

BOULIANNE  
CHARPENTIER  
ARCHITECTES



PARTIAL RENOVATION OF THE BUILDING  
FOOD SERVICE, PHASE 2A, 2B AND 3  
COWANSVILLE ESTABLISHMENT

PRISON SERVICES  
COWANSVILLE ESTABLISHMENT  
400 FORDYCE ROAD  
COWANSVILLE, QUEBEC, J2K 3N7

SPECIFICATION ISSUED FOR BID  
DATE: AUGUST 2021

Arch. Project # : 20-10750  
Client Project # : 350-3552

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400, chemin Fordyce  
Cowansville, Quebec  
J2K 3N7  
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Date : August 31, 2021

Dossier numéro : 20-10750

1. Document and site review

1. The bidder studies the documents and the site to properly assess the scope of the work, and see for himself the local conditions which could affect the execution of the works contract.

2. Coordination

1. The bidder is responsible for the distribution and coordination of the work. No supplement is granted in the event of a dispute arising from the interpretation of the documents by the subcontractors, nor for the differences found between the drawings and specifications, and the codes and regulations cited in the general requirements.

3. Work schedule

1. The contractor's coordination work can begin following the signing of the contract and between the contractor and the Cowansville Institution (signing of contracts with subcontractors, coordination, measurements, shop drawings, material orders, etc.).
2. The period between the signing of the contract and the date of the start of the work allows the Contractor to gather all the documents before the site and its work, materials, subcontractors, shop drawings, measurements, schedule , etc.
3. Work phases 2A, 2B and 3 will be carried out with schedule restrictions outside the periods of use of the food service. The general contractor must take into consideration that the food service is used for its regular activities between 5:30 a.m. and 5:30 p.m. The contractor must propose a schedule taking into account the different phases of the work and the time restriction.
4. During phase 3, repair work on the floor of the "cooking zone in room 4" (including the reinstallation of cooking equipment) must be carried out within a maximum period of 2 working calendar weeks.

4. Existing services:

1. All services (water, sewer, electricity, heating, gas, ventilation, air conditioning, etc.) present in the establishment must remain available to users at their usual locations.

5. Equipment at Cowansville establishment:

1. The contractor may not use any equipment at the Cowansville establishment without an explicit request to the work manager and an explicit agreement, in particular: waste and recycling bins, elevators, elevator, fire extinguishers (except in emergencies ), mechanical equipment.

6. Presence of the contractor on the property:

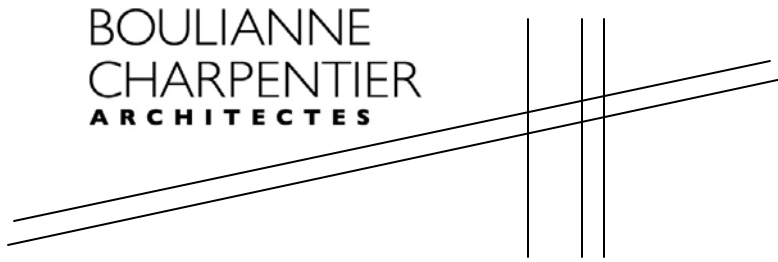
1. The Contractor must ensure daily cleaning of both interior and exterior work areas and demonstrate diligent cooperation with other occupants of the property authorized by Cowansville establishment.
2. The contractor must make the arrangements he deems necessary to carry out his work while allowing the Cowansville establishment to have its regular activities.

3. During the work period, the contractor is responsible for securing the work and preventing access to it by the dust-proof and protective installation for all work. The contractor must comply, among other things, with the document of the "Régie du bâtiment" "The occupation of a building under construction or transformation" and the requirements of the CNESST.

7. Translation of Boulianne Charpentier Architectes' documents

1. The English version of documents are translated from the French version of documents. In the event of discrepancy between the two versions, the French version of documents take precedence over the English version of documents.

END OF SECTION 00 21 00



PARTIAL RENOVATION OF THE BUILDING  
FOOD SERVICE, PHASE 2A, 2B AND 3  
COWANSVILLE ESTABLISHMENT

PRISON SERVICES  
COWANSVILLE ESTABLISHMENT  
400, CHEMIN FORDYCE  
COWANSVILLE, QUEBEC, J2K 3N7

SPECIFICATION ISSUED FOR BID  
SPECIAL CHARGES  
DATE : August 2021

Arch. Project # : 20-10750  
Client Project # : 350-3552

**TABLE OF CONTENTS OF SPECIAL CHARGES**

<b>Sections of special charges</b>	<b>Number of pages</b>
<b>Division 01 GENERAL REQUIREMENTS</b>	
01 00 01 Table of contents for special charges .....	1
01 11 00 Summary of work .....	2
01 20 00 Warranties .....	1
01 31 00 Management and Coordination .....	1
01 33 00 Submittal Procedures .....	4
01 33 00 Annexe A .....	1
01 35 43 Environmental Procedures .....	2
01 41 00 Regulatory Requirements .....	2
01 45 00 Quality Control .....	2
01 52 00 Construction Facilities .....	3
01 61 00 Common Product Requirements .....	3
01 78 00 Closeout Submittals .....	1
<b>Division 02 EXISTING CONDITIONS</b>	
02 41 00 Demolition .....	3
<b>Division 05 METALS</b>	
05 50 00 Metal Fabrication .....	5
<b>Division 07 THERMAL INSULATION AND WATERPROOFING</b>	
07 92 00 Joints Sealants .....	7
<b>Division 08 OPENINGS, CLOSURES, DOORS AND WINDOWS</b>	
08 11 00 Metal Doors and Frames .....	7
08 71 00 Door Hardware .....	5
08 80 00 Glazing .....	4
<b>Division 09 FINISHING COATINGS AND MATERIALS</b>	
09 30 13 Ceramic Tiling .....	9
09 67 00 Fluid-Applied Flooring .....	5
09 91 00 Painting .....	3

1. Brief, non-exhaustive description of the project work
  - .1 The work covered by this contract includes interior work and other items mentioned in the plans, specifications and architectural drawings. The work cited as well as all related work cited or not and required, including all connection and reconnection work, with respect to the contractual documents are also included.
2. Related sections
  - .1 Drawings and specifications in Architecture: Boulianne Charpentier Architectes.
3. Type of contract
  - .1 The work must be the subject of a fixed price contract.
  - .2 The relationships and responsibilities between the Contractor and the subcontractors designated by the Employer must be in accordance with the conditions of the contract.
4. Work order
  - .1 Execute the work in such a way as to inconvenience the Owner and the users as little as possible.
  - .2 Coordinate the work progress schedule and the occupancy of the premises by the Employer during the construction work.
  - .3 Maintain access for fire fighting purposes; also maintain the means of fire fighting.
  - .4 Work is carried out in phases with time restrictions. The contractor remains solely responsible for the coordination and scheduling of the work and the project schedule.
5. Use of the premises by the Contractor
  1. The use of the premises by the Contractor is restricted to the areas necessary for the execution of the work and access, in order to allow:
    - .1 the occupation of the premises by the Contracting Authority;
    - .2 execution of work by other Contractors;
    - .3 use of premises by the public.
  2. Never prevent the proper functioning of the building area and exits including those included in the work.
  3. Coordinate the use of the premises according to the directives of the Owner and his professionals.
  4. Assume full responsibility for the protection and custody of the products necessary for the execution of this contract.
  5. If necessary, find additional work or storage areas required to perform work under this contract and pay the cost.

6. Observe Owner's instructions regarding signs and announcements.
7. Maintain order and discipline at all times on site.
6. Use of the premises by the Contracting Authority
  - .1 The users occupy the premises for the duration of the construction work and continue their normal activities during this period. Students, staff and visitors will be present during the entire construction period except during school holidays when staff will be reduced. Children and adult staff will be present in the building and in the school grounds during school holidays for day camps.
  - .2 The Contractor must work very closely with the Employer in establishing a work schedule so as to reduce conflicts and facilitate the latter's use of the premises as quickly as possible.
7. Continuity work
  - .1 The Contractor must coordinate the work of its employees and subcontractors in order to ensure continuity of the work and thus ensure that the work inconveniences users for as short a time as possible. The work must be carried out continuously without any interruption from the start of the site until the provisional acceptance. The continuous presence of the foreman is required at all times on the site, until the end of the work.

END OF SECTION 01 11 00



## 1. GENERAL

### 1.1 Scope of this section

- .1 These requirements apply to all disciplines. The most restrictive requirements must be met.

### 1.2 Reference

- .1 The Contractor has the duty to honor the articles relating to the contract, civil liability and any other article related to the work of this section stipulated in the Civil Code of Quebec, "Book 5 of obligations".

### 1.3 Generals

1. The Contractor is responsible for supporting the related work relating to the guaranteed work for each of the specialized contractors for the entire duration of the said guarantee:  
Any defects detected during the work or during the prescribed warranty period must be corrected to the satisfaction of the customer and / or his professional at the expense of the General Contractor.
2. Any repair or replacement, as well as any damage done to the work of other trades by faulty work in this section during the warranty period, will be taken back at the expense of the General Contractor and the subcontractors concerned.
3. The Contractor must keep the guarantees for delivery in the operation manuals requested at the end of the work.
4. Unless otherwise indicated, all warranty periods requested in the contractual documents are effective from the date of issue of the Receipt Certificate with reservation. The body of the guarantee text must in particular state:
  - .1 length of warranty periods for materials and labor;
  - .2 the effective date of these periods, ie the date of issue of the Certificate of Substantial Completion;
  - .3 the name of the Owner;
  - .4 the address of the building concerned;
  - .5 that the work is carried out according to the standards in force and according to the manufacturer's instructions.

END OF SECTION 01 20 00

1. Project coordination

- .1 Before undertaking the work described in a section, the general contractor must ensure that the condition of the site and the parts of the work receiving the products provided for in this section (including dimensions and templates) are satisfactory.
- .2 The general contractor must bring in writing to the Client and professionals any errors likely to affect the quality of the work.
- .3 The commencement of work by the general contractor described in one section signifies acceptance of the preliminary work described in other sections and responsibility for their correction if necessary.
- .4 Similarly, deficiencies in the work of other sections cannot be used as a justification for deficiencies in the work of each section.

2. Kick-off meeting

- .1 Within fifteen (15) days following the award of the contract, the general contractor must convene all his subcontractors to the contract to a meeting to define the responsibilities of each, to discuss plans and specifications, administrative procedures and to iron out any difficulties. The general contractor must ensure that all his subcontractors attend this meeting.

3. Periodic site meetings

- .1 The Client in collaboration with his professionals will schedule site meetings as needed, during the execution of the work and will write the minutes.

4. Required documents

- .1 Keep on site a copy of each of the following documents:
  - .1 contractual drawings issued for construction and additional drawings;
  - .2 quotes issued for construction;
  - .3 addenda;
  - .4 revised shop drawings;
  - .5 change orders and authorizations;
  - .6 reports of other contract modifications;
  - .7 field test reports;
  - .8 up-to-date work schedule;
  - .9 product installation and implementation instructions provided by manufacturers.

END OF SECTION 01 31 00

1. Work schedule

- .1 The Contractor provides a detailed reference schedule describing each activity. An activity must be performed by a single stakeholder and must be able to be performed continuously by the same stakeholder.
- .2 This schedule must be provided no later than fifteen (15) days after signing the contract and the contractor ensures that the work progresses according to this schedule. The schedule is in line with the planned completion times.
- .3 The Contractor must submit to Professionals an update of the schedule at least every month.
- .4 When modifications are required, the Contractor must provide the Professionals with a revised schedule (update or modification) within these intervals.
- .5 During reviews, highlight data that has changed since the last schedule review, including:
  - .1 significant changes in the scope of work;
  - .2 activities that have changed since the last revision of the schedule;
  - .3 revised projections for the progress of the work and their date of completion;
  - .4 other modifications that may be recorded.
- .6 Prepare a written report outlining the following:
  - .1 problems identified, anticipated delays and the impact of these factors on the schedule;
  - .2 recommended corrective actions and their implications;
  - .3 the impact of these changes on the schedules of other contractors.

2. Shop drawings and Samples

- .1 Within a reasonable time and in a predetermined order so as not to delay the execution of the work, submit the documents and samples required for the approval of professionals. Delay in this regard cannot be a sufficient reason for obtaining an extension of the time limit for completion of the works and no such request will be accepted.
- .2 Work for which documents and samples are required to be deposited must not be undertaken before the verification of all the submitted parts is completely completed.
- .3 Examine documents and samples before giving them to professionals. By this prior verification, the Contractor confirms that the requirements applicable to the work have been determined and verified, and that each of the documents and samples submitted has been examined and found to comply with the requirements of the work and of the contractual documents.

The General Contractor also confirms that these shop drawings are compatible and have been coordinated with the other trades.

- .4 When works or elements are connected or connected to other works or to other elements, indicate on the drawings that there has been coordination of requirements, regardless of the section under which the works or adjacent elements will be supplied and installed.
- .5 Ensure the accuracy of measurements taken on site in relation to adjacent structures affected by the work.
- .6 The shop drawings must indicate the characteristics of the materials, the dimensions and thicknesses of the components, the manufacturing, assembly and installation details. In addition, these shop drawings must be accompanied by samples and technical documentation required by the professional concerned.
- .7 The professional may, at his discretion, require other shop drawings or samples than those required in the estimate.
- .8 The shop drawings concerning the structural elements must be signed by a Structural Engineer, recognized in the province of Quebec.
- .9 Where applicable, clearly indicate each deviation from the contractual drawings and specifications and explain the reasons.
- .10 If necessary, make the modifications required by the professional to the shop drawings to make them compatible with the working drawings and specifications. Changes made to shop drawings by professionals are not intended to change the contract price. If this is the case, however, notify the professionals in writing before starting the work.
- .11 The sole purpose of the professional review is to ascertain that the information indicated therein conforms to the general concept of the project. This review does not relieve the General Contractor of its responsibility for errors or omissions contained in the shop drawings or of its obligation to meet all the requirements of the contract documents. In addition, the annotations made by the professional on the shop drawings are not exhaustive.  
  
