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ARCHITECTURE

Section 00 00 07	Seal and Signature
Section 00 01 10	Table of Contents
Section 01 33 00	Submittal Procedures
Section 01 61 00	Common Product Requirements
Section 01 73 03	Execution Requirements
Section 01 74 11	Cleaning
Section 01 77 00	Closeout Procedures
Section 01 78 00	Closeout Submittals
Section 02 41 16	Structure Demolition
Section 03 36 20	Concrete Repairs
Section 04 05 10	Common Work Results for Masonry
Section 04 05 12	Masonry Mortar and Grout
Section 04 22 00	Concrete Unit Masonry
Section 05 50 00	Metal Fabrications
Section 06 10 11	Rough and Finish Carpentry
Section 06 40 00	Architectural Woodwork
Section 07 21 16	Blanket Insulation
Section 07 92 00	Joint Sealants
Section 08 10 00	Door and Frame Schedule
Section 08 11 00	Metal Doors and Frames
Section 08 14 16	Flush Wood Doors
Section 08 71 10	Door Hardware
Section 08 80 50	Glazing
Section 09 10 00	Finishes Schedule
Section 09 21 16	Gypsum Board Assemblies
Section 09 22 16	Non-Structural Metal Framing
Section 09 30 13	Ceraminc Tiles
Section 09 51 13	Acoustical Ceiling Panels
Section 09 53 00	Acoustical Suspension
Section 09 65 16	Resilient Sheet Flooring
Section 09 68 13	Tile Carpeting
Section 09 91 23	Interior Painting
Section 10 28 10	Toilet and Bath Accessories

END OF SECTION

		PAGES
Section 00 00 07	Seal and Signature	1
Section 00 01 10	Table of Contents	2
DIVISION 01	GENERAL REQUIREMENTS	
Section 01 33 00	Submittal Procedures	4
Section 01 61 00	Common Product Requirements	4
Section 01 73 03	Execution Requirements	2
Section 01 74 11	Cleaning	2
Section 01 77 00	Closeout Procedures	1
Section 01 78 00	Closeout Submittals	4
DIVISION 02	EXISTING CONDITIONS	
Section 02 41 16	Structure Demolition	8
DIVISION 03	CONCRETE	
Section 03 36 20	Concrete Repairs	3
DIVISION 04	MASONRY	
Section 04 05 10	Common Work Results for Masonry	6
Section 04 05 12	Masonry Mortar and Grout	3
Section 04 22 00	Concrete Unit Masonry	2
DIVISION 05	METALS	
Section 05 50 00	Metal Fabrications	5
DIVISION 06	WOOD AND PLASTIC	
Section 06 10 11	Rough and Finish Carpentry	3
Section 06 40 00	Architectural Woodwork	8
DIVISION 07	THERMAL AND MOISTURE PROTECTION	
Section 07 21 16	Blanket Insulation	3
Section 07 92 00	Joint Sealants	8
DIVISION 08	OPENINGS	
Section 08 10 00	Door and Frame Schedule	
Section 08 11 00	Metal Doors and Frames	8
Section 08 14 16	Flush Wood Doors	4
Section 08 71 10	Door Hardware	3
Section 08 80 50	Glazing	6

DIVISION 09	FINISHES	
Section 09 10 00	Finishes Schedule	2
Section 09 21 16	Gypsum Board Assemblies	4
Section 09 22 16	Non-Structural Metal Framing	4
Section 09 30 13	Ceramic Tiles	4
Section 09 51 13	Acoustical Panel Ceilings	3
Section 09 53 00	Acoustical Suspension	3
Section 09 65 16	Resilient Sheet Flooring	7
Section 09 68 13	Tile Carpeting	7
Section 09 91 23	Interior Painting	11
DIVISION 10	SPECIALTIES	
Section 10 28 10	Toilet and Bath Accessories	3

Part 1 General

1.1 SECTION CONTENTS

.1 Shop drawings and product data.

.2 Product samples and mock-ups.

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 RELATED SECTIONS

.1 Section 01 78 00 – Closeout Submittals.

1.4 ADMINISTRATIVE

.1 Submit to Ministry Representative submittals listed for review. Submit promptly and in orderly sequence as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Do not proceed with Work affected by submittal until review is complete.

.3 Present shop drawings, product data, samples and mock-ups in SI Metric units.

.4 Where items or information is not produced in SI Metric units converted values are acceptable.

.5 Notify Ministry Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.6 Review submittals prior to submission to Ministry Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

.7 Verify that field measurements and affected adjacent Work are co-ordinated.

.8 Contractor's responsibility for errors and omissions in submission is not relieved by Ministry Representative's review of submittals.

.9 Contractor's responsibility to deliver submittals according to contract requirements is not relieved by Ministry Representative's review of submittals.

.10 Keep one reviewed copy of each submission on site.

1.5 SHOP DRAWINGS AND PRODUCT DATA

.1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.

.2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of

Section under which adjacent items will be supplied and installed. Indicate cross-references to design drawings and specifications.

.3 Allow 15 work days for Ministry Representative's review of each submission.

.4 Adjustments made on shop drawings by Ministry Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Ministry Representative prior to proceeding with Work.

.5 Make changes in shop drawings as Ministry Representative may require, consistent with Contract Documents. When resubmitting, notify Ministry Representative in writing of revisions other than those requested.

.6 Accompany submissions with transmittal letter, in duplicate, containing:

- .1 Date.
- .2 Project title and number.
- .3 Contractor's name and address.
- .4 Identification and quantity of each shop drawing, product data and sample.
- .5 Other pertinent data.

.7 Submissions include:

- .1 Date and revision dates.
- .2 Project title and number.
- .3 Name and address of:
  - .1 Subcontractor.
  - .2 Supplier.
  - .3 Manufacturer.
- .4 Details of appropriate portions of Work as applicable:
  - .1 Materials and Fabrication.
  - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
  - .3 Setting or erection details.
  - .4 Capacities.
  - .5 Performance characteristics.
  - .6 Standards.
  - .7 Operating weight.
  - .8 Wiring diagrams.
  - .9 Single line and schematic diagrams.
  - .10 Relationship to adjacent work.

.8 Submit 2 printed copies or one PDF version of shop drawings requested in specification Sections.

.9 Ministry Representative will return 1 copy to Contractor. Contractor will make 7 printed copies and distribute them to the appropriate persons.

.10 Distribute shop drawing and product data copies only after Ministry Representative has finished review.

.11 Delete information not applicable to project.

.12 Supplement standard information to provide details applicable to project.

.13 If upon review by Ministry Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

1.6 SAMPLES

.1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.

.2 Deliver samples prepaid to Ministry Representative's business address.

.3 Notify Ministry Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.

.4 Where colour, pattern or texture is criterion, submit full range of samples.

.5 Adjustments made on samples by Ministry Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Ministry Representative prior to proceeding with Work.

.6 Make changes in samples that Ministry Representative may require, consistent with Contract Documents.

.7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

END OF SECTION

Part 1 General

1.1 SECTION CONTENTS

.1 Quality, availability, storage, handling, protection and transportation of products.

.2 Manufacturer's instructions.

.3 Installation, coordination and fasteners;

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 RELATED SECTIONS

.1 Section 01 73 03 – Execution Requirements.

1.4 REFERENCES

.1 Within text of each specifications section, reference may be made to reference standards.

.2 Conform to these reference standards, in whole or in part as specifically requested in specifications.

.3 If there is question as to whether products or systems are in conformance with applicable standards, the Ministry Representative reserves right to have such products or systems tested to prove or disprove conformance.

.4 Cost for such testing will be born by the Ministry Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

.5 If no specific date or edition is indicated, conform to most recent applicable norms.

1.5 QUALITY

.1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality (in accordance with the specification terms) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.

.2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.

.3 Should disputes arise as to quality or fitness of products, decision rests strictly with the Ministry Representative based upon requirements of Contract Documents.

.4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

.5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.6 AVAILABILITY

.1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Ministry Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.

.2 In event of failure to notify Ministry Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Ministry Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.7 STORAGE, HANDLING AND PROTECTION

.1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.

.2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.

.3 Store products subject to damage from weather in weatherproof enclosures.

.4 Store cementitious products clear of earth or concrete floors, and away from walls.

.5 Sand for mortar and grout shall remain dry and clean. Store on wood pallets and cover with waterproof tarps during inclement weather.

.6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.

.7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

.8 Replace damaged products at own expense and to satisfaction of Ministry Representative.

.9 Touch-up damaged factory finished surfaces to Ministry Representative’s satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.8 TRANSPORTATION

.1 Pay costs of transportation of products required in performance of Work.

1.9 MANUFACTURER'S INSTRUCTIONS

.1 Unless otherwise indicated in specifications install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

.2 Notify Ministry Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Ministry Representative will establish course of action.

.3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Ministry Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.10 QUALITY OF WORK

.1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Ministry Representative if required Work is such as to make it impractical to produce required results.

.2 Do not employ anyone unskilled in their required duties. Ministry Representative reserves right to require dismissal from site, workers deemed incompetent, negligent, insubordinate, careless or whose presence will not be permitted on the Work site.

.3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Ministry Representative, whose decision is final.

1.11 COORDINATION

.1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.

.2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.12 CONCEALMENT

.1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.

.2 Prior to concealment inform Ministry Representative if there is interference. Install as directed by Ministry Representative.

1.13 REMEDIAL WORK

.1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.

.2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.14 LOCATION OF FIXTURES

.1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.

.2 Inform Ministry Representative of conflicting installation. Install as directed.

1.15 FASTENINGS

.1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.

.2 Prevent electrolytic action between dissimilar metals and materials.

.3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.

.4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.

.5 Keep exposed fastenings to a minimum, space evenly and install neatly.

.6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.16 FASTENINGS - EQUIPMENT

.1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.

.2 Use heavy hexagon heads, semi finished unless otherwise specified. Use No. 316 stainless steel for exterior areas.

.3 Bolts may not project more than one diameter beyond nuts.

.4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use stainless steel washers for stainless steel sheet.

1.17 PROTECTION OF WORK IN PROGRESS

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

END OF SECTION

Part 1 General

1.1 SECTION CONTENTS

.1 Exigences et restrictions regarding cutting and patching.

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 RELATED SECTIONS

.1 Section 01 33 00 – Submittal Procedures.

.2 Technical sections of specifications, regarding cutting and patching necessary for this project. Advise sub-trades in advance.

1.4 REQUEST FOR CUTTING AND PATCHING WORK

.1 Submit written request before cutting or patching if the following may be affected:

- .1 Structural integrity of any element.
- .2 Integrity of waterproofed elements or elements exposed to weather.
- .3 Effectiveness, maintenance, or safety of any functional element.
- .4 Aesthetic qualities of visible elements.

.2 Request must include and specify following:

- .1 Project name.
- .2 Location and description of affected elements.
- .3 Explanation of need to perform cutting and patching work being requested.
- .4 Description of work to be performed and products to be used.
- .5 Alternative solutions.
- .6 Written permission of other contractor.
- .7 Date and time that work will be performed.

1.5 MATERIALS

.1 Materials required to perform work identical to existing adjacent work.

.2 Change in Materials: submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

1.6 PREPARATION

.1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

.2 After uncovering, inspect conditions affecting performance of Work.

.3 Beginning of cutting or patching means acceptance of existing conditions.

.4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

.5 Provide protection from elements for areas that are to be exposed by uncovering work; maintain excavations free of water.

1.7 EXECUTION

.1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.

.2 Fit several parts together, to integrate with other Work.

.3 Uncover Work to install ill-timed Work.

.4 Remove and replace defective and non-conforming Work.

.5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.

.6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

.7 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.

.8 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.

.9 Restore work with new products in accordance with requirements of Contract Documents.

.10 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

.11 At penetrations through fire-resistant walls, ceilings or floors, completely fill voids around with fireproof material over the entire thickness of the penetrated element.

.12 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.

.13 Unless otherwise specified, cover all conduits, ducts, and cables in walls, ceilings or floors in finished rooms.

END OF SECTION

Part 1 General

1.1 SECTION CONTENTS

.1 Project cleanliness

.2 Final cleaning

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 SECTIONS CONNEXES

.1 Section 01 77 00 - Closeout Procedures.

1.4 PROJECT CLEANLINESS

.1 Maintain Work in tidy condition, free from accumulation of waste products and debris.

.2 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.3 Clear snow and ice from access to building, bank/pile snow in designated areas only.

.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.5 Provide on-site containers for collection of waste materials and debris. Dispose of waste and debris at designated off site facilities each day.

.6 Provide and use marked separate bins for recycling.

.7 Dispose of waste materials and debris off site in containers at the end of each work shift.

.8 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.

.9 Store volatile waste in covered metal containers, and remove from premises at end of each working day. Sw

.10 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

.11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

.12 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.5 FINAL CLEANING

.1 Remove waste products and debris other than that caused by others, and leave Work clean and ready for occupancy.

.2 Prior to final review remove surplus products, tools, construction machinery and equipment.

.3 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.

.4 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls and floors.

.5 Clean lighting reflectors, lenses, and other lighting surfaces.

.6 Vacuum clean and dust building interiors, behind grilles, louvres and screens.

.7 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.

.8 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.

.9 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.

.10 Remove dirt and other disfiguration from exterior surfaces.

.11 Clean and sweep roofs, gutters, areaways, and sunken wells.

.12 Sweep and wash clean paved areas.

.13 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.

.14 Clean roofs, downspouts, and drainage systems.

.15 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

.16 Remove snow and ice from access to building.

END OF SECTION

Part 1 General

1.1 SECTION CONTENTS

.1 Administrative requirements prior to the preliminary and final inspections.

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 RELATED SECTIONS

.1 Section 01 78 00 – Closeout Submittals.

1.4 INSPECTION AND DECLARATION

.1 Contractor's Inspection: Contractor and sub-contractors must inspect their work, identify defects and make necessary repairs to ensure conformance to contract documents.

.1 Notify Ministry Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.

.2 Request Ministry Representative's Inspection.

.2 Ministry Representative's Inspection: the Ministry Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.

.3 Completion: submit written certificate that following have been performed:

.1 Work has been completed and inspected for compliance with Contract Documents.

.2 Defects have been corrected and deficiencies have been completed.

.3 Equipment and systems have been tested, set-up and calibrated, and are completely operational.

.4 Certificates required by utility companies have been submitted.

.5 Work is complete and ready for final inspection.

.4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative, and Contractor. If Work is deemed incomplete by Ministry Representative, complete outstanding items and request reinspection.

END OF SECTION

Part 1 General

1.1 SECTION CONTENTS

.1 Project file, samples and specification.

.2 Materials and Equipment.

.3 Product data, samples, materials and related information.

.4 Spare parts, maintenance materials and special tools.

.5 Warranties and bonds.

1.2 PRIORITY

.1 In the case of Work performed for the federal government, Division 1 sections take priority over the technical specifications of the other divisions.

1.3 SUBMITTALS

.1 Instructions to be prepared by competent persons with necessary knowledge of operation and maintenance of products or systems described.

.2 Copy will be returned after final inspection, with Ministry Representative's comments.

.3 Revise content of documents as required prior to final submittal.

.4 Two (2) weeks prior to Substantial Performance of the Work, submit to the Ministry Representative, two (2) final copies of operating and maintenance manuals in French.

.5 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.

.6 Furnish evidence, if requested, for type, source and quality of products provided.

.7 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.

.8 Pay costs of transportation.

.9 When existing equipment is dismantled or replaced, the existing blue lamicoids on the equipment must be handed to the Ministry Representative.

1.4 FORMAT

.1 Organize data as instructional manual.

.2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.

.3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.

.4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.

.5 Arrange content by systems, under Section numbers and sequence of Table of Contents.

.6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.

.7 Text: manufacturer's printed data, or typewritten data.

.8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

1.5 CONTENTS - EACH VOLUME

.1 Table of Contents: provide title of project

.1 Addresses and telephone numbers of Ministry Representative and Contractor name of responsible parties.

.2 Schedule of products and systems, indexed to content of volume.

.2 For each product or system

.1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.

.3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.

.4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

.5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.6 AS-BUILTS AND SAMPLES

.1 Maintain, in addition to requirements in General Conditions, at site for Ministry Representative one record copy of:

.1 Contract Drawings.

.2 Specifications.

.3 Addenda.

.4 Change Orders and other modifications to Contract.

.5 Reviewed shop drawings, product data, and samples.

.6 Field test records.

.7 Inspection certificates.

.8 Manufacturer’s certificates.

.2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.

.3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.

.4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.

.5 Keep record documents and samples available for inspection by Ministry Representative.

1.7 RECORDING ACTUAL SITE CONDITIONS (AS BUILT)

.1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Ministry Representative.

.2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.

.3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.

.4 Contract Drawings and shop drawings: mark each item to record actual construction, including:

.1 Field changes of dimension and detail.

.2 Changes made by change orders.

.3 Details not on original Contract Drawings.

.4 References to related shop drawings and modifications.

1.8 EQUIPMENT AND SYSTEMS

.1 For each item of equipment and each system: Include description of unit or system, and component parts. Give function, normal operation characteristics and limiting conditions.
Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.

.2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.

.3 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

.4 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

.5 Provide servicing and lubrication schedule, and list of lubricants required.

.6 Include manufacturer's printed operation and maintenance instructions.

.7 Include sequence of operation by controls manufacturer.

.8 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

.9 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

.10 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

.11 Additional requirements: as specified in individual specification sections.

1.9 MATERIALS AND FINISHES

.1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and color and texture designations. Give the information necessary to order special products.

.2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

.3 Additional requirements: as specified in individual specifications sections.

.4 Collaborate with Ministry Representative in work scheduling to reduce conflicts and facilitate site use by CSC.

1.10 STORAGE, HANDLING AND PROTECTION

.1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.

.2 Store in original and undamaged condition with manufacturer's seal and labels intact.

.3 Store components subject to damage from weather in weatherproof enclosures.

.4 Store paints and freezable materials in a heated and ventilated room.

.5 Remove and replace damaged products at own expense and to satisfaction of Ministry Representative.

1.11 WARRANTIES AND BONDS

.1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.

.2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

.3 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.

.4 Verify that documents are in proper form, contain full information, and are notarized.

END OF SECTION

Part 1 General

1.1 ACTION AND INFORMATIONAL REQUIREMENTS

.1 When requested by the competent authorities, submit for approval the shoring and bracing designs before undertaking the demolition work. These drawings must be prepared by a qualified engineer authorized to practice in Canada in the province and must illustrate the proposed method of work.

1.2 SCOPE OF WORK

.1 This section includes the demolition and dismantling of building parts in order to permit envelope refurbishing, as indicated in the drawings.

.2 The work includes:

.1 Demolition of doors and windows, including frames;

.2 Demolition of interior partitions, including concrete block partitions;

.3 Partial demolition of partitions, including concrete block partitions;

.4 Demolition of mechanical and electrical equipment;

.5 Partial demolition of interior finishes;

.6 All other elements indicated in drawings.

1.3 REFERENCES

.1 CSST: current labor standards.

.2 Canadian Standards Association (CSA International).

.1 CSA S350-M1980 (R1998), Code of Practice for Safety in Demolition of Structures

1.4 DEFINITIONS

.1 Hazardous Materials: Dangerous substances, dangerous goods, hazardous commodities and hazardous products that may include, but are not limited to, poisons, corrosive agents, inflammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well-being or the environment if handled improperly.

.2 Remove: uninstall a component of a construction. In the case of a temporary removal, the removal work must be carried out with care to allow relocation at a later date.

.3 Demolish: dismantle or disassemble a building or component thereof regardless of the condition of the materials after the work and remove the waste from the site.

.4 Disassemble: dismantle or disassemble a construction or component thereof with care for full or partial recovery.

1.5 ENVIRONMENTAL PROTECTION

.1 Ensure that demolition works do not cause adverse effects on wildlife, groundwater and adjacent streams and that they do not generate excessive levels of air or noise pollution.

.2 It is forbidden to burn waste and materials on the site.

.3 Do not discharge waste or volatile materials, such as mineral spirits, oils, petroleum-based lubricants or toxic cleaning solutions into watercourses or storm or sanitary sewers.

.1 Ensure that appropriate methods for the disposal of this type of waste are maintained throughout the duration of the work.

.4 Do not discharge water containing suspended solids into streams, storm sewers, or sanitary sewers or on adjacent land, by pumping or otherwise.

1.6 EXISTING CONDITIONS

.1 If a material resembling asbestos applied by projection or trowel or other materials designated and listed as hazardous is discovered during the execution of the work (other than the materials already identified in the asbestos report), suspend work, take appropriate precautions and inform the departmental representative immediately. Do not resume work until you have received written instructions from the Ministry Representative.

.2 Notify the Ministry Representative before obstructing access to the building or interrupting services.

1.7 WASTE PROCESSING SITES

.1 Send all excess materials to a regulatory approved site.

1.8 SCHEDULING

.1 Co-ordinate work with other activities at site to ensure timely and orderly progress of work.

Part 2 Products

2.1 EQUIPMENT

.1 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

.2 Demonstrates that tools, equipment and machinery are used in a manner that permits the recovery of materials in the best condition possible.

.3 Provide for all demolition conditions related to repairs that may interfere with or affect work schedule.

.4 Provide all necessary material, equipment and tools for demolition and reconstruction.

Part 3 Execution

3.1 PROTECTIVE MEASURES

.1 Take steps to prevent movement or collapse of structures, utility pipelines, sidewalks, pavements, trees, landscaping, adjacent soils and parts of buildings to be preserved, and prevent them from being damaged.

.1 Provide and install bracing and shoring parts and carry out the necessary work.

.2 If necessary, repair structures damaged by demolition work as directed by the Ministerial Representative.

.2 Properly support structures or works described and, if it appears that demolition poses a danger to the rest of the structure or pipeline works, take appropriate precautionary measures, stop work and notify the Ministerial Representative.

.3 Ensure that demolition will not block the surface water drainage system or the electrical and mechanical systems that must remain in function.

3.2 PRELIMINARY WORK

.1 Protection

.1 Minimize dust and noise from work and inconvenience to occupants.

.2 Protect appliances, mechanical and electrical installations and utilities.

.3 Provide dust shields, tarpaulins, guard rails, support elements and other necessary protective devices.

.4 Special protective measures are required and must be considered for demolition and reconstruction to adequately protect the premises and temporary storage of existing windows until new units are delivered. The contractor will not be able to invoke a misunderstanding of the work to be carried out and the general coordination within the project.

.5 As the demolition progresses, the contractor will be required to coordinate the reconstruction to keep the building protected from the weather.

.2 Disconnect and redirect electrical, telephone and telecommunication mains. Provide warning marks on piping and electrical equipment that must remain live during demolition to supply other structures.

.3 Identify and protect utility lines. Do not touch any utility lines that are in service or under voltage and that cross the premises and should not be moved.

.4 Débrancher et obturer les canalisations désignées des installations mécaniques.

3.3 GENERAL CONDITIONS

.1 Carry out demolition work in accordance with CSST standards.

3.4 REMOVAL OF HAZARDOUS WASTES

.1 Remove materials defined by environmental protection authorities as contaminated or dangerous from site and dispose of safely so as to minimize danger at the site or during disposal.

.2 Prior to the start of demolition work, remove contaminated or hazardous materials from site as directed by the appropriate authorities according to the architect and disposed of by way of the designated facilities, in a manner that is safe and in accordance with regulatory requirements.

3.5 DEMOLITION

.1 Dismantle parts of existing building that are required to permit new construction or installation of new finishes.

.2 Shrink the edges of partially demolished components of the building within the tolerances specified by the Consultant to facilitate the installation of the new components.

.3 Turn all concrete debris generated by foundation demolition work in to materials of appropriate size for recycling.

.4 Remove material, piping and other items that interfere with the rehabilitation or repair of existing surfaces and reinsert them as work progresses.

.5 At the end of each workday, ensure that the work is safe and stable.

.1 Protect at all times against exterior elements all interior surfaces of parts not to be demolished

.6 Carry out demolition work in a manner to minimize dust.

.7 Contain fibrous materials (e.g. insulation) to minimize the release of fibers into the air during transportation within facilities.

.8 Unless otherwise specified, demolition materials shall be removed and disposed of from the site in accordance with the requirements of the competent authorities.

.9 Where temporary removal of existing materials, equipment or appliances is indicated in the drawings, carefully remove the items in question and store them in a safe place until reinstated.

3.6 STORAGE

.1 During storing of items to be re-installed, follow these instructions:

.1 Clearly label all recovered materials, indicating their nature and quantity.

.2 Take appropriate safety measures and allocate sufficient resources to prevent theft, vandalism and deterioration of materials.

3.7 DISPOSAL OF CONSTRUCTION MATERIALS

.1 If it interferes with the progress of work, any material set aside must be removed as directed by the Ministerial Representative.

.2 Remove similar materials set aside and to be disposed of using the same environmental method, once the collection of these materials is complete.

.3 Transport materials intended for environmental disposal through approved waste-accepting organizations in accordance with relevant regulations.

.4 Dispose of materials not designated for environmental disposal in accordance with applicable regulations.

3.8 CLEANING AND RESTORATION

.1 Keep the premises clean and in good order throughout the duration of the demolition work.

.2 Upon completion of work, resurface areas, parking areas, pedestrian walkways and light poles that have been affected by the work will be returned to a condition consistent with that of adjacent undisturbed surfaces.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 02 41 16 – Structure Demolition

.2 Division 04 – Masonry Work

.3 Section 09 65 16 – Resilient Sheet Flooring

.4 Section 09 68 13 – Tapis-moquettes en dalles

.5 Section 09 91 23 – Interior Painting

1.2 REFERENCES

.1 CAN / CGSB-25.20-95, Flooring Primer.

.2 CAN/CSA-A23.1-F09/A23.2-F09, Ready-Mix Concrete - Certification Program.

1.3 PERFORMANCE

.1 Quality of products and quality of work: according to the requirements of the general conditions.

.2 Submit written certification that the various treatment products used are compatible and will not affect the properties of the floor coverings or the adhesives used for their installation.

1.4 TECHNICAL DATA SHEETS

.1 Submit written certification that the various treatment products used are compatible and will not affect the properties of the floor coverings or the adhesives used for their installation.

1.5 SCOPE OF WORK

.1 Concrete surfaces and damaged concrete blocks repairs due to dismantling existing finishes and furnishings.

.2 For all existing surfaces on which a floor finish is dismantled, provide for the cleaning and preparation of concrete floor surfaces and masonry walls of concrete blocks to the specified profile and surface suitable for receiving the new finishes described in the.

.3 Filling holes less than 150mm in diameter, filling of cracks or depressions and leveling of surfaces.

1.6 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Deliver materials to job site in their original packaging, which must be labeled with the name and address of the manufacturer.

PART 2 Products

2.1 MATERIALS

.1 Concrete block wall repairs, walls and cast-concrete ceilings: One-component, polymer-modified repair and reprofiling mortar with integrated corrosion inhibitor for ceilings and vertical surfaces:

- .1 Compressive strength at 28 days: 40 MPa ASTM C109;
- .2 Bonding strength at 28 days: 10 MPa CAN A23.3-6B;
- .3 Primer: as recommended by manufacturer

.2 Floor Repair: Fast-setting two-component mortar based on polymer-modified cement with the following characteristics (roughness greater than 3mm to 38mm):

- .1 Compressive strength at 28 days: 50 MPa ASTM C109;
- .2 28-day bonding strength: 17 MPa CAN A23.3-6B
- .3 Primer: as recommended by manufacturer.

