

# **ARCHITECTURAL SPECIFICATIONS**

**MP SUITES - DOOR OPERATORS PROJECT**

**PWGSC  
Ottawa, Ontario**

**Project No. R.112395.001**

**ISSUED FOR TENDER**



**July 27, 2020**

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APPENDIX "A"

- DOOR AND FRAME SCHEDULE
- DOOR HARDWARE SCHEDULE

APPENDIX "B" (UNDER SEPARATE COVER)

- DESIGNATED SUBSTANCES - CONFEDERATION, JUSTICE AND VALOUR BUILDINGS
- ASBESTOS ABATEMENT - MINIMUM PRECAUTIONS - CONFEDERATION BUILDING
- ASBESTOS ABATEMENT - INTERMEDIATE PRECAUTIONS - CONFEDERATION AND JUSTICE BUILDINGS
- ASBESTOS ABATEMENT - MAXIMUM PRECAUTIONS - CONFEDERATION AND JUSTICE BUILDINGS

END OF SECTION

PART 1 - GENERAL1.1 RELATED  
REQUIREMENTS

- .1 Also refer to Section 01 14 00 Work Restrictions.

1.2  
REGULATORY  
REQUIREMENTS

- .1 Smoking is not permitted in the Building. Obey smoking restrictions on building property.
- .2 Hazardous Material Discovery:
  - .1 Stop work immediately when material resembling spray or trowel-applied asbestos, Polychlorinated Biphenyl (PCB), mould or other designated substance and / or hazardous substance is encountered during demolition work.
  - .2 Do not proceed until written instructions have been received from Departmental Representative.
- .3 Perform Work in accordance with the National Building Code of Canada, (NBC), 2015 including amendments up to tender closing date and other codes of provincial or local application provided that in the case of conflict or discrepancy, more stringent requirements apply.

1.3 DOCUMENTS  
REQUIRED

- .1 Contractor to provide the following after contract award:
  - .1 Copy of trade certificate and health and safety training records
  - .2 Contractor health and safety procedures
  - .3 Safety plans:
    - .1 Site specific safety plan for all general work.
  - .4 Copy of Notice of Project from Ministry of Labour.
  - .5 Names and dates of birth of each worker coming to site.
- .2 Maintain at job site, documentation as

requested by the Departmental Representative. Documents may include Contract Drawings, Specifications, Shop Drawings or other documents as requested. Exact list of documents to be confirmed by Departmental Representative at Construction Kick-off meeting.

#### 1.4 EXAMINATION AND PREPARATION

- .1 Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.
- .2 Before commencing work, establish location and extent of services lines in area of work and notify Departmental Representative of findings.

#### 1.5 SUBMITTALS

- .1 Shop Drawings:
  - .1 Submit for Departmental Representative review, soft copies of each shop drawing.
  - .2 Review is for sole purpose of ascertaining conformance with general design concept and does not mean approval of design details inherent in shop drawings, responsibility for which remains with contractor.
  - .3 Departmental Representative's review does not relieve Contractor of responsibility for errors or omissions in shop drawings or Contractor's responsibility for meeting requirements of Contract Documents.
  - .4 Do not commence ordering material or manufacturing before shop drawings are reviewed.
- .2 Product Data
  - .1 Submit soft copies (pdf format) of product data.
  - .2 Delete information not applicable to project.
  - .3 Cross reference product data information by division and section number to applicable portions of Contract Documents.
- .3 Samples

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
- .2 Submit samples as requested as identified in other Sections of the Specification.
- .3 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

#### 1.6 REMOVED MATERIALS

- .1 Unless otherwise specified, materials for removal become contractor's property. Remove materials promptly.

#### 1.7 WASTE MANAGEMENT

- .1 Comply with the Environmental Protection Act, Ontario Regulations O.Reg. 102/94 and O. Reg. 103/94 for waste management program on construction and demolition projects.
- .2 Conduct "waste audit" to determine waste generated during demolition or construction operations, prepare written "waste reduction work plan" and implement procedures to reduce, reuse and recycle materials to the extent possible.
- .3 Provide a "source separation program" to disassemble and collect in an orderly fashion the following "materials designated for alternative disposal" from the "general waste" stream.
  - .1 cardboard (corrugated).
  - .2 gypsum board (unfinished).
  - .3 steel.
  - .4 wood (not including painted, treated or laminated wood).
- .4 Submit complete records of all removals from site for both "materials designated for alternative disposal" and "general waste" including:
  - .1 Time and date of removal
  - .2 Description of material and quantities.
  - .3 Proof that materials have been received at an Approved Waste Processing Site or

certified Waste Disposal Site as required.

1.8 CLOSEOUT  
SUBMITTALS

- .1 Operational and Maintenance Manuals: Two (2) weeks prior to any scheduled training, submit to Departmental Representative two (2) soft copies (USB sticks) of approved Operations Data and Maintenance Manual in both official languages, compiled as follows:
  - .1 Include title sheet labelled "Operation Data and Maintenance Manual," project name, date and list of contents. Project name must appear on title sheet and on USB stick.
  - .2 Organize contents into applicable sections of work to parallel project specifications breakdown.
- .2 Include following information plus data specified.
  - .1 Maintenance instruction for finished surface and materials.
  - .2 Copy of hardware and paint schedules.
  - .3 Description: Operation of the equipment and systems defining start-up, shut-down and emergency procedures, and any fixed or adjustable set points that affect the efficiency of the operation. Include nameplate information such as make, size, capacity and serial number.
  - .4 Maintenance: Use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:
    - .1 lubrication products and schedules.
    - .2 trouble shooting procedures.
    - .3 adjustment techniques.
    - .4 operational checks.
    - .5 Suppliers names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.

- .5 Guarantees showing:
  - .1 Name and address of projects.
  - .2 Guarantee commencement date (date of Interim Certificate of Completion).
  - .3 Duration of guarantee.
  - .4 Clear indication of what is being guaranteed and what remedial action will be taken under guarantee.
  - .5 Signature and seal of Guarantor.
- .6 Additional material used in project listed under various Sections showing name of manufacturer and source of supply.
- .7 Suppliers' names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturer's part number.
- .3 Spare parts: List all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed must be identified as to manufacturer, manufacturer part number and supplier (including address).
- .4 Include soft copy of final shop drawings in a separate folder indicating corrections and changes made during fabrication and installation.

#### 1.9 RECORDS

- .1 As work progresses, maintain accurate records to show deviations from contract drawings. Just prior to Departmental Representative's inspection for issuance of final certificate of completion, supply to the Departmental Representative one (1) set of white prints with all deviations neatly inked in. The Departmental Representative will provide two sets of clean white prints for this purpose.



- 1.10 GUARANTEES AND WARRANTIES .1 Before completion of work collect all manufacturer's guarantees and warranties and deposit with Departmental Representative.

1.11 CLEANING

- .1 Clean up work area as work progresses. At the end of each work period, and more often if ordered by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up generally.
- .2 Upon completion remove scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.
- .3 Wash and polish glass, aluminum, chrome, stainless steel, plastic laminate and other plastic surfaces, upholstered surfaces, floors, hardware.  
Clean manufactured articles in accordance with manufacturer's directions.
- .4 Clean areas under contract to a condition at least equal to that previously existing and to approval of Departmental Representative.

