MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

VOLUME 1

DOORS REPLACEMENT
TO ÉÉC SAINTE-JEANNE d'ARC

25 LAURELCREST ST. BRAMPTON, ON L6S4C4

ARCHITECTURAL
SPECIFICATIONS

ISSUED FOR TENDER: MAY 28, 2018

TENDER NO. RFQ 2018-51

PROJECT # 18-002

Cellucci+Pace
ARCHITECTURE I PLANNING I PROJECT MANAGEMENT

SPECIFICATIONS

PROJECT: **EXTERIOR DOOR REPLACEMENT**
ÉCOLE ÉLÉMENTAIRE CATHOLIQUE
SAINTE JEANNE D'ARC
225 LAURELCREST ST.
BRAMPTON, ONTARIO

OWNER: **CONSEIL SCOLAIRE CATHOLIQUE MONAVENIR**

CONSULTANT:
CELLUCCI + PACE INC.
510 ROWNTREE DAIRY ROAD UNIT 3C
WOODBRIDGE, ONTARIO L4L 8H2

TEL: 416-855-2260

CONSULTANT'S PROJECT NUMBER: **18-002**

DATE: **MAY, 2018**

SECTION 00 01 10 - SPECIFICATIONS TABLE OF CONTENTS

INTRODUCTORY INFORMATION

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

DIVISION 2 – EXISTING CONDITIONS

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

DIVISION 8 - OPENINGS

DIVISION 9 - FINISHES

END

DOCUMENT 00 01 07 - SEALS

DISCIPLINE	SEAL & SIGNATURE
ARCHITECTURAL This seal governs all Documents and Sections of the Architectural Specifications.	

END

SECTION 00 31 00 - AVAILABLE PROJECT INFORMATION

1. DESIGNATED SUBSTANCES

.1 A limited designated substances survey has been carried out by Maple Environmental Inc. who have issued the following report:

.1 Limited Designated Substance Survey, Report, (Renovation Areas), École élémentaire catholique Sainte Jeanne d'Arc", Maple Project No. 17114, dated May 11, 2018.

.2 Report is hereby offered in good faith for general information and guidance. The Consultant assumes no responsibility for completeness and accuracy of report.

.3 Owner has separately arranged and paid for the removal of asbestos containing materials in the affected work areas, in accordance with the Designated Substance Survey Report, and as required for this project.

.4 With the exception of lead containing paint, designated substances are not known to exist in the assigned work areas.

.5 Also refer to Section 01 35 00 for additional requirements concerning designated substances.

END

SECTION 01 19 00 - GENERAL REQUIREMENTS

1. GENERAL REQUIREMENTS

.1 Requirements of Division 1 apply to all Sections of Work.

2. SUMMARY OF WORK

.1 Provide all items, articles, materials, services and incidentals, whether or not expressly specified or shown on Drawings, to make the Work complete and fully operational, consistent with the intent of the Contract Documents.

.2 The following is not included in this Contract:

.1 Asbestos abatement

.2 Work designated N.I.C.

3. DEFINITIONS

.1 Wherever words "acceptable", "approved", "reviewed", "satisfactory", "directed", "selected", "designated", "required", "submit", "instructed", "permitted" or similar words or phrases are used in Contract Documents or referenced standards, it shall be understood, that "by" or "to" "the Consultant" follows, unless context clearly provides otherwise.

4. DIVISION OF WORK

.1 Notwithstanding the organization of the Specifications, division of work among subcontractors and suppliers is the Contractor's responsibility.

.2 The Consultant shall not be responsible to establish subcontract limits.

5. METRIC PROJECT

.1 This project is based on The International System of Units (SI). Measurements are expressed in metric (SI) units and depending on the progress made in the various sectors of the industry are either hard or soft converted units.

.2 All metric units specified shall be taken to be the minimum accept able unless otherwise noted.

.3 It is the Contractor's responsibility to check and verify with manufacturers and suppliers on the availlabity of materials and products in either metric or imperial sizes.

.4 Where a material or product cannot be obtained in the metric size specified, provide the next larger imperial size available.

.5 Where both metric and imperial sizes or dimensions are shown, the metric size or dimension shall govern.

6. EXAMINATION

.1 Examine site and surrounding areas and be fully informed as to the conditions, circumstances and limitations under which the Work has to be executed. Claims for additional costs will not be entertained with respect to conditions which could reasonably have been ascertained by an inspection prior to bid closing.

.2 Prior to commencement of work, make careful examination of previously executed work, existing conditions, levels, dimensions and clearances. Promptly advise Consultant of unsatisfactory preparatory work and substrate conditions; commencement of work implies acceptance of conditions.

7. PROTECTION

.1 Ensure that no damage is caused to existing structures, buildings, property, utilities, services, finishes during the progress of Work. Repair and make good any damage caused, to the satisfaction of the Owner. Do not proceed with repairs or remedial work without written permission of the Consultant. Only trades specifically capable of performing the work will be allowed to make remedial or repair work.

.2 At all times protect new and existing work from damage with suitable protective coverings.

8. SAFETY AND SECURITY

.1 Be responsible for security of assigned work areas until taken over by Owner. Take steps to prevent entry to the Work by unauthorized persons and guard against theft, fire and damage by any cause.

.2 Maintain fire protection for work. Store volatile substances in a separate and controlled locations and inspect frequently. Inspect temporary wiring, drop cords, extension cables for defective insulation or connections frequently. Remove combustible wastes frequently. Prohibit smoking anywhere on Owner's property.

.3 Do not cut, bore or sleeve through any load bearing member, without Consultant's written authorization unless specifically indicated.

9. HAZARDOUS MATERIALS

.1 Comply with provisions of the Occupational Health and Safety Act as amended to include WHMIS (Workplace Hazardous Materials Information System).

.2 Ensure that Material Safety Data Sheets (MSDS) are available on site prior to delivery to site of any hazardous material.

.3 Maintain on site for duration of Contract a hazardous materials log containing all required MSDS.

.4 Log shall be open for inspection by Owner, Contractor, Consultant and all personnel on site.

.5 Ensure that workers are instructed in the purpose and content of MSDS.

10. SLEEVES, SUPPORTS AND FASTENERS

.1 Furnish, set and secure insets, hangers, sleeves, fasteners, adhesives, anchors and other supports and fittings required for proper installation and securement of the Work.

.2 Use exposed metal fastenings and accessories of same texture, colour and finish as base metal on which they occur.

.3 Select appropriate type of anchoring and fastening devices and in sufficient quantity and in such manner as to provide positive permanent anchorage of unit to be anchored in position. Keep exposed fasteners to a minimum, evenly spaced and neatly laid out.

.4 Fasteners shall be of permanent type. Do not use wood plugs.

.5 Fasteners which cause spalling or cracking of material to which anchorage is being made shall not be used.

11. CONCEALMENT

.1 Conceal ductwork, piping, conduits and wiring located in finished areas, in ceiling spaces, walls and where required behind furred construction, unless specifically noted to be exposed.

.2 If any doubt arises as to means of concealment, or intent of Contract Documents in this connection, request clarification from Consultant before proceeding with portion of work in question.

12. CUTTING AND PATCHING

.1 Do all cutting, patching and making good to leave in a finished condition and to make the several parts of the work come together properly coordinate work to keep cutting and patching to a minimum.

.2 Regardless of which Section of work is responsible for any portion of cutting and patching, in each case tradesmen qualified in work being cut and patched shall be employed to ensure that it is correctly done.

.3 Any cost caused by omission or ill-timed work shall be borne by party responsible therefore.

.4 Do not endanger any work by cutting, digging or otherwise altering, and do not cut or alter any loadbearing element without written authorization by Consultant. Provide bracing, shoring and temporary supports as required to keep construction safely supported at all times.

.5 Cut holes carefully and not larger than required after they are located by Sections requiring them, using suitable equipment and tools.

.6 Patching and making good shall be done by trade specialists in material to be treated and shall be made undetectable in finished work.

13. DIMENSIONS

.1 Check and verify dimensions wherever referring to work. Dimensions pertaining to work of another Section, shall be verified with Section concerned. Details and measurements of work which is to fit or conform with work installed shall be taken at site.

.2 Do not scale Drawings. If there is ambiguity, lack of information or inconsistency, immediately request clarification.

14. LOCATION OF FIXTURES

.1 Location of fixtures, apparatus, equipment, fittings and outlets shown or specified, but not dimensioned, shall be considered approximate.

.2 Consult with Consultant to establish exact location. Any relocation caused by Contractor's failure to consult with Consultant shall be done by Contractor as part of work. Where job conditions require reasonable changes in indicated locations and arrangements, make changes at no additional cost.

15. SITE ADMINISTRATION

.1 When work is in progress keep on site a complete set of Contract Documents (Drawings, schedules and Specifications) with all addenda, site instructions, change orders, reviewed shop drawings and samples, colour schedule, paint materials schedules, hardware list, progress reports and meeting minutes.

.2 Organize and chair required site meetings. Ensure that persons, whose presence is required are present and that relevant information is at hand to allow meetings to be conducted efficiently. Record minutes of meetings and promptly distribute copies to all participants not later than 5 days after meetings.

16. CONSTRUCTION SCHEDULE

.1 Within 7 days of Contract award, submit in format acceptable to Consultant construction schedule for work of entire Contract.

.2 Show in schedule, start and completion times of each item of work, including erection and dismantling of temporary facilities.

.3 Completely update construction schedule whenever changes occur to scheduling and in manner and at times acceptable to Consultant.

17. PRODUCT DATA

.1 Submit product data sheets, required by Contract Documents, and others as may be reasonably required by Consultant.