.3 Floor repair : Rapid setting portland cement repair mortar with the following characteristics (roughness greater than 25mm to 200mm):

- .1 Compressive strength at 28 days: 45 MPa ASTM C109;
- .2 7-day bonding strength: 2.5 MPa ASTM C882;
- .3 Primer: as recommended by manufacturer.

.4 Leveling: repair mortar based on portland cement with rapid setting, having the following characteristics:

- .1 Compressive strength at 28 days: 20.7 MPa ASTM C109;
- .2 Primer: as recommended by manufacturer.

PART 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with the manufacturer's requirements, recommendations and written specifications, including any technical bulletins available, instructions in the product catalog, product catalogs and technical data.

.2 Apply materials in accordance with manufacturer's recommendations.

3.2 SURFACE PREPARATION

.1 All concrete surfaces with a dismantling finish shall be treated with a suitable mechanical method such as a portable steel spray, sand or water jet, sanding with a diamond grinder or any other method approved by the departmental representative.

.2 Remove any old glue, dust, laitance, grease, oil, dirt, foreign matter, renders and disintegrated materials from the surface to surfaces suitable for new finishes.

.3 Clean surfaces with vacuum cleaner, remove all dust.

.4 Ensure that the surfaces to be repaired are solid and sound, dry and free of foreign matter that may prevent adhesion of repair materials or new finish materials.

.5 Make a sample of each type of surface to be prepared for approval by the architect..

3.3 MIXING

.1 Mechanically mix according to manufacturer's recommendations.

.2 For filling cracks, holes or other irregularities, prepare a dense mortar by mixing it with uniformed size aggregates.

3.4 PRIMER

.1 Apply primer or bonding agents in accordance with methods recommended by the product manufacturer.

3.5 SURFACE REPAIRS

.1 Close all openings and tracks in concrete slabs left as a result of demolition and removal of mechanical, electrical or architectural works. If necessary, temporarily block the lower opening of the holes to be closed

.2 Openings and traces shall be filled to the level of adjacent surfaces.

.3 Fill the rough edges left by the removal of the existing furniture and any other roughness according to the manufacturer's instructions and level the adjacent surfaces.

.4 Ensure bonding of new mortar to existing concrete.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 04 05 12 - Mortar and Masonry Grout.

.2 Section 04 22 00 - Concrete Unit Masonry.

.3 Section 07 92 00 - Joint Sealants.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International).

.1 CSA A179-94(R1999), Mortar and Grout for Unit Masonry.

.2 CSA-A371-94 (R1999), Masonry Construction for Buildings.

1.3 SCOPE OF WORK

.1 In general, without being limited by this list, and other than those prescribed in demolition, the masonry work consists of :

.1 Supply and installation of new concrete bloc walls.

.2 Supply and construction openings of existing block walls to be closed off.

.3 Any other work described in the documents and required in order to achieve complete and finished Work.

1.4 SAMPLES

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

.2 Submit samples as follows:

.1 Two of each type of masonry unit specified.

.2 One of each type of masonry accessory specified.

.3 Minimum required for testing purposes.

1.5 TEST REPORTS

.1 Submit laboratory test reports in accordance Section 01 33 00 – Submittal Procedures.

.2 Submit laboratory test reports certifying compliance of masonry units and mortar ingredients with specification requirements.

.3 For clay elements, respect CSA and ASTM requirements mentioned above. Specify initial absorption rate of proposed elements.

1.6 MOCK-UPS

.1 Construct mock-up panel of exterior masonry wall construction 1200 x 1800 mm showing masonry colours and textures, use of reinforcement, ties, through-wall flashing, weep holes, jointing, coursing, mortar and workmanship.

.2 Construct mock-up where directed.

.3 Allow 24 hours for inspection of mock-up by Ministerial representative before proceeding with work.

.4 When accepted by Ministerial representative, mock-up will demonstrate minimum standard for this work. Mock-up may remain as part of finished work.

1.7 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Deliver materials to job site in dry condition.

.3 Keep materials dry until use except where wetting of bricks is specified.

.4 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.8 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal paper, plastic and corrugated cardboard packaging material in accordance with Waste Management Plan.

1.9 SITE CONDITIONS

.1 Cold weather installation to be in accordance with following instructions, applicable standards, and requirements of masonry veneer product manufacturers in regards to temperature, heating, and protection.

.2 The use of antifreeze or salt to lower freezing point of mortar is not permitted. The use of calcium chloride or other accelerating agents is also not permitted.

.3 Ensure that during cold weather masonry installation, substrate insulation is in place in order to create a weather barrier that will help maintain prescribed temperature within temporary work shelter. If for a reason out of Contractor's control the insulation is not installed in time, masonry sub-contractor must take necessary precautions to maintain prescribed temperature for the time required for mortar to cure.

.4 Cold weather installation:

.1 Below 4.4 degrees C (40 degrees F) Mortar temperature to be between 21 degrees C (70 degrees F) and 48.9 degrees C(120 degrees F); water and sand temperature to be between 21 degrees C (70 degrees F) and 71 degrees C(160 degrees F).

.2 Below 0 degrees C (32 degrees F), location to be enclosed and heated. Water and sand to be heated to between 21 degrees C (70 degrees F) and 71 degrees C (160 degrees F).

.3 Below 7.8 degrees C (18 degrees F), masonry elements to be heated to at least 4.4. degrees C (40 degrees F).

.4 No masonry installation to be performed when temperature is below negative 17.8 degrees C (0 degrees F) if requirements for heating, shelter, and other recommendations of this section are not met.

.5 Heating and shelter requirements:

.1 When temperature is between 0 degrees C (32 degrees F) and 4.4 degrees C (40 degrees F): normal conditions (use minimal required protection).

.2 When temperature is between negative 3.9 degrees C (25 degrees F) and 0 degrees C (32 degrees F) : heat with salamanders and provide windbreak type shelter.

.3 When temperature is between 7.7 degrees C (18 degrees F) and negative 3.9 degrees C (25 degrees F) : heat with salamanders and provide plastic or canvas shelter.

.4 Add following specifications to requirements of paragraph 5.15.2 of CSA-A371.

.6 Hot weather installation:

.1 Cover fresh masonry work with non-staining weatherproof tarp in order to keep mortar from drying out.

.2 As long as masonry work is not finished or protected by flashings or other permannet construction, it must be kept dry with non-staining weatherproof tarps extended over walls for a distance sufficient to protect from wind-driven rain.

.3 Protect masonry work and adjacent work from dirt and damage. Protect finished work from mortar spatter with non-staining tarps.

1.10 PROTECTION OF WORK

.1 Protect masonry work and adjacent work from dirt and damage.

.2 Protect finished work from mortar spatter with non-staining tarps.

.3 Protect exterior walls at grade level from soil spatter before sodding or other landscaping work.

.4 Provide temporary shoring of masonry work until permanent lateral support is in place.

PART 2 Products

2.1 MATERIALS

.1 Masonry materials are specified in Related Sections mentioned in 1.1.

PART 3 Execution

3.1 INSTALLATION

.1 Do masonry work in accordance with CSA-A371 except where specified otherwise.

.2 Build masonry plumb, level, and true to line, with vertical joints in alignment.

.3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.2 CONSTRUCTION

.1 Jointing.

.1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, joints true to line, compressed, uniformly concave joints where concave joints are indicated.

.2 Cutting.

.1 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects.

.2 Make cuts straight, clean, and free from uneven edges.

.3 Building-In.

.1 Build in items required to be built into masonry.

.2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.

.3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

.4 Joints: When work is interrupted in mid-course or at building corners:

.1 Step-back blocks starting from most recent full course.

.2 At no time shall a section of wall under construction be more than 1220 mm higher than an adjacent section of wall.

.5 Support of loads.

.1 Use grout to CSA A179 where grout is used in lieu of solid units.

.2 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units.

.6 Provision for movement.

.1 Leave 3 mm space below shelf angles.

.2 Leave 6 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges.

.3 Built masonry to tie in with stabilizers, with provision for vertical movement.

.7 Steel windows.

.1 Install the steel window frames that will serve as lintels. Centre over opening width.

.8 Lateral support angles:

.1 Install steel angles along tops of block walls as indicated.

.9 Control joints.

.1 Construct continuous control joints as indicated.

.10 Expansion joints.

.1 Build-in continuous expansion joints as indicated.

3.3 SITE TOLERANCES

.1 Tolerances in notes to Clause 5.3 of CSA-A371 apply.

.2 The following tolerances are permitted for visible masonry work:

.1 From fixed reference point: 3 mm for length of 2.5 meters.

.2 At openings: additional 6 mm.

.3 Assume full responsibility for precision of dimensions, plumbing and leveling of Work, and continuous verification with graduated rod.

.4 Masonry courses shall be of equal height, horizontal and vertical joints shall be of constant width, and both coursing and jointing shall match existing pattern.

.5 Place first masonry course without mortar for Ministerial representative's approval of joint locations.

3.4 COOPERATION WITH OTHER TRADES

.1 Make openings in masonry where necessary or where indicated.

.2 Carefully execute, at indicated locations and dimensions, housings and openings for conduits.

.3 Where masonry encloses conduits or plumbing, ensure flush setting as required. Do not close openings or housings for plumbing or conduits until receiving confirmation that inspections and tests have taken place.

.4 In cooperation with all other trades, verify if all elements to be integrated into masonry wals are in place, or if they are to be installed prior to or at the time of wall construction. To this end, check all mechanical, electrical, and structural documents, as well as documents of any other consultant.

3.5 CLEANING

.1 When masonry work is finished, remove all stains, spatters, or surplus mortar with wooden paddle.

.2 As needed. Patch or replace defective mortar with fresh mortar to match existing mortar, according to requirements of these specifications.

.3 Rub surfaces with non-darkening alkaline cleaning solution in accordance with manufacturer's recommendations.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 All sections of division 04.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International).

.1 CSA A179-94(R1999), Mortar and Grout for Unit Masonry.

1.3 PRODUCT DATA

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

.2 Provide instructions for:

.1 Reference standards for product in question.

.2 “Factory-prepared mix standards” table indicating mortar characteristics (compression strength, water retention, air contents).

.3 Test certificates for mortar mix batches delivered to site for use in work.

1.4 SAMPLES

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

.2 Submit two size samples of each coloured mortar

.1 Samples to be submitted in clear plastic channels, 12 x 12 x 100 mm long.

.2 Identify each type of mortar and each pigment colour.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal paper, and corrugated cardboard packaging material in accordance with Waste Management Plan.

PART 2 Products

2.1 MATERIALS

.1 Use same brands of materials and source of aggregate for entire project.

.2 Mortar and grout: CSA A179.

.3 Type 10 Portland cement, to CAN/CSA-A5.

.4 Type “S” hydrated lime, to ASTM C270-91 (1997).

.5 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.

.6 Colour: ground coloured natural aggregates or metallic oxide pigments.

.7 Use of admixtures in not permitted.

2.2 MORTAR TYPES

.1 Factory-mixed mortar with compression strength similar to adjacent masonry elements. Mortar may be delivered with sand mixed into matrix: add water according to instructions.

.2 Mortar for interior masonry.

.1 Non-Loadbearing: type M based on Property specifications.

.3 Grout: to CSA A179, Table 3.

2.3 CONCRETE

.1 Concrete for filling concrete block lintels and reinforced concrete block cavities, to CSA A179 (most recent revision):

.1 1 part Portland cement.

.2 2 parts sand.

.3 2 parts gravel, 9.5 mm to 4.75 mm minimum, to ASTM 92.

.4 Resistance of 25 MPa.

2.4 COLOUR

.1 Concrete block masonry: colourless mortar.

PART 3 Execution

3.1 CONSTRUCTION

.1 Do masonry mortar and grout work in accordance with CSA A179 except where specified otherwise.

3.2 MIXING

.1 Mixing to be done with mechanical mixer; clean and free of dried mortar, rust, or other contaminant; do not defrost equipment with salt or antifreeze.

.2 Use 1 cubic foot containers for precision measurement of required quantity of sand according to grout type. Measuring sand with shovel is not permitted.

.3 Prepare mortars according to supplier's instructions in regards to proportion of water to cementitious materials, as well as steps to follow in mixing. Perfectly respect water quantities required per sack of mortar as prescribed by manufacturer.

.4 Total mixing time to be no less than 8 minutes and no more than 10 minutes. Let rest 2 minutes and remix 2 minutes. For mortar coloured on-site, mixing to be between 8 and 12 minutes to ensure complete and uniform dispersion of pigments.

3.3 INSTALLATION TIMEFRAME FOR MORTAR AND GROUT

.1 Mortar to be used and applied within 2.5 hours following mixing; when air temperature is equal or higher than 25°C, timeframe is reduced to 1.5 hours. Past these limits, mortar must be rejected.

3.4 REMIXING

.1 Remixing of mortar stiffened due to evaporation is not permitted; such mortar must be rejected.

3.5 COLOUR UNIFORMITY

.1 In order to ensure uniformity of mortar colour, Contractor should:

.1 Use clean water from a single source.

.2 Avoid adding water after initial mixing in order to make mortar more workable.

.3 Always smooth joints within the same time after initial application of mortar.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 All sections of Division 04.

.2 See structure for reinforcing and block wall anchors.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International)

.1 CAN3 A165 SERIES-94(R2000), CSA Standards on Concrete Masonry Units covers: A165.1, A165.2, A165.3.

1.3 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Collect and separate for disposal paper, plastic, polystyrene or corrugated cardboard packaging material in appropriate on-site containers for recycling in accordance with Waste Management Plan.

.3 Divert damaged or unused concrete materials from landfill to local recycling facility approved by Ministerial representative.

Part 2 Products

2.1 MATERIALS

.1 Concrete block units cured in high-pressure autoclave at 1050 @ 1100kPa, temperature of 175 @ 185 degrees centigrade, 100% humidity for 5 hours; to CSA A165.1-94.

.1 Grade H15CM, 190 x 190 x 390.

Part 3 Execution

3.1 INSTALLATION

.1 Bond: Running, coursing height respected throughout.

.1 Coursing height: 200 mm for one block and one joint.

.2 Jointing: concave.

3.2 CLEANING

.1 Standard block: Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block and finally by brushing.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 06 40 00 – Architectural Woodwork.

1.2 SHOP DRAWINGS

.1 Submit shop drawings in compliance with requirements of Section 01 33 00 – Submittal Procedures.

.2 The shop drawings must indicate or show materials, web thickness, finishes, connections, joints, type of anchoring and number of anchoring devices, bearings, reinforcement elements, details and accessories.

PART 2 Products

2.1 MATERIALS AND EQUIPMENT

.1 Steel: 300W, in accordance with CAN/CSA-G40.20/G40.21 standard.

.2 Welding materials: compliant with CSA W59 standard.

.3 Welding electrodes: compliant with standards from the CSA W48 series.

.4 Bolts, nuts, lag screws, threadbars and washers: compliant with ASTM A307 standard. All fasteners used outdoors must be grade 304 stainless steel.

2.2 FINISHING

.1 Paint applied in the workshop: primer according to CGSB 1-GP-38M, one coat, color: matt gray.

2.3 FORMING

.1 Unless otherwise indicated in the drawings, connections must as much as possible be shop welded.

.2 Work must be shop assembled, in elements that are as long and complete as possible and ready to be put together on-site.

.3 No welding will be done on-site. Cut and pre-bore in the shop all work that must be assembled on-site.

.4 Connections must be adjusted with precision; exposed parts must be flush; joints and miters must be tight.

.5 Welds and visible extremities of profiles must be carefully grinded or filed.

.6 Visible seals must be performed continuously along the length of the joint, filed or grinded to obtain a smooth and even surface. Seal the outdoor metal fabrications with steel to protect from corrosion in compliance with CAN3-S16.1 standard.

2.4 LIST OF WORKS

.1 Counter supports (supplied only): 4.76 mm thick steel plates, cut and bent to specified dimensions. Provide a round grommet hole at the indicated location and pre-drilled anchor and fixing holes. Fold the brackets at exactly 90 ° and weld the flanges together at the corner. If necessary, grind the weld to ensure that the weld material is flush with the surface of the flanges. All corners should be rounded 15mm. Fil and ground all edges.

.1 Quantity and location: see drawings of furniture.

PART 3 Execution

3.1 EXECUTION

.1 Give the appropriate building trades the counter supports. Also provide threaded rods and adhesive caps for anchoring metal structures to concrete or masonry elements.

.2 The assembly of metal fabrications on-site must be done with bolts only. No cutting, welding or grinding must be done on the work site.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 08 11 00 – Metal Doors and Frames

.2 Section 08 14 16 – Flush Wood Doors

.3 Section 09 21 16 – Gypsum Board Assemblies

.4 Section 09 22 16 – Non-Structural Metal Framing

1.2 REFERENCES

.1 Canadian Standards Association (CSA International)

.1 CSA B111-1974(R1998), Wire Nails, Spikes and Staples.

.2 CAN/CSA-G164-M92(R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.

.3 CSA O121-M1978(R1998), Douglas Fir Plywood.

.4 CAN/CSA-O141-91(R1999), Softwood Lumber.

.5 CSA O151-M1978(R1998), Canadian Softwood Plywood.

.6 CAN/CSA-O325.0-92(R1998), Construction Sheathing.

.2 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber 2000.

1.3 QUALITY ASSURANCE

.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.2 Plywood identification: by grade mark in accordance with applicable CSA standards.

.3 Plywood, OSB and wood based composite panel construction sheathing identification: by grademark in accordance with applicable CSA standards.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Collect and separate for disposal paper, plastic, polystyrene or corrugated cardboard packaging material [in appropriate on-site bins] for recycling in accordance with Waste Management Plan.

.3 Divert unused wood materials from landfill to recycling reuse or composting facility approved by Ministerial representative.

.4 Do not dispose of preservative treated wood through incineration.

.5 Do not dispose of preservative treated wood with materials destined for recycling or reuse.

.6 Dispose of treated wood, end pieces, wood scraps and sawdust at sanitary landfill approved by Ministerial representative.

.7 Dispose of unused wood preservative material at official hazardous material collections site approved by Ministerial representative.

.8 Do not dispose of unused preservative material into sewer system, into streams, lakes, onto ground or in other locations where they will pose health or environmental hazard.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements
- .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Store and protect materials from nicks, scratches, and blemishes.
- .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 LUMBER MATERIAL

.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
- .1 CAN/CSA-O141.
- .2 NLGA Standard Grading Rules for Canadian Lumber.

.2 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
- .1 S2S is acceptable.
- .2 Board sizes: "Standard".
- .3 Dimension sizes: "Standard" light framing.
- .4 Post and timber sizes: "Standard".

2.2 PANEL MATERIALS

.1 Douglas fir plywood (DFP): to CSA O121, standard construction.

2.3 ACCESSORIES

.1 Nails, spikes and staples: to CSA B111.

Part 3 Execution

3.1 INSTALLATION

.1 Comply with requirements of NBC, supplemented by the following paragraphs.

.2 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding and other work as required.

.3 Align and plumb faces of furring and blocking to tolerance of 1:600.

.4 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

.5 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized steel fasteners.

.6 Provide electrical equipment backboards for mounting electrical equipment as indicated. Use 19 mm thick plywood on 19 x 38 mm furring around perimeter and at maximum 300 mm intermediate

.7 Install wood backing, dressed, tapered and recessed slightly below top surface of roof insulation for roof hopper.

3.2 ERECTION

.1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

.2 Countersink bolts where necessary to provide clearance for other work.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 05 50 00 – Metal Fabrications.

.2 Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

.1 American National Standards Institute (ANSI)

.1 ANSI A208.1-99, Particleboard.

.2 ANSI A208.2-94, Medium Density Fiberboard (MDF).

.2 American Society for Testing and Materials (ASTM)

.1 ASTM E1333-96, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.

.2 ASTM D2832-92(R1999), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.

.3 ASTM D5116-97, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.

.3 Architectural Woodwork Manufacturers Association of Canada (AWMAC)

.1 AWMAC Quality Standards for Architectural Woodwork, 2nd edition, 2014.

.4 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.

.5 Canadian Standards Association (CSA)

.1 CSA B111-74(R1998), Wire Nails, Spikes and Staples.

.2 CSA O112.4-M1977(R1999), Standards for Wood Adhesives.

.3 CSA O112.5-Series-M-1977(R1999), Urea Resin Adhesives for Wood (Room- and High-Temperature Curing).

.4 CSA O112.7-Series M-1977(R1999), Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room- and Intermediate-Temperature Curing).

.5 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.

.6 CSA O121-M89(R1998), Douglas Fir Plywood.

.7 CAN/CSA O141-91R1999, Softwood Lumber.

.8 CSA O151-M1978(R1998), Softwood Plywood.

.9 CSA O153-M1980(R1998), Poplar Plywood.

.6 Environmental Choice Program (EPC)

.1 ECP-44-92, Adhesives.

.2 ECP-45-92, Sealants and Caulking Compounds.

.3 ECP-76-98, Surface Coatings.

.7 National Hardwood Lumber Association (NHLA)

.1 Rules for the Measurement and Inspection of Hardwood and Cypress, January 1996.

.8 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber, 2000.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide shop drawings in accordance with Section 01 33 00 – Submittal Procedures

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate details of construction, profiles, jointing, fastening and other related details.

.3 Indicate materials, thicknesses, finishes and hardware.

.4 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.

.2 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.

.1 Submit, in duplicate, the samples described below.

.1 A 300 mm x 300 mm sample of each material used for countertop and shelf tops, including fasteners.

.2 One sample of each color and standard finish for specified panels, 300 mm X 300 mm X thickness specified.

.3 Any other samples as may be requested by the ministerial representative.

.3 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.

.2 Protect millwork against dampness and damage during and after delivery.

.3 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Separate and recycle waste materials to the maximum extent economically possible.

.2 Separate wood waste in accordance with the Waste Management Plan and place in designated areas in the following categories for recycling: Solid wood/softwood/hardwood, composite wood, treated, painted, or contaminated wood.

.3 Set aside damaged wood for acceptable alternative uses (e.g. bracing, blocking, cripples, bridging, finger-joining, or ties). Store this separated reusable wood waste convenient to cutting station and area of work.

.4 Separate corrugated cardboard in accordance with Waste Management Plan and place in designated areas for recycling.

.5 Do not burn scrap at the project site.

.6 Fold up metal banding, flatten, and place in designated area for recycling.

1.6 COORDINATION BETWEEN TRADES

.1 Coordinate with subcontractor in fabricated metals to provide countertop supports.

.2 Supply and installation of countertops covered with stainless steel sheet are included in the work of this section. The cabinetmaker subcontractor must retain and coordinate with a supplier of stainless steel sheet materials to provide the countertops described in Part 2 of this section.

1.7 LIST OF HARDWARE

.1 Submit a list of cabinet hardware in accordance with Section 01 33 00 – Submittal Procedures.

.2 List the different prescribed items and indicate the make, model, material, function and finish, as well as any other relevant information.

1.8 WARRANTY

.1 Provide written document, signed and addressed to Owner, stipulating that the materials in this section and that the contractor warrants the work of this section for a period of five (5) years starting with the date of the provisional acceptance inspection.

PART 2 Products

2.1 MATERIALS

.1 Softwood lumber: unless specified otherwise, S4S, moisture content 19 % or less in accordance with following standards:

.1 CAN/CSA-O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.3 AWMAC regular grade, moisture content as specified.

.2 Machine stress-rated lumber is acceptable for all purposes.

.3 Hardwood lumber: moisture content 6 % or less in accordance with following standards:

.1 National Hardwood Lumber Association (NHLA).

.2 AWMAC regular grade, moisture content as specified.

.4 Poplar plywood (PP): to CSA O153, standard construction.

.5 Medium Density Fibreboard (MDF): according to ANSI A208.2, thickness as shown in the drawings, with a basis weight of 769 kg / m³.

.1 The resin used in the manufacture of medium density fibreboard shall not contain added urea-formaldehyde.

.6 Laminated plastic for flatwork: to NEMA LD3, Grade VGL for vertical surfaces, 0,7 mm thick; based on solid woodgrain colour range with gloss or matt finish.

.1 Laminated plastic backing sheet, minimum of 0,5 mm thick or same thickness and colour as face laminate.

.7 Laminates for postformed works: to NEMA LD3, for horizontal surfaces), 1.1 mm thick, decorative, textured.

.8 Interior sheets, QO grade, 1.6 mm thick, white.

.9 Stainless steel sheet: to ASTM A480 / A480M-16a, grade 304, 18 gauge, commercial grade, AISI finish number 4.

.10 Countertop Supports: Provided by Section 05 50 00, installed by this section.

.11 Nails and staples: to CSA B111.

.12 Wood screws: copper, type and size to suit application.

.13 Sealant: refer to section 07 92 00 – Joint Sealants.

.14 Laminated plastic adhesive: contact adhesive to CAN/CGSB-71.20 or resorcinol resin adhesive to CSA O112.7

.1 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.

2.2 MANUFACTURED UNITS

.1 Casework.

.1 Fabricate caseworks to AWMAC regular quality grade. See drawings for materials.

.2 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.

.1 S2S is acceptable.

.2 Board sizes: "Standard".

.3 Dimension sizes: "Standard".

.2 Drawers

.1 Fabricate drawers to AWMAC regular quality grade, see drawings for materials.

.3 Casework Doors

.1 Fabricate doors to AWMAC regular quality grade, see drawings for materials.

.4 Countertops - Laminate

.1 Fabricate preformed countertops, backsplash and integrated nose, to AWMAC regular quality grade, laminated plywood, see drawings for dimensions.

.5 Counter Tops - Stainless Steel

.1 Counter top covered with stainless steel, made of two layers of plywood laminated together, covered with stainless steel sheet.

.1 Cover bottom with plywood backing sheet with laminate trim sheet.

.2 Chamfer the bottom edges of the plywood. Coordinate with the supplier of the sheet metal coating to predict the tolerances required for the radii of curvature of the folds.

.3 Backrest, nose and side edges bent to specified profiles.

.1 Steel folds covering the edges of the counter should be folded over a width of 19mm on the underside of the plywood bottom.

.2 The edges of the steel folds covering the backsplashes shall be flush with the back of the plywood so that they can be hung on the wall.

.3 Where two counter sections are to meet, do not cover the side edges of the plywood base. The edges of the sheet should be flush with the edge of the plywood.

.4 Provide welding at corners where two folds meet. The welding must be carried out before the sheet is installed on the plywood base. Grind the weld joints for a smooth finish. Grind the outgoing corners of the countertop to a radius of 3mm.

.5 Limit edges of sheet to provide non-cutting edge.

.6 Sheet metal coatings must be supplied with a self-adhesive plastic sheet.

.4 Secure sheet metal cover to plywood base using stainless steel-compatible adhesive.