PART 1 - GENERAL

- |                          |    |  |
|--------------------------|----|--|
| <u>1.1 WORK SEQUENCE</u> | .1 | Construct Work in stages to accommodate Departmental Representative's continued use of premises during construction. |
|                          | .2 | Coordinate Progress Schedule and coordinate with Departmental Representative's Occupancy during construction.        |

- |                                    |    |   |
|------------------------------------|----|---|
| <u>1.2 SEQUENCING RESTRICTIONS</u> | .1 | Maintain access to the facility at all times.   |
|                                    | .2 | Maintain and protect all exit and egress routes at all times for entire duration of work.   |
|                                    | .3 | Maintain all fire access / control at all times.  |
|                                    | .4 | Do not disrupt building services. Provide for temporary services if interruptions are required.   |
|                                    | .5 | Construction for this project shall occur while the Houses are in Recess and shall comply with the following requirements:<br>.1 Construction related activities in buildings occupied by Senators and Members of Parliament where work is likely to create a disturbance to building occupants shall be performed Monday to Friday during off hours from 6:00pm to 6:00am, and on Saturdays, Sundays and statutory holidays. |

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|--|----|--|
| <u>1.3 CONTRACTOR USE OF SITE AND FACILITIES</u> | .1 | Execute work with no interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated. |
|  | .2 | Maintain existing services to building and provide for personnel and vehicle access.   |
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1.3 CONTRACTOR USE  
OF SITE AND  
FACILITIES  
(Cont'd)

- .3 Where security is reduced by work coordinate temporary means to maintain security with Departmental Representative. Security escorts will be required.
- .4 Departmental Representative will assign sanitary facilities for use by Contractor's personnel. Keep facilities clean.
- .5 Use only elevators existing in building for moving workers and material. Coordinate path of material movement ahead of time with Departmental Representative.
  - .1 Protect walls of passenger elevators, to approval of Departmental Representative prior to use.
  - .2 Accept liability for damage, safety of equipment and overloading of existing equipment.
- .6 Closures: protect work temporarily until permanent enclosures are completed.

1.4 ALTERATIONS,  
ADDITIONS OR  
REPAIRS TO EXISTING  
BUILDING

- .1 Execute work with no interference or disturbance to building operations, occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

1.5 EXISTING  
SERVICES

- .1 Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
  - .2 Where Work involves breaking into or connecting to existing services, give Departmental Representative at least 20 days advance notice for necessary interruption of mechanical or electrical service throughout course of work. Keep duration of interruptions minimum. Carry out interruptions after normal working hours of occupants, preferably on weekends.
  - .3 Provide for personnel and pedestrian traffic.
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|-----------------------------------|----|---|
| 1.5 EXISTING SERVICES<br>(Cont'd) | .4 | Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures. |
|-----------------------------------|----|---|
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|------------------------------------|----|--|
| 1.6 INGRESS AND EGRESS OF VEHICLES | .1 | Submit schedule in accordance with Section 01 32 16.06 - Construction Progress Schedule - Critical Path Method (CPM)   |
|                                    | .2 | Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.   |
|                                    | .3 | Keep within limits of work and avenues of ingress and egress.  |
|                                    | .4 | Ingress and egress of Contractor vehicles at site to be as follows. Requirements include authorization process, driver and vehicular operation requirements, parking, etc.<br>.1 All vehicles entering the Parliament Hill grounds shall require an Authorization Vehicle Access Form (AVA) from Departmental Representative (PSPC enters vehicle information in Site Secure and shares with Vehicle Screening facility to facilitate access).<br>.2 Vehicles will not be permitted to obstruct traffic and/or parking unless coordinated and approved with the Parliamentary Partners.<br>.3 Vehicles shall not be left unattended in authorized areas.<br>.4 Shut down vehicle and machinery when inactive to reduce noise and generation of fumes.<br>.5 Construction vehicles are not permitted to park in the parliamentary Precinct and grounds, including in Parliamentary Partners' parking spaces, unless pre-approved by the Parliamentary Partners.<br>.6 Personnel vehicles are not permitted to park within construction sites. |
|                                    | .5 | Deliver materials as per the following requirements. Note that scanning of all materials and products will be required before transport to the area of work. Refer to 1.7 for address of scan facility:  |
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1.6 INGRESS AND  
EGRESS OF VEHICLES  
(Cont'd)

- .5 (Cont'd)
- .1 Materials shall be delivered and unloaded within preapproved laydown areas. If this is not possible, unloading should be carried out close to the entry point of the construction zone in order to minimize disruption to the Parliamentary Partners' operations. Contractor to minimize the time spent unloading and do not allow materials or equipment to remain outside the hoarded areas. All deliveries and laydown area must be coordinated and approved by the Parliamentary Partners.
- .2 The contractor is responsible for loading and unloading of materials and must supply their own material handling equipment (i.e. flat trucks, dollies, pallet truck, etc)
- .3 Deliveries or removals using articulated tractor trailers or vehicles with large or heavy items shall be scheduled and agreed amongst the Parliamentary Partners a minimum of two (2) business days in advance.
- .4 signage, barriers, etc must be in place and traffic control persons must be engaged when required to ensure safe operation of vehicles in and around the Precinct.
- .5 Vehicle waiting time on the Precinct must be minimized.
- .6 Use of loading docks for deliveries or removal must be scheduled and coordinated with the appropriate Parliamentary Partner a minimum of two (2) business days in advance to minimize impact to client operations.
- .1 Loading dock restrictions to be validated for each location.
- .2 After hours Security escort will be required; request must be approved by the appropriate Partner a minimum of two (2) business days in advance.
- .3 Loading dock access is to be identified on the associated Authorization for Building Access (ABA) for the work.
- .4 Materials shall be unloaded and immediately transported to the designated materials storage area. Materials or equipment shall not remain in the vicinity of the loading docks.
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1.7 SECURITY  
SCANNING OF  
CONSTRUCTION  
MATERIALS AND  
EQUIPMENT

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- .1 All deliveries are required to go to a scanning facility for inspection (location A) prior to being delivered to site (location B, C, and D). Location B, C, and D will be the final delivery locations.
- Location A) SCI Group,  
2303 Stevenage Drive,  
Ottawa, Ontario, K1G 0Z1  
Phone:613-219-4905, attn: Brian Dodds  
Hours: 7:00am to 3:00pm
- Location B) Parliamentary Precinct  
Confederation Building 229  
Wellington Street, Ottawa,  
Ontario, K1A 0A6
- Location C) Parliamentary Precinct -  
Justice Building,249  
Wellington Street, Ottawa,  
Ontario, K1A 0J1
- Location D) Parliamentary Precinct -  
Valour Building, 151 Sparks  
Street, Ottawa, Ontario, K1P  
5E3
- .2 Contractor must use a lockable cube van or trailer at the scanning facility centre. Please contact the Inspection Centre for all details.
- .3 The Supplier must coordinate all deliveries and installation dates as detailed below with the Departmental Representative.
- .4 Groups arriving at the facility for processing are serviced on a first come, first come, first served basis.
- .5 Items to be scanned are to be removed from the transporting vehicle for processing. Items are then placed back into the contractor vehicle for sealing.
- .6 Seal number is communicated from SCI staff to receiving staff on site at Locations B, C, and D.
-

1.7 SECURITY  
SCANNING OF  
CONSTRUCTION  
MATERIALS AND  
EQUIPMENT  
(Cont'd)

- .7 No advance notice for small loads received at SCI is necessary, however for larger loads (such as 53 foot trailers) advance notice is required. Details required are as follows:
- .1 The Supplier is required to provide the HoC Project Authority with the following information a minimum of five (5) working days prior to on site delivery:
- .1 Date and time of Delivery;
  - .2 Vehicle description;
  - .3 Vehicle license plate;
  - .4 Names of employees including the driver.

