

**QUOTE FOR COORDINATION 100%**  
Architecture

Canadian Space Agency - John H. Chapman Space Center  
6767, route de l'Aéroport | Saint-Hubert (Québec) J3Y 8Y9

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**Collaborative space**

**CIMaISe**

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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.
8. The Contractor must erect temporary fire separations, with a fire resistance rating of one (1) hour between the construction area and the rest of the building.

## 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 only inside the limited area selected by the Ministerial representative. The Contractor must take into consideration that there are very few parking areas available on the site.
3. Parking on the premise, elsewhere of inside prescribed limits is forbidden and any vehicle found will be toed at his own expense and be liable for a fine.

## 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.



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**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**

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## **PART 1 GENERAL**

### **1. DOCUMENT PRIORITY**

1. For all conflicting conditions or requirements between PWGSC'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 moving the location of the control room in the conference center of the John H. Chapman Space Center. In addition to reviewing the position of the premises, the agency will replace almost all the audiovisual system to go digital signal.
2. The peculiarities of the work mainly on the coordination of several trades to do the cleaning of existing components and give new structured and efficient facilities for the maintenance of the conference center. The acoustics will also be a key element of this project. The area will be completely vacated during the work
3. 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. **Work will be carried out in a single phase.**
2. Scheduling, see **section 01 32 18E** and Ministerial representative's instructions.
3. The work site is inside the occupied building. The area bounded by the site will be fully available to the contractor
4. Since the site is still in operation, services will remain active at all times and free lanes for local traffic.
5. **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.
6. Work will be performed in accordance with the requirements listed in other sections and to comply with the deadline imposed.
7. 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.

#### 5. SITE OCCUPANCY BY MINISTERIAL REPRESENTATIVE

1. Circulation must be maintained for emergency evacuation compliance.
2. The premises must be cleaned every shift.

**END OF SECTION**

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**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:

**2. APPROXIMATE DATES**

1. Contract award ..... In accordance with the general conditions
2. Site preparation, documentation, and order of materials ..... 6 weeks
3. Work time ..... 14 weeks
4. End of work (including correction of deficiencies) ..... 2 week

**3. REQUIRED SCHEDULES**

1. Schedules to be submitted:
  1. Execution schedule.
  2. Workshop drawing and technical data sheet submission schedule.
  3. Samples submission schedule.
  4. Product order and delivery schedule.

**4. 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.

**5. 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.

## 6. 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. Foundations and concrete work.
  5. Structure assembly and media.
  6. Envelope and seal.
  7. Mechanical and electrical services.
  8. Interior Finish.
  9. Site Development.
  10. 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. Indicate the changes made since the submission of the last calendar.
  2. Main changes in view
  3. Modified activities since the last calendar presentation.
  4. Revised forecast of rate of progress and completion date.
  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**

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## **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. The electronic version will be included in the 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 in three (3) copies 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. Safety officer attestations, if applicable;
  3. First aid in the workplace and cardiopulmonary resuscitation;
  4. Work likely to release asbestos dust;
  5. Work in confined spaces;
  6. Lockout procedures;
  7. Safe work procedures at height;
  8. Hot work procedures;
  9. Wearing and fitting of individual protective gear;

10. Forklift truck safe driving practices;
  11. Positioning platform;
  12. 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. MEETINGS

1. Contractor decisional representative must attend any meetings at which site safety and health issues are to be discussed
2. Set up a site safety committee and convene meetings in accordance with the Construction Safety Code (S-2.1, r.6).

## 6. 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.

## 7. 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.

## 8. 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.

## 9. 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.

## 10. 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. Minutes of site committee meetings;
  8. Names of site committee representatives;
  9. Names of those with first-aid training;
  10. Action reports and correction notices issued by the CNESST.

## 11. 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.

## 12. HEALTH/SAFETY/HYGIENE/ENVIRONMENTAL SPECIALISTS

1. As soon as work starts, hire one or several safety officer(s), pursuant to the provisions of sections 2.5.3 and 2.5.4 of the Construction Safety Code (S-2.1, r. 6) and give him/her/them the necessary authority to carry out the duties of this position, including authority to stop work on safety and health grounds.
2. As of [enter time], hire a qualified person whose duties will be to ensure compliance with and application of all legislation, regulations and standards and all contractual requirements pertaining to [specify area of expertise].
3. Provide this person with the authority, resources and tools needed for performance of his/her duties.
4. The person selected shall meet the following requirements:
  1. Possessed a minimum of five ( 5 ) years of experience in the domain.
5. The person selected shall:
  1. have in-depth knowledge of legislation and regulations applicable to the site pertaining to (specify area of expertise).
  2. develop and disseminate a safety orientation program for all site workers.
  3. ensure that no worker is admitted to the site without having taken the safety orientation program and met all the training requirements of the applicable legislation and the site-specific safety program.
  4. inspect the work and ensure compliance with all regulatory requirements and those of the contract documents or the site-specific safety program.
  5. keep a daily log of actions taken and submitting a copy to Departmental Representative each week.

## 13. INSPECTION OF SITE AND CORRECTION OF HAZARDOUS SITUATIONS

1. Inspect the work site and complete the site inspection sheet at least once a month if the work length exceeds 30 nonworking days. If the work length is less than 30 nonworking days, the frequency is at least once during the work length.
2. Immediately take all necessary measures to correct any lapses from legislative or regulatory requirements and any hazards identified by a government inspector, by the Departmental Representative, by the site safety and health coordinator or during routine inspections.
3. Submit to Departmental Representative written confirmation of all measures taken to correct lapses and hazardous situations.
4. Give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order interruption and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and site workers and environmental protection take precedence over cost and scheduling considerations.
5. Without limiting the scope of sections 1.8 and 1.9, Departmental Representative may order cessation of work if, in his/her view, there is any hazard or threat to the safety or health of site personnel or the public or to the environment.

## 14. 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.      RELATED REQUIREMENTS**

1.      The specific requirements relating to inspection and to tests that must be performed by laboratories are indicated in various sections. The Ministerial representative will make control inspections of the execution of the work. This in no way limits the Contractor's responsibility to do his own inspections to comply with current standards and codes. The Ministerial representative may also hire testing laboratories to perform tests on the structure or on the tightness of the various systems, damaged or not, to identify noncompliance or omissions.

### **2.      CONTRACTOR'S RESPONSIBILITIES**

1.      Provide the workforce and facilities needed to:
  1.      allow access to the structures to be inspected and tested;
  2.      facilitate inspections and tests;
  3.      restore structures that are disturbed during inspections and tests.
2.      Give Ministerial representative enough advance warning of operations so that he may plan visits for the inspection of specific structures or make appointments with laboratory staff and establish a testing schedule. When materials must be tested, and on demand of Ministerial representative, directly send the requested number of representative samples to the testing laboratory. Assume the cost of work carried out to uncover and restore structures that were covered before the required inspection or tests were performed and approved by the architect or the Ministerial representative.

### **3.      REJECTED STRUCTURES**

1.      Remove defective elements deemed noncompliant with contract documents and rejected by the Ministerial representative, either because they were not built according to good engineering practices, they were made with defective materials or products, or they were damaged, even if they are already part of the finished structure. Replace or rebuild the elements in question according to the requirements in the contract documents. Immediately repair other contractors' structures that have been damaged during replacement work described above. If, in the Ministerial representative's opinion, it is not feasible to repair the structures deemed defective or noncompliant with contract documents, the ministerial representative may deduct from the contract price the difference in value between the structure that was built and the one prescribed in the contract documents, with the amount of this difference being determined by the Ministerial representative.

### **4.      WORKERS' COMPETENCE**

1.      The Contractor must prove to the Ministerial representative, upon demand, that the workers possess the skills to carry out the work they have been assigned. Certification complying with current laws and regulations may be necessary. If the Ministerial representative is not satisfied by the proof, he may require the contractor to replace the workers.

**END OF SECTION**



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**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 always remain active 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 equipment. 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**

## **PARTIE 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.

## PARTIE 2 PRODUCTS

### 1. WITHOUT OBJECT

## PARTIE 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**



## **PARTIE 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 addition to a digital version of those documents. Files must be in PDF format and organized according to the folders' structure provided by 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.
3. Regroup data according to a logic order. Clearly indicate content of each in the tiles of the files.
4. Organize the content according to the section numbers of the specifications and the order in which they appear in the table of contents.
5. Provide, for each product and each system, a clear and well-named folder.

### **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. INCLUDED WORKS**

1. Removal and recovery for recycling old carpets and carpet scraps newly implemented.

### **2. REFERENCES**

1. Carpet and Rug Institute (CRI)
  1. CRI 104-[1996], Standard for Installation of Commercial Carpet.

### **3. DEFINITIONS**

1. Closed circuit recycling: transformation process of a product after used in a similar product.
2. Open circuits recycling: transformation process of a used product into a different product.
3. Nylon 6: fiber used to make carpet-rugs with a basic component; caprolactam.
4. Nylon 6,6: fiber used to make carpet-rugs, with two (2) basic components: hexanedioic acid (adipic acid) and hexamethylene.

### **4. DOCUMENTS/SAMPLES TO BE SUBMITTED**

1. Submit report stating proposed method to prevent dust.
2. Submit a list of carpet-rug, on which the designation of pieces will be the same as the one used on the drawings.
3. Submit a list of recovery/recycling activities of carpet-rugs, stating or containing what follows:
  1. Removal sequence of carpet-rugs.
  2. Inventory of coverings or covering components to be removed, salvaged or recycled.
  3. Type of fiber.
  4. Characteristics related to recycling procedure.

### **5. DOCUMENTS/COMPONENTS TO BE GIVEN AT END OF WORKS**

1. Submit a list of recovery activities of carpet-rugs.
  1. Submitted list must have or indicate what follows:
    1. Partially occupied space areas.
    2. Inventory of carpet-rugs to be removed and salvaged.
    3. Proposed methods of conditioning and transportation.
2. Submit documents provided by salvage company, confirming reception and elimination of salvaged carpet-rugs.
3. Submit document provided by salvage company certifying that old carpets-rugs were removed, salvaged, and recycled as per salvage program established by carpet-rug manufacturer.

1. Recycling process type:
  1. Closed and/or open circuit.
4. Record data pertaining to removal of old carpet-rugs out of the site and garbage from salvaged carpet-rugs. Give the following information:
  1. Date and time of removal.
  2. Type of fibers.
  3. Weight and quantity of materials salvaged;
  4. Final destinations of salvaged materials.

## **6. MANAGEMENT AND ELIMINATION OF GARBAGE**

1. Sort and recycle garbage.
2. Remove out of the site all wrapping materials and send them to appropriate recycling installations.
3. Salvage and sort paper, plastic, polystyrene, nodule cardboard wrapping and dispose of them as per management agreement for garbage.

## **7. DOCUMENTS TO SUBMIT PERTAINING TO QUALITY INSURANCE**

1. Certificates: submit documents sent by company in charge of removing salvaged old carpet-rugs, certifying that they have been removed, recovered, and recycled as per salvage program for carpet-rugs. It is forbidden to recuperate energy generated by incineration process.

## **PART 2 PRODUCTS**

### **1. RECYCLING COMPANY FOR CARPET-RUGS.**

1. Contractor must provide the name of the company who will be recycling the carpet-rugs and their recycling program.

### **2. MATERIAL/MATERIALS**

1. Solvents used to remove glue on carpet-rugs: as per CRI-104 standard.
2. Old carpet-rugs:
  1. Keep old carpet-rugs. Remove them immediately from work areas and place them in a container or trailer.
3. Underlay:
  1. Ensure recovery and recycling of underlay when recovery/recycling program exist in designated regions by carpet-rug salvage company.
4. Recovery containers:
  1. There is no available storage place on premises for removed carpet. Contractor must take away carpet rubbish as they are removed and store them temporarily until rug manufacturer will pick them up.

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**PART 3      WORK**

**1. ASSESSMENT OF PREMISES**

1. Check state of the works and make sure existing conditions are favorable to the performance of the work. Identify any problem susceptible of slowing beginning and completion of the works. Inform Ministerial representative.
  1. Do not begin works before problems are resolved and before receiving approval of the Ministerial representative.

