining to these works, for the furniture and the installation of all components necessary for the execution of this work.
2. Unless stated otherwise, the manufacturer must provide all necessary accessories to complete, on the spot, the installation of the components he fabricated.
3. The installation is the responsibility of the Contractor. He will provide materials, workmanship and equipment required to complete the installation of his work.

3. OPENINGS AND REPAIRS

1. In principle, unless stated otherwise on the drawings and on Ministerial representative tender, all openings and piercing to be done, being over 150mm in diameter or more than 195 square centimeters, for the needs of different trades in the existing building and in new concrete slabs, will be done by the Contractor, after approval of Ministerial representative.
2. The Contractor will do the repairs afterwards, as soon as subcontractor's work is done and that they have the certificates for tests, inspection and approval done by laboratories, inspectors, and Ministerial representative.
3. It is the responsibility of the Contractor to ensure the cooperation and the coordination of all subcontractors to anticipate, as much as possible before beginning of the work, the openings, location for fastening devices, necessary space for various components, etc. To this effect, refer to the beginning of each division for general clauses, proper to each trade.

4. SITE LIMITS

1. The Contractor will respect the site limits established while respecting the required conditions stated on the drawings, in the tender and by other requirements by Ministerial representative.

5. EXISTING SERVICES

1. When connecting work must be done to existing networks, the work must be performed at times fixed by responsible authority, not to bother the activities of users.

6. OTHER DRAWINGS

1. The Ministerial representative can, for clarification purposes only, give to the Contractor extra drawings to ensure the good execution of the works. These drawings will have the same signification and the same range as if they were part of the contract documents.

7. SITE MEETINGS

1. The Ministerial representative will organize some project meetings when necessary. He will state the time and write a progress report then distribute it.

8. EQUIPMENTS

1. In their tender, the Contractor and subcontractors will consider the installation costs for existing equipment and equipment provided by the Ministerial representative as stated in architectural, mechanical/electrical tender.

9. SITE PREPARATION

1. At the beginning and during work, prepare premises in advance and in relation with the work to be done.
2. Anticipate the arrival of materials and equipment so as not to block or even reduce access ways during heavy traffic. Release and transport out of the site any residue resulting from construction work and demolition. As much as possible, deliver materials immediately before needed or for before installation, therefore not cluttering unnecessarily access to the buildings.
3. In entrances and other places, remove all clutter to allow easy access where work must be done. Free entrances and build the required protections to allow users to pass in security, at all times.
4. Plan, coordinate and prepare the work for each operation so there is no loss of time or delays due to the lack of foresight, of rules and regulations, of harmful overlapping of certain works, of useless clutter and hard access, basic work and incomplete preparation, or defective electricity, water, and other inadequate supply services and of all other unfavorable similar causes or conditions.
5. Before starting any work, coordinate and determine, with each subcontractor, the spaces required for doing the work.

10. SITE CONDITIONS

1. Work must be planned and done to minimize all inconvenient such as interferences, troubles, noise, dust, gas for combustible motors and other nuisances. Work areas must be zoned and when required by the Ministerial representative, adequate temporary protections must be installed to confine construction spaces where necessary; (according to the requirements of the Ministerial representative).

11. PUBLIC, WORKERS AND OCCUPANTS' PROTECTION.

1. According to the regulation of Health and Work Security Board, the Contractor is the project manager.
2. Build and maintain in good order, fences, partitions, wire netting, covered bridges and any other means for temporary protection appropriate for surrounding the building, around openings and scaffoldings and in other dangerous areas around the building and on the ground.
3. Provide, install, and maintain in operation, during darkness periods, fires or guard lights in areas where there are ramps, clutter, open passages, dangerous objects or equipment and in any other area of this nature around the building and on the ground.

4. Protective gears must be as per Workmen Health and Safety Code.
5. The Ministerial representative will have the right, without prior formal demand, to provide, at the expense of the contractor, safety measures that the Contractor has omitted to take, either for the maintenance of communications or for the protection of public or company's workers.
6. It is the responsibility of the Contractor to build and maintain in place signs, barricades and required fences to ensure safety of occupants having to circulate on the site. However, this work has to be coordinated with the security service of the Ministerial representative and municipal authorities.
7. The prevention program of the Contractor, proper to the site, must be coordinated to the prevention program of the Ministerial representative.

12. ACCESS TO WORK ON SITE

1. The Contractor is responsible for any damage caused on the site or out of the site area where work is being done with heavy machinery and demolition of construction materials. The route taken by vehicles must be approved by competent authorities.
2. Access must be made to ensure safety of public and of workers in areas where work is being done, as much for municipal, ambulance, police, and firemen services.

13. TRAFFIC BLOCKING

1. The Contractor must comply with the prescribed measures and precautions stated by the Ministerial representative concerning tools, installations and work on the site and must not hinder traffic and not be the cause for accident.
2. Actual services to buildings for taxis, suppliers, fire, and security services, resupplying for cafeterias, postal services, and garbage removal must stay in operation at all times; the Contractor will coordinate his work and deliveries to the site so as not to hinder or affect normal functioning of services stated above.

14. STORAGE AREAS AND PARKING

1. In principle, no massive storage will be authorized on the site, except for limited spaces well defined by the Ministerial representative, to store certain materials in large enough quantity to continue the work and ensure its continuity.
2. Parking spaces for the Contractor and his subcontractors will be allowed inside the general parking in front, in an area defined by the Ministerial representative.

15. SITE OFFICES

1. The Contractor will not have any room outside of work area.
2. Site meetings will be held in an office supplied by Ministerial representative.

16. PROTECTION OF MATERIALS

1. During storage period, protect against damage all materials and manufactured products delivered to the site.
2. Protect materials and manufactured products according to printed instruction from manufacturer.

17. PROTECTION OF WORK IN PLACE AND OF THE SITE.

1. With a tarp, protect plywood or other types of appropriated material, all existing walls and other works located nearby and near ramps, ladders and other temporary means of transport and circulation.
2. During bad weather, protect work being done or finished against any deterioration by means of temporary shelter and other appropriate means. Also protect against humidity and water all work susceptible to be damaged by the weather.
3. Cover with a plywood sheet all finished surfaces that must be protected to allow for work to continue.
4. Protect all equipment that is entrusted to the Contractor.

18. PROTECTION OF EXISTING STRUCTURES

1. The Contractor must, at his own expense, protect, support, hold, re-route, and re-establish to good order, all water ducts, building gas conducts, energy, telephone, or other structures met, disturbed, or damaged in the course of the work, and all this, to the satisfaction of interested parties.
2. Before beginning demolition work, the contractor must communicate with authorities of concerned services to locate existing ducts. Otherwise, the Contractor will be held responsible for damages caused to ducts, structures, and other components like finishing, etc.

19. REMOVAL OF TEMPORARY WORKS

1. As work progresses, remove scaffoldings, ramps, footbridges, ladders, and other temporary work of same nature that are no longer required.
2. At the end of the work, remove equipment, accessories, materials, networks etc., coming from temporary works. Leave grounds free of all residue material or surplus.

20. TEMPORARY SOURCE FOR SUPPLIES

1. The Contractor will be able to use existing services for water, electricity, heating, and any other source of energy necessary for the duration of the construction of expansion work, for his operation purpose and the ones for the subcontractors.
2. Note that existing services are located near the main building. The Contractor must provide the necessary facilities near the site and protect the path traveled from the point of connection.
3. Any damage done to the work due to inadequate functioning of temporary mechanical and electrical services must be repaired without additional cost to the Ministerial representative.
4. Temporary services must comply with the laws and regulations pertaining to accident prevention of the Quebec Workmen Health and Safety Code.
5. Temporary services must be maintained in operation until provisory acceptance of permanent designed areas.

21. GENERAL REPAIRS

1. Repair or replace all material or other accessories that could have been damaged by any situation out of control of the manufacturer or concerned trade.
2. Before each final acceptance by the Ministerial representative, the Contractor must proceed to repair all surfaces that could have been damaged by Contractor or his subcontractors while doing their work.

22. LICENSES AND AUTHORIZATION

1. It is the responsibility of the Contractor to obtain from municipal and government authorities, all pertinent information concerning laws and regulations in force concerning construction work in the province and the town where work will be done. He must also inquire about the execution contingencies specific to the areas.
2. No building permit is required for this construction.

23. TOILETS

1. The Contractor will have the possibility to use toilets and services of the building. Only the identified room may be used. The contractor has the responsibility to clean the room daily.

24. GARBAGE CONTAINERS

1. Cost of transportation and dumpsite will be paid by Contractor.

25. APPROVAL OF SHOP DRAWINGS

1. All shop drawings must be checked by Ministerial representative before making a product, equipment, etc.
2. All products, equipment etc., stated in the shop drawings and that were not approved by Ministerial representative before their shipping, will be automatically rejected.

26. BUILDING CODES IN FORCE

1. Canadian Building Code and all other codes and regulations in force.

27. SUPERVISION AND COORDINATION : RESPONSIBILITY OF THE CONTRACTOR

1. The Contractor must coordinate himself all the works of different trades.
2. The Contractor must keep an eye on all subcontractor works and make sure that the work is done according to specifications. The presence of a superintendent or responsible for the coordination is required during the construction period.
3. Before sending Ministerial representative a requirement for definite approval, the Contractor must check all the lists of deficiencies given by the Ministerial representative after their inspection. He must verify himself that each items listed has been corrected.

28. PROTECTION OF FINISHING COMPONENTS AND OTHER WORKS

1. The Contractor has the responsibility to protect against all damage, all components that must be used in the building construction, mainly decoration and finishing accessories. Damaged components will be refused and must be replaced.

29. WORKS DONE BY OTHERS

1. In the drawings and tender, the mention "by other divisions" or "by other sections" implies that these works are concerning the Contractor, either for another section or for another division of the tender.
2. When works are not part of the contract, the mention "apart from contract" appears specifically.

3. The Contractor must consult in detail all architectural, structural, mechanical and electrical drawings and tender to be able to include, in his contract, all the works designed by the mention "by other divisions", "by the Contractor" or any other similar term.
4. Some of these works could already have been included in other sections of the tender or other drawings. It is the responsibility of the Contractor to consult all documents so he can itemize the ones being already under someone else's specific section of the tender or again, illustrated on the drawings of other specific trades or field. The ones that are not specifically described or itemized on the drawings or tender of other divisions will be the responsibility of the Contractor.

END OF SECTION

PART 1 GENERAL

1. DOCUMENT PRIORITY

1. For all conflicting conditions or requirements between SCA's general conditions and complementary general conditions, general conditions prevail. Furthermore, sections from **Division 01** prevail on technical sections from other divisions in project specifications.

2. WORK COVERED BY CONTRACT DOCUMENTS

1. The project involves replacing doors in a fire wall. The doors are heavily used, and they respect a high level of security. Works must be done swiftly in time allocated by present documents.
2. The sector will be fully paid for the work. Include the following steps and rigorous environment to meet the prescribed deadline:
 1. Site preparation.
 2. Installation of temporary protection and temporary installations.
 3. Demolition, construction, and resurfacing prescribed in plans and specifications.
 4. All construction required to complete the work without fault.
 5. Coordinate logistics jobs based on scheduling.

* Refer to plans and specifications to determine the full scope of work.