.2 Submit product data sheets in digital or printed (hard copy) form and in accordance with the following requirements:

.1 Show detailed comprehensive information on products to be used.

.2 Clearly identify product/model number on data sheets containing multiple products.

.3 Supplement manufacturer's/distributor's standard schematics, diagrams, brochures, data sheets, catalogue sheets, charts and other descriptive data as required to give a clear understanding how product is to be incorporated into project.

18. SHOP DRAWINGS

.1 Submit shop drawings required by Contract Documents and others as may be reasonably required by Consultant.

.2 Prepare shop drawings using the same system of measurement used for Contract Documents. Shop drawings failing to meet this requirement may be rejected.

.3 Unless otherwise directed by Consultant submit shop drawings in digital form or submit the following number of prints for each shop drawing required:

.1 Architectural shop drawings: 2 prints.

.2 Mechanical, electrical shop drawings: 3 prints.

.4 After review Consultant will return the digital file or a marked up print to Contractor. Contractor shall obtain and distribute the necessary copies for each shop drawing.

.5 No work requiring a shop drawing submission shall be commenced until the submission has received Consultant's final review.

.6 Consultant's review is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor, and this review shall not relieve the Contractor of his responsibility for meeting the requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

19. SAMPLES

.1 Submit samples required by Contract Documents and as directed by the Consultant.

.2 Unless indicated otherwise submit samples in duplicate.

.3 Submit samples with identifying labels bearing material or component description, manufacturer's name and brand name, Contractor name, project name, location in which material or component is to be used, and date.

.4 No work requiring a sample submission shall be commenced until the submission has received Consultant's final review.

20. TOLERANCES

.1 Unless specific tolerances are required by a Section of the Specifications or a references standard, meet the following non-cumulative tolerances for installed work:

.1 "plumb" shall mean plumb within ±3 mm in 3 m of true plumb

.2 "level" shall mean level within ±3 mm in 3 m of true level

.3 "square" shall mean within ± 30 seconds from true 90º

.4 "straight" shall mean within ±3 mm in 3 m under a 3 m straight edge

21. WORKMANSHIP

.1 All work shall be carried out in accordance with the best trade practice, by workers skilled in the type of work concerned.

.2 Products, materials, systems and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the applicable manufacturer's printed directions.

.3 Where specified requirements are in conflict with manufacturer's written directions, follow manufacturer's directions, but inform Consultant in writing prior to proceeding with affected work. Where specified requirements are more stringent than manufacturer's directions, comply with specified requirements.

22. AVAILABILITY AND SUBSTITUTIONS

.1 Products which are specified by their proprietary names or by part or catalogue number form the basis for Contract. No substitutes for these may be used without Consultant's approval in writing.

.2 Requests for substitution resulting from failure to place orders in time will not be entertained. Be responsible for ordering products in time to ensure their required delivery; bear all costs for failure to comply with these requirements.

23. PRODUCT DELIVERY, HANDLING AND STORAGE

.1 Suitably pack, crate and protect products during transportation to site to preserve their quality and fitness for the purpose intended.

.2 Store products in original, undamaged condition with manufacturer's labels and seals intact until they are being incorporated into completed work.

.3 Handle and store materials in accordance with manufacturer's and suppliers recommendations and so as to ensure preservation of their quality, appearance and fitness for work.

.4 Arrange materials so as to facilitate prompt inspection, and remove faulty, damaged or rejected materials immediately from site.

24. PROJECT CLOSEOUT

.1 Comply with OAA/OGCA "A Guide to Project Closeout Procedures" November 2010, except as modified in these Specifications.

.2 Prior to Substantial Performance submit a complete set of as-built drawings consisting of white prints marked clearly, neatly and accurately with revisions made to the Contract Documents during construction. Show exact location of buried and concealed services.

.3 Prior to Substantial Performance submit 3 copies of operation and maintenance information contained in 3-ring binder, suitably marked on spine. Assemble information in systematic order, generally following specification format and identified with tabled dividers according. Include the following:

.1 List of contents.

.2 List of subcontractors and suppliers with telephone numbers and contacts.

.3 List of products incorporated in Project.

.4 Operation and maintenance instructions.

.5 Other information which may be reasonably requested by Consultant

.4 Prior to Substantial Performance instruct Owner in operation and maintenance of equipment and systems provided under this Contract.

25. CLEANING

.1 Be responsible for cleanliness of the project to satisfaction of Consultant. Maintain Work in neat and orderly condition at all times.

.2 Prior to Substantial Performance, and where work is carried out in phases, upon completion of each phase thoroughly clean all surfaces and components. Provide professional cleaning of all areas and surfaces to allow Owner to occupy without further cleaning.

26. DISPOSAL OF WASTE MATERIALS

.1 All waste materials resulting from operations related to this contract shall be removed and legally disposed unless clearly stated otherwise.

.2 Separate recyclable/reusable materials to maximum extent possible from general waste stream and transport to recycling/reuse facilities.

.3 Fires and burning of waste materials is not permitted on site.

.4 Do not bury waste materials on site.

.5 Do not dispose of liquid waste or volatile materials into watercourses, storm or sanitary sewers.

27. WARRANTY INSPECTION

.1 The Contractor shall organize a warranty inspection to take place two weeks prior to the expiration of the standard one-year warranty. The Consultant, Contractor, and the Owner shall attend.

END

SECTION 01 21 00 - ALLOWANCES

1. GENERAL

.1 Cash allowances are designated for additional work and services deemed to be necessary by Owner, from time to time, throughout the execution of the Work. Where a cash allowance refers to an item or category of work already included in Contract Documents, it shall be assumed to cover work or services in addition to that indicated, unless specifically indicated otherwise.

.2 Contractor may be required from time to time to assist in tendering of certain items of work covered by allowance, as directed by Consultant.

2. AUTHORIZATION

.1 Expenditures from allowances included in the Contract must be authorized in writing by the Owner.

.2 Work covered by allowances shall be performed for such amounts and by such persons as directed by the Consultant.

3. CASH ALLOWANCES

.1 Cash allowances include supply and installation unless specifically indicated otherwise.

.2 Supply only allowances shall include:

- .1 Net cost of products
- .2 Delivery to site
- .3 Applicable taxes and duties (excluding HST)

.3 Supply and install allowances shall include:

- .1 Net cost of products
- .2 Delivery to site
- .3 Unloading, storing, handling of products on site
- .4 Installation, finishing and commissioning of products
- .5 Applicable taxes and duties (excluding HST)

.4 Inspection and testing allowances shall include:

- .1 Net costs of inspection / testing services
- .2 Applicable taxes (excluding HST)

.5 Other costs related to work covered by cash allowances are not covered by the allowance but shall be included separately in Contract.

.6 Include in the Contract a cash allowance of $3,000.00 (three thousand dollars) for the following:

- .1 Independent inspection and testing.
- .2 Removal and reinstallation of existing door security components.

END

SECTION 01 35 00 - SPECIAL PROJECT REQUIREMENTS

1. OPERATIONAL LIMITATIONS

.1 Contractor's access to and use of site is limited to assigned areas indicated.

.2 At all times restrict access, parking, material deliveries, execution of work, operations and procedures to agreed locations and times and do not deviate from agreed procedures without prior approval by Owner.

.3 Check means of access and egress, rights and interests which may be interfered with. Do not block lanes, roadways, entrances or exits.

.4 Periodically review proposed construction operations with the Owner and Consultant and co-operate as required to ensure that the Owner's interests and requirements are not unduly compromised.

.5 Prevent disruptions of existing life safety systems in unassigned areas including fire detection and alarm systems, fire protection systems, exits, emergency lighting. Comply with "Guidelines for Maintaining Fire Safety During Construction in Existing Buildings" issued by the Office of the Fire Marshal, dated January 2003. Coordinate with Owner and municipal fire department to maintain fire safety within existing facility.

.6 Reschedule excessively noisy operations as directed by Owner.

.7 Workers are not permitted outside of assigned access and work areas except by prior arrangement with the approval of the Owner.

2. ALTERATIONS, MATERIALS AND WORKMANSHIP

.1 Cut, alter, relocate, modify existing work as required to accommodate new work.

.2 Materials used in patching, making good and refinishing of existing construction and/or components shall be of a standard equal to that specified for new construction and if not specified, equal to or exceeding that of original existing work.

.3 Quality of workmanship employed in alterations work shall be equal to that specified for new work if not specified, equal to or exceeding original existing work.

.4 Existing materials and equipment which are to be used in new work shall be repaired and refinished as necessary or additional new materials and components required shall be provided to facilitate reinstallation of such existing materials and equipment.

.5 As part of the work of this Section, remove and relocate, or temporarily remove and reinstall, existing materials and equipment as required to complete work of the Contract.

.6 Make good by restoring to original condition, existing construction, equipment, materials, finishes, features, not scheduled for alterations but damaged or disturbed due to work of this Contract.

.7 Prepare existing surfaces scheduled to receive new finish by grinding, filling, overcoating, washing, etching, shot blasting or other chemical or mechanical means, as required to ensure satisfactory installation of new finish.

.8 Unless otherwise detailed finish new surfaces flush with existing surfaces. Make junctions between existing and new work, or at replaced or remedial work visually undetectable. Make surfaces adjacent to one another of the same material, unit sizes, colour, and texture. If this is impossible, make a proposal of intended method of making good for approval, before proceeding.

.9 Where existing work, penetrating existing exposed surfaces, has been removed, patch surfaces to match existing construction/fiish, unless shown otherwise.

3. EXISTING SERVICES

.1 Ensure that existing such as life safety and security systems are not damaged or interrupted, except as required to allow required tie-ins and alterations.