**2. STAGING WORKS**

1. Vacuum old carpet-rugs before removal. Do it vigorously to minimize dust particles when pulling it out.

**3. REMOVAL OF CARPET-RUGS**

1. Remove old carpet-rugs by strips, big strips according to recommendation of manufacturer/recycler.
  1. Roll tightly and carefully place in container or recovery trailer. Also salvage cuttings and waste of newly installed carpet-rugs.
  2. Pile or place in cardboard boxes slabs of removed rug-carpets, and then place them in recycling bin or on recycling pallet.
2. Slab rug-carpet put into container or recycling bin must be dry and clean, that is, without demolition debris, asbestos garbage, rubbish materials and staple strips.
3. Remove glue as per CRI-104 standard.

**4. DISPOSAL**

1. Contractor must take out of the site carpet to be recycled and store temporarily, and that, until picked up by the recycling company or manufacture's transportation.

**5. INSTALLATION OF NEW RUG-CARPET**

1. Install new carpets: By Contractor as per section 09 68 00E – Carpets.
2. Collect scraps new carpet and dispose of the old carpet identically demolished.

**END OF SECTION**

## **PART 1 GENERAL**

### **1. INCLUDED WORKS**

1. Non-exhaustive list:
  1. Provide and install all materials **for metal structures** indicated in the drawings, specified in the current section, and needed to complete the structure; provide the equipment, tools and all labour required for its design, fabrication, delivery, and installation.
    1. **Steel elements:**
      1. Tubes, rods, channels, primed plates shown on the drawings.

### **2. REFERENCES**

1. Conform to current, applicable standards (latest version). When submitting documents, specify the reference standard or standards and their edition.
2. Non-exhaustive list:
  1. American Society for Testing and Materials International, (ASTM)
    1. ASTM A53/A53M, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
    2. ASTM A269, Specification for Seamless and Welded Austenitic Stainless-Steel Tubing for General Service.
    3. ASTM A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
    4. ASTM B209M, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    5. ASTM B210M, Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless tubes.
    6. ASTM B211M, Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod and Wire.
    7. ASTM F593, Specification for Stainless Steel Bolts, Hex Cap Screws and Studs.
  2. Canadian General Standards Board (CGBM)
    1. CAN/CGSBM-1.40, Anticorrosive Structural Steel Alkyd Primer
    2. CAN/CGSBM-1.181, Ready-mixed Organic Zinc-Rich Coating
  3. Canadian Standards Association (CSA)
    1. CAN/CSA-G40.20 AND G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
    2. CAN/CSA-S16.1-01, Limit States Design of Steel Structures.
    3. CAN/CSA-S157, Strength Design in Aluminum.
    4. CAN/CSA W47.1, Certification of Companies for Fusion Welding of Steel.
    5. CAN/CSA W47.2, Certification of Companies for Fusion Welding of Aluminum.
    6. CAN/CSA W48, Filler Metals and Allied Materials for Metal Arc Welding (written in collaboration with the Canadian Welding Bureau).
    7. CAN/CSA W59, Welded Steel Construction (Metal Arc Welding) (metric).

8. CAN/CSA W59.2, Welded Aluminum Construction.
4. Others:
  1. Aluminum Association Inc. (AA), Designation System for Aluminium Finishes.
  2. Aluminum Welding Society (AWS), A5.10 and A5.10M, Specification for Bare Aluminum and Aluminum Alloy Welding Electrodes and Rods.

### **3. CALCULATION CRITERIA**

1. Metal and aluminium structures and all fastening components must be designed and calculated to withstand overloads in the vertical and horizontal directions, as per the requirements of the NBC of Canada, 2010, latest version.

### **4. DOCUMENTS AND SAMPLES TO BE SUBMITTED**

1. Data sheets: submit data sheets as per section 01 33 00E – Submittal procedures.
2. Shop drawings: submit required shop drawings as per section 01 33 00E – Submittal procedures. Shop drawings must indicate or show the materials, core thickness, finish, assemblies, joints, anchoring method and number of anchors, supports, reinforcements, details, and accessories.
3. Certificates: submit documents as per section 01 33 00E – Submittal procedures, signed by the manufacturer, certifying that the products, materials, and equipment satisfy the prescriptions regarding physical characteristics and performance criteria.

### **5. TRANSPORT, STORAGE, AND HANDLING**

1. Packaging, shipping, handling, and unloading
  1. The equipment and materials must be transported, stored, handled, and protected adequately.
2. Storage and protection
  1. Visible surfaces of metal and/or aluminum elements must be covered with self-adhesive building paper or plastic film before the elements are shipped to the building site.
  2. Surfaces must only have their protective lining removed during the building's final cleaning. Provide the necessary instructions for the removal of this protection.

## **PART 2 PRODUCTS**

### **1. MATERIALS AND EQUIPMENT**

1. Steel plates and sections: grade 300W or 350W as per CAN/CSA-G40.20 and G40.21 standards.
2. Steel pipes: as per ASTM A53/A53M standard, extra-strong series.
3. Steel plates and sheets: as per ASTM-A 36 standard.
4. Welding materials: as per CAN/CSA W59 standard.
5. Welding electrodes: as per standards in the CAN/CSA W48 series.
6. Steel bolts and anchors bolts: as per ASTM F593 standard, **everywhere unless otherwise specified**

7. Steel bolts and anchor bolts: as per ASTM A307 standard (if required).
8. Aluminum welding bars: as per AWS A5.10 and A5.10M standards.
9. Aluminum and aluminum alloy bars, rods, wires, profiles, and extruded tubes: as per ASTM B211M standard, throughout unless otherwise indicated.
10. Finishing paint: system quality and color, see article 2 Finish.

## 2. STAINLESS STEEL ELEMENTS

1. Materials and hardware
  1. Stainless steel tubing : conforming to ASTM A269, grade 302 or 304 (316L for swimming pool structure) commercial quality weldable, without longitudinal seams, AISI number 4 satin finish.
  2. The stainless steel used must be of first quality, cold rolled, free of scale, roughness, deep, scratches or rust. Unless otherwise specified, use 16 gauge channels.
2. Stainless steel bolts and anchor bolts as per ASTM F593 standard, for any use located outside and everywhere else, in place exposed to humidity.
  1. All fastening hardware (screws, rivets, washers, bolts, etc.) for fixing the various non-welded elements must be stainless steel.
3. Finish:
  1. All welding must be done by arc welding (electric welding), without discoloration, with materials like the stainless steel described above. No other type of welding is allowed. All welds must be flush with the adjacent surface continuous, without crevices, sanded and polished to a number 4 satin finish.
  2. No perforation, nor any discoloration due to the welding elements inside the boxes are acceptable on their visible faces.

## 3. GENERAL

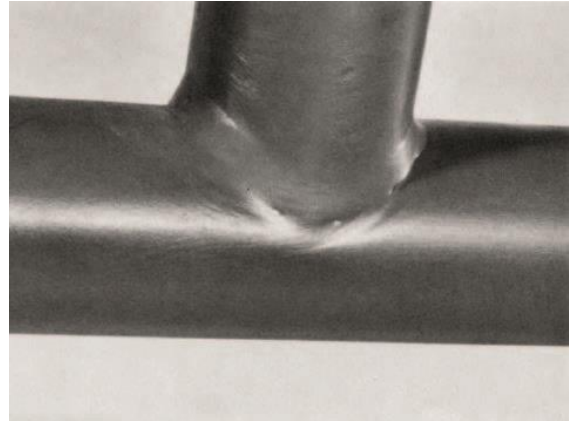
1. Structures must be right, square, well aligned and in accordance with prescribed dimensions; the joints must be tight and well secured.
2. Unless otherwise indicated, use stainless steel, flathead, self-tapping, loosening-resistant screws for threaded assemblies.
3. Inasmuch as possible, structures must be adjusted and assembled in shop, and delivered ready to install.
4. Visible welds must be continuous along the joint's entire length; they must be filed or ground to present a smooth, even surface.
5. Metallic structures inside the building: Exposed welds must be type 1 (unless otherwise indicated), continuous and sealed over the entire length of the joint.

## 4. WELDS

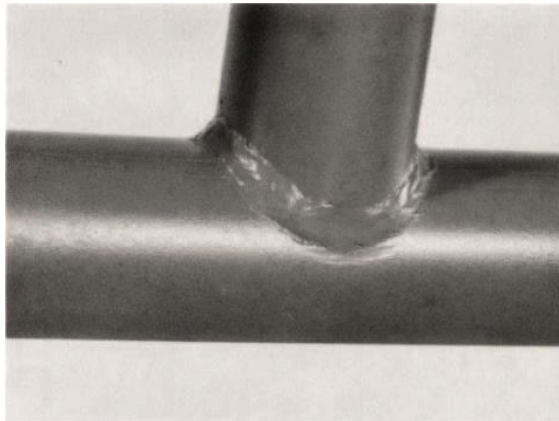
1. The quality of weld finish is defined according to types 1 to 4, as illustrated in the extract from document AMP500-06 published by the American NAAM (National Association of Architectural Metal manufacturers). The examples shown refer to tube assemblies, but the principals and results are the same for other types of profiles
2. Comply with the following prescriptions:



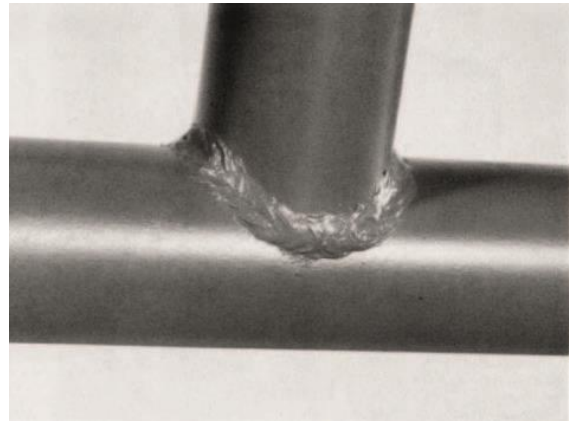
Type 1  
Ornamental quality  
No trace of solder joint.



Type 2  
Good looking weld  
Joint completely sanded, some undercuts  
and pinholes.



Type 3  
Average looking weld  
Joint partially straightened, no spatter.



Type 4  
Raw solder  
Good quality joint, unstraightened, uniform  
with minimal spatter.

\*Shown with round tubes, but applicable for all type of elements to be welded.

## 5. FINISH

1. Unless otherwise specified, all steel components shall be shop primed and painted.
  1. Electrostatic, polyester-based, spray-applied, baked-on thermosetting power coating, such as POWDURA SUPER DURABLE TGIC by SHERWIN WILLIAM, meeting the requirements of AAMA 2604.

| CRITERIA          | REFERENCE                  | RESULTS           |
|-------------------|----------------------------|-------------------|
| CROSS HATCH TEST  | ASTM D3359                 | EXCELLENT         |
| SALT SPRAY        | ASTM B117                  | 1000 HOURS        |
| HUMIDITY          | ASTM D2247, 100°F, 100% RH | 1000 HOURS        |
| TAPER CHUCK       | ASTM D1737                 | UP TO 180°, 3,2MM |
| IMPACT RESISTANCE | ASTM D2794                 | UP TO 160 IN LB   |
| HARDENESS         | ASTM D3363                 | H PLUS            |

2. Application: in workshop with a paint sprayer.
  3. System thickness: 4 mils
  4. Color: to be chosen by architect
2. Primed steel: Paint for primer coat applied in shop, conforming to CAN/CGSB 1.40.
    1. On-site touch-ups: Prime coat paint, ready to apply, in accordance with CAN/CGSB 1.40
    2. Finish: Powder coated spray applied and baked on.

## 6. INSULATING COATING

1. Plan on using tape and/or neoprene as a separator wherever indicated and/or required:
  1. Metals of a different kinds, except for stainless steel, zinc, and white bronze of reduced surface area.

## PART 3 WORK

### 1. INSTALLATION

1. Reinstall existing elements retrieved, modified in the workshop. Place them back according to the new layout, see drawings. Provide all funds anchor necessary. Secure each piece, as the existing. Also install new elements according to the indications in approved shop drawings. Respect accepted tolerances without combining them. Components shall be installed in precise positions, adjusted, square, and plumb with parallel, uniform joints.
2. Unless otherwise indicated, assemble all the elements **by bolting**. Provide and install all anchors in stainless steel, including bolts, lock washers, nuts, half-round tongues, locks, expansion parts, etc., and if possible, eliminate on-site welding. Do not secure support plates in sliding joints to allow the structural system to expand. Tighten bolted assemblies evenly with the required torque. Inspect and correct deficiencies.
3. Welding work will not be permitted on the site.