3. WORK SCHEDULING

Unless otherwise indicated :

1. Scheduling, see section 01 32 18E and Ministerial representative's instructions.
2. The work site is inside the occupied building. The area bounded by the site will be fully available to the contractor during the allocated period.
3. Since the site is still in operation, services must remain active at all times and lanes for local traffic freed.
4. Steps to foresee (list not exhaustive):
 1. Overall coordination and detailed.
 2. Submission of detailed work schedule for approval.
 3. Delivery schedule for submission of shop drawings, data sheets and samples for approval.
 4. Manufacturing according to documents reviewed and approved.
 5. Mobilization on the site according to the approved schedule.
 6. Install temporary services.
 7. Delivery of products and materials according to the approved schedule.
 8. Demolition / construction on the site according to the approved schedule.
 9. Detailed inspection work by the Contractor and correction of all defects apparent even before notifying in writing the designated professionals of completion.
 10. Correction of defects identified by the Ministerial representative and / or professional and other competent authorities, within the time required.

11. Decommissioning, compliance certificates and documents management.
5. Work will be performed in accordance with the requirements listed in other sections and to comply with the deadline imposed.
6. Always maintain access for the fight against fire; also maintain the means to fight against fire.

4. SITE USE BY CONTRACTOR

1. Except if otherwise noticed, use of site by contractor is restricted to work, storage, and access area.
2. Site use must be coordinated with Ministerial representative's instructions.
3. Find extra work or storage area required for completion of work included in contract. Contractor must pay all cost related to these areas.

END OF SECTION

PART 1 GENERAL

1. CONSTRUCTION PERIOD

1. Except if otherwise noticed in general conditions, work needs to be completed according to allowed delays in contract terms. The range of work is 8 weeks after the inception meeting. Furthermore, Ministerial representative imposes following milestones:

Approximate dates:

1. Shop drawings and order of materials 8-12 weeks
2. Demolition and construction 1 week-end
3. Finishing and commissioning 1 week
2. Material must be ordered in time and all necessary labour must be planned to comply with above contractual schedule.
3. Work cannot begin as long as the Contractor does not have on hand all materials required to complete work.

2. REQUIRED SCHEDULES

1. Schedules to be submitted:
 1. Execution schedule;
 2. Product order and delivery schedule.

3. PRESENTATION

1. Schedules must be presented in one horizontal bar diagram.
2. One separate bar must be assigned for each operation or trade.
3. Time must be represented as a horizontal linear scale indicating first business day of each working week.
4. Lists presentation: as per specification's table of content.
5. Lists content designation: as per subjects of each specification sections.

4. SUBMISSION SCHEDULE

1. If need be, submit first schedules within **10 days** following contract attribution.
2. Submit one copy for Ministerial representative and one copy per consultant.
3. Ministerial representative must verify proposed schedule et hand back one revised copy within 5 days after its reception.
4. Schedule's final version must be submitted with no delay after reception of the revised copy.
5. Each payment request must be accompanied of a revised version of the execution schedule.
6. One copy of the revised execution schedule must be sent to:
 1. Site office;
 2. Subcontractors;
 3. Other interested parties.

7. Ask addressees to inform Contractor, within a delay of 10 days of every issue which could be caused by the proposed execution schedule.

5. EXECUTION SCHEDULE

1. Present construction activities' complete schedule.
2. Give dates of beginning and end of each of the major activities including those listed below. The critical path shall be identified clearly from the development of the first schedule.
 1. Ordering materials and delivery;
 2. Site Preparation;
 3. Location of services;
 4. Mechanical and electrical services;
 5. Interior Finish
 6. Closing the site.
3. Planned progression's percentages on first day of each week must be given for each activity.
4. Progression's percentage of each activity must be given on schedule submission date.
 1. Changes that occurred since last schedule submission must be indicated.
 2. Main changes to come
 3. Modified activities since last schedule
 4. Progression rhythm and work completion date revised forecast.
 5. Other predictable changes
5. Detailed report on following subjects must be done:
 1. Issues, predictable delay, and their impact over schedule.
 2. Proposed corrective measures and intended results.
 3. Modifications' probable effect on another Contractor's schedule.

END OF SECTION

PART 1 GENERAL

1. REQUIREMENTS

1. Shop drawings and product descriptions
2. Samples
3. Operation and maintenance manuals
4. Drawings to be inserted in file project
5. Certificates and copies

2. ADMINISTRATIVE TASKS

1. Submit to Ministerial representative for verification purposes all required documents and samples in a reasonable delay and following appropriate order so works are not delayed. Lateness does not constitute a valid reason for asking for a prolongation of the contractual period. No requirements to this effect will be accepted.
2. Works stated in documents or samples to be submitted must not be started before all of them are confirmed.
3. Check all dimensions taken on site and make sure that works pertaining to adjacent works, being subjected to approval, are coordinated.
4. On site, keep an approved copy of documents and samples to be submitted.

3. SHOP DRAWINGS

1. The expression "shop drawings" indicate drawings, diagrams, illustrations, productivity or performance graphic charts, brochures and other documentation that the Contractor must provide to show in detail part of the work targeted.
2. Shop drawings must indicate materials to be used and construction methods. Also, they must show fixation or anchorages to be used. They must have mounting diagrams, explanatory notes and any other pertinent information needed to do the work. When some components or adjacent works are prescribed related to work to be done, make sure they are well coordinated in tender, no matter which section of adjacent works are provided or installed.
3. Description. Shop drawings must:
 1. Indicate the date, the name of subcontractor and details, number of pages and their numbering.
 2. When asked for, as per certain standards, please indicate.
 3. Describe all abbreviations or symbols.
 4. Leave a free space of 60mm x 100mm for stamping and remarks by Ministerial representative.
 5. Must be very readable: fax will be refused.
 6. Must contain only information pertinent to the project.
4. Modification to the shop drawings by the Ministerial representative should not increase price of contract. Should it increase the price, please notify to Ministerial representative, in writing before starting works.

5. Make changes to shop drawings requested by the Ministerial representative, as per requirements of contractual documents. When re-submitting, notify the Ministerial representative in writing of all changes made other than the ones required by him.
6. Unless stated otherwise, submit shop drawings in PDF format by e-mail.
7. Allow ten (10) working days to leave time to the Ministerial representative to check submitted documents.
8. When shop drawings are verified by the Ministerial representative and no errors or omission have been found or that there are only minor corrections to be made, the copies will be returned, and manufacturing and installation can start. If shop drawings are rejected, the annotated copies will be returned and new corrected shop drawings should be submitted as per mentioned indications, before manufacturing or installation can start.

4. IDENTIFICATION SHEETS

1. Contractor must keep one (1) copy on the site and a digital copy will be inserted in operation and maintenance manuals.

5. SAMPLES

1. Submit samples for verification purposes as per requirements of various sections of tender. Label samples, stating their origin and proposed use in performing the works.
2. Notify the Ministerial representative in writing, of all differences in samples regarding requirements in contractual documents.
3. Modifications made to samples by the Ministerial representative should not increase price of contract. Should it happened, please notify the Ministerial representative, in writing, before starting works.
4. Make changes to samples that could be requisite by Ministerial representative as per requirements of contractual documents.
5. When required, build work samples in an area approved by the Ministerial representative. For these works, coordinate with the Ministerial representative to approve the samples on site.

6. DRAWINGS TO BE INSERTED IN FILE PROJECT

1. After contract is awarded, in lieu of drawings to be inserted in the project file, note with care and precision all disparities regarding contractual documents that are cause by state of premises and changes to be done.
2. Mark placement of concealed components in mechanical and electrical installations.
3. Identify drawings as being "drawing as built, copies for project file", maintain them as new and make sure they are available on site, so the Ministerial representative can validate them.
4. Once works are done and before final inspection, submit to the Ministerial representative all documents inserted in project file.

7. CERTIFICATES AND COPIES

1. Immediately after contract is awarded, submit required certificates to responsible organism for Workmen's Health and Security Welfare, proper construction licenses and copies of insurance policies. All documents must be submitted digital version (PDF) to the Ministerial representative.

END OF SECTION

PART 1 GENERAL

1. SECTION INCLUDES

1. Contractor shall manage his operations so that health and safety of the public and of site workers always take precedence over cost and scheduling considerations.

2. REFERENCES

1. Canada Labour Code - Part II, Canadian Occupational Safety and Health Regulations.
2. Canadian Standards Association (CSA)
3. Workplace Hazardous Materials Information System (WHMIS)
4. Act Respecting Occupational Health and Safety, R.S.Q. Chapter S-2.1.
5. Construction Safety Code, S-2.1, r.6.

3. SUBMITTALS

1. Submit to Departmental Representative, the site-specific safety program, as outlined in 1.8 at least 10 days prior to start of work. The Contractor must review his program during the project if any change occurs in work methods or site conditions. The Departmental Representative may, after receiving the program or at any time during the project, ask the Contractor to update or modify the program in order to better reflect the reality of the construction site and activities. The Contractor must make the required changes before work begins.
2. Submit to Departmental Representative the site inspection sheet, duly completed, at the intervals indicated in 1.13.1.
3. Submit to Departmental Representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by federal or provincial inspectors.
4. Submit to Departmental Representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.
5. Submit to Departmental Representative all safety data sheets for hazardous material to be used at the site at least three days before they are to be used.
6. Submit to Departmental Representative copies of all training certificates required for application of the safety program, in particular :
 1. General construction site safety and health courses;
 2. First aid in the workplace and cardiopulmonary resuscitation;
 3. Work likely to release asbestos dust;
 4. Work in confined spaces;
 5. Lockout procedures;
 6. Safe work procedures at height;
 7. Hot work procedures;
 8. Wearing and fitting of individual protective gear;
 9. Forklift truck safe driving practices;
 10. Positioning platform;

11. Any other requirement of Regulations or the safety program.
7. Medical examinations : Wherever legislation, regulations, directives, specification, or a safety program require medical examinations, Contractor must:
 1. Prior to start-up, submit to Departmental Representative certificates of medical examination for all concerned supervisory staff and employees who will be on duty when the site opens.
 2. Thereafter, submit without delay certificates of medical examination for any newly hired concerned personnel as and when they start work at the site.
8. Emergency plan : The emergency plan, as defined in 1.8.3, shall be submitted to Departmental Representative at the same time as the site-specific safety program.
9. Notice of site opening : Notice of site opening shall be submitted to the Commission de la santé et de la sécurité du travail before work begins . A copy of such notice shall be submitted to Departmental Representative at the same time, and another posted in full view at the site. During demobilization, a notice of site closing shall be submitted to the CSST, with copy to Departmental Representative.
10. Plans and certificates of compliance : Submit to the CSST and to Departmental Representative a copy signed and sealed by engineer of all plans and certificates of compliance required pursuant to the Construction Safety Code (S-2.1, r. 6), or by any other legislation or regulation or by any other clause in the specifications or in this contract. Copies of these documents must be always on hand at the site.
11. Certificate of compliance delivered by the CSST: The certificate of compliance is a document delivered by the CSST confirming that the contractor is in rule with the CSST, i.e., that he had pay out all the benefits concerning this contract. This document must be delivered to Departmental Representative at the end of the work.