.6 Shelving: Fabricate to AWMAC regular quality grade, see drawings for materials.

2.3 HARDWARE

.1 Drawer slides (full extension) made of pressed steel with nylon roller, of required length, enamelled white.

.2 Hinges: chromed pressed steel with spring closure, invisible and adjustable, with black finish cap, angle of opening 110 degrees for all doors, model “Clip.”

.3 Cabinet and drawer handles: U-shaped tube of aluminum or stainless steel, 150mm wide.

.4 Door bumpers: transparent.

.5 Adjustable shelf supports: stainless steel with stainless steel receptacles.

2.4 FABRICATION

.1 Set nails and countersink screws apply wood filler to indentations, sand smooth and leave ready to receive finish.

.2 Shop install cabinet hardware for doors and shelves. Recess shelf standards unless noted otherwise.

.3 Shelving to cabinetwork to be adjustable unless otherwise noted.

.4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.

.5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.

.6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.

.7 Ensure adjacent parts of continuous laminate work match in colour and pattern.

.8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm.

.9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.

.10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.

.11 Apply laminate backing sheet to reverse side of core of plastic laminate work.

.12 Apply laminated plastic liner sheet to interior of cabinetry.

2.5 FINISHING

.1 Laminate:

.1 Apparent surfaces: Provide three (3 - identified Type 1, Type 2 and Type 3 in drawings) colors chosen from the manufacturer's standard range.

.2 Interior surfaces: white, unless otherwise indicated by drawings.

.3 NB: colors may be purchased from different manufacturers at no extra charge. Manufacturers' special ranges (such as genuine wood finish, metallic finishes, translucent finishes, etc.) are excluded.

PART 3 Execution

3.1 INSTALLATION

.1 Do architectural woodwork to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.

.2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.

.3 Fasten and anchor millwork securely. Provide heavy duty fixture attachments for wall mounted cabinets.

.4 Use draw bolts in countertop joints.

.5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.

.6 At junction of plastic laminate counter back splash and adjacent wall finish, apply small bead of sealant.

.7 Apply water resistant building paper over wood framing members in contact with masonry or cementitious construction.

.8 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

.9 Site apply laminated plastic to units as indicated. Adhere laminated plastic over entire surface. Make corners with hairline joints. Use full sized laminate sheets. Make joints only where approved. Slightly bevel arises.

.10 For site application, offset joints in plastic laminate facing from joints in core.

3.2 INSTALLATION OF STAINLESS STEEL COVERED COUNTERS

.1 Using chemical anchors for block walls provided by the subcontractor in fabricated metal, install the counter support brackets at the locations indicated. Make sure the tops of the brackets are all level.

.2 Install counter sections on brackets. Make sure that the sections are level, that the neighboring sections are flush with each other, and that the backsplashes are flush with the wall. Level it with shims if necessary. Secure countertops to supports with stainless steel screws.

.3 In areas where two sections snap together, attach a first section to the brackets. Apply a transparent sealant tape to the edge of the countertop. Put the second section in place. Tighten the two sections together using two clamps installed on the underside of the plywood bottom. Make sure that the second section is firmly against the wall, and secure the section to the supports. Once the two sections are properly installed, remove the excess clear sealant along the joint using a razor blade. Repeat this procedure for subsequent sections.

.4 Remove self-adhesive plastic sheet only at end of jobsite.

3.3 CLEANING

.1 Clean cabinet work inside cupboards and outside surfaces.

.2 Remove excess glue from surfaces.

3.4 PROTECTION

.1 Protect cabinet work from damage until final inspection.

3.5 QUANTITY AND LOCATION

.1 See drawings.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 05 50 00 – Metal Fabrications.

.2 Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

.1 American National Standards Institute (ANSI)

.1 ANSI A208.1-99, Particleboard.

.2 ANSI A208.2-94, Medium Density Fiberboard (MDF).

.2 American Society for Testing and Materials (ASTM)

.1 ASTM E1333-96, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.

.2 ASTM D2832-92(R1999), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.

.3 ASTM D5116-97, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.

.3 Architectural Woodwork Manufacturers Association of Canada (AWMAC)

.1 AWMAC Quality Standards for Architectural Woodwork, 2nd edition, 2014.

.4 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.

.5 Canadian Standards Association (CSA)

.1 CSA B111-74(R1998), Wire Nails, Spikes and Staples.

.2 CSA O112.4-M1977(R1999), Standards for Wood Adhesives.

.3 CSA O112.5-Series-M-1977(R1999), Urea Resin Adhesives for Wood (Room- and High-Temperature Curing).

.4 CSA O112.7-Series M-1977(R1999), Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room- and Intermediate-Temperature Curing).

.5 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.

.6 CSA O121-M89(R1998), Douglas Fir Plywood.

.7 CAN/CSA O141-91R1999, Softwood Lumber.

.8 CSA O151-M1978(R1998), Softwood Plywood.

.9 CSA O153-M1980(R1998), Poplar Plywood.

.6 Environmental Choice Program (EPC)

.1 ECP-44-92, Adhesives.

.2 ECP-45-92, Sealants and Caulking Compounds.

.3 ECP-76-98, Surface Coatings.

.7 National Hardwood Lumber Association (NHLA)

.1 Rules for the Measurement and Inspection of Hardwood and Cypress, January 1996.

.8 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber, 2000.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide shop drawings in accordance with Section 01 33 00 – Submittal Procedures

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate details of construction, profiles, jointing, fastening and other related details.

.3 Indicate materials, thicknesses, finishes and hardware.

.4 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.

.2 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.

.1 Submit, in duplicate, the samples described below.

.1 A 300 mm x 300 mm sample of each material used for countertop and shelf tops, including fasteners.

.2 One sample of each color and standard finish for specified panels, 300 mm X 300 mm X thickness specified.

.3 Any other samples as may be requested by the ministerial representative.

.3 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.

.2 Protect millwork against dampness and damage during and after delivery.

.3 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Separate and recycle waste materials to the maximum extent economically possible.

.2 Separate wood waste in accordance with the Waste Management Plan and place in designated areas in the following categories for recycling: Solid wood/softwood/hardwood, composite wood, treated, painted, or contaminated wood.

.3 Set aside damaged wood for acceptable alternative uses (e.g. bracing, blocking, cripples, bridging, finger-joining, or ties). Store this separated reusable wood waste convenient to cutting station and area of work.

.4 Separate corrugated cardboard in accordance with Waste Management Plan and place in designated areas for recycling.

.5 Do not burn scrap at the project site.

.6 Fold up metal banding, flatten, and place in designated area for recycling.

1.6 COORDINATION BETWEEN TRADES

.1 Coordinate with subcontractor in fabricated metals to provide countertop supports.

.2 Supply and installation of countertops covered with stainless steel sheet are included in the work of this section. The cabinetmaker subcontractor must retain and coordinate with a supplier of stainless steel sheet materials to provide the countertops described in Part 2 of this section.

1.7 LIST OF HARDWARE

.1 Submit a list of cabinet hardware in accordance with Section 01 33 00 – Submittal Procedures.

.2 List the different prescribed items and indicate the make, model, material, function and finish, as well as any other relevant information.

1.8 WARRANTY

.1 Provide written document, signed and addressed to Owner, stipulating that the materials in this section and that the contractor warrants the work of this section for a period of five (5) years starting with the date of the provisional acceptance inspection.

PART 2 Products

2.1 MATERIALS

.1 Softwood lumber: unless specified otherwise, S4S, moisture content 19 % or less in accordance with following standards:

.1 CAN/CSA-O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.3 AWMAC regular grade, moisture content as specified.

.2 Machine stress-rated lumber is acceptable for all purposes.

.3 Hardwood lumber: moisture content 6 % or less in accordance with following standards:

.1 National Hardwood Lumber Association (NHLA).

.2 AWMAC regular grade, moisture content as specified.

.4 Poplar plywood (PP): to CSA O153, standard construction.

.5 Medium Density Fibreboard (MDF): according to ANSI A208.2, thickness as shown in the drawings, with a basis weight of 769 kg / m³.

.1 The resin used in the manufacture of medium density fibreboard shall not contain added urea-formaldehyde.

.6 Laminated plastic for flatwork: to NEMA LD3, Grade VGL for vertical surfaces, 0,7 mm thick; based on solid woodgrain colour range with gloss or matt finish.

.1 Laminated plastic backing sheet, minimum of 0,5 mm thick or same thickness and colour as face laminate.

.7 Laminates for postformed works: to NEMA LD3, for horizontal surfaces), 1.1 mm thick, decorative, textured.

.8 Interior sheets, QO grade, 1.6 mm thick, white.

.9 Stainless steel sheet: to ASTM A480 / A480M-16a, grade 304, 18 gauge, commercial grade, AISI finish number 4.

.10 Countertop Supports: Provided by Section 05 50 00, installed by this section.

.11 Nails and staples: to CSA B111.

.12 Wood screws: copper, type and size to suit application.

.13 Sealant: refer to section 07 92 10 – Joint Sealants.

.14 Laminated plastic adhesive: contact adhesive to CAN/CGSB-71.20 or resorcinol resin adhesive to CSA O112.7

.1 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.

2.2 MANUFACTURED UNITS

.1 Casework.

.1 Fabricate caseworks to AWMAC regular quality grade. See drawings for materials.

.2 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.

.1 S2S is acceptable.

.2 Board sizes: "Standard".

.3 Dimension sizes: "Standard".

.2 Drawers

.1 Fabricate drawers to AWMAC regular quality grade, see drawings for materials.

.3 Casework Doors

.1 Fabricate doors to AWMAC regular quality grade, see drawings for materials.

.4 Countertops - Laminate

.1 Fabricate preformed countertops, backsplash and integrated nose, to AWMAC regular quality grade, laminated plywood, see drawings for dimensions.

.5 Counter Tops - Stainless Steel

.1 Counter top covered with stainless steel, made of two layers of plywood laminated together, covered with stainless steel sheet.

.1 Cover bottom with plywood backing sheet with laminate trim sheet.

.2 Chamfer the bottom edges of the plywood. Coordinate with the supplier of the sheet metal coating to predict the tolerances required for the radii of curvature of the folds.

.3 Backrest, nose and side edges bent to specified profiles.

.1 Steel folds covering the edges of the counter should be folded over a width of 19mm on the underside of the plywood bottom.

.2 The edges of the steel folds covering the backsplashes shall be flush with the back of the plywood so that they can be hung on the wall.

.3 Where two counter sections are to meet, do not cover the side edges of the plywood base. The edges of the sheet should be flush with the edge of the plywood.

.4 Provide welding at corners where two folds meet. The welding must be carried out before the sheet is installed on the plywood base. Grind the weld joints for a smooth finish. Grind the outgoing corners of the countertop to a radius of 3mm.

.5 Limit edges of sheet to provide non-cutting edge.

.6 Sheet metal coatings must be supplied with a self-adhesive plastic sheet.

.4 Secure sheet metal cover to plywood base using stainless steel-compatible adhesive.

.6 Shelving: Fabricate to AWMAC regular quality grade, see drawings for materials.

2.3 HARDWARE

.1 Drawer slides (full extension) made of pressed steel with nylon roller, of required length, enamelled white.

.2 Hinges: chromed pressed steel with spring closure, invisible and adjustable, with black finish cap, angle of opening 110 degrees for all doors, model “Clip.”

.3 Cabinet and drawer handles: U-shaped tube of aluminum or stainless steel, 150mm wide.

.4 Door bumpers: transparent.

.5 Adjustable shelf supports: stainless steel with stainless steel receptacles.

2.4 FABRICATION

.1 Set nails and countersink screws apply wood filler to indentations, sand smooth and leave ready to receive finish.

.2 Shop install cabinet hardware for doors and shelves. Recess shelf standards unless noted otherwise.

.3 Shelving to cabinetwork to be adjustable unless otherwise noted.

.4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.

.5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.

.6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.

.7 Ensure adjacent parts of continuous laminate work match in colour and pattern.

.8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm.

.9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.

.10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.

.11 Apply laminate backing sheet to reverse side of core of plastic laminate work.

.12 Apply laminated plastic liner sheet to interior of cabinetry.

2.5 FINISHING

.1 Laminate:

.1 Apparent surfaces: Provide three (3 - identified Type 1, Type 2 and Type 3 in drawings) colors chosen from the manufacturer's standard range.

.2 Interior surfaces: white, unless otherwise indicated by drawings.

.3 NB: colors may be purchased from different manufacturers at no extra charge. Manufacturers' special ranges (such as genuine wood finish, metallic finishes, translucent finishes, etc.) are excluded.

PART 3 Execution

3.1 INSTALLATION

.1 Do architectural woodwork to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.

.2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.

.3 Fasten and anchor millwork securely. Provide heavy duty fixture attachments for wall mounted cabinets.

.4 Use draw bolts in countertop joints.

.5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.

.6 At junction of plastic laminate counter back splash and adjacent wall finish, apply small bead of sealant.

.7 Apply water resistant building paper over wood framing members in contact with masonry or cementitious construction.

.8 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

.9 Site apply laminated plastic to units as indicated. Adhere laminated plastic over entire surface. Make corners with hairline joints. Use full sized laminate sheets. Make joints only where approved. Slightly bevel arises.

.10 For site application, offset joints in plastic laminate facing from joints in core.

3.2 INSTALLATION OF STAINLESS STEEL COVERED COUNTERS

.1 Using chemical anchors for block walls provided by the subcontractor in fabricated metal, install the counter support brackets at the locations indicated. Make sure the tops of the brackets are all level.

.2 Install counter sections on brackets. Make sure that the sections are level, that the neighboring sections are flush with each other, and that the backsplashes are flush with the wall. Level it with shims if necessary. Secure countertops to supports with stainless steel screws.

.3 In areas where two sections snap together, attach a first section to the brackets. Apply a transparent sealant tape to the edge of the countertop. Put the second section in place. Tighten the two sections together using two clamps installed on the underside of the plywood bottom. Make sure that the second section is firmly against the wall, and secure the section to the supports. Once the two sections are properly installed, remove the excess clear sealant along the joint using a razor blade. Repeat this procedure for subsequent sections.

.4 Remove self-adhesive plastic sheet only at end of jobsite.

3.3 CLEANING

.1 Clean cabinet work inside cupboards and outside surfaces.

.2 Remove excess glue from surfaces.

3.4 PROTECTION

.1 Protect cabinet work from damage until final inspection.

3.5 QUANTITY AND LOCATION

.1 See drawings.

END OF SECTION

PART 1 General

1.1 REFERENCES

.1 CAN/ULC-S702-97, Mineral Fibre Thermal Insulation for Buildings.

1.2 TECHNICAL DATA SHEETS

.1 Submit the technical data sheets in compliance with requirements of Section 01 33 00 – Submittal Procedures.

PART 2 Products

2.1 INSULATION MATERIALS

.1 Acoustic insulation: glass fiber blanket insulation, recycled content minimum 70%, non-combustible, type 1 (preformed insulation), dimensions according to stud spacing and wall thickness as indicated in plans.

.2 Thermal insulation: Type 1 non-combustible rock wool fiber blanket insulation with RSI value 0.69 / 25mm, density 32 kg / m³.

PART 3 Execution

3.1 INSTALLATION OF INSULATION

.1 Install acoustic insulation in the cavities of interior acoustic walls.

.2 Install thermal insulation in the roof construction spaces between the wood truss joists as well as in the cavity of the training building's exterior wall.

.3 Install the insulation in such a way as to ensure continuous thermal protection for the components and empty construction spaces of the building.

.4 Carefully adjust the insulation on the elements to cover up as well as around service boxes, pipes, air ducts and frames that penetrate it.

.5 Do not compress the insulation to make it fit in the spaces to be insulated.

.6 Do not cover the insulation until the installation work has been inspected and approved by the ministerial representative.

END OF SECTION

Part 1 General

1.1 DESCRIPTION

.1 This section covers all sealant and caulking materials not covered in other sections.

.2 Refer to relevant sections to obtain more instructions on sealant and caulking materials.

.3 When caulking work with sealant materials are shown in cross-section or in details, it is agreed that the joint(s) must be sealed along the entire perimeter and/or the length of work to seal.

1.2 REFERENCE STANDARDS

.1 Canadian General Standards Board (CGSB)

.1 CGSB19 GP 5M 1984, Sealing Compound, One Component, Acrylic Base, Solvent Curing (Incorporating Amendment No. 1).

.2 CAN/CGSB 19.13 M87, Sealing Compound, One-Component, Elastomeric, Chemical Curing.

.3 CAN/CGSB 19.17 M90, One-Component, Acrylic Emulsion Base Sealing Compound.

.4 CAN/CGSB 19.24 M90, Multicomponent, Chemical-Curing Sealing Compound.

1.3 CONTRACTOR QUALIFICATIONS

.1 The Contractor must detain an operating license in a category giving it the right to installer sealing compounds.

.2 Only labour that is competent in the installation of sealing compounds, employed by a company with at least three years of experience in the installation of sealing compounds and possessing the adequate and necessary equipment to carry out such work may execute the work.

1.4 COMPATIBILITY

.1 The sealing compounds and their primers must be supplied by the same manufacturer.

1.5 SCOPE OF WORK

.1 Seal around all openings.

.2 Carry out the other required or necessary sealing work as described in the drawings.

1.6 PRODUCT SAMPLES

.1 Once the preliminary choices are made, an on-site sample must be made over 3000 mm for final approval.

1.7 DELIVERY, HANDLING AND STORAGE

.1 Deliver and store materials in the original containers and packaging bearing the manufacturer’s seal.

.2 The materials must be adequately protected and permanently stored in a dry, well ventilated shelter, away from open flames or welding sparks, protected from bad weather and harmful substances.

.3 Store water-based compounds at a temperature of 5 °C or higher. Store solvent-based compounds at a sufficiently high temperature to ensure the require malleability for their application.

1.8 WARRANTY

.1 The contractor hereby guarantees the sealing work against leaks, cracking, crumbling, disintegration, loss of consistency, shrinkage, running, loss of adhesion and tarnishing of adjacent surfaces for a period of five (5) years starting from the date of the provisional acceptance inspection.

1.9 PROJECT CONDITIONS

.1 Environmental limitations:

.1 Do not proceed with installation of joint sealants under following conditions:

.1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4˚C.

.2 When joint substrates are wet.

.2 Joint-Width Conditions:

.1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

.3 Joint-Substrate Conditions:

.1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

.4 Ventilate work areas using approved portable force-draft fans and exhaust fans.

.5 Carry out all sealing compound installation work including waste management and disposal in accordance with provisions of local regulations as well as *ministère de l'Environnent du Québec* regulations.

1.10 ACCEPTABLE PRODUCTS OR MATERIALS

.1 When materials or products are prescribed by their trademark, consult the Instructions to Bidders in order to know the procedure concerning the request for approval of materials or substitutes.

Part 2 Products

2.1 SEALANT MATERIALS

.1 The sealants selected for the project must appear on the list of approved products drafted by the CGSB's sealant materials certification commission. With regard to sealants approved with a primer, only that primer may be used with said sealant.

.2 Sealant type 1: multi-part polyurethane sealant.

.1 Reference products: Sonolastic NP 2 by Sonneborn, Sikaflex 2C NS by Sika or Dymeric by Tremco or a replacement approved by addenda according to Instructions to Bidders.

.2 Locations:

.1 Fire-resistant joints.

.3 Sealant type 2: single part aliphatic polyurethane sealant with high colour retention.

.1 Reference products: Sonolastic Ultra by Sonneborn, Sikaflex 1A by Sika or Spectrem II by Tremco or a replacement approved by addenda according to Instructions to Bidders.

.2 Location: joints in prepainted steel or white aluminum assemblies.

.4 Sealant type 3: general purpose, mildew resistant, silicone sealant.

.1 Reference products: Sonolastic Omniplus by Sonneborn, Sikasil GP by Sika or Tremsil 200 by Tremco or a replacement approved by addenda according to Instructions to Bidders.

.2 Locations:

.1 Interior joints on countertops and around sinks and lavatories.

.2 Joints required to be mildew-resistant.

.5 Sealant type 4: acrylic latex sealant.

.1 Locations: Static interior joints not requiring fire resistance (such as around interior door and window frames.

.6 Sealant type 5: acoustic sealant, blended polymer and synthetic rubber base.

.1 Locations: at the top and bottom of sound-insulated interior walls.

.7 Primers: type recommended by the manufacturer.

.8 Colour will be chosen by the ministerial representative from the entire range offered by the manufacturer to match colour of adjacent materials.

2.2 SUPPORT MATERIALS

.1 Polyethylene, urethane, neoprene or vinyl foams.

.1 Back-up material in extruded foam.

.2 Elements oversized by 30 to 50%.

.2 Release agent

.1 Polyethylene bond breaker tape that does not adhere to the sealant.

2.3 JOINT CLEANER

.1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.

2.4 COORDINATING LOCATIONS

.1 Contractor and subcontractors shall check all contractual documents to ensure the use of the right sealing compound at the right place. Any cases of conflict between specification sections or between the

specifications and drawings shall be reported to the ministerial representative prior to the commencement of work.

Part 3 Execution

3.1 SITE PROTECTION

.1 Protect installed Work of other trades from staining or contamination.

3.2 SURFACE PREPARATION

.1 Rid the joint surfaces of any undesirable material, including dust, rust, oil, grease and other foreign materials which could harm the execution or effectiveness of the work.

.2 Using a wire brush, a grinding wheel or sand blast, remove rust, calamine and coatings covering ferrous metal surfaces. Using the joint cleaner, remove oil, grease stains and other coatings covering the surface of non-ferrous metal surfaces.

.3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.

.4 Ensure joint surfaces are dry and frost free.

.5 Prepare concrete and masonry surfaces as well as glassy and vitreous surfaces in compliance with the sealant manufacturer’s instructions.

.6 Check the joint dimensions and apply the necessary corrective actions so that the depth is equal to half its width, for a minimum depth and width of 6mm and a maximum depth and width of 13 mm.

.7 Prime the surfaces in compliance with the manufacturer’s instructions.

.8 Starting the sealing work constitutes and acceptance of underlying surfaces and no claim may be brought to this chapter.

3.3 PRIMER

.1 Before applying the primer and caulking material, cover adjacent surfaces to prevent tarnishes, where necessary.

.2 Right before applying the caulking material, apply the primer on the lateral surfaces of masonry joints, in compliance with the sealant manufacturer’s instructions.

3.4 BACK-UP MATERIAL

.1 Apply bond breaker tape where required to manufacturer's instructions.

.2 Install joint filler to achieve correct joint depth and shape.

3.5 PREPARATION OF SEALING PRODUCTS

.1 Mix materials while rigorously respecting the sealant manufacturer’s instructions.

3.6 APPLICATION

.1 Sealant:

.1 Apply sealant in accordance with manufacturer's written instructions.

.2 Apply sealant in continuous beads.

.3 Apply sealant using gun with proper size nozzle.

.4 Use sufficient pressure to fill voids and joints solid.

.5 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.

.6 Tool exposed surfaces before skinning begins to give slightly concave shape.

.7 Remove excess compound promptly as work progresses and upon completion.

.8 Caulk exterior cladding joints with door frames and around new openings as well as anywhere else indicated on the drawings. Do not caulk exterior cladding joints at door frame or window frame heads, which are fitted with labels.

.9 Caulk around soundproof dividers and fire barriers where they meet different materials.

.10 Caulk the perimeter or frames, interior doors and windows as well as openings and objects that penetrate soundproof dividers and fire barriers.

3.7 CURING

.1 Cure sealants in accordance with sealant manufacturer's instructions.

.2 Do not cover up sealants until proper curing has taken place.

.3 Protect compounds from bad weather and dirt for a period of 24 hours.

3.8 CLEANING

.1 Clean adjacent surfaces immediately and leave Work neat and clean.

.2 Remove excess and droppings, using recommended cleaners as work progresses.

.3 Remove masking tape after initial set of sealant.

.4 Cleaning:

.1 Clean adjacent surfaces immediately and leave Work neat and clean.

.2 Remove excess and droppings, using recommended cleaners as work progresses.

.3 Remove masking tape after initial set of sealant.