In the event that an element differs during the examination of documents and samples, if the discrepancy is noted after examination of the documents, the plans and specifications shall prevail over the documents and samples submitted.
- .12 Each document submitted is reviewed for a maximum of two (2) times. After the 2nd commented examination, the Contractor is required to carry out the work in accordance with the contractual documents and the documents submitted for commented examination.
- .13 The documents submitted must be accompanied by a presentation sheet for shop drawings, technical data sheets and samples, containing the following information:
  - .1 date of presentation or revision;
  - .2 the name and number of the project;
  - .3 the name and address of the Contractor;
  - .4 the name and address of the subcontractor;
  - .5 the designation of each drawing, technical sheet and sample as well as the number submitted;

- .6 the General Contractor's stamp, signed by the latter's authorized representative, certifying that the documents submitted are approved, that the measures taken on site have been verified and that the assembly conforms to the requirements of the contractual documents.
- .7 any other relevant data.
- .14 Shop drawings may be presented in adequate format and high enough resolution to be easily readable. They will be returned annotated in electronic form.
- .15 List of technical data sheets, shop drawings or sample required: see Annex to this section for architectural documents and contractual documents from other professionals.
- .16 Special feature for samples.
  - .1 Submit two (2) product samples for verification, according to specifications in technical sections.
  - .2 Stamp, sign, date and identify documents and samples related to the project.
  - .3 Ship samples prepaid to the Professional's business office.
  - .4 The examined and approved samples will become reference standards from which the quality of materials and the quality of workmanship of finished and installed works will be evaluated.
  - .5 According to the requests formulated in the following list, the choices of color and / or textures and / or finishes, etc., will be made on samples from complete ranges. However, from this list, choices have already been made and are part of the sections of the estimate. To this end, the samples provided to the Professional will be provided according to the requirements and choices made in these sections of this specification.
- 3. Work samples
  - .1 Perform the required work samples in accordance with the prescriptions of the section 01 45 00 – Quality control.
- 4. Coordination drawings
  - .1 Provide the information requested by the client and his professionals for the preparation of the coordination drawings.
  - .2 Review and approve revised drawings before submitting them to the Owner and his professionals.
- 5. Surplus for maintenance
  - .1 The quantity of additional materials required in this section will be established according to the specification sections concerned.
  - .2 Surpluses will be stored at the location indicated by the Client.

6. Plans as built

- .1 As the work progresses, the General Contractor must update his drawings by recording all changes compared to the contract drawings, accurately reflecting the work performed.
- .2 The Contractor must report all these changes, in a clean and legible manner.
- .3 If the professional considers that these drawings are inaccurate, after giving one week's notice to the General Contractor, require the latter to make the necessary corrections at the latter's expense.

7. Maintenance and operation manual

- .1 The General Contractor must gather and bind in two (2) PDF manuals on USB key the following elements, grouping them according to the categories of work and in the same order as the sections of the estimate, in French language.
  - .1 List of finished suppliers and all installed equipment.
  - .2 Instructions on maintenance of finishes.
  - .3 Instructions on the maintenance and operation of all installed equipment: plumbing, heating, ventilation, electrical or other devices. (Operation of technical installations, frequency of cleaning, lubrication, adjustment and checking of elements and systems).
  - .4 Warranties accompanying finishes and installed equipment as well as all other required warranties.

END OF SECTION 01 33 00

## ANNEXE A

**Projet:** Partial renovation of the buiding, food service phase 2A, 2B and 3

**Contractor no. :**

**Architecte no.:**

20-10750

No section	Nom de la section	Specs	Draw	Sample
<b>05 50 00</b>	Metal fabrication (F-D-E)		<b>X</b>	
<b>07 92 00</b>	Joint sealants (F-D-E)	<b>X</b>		
<b>08 11 00</b>	Metal doors and frames (F-D-E)	<b>x</b>	<b>x</b>	
<b>08 71 00</b>	Door hardware (F-D-E)	<b>X</b>	<b>X</b>	
<b>08 80 00</b>	Glazing	<b>X</b>		
<b>09 30 13</b>	Ceramic tiling (F-D-E)	<b>X</b>		<b>X</b>
<b>09 67 00</b>	Fluid-Applied flooring (F-D-E)	<b>X</b>		
<b>09 91 00</b>	Painting (F-D-E)	<b>X</b>		

## 1. GENERAL

### 1.1 Scope of this section

- .1 These requirements apply to all disciplines. The most restrictive requirements must be met.

### 1.2 Related works

- .1 Not applicable.

### 1.3 Reference standards

- .1 Not applicable.

### 1.4 Quality assurance

- .1 Not applicable.

### 1.5 Implementation conditions

#### .1 Waste disposal

- .1 It is forbidden to bury waste materials on the site.

- .2 It is forbidden to evacuate waste materials or volatile materials such as mineral spirits and thinners for oil or paint, by dumping them on the ground, in waterways, storm sewers or sewers sanitary facilities.

#### .3 Drainage

- .1 Provide temporary drainage and pumping necessary to keep excavations and site dry.
- .2 It is forbidden to pump water containing particles of suspended materials into waterways, sewer systems or drainage systems.
- .3 Control the evacuation of water containing particles of suspended materials or any other deleterious substance in accordance with the requirements of local authorities.

#### .4 Pollution prevention

- .1 Maintain temporary installations intended to prevent erosion and pollution and put in place under this contract.
- .2 Ensure control of gases given off by equipment and installations, in accordance with local authority requirements.
- .3 Construct temporary shelters to prevent sanding materials and other foreign matter from contaminating the air beyond the application area.
- .4 Water dry materials and cover waste to prevent wind blowing dust or dragging debris. Remove dust from temporary roads.

### 1.6 Approvals

- .1 Not applicable.

### 1.7 Delivery, storage and handling

- .1 Not applicable.



1.8 Warranties

- .1 Not applicable.

END OF SECTION 01 35 43

## 1. GENERAL

### 1.1 Scope of this section.

- .1 These requirements apply to all disciplines. The most restrictive requirements must be met.

### 1.2 Related works

- .1 Not applicable.

### 1.3 Reference standards

- .1 Work must be carried out in accordance with the requirements of the National Building Code - Canada 2010 (amended) and other relevant provincial or local codes. In the event of any discrepancy between the requirements of the various documents, the more stringent ones prevail.
- .2 The work must meet or exceed the requirements of the documents mentioned below:
  - .1 Contract documents.
  - .2 Standards, codes and other prescribed reference documents.
- .3 The year of modification of each standard is noted indicatively only. Comply with the applicable standards in force (last modification). In the submission of shop drawings or other documents, specify the referenced standards and the year of revision thereof, document that the manufacturer has considered.

### 1.4 Quality assurance

- .1 Not applicable.

### 1.5 Implementation conditions

- .1 Discovery of hazardous materials
  - .1 Work in the presence of materials that are dangerous or harmful to health or the environment.
    - .1 The demolition or construction of works may present dangers to health or the environment. If materials having the appearance of materials that may be dangerous or harmful to health or the environment are discovered during demolition work, immediately stop the work and notify the Owner and his professionals. All the work must be carried out in accordance with all the regulatory requirements in force as well as the requirements of the CNESST and the documents issued for this project by the occupational hygiene professional.

### 1.6 CNESST and CCQ:

- .1 The contractor must have an active employer file with the CNESST and the CCQ.

### 1.7 Delivery, storage and handling

- .1 Not applicable.

1.8 Warranties

- .1 Not applicable.

END OF SECTION 01 41 00

1. Presence of the superintendent

- .1 At no time will it be accepted that the Contractor's workers or a subcontractor perform work without the presence of the Superintendent.

2. Inspection

- .1 The Owner and his professionals must have access to the works. If part of the work or structures is carried out outside the site, access to this place must also be ensured for the duration of this work.
- .2 In the event that works must be subject to inspections, approvals or special tests ordered by the Owner and his professionals or required under local regulations for the site, make a request in a reasonable time.
- .3 If the General Contractor has covered or allowed to cover a work before it has been submitted to inspections, approvals or special tests required by professionals, he must discover the work in question, see carrying out the inspections or tests required to the satisfaction of the competent authorities, then returning the work to its original condition at no additional cost.
- .4 The Client and his professionals may order the inspection of any part of the structure whose compliance with the contractual documents is in doubt. If, after examination, the work in question is declared not to comply with the requirements of the contractual documents, the General Contractor must take the necessary measures to bring the work into conformity with the specified requirements, and assume the costs of inspection and repair.

3. Independent testing and inspection bodies

- .1 The Owner and his professionals will be responsible for retaining the services of independent testing and inspection organizations. The cost of these services is borne by the Client.
- .2 Provide the material required by the designated organizations for the performance of tests and inspections.
- .3 The use of testing and inspection organizations in no way releases the General Contractor from his responsibility for carrying out the work in accordance with the requirements of the contract documents.
- .4 If defects are found during the tests and / or inspections, the designated organization will require a more in-depth inspection and / or additional tests to define with precision the nature and the importance of these defects. The General Contractor must correct the defects and imperfections according to the directives of the Owner and his professionals, at no additional cost to the Owner and his professionals, and assume the cost of tests and inspections which must be made after these corrections.

4. Test procedure

- .1 Notify the appropriate organization in advance, as well as the Owner and his professionals, when testing is required so that all parties involved can be present.
- .2 Submit the samples, equipment and materials required for testing according to the needs of the project and according to the specifications in the specifications documents, within a reasonable time and in a predetermined order so as not to delay the execution of the work.
- .3 Provide the labor and facilities necessary to collect and handle samples and materials on site. Also plan for the space required for the storage and curing of the samples.

5. Test reports

- .1 Provide reports of tests and inspections to the Owner and his professionals.
- .2 Also provide these reports to the subcontractors responsible for the works inspected or tested, to the manufacturers or processors of the materials inspected or tested.

6. Samples of books

- .1 Prepare samples of work specifically required in the specifications. The requirements of this article apply to all sections of the specifications in which it is requested to provide samples of works.
- .2 Prepare work samples for approval by the Client and his professionals within a reasonable time and in a predetermined order, so as not to delay the execution of the work.
- .3 A delay in the preparation of the samples of works cannot constitute a sufficient reason to obtain an extension of the period of execution of the works and no request in this direction will be accepted.
- .4 Work samples may be part of the finished work.

END OF SECTION 01 45 00

1. Temporary installations

- .1 Provide barricades, site fences, dust or weather screens, first aid, transport and other services necessary for the execution of work according to applicable codes. The general contractor of the work must provide his own sanitary services outside the building. No sanitary installation in the building can be used.
- .2 Install all posters required for the regulations and requirements of the CNESST as well as for the safety and smooth running of the site.
- .3 Install and maintain a site shed and any barrier required for site safety.
- .4 The Contractor must provide its own waste containers. The location of the containers is approved in advance by the Master of work. All breakage caused by containers must be repaired at no cost to the Master of work. All containers must be fenced and installed at least five (5) meters from the building.
- .5 Provide and use separate clearly identified containers for recycling.
- .6 Scaffolding and lifting equipment
  - .1 Provide scaffolding, access ramps, ladders, flying scaffolds, platforms, temporary stairs, winches, cranes, etc. necessary for the execution of the work, and ensure its maintenance.
  - .2 Lifting devices must be operated by an operator with an appropriate skill card for the device, at no additional cost to the Customer.

2. Protection of the work and property

- .1 Any damage caused by work both outside and inside the perimeter of the site is repaired promptly without change in costs and time.
- .2 Avoid loading part of the structure with a weight that compromises its safety or causes permanent or excessive deformation. Do not overload or allow any part of the structure to be overloaded so as not to compromise its integrity.
- .3 At no time do not leave or store materials in corridors or exits.
- .4 Keep to a minimum the inconveniences caused by noise, dust and refuse.
- .5 Before the end of each shift and after carrying out the work described in each section, clean the premises, remove from the areas affected by this work, dust, waste, debris, equipment, and surplus materials leaving the premises in a state of cleanliness allowing the use of the premises by the users.
- .6 The Contractor, before carrying out the work, must provide for the temporary protection of all fixed furniture and fixed equipment (see architectural drawings) to be left on site in the premises affected by the work using extra strong polyethylene sealed to prevent the spread of dust in the elements present in the premises.

3. Fire protection

- .1 Provide the fire protection equipment required by the competent insurance companies and by the codes and regulations in force, and ensure their maintenance.
- .2 It is forbidden to burn waste materials and construction waste on the site.
- .3 Store toxic, dangerous or volatile materials according to CNESST and Fire Prevention Code standards.
- .4 Provide access to the site for emergency vehicles and provide sufficient clearances in this regard.

4. Parking on site

- .1 Worker parking can only be done in the Cowansville establishment parking lot. An agreement must be made with the Owner.

5. Interruption of services

- .1 All services (water, sewer, electricity, heating, gas, ventilation, air conditioning, etc.) present in the building must remain available to users.
- .2 Any temporary interruption of these services must be kept to a minimum and coordinate with the Client at least three (3) working days in advance and cannot be done without the latter's authorization.