.2 Should existing services be accidentally disrupted, make complete restoration immediately and ensure adequate protection to avoid future disruption.

.3 Schedule required disruptions of services to unassigned areas at times causing least amount of disturbance and inconvenience to building occupants. Notify the Owner minimum 72 hours prior to executing any work which would disrupt services to occupied areas and obtain permission to proceed. Restore systems to their proper operating condition at the end of each interruption.

4. DESIGNATED SUBSTANCES

.1 Designated substances (as defined by Bill 208 of the Occupational Health and Safety Act), except those identified by the Owner prior to submission of bids are not known to exist in Contractor's work area.

.2 If, in the execution of the Work, any designated substances or PCB containing materials other than those previously identified, are encountered, cease work in area affected and inform Consultant immediately. Do not proceed with work in areas affected until receiving instructions from Consultant.

.3 Refer to Section 01 35 00 for additional requirements concerning designated substances.

.4 Refer to Section 09 91 00 for requirements governing lead containing paint abatement.

5. PROTECTION

.1 Keep work areas safe and secure at all times, denying access to unauthorized personnel.

.2 Protect existing work from damage. Make good any damage caused.

.3 Do not at any time leave any openings in building exterior envelope unprotected, except when workers are present and work is in progress. Replace exterior elements within the same work period, or when this cannot be accomplished, provide temporary closures, watertight and secure against unauthorized entry.

.4 Prevent spread of dust and noxious fumes, odours to unassigned areas.

6. EXISTING CONDITIONS

.1 Prior to start of work on site carry out a photographic precondition survey of existing surfaces, finishes, features in all areas affected by this project.

.2 Provide a copy of survey to Owner and Consultant.

.3 Contractor shall be responsible for and make good any damage caused to existing buildings, structures, surfaces, finishes, features except that which is clearly documented to have existed prior to start of work.

7. TEMPORARY USE OF EXISTING FACILITIES

.1 Existing facilities such as water, electrical power, washrooms may be utilized by Contractor for temporary use; make arrangements with the Owner and follow Owner's directions with regard to such use.

.2 Provide power cords, hoses and other devices as required to convey power/water from points where it is available to points where it is required.

END

Ministry of Public Safety and Security

Office of the
Fire Marshal

Place Nouveau Building
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5775 Yonge Street
North York ON M2M 4J1
Telephone: (416) 325-3100
Facsimile: (416) 325-3213

Ministère de la Sûreté et de la Sécurité publique

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des incendies

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Ontario

GUIDELINES FOR MAINTAINING FIRE SAFETY DURING CONSTRUCTION IN EXISTING BUILDINGS

The following typical conditions usually arise during construction and could present serious unsafe conditions in case of a fire emergency.

1. Closing of Exits

All exits, including stairways and exterior doors to the outside, serving the existing building must be maintained. Where an exit is blocked off or deleted due to construction activities, an acceptable alternative exit must be provided. Where it is absolutely necessary for access to be gained through the construction area to an exit, the access must be clearly defined and protected so that it is separated from the construction area by a reasonable smoke tight fire separation equivalent to ¾ hour fire-resistance rating.

2. Intersecting Corridors – Existing Corridors on Occupied Floor Areas Exposed to New Corridors Under Construction

Temporary fire separations of steel studs and gypsum board construction equivalent to ¾-hour fire-resistance rating must be erected. Where access is desired, the opening must be protected by a door of solid core wood or hollow steel construction equipped with self-closing and latching hardware. Should such temporary fire separations cut off or eliminate required access to exits, alternative access must be provided.

3. Fire Department Access

The location of a building addition and the construction activities must not obstruct the access roadways designated for fire department equipment. If it is necessary that existing access be obstructed or deleted, alternative access, acceptable to the fire department, must be pre-planned and provided prior to commencement of construction. Sentence 3.2.5.2. (6) of the Ontario Building Code provides the design criteria for required access routes.

4. Control of Combustible Materials

The stockpiling of construction materials adjacent to the existing building must be carefully controlled. Article 2.4.2.1. of the Fire Code prohibits such storage where the materials create a fire hazard to the existing building or its occupants. Materials stored and equipment used in portion of the building under construction could create a fire hazard; for instance, the storage of excessive amounts of foam plastic insulation or the placement of open flame portable heating appliances. The control of combustibles on a construction site is also regulated under the *Occupational Health and Safety Act*.

5. Exposure of Construction in Progress to Existing Occupied Areas

Existing exterior walls with windows of plain glazing when exposed to construction in progress must be protected by ⅝" gypsum board on suitable framing for the duration of the construction. Other openings in the existing exterior walls such as doors, louvers, etc. must be similarly protected or replaced with doors of solid core wood or hollow steel construction.

6. Openings Created Through Floors or Other Fire Separations

Openings in existing floor assemblies and vertical fire separations necessitated by installation of equipment systems or construction in general must be temporarily sealed with fire barrier materials such as mineral wool or other noncombustible insulation.

7. Modification and Extension to Existing Fire Alarm Systems

Maintaining the fire alarm system in operating condition during the construction of the addition will require careful planning especially when the extension to the fire alarm system is carried out in phases.

A technical representative from the fire alarm manufacturer should be assigned to the project to coordinate the different stages of the extension. Whenever a changeover time occurs, which is an outage time of a least a portion of the fire alarm system, the municipal fire department must be notified of the temporary shutdown and alternative measure must be devised.

8. Shutdown of Fire Protection Systems

Where temporary shutdown of sprinkler systems, standpipe systems or other fire protection systems is necessary due to alterations, repairs or extensions, the appropriate requirements in the Fire Code must be observed. See Article 1.1.1.2., Clause 2.8.2.1.(1)(g), Subsections 6.4.1 and 6.5.2.

9. Fire Safety Plan

Depending on the nature of the construction, it may become necessary to modify the fire emergency procedures required under the Fire Safety Plan, subsection 2,8.2 of the Fire Code. Such changes may be of a temporary nature to accommodate revised exits, modifications to the fire alarm system operation, etc. in which case, the procedures must be returned to the original format at the completion of the project. In some cases, permanent revisions to the emergency procedures are required when the construction is completed.

Materials and closures in the temporary fire separations mentioned in the able are suggested examples only. Other materials acceptable to this Office may, of course, be sued. Should there be questions arising from any of the able situations, this Office sir to be informed and consulted to ensure that minimum life safety will be maintained. We would like to point out that partial occupancy of a building is regulated under Subsection 2.4.3. of the Building Code and comes under the authority of the Municipal Building Department.

January 2003

SECTION 01 42 13 - ABBREVIATIONS

1. The abbreviations listed below, when used in the Contract Documents, shall have the meanings shown.

2. See Drawing Abbreviations and Room Finish Schedule for additional abbreviations.

ABBREVIATION	MEANING
AA	ALUMINUM ASSOCIATION
AAMA	ARCHITECTURAL ALUMINUM MANUFACTURERS` ASSOCIATION
AASHO	AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
ACI	AMERICAN CONCRETE INSTITUTE
AGA	AMERICAN GAS ASSOCIATION
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AIMA	ACOUSTICAL & INSULATING MATERIALS ASSOCIATION
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION INC.
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIRCONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWI	ARCHITECTURAL WOODWORK INSTITUTE (USA)
AWMAC	ARCHITECTURAL WOODWORK MANUFACTURERS ASSOCIATION OF CANADA
AWS	AMERICAN WELDING SOCIETY
CCA	CANADIAN CONSTRUCTION ASSOCIATION
CCRC	CANADIAN CODE FOR RESIDENTIAL CONSTRUCTION
CEC	CANADIAN ELECTRICAL CODE
CFUA	CANADIAN FIRE UNDERWRITERS ASSOCIATION
CGA	CANADIAN GAS ASSOCIATION
CGSB	CANADIAN GENERAL STANDARDS BOARD
CIQS	CANADIAN INSTITUTE OF QUANTITY SURVEYORS
CISC	CANADIAN INSTITUTE OF STEEL CONSTRUCTION
CITC	CANADIAN INSTITUTE OF TIMBER CONSTRUCTION
CLA	CANADIAN LUMBERMEN`S ASSOCIATION
CMHC	CANADA MORTGAGE & HOUSING CORPORATION
COFI	COUNCIL OF FOREST INDUSTRIES OF BRITISH COLUMBIA
CPCI	CANADIAN PRESTRESSED CONCRETE INSTITUTE
CRCA	CANADIAN ROOFING CONTRACTORS ASSOCIATION
CSA	CANADIAN STANDARDS ASSOCIATION
CSC	CONSTRUCTION SPECIFICATIONS CANADA
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE (USA)
CSPI	CORRUGATED STEEL PIPE INSTITUTE
CSSBI	CANADIAN SHEET STEEL BUILDING INSTITUTE
CUA	CANADIAN UNDERWRITERS` ASSOCIATION
CWB	CANADIAN WELDING BUREAU
CWC	CANADIAN WOOD COUNCIL
DND	DEPARTMENT OF NATIONAL DEFENCE, CANADA
FM	FACTORY MUTUAL ENGINEERING CORPORATION
FS	FEDERAL SPECIFICATION (USA)
IES	ILLUMINATING ENGINEERING SOCIETY
IGMAC	INSULATED GLASS MANUFACTURERS ASSOCIATION OF CANADA
LTIC	LAMINATED TIMBER INSTITUTE OF CANADA
MIA	MARBLE INSTITUTE OF AMERICA
MPI	MASTER PAINTERS INSTITUTE
MPMDD	MODIFIED PROCTOR MAXIMUM DRY DENSITY
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (USA)
NBFU	NATIONAL BOARD OF FIRE UNDERWRITERS
NBC	NATIONAL BUILDING CODE OF CANADA
NBS	NATIONAL BUREAU OF STANDARDS (USDC)
NEMA	NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NHLA	NATIONAL HARDWOOD LUMBER ASSOCIATION (USA)