END OF SECTION

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Correctionnel Service Canada — Section 08 10 00

Port-Cartier Establishement — DOORS AND FRAMES SCHEDULE

Renovations: Program Sector and Operational Offices — Project : 15-2118B

TABLEAU DES PORTES ET CADRES

Revisions				EXISTING DOORS AND FRAMES TO DEMOLISH				NEW DOORS										NEW FRAMES						
No.	Date		DOOR NUMBER	MATERIALS - DOOR	MATERIALS - FRAME	ROUGH OPENING (± width and height)	COMMENTS	DOOR-TYPE	DOOR-QUALITY	MATERIALS	WIDTH	HEIGHT	THICKNESS (mm)	TYPE OF GLAZING	OPENING DIRECTION	FINISH	FIRE RESISTANCE (Min.)	FRAME-TYPE	MATERIALS	TYPE DE VITRAGE	FINISH	FIRE RESISTANCE (Min.)	HARDWARE GROUP	COMMENTS
No.	**FROM : TO**																							
NEW DOORS AND FRAMES																								
GROUND FLOOR																								
	B-101 @ B-123	PB-123	M	M	±865 x ±2040	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-126 @ B-123	PB-123-1	-	-	-	-	E	PC	M	915	2135	45	-	RH	P	-	C1	M	-	P	-	3	3
	B-100 @ B-124	PB-124	M	M	±915 x ±2040	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-125 @ B-124	PB-124-1	-	-	-	-	B	PC	M	865	2135	45	V.T.	RHR	-	-	C1	M	-	P	-	3	3
	B-100 @ B-125	PB-125	-	-	-	-	C	PD1	M	810	2135	45	V.S.	RH	P	-	C1	M	-	P	-	2	3
	B-124 @ B-126	PB-126	M	M	±800 x ±2040	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-131 @ B-127	PB-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6
	B-128 @ B-129	PB-129.1	M	M	±810 x ±2040	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-126 @ B-129	PB-129.2	M	M	±895 x ±2040	2	B	PC	M	810	2035	45	V.T.	LH	P	-	C1	M	-	P	-	3	3
	B-128 @ B-130	PB-130	M	M	±895 x ±2040	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-101 @ B-130	PB-130-1	-	-	-	-	C	PC	M	915	2135	50	V.T.9	RH	P	-	C1	M	-	P	-	1	3
	B-100 @ B-130	PB-131	M	M	±865 x ±2040	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-101 @ B-130	PB-131-1	-	-	-	-	C	PC	M	865	2035	45	V.T.	LH	P	-	C1	M	-	P	-	1	3
	B-131 @ B-128	PB-131.3	M	M	±806 x ±2040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B-100 @ B-124	CA-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	WIN	M	V.S.	P	-	-	-

LÉGENDE:

MAT.
M: Metal
W: Wood

TYPE DE PORTE:
B: Glazed half-pannel
C: Side window
E: Full panel

QUALITÉ DE PORTE:
PC: "Commercial" type door
PD1: "Security" type door

VERRE :
V.S.: "security" scelled unit
V.A.: Acoustique glazing
V.T.: 6mm tempered glass
V.T.9: 9mm tempered glass

SENS OUVERTURE:
LH : Left Hand
RH : Right Hand
LFR : Left Hand Reversed
RHR : Right Hand Reversed

FINIS :
P: Painted

REMARQUES :
1 Door to condemn, see drawings
2 Door to demolish, frame to conserve
3 The dimensions of the new doors and frames to be validated on site
4 Door and/or glass frame to relocate
5 Door and frame to dismantle and hand over to owner
6 Existing door preserved, hardware to be added
7 Existing frame preserved, new door. Dimensions to be validated

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Correctionnel Service Canada — Section 08 10 00

Port-Cartier Establishement — DOORS AND FRAMES SCHEDULE

Renovations: Program Sector and Operational Offices — Project : 15-2118B

TABLEAU DES PORTES ET CADRES

Revisions No.	Date		DOOR NUMBER	EXISTING DOORS AND FRAMES TO DEMOLISH: MATERIALS - DOOR	MATERIALS - FRAME	ROUGH OPENING (± width and height)	COMMENTS	NEW DOORS: DOOR-TYPE	DOOR-QUALITY	MATERIALS	WIDTH	HEIGHT	THICKNESS (mm)	TYPE OF GLAZING	OPENING DIRECTION	FINISH	FIRE RESISTANCE (Min.)	NEW FRAMES: FRAME-TYPE	MATERIALS	TYPE DE VITRAGE	FINISH	FIRE RESISTANCE (Min.)	HARDWARE GROUP	COMMENTS
No.	**FROM : TO**																							
NEW DOORS AND FRAMES																								
SECOND FLOOR																								
	C-215 @ C-204	PC-204	-	M	-	-	E	PC	W	735	2035	45	-	RHR	P	-	-	-	-	-	-	-	3	7
	C-216 @ PC-207	PC-207	M	M	±800 x ±2045	5	E	PC	W	915	2035	45	-	LH	P	-	C2	M	V.A.	P	-	3	3	
	C-216 @ PC-207.1	PC-207-1	-	-	-	-	E	PC	W	915	2035	45	-	LH	P	-	C2	M	V.A.	P	-	3	3	
	C-216 @ PC-208.1	PC-208.1	M	M	±900 x ±2045	4	-	-	-	-	-	-	-	-	P	-	C2	M	V.A.	P	-	3	4	
	C-216 @ PC-208.2	PC-208.2	M	M	±900 x ±2045	4	-	-	-	-	-	-	-	-	P	-	C2	M	V.A.	P	-	3	4	
	C-216 @ PC-209	PC-209	M	M	±800 x ±2045	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	C-216 @ PC-209	PC-209-1	-	-	-	-	B	PC	W	915	2035	45	-	LH	P	-	C1	M	-	P	-	3	3	
	C-216 @ PC-210	PC-210	M	M	±800 x ±2045	4	-	-	-	-	-	-	-	-	P	-	-	-	-	P	-	3	4	
	C-216 @ PC-211	PC-211	M	M	±800 x ±2045	4	-	-	-	-	-	-	-	-	P	-	-	-	-	P	-	3	4	
	C-216 @ PC-212	PC-212	M	M	±800 x ±2045	4	-	-	-	-	-	-	-	-	P	-	-	-	-	P	-	3	4	
	C-216 @ PC-217	PC-217	-	-	-	-	E	PC	W	915	2032	45	-	RH	P	-	C2	M	-	P	-	3	3	

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PART 1 General

1.1 RELATED SECTIONS

.1 Section 06 10 11 – Rough and Finish Carpentry

.2 Section 07 92 00 - Joint Sealants.

.3 Section 08 14 16 – Flush Wood Doors.

.4 Section 08 71 10 - Door Hardware.

.5 Section 08 80 50 – Glazing.

.6 Section 09 91 23 – Interior Painting.

1.2 REFERENCES

.1 American Society for Testing and Materials (ASTM International)

.1 ASTM A653/A653M-01a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.2 ASTM A366-85, Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

.3 ASTME A525-86, Specification for General Requirements for Steel Sheet Zinc-Coated (Galvanized) by the Hot-Dip Process.

.4 ASTM F1450-05, Test Method for Hollow Metal Swinging Door Assemblies for Detention Facilities.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.

.2 CSGB 1-GP-40M-97, Anticorrosive Structural Steel Alkyd Primer.

.3 CSGB 1-GP-148-80, Removable Matte Touch-Up paint.

.3 Canadian Standards Association (CSA International)

.1 G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.

.2 CSA W59-M1989(R2001), Welded Steel Construction (Metal Arc Welding) (Metric Version).

.3 CAN/CSA-G40.20-M87, General Requirements for Rolled or Welded Structural Quality Steel.

.4 Canadian Steel Door Manufacturers' Association, (CSDMA).

.1 CSDMA, Specifications for Commercial Steel Doors and Frames, 1990.

.2 CSDMA, Recommended Selection and Usage Guide for Commercial Steel Doors, 1990.

.5 National Fire Protection Association (NFPA)

.1 NFPA 80-99, Standard for Fire Doors and Fire Windows.

.2 NFPA 252-99, Standard Methods of Fire Tests of Door Assemblies.

.6 Underwriters' Laboratories of Canada (ULC)

.1 CAN4-S104-80(R1985), Fire Tests of Door Assemblies.

.2 CAN4-S105-85(R1992), Fire Door Frames Meeting the Performance Required by CAN4-S104.

.3 CAN/ULC-S704-01, Urethane and Isocyanurate Thermal Insulation, coated panels.

.4 CAN/ULC-S704-01, Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

.7 Correctional Service Canada: Technical Criteria, April 2015

1.3 DESIGN REQUIREMENTS

.1 Submit shop drawings required in accordance with Section 01 33 00 – Submittal Procedures.

.2 Shop drawings shall indicate each type of door proposed, the nature of the materials used, the thickness of the bare metal, the mortise joints, the reinforcement parts, the location of the anchors and visible fixings, the openings to accommodate the glazing, the arrangement of the hardware and the degree of fire resistance, and the finishes.

.3 Shop drawings shall indicate each type of frame proposed, the nature of the materials used, the thickness of the bare metal, the reinforcement parts, the glazing beads, the location of the anchors and visible fixings and the types of finishing coatings.

.4 Workshop drawings shall include a list of doors with marks and numbers corresponding to those used in the drawings and the list of doors.

.5 Submit test results, technical data and instructions for door installation.

1.4 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, glazing, arrangement of hardware and fire rating and finishes.

.3 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings finishes.

.4 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.

.5 Submit test and engineering data, and installation instructions.

1.5 REQUIREMENTS

.1 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104M and NFPA 252 for ratings specified or indicated and bearing the label of the organism in question..

.2 Provide fire labelled frame products for those openings requiring fire protection ratings, as scheduled. Test products in strict conformance with CAN4-S104, ASTM E152 or NFPA 252 and list by nationally recognized agency having factory inspection service and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Collect and separate for disposal paper, plastic, polystyrene or corrugated cardboard packaging material for recycling in accordance with Waste Management Plan.

.3 Divert unused paint and sealant materials from landfill to official hazardous material collections site approved by Engineer.

.4 Do not dispose of unused paint and sealant materials into sewer systems, into lakes, streams, onto ground or in other locations where it will pose health or environmental hazard.

.5 Divert unused metal materials from landfill to metal recycling facility approved by the ministry representative.

.6 Divert unused wood materials from landfill to recycling reuse composting facility approved by the ministry representative.

.7 Damaged or broken glazing materials are not recyclable. These materials must not de disposed of with materials destined for recycling.

PART 2 Products

2.1 MATERIALS

.1 "Commercial" doors: hollow steel door with stapled joints. Hot dipped galvanized steel sheet, to ASTM A924M-94, factory galvanized to Z275 (zinc phosphate). Metal thickness: 18 gauge.

.2 "Security" doors: Hollow steel door with welded joints. Hot dipped galvanized steel sheet, to ASTM A924M-94, factory galvanized to Z275 (zinc phosphate). Metal Thickness: 14 gauge. Manufactured in accordance with CSC Technical Criteria, April 2015. Provide test report confirming door is in accordance with ASTM 1450-05; provide internal structural reinforcements as required to ensure door is in accordance with standard. In particular, the door shall comply with the following requirements:

.1 Static load: maximum deflection of 30mm under load of 4,000kg. Maximum permanent deformation of 2mm.

.2 Bend test: maximum deflection of 35mm under load of 2,645kg applied to the unsupported corner of the door.

.3 Impact test: always in working condition after having experienced 375 impacts of 271 joules applied to the bolt, hinges and panels.

.3 "Commercial" door frames: 18 gauge galvanized steel, welded joints.

.4 "Security" door frames: 14 gauge galvanized steel, welded joints. Frames must be engineered to accommodate the "security" door strikes. Manufactured in accordance with CSC Technical Criteria, April 2015.

.5 "Security" window frames: 12 gauge galvanized steel, welded joints. Frame must be engineered to receive a deal tray. Glazing stops made of steel 25mm x 25mm x 4mm thick. Manufactured in accordance with CSC Technical Criteria, April 2015.

2.2 OTHER ELEMENTS

.1 Provide any other elements for doors and frames in accordance with requirements of CSDFMA.

2.3 PRIMER

.1 For galvanized steel sheet: to CSGB 1-GP-18M-77 (R1978) and the amendment of March 1978.

2.4 TOUCH-UP PAINT

.1 Anti-rust touch-up paint to CAN/CGSB-1.181.

2.5 PAINT

.1 Field paint steel doors and frames in accordance with Section 09 91 23 – Interior Painting.

2.6 ACCESSORIES

.1 Door silencers: single stud rubber/neoprene type.

.2 Fabricate glazing stops as formed channel, minimum 16 mm height, accurately fitted, butted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws.

.3 Deal tray: high-security slide-in drawer for front mounting, stainless steel, approximate overall dimensions 50mm high, 350mm wide, depth appropriate to the thickness of the wall.

.4 Metallic paste filler: to manufacturer's standard.

.5 Fire labels: metal riveted.

.6 Sealant: in accordance with Section 07 92 00 - Joint Sealants.

.7 Glazing: in accordance with Section 08 80 50 Glazing.

.8 Make provisions for glazing as indicated and provide necessary glazing stops.

.1 Design exterior glazing stops to be tamperproof.

2.7 GENERAL FRAME FABRICATION

.1 Fabricate frames in accordance with CSDMA specifications.

.2 Fabricate frames to profiles and maximum face sizes as indicated.

.3 Frames for interior openings, dimensions as indicated in Door Schedule.

.4 Blank, reinforce, drill and tap frames for mortised, templated hardware, and electronic hardware using templates provided by finish hardware supplier. Reinforce frames for surface mounted hardware.

.5 Protect mortised cutouts with steel guard boxes.

.6 Prepare frame for door silencers, 3 for single door, 2 at head for double door.

.7 Manufacturer's nameplates on frames and screens are not permitted.

.8 Conceal fastenings except where exposed fastenings are indicated.

.9 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.

.10 Insulate exterior frame components with polyurethane insulation.

.11 All hinge reinforcing to be “high frequency” or “intensive use” type folded sheet.

2.8 FRAME ANCHORAGE

.1 Provide appropriate anchorage to floor and wall construction.

.2 Locate each wall anchor immediately above or below each hinge reinforecement on hinge jamb and directly opposite on strike jamb.

.3 Provide 2 anchors for rebate opening heights up to 1520 mm and 1 additional anchor for each additional 760 mm of height or fraction thereof.

.4 Locate anchors for frames in existing openings not more than 150 mm from top and bottom of each jambs and intermediate at 660 mm o.c. maximum.

.5 All exposed fasteners for "security" type frames shall be tamper-resistant.

2.9 FRAMES: WELDED TYPE

.1 Welding in accordance with CSA W59.

.2 Accurately mitre or mechanically joint frame product and weld continuously along entire length inside of profile.

.3 Cope accurately and securely weld butt joints of mullions, transom bars, centre rails and sills.

.4 Grind welded joints and corners to a flat plane, fill with metallic paste and sand to uniform smooth finish.

.5 Securely attach floor anchors to inside of each jamb profile.

.6 Weld in 2 temporary jamb spreaders per frame to maintain proper alignment during shipment.

.7 For each single door, install e simple, installer three door silencers on strike side of frame; for double doors, install 2 silencers on head of frame.

.8 Provide glazing as indicated and install required glazing stops.

.9 Provide integration of the deal tray at the bottom of the security window frame.

2.10 GENERAL DOOR FABRICATION

.1 Doors: swing type, flush, with provision for glass and/or louvre openings as indicated.

.2 Edges sealed with adhesive, visible square folded joint.

.3 Blank, reinforce, drill doors and tap for mortised, templated hardware.

.4 Factory prepare holes 12.7 mm diameter and larger except mounting and through-bolt holes, on site, at time of hardware installation.

.5 Reinforce doors where required, for surface mounted hardware.

.6 Provide flush PVC top caps to exterior doors.

.7 Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.

.8 Manufacturer's nameplates on doors are not permitted.

.9 Unless otherwise indicated, doors and frames to be fabricated according to details and requirements of “Canadian Manufacturing Specifications for Metal Doors and Frames,” most recent edition, published by “Canadian Steel Door and Frame Manufacturers’ Association” (CSDFMA).

.10 Factory prime cold-rolled steel sheet.

.11 Factory apply touch-up primer at places where galvanization has been damaged.

.12 All hinge reinforcing to be “high frequency” or “intensive use” type folded sheet.

.13 Top and bottom to be flush; provide steel shapes with full width of door welded to both faces.

PART 3 Execution

3.1 INSTALLATION GENERAL

.1 Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise.

.2 Install doors and frames to CSDMA Installation Guide.

3.2 FRAME INSTALLATION

.1 Set frames plumb, square, level and at correct elevation.

.2 Secure anchorages and connections to adjacent construction.

.3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.

.4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

.5 Caulk perimeter of frames between frame and adjacent material.

.6 Maintain continuity of air barrier and vapour retarder with additional self-adhesive membranes as indicated.

3.3 DOOR INSTALLATION

.1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 10 - Door Hardware - General.

.2 Provide even margins between doors and jambs and doors and finished floor[and thresholds] as follows.

.1 Hinge side: 3.0 mm.

.2 Latchside and head: 3.0 mm.

.3 Finished floor, noncombustible sill and thresholds: 13 mm.

.3 Adjust operable parts for correct function.

3.4 FINISH REPAIRS

.1 Touch up with primer finishes damaged during installation.

.2 Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

3.5 GLAZING

.1 Install glazing for doors in accordance with Section 08 80 50 - Glazing.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 06 10 11 – Rough and Finish Carpentry

.2 Section 07 92 10 - Joint Sealing.

.3 Section 08 14 16 – Flush Wood Doors.

.4 Section 08 71 10 - Door Hardware.

.5 Section 08 80 50 – Glazing.

.6 Section 09 91 23 – Interior Painting.

1.2 REFERENCES

.1 American Society for Testing and Materials (ASTM International)

.1 ASTM A653/A653M-01a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.2 ASTM A366-85, Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

.3 ASTME A525-86, Specification for General Requirements for Steel Sheet Zinc-Coated (Galvanized) by the Hot-Dip Process.

.4 ASTM F1450-05, Test Method for Hollow Metal Swinging Door Assemblies for Detention Facilities.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.

.2 CSGB 1-GP-40M-97, Anticorrosive Structural Steel Alkyd Primer.

.3 CSGB 1-GP-148-80, Removable Matte Touch-Up paint.

.3 Canadian Standards Association (CSA International)

.1 G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.

.2 CSA W59-M1989(R2001), Welded Steel Construction (Metal Arc Welding) (Metric Version).

.3 CAN/CSA-G40.20-M87, General Requirements for Rolled or Welded Structural Quality Steel.

.4 Canadian Steel Door Manufacturers' Association, (CSDMA).

.1 CSDMA, Specifications for Commercial Steel Doors and Frames, 1990.

.2 CSDMA, Recommended Selection and Usage Guide for Commercial Steel Doors, 1990.

.5 National Fire Protection Association (NFPA)

.1 NFPA 80-99, Standard for Fire Doors and Fire Windows.

.2 NFPA 252-99, Standard Methods of Fire Tests of Door Assemblies.

.6 Underwriters' Laboratories of Canada (ULC)

.1 CAN4-S104-80(R1985), Fire Tests of Door Assemblies.

.2 CAN4-S105-85(R1992), Fire Door Frames Meeting the Performance Required by CAN4-S104.

.3 CAN/ULC-S704-01, Urethane and Isocyanurate Thermal Insulation, coated panels.

.4 CAN/ULC-S704-01, Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

.7 Correctional Service Canada: Technical Criteria, April 2015

1.3 DESIGN REQUIREMENTS

.1 Submit shop drawings required in accordance with Section 01 33 00 – Submittal Procedures.

.2 Shop drawings shall indicate each type of door proposed, the nature of the materials used, the thickness of the bare metal, the mortise joints, the reinforcement parts, the location of the anchors and visible fixings, the openings to accommodate the glazing, the arrangement of the hardware and the degree of fire resistance, and the finishes.

.3 Shop drawings shall indicate each type of frame proposed, the nature of the materials used, the thickness of the bare metal, the reinforcement parts, the glazing beads, the location of the anchors and visible fixings and the types of finishing coatings.

.4 Workshop drawings shall include a list of doors with marks and numbers corresponding to those used in the drawings and the list of doors.

.5 Submit test results, technical data and instructions for door installation.

1.4 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, glazing, arrangement of hardware and fire rating and finishes.

.3 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings finishes.

.4 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.

.5 Submit test and engineering data, and installation instructions.

1.5 REQUIREMENTS

.1 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104M and NFPA 252 for ratings specified or indicated and bearing the label of the organism in question..

.2 Provide fire labelled frame products for those openings requiring fire protection ratings, as scheduled. Test products in strict conformance with CAN4-S104, ASTM E152 or NFPA 252 and list by nationally recognized agency having factory inspection service and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Collect and separate for disposal paper, plastic, polystyrene or corrugated cardboard packaging material for recycling in accordance with Waste Management Plan.

.3 Divert unused paint and sealant materials from landfill to official hazardous material collections site approved by Engineer.

.4 Do not dispose of unused paint and sealant materials into sewer systems, into lakes, streams, onto ground or in other locations where it will pose health or environmental hazard.

.5 Divert unused metal materials from landfill to metal recycling facility approved by the ministry representative.

.6 Divert unused wood materials from landfill to recycling reuse composting facility approved by the ministry representative.

.7 Damaged or broken glazing materials are not recyclable. These materials must not de disposed of with materials destined for recycling.

PART 2 Products

2.1 MATERIALS

.1 "Commercial" doors: hollow steel door with stapled joints. Hot dipped galvanized steel sheet, to ASTM A924M-94, factory galvanized to Z275 (zinc phosphate). Metal thickness: 18 gauge.

.2 "Security" doors: Hollow steel door with welded joints. Hot dipped galvanized steel sheet, to ASTM A924M-94, factory galvanized to Z275 (zinc phosphate). Metal Thickness: 14 gauge. Manufactured in accordance with CSC Technical Criteria, April 2015. Provide test report confirming door is in accordance with ASTM 1450-05; provide internal structural reinforcements as required to ensure door is in accordance with standard. In particular, the door shall comply with the following requirements:

.1 Static load: maximum deflection of 30mm under load of 4,000kg. Maximum permanent deformation of 2mm.

.2 Bend test: maximum deflection of 35mm under load of 2,645kg applied to the unsupported corner of the door.

.3 Impact test: always in working condition after having experienced 375 impacts of 271 joules applied to the bolt, hinges and panels.

.3 "Commercial" door frames: 18 gauge galvanized steel, welded joints.

.4 "Security" door frames: 14 gauge galvanized steel, welded joints. Frames must be engineered to accommodate the "security" door strikes. Manufactured in accordance with CSC Technical Criteria, April 2015.

.5 "Security" window frames: 12 gauge galvanized steel, welded joints. Frame must be engineered to receive a deal tray. Glazing stops made of steel 25mm x 25mm x 4mm thick. Manufactured in accordance with CSC Technical Criteria, April 2015.

2.2 OTHER ELEMENTS

.1 Provide any other elements for doors and frames in accordance with requirements of CSDFMA.

2.3 PRIMER

.1 For galvanized steel sheet: to CSGB 1-GP-18M-77 (R1978) and the amendment of March 1978.

2.4 TOUCH-UP PAINT

.1 Anti-rust touch-up paint to CAN/CGSB-1.181.

2.5 PAINT

.1 Field paint steel doors and frames in accordance with Section 09 91 23 – Interior Painting.

2.6 ACCESSORIES

.1 Door silencers: single stud rubber/neoprene type.

.2 Fabricate glazing stops as formed channel, minimum 16 mm height, accurately fitted, butted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws.

.3 Deal tray: high-security slide-in drawer for front mounting, stainless steel, approximate overall dimensions 50mm high, 350mm wide, depth appropriate to the thickness of the wall.

.4 Metallic paste filler: to manufacturer's standard.

.5 Fire labels: metal riveted.

.6 Sealant: in accordance with Section Joint Sealants.

.7 Glazing: in accordance with Section 08 80 50 Glazing.

.8 Make provisions for glazing as indicated and provide necessary glazing stops.

.1 Design exterior glazing stops to be tamperproof.

2.7 GENERAL FRAME FABRICATION

.1 Fabricate frames in accordance with CSDMA specifications.

.2 Fabricate frames to profiles and maximum face sizes as indicated.

.3 Frames for interior openings, dimensions as indicated in Door Schedule.

.4 Blank, reinforce, drill and tap frames for mortised, templated hardware, and electronic hardware using templates provided by finish hardware supplier. Reinforce frames for surface mounted hardware.

.5 Protect mortised cutouts with steel guard boxes.

.6 Prepare frame for door silencers, 3 for single door, 2 at head for double door.

.7 Manufacturer's nameplates on frames and screens are not permitted.

.8 Conceal fastenings except where exposed fastenings are indicated.

.9 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.

.10 Insulate exterior frame components with polyurethane insulation.

.11 All hinge reinforcing to be “high frequency” or “intensive use” type folded sheet.

2.8 FRAME ANCHORAGE

.1 Provide appropriate anchorage to floor and wall construction.

.2 Locate each wall anchor immediately above or below each hinge reinforecement on hinge jamb and directly opposite on strike jamb.

.3 Provide 2 anchors for rebate opening heights up to 1520 mm and 1 additional anchor for each additional 760 mm of height or fraction thereof.

.4 Locate anchors for frames in existing openings not more than 150 mm from top and bottom of each jambs and intermediate at 660 mm o.c. maximum.

.5 All exposed fasteners for "security" type frames shall be tamper-resistant.

2.9 FRAMES: WELDED TYPE

.1 Welding in accordance with CSA W59.

.2 Accurately mitre or mechanically joint frame product and weld continuously along entire length inside of profile.

.3 Cope accurately and securely weld butt joints of mullions, transom bars, centre rails and sills.

.4 Grind welded joints and corners to a flat plane, fill with metallic paste and sand to uniform smooth finish.

.5 Securely attach floor anchors to inside of each jamb profile.

.6 Weld in 2 temporary jamb spreaders per frame to maintain proper alignment during shipment.

.7 For each single door, install e simple, installer three door silencers on strike side of frame; for double doors, install 2 silencers on head of frame.

.8 Provide glazing as indicated and install required glazing stops.

.9 Provide integration of the deal tray at the bottom of the security window frame.

2.10 GENERAL DOOR FABRICATION

.1 Doors: swing type, flush, with provision for glass and/or louvre openings as indicated.

.2 Edges sealed with adhesive, visible square folded joint.

.3 Blank, reinforce, drill doors and tap for mortised, templated hardware.

.4 Factory prepare holes 12.7 mm diameter and larger except mounting and through-bolt holes, on site, at time of hardware installation.

.5 Reinforce doors where required, for surface mounted hardware.

.6 Provide flush PVC top caps to exterior doors.

.7 Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.

.8 Manufacturer's nameplates on doors are not permitted.

.9 Unless otherwise indicated, doors and frames to be fabricated according to details and requirements of “Canadian Manufacturing Specifications for Metal Doors and Frames,” most recent edition, published by “Canadian Steel Door and Frame Manufacturers’ Association” (CSDFMA).

.10 Factory prime cold-rolled steel sheet.

.11 Factory apply touch-up primer at places where galvanization has been damaged.

.12 All hinge reinforcing to be “high frequency” or “intensive use” type folded sheet.

.13 Top and bottom to be flush; provide steel shapes with full width of door welded to both faces.

PART 3 Execution

3.1 INSTALLATION GENERAL

.1 Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise.

.2 Install doors and frames to CSDMA Installation Guide.

3.2 FRAME INSTALLATION

.1 Set frames plumb, square, level and at correct elevation.

.2 Secure anchorages and connections to adjacent construction.

.3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.

.4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

.5 Caulk perimeter of frames between frame and adjacent material.

.6 Maintain continuity of air barrier and vapour retarder with additional self-adhesive membranes as indicated.

3.3 DOOR INSTALLATION

.1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 10 - Door Hardware - General.

.2 Provide even margins between doors and jambs and doors and finished floor[and thresholds] as follows.

.1 Hinge side: 3.0 mm.

.2 Latchside and head: 3.0 mm.

.3 Finished floor, noncombustible sill and thresholds: 13 mm.

.3 Adjust operable parts for correct function.

3.4 FINISH REPAIRS

.1 Touch up with primer finishes damaged during installation.

.2 Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

3.5 GLAZING

.1 Install glazing for doors in accordance with Section 08 80 50 - Glazing.

END OF SECTION

PART 1 General

1.1 SECTION CONTENTS

.1 Work under this section includes supply and installation of new wood doors.

1.2 RELATED SECTIONS

.1 Section 01 33 00 – Submittal Procedures.

.2 Section 06 10 11 – Rough and Finish Carpentry.

.3 Section 08 11 00 – Steel Doors and Frames.

.4 Section 08 71 00 – Door Hardware.

.5 Section 08 80 50 – Glazing.

.6 Section 09 91 23 – Interior Painting.

1.3 REFERENCES

.1 Canadian Standards Association (CSA International).

.1 CSA O112.4 M1977 (R1999), Polyvinyl Adhesives for Wood.

.2 CAN/CSA O132.2 Series-90(R1998), Wood Flush Doors.

.3 CAN/CSA-O132.5-M1992(R1998), Stile and Rail Wood Doors.

.2 National Fire Protection Association (NFPA).

.1 NFPA 80-07, Standard for Fire Doors and Other Opening Protective.

.2 NFPA 252-08, Standard Method of Fire Tests of Door Assemblies.

.3 Underwriters' Laboratories of Canada (ULC).

.1 CAN-4S104 M80, Fire Tests of Door Assemblies.

.2 CAN4-S105M R1992, Fire Door Frames Meeting the Performance Required by CAN4-S104.

1.4 SUBMITTALS

.1 Submit product data and samples according to Section 01 33 00 – Submittals.

.2 Submittals must include construction details and details of door faces and cores.

.3 Manufacturer's instructions

.1 Submit manufacturer's installation and operation instructions.