### 2. FINISHING WITH THERMOSETTING PAINT

1. The component must be finished in workshop according to appropriate procedure
2. Clean the parts by spray chrome plating (min 200 degrees Fahrenheit or 94 degrees Celsius). Remove grease residue and all other contaminants from equipment.



3. Application of paint by electrostatic spraying 40 to 120 Kv on the parts while they are still hot. Film thickness shall be 4.0 mils with ASTM D3363 Eagle pencil hardness and 180 degree flexibility at taper mandrel ASTM D522.

### **3. CLEANING**

1. Clean structures after installation to rid them of the dust generated by construction work or by the premises themselves.
2. Once the installation is complete, rid the site of excess materials, waste, tools, and barriers used to protect the equipment.

**END OD SECTION**

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## **PART 1 GENERAL**

### **1. RELATED SECTIONS**

1. Nailing bottom and filling materials.
2. Accessories and support panels.

### **2. QUALITY CONTROL**

1. Wood marking: grade stamp from an organization recognized by the Canadian Lumber Standards Accreditation Board.
2. Plywood marking: grade mark as per relevant CSA standards.

## **PART 2 PRODUCTS**

### **1. CONSTRUCTION LUMBER**

1. Spruce, category #1, of the dimensions indicated in the plans and detail drawings, maximum moisture percentage 19%, finish S45, surfaced on four sides and adhering to the following standards:
  1. CAN/CSA-0141-91.
  2. NLGA (Standard Grading Rules for Canadian Lumber), 1987 edition.
2. Furring, spacers, nailing strips, grounds, subframes, fillers, etc.
  1. Planks: "standard" or superior category.
  2. Heavy timber: classified "light framing", "standard" or superior category.
  3. Columns and timber: "standard" or superior category.
3. **All wood components used and incorporated into the roofing system must be pressure treated using the CCA-050 process, as per standard CSA-080.2a.**

### **2. WOOD PANELS**

1. Douglas fir plywood: As per standard CSA 0121-M1978, "construction" classification, "standard" category.
2. Canadian softwood plywood: As per standard CSA 0151-M1978, "construction" classification, "standard" category.
3. Exterior plywood: Eastern spruce, 7-ply, water-repellent glue, PMAC Exterior quality, "underlay" type, good on both sides.
4. Unless otherwise indicated, panels must measure 1,220 mm x 2,440 mm (4'-0" x 8'-0") and be squared.
5. Follow indications in detail drawings, according to specified thickness.

### **3. FASTENING DEVICES**

1. Drive screws, staples, and clips, as per standard CSA B111-1974.
2. Bolts with nuts and washers with a diameter of 12.5 mm (1/2"), unless otherwise indicated.

3. Certified fastening devices: tumble-type toggle bolts, expansion shields with lag bolts, lead or inorganic fibre sleeves with screws, devices equipped with explosive cartridges provided for this purpose by the manufacturer.
4. Galvanized metal fasteners: Galvanization in accordance with standard CSA G164-M1981 for exterior structures, interior structures in very humid locations, and structures made of treated wood.
5. Hot-galvanized masonry anchors (nails and/or concrete screws) for fastening plywood to masonry.
6. Masonry adhesive compatible with plywood, in cartridges, applicable as a bead.

## **PART 3      WORK**

### **1.      CARPENTRY**

1. Install components as per indicated lines, levels, and elevations. Space them uniformly.
2. Produce continuous elements from parts that are as long as possible.
3. Any convex or curved surfaces of elements supported by frame-bearing points must be at the top of the structure.
4. Unless otherwise indicated, execute carpentry work in accordance with the quality standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC).
5. Trace out and trim elements in such a way as to ensure they are a correct fit for adjacent surfaces and walls, recesses, and screeds, as well as for pipes, ducts, columns, electric appliances, electrical outlets, and any other projecting, recessed or transverse object.
6. Finish joints to conceal recessed elements.

### **2.      PLASTERBOARD INSTALLATION**

1. Install plasterboard as per plan specifications. Panels must cover surfaces in their entirety.
2. All joints must be closed tightly, and joints parallel to the deck must be properly supported.
3. Glue panels using an adhesive. Application rates must be consistent with the manufacturer's requirements. NO MECHANICAL FASTENING: the assembly must be strengthened using wood filler pieces. Provide for a temporary fastening system, if required.
4. Clean up any glue overflow or surplus prior to applying subsequent products.

### **3.      OTHER WORK**

1. Carry out all carpentry work required for completion of roof work. Refer to construction notes indicated in plans.

### **4.      TEMPORARY WORK**

1. Supply and erect all scaffolding, steps, ramps, ladders, platforms, fences, means of temporarily closing off openings with canvases or polyethylene sheets, as well as any other required work.

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**END OF SECTION**

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## **PART 1 GENERAL**

### **1. RANGE OF WORKS**

1. None-limitative list of works for this section:
  1. All labor force and all required materials for woodworking indicated on drawings and / or specified in tender.
  2. New integrated furniture.
  3. The movement of wooden doors and frames.
  4. The manufacture and installation of windows with wooden frame.
  5. Handling and installation of recovered integrated furniture.

### **2. SAMPLES**

1. Submit samples as required in Section 01 33 00E – Shop drawings, documents, and samples.

### **3. REFERENCE STANDARDS**

1. Unless stated otherwise, make cabinetmaking work as per applicable standards of Architectural Woodwork Manufacturers' Association of Canada (AWMAC) 1984.

### **4. MANUFACTURER EXPERTISE**

1. Furniture components must be made by a manufacturer, specialized in cabinetmaking, having at least five (5) years experience in this field.

### **5. SHOP DRAWINGS**

1. Submit shop drawings as prescribed in Section 01 33 00E – Shop drawings, technical data, and samples.
2. Drawings must show construction details and assembly, section, fastening devices and other related details.
3. Drawings must indicate all materials, finish, thickness, and hardware pieces.
4. Drawings must indicate conditions of particular and typical installation, all connections, accessories, and anchorages. Also, if need be, they must show places of apparent fixation devices.

### **6. QUALITY ASSURANCE**

1. Wood marking: classification stamp from an organization recognized by the Canadian Lumber Standards Accreditation Board Regulations.
2. Plywood marking, particle board and oriented strand board (OSB) and wood-based composite panels: to relevant CSA and ANSI standards,
3. All the woodworking pieces must meet the quality standards of AWMAC (Architectural Woodwork Manufacturers Association of Canada) in their execution, their composition, their construction, and finishes
  1. The quality is "CUSTOM" GRADE.

2. The Ministerial representative reserve the right to refuse all pieces of cabinetry furniture delivered to the worksite that does not meet the minimal standards described in standard (finishes, wide of the material joints, scratches, chip, defect, etc.)

## 7. DELIVERY, STORAGE, AND HANDLING OF MATERIALS

1. Protect prefabricated works against humidity during and after delivery.
2. Store prefabricated works in well ventilated rooms. Protect them against extreme variation of temperature and humidity.

## 8. WARRANTY

1. **Fabrication warranty:** The manufacturer of the products must certify in writing that the products have been designed, calculated and manufactured with regard to the regulation, standards and codes in force and must certify in writing that the products are guaranteed (materials & workmanship), against any defect, for a period of 5 years from the date of the certificate of substantial completion of the work, issued by the architect.
2. **Installation warranty:** Installers of products must certify in writing that the job done in the working site are guaranteed (materials & workmanship), against any defect, for a period of 5 years from the date of the certificate of substantial completion of the work, issued by the architect.
3. The corrections done on products and/or on jobs within the period of warranty will be submitted to approbation of the architect and will have the same warranty
4. Incorporate the signed warranty certificates (originals) into the end of project manual.

## PART 2 PRODUCTS

### 1. TIMBER

1. All wood for cabinets must have the 'Select' grade.
2. Soft wood: as per ACNOR 0141-1970 standards and requirements of National Lumber Grades Authority, maximal humidity percentage of 9%.
  1. Pieces that must be hidden or covered with stratified plastic: Use white pine or American Linden, category n° 1.
3. Hard wood: as per requirements of NHLA (National Hardwood Lumber Association). Maximal humidity percentage of 7%. Essence: hard maple, first quality.

### 2. PANELS

1. Hard wood plywood, as per ACNOR 0115-M-1987 standard, maple essence.
2. Poplar plywood: As per CSA 0153 standard, classification "construction", category "standard".
3. Presswood particleboard: As per ANSI A208.1 standards, FSC certified wood.
4. Solid surface: homogeneous and non-porous sold surface material, made of natural minerals and high-performance acrylic resin.

1. Compliant to standards of ANSI Z124.3 or ANSI Z124.6 not containing any defects or irregularity exceeding 0,25mm. Material must permit sanding and polishing the surfaces for reparation and maintenance.
2. Dimensions: panels of at less 765 x 3683 mm
3. Thickness: 13mm unless otherwise stated.
4. Finishes and profil: refer indication on drawings
5. Colors: to be chosen by Ministerial Representative

### 3. FREESTANDING LAMINATED

1. According to ANSI/NEMA LD3 AND SEFA 8 standards, solid core composite phenolic panels, homogeneous decorative, resistant to solvents, most cleaning products, self-supporting, decorative single-sided, under-sided sanded
  1. Quality freestanding (SS/QA) for postform structure (PF/QP) and flame retardant (FR/QI)
  2. Thickness: 19 mm, unless otherwise stated
  3. Color: layers of uniform colors.
  4. Decorative face: refer to indication on drawingFinish: refer to indication on drawing.

### 4. HEAVY TIMBER

1. Hard maple, quality for varnish.

### 5. PLASTIC LAMINATE

1. Flat surfaces laminate: As per NEMA LD3 standards, HGS category, 1.2mm thick; color and pattern according to architect's choice.
2. Compensation sheet: BKH quality, at least 1.2mm thick or same thickness as surface sheet.
3. Edgebanding: use same plastic laminate as the one on surface. Visible edges to be uniformly chamfered; 20 degrees. Do not miter cut edges of plastic laminate.

### 6. THERMOFUSED MELAMINE

1. Thermofused melamine: As per ANSI A208.1 standards, M-2 category, with minimum density of 635kg/m<sup>3</sup>, FSC certified. Color and finish according to Departmental Representative choice in manufacturer's standard chart.

### 7. LAMINATE ADHESIVE

1. Urea formaldehyde adhesive as per CSA 0112.5 standards, contact adhesive as per CAN/CGSB-71.20 standards, resorcinol adhesive as per CSA 0112.7 standards, polyvinyl adhesive as per CSA 0112.4 standards, 2 components thermosetting epoxy adhesive, according to plastic laminate manufacturer's indications or recommendations.
2. Medium upholstery foam: flexible high resilience polyurethane foam

1. Compliant to standard ASSTM D 3574 and UL900
2. Fire-retardant, mildew-proof, anti-microbial.
3. Density (weight): 2.5 – 2.7lbs/pi3
4. Firmness level (resistance) compliant to standard ASTM D 3574: 32-38 lbs/50 po2
5. Application: interior
6. Product references:
  1. **Velva 35** form **Domfoam inc.**
  2. **HD36-HQ** from **Foam factory**
3. Extra-firm upholstery foam: flexible high resilience polyurethane foam.
  1. Compliant to standards ASTM D 3574 and UL9200
  2. Fire-retardant, mildew-proof, anti-microbial.
  3. Density (weight): 2.5 – 2.7lbs/pi3
  4. Firmness level (resistance) compliant to standard ASTM D 3574: 50-60 lbs/50po2
  5. Application : interior
  6. Products reference:
    1. **Velva 60** from **Domfoam inc**
    2. **Lux-QC** from **Foam Factory**

#### 8. PVC STRIPES FINISH

1. Edge banding 1.5 mm thick, with rounded edges on four edges, width, to suit use, color to be chosen by architect, to match color of adjacent surface.

#### 9. ACCESSORIES

1. Screws and washers: stainless steel for fixing decorative panels to ceiling.
2. Glues and adhesives: as per standards of manufacturer and appropriate for the work.
3. Sealing product: see section 07 92 00E.