4. HAZARDS ASSESSMENT

1. The contractor must identify all hazards inherent in each task to be carried out at the site.
2. The contractor must plan and organize work to eliminate hazards at source or promote mutual protection so that reliance on individual protective gear can be kept to a minimum. Where individual protection against falling is required, workers shall use safety harness that meets standard Can-CSA-Z-259.10-M90. Safety belts shall not be used as protection against falling.
3. Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
4. All mechanical equipment shall be inspected before delivery to the site. Before using any mechanical equipment, submit to Departmental Representative a certificate of compliance signed by a qualified mechanic. Whenever he suspects a defect or accident risk, Departmental Representative may at any time order the immediate shut-down of equipment and require a new inspection by a specialist of his own choosing.

5. LEGAL AND REGULATORY REQUIREMENTS

1. Comply with all legislation, regulations, and standards applicable to the site and its related activities.
2. Comply with specified standards and regulations to ensure safe operations at site containing hazardous or toxic materials.
3. Regardless of the publication date shown in the construction safety code, always use the most recent version.

6. SITE-SPECIFIC CONDITIONS

1. At the site, the contractor must take account of the following specific conditions:
 1. Works in a building occupied in operation.
2. The entrepreneur must follow the instructions of the ministerial Representative in what concerned the internal and outside temporary installations and concerning the accesses to the site of the works.

7. SAFETY AND HEALTH MANAGEMENT

1. Acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the Act Respecting Occupational Health and Safety (R.S.Q., chapter S-2.1) and the Construction Safety Code (S-2.1, r.6).
2. Develop a site-specific safety program based on the hazards identified and apply it from the start of project work until close-out is completed. The safety program must take account of all information appearing in 1.7 and must be submitted to all parties concerned, in accordance with the provisions set forth in 1.3. At a minimum, the site-specific safety program must include :
 1. Company safety and health policy.
 2. A description of the work, total costs, schedule, and projected workforce curve.
 3. Flow chart of safety and health responsibility.
 4. The physical and material layout of the site.
 5. First-aid and first-line treatment standards.
 6. Identification of site-specific hazards.
 7. Risk assessment for the tasks to be carried out, including preventive measures and the procedures for applying them.
 8. Training requirements.
 9. Procedures in case of accident/injury
 10. Written commitment from all parties to comply with the prevention program.
 11. A site inspection schedule based on the preventive measures.
3. The contractor must draw up an effective emergency plan based on the characteristics and constraints of the site and its surroundings. Submit the emergency plan to all parties concerned, pursuant to the provisions of 1.3. The emergency plan must include:
 1. Evacuation procedure;
 2. Identification of resources (police, firefighters, ambulance services, etc.);
 3. Identification of persons in charge at the site;
 4. Identification of those with first aid training;
 5. Training required for those responsible for applying the plan;
 6. Any other information needed, in the light of the site characteristics.

8. RESPONSIBILITIES

1. No matter the size of the construction site or how many workers are present at the workplace, designate a competent person to supervise and take responsibility for health and safety. Take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the site and likely to be affected by any of the work.
2. Take all necessary measures to ensure application of and compliance with the safety and health requirements of the contract documents, applicable federal and provincial regulations, and standards as well as the site-specific safety program, complying without delay with any order or correction notice issued by the Commission de la santé et de la sécurité du travail.
3. Take all necessary measures to keep the site clean and in good order throughout the course of the work.

9. COMMUNICATIONS AND POSTING

1. Make all necessary arrangements to ensure effective communication of safety and health information at the site. As they arrive on site, all workers must be informed of their rights and obligations pertaining to the site's specific safety program. The Contractor must insist on their right to refuse to perform work which they feel may threaten their own health, safety or physical integrity or that of other persons at the site. The Contractor must keep and update a written record of all information transmitted with signatures of all affected workers.
2. The following information and documents must be posted in a location readily accessible to all workers:
 1. Notice of site opening;
 2. Identification of principal Contractor;
 3. Company OSH policy;
 4. Site-specific safety program;
 5. Emergency plan;
 6. Data sheets for all hazardous material used at the site;
 7. Names of site committee representatives;
 8. Names of those with first-aid training;
 9. Action reports and correction notices issued by the CNESST.

10. UNFORESEEN CIRCUMSTANCES

1. Whenever a source of danger not defined in the specifications or identified in the preliminary site inspection arises as a result of or in the course of the work, immediately suspend work, take appropriate temporary measures to protect the workers and the public and notify Departmental Representative, both verbally and in writing. Then the Contractor must modify or update the site's specific safety program in order to resume work in safe conditions.

11. POWDER ACTUATED DEVICES

1. Use of power hammers and other explosive-actuated devices must be authorized by Departmental Representative.
2. Any person using a power hammer shall hold a training certificate and meet all requirements of Section 7 of the Construction Safety Code (S-2.1, r. 6).
3. Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

END OF SECTION

PART 1 GENERAL

1. MATERIAL INSTALLATION AND REMOVAL

1. Provide, set-up or lay out necessary installation on site to allow for work to be done within the shortest time possible.
2. As work progresses, dismantle material not needed and remove of the site.
3. The place of work is within an occupied building. The area bounded by the project will be at the disposal of the contractor.
4. Since the site is still in operation, services will remain active at all times and open lanes for local traffic.

2. ON-SITE STORAGE – ADMISSIBLE CHARGES

1. Ensure that work is done within the time limits stated in the contract. Do not clutter site unnecessarily with equipment and materials.
2. Do not overload or allow overloading on any part of the work to not compromise its integrity.

3. SANITARY INSTALLATION

1. Sanitary facilities must be provided inside the security perimeter of the site area.

4. SIGNPOSTING

1. Install, in pertinent areas, sign panels to indicate site limits, the direction of temporary relocated exits or other pertinent information.

5. REMOVAL OF TEMPORARY INSTALLATION

1. Remove from site all temporary installation when the Ministerial representative will judge it appropriate.

6. PROTECTION OF FINISHED BUILDING SURFACES

1. During all the work period, protect all finished or partially finished surfaces, the existing equipment and furniture leaved in place.
2. Foresee screens, tarps, and necessary fences.
3. Three (3) days prior to installation of protective components, confirm with the Ministerial representative where each protection will go. Confirm schedule for installation.
4. Take all the responsibility for damage caused to works because of lack of protection or unsuitable protection.

7. GUARDRAILS AND BARRIERS

1. Provide guardrails and rigid barriers and security and set them around deep excavations, service ducts and stairwells and not enclosed along the edges of floors and roofs.
2. Supply and install these components in accordance with jurisdictional requirements.

END OF SECTION

PART 1 GENERAL

1. RELATED REQUIREMENTS

1. To complement the general conditions, the contractor must comply with the requirements of the present section.

2. CLEANNESS OF SITE

1. Ensure cleanliness of site and get rid of all piling up of rubbish and material for garbage.
2. Remove from site debris and garbage materials and place them in garbage containers at the end of each shift.
3. Clean interior surfaces before starting finishing work and keep these areas free of dust and other impurities during said work.
4. Clean daily occupied areas soiled by work of the Contractor or his subcontractors. Cleaning must be done immediately after work so the good functioning of the building is not hindered by it.
5. The Contractor must take necessary precautions to protect existing and new construction to minimize contamination of clean room. Coordinate all protection measures with decontamination experts.

3. FINAL CLEANING

1. When work is almost entirely done remove surplus material, tools, and equipment. Remove construction material that is not necessary to the unfinished work.
2. Remove debris and scrap material other than the ones generated by the Ministerial representative, other contractors or their employees and leave premises clean and ready to use.
3. At the end of the work, remove surplus material, tools, and equipment and also all construction material. Remove debris and scrap materials other than those generated by the Ministerial representative or other contractors.
4. Scrap materials must be removed from site at pre-established fixed intervals or eliminate them according to the Ministerial representative requirements. Do not burn scrap materials on site unless you have an express approval from the Ministerial representative.
5. Take the necessary required arrangements to obtain licenses from competent authorities to eliminate debris and scrap materials.
6. Sweep all work surfaces prior to site inspection.
7. Clean and polish windows, hardware pieces, chromed and enamel surfaces (oven dried), stainless steel, mechanical and electrical equipments. Replace all broken, scratched, or damaged windows.
8. Remove dust and stains, marks, scratches seen on decorative work, mechanical and electrical appliances, furniture components, walls, floors, and ceilings.
9. Dust interior surfaces of the building and vacuum, without forgetting to clean behind railings, louvers and registers.
10. Wash, soap, wax, seal or treat in any way floor coverings, according to manufacturer indications.
11. Examine the finishing, accessories, and material to ensure that they all meet requirements stated regarding the quality of work and its functioning.

12. Clean mechanical ducts in between the ceiling. Eliminate dust residues accumulated on equipment and mechanical ducts during the work.
13. Carefully clean material and appliances. Clean or replace filters of mechanical appliances.

END OF SECTION

PART 1 GENERAL

1. CONTENT AND OBJECTIVE OF THIS SECTION

1. The present section states the requirements concerning the management and removal of garbage for the present project. It concerns in part demolition and construction works. It must include at the source sorting programs, for certain demolition garbage and for construction garbage.
2. Building, refurbishing, and demolishing generate a good quantity of residues that are generally buried. The present section is for contributing to the good management of our environment. The goal of the present is to reduce the volume of garbage to be buried and to recuperate some materials that could be reused elsewhere.

2. LEGAL OBLIGATIONS

1. Contractor has legal obligation to dispose of hazardous materials in accordance with the provincial and the federal Hazardous Materials Act.
2. Make sure the objectives in terms of waste management are respected, as defined in the strategy for a green government.

<https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/strategy.html>

3. DEFINITIONS

1. Audit of garbage: The audit of garbage concerns the quantity of garbage that the works should generate. This verification assumes measurement and evaluation of the quantity, the composition and the origin of garbage produced and operational factors to their production.
2. Plan for reducing garbage: Written documents in which reduction, reuse and recycling opportunities are studied. The garbage reduction plan is based on data given by the garbage control sheet.
3. Audit of demolition garbage: Is applied to garbage generated by this work.
4. Sorting programs of material at the source: Sorting activities, on the site of reusable and recyclable garbage, so they may be classified in appropriate categories
5. Coordination for garbage management: A chosen person and working on the site. Other persons must be designated among the personnel of each subcontractor to ensure coordination of the management of garbage with the coordinator.
6. Sorted garbage: Garbage already classified by type.

4. USE OF PREMISES AND INSTALLATIONS

1. Do the work without preventing normal use of premises.
2. Put in place provisory safety measures, approved by the Ministerial representative.

5. SORTING PROGRAM FOR DEMOLITION MATERIALS

1. Prepare sorting program for demolition material before beginning works.
2. Following approved methods by the Ministerial representative and with his authorization, begin the sorting program of material to be recuperated for recycling.
3. On the site, anticipate necessary installations to collect, handle and transport projected quantities of recyclable garbage.
4. Material must be collected, handled, and evacuated either at the sorting stage or to be sorted at an independent site. Recuperated materials must be transported towards approved installation and authorized for recycling.
5. Hold information and awareness meeting for workers that will be working on the site and give them written information on the procedure to be followed for recuperation.