.4 Closeout Submittals: Submit maintenance instructions for inclusion in project manual specified in Section 01 78 00 – Closeout Submittals:

.1 Name, type and operation.

.2 Manufacturer's product number.

1.5 QUALITY ASSURANCE

.1 Fire-rated doors whose fire-rating has been indicated by the ministry representative shall have undergone testing in a Canadian test lab to CAN4 S104 and NFPA 252 and bear the label of testing organization in question.

.2 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.

.3 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.6 PROTECTION

.1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.

.2 Store doors in well ventilated room, off floor, in accordance with manufacturer's recommendations.

.3 Deliver doors individually wrapped and store them in such a way as to protect them from scratches, handling marks and other damage. Doors shall be stored horizontally, one above the other, according to manufacturer's instructions.

.4 Store doors away from direct sunlight.

1.7 WARRANTY

.1 Provide a written document, signed and issued to the owner stating that all wood doors are guaranteed against warping and buckling, defective joints, cracking, delamination, and sagging, for a period of three (3) years starting with date of the provisional acceptance inspection.

PART 2 Products

2.1 MATERIALS

.1 Door material: To CAN/CSA O132.2-Series 90.

2.2 WOOD FLUSH DOORS

.1 Standard doors: cellular core, density of 449 kg/m³, adhered to stiles and crosspieces according to CSA and ANSI A208.1, with following characteristics:

.1 Thickness: 45mm.

.2 Upper and lower crosspieces: Wood veneer of 3 mm of the same essence as the face of the door, longitudinally laminated by hot pressing using a structural adhesive type 1, with a total width 30 mm; all glued to core.

.3 Stiles: Wood veneer 3 mm thick, matched to front, longitudinally laminated by hot pressing using a structural adhesive type 1, including a piece of hardwood 22 mm; total width of 30 mm; all glued to the core, with blind joints.

.4 Reinforcement: integrated blocking for lockset, door closers, door-openers, panic bars, etc.

.5 Faces: white birch plywood, rotary peeled, continuous, painted grade.

.6 Adhesive: Type I, hot.

.7 Finish: factory painted by the manufacturer of doors according TR6 process; color choice by ministry representative.

2.3 FABRICATION

.1 To CAN/CSA O132.2 – Series 90.

.2 Prepare doors for hardware and glazing beads at factory by the manufacturer of doors in order to maintain security and to comply with regulatory requirements. Maximum allowable cutting during field installation is 16 mm at the bottom of the door and 3 mm at top.

.3 Bevel vertical edges of single acting doors 3 mm in 50 mm on lock side and 1.5 mm in 50 mm on hinge side.

.4 Before fabricating doors, check door opening for precise dimensions required in order to provide doors of maximum useful width.

.5 Affix labels on the doors of an accredited certification body.

PART 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 INSTALLATION

.1 Unwrap and protect doors in accordance with CAN/CSA-O132.2 Series, Appendix A.

.2 Install labelled fire rated doors to NFPA 80.

.3 Install doors and hardware in accordance with manufacturer's printed instructions.

.4 Adjust hardware for correct function.

.5 Install glazing in accordance with Section 08 80 50 - Glazing.

3.3 ADJUSTMENT

.1 Adjust door precisely for uniform clearances 3 mm at the head and jambs and 16 mm at the bottom, taking into account the thickness of the flooring and to ensure their full opening.

.2 Re-adjust doors and hardware just prior to completion of building to function freely and properly.

3.4 CLEANING

.1 Perform cleaning as soon as possible after installation to remove construction and accumulated environmental dirt.

.2 Remove traces of primer, caulking; clean doors and frames.

.3 Clean glass and glazing materials with approved non-abrasive cleaner.

.4 On completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 08 11 14 – Metal Doors and Frames.

.2 Section 08 14 16 –Flush Wood Doors.

1.2 REFERENCES

.1 CNB 1995 (non revised).

.2 ANSI/BHMA A 156.

.3 NFPA 80.

.4 NFPA 101.

1.3 REGULATORY REQUIREMENTS

.1 Hardware for exterior exit doors and for labeled doors in fire separations must be certified by a Canadian certification organization accredited by the CSA.

1.4 HARDWARE LIST

.1 Submit contract hardware list in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate specified hardware, including make, model, material, function, size, finish (ANSI) and other pertinent information.

.3 List to include door and frame information.

.4 Use numbering system established by Architect.

.5 Verification of the hardware list does not relieve contractor's responsibility to provide all hardware required for completion of Work.

1.5 CLOSEOUT PROCEDURES

.1 Provide operation and maintenance data for door closers, locksets, door holders electrified hardware and fire exit hardware for incorporation into manual specified in Section 01 78 00 - Closeout Submittals

.2 Explain correct hardware maintenance and cleaning methods to maintenance personnel.

.3 The list will be constantly revised to take change orders into account. Hardware supplier will provide revised copies to interested parties upon request.

.4 At closeout, provide all parties with one copy of "As built" list.

1.6 EXTRA MATERIALS

.1 Provide maintenance and extra material as required by section 01 78 00 – Closeout Submittals.

1.7 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements

.2 Store finishing hardware in locked, clean and dry area.

.3 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.

.4 Draw up inventory list based on hardware list.

.5 Deliver hardware in its original packaging.

1.8 WASTE DISPOSAL AND MANAGEMENT

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Dispose of corrugated cardboard, polystyrene or plastic packaging material in appropriate on-site bin for recycling in accordance with site waste management program.

1.9 OUTILS D'AJUSTEMENT

.1 Provide Owner with two sets of special installation and adjustment tools furnished by manufacturer upon delivery of hardware.

1.10 EQUIVALENCE

.1 All requests for approval of equivalent products must be submitted in writing to the ministerial representative before tender of bid in order to allow analysis of request and to permit other bidders to be informed.

1.11 WARRANTY

.1 Provide written warranty against any material or labor defect for a period of two (2) years starting with date of the provisional acceptance inspection.

PART 2 Products

2.1 HARDWARE ITEMS

.1 Hardware in accord with relevant ANSI/BHMA standards.

.2 Use one manufacturer's products only for similar items.

.3 See list of hardware groups at end of this section for pieces of hardware included in the Work of this section.

.4 Provide required quantities as indicated by drawings, specifications, and door and hardware schedule.

.5 For any article required to complete the Work but not expressly specified in this section, request additional information before tendering bid, or take responsibility for providing these articles with no additional cost to Owner.

.6 Hardware to be installed with fasteners (screws, bolts, etc.) provided by the manufacturer.

.7 Provide all shims and accessories required for installation of various articles of hardware. Pay particular attention to door closers, weatherstripping, and soundproofing.

.8 All hardware components to be heavy-duty commercial grade. The hardware components installed on the outside must be designed for outdoor installation. The hardware components installed on doors bearing a fire rating must also be fire rated.

2.2 FASTENINGS

.1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.

.2 Exposed fastening devices to match finish of hardware.

.3 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners, unless otherwise indicated.

.4 Use fasteners compatible with material through which they pass.

.5 Use only fasteners provided or recommended by manufacturers.

.6 Do not use any thru-bolts unless expressly approved by the Engineer.

2.3 KEYING

.1 Provide three keys for each lock, keyed to **new** building key path.

.2 Locksets shall be provided with BEST-compatible cylinders. Core coding will be provided by the customer.

.3 Provide a master key controlling all Training Building doors of another for the Shooting Gallery and Bullet Collector buildings.

.4 Provide six (6) copies of each master key.

.5 Key blanks, cores, extractors (2) and master key to be shipped securely directly from the manufacturer to the ministerial representative.

.6 Even if they are not specifically described, provide cores required for securing all doors to the building key path. If in doubt, check with the engineer or take responsibility for providing at no additional cost.

PART 3 Execution

3.1 EXAMINATION

.1 Check plans, details, and hardware schedule for items of hardware to be installed. Include all door hardware and related items such as gaskets, screws, bolts, shims, door closer accessories, etc., that are necessary to complete the Work of this section.

.2 The hardware schedule is provided as a guide to the type, function, quality, and minimum weight of required articles, but is not to be interpreted as a quantity list.

3.2 MANUFACTURER'S INSTRUCTIONS

.1 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.

.2 Furnish manufacturers' instructions for proper installation of each hardware component.

3.3 INSTALLATION

.1 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association. Pay particular attention to hinge placement: upper hinges shall be at 127mm from door top, lower hinges at 254mm from door bottom, third hinge centered between the first two.

.2 Where door stop contacts door pulls, mount stop to strike bottom of pull.

.3 All hardware is to be adjusted to and solidly installed on doors and frames as specified.

.4 All hardware is to be installed level and plumb.

.5 All hardware is to function smoothly and perfectly.

.6 Where door stop contacts door pulls, mount stop to strike bottom of pull.

.7 Commercial hardware must be installed according to industry standards by specially trained employees.

.8 Install hardware at heights recommended by manufacturers and according to applicable standards.

3.4 SCHEDULE

.1 The following hardware schedule is not exhaustive and thus does not constitute a quantity list. The groups are listed as a guide to the type, function, quality, and finish of required articles. Check groups against drawings and door schedule and provide any additional items not specified but required to complete the Work according to the intent of the construction documents.

.2 Hardware list:

	GROUP 01	
3	STAINLESS STEEL HINGES - 127 x 102	652
1	«OFFICE» LOCK type « ORBIT » (ROUND HANDLE)	626
1	SPRING CUSH DOOR CLOSER	689
1	STAINLESS STEEL PROTECTION PLATE - 200h	630
1	WALL OR FLOOR-MOUNTED DOOR STOP, ACCORDING TO LOCATION	682
1	WEATHERSTRIPPING	NOIR
1	AUTOMATIC DOOR BOTTOM	628
	GROUP 02	
3	HIGH SÉCURITÉ HINGES SOUTHERN FOLGER MODEL 205FS, 127H X 114L X 12, 7THICK., installed using tamper-resistant fasteners	Primer
1	LOCK WITHOUT LATCH type « ORBIT » (ROUND HANDLE)	626
1	HIGH SÉCURITÉ DEADLOCK FOLGER ADAM MODEL 82 + STRIKE 80-4DB	Primer
1	STAINLESS STEEL PROTECTION PLATE - 200h Push side	630
1	WEATHERSTRIPPING	NOIR
1	SPRING CUSH DOOR CLOSER	689
	GROUP 03	
3	STAINLESS STEEL HINGES - 127 x 102	652
1	«OFFICE» LOCK type « ORBIT » (ROUND HANDLE)	626
1	STAINLESS STEEL PROTECTION PLATE - 200h Push side – ON METAL DOORS ONLY	630
1	WEATHERSTRIPPING	NOIR
1	AUTOMATIC DOOR BOTTOM	628
1	WALL OR FLOOR-MOUNTED DOOR STOP, ACCORDING TO LOCATION	682

.3 Schedule: See Section 08 10 00 – Doors and Frames Schedule

END OF SECTION

PARTIE 1 General

1.1 RELATED SECTIONS

.1 Section 08 11 14 – Steel Doors and Frames.

.2 Section 08 14 16 – Flush Wood Doors.

1.2 REFERENCES

.1 American Society for Testing and Materials International, (ASTM).
- .1 ASTM C 542-94(1999), Specification for Lock-Strip Gaskets.

.2 Canadian General Standards Board (CGSB).
- .1 CAN/CGSB-12.12-M90, Plastic Security Glazing Panels.
- .2 CAN/CGSB-12.2-M91, Flat, Clear Sheet Glass.
- .3 CAN/CGSB-12.3-M91, Flat, Clear Float Glass.
- .4 CAN/CGSB-12.8-97, Insulating Glass Units.
- .5 CGSB 19-GP-5 Sealing Compound, One Component, Acrylic Base, Solvent Curing.
- .6 CAN/CGSB-19.13-M87, Sealing Compound, One Component, Elastomeric, Chemical Curing.
- .7 CAN/CGSB-19.13-M87, Sealing Compound, One Component, Silicone Base, Solvent Curing.
- .8 CAN/CGSB-19.24-M90, Multicomponent, Chemical-Curing Sealing Compound.

1.3 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

1.4 SAMPLE

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

.2 Submit single 150 x 150 mm samples of each type of glazing and sealant material.

1.5 WARRANTY

.1 Provide written document, signed and addressed to Owner, stipulating that insulating glass units are guaranteed against any loss of impermeability of enclosed air space and that all glass described by this section is guaranteed against any defect that might obstruct vision for a period of five (5) years starting with date of the provisional acceptance inspection.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Divert metal cut-offs from landfill by disposal at nearest metal recycling facility.

.2 Divert uninstalled materials for reuse at nearest used building materials facility or similar type facility.

.3 Divert unused caulking and sealant materials from landfill through disposal at special wastes depot.

.4 Evacuate all packaging materials from site and route to appropriate recycling facilities.

.5 Place all corrugated, polystyrene and plastic packing materials in appropriate dumpsters installed on site for recycling in accordance with the on-site waste management program.

1.7 PACKAGING MATERIALS

.1 Remove form site and dispose of packaging materials at appropriate recycling facilities.

.2 Dispose of corrugated cardboard, polystyrene or plastic packaging material in appropriate on-site bin for recycling in accordance with site waste management program.

PARTIE 2 Products

2.1 MATERIALS: FLAT GLASS

.1 V.T.: Clear tempered glass: to CAN/CGSB-12.3, clear float glass, tempered, glazing quality, 6mm thick.

.2 V.T.9: Clear tempered glass, to CAN/CGSB-12.3, clear float glass, tempered, glazing quality, 9mm thick.

2.2 SEALED INSULATING GLASS

.1 V.S.: Security glazing (for window CA-60 and door B-125), two panels, 31mm overall thickness, having the following characteristics:

.1 Exterior panel (detainee side): Tempered clear glazing.

.2 Inter-cavity space thickness: 12 mm thick with black stainless steel spacers.

.3 Interior panel: laminated glazing.

.4 Provide cut-out of sealed unit as required for the installation of a speak-thru. Cutting should be done before tempering the panels. Provide stainless steel insert at the perimeter of the hole.

.2 V.A.: Acoustic glazing (for interior office windows), two panels, 25 mm overall thickness, having the following characteristics:

.1 Exterior panel: Tempered clear glazing.

.2 Inter-cavity space thickness: 12 mm thick with black stainless steel spacers.

.3 Interior panel: Tempered clear glazing.

2.3 ACCESSORIES

.1 Setting blocks: Neoprene, 50 Shore A durometer hardness to ASTM D2240, width to suit glazing method, glass light weight, thickness and area.

.2 Spacer shims: Neoprene, 50-60 Shore A durometer hardness to ASTM D2240, 75 mm long x one half height of glazing stop x thickness to suit application. Self adhesive on one face.

.3 Glazing tape:

.1 Preformed butyl compound with continuous internal shim, 10-15 Shore A durometer hardness to ASTM D2240; coiled on release paper; 3 x 10 mm size; black colour.

.2 Closed cell polyvinyl chloride foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume 2 %, designed for compression of 25 %, to effect an air and vapour seal; 3 mm size.

.4 Speak-thru: bullet proof speak-thru, round, 152mm, brushed stainless steel.

.5 Glazing splines: see section 08 11 00.

.6 Glazing clips: manufacturer's standard type.

.7 Lock-strip gaskets: to ASTM C 542-94(1999).

.8 Sealant: silicone-based mastic, single component, polymerization by solvent evaporation, to CAN/CGSB-19.18-M87, colour to match colour of frames.

.9 Glazing strips: recently manufactured neoprene, designed for dry method glazing, appropriate for aluminum shapes, black.

.10 Sealant primer and cleaning products: as recommended by glass manufacturer.

PARTIE 3 Execution

3.1 EXAMINATION

.1 Verify that openings for glazing are correctly sized and within tolerance.

.2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

3.2 PREPARATION

.1 Clean contact surfaces with solvent and wipe dry.

.2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.

.3 Prime surfaces scheduled to receive sealant.

3.3 GENERAL

.1 Glass shall be precision cut to tolerances required for installation. Glass shall be installed as to be free of any superimposed load or other factor that could cause warping or bending that could affect appearance or lead to breaking. At locations where glass edges will be visible, they are to be straight, smooth, polished, and non cutting. Use only normal glass cutting methods. Glazing stops of openings to be glazed will be well-aligned and will ensure adequate fit of glazing within openings.

.2 Glass installation will be rigid once finished and shall be adjusted to fit various building all direct contact between glass and metal or wood shall be avoided. Any tape, strip, or other glazing accessories will be flush with the glazing stops or other similar accessories. Glazing stops will be removable to allow replacement of glass as required.

.3 Each glass unit will be labelled with a removable label from the manufacturer identifying the manufacturer, glass type, and glass quality. Labels will only be removed once with Ministerial representative's written approval.

3.4 INTERIOR GLAZING - DRY METHOD, GLAZING TAPE

.1 Cut glazing tape to length and set against permanent stops, projecting 5 mm above sight line. Begin by taping entire width of glazing before taping vertical dimension. Seal corners by butting tape and sealing junctions with sealant.

.2 Place setting blocks at ¼ points, with edge block maximum 150 mm from corners.

.3 Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.

.4 Install removable stops without displacing glazing tape. Exert pressure for full continuous contact. Screw the glazing strips in place. For security type glazing, the screws must be of tamper-resistant.

.5 Trim protruding tape edge.

.6 Install the speak-thru in the security glazing.

3.5 CLEANING

.1 Remove glazing materials from finish surfaces.

.2 Remove labels after work is complete.

.3 All scratched, broken, or damaged glass is to be immediately replaced at no additional cost to Owner.

3.6 PROTECTION OF FINISHED WORK

.1 After installation, mark light with an "X" by using removable plastic tape or paste. Do not mark heat absorbing glass units.

END OF SECTION

ROOM IDENTIFICATION			FINISHES				
NUMBER	REVISION	DESCRIPTION	FLOOR	BASE	WALL	CEILING	COMMENTS
Ground Floor							
B-123		OFFICE	R	R	CB2/NG	AT1	1,3,5,6
B-124		PEES	R	R	CB2/CB3	AT1	1,3
B-125		SAS	R	R	CB2/CB3	AT1	4
B-126		KITCHENETTE	R	R	CB2/CB3	EG	1,3
B-127		OFFICE	R	R	CB2	AT1	1,3,4
B-128		OFFICE	R	R	CB2/CB3/NG	AT1	1,3,4,6
B-129		MEETING ROOM	R	R	CB1/CB2/CB3	AT1	1,3
B-130		DEPOSITORY	-	-	CB2/CB3	SB	2
B-131		OFFICE	R	R	CB2/CB3	AT1	1,3,4
B-132		TOILET	-	-	-	EG	
Second Floor							
C-139.1		STAIRS	-	-	C2	CS	
C-141.2		STAIRS	-	-	-	CS	
C-204		MAINTENANCE	-	-	CB2/EG	EG	
C-205		TOILET	-	-	-	EG	
C-206		TOILET	-	-	-	EG	
C-207		OFFICE	C	C	EG/NG	AT1	1,3,5
C-207.1		OFFICE	C	C	NG	AT1	
C-208		OFFICE	C	C	EG/NG	AT1	1,3,5
C-208.1		OFFICE	C	C	NG	AT1	1,3
C-209		OFFICE - MANAGER	C	C	EG/NG	AT1	1,3,5
C-210		OFFICE	C	C	EG/NG	AT1	1,3,5
C-211		OFFFICE - MANAGER	C	C	EG/NG	AT1	1,3,5
C-212		OFFICE - MANAGER	C	C	EG/NG	AT1	1,3,5
C-213		OFFICE	C	C	EG/NG	AT1	1,3,5
C-214		MEETING ROOM	C	C	C2/EG/NG	AT1	1,3,5
C-215		OFFICE SPACE	C	C	CB2/EG/NG	AT1	1,3,5
C-216		OFFICE SPACE	C	C	EG/NG	AT1	1,3,5
C-217		STATIONERY	C	C	NG	AT1	

LÉGENDE

Floor		
R		Rubber covering, smooth finish
C		Carpet
Baseboard		
R		Rubber
C		Carpet
Wall		
C1		Exposed concrete wall, to paint
C2		Painted concrete wall, to paint
CB1		Concrete block wall covered with plaster, to be painted
CB2		Existing painted concrete block wall, to paint
CB3		New concrete block wall, to paint
EG		Existing gypsum wall, to paint
NG		New gypsum wall, to paint
Ceiling		
CS		Exposed concrete structure
AT1		New acoustic tile suspended ceiling, type 1
GE		Existing gypsum ceiling, to paint
Comments		
1		Existing vinyl tile floor to remove
2		Unfinished concrete floor to patch
3		Rubber baseboards to remove
4		Existing gypsum ceiling to remove
5		Acoustic tiles and ceiling suspension to remove
6		New gypsum wall to paint, see wall type I and J, A701

NOTE: See section 09 91 23 for paint work

PART 1 General

1.1 RELATED SECTIONS

.1 Section 06 10 11 – Rough and Finish Carpentry.

.2 Section 07 21 16 – Blanket Insulation.

1.2 REFERENCES

.1 Unless otherwise indicated, perform work to ACNOR A82.31.

.2 ASTM D1037.

.3 ASTM A 118.9.

.4 CAN/ULC-S126.

.5 CAN/ULC-S107.M.

1.3 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

1.4 SITE ENVIRONMENTAL REQUIREMENTS

.1 Maintain temperature minimum 10 degrees C, maximum 21 degrees C for 48 hours prior to and during application of gypsum boards and joint treatment, and for at least 48 hours after completion of joint treatment.

.2 Apply board and joint treatment to dry, frost free surfaces.

PART 2 Products

2.1 MATERIALS

.1 Fire separation board: to ASTM C36, high resistance Type X, thickness as indicated, 1200 mm wide x maximum practical length, ends square cut, edges squared or bevelled, containing at least 25% recycled content.

.2 High resistance boards: to ASTM C36, high resistance with fiberglass mesh reinforcing, thickness as indicated, 1200 mm wide x maximum practical length, ends square cut, edges squared or bevelled, containing at least 25% recycled content.

.3 Humidity resistant boards: to ASTM C36, humidity resistant, thickness as indicated, 1200 mm wide x maximum practical length, ends square cut, edges squared or bevelled, containing at least 25% recycled content.

.4 Regular boards: to ASTM C36, thickness as indicated, 1200 mm wide x maximum practical length, ends square cut, edges squared or bevelled, containing at least 25% recycled content.

.5 Lightweight concrete panels: Portland cement-based composite panels, sand, expanded polystyrene beads coated with high performance alkali resistant fiberglass mesh, free from asbestos, gypsum and gypsum. organic fiber or cellulose fiber and having the following characteristics:

.1 Borders: Tapered edges and edges with tapered longitudinal edges;

.2 Water absorption: less than 10% of mass;

.3 Deflection at moisture: 0 mm;
.4 Thermal expansion coefficient: 0.013 mm / C / m;
.5 Resistance to fungi and bacteria: 0 growth;
.6 Resistance to wind thrusts: 3.6 KPa;
.7 Mass per unit area: 14.2 kg / m²;
.8 Peel strength: 849N;
.9 Surface Burning Characteristics: Flame Propagation = 0; smoke emission = 0.

.6 Steel drill screws: to ASTM C1002 and C954. Screws to be long enough for minimum 10 mm penetration into support.

.7 Corner beads and casing beads to be plaster-finished: galvanized steel, 26 gauge minimum, perforated flanges, one piece length per location.

.8 Expansion joints: zinc-coated, perforated flanges, with removable plastic film, one piece length per location.

.9 Sealants: in accordance with Section 07 92 00 - Joint Sealants.

.10 Acoustic sealant: in accordance with Section 07 92 00 - Joint Sealants.

.11 Joint compound: to ASTM C475, asbestos-free, premixed, all purpose.

.12 Joint tape: fiber-reinforced paper tape.

PART 3 Execution

3.1 ERECTION

.1 Do application and finishing of gypsum board in accordance with ASTM C840 except where specified otherwise.

.2 Do application of gypsum sheathing in accordance with ASTM C1280.

.3 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with ASTM C840 except where specified otherwise.

.4 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.

.5 Install work level to tolerance of 1:1200.

.6 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, and grilles.

.7 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.

.8 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.

.9 Furr duct shafts, beams, columns, pipes and exposed services where indicated.

3.2 INSTALLATION

.1 Do not apply gypsum board until bucks, anchors, blocking, sound attenuation, electrical and mechanical work are approved.

.2 Apply single or double layer gypsum board to metal furring or framing using screw fasteners. Maximum spacing of screws 300 mm on centre.

.3 Install boards horizontally or vertically as indicated. Stagger joints over different studs on opposite sides of wall.

.1 In partitions with required fire resistance, lay the gypsum board vertically and align the joints on the framing. If the gypsum board is to be installed horizontally or if the heights or site conditions require a horizontal joint, add a steel plate of the same gauge as the framing so that all horizontal joints are against framing on all the width of the partition.

.4 Where acoustic partitions with two layers of gypsum board are indicated, install the first layer with 6 mm spaces at joints between all panel edges. Seal joints with acoustic sealant. Orient gypsum boards perpendicular to each other on opposite sides of partition.

.5 Apply 12 mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components. Seal full perimeter of cut-outs around electrical boxes, and ducts in partitions where perimeter sealed with acoustic sealant.

.6 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges. Secure at 150 mm on centre using contact adhesive for full length.

.7 Install corner beads on all external corners. Install casing beads where gypsum board butts against surfaces having no trim concealing junction, such as metal door and window frames, block walls, or any other non-plaster surface. Seal joints with thin bead of acrylic sealant.

.8 Install expansion joints along joint between floors in stair enclosure. Complete finish work before removing protective plastic film.

.9 Install access doors to electrical and mechanical fixtures specified in respective sections.

.1 Rigidly secure frames to furring or framing systems.

.10 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.

.11 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.

.12 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.

.13 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.

.14 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

.15 Apply one coat of white primer sealer over surface to be textured. When dry apply textured finish in accordance with manufacturer's instructions.

.16 Mix joint compound slightly thinner than for joint taping.

.17 Apply thin coat to entire surface using trowel or drywall broadknife to fill surface texture differences, variations or tool marks.

.18 Allow skim coat to dry completely.

.19 Remove ridges by light sanding or wiping with damp cloth.

END OF SECTION

1 GENERAL

1.01 RELATED SECTIONS

.1 Section 06 10 00 – Rough and Finish Carpentry.

.2 Section 06 40 00 – Architectural Woodwork.

.3 Section 07 21 16 – Blanket Insulation.

.4 Section 07 92 00 – Joint Sealants.

.5 Division 8.

.6 Section 09 21 16 – Gypsum Board Assemblies

1.02 REFERENCES

.1 American Society for Testing and Materials (ASTM).

.1 ASTM C645-08A, Standard Specification for Non-structural Steel Framing Members.

.2 ASTM C754-07, Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.

.3 ASTM A568/A568M-07a - Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for.

.4 ASTM A525-94, Specification for General Requirements for Steel Sheet, Zinc-coated (Galvanised) by the Hot-Dip Process

.2 Canadian Standards Association (CSA Group)

.1 CSA A123.3-05, Asphalt Saturated Organic Roofing Felt.