NLGA	NATIONAL LUMBER GRADES AUTHORITY
NRC	NATIONAL RESEARCH COUNCIL
OBC	ONTARIO BUILDING CODE
OHSA	OCCUPATIONAL HEALTH AND SAFETY ACT
OPSS	ONTARIO PROVINCIAL STANDARD SPECIFICATIONS
PCA	PORTLAND CEMENT ASSOCIATION
PCI	PRESTRESSED CONCRETE INSTITUTE
RAIC	ROYAL ARCHITECTURAL INSTITUTE OF CANADA
SDI	STEEL DECK INSTITUTE
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SPMDD	STANDARD PROCTOR MAXIMUM DRY DENSITY
SSPC	STEEL STRUCTURES PAINTING COUNCIL
TTMAC	TERRAZZO, TILE & MARBLE ASSOCIATION OF CANADA
ULC	UNDERWRITERS' LABORATORIES OF CANADA
ULI	UNDERWRITERS' LABORATORIES, INC. (USA)
USAS	UNITED STATES OF AMERICA STANDARDS INSTITUTE
WSIB	WORKPLACE SAFETY AND INSURANCE BOARD

END

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1 Disconnecting, relocation of mechanical and electrical services and equipment: Divisions 21 to 28

1.3 REGULATORY REQUIREMENTS

.1 Obtain and pay for necessary permits for work of this Section. Give required notices, and make submissions required by regulatory agencies.

.2 Comply with applicable requirements of jurisdictional authorities and CSA S350-M1980 (R2003) "Code of Practice for Safety in Demolition of Structures".

.3 Comply with applicable regulatory requirements governing waste management.

1.4 SUBMITTALS

.1 Prior to start of work, if required by jurisdictional authorities, submit written proposal outlining proposed demolition procedures.

1.5 PROTECTION

.1 Prevent uncontrolled movement, settlement, or damage. Provide shoring and bracing required.

.2 Take steps to positively prevent uncontrolled falling of demolished materials.

.3 Ensure that no part of existing structure is overloaded due to work carried out under this Section.

.4 Prevent debris from blocking drainage systems.

.5 Ensure that temporary guards, hoardings are provided in accordance with applicable safety regulations.

1.6 EXAMINATION

.1 Visit the site and the existing building so as to fully understand all existing conditions, limitations and circumstances, and extent of work required. No increase in cost or extension of performance time will be considered for conditions, limitations and circumstances which could reasonably be determined prior to submission of bid.

.2 Take over buildings and structures to be demolished based on their condition prior to submission of bid, except where indicated otherwise.

1.7 COORDINATION

.1 Refer to Divisions 21 to 28 to determine demolition work covered by them and coordinate as required.

PART 2 - PRODUCTS Not Applicable

PART 3 - EXECUTION

3.1 PREPARATION

.1 Ensure that affected building areas are unoccupied and discontinued in use and that required

separations between assigned and unassigned areas are in place prior to start of demolition work.

.2 Verify that existing services in areas affected by demolition work are disconnected, capped, removed or relocated, prior to start of work.

3.2 SALVAGE

.1 Prior to start of general demolition carefully remove and temporarily store in protected location items scheduled for salvage.

3.3 DEMOLITION

.1 Demolish existing work as indicated and as required to accommodate new work.

.2 Use appropriate methods and equipment so as to minimize damage to existing work designated to remain; make good any damage caused.

.3 Demolish work in a safe and systematic manner, from top to bottom.

.4 Demolish in a manner to minimize dusting. Keep dusty materials wetted but prevent flooding or contaminated runoff.

.5 At all times leave work in safe condition, so that no part is in danger of uncontrolled toppling or falling.

3.4 DISPOSAL AND CLEAN-UP

.1 All materials, rubbish and debris resulting from demolition work shall become the Contractor's property and shall be removed from site and legally disposed of unless specifically indicated otherwise.

.2 Separate recyclable / reusable materials to maximum extent possible and transport to recycling / reuse facilities.

.3 Do not allow demolished materials to accumulate on site. Promptly, as work progresses, remove and legally dispose of materials away from site.

.4 Selling, burning and burying of materials on site is not permitted.

END

SECTION 07 92 00 - SEALANTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 DEFINITION

.1 Caulking = Sealant.

1.3 QUALITY ASSURANCE

.1 Sealants must be installed by qualified applicator with minimum five years' experience.

1.4 SUBMITTALS

.1 Submit complete range of colour samples for each type sealant required.

1.5 PRODUCT HANDLING

.1 Deliver sealants to site in sealed containers bearing manufacturer's name, brand name of sealant and reference standard to which sealant complies.

.2 Store materials in a dry area having an ambient temperature within limitations recommended by material manufacturer.

1.6 JOB CONDITIONS

.1 Unless otherwise specified, apply sealants when air temperature is between 10°C and 25°C. When air temperature is above 25°C or below 10°C follow sealant manufacturer's recommendations regarding application.

PART 2 – PRODUCTS

2.1 MATERIALS

.1 Sealants:

.1 Compatibility: provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as recommended by sealant manufacturer based on testing and field experience.

.2 Colours of exposed joint sealants: selected by Consultant.

.3 Elastomeric sealant standard: comply with ASTM C920 and other requirements indicated.

.4 Joints at exterior surfaces: two-part medium modulus silicone sealant with joint movement capability of ±50%; custom colour selected by Consultant: ASTM C920, Type S, Grade NS, Class 25, uses NT, G,A,O: standard of acceptance: Dow Corning 790 Silicone Building Sealant.

.5 Joints at interior vertical surfaces: one part acrylic latex with joint movement capability of ±7 ½%, paintable: ASTM 834; Standard of acceptance: Tremco Tremflex 834.

.6 Joints at interior horizontal surfaces: multi-component, self-levelling, chemically curing polyurethane: ASTM C920, Type M, Grade P, Class 25; Standard of acceptance: Tremco THC-900.

.2 Primers, thinners, cleaners: as recommended by sealant manufacturer, non-staining type.

.3 Premoulded backup for sealant: non-gassing closed cell foam rope, compressed 25% when in joint: Sof-Rod by Tremco.

.4 Bond breaker: polyethylene tape, self-adhering one side.

PART 3 - EXECUTION

3.1 EXAMINATION

.1 Examine joints to be caulked and report in writing to the Consultant any defects in work of other Sections which would impair installation, performance and warranty of sealants.

.2 Do not commence installation of sealants until conditions are acceptable.

.3 Start of work implies acceptance of conditions.

3.2 PREPARATION

.1 Clean and prepare joints to be caulked to produce clean sound surfaces for sealant adhesion.

.2 Remove dust, oil, grease, water, frost, loose mortar and other foreign matter. Remove loose particles by blowing joint out with compressed air.

.3 Chemically clean non-porous surfaces such as metal and glass, taking care to wipe solvents dry with a clean cloth. Use solvents recommended by sealant manufacturer.

.4 Clean porous surfaces such as masonry, concrete and stone by mechanical abrading.

.5 Surfaces adjacent to joints to be primed and which may be stained by primer shall be masked with tape before primer is applied.

.6 Prime joints in accordance with sealant manufacturer's recommendations. Apply primer before installing premoulded backup.

.7 Install premoulded backup in joints 6 mm and more in width. Roll rope type backup into joint, do not stretch or braid. Install bond breaker in joints less than 6 mm in width.

.8 Protect adjacent surfaces from stains and contamination. Make good any damage caused.

3.3 APPLICATION

.1 Apply sealants under pressure using suitable equipment. Gun nozzle shall be of proper size to fit, and seal joint.

.2 Force sealant into joints in full bead, making certain that void free contact is made with sides of joint. Tool joints to produce a slightly concave surface.

.3 Caulking must appear as a concave recessed joint, free of ridges, wrinkles and embedded foreign matter. Caulking shall not spread or bulge beyond surfaces on each of joint.

.4 Apply sealants in accordance with following table:

Joint Width	Sealant Depth
5 mm	5 mm
10 mm	5 mm
15 mm	7 mm
20 mm	10 mm
25 mm	12 mm

3.4 CLEANING

.1 As work progresses, remove sealant smears and stains from adjacent surfaces. Use cleaning method recommended by sealant manufacturer.

.2 Leave adjacent surfaces in neat and clean condition.

3.5 SCHEDULE

.1 Apply sealant at the following exterior locations:

.1 Between new dissimilar materials in exposed locations except where specifically indicated otherwise.

.2 Between new and existing materials at exposed locations.

.3 Below door thresholds (double bead).

.4 At perimeter of door and screen frames.

.5 Where indicated.

.2 Apply sealant at the following interior locations:

.1 Between new dissimilar materials in exposed locations except where specifically indicated otherwise.

.2 Between new and existing materials in exposed locations.

.3 At perimeter of door and screen frames.

.4 Where indicated.

.3 At interior locations use acrylic emulsion sealant except:

.1 At floor joints use polyurethane for floors.

END

SECTION 07 92 00 - SEALANTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 DEFINITION

.1 Caulking = Sealant.

1.3 QUALITY ASSURANCE

.1 Sealants must be installed by qualified applicator with minimum five years' experience.

1.4 SUBMITTALS

.1 Submit complete range of colour samples for each type sealant required.

1.5 PRODUCT HANDLING

.1 Deliver sealants to site in sealed containers bearing manufacturer's name, brand name of sealant and reference standard to which sealant complies.