#### 10. FINISHING HARDWARE

1. For all wooden door hardware, see section 08 71 00E.
2. Furniture finishing hardware: see drawings.
3. Hardware items not necessarily identified on the drawings, unless specifically and more restrictively indicated in the documents:
  1. Door hinge:
    1. **CLIP TopBLUMOTION 110 (71B358180)** from **Richelieu**
    2. **Sensys 8645i** from **Hettich**
    3. **Grass tiomos 110 (PEN-GT110CG)** from **Rocheleau**



2. Drawer slides:
  1. **828550** de **Richelieu**
  2. **Quadro V6 (9136006)** from **Hettich**
  3. **Dynapro 700 (COU-DYN-TMSC-50-700)** from **Rocheleau**
3. Racks and supports for cabinet shelves:
  1. **Serie 2552G (racks) and CP2562G support** from **Richelieu**
  2. **0052116 (racks) and 0052117 (support)** from **Hettich**
  3. **CRE-8ZC (racks) and SUP-C1428** de **Rocheleau**
4. Bumpers:
  1. Product reference: **MP59042011** distributed by **Richelieu** or approved equivalent
  2. Install 2 units minimum per doors per drawer.
5. Concealed levelers: plastic threaded rod-levelers with push-in nut:
  1. Product reference: **BP53961190** from **Richelieu** or approved equivalent.
6. Levelers for cabinets: plastic levelers with adjustment capacity of 25 mm.
  1. Product reference **4511090** from **Richelieu** or approved equivalent
4. Specific hardware items: location identified on drawings, A700 serie, on specific hardware legend:
  1. Handle 330mm: **BP57613170**, width 330mm stainless steel
  2. Power outlet:
    1. **MP15252P2O030** distributed by **Richelieu**, color white
    2. **3213030** distributed by **Richelieu** white color
  3. Parallel opening system: **Aventos HK** opening system distributed by **Richelieu**.
  4. Counter support: **9910152190** distributed by **Richelieu**, color black
  5. Bended stainless steel L profile: stainless steel 16 ga, 38 x 38mm, grade 304 finish no 4 (brushed)

## 11. ROUGH HARDWARE

1. Screws for wood: as per ACNOR B35.4-1972 standard; steel, flat heads, appropriate dimension for the work.
2. Parker screw: as per ACNOR B35.1-1962 standard, Carbone steel.
3. Nails and fasteners: as per ACNOR B111-1974 standard.
4. Long screw with ring attachment and tongues as recommended by maker.

## 12. OTHER ELEMENTS

1. For all required hardware or accessories which have no referenced model, submit product which fits intended use according to documents. Quality must be equal to specified models in this division.

### 13. BUILD IN SHOP

1. Make furniture and any other component foreseen for this section, according to details in drawings and in approved shop drawings.
2. Materials to be used and thickness are indicated on drawings. All specified materials are to be incorporated in the works by contractor of this section.
3. Get required dimensions before making components that will be incorporated into appliance or pieces of equipment and other materials.
4. Make sure that colors and motifs of continuous works are the same on the entire surface and that they are in conformity with existing finishes.
5. Make necessary cuts to added pieces, gates, electrical appliances or others, outlet boxes or other built-in objects.
6. Install hardware and accessory pieces as per manufacturer's instructions, using appropriate templates.
7. Install, in shop, all built-in hardware or pieces integrated into the system.
8. Unless stated otherwise, cupboards shelves must be adjustable.
9. When components to be delivered to the site are assembled in shop, consider handling difficulties of the works and free space of building openings.
10. Prepare works ready to receive added specific pieces, specified in other sections, as indicated.

### 14. WOOD ELEMENTS FINISHING

1. New wooden doors and frames finishing must be done in workshop, according to hereunder instructions:
  1. Two (2) layers of wood stain and four (4) layers of lacquer.

### 15. SEAT

1. Glue different foams using a compatible glue according to the manufacture recommendations
2. Unless otherwise stated on drawing, the visible edges of the upholstery foam must be cut with a constant finished radius of 20mm.
3. The junction of the different faces of the upholstered part must be formed from concealed single flat seam (on the reverse side) with thread of the same color as the fabric.
4. The seat and the back are in two separate pieces.
5. The upholsterer is free to propose his assembly methods by providing work sample.
6. Padded seat: unless otherwise indicated on drawings, seats are made of 16 mm plywood, a bottom layer of 102mm extra-firm foam padding and a top medium foam padding of 25mm
7. Padded back: unless otherwise indicated on drawings, back seat made of 16mm plywood, a bottom layer of 102 mm extra-firm foam padding and a top medium foam padding of 25mm, provide an angle of 100° between the back and seat.

### 16. CABINET

1. Unless otherwise specified and more restrictive in the documents, manufacture the cabinets in accordance with the following requirements, The expression "cabinet" used in the documents includes "cabinet" and "counter"

2. Furring strips, spacers, nailing, strips, nailing strips, subframes and bearing parts.
  1. Elements with S2S finish are acceptable for concealed work.
  2. Boards: "standard" category or higher.
  3. Sawn timber: "light carpentry" classification "standard" category or higher
3. Frame elements: cherry wood species superior category "custom grade" according to the NHLA
4. Hidden cabinet panels (boxes: ends, dividers, top, bottom, divider panels)
  1. 16mm thick melamine panels,
  2. Faces and edges finished in plastic laminate.
  3. Hardware: with 4 full height rack and 8 shelf support
5. Open cabinets shelves:
  1. Melamine panels, 16mm thick,
  2. Front and back sides finished in plastic laminate
  3. All edges finished with PVC
  4. Hardware: 4 full height racks and 4 shelf support for each shelf shown in the drawings
6. Closed cabinet shelves:
  1. Melamine panels. 16mm thick
  2. Faces and edges finished in plastic laminate.
  3. Hardware: 4 full height racks and 4 shelf supports for each shelf shown in the drawing
  4. Groove th panels of the box to embed th rack
7. Doors and drawer fronts:
  1. Built in 16 mm thick particle board.
  2. Front and back sides finished in plastic laminate
  3. All edges finished (with PVC)
  4. Hardware: 2 slides per drawer of 2 hinges per door; and pads.
8. Drawers:
  1. Frame and bottom in melamine panels, 16 mm thick, with all edges finished in plastic laminate.
  2. Fronts: see "doors and drawer fronts"
  3. Hardware: 2 slides per drawer and pads

## **PART 3      WORK**

### **1.      INSTALLATION**

1. Install works plumb, level, and square. Adjust to adjacent surfaces in accordance with AWMAC quality standards. Furniture must be fixed unto floor and wall.
2. Use long screw with ring attachment and tongues to make joints on top of counter. Make joints at 410 mm intervals at the most and at 76mm from edges. Joints must be tight and flush.

3. Leave enough space in areas where fixed pieces cut through panel, so any normal movement can freely come about.
4. Make necessary cuttings to added pieces, gates, electrical appliances, outlets, and other built-in objects. Round retractable angles, bevel edges and seal parts of panel's core that became naked due to cuttings.
5. Adjust all pieces of hardware to ensure soft functioning.
6. Install prefabricated pieces as per manufacturer instructions.
7. Apply thin sealant strip in joints between backsplash and adjacent wall finish, in accordance with section 07 92 00E.
8. Clean and properly protect all works foreseen in this section until final approval.

**END OF SECTION**

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## **PART 1 GENERAL**

### **1. DESCRIPTION**

1. The present section is for waterproofing and caulking products that are not prescribed in any other section. Refer to pertinent sections to learn information concerning all waterproofing and caulking products not described hereafter.

### **2. REFERENCE STANDARDS**

1. CAN/CGSB-19.13, One-component elastomeric waterproof putty with chemical polymerization.
2. CGSB19-GP-14M, One-component butyl-polyisobutylene base with solvent evaporation by polymerization
3. CAN/CGSB-19.18, one component waterproof product, silicone base with polymerization by solvent evaporation.
4. CAN/CGSB-19.24, multi-components waterproof putty with chemical polymerization.
5. Federal standards: TT-S-001543A, type "NON SAG".

### **3. QUALIFICATIONS OF APPLICATOR**

1. Sealant works must be done by contractor specializing in sealant application and having at least three (3) years of experience in this field. He must prove his competency before starting works.

### **4. SAMPLES, TECHNICAL DATA OF PRODUCTS**

1. Submit all technical data for products used as per section 01 33 00 – Submittal procedures.

### **5. WORK SAMPLES**

1. Produce required samples as prescribed in section 01 33 00 – Submittal procedures.
2. Samples must show the location, dimensions, profile, and depth of joints, including back-up joint, primary, waterproofing, and caulking product. Samples can be part of finished work.
3. Wait 24 hours before starting waterproofing work so Ministerial representative can inspect samples.

### **6. DELIVERY, HANDLING, AND STORAGE**

1. Deliver and store materials in their original containers and packaging, bearing intact seal of manufacturer. Preserve materials from water and frost. Do not place directly on ground or floor.

### **7. REQUIREMENTS RELATED TO ENVIRONMENT SAFETY**

1. Comply with requirements of information system concerning dangerous goods used at work (SIMDUT) pertaining to their use, handling, storage, and disposal of dangerous goods also to labeling and supply of signalization data recognized by Work Canada.
2. Respect recommendations from manufacturer concerning temperatures, relative humidity percentage and humidity content of support needed for application and drying of waterproofing products. Follow special directives relative to their use.
3. In building occupied by tenants, ventilate work area with adequate blowing fans and portable extraction appliances.

## **8. MANAGEMENT AND DISPOSAL OF GARBAGE**

1. Sort and recycle garbage as per regulation in force.
2. All substances corresponding to definition of toxic or dangerous goods must be placed in designated containers.
3. In view of upcoming disposal, make sure that empty containers are sealed then stored correctly, out of reach of children.
4. Dispose of surplus finishing and chemical products as per governmental, federal, provincial, and municipal regulations in force.
5. Return saturated oil or solvent cloths used during works so they are disposed of appropriately, cleaned or treated for recuperation of contaminants.
6. For accomplishment of works foreseen in this present section, use waterproofing products, adhesives, sealing, caulking, and finishing products that are the least toxic possible.
7. Close and properly seal adhesive containers and waterproofing product that are partly used. Store them at moderate temperature in a well-ventilated fireproof area.
8. After use, place containers and adhesive tubes, waterproof products in designated areas for storing dangerous goods products.

## **9. MANUFACTURER'S REPRESENTATIVE**

1. Ask for a representative of the manufacturer of waterproof product to visit site before beginning works, so he can discuss procedure with designer and contractor.

## **10. GUARANTEE**

1. All waterproof works, including products and manpower must be guaranteed against loss of waterproofing due to bad installation of product, bad preparation of substrate or bad quality of product, for a five (5) year period, starting at date of definitive approval of certificate.

## **PART 2 PART 2 - PRODUCTS**

### **1. WATERPROOF PRODUCTS**

1. Caulking and waterproofing products used must satisfy following requirements:
  1. Must be as per pertinent safety standards, industry performance and government regulation or better.
  2. Must be produced and transported so all steps of procedure, including disposition of generated garbage, as per government laws and regulations are followed. In case of installation in Canada, they must also comply with Fish and game laws and Canadian environmental protection laws.
2. Caulking and waterproofing products must not contain following components nor be produced with them: aromatic solvents, talcum fibers or asbestos, formaldehyde, halogen solvents, mercury, lead, cadmium, hexavalent chromium, barium, or derivatives, except for barium sulphate.
3. Caulking and waterproofing products must not contain more than 5% in weight (total) of volatile organic components (COV), percentage calculated from stated quantities of components used in preparation of product.
4. With goal of minimizing health risks and maximize product performance, it is important that they are accompanied with detailed instructions concerning their application methods and necessary information regarding disposal of waste.

5. Caulking products having strong odors, containing toxic chemical products, or not certified as being of type resisting to moulds must not be used in air treating appliances.
6. If it cannot be done otherwise, restrain use of toxic product to areas where emanations can be evacuated towards exterior or in areas where they can be confined in the back of air barrier, or again apply many months in advance before premises are occupied to allow evacuation of emanation for the longest period possible.
7. Product chosen to do the works of present section must present the following characteristics: produced without any component susceptible of harming ozonesphere in high atmosphere.
8. Production process must be as per regulations for analysis of life span cycle stated in ISO 14040/14041 standard (t printed in 1998) and CSA Z760-94.
9. Selected waterproofing products must be on list of approved products published by Approval Commission of Waterproof Products of ONGC (CGSB). In the case of approved waterproof products with a primary, use only primary in question with said waterproof product.