.2 CAN/CSA S136-07, North American Specification for the Design of Cold-Formed Steel Structural.

1.03 QUALITY ASSURANCE

.1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.

.2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.04 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.2 Collect and separate for disposal paper, plastic, polystyrene or corrugated cardboard packaging material for recycling in accordance with Waste Management Plan.

.3 Divert unused metal materials from landfill to metal recycling facility approved by the ministry representative.

.4 Divert unused gypsum materials from landfill to recycling reuse composting facility approved by the ministry representative.

1.05 CALCULATION CRITERIA

.1 Although thicknesses are mentioned, all wall elements shall be designed to withstand pressures for a uniform lateral load of 240 Pa with a maximum deflection of L/360.

.2 The dimensions and thickness of the shapes shall be such as to obtain a maximum deflection of L/720 for brick walls and L/360 for other walls, for a wind load of 1 KPa for once in 30 years .

2 PRODUCTS

2.01 MATERIALS

.1 Non-load bearing channel stud framing: stud size to ASTM C 645, hot dipped galvanized steel sheet, for screw attachment of gypsum board and equipped with knock-out service holes at 460 mm centres for the passage of service pipes; dimensions and spacing of posts as indicated.
.1 Gauge: 20

.2 Floor and ceiling tracks: to ASTM C 645, in widths to suit stud sizes, 32 mm flange height.
.1 The tracks will be the same gauge as the studs used

.3 U shaped metal channel stiffener: 13 mm x 38mm size, 1.2 mm thick cold rolled steel, coated with rust inhibitive coating.

.4 Sealant: in accordance with Section 07 92 00 - Joint Sealants.

.5 Insulating strip: polyethylene foam strip with open and closed cells, 3 mm thick for interior partitions x width and length.

.6 Metal fasteners for insulating or thermal insulation wool mats: galvanized steel plates measuring 64 x 304 mm with precut threaded folding rods.

.7 Metallic furring (U-profiles, suspension rods, fixing wires, inserts and anchors), galvanized.

.8 " Ω " type furring: Zinc-coated sheet steel, Z275 compliant with ASTM A526 / A526M, allowing screw fixing of various panels, gauge 26 for gypsum ceilings.

3 EXECUTION

3.01 ERECTION

.1 Align partition tracks at floor and ceiling and secure at indicated spacing.

.2 Install a water repellent membrane under the partition floor tracks resting on floor slabs.

.3 Place studs vertically, space as indicated on drawings and not more than 50 mm from abutting walls, and at each side of openings and corners. Position and fasten studs in tracks at floor and ceiling. Cross brace studs as required to provide rigid installation of any partition higher than 2400 mm by means of metal stiffeners every 1200 mm in height according to the manufacturer's instructions.

.4 Erect metal studding to tolerance of 1:1000.

.5 Attach studs to bottom and top track using screws.

1. Vertical posts must be attached to both sides of the top and bottom track.

.6 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.

.7 Co-ordinate erection of studs with installation of door/window frames and special supports or anchorage for work specified in other Sections.

.8 Provide two studs extending from floor to ceiling at each side of openings wider than stud centres specified. Secure studs together, 50 mm apart using column clips or other approved means of fastening placed alongside frame anchor clips.

.9 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in same manner and spacing as wall studs.

.10 Install frames around all four sides of building openings, built-in hardware, cabinets and access panels. Extend the frames. Check required clearances from equipment suppliers.

.11 Secure 40 mm studs or fur sections between main posts to allow fixing of sanitary fixtures and accessories such as washbasins, toilets, bathroom accessories and other items, including grab bars and towel rails, to steel post framed partitions.

.12 Install steel studs or furring channel between studs for attaching electrical and other boxes.

.13 Extend partitions to ceiling height except where noted otherwise on drawings.

.14 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs.
.1 Use 50 mm leg ceiling tracks. Use double track slip joint as indicated.

.15 Install continuous insulating strips to isolate studs from uninsulated surfaces.

.16 Install two continuous beads of sealant for sound insulation below studs and tracks at the perimeter of soundproofing partitions.

3.03 CLEANING

.1 Upon completion remove surplus materials, rubbish, tools and barriers used to protect the equipment.

END OF SECTION

1 GÉNÉRALITÉS

1.01 RÉFÉRENCES

.1 Section 03 36 20 – Réparation des surfaces de béton

1.02 RÉFÉRENCES

.1 American National Standards Institute (ANSI)/Ceramic Tile Institute (CTI)
- .1 ANSI A108.1-99, Specification for the Installation of Ceramic Tile (Includes ANSI A108.1A-C, 108.4-.13, A118.1-.10, ANSI A136.1).
- .2 CTI A118.3-92, Specification for Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive (included in ANSI A108.1).
- .3 CTI A118.4-92, Specification for Latex Cement Mortar (included in ANSI A108.1).
- .4 CTI A118.5-92, Specification for Chemical Resistant Furan Resin Mortars and Grouts for Tile Installation (included in ANSI A108.1).
- .5 CTI A118.6-92, Specification for Ceramic Tile Grouts (included in ANSI A108.1).

.2 American Society for Testing and Materials International (ASTM)
- .1 ASTM C 144-04, Specification for Aggregate for Masonry Mortar.
- .2 ASTM C 207-06, Specification for Hydrated Lime for Masonry Purposes.
- .3 ASTM C 979-05, Specification for Pigments for Integrally Coloured Concrete.

.3 Office des normes générales du Canada (CGSB)
- .1 CAN/CGSB-75.1-M88, Carreaux de céramique.
- .2 CAN/CGSB-25.20-95, Apprêt pour planchers.

1.03 DOCUMENTS/ ÉCHANTILLONS A SOUMETTRE POUR APPROBATION/INFORMATION

.1 Soumettre les documents et les échantillons requis conformément à la section 01 33 00 - Documents et échantillons à soumettre.

.2 Soumettre les fiches techniques requises conformément à la section 01 33 00 - Documents et échantillons à soumettre.
- .1 Fournir la documentation du fabricant concernant ce qui suit :
  - .1 le ciment-colle à prise rapide;
  - .2 le coulis cimentaire;
  - .3 le colmatage cimentaire à prise rapide;

1.04 ASSURANCE DE LA QUALITÉ

.1 Assurance de la qualité
- .1 Instructions du fabricant : soumettre les instructions d'installation fournies par le fabricant.
- .2 Rapports des contrôles effectués sur place par le fabricant : soumettre les rapports prescrits.

1.05 TRANSPORT, ENTREPOSAGE ET MANUTENTION

.1 Conditionnement, transport, manutention et déchargement
- .1 Transporter, entreposer et manutentionner les matériaux et les matériels conformément à

la section 01 61 00 - Exigences générales concernant les produits.

1.06 CONDITIONS AMBIANTES

.1 Maintenir la température ambiante dans la zone de mise en œuvre ainsi que la température du support destiné à recevoir les carreaux de céramique au-dessus de 12 degrés Celsius pendant une période de 48 heures avant la pose, pendant toute la durée de la pose et pendant 48 heures après l'achèvement de ces travaux.

.2 Ne pas procéder à la pose des carreaux lorsque la température est inférieure à 12 degrés Celsius ou supérieure à 38 degrés Celsius.

2 PRODUITS

2.01 CARRELAGES DE SOL ET MURAUX

.1 Carreaux de céramique : identiques aux carreaux existants, dimension : 50 mm X 50 mm, à valider sur place. Prévoir deux couleurs de carreaux telles que l'existant.

2.02 MORTIERS ET ADHÉSIFS

.1 Ciment-colle flexible à prise rapide :
- .1 Conforme aux normes ANSI A118.4 et ANSI A118.11;
- .2 Classifié C2 et E selon la classification ISO 13007.

2.03 COULIS

.1 Pigments
- .1 Pigments minéraux, résistant à la chaux, solides à la lumière, conformes à la norme ASTM C 979.
- .2 Les pigments doivent être ajoutés au coulis par le fabricant.
- .3 Les coulis colorés sur place ne sont pas acceptés.
- .4 La couleur du coulis doit correspondre à celle du coulis existant. Couleur au choix du représentant ministériel.

.2 Coulis de ciment : conforme à la norme ANSI A118.6.
- .1 Le coulis doit être constitué d'une partie de ciment blanc et d'une partie de sable blanc passant un tamis numéro 30.
- .2 Coulis de ciment avec sable et polymère, préféré un coulis à prise rapide cependant un coulis à prise régulière est aussi acceptable.
  - .1 Classifié CG2 selon la classification ISO 13007,
  - .2 Si prise rapide, classifié F selon la classification ISO 13007.

2.04 PRODUITS DE NETTOYAGE

.1 Produits spécialement conçus pour nettoyer les surfaces en maçonnerie et en béton, mais qui ne nuisent pas au liaisonnement des diverses couches d'enduit destinées à la mise en œuvre des carrelages, y compris les couches de ragréage-lissage de même que les couches et membranes d'imperméabilisation à base d'élastomère.

.2 Les produits contenant des matières acides ou caustiques ne sont pas acceptés.

3 EXÉCUTION

3.01 INSTRUCTIONS DU FABRICANT

.1 Conformité : se conformer aux exigences, recommandations et spécifications écrites du fabricant, y compris à tout bulletin technique disponible, aux instructions relatives à la manutention, à l'entreposage et à la mise en œuvre des produits, et aux indications des fiches techniques.

3.02 QUALITÉ D'EXÉCUTION

.1 Sauf indication contraire, exécuter le carrelage conformément au manuel intitulé « Manuel de pose de carreaux 2006/2007 », publié par l'Association canadienne de terrazzo, tuile et marbre (ACTTM).

.2 Enlever le carrelage et l'adhésif jusqu'au support existant.

.3 Remplir les trous dans le support afin d'obtenir une surface plane pour la pose des carreaux. Suivre les instructions du fabricant du produit de colmatage pour la mise en œuvre et les délais d'attente.

.4 Poser les carreaux sur des surfaces saines et propres.

.5 L'écart de planéité maximal admissible est de 1:800.

.6 Faire des joints uniformes d'environ 1.5 mm de largeur de manière que les carreaux soient d'aplomb, d'équerre, d'alignement et tous dans le même plan. S'assurer qu'on ne distingue pas les différentes plaques de carreaux dans l'ouvrage fini. Aligner les motifs.

.7 Après la pose, tapoter les carreaux et remplacer ceux qui sonnent creux afin d'obtenir une adhérence parfaite.

.8 Attendre au moins 24 heures après la pose des carreaux avant d'appliquer le coulis de jointoiement.

.9 Une fois que l'ouvrage a durci et que le coulis est bien pris, nettoyer les surfaces carrelées.

3.03 PRODUIT D'IMPRESSION ET ENDUIT DE PROTECTION POUR PLANCHERS

.1 Appliquer conformément aux instructions du fabricant.

3.04 NETTOYAGE

.1 Effectuer les travaux de nettoyage conformément à la section 01 74 11 - Nettoyage.

FIN DE SECTION

1 GENERAL

1.01 REFERENCES

.1 Section 03 36 20 – Concrete Repairs

1.02 REFERENCES

.1 American National Standards Institute (ANSI)/Ceramic Tile Institute (CTI)
- .1 ANSI A108.1-99, Specification for the Installation of Ceramic Tile (Includes ANSI A108.1A-C, 108.4-.13, A118.1-.10, ANSI A136.1).
- .2 CTI A118.3-92, Specification for Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive (included in ANSI A108.1).
- .3 CTI A118.4-92, Specification for Latex Cement Mortar (included in ANSI A108.1).
- .4 CTI A118.5-92, Specification for Chemical Resistant Furan Resin Mortars and Grouts for Tile Installation (included in ANSI A108.1).
- .5 CTI A118.6-92, Specification for Ceramic Tile Grouts (included in ANSI A108.1).

.2 American Society for Testing and Materials International (ASTM)
- .1 ASTM C 144-04, Specification for Aggregate for Masonry Mortar.
- .2 ASTM C 207-06, Specification for Hydrated Lime for Masonry Purposes.
- .3 ASTM C 979-05, Specification for Pigments for Integrally Coloured Concrete.

.3 Canadian General Standard Board (CGSB)
- .1 CAN/CGSB-75.1-M88, Tile, Ceramic
- .2 CAN/CGSB-25.20-95, Surface Sealer fo Floors.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

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

.2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.
- .1 Include manufacturer's information on:
  - .1 Rapid setting flexible mortar
  - .2 Cementitious grout.
  - .3 Rapid setting cementitious patching.

1.04 QUALITY ASSURANCE

.1 Quality Assurance Submittals
- .1 Manufacturer's Instructions: manufacturer's installation instructions.
- .2 Manufacturer's Field Reports: manufacturer's field reports specified.

1.05 DELIVERY, STORAGE AND HANDLING

.1 Packing, shipping, handling and unloading:

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product

Requirements.

.2 Waste Management and Disposal:
.1 Separate waste materials for reuse and recycling.

1.06 AMBIENT CONDITIONS

.1 Maintain air temperature and structural base temperature at ceramic tile installation area above 12 degrees C for 48 hours before, during, and 48 hours after, installation.

.2 Do not install tiles at temperatures less than [12] degrees C or above [38] degrees C.

2 PRODUCTS

2.01 FLOOR AND WALL TILE

.1 Floor tile: identical to the existing tiles, dimensions: 50 mm X 50 mm, to validate on site. Provide two tile colors such as existing tiles.

2.02 MORTAR AND ADHESIVE

.1 Quick-setting flexible cement-glue :
.1 Complies with ANSI A118.4 and ANSI A118.11.
Classified C2 and E according to ISO 13007 classification.

2.03 GROUT

.1 Pigments
.1 Pure mineral pigments, limeproof and nonfading, complying with ASTM C 979.
.2 Colouring pigments to be added to grout by manufacturer.
.3 Job coloured grout are not acceptable.
.4 The color of the grout must match with the existing grout. Color choice Departmental Representative.

.2 Cementitious grout: to ANSI A118.6.
.1 Use one part white cement to one part white sand passing a number 30 screen.
.2 Cemetitious grout with sand and polymere, prefered a rapid setting grout, a regular setting grout is also acceptable.
.1 Classified CG2 to ISO 13007,
.2 If rapid setting, classified F to ISO 13007.

2.04 CLEANING COMPOUNDS

.1 Specifically designed for cleaning masonry and concrete and which will not prevent bond of subsequent tile setting materials including patching and leveling compounds and elastomeric waterproofing membrane and coat.

.2 Materials containing acid or caustic material are not acceptable.

3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.02 WORKMANSHIP

.1 Do tile work in accordance with TTMAC Tile Installation Manual 2006/2007, "Ceramic Tile", except where specified otherwise.

.2 Remove the tiles and the adhesive to the existing support.

.3 Fill holes in the holder to obtain a flat surface for laying tiles. Follow the instructions of the sealant manufacturer to implement and waiting times.

.4 Apply tile to clean and sound surfaces.

.5 Maximum surface tolerance 1:800.

.6 Make joints between tile uniform and approximately 1.5 mm wide, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.

.7 Après la pose, tapoter les carreaux et remplacer ceux qui sonnent creux afin d'obtenir une adhérence parfaite.

.8 Allow minimum 24 hours after installation of tiles, before grouting.

.9 Clean installed tile surfaces after installation and grouting cured.

3.03 FLOOR SEALER AND PROTECTIVE COATING

.1 Apply in accordance with manufacturer's instructions.

3.04 CLEANING

.1 Proceed in accordance with Section 01 74 11 - Cleaning.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 09 21 16 – Gypsum Board Assemblies.

.2 Section 09 53 00 – Acoustic Ceiling Suspension Systems.

1.2 REFRENCES

.1 American Society for Testing and Materials International (ASTM)

.1 ASTM E1264-98, Standard Classification for Acoustical Ceiling Products.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.

.2 CAN/CGSB-92.1-M89, Sound Absorptive Prefabricated Acoustical Units.

.3 Canadian Standards Association (CSA International)

.1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.

.4 Underwriter's Laboratories of Canada (ULC)

.1 CAN/ULC-S102-2003, Surface Burning Characteristics of Building Materials and Assemblies.

1.3 SAMPLES

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

.2 Submit duplicate full size samples of each type acoustical units.

1.4 TRANSPORT, STORAGE AND HANDLING

.1 Protect from moisture damage absorbent materials used or stored on site.

1.5 REGULATORY REQUIREMENTS

.1 Fire-resistance rated floor/ceiling and roof/ceiling assembly: certified by Canadian Certification Organization accredited by Standards Council of Canada.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate paper, plastic, polystyrene or corrugated cardboard for recycling in accordance with Waste Management Plan (WMP).

1.7 ENVIRONMENTAL REQUIREMENTS

.1 Permit wet work to dry before beginning to install.

.2 Maintain uniform minimum temperature of 15 degrees C and humidity of 20-40 % before and during installation.

.3 Store materials in work area 48 hours prior to installation.

1.8 EXTRA MATERIALS

.1 Provide extra materials of acoustic units in accordance with Section 01 78 00 - Closeout Submittals.

.2 Provide acoustical units amounting to 2 % of gross ceiling area for each pattern and type required for project.

.3 Ensure extra materials are from same production run as installed materials.

.4 Clearly identify each type of acoustic unit, including colour and texture.

.5 Deliver to Ministerial representative, upon completion of the work of this section.

.6 Store extra materials in location indicated by Ministerial representative.

1.9 WARRANTY

.1 Correct free of charge any defects due to materials or workmanship for twelve (12) months starting with the date of the provisional acceptance inspection.

PART 2 Products

2.1 MATERIALS

.1 Acoustic units for type 1 suspended ceiling system: to CAN/CGSB-92.1.

.1 Type 1: Standard mineral fiber, textured pattern.

.1 The textured pattern shall be paired with the acoustic elements already used at the facility.

.2 Flame spread rating of 25 or less in accordance with CAN/ULC-S102.

.3 Smoke developed 25 or less in accordance with CAN/ULC-S102.

.4 Noise Reduction Coefficient (NRC) designation of 55.

.5 Light Reflectance (LR) range of 0.80.

.6 Ceiling plenum sound transmission range of 35.

.7 Edge type square, flat shape.

.8 Colour: white.

.9 Size: 1220mm x 610mm x 15mm thick.

.2 Adhesive: type recommended by acoustic unit manufacturer.

.3 Staples, nails and screws: to CSA B111 non-corrosive finish as recommended by acoustic unit manufacturer.

.4 Hold down clips: purpose made clips to secure tile to suspension system, approved for use in fire-rated systems.

PART 3 Execution

3.1 EXAMINATION

.1 Do not install acoustical panels and tiles until work above ceiling has been inspected by Ministerial representative.

3.2 INSTALLATION IN SUSPENSION SYSTEM

.1 Install acoustical panels and tiles in ceiling suspension system.

3.3 INSTALLATION ON SOLID SUBSTRATE

.1 Install acoustic elements as indicated by reflected ceiling plan.

.2 Scribe acoustic units to fit adjacent work. Butt joints tight.

3.4 INTERFACE WITH OTHER WORK

.1 Co-ordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers, speakers, sprinkler heads, to be built into acoustical ceiling components.

END OF SECTION

PART 1 General

1.1 RELATED SECTIONS

.1 Section 09 21 16 - Gypsum Board Assemblies.

.2 Section 09 51 13 - Acoustic Ceiling Panels.

1.2 REFERENCES

.1 American Society for Testing and Materials (ASTM International)

.1 ASTM C635-00, Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.

.2 ASTM C636-96, Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.

1.3 DESIGN REQUIREMENTS

.1 Maximum deflection: 1/360th of span to ASTM C635 deflection test.

1.4 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit reflected ceiling plans for special grid patterns as indicated.

.3 Indicate lay-out, insert and hanger spacing and fastening details, splicing method for main and cross runners, location of access splines change in level details, access door dimensions, and locations and acoustical unit support at ceiling fixture lateral bracing and accessories.

1.5 SAMPLES

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

.2 Submit one representative model of each type ceiling suspension system.

.3 Ceiling system to show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes, acoustical unit installation.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Divert unused metal materials from landfill to metal recycling facility approved by ministerial representative.

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.3 Dispose of corrugated cardboard, polystyrene or plastic packaging material in appropriate on-site bin for recycling in accordance with site waste management program.

1.7 REMPLACEMENT MATERIAL TO SUBMIT

.1 Provide materials / maintenance / replacement equipment required in accordance with Section 01 78 00 – Closeout Submittals.

.2 Provide one (1) box containing at least 1 length of each item of metal suspensions used in the project.

.3 .3 Provide replacement materials from the same production batch as established.

.4 .4 Identify the contents of each box of materials and equipment and store them in the location indicated by the Owner.

1.8 GARANTIE

.1 Prévoir une garantie de cinq (5) ans contre les défauts de fabrication, notamment contre le farinage, l'écaillage et la décoloration du revêtement de finition, et ce à partir de la date de la visite d'acceptation provisoire.

PART 2 Products

2.1 MATERIALS

.1 Heavy duty system to ASTM C635.

.2 Basic materials for suspension system: commercial quality cold rolled steel, zinc coated.

.3 Suspension system: non fire rated, made up as follows:

.1 Exposed tee bar grid for acoustic tile:

.1 Exposed tee bar grid components: shop painted satin sheen. Components die cut. Main tee with double web, rectangular bulb and 25 mm rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection

.2 Note: Suspension system to be provided by manufacturer of acoustic tiles.

.4 Hanger wire: galvanized soft annealed steel wire.

.1 3.6 mm diameter for "floating" island ceilings.

.2 2.6 mm diameter for other ceilings.

.5 Hanger inserts: purpose made.

.6 Carrying channels: 38 x 24 mm channel, of 2.6 mm thick painted galvanized steel.

.7 Accessories: splices, clips, wire ties, retainers and wall moulding flush, to complement suspension system components, as recommended by system manufacturer.

PART 3 Execution

3.1 INSTALLATION

.1 Installation: in accordance with ASTM C636 except where specified otherwise.

.2 Install suspension system to manufacturer's instructions.

.3 Do not erect ceiling suspension system until work above ceiling has been inspected by ministerial representative.

.4 Secure hangers to overhead structure using attachment methods acceptable to ministerial representative.

.5 Install hangers spaced at maximum 1200 mm centres and within 150 mm from ends of main tees.

.6 Lay out centre line of ceiling both ways, to provide balanced borders at room perimeter according to reflected ceiling plan.

.7 Install cross-tees at 610 mm on centre maximum for the gypsum board suspension system.

.8 Ensure suspension system is co-ordinated with location of related components.

.9 Install wall moulding to provide correct ceiling height.

.10 Completed suspension system to support super-imposed loads, such as lighting fixtures diffusers grilles and speakers.

.11 Support at light fixtures diffusers with additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.

.12 Attach cross member to main runner to provide rigid assembly.

.13 Frame at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights.

.14 Install access splines to provide 10 percent ceiling access.

.15 Finished ceiling system to be square with adjoining walls and level within 1:1000.

3.2 CLEANING

.1 Touch up scratches, abrasions, voids and other defects in painted surfaces.

END OF SECTION

PART 1. GENERAL

1.01 RELATED REQUIREMENTS

.1 Section 07 92 00 – Joint Sealants.

.2 Section 09 21 16 – Gypsum Board Assemblies.

1.02 REFERENCES

.1 General

- .1 ASTM D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
- .2 ASTM D2240: Standard test method for rubber property (hardness after durometer).
- .3 ASTM F386: Standard test method for the thickness of resilient floor coverings with flat surfaces.
- .4 ASTM F410: Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement.
- .5 ASTM F710: Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- .6 ASTM F925: Standard Test Method for Resistance to Chemicals of Resilient Flooring
- .7 ASTM F1514: Standard Test Method for Measuring Heat Stability of Resilient Vinyl Flooring by Color Change.
- .8 ASTM F1515: Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
- .9 ASTM F1859: Standard Specification for Rubber Sheet Floor Covering Without Backing (sections 7.1-7.6, 8.3-8.6).
- .10 ASTM F1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- .11 ASTM F2170: Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

1.03 SAMPLES

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

.2 Submit duplicate 300 x 300 mm sample pieces of sheet material and two 300 mm long resilient flooring samples.

1.04 CLOSEOUT PROCEDURES

.1 Provide instructions for the maintenance of the resilient floor coverings for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.05 EXTRA MATERIALS

.1 Provide extra materials of acoustic units in accordance with Section 01 78 00 - Closeout Submittals.

.2 Provide acoustical units amounting to 2 % of gross ceiling area for each pattern and type required for project.

.3 The additional sheets provided must be one piece and come from the same production batch as the sheets

in place.

.4 Clearly identify each roll or box of sheets and each container of adhesive

.5 Deliver to Ministerial representative, upon completion of the work of this section.

.6 Store extra materials in location indicated by Ministerial representative.

1.06 DELIVERY, STORAGE AND HANDLING

.1 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.2 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

1.07 GENERAL OBLIGATION

.1 Provide a letter indicating the moisture content and PH (alkalinity) contained in the concrete slab and demonstrating that the measurements obtained are within the parameters required by ASTM F 1869 or ASTM F2170.

.2 Issue, for the benefit of the owner, a certificate attesting that the manufacturer warrants the materials in this section for a period of one (1) year.

1.08 SITE CONDITIONS

.1 The Contractor shall ensure that the work site conditions are met at all times.

.2 The surface of the concrete slab shall be free of any contaminants that may impair adhesion (paint, wax, dust, oil or grease, sealant, curing agent, solvent, asphalt, old adhesive residue, etc.) .

.3 Any contaminants present must be removed mechanically (scarifying, shot blasting, etc.). The use of chemical strippers will not be accepted.

.4 Concrete must have a smooth, dense and very compact finish with a tolerance of 3.2 mm within a radius of 3.05m.

.5 All concrete slabs shall be tested for moisture and alkalinity, in accordance with the intended service conditions. Operate the heating, ventilation and air conditioning (HVAC) system before starting the tests to ensure a stable environment and more accurate results. The surface pH of the concrete slab should be between 7 and 10. The relative humidity of the concrete slab should not exceed 85% when the standard test method ASTM F2170 (in situ probes) is used. The level of moisture vapor should not exceed the maximum tolerance of the selected adhesive when the ASTM F1869 (Anhydrous Calcium Chloride) standard test method is used.

.6 Room temperature and concrete surface temperature should remain constant / stable between 18 ° C to 30 ° C 48 hours before, during and 48 hours after installation. The relative humidity of a room must be maintained between 35% and 55%.

.7 The Contractor shall ensure that the work environment remains clean and safe before, during and after the installation of the resilient flooring.

.8 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees for 48

hours before, during and 48 hours after installation.

.9 Keep the ambient air and surface of the substrate at a minimum temperature of 20°C for a period of 48 hours prior to installation for the duration of the installation and for 48 hours thereafter.

.10 Installation of the flooring should begin only after the other trades are completed to avoid overlap and contamination by a third party.

1.09 WARRANTY

.1 Issue, to the owner, a certificate attesting that the manufacturer warrants the materials in this section for a period of three (3) years starting with the date of the provisional acceptance inspection.