1.8 SECURITY

- .1 Where security has been reduced by Work of Contract, coordinate temporary means ahead of time with Departmental Representative.
- .2 Security escort:
- .1 Personnel employed on this project must be under escort while office doors need to be open for work. While work on office doors are in progress, the doors shall stay open.
  - .2 Submit an escort request to the Departmental Representative at least 4 business days before service is needed. For requests submitted within time mentioned above, costs of the security escort will be paid for by the Departmental Representative. Cost incurred by late request will be the Contractor's responsibility.

1.9 FIRE SAFETY  
REQUIREMENTS

- .1 Comply with the National Building Code of Canada 2015 (NBC) for fire safety in construction and the National Fire Code of Canada 2015 (NFC) for fire prevention, fire fighting and life safety in occupied buildings.
- .1 The National Building Code (NBC): for fire safety and fire protection features that are require to be incorporated in a building during construction.
- .2 The National Fire Code (NFC):
- .1 The on-going maintenance and use of the fire safety and fire protection features incorporated in buildings.

1.9 FIRE SAFETY  
REQUIREMENTS  
(Cont'd)

- .1 (Cont'd)
- .2 (Cont'd)
  - .2 The conduct of activities that might cause fire hazards in and around buildings
  - .3 Limitations on hazardous contents in and around buildings
  - .4 The establishment of fire safety plans.
  - .5 Fire Safety at construction sites.
- .2 Welding and Cutting:
  - .1 At least 4 days prior to commencing cutting, welding or soldering procedure, provide to Departmental Representative:
    - .1 Notice of Intent, indicating devices affected, time and duration of isolation or bypass.
    - .2 Return welding permit to Departmental Representative immediately upon completion of procedures for which permit was issued.
  - .2 Before welding, soldering, grinding, core drilling, concrete drilling and/or cutting work, obtain a permit from Fire Prevention Unit as directed by Departmental Representative.
  - .3 Immediately upon completion of work, restore fire protection systems to normal operation and verify that devices are fully operational.
  - .4 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.
  - .5 "Fire Watchers" as described in NFC shall be assigned when welding or cutting operations are carried out in areas where combustible material within 15m may be ignited.

1.10 WORK STOPPAGE

- .1 Work may be stopped due to Special Events, Project related events or Late Sittings. Contractor to be notified by Departmental Representative should a work stoppage be required. In this case, Contractor can expect to be stopped for 3 days.
-



PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL1.1 ADMINISTRATIVE

- .1 Attend meetings throughout the progress of the work at the call of Departmental Representative.
- .2 The Departmental Representative will distribute written notice of each meeting four days in advance of meeting date.
- .3 Departmental Representative to provide physical space and make arrangements for meetings.
- .4 The Departmental Representative shall preside at meetings.
- .5 The Departmental Representative shall record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .6 Minutes will be distributed within three days after meetings and transmit to meeting participants and, affected parties not in attendance.

1.2 PROGRESS  
MEETINGS

- .1 During course of Work and two weeks prior to project completion, schedule progress meetings bi-weekly.
  - .2 Departmental Representative will confirm attendees.
  - .3 Parties will be notified minimum 5 days prior to meetings.
  - .4 Departmental Representative to record minutes of meetings and circulate to attending parties and affected parties not in attendance within 4 days after meeting.
-

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

1.1 ALLOWANCES .1 Not Used.

1.2 REFERENCE STANDARDS .1 Project Management Institute (PMI Standards)  
.1 A Guide to the Project Management Body of Knowledge (PMBOK Guide) - Fourth Edition.  
.2 Practice Standard for Scheduling - 2011.

1.3 DEFINITIONS .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.

.2 Bar Chart (Gantt chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars.

.3 Baseline: original approved plan (for Project, work package, or activity), plus or minus approved scope changes.

.4 Cash Flow: projection of progress payment requests based on cash loaded construction schedule.

.5 Completion Milestones: they are firstly Substantial Completion and secondly Final Certificate.

.6 Constraint: applicable restriction or limitation, either internal or external to project, that will affect performance of Project. Factors that affect activities can be scheduled.

.7 Control: process of comparing actual performance with planned performance, analyzing variances, evaluating possible alternatives, and taking appropriate corrective action as needed.

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1.3 DEFINITIONS  
(Cont'd)

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- .8 Critical Activity: any activity on a critical path.
    - .1 Most commonly determined by using critical path method.
  - .9 Critical Path: sequence of activities that determines duration of Project. Generally, it is the longest path through Project.
    - .1 Usually defined as those activities with float less than or equal to specified value, often zero.
  - .10 Critical Path Method (CPM): network analysis technique used to determine the amount of scheduling flexibility (amount of float) on various logical network paths in Project schedule network, and to determine the minimum total Project duration.
  - .11 Data Date: date through which project status and progress were last determined and reported for analyses, such as scheduling and performance measurements.
  - .12 Duration: total number of work periods (not including holidays or other non-working periods) required to complete activity or other Project element.
    - .1 Usually expressed as workdays or work weeks.
  - .13 Early Finish Date: in critical path method, earliest possible point in time on which uncompleted portions of activity (or Project) can finish, based on network logic and schedule constraints.
    - .1 Early finish dates can change as Project progresses and changes are made to Project plan.
  - .14 Early Start Date: in critical path method, earliest possible point in time on which uncompleted portions of activity (or Project) can start, based on network logic and schedule constraints.
    - .1 Early start dates can change as Project progresses and changes are made to Project Plan.
  - .15 Finish Date: point in time associated with activity's completion.
-

1.3 DEFINITIONS  
(Cont'd)

- .15 (Cont'd)
- .1 Usually qualified by one of following:  
actual, planned, estimated, scheduled, early,  
late, baseline, target, or current.
- .16 Float: amount of time that activity may be  
delayed from its early start without delaying  
Project finish date.
- .17 Impact Analysis: schedule analysis technique  
that adds a modeled delay to an accepted  
construction schedule to determined possible  
outcome of that delay on project completion.
- .18 Lag: modification of logical relationship that  
directs delay in successor activity.
- .19 Late Finish Date (LF): in critical path  
method, latest possible point in time that  
activity may be completed without delaying  
specified milestone (usually Project finish  
date).
- .20 Late Start Date (LS): in critical path method,  
latest possible point in time that activity  
may begin without delaying specified milestone  
(usually Project finish date).
- .21 Lead: modification of logical relationship  
that allows acceleration of successor task.
- .22 Logic Diagram: see Project network diagram.
- .23 Master Schedule: summary-level schedule that  
identifies major deliverable; work breakdowns  
structure and key milestones.
- .24 Milestone: significant point or event in  
Project, usually completion of major  
deliverable.
- .25 Monitoring: capture, analysis, and reporting  
of Project performance, usually as compared to  
plan.
- .26 Non-Critical Activities: activities which when  
delayed, do not affect specified Contract  
duration.
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1.3 DEFINITIONS  
(Cont'd)