## **2. WATERPROOF PRODUCTS - GENERAL DESCRIPTION**

1. Two component waterproof putty with urethane base
  1. None sagging product, as per CAN/CGSB-19.24 standard.
  2. Color identical to existing facing (color : Aluminum).
  3. Acceptable product: Dymeric from Tremco or SONOLASTIC NP2 from SONNEBORN.
2. One component waterproof putty with urethane base.
  1. Non sagging product, as per CAN/CGSB-19.13 standard, of type 2, MCG-2-40 or meeting TT-S-001543A, type « NON SAG » standard.
  2. Color identical to existing adjacent facing (color: gray, aluminum).
  3. Acceptable products: Dymonic from Tremco SIKAFLEX 15 LM from Sika and SONOLASTIC NP 1 from SONNEBORN.

## **3. WATERPROOF PRODUCTS – LOCATIONS**

1. Make a sealant joint at junction of all different materials.

## **4. BACK-UP JOINT**

1. Vertical and horizontal joints not exposed to circulation:
  1. Closed cell, round polyethylene rod foam, compressible, exterior covered with anti-adherent film, available in many widths between 3/8" and 4". Rods will be 25% bigger than openings to be filled.
2. Horizontal joints exposed to pedestrian circulation:
  1. Loose cell polyethylene foam, high density, covered with anti-adherent film.

## **5. ANTI-ADHERENT RIBBON**

1. Polyethylene ribbon not adhering to waterproof putty, available in required widths stated on drawings.

## **6. CLEANING PRODUCTS FOR JOINTS**

1. Non-corrosive and non-messy cleaning products compatible with joints and waterproof products, recommended by product manufacturer.

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## **PART 3      WORK**

### **1.      PROTECTION OF WORKS**

1.      Protect works done by third party against dirt and contamination of all kinds.

### **2.      PREPARATION OF SURFACES**

1.      Check dimensions of joints to be made and state of materials to obtain a good adequate report width-depth regarding implementation of back-up joints and waterproofing products.
2.      Get rid of joint on surfaces and all undesirable matter, including dust, rust, oil, grease, and other foreign matter susceptible being detrimental to implementation or efficiency of works.
3.      Do not apply waterproof products on joint surfaces having been treated with filler, a hardening product, water repellent product or any other type of coating unless tests were done beforehand, and compatibility of these products is confirmed. Remove coatings already covering surfaces if need be.
4.      See that surfaces are very dry and not frozen.
5.      Apply primer on surfaces as recommended by manufacturer

### **3.      APPLICATION OF PRIMER**

1.      Before applying primer and caulking product, use masking tape on adjacent surfaces to prevent dirt marks, if need be.
2.      Apply primer on lateral surfaces of joint immediately before putting waterproofing product, as per instruction of manufacturer.

### **4.      INSTALLATION OF BACK-UP JOINT**

1.      Install an anti-solidarization ribbon in required areas, as per instruction of manufacturer.
2.      By compressing it by about 30 %, install back-up joint as per depth and profile of joint desired.

### **5.      PREPARATION OF WATERPROOF PRODUCT**

1.      Mix materials respecting rigorously instruction from manufacturer for waterproofing product.

### **6.      IMPLEMENTATION**

1.      Application of waterproof product
  1.      Implementation of waterproof product as per written instruction from manufacturer.
  2.      To make clear joints, install a masking tape on edges of surfaces to be jointed, if need be.
  3.      Apply product forming a continuous waterproof cord.
  4.      Apply waterproof product with a gun having a nozzle of proper dimension.
  5.      Feeding pressure must be strong enough to allow filling of empty spaces and to produce perfect blocking of joints.
  6.      Make joints to form a continuous waterproof cord, free from crests, folds, sagging, empty air pockets and covered dirt.
  7.      Before a skin if formed on joints, fashion apparent surfaces to give them a lightly concave profile.



8. As work progresses, remove surplus of waterproof product up to the end of it.
2. Drying
  1. Ensure drying and hardening of waterproofing products as per instructions of product manufacturer.
  2. Do not cover joints with waterproof products before they are completely dry.
3. Cleaning
  1. Clean immediately all adjacent surfaces. Leave work clean and in perfect order.
  2. As work progresses, remove surplus and smears of waterproofing product with recommended cleaning products.
  3. Remove masking tape after joints are settled.

**END OF SECTION**

## **PARTIE 1 GENERAL**

### **1. RANGE OF WORKS**

1. Supply and installation of gypsum required to work.
2. Sealing joints.

### **2. REFERENCE STANDARDS**

1. Unless stated otherwise, construct as per ACNOR A82.31 – M91 standard.

### **3. SAMPLES**

1. Submit samples as per requirements of section 01 33 00E – Submittal procedures.
2. Submit samples for angles reinforcement, out-crop, and fluted mouldings.

### **4. TECHNICAL DATA**

1. Submit technical data for each product used.

### **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.

## **PARTIE 2 PRODUCTS**

### **1. GYPSUM PANELS**

1. Throughout unless otherwise: Standard panels type X: as per ACNOR A82.27-M91 standard, regular, thickness indicated on drawings.
2. No product called "Light" will be approved.

### **2. FASTENERS AND ADHESIVES**

1. Nails, screws, and fasteners: as per ACNOR A82.31-M91 standard.
2. Adhesive for wall framing system: as per ONGC 71-GP-25M-77 standard.
3. Strip adhesive: as per manufacturer recommendation, without asbestos.
4. Adhesive for lamination of fibre glass panels.

### **3. ACCESSORIES**

1. Flushing mouldings, reinforced angles furring type: galvanized steel of commercial quality 0,5 mm thick, bare, with zinc Z275, as per ASTM A525M-86 standard, perforated wings in one piece.
2. Acoustical weatherproof mastic: as per CAN/CGSB-19.21-M87 standard.

1. Acceptable weatherproof products for the present work must be on the list of approved products given by the approval commission for weatherproof products for joints of ONGC.
3. Insulating strips: rubberized, waterproofed, cellular neoprene, 3mm thick, 12mm large with at least one face coated by a permanent self-adhesive, in appropriate length for panels.
4. Cement for joints: premixed cement, ready to use, with vinyl base without asbestos, as per ACNOR A82.31-M91 standard.
5. Kraft paper joint strips especially treated with minute perforations.
6. "U" shape galvanized steel strip: to maintain gypsum moulding in partitioning areas where there are some empty spaces.
7. Expansion joints: such as CGC no. 093.
8. Shadow finish moulding, galvanized steel, around window's perimeter and all openings.
9. Finishing moulding and pre-painted steel fold, as per the plan's details and dimensions.
10. Stone wool: AFB by Roxul.

### **PARTIE 3 WORK**

#### **1. INSTALLATION OF GYPSUM PANELS**

1. All partitions go from floor slab to the next upper one when there are no indications on drawings.
2. Do not install gypsum panels before other false frame, fasteners, shims, electrical and mechanical installations are approved.
3. Install one or two thickness of gypsum panels to the wall frame or to the furring, with screwing fasteners and wall-frame adhesive for the first thickness. Fix screws at 300mm intervals maximum.
4. Where indicated, install one thickness of gypsum panel on concrete surfaces or on concrete blocks.
5. Apply a continuous strip of 12mm in diameter of a waterproof acoustical product, around gypsum panels and structural frame and where partitions join the fixed components of the building. Seal perfectly all cuttings made around electrical boxes, pipes, and other perforations in the partitions, where the perimeter has an acoustic sealant and/or fire and smoke dampers.
6. Insert properly soundproof wool braids between frames to obtain a continuous acoustical protection and/or fire and smoke dampers. Coordinate installation of soundproof wool with installation of metallic frame for doors and frames and interior windows placed in soundproof partitions. In very thick partition, maintain wool braids with mechanical fasteners, as recommended by manufacturer and approved by Ministerial representative. Fill properly all striations of the steel bridge where soundproof partitions meet.

#### **2. ACCESSORIES**

1. Install accessories square, plumb and on level. Adjust them solidly in the chosen area. When possible, use full length pieces. Make well-adjusted joints, aligned, and solidly saddles. Miter angles and adjust perfectly, without leaving rough edges. Install components at 150mm interval. Install out-crop mouldings around the perimeter of suspended ceilings. Install out-crop mouldings at junction points of gypsum panels with surfaces having no cover joint and where indicated. Seal joints with waterproof product. Install insulating strips in a continuous matter to sides of gypsum panels and to out-crop mouldings, at their meeting position, with metallic frames of windows and exterior doors, to ensure a break in the thermal conduction. Install a moulding at junction of wall/ceiling according to indications. Reduce the number of joints to a minimum, use angle

mouldings and joint. Shadow finish moulding, galvanized steel, around window's perimeter, change materials and all openings.

### **3. RECESS JOINTS**

1. Make recess joints, around each overture, formed with prefabricated components with two out-crop mouldings installed back-to-back, down in gypsum panel, cover and fixed independently on each side of the joint.
2. Install a continuous polyethylene strip (making an anti-dust screen) in the back of the recess joint and overlap
3. Place recess joints where indicated on the drawings. In addition to indications, place receding joints in areas where there is a change in the nature of the support. Place at every 10 meters maximum, along large corridors and on all walls that are longer than 10 meters. On the ceiling, place receding joints at every 15 linear meter in all directions.
4. Make receding joints square and aligned.
5. Make receding joints at floor level inside staircases.

### **4. JOINT STRIP AND PLASTER**

1. Finish joints between panels and in recessing angles with the following products: Joint paste, joint strips and strip coating. Apply these products as recommended by the manufacturer and smooth down by thinning the work so it meets the finish of the panel surface.
2. Cover angle mouldings, recess joints and if need be, the trimmings with two (2) coats of joint paste and with one (1) coat of strip coating. Make it smooth and thin so it meets the surface finish of the panel.
3. Fill screw head holes with joint paste and strip coating until achieving a smooth uniform surface, flush with adjacent gypsum panel surface, so the holes become invisible once application of coating is finish.
4. Lightly sand the sharp edges and other imperfections. Try not to sand adjoining surfaces that have no need.
5. Once installation is done, work must be smooth, on level and plumb, with no corrugations and other defects and must be ready to receive the finish coating.

### **5. SOUNDPROOF AND FIREPROOF INTEGRITY**

1. Fit together structural elements (beams, girders, etc.) and others that are situated on top of partitions to be built up to the bypass to get the same soundproof and fireproof properties and/or fire and smoke dampers that of underlying partition.
2. Where partitions will be built up to the bypass, block all openings perfectly tight around wires, ducts, pipes, structural elements, and others. Block openings left by striation of bypass with a gypsum panel and cut according to shape of bypass. Seal each side.

**END OF SECTION**

## **PARTIE 1 GENERAL**

### **1. SECTION CONTENTS**

1. The supply and installation and metal stud framing for walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada.
2. Coordination of engineering work to fix electromechanical elements in walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada.

### **2. 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.

## **PARTIE 2 PRODUCTS**

### **1. MATERIALS**

1. None supporting framing made of framing sections, "U" shape: as per ASTM C645-83 standards; posts 32 x 92mm (1¼" x 3 5/8") and 32 x 41mm (1 ¼" x 1 ½"), hot immersion laminated and galvanized steel 0.91mm (cal 20, 0.0312") thick; posts must be made so gypsum panel can be screwed. They must have openings for pipe work and be half perforated at an interval of 460 mm (18").
2. Top plate, bottom girts and plate: as per ASTM C645-83 standard, proper width for post dimensions, same caliber as posts with 32 mm (1¼") high flange for bottom plate and 52mm (2") high flange for top plate.
3. Metallic furring, hat shaped galvanized steel gauge 20, section 22mm (7/8") thick and 68mm (2 5/8") large, if not stated otherwise on drawings.
4. Galvanized steel flexible cleat, galvanized steel section, cal 25, 12mm (½") thick x 67mm large, reference RC-1 from CGC.
5. Insulating strips: waterproof, self-adhesive on one face of acoustical rubber strip sealer, 3mm thick x 1 mm large.
6. Acoustical insulation: for metallic wall framing made of mineral fiber 75mm thick, such as ROXUL AFB from ROXUL or approved equivalent.
7. Polyefine foam extrusion with non-absorbing envelope, reference: ETAFOAM.
8. Cold rolled steel section for suspended gypsum ceiling; 38 x 19mm, 1.2mm thick, "U" shape, installed at 1200mm C/C maximum.
9. Galvanized and annealed mild steel suspension wire, 2.6mm diameter at 1200mm C/C maximum.
10. Load bearing and reinforcing elements with heavy-gauge metal studs. See plans and details for description. These elements mainly involve the posts on either side of the openings, as well as the lintels.