PART 2. PRODUCTS

2.01 MATERIALS

.1 Resilient prefabricated floor covering consisting of synthetic and natural rubber, calendered and vulcanized rubber and stabilizing and pigmenting agents.
- .1 Health conscious manufacturing: BPA free (bisphenol A), formaldehyde, halogen, heavy metals, isocyanate, phthalate and PVC (polyvinyl chloride).
- .2 Thickness: 3.mm.
- .3 Colour: light gray marbled.
- .4 Surface texture: smooth.
- .5 Wear layer: surface coated with a low-gloss coating applied at the factory and hardened with ultraviolet.
- .6 Vulcanized double durometer product; the hardness of the (superficial) wear layer will be higher than that of the backing.
- .7 Format: rolls 1.90 m wide and 10 m long.

.2 Rubber baseboards: grooved, 104mm high, color matched to floor coverings.

2.02 OTHER COMPONENTS

.1 Primer and adhesives: product recommended by resilient flooring manufacturer.

.2 Provide matching or solid colored weld seams for concealed seams.

.3 Filler and Smoothing Coating: Portland cement fast setting cement or polymer modified cementitious compound as recommended by the Manufacturer.

.4 Printing (primers) and waxes: of the type recommended by the flooring manufacturer.

.5 Transition molding between rubber coating and other surfaces: extruded anodised aluminum, profile and size according to the surrounding surface.

PART 3. EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with the manufacturer's written requirements, recommendations and specifications,

including any technical bulletins available, instructions for handling, storing and processing products and specifications.

3.02 VERIFICATION OF INSTALLATION CONDITIONS

.1 The general contractor is responsible of ensuring that the site conditions are acceptable and allow the installation of the floor covering. Using the methods recommended by the flooring manufacturer, ensure that the plywood or concrete substrate is clean and dry and that the degree of moisture of the substrate is acceptable for laying the product.

.2 The general contractor shall provide for the application of a sealer approved by the adhesive manufacturer if the moisture content of the substrate exceeds the manufacturer's limits.

3.03 SUBSTRATE PREPARATION

.1 Smooth the inequalities of the substrate. Fill depressions and seal cracks, gaskets, holes and other defects using Planipatch underlayment, as recommended by the flooring manufacturer. Plan to level the surface so that the two flexible floor coverings are at the same level when they are contiguous.

.2 Clean floor to be covered, apply filler with trowel and to achieve a smooth, level surface. Prohibit any circulation until the product has hardened and dried.

.3 Prepare and seal the concrete slab or plywood substrate according to the written instructions of the manufacturer of the soft flooring.

.4 Check that all other surrounding structures that may cause damage, dust, or delay installation are completed or suspended.

.5 Ensure ambient temperature is above 20 ° C.

.6 Check for objects on substrate.

.7 Consult and document substrate moisture test results and install soft flooring if the moisture content detected within the concrete slab is less than the manufacturer's a 24 hour period using the calcium chloride test (ASTM F 1869) or the hygrometric probe (ASTM F 2170).

.8 Check that the alkalinity (PH) of the slab is within the acceptable standards of installation according to the Manufacturer.

.9 Document results obtained from different tests and ensure that they conform to manufacturer's recommendations.

3.04 RESILIENT SHEET FLOORING INSTALLATION

.1 Ensure high ventilation rate, with maximum supply of fresh air, throughout installation work and for 48 to 72 hours after completion. Ventilate as much as possible directly outside. Do not allow contaminated air to re-circulate in any part or the entire distribution system. Provide additional ventilation for a period of at least one month once the building is occupied.

.2 Install flooring in accordance with manufacturer's recommendations and guidelines for acceptable moisture level for specified flooring.

.3 Weld sheet joints according to manufacturer's written instructions.

.4 All precautions necessary to reduce noise, odor, dust shall be taken to prevent various disadvantages.

.5 Access to the installation site should be closed or restricted by the installer. Installation should begin only when the installation conditions are deemed adequate by the installer.

.6 Inspect equipment for damage or defect.

.7 Apply adhesive uniformly using recommended trowel. Avoid spreading adhesive over a large area so that the initial setting does not occur before laying the flooring. Then roll the adhesive with a roller to optimize adhesion and avoid telegraphy of trowel marks.

.8 Roll the liner in both directions using a 100 lbs roll.

.9 Check for air bubbles. If necessary, roll the coating again.

.10 Repeat the procedure for the remainder of the installation.

.11 Avoid traffic for 24 hours after installation. This period is 72 hours for heavy equipment.

.12 Wait a period of 72 hours after installation before starting initial coating maintenance.

.13 At doorways, interrupt the flooring under the transverse axis of the door when the finish or color of the flooring is different in contiguous rooms.

.14 To execute the joints, overlap the two sheets which are to be overlapped, then cut the two layers simultaneously and seal continuously, weld to heat according to the manufacturer's documentation.

3.05 HOT WELDING

.1 Wait 24 hours after installation of the cover before welding joints.

.2 Always refer to manufacturer's hot welding procedure.

.3 Clean joints with vacuum cleaner, cleaner or brush.

.4 Ensure that the area to be welded is clean, free from dust, adhesive residue or other particles.

.5 Chamfer the seal leaving an opening of 0.8 mm.

.6 Allow the soldering gun to warm up for a few minutes (as recommended by the tool manufacturer).

.7 Weld the cord into the joint using the nozzle recommended by the manufacturer.

.8 Shave the cord using the appropriate knife, while welding is still hot.

.9 Shave the remaining cord with the appropriate knife after the cord has cooled down.

.10 Check weld condition and make corrections as required.

.11 Repeat the same procedure for the remainder of the welds.

3.06 BASEBOARDS AND WALL PROTECTION INSTALLATION

.1 Lay the baseboards so that there are as least joints as possible.

.2 Clean substrate and prime with adhesive.

.3 Apply glue to back of baseboard.

.4 Secure baseboards to wall and floor with 3 kg manual cylinder.

.5 Install baseboards level with maximum permissible deviation of 1:1000.

.6 Cut baseboards and adjust to door frames and other obstructions.

.7 Re-seal joints in recessed corners. Use pre-molded corner pieces for protruding corners. Use pre-molded straight sections to form projecting angles that are not square.

3.07 ON-SITE QUALITY CONTROL

.1 On-site inspections by the manufacturer.

.1 The manufacturer shall make recommendations regarding the use of the product(s) and conduct periodic surveys to verify compliance with recommendations.

3.08 CLEANING AND FINISHING

.1 Carefully remove excess adhesive from the floor, baseboards and walls.

.2 Clean floor and baseboards according to flooring manufacturer's documentation.

3.09 PROTECTION OF FINISHED SURFACES

.1 Protect the flooring from newly coated floors from the moment the adhesive is finally taken until the final inspection.

.2 Prohibit traffic on coated floors for 48 hours after laying the floor.

END OF SECTION

PARTIE 1 Généralités

1.01 RÉFÉRENCES

.1 American Association of Textile Chemists and Colorists (AATCC)
- .1 AATCC Test Method 16-[2004], Colorfastness to Light.
- .2 AATCC Test Method 23-[2005], Colorfastness to Burn Gas Fumes.
- .3 AATCC Test Method 129-[2005], Colourfastness to Ozone in the Atmosphere Under High Humidities.
- .4 AATCC Test Method 134-[2006], Electrostatic Propensity of Carpets.
- .5 AATCC Test Method 171-[2005], Carpets: Cleaning of; Hot Water Extraction Method.
- .6 AATCC Test Method 175-[2008], Stain Resistance: Pile Floor Coverings.
- .7 AATCC Test Method 189-[2007], Fluorine Content of Carpet Fibers.

.2 ASTM International
- .1 ASTM D 297-[93(2006)], Standard Test Methods for Rubber Products-Chemical Analysis.
- .2 ASTM D 1335-[05], Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings.
- .3 ASTM D 2661-[08], Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings.
- .4 ASTM D 1667-[05], Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
- .5 ASTM D 3574-[08], Standard Test Methods for Flexible Cellular Materials - Slab, Bonded, and Molded Urethane Foams.
- .6 ASTM D 3936-[05], Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering.

.3 Office des normes générales du Canada (CGSB)
- .1 CAN/CGSB-4.2 numéro 22-[2004], Méthodes pour épreuves textiles - Solidité de la couleur au frottement.
- .2 CAN/CGSB-4.2 numéro 27.6M-[2004], Résistance à l'inflammation - Essai à la tablette de méthénamine des revêtements de sol textiles.
- .3 CAN/CGSB-4.2 numéro 76-[94]/ISO 2551 : [1981], Méthodes pour épreuves textiles - Revêtements de sol textiles fabriqués à la machine - Détermination de la variation des dimensions due à diverses conditions de mouillage et de chaleur.
- .4 CAN/CGSB-4.2 numéro 77.1-[94]/ISO 4919 : [2000], Tapis-moquettes - Détermination de la force d'arrachement de touffes.
- .5 CAN/CGSB-4.129-[93(C1997)], Tapis pour utilisation commerciale.

.4 Carpet and Rug Institute (CRI)
- .1 CRI Carpet Installation Standard [2009].
- .2 CRI Green Label Indoor Air Quality Testing Program.
- .3 CRI Green Label Plus Indoor Air Quality Testing Program.

.5 Santé Canada - Système d'information sur les matières dangereuses utilisées au travail (SIMDUT)
- .1 Fiches signalétiques (FS).

.6 Association nationale des revêtements de sol (ANRS)
- .1 National Floor Covering Specification Manual [2007].

.7 Laboratoires des assureurs du Canada (ULC)
- .1 CAN/ULC-S102-[07], Méthode d'essai normalisée - Caractéristiques de combustion superficielle

des matériaux de construction et des assemblages.

.2 CAN/ULC-S102.2-[07], Méthode d'essai normalisée - Caractéristiques de combustion superficielle des revêtements de sol et des divers matériaux et assemblages.

1.02 DOCUMENTS/ ÉCHANTILLONS A SOUMETTRE POUR APPROBATION/INFORMATION

.1 Fiches techniques

.1 Soumettre les fiches techniques requises ainsi que les instructions et la documentation du fabricant concernant chaque tapis-moquette en dalles, thibaude, adhésif, revêtement de protection, produit de ragréage du support. Les fiches techniques doivent indiquer les caractéristiques des produits, les critères de performance, les dimensions, les limites et la finition.

.2 Soumettre deux (2) exemplaires des fiches signalétiques requises aux termes du SIMDUT.

.2 Dessins d'atelier

.1 Les dessins d'atelier doivent contenir les indications ci-après.

.1 Le sens du velours, les bords découverts et les motifs particuliers.

.2 Les endroits où des ouvertures doivent être ménagées.

.3 Le traitement des bords : l'emplacement des moulures des bords et des moulures des plinthes.

.3 Échantillons

.1 Soumettre des échantillons de chaque type de tapis-moquette en dalles aux fins d'examen et d'acceptation.

.2 Les échantillons seront remis à l'Entrepreneur, qui devra les incorporer à l'ouvrage.

.3 Soumettre deux (2) échantillons de chaque type de tapis-moquette en dalles prescrit et deux (2) dalles de chaque couleur choisie et des profilés de rattrapage de niveau de 150 mm de longueur, plinthes, barres de séparation.

.4 Certificats : soumettre les documents signés par le fabricant, certifiant que les produits, les matériaux et les matériels sont conformes aux prescriptions quant aux caractéristiques physiques et aux critères de performance.

.5 Instructions du fabricant : soumettre les instructions du fabricant concernant la pose et l'entreposage.

1.03 DOCUMENTS/ÉLÉMENTS A REMETTRE A L'ACHEVEMENT DES TRAVAUX

.1 Soumettre les documents/éléments requis conformément à la section 01 78 00 - Documents/Éléments à remettre à l'achèvement des travaux.

.2 Fiches d'exploitation et d'entretien : fournir les instructions relatives à l'utilisation et à l'entretien [des produits installés, lesquelles seront incorporées au manuel d'E&E.

.3 Documents de garantie : soumettre les documents de garantie prescrits.

1.04 MATÉRIAUX/MATÉRIELS DE REMPLACEMENT A REMETTRE

.1 Matériaux/matériels de remplacement/d'entretien : Remettre au Représentant ministériel, aux fins de remplacement/d'entretien, des produits provenant du même lot de fabrication que ceux qui ont été mis en œuvre. Les placer dans des emballages protecteurs correctement marqués au moyen d'étiquettes appropriées. Se conformer aux prescriptions de la section 01 78 00 - Documents/Éléments à remettre à l'achèvement des travaux.

.1 Quantité : fournir au moins 5% de chaque élément ci-après.

.1 Tapis-moquettes en dalles.

.2 Plinthes en tapis-moquette.

1.05 CONDITIONS DE MISE EN OEUVRE

.1 Conditions ambiantes
- .1 Teneur en eau : s'assurer que la teneur en eau et l'alcalinité du support se situent dans les limites recommandées par le fabricant du revêtement. Préparer l'essai visant à déterminer la teneur en eau du support et remettre le rapport au Représentant du Ministère.
- .2 Température : maintenir la température ambiante à au moins 18 degrés Celsius à partir de 48 heures avant le début des travaux d'installation jusqu'à au moins 48 heures après l'achèvement de ces derniers.
- .3 Humidité relative : maintenir le taux d'humidité relative entre 10 % et 65 % pendant une période de 48 heures avant le début des travaux d'installation, pendant toute la durée des travaux et pendant une période de 48 heures après l'achèvement de ces derniers.
- .4 Ventilation
  - .1 Le Représentant du Ministère coordonnera le fonctionnement du système de ventilation du bâtiment pendant la durée des travaux de pose des tapis-moquettes en dalles.
  - .2 Assurer une ventilation continue 24 heures par jour pendant toute la durée des travaux d'installation, de même que pendant une période de sept (7) jours après l'achèvement de ces derniers.
- .5 Ne pas procéder à l'installation des tapis-moquettes avant que la zone de travail soit fermée et protégée contre les éléments extérieurs, que les ouvrages humides réalisés dans la zone considérée soient terminés et presque secs et que les travaux réalisés dans le vide de plafond soient également terminés.

1.06 GARANTIE

.1 Garantie du fabricant : soumettre au Représentant du Ministère, aux fins d'approbation, le document de garantie standard du fabricant, exécuté par un représentant autorisé de l'entreprise. La garantie du fabricant est en sus de la garantie prévue au contrat et elle ne restreint en rien les droits du Maître de l'ouvrage prévus dans les conditions du contrat.

.2 Durée de la garantie : un (1) an, à compter de la date de la visite d'acceptation provissoire.
- .1 La garantie couvre la main-d'œuvre et la réparation ou le remplacement des éléments défectueux pendant un (1) an après la date de la visite d'acceptation provisoire.

PARTIE 2 PRODUITS

2.01 MATÉRIAUX/MATÉRIELS

.1 Description
- .1 Adhésifs : teneur maximale en COV de 150 g/L.
- .2 Primaires: selon les recommandations du fabricant en fonction de l'état des surfaces.
- .3 Tapis-moquette et accessoires

2.02 PERFORMANCE

.1 Degré d'inflammabilité certifié conforme au Règlement sur les produits dangereux (carpettes) de Santé Canada, partie II de l'annexe 1.

.2 Indice de propagation de la flamme d'au plus 300, indice de pouvoir fumigène d'au plus 500, d'après des essais effectués selon la norme CAN/ULC-S102.2.

.3 Usure : au plus 10 % en poids des fibres côté velours après 10 ans.

.4 Effilochage des bords : aucun après 10 ans.

.5 Traitement antistatique permanent selon la norme AATCC 134, permettant de limiter le développement et l'accumulation d'une charge électrostatique d'au plus 3000 V à un taux d'humidité relative de 20 % et à une température de 22 degrés Celsius.

.6 Résistance minimale acceptable des touffes à l'arrachement : selon la norme ASTM D 1335.

.7 Résistance minimale acceptable du deuxième dossier au décollement : selon la norme ASTM D 3936.

.8 Résistance aux taches : selon la norme AATCC 175.

.9 Résistance aux salissures : concentration en fluor d'au moins 350 ppm, durabilité de la concentration en fluor selon la norme AATCC 189.

.10 Solidité des couleurs à la lumière : selon la norme CAN/CGSB-4.2 numéro 18.3.

.11 Solidité des teintures par rapport au dégorgement : selon la norme CAN/CGSB-4.2 numéro 22.

2.03 FABRICATION

.1 Dimensions de 500 mm x 500 mm.

.2 Construction du velours
- .1 Velours touffeté.

.3 Aspect du velours
- .1 Velours bouclé texturé : boucles en relief.

.4 Types de fibres : selon la norme CAN/CGSB-4.129.
- .1 Nylon : FCG fibres discontinues.

.5 Dossiers pour tapis-moquettes touffetés : selon la norme [CAN/CGSB-4.129].

.6 Points : 39,4/10 cm

.7 Jauge : 47,2 bouts/10 cm

.8 Masse volumique du velours : 230,6/m^3

.9 Hauteur du velours : hauteur moyenne d'au moins 2,5 mm.

.10 Masse du velours : au moins [474 g].

.11 Masse totale : 576g/m^2

.12 Stabilité dimensionnelle : au plus + 0.15 % selon la norme CAN/CGSB-4.2 numéro 76/ISO 2551.

2.04 ACCESSOIRES

.1 Plinthes :
- .1 Plinthes en tapis-moquette : de 104 mm de hauteur, en même matériau et de mêmes couleur, motif

et texture que les tapis-moquettes installés, avec bande de recouvrement en vinyle, d'une épaisseur correspondant à celle de la plinthe, de même couleur que celle du tapis-moquette.

.2 Profilés de rattrapage de niveau : fini aluminium.

.3 Adhésif
- .1 Adhésif autocollant : de type recommandé par le fabricant de tapis-moquette en dalles à dossier spécial pour pose directe sur le support.
- .2 Adhésif pré-appliqué en usine : indécollable.

.4 Moulures de transition
- .1 Barres de seuil / bandes de réduction : aluminium anodisé extrudé d'épaisseur selon la différence de niveau.

.5 Revêtement de protection : papier kraft robuste, ne tachant pas.

.6 Primaire pour plancher en béton : selon recommandations du fabricant.

.7 Enduit de ragréage pour supports : produit à base de ciment Portland auquel il faut ajouter du latex et de l'eau pour produire une pâte liante.

PARTIE 3 EXÉCUTION

3.01 POSEURS

.1 Les travaux de pose et d'assemblage des tapis-moquettes en dalles doivent être exécutés par des techniciens compétents et expérimentés.

3.02 EXAMEN

.1 Examiner l'état des surfaces, des supports et des ouvrages destinés à recevoir les tapis-moquettes en dalles.

.2 Vérification des conditions : avant de procéder à la pose des tapis-moquettes en dalles, s'assurer que l'état des surfaces/supports préalablement mis en œuvre aux termes d'autres sections ou contrats est acceptable et permet de réaliser les travaux conformément aux instructions écrites du fabricant.
- .1 Informer immédiatement le Représentant du Ministère de toute condition inacceptable décelée.
- .2 Commencer les travaux d'installation seulement après avoir corrigé les conditions inacceptables [et reçu l'approbation écrite du Représentant du Ministère.

3.03 TRAVAUX PRÉPARATOIRES

.1 Préparation du support
- .1 Inspecter les supports pour déterminer les travaux qu'il convient d'effectuer pour qu'ils puissent recevoir les tapis-moquettes.
- .2 Remplir les fissures de 3 mm de largeur et aplanir les saillies de plus de 0.8 mm au moyen d'un enduit de ragréage/lissage au latex modifié aux polymères approprié et compatible.
- .3 Respecter les recommandations écrites du fabricant quant à l'épaisseur d'enduit à appliquer.
- .4 Appliquer un primaire compatible sur les grandes surfaces à réparer.
- .5 Les supports en béton doivent être secs, durcis et propres.
- .6 Les supports en béton doivent être exempts de peinture, de saleté, de graisse, d'huile, de produit de cure et de produit antisolidarisation, de produit d'impression et de tout autre contaminant

susceptible de nuire au collage de l'adhésif.

.7 Appliquer sur les supports en béton poreux ou poudreux un primaire compatible avec l'adhésif, de manière à rendre la surface apte à recevoir un revêtement posé par collage direct sur le support.

.2 Préparation des surfaces : préparer les surfaces conformément aux recommandations écrites du fabricant.

.1 Préparer les surfaces conformément aux exigences de la norme CRI Carpet Installation Standard.

.3 Préparation des tapis-moquettes en dalles

.1 Traitement préalable des tapis-moquettes : selon les instructions écrites du fabricant.

3.04 POSE DES TAPIS-MOQUETTES

.1 Poser les tapis-moquettes en dalles conformément aux instructions écrites du fabricant.

.2 Coordonner les travaux de pose des tapis-moquettes avec les travaux des autres corps de métiers afin d'observer un calendrier et une séquence qui permettront d'éviter les retards de construction.

.3 Poser les tapis-moquettes en dalles une fois que les travaux de finition sont terminés, mais avant que les cloisons amovibles des bureaux et que les socles pour prises téléphoniques et électriques soient mis en place.

.4 Installer les tapis-moquettes en dalles conformément aux recommandations du fabricant. Cela peut comprendre les motifs suivants : quart de tour (90 degrés), monolithique (sans joints), aléatoire, horizontal, mosaïque quart de tour, mosaïque chevrons ou verticale.

.5 Faire des joints serrés pour toute l'installation.

.1 Mesurer la distance couverte par 11 dalles (10 joints) pour s'assurer qu'elle respecte les spécifications de pose du fabricant.

.2 Ne pas coincer de fils entre les dalles de moquette.

.6 Appliquer un mince film d'adhésif autocollant conformément aux instructions du fabricant.

.7 Le revêtement de tapis-moquettes en dalles fini doit présenter un velours uni, exempt de joints apparents, d'effilochures ou d'autres défauts.

.8 Dans chaque zone à recouvrir, utiliser du tapis-moquette provenant du même lot de teinture.

.1 Veiller à ce que la couleur, le motif et la texture des pièces s'harmonisent.

.2 Orienter également le velours des pièces dans le même sens.

.9 Bien ajuster les tapis-moquettes sur tout le pourtour des locaux visés, dans les parties en retrait de même qu'autour des éléments d'ossature, des ouvrages mécaniques et électriques, des prises téléphoniques, des pièces de mobilier fixes et des éléments en saillie.

.10 Fixer les tapis-moquettes en dalles aux éléments en saillie des réseaux de distribution installés sous plancher ainsi qu'aux tampons de visite qui y permettent l'accès.

.11 Poser du tapis-moquette sur les tampons de visite encastrés.

.12 Prolonger les tapis-moquettes sous les plinthes, les tableaux de baie de porte, les brides et les rosaces amovibles, les éléments en saillie suspendus, dans les espaces en retrait et dans les autres ouvertures similaires.

.13 Poser les dalles de tapis-moquette en éliminant les poches, les plis et les autres défauts.

.14 Poser des bandes de transition appropriées pour protéger les bords apparents des dalles de tapis-moquette aux jonctions avec d'autres revêtements de sol.

.15 Pose des plinthes : selon les instructions du manufacturier.

3.05 NETTOYAGE

.1 Nettoyage en cours de travaux : effectuer les travaux de nettoyage conformément à la section 01 74 11 - Nettoyage.
- .1 Laisser les lieux propres à la fin de chaque journée de travail.
- .2 Nettoyage final : évacuer du chantier les matériaux/matériels en surplus, les déchets, les outils et l'équipement conformément à la section 01 74 11 - Nettoyage.
  - .1 Passer l'aspirateur sur les tapis-moquettes dès que les travaux d'installation sont terminés.

3.06 PROTECTION

.1 Protéger les matériels et les éléments installés contre tout dommage pendant les travaux de construction.

.2 Interdire toute circulation sur les tapis-moquettes pendant au moins 24 heures après la pose et jusqu'à ce que l'adhésif soit complètement sec.

.3 Installer les revêtements de protection à la satisfaction du Représentant du Ministère.

.4 Réparer les dommages causés aux matériaux et aux matériels adjacents par l'installation des tapis-moquettes en dalles.

FIN DE SECTION

PARTIE 1 GENERAL

1.01 REFERENCES

.1 American Association of Textile Chemists and Colorists (AATCC)
- .1 AATCC Test Method 16-[2004], Colorfastness to Light.
- .2 AATCC Test Method 23-[2005], Colorfastness to Burn Gas Fumes.
- .3 AATCC Test Method 129-[2005], Colourfastness to Ozone in the Atmosphere Under High Humidities.
- .4 AATCC Test Method 134-[2006], Electrostatic Propensity of Carpets.
- .5 AATCC Test Method 171-[2005], Carpets: Cleaning of; Hot Water Extraction Method.
- .6 AATCC Test Method 175-[2008], Stain Resistance: Pile Floor Coverings.
- .7 AATCC Test Method 189-[2007], Fluorine Content of Carpet Fibers.

.2 ASTM International
- .1 ASTM D 297-[93(2006)], Standard Test Methods for Rubber Products-Chemical Analysis.
- .2 ASTM D 1335-[05], Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings.
- .3 ASTM D 2661-[08], Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings.
- .4 ASTM D 1667-[05], Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
- .5 ASTM D 3574-[08], Standard Test Methods for Flexible Cellular Materials - Slab, Bonded, and Molded Urethane Foams.
- .6 ASTM D 3936-[05], Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering.

.3 Office des normes générales du Canada (CGSB)
- .1 CAN/CGSB-4.2 numéro 22-[2004], Méthodes pour épreuves textiles - Solidité de la couleur au frottement.
- .2 CAN/CGSB-4.2 numéro 27.6M-[2004], Résistance à l'inflammation - Essai à la tablette de méthénamine des revêtements de sol textiles.
- .3 CAN/CGSB-4.2 numéro 76-[94]/ISO 2551 : [1981], Méthodes pour épreuves textiles - Revêtements de sol textiles fabriqués à la machine - Détermination de la variation des dimensions due à diverses conditions de mouillage et de chaleur.
- .4 CAN/CGSB-4.2 numéro 77.1-[94]/ISO 4919 : [2000], Tapis-moquettes - Détermination de la force d'arrachement de touffes.
- .5 CAN/CGSB-4.129-[93(C1997)], Tapis pour utilisation commerciale.

.4 Carpet and Rug Institute (CRI)
- .1 CRI Carpet Installation Standard [2009].
- .2 CRI Green Label Indoor Air Quality Testing Program.
- .3 CRI Green Label Plus Indoor Air Quality Testing Program.

.5 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
- .1 Material Safety Data Sheets (MSDS).

.6 National Floor Covering Association (NFCA)
- .1 National Floor Covering Specification Manual [2007].

.7 Underwriters' Laboratories of Canada (ULC)
- .1 CAN/ULC-S102-[07], Standard Method of Test for Surface Burning Characteristics of Building

Materials and Assemblies.

.2 CAN/ULC-S102.2-[07], Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies.

1.02 ACTION AND INFORMATIONAL SUBMITALS

.1 Product Data

.1 Submit manufacturer's instructions, printed product literature and data sheets for each carpet tile, undercushion, adhesive, carpet protection, subfloor patching compound and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit two (2) of WHMIS MSDS.