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- .27 Project Control System: fully computerized system utilizing commercially available software packages.
  - .28 Project Network Diagram: schematic display of logical relationships of Project activities.
    - .1 Always drawn from left to right to reflect Project chronology.
  - .29 Project Plan: formal, approved document used to guide both Project execution and Project control.
    - .1 Primary uses of Project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines.
    - .2 Project plan may be summary or detailed.
  - .30 Project Planning: development and maintenance of Project Plan.
  - .31 Project Planning, Monitoring and Control System: overall system operated to enable monitoring of Project Work in relation to established milestones.
  - .32 Project Schedule: planned dates for performing activities and planned dates for meeting milestones.
  - .33 Quantified days duration: working days based on 5 day work week, discounting statutory holidays.
  - .34 Risk: uncertain event or condition that, if it occurs, has positive or negative effect on Project's objectives.
  - .35 Start Date: point in time associated with activity's start, usually qualified by one of following: actual, planned, estimated, scheduled, early, late, target, baseline, or current.
-

1.3 DEFINITIONS  
(Cont'd)

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- .36 Work Breakdown Structure (WBS):  
deliverable-oriented hierarchical decomposition of Work to be executed by contractor to accomplish project objectives and create required deliverables. It organizes and defines total scope of Project. Each descending level represents an increasingly detailed definition of Project Work. WBS is decomposed into Work packages.

1.4 ADMINISTRATIVE  
REQUIREMENTS

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- .1 Project Meeting:  
.1 Participate in regular project progress meetings with Departmental Representative specifically intended to discuss update of detailed schedule and contract changes.
- .2 Scheduling:  
.1 Planning: ensure that planning process is iterative and results in generally top-down processing with more detail being developed as planning progresses, and decisions concerning options and alternatives are made.  
.2 Ensure project schedule efficiencies through monitoring of Project in detail to ensure integrity of Critical Path, by comparing actual completions of individual activities with their scheduled completions, and review progress of activities that has started but are not yet completed..  
.3 Monitor sufficiently often so that causes of delays can immediately be identified and removed.
- .3 Project monitoring and reporting:  
.1 Keep team aware of changes to schedule, and possible consequences as project progresses.  
.2 Use narrative reports to provide advice on seriousness of difficulties and measures to overcome them.  
.3 Begin narrative reporting with statement on general status of Project followed by summarization of delays, potential problems, corrective measures and Project status criticality.
- .4 Critical Path Method (CPM) Requirements:
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1.4 ADMINISTRATIVE REQUIREMENTS (Cont'd)	.4	(Cont'd)
		.1 Ensure Master Plan and Detail Schedule are practical and remain within specified Contract duration.
		.2 Revise Master Schedule and Detail Schedule deemed impractical by Departmental Representative and resubmit for approval.
		.3 First Milestone on Master Schedule and Detail Schedule will identify start Milestone with an "ES" constraint date equal to Award of Contract date.
		.4 Calculate dates for completion milestones from Plan and Schedule.
		.5 Substantial Completion with "LF" constraint equal to calculated date.
		.6 Do not use float suppression techniques such as software constraints, preferential sequencing, special lead/lag logic restraints, extended activity times.
		.7 Allow for and show Master Plan and Detail Schedule adverse weather conditions normally anticipated.
		.8 Arrange participation on and off site of subcontractors and suppliers, as required by Departmental Representative, for purpose of network planning, scheduling, updating and progress monitoring.
		.1 Approvals by Departmental Representative of original networks and revisions do not relieve Contractor from duties and responsibilities required by Contract.
		.9 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.
1.5 QUALITY ASSURANCE	.1	Use experienced personnel, fully qualified in planning and scheduling to provide services from start of construction to Final Certificate, including Commissioning.
1.6 WORK BREAKDOWN STRUCTURE (WBS)	.1	Prepare construction Work Breakdown Structure (WBS) within 10 working days of Award of Contract date.

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1.6 WORK BREAKDOWN STRUCTURE (WBS)  
(Cont'd)

.1 (Cont'd)  
.1 Develop WBS through at least five levels: project, stage, element, sub-element and work package.

1.7 PROJECT MILESTONES

.1 Work for this project is scheduled to occur during the Winter Recess 2021, commencing December 11, 2020 to January 24, 2021. Note that on-site construction is limited to occur within this time frame.

.2 Mandatory and recommended project milestones form targets for both Master Schedule and Detail Schedule of CPM construction network system.  
.1 Recommended: interior finishing and fitting, mechanical and electrical work completed by January 24, 2021.  
.2 Recommended: interim Certificate (substantial completion) by January 10, 2021.  
.3 Recommended: final Certificate completion by January 24, 2021.

1.8 MASTER SCHEDULE

.1 Structure and base CPM construction networks system on WBS coding in order to ensure consistency throughout Project.

.2 Prepare comprehensive construction Master Schedule (CPM logic diagram) and dependent Cash Flow Projection within 5 working days of finalizing Agreement to confirm validity or alternates of identified milestones.  
.1 Master Schedule will be used as baseline.  
.1 Revise baseline as conditions dictate and as required by Departmental Representative.  
.2 Departmental Representative as Project progresses will review and return revised baseline within 5 work days.

.3 Reconcile revisions to Master Schedule and Cash Flow Projections with previous baseline to provide continuous audit trail.

.4 Initial and subsequent Master Schedule will include:

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1.8 MASTER SCHEDULE .4 (Cont'd)

(Cont'd)

.1 CD containing schedule and cash flow information, clearly labelled with data date, specific update, and person responsible for update.

.2 Bar chart identifying coding, activity durations, early/late and start/finish dates, total float, completion as percentile, current status and budget amounts.

.3 Network diagram showing coding, activity sequencing (logic), total float, early/late dates, current status and durations.

.4 Actual/projected monthly cash flow: expressed monthly and shown in both graphical and numerical form.

1.9 DETAIL .1 Provide detailed project schedule (CPM logic diagram) within 10 working days of Award of Contract date showing activity sequencing, interdependencies and duration estimates. Include listed activities as follows:

.1 Shop drawings.

.2 Samples.

.3 Approvals.

.4 Procurement.

.5 Construction.

.6 Installation.

.7 Testing.

.8 Commissioning and acceptance.

.2 Detail CPM schedule to cover in detail beginning from Award of Contract date.

.1 Show remaining activities for CPM construction network system up to Final Certificate and develop complete detail as project progresses.