## **PARTIE 3 WORK**

### **1. PARTITIONS MOUNTING**

1. Install top and bottom plates on floor and ceiling, align with precision and fix them at a maximum interval of 610mm (24").

2. Install foam strip under upper, lower, and lateral plates of partitions adjacent to concrete construction.
3. Install vertical posts at interval of 406mm (16") (some at 300mm c / c, see drawings) and at 52mm (2") at the most from wall intersections and on each side of openings and angles. Fix post so they ensure rigidity of structure as per manufacturer instruction.
4. At mounting stage, maximal admissible gap is of 1:1000.
5. Fasten post to wall plates by crimping.
6. Coordinate installation of posts with installation of pipe works for various services. Install posts so openings are well aligned.
7. Coordinate installation of posts with installation of door and window frames and other supports or anchoring devices planned for required works in other sections.
8. Double up posts (on the whole height of the room) on each side of openings when width is higher than interval for posts. Assemble doubled up posts, while leaving a space of 52mm (2"); to do this, use clips or other approved anchoring device, placed besides attach stub's structure.
9. Install wall plates over door and window openings, under windowsills and lateral openings to be able to fix intermediate posts. Fix wall plates to each end of posts as per manufacturer instructions. Install post placed over and under openings, spacing being the same as for posts forming wall structure and using same method of fixation.
10. Install furring sections around openings of building and around built-in material, cupboards, and access panels. Prolong furring in reveals. Inquire about required space and clearing from material supplier.
11. Install posts or furring sections 38mm (1½") between main posts to allow anchorage of sanitary appliances, suspended to metallic partitions, such as wash basin, washroom accessories and other sanitary appliances, including supporting rod, and towel bars.
12. Leave a space under wall plates and supporting slabs so structure weight is not transmitted to the posts. Install upper winged wall plates 52mm (2"). Make a sliding joint for double wall plates as indicated.
13. Install continuous insulating plates for posts being in contact with surfaces that are not insulated.
14. For all partitions, install acoustical insulation respecting manufacturer conditions to maximize system efficiency.

## 2. SUSPENDED GYPSUM CEILING MOUNTING

1. Install ceiling's "U" shape trim at 1200mm C/C maximum by using suspension wire at 1200mm maximum, all trims must be leveled. All wire ties must make a minimum of three turns over a maximum of 76mm in height. Installation tolerance is 3mm over 3.5m. Install metal furring perpendicularly to "U" shape trim at 400mm C/C maximum. All openings for access door, lighting devices, diffusers, grids, or any other element crossing ceiling must be framed with trims and furring.

## 3. FIXING PARTITIONS, CEILINGS, AND EQUIPMENT

1. Place the frame and metal studs for walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada 2010, especially against earthquakes.
2. Coordinate the work of this section with engineering to determine the electromechanical elements in walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada 2010, especially against earthquakes.



## **PARTIE 1 GENERAL**

### **1. RANGE OF WORKS**

1. None-limitative list of works for this section:
  1. The supply and installation and metal stud framing for walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada 2010.
  2. Coordination of engineering work to fix electromechanical elements in walls and ceilings in accordance with manufacturer's instructions and in accordance with Part 4 of the National Building Code of Canada 2010.

### **2. REFERENCE STANDARDS**

1. ASTM C635-04, Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
2. ASTM C636-04, Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
3. ASTM E 580-06, standard practice for application of ceiling suspension systems for acoustical tile and lay-in panels in areas requiring seismic restraint.

### **3. CALCULATION CRITERIA**

1. Maximum flexion: deflection of 1/360 over span, determined by flexion test prescribed in ASTM C635 standards.
2. Follow the manufacturer's recommendations regarding the applicable seismic zone. (Category D of the IBC, for the purposes of submission).

### **4. TECHNICAL DATA SHEETS AND SAMPLES**

1. Data sheets and samples must be submitted according to section 01 33 00E – Submittal procedures.
2. Submit representative model of the suspension frame.
3. Each sample must show mounting and assembling details, wall anchoring, recessed equipment, interlocking method, finishing, and soundproofing elements installation.
4. Each sample must carry product number referenced in current 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.

## **PARTIE 2 PRODUCTS**

### **1. SEISMIC SUSPENSION SYSTEM, IBC CATEGORY D**

1. Seismic suspension system: **PRÉLUDE XL** by **ARMSTRONG** and seismic suspension system **RX**.
  1. Metal frame suspension superior strength, evaluated by ICC-ES (ESR-1308) according to ASTM C 636 and in accordance with ASTM E580-06 and Part 4 of the National Building Code of Canada 2010, suspended to the building structure and fixed to the walls with fasteners designed for this purpose.



2. Location and configuration of the ceiling: See drawings
  3. Integrated electromechanical equipment: See engineering drawings
  4. Dimensions and Levels: See drawings. Take and verify all dimensions and levels on site.
  5. Finish: "blizzard white", satin
2. Fabrication materials for framing elements: cold rolled steel commercial grade, galvanized.
  3. Exposed suspension grid elements with T shaped tracks, painted in the workshop, matt satin finish; matrixed.
  4. Main TEE with double web thickness surmounted by a rectangular pipe and provided, on the face side of a flange.
  5. Secondary TEE surmounted by a tube rectangular core completed in tongues, type "Quick-Release" for fixing the foolproof main tee, provided with a support base to tilting mismatch crossings.
  6. Shroud: Annealed mild steel and galvanized wires.
  7. Anchorages for shroud: As recommended by the manufacturer of the frames.
  8. Accessories: sides, attachments, wire retaining clips, clips and molding ceiling wall joints, setback, in addition to the elements of the framework of suspension in accordance with manufacturer's recommendations framing.
  9. Adjustable holding claw for fire resistant assemblies.
  10. U shape supporting profiles: of 38 x 15 mm, galvanized steel 1.3 mm thick for circumventing bypass of the ventilation elements and others.
  11. Product reference:
    1. ARMSTRONG PRELUDE XL system and RX anti-seismic suspension system.
    2. 15/16" EZ stab Classic System Heavy Duty

## 2. ACOUSTIC CEILING | PL01

1. Seismic suspension of the system
  1. Type 1
  2. Finish: "blizzard white" enamel, satin finish
2. Acoustic tiles:
  1. Armstrong CALLA model
  2. Dimensions of 610mmx 610mm x22mm, made of mineral fiber
  3. Borders: square.
  4. Finish: white (WH)

## 3. OTHER ACCESSORIES EXPOSED TEE SYSTEMS AND MOLDING POSSIBLE

1. Consult the manufacturer, validate regulatory requirements, and provide all components required to complete the work in accordance with:
2. Other possible materials: non-limiting list
  1. BERC: Beam end retaining clip joins main (IBC category C).
  2. MB: Seismic joint clip.
  3. ESR4: Expansion sleeve.

4. ABSC: Air bar spacer clip.
5. DLCC: Direct load ceiling clip.
6. DW50LT et DW58LT: Transition clip with locking tabs.
7. EHDC50, EHDC58, EHDC75: Exterior hold down clip (drywall).
8. MBAC: Main beam adapter clip (drywall).
9. DW30C, DW45C, DW60C, DW90C: Angle clip (drywall).
10. RC1, RC2: Radius clip (drywall).
11. UPC: Universal partition clip 15/16.
12. 7327CA: Adapter mesh (for change of direction).
13. UTC: up tight clip (to attach to wood joist "C" of 38mm).
14. CBS4, CBS6, CBS8, CBS10, CBS12: Channel beam splice (100 to 305mm).
15. CBS2006, CBS2008: Channel main beam splice with square edge.
16. ES4, ES49: Expansion sleeve for rails 15/16 or 9/16.
17. GCWA: Grip clip wall attachment.
18. C1430: Variable placement hook clip.
19. WS12: Hanger wire splice, gage 12.
20. 7861, 7873: Shadow molding, inside corners.
21. 7862, 7873: Shadow molding, outside corners.
22. 7863, 7865: Outside corner cover.
23. 7864, 7866: Radius bullnose corner cover.
24. 7867: Field cut corner cover.
25. LFC: Light fixture clip.
26. 414 and/or UHDC: Universal hold down clip.
27. DWC: Drywall clip.
28. CHDC: Hold down clip.
29. XTAC: Cross Tee Adapter Clip.
30. MBSC2: Spacing clip for main beam (50mm).
31. 7425, 7445: Stabilizer bar of 610mm and 1220mm length.
32. GC3W: accessory grip clip 3-way.
33. SH12: Hanger bar, of knockouts 305mm c/c.
34. Aircraft cable stainless steel dia. appropriate (if visible).
35. Compression posts robust minimum strength of 430 lbs (195 kg) and of appropriate dimensions.
36. 7800 à 7813: Other hemmed angle moldings ("L").
37. 7880 à 7898: Flexible angle molding ("L" for minimum radius of 1830mm).
38. 7841 à 7843: Slip tile molding bonded ("J").

39. 7853, 7856: "F" molding for drywall 13mm or 16mm.
40. 7823, 7871, 7873, 7874, 7875, etc.: Other hemmed shadow moldings.
41. 7814, 7816, 7818: Edge molding 100mm, 150mm or 200mm height.
42. 7830, 7831, 7834, 7835: Profile molding "C".
43. 7857, 7858: Hemmed angle molding "inverse L".
44. 435: Stabilizer clip 19mm and 25mm thick.
45. 7870: Spring border clip.
46. 440: Border clip Vector.
47. 442: Vector clip against earthquakes.
48. And others.

### **PARTIE 3 EXECUTION**

#### **1. MOUNTING**

1. **Build the backbone of the suspended ceiling according to the requirements of ASTM C636 and ASTM E580 and the National Building Code of Canada 2010; according to the strict guidelines of Armstrong on the seismic suspension system prescribed and indicated in this specification. The most restrictive conditions apply.**
2. Do not start ceiling's frame installation before Ministerial representative's verification and approval of hidden installations in ceiling gap.
3. Hangers must be fastened to upper structure of the building by using appropriate robust fixation method approved by Ministerial representative.
4. Hangers must be attached to main beam center. All wire ties are to be at least three tight turns around itself within 75mm according to ASTM C636.
5. Hangers must be installed at 1200mm C/C maximum; hangers must be installed within 200mm of main tees ends.
6. If aluminum suspension system is installed, hangers must be installed at 900mm C/C maximum to withstand average charge according to ASTM C635.
7. If fireproof suspension system is installed, hangers must be installed at 75mm maximum on both sides of expansion joint.
8. Install moldings perimeter that delineate the exact height of the ceiling.
9. Attach the "L" molding on the wall at 300mm c / c maximum and screw facing each beam (at each intersection of a T) as required by the standard.
10. Have the framework in the reflected ceiling plan.
11. On the ceiling, draw two perpendicular medial to ensure the symmetry of the system at the periphery of the room.
12. Dispose of the frame so that the width of the edge elements is not less than 50% of the standard width of the elements.
13. **Use fasteners BERCE2 at each rail on all the walls. Use LFB lateral force spacers, CT and 436 clips required. Secure compliance with the requirements of the standards and instructions Armstrong.**

14. Effectively coordinate the provision of framing with the location of other elements mounted in the ceiling.
15. Once completed, the framework must be able to withstand any additional charges, such as those lighting fixtures, diffusers, grilles, and speakers.
16. Once installed, ceiling grid must withstand all extra weight, e.g., lighting devices, diffusers, grilles, and speakers. For each lighting device and diffuser, provide extra hangers to be installed at 152mm maximum from each corner and at 610mm maximum on perimeter.
17. Cross tee must be attached to main beams to get rigid assembly.
18. Install perimeter trim around lighting devices, diffusers, and speakers' openings, as well as at ceiling level changes.
19. Finished ceiling edges must be set squared along walls and must not admit a gap greater than 1:1000.
20. Dilation joints (when applicable).
  1. All along building's dilation joints, install in parallel, at 25mm from each other, two main tee beams. Acoustical panels to be install between those trims; width should be 25% less than of space between tees.
  2. Metal Z bars must be installed between main beams on both sides of dilation joint. Bars must be trimmed to allow a 25mm gap and ensure joint occlusion. Z bars must be finished so they look the same as adjacent metal trims. Metal plate must be installed behind butt joints.