.2 Store materials in a dry area having an ambient temperature within limitations recommended by material manufacturer.

1.6 JOB CONDITIONS

.1 Unless otherwise specified, apply sealants when air temperature is between 10°C and 25°C. When air temperature is above 25°C or below 10°C follow sealant manufacturer's recommendations regarding application.

PART 2 – PRODUCTS

2.1 MATERIALS

.1 Sealants:

.1 Compatibility: provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as recommended by sealant manufacturer based on testing and field experience.

.2 Colours of exposed joint sealants: selected by Consultant.

.3 Elastomeric sealant standard: comply with ASTM C920 and other requirements indicated.

.4 Joints at exterior surfaces: two-part medium modulus silicone sealant with joint movement capability of ±50%; custom colour selected by Consultant: ASTM C920, Type S, Grade NS, Class 25, uses NT, G,A,O: standard of acceptance: Dow Corning 790 Silicone Building Sealant.

.5 Joints at interior vertical surfaces: one part acrylic latex with joint movement capability of ±7 ½%, paintable: ASTM 834; Standard of acceptance: Tremco Tremflex 834.

.6 Joints at interior horizontal surfaces: multi-component, self-levelling, chemically curing polyurethane: ASTM C920, Type M, Grade P, Class 25; Standard of acceptance: Tremco THC-900.

.2 Primers, thinners, cleaners: as recommended by sealant manufacturer, non-staining type.

.3 Premoulded backup for sealant: non-gassing closed cell foam rope, compressed 25% when in joint: Sof-Rod by Tremco.

.4 Bond breaker: polyethylene tape, self-adhering one side.

PART 3 - EXECUTION

3.1 EXAMINATION

.1 Examine joints to be caulked and report in writing to the Consultant any defects in work of other Sections which would impair installation, performance and warranty of sealants.

.2 Do not commence installation of sealants until conditions are acceptable.

.3 Start of work implies acceptance of conditions.

3.2 PREPARATION

.1 Clean and prepare joints to be caulked to produce clean sound surfaces for sealant adhesion.

.2 Remove dust, oil, grease, water, frost, loose mortar and other foreign matter. Remove loose particles by blowing joint out with compressed air.

.3 Chemically clean non-porous surfaces such as metal and glass, taking care to wipe solvents dry with a clean cloth. Use solvents recommended by sealant manufacturer.

.4 Clean porous surfaces such as masonry, concrete and stone by mechanical abrading.

.5 Surfaces adjacent to joints to be primed and which may be stained by primer shall be masked with tape before primer is applied.

.6 Prime joints in accordance with sealant manufacturer's recommendations. Apply primer before installing premoulded backup.

.7 Install premoulded backup in joints 6 mm and more in width. Roll rope type backup into joint, do not stretch or braid. Install bond breaker in joints less than 6 mm in width.

.8 Protect adjacent surfaces from stains and contamination. Make good any damage caused.

3.3 APPLICATION

.1 Apply sealants under pressure using suitable equipment. Gun nozzle shall be of proper size to fit, and seal joint.

.2 Force sealant into joints in full bead, making certain that void free contact is made with sides of joint. Tool joints to produce a slightly concave surface.

.3 Caulking must appear as a concave recessed joint, free of ridges, wrinkles and embedded foreign matter. Caulking shall not spread or bulge beyond surfaces on each of joint.

.4 Apply sealants in accordance with following table:

Joint Width	Sealant Depth
5 mm	5 mm
10 mm	5 mm
15 mm	7 mm
20 mm	10 mm
25 mm	12 mm

3.4 CLEANING

.1 As work progresses, remove sealant smears and stains from adjacent surfaces. Use cleaning method recommended by sealant manufacturer.

.2 Leave adjacent surfaces in neat and clean condition.

3.5 SCHEDULE

.1 Apply sealant at the following exterior locations:

.1 Between new dissimilar materials in exposed locations except where specifically indicated otherwise.

.2 Between new and existing materials at exposed locations.

.3 Below door thresholds (double bead).

.4 At perimeter of door and screen frames.

.5 Where indicated.

.2 Apply sealant at the following interior locations:

.1 Between new dissimilar materials in exposed locations except where specifically indicated otherwise.

.2 Between new and existing materials in exposed locations.

.3 At perimeter of door and screen frames.

.4 Where indicated.

.3 At interior locations use acrylic emulsion sealant except:

.1 At floor joints use polyurethane for floors.

END

SECTION 08 11 13 - STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1	Caulking at frame perimeters:	Section 07 92 00
.2	Supply of door hardware:	Section 08 71 00
.3	Glazing:	Section 08 81 00
.4	Painting:	Section 09 91 00
.5	Electrical power for automatic door operators:	Division 26

1.3 QUALITY ASSURANCE

.1 Acceptable manufacturers:

- .1 Artek
- .2 Daybar
- .3 Fleming (Assa Abloy)
- .4 Metal Door

.2 Reference standards: Unless otherwise indicated, meet requirements of "Canadian Manufacturing Specification for Steel Doors and Frames" and “Recommended Dimensional Standards for Commercial Steel Doors and Frames” published by the Canadian Steel Door Manufacturers' Association.

.3 Fire protection requirements: fire rated doors and frames shall bear ULC or WHI label for required rating and shall be installed in accordance with NFPA80 - Fire Doors and Windows, current edition. Provide temperature rise rated assemblies where required.

1.4 SHOP DRAWINGS

.1 Prepare and submit detailed shop drawings. Include door and frame schedules, materials and finishes, hardware preparations and frame anchorage details.

1.5 PRODUCT HANDLING

.1 Tag doors and frames at shop with identification marks indicating proper location for installation.

.2 Deliver, store and handle components so as to prevent damage, distortion and corrosion. Store components off the ground and under cover in a dry protected area. Stack doors and frames to prevent twisting. Do not enclose components in plastic covers without venting.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Sheet Steel: hot dip galvanized (wipe coated) cold rolled steel with stretcher level degree of flatness, meeting requirements of ASTM A924 and A653; minimum zinc coating designation ZF120.

.2 Core Material

- .1 Exterior doors: rigid polyurethane or rigid mineral fibre.
- .2 Interior doors, except fire rated doors: honeycomb core of rigid, pre-expanded resin impregnated Kraft paper having maximum 25 mm hexagonal shaped cells.

.3 Finishing Materials

.1 Touch up paint: zinc rich paint CAN/CGSB-1.181-99.

.2 Metal filler: two component epoxy type.

.4 Sprayed foam insulation for spaces between exterior steel frames and masonry: Exo Air Flex by Tremco.

2.2 HARDWARE PREPARATION

.1 Prepare for mortised and cylindrical hardware in accordance with ANSI A115 Series standards, except where specified otherwise. Provide mortise lock preparation to ANSI A115.1, including integral reinforcement channel, mounting tabs, and lock support. Provide cylindrical lock preparation to ANSI A115.2, including integral latch case support.

.2 Blank, reinforce, drill and tap doors and frames for concealed, mortised and surface mounted hardware. Provide door closer reinforcement at all steel doors and frames whether closer is required by hardware list or not.

.3 Coordinate with Section 08 71 00 and Division 26 to accommodate access and security system components.

2.3 DOORS

.1 Provide all doors of seamless construction with no visible seams or joints on faces.

.2 Exterior doors shall be of reinforced hollow steel construction with all spaces filled with insulation. Skins shall be minimum 1.5 mm thick. Join door faces at vertical door edges by continuous weld, extending full height of door; fill, grind, and dress smooth.

.3 Provide condensation weep holes at bottom edge of exterior door.

.4 Provide flush end closures at top edge of exterior doors and where required for attachment of hardware and weatherstripping.

.5 Hardware reinforcements shall be minimum 3.4 mm thick, not including door skin thickness. Provide reinforcement at all hardware fastening points.

.6 Surround openings in flush doors with minimum 1.2 mm thick steel edge channels, welded to both face sheets

.7 Provide removable glazing stops of zinc coated steel channels, accurately fitted into position and fastened with oval head plated screws. Length of each glazing stop shall match length/height of glass retained; intermediate joints are not acceptable.

.8 Glazing stops at outside of exterior doors shall be rendered non-removable.

2.4 FRAMES

.1 Provide welded frames of 1.5 mm thick sheet steel to profiles shown. Door stops and glass stops shall be formed integrally with frame and not added as a separate profile.

.2 Exterior door frames shall be thermally broken with a continuous PVC spline, eliminating metal to metal contact; standard of acceptance: Fleming TB Series.

.3 Assemble components with accurately cut joints. Mitre outside corner joints of frames. Continuously weld joints on inside of profile and grind welds, flush and sand to smooth uniform surface; tabbed and spotwelded connections are not acceptable.

.4 Fit and assemble work in the shop wherever possible, eliminating field joints.

.5 Glazing stops shall be minimum 0.9 mm thick steel, mitred at corners, drilled and secured with oval headed screws. Glazing stops at outside of exterior frames shall be rendered non-removable.

.6 Side light and transom framing shall be of same thickness metal as adjacent door frame.

.7 Countersink frames at anchor locations to accommodate 10mm screw fasteners for frames installed into existing openings. Provide steel sleeves between frame and wall.

.8 Provide angle or channel head reinforcement for door frames wider than 915 mm.

.9 Tack weld two removable minimum 1.2 mm thick steel spreader channels to inside faces of door frames at base.

.10 Provide adjustable base clips for anchorage to floor at bottom of each door jamb.

.11 Protect strike and hinge reinforcements with 0.9 mm guard boxes.