.2 Detail activities completely and comprehensively throughout duration of project.

.3 Relate Detail Schedule activities to basic activities and milestones developed and approved in Master Schedule.

.4 Clearly show sequence and interdependence of construction activities and indicate:

.1 Start and completion of all items of Work, their major components, and interim milestone completion dates.

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|---|-------------|---|
| 1.9 DETAIL<br>(Cont'd)                                | .4 (Cont'd) | .2 Activities for procurement, delivery, installation and completion of each major piece of equipment, materials and other supplies, including:<br>.1 Time for submittals, resubmittals and review.<br>.2 Time for fabrication and delivery of manufactured products for Work.<br>.3 Interdependence of procurement and construction activities.<br>.3 Include sufficient detail to assure adequate planning and execution of Work. Activities should generally range in duration from 3 to 15 workdays each. |
|   | .5          | Provide level of detail for project activities such that sequence and interdependency of Contract tasks are demonstrated and allow co-ordination and control of project activities. Show continuous flow from left to right.  |
|   | .6          | Ensure activities with no float are calculated and clearly indicated on logical CPM construction network system as being, whenever possible, continuous series of activities throughout length of Project to form "Critical Path". Increased number of critical activities is seen as indication of increased risk.   |
|   | .7          | Insert Change Orders in appropriate and logical location of Detail Schedule. After analysis, clearly state and report to Departmental Representative for review effects created by insertion of new Change Order.   |
| 1.10 REVIEW OF THE<br>CONSTRUCTION DETAIL<br>SCHEDULE | .1          | Allow 10 work days for review by Departmental Representative of proposed construction Detail Schedule.  |
|   | .2          | Upon receipt of reviewed Detail Schedule make necessary revisions and resubmit to Departmental Representative for review within 10 work days.   |
|   | .3          | Promptly provide additional information to validate practicability of Detail Schedule as required by Departmental Representative.   |
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1.10 REVIEW OF THE CONSTRUCTION DETAIL SCHEDULE  
(Cont'd)

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- .4 Submittal of Detail Schedule indicates that it meets Contract requirements and will be executed generally in sequence.

1.11 COMPLIANCE WITH DETAIL SCHEDULE

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- .1 Comply with reviewed Detail Schedule.
- .2 Proceed with significant changes and deviations from scheduled sequence of activities that cause delay, only after written receipt of approval by Departmental Representative.
- .3 Identify activities that are behind schedule and causing delay. Provide measures to regain slippage.
- .1 Corrective measures may include:
- .1 Increase of personnel on site for effected activities or work package.
- .2 Increase in materials and equipment.
- .3 Overtime work.
- .4 Submit to Departmental Representative, justification, project schedule data and supporting evidence for approval of extension to Contract completion date or interim milestone date when required. Include as part of supporting evidence:
- .1 Written submission of proof of delay based on revised activity logic, duration and costs, showing time impact analysis illustrating influence of each change or delay relative to approved contract schedule.
- .2 Prepared schedule indicating how change will be incorporated into the overall logic diagram. Demonstrate perceived impact based on date of occurrence of change and include status of construction at that time.
- .3 Other supporting evidence requested by Departmental Representative.
- .4 Do not assume approval of Contract extension prior to receipt of written approval from Departmental Representative.
- .5 In event of Contract extension, display in Detail Schedule that scheduled float time available for work involved has been used in full without jeopardizing earned float.

1.11 COMPLIANCE WITH DETAIL SCHEDULE <u>(Cont'd)</u>	.5	(Cont'd) .1 Departmental Representative will determine and advise Contractor number of allowable days for extension of Contract based on project schedule updates for period in question, and other factual information. .2 Construction delays affecting project schedule will not constitute justification for extension of contract completion date.
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1.12 PROGRESS MONITORING AND <u>                    </u>	.1	On ongoing basis, Detail Schedule on job site must show "Progress to Date". Inspect Work with Departmental Representative at least once monthly to establish progress on each current activity shown on applicable networks.
	.2	Update and reissue project Work Breakdown Structure and relevant coding structures as project develops and changes.
	.3	Perform Detail Schedule update monthly with status dated (Data Date) on last working day of month. Update to reflect activities completed to date, activities in progress, logic and duration changes.
	.4	Do not automatically update actual start and finish dates by using default mechanisms found in project management software.
	.5	Submit to Departmental Representative copies of updated Detail Schedule.
	.6	Requirements for monthly progress monitoring and reporting are basis for progress payment request.
	.7	Submit monthly written report based on Detail Schedule, showing Work to date performed, comparing Work progress to planned, and presenting current forecasts. Report must summarize progress, defining problem areas and anticipated delays with respect to Work schedule, and critical paths. Explain alternatives for possible schedule recovery to mitigate any potential delay. Include in report: .1 Description of progress made.

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1.12 PROGRESS MONITORING AND <u>(Cont'd)</u>	.7	(Cont'd) .2 Pending items and status of: permits, shop drawings, change orders, possible time extensions. .3 Status of Contract completion date and milestones. .4 Current and anticipated problem areas, potential delays and corrective measures. .5 Review of progress and status of Critical Path activities.
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## PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not used.
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## PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not used.
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PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Province of Ontario
  - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990, c.0.1, as amended on December 10, 2019 and O. Reg. 213/91 as amended - Updated October 2, 2019.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions; Documents Required.
  - .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
    - .1 Results of site specific safety hazard assessment.
    - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
    - .3 Site Specific Site Plan that includes: Washroom locations, emergency evacuation route/ muster area.
    - .4 The plan is to be updated as the project progresses, or as requested by the Departmental Representative.
  - .3 Submit 3 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative weekly.
  - .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
  - .5 Submit copies of incident and accident reports within 24 hours.
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1.2 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

- .6 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 10 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 5 days after receipt of comments from Departmental Representative.
- .7 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .8 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.
- .9 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations. Coordinate with Departmental Representative.

1.3 SAFETY  
ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project. The assessment shall encompass all scopes of work being performed on the project and shall be reviewed and updated as often as necessary, as the work proceeds or as requested by the Departmental Representative.

1.4 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.

1.5 REGULATORY  
REQUIREMENTS

- .1 Do Work in accordance with Section 01 00 10 - General Instructions; Regulatory Requirements.
-

1.6 GENERAL  
REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications, applicable regulations, and facility requirements.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- .3 MSDS documentation and mitigation strategies to be provided when required and submitted to Departmental Representative, a minimum of 5 days before use.