6. SORTING PROGRAM FOR CONSTRUCTION GARBAGE, AT THE SOURCE

1. Prepare sorting program for construction residue prior to the beginning of work.
2. Following approved method by the Ministerial representative and with his authorization, begin sorting program at the source where all garbage is generated by the works.
3. On the site, anticipate necessary installation to collect, handle and stock projected quantities of reusable and or recyclable garbage.
4. Provide containers in which reusable and /or recyclable garbage will be put in.
5. Place containers in areas where it will be easy to deposit materials without causing a problem for other activities on the site.
6. Place sorted material in areas where they will be the least damaged and where they will be easily accessible.
7. Materials should be collected, handled, and stocked on the site, then evacuated at the sorting stage. Recovered materials must be transported towards approved and authorized installations for recycling.
8. Hold information and awareness meeting for workers that will be working on the site and give them written information concerning the procedure to be followed for recuperation.

7. INTERNET LINKS ON GARBAGE TREATMENT

1. <http://www.mddep.gouv.qc.ca/matieres/valorisation.htm#debris>
Available documentations:
 - Information sheet : « Construction residue, renovation and demolition »
 - Information guide on recycling of dry materials.
2. <http://www.3rmcdq.qc.ca/>
3. <http://www.usgbc.org/>
4. <http://www.recyc-quebec.gouv.qc.ca>
5. <http://www.cca-acc.com>

8. REMOVAL OF GARBAGE

1. It is forbidden to bury debris and garbage on the site.
2. It is forbidden to throw garbage, mineral essences, oil, paint thinner in water ways, sanitary and rain sewers.

9. STOKING, HANDLING AND PROTECTION OF MATERIALS

1. Stock, in designated areas on the site, material intended to be reused, recycled, or recuperated.
2. If not stated otherwise, materials that must be disposed of, become the property of the contractor.
3. Protect, pile up, stock, and list all components to be recuperated.
4. Separate non recoverable components from recoverable ones. Transport and deliver non recoverable components to authorized elimination installation.
5. Support all work affected by the works. Should the safety of the building become compromised, stop work, and inform the Ministerial representative immediately.
6. Protect superficial water evacuation works and all electrical and mechanical installations to prevent damage or blockage.

10. WORK SCHEDULE

1. Coordinate management of garbage with other activities to ensure the good order of the works.

PART 2 PRODUCTS

1. WITHOUT OBJECT

PART 3 WORK

1. GENERAL

1. Do work as per garbage sorting program.
2. Handle as per pertinent codes and regulations for garbage that are not reusable, recoverable and or recyclable.
3. Complete the following table prepared by the ministerial representative:
"Construction, Renovation and Demolition Waste Diversion Rate" included in the file « Matrice de traçabilité des déchets de construction - Waste Traceability Matrix_Construction waste.xlsx ». Submit the document with each payment. request

2. CLEANING

1. Once work is done, remove all tools and garbage. Leave premises clean and in good order.
2. Clean work areas as work progresses.
3. Sort, at the source, all material that must be reused/recycled and place them in designated areas.

3. RECOVERING MATERIAL AND TO BE SENT TO RECOVERING SITES

1. Sort materials from the general flow of garbage. Pile them in separate piles or in distinct containers, with the approbation of the Ministerial representative and as per pertinent regulations for fire safety. Identify containers and areas for piling. Provide instructions concerning removal practices.
2. It is forbidden to sale recovered material on site.

END OF SECTION

PART 1 GENERAL

1. CONTENT FOR THIS SECTION

1. Project file, samples and tender;
2. Materials and appliances;
3. Technical data, materials, material and finishing products and related information;
4. Data and operation and maintenance manuals;
5. Material/replacement material, special tools, and replacement parts;
6. Guarantees and bonds.

2. DOCUMENTS TO SUBMIT

1. Information must be prepared by competent persons, having the required knowledge pertaining to functioning and maintenance for the described products.
2. Submit a sample of operation and maintenance manual in their final form, before final reception of work.
3. Submitted samples will be returned with comments from the Ministerial representative.
4. If need be, review content of documents before to re-submitting.
5. Once manuals are ready and approved, hand over one (1) definite copy of maintenance and operation manuals to the ministerial representative in a digital version of those documents. Files must be in PDF format and organized according to the folders' structure provided by the ministerial representative.
6. In addition to information written in this present section, refer to Ministerial representative (in engineering and other specialties) documents to know the requirements and the content of manuals to be submitted.

3. PRESENTATION

1. Present data in the form of an instruction manual.
2. The digital version will be handed on a USB key disc.
3. Regroup data according to a logic order. Clearly indicate content of each folder in its name.
4. Organize the contents per section numbers of the tender and the order as they appear on the table of content.
5. Anticipate, for each product and each system, a clearly labelled folder and structure

4. CONTENT OF EACH VOLUME OF THE FINAL PROJECT FILE

1. Table of contents: indicate designation of project:
 1. Date for handing over the documents.
 2. Name, address, and telephone number of the Ministerial representative, of the Contractor and the names of their authorized representatives.
 3. A list of products and systems, indexed, according to the contents of the binder.

4. A list of subcontractors and pertinent information.
2. For each product or system indicate the following:
 1. Name, address and telephone number of subcontractors and suppliers.
 2. Name of persons responsible for the project.
 3. Name of local distributors for spare parts.
3. Technical data: Mark each sheet to clearly indicate products and specific parts. Give proper directives pertaining to installation. Delete all information that is not pertinent.
4. Drawings: Drawings are used to supplement the charts and to illustrate the relation between various elements of material and systems; they include diagrams of order and principle.
5. Typed text: according to need, to complete technical data. Give instructions in a logic sequence for each intervention, incorporating information from manufacturer.
6. The following data specified in individual section of Divisions 02 to 45.
 1. List of equipment, including service center;
 2. Information written on identification plate like the number of the equipment, commercial brand, dimensions, capacity or power, serial number.
 3. List of pieces;
 4. Details pertaining to installation of equipment;
 5. Instruction pertaining to the operation of the equipment;
 6. Instruction pertaining to maintenance of equipment;
 7. Instruction pertaining to finish maintenance.
7. Divide binders by specialty: architecture, structure, exterior layout, mechanic, electricity, etc.
8. **Refer to contract documents of all disciplines of the Ministerial representative.**
9. Administrative information: Include the following information:
 1. Certificate of compliance to the law and regulations pertaining to economy of energy.
 2. Certificate of compliance given by the Workmen Health and Safety Commission.
 3. Certificate of company in order with the Quebec Construction Commission.
 4. Contractor must make a statutory declaration. It must accompany his request to free the deduction, security deposit or both when a substantial part of the work is done or finished.
 5. Receipts from subcontractors and suppliers.
 6. Lift and other raising appliance inspection report by the Building Control Board.
 7. Guarantee asked for each section.
 8. Acknowledgment of receipt must be given by the ministerial representative for all keys, all keys for boxes and other components given directly to the ministerial representative.
 9. A list of paint products and color used.
 10. Maintenance instruction for surfaces and requested materials.
10. Shop drawings:
 1. Separately bind a complete set of definite revised shop drawings and technical data.

11. List of special tools provided by the ministerial representative.
12. List of spare parts to give to the ministerial representative.
13. Inventory of replacement material given to the ministerial representative with acknowledgment of receipt of these products.
14. Drawings "as built", on which real site conditions were written, as described in article 7.

5. DOCUMENTS AND SAMPLES TO ADD TO THE PROJECT FILE

1. In addition to requirements mentioned in the general conditions, store on the site, for the ministerial representative a sample or set of the following documents:
 1. Contractual drawings;
 2. Tender;
 3. Addenda;
 4. Order of modification and other amendments to the contract;
 5. Revised shop drawings, technical data, and samples;
 6. Records of tests made on the site;
 7. Inspection certificates;
 8. Certificates given by the manufacturer.
2. Store all file project documents and samples used for the project apart from the documents used for the work. Anticipate filing cabinets, shelves, and a safe storage area.
3. Label documents and file according to list of section numbers stated in the table of contents of the file project. Clearly write FILE PROJECT in square letters on a label for each document.
4. Keep project file documents clean, dry, and readable. Do not use as execution documents for the work.
5. The Ministerial representative must have access to documents and samples of the project file for inspection.

6. CONSIGNMENT OF CONDITIONS OF SITE (BUILDING AND SITE)

1. Write down information on a set of opaque drawings with black lines and in project file samples given by the Ministerial representative. For the works, the Contractor must provide three (3) sets of all Drawings given for construction, corrected with notes that state real conditions on the site.
2. Write down information with fine line black felt markers, anticipating a color for each different important system.
3. Write down information as work progresses. Do not conceal works before required information is registered.
4. Contractual drawings and shop drawings: Clearly indicate each data, to show work as is, including what follows:
 1. Depth measured of foundation elements in comparison with the level of the finished first floor.
 2. The position measured horizontally and vertically on the plans for utility ducts and underground accessories in comparison with permanent layout on the surface.
 3. Position of utility ducts and interior accessories, measured in comparison with visible and accessible construction elements.

4. Modifications done on the spot to dimensions and details of works.
5. Changes done following order for modification and site instructions.
6. Details not shown on original contractual documents.
7. Reference to shop drawings and related modifications.
5. Tender: clearly write each fact to describe works as they are, including what follows:
 1. Name of manufacturer, commercial brand and catalogue number for each product installed, especially for optional and replacement elements.
 2. Changes being part of the addenda or order for modification.
6. Other documents: keep manufacturer's certificates, inspection certificates, records of tests done on site prescribed for each of the technical sections of this tender.

7. MATERIEL AND SYSTEMS

1. For each piece of material and each system:
 1. Give description of appliance or of system for each component piece.
 2. Indicate its function, normal operation characteristics and limits.
 3. Give characteristic curves with technical data and results of tests.
 4. Give complete list and commercial number for pieces that could be replaced.
2. Provide lists of supply circuits for distribution panels, with indication of electrical characteristics, command, and telecommunication circuits.
3. Provide outline of color-coded cables for installed material.
4. Operation methods: Indicate instructions and sequences for starting, breaking in and normal operation; adjustment, control, stop, out of order and for help; summer and winter operation and for any other instruction.
5. Maintenance: Provide instructions pertaining to regular maintenance and search of breakdown and instruction related to dismantling, repair, and reassembly. Give instruction for alignment, tuning, balancing and how to check some components and some networks.
6. Provide maintenance schedule for lubrication and a list of necessary lubricant.
7. Provide written instructions from manufacturer concerning operation and maintenance of components.
8. Provide sequential description of prepared operations by various appliance manufacturers and for control/adjustment devices.
9. Provide a list of original manufacturer's pieces, illustrations, drawings, and mounting outline necessary for maintenance.
10. Provide outlines of controls/adjustments for appliances installed and prepared by different manufacturer.
11. Provide coordination drawings from Contractor and color-coded outline for installed piping.
12. Provide a list of labeling numbers for faucets, with position indication for each appliance. Refer to control and principal outlines.
13. Provide a list of spare parts from original manufacturer with indication of current prices and quality recommended to keep in stock.

14. Provide test reports for balancing prescribed in Ministerial representative's documents.
15. Additional requirements: according to requirements of various technical sections in the tender.

8. MATERIALS AND FINISHING PRODUCTS

1. Construction material, finishing products and other products to be applied: provide all technical data and indicate catalogue number, dimensions, composition, designation of colors and textures of products and materials. Give necessary requirements to order special products.
2. Provide instruction concerning cleaning products and methods, recommended cleaning, and maintenance schedule. Indicate precautions to be taken against detrimental methods and toxic products.
3. Additional requirements: according to requirements of various technical sections of the tender.