.2 Shop Drawing

.1 Information on shop drawings to indicate.

.1 Nap: direction, open edges, special patterns.

.2 Cutouts: show locations where cutouts are required.

.3 Edgings: show location of edge moldings and edge bindings.

.3 Samples

.1 Submit for review and acceptance of each unit. Les échantillons seront remis à l'Entrepreneur, qui devra les incorporer à l'ouvrage.

.2 Samples will be returned for inclusion into work.

.3 Submit duplicate samples of each type of carpet tile specified and duplicate tiles for each colour selected, 150 mm length, base and divider strips.

.4 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements. Instructions du fabricant : soumettre les instructions du fabricant concernant la pose et l'entreposage.

1.03 CLOSEOUT SUBMITTALS

.1 Soumettre les documents/éléments requis conformément à la section 01 78 00 - Documents/Éléments à remettre à l'achèvement des travaux.

.2 Fiches d'exploitation et d'entretien : fournir les instructions relatives à l'utilisation et à l'entretien [des produits installés, lesquelles seront incorporées au manuel d'E&E.

.3 Documents de garantie : soumettre les documents de garantie prescrits.

1.04 MAINTENANCE MATERIAL SUBMITTALS

.1 Matériaux/matériels de remplacement/d'entretien : Remettre au Représentant ministériel, aux fins de remplacement/d'entretien, des produits provenant du même lot de fabrication que ceux qui ont été mis en œuvre. Les placer dans des emballages protecteurs correctement marqués au moyen d'étiquettes appropriées. Se conformer aux prescriptions de la section 01 78 00 - Documents/Éléments à remettre à l'achèvement des travaux.

.2 Extra stock materials: deliver to Ministerial representative extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Section 01 78 00 - Closeout Submittals.

.1 Quantity : provide minimum 5% of :

.1 Carpet tile.

.2 Carpet base.

1.05 SITE CONDITIONS

.1 Ambient Conditions
- .1 Moisture: ensure substrate is within moisture limits and alkalinity limits recommended by manufacturer. Prepare moisture testing and provide report to Ministerial representative.
- .2 Temperature: maintain ambient temperature of not less than 18 degrees C from 48 hours before installation to at least 48 hours after completion of work.
- .3 Relative humidity: maintain between 10% and 65% for 48 hours before, during and 48 hours after installation.
- .4 Ventilation
  - .1 The Ministerial representative will co-ordinate operation of ventilation system during installation of carpet.
  - .2 Provide continuous ventilation during and after carpet application. Run ventilation system 24 hours per day during installation; provide continuous ventilation for 7 days after completion of carpet installation.
- .5 Install carpet after space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete.

1.06 WARRANTY

.1 Manufacturer's Warranty: submit to the Ministerial Representative, for approval, the manufacturer's standard warranty document, executed by an authorized representative of the company. The manufacturer's warranty is in addition to the warranty provided for in the contract and does not in any way limit the rights of the Employer under the terms of the contract..

.2 Duration of warranty: one (1) year starting from date of the provisional acceptance inspection.
- .1 The warranty covers labor and repair or replacement of defective parts for one (1) year starting from date of the provisional acceptance inspection.

PARTIE 2 PRODUCTS

2.01 MATERIALS

.1 Description
- .1 Adhesives: VOC limit 150 g/L maximum.
- .2 Primer: in accordance with manufacturer’s recommandations for surface conditions.
- .3 Carpet and Accessories

2.02 PERFORMANCE

.1 Flammability: certified for flammability to Health Canada regulations under "Hazardous Products - Carpet Regulations", Part II of Schedule 1.

.2 Flame Spread: maximum flame spread rating 300, maximum smoke developed classification 500, when tested to CAN/ULC-S102.2.

.3 Wear: maximum 10% of pile face fiber by weight for 10 years.

.4 Edge Ravel: none for 10 years.

.5 Static Resistance: permanent static control to AATCC 134, 3000 V maximum at 20% RH and 22 degrees C.

.6 Tuft Bind: Tuft Lock: to ASTM D 1335.

.7 De-lamination of Secondary Backing: Lamination Strength of Secondary Backing: to ASTM D 3936.

.8 Stain resistance: to AATCC 175.

.9 Soil Resistance: 350 ppm fluorine minimum, Fluorine Durability Level to AATCC 189.

.10 Colourfastness to light: to CAN/CGSB-4.2 No.18.3.

.11 Colourfastness to crocking: to CAN/CGSB-4.2 No. 22.

2.03 FABRICATION

.1 Size: 500 mm x 500 mm.

.2 Face construction:
.1 Tufted.

.3 Pile Surface Appearance
.1 Multi-level loop: sculptured.

.4 Pile fibre: to CAN/CGSB-4.129.
.1 Nylon : BCF staple.

.5 Tufted Carpet Backing: to CAN/CGSB-4.129.

.6 Stiches : 39,4/10 cm

.7 Gauge : 47,2 bouts/10 cm

.8 Pile Weight Density : 230,6/m³

.9 Finished Pile Height : minimum 2,5 mm average.

.10 Surface Pile Weight : minimum 474 g.

.11 Total Weight : 576g/m²
.12 Dimensional Stability: maximum + 0.15% to CAN/CGSB-4.2 No. 76/ISO 2551.

2.04 ACCESSOIRES

.1 Base :
.1 Carpet Base : 104 mm high, same material, colour, pattern and texture as adjoining carpet tile, with vinyl cap strip to accomodate carpet base thickness, colour to match carpet.

.2 Binder Bars : aluminum finish.

.3 Adhesive:
.1 Pressure Sensitive Type: recommended by carpet tile manufacturer for direct glue down installation of speciality backed carpet tiles.
.2 Mill-applied Adhesive Type: fully cured.

.4 Transition Mouldings

.1 Carpet edge / reducer strip: extruded anodized aluminum, thickness according to the difference in level.

.5 Carpet protection: [non-staining heavy duty kraft paper.

.6 Concrete floor primer: according to the manufacturer's recommendations.

.7 Subfloor patching compound: Portland cement base filler, mix with latex and water to form cementitious paste.

PARTIE 3 EXECUTION

3.01 INSTALLERS

.1 Use experienced and qualified technicians to carry out assembly and installation of tile carpet.

3.02 EXAMINATION

.1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for carpet tile installation in accordance with manufacturer's written instructions.
- .1 Inform Ministerial representative of unacceptable conditions immediately upon discovery.
- .2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Ministerial representative.

3.03 PREPARATION

.1 Subfloor Preparation
- .1 Inspect concrete and determine special care required to make it a suitable for carpet.
- .2 Fill and level cracks 3 mm wide or protrusions over 0.8 mm with appropriate and compatible [latex] [polymer fortified] patching compound.
- .3 Comply with manufacturer's written recommendations for maximum patch thickness.
- .4 Prime large patch areas with compatible primer.
- .5 Ensure concrete substrates are cured, clean and dry.
- .6 Ensure concrete substrates are free of paint, dirt, grease, oil, curing or parting agents, and other contaminates, including sealers, that interfere with the bonding of adhesive.
- .7 Where powdery or porous concrete surface is encountered, apply primer compatible with adhesive to provide a suitable surface for glue-down installation.

.2 Surface Preparation: prepare surface in accordance with manufacturer's written recommendations.
- .1 Prepare floor surfaces in accordance with CRI Carpet Installation Standard.

.3 Tile Carpeting Preparation:
- .1 Pre-condition carpeting: following manufacturer's written instructions.

3.04 TILE CARPETING INSTALLATION

.1 Install carpet tiles in accordance with manufacturer's written instructions.

.2 Co-ordinate tile carpeting work with work of other trades, for proper time and sequence to avoid construction delays.

.3 Install carpet tile after finishing work is completed but before demountable office partitions and telephone and electrical pedestal outlets are installed.

.4 Install carpet tile as per manufacturer's recommendation. This can include quarter-turn 90 degree format, monolithic, random, quarter turn ashlar, horizontal, herringbone or vertical ashlar.

.5 Snugly join carpet tiles in completed installation.
- .1 Measure distance covered by 11 carpet tiles (10 joints) and ensure distance is in compliance with manufacturer specifications.
- .2 Do not trap yarn between carpet tiles.

.6 Apply thin film of pressure-sensitive adhesive according to manufacturer's recommendations.

.7 Ensure finished installation presents smooth wearing surface free from conspicuous seams, burring and other faults.

.8 Use material from same dye lot.
- .1 Ensure colour, pattern and texture match within visual areas.
- .2 Maintain constant pile direction.

.9 Fit around architectural, mechanical, electrical and telephone outlets, and furniture fitments, around perimeter of rooms into recesses, and around projections..

.10 Install carpet tiles to underfloor duct system and to access covers.

.11 Install carpeting in pan type floor access covers.

.12 Extend carpet tiles into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

.13 Install carpet tiles smooth and free from bubbles, puckers, and other defects.

.14 Protect exposed carpet tile edges at transition to other flooring materials with suitable transition strips.

.15 Base Installation : following manufacturer's written instructions.

3.05 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
- .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
  - .1 Vacuum carpets clean immediately after completion of installation.

3.06 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Prohibit traffic on carpet for period of 24 hours minimum after installation and until adhesive is cured.

.3 Install carpet protection to satisfaction of Ministerial Representative.

.4 Repair damage to adjacent materials caused by tile carpeting installation.

FIN DE SECTION

PART 1 General

1.1 REFERENCES

.1 Architectural Painting Specifications Manual, Master Painters Institute (MPI).

.2 Systems and Specifications Manual, SSPC Painting Manual, Volume Two, Society for Protective Coatings (SSPC).

.3 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).

.4 National Fire Code of Canada - 1995

1.2 QUALITY ASSURANCE

.1 Contractor: minimum of five years proven satisfactory experience. Provide list of last three comparable jobs including job name and location, specifying authority, and project manager.

.2 Journeymen: qualified journeymen who have "Tradesman Qualification Certificate of Proficiency" engaged in painting work. Apprentices: working under direct supervision of qualified trades person in accordance with trade regulations.

.3 Conform to most recent MPI requirements concerning interior painting, including surface preparation and application of primer or print paint.

.4 All products used, including primers, print paints, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc., must be included in the List of Approved Products given in the MPI Architectural Painting Specification Manual, and all products making up a particular paint system must be supplied by a single manufacturer.

.5 Additional paint products, such as linseed oil, shellac, and turpentine, must be compatible with all other materials with which they come in contact, and be of high quality. They must be supplied by a manufacturer approved in the MPI Painting Specification Manual.

.6 Keep all order forms, bills and other documents that can be used to prove upon Ministerial representative's request that all work was done in accord with MPI requirements.

.7 Quality standards:

.1 Walls: no defect visible from a distance of 1000 mm at an angle of 90° to the surface in question.

.2 Ceilings: no defect visible to observer standing at floor level at an angle 45° to the surface in question, under final lighting conditions.

.3 Finish colour and gloss level must be uniform over the entire surface in question.

1.3 ENVIRONMENTAL PERFORMANCE REQUIREMENTS

.1 Paint products must conform to the requirements for obtaining the MPI Environmentally Friendly classification as defined in "Green Performance Standard MPI GPS-1," based on the amount of volatile organic compounds (VOC) in the product as determined by method n 24 of the Environmental Protection Agency (EPA).

1.4 SCHEDULING

.1 Submit work schedule for various stages of painting to Ministerial representative for review. Submit schedule minimum of 48 hours in advance of proposed operations.

.2 Obtain written authorization from Ministerial representative for changes in work schedule.

.3 Schedule painting operations to prevent disruption of occupants or people in the vicinity.

1.5 SUBMITTALS

.1 Submit product data sheets and manufacturer's instructions in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit complete information for all products used. Indicate all products that make up each system, including the following information for each product:

.1 Name, type and use of product.

.2 Manufacturer's products number

.3 Colour number

.4 MPI Environmentally Friendly classification system rating.

.5 Manufacturer's Product data sheet.

1.6 EXTRA MATERIALS

.1 Deliver extra materials in accordance with Section 01 78 00 - Closeout Submittals.

.2 Quantity: provide one four-litre can of each type and colour of primer and finish coating. Identify colour and paint type in relation to established colour schedule and finish system.

.3 Deliver extra material to Contractor and store at location indicated by Ministerial representative.

1.7 DELIVERY, STORAGE AND HANDLING

.1 Pack, ship, handle and unload materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Identify products and materials with labels indicating:

.1 Manufacturer's name and address.

.2 Type of paint or coating.

.3 Compliance with applicable standard.

.4 Colour number in accordance with established colour schedule.

.3 Remove damaged, opened and rejected materials from site.

.4 Provide and maintain dry, temperature controlled, secure storage.

.5 Store and handle products as recommended by manufacturer.

.6 Store materials and supplies away from heat generating devices.

.7 Store materials and equipment in well ventilated area with temperature range 7 degrees C to 30 degrees C.

.8 Store temperature sensitive products above minimum temperature as recommended by manufacturer.

.9 Keep areas used for storage, cleaning and preparation clean and orderly to the satisfaction of Ministerial representative. After completion of operations, return areas to clean condition to the satisfaction of Ministerial representative.

.10 Remove paint materials from storage only in quantities required for same day use.

.11 Respect WHMIS requirements respecting use, storage, handling and disposal of hazardous materials.

.12 Fire Safety Requirements:

.1 Provide one 9 kg Type ABC dry chemical fire extinguisher adjacent to storage area.

.2 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.

.3 Handle, store, use and dispose of flammable and combustible materials in accordance with National Fire Code of Canada requirements.

1.8 SITE CONDITIONS

.1 Heating, Ventilation and Lighting:

.1 Before beginning work, verify if existing ventilation is adequate and continuous, If not, provide heating facilities to maintain ambient air and substrate temperatures above 10 degrees C for 24 hours before, during and after paint application.

.2 As needed, provide continuous ventilation for seven days after completion of application of paint.

.3 Coordinate use of existing ventilation system with Ministerial representative, as needed, and ensure its operation during and after application of paint as required.

.4 Provide temporary ventilating and heating equipment where permanent facilities are not available or supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements.

.5 Provide minimum lighting level of 323 Lux on surfaces to be painted. Supplementary lighting systems needed to provide adequate lighting must be provided by Contractor.

.2 Temperature, Humidity and Substrate Moisture Content Levels:

.1 Unless pre-approved written approval by Specifying body and product manufacturer, perform no painting when:

.1 Ambient air and substrate temperatures are below 10 degrees C.

.2 Substrate temperature is above 32 degrees C unless paint is specifically formulated for application at high temperatures.

.3 Substrate and ambient air temperatures are not expected to fall within MPI or paint manufacturer's prescribed limits.

.4 The relative humidity is under 85% or when the dew point is more than 3 degrees C variance between the air/surface temperature.

.5 Rain or snow are forecast to occur before paint has thoroughly cured or when it is foggy, misty, raining or snowing at site.

.2 Perform painting work when maximum moisture content of the substrate is below:

.1 12% for concrete and masonry (concrete or clay bricks or blocks).

.2 15% for wood.

.3 12% for plaster and gypsum board.

.3 Test for moisture using calibrated electronic Moisture Meter. Test concrete floors for moisture using "cover patch test".

.4 Test concrete, masonry and plaster surfaces for alkalinity as required.

.3 Surface and Environmental Conditions:

.1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.

.2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits.

.3 Apply paint when previous coat of paint is dry or adequately cured.

.4 Apply paint finishes when temperature at location of installation can be satisfactorily maintained within manufacturer's recommendations.

.5 Apply paint in occupied facilities during silent hours only. Schedule operations to approval of Ministerial representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.

1.9 WASTE MANAGEMENT AND DISPOSAL

.1 Paint, stain and wood preservative finishes and related materials (thinners, and solvents) are regarded as hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from Provincial Ministries of Environment and Regional levels of Government.

.2 Material which cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.

.3 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.

.4 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into ground follow these procedures:

.1 Retain cleaning water for water-based materials to allow sediments to be filtered out.

.2 Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.

.3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.

.4 Dispose of contaminants in approved legal manner in accordance with hazardous waste regulations.

.5 Empty paint cans are to be dry prior to disposal or recycling (where available).

.5 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.

.6 Close and seal partially used containers of adhesive and sealant and store in well ventilated, temperature-controlled, fireproof location.

PART 2 Products

2.1 MATERIALS

.1 Certified Materials: for this project, use only products found on the list of certified materials issued by CGSB.

.2 Provide paint materials for paint systems from single manufacturer.

.3 Only qualified products with "Environmentally Friendly" rating as defined by Green Performance Standard MPI GPS-1 are acceptable for use on this project.

.4 Paints, coatings, adhesives, solvents, cleaners, lubricants, and other fluids:

.1 Water-based, water soluble, water clean-up.

.2 Non-flammable.

.3 Manufactured without compounds which contribute to ozone depletion in the upper atmosphere.

.4 Do not contain toxic metal pigments.

.5 Water-borne products must be manufactured and transported so that every step of the process, including waste disposal during the work, respects all applicable laws and government regulations including, for work done in Canada, the Fisheries Act and the Canadian Environmental Protection Act

.6 Formulate and manufacture water-borne surface coatings with no aromatic solvents, formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.

.7 Water-borne paints and stains, recycled water-borne surface coatings and water borne varnishes to meet minimum "Environmentally Friendly" as defined by Green Performance Standard MPI GPS-1.

2.2 COLOURS

.1 Ministerial representative will provide Colour Schedule after Contract award. Submit proposed Colour Schedule to Consultant for review.

.2 Colour schedule will be based upon selection of three base colours and eight accent colours. No more than eleven colours will be selected for entire project and no more than five colours will be selected in each area.

.3 Selection of colours from manufacturers full range of colours.

.4 Where specific products are available in restricted range of colours, selection will be based on limited range.

2.3 MIXING AND TINTING

.1 Perform colour tinting operations prior to delivery of paint to site. Obtain written approval from Ministerial representative for tinting of painting materials.

.2 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

2.4 GLOSS/SHEEN RATINGS

.1 Gloss level ratings of painted surfaces as indicated for each specified product.

2.5 INTERIOR PAINTING SYSTEMS

.1 Concrete vertical surfaces:

.1 On new concrete surfaces, ne coat emulsion primer for blocks, to CGSB 1-GP-188M (mod. Sept. 80).

.2 On new concrete surfaces, one coat emulsion primer, to CGSB 1-GP-119M (mod. Sept. 80).

.3 On new and existing, two coats paint, matte finish, to CGSB 1-GP-118M, finish and colour to be chosen by the ministerial representative.

.2 Plaster and gypsum board: gypsum wallboard, drywall, "sheet rock type material", and textured finishes:

.1 On new gypsum surfaces, one coat emulsion primer, tinted for walls to be coloured, with less than 51g/L VOC contents, to CGSB 1-GP-119M (mod. Sept. 80).

.2 On new and existing surfaces, two coats 100% acrylic latex paint, with less than 11g/L VOC contents, to CGSB 1-GP-57M. Finish and color to be chosen by the ministerial representative.

.3 Interior system: For existing surfaces with oil paint.

.1 Regardless the primer described in interior finish paint systems, all interior walls and partitions with an oil-based finish shall use the following primer:

Fast drying alkyd primer sealer.

.4 Galvanized metal:

.1 On new zinc-plated metal surfaces (such as steel doors and frames), one coat reactive vinyl primer, to CGSB 1-GP-121M.

.2 On primed new surfaces or existing surfaces, one coat base enamel paint, to CGSB 1-GP-38M, followed by two coats of enamel paint, to CGSB 1-GP-57M, finished and color to be chosen by the ministerial representative.

.5 Choice and number of coats of paint

.1 Regardless of paint system descriptions indicated above, use sufficient number of additional coats to obtain complete and uniform coverage, with no effect of transparency, to the satisfaction of Ministerial representative.

PART 3 Execution

3.1 GENERAL

.1 Perform preparation and operations for interior painting in accordance with MPI Architectural Painting Specifications Manual except where specified otherwise.

.2 Apply paint materials in accordance with paint manufacturer's written application instructions.

3.2 EXAMINATION

.1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Ministerial representative damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.

.2 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter. Report results to Ministerial representative. Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.

.3 Maximum moisture content as follows:

.1 Stucco, plaster and gypsum board: 6%.

3.3 PROTECTION

.1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore surfaces as directed by Ministerial representative.

.2 Protect items that are permanently attached such as Fire Labels on doors and frames.

.3 Protect factory finished products and equipment.

.4 Protect building occupants in and about the building.

.5 Remove electrical cover plates, light fixtures, surface hardware on doors, bath accessories and other surface mounted equipment, fittings and fastenings prior to undertaking painting operations. Identify and store items in secure location and re-installed after painting is completed.

.6 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.

.7 Place "WET PAINT" signs in occupied areas as painting operations progress. Signs to approval of Ministerial representative.

3.4 SURFACE PREPARATION

.1 Clean and prepare surfaces in accordance with MPI Architectural Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:

.1 Remove dust, dirt, and other surface debris by vacuuming and wiping with dry, clean cloths.

.2 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.

.3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.

.4 Allow surfaces to drain completely and allow to dry thoroughly.

.5 Prepare surfaces for water-based painting, water-based cleaners should be used in place of organic solvents.

.6 Use trigger operated spray nozzles for water hoses.

.7 Many water-based paints cannot be removed with water once dried. Minimize use of mineral spirits or organic solvents to clean up water-based paints.

.2 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pretreatment as soon as possible after cleaning and before deterioration occurs.

.3 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.

.4 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements. Remove traces of blast products from surfaces, pockets and corners to be painted by brushing with clean brushes.

.5 Touch up of shop primers with primer as specified in applicable section. Major touch-ups, such as cleaning and painting of site-assembled components, welds, rivets, bolts, nuts, and washers as well as rusted or inadequately painted surfaces, must be performed by the supplier of the component in question.

.6 Do not apply paint until prepared surfaces have been accepted by Ministerial representative.

.7 Prepare galvanized steel surfaces to CGSB 85-GP-14M.

.8 Prepare masonry, stucco, and concrete surfaces to CGSB 85-GP-31M.

.9 Prepare plaster and gypsum surfaces to CGSB 85-GP-33M. Fill small cracks with wall patch compound.

3.5 APPLICATION

.1 Method of application to be as approved by Ministerial representative. Apply paint by brush, roller, or sprayer. Conform to manufacturer's application instructions unless specified otherwise.

.2 Brush and Roller Application:

.1 Apply paint in uniform layer using brush and/or roller type suitable for application.

.2 Work paint into cracks, crevices and corners.

.3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers or sheepskins.

.4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces free of roller tracking and heavy stipple, unless accepted by Ministerial representative.

.5 Remove runs, sags and brush marks from finished work and repaint.

.3 Spray application:

.1 Provide and maintain equipment that is suitable for intended purpose, capable of atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.

.2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.

.3 Apply paint in uniform layer, with overlapping at edges of spray pattern. Back roll first coat application.

.4 Brush out immediately all runs and sags.

.5 Use brushes and rollers to work paint into cracks, crevices and places which are not adequately painted by spray.

.4 Use dipping, sheepskins or daubers only when no other method is practical in places of difficult access, and only with the express approval of Ministerial representative.

.5 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.

.6 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.

.7 Sand and dust between coats to remove defects visible from a distance of 1.5 m.

.8 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.

.9 Finish inside of cupboards and cabinets as specified for outside surfaces.

.10 Finish closets and alcoves as specified for adjoining rooms.

.11 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.

3.6 FIELD QUALITY CONTROL

.1 Advise Ministerial representative when surfaces and applied coating are ready for inspection. Do not proceed with subsequent coats until previous coat has been approved.

3.7 RESTORATION

.1 Clean and re-install hardware items removed before undertaken painting operations.

.2 Remove protective coverings and warning signs as soon as practical after operations cease.

.3 Remove paint splash on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.

.4 Protect freshly completed surfaces from paint droppings and dust to approval of Ministerial representative. Avoid scuffing newly applied paint.

.5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Ministerial representative.

END OF SECTION

PART 1 General

1.1 REFERENCES

.1 American Society for Testing and Materials (ASTM)

.1 ASTM A167-99, Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-12.5-M86, Mirrors, Silvered.

.3 Canadian Standards Association (CSA)

.1 CAN/CSA-B651-95, Barrier-Free Design.

1.2 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate size and description of components, base material, surface finish inside and out, hardware and locks, attachment devices, description of rough-in-frame, building-in details of anchors for grab bars.

1.3 CLOSEOUT SUBMITTALS

.1 Provide maintenance data for toilet and bath accessories for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.

1.5 EXTRA MATERIALS

.1 Provide special tools required for accessing, assembly/disassembly or removal for toilet and bath accessories in accordance with requirements specified in Section 01 78 00 - Closeout Submittals.

.2 Deliver special tools to Ministerial representative.

PART 2 Products

2.1 MATERIALS

.1 Stainless steel sheet metal: to ASTM A167, Type 304, with brushed finish.

.2 Stainless steel tubing: Type 304, commercial grade, seamless welded, 1.2 mm wall thickness.

.3 Fasteners: concealed screws and bolts hot dip galvanized, exposed fasteners to match face of unit. Expansion shields fibre, lead or rubber as recommended by accessory manufacturer for component and its intended use.

2.2 COMPONENTS

.1 Plain mirror: wall mounted unit, fixed 6 mm mirror, dimensions 610mm L x 915mm H, to CAN/CGSB-12.5, stainless steel frame 25mm deep at the bottom of the frame, 100mm deep at the top of the frame, fixed to the wall using concealed screws. Fixtures supplied by the manufacturer.

2.3 FABRICATION

.1 Weld and grind joints of fabricated components flush and smooth. Use mechanical fasteners only where approved.

.2 Wherever possible form exposed surfaces from one sheet of stock, free of joints.

.3 Brake form sheet metal work with 1.5 mm radius bends.

.4 Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.

.5 Back paint components where contact is made with building finishes to prevent electrolysis.

.6 Hot dip galvanize concealed ferrous metal anchors and fastening devices to CSA G164.

.7 Shop assemble components and package complete with anchors and fittings.

.8 Deliver inserts and rough-in frames to job site at appropriate time for building-in. Provide templates, details and instructions for building in anchors and inserts.

.9 Provide steel anchor plates and components for installation on studding and building framing.

2.4 FINISHES

.1 Chrome and nickel plating: to ASTM B456, satin finish.

.2 Manufacturer's or brand names on face of units not acceptable.

PART 3 Execution

3.1 INSTALLATION

.1 Fix mirrors as follows:

.1 Provide drill bit for ceramic piercing and appropriate wall anchors.

.2 Drill four holes in the wall at the locations indicated by the template or plan provided by the manufacturer, so that the top of the frame is 1765mm from the floor once installed

.3 Install 4 wall anchors in holes. Install the screws provided by the manufacturer in the anchors. The heads should be 4mm out of the wall.

.4 Align the slots in the back of the mirror frame with the screw heads. Slide the screw heads into the slots and pull the mirror down until it snaps into place.

3.2 QUANTITY AND LOCATION

.1 Install mirrors to replace existing mirrors at locations indicated in drawings.

END OF SECTION