6. Work area

- .1 Ensure work is carried out in protected areas in accordance with CNESST requirements.
- .2 All installations, storage and materials outside the building must be stored in padlocked containers provided for this purpose.

7. Delivery of materials and others

- .1 The contractor is responsible for unloading, hoisting and handling all materials and equipment required for his work, at his expense.
- .2 The contractor is responsible for the storage and protection of his materials and equipment, which must be done outside the existing building in padlocked containers provided for this purpose. The Cowansville establishment, its representatives and professionals accept no responsibility for thefts, damages and losses that the contractor may suffer in this regard.
- .3 The contractor must transport the materials required for the work. The transport of materials inside the building must be done directly in the identified work area from the outside, unless otherwise specified elsewhere in the contract documents.
- .4 The contractor may only use the site accesses identified in the architectural drawings.

8. Housekeeping during the work:

- .1 The contractor is responsible for clearing the site and the accesses used every day of its rubbish, equipment, materials and dust as the work progresses according to the permitted schedule. At no time should the premises, corridors, exits and access routes to the exit be used to store materials.
- .2 Daily cleaning
  - .1 Remove grease, dust, dirt, stains, fingerprints and other foreign material from interior exposed finished surfaces.
  - .2 Remove surplus materials, tools, equipment and construction material.
  - .3 Dust and vacuum interior surfaces of building.
  - .4 Leave premises clean and ready to be occupied, for their intended use.

END OF SECTION 01 52 00



1. Transport, handling, storage and protection

- .1 Pay the transportation costs of the products required for the execution of the work.
- .2 The products are brought and stored on site in their original packaging and containers with intact labels, and are protected from any deterioration and kept from any contact with the ground.
- .3 Any delivery and / or movement of machinery must be carried out during the periods established by the Establishment.
- .4 Products likely to be damaged by climatic elements must be stored in a weatherproof enclosure.
- .5 Place construction lumber as well as sheet and panel materials on rigid, flat supports so that they do not rest directly on the ground. Give a low slope in order to favor the flow of the condensed water.
- .6 Damaged materials are replaced without change in cost and time.

2. Choice of products and quality of work execution

- .1 Unless otherwise indicated, products incorporated into the work are new.
- .2 Unspecified products are of quality best suited to the required purposes and their use is subject to the approval of the Architect.
- .3 The implementation must be of the best possible quality, and the work must be carried out by trades workers, qualified in their respective disciplines. Notify the Client and his professionals if the work to be performed is such that it is unlikely that the expected results will be obtained.
- .4 Hire qualified people to perform the work assigned to them. The Client and its professionals reserve the right to demand the dismissal of any person deemed incompetent, negligent, or insubordinate.
- .5 Only the Client and his professionals can settle disputes concerning the quality of execution of the work and the skills of the workforce; their decision is irrevocable.

3. Ease of obtaining products

- .1 Immediately after signing the contract, become aware of the requirements for product delivery and plan for any delays. If delays in the delivery of the products are foreseeable, notify the Customer and his professionals so that measures can be taken to replace them with replacement products or to make the necessary corrections, and this, sufficiently in advance not to delay the works.

4. Equivalences

- .1 The Contractor may propose equivalents to the materials and devices mentioned in the plans and specifications, indicating in the appendix to his bid, for each of the proposed equivalents, the nature of the material or device, the name of the Manufacturer, the reason which motivates this replacement, and the cost to be added or subtracted from the total amount of

the tender as well as a comparative table clearly illustrating the differences between the product specified and the equivalent offered.

- 2 Proof of the equivalence of a product or a method to those specified in the estimate is the responsibility of the Contractor; this proof may include the transmission of a certified copy of a report from a recognized and pre-approved laboratory.
  - .3 The approval of these equivalents will be made jointly by the owner and the Architect. The equivalents proposed in the annex to the bidder will be taken into consideration for compliant bidders only.
  - .4 All the proposed equivalents must conform to the materials and devices whose trademark appears in the plans and specifications.
  - .5 If no mention of equivalence appears in the bid, then the Contractor must supply and install the materials and devices, as mentioned in the plans and specifications.
  - .6 Equivalence requests are admissible upon submission of the bidder. After this period, any substitution of a product or a method for those specified, follows the procedure of evaluation and certification of modifications to the work provided for in the general charges.
  - .7 The architect will submit his recommendations. The customer's decision is final.
5. Manufacturer's instructions
- .1 The work is carried out in accordance with the instructions of the manufacturers of the products used; accessories such as mechanical fasteners, adhesives, etc. and the cleaning mode are those recommended by them.
  - .2 If the manufacturer's instructions have not been followed, the Customer and his professionals may require, without the contractual price being increased, the removal and reinstallation of products which have been fitted or installed incorrectly.
6. Fasteners
- .1 Unless otherwise indicated, provide accessories and metal fasteners having the same textures, colors and finishes as the material to which they are fixed.
  - .2 Avoid any electrolytic action between metals or materials of a different nature.
  - .3 Unless otherwise indicated, use hot-dip galvanized steel fasteners and anchors resistant to corrosion, to secure exterior work.
  - .4 It is important to determine the spacing of the anchors taking into account the limit loads and the shear resistance in order to ensure a permanent solid anchorage. Wooden dowels or any other organic material are not accepted.
  - .5 Use as few visible fasteners as possible; Space them evenly and place them carefully.
  - .6 Fasteners which could cause chipping or cracking of the material in which they are anchored will be refused.
  - .7 Use fasteners of standard commercial shapes and dimensions, of suitable material, with a finish suitable for the intended use.

- .8 The shanks of the bolts must not protrude above the tops of the nuts by a length greater than their diameter.

7. Protection of works in progress

- .1 Provide sufficient protection for completed or ongoing works. Structures damaged or altered as a result of a lack of protection must be replaced or repaired, according to the indications of the Customer and his professionals, free of charge and without modification of the duration of the contract.

END OF SECTION 01 61 00

1. Final cleaning

- .1 When the building is almost finished or ready to be occupied, inspect the interior and exterior exposed surfaces.
- .2 Remove grease, dust, dirt, stains, labels, fingerprints and other foreign matter from exposed finished surfaces, interior and exterior.
- .3 Before final inspection, remove surplus materials, tools, equipment and construction material.
- .4 Clear technical voids and other accessible concealed spaces of debris and surplus materials.
- .5 Clean and polish glazing, mirrors, hardware, wall tiles, chrome or enamel surfaces, laminate surfaces, stainless steel or porcelain enamel elements as well as mechanical and electrical devices.
- .6 Clean and vacuum interior surfaces of building, remembering to clean behind grills, louvers, registers and screens.
- .7 Leave premises clean and ready to be occupied, for their intended use.

2. Commissioning

- .1 Before the final inspection, the Contractor must demonstrate the operation of the equipment to the owner. He must give instructions on the operation, adjustment and maintenance of the equipment, using as guides the maintenance and operation manuals provided.

END OF SECTION 01 78 00

1. **GENERAL**

.1 Works included

- .1 The supply of all labor, equipment and services required for the demolition of all the elements indicated in the plans, specifications and / or drawings or any other element necessary to carry out the work in accordance with all the applicable requirements stated in the contractual documents.
- .2 For the dismantling and connection of the plumbing, ventilation and electricity elements, refer to the Client's information and the rules of the art.
- .3 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 See engineering documents.

.3 Reference standards

- .1 All demolition work is carried out according to the directives of the authorities having jurisdiction and after having obtained and paid the permits that may be required for this work by the general contractor.

.4 Quality assurance

- .1 The Contractor must visit the site and familiarize himself with the working conditions before starting work. No modification to the contract is granted for performance difficulties which could have been anticipated following a careful examination of the premises.

.5 Conditions of implementation

.1 Protection and repair of existing works

- .1 Before demolishing any element of the building, ensure that it is not structural.
- .2 Protect existing works that must remain in place and materials that must be salvaged.
- .3 If damaged, notify Architect immediately. Make replacements or repairs to all existing structures damaged during demolition or construction.
- .4 For floor, wall or ceiling finishes, use identical materials (same type and same color) and carry out the work in the same spirit as the existing works.

.5 Safety measures

.1 Take all necessary measures to prevent any displacement or subsidence of the existing building or parts of the building. Supply and install the necessary parts for reinforcement and shoring. Repair damaged structures and assume responsibility for injuries that may result from demolition work and put in place all temporary structures.

.6 Approvals

.1 Not applicable.

.7 Delivery, storage and handling

.1 Not applicable.

.8 Warranties

.1 Not applicable.

2. **PRODUCTS**

.1 Not applicable.

3. **EXECUTION**

.1 Preparation

.1 Inspect the site and verify with the Owner and all professionals the works, accessories, furniture or equipment that must be removed and those that must remain in place.

.2 Identify and protect public and private service networks. Protect the networks that cross the site so as to keep them in working order.

.3 Notify utility companies before starting demolition work.

.2 Removal

.1 Remove the works required for the realization of the project and to promote the work.

.2 Do not disturb adjacent works which must remain in place.

.3 Recovery of products and materials

.1 Carefully remove products and recoverable materials (doors, etc.), and offer them to the Owner.

.2 Store recovered products and materials in a safe place.

- .3 Dispose of any unwanted material or equipment.
- .4 Waste disposal
  - .1 Accumulate waste and scrap in a padlocked container appropriate for the site. Clear the site of demolition waste at the end of each shift. Evacuate waste from access to exits and in exits as the work progresses and without waiting for the end of working hours in order to leave the exits free at all times.
- .5 Repair work
  - .1 At the end of each shift, restore surfaces and leave the site clean.

END OF SECTION 02 41 00

1. **GENERAL**

.1 Works included

- .1 Wall protection plate.
- .2 Tubular guard.
- .3 Protection box.
- .4 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 Section 09 91 00 - Painting.

.3 Reference standards

.1 ASTM International

- .1 ASTM A53 / A53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- .2 ASTM A269-08, Standard specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- .3 ASTM A307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

.2 CSA International

- .1 CSA G40.20 / G40.21-04 (R2009), General Requirements for Rolled and Welded Structural Steel / Structural Steels.
- .2 CAN / CSA G164-FM92 (C2003), Hot Dip Galvanizing of Irregular Shaped Articles.
- .3 CSA S16-09, Design of Steel Structures.
- .4 CSA W48-06, Filler Metals and Allied Materials for Arc Welding (prepared in collaboration with the Canadian Welding Bureau).
- .5 CSA W59-FM03 (C2008), Welded steel construction (arc welding)(metric units).
- .6 CSA A500-16, Glass railings.

.3 Green Seal Environmental Standards (GS)

- .1 GS-11-2008, 2nd Edition, Paints and Coatings.



- .2 The master Painters Institute (MPI)
  - .1 Architectural Painting Specification Manual - current edition.
- .4 Quality assurance
  - .1 The drawings must indicate, among other things, the construction details, the dimensions of the steel profiles, the anchors, the welds, the finishes and all other information required and / or related to the structural conformity of the metal works.
- .5 Conditions of implementation
  - .1 Not applicable.
- .6 Approvals
  - .1 Submit to the Architect the shop drawings following the procedure established in section 01 33 00.
  - .2 The shop drawings must indicate the materials, thicknesses, finishes, assemblies, joints, mode and number of anchors, supports, reinforcements, details and accessories
- .7 Delivery and storage
  - .1 Deliver materials and equipment to site in their original packaging, which must include a label indicating the name and address of the manufacturer.
  - .2 Store materials and equipment in a dry, clean, well-ventilated area, in accordance with manufacturer's recommendations.
  - .3 Protect them against soiling.
  - .4 Replace damaged materials and equipment with new materials and equipment.
- .8 Warranty
  - .1 Manufacturer's standard warranty or others
    - .1 At the end of the work, the Contractor must give the Owner the warranty in due form covering all work in this section including material and labor for a period of five (5) years.

## 2. PRODUCTS

- .1 Materials
  - .1 All welds must be continuous, polished and ground and without stops. These operations must be carried out before the galvanizing or painting preparation process.
  - .2 For all galvanized steel wrought metals left exposed, after galvanizing, the surfaces must be cleaned and polished with a scouring pad in order to remove imperfections, protruding defects, etc. that could scratch the users of the building.

- .3 Steel profiles and plates: conform to CAN / CSA-G40.21-13, grade 300W for profiles and 260W for plates.
- .4 Steel pipes: according to ASTM A 53 / A53M, standard weight, schedule 40, seamless, dimensions and sizes as indicated.
- .5 Steel tubes: according to CAN / CSA-G40.21, grade 300W, shape indicated, wall thickness 3 mm minimum, dimensions and thicknesses as indicated.
- .6 Welding materials: conform to CSA W59 standard.
- .7 Bolts and anchor bolts: in accordance with ASTM A307.
- .8 Non-shrinkage, non-metallic, fluid grout having a strength of 15 MPa after 24 hours.
- .9 Glue: Hilti HFX injectable mortar or equivalent accepted.
- .10 Workshop applied primer paint in accordance with CAN / CGSB-1.40-97.
- .11 Galvanization: hot dipped galvanization, with a layer of zinc 600 g / m.ca. Complies with CSA G164-M92 (R2003).