9. REPLACEMENT PARTS

1. Provide spare parts according to quantity requirements in various technical sections of the tender.
2. Provided spare parts must come from the same manufacturer and be of the same quality as of incorporated components.
3. Deliver and store spare parts in selected area.
4. Receive and take inventory of every spare part, then submit the inventory list to the Ministerial representative. Insert the approved list in maintenance manual.
5. Write the following information:
 1. Number of spare parts.
 2. Equipment of system for which parts are used.
 3. Instruction concerning their installation.
 4. Name and address of closest manufacturer.
6. Keep a receipt for all parts delivered and submit it before final payment.

10. REPLACEMENT MATERIALS/MATERIAL

1. Provide material and replacement materials according to indicated quantities requested in various technical section of the tender.
2. Material and replacement materials must come from the same manufacturer and must be of same quality as of materials already incorporated in the work.
3. Deliver and store material/ replacement materials where indicated.
4. Receive and take inventory of material and replacement materials, then submit inventory list to the Ministerial representative. Insert approved list in operation manual.
5. Keep a receipt of all parts delivered and submit if before final payment.

11. SPECIAL TOOLS

1. Provide special tools according to prescribed quantities in various technical sections of the tender.

2. Tool must bear a label stating its function and material where they are met to be used.
3. Deliver and store special tools where indicated.
4. Receive and take inventory of special tools, then submit inventory list to the Ministerial representative. Insert approved list in maintenance manual.

12. STORAGE HANDLING AND PROTECTION

1. Store spare parts, material, replacement material and special tools to prevent damage and deterioration.
2. Store spare parts, material, replacement material and special tools in their original packaging, kept in good order, bearing the seal and the label of the manufacturer.
3. Store all components sensitive to bad weather damage in weatherproof areas.
4. Store paint and product sensitive to very cold weather in a well-ventilated heated room.
5. Get rid of components, damaged and/or deteriorated products. Replace them without additional costs, to the satisfaction of the Ministerial representative.

13. GUARANTEES AND BONDS

1. Separate each guarantee or bond with tabs index, according to the list given on the table of contents.
2. Give list of subcontractors, suppliers, and manufacturers with names, addresses and telephone numbers of a chosen representative for each one.
3. Obtain double copies of signed guarantees and bonds, by the subcontractors, suppliers, and manufacturers, within ten (10) days following the end of the work concerned.
4. Except for what concerns the elements put into service with the authorization of the Ministerial representative, do not modify the entry data in force on the guarantee before the date of the end of the work is established.
5. Ensure that all documents are in good order, that they have all necessary information and that they are notarized.
6. Countersign the documents to surrender when necessary.
7. Retain the guarantees and bonds until it is time to hand them over. Include them in the final project file at the end of the work.

END OF SECTION

PART 1 GENERAL

1. SECTION CONTENTS

1. Provision of products and equipment and manpower to carry out the demolition work prescribed for openings, product recovery and cleaning of the work area required.
2. Debris removal.
3. Resurfacing (patching): Preparation and repair of surfaces, such as existing.
4. Supply and installation of materials identical to the existing one.

2. REGULATIONS

1. All demolition works will be done according to authority instructions having jurisdiction and after having paid and obtain all licenses pertaining to the works.

3. SITE EXAMINATION

1. Contractor must visit premises and be familiar with work conditions before presenting his tender. No modifications to the contract will be given for difficulties encountered in doing the works that could have been anticipated following a careful study of the premises.

4. SAFETY MEASURES

1. Take all necessary precautions to prevent any displacement or sagging of existing building or parts of the building. Provide and install all necessary pieces for reinforcement or propping-up. Repair damaged work and assume responsibility for injuries that result from demolition work.

5. PROPERTY

1. All materials coming from demolition work, that are not indicated as reusable or that the Ministerial representative did not reserve before demolition, become the property of the Contractor who must dispose of it as he wishes.

6. ACTUAL CONDITIONS

1. Contractor will take possession of actual building as is, after being notified that the contract was awarded to him.

PART 2 PRODUCTS

1. PRODUCTS

1. Provide all products, equipment, and labor necessary for demolition, the openings, the product recovery, and cleaning of surfaces to optimize installation of new materials.
2. Provide all the products and equipment and labor necessary to remove debris.

3. Provide all the products, equipment and labor for resurfacing work (patching). Products must be new and free from defects. Use materials identical to existing.

PART 3 WORK

1. DEMOLITION

1. Demolish part of existing building to allow for restructuration and repair works according to drawings.

Note: Openings in walls, floors, and ceiling of a surface equivalent to a 6" diameter or more are the responsibility of the general contractor unless stated otherwise.

2. Remove and take out of site all demolition garbage and residues and, if need be, make repairs of all damage done to the property, caused by the works, and that goes for all trade people related to this project.
3. Contractor must anticipate waterproof, dustproof and noise proof closings for parts of the building occupied during demolition work.

2. REFURBISHING

1. Contractor will verify all building levels to ensure proper connecting as foreseen and to present a continued smooth surface between existing finish and new ones. Contractor will do all joints or assembly required to allow differential movements without causing fissures.
2. **Surface refurbishing will be done with same materials as existing ones, same textures and same colors or something equivalent in case materials are no longer available or discontinued.** Touch-ups will be done up to closest angles to make touch-up coating or paint disappear.
3. **Contractor must refurbish floors, walls, and ceilings where equipment, appliance or mechanical or electrical ducts must be added, removed, or relocated. This includes removal of equipment by Ministerial representative before starting of the works.**

3. MATERIAL HANDLING

1. Contractor will be responsible for technique and circuit chosen for handling of framing, concrete and other material components, If need be, remove existing window or windows or glass and other unsafe components. Protect adequately all components in place, such as floors, walls, and ceilings. Repair if altered in any way because of the works. If need be, make protective surfaces, temporary partitions to protect from shocks. Restrain access and protect from noise and dust all parts of the building being redone. Return with care components to their position and replace if damaged because of the works.
2. Contractor must circulate by route imposed by Ministerial representative. No additional cost will be accepted for material handling. If this operation influences the range of the works, the route could be presented when visited by tenders.
3. Transportation must be done in a safety manner, respecting patrons when circulating inside the building.

END OF SECTION

PART 1 GENERAL

1. RANGE OF WORKS

List of non-limitative works for this section:

1. Supplying and installation of steel doors and frames.

2. REFERENCE STANDARDS

1. ASTM A366-85, Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
2. ASTM A525-86, Specification for General Requirements for Steel Sheet inc-Coated (Galvanized) by the Hot-Dip Process.
3. Canadian Steel Door and Frame Manufacturers' Association (SDFMA), "Canadian Manufacturing Specifications for Steel Door and Frames", 1982.
4. NFPA 80-1986 Fire Doors and Windows.

3. SHOP DRAWINGS

1. Shop drawings must indicate every type of door, material used, core thickness, mortise assembly, reinforcement pieces, location of apparent fixings, openings, glazing, louvers, position of hardware pieces and fire resistance index.
2. Shop drawings must indicate each type of frame, material used, core thickness, reinforcement pieces, glazing beads, location of apparent anchoring and fixings and types of coating finish.
3. Include table where each door and frame are identified, indicators and door numbers corresponding to numbers indicated on drawings and on door table.

4. MATERIAL ORIGIN

1. Steel frames must be made in Quebec and answer to requirements of Permanent Committee and interdepartmental purchases.

5. REQUIREMENTS FROM REGULATION

1. Steel fire stopping doors and frames: bearing authorization label from accredited organism by the Canadian council of standards and who's prescribed or indicated fire resistance index is as per CAN4-S104M-80 (revised in 1985) and CAN4 S105M-1985 standards.

6. GUARANTEE

1. Provide a certificate of guarantee, signed, and issued on behalf of the Ministerial representative, stating that all the works in this section are warranted against defects for a period of five (5) years from the date of signature of the certificate of provisional acceptance work. Comply with section 01 78 00E.

PART 2 PRODUCTS

1. MATERIALS

1. Galvanized steel sheet: Commercial quality steel sheet, as per ASTM A526 standards with W025zinc applied by wiping.
2. Steel plates to be folded, as per CAN3-G40.21-M81 standard, nuance 300W.
3. Fire stopping doors and frames: built fire stopping doors and frames as per requirements of regulation organisms and affix authorized seals. Unless stated otherwise, minimal thickness of galvanized steel base used for doors must be 1,2 mm (cal 18) and for frames, 1,6 mm (cal 16).
4. Doors:
 1. Interior doors "fire resistance required": 44,5mm (1-3/4") thickness, see door schedule for height and width, gauges 14 panels.
 1. Reinforcements for perimeter: gauge 14;
 2. Reinforcement for top and bottom, reversed "U" gauge 16 for tapper finish;
 3. Reinforcement for surface mounted hardware gauges 10;
 4. Reinforcements for hinges, gauge 10;
 5. Reinforcements for door closer, gauge 14;
 6. Core of doors "fire resistance required" ULC approved;
 7. Fire resistant as per door schedule and compliant with ASTM E90;

Interior doors: solidify with vertical stays and steel frame, all empty doors filled of deployed cells retained on the surface of panels by ULC approved adhesive.
5. Frame, thickness of construction steel:
 1. Door frame for acoustical and fire-resistant doors: gauge 14.
6. Stops: Simple black neoprene posts, pressure inserted in all pre-drilled holes.
7. Provide other components for doors and frames as per requirements of CSDFMA or needs.

2. PRODUCTION

1. Unless stated otherwise, steel doors and frames must be made as per provided details and as per requirements of "Canadian Manufacturing Specifications for Metal Doors and Frames", 1982, document published by the "Canadian Steel Door and Frame Manufacturers' Association" (SDFMA). Doors and frames must be reinforced in a way to satisfy requirements indicated for hardware pieces stated in section 08 71 10E – Hardware.
2. Cut, reinforce, pierce and screw doors and frames where necessary to be able to receive hardware parts to mortised doors provided by Ministerial representative: adjust to their existing dimensions. Reinforce perimeter of these openings and for door itself. Reinforce frames to be able to receive hardware parts to be mounted on the surface.
3. Prime, in shop, cold laminated steel sheets.
4. Apply, in shop, a primer for touch-ups where zinc was damaged.

3. REGULAR DOORS

1. Provide and install glazing as per indications.
2. Longitudinal edges must be done without apparent joint, welded, trimmed with filling material, then smooth by sanding. This also applies to fire stopping doors.

4. FRAMES

1. Cut miters and joints well and weld making a continuous cord inside section.
2. Grind joints and welded angles, trim them with metal filling paste then rub down until finish is smooth and uniform.
3. On frames, install mounting feet allowing anchorage of frames to the ground. Install masonry anchoring, protection boxes for striking plates etc., as needed.
4. For each simple door, install three (3) stoppers on the frame to receive striking plate; in cases of double doors, install two (2) of them on lintel.
5. For doors separating a heated space from another unheated one, make frames with thermal bridge breaker for external doors. Use insulating polyvinyl chloride insulation to separate exterior components from interior ones.
6. Build opening for glazing and install glazing bead needed as indicated. Faces of screws must be flushed with metal of glazing bead.