.12 Hardware reinforcements shall be minimum 3.4 mm thick, not including frame thickness. Provide reinforcement at all hardware fastening points. Provide high frequency (angle type) reinforcement at hinges.

.13 Where indicated provide removable mullions.

.14 Provide welded on drip at head of exterior door frames.

.15 Provide special head members to accommodate automatic door operators. Coordinate with Division 26 to permit access for wiring and equipment.

.16 Prepare exterior door frames for security system contacts.

.17 Where shown provide laminated panel rails consisting of rigid insulation core and sheet steel facing minimum 1.2 mm thick on both sides.

2.5 FINISHES

.1 Fill seams, corner joints and other depressions with filler and sand smooth.

.2 Clean and remove all traces of oil, grease, and other foreign substances to ensure proper bond of touch up after fabrication.

.3 Touch up damaged zinc coating with zinc rich paint.

.4 Insulate, where necessary to prevent electrolysis, metal surfaces in contract with dissimilar metals or cementitious materials.

PART 3 - EXECUTION

3.1 FRAME AND SCREEN INSTALLATION

.1 Allowable limit of distortion shall be 1.5 mm out of plumb at each jamb, measured on face of frame, resulting in maximum twist of frame of 3 mm measured from upper corner to lower diagonal corner.

.2 Generally, anchorage of frames shall be by means of standard anchors. At masonry walls, use T-strap anchors; wire anchors not acceptable. Where standard anchors cannot be used, provide special anchors to ensure proper installation. Method of anchorage shall not be visible when frames are installed.

.3 Provide minimum 3 anchors at each jamb. At frames exceeding 2150 mm in height provide one additional anchor for each additional 610 mm or part thereof.

.4 Anchor intermediate vertical frame members to structure above as required to ensure stability. Where required, provide steel frame extensions. Provide flexible connection at structure to allow for deflection.

.5 Remove steel shipping spreaders; install wood installation spreaders at sill and at third points of frame rabbet height to maintain constant frame width. Remove wood spreaders only after frames are securely anchored in place.

.6 Intermediate field joints shall be continuously welded or tack welded, filled and ground smooth.

.7 Fill spaces between exterior door frames and masonry with sprayed foam insulation.

3.2 DOORS

.1 Install steel doors.

.2 Install hardware in accordance with hardware supplier's instructions.

.3 Adjust operable parts to ensure proper operation.

3.3 TOUCH-UP

.1 Patch damaged finishes. Remove rust, sand damaged and abraded surfaces and touch-up with zinc rich paint.

END

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1 Installation of hardware for steel doors: Section 08 11 13

1.3 QUALITY ASSURANCE

.1 Meet requirements of Ontario Building Code and other applicable regulations.

.2 Upon completion of finish hardware installation, hardware supplier shall inspect work and shall certify in writing that all items and their installation are in accord with requirements of Contract Documents and are functioning properly.

1.4 SUBMITTALS

.1 Upon Consultant's request submit samples of door hardware.

.2 Prepare and submit a detailed hardware and keying schedule.

.3 Furnish other Sections with templates required for hardware preparation and installation. Issue templates when requested so as not to cause any delays but not before hardware list has received final review by Consultant.

1.5 PRODUCT DELIVERY, HANDLING & STORAGE

.1 Deliver each hardware item packaged separately in individual containers with necessary screws, keys, instructions and installation templates.

.2 Mark each container with item number corresponding to number shown on hardware schedule with respective door number.

.3 Store hardware in dry, lockable area.

PART 2 - PRODUCTS

2.1 DOOR HARDWARE

.1 Door hardware required for this project: refer to Opening Schedule and Hardware Schedule, appended to this Section.

PART 3 - EXECUTION

3.1 INSTALLATION

.1 Meet requirements of ANSI / DHI A115.1G-94, “Installation Guide for Doors and Hardware”.

.2 Confirm locations and mounting heights of finish hardware with Consultant.

.3 Install finish hardware in accordance with hardware suppliers’ directions. Ensure that hardware is installed correctly. Issue instructions if required to Sections concerned.

.4 Unless otherwise directed by the Consultant, install finish hardware at heights matching existing.

END

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Openings Schedule

Hardware Group	Qty	Opening Number(s)	Location 1	To/ From	Location 2	Door Type	Nominal Width	Nominal Height	Door Thickness	Hand	Door Mat'l	Frame Mat'l	Label
001	1	101	EXTERIOR	FROM	VESTIBULE 101	A	1000, 1000	2120	45	LHR/RHRA	HM	HM	
002	1	106	EXTERIOR	FROM	KINDERGARTEN VESTIBULE 106	B	910	2140	45	LHR	HM	EXIST	
003	1	140	EXTERIOR	FROM	GYM 140	D	915, 915	2150	45	LHRA/RHR	HM	HM	
004	1	144	EXTERIOR	FROM	GARBAGE ROOM		?			LHR	EXIST	EXIST	
005	1	146	EXTERIOR	FROM	STAFF ENTRANCE VESTIBULE 146	A	950	2150	45	RHR	HM	HM	
006	1	151	EXTERIOR	FROM	VESTIBULE 151		?, ?			LHRA/RHRA	EXIST	EXIST	
007	1	161	EXTERIOR	FROM	VESTIBULE 161	C	915, 915	2120	45	LHR/RHRA	HM	HM	

Hardware Schedule

Heading #001

1 Pair of doors 101, EXTERIOR FROM VESTIBULE 101 LHR/RHRA

Type: A, 1000, 1000 x 2120 x 45 - HM DR x HM FR

FIXED MULLION

8	Hinge	STSBB1099 114 X 101 NRP C32D NOTE: 4 HINGES PER LEAF	32D
1	Cylinder	Cylinder - By Others	
1	Exit Device	LC-8804 J Less Trim RHR C32D 1000 x 2120 Door	C32D
1	Exit Device	8810 J US32D LHR	C32D
1	Electric Strike	9600-630	630
2	Door Pull	1180-1 C32D	C32D
2	Closer	351 P10 EN	EN
2	Overhead Door Stop	699S US26D	C26D
2	Kick Plate	GSH 80A C32D (150 x 965) TM	C32D
2	Threshold	CT-45-1 + CT-41-1 + CT-49-1 x 1219	
2	Weatherstripping	W-50S-CA x 1219, 2@2134	CA
2	Door Sweep	W-24S-CA x 1219	CA
1	Intercom	Intercom by Security	
1	Card Reader	Card Reader by Security	

Heading #002

1 Single door 106, EXTERIOR FROM KINDERGARTEN VESTIBULE 106 LHR

Type: B, 910 x 2140 x 45 - HM DR x EXIST FR

3	Hinge	STSBB1099 114 X 101 NRP C32D	32D
1	Cylinder	Cylinder - By Others	
1	Exit Device	LC-8804 F Less Trim LHR C32D 910 x 2140 Door	C32D
1	Door Pull	1180-1 C32D	C32D
1	Surface Closer	351 CPS EN LHR	EN
1	Kick Plate	GSH 80A C32D (150 x 875) TM	C32D
1	Threshold	CT-45-1 + CT-41-1 + CT-49-1 x 915	
1	Weatherstripping	W-50S-CA x 915, 2@2150	CA
1	Door Sweep	W-24S-CA x 915	CA

Heading #003

1 Pair of doors 140, EXTERIOR FROM GYM 140 LHRA/RHR

Type: D, 915, 915 x 2150 x 45 - HM DR x HM FR

REMOVEABLE MULLION

EXIT ONLY

6	Hinge	STSBB1099 114 X 101 NRP C32D	32D
1	Removable Mullion	980 CP	CP
1	Exit Device	8810 F LHR C32D 915 x 2150 Door	C32D
1	Exit Device	8810 F RHR C32D 915 x 2150 Door	C32D
2	Closer	351 P10 EN	EN
2	Overhead Door Stop	698S US26D	C26D
2	Kick Plate	GSH 80A C32D (150 x 880) TM	C32D
2	Threshold	CT-46 x 915	
2	Weatherstripping	W-50S-CA x 915, 2@2150	CA
2	Door Sweep	W-24S-CA x 915	CA

Heading #004

1 Single door 144, EXTERIOR FROM GARBAGE ROOM LHR

? x __ x __ - EXIST DR x EXIST FR

NOTE:

EXISTING DOOR & FRAME TO BE PAINTED ONLY. HARDWARE TO REMAIN.

Heading #005

1 Single door 146, EXTERIOR FROM STAFF ENTRANCE VESTIBULE 146 RHR

Type: A, 950 x 2150 x 45 - HM DR x HM FR

4	Hinge	STSBB1099 114 X 101 NRP C32D NOTE: 4 HINGES PER LEAF	32D
1	Cylinder	Cylinder - By Others	
1	Exit Device	LC-8804 J Less Trim RHR C32D 950 x 2150 Door	C32D
1	Electric Strike	9600-630	630
1	Door Pull	1180-1 C32D	C32D
1	Closer	351 P10 EN	EN
1	Overhead Door Stop	698S US26D	C26D
1	Kick Plate	GSH 80A C32D (150 x 915) TM	C32D
1	Threshold	CT-45-1 + CT-41-1 + CT-49-1 x 1219	
1	Weatherstripping	W-50S-CA x 1219, 2@2150	CA
1	Door Sweep	W-24S-CA x 965	CA
1	Intercom	Intercom by Security	
1	Card Reader	Card Reader by Security	

Heading #006

1 Pair of doors 151, EXTERIOR FROM VESTIBULE 151 LHRA/RHRA

?, ? x __ x __ - EXIST DR x EXIST FR

NOTE:

EXISTING DOOR & FRAME TO BE PAINTED ONLY. HARDWARE TO REMAIN.