1.7 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
  - .2 Contractor will be responsible and assume the role Constructor as described in the Ontario Occupational Health and Safety Act and Regulations for Construction Projects.
  - .3 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
  - .4 Complete and submit a weekly Work Permit to the Departmental Representative identifying what work is taking place within the construction space within the defined work hours. Hazard assessments are to be submitted for each scope of work identified on the Work Permit.
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| <u>1.7 RESPONSIBILITY<br/>(Cont'd)</u>       | .5 | If the contractor comes upon a previously unidentified substance assumed to be contaminated or assumed to be a designated substance, the Constructor is to notify the Departmental Representative immediately, and stop all work that may disrupt the substance until direction is provided by the Departmental Representative. |
|  | .6 | Be responsible to ensure dust tight protection is in place at the project at all times as not to adversely affect the public or facility occupants.   |
| <u>1.8 COMPLIANCE<br/>REQUIREMENTS</u>       | .1 | Comply with Ontario Occupational Health and Safety Act, R.S.O. 1990, c. 0.1 as amended on December 10, 2019 and O. Reg. 213/91 as amended - Updated October 2, 2019   |
| <u>1.9 UNFORESEEN<br/>HAZARDS</u>            | .1 | When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Ontario having jurisdiction and advise Departmental Representative verbally and in writing.                 |
| <u>1.10 POSTING OF<br/>DOCUMENTS</u>         | .1 | Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Ontario having jurisdiction, and in consultation with Departmental Representative.  |
| <u>1.11 CORRECTION OF<br/>NON-COMPLIANCE</u> | .1 | Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.  |
|  | .2 | Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.   |
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<u>1.11 CORRECTION OF NON-COMPLIANCE (Cont'd)</u>	.3	Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.
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<u>1.12 POWDER ACTUATED DEVICES</u>	.1	The use of electric tools are preferred. Use powder actuated devices is permissible only after receipt of written permission from Departmental Representative .
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<u>1.13 WORK STOPPAGE</u>	.1	Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
	.2	Refer to Section 11, "Guidelines for Working in and Around Buildings Occupied by Parliamentary Partners", Revision 3.0.

## PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not used.
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## PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not used.
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PART 1 - GENERAL

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| <u>1.1 REFERENCE STANDARDS</u> | .1 | Not used. |
|--------------------------------|----|-----------|
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|-----------------------|----|---|
| <u>1.2 INSPECTION</u> | .1 | The Departmental Representative will inspect all construction prior to the closing of walls or ceilings. Closing of walls cannot occur until acceptance of work by Departmental Representative. |
|-----------------------|----|---|
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|---------------------------|----|--|
| <u>1.3 ACCESS TO WORK</u> | .1 | Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants. |
|                           | .2 | Co-operate to provide reasonable facilities for such access.                                     |
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|-----------------------|----|---|
| <u>1.4 PROCEDURES</u> | .1 | Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.   |
|                       | .2 | Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work. |
|                       | .3 | Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.  |
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|--------------------------|----|--|
| <u>1.5 REJECTED WORK</u> | .1 | Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents. |
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|--------------------------------------|----|--|
| <u>1.5 REJECTED WORK</u><br>(Cont'd) | .2 | Make good other Contractor's work damaged by such removals or replacements promptly.               |
| <u>1.6 REPORTS</u>                   | .1 | Submit electronic copies of inspection and test reports to Departmental Representative.            |
|                                      | .2 | Provide copies to subcontractor of work being inspected or tested.                                 |
| <u>1.7 MOCK-UPS</u>                  | .1 | Not used.  |
| <u>1.8 EQUIPMENT AND SYSTEMS</u>     | .1 | Submit adjustment and balancing reports for mechanical, electrical and building equipment systems. |

PART 2 - PRODUCTS

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|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

- |                     |    |           |
|---------------------|----|-----------|
| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

<u>1.1 REFERENCE STANDARDS</u>	.1 Canadian Standards Association (CSA International) .1 CSA-0121-17, Douglas Fir Plywood.
	.2 Master Painters Institute (MPI) .1 MPI Architectural Painting Specifications Manual, 2013
	.3 Canadian General Standards Board (CAN/CGSB) .1 CAN/CGSB 1.119-2000 Interior Latex Primer-Sealer
<u>1.2 INSTALLATION AND REMOVAL</u>	.1 Provide temporary controls in order to execute Work expeditiously.
	.2 Remove from site all such work after use.
<u>1.3 HOARDING</u>	.1 Not used.
<u>1.4 TRANSLUCENT DUST TIGHT SCREENS</u>	.1 Provide translucent dust tight screens or partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
	.2 Maintain, reinstate, and/or relocate protection as required on a continual until such work is complete.
<u>1.5 ACCESS TO SITE</u>	.1 Refer to Section 01 14 00 Work Restrictions.
<u>1.6 PUBLIC TRAFFIC FLOW</u>	.1 Refer to Section 01 14 00 Work Restrictions.
<u>1.7 FIRE ROUTES</u>	.1 Refer to Section 01 14 00 Work Restrictions.

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1.8 PROTECTION FOR  
OFF-SITE AND PUBLIC  
PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

1.9 PROTECTION OF  
BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

1.10 WASTE  
MANAGEMENT AND  
DISPOSAL

- .1 Refer to Section 01 00 10 General Instructions.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.



PART 1 - GENERAL

1.1 REFERENCE  
STANDARDS

- .1 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether products or systems are in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .3 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

1.2 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
  - .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
  - .3 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.
  - .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
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<u>1.2 QUALITY (Cont'd)</u>	.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.
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<u>1.3 STORAGE, HANDLING AND PROTECTION</u>	.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	Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
	.6	Store sheet materials 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	Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
	.9	Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
	.10	Refer to Section 01 14 00 Work Restrictions.

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- 1.4 TRANSPORTATION
- .1 Pay costs of transportation of products required in performance of Work.
  - .2 Transportation cost of products supplied by Departmental Representative will be paid for by Departmental Representative. Unload, handle and store such products.

- 1.5 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 Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.

- 1.6 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 Departmental 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. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
  - .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

- 1.7 CO-ORDINATION
- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
  - .2 Be responsible for coordination and placement of openings, sleeves and accessories.
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|----------------------------------|----|--|
| <u>1.8 CONCEALMENT</u>           | .1 | In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.   |
|                                  | .2 | Before installation inform Departmental Representative if there is interference. Install as directed by Departmental Representative.   |
| <u>1.9 REMEDIAL WORK</u>         | .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.  |
| <u>1.10 LOCATION OF FIXTURES</u> | .1 | Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.  |
|                                  | .2 | Inform Departmental Representative of conflicting installation. Install as directed after confirmation by on-site Departmental Representative.   |
| <u>1.11 FASTENINGS</u>           | .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. |
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1.11 FASTENINGS  
(Cont'd)

- .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.

1.12 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. 304 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 resilient washers with stainless steel.

1.13 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 Departmental Representative.

1.14 EXISTING  
UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by the Departmental Representative, with minimum of disturbance to Work, and none to building occupants.
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<u>1.14 EXISTING UTILITIES</u> <u>(Cont'd)</u>	.2	Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.
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PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not Used.
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PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not Used.
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PART 1 - GENERAL1.1 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Submittals: in accordance with Section 01 00 10 - General Instructions
- .2 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of elements of project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of operational elements.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of Departmental Representative or separate contractor.
- .3 Include in request:
  - .1 Identification of project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work, and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect on Work of Departmental Representative or separate contractor.
  - .7 Written permission of affected separate contractor.
  - .8 Date and time work will be executed.

1.2 MATERIALS

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 00 10 - General Instructions, 1.5 Submittals.