PART 3 WORK

1. DOOR INSTALLATIONS

1. Doors, frames, and hardware pieces are covered under Section 08 71 10E.
2. Leave a uniform space between doors, frames, and framing posts and between doors and floor, as follows:
 1. Hinge side: 1 mm.
 2. Bolt and lintel side: 1,6 mm.
 3. Floor side: 6 mm.

2. FRAME INSTALLATIONS

1. Install frames plumb, square and on level, to appropriate height.
2. Fix anchoring devices and connections to continuous component of structure.
3. Maintain frames with braces during installation work. Temporarily install wooden braces placed horizontally to the third of opening, to maintain constant width of frames. When opening width is over 1220mm, support crossbeam in centre with vertical stay. Remove braces and supports once frames are completely installed.
4. Leave enough space for flexion to ensure that pressure made on structure is not transferred to the frames.
5. To be coordinate with drawings

END OF SECTION

PART 1 GENERAL

1. RANGE OF WORKS

1. Supply and installation of hardware for required doors.

2. REFERENCE STANDARDS

1. Normal installation of hardware pieces must be as per requirements of Canadian metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.

3. REQUIREMENTS FROM REGULATORY ORGANISM

1. Use hardware pieces approved and labeled by ULC for fireproof doors and emergency exits.

4. SHOP DRAWINGS

1. Submit shop drawings as per Section 01 33 00E.
2. Clearly indicate construction details, forms of components, assembly and fastening mode or any other pertinent detail.

5. HARDWARE LIST

1. Submit a list of hardware pieces as prescribed in Section 01 78 00E.

6. MAINTENANCE MATERIAL

1. Provide two (2) sets of wrenches necessary for closed door locks and accessories for emergency exits.

7. DELIVERY AND STORAGE

1. Store finishing pieces of hardware in clean, dry, locked room.
2. Wrap separately or by group each similar piece of hardware and label each bundle as to their nature and placement of the piece.

8. GUARANTEE

1. Provide a certificate of guarantee, signed, and issued on behalf of the Ministerial representative, stating that all the works in this section are warranted against defects for a period of five (5) years from the date of signature of the certificate of provisional acceptance work. Comply with section 01 78 00E.

PART 2 PRODUCTS

1. HARDWARE PIECES

1. Only door checks and sets of locks and bolts being on the list of approved products given by ONGC will be acceptable for the present works.
2. Use product coming from same manufacturer for pieces of same nature.

2. QUALITIES

1. All hardware, not otherwise specified, will be of typical template. Give to frame and door manufacturer templates, patterns, and all other required information for preparation of frames and doors. Give to manufacturer of fireproof doors, all pieces that must be inserted or fixed into these doors, if need be.
2. All sliding bolts, dead-bolts, auxiliary bolts, faces, locks and followers, latches, cylinders, cylinder necks, latches, door pull plates, pull handles, mechanisms, coordinators, bolts, door stopper, stoppers or door holders and close door arms will be made of aluminum.
3. Buttons, rosaces, headstall or plates and lock striking plates, bolts cases for emergency doors will be brass or bronze.
4. Lock cases will be of cast iron and mechanism will rust resistant steel. Protective boxes for striking plates will be made of pressed steel.
5. Keys will be made of a nickel-silver alloy.

3. FINISH

1. Unless stated otherwise, all apparent finishing hinges will be chrome satin plated as per 626/652 standard. Hinges will be made of stainless steel. Pull handles, push, and foot plates will be in stainless steel, finish 630. Boxes for close doors will have a natural anodized finish 628.

4. HARDWARE PIECES FOR DOORS

1. For list and description of all door hardware pieces, refer to inserted charts on architectural Drawings.

5. FASTENING DEVICES

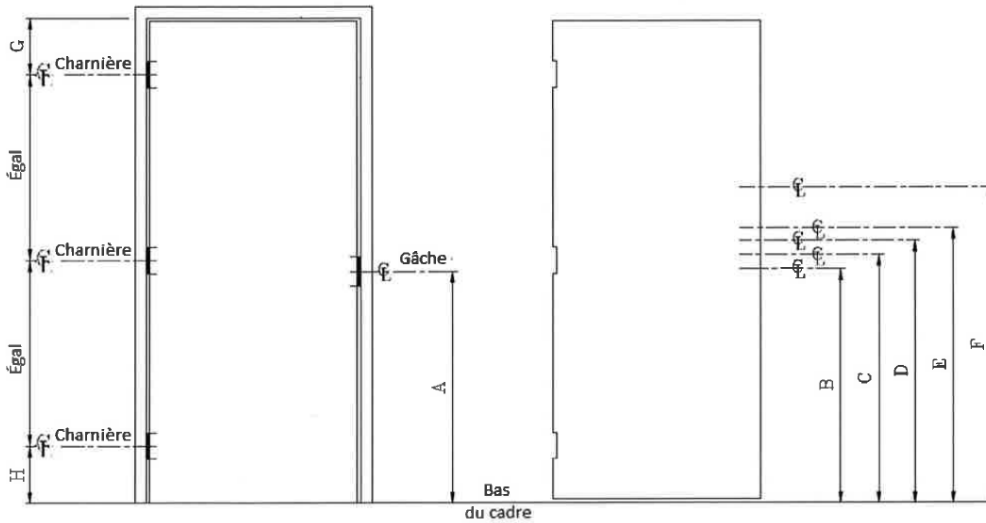
1. Provide screws, bolts, expansible plugs, and other fixation devices necessary to fix hardware properly and for the good order of hardware pieces.
2. Apparent fixation devices must be assorted to hardware pieces finish.
3. Where a traction handle is needed on one of the faces and a push plate, on the other face of door, provide fixation pieces needed to install in a manner that handle is fixed on both sides of door. Install push plate to hide fixations.
4. Use fixation pieces made of compatible material with the one they are passing through.

PART 3 WORK

1. INSTALLATION INSTRUCTION

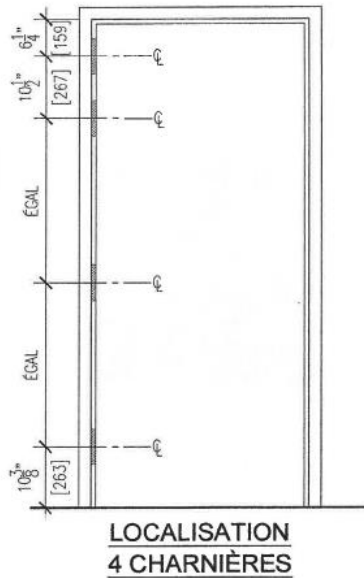
1. Provide complete instructions and installation templates essential to metal door and frame manufacturer to allow them for preparation of their products to receive anticipated hardware pieces.
2. Each hardware piece must be accompanied with installation instruction from manufacturer.
3. Install hardware pieces in normal positions as per requirements of Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by the Canadian Steel Door and Frame Manufacturers' Association.
4. If door stopper must touch tie-rod, install stopper so it touches the lower part of the tie-rod.

5. Standard position of architectural hardware



Item de quincaillerie		Impériale (jusqu'à)	Métrique (jusqu'à)
A	Ligne du centre pour serrures rondes et à levier, dispositifs de sortie de secours & pènes à rouleau	40 5/16"	1035
B	Ligne de centre d'une poignée à tirer et ensemble de barres à tirer & pousser	42"	1065
C	Ligne du centre d'un pêne de bras à tirer d'hôpital	45"	1145
D	Ligne du centre d'un bras à tirer d'hôpital (type vertical)	47"	1195
E	Ligne du centre d'une plaque à pousser d'hôpital	48"	1220
F	Ligne du centre de la serrure auxiliaire	48"	1220
G	Ligne du centre de la charnière du haut (max)	9 3/4"	250
H	Ligne du centre de la charnière du bas (max)	13"	330

6. 4 hinges openings / special positioning (note #8)



7. Finish chart ANSI / BHMA

Code and description	Base Material	Eqv
626 Satin chromium plated	Brass, bronze	C26D
627 Satin aluminium, clear coted	Aluminium	C27
628 Satin aluminium, clear anodizes	Aluminium	C28
630 Satin stainless steel	Stainless steel, 300 series	C32D
652 Satin chromium plated	Steel	C26D
689 Aluminium painted	Any	C28

Notes & abréviations :

- r.L. : required Length (adapted to specific openings).
- r.H. : required Height (adapted to specific openings).
- d.W. : Door Width (adapted to specific openings).
- LC : Less Cylinder. In due time, the owner will provide to the general contractor its own cylinders and keys so the contractor can proceed to their installation.
- **IMPORTANT :**
- Procedure to follow for installing certain hardware items:
 - Use machine screw (MS) to install door operators in these circumstances: On steel and aluminium frames. On aluminium doors. On steel doors. On steel doors when operator has no integrated stop.
 - Use thru-bolts (TB) to install door operators in these circumstances: Door operators with integrated stop must be fixed to steel and wood doors with thru bolts (TB).
 - Panic exit devices (and strikes) must be fixed to steel frames and doors with machine screw (MS).
 - Do not use poorly calibrated power tool (too powerful), it can damage frames, doors and hardware.
 - Regarding machine screw (MS), installer must first thread steel correctly before proceeding with final installation of screws. Failure to comply with these requirements could result in the replacement of frames and doors, entirely at the expense of the general contractor.
- Kick and protection plates: Kick plate screws must be flat head stainless steel. Other types of screws are automatically refused. Kick plate height must be coordinated with lower rails by hardware subcontractor.
- Surface door bottoms vs aluminium sills: Bottom of door must rest on the bevelled / angular part of the thresholds.
- Automatic door bottoms: Final coordination of recessed automatic door bottoms is the general contractor's responsibility and his hardware subcontractor. Consult hardware groups for more information.
- Steel frames: Supply and install 3 rubber door dampers for single frame of 84" or less, and 4 units for frame of 84" or more. 2 units for double frames.
- **Notes (electrical and others) :**
- **NOTE # 1:** Before work begins, the various stakeholders will have to coordinate their work together.
- **NOTE # 2:** EMT conduits with pull cables, low voltage wiring for access control and for the supervision system (including for electromagnetic locks), electrical and junction boxes (when required); and 120V power supply: Supplied, installed, connected; and started by the Electrical Division.
- **NOTE # 3:** The Electrical Division will have to connect the fire alarm system to the openings requiring it. Consult the hardware groups for this coordination.
- **NOTE # 4:** Access control systems by cards, by communication system (if used); and supervision (and its accessories): Supplied, installed, connected and started by the Electrical Division (including all wiring). This division will have to install the electromagnetic locks which will have been provided by the architectural hardware section. Install the electromagnetic locks using a silicone coating to keep them in place and secure.
- **NOTE # 5:** Electrical hardware in this group (except items by Electrical Division): Provided, connected, installed and started up by this section (including 18AWG stranded low voltage wiring and those specified in hardware groups with quick connectors). The wiring will be brought to the junction box above the door (or near) and / or to the power supply box (when present in the group). Magnetic contacts are provided by this section, but installed by the Electrical Division.
- **NOTE # 6:** Automatic opening systems (components and operation) must meet the ANSI 156.19 standard for universal accessibility. The subcontractor and the supplier are responsible for supplying and installing ALL the components required to meet this standard (eg coordination and synchronization relays, movement and presence sensors on the push and pull sides, etc.).
- **NOTE # 7:** Automatic door operator and accessories: provided, installed, connected, and started by this section (including the low voltage wiring for starting this system). Installer must be recognized and certified by the manufacturer and the AAADM organization. Exact position of activation plates is to be coordinated with the architect. Types of activation plates must also be coordinated with

site conditions. Consult the architect if in doubt. This installer must provide and produce his own connection diagrams and coordinate them with those specified in this section beforehand.