Heading #007

1 Pair of doors 161, EXTERIOR FROM VESTIBULE 161 LHR/RHRA

Type: C, 915, 915 x 2120 x 45 - HM DR x HM FR

REMOVABLE MULLION

8	Hinge	STSBB1099 114 X 101 NRP C32D NOTE: 4 HINGES PER LEAF	32D
1	Removable Mullion	980 CP	CP
1	Cylinder	Cylinder - By Others	
1	Exit Device	8810 F LHR C32D 915 x 2120 Door	C32D
1	Exit Device	56-LC-8804 F Less Trim RHR C32D 915 x 2120 Door	C32D
1	Electrical Power Transfer	SEPT-10	
2	Door Pull	1180-1 C32D	C32D
2	Closer	351 P10 EN	EN
2	Overhead Door Stop	698S US26D	C26D
2	Kick Plate	GSH 80A C32D (150 x 880) TM	C32D
2	Threshold	CT-45-1 + CT-41-1 + CT-49-1 x 915	
2	Weatherstripping	W-50S-CA x 915, 2@2134	CA
2	Door Sweep	W-24S-CA x 915	CA
1	Power Supply	BPS-12/24-1	
1	Card Reader	Card Reader by Security	

SECTION 08 81 00 - MISCELLANEOUS GLAZING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1 Steel doors and frames: Section 08 11 13

1.3 QUALITY ASSURANCE

.1 Follow recommendations of the Flat Glass Marketing Association (USA) "Glazing Manual" latest edition.

.2 Every pane of glass shall be factory labelled and label shall remain in place until final cleaning. Safety glass shall have permanent identification.

1.4 SUBMITTALS

.1 Submit complete and detailed product data for each product required.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Setting blocks: neoprene, Shore 'A' durometer hardness of 70 to 90 points; spacer shims, 40 to 50 points, as recommended by glass manufacturer.

.2 Glazing sealant: to ASTM C920: one part polysulphide or one part silicone.

.3 Glazing tape: polyisobutylene tape; acceptable product: Tremco 440 tape.

.4 Glazing gasket: Tremco Vision Strip; colour selected by Consultant.

.5 Float glass: clear float glass to CAN/CGSB-12.3-M91, Glazing Quality.

.6 Tempered glass: minimum 6 mm thick fully tempered float glass to CAN/CGSB-12.1-M90. Tempered glass identification must be sandblasted into glass and shall be visible after installation.

.7 Fire protective glass: 5 mm thick ceramic glass with safety film applied to one side: Pyran Platinum F by Shott or Premium Fire Lite NT by Nippon or Keralite by St. Gobain; accessory materials in accordance with UL/ULC test assembly and as recommended by glass manufacturer.

PART 3 - EXECUTION

3.1 GLASS INSTALLATION GENERAL

.1 Do not glaze when ambient or surface temperature is less than 5^{o}C. Ensure that glazing rabbets, stops and glass are dry, free of frost, grease, oil, dust, rust and other substances detrimental to adhesion of compounds and sealants.

.2 Provide clearance at perimeter edge of glass on all four sides, minimum equal to glass thickness. Accurately cut glass to fit openings, allowing for expansion in accordance with glass manufacturer's recommendations.

.3 Provide sealer space between face of glass and glazing stops of minimum 3 mm.

.4 Clean sealing surfaces at perimeter of glass and sealing surfaces of rabbets and stop beads before applying glazing tapes, gaskets and compounds. Use solvents and cleaning agents recommended by manufacturer of sealing materials.

.5 Install glazing tapes uniformly with accurately formed corners and bevels. Ensure that proper contact is made with glass and rabbet interfaces.

.6 Set glass on setting blocks, spaced as recommended by glass manufacturer. Provide at least one setting block at quarter points from each corner.

.7 Centre glass in glazing rabbet to maintain specified clearances at perimeter on all four sides. Maintain centred position of glass in rabbet and provide the required sealer thickness on both sides of glass.

.8 Use spacers and shims in accordance with glass manufacturer's recommendations.

.9 Carefully remove glazing stops and reinstall after glazing.

.10 Mark each pane of glass to indicate presence of glass.

3.2 EXTERIOR GLAZING

.1 Unless otherwise indicated glaze exterior openings as follows:

.1 Apply glazing tape to permanent stop; butt tape joints and weld together; do not overlap joints; daub tape corners with sealant.

.2 Set glass on setting blocks, align edges and press home to ensure adhesion at all points.

.3 Apply heel bead of sealant around perimeter of glass, maintaining 5 mm bite to glass and positive bond to frame. Completely seal void around glass edges. Sealant shall partially fill channel between glass and removable stop.

.4 Install removable stops; insert spacer shims between glass and stops at approximately 610 mm o.c. not less than 6 mm below sight lines. Fill remaining void with glazing compound or sealant to sight line and trim to clean line leaving no voids or depressions.

.5 Glazing gaskets may be installed in lieu of backfilling with sealant or glazing compound after setting removable stops.

3.3 FIRE PROTECTIVE GLASS

.1 Install fire protective glass in compliance with provisions of UL/ULC test assembly for selection of accessory materials (setting blocks, glazing tapes and compounds) and for method of installation.

3.4 CLEANING

.1 Remove dirt, scum, plaster, paint spatter, and other harmful and deleterious matter from glass promptly and completely, before they establish tight adhesion.

.2 Avoid using abrasives, steel wool, razor blades, solvents, alkaline or other harsh cleaning agents.

.3 Remove glazing compound droppings promptly from all surfaces as the work progresses.

.4 Replace scratched or otherwise damaged glass.

3.5 SCHEDULE

.1 Provide glazing for steel doors and screens.

.2 Unless otherwise shown provide single fire protective glass.

END

SECTION 09 21 16 - GYPSUM BOARD

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1	Sealants:	Section 07 92 00
.2	Supply of steel door frames:	Section 08 11 13
.3	Painting:	Section 09 91 00

1.3 DEFINITION

.1 Drywall = gypsum board.

1.4 QUALITY ASSURANCE

.1 Interior metal framing and furring: comply with applicable requirements of ASTM C754 and ASTM C840 unless otherwise shown.

.2 Gypsum board application and finishing: comply with requirements of ASTM C840, unless otherwise shown.

.3 Gypsum board surfaces exposed to view shall meet Gypsum Association GA 214-10 Recommended Levels of Gypsum Board Finish “Level 4”.

1.5 SUBMITTALS

.1 Submit detailed and complete product data for each product required.

1.6 PRODUCT HANDLING AND STORAGE

.1 Handle gypsum board panels to prevent damaged and broken edges.

.2 Store materials in dry place so as to preserve their quality and fitness for work.

1.7 JOB CONDITIONS

.1 Install and finish gypsum board when ambient temperature is between 14 and 22^{o}C. Maintain this temperature range in areas to receive gypsum board for 24 hours before and during application and until joint cement and adhesives are fully cured.

.2 Ensure that work to be concealed by gypsum board has been installed, tested, inspected and approved before starting work.

.3 Follow details shown for junction of gypsum board to existing ceilings, so as to avoid disturbing existing asbestos containing materials.

PART 2 - PRODUCTS

2.1 FRAMING, FURRING AND TRIM

.1 Unless otherwise specified, provide framing members of minimum 0.5 mm core thickness steel hot dip galvanized (wipe coat) to ASTM A653.

.2 Studs, interior locations: channel shaped screw-on type: depth as indicated; with knurled supporting flanges at least 34 mm wide; with service pass-through holes at 610 mm o.c. in web. Provide minimum 0.9 mm thick framing members at exterior locations.

.3 Top and bottom runners: channel sections, 35 mm legs. Depth to suit studs.

.4 Rough framing members: 38 x 13 x 1.2 mm and 19 x 13 x 1.2 mm galvanized steel channels.

.5 Furring and strapping members to receive gypsum board: 19 mm deep channel shaped section with outstanding flanges and 35 mm wide knurled supporting face.

.6 Corner beads: beaded angle with perforated flanges.

.7 Casing beads: channel shaped; beaded corners.

.8 Hangers: minimum 3 mm galvanized steel wire.

.9 Tie wire: minimum 1.5 mm soft annealed galvanized steel.

.10 Metal control joint section: bellows shaped section with perforated flanges.

.11 Reveal mouldings: extruded aluminum, profiles as indicated, by Fry, Pittcon or Gordon.

2.2 GYPSUM BOARD

.1 Exposed gypsum board for interior use: tapered edge: ASTM C1396.

.2 Unexposed gypsum board for interior use: ASTM C1396.

2.3 FASTENING AND FINISHING MATERIALS

.1 Drywall screws: self-drilling, self-tapping, case hardened. Use zinc, nickel or cadmium plated screws for fastening of cementitious board, sheathing board and moisture resistant board.

.2 Laminating adhesive: CGC Durabond 90 compound by CGC, or equivalent product by CertainTeed.

.3 Joint tape: 50 mm perforated type.

.4 Joint filler and topping cement: casein, vinyl or latex base, slow setting.

PART 3 - EXECUTION

3.1 METAL FRAMING

.1 Framing and furring indicated is schematic and shall not be considered exact or complete. Location and spacing of members, bracing, supports and securement shall be in accord with referenced standards as required to provide complete and finished work.

.2 Make provision for supporting recessed and surface mounted fixtures and equipment. Provide additional framing, supports and stiffeners as required.

.3 Neatly frame around recessed fixtures and openings.

.4 Suspended components:

.1 Erect suspension and furring system level with a maximum tolerance of $\pm$3 mm over a 3000 mm length.

.2 Suspension system shall support ceiling assemblies, with maximum deflection of L/360, L being span between supports.