.2 Shaping

- .1 Shape the works so that they are square, aligned, plumb, with the precise dimensions required and with tight joints and firmly secured.
- .2 Assemblies should be welded as much as possible; otherwise, they must be bolted for exterior structures, or assembled by screws for interior structures. Adjust and assemble the works in the workshop, ready to assemble, when possible.
- .3 The visible bolts must be embedded in countersunk holes, then cut flush with the nuts.
- .4 Structures assembled by screws: use flat head screws, countersunk, self-tapping, lock-in or as indicated.
- .5 The visible fasteners must be of the same material, the same color and the same finish as the material of the elements to be assembled.
- .6 Perform visible welds continuously over the entire length of the joint, filed or ground to obtain a smooth and even surface. Seal exterior steel structures to protect them against corrosion in accordance with CAN / CSA-S16.1-05.
- .7 When galvanized steel elements must be an integral part of a final assembly on the site, no welding should be carried out on the site. Only the bolting of the different parts can be done on site. All drilling, welding and bending must be done before the hot-dip galvanizing treatment.

.3 Assembled elements

- .1 Assemblies must be welded as much as possible; otherwise, they must be bolted. The visible bolts must be embedded in countersunk holes, then cut flush with the nuts. The visible fasteners must be of the same material, the same color and the same finish as the material of the elements to be assembled.

- .2 The assemblies must be adjusted with precision; the visible parts must be flush; joints and tabs must be tight.
- .3 The welds and the visible ends of the profiles must be ground or filed.
- .4 When galvanized steel elements must be an integral part of a final assembly on the site, no welding must be carried out on the site. Only the bolting of the different parts can be done on site.

.4 Finishing

- .1 Galvanization: By hot immersion, with Zinc plating of 600g / m<sup>2</sup>, according to the CAN / CSA-G164 standard and the DCC-048 directive as well as the GS-11 standard with regard to the chemical composition and the content of VOC

3. **EXECUTION**

.1 Examination

- .1 Before proceeding with the installation of metal works, ensure that the condition of the surfaces / supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out in accordance with the manufacturer's written instructions. .
  - .1 Make a visual inspection of surfaces / supports in the presence of the Client and his professionals.
  - .2 Immediately inform the Client and his professionals of any unacceptable condition detected.
  - .3 Begin installation work only after correcting unacceptable conditions and receiving written approval from Customer and its professionals.

.2 Installation and assembly in situ

- .1 Unless otherwise indicated, perform welding work in accordance with CSA W59. Welds should be continuous and ground for a uniform finish.
- .2 All work required for the assembly of the constituent elements (machining, drilling, cutting welding) must be done before immersion for the hot-dip galvanizing treatment.
  - .1 Unless otherwise indicated or agreed in advance, any welding work will be prohibited on the site of installation. In such a case, and using a primer paint rich in zinc, touch up the galvanized surfaces, at the places burned during the welding work on site.
- .3 Mount metal work squares, plumb and level, aligned and precisely adjusted, and ensure that joints and crossings are tight.
- .4 Visible fasteners must be compatible with the material through which they pass or to which they are subjected, and of the same finish as the material.
- .5 Provide the necessary components for work carried out by other trades, in accordance with the nomenclature and shop drawings submitted.

- .6 Once assembly is complete, touch up rivets, bolts, welds and burnt or scratched surfaces, etc. with an appropriate protective paint or with galvalum.
- .7 Clean and polish with a scouring pad to remove imperfections, protruding defects, etc. that could scratch the users of the building.

END OF SECTION 05 50 00

1. **GENERAL**

.1 Works included

- .1 Caulking of perimeter space around all openings and holes and at the following locations:
  - .1 interior and exterior doors and windows;
  - .2 fans, grills, pipes, ducts;
  - .3 where there is likely to be air infiltration.
- .2 Sealing of all the following joints:
  - .1 at the exterior perimeter of openings and perforations in exterior facings;
  - .2 sheet metal work and metal cladding finish joints;
  - .3 between different facings (vertical joints only);
  - .4 at control joints in masonry coverings;
  - .5 at vapor barrier perforation joints with conduits, boxes, brackets, wires, etc;
  - .6 interior and exterior finish joints;
  - .7 in places where there is a risk of water infiltration.
  - .8 in places where finishing is difficult to achieve and / or in places difficult to access during housekeeping.
- .3 The waterproofing products used in the various assemblies must be coordinated with those prescribed in the other sections of the specifications. Preferably, a single sealant, from the same manufacturer, should be used for all joints of the same nature throughout the structure.
- .4 For the sake of environmental protection, use sausages containers rather than plastic cartridges.
- .5 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 Section 05 50 00 - Metal work
- .2 Section 08 11 00 – Door
- .3 Section 09 30 13 - Ceramic tile
- .4 Section 09 67 00 - Epoxy toppings

- .5 Section 09 91 00 – Painting
- .3 Reference standards
  - .1 American Society for Testing and Materials International, (ASTM)
    - .1 ASTM C919-02, Standard Practice for Use of Sealants in Acoustical Applications.
    - .2 ASTM C920, Standard Specification for Elastomeric Joint Sealants.
    - .3 ASTM C 794-15a- Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants;
    - .4 ASTM C 1248-08 (2012) - Standard Test Method for Staining of Porous Substrate by Joint Sealants;
  - .2 Canadian General Standards Board (CGSB)
    - .1 CAN / CGSB-19-GP-5M-1984, One-component, acrylic-based, solvent-evaporative polymerization sealant (April 1976 edition confirmed, incorporating amendment number 1).
    - .2 CAN / CGSB-19.13-M87, One-component, elastomeric, chemically cured sealant.
    - .3 CAN / CGSB-19.14M-76, One-component, butyl-polyisobutylene sealant, solvent evaporative polymerization (confirmed April 1976).
    - .4 CAN / CGSB-19.17-M90, One-component sealant based on acrylic resin emulsion.
    - .5 CAN / CGSB-19.18-M90.
    - .6 CAN / CGSB-19.24-M90, Multi-component, chemically cured sealant.
  - .3 General Services Administration (GSA) - Federal Specifications (FS)
    - .1 FS-SS-S-200-E (2) 1993, Sealants, Joint, Two-component, Jet-Blast-Resistant, Cold Applied, for Portland Cement Concrete Pavement.
  - .4 Sealants and caulks used must meet or exceed relevant industry and government safety and performance standards.
  - .5 Sealants and caulks must not contain more than 5% by weight (in total) of volatile organic compounds (VOCs), percentage calculated from the recorded quantities of components used in the preparation of the product.
  - .6 Caulking products which emit strong odors, contain toxic chemicals or which are not certified as being of a mold resistant type must not be used in air handling units.
  - .7 If the only possible solution is to use toxic products, restrict their use to places where fumes can be evacuated to the outdoors or to places where they will be confined

behind air barriers , or apply them several months before the place is occupied so as to allow the evacuation of the fumes over the longest possible period.

.4 Quality assurance

.1 Not applicable.

.5 Conditions of implementation

.1 Not applicable.

.6 Approvals

.1 Documents and samples to be submitted

.1 Submit to the Architect the technical data sheets and a sample of the products used according to the procedure established in section 01 33 00.

.2 The technical data sheets must describe the products, their physical properties and their performances. It should also be possible to read the installation recommendations and the conditions of implementation.

.3 Samples must show location, dimensions, profile and depth of joints, including backing joint, primer, sealant and caulking. Samples can be part of the finished work.

.4 Wait 24 hours before starting sealing work to allow the Customer and his professionals to inspect the samples.

.5 Once accepted, the samples will constitute the minimum standard to be met for the work.

.2 Preparatory meeting

.1 Adhesion tests: perform material adhesion tests of all prescribed sealants and all materials involved, using the methods prescribed by the manufacturer.

.2 The general contractor is responsible for coordinating and planning the meeting with the manufacturer's representative on the site. The purpose of the meeting is to inform the contractor about the preparation of the work and the implementation of waterproofing products for this project. The meeting also aims to verify the adhesion tests of sealants.

.3 Following this meeting, the general contractor is responsible for obtaining the written report from the manufacturer's representative stating the meeting on site. Information regarding the products to be used, the preparation of the substrates, the execution of the work, etc. must be recorded in the written report. This must be submitted to the Architect for review before the majority of sealant work begins.

- .3 Certificates to be submitted
  - .1 By submitting product data sheets, the contractor is responsible for submitting written confirmation from the manufacturer attesting that the sealants specified in the estimate are suitable for the various applications to be carried out for this project. In the event of an incompatibility between the products specified in the specifications and the materials on which the applications will be carried out, the general contractor is responsible for obtaining from the manufacturer the written opinion on the right product (s) to be used for the given applications for this project.
- .4 Delivery, storage and handling
  - .1 Equipment and materials must be transported, stored and handled in accordance with the requirements of section 01 61 00 - General product requirements.
  - .2 Deliver and store materials in original containers and packaging with manufacturer's bucket intact. Protect materials from water, humidity and frost; do not place them directly on the ground or on a floor.
- .5 Warranty
  - .1 The Contractor will provide a written warranty for a period of five (5) years against any loss of waterproofing due to poor workmanship or materials.
  - .2 The Contractor must also provide the owner, for the building concerned, with the manufacturer's warranty covering all materials used in this section for a period of twenty (20) years, starting from the date specified in section 01 20 00 - Warranties.

## 2. PRODUCTS

### .1 Materials

- .1 Sealing base: two-cell black extruded polyethylene rod, with a water-resistant outer skin, such as Adseal Backer Rod 2600, from Adfast or equivalent accepted.
- .2 Solvent / Cleaner
  - .1 General cleaning agent based on isopropyl alcohol 99% purity, such as ADSOLVE 6003, from Adfast or equivalent accepted.
- .3 Sealant
  - .1 Type A sealant: 1-component silicone sealant, in accordance with CAN / CGSB 19.13-M87 and ASTM C920, Type S, grade NS, class 50, use NT, M, A and O.
    - .1 Reference product: Adseal DWS 4580 from ADFAST, Dowsil 795 from Dow Corning or approved equivalent.



- .2 Colors: matched to adjacent materials and approved by the Architect, this sealant cannot be painted.
- .3 For use in the following locations:
  - .1 for the various joints at the junctions with metal structures;
  - .2 for the various joints where indicated in the drawings;
- .2 Type B sealant: acrylic latex sealant, compliant with CGSB-19GP-17M:
  - .1 Reference product: "ADSEAL Doors Windows and Moldings series 1090" from "Adfast Corp." or equivalent accepted.
  - .2 Colors: this sealant is paintable.
  - .3 To be used in the following locations.
    - .1 At the perimeter of all openings (doors, windows and curtain walls) in the exterior walls, on the interior side;
    - .2 for the various interior finishing joints where indicated in the drawings;
    - .3 for the various interior finishing joints described as "paintable sealant" where indicated on the drawings
- .3 Type E sealant: 1-component sealant, polyurethane-based, self-leveling:
  - .1 Reference product: Sikaflex 12-SL from Sika Canada, CGS from DOW Corning or approved equivalent.
  - .2 Colors: Gray.
  - .3 For use in the following locations:
    - .1 Control joints in concrete floors or other materials such as ceramic.
- .4 Type I sealant
  - .1 One component silicone adhesive sealant, general application, which cures to a strong, flexible and durable rubber. CFIA approved.
  - .2 Physical properties

Standards:	Properties	Results
.1 ASTM D - 2240	Shore A hardness	15
.2 ASTM D - 412	Tension force	111 PSI
.3 ASTM D - 412	Elongation	408%

- .4 ASTM D - 412      Tensile Strength      43 PSI at 100% elongation
- .5 ASTM D - 624      Tear Strength (lbs / in) 24
- .3      Reference product: ADSEAL Series 4800 or equivalent accepted.
- .5      Primer: if necessary, use the primer recommended by the sealant manufacturer according to the materials to which the sealants will be applied and according to the application temperatures. The contractor is responsible for including in his bid the primer recommended under the conditions cited.
- .2      Cleaning products for joints
  - .1      Non-corrosive and non-fouling cleaning products, compatible with the materials constituting the joints and with the sealants, and recommended by the manufacturer of the latter. Refer to the manufacturer's instructions for cleaning procedures.
    - .1      Reference product: "ADSOLV 6003" from "Adfast Corp." or equivalent accepted
- 3.      **EXECUTION**
  - .1      Protection of structures
    - .1      Protect works against dirt or any other form of contamination.
  - .2      Surface preparation
    - .1      Completely remove old sealant.
    - .2      Remove dust, paint, loose mortar and other foreign objects, and dry joint surfaces.
    - .3      Check the dimensions of the joint and make the necessary corrections. Install a backer rod so that the depth of the joint is equal to half its width, for a minimum depth and width of 6 mm and a maximum width of 25 mm.
    - .4      Check that the surfaces of the joints are well dried and are not frozen.
    - .5      Prime surfaces in accordance with manufacturer's instructions.
  - .3      Applying the primer
    - .1      Before applying the primer and caulking product, mask adjacent surfaces if necessary to avoid soiling.
    - .2      Apply primer to side surfaces of joints immediately before applying sealant, in accordance with sealant manufacturer's instructions.
  - .4      Installation of the joint backing
    - .1      Install anti-bonding tape where required, in accordance with manufacturer's instructions.