- **NOTE # 8 : Location of hinges for openings of 4 units :** 6 1/4", 10 1/2", equal, equal, and 10 3/8" (10 3/8" between centre of bottom hinge and bottom of frame). Dimensions from top of frame, to center of hinges, down to bottom of frame. If frames with dimension other than 84", "equal" dimensions must adapt to this change (distribute equally).
- **Notes to installer regarding fire-rated doors:**
- National Building Code - Canada 2010 (CNBC) refers to NFPA 80 Standard for Fire Doors and Other Opening Protectives - 2010 edition for any fire-rated opening.
- Article #6.4.4.7.1 of NFPA 80 says « Locks, latches, surface-mounted top and bottom bolts, and fire exit hardware shall be secured to reinforcements in the doors with machine screws or shall be attached with through-bolts ».
- Article #6.5.2 of NFPA 80 says « All components shall be installed in accordance with the manufacturers' installation instructions and shall be adjusted to function as described in the listing ».
- Once door operator is installed, installer must adjust the three adjustments screws to ensure correct operation of each door. Adjustments are; « Sweep », « Latching » and « Back Check ». These adjustments can vary depending on length and position of door. Fire-rated doors must open smoothly and close and latch after each use. (Article #6.1.4.2.1 of NFPA 80).
- Noncompliance to the afore mentioned articles voids the fire rating certification of the opening.

Group 01 / Doors # P-2B-200.1

QTY	DESCRIPTION	FINISH	MANUFACTURER
	<p>INFORMATIONS :</p> <p>1. Secured RCM sector is 2B-200 SOUTH. Door opening towards this sector IS NOT part of egress.</p> <p>2. Non-secured RCM sector is 2B-200 NORTH. Door opening towards this sector IS part of egress.</p> <p>3. Double exit opening must be fire rated. See plans.</p> <p>4. Opening dimensions must be measured on site. Electromagnetic locks must be integrated with opening's height. Minimal height 78" (see NBC for more information).</p> <p>5. Subcontractor must make his own vérifications on site, before submittal of shop drawings.</p> <p>6. Notify architects of any problems. Offer solutions at the same time.</p>		
8	Heavy weight full mortise bearing hinges and non-removable pins T4A3786 4.5" x 4" NRP (espacements spéciaux, voir la note # 8)	652	McKinney
2	Electrical power transfer in upper part to power Superscan sensors (locate under second hinge from the top) CEPT	630	Securitron TC
2	Electrical power transfer with quick connectors in lower part to power panic exit devices (locate under third hinge from the top) EL-CEPT	630	Securitron TC
1	Door opening towards secured RCM sector # 2B-200 SOUTH Concealed vertical rod exit device. Fire and Panic listed. Top bolt only. Electrical retraction of bolt/lock to exit only. 12-56-NB-MD8610 x r.l. x r.h. x d.w. x 650 x 24VDC (to coordinate on door)	630	Sargent 56
1	Door opening towards non-secured RCM sector # 2B-200 NORTH Concealed vertical rod exit device. Fire and Panic listed. Top bolt only. Electrical retraction of bolt/lock to exit only. Supervision of panic bar for exit only.		Sargent 55 - 56

Replacement of doors 2G-110 and 2B-100.1

Candian Space Agency

Y/Ref. :
O/Ref. : 21310-12

Hardware

Section **08 71 10E**
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	12-55-56-NB-MD8610 x r.l. x r.h. x d.w. x 650 x 24VDC (to coordinate on door)	630	
1	<p>Heavy duty automatic swing door operator SW200i. Casing full length of opening. Existing PUSH and PULL arms to reinstalls (two simple motor of double motor to coordinate on site). Hand over existing presence sensors to owner (2). Important : Automatic opening systems (components and operation) must comply to ANSI 156.19 regarding universal accessibility. Subcontractor and provider must supply and install ALL component to comply to this norm. If possible, opening of doors must be simple and not simultaneous. Coordinate on site with existing door operator. Notify architects of all possibilities.</p>	689	<p>Existing to reinstall OPAE</p>
1	All accessories to supply and install to ensure the automatic opening system can operate properly: EXU-SA, EXU-SI and CU-HUB modules, fire rated relay, etc. Coordinate accessory needs on site.		Assa-Abloy Entrance Systems
4	<p>High performing presence sensor (one on the upper corner on each side of doors) Superscan II or III x r.L. for 36" doors (to be installed on doors) Important : Wires powering Superscans must transit by the upper electrical power transfers # CEPT. Surface mounted wires are not accepted.</p>	black	<p>Assa-Abloy Entrance System DP</p>
2	<p>Electromagnetic lock, PUSH side, with 1200lbs holding force M62 x 24VDC (or M32 model with 600lbs holding force if 78" minimal height cannot be respected with M62 model)</p>	630	<p>Securitron EA</p>
2	<p>Kick plate K1050 12" x r.l. x CSK</p>	630	Rockwood
1	Weatherstrip gasketing for fire doors, self-adhesive, made of black silicone W-22 x l.r. (head & jambs)	black	KN Crowder
2	<p>Automatic door bottom for steel door CT-54 with shims x r.l.</p>	719	KN Crowder
1	Flat steel astragal 1/8" x 1.5" x l.h. welded on PULL side of door opening toward secured RCM sector # 2B-200 SOUTH		Fabricant des portes
2	<p>Concealed magnetic contact SPDT 2757 (or Flair # 1000-34SW RAC if Sentrol is unavailable)</p>	630	<p>Sentrol CM</p>
1	Mortise keyswitch alternate. Recessed wall installation on non-secured # 2B-200 NORTH side MKA x 24VDC	630	<p>Securitron ICI</p>
1	Mortise keyswitch with audible momentary. Recessed wall installation on secured # 2B-200 SOUTH side MKPZ x 24VDC	630	<p>Securitron ICI – ASI</p>
2	Mortise key cylinder supplied by CSA (Canadian space agency) but installed by contractor. (coordinate with keyswitches)	626	<p>CSA General Constructor</p>
2	Wire harness with quick connectors between panics et transfers QC-C012 x r.l. (coordinate length with opening)		<p>McKinney CCR</p>
2	Retrofit cable with quick connectors between transfers et junction/power box QC-C3000P x r.l. (coordinate length with opening)		<p>McKinney CCR</p>
1	<p>Boxed power supply with 15 seconds nuisance management module BPS-24-3 x 120V x 24V + XDT-24 + RB-4-24 + RB-4-12 + PDB-1R (12V card required if access control is 12V, coordinate on site)</p>	600	<p>Securitron BA – N15s</p>
1	Self-adhesive signalisation panel on PUSH side of door opening toward non-secured sector #@B-200 NORTH		ARD

	SCC-16 x 3292 x 315FA (bilingual text)		
1	Connection diagram and explanatory manual SCC-16 x DR x G01 x 210901-16 x Revision #1 2021-10-14		ARD
	Access control hardware by Electrical Division: 2 card readers (LC/LC), Access system controller (CT), Central Manager (GC), power source, connection diagram and explanatory manual, etc.		Division Électrique

- Specified quantities are unitary quantities required for each door mentioned in reference
- Junction box must be localized near opening.
- **APPLICABLE NOTES # 1, 2, 3, 4, 5, 6, 7 et 8. Opening under access control.**
- **OPERATION :**
- **At all time :**
- Opening is secured in both (2) directions (via access control system and electromagnetic locks).
- **DOOR OPENING TOWARD SECURED SECTOR # 2B-200 SOUTH (not an Exit/means of egress):**
- Electromagnetic lock is continuously power and locks door, door cannot be opened.
- To reach secured secteur # 2B-200 SOUTH, present card to card reader. Once accepted, electromagnetic lock is momentarily no longer powered, bolt/lock retracts electrically, and door automatically opens. Presence sensor on each side of door ensure security of users (door would not be able to open or close if someone is too close).
- In case of fire alarm, electromagnetic lock is ALWAYS powered to ensure that the secured sector # 2B-200 SOUTH remains secured (since door is not an exit).
- **DOOR OPENING TOWARD NON-SECURED SECTOR # 2B-200 NORTH (This door is an Exit)**
- Electromagnetic lock is continuously power and locks door, door cannot be opened.
- To reach sector # 2B-200 NORTH, present card to card reader. Once accepted, electromagnetic lock is momentarily no longer powered, the 15 seconds nuisance is also momentarily suspended. Bolt/lock retracts electrically, and door automatically opens. Presence sensor on each side of door ensure security of users (door would not be able to open or close if someone is too close).
- In case of emergency, push panic a few seconds, exit will be possible after 15 seconds.
- En cas d'urgence, pousser la panique quelques secondes, et la sortie sera possible après 15 secondes. Sound alarm will go off (MKPZ). Use keyswitch MKPZ to rearm.
- For maintenance, use keyswitch MKA (ON/OFF).
- In case of fire alarm, electromagnetic lock is no longer powered and door is completely free. Push on panic to manually open door.

END OF SECTION

PART 1 GENERAL

1. RANGE OF WORKS

Non-exhaustive list of works in this section:

1. Provide glass panels for interior glass partitions as well as glazed doors.

2. REFERENCE STANDARDS

Non-exhaustive list of applicable reference standards for this section:

1. Aluminum Association (AA), Designation System for Aluminum Finishes
2. Canadian General Standards Board (CGSB)
3. Canadian Standards Association (CSA)
4. CSA-A440-/A440.1, A440, Windows / Special Publication A440.1, User Selection Guide to CSA Standard A440, Windows.

3. DATA SHEETS AND SAMPLES

1. Submit data sheets as per the prescriptions of section 01 33 00E – Submittal procedures.
2. Submit required samples as per section 01 33 00E – Submittal procedures.
3. Submit one (1) sample measuring 150 x 150 mm of the products listed below.

4. TEST REPORTS

1. Submit reports from tests performed by an independent, approved laboratory, certifying that the data conform to specifications.

5. GUARANTEE

1. Provide a certificate of guarantee, signed, and issued on behalf of the Ministerial representative, stating that all the works in this section are warranted against defects for a period of five (5) years from the date of signature of the certificate of provisional acceptance work. Comply with section 01 78 00E.

PART 2 PRODUCTS

1. MATERIALS

1. Materials: as per CSA-A440/A440.1 standard and the following prescriptions.
2. Sheet glass: as per CAN/CGSB-12.2 standard, thickness based on assembly.
3. Tempered safety glass, as per CAN/CGSB-12.1-M90 standard, type 2, class B, clear, 6-mm (1/4") thick.
4. Glass thickness must conform to CAN/CGSB-12.20 standard for specified design pressures. The pane of glass must be free of any defect that could alter its mechanical resistance. The following conditions shall be considered unacceptable:

1. Notches in the shape of a "V" and/or grinding of edges.
 2. Shark teeth whose height exceeds half the thickness of the glass.
 3. Height of Walner lines (serration hackle) exceeds a quarter of the thickness of the glass, or presence of flakes in the pane of glass.
 4. Deviations in the straightness of edges exceeding 1/8 of the thickness of the glass.
 5. Bevel rips whose spacing exceeds 1/4 of the thickness of the glass.
 6. Surface flakes whose length and/or width exceeds 6 mm.
5. The glazing seals must be made of materials compatible with aluminum or steel and with sealers and sealing materials used in the composite structure with which they are in direct contact.