1.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
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|------------------------------------|----|--|
| <u>1.3 PREPARATION</u><br>(Cont'd) | .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 which are to be exposed by uncovering work; maintain excavations free of water.                     |

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| <u>1.4 EXECUTION</u> | .1  | Execute cutting, fitting, and patching 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 to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.   |
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|---|-----|--|
| <u>1.4 EXECUTION</u><br><u>(Cont'd)</u> | .11 | At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, full thickness of the construction element. |
|   | .12 | Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.              |
|   | .13 | Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.                                      |

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|--|----|--|
| <u>1.5 WASTE</u><br><u>MANAGEMENT AND</u><br><u>DISPOSAL</u> | .1 | Separate waste materials for reuse and recycling in accordance with Section 01 00 01 General Instructions. |
|--|----|--|

PART 2 - PRODUCTS

- |                     |    |           |
|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not Used. |
|---------------------|----|-----------|

PART 3 - EXECUTION

- |                     |    |           |
|---------------------|----|-----------|
| <u>3.1 NOT USED</u> | .1 | Not Used. |
|---------------------|----|-----------|

PART 1 - GENERAL

1.1 RELATED  
REQUIREMENTS

- .1 Section 08 71 00 Door Hardware.

1.2 ADMINISTRATIVE  
REQUIREMENTS

- .1 Demonstrate scheduled operation and maintenance of equipment and systems to Departmental Representative's personnel two weeks prior to date of substantial performance.
  - .2 Departmental Representative: provide list of personnel to receive instructions, and co-ordinate their attendance at agreed-upon times.
  - .3 Preparation:
    - .1 Verify conditions for demonstration and instructions comply with requirements.
    - .2 Verify designated personnel are present.
    - .3 Ensure equipment has been inspected and put into operation in accordance with Section 08 71 00 Door Hardware.
    - .4 Ensure testing, adjusting, has been performed and equipment and systems are fully operational.
  - .4 Demonstration and Instructions:
    - .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting,, servicing, and maintenance of each item of equipment at scheduled times, at the equipment location.
    - .2 Instruct personnel in phases of operation and maintenance using operation and maintenance manuals as basis of instruction.
    - .3 Review contents of manual in detail to explain aspects of operation and maintenance.
    - .4 Prepare and insert additional data in operations and maintenance manuals when needed during instructions.
  - .5 Time Allocated for Instructions: ensure amount of time required for instruction of each item of equipment or system as follows:
    - .1 Section 08 71 00 - Door Hardware: 3 hours of instruction.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Provide submittals in accordance with Section 01 00 10 - General Instructions - Submittals.
- .2 Submit schedule of time and date for demonstration of each item of equipment and each system two weeks prior to designated dates, for Departmental Representative's approval.
- .3 Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .4 Give time and date of each demonstration, with list of persons present.
- .5 Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

1.4 QUALITY  
ASSURANCE

- .1 When specified in individual Sections requiring manufacturer to provide authorized representative to demonstrate operation of equipment and systems:
  - .1 Instruct Departmental Representative's personnel.
  - .2 Provide written report that demonstration and instructions have been completed.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

PART 1 - GENERAL

- 1.1 SUMMARY
- .1 This Section includes the following:
    - .1 Demolition and removal of selected portions of interior building components and finishes.
    - .2 Repair procedures for selective demolition operations.
  - .2 This section does not include the following:
    - .1 Removal of hazardous materials or asbestos abatement.
    - .2 Demolition of exterior building components or structural elements.
    - .3 Mechanical or electrical equipment, except as required to make minor modifications to allow the work to be completed.
- 1.2 RELATED REQUIREMENTS
- .1 Section 01 14 00 Work Restrictions
- 1.3 REFERENCE STANDARDS
- .1 American Society for Testing and Materials (ASTM):
    - .1 ASTM C 475/C 475M-17, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
  - .2 Department of Justice Canada (Jus)
    - .1 Canadian Environmental Assessment Act (CEAA), 2012
    - .2 Canadian Environmental Protection Act (CEPA), 2012
      - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations
      - .2 SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations
      - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34
      - .4 Motor Vehicle Safety Act (MVSA), 1995
      - .5 Hazardous Materials Information Review Act, 1985
  - .3 National Fire Protection Association (NFPA)
-

1.3 REFERENCE  
STANDARDS  
(Cont'd)

- .3 (Cont'd)  
.1 NFPA 241 13, Standard for Safeguarding Construction, Alteration, and Demolition Operations

1.4 DEFINITIONS

- .1 Demolish: Detach items from existing construction and legally dispose of them off site, unless indicated to be removed and salvaged or removed and reinstalled. Disposal to be as per the requirements of Section 01 00 10 General Instructions: Waste Management.
- .2 Remove and Salvage: Detach items from existing construction and deliver them to Departmental Representative.
- .3 Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- .4 Existing to Remain: Existing items of construction that are not removed and that are not otherwise indicated as being removed, removed and salvaged, or removed and reinstalled.
- .5 Waste Management Coordinator (WMC): Contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.
- .6 Draft Construction Waste Management Plan (Draft CWM Plan): Detailed inventory of materials in building indicating estimated quantities of reuse, recycling and landfill, prepared in accordance with Section 01 00 10 - General Instructions: Waste Management and as follows:  
.1 Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project.
- .7 Construction Waste Management Plan (CWM Plan): Written plan addressing opportunities for reduction, reuse, or recycling of materials prepared in accordance with Section 01 00 10 - Waste Management and Disposal.
-

1.4 DEFINITIONS  
(Cont'd)

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- .8 Construction Waste Management Report (CWM Report): Written report identifying actual materials that formed CWM Plan for reduction, reuse, or recycling of materials prepared in accordance with Section 01 00 10 - General Instructions; Waste Management.
- .9 Hazardous Substances: Dangerous substances, dangerous goods, hazardous commodities and hazardous products may include asbestos, mercury and lead, PCB's, poisons, corrosive agents, flammable substances, radioactive substances, or other material that can endanger human health or wellbeing or environment if handled improperly as defined by the Federal Hazardous Products Act (RSC 1985) including latest amendments.

1.5 ADMINISTRATIVE  
REQUIREMENTS

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- .1 Coordination: Coordinate with Departmental Representative for the material ownership as follows:
    - .1 Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Departmental Representative's property, demolished materials shall become Contractor's property and shall be removed from Project site.
    - .2 Coordinate selective demolition work so that work of this Section adheres to aesthetic criteria established by the Drawings and specified dimensions with all elements in planes as drawn, maintaining their relationships with all other building elements.
  - .2 Pre Demolition Meeting: Convene pre-installation meeting 1 week prior to beginning work of this Section and on-site installation, with Contractor and Departmental Representative in accordance with Section 01 31 19 - Project Meetings to:
    - .1 Confirm extent of salvaged and demolished materials
    - .2 Review Contractor's demolition plan
      - .1 Verify existing site conditions adjacent to demolition work
      - .2 Coordination with other construction sub trades
-