- .2 By compressing it by about 30%, install the joint backing according to the required joint depth and profile.
- .5 Dosage
  - .1 Dose components in strict accordance with the sealant manufacturer's instructions.
- .6 Implementation
  - .1 Application of sealant
    - .1 Apply sealant in accordance with manufacturer's written instructions.
    - .2 In order to achieve clean joints, apply masking tape, if necessary, on the edge of the surfaces to be grouted.
    - .3 Apply the product forming a continuous sealing bead.
    - .4 Apply sealant using a gun fitted with a nozzle of appropriate size.
    - .5 The supply pressure must be strong enough to allow the filling of voids and perfect sealing of the joints.
    - .6 Make joints so as to form a continuous sealing bead free of ridges, folds, sags, air voids and coated dirt.
    - .7 Before skin forms on joints, shape visible surfaces to give them a slightly concave profile.
    - .8 Remove excess sealant as the work progresses and at the end of the work.
  - .2 Drying
    - .1 Dry and cure sealants in accordance with the manufacturer's instructions.
    - .2 Do not cover the joints made with sealants before they are completely dry.
- .7 Adjustment and cleaning
  - .1 As work progresses, remove excess and overflowing burrs on adjacent surfaces using cleaning product recommended by sealant manufacturers.
  - .2 Before skin forms, quickly shape Type G sealant, using soapy water solution. Dip the Adseal Tooling Kit wands into the solution. Avoid applying the solution directly to the sealant.
  - .3 Remove masking tape at end of initial joint setting period.

END OF SECTION 07 92 00

1. **GENERAL**

.1 Works included

- .1 Steel doors.
- .2 Steel frames.
- .3 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 Section 07 92 00 – Sealant
- .2 Section 08 71 00 - Hardware.
- .3 Section 08 80 00 - Glazing.
- .4 Section 09 91 00 - Painting.

.3 Reference standards

- .1 Doors and frames classified for their fire rated degree are approved by an organization accredited by the Canadian Council and show the appropriate ULC label.
- .2 Steel doors and frames:
  - .1 American Society for Testing and Materials (ASTM)
    - .1 ASTM A 653M-95, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
    - .2 ASTM B 29-92, Specification for Pig Lead.
    - .3 ASTM B 749-85 (1991), Specification for Lead and Lead Alloy Strip, Sheet and Plate Products
  - .2 Canadian General Standards Board (CGSB)
    - .1 CAN / CGSB-1.181-92, Zinc Rich, Organic Coating Prepared.
    - .2 CGSB 41-GP-19Ma-84, Rigid vinyl profiles for windows and doors.
    - .3 CAN / CGSB-51.20-M87, Polystyrene Thermal Insulation, Panels and Pipe Coverings.
    - .4 CGSB 51-GP-21M-78, Urethane and Isocyanurate Thermal Insulation, Uncoated.

- .3 Canadian Standards Association (CSA)
    - .1 CSA A101-M1983, Thermal insulation of buildings, mineral fiber.
    - .2 CAN / CSA-G40.21-M92, Structural steels.
    - .3 CSA W59-M1989, Welded Steel Construction (Arc Welding).
  - .4 Canadian Association of Steel Door and Frame Manufacturers (CSDFMA)
    - .1 CSDFMA, Specifications for Commercial Steel Doors and Frames, 1990.
    - .2 CSDFMA, Recommended Selection and Usage Guide for Commercial Steel Doors, 1990.
  - .5 National Fire Protection Association (NFPA)
    - .1 NFPA 80-1992, Fire Doors and Windows.
    - .2 NFPA 252-1990, Door Assemblies, Fire Tests of.
  - .6 Underwriters Laboratories of Canada (ULC)
    - .1 CAN4-S104M-M80 (R1985), Standard Method for Tests of the Fire Behavior of Doors.
    - .2 CAN4-S105M-M85, Standard Specification for Frames of Fire Doors Meeting Performance Requirements of CAN4-S104.
  - .7 Steel doors and frames rated for their fire resistance: approved by an organization accredited by the Standards Council of Canada, in accordance with the requirements of standards CAN4-S104M and NFPA 252 with regard to the prescribed ratings and degrees of fire resistance or indicated, and bearing the label of the organism in question.
  - .8 Fire protection frames must be provided in the case of openings to be closed by elements rated for their fire resistance, according to the list or the established nomenclature. Products must be tested in accordance with CAN4-S104, ASTM E 152 or NFPA 252, be certified by a nationally recognized organization providing factory inspection service, and be manufactured to the details indicated in the procedures. monitoring and factory inspection manuals published by the certification body and provided to the various manufacturers.
- .4 Quality assurance
- .1 Calculation criteria:
    - .1 Frames installed in exterior walls must be designed so that elements (doors and frames) can expand and contract freely when their surface is subjected to temperatures ranging from  $-35^{\circ}\text{C}$  to  $35^{\circ}\text{C}$ .

- .2 Frames installed in walls of refrigerated rooms must be designed so that the elements (doors and frames) can expand and contract freely when their surface is subjected to the temperatures indicated on the drawings.
- .3 The maximum deflection of steel bay closing elements under an overload due to winds of 1.2 kPa must not exceed 1/175 of the span.
- .5 Implementation condition:
  - .1 Not applicable.
- .6 Approvals:
  - .1 Shop drawings
    - .1 Submit to the Architect the details of the manufacturer's catalogs following the procedure established in section 01 33 00 for each type of door and frame, illustrating the cuts, dimensions, assembly methods and coatings finishing.
    - .2 The shop drawings must indicate each type of frame proposed, the nature of the materials used, the thickness of the bare metal, the reinforcing pieces, the glazing beads, the location of the anchors and visible fasteners and the types of fire retardant reinforcing topcoats.
    - .3 The shop drawings must include a list of the doors with references and numbers corresponding to those used on the drawings and in the door table.
- .7 Delivery, storage and handling
  - .1 The products must be delivered, stored and handled in accordance with the manufacturer's recommendations.
  - .2 Materials must be protected against moisture during and after delivery.
  - .3 The materials must be stored in ventilated rooms, protected from humidity and extreme temperature variations.
- .8 Warranty
  - .1 For steel doors, provide a 5-year written warranty on the manufacture and finish of the material, as well as against any warping of the material.
  - .2 For wood doors, provide a lifetime written warranty on the workmanship and finish of the material, as well as against any warping of the material.

## 2. PRODUCTS

.1 Materials of steel doors and frames

- .1 Hot dipped galvanized steel sheet: to ASTM A 653 M, with ZF75 zinc coating; minimum bare metal thickness in accordance with CSDFMA standard, Table 1 - Thickness for Component Parts.
- .2 Reinforcement profiles: steel conforming to standard CAN / CSA-G40.21, grade 44W, with ZF75 zinc coating according to ASTM A 653M.

.2 Steel doors

.1 Core of the Doors

.1 Honeycomb core.

.1 Core of the "honeycomb" type, mesh size of not more than 1", in Kraft paper with a mass of at least 36.3 kg per ream and a density of at least 16.5 kg / m, sanded to the required thickness.

.2 Reinforced core: panels glued on honeycomb core. Polyurethane core: rigid modified polyisocyanurate panels, closed cell, density 32 kg / m, according to CGSB 51-GP-21M.

.2 Manufacture of steel doors – General

- .1 The doors must be flat, hinged (unless otherwise indicated) and have an opening allowing the installation of glazing or shutters, as indicated.
- .2 Interior steel doors to be honeycomb core type.
- .3 The longitudinal edges of the doors must be welded. The longitudinal joint should be ground to a flat surface, topped with metal filler, then sanded to a smooth, even finish.
- .4 The doors must be cut, reinforced and tapped as needed to receive the mortised and jugged hardware pieces as well as the necessary electronic equipment.
- .5 Openings with a diameter equal to or greater than ½ " must be drilled in the factory, except those intended to receive mounting bolts and through bolts, which must be drilled on site, when fitting parts.
- .6 Doors must be reinforced where hardware is to be protruding.
- .7 Exterior doors must be fitted, at the top, with a flush closing steel profile to close the top of the door.
- .8 Interior doors must be fitted, at the top and at the bottom, with a recessed inverted profile, spot welded (unless otherwise specified - see surface finish).

- .9 No manufacturer's identification plate shall be placed on the doors.
- .3 Accessories
  - .1 Glazing beads must be made from shaped profiles at least 5/8 "high; they should fit snugly, butt at the corners, and be secured to the frame components with oval countersunk tapping screws.
  - .2 Metal filler: according to manufacturer's specifications.
  - .3 Firestop certification labels: fixed with metal rivets.
- .3 Steel frames
  - .1 Manufacture of frames – General
    - .1 The frames must be manufactured according to the profiles, spacings and maximum front dimensions indicated.
    - .2 Exterior frames and refrigerated rooms: 1.6 mm (16 gauge) thick, welded, with broken thermal bridge.
    - .3 Interior frames: 1.6 mm (16 gauge) thick, welded.
    - .4 Double door frames: 2 mm (14 gauge) thick, welded.
    - .5 The frames must be cut, reinforced, drilled and tapped as needed to receive the mortised and jiggged hardware parts and the necessary electronic equipment, using the jigs provided by the supplier of the finishing hardware. The frames should be reinforced as needed to accommodate the hardware to be surface mounted.
    - .6 Mortises must be protected with steel mortise covers.
    - .7 Single leaf door frames must be fitted with three neoprene shock absorbers. For double-leaf door frames, add two shock absorbers on the top rail.
    - .8 No manufacturer's identification plate shall be placed on the frames and panels.
    - .9 Fasteners must be concealed, unless otherwise indicated.
    - .10 Insulate exterior frames with polyurethane-based insulation.
  - .2 Anchoring of frames
    - .1 Appropriate devices for fixing the frames to the walls and floors must be provided and installed.
    - .2 Wall anchors must be installed immediately above or below each hinge reinforcement on the upright on the hinge side, and directly opposite on the flap upright.



- .3 The uprights whose rebate height is equal to or less than 1520 mm must be fitted with 2 anchors; an additional anchor must be provided for each additional segment or portion of a 760 mm segment.
- .4 Anchors that will be embedded in bay frames made before the door frames are installed must be placed 150 mm from the top and bottom of each upright, then at 660 mm at most.
- .3 Welded frames
  - .1 Welds must be carried out in accordance with CSA W59.
  - .2 The elements of the frames must be assembled with precision, mechanically or miter, then be solidly welded to each other, the weld being deposited on the interior wall of the profiles.
  - .3 The butt joints between the mullion elements, transom cross members, central cross members as well as sills and supports must be accurately counter-profiled.
  - .4 Welded joints and angles must be ground to a flat surface, covered with metal filler, then sanded until a smooth and uniform finish is obtained.
  - .5 Floor anchors must be securely fixed inside each upright.
  - .6 Two temporary spacers must be welded to each frame to keep them straight during transport.
- .4 Steel surface finishes
  - .1 Doors and interior frames: anti-rust touch-up paint in accordance with CAN / CGSB-1.181.
  - .2 Exterior doors and frames: galvanized steel with touch-up anti-rust paint in accordance with CAN / CGSB-1.181.

### 3. EXECUTION

- .1 Implementation
  - .1 Frames
    - .1 Install steel frames plumb, square, level and at appropriate height.
    - .2 Fill metal frames with fiberglass.
    - .3 Secure anchors to adjacent structural members.
    - .4 Firmly hold frames in position using bracing until installed. Install temporary wooden spacers horizontally at thirds of the opening to keep the width of the frames constant. Install a vertical stay under the upper cross member, in the center of the opening when the width of the latter is greater than 1200 mm. Remove the wooden spacers once the frames are in place.

- .5 Leave the clearances necessary for the bending of the frame to prevent the loads exerted by the latter from being transmitted to the frames.
- .6 Caulk the perimeter of the frames between them and adjacent elements.
- .7 Ensure the continuity of the building's vapor barrier and air barriers.
- .2 Doors
  - .1 Install doors and hardware using templates and according to manufacturer's instructions. Adjust moving parts so that the doors operate smoothly.
  - .2 Maintain uniform spacing between doors and frame studs and between doors and finished floor and threshold, as follows:
    - .1 Hinge side: 1.0 mm.
    - .2 Lock side and header: 1.5 mm.
    - .3 Finished floor and non-combustible threshold and threshold strip: 13 mm.
  - .3 Install doors rated for their fire resistance in accordance with standard NFPA80; these doors must bear the approval label of the competent body.
  - .4 Adjust leaves and locking devices to ensure smooth operation.
- .2 Finishing work
  - .1 Install the glazing according to the specifications in the door table.
  - .2 For steel doors:
    - .1 Touch up with an anti-rust paint conforming to CAN / CGSB-1.181 the surfaces which have been damaged during manufacture and / or installation.
- .3 Cleaning
  - .1 Remove all traces of printing paint and cleaning product. Clean doors and frames.
  - .2 Clean glass surfaces with approved non-abrasive cleaning product.

END OF SECTION 08 11 00

1. **GENERAL**

.1 Works included

.1 Door hardware:

.1 See hardware groups in point 2.4 of this section.

.2 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.3 Due to his specialty in door hardware, the subcontractor must validate all door / frame and hardware interactions during the preparation of his tender and must include all missing or incomplete elements (elements, options, etc. ) in its submission.

.2 Related works

.1 Section 08 11 00 – Door

.2 Section 09 91 00 – Painting

.3 Reference standards

.1 The standard position of the hardware items must meet the requirements of the Canadian Metric Guide for Steel Doors and Frames (Modular Construction), developed by the Canadian Association of Manufacturers of Steel Doors and Frames.

.2 CAN / CGSB-69.17- M86 /ANSI/BHMAA156.2-1983, Locks for reamed openings and pre-assembled locks.

.3 CAN / CGSB-69.18- M90 /ANSI/BHMAA156.1-1981, Edge hinges and other hinges.

.4 CAN / CGSB-69.19- M89 /ANSI/BHMAA156.3-1984, Exit Door Openers.

.5 CAN / CGSB-69.20- M90 /ANSI/BHMAA156.4-1986, Accessories for doors (door closer).

.6 CAN / CGSB-69.21- M90 /ANSI/BHMAA156.5-1984, Auxiliary Locks and Associated Products.