3.2 GYPSUM BOARD INSTALLATION

.1 Locate board end joints over supporting members.

.2 Cut and fit board as required to accommodate other work.

.3 Provide corner beads at external corners.

.4 Provide casing beads around openings and where gypsum board abuts dissimilar material and construction.

.5 Fasten board to supports with screws spaced at maximum 305 mm o.c.

3.3 GYPSUM BOARD FINISHING

.1 Tape and fill exposed joints, fastener heads, edges, corners, to produce an acceptable surface ready for decoration.

.2 Conceal exposed flanges of corner beads, casing beads and other trim sections with at least 3 coats of cement, feathered out minimum 200 mm.

.3 Fill depressions at fastener head with cement, then apply 2 additional coats of cement to produce smooth, level surface.

.4 Sand each coat of topping cement with fine sandpaper as required to produce smooth surface. Do not sand paper face of gypsum board.

END

SECTION 09 91 00 - PAINTING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

1.2 RELATED WORK

.1 Steel doors and frames: Section 08 11 13

.2 Gypsum board: Section 09 21 16

1.3 ACCEPTABLE MANUFACTURERS

.1 Benjamin-Moore

.2 Canadian Industries Ltd.

.3 Dulux Paints (AKZO Nobel)

.4 Para Paints

.5 Pittsburgh Paints

.6 Pratt & Lambert

.7 Sherwin-Williams

1.4 LIST OF MATERIALS, SAMPLES

.1 List of Materials:

.1 Before ordering materials, submit written request in form acceptable to Consultant, for approval of paint materials. List each of the materials proposed and surfaces to be covered. State manufacturer's name and brand name of materials.

.2 List of materials shall be endorsed by manufacturer as being the best material for the applicable condition.

.3 Do not order material or commence work until list of materials is approved by Consultant.

.2 Samples:

.1 Submit two 200 mm x 250 mm colour draw-downs of each paint colour coated with manufacturer's paint system to confirm colour match with colour chips supplied by Consultant.

.3 Maintenance Materials:

.1 Upon completion of work provide one sealed and properly identified 1 L can of each type and colour paint used on this project.

.2 Only top coating paints used are required.

.3 Submit complete colour schedule listing paint colours, name and product code numbers, prior to Substantial performance.

1.5 PRODUCT HANDLING

.1 Deliver paint materials to site in sealed original labelled containers bearing manufacturer's name, brand name, type of paint and colour designation.

.2 Store materials in strict accordance with manufacturer's recommendations.

1.6 JOB CONDITIONS

.1 Environmental Conditions:

.1 Maintain temperature in interior areas to receive coatings between 15°C and 25°C for at least 24 hours before, during application and until coatings have cured after application. Apply exterior coatings only when temperature is above 10°C.

.2 Do not apply exterior coatings during periods of precipitation nor when precipitation is imminent.

.3 Do not apply coatings under direct sunlight during hot weather.

.4 Adequately ventilate areas where coatings are being applied. Maintain a reasonably dust-free atmosphere for duration of work.

.2 Protection:

.1 Protect adjacent surfaces not scheduled to receive coatings from damage.

.2 Remove electrical plates, surface hardware, fittings and fastenings prior to painting operations. These items shall be carefully stored, cleaned and replaced on completion of work in each area. No solvent shall be used to clean hardware that will remove permanent lacquer finish on these items.

.3 Mask labels and specification plates occurring on equipment to be painted.

.4 Post "wet coating" signs and "no smoking" signs while work is in progress and while coatings are curing.

.5 Keep oily rags, wastes and other combustible materials in closed metal containers and remove at end of each work day. Take every precaution to avoid spontaneous combustion.

.3 Work Schedule:

.1 Unless otherwise permitted, apply coatings only after all other Sections have completed their work.

.2 Coordinate work of this Section with that of Section 07 92 00 and review order of installation with Consultant where sealants are installed adjacent to painted surfaces.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Materials shall be "top line quality" products and shall be supplied by a single manufacturer except for specialty products not available from paint manufacturer.

.2 Materials wherever possible shall be low odour products, free of or low in VOC content.

.3 Paints shall be factory mixed unless otherwise specified, except any coating in paste or powder form, or to be field-catalyzed shall be field-mixed in accordance with manufacturer's directions.

.4 Primers shall be as specified by manufacturer and fully compatible with finish coats.

.5 Thinners, cleaners: as recommended by paint manufacturer.

2.2 FINISHES

.1 Paint colours and other finishes will be selected by Consultant. Do not start work until after receiving colour selections.

.2 Confirm gloss levels for all surfaces with Consultant before starting work. Unless otherwise directed, provide the following:

.1 Ceilings: flat
.2 Walls: eggshell
.3 Trim, frames, doors: semi-gloss

PART 3 - EXECUTION

3.1 CONDITIONS OF SUBSTRATES

.1 Sound, non-dusting, and free of grease, oil, dirt, and other matter detrimental to adhesion and appearance of coatings.

.2 Temperature: minimum 13°C.

.3 Moisture content: maximum 12%. Test for moisture content using moisture meter.

.4 Alkalinity: test cementitious substrates for alkalinity. Use method recommended by coating manufacturer.

3.2 PREPARATION OF SUBSTRATES

.1 All substrates: clean as required to produce an acceptable surface. If wood, metal or any other surface to be finished cannot be put in proper condition for finishing by cleaning, sanding and filling as specified, notify Consultant in writing or assume responsibility for an rectify any unsatisfactory finish resulting.

.2 Bare ferrous metal: remove rust and scale; wash with solvent; chemically clean; apply coat of metal primer.

.3 Previously primed metal: remove rust, oil, grease and loose shop paint by washing or wire brushing; make good shop coat; feather out edges of touch-up.

.4 Hot dip galvanized steel: coat with etching cleaner (MPI #25) and rinse.

.5 Gypsum board: fill minor cracks, holes and imperfections with patching plaster; allow to dry and sand smooth; sand taped joints and remove dust.

3.3 APPLICATION OF COATINGS

.1 Apply paint by brush or roller, except on wood and metal surfaces where paint shall be applied by brush only.

.2 Applied and cured coatings shall be uniform in thickness, sheen, colour and texture and free of brush or roller marks, sags, crawls and other defects detrimental to appearance and performance.

.3 Regardless of the number of coats specified for any surface, apply sufficient paint to completely cover and hide substrate and to produce a solid uniform appearance.

.4 Thoroughly mix materials before application. Use same brand of paint for primer, intermediate and finish coats.

.5 Where two or more coats of same paint are to be applied, undercoats shall be tinted in lighter shades of final coat to differentiate from final coat.

.6 Touch up suction spots after application of first coat. Sand lightly between coats with fine sandpaper.

.7 Each coat of finish shall be dry and hard before succeeding coats are applied with a minimum of 24 hours between coats, unless manufacturer's instructions state otherwise. Do not proceed with any coat until the last preceding coat is approved by the Consultant.

3.4 SCHEDULE OF FINISHES

.1 General Requirements:

.1 Paint exposed surfaces of building materials, services and building equipment except those which are prefinished in factory and except those which are located in areas designated as not requiring painting.

.2 Finish tops of doors, trim, projections and other work as specified for surrounding work whether above site lines or not.

.3 Where finishing formula for surfaces requiring painting is not included hereunder, follow recommendations of MPI Architectural Painting Specification Manual Premium Grade, latest issue.

.2 Interior Finishing:

.1 Concrete and concrete block:
Block filler
1 coat primer
2 coats acrylic latex enamel

.2 Metal, prime painted:
spot prime with alkyd metal primer
2 coats acrylic latex enamel

.3 Metal zinc coated:
1 coat galvanized primer
2 coats acrylic latex

.4 Gypsum board:
1 coat drywall primer
2 coats acrylic latex

.3 Exterior Finishing:

.1 Metal, hot dip galvanized:

1 coat epoxy primer
2 coats aliphatic polyurethane

.2 Metal, zinc coated (inorganic zinc rich primer):

1 coat epoxy primer
2 coats aliphatic polyurthane

3.5 EXISTING SURFACES

.1 Repaint existing surfaces where they are scheduled to be painted or where finish is damaged by alteration work. Extend new paint finish over full height and/or width of area affected, to a straight line in location determined by Consultant.

.2 All existing surfaces to be repainted shall receive as many coats of new paint, as required to hide

existing finish.

.3 Materials used for repainting shall be of similar quality to those specified for new work, but in each case shall be compatible with finishes to which they are applied.

.4 Where compatibility of new coating with existing surface is uncertain, apply test patch of approximately 0.5 m² and check for results.

.5 Prepare existing surfaces to be repainted as follows:

.1 Clean as required to remove dirt, dust, oil, grease, loose paint, rust and any other foreign matter which would prevent proper bonding of new finish.

.2 Peeled chipped, scratched and otherwise damaged surfaces shall be filled, sanded and repaired as required to provide consistent surface with texture matching that of adjacent area.

.3 Sandy glossy surfaces to uniform dull texture.

.4 Treat bare areas as specified for new work.

.6 Lead based paint:

.1 Remove lead based paint, where required, in accordance with EACO Lead Guideline, applicable provisions of the OHSA, and the Ministry of Labour.

.2 Remove lead based paint using lead dust capturing equipment and/or procedures or other method of removal prevent lead dust from leaving immediate abatement area.

.3 Equip operators involved in removal of lead based paint with appropriate personal protective devices as recommended by EACO.

.7 Prior to repainting existing surfaces request Consultant's review and acceptance of prepared substrates, existing surfaces repainted without Consultant's review and acceptance may have to be prepared again as directed by Consultant and repainted at no extra cost.

END