2. GLAZING VI01

1. **Tempered safety glass:** complies with standard CAN / CGSB-12.1-M90, type 2, class B, clear 6 mm (1/4 ") thick
2. Polyvinyl butyral Interleave (PVB) of 0.38 mm thickness.
3. Tempered safety glass, conforming to CAN / CGSB-12.1-M90, type 2, class B, clear 6 mm (1/4 ") thick.

3. ACCESSORIES

1. **Setting block:** neoprene, 80 to 90 Shore A hardness, measured with a durometer as per ASTM D2240 standard, adapted to the installation of the glass panels as well as the weight and dimensions of the glass and at least 100 mm in length x 6 mm thick, installed a minimum of 150mm from the corner of the sealed unit.
2. **Locating blocks:** neoprene, 50 to 60 Shore A hardness, measured with a durometer as per ASTM D2240 standard, self-adhesive on one face, 75 mm in length over half the height of the glass bead and the appropriate thickness of the installed glazing.
3. **Self-adhesive glazing strip:**
 1. Pre-moulded butyl compound with integrated spacer, resilient and tube-shaped, 10 to 15 Shore A hardness measured with a durometer as per ASTM D2240 standard, rolled on anti-adhesive coated paper, 12 mm x 3 mm, black colour.
 2. Polyvinyl-chloride foam with closed cells, rolled on anti-adhesive coated paper, covered with adhesive on both faces, with a maximum water absorption capacity by volume of 2%, allowing compression of 25%, ensuring air tightness and vapour tightness.
 3. All rolled glass must be perfectly sealed and adherent to the frame around the perimeter of the glass. Use a preformed adhesive tape like Polyshim.
 4. For acoustic frames, use of pressure-sensitive seals with rubber profile positioned on the line of sight as VisionStrip by Tremco, 3mm thick.
4. **Glazier's points and spring pliers:** resistant to corrosion, standard make.
5. **Extruded joints with retaining flaps:** black neoprene as per ASTM C542 standard, type U for cavities, glass-bead type for built-in reglets. The joint of the supporting cross beam must have an interior channel and holes for drainage. Injection-moulded single-piece angle joints, hot welded to the main joint.
6. **Glass mirror fastening accessories:** extrusion molding in clear anodized finish aluminum and continuous stainless-steel ties along the entire perimeter of the glazing.
7. **Sealing primers and cleaning products:** as per the glass manufacturer's specifications.

8. **Sealing strips:** interior and exterior, as per the window manufacturer's standards.

PART 3 WORK

1. QUALITY OF WORK

1. Install windows as per CSA-A440/A440.1 and 4-07 standards.
2. Remove protective coatings, clean contact surfaces using a solvent, and dry.
3. Apply a coat of sealing primer on contact surfaces.
4. Place setting blocks as per the manufacturer's instructions.
5. Put the glass in place, press down on the setting blocks and ensure perfect adherence around the entire perimeter.
6. Leave a space of at least 3 mm (1/8") around the edges.
7. Insert locating blocks to properly centre the glass in the frame. Place the blocks at 600 mm (24") intervals and maintain at 6 mm (1/4") below the sight line.
8. Install windows and align the faces in a single plane for each wall section; set up windows and materials square and plumb, and properly anchored to maintain their position permanently when subjected to normal temperature fluctuations and expected wind loads.

2. INTERIOR GLAZING

1. Assembly with rabbet – self-adhesive tape
 1. Cut the self-adhesive tape to the appropriate length and place it on the permanent glass beads, surpassing them by 1.6 mm (1/16") above the sight line.
 2. Place the self-adhesive tape around the free perimeter of the glass as indicated above.
2. Cut the adhesive tape to the appropriate length and press it against the permanent glass beads, extending up to 1.6 mm above the sight line.
3. Place the setting blocks at intervals corresponding to a third of the width of the glass, so that the end blocks are no more than 150 mm from the corners of the glass.
4. Place the glass on the setting blocks and press it against the adhesive tape to obtain perfect surface contact around the entire perimeter.
5. Place adhesive tape around the perimeter of the other face of the glass as already described.
6. Apply a bead of sealant silicone between the edge of the glass and the frame, around the perimeter of the opening to seal for sound system.
7. Lay out the detachable glass beads without moving the adhesive tape and exert pressure on the tape to obtain perfect surface contact.
8. Cut excess tape with an appropriate knife.

3. CLEANING

1. Immediately clean finished surfaces by removing compound smudges and drops of sealing product. Once the task is completed, remove labels and clean again.

2. Once the installation is completed, proceed with cleaning the site to remove accumulated dirt and debris caused by the construction work and the environment.
3. Remove all traces of priming, caulking, and sealing products.

END OF SECTION

PART 1 GENERAL

1. RANGE OF WORK

1. Non-exhaustive list:
 1. Clean existing and new surfaces to be painted and new finishes.
 2. Paint walls and partitions (gypsum and concrete block) as described in plans.
 3. Paint all structures and accessories such as doors, frames, steel finish boards, mouldings, the structure of the crane, etc.

2. REFERENCE STANDARDS

1. Office of general standards of Canada (ONGC).
 1. CAN/CGSB-1.28, Interior alkyd resin paints for buildings.
 2. CAN/CGSB-1.132 Paint for primer coat, zinc chromate, low sensitivity to humidity.
 3. CAN/CGSB-1. Aluminum enamel paint with silicone-alkyd resin, resistant to heat.
 4. CAN/CGSB-1.146 Cover with epoxy resins paint, cold hardening, bright.
 5. CAN/CGSB-1.153 Cover with epoxy resins paint, high garnishing power, bright.
 6. CAN/CGSB-1.165 Paint for primer coating with epoxy resins, cold hardening.
 7. CGSB 85-GP-14M Painting of steel surfaces exposed to normal dry atmosphere.
 8. CGSB 85-GP-16M, Painting of galvanized steel.
 9. CAN/CGSB-85.100, Painting.
2. Steel Structures Painting Council (SSPC).
 1. Systems and Specifications Manual, 1989.
3. Architectural Painting Specifications Manual, Master Painters Institute (MPI).

3. CONDITION FOR BEGINNING WORK

1. Do not apply paint where work emitting dust is being done.

4. MAINTENANCE MATERIAL

1. Deliver one gallon each of tint and finish used for interior wall surfaces.
2. Use replacement material coming from the same production lot of material used for works.
3. Colors and tints:
 1. All colors, intensity of tones and tints will be chosen by Ministerial representative during the course of the work.
 2. Where many coats are applied, the next to last coat of paint will of the color chosen and submitted for approval by Ministerial representative that reserve the right to change or modify their choice during the work.

3. Many colors will be used.

5. INSPECTION OF ROOMS SURFACES TO BE PAINTED

1. Rooms will be thoroughly swept to remove any dust. Concrete work must have been finished for at least thirty (30) days. Masonry work must be completed and dry enough.
2. Surfaces will be suitably finished, clean, dry, with regular appearance and texture and without of defect.
3. Unless reserves were made beforehand by Ministerial representative and/or the contractor, the beginning of work means implicit approval of conditions and of the state of surfaces on which work is to be done. The Contractor will be held responsible for the quality and the condition of finish, if not of first quality.

6. CLIMATIC CONDITIONS

1. No paint, tint or preservative will be applied when temperature is inferior to 10oC inside and for exterior, when ambient temperature is inferior to 10oC and superior to 32 °C. No exterior finish will be applied during night, snow or after, until surfaces are dry.

7. GENERAL PROTECTION

1. Contractor will protect work against humidity or damage by whatever cause. Also protect adjacent works from any damage caused by workers, materials, tools, or equipment used to do the work. Assume responsibility for adequate protection of works against any eventual damage caused by the execution of works related to this division or others.
2. Contractor must repair all damage, without cost to the ministerial representative and to the satisfaction of consulting-experts. If, in their opinion, these damages cannot be suitably repaired, damaged work will be replaced at the cost of the Contractor.

8. GUARANTEE

1. Provide a certificate of guarantee, signed, and issued on behalf of the Ministerial representative, stating that all the works in this section are warranted against defects for a period of one (1) year from the date of signature of the certificate of provisional acceptance work. Comply with section 01 78 00E.

PART 2 PRODUCTS

1. MATERIALS

1. Approved materials: to do present works, use only paint material from list of approved products given by OGSC (O.N.G.C.).
2. Use paint material as per O.N.G.C. standard, mentioned on the list of paint systems for finish.
3. Material from each paint system must come from one manufacturer only.
4. Choice of:
 1. 3 colours for walls;
 2. 2 colours for doors, frames and glazed partitions;

3. 2 colours for ceiling;
4. 3 colours for conduits and equipment
5. On surfaces: one (1) primer coating and three (3) finish coatings, unless told otherwise.

PART 3 WORK

1. SURFACES PREPARATION

1. Application of paint must not start before surfaces are suitable prepared. All surfaces must be solid, dry, and clean without dirt, dust, grease, rust, mortar projections, salts, and foreign matters susceptible of compromising the good appearance of paint coatings.
2. Prepare existing doors and frames in the following way:
 1. Wash surfaces with a multi-purpose oxygen active cleaner as No 771-136 per Sico.
 2. Sand surfaces to attenuate glossiness.
 3. Exterior walls must be cleaned with pressurized air. Then, clean foundation walls up to the height of the garage doors with pressurized water. The device must deliver a minimal amount of water to not soak the surfaces.
3. Prepare plaster and plasterboard surfaces, as per ONGC 85-GP-33M standard. Fill small cracks with smoothing product.
4. Wash all gypsum surfaces with a multi-purpose oxygen active cleaner as No 771-136 per Sico. Sand all gypsum surfaces apply a primer as No 850-130 or 870-177 per Sico. Sand thereafter and dust between each coat of paint.

2. APPLICATION

1. Sand and dust between applications of each coat of paint to correct defects visible at a distance of 1,5m.
2. After adjusting doors, finish edges and door frames according to requirements anticipated for door itself.
3. Finish upper part of cupboards and protruding edges, on top and under vision line, according to requirements estimated for adjacent surfaces.
4. Finish cupboards and tiny rooms according to requirements estimated for adjacent rooms.
5. Coordinate paint work, including methods of applications and periods to do the work.
6. Finish non-visible areas from inside but visible from the outside by an opening or through windows.

3. INTERIOR FINISH

1. System for walls and ceilings:
 1. Washable interior acrylic paint, high performance, durable and of professional quality, without VOC, compliant with LEED V4 emission and VOC standards, such as Sherwin William 200HP or approved equivalent with manufacturer's technical data sheet meeting the mentioned requirements. Provide primer from the same manufacturer suitable for the surface.
2. System for doors and steel frames and primed ferrous metal:

1. 100% acrylic semi-gloss finish paint, recommended by the manufacturer for use on metals with excellent adhesion power, corrosion resistant, VOC content less than 150, which meets LEED V4 certification such as Benjamin Moore ultra SPEC HP FP29 or approved equivalent with manufacturer's technical data sheet meeting the mentioned requirements. Provide primer from the same manufacturer suitable for the surface

END OF SECTION