.7 CAN / CGSB-69.22- M90 /ANSI/BHMAA156.6-1986, Architectural hardware accessories.

.8 CAN / CGSB-69.23- M90 /ANSI/BHMAA156.7-1981, Dimensions of template hinges.

.9 CAN / CGSB-69.24- M90 /ANSI/BHMAA156.8-1982, Door accessories - Door stoppers attached to the top of the doors.

.10 CAN / CGSB-69.26- M90 /ANSI/BHMAA156.10-1985, Automatic pedestrian doors.

.11 CAN / CGSB-69.28- M90 /ANSI/BHMAA156.12-1986, Combination Locks and Latches.

.12 CAN / CGSB-69.29- M90 /ANSI/BHMAA156.13-1980, Locks and Mortise Latches.

.13 CAN / CGSB-69.30- M90 /ANSI/BHMAA156.14-1985, Hardware accessories for sliding doors and for folding doors.

.14 CAN / CGSB-69.31- M89 /ANSI/BHMAA156.15-1981, Door Retaining and Closing Mechanism Release Devices.

.15 CAN / CGSB-69.32- M90 /ANSI/BHMAA156.16-1981, Secondary hardware accessories.

.16 CAN / CGSB-69.33- M90 /ANSI/BHMAA156.17-1987, Hinges and return pins.

- .17 CAN / CGSB-69.34- M90 /ANSI/BHMAA156.18-1984, Materials and Finishes.
- .18 CAN / CGSB-69.35- M89 /ANSI/BHMAA156.19-1984, Doors with assisted opening and doors with automatic opening and closing with low kinetic energy.
- .19 CAN / CGSB-69.36- M90 /ANSI/BHMAA156.20-1984, Hinges, T-hinges and hasps.
- .20 Hardware for exterior exit doors (exit doors) and doors in fire partitions must be certified by a Canadian certification body accredited by the Standards Council of Canada.
- .21 Regulatory Agency Requirements:
  - .1 Automatic entrances must be U.L. (Underwriters Laboratory, Inc.) U.L.C. appearing in the FDDR and FUXV guide.
  - .2 Must meet the requirements of the disabled in accordance with federal regulations ANSI 117.
- .22 All automatic equipment must comply with ANSI A156.19 standards.
  
- .4 Quality assurance
  - .1 Quality assurance and substitution
    - .1 Hardware installers must have at least five (5) years of hardware installation experience.
  
- .5 Conditions of implementation
  - .1 Not applicable.
  
- .6 Approvals
  - .1 Shop drawings
    - .1 Submit the complete list of hardware to the Architect, following the procedure established in section 01 33 00.
    - .2 Submit templates to related trades when requested.
    - .3 List the hardware items submitted for approval, taking care to indicate the make, model, material, function and finish, as well as any other pertinent information.
  
- .7 Delivery, storage and handling
  - .1 Marking and packaging
    - .1 Mark the boxes with the position number, the door number and the key set symbol, if applicable, in the original packaging supplied by the manufacturer. The equipment must be protected in suitable packaging and containers during transport and storage.
    - .2 Include accessories, fasteners and other loose items with each applicable item of hardware.
  - .2 Delivery
    - .1 Deliver material for related trades.

.3 Storage

.1 Store in a clean, dry place with a lockable door and adequate shelves to allow organization so that item numbers are easily visible.

.4 Maintenance

.1 Provide the range of locks required to replace the barrels.

.8 Warranty

.1 Manufacturer's standard warranty or others

.1 The Contractor will provide a written warranty for a period of two (2) years against any defect due to deficient materials or workmanship.

.2 Provide these specific warranties by recognized manufacturers:

Material element	Warranty duration
Mortise hinges	1 year
Locks (ND series)	10 years
Output devices	3 years
Stop bar	1 year
Floor / wall stopper	1 year

2. **PRODUCTS**

.1 List of finishes

ITEM	BHMA#	DESCRIPTION	BASE MATERIAL
Hinges	630	satin stainless steel	stainless steel
Hinges	652	satin chrome	steel
Piano hinges	689	anodized aluminum	aluminum
Lock trim	626,	satin chrome	brass / bronze
Output devices	626,	satin chrome	brass / bronze
Output devices	630,	satin stainless steel	stainless steel
Close door	689	powder coated aluminum	steel
Locks	626	satin chrome	brass / bronze
Locks	630	satin stainless steel	stainless steel
Protection plates	630	satin stainless steel	stainless steel
Stop bar	630	satin stainless steel	stainless steel
Wall / Floor	626	satin chrome	brass / bronze

Sills	627	anodized aluminum	aluminum
Weatherstripping	628	anodized aluminum	aluminum

.2 Materials

- .1 Each piece of hardware is supplied with mechanical fasteners, jigs and instructions necessary for its installation.
- .2 Screws and fasteners: The finish of screws and fasteners must match that of their product and the manufacturer's standard. Door closers, door stops and exit devices installed on fire-rated wood doors and hollow metal doors will need to be secured with fasteners to meet code requirements.
- .3 Visible fasteners must have the same finish as the hardware items and compatible with the materials through which they pass.

.3 Cylinders, keying systems and key control

- .1 Meet with the Owner to obtain the door cylinders to perform the machining and installation thereof in the new hardware store. The cylinders are supplied by the Owner and installed by the contractor of this section.

.4 Description of the hardware

- .1 Hardware group to be defined.

GR.porte #5	3	CHARNIÈRES	BB1079 4 1/2" X 4" 630	CHARNIÈRE MONTRÉAL
	1	BARRE PANIQUE	98L-BE 626 4040XP-HCUSH 3049CNS-MC	VON DUPRIN
	1	FERME-PORTE	689	LCN
	2	PLAQUES À PIED	8400 S32Dx300mm x LARG. 630	IVES
	1	COUPE-FROID	17V x L ALUM & NEOPRENE	UNIQUE
	2	COUPE-FROID	1650 x H ALUM	UNIQUE
		BALAIS BAS DE		
	1	PORTE	1800V x L	UNIQUE

3. **EXECUTION**

.1 Preparation

- .1 Use templates and consult manufacturers' installation instructions to install hardware.
- .2 Ensure doors and frames are prepared and reinforced to receive hardware.

- .3 Ensure door frames and finished floor are plumb and level to allow proper engagement and proper functioning of hardware.

.2 Implementation

- .1 Install hardware according to manufacturer's instructions using fasteners provided by manufacturer.
- .2 Install hardware items in standard positions in accordance with the requirements of the Canadian Metric Guide for Steel Doors and Frames (Modular Construction), developed by the Canadian Association of Steel Doors and Frames Manufacturers.
- .3 If the installation is such that the stopper will touch the handle, install the stopper so that it hits the bottom.
- .4 Adjust the gap of moving parts so that the doors operate smoothly.
- .5 Ensure exit devices are in the correct grip and adjust device cam / nail-screw prior to installation to ensure exterior trim functions properly.
- .6 Door closer adjustment includes spring power, closing speed, locking speed and timer, valve nuts for the timer at the time of installation.

.3 In Situ Quality Control

- .1 Check that each leafs opens, closes and locks. Inspect rated openings for fire resistance to ensure they are installed in accordance with NFPA 80 requirements. Test access control system and electrified hardware devices to ensure proper operation; the owner will give his approval after having checked the operation. Check that the electric door opening hardware operates correctly when the fire alarm system is activated.

.4 Tune-up and cleaning

- .1 Check and make the necessary adjustments to each item of equipment operation for each door to ensure their proper functioning.
- .2 Adjust doors with closing devices or automatic closing devices for operation after HVAC system is balanced and adjusted. Adjust the spring force of non-calibrated door closers to close and lock the door.
- .3 Hardware must be left clean and free from damage.
- .4 Clean material elements. Avoid abrasive products and abrasive pads.

.5 Protection

- .1 Protect equipment from damage during construction. Wrap locks, emergency exit panic hardware, door handle trims with kraft paper or bubble wrap to protect finishes from damage until near completion date. Remove and reinstall, or when necessary, use temporary material to maintain finishes in new condition and maintain the manufacturer's warranty.

END OF SECTION 08 71 00

1. **GENERAL**

.1 Works included

- .1 The interior glass of the project.
- .2 Sealing materials.
- .3 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 Section 07 92 00 - Sealant.
- .2 Section 08 11 00 - Door.

.3 Reference standards

- .1 ANSI / ASTM E330-90, Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- .2 ASTM C 542-90, Specification for Lock-Strip Gaskets.
- .3 ASTM D 790-91, Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- .4 ASTM D 1003-61 (1988), Test Method for Haze and Luminous Transmittance of Plastics.
- .5 ASTM D 1929-91a, Test Method for Ignition Properties of Plastics.
- .6 ASTM D 2240-91, Test Method for Rubber Property - Durometer Hardness.
- .7 ASTM E 84-91a, Test Method for Surface Burning Characteristics of Building Materials.
- .8 ASTM F 1233-92, Test Method for Security Glazing Materials and Systems.
- .9 CAN / CGSB-12.2- M91, Flat and clear window glass.
- .10 CAN / CGSB-12.3- M91, Float glass, flat and clear.
- .11 Flat Glass Manufacturers Association (FGMA) Glazing Manual.
- .12 Laminators Safety Glass Association Standards Manual.

.4 Quality assurance

- .1 Allowable tolerances
  - .1 Performance characteristics: the maximum bending of the glazing must not exceed the limit of the bending strength of the glass, without altering the physical properties of the glass materials.
- .2 Quality assurance and substitution
  - .1 Perform work in accordance with guidelines set out in document published by Canadian Glazing Manufacturers Association (IGMAC) and Laminators Safety Glass Association Standards Manual regarding types of glass panel mounting.

.5 Conditions of implementation

- .1 Not applicable.



.6 Approvals

.1 Documents and samples to be submitted

.1 Submit technical data sheets and samples in accordance with the requirements of section 01 33 00 Documents and samples to be submitted.

.2 Submit 300 mm sample of each type of glass and sealants.

.2 Workshop drawing

.1 Submit shop drawings for all furniture required in accordance with the requirements of section 01 33 00 - Documents and samples to be submitted.

.2 Shop drawings must indicate the locations of each type of glass offered.

.7 Delivery, storage and handling

.1 Not applicable.

.8 Warranty

.1 At the end of the work, the contractor shall give the owner the warranty in due form covering the sealed units including material and labor for a period of two (2) years, from the specified date. in section 01 20 00 Guarantees.

.2 Maintenance sheet

.1 Provide the necessary maintenance sheets, including cleaning instructions, and attach them to the manual mentioned in section 01 78 00 Closing of the contract.

2. **PRODUCTS**

.1 Glass materials

.1 Float glass (clear): in accordance with CAN / CGSB-12.3, quality glazed glass.

.2 Laminated glass: conforms to CAN2-12.1-M79, type 1, class A, 6 mm (2 x 3 mm) thick, unless otherwise indicated.

.2 Accessories

.1 Self-adhesive tape for glazing: preformed butyl tape, hardness index 10-15 by durometer, with release paper, 5 mm thick x 10 mm wide.  
Black color.

.2 Self-adhesive glazing tape

.1 Pre-molded butyl compound, Shore A hardness 10 to 15 measured by durometer according to standard ASTM D 2240, rolled up on non-stick coated paper, 3 mm x 10 mm, black color.

- .2 Closed cell polyvinyl chloride foam, 3 mm thick, rolled up on non-stick coated paper, coated with adhesive on both sides, with a maximum water absorption capacity by volume of 2%, capable of admitting a compression of 25%, ensuring airtightness and vapor tightness.
- .3 Seat wedges: neoprene, hardness index 80/90 by Shore "A" durometer, 100 mm long x 6 mm high, width appropriate to the thickness of the glass as well as the weight and the dimension of the glass.  
Black color.
- .4 Peripheral shims: neoprene, Shore "A" hardness index 50, 75 mm long x 2.4 mm thick x 9 mm high.  
Black color.
- .5 Peripheral shims: in neoprene, Shore A hardness 50 to 60 measured with a durometer according to standard ASTM D 2240, self-adhesive on one side, 75 mm in length over half the height of the glazing beads on the appropriate thickness for the glazing placed in place.
- .6 Glazier pliers: standard type recommended by manufacturer.
- .7 Extruded gaskets with locking tabs: according to ASTM C 452.

### 3. EXECUTION

#### .1 Implementation

- .1 Remove protective coatings, clean contact surfaces with solvent and dry.
- .2 Place a sufficient number of seat blocks to support the weight of the glass without risk of breakage.
- .3 Cut the self-adhesive strip to the appropriate and continuous length, and place it against the permanent glazing bead, 1.5 mm above the line of sight.
- .4 Tear off the release paper from the self-adhesive strip.
- .5 Put the glass in place, press it on the base blocks and press it against the self-adhesive strip with enough firmness to ensure perfect adhesion all around.
- .6 Apply the self-adhesive strip to the other surface of the glass in the same manner.
- .7 Insert the peripheral shims so as to properly center the glass in the frame. Place the wedges 600 mm on center and keep them 6 mm back from the line of sight.
- .8 Place the removable glazing beads, avoiding moving the self-adhesive strip and exerting the required pressure to ensure perfect contact around the entire perimeter.

#### .2 Cleaning

- .1 Clean finished surfaces immediately, removing burrs of sealant and drops of sealant. When the job is done, remove the labels.

.3 Table

- .1 Interior door: laminated glass.