## 2. LAYING THE TILES

1. Carefully examine the ceiling plans before installing the soundproofing tiles.
2. It is forbidden to install soundproofing panels and tiles before the Departmental Representative has inspected the installations that will be concealed by the ceiling.
3. Coordinate the mounting work that of the sections for light fixtures, diffusers, loudspeakers, and sprinklers heads intended to be acoustic ceiling.
4. Install fastening clips, at the locations indicated on the plans.
5. Ensure all acoustic tiles are free from blemishes scratches, stains, discoloration, etc., and replace as required.

## 3. WOODEN SLAT CEILING

1. Wooden panels must acclimate for 72 hours before installation. Maintain relative humidity between 25% and 55% and a temperature between 10° and 30°.
2. Install the ceiling according to the manufacturer's instructions and in accordance with the requirements of the ASTM C636 standard.

## 4. MINOR JOBS AND GENERAL INSPECTION

1. Review all system connections, all joints of materials, to ensure and provide earthquake resistant construction as required and without blemish.
2. Check that the electromechanical equipment located in the ceilings are fixed to the building structure in accordance with the requirements of the standards and codes.
3. Perform minor adjustments and / or corrections necessary.

## 5. RECOVERY, ADJUSTMENT, AND RESETTLEMENT (MODIFIED EXISTING CEILINGS)

1. Level out existing acoustic ceilings, where required and indicated in the drawing:

1. Recover existing tile, store them for work.
2. Before reinstalling, sort and remove those tiles stained and damaged that cannot be reused.
3. Cut retrieved tiles according to the modified frame.
4. On recovered tiles, bevel the edges of cut tiles in place as existing. Use the appropriate tools.
5. Lay the tiles in the modified frame, such as existing. Adjust.

**6. CLEANING**

1. Scratched or damages painted surface must be touched up and cleaned.

**END OF SECTION**

## **PARTIE 1 GENERAL**

### **1. EXTENT OF WORKS**

1. Non-exhaustive list :
  1. Prepare existing surfaces affected by demolition work, as per the written recommendations of the manufacturer of the floor finish.
  2. Provide and install resilient sheet flooring for floors.
  3. Provide and install baseboards.
  4. Provide and install welded joints (when applicable).
  5. Provide and install finishing mouldings required to complete the work.

### **2. DOCUMENTS TO BE SUBMITTED**

1. Provide a copy of the manufacturer's installation instructions, as per the prescriptions of section 01 33 00E.
2. Provide a document specifying the humidity level of the concrete slab as well as the pH level, respecting the manufacturer's installation instructions.
3. **Perform the required number of tests (at each different location).**
4. Submit a cutting plan indicating the direction of rollers and the location of cuts; specify the colour(s) of the flooring and the different welding seams as per section 01 33 00E.

### **3. REFERENCE STANDARDS**

1. Conform to current, applicable standards (latest version). When submitting documents, specify the reference standard or standards and the edition year.
2. Non-exhaustive list:
  1. ACNOR / CSA and ASTM, as required.

### **4. SAMPLES TO BE SUBMITTED**

1. Submit samples as per the prescriptions of section 01 33 00E.
2. Provide two (2) resilient sheet flooring samples measuring 300 x 300mm, and two (2) samples of these accessories: decorative strips, mouldings, borders, and others measuring 300mm in length.

### **5. INSTALLATION CONDITIONS**

1. Maintain ambient air and the support surface at a temperature greater than 20°C for a period of 48 hours prior to installation, throughout installation and for 7 days after.
2. Concrete substrates must have a minimum compressive strength of 3500 lb/in<sup>2</sup> (25Mpa).
3. The concrete slab must cure for a minimum of 28 days and be dry before work begins.
4. Do not proceed with the installation of the flooring on a concrete slab whose humidity level exceeds 5 lbs/1000 sq.ft as per F-1869-98 standard. The concrete's pH must not be greater than 9.5. If necessary, contact the manufacturer's technical representative.

## 6. QUALITY CONTROL

1. A manufacturer-certified installer shall be present on site during the installation of the linoleum flooring.
2. Submit a document indicating the manufacturer's approval of the adhesive that the installer plans to use for the work included in this section.
3. Provide a document indicating the status of member in good standing of the *Fédération québécoise des revêtements de sol* (FQRS).
4. The consultant shall approve the application surface before the flooring is installed.

## 7. MAINTENANCE AND/OR REPLACEMENT MATERIALS

1. Provide the equivalent of five percent (5%) of the sheet flooring, in each colour, pattern and type necessary to maintain the current structure in good condition.
2. Replacement materials must be all of a piece and come from the same production batch as the installed materials.
3. Clearly identify each roller and each container of adhesive.

## 8. MAINTENANCE SHEETS

1. Provide instructions relating to the maintenance of resilient flooring and incorporate them into the maintenance manual specified in the general conditions. Conform to section 01 78 00E.

## 9. GUARANTEE

1. Provide a certificate of guarantee, signed, and issued in the name of the ministerial representative, stipulating all works in the current section are guarantee against any defect for a period of five (5) years starting from the date of signature of the provisional acceptance certificate. Conform to section 01 78 00E.

## **PARTIE 2 PRODUCTS**

### 1. FLEXIBLE SLAT FLOORING

1. Refer to indication on drawing

### 2. ACCESSORIES

1. **Rubber baseboard:**
  1. Rubber baseboard, 3.17mm, such as DC-63 "BURNT UMBER", 114mm in height with base, such as Johnsonite inc., maximum useful length.
2. Adhesive for flooring: see manufacturer's instructions.
3. Rubber moulding adhesive:
  1. For porous surface: 960 "Cove Base Adhesive" by Johnsonite Inc.
  2. For non-porous surface: 946 "Premium Contact Adhesive" by Johnsonite Inc.
4. Rubber transition moulding:
  1. Vinyl transition moulding such as CTAXXC by Johnsonite inc.
  2. The colour is the Ministerial consultant's choice. Submit the range of colors available from the manufacturer and 300mm long samples for final approval.

### 3. LEVELING UNDERLAYMENT AND FILLING

1. Flooring substrate filler and smoother: pre-mixed white latex requiring only water to produce a binder paste and /or two (2) component latex filler requiring no water, as recommended by the flooring manufacturer.
2. Reference product:
  1. **UntrePlan** from **Mapei** or equivalent approved

### 4. SEALANT AT THE JUNCTION OF DOOR FRAMES AND INTERIOR WINDOW

1. Of the type recommended by the manufacturer of the flooring, as to their compatibility with the material and the location.
2. Refer to **section 07 92 00** – Weatherproof products for joints for description of materials to be installed by this section.
3. Colors to match adjacent flooring, at architect's discretion.

## **PARTIE 3 WORK**

### 1. INSPECTION AND TEST BEFORE EXECUTION OF WORK

1. Using the test methods recommended by the flooring manufacturer, ensure that the concrete floor is dry and free of any trace of alkalinity, carbonization, or dust. If wood surfaces are found, advise the consultant, and wait for instructions before continuing.
2. Before beginning work, perform a picking test in a spot that is typical of the site's conditions. Install a 610mm x 610mm piece, using the fillers and adhesives prescribed for the work. Let the sample dry for 24 hours, then perform the picking test, taking care to check the adhesion of various elements. Do not undertake the work if adhesion is weak.
3. Allow 72 hours before beginning work to test the humidity level of the concrete slab as well as establish the pH level.

### 2. TREATMENT OF THE SUBFLOOR AND THE BASE OF THE WALL

1. Scratch and remove old glue. Flatten out unevenness in the subfloor and the base of the wall. Fill in cavities, cracks, joints, holes, and other defects using a repairing mortar, after the product has been approved by the manufacturer of the self-levelling cement coating.
2. Flatten out unevenness in the support as per F710 standard (3mm by 3 metres), fill in saw marks and depressions. Plug up cracks, joints, holes, and other defects using a self-levelling underlayment as per the prescriptions of the flooring manufacturer.
3. Clean the floor to be covered, apply filler with a trowel and a mortar board to obtain a surface that is uniform, hard, smooth, and flat. Do not allow foot traffic until the filler has hardened and dried.
4. Remove dust, old adhesive, paint, mud, wax, sealant, and other foreign substances from the existing surface.
5. Prime the surfaces as per the recommendations of the manufacturer of the finishing products.

### 3. INSTALLING THE FLOORING

1. Confirm the position of the grids (joints), dimension and alignments on site with the architect before starting the work.
2. To facilitate installation, store the Linoleum (marmoleum) upright at a temperature greater than 20°C for at least 48 hours.
3. Evenly apply the adhesive using the recommended trowel. Avoid spreading the adhesive over too large a surface so that it does not set before the flooring is put in. Immediately clean excess adhesive.



4. Lay down the flooring by forming joints that are parallel to the building's lines, so as to obtain a symmetrical pattern. Immediately after it is put down, roll a 150-pound roller (68KG) in both directions.
5. Cut the flooring and carefully adjust it around fixed objects.
6. In doorways, stop the flooring under the door's transverse axis if the finish and/or colour of the flooring is different in the adjacent rooms.
7. Install transition mouldings between two different materials.
8. Apply a seam of protective sealant along the perimeter of door frames and around objects. Seal as per the manufacturer's instructions and current applicable standards.
9. After laying down the linoleum (Marmoleum), wait 72 hours before moving equipment on wheels and 7 days before moving heavy equipment.
10. After laying down the linoleum (Marmoleum), wait 48 hours before cleaning and preparing as per the manufacturer's maintenance manual.

#### **4. INSTALLING BASEBOARDS AND MOULDINGS**

1. Install appropriate finishing mouldings, approved by the consultant, level and using pieces that are as long as possible. Baseboards must cover the entire perimeter of the walls and be in proper contact with the ground.
2. Coordinate the installation of transition mouldings with adjacent flooring. See plan for locations.
3. Use the adhesive recommended by the moulding manufacturer, based on the existing substrate. This product should also be approved.
4. Reinstall existing granite baseboards. See location on drawings.
5. Remove any trace of adhesive and other substances from the flooring.

#### **5. CLEANING**

1. Carefully remove excess adhesive from flooring, baseboards, and walls.
2. Wash with mild, pH-neutral soap and clean water approximately 48 hours after installation. Dry.
3. **Do not simonize, unless indicated in the specifications of the chosen product.**

#### **6. PROTECTING FINISHED SURFACES**

1. Protect new flooring from the moment the adhesive has set to the moment of provisional acceptance.
2. Do not allow foot traffic on the flooring for 48 hours following installation.

**END OF SECTION**

## **PART 1 GENERAL**

### **1. RANGE OF WORKS**

1. Substrate preparation and floor surfacing.
2. Installation of carpet tiles.
3. Supplying and installation of baseboards, mouldings and accessories.

### **2. REFERENCES**

1. American Association of Textile Chemists and Colorists (AATCC)
  1. AATCC 16, Color Fastness to Light.
  2. AATCC 23, Color Fastness to Burn Gas Fumes.
  3. AATCC 118, Oil Repellency: Hydrocarbon Resistance Test.
  4. AATCC 129, Colour Fastness to Ozone in the Atmosphere Under High Humidities.
  5. AATCC 134, Electrostatic Propensity of Carpet.
  6. AATCC 171, Carpets : Cleaning of; Hot Water Extraction Method.
  7. AATCC 174, Antimicrobial Activity Assessment of Carpets.
  8. AATCC 175, Stain Resistance: Pile Floor Coverings.
  9. AATCC 189, Fluorine Content of Carpet Fibers.
2. American Society for Testing and Materials (ASTM International)
  1. ASTM D1055, Specification for Flexible Cellular Materials – Latex Foam.
  2. ASTM D1335, Tuft Bind of Pile Floor Coverings.
  3. ASTM D1667, Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
  4. ASTM D3936 Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering.
  5. ASTM D5252, Standard Practice for the Operation of the Hexapod Drum Tester.
  6. ASTM D5417, Standard Practice for Operation of the Vettermann Drum Tester.
  7. ASTM E84, Test Method for Surface Burning Characteristics of Building Materials.
  8. ASTM E662, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
3. Office des normes générales du Canada (CGSB)
  1. CAN/CGSB-4.2 no27.6, Résistance à l'inflammation – Essai à la tablette de méthénamine des revêtements de sol textiles.
  2. CAN/CGSB-4.2 no 77.1/ISO 4919 :1978, Tapis-moquettes – Détermination de la force d'arrachement de touffes.
  3. CGSB 4-GP-36M, Thibaude type fibre.
  4. CAN/CGSB-4.129, Tapis pour utilisation commerciale.
  5. CAN/CGSB-25.20, Apprêt pour planchers.

4. Carpet and Rug Institute (CRI)
  1. CRI-104, Standard Installation of Commercial Carpet.
  2. IAQ Carpet Testing Program.
5. Association nationale des revêtements de sol (ANRS)
  1. Floor Covering Specification Manual.
6. Laboratoires des assureurs du Canada (ULC)
  1. CAN/ULC-S102, Caractéristiques de combustion superficielle des matériaux de construction et des assemblages.
  2. CAN/ULC-S102.2, Caractéristiques de combustion superficielle des revêtements de sol et des divers matériaux et assemblages.

### 3. TECHNICAL DATA SHEET AND SAMPLES

1. Submit technical data sheet as required by section 01 33 00 – Submittal procedures.
2. Technical data sheet must be submitted for each proposed repair product, adhesive and type of carpet, underlay, and protection coating.
3. Provide two (2) carpet tile samples, full size, and two (2) wall base samples, 300mm long.

### 4. GUARANTEE

1. Provide a written document signed and given in the name of the ministerial representative, guarantying carpet installation for a period of five (5) years, starting at date of provisory approval of works and prescriptions for additional general conditions.

## **PART 2 PRODUCTS**

### 1. CARPET

1. Refer to indications on drawing
2. Provide all accessories and equipment that must be an integral part of the installation.

### 2. ADHESIVE

1. Adhesive: as recommended by carpet manufacturer. In addition to standard compliance, the adhesive must be 0 VOC.

### 3. WALL BASE

1. Resilient wall base: continuous, leaning on floor covering, with site molded ends and angles as per manufacturer recommendations.
2. Rubber cove base, 100mm high, 3mm thick such as **DC-XX-4** from **Johnsonite**.
3. Color: Burnt Umber #63

#### 4. LEVELING UNDERLAYMENT AND FILLING

1. Flooring substrate filler and smoother: pre-mixed with latex requiring only water to produce a binder paste and/or two (2) component latex filler requiring water, as recommended by the flooring manufacturer.
2. Reference product: **UltraPlan** from **Mapei** or equivalent approved.

### **PART 3 WORK**

#### 1. GENERAL

1. Here under described works must be realized in sequences so demolition, surface preparation and finish installation are done in one work shift.
2. Clean floor and prepare mechanically to eliminate all contaminant, as per manufacturer's requirements.
3. Resurface and level slate with self-leveling mortar.
4. Supports must be inspected to determine required intervention to get them appropriate for carpet installation. Fill cracks that are 3mm and flatten bumps that are more than 1.5mm with an appropriate and compatible polymer patching and smoothing coating.
5. All concrete supports must be dry, hardened, and clean.
6. Install carpet tiles as per manufacturer documentation when finishing work are completed.
7. Once work is done, finish installation to ensure a smooth surface wearing, without badly concealed joints, fraying or other defects.
8. In every area to be covered, use carpet coming from one and only tint lot and ensure harmony in color, motif, and texture.

#### 2. DEMOLITION

1. Remove and dispose existing roll carpet according to general requirements. Without limitation, see section 02 41 17E and 02 42 13E.

#### 3. PREPARATION OF SURFACES

1. Prepare floor as per ONGC 4-GP-156 standard and according to manufacturer documentation.

#### 4. INSTALLATION OF CARPET

1. Install carpet tiles as per documentation of manufacturer. Adjust carpet well around architectural and mechanical works, around outlets and telephone, pieces of fixed furniture, pieces crossing floor and on edges of rooms, making it take the shape of the depression.
2. Seal with latex around all cuttings.
3. Install carpet on visitor's trap cover plates. Respect motifs and direction of velour. Direction and motifs must be approved by ministerial representative when sample is being put in place.

#### 5. INSTALLATION OF WALL BASE

1. Install wall base so there are as less joints as possible.
2. Clean substrate and prime with one adhesive layer.

3. Apply adhesive to wall base back side.
4. Carefully position the wall base on the wall surface and roll with a 3kg hand roller. Butting joints must be tight and strongly adhered.
5. Cut wall base and adjust to door frame and obstacles. Where door frames are recessed, and angles projecting, pieces must be molded as per manufacturer recommendations.
  1. Before gluing, put wall base in place to take precise measurements. Mark angles and edges.
  2. With the proper instrument, make a shallow notch on the back of the wall base to allow the wall edge to fit snugly into the notch.
  3. Heat wall base bottom lip with a heat gun (no flames) and shape material according to desired profile.
6. Inside angles, make overlap joints.

## **6. PROTECTION OF FINISHED WORKS**

1. Vacuum carpet. Cover circulation areas with protective sheets for carpets. With tape, cover joints and edges of protective sheets to keep them in place.

**END OF SECTION**

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## **PART 1      GENERAL**

### **1.      SECTION CONTENTS**

1.      Provision and installation of acoustical panels as indicated on plans.
2.      Dismantling, modification, and installation of existing signs to recover.

### **2.      REFERENCES**

1.      Comply with the applicable standards (last modification). In the submission of documents, specify the standards reference and year of revision.
2.      Non-exhaustive list:
  1.      CAN/CGSB-92.1, Sound Absorptive Prefabricated Acoustical Units.
  2.      Underwriters Laboratories of Canada (ULC); ULC Fire Resistance Manual.

### **3.      TECHNICAL DATA SHEETS AND SAMPLES**

1.      Submit technical data sheets and samples according to **section 01 30 00E**.

### **4.      IMPLEMENTATION CONDITIONS**

1.      Works releasing moisture must dry before starting labor.
2.      Before and during work, in the installation premise, maintain a constant temperature of at least 15°C and a relative humidity rate between 20% and 40%.
3.      Before the use of materials, store them in the installation premise for 48 hours.

### **5.      GUARANTEE**

1.      For new panels, supply a warranty certificate, signed, and submitted in the name of the ministerial representative, stipulating that all works of the present section are guaranteed against any defect for a period of five (5) years starting the date the final certificate of completion is signed. Comply with section 01 78 00E.
2.      For existing panels to recover, the general warranty will apply to the scope of the work and limited to making mistakes and defects.

### **6.      SKILLS OF THE MANUFACTURER/INSTALLER**

1.      The acoustical treatment contractor must have a minimum of five (5) year experience in manufacturing and installation of this type of acoustical panels and employ qualified and experienced personnel.

## **PART 2      PRODUCTS**

### **1.      ACOUSTIC BLADES**

1.      Typical panel, mineral fibers, dimensions as on plans.
  1.      Panels of the largest useful width and length x 50 mm thick.
  2.      Beveled edges 6mm.

3. ACFR type with glass wool, density of 96kg/m<sup>3</sup>.
  4. Chemically hardened edges and anchors with a penetration of 3 mm (1/8").
  5. Screen fabric 100% polyester.
  6. Jacquard weaving, 11 ounces ± 1 ounces.
  7. Flammability test: class 1 or A, ASTM E-84.
  8. Colors: one (1) color to the choice of the architect.
  9. Anchors: fixed with construction type adhesive.
2. Eligible manufacturers:
    1. **Acco panneaux acoustiques Inc.** or
    2. **Decoustics by Saint-Gobain.**

## **PART 3 EXECUTION**

### **1. INSTALLATION**

1. The contractor specializing in acoustic treatment will be responsible for accurate measurements prescribed absorbers.
2. The acoustical treatment contractor must manufacture, deliver, store, and install the acoustical panels prescribed.
3. Storage must be done once the site is dust-free.
4. The temperature of the storage room must be between 15°C et 30°C (60°F et 85°F). Relative humidity must not exceed 70%. The panels must be stored for at least 48 hours before their installation.
5. Coordinate the ceiling mounting work with lighting ducts and fixtures, diffusers, speakers, and existing sprinkler heads.
6. No panels trimmed on site.
7. Adhere panels to painted gypsum ceiling.
8. Confirm with architect the exact location of the panels before starting labor.
9. On a general basis, produce a sample for approval before proceeding.
10. Panels must be perfectly aligned with each other. Edge panels must be perfectly abutted and secured.
11. Follow the manufacturer's written recommendations for installation and finishing adjustments.
12. Personnel handling the panels must wear clean cotton gloves to avoid staining the panels.
13. Once installation completed, minor adjustments must be made to ensure that all joints are aligned. Panels must be cleaned using a vacuum with a soft brush. Avoid all solvent and alcohol products not to separate the finishing material from the fiber. Verify compatibility of cleaning products with manufacturer. Otherwise, test a non-apparent surface (back fold of the fabric) before applying the cleaning product.
14. The panels must be cleaned with a vacuum cleaner taking care to use a soft bristle brush. Avoid all solvents and alcohol so as not to separate the finishing material from fiber. Check with manufacturer for cleaning product compatibility. Otherwise, do a test on an inconspicuous surface (back folds of fabric) before applying a cleaning product.

**END OF SECTION**





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## **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. 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.
  2. 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. Colors: Refer to plan.
5. On surfaces: one (1) primer coating and three (3) finish coatings, unless told otherwise.

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## **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. 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 gypsum walls:
  1. New surfaces: Apply a coat of latex sealing primer as per ONGC 1-GP-1.119 standard such as SICO ECOSOURCE 850-130 product.
  2. Apply two (2) coats of latex paint 100% acrylic, platinum finish as per ONGC 1-GP-1.209 standard such as SICO ECOSOURCE product, series 853-620.
2. System for doors and steel frames and primed ferrous metal:
  1. If need be, touch up naked areas with an alkyd primer for metal as per ONGC 1-GP-48 standard, such as CORROSTOP from SICO 635-785.
  2. Apply three (3) coats of acrylic urethane paint, 0 COV such as Rust-Oleum S-37 Metalmax.

**END OF SECTION**

## **PART 1      GENERAL**

### **1. INCLUDED WORK**

1. Supply and install the curtain wall covers at the locations indicated on the plans and according to the written notes on plans.
2. Design and put in place the wall sconce as described in drawing 1 of sheet A403
3. Provide all equipment and accessories described in plans.

### **2. SAMPLES**

1. Submit, for the Architect's approval, a sample of each element in this section in the desired shapes and colors.

### **3. SHOP DRAWINGS**

1. Submit shop drawings in accordance with the general conditions and section 01 33 00 - Submittal procedures.
2. Drawings must show full scale, dimensions and details of all materials, finishes, anchors, and assemblies.

## **PART 2      PRODUCTS**

### **1. MATERIAL**

1. Refer to the plans for models and materials.

### **2. SNAP-IN COVERS**

1. Aluminum continuous pressure plate, compatible with the cover.
2. Fasteners: screws, bolts, nuts, fasteners, and anchors will be in stainless steel.
3. Snap-in covers will be in aluminum
  1. Dimensions: 70mm in width per 50mm in depth
  2. Clear anodized finish: Anospec 518, conforms to standard AA-M12-C22-A41, Class I (18 microns)

### **3. WALL SCONCE**

1. Opaque colored self-adhesive vinyl film, such as Avery Dennison Façade Film, color chosen by the architect.
  1. Information: see indications on the drawings
  2. Front: Swiss721 BlkCN BT
  3. Lettering height: to be validated

## **PART 3 EXECUTION**

### **1. MANUFACTURER'S INSTRUCTION**

1. Abide with the manufacturer's written requirements, recommendations, and specifications for each product, including any available technical bulletin, instructions appearing in the product catalog, those appearing on product packaging, and data sheet indications.

### **2. INSTALLATION**

1. Place the elements on a solid support, plumb, firmly secured and in perfect alignment.
2. Finish the perimeter of the elements with a light transparent silicone gasket, according to the instructions of section 07 92 00 – joint sealing

### **3. CLEANING**

1. Once installation is complete, clean site to remove accumulated dirt and debris, attributable to construction work and environment.
2. After installation is complete, clean component surfaces using the manufacturer's recommended method.

**END OF SECTION**