END OF SECTION 08 80 00

1. **GENERAL**

.1 Works included

- .1 Surface preparation.
- .2 Recessing ceramic joints
- .3 Floor covering.
- .4 Cladding of interior walls.
- .5 Ceramic tile baseboards.
- .6 Accessories for installation including borders, baseboards, transition profiles, control profiles, movement joints, treads, stair nosings and all other accessories required for finishing the work.
- .7 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

.2 Related works

- .1 Section 07 92 00 - Sealant.

.3 Reference standards

- .1 American National Standards Institute (ANSI).
  - .1 ANSI / CTI A108.12012, Specification for the Installation of Ceramic Tile: Collection of 21
  - .2 ANSI / CTI A108, A118 and A136 Series of Standards on Tile Installation;
  - .3 ANSI A137.1-2012, Specification for Ceramic Tile;
  - .4 ANSI A137.2-2012, Specification for Glass Tile.
- .2 ANSI A118 standard series - American National Standards for Installation of Ceramic Tile.
- .3 ASTM C1178 / C1178M 11, Standard Specification for Glass Mat Water Resistant Gypsum Backing Panel.
- .4 Canadian General Standards Board (CGSB).
  - .1 CGSB 71-GP-22M- 86, Organic adhesive for the installation of ceramic wall tiles.
  - .2 CAN / CGSB-75.1- M88, Ceramic Tiles.
- .5 TCNA (HB) - Handbook for Ceramic Tile Installation; Tile Council of North America.
- .6 TTMAC / ACTTM - Guide 09 30 00 of estimates - Installation of tiles and tiles - Manual 2016-2017.
- .7 TTMAC / ACTTM - Maintenance guide.
- .8 ISO 13006-2012, Ceramic tiles and slabs - Definitions, classification, characteristics and marking.
- .9 ISO 13007-2010, Ceramic tiles - Joint mortars and adhesives.
- .10 ISO 10545 Series, Ceramic Tiles and Test Standards.

.4 Quality assurance

.1 Quality assurance and substitution

- .1 To meet warranty requirements and ensure product compatibility, ensure that all tile setting and grouting materials, as well as additives and factory-prepared surface preparation products come from 'one and the same manufacturer.
- .2 The Contractor and his subcontractors are responsible for ensuring that all the products to be used to carry out the ceramic work are compatible with each other, and therefore that all the required warranties will be honored.
- .3 To ensure color consistency, tiles must be of the same production sequence, same color batch, same caliber and same production number. When there is a significant difference in the shade of the colors, the Contractor is responsible for notifying the Client and his professionals as soon as possible.

.2 Competence and qualification

- .1 The installer of the specified products must have the necessary skills and apply the installation methods prescribed by the manufacturers and all applicable standards and procedures.

.5 Conditions of implementation

- .1 Comply with the requirements of the cited standards and the recommendations of the product manufacturers regarding the appropriate ambient conditions before, during and after installation. Requirements from manufacturers that are more stringent than the following specified requirements take precedence over the latter.
- .2 Thoroughly ventilate areas to be tiled, in accordance with manufacturers' instructions for the products to be used.
- .3 Maintain the ambient air and the surface of the support at a temperature between 20°C and 32°C for a period of 48 hours before installation, throughout the installation and for the following seven (7) days the latter or until the cure of the products used is complete.
  - .1 Provide an additional heat source when there is a risk that the surface temperature will drop below the minimum recommended temperature.
  - .2 Provide a cooling system or wait for the temperature to drop below the maximum recommended degree. Be careful not to install materials if the temperature reaches or exceeds the recommended maximum.
- .4 Concrete substrates must have a minimum compressive strength of 3500 psi (25mpa).
- .5 Concrete substrates must have a compressive strength corresponding to the requirements of the manufacturers of the products to be used. Concrete slabs must meet the required cure to allow installation of the ceramic flooring.

- .6 Do not install the flooring on a concrete slab whose humidity level exceeds the constraints and requirements of the membrane and ceramic coating to be installed.
- .7 On a concrete floor, lay tiles when the humidity level in the concrete meets the standards of the membrane, tile and adhesive manufacturers.
- .8 Maintain the work area at a temperature of at least 10 ° C for a period of 24 hours before, during and 24 hours after installation.
- .9 Take the necessary precautions so that the use of the premises is possible at the end of the workers' shift.
- .10 Protect wall coverings until fixing bed is sufficiently hard, 48 hours minimum.
- .11 Protect wall tiles against any impact, vibration and violent hammering on adjoining walls for at least 14 days after installation.
- .12 Avoid static charges until adhesive is fully cured.

.6 Approvals

- .1 Documents and samples to be submitted
  - .1 Submit the technical data sheets and shop drawings required in accordance with the requirements of section 01 33 00 - Documents and samples to be submitted.
  - .2 The technical data sheets must demonstrate the physical properties of the materials to be used. The technical data sheets must also indicate compliance with the manufacturers' specifications and installation recommendations for the products used.
  - .3 Submit as samples, in two (2) copies, tiles of prescribed dimensions of each color, texture and pattern of specified tiles.
  - .4 Submit written declarations from manufacturers assuring compatibility of their materials with materials from another manufacturer, when products and materials from more than one manufacturer are used to form a complete system.
- .2 Preparatory meeting
  - .1 Call a preparatory meeting at least one (1) week before the start of work on this section.
  - .2 The meeting agenda should include, but not be limited to, the review of the following topics:
    - .1 Site conditions;
    - .2 Compatibility between all materials;
    - .3 Preparation of supports and backing;

- .4 The flatness requirements of supports and supporting surfaces as well as the location and type of moldings to be installed;
  - .5 Products and installation methods;
  - .6 The grouting procedure;
  - .7 Products and methods of maintenance and cleaning.
- .3 Review installation procedures and coordinate execution of work with other trades for related work.
- .3 Representation of the Manufacturer
- .1 Require the presence of the representative of the manufacturer of surface preparation products, installation products and jointing products. Require the presence of the representative of the manufacturer of related accessories (membranes, moldings, etc.). Require the presence of the representative of the manufacturer or suppliers of the tiles as well as the presence of the installers.
- .4 Shop drawings: Shop drawings must show the following:
- .1 Special tile patterns and conditions likely to affect installation.
  - .2 Transitions and intersections between different materials.
  - .3 Widths, details and locations of expansion and contraction joints, and control and isolation joints in substrate and finished tiled surfaces.
  - .4 Locations and configuration of inserts and finishing edges.
- .7 Delivery, storage and handling
- .1 Delivery and acceptance requirements: deliver and store the materials, packed in the original containers, keep them well sealed and well identified with their respective labels, which must remain intact until use, in accordance with the ANSI standard A108.1 relating to the labeling of sealed tile packaging.
  - .2 Storage and handling requirements: Store materials in such a way as to prevent damage or contamination by water, freezing, foreign matter, and other causes. Store cementitious materials in a dry place, on a surface other than the ground. Do not use products that have frozen.
- .8 Warranties
- .1 Manufacturer's standard warranty or others
    - .1 At the end of the work, the Contractor must give to the Client, for the building concerned, the warranty in due form covering all the work of this section including material and labor for a period of five (5) years, starting from the date specified in section 01 20 00 Warranties.

- .2 The Contractor must also provide the Client, for the building concerned, with the manufacturer's warranty in due form covering all surface preparation products, including the required membranes, in this section for a period of ten (10 ) years, from the date specified in section 01 20 00 Warranties.

- .2 Replacement material: 5% required.

## 2. PRODUCTS

### .1 Materials

#### .1 Surface preparation

- .1 See and comply with manufacturer's recommendations.

#### .2 Floor tiles

- .1 See Finishes plan.
- .2 The manufacturing process must meet the criteria relating to life cycle analysis, as set out in standard CAN / CSA-ISO 14040.
- .3 Ceramic floor tiles: conform to standard CAN2-75.1, type 4, category MR1.
- .4 According to the finish legend:

##### .1

Product	MT.MAY.RED.8x8
Collection	Metropolitan
Company	Olympia
Format	200 x 200mm
Color	Mayflower Red 310
Installation	Damier
Grout type	Epoxy
Grout color	Arch. selection

#### .5 Plinth

- .1 Baseboards are the same finish as the floor tile
- .2 Unless otherwise indicated, the baseboards are the same height as the existing ones (to be validated on site).
- .3 Pull a joint of light-colored paintable acrylic latex sealant at the corner between ceramic and adjacent surfaces.

#### .3 Mortar, thin-set mortar and grout

- .1 Preparation mortar: See and comply with manufacturer's recommendations.



- .2 Cement-adhesive.
  - .1 Unmodified, water-resistant floor mortar consisting of a homogeneous Portland cement powder, inert fillers such as "Kerapond-Keralastic" from "Mapei" or accepted equivalent.
  - .2 For wall baseboards: "Kerabond-Keralastic", from "Mapei" or equivalent accepted.
- .3 Joint grout.
  - .1 Joint grout for walls such as "Kerapoxy IEG CQ" from "Mapei" or equivalent accepted.
  - .2 Joint grout for floors "Kerapoxy IEG CQ" from "Mapei" or equivalent accepted.
  - .3 Color of "Kerapoxy", in the "Kerapoxy" range of "Mapei" or equivalent accepted.
- .4 Accessories
  - .1 Edges: moldings adapted to the thickness of the ceramic, bevelled, shouldered flush with the upper part of the continuous floor, as manufactured by Schlüter.  
Material: stainless steel.  
Application: general.
- .5 Flexible sealant
  - .1 100% professional grade silicone sealant specially formulated for high traffic areas as well as expansion and movement joints (horizontal and vertical), to ASTM standards; sag (ASTM C639), times before product is touch dry (ASTM C679), Shore "A" hardness (ASTM C661), joint movement (ASTM C920), elongation at break (ASTM D412), flexibility (ASTM C734) and passes weather resistance tests (QUV accelerated aging device).  
Product such as "Mapesil T" from "Mapei" or equivalent accepted.
- .6 Self-leveling cementitious underlayment
  - .1 Easy-to-prepare self-leveling underlayment, such as a leveling compound and / or repair to be used on floor surfaces for the installation of flexible tile and ceramic floor coverings: cementitious base with rapid setting modified with polymers such as Ultraplan 1 Plus products of "Mapei" or equivalent accepted mixed together and mechanically according to the manufacturer's recommendations for the planned installation. Cover all surfaces of the parts with this product to obtain a flat surface.

### 3. EXECUTION

#### .1 Examination

- .1 Examine the supports and ensure that they comply with the requirements and that there are no conditions that could affect the work or the results. Refer to ANSI A108.01 "General requirements for sub-surfaces and preparations by other trades materials" and to the ACTTM manual "Guide 09 30 00 of specifications - Installation of tiles and tiles - Manual 2016-2017".
- .2 Installation of products signifies acceptance of site conditions and supports.

#### .2 Preparation of the substrates

- .1 Strip existing ceramic floors including the substrate up to the concrete slab. Prepare existing and new slabs according to the manufacturer's instructions.
- .2 Before installing the new tiling, ensure that the surface is free of all traces of previous adhesive (glue or grout), that it is sound and clean.
- .3 Surface must be finished with a steel trowel and fine bristle broom for thin film installations.
- .4 The variation in the surface of the support must not exceed 6 mm in 3,000 mm (or 3 mm in 3,000 mm if the tiles are of formats greater than 200 mm x 300 mm), as much for traditional installations on bed of mortar only for thin bed installations.
- .5 As the variation of the support surface of a thin-bed installation must not exceed 2 mm in 300 mm, in the case of tiles larger than 380 mm x 380 mm, the variation of the surface must not exceed 3 mm in 3,000 mm.
- .6 A leveling coat of latex modified thin-set mortar or epoxy mortar may be applied to the substrate to correct slight irregularities and imperfections of 5 mm or less. This layer must have hardened sufficiently before the application of other materials. To level surface variations of more than 5 mm, use a patch and leveling coat based on a medium-set mortar or a traditional bed of mortar.

#### .3 Tiling

- .1 Install tiles according to TCNA or ACTTM methods specified on drawings.
- .2 Install square profile above wall tiles.
- .3 Install a rounded molding at the floor and wall junction.
- .4 Install rounded profile at vertical corners of wall tiles.
- .5 Apply mortar and joint grout according to manufacturer's instructions.
- .6 Install tiles plumb, square, alignment and all in the same plane. Perimeter tiles must be at least half the width of the normal tile.

- .7 Adjust tiles at angles, around obstacles. Make uniform joints approximately 6 mm wide for floors and 3 mm for walls. Trim the edges to form smooth, even edges. Align the patterns.
- .8 The maximum allowable deviation from flatness is 1: 800.
- .9 Perimeter tiles must be at least half of their full size.
- .10 Make re-entrant angles with sharp edges and projecting angles with rounded edges.
- .11 After installation, pat the tiles and replace those which sound hollow in order to obtain a perfect adhesion.
- .12 Limit the tiles to the center of the door openings when the finish or the color of the adjoining ground cover is different.
- .13 Make sure to lay the starter tile so that cleaning is easy. The top of the rounded part should be flush with the top of the floor tile.
- .14 Install transition strips at the junction of the floor tiles with different materials.
- .4 Grouting
  - .1 Wait at least 24 hours between laying the tiles and applying the grout.
  - .2 Apply the grout in accordance with the manufacturers' instructions while respecting the normative requirements ANSI A108.10 or ANSI 108.6.
  - .3 Remove all traces of water, dust and dirt in the joints before applying the grout.
  - .4 Clean and dry the surface of the tiles before grouting.
  - .5 As soon as grouting is complete, promptly clean surfaces of any grout residue.
- .5 Cleaning, sealing and protection
  - .1 Complete cleaning of surfaces following the work, following all of the manufacturer's recommendations. The surfaces must no longer present films of dust, stains, mortar, grout, traces of washing or other, or any residue of any kind.
  - .2 Prohibit traffic during installation and for forty-eight (48) hours following the end of the work, or a longer period if required by the tiling contractor.
  - .3 Protect floors from impact and vibration for at least forty-eight (48) hours after installation. As soon as the tiling of the floor is finished, the General Contractor becomes responsible for protecting the floor from damage.

END OF SECTION 09 30 13

1. **GENERAL**

.1 Works included

- .1 Finishing and preparation of slabs.
- .2 Provide labor, materials, tools and equipment necessary for surface preparation and application of materials specified in this section.

.2 Related works

- .1 Section 07 92 00 – Joints Sealant

.3 Reference standards

- .1 ASTM E1907: Current standard for determining moisture acceptability of concrete slabs for flooring to receive a moisture sensitive coating.
- .2 ASTM D4263: Indication of the Presence of Moisture in Concrete by the Polyethylene Film Method.
- .3 ASTM F 1869: Measure the rate of water vapor emissions for a concrete substrate using anhydrous calcium chloride.
- .4 ASTM D4414: Measuring wet film thickness using a notched gauge.
- .5 ASTM C1583: Standard Test Method for Tensile Strength of Concrete Surfaces and Bond Strength or Tensile Strength of Repaired Concrete and Covering Materials by Direct Tensile Test (Pullout Method) .
- .6 I.C.R.I Directive Number 03732: selection and specification of concrete surface preparation for sealants, coatings and polymeric coatings.

.4 Quality assurance

- .1 The work associated with this section should be performed by a company with a minimum of five years of experience in the application of a floor covering of this type. The installer must be an "approved applicator" of the material manufacturer.
- .2 Before starting the application, organize a preparatory meeting on the site with the contractor, the manufacturer and / or representatives of the materials and the consultant assigned to the project. Discuss the scope of the project, methods of application, details; inspect and test substrates and be aware of ambient conditions.
- .3 Prior to commencement of work, alternative installation procedures and recommendations must be submitted in writing and approved by the project consultant.
- .4 Check at random locations, determined by the consultant assigned to the project, of the thickness of the flooring system once cured. Fill in the areas that have been checked until they are flush with the thickness of the rest of the soil.

.5 Shop drawings

- .1 Send letter from manufacturer certifying that installer is still an "approved applicator" and fully trained in the installation of specified materials.
- .2 Prior to application, send three copies of manufacturer's most recent technical data sheets and installation details of materials to be used.
- .3 Before application, make 300 mm x 300 mm (12 "x 12") samples of the specified finish and color chosen on site, in order to obtain customer approval.

.6 Delivery and storage

- .1 The materials must be delivered to the site in unopened containers, bear the name of the manufacturer, the product and indicate the color. The applicator should record the lot numbers of all materials used and retain them for reference as needed.
- .2 Store materials indoors, in their original, undamaged packaging, in a dry place at a temperature ranging from 16°C to 30°C (60°F to 85°F).

.7 Site conditions

- .1 Install appropriate barriers and legible signage at entrances to avoid general traffic and that of trades on the site during the application and curing of the flooring.
- .2 Maintain an ambient temperature of 20°C (68°F) during installation, for 48 hours before or after, or until fully cured.
- .3 At the time of application, make sure to keep the minimum temperature of the substrate above 10°C (50°F) and always maintain it 3°C (5.5°F) above dew point.
- .4 Preparatory meeting
  - .1 Call a preparatory meeting at least one (1) week before the start of work on this section with the product representative.

.8 Warranty

- .1 The Contractor shall warrant that the work associated with this section will be free from defects attributable to materials and workmanship for one (1) year from the date of installation.

2. **PRODUCTS**

.1 Materials

- .1 Coved baseboards: Apply a coat of Ureco P primer to a thickness of 10 mils. When the primer is tacky, follow with Ureco V mortar to a thickness of 3mm. Apply an Ureco TC topcoat or accepted equivalent at a thickness of 10 mils.

- .2 Floor covering: Cementitious polyurethane for flooring.
  - .1 Basecoat (Self-Priming): Ureco STS, or accepted equivalent, is a three-component, self-leveling cementitious polyurethane system with diffused aggregate. Apply 3mm (1/8 ") thick. Texture must be approved by customer representative. A sample will be taken on site to approve the texture and obtain customer consent.
  - .2 Topcoat: Ureco TC, or accepted equivalent, is a tough, solvent-free protective coating system. Being based on cementitious polyurethane technology, this high resistance product will give you a matte and durable finish. This system is installed between 10 mils thick.
- .3 Color: "Tile Red" according to the Ureco Powerblast Canada charter or equivalent accepted.
- .4 Additional materials: fill all joints, hollows, cracks and any other roughness of the surface with additional materials recommended by the manufacturer of the specified product.
- .5 Leveling mortar recommended by the manufacturer.

### 3. EXECUTION

#### .1 Inspection

- .1 Before the start of the work referred to in this section, the applicator must inspect all concrete surfaces, test them and immediately notify in writing the consultant assigned to the project and the manufacturer of all conditions deemed unsatisfactory likely to cause jeopardize the successful installation of the flooring.
- .2 Once the surface preparation is completed and before applying the coating, perform the following tests to ensure that the concrete is adequate.
- .3 Perform the required mechanical preparation work so that the texture of the concrete surface corresponds to CSP 3-6 of I.C.R.I.
- .4 Evaluate the tensile strength of concrete before application, in accordance with ASTM C1583. Tensile strength should be at least 1.5 MPa (210 psi).
- .5 Before application, establish the dew point of the surface to be covered. The Contractor must ensure that the dew point is monitored during application and initial curing. The surface should always be kept at least 3 ° C (5.5°F) above the dew point during application and curing.

#### .2 Surface preparation

- .1 The surface must be profiled, dry, clean, free of oil and sound. Degrease and decontaminate the surfaces of all oils, greases and others using the Ureco Degreaser.

- .2 Degrease and decontaminate the surfaces of all oils, greases and others using the Ureco Degreaser.
  - .3 Remove dust, laitance, dirt, hardening agents, wax, foreign bodies, existing coatings and others by appropriate mechanical means in order to obtain a profile equivalent to ICRI CSP3-6 with shot blasting machine and / or scarifier and / or grinder with a dust collector. Good adhesion to the substrate is necessary.
  - .4 Eliminate all that exceeds the surface or other conditions likely to affect the installation of the flooring.
  - .5 Cover contiguous surfaces, fixed accessories, and equipment with a protective canvas or other suitable means, to prevent damage attributable to projection, spillage or any other damage likely to occur during the work.
  - .6 Make an anchoring groove at 100mm (4 ") before each stop of the screed, drains, channels and connection points. The groove must be 8mm (3/8") wide and double its depth the thickness of the floor covering.
  - .7 Smooth out unevenness in the support, fill in saw cuts and depressions. Fill cracks, joints, holes and other defects with a filling material in accordance with the Manufacturer's instructions. Major Repair: Ureco V is a three component cementitious polyurethane pigmented mortar system that can be used for floor repairs.
  - .8 At all ends that do not end in a wall or a curb, avoid reducing the thickness. In fact, a minimum thickness of 6mm (1/4 ") must be kept around drains, ditches and any openings in the ground.
  - .9 Unstable cracks and expansion joints must be extended into the flooring system and filled with a flexible product.
- .3 Installation
- .1 Refer to the manufacturer's technical data sheets and instructions.
    - .1 Apply materials in accordance with manufacturer's instructions by contacting them to obtain a recommendation on a particular product.
    - .2 Work, when completed, should correspond to approved samples, show uniform thickness, luster, color and texture. The finished surface must be free from defects that could affect the appearance and performance of the product.
    - .3 Provide adequate protection until complete curing of the floor covering.
- .4 Cleaning
- .1 Remove tapes and covers used to protect adjacent surfaces.
  - .2 Remove excess materials and construction debris, and dispose of them in accordance with local regulations. Leave the site clean.

.5 Protection

- .1 Protect, if necessary, the ground, once finished, by appropriate means, from damage caused by the passage of trades.
- .2 Avoid contact of work with water during curing, for approximately 24 hours at 20°C (68°F).
- .3 Protect finished floor from chemicals until fully cured, approximately 5 days at 20°C (68°F).

END OF SECTION 09 91 01



## 1. GENERAL

### .1 Works included

- .1 The leveling of existing and new surfaces to be painted including all preparation and finish to provide surfaces ready for paint finish.
- .2 Interior painting.
- .3 Items not specifically described, labor, equipment and services required for the preparation and installation of the work.

### .2 Related works

- .1 Section 05 50 00 – Metal Fabrication
- .2 Section 08 11 00 – Metal Doors and Frames

### .3 Reference standards

- .1 Paint in accordance with CAN2-85.100-93, Painting by CSA.
- .2 Use painting materials conforming to MPI standards.
- .3 Provide certificates issued by manufacturers attesting that the products are low in VOCs.

### .4 Conditions of implementation

- .4 Perform work within temperature limits suggested by the manufacturer of the product used.

### .5 Approvals

- .5 Submit to the Architect a sample of each color, following the procedure established in section 01 33 00 Submittal Procedures.

## 2. PRODUCTS

### .1 Materials

- .1 Use painting materials in accordance with the standards mentioned in the list of painting systems.
- .2 Deliver the materials whose brand is specially designated in the specifications in their original sealed packaging and bearing the manufacturers' label.

## 3. EXECUTION

### .1 Preparation

- .1 Protect accessories and surrounding surfaces.

- .2 Clean surfaces, sandpaper and brush to remove any stains, scratches, unevenness or roughness.
  - .3 Do not lay any material on damp, dirty, rough or otherwise defective elements.
  - .4 Remove grease, oils and clean the metal of any rust with a steel brush and emery paper. Wash surfaces with mineral spirits and dry them thoroughly.
  - .5 If the surface preparations described above differ from those of the Manufacturer, please refer to those of the Manufacturer.
  - .6 Prepare galvanized or zinc-plated steel surfaces in accordance with the requirements of CGSB 85-GP-16M.
  - .7 Prepare in accordance with the requirements of standard CGSB 85-GP-11M, CGSB 85-GP-18M, steel surfaces exposed to water or to high degrees of humidity.
  - .8 Surface preparation for steel doors: Such as SSPC-SP15 Commercial grade mechanical cleaning (sanding) making sure to create a 1 mil profile. (25 microns).
- .2 Implementation
- .1 Apply paint in uniform coats, without burrs or other visible defects at 2 meters.
  - .2 Do not superimpose one coat of paint on another until it has dried perfectly.
  - .3 Sand each coat of paint with fine paper and dust it before applying the next.
  - .4 Finish not only surfaces exposed to view, but also surfaces exposed to air, such as: door edges, projecting tops and edges of cabinets, cubicles, etc.
- .3 Painting systems
- Note: On existing surfaces already painted, be sure to clean, remove grease, oils and decontaminate the surfaces, without roughening the surface possibly containing contaminating materials. If the existing paint is alkyd based, apply one coat of primer, followed by two coats of finish. Clean existing surfaces using the method described in article 3.1 of this section.
- .1 Existing steel exterior doors and frames
    - .1 Apply one (1) coat of primer "MF Acrylic Universal 278808", or equivalent accepted.
    - .2 Apply the required and necessary number of coats, at least two (2) coats, of acrylic urethane paint such as Sierra Performance Metalmax S37 "0 VOC, semi-gloss finish or equivalent accepted.
  - .2 Existing and new steel interior doors and frames.
    - .1 Apply one (1) coat of primer "MF Acrylic Universal 278808", or equivalent accepted.

- .2 Apply the required and necessary number of coats, at least two (2) coats, of acrylic urethane paint such as Sierra Performance Metalmax S37 "0 VOC, semi-gloss finish or equivalent accepted.
- .3 Wall and ceiling in existing gypsum or plaster panels.
  - .1 Apply one (1) coat of MF Primer-Sealer Water-based alkyd emulsion primer such as "MF Adhero Hybrode 297-0" or accepted equivalent.
  - .2 Apply two (2) coats of 0-Cov two-component water-based epoxy free of hazardous air pollutants, satin finish, such as MF Sierra Performance S62 or equivalent accepted.
- .4 For ferrous metal, primed or not. Paint all visible interior metals. Paint all visible electrical and mechanical conduits / boxes. Existing and new tubing and guards.
  - .1 Apply one (1) coat of latex primer for galvanized metal "MF Universal Acrylic 278808, or equivalent accepted.
  - .2 Apply the required and necessary number of coats, at least two (2) coats, of 0 VOC enamel such as Sierra Performance Métalmax S37 from MF Paints or equivalent accepted.
- .5 Existing concrete block walls
  - .1 Apply one (1) coat of concrete block sealer primer such as MF Water-based alkyd emulsion primer such as "MF Adhero Hybrid 297-0" or equivalent accepted and approved MPI-172.
  - .2 Apply the number of coats required and necessary, at least two (2) coats, of water-based epoxy two-component 0-VOC and without hazardous atmospheric pollutants, satin finish, such as MF Sierra Performance S62 or equivalent accepted and approved Green Seal GS-11.
- .6 Existing plaster wall with relief
  - .1 Apply one (1) coat of 100% acrylic super adherent primer such as "MF Adhero Plus 290-0" or accepted equivalent.
  - .2 Apply the number of coats required and necessary, at least two (2) coats, of water-based epoxy two-component 0-VOC and without hazardous atmospheric pollutants, satin finish, such as MF Sierra Performance S62 or equivalent accepted and approved Green Seal GS-11.

END OF SECTION 09 91 00