- 1.5 ADMINISTRATIVE REQUIREMENTS  
(Cont'd)
- .2 (Cont'd)
  - .2 (Cont'd)
  - .3 Hold project meetings bi-weekly.
  - .4 Ensure key personnel attend.
  - .5 WMC must provide written report on status of waste diversion activity at each meeting.
  - .6 Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.
- 1.6 ACTION AND INFORMATION SUBMITTALS
- .1 Action Submittals: Provide the following submittals before starting any work of this Section:
    - .1 Schedule of Selective Demolition Activities: Coordinate with Section 01 32 16.06 - Construction Progress Schedule, and indicate the following:
      - .1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
      - .2 Coordinate with Departmental Representative and user group ongoing site operations, and limit the number of interruptions during regular business hours.
      - .3 Interruption of utility services.
      - .4 Coordination for shutoff, capping, and continuation of utility services.
      - .5 Use of elevator and stairs.
      - .6 Locations of temporary partitions and means of egress, including for others affected by selective demolition operations.
      - .7 Coordination continuing occupancy of portions of existing building and of Representative partial occupancy of completed Work
    - .2 Demolition Plan: Submit a plan of demolition area indicating extent of temporary facilities and supports, methods of removal and demolition, in accordance with requirements of Authority Having Jurisdiction, and as follows:
-

1.6 ACTION AND  
INFORMATION  
SUBMITTALS  
(Cont'd)

- .1 (Cont'd)
- .2 (Cont'd)
  - .1 Proposed Dust Control and Noise Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Departmental Representative reserves the right to make modifications where proposed methods interfere with the Departmental Representative's ongoing operation
  - .2 Inventory: Submit a list of items that have been removed and salvaged after selective demolition is complete.
  - .3 Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
  - .4 Pre demolition Photographs or Videotape: Submit photographs or videotape indicating existing conditions of adjoining construction and site improvements prior to starting Work. Include finish surfaces that may be misconstrued as damage caused by selective demolition operations.
- .2 Informational Submittals: Provide the following submittals when requested by the Representative :
  - .1 Qualification Data: Submit information for companies and personnel indicating their capabilities and experience to perform work of this Section including; but not limited to, lists of completed projects with project names and addresses, names and addresses of Departmental Representatives, for work of similar complexity and extent.

1.7 QUALITY  
ASSURANCE  
                    

- .1 Regulatory Requirements: Perform work as follows; use most restrictive requirements where differences occur between the municipal, provincial and federal jurisdictions:
    - .1 Provincial and Federal Requirements: Perform work in accordance with governing environmental notification requirements and regulations of the Authority Having Jurisdiction.
-



1.7 QUALITY  
ASSURANCE  
(Cont'd)

- .1 (Cont'd)
  - .2 Municipal Requirements: Perform hauling and disposal operations in accordance with regulations of Authority Having Jurisdiction.
- .2 Qualifications: Provide proof of qualifications when requested by Representative :
  - .1 Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project:
    - .1 Conform to the provincial Occupational Health and Safety Act and Regulation.
    - .2 Conform to Workers' Compensation Board Regulations.
    - .3 Conform to City of local municipal bylaws and regulations governing this type of work.

1.8 SITE CONDITIONS

- .1 All portions of the building immediately adjacent to selective demolition area will be occupied:
    - .1 Conduct selective demolition so that Departmental Representative's operations will not be disrupted.
    - .2 Refer to Section 01 14 00 Work Restrictions .
  - .2 Maintain access to existing means of egress, walkways, corridors, exits, and other adjacent occupied or used facilities in accordance with Section 01 14 00 Work Restrictions:
    - .1 Do not close or obstruct means of egress, walkways, corridors, exits, or other occupied or used facilities without written acceptance from authorities having jurisdiction.
  - .3 Departmental Representative assumes no responsibility for condition of areas to be selectively demolished:
    - .1 Conditions existing at time of Pre Bid Site Review will be maintained by Departmental Representative as far as practical.
-

- 1.8 SITE CONDITIONS .4 Discovery of Hazardous Substances: It is not expected that Hazardous Substances will be encountered in the Work; immediately notify Departmental Representative if materials suspected of containing hazardous substances are encountered and perform the following activities:
- .1 Refer to Section 01 00 10 - General Instructions; Regulatory Requirements for directives associated with specific material types.
  - .2 Hazardous materials will be as defined in the Hazardous Materials Act.
  - .3 Hazardous materials will be removed by Departmental Representative before start of the Work.
  - .4 If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Departmental Representative. Hazardous materials will be removed by Departmental Representative under a separate contract or as a change to the Work.

PART 2 - PRODUCTS

- 2.1 DESCRIPTION .1 This section of the Work includes, but is not necessarily limited to, the following:
- .1 Demolition, removal completely from site, and disposal of all identified components, materials, equipment and debris
  - .2 Selective demolition to allow new walls, bulkheads, ceilings and other materials to meet existing construction as indicated
  - .3 All material from demolition shall be removed from site immediately with no salvage, selling, sorting or burning permitted on site
  - .4 Retain items indicated on drawings for re use in new construction

- 2.2 DEBRIS .1 Make all arrangements for transport and disposal of all demolished materials from the site.
-

### 2.3 EQUIPMENT

- .1 Provide all equipment required for safe and proper demolition of the building interiors indicated. Grinding of floor slabs may be required at locations of operable partitions in order to respect tolerances of floor levelness required for proper operation of partitions.

### 2.4 REPAIR MATERIALS

- .1 Use repair materials identical to existing materials:
  - .1 If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - .2 Use a material whose installed performance equals or surpasses that of existing material.
  - .3 Comply with material and installation requirements specified in individual Specification Sections.
- .2 Floor Patching and Levelling Compounds: Cement based, trowelable, self levelling compounds compatible with specified floor finishes; gypsum based products are not acceptable for work of this Section.
- .3 Gypsum Board Patching Compounds: Joint compound to ASTM C 475/C 475M, bedding and finishing types thinned to provide skim coat consistency to patch and prepare existing gypsum board walls ready for new finishes in accordance with Section 09 21 16.08 - Gypsum Board Assemblies for Minor Works.
- .4 Hoarding and Dust Screens: Refer to Section 01 56 00.

### 2.5 EXISTING MATERIALS

- .1 Items to be retained for re use in new construction include, but are not limited to the following:
    - .1 Millwork components
    - .2 Doors.
    - .3 Hardware.
-

- |  |  |
|--|--|
| 2.5 EXISTING<br>MATERIALS<br><u>(Cont'd)</u> | .1 (Cont'd)<br>.4 Confirm with Departmental Representative<br>any materials that appear to be in re usable<br>condition prior to disposal.<br>.5 Confirm with Departmental Representative<br>any materials scheduled for re use that are<br>not in re usable condition prior to<br>installation. |
|--|--|

### PART 3 - EXECUTION

- |                                    |  |
|------------------------------------|--|
| 3.1 EXAMINATION<br><u></u>         | .1 Verify that utilities have been disconnected<br>and capped.<br><br>.2 Survey existing conditions and correlate with<br>requirements indicated to determine extent of<br>selective demolition required.<br><br>.3 Inventory and record the condition of items to<br>be removed and reinstalled and items to be<br>removed and salvaged.<br><br>.4 Notify the Departmental Representative where<br>existing mechanical, electrical, or structural<br>elements conflict with intended function or<br>design:<br>.1 Investigate and measure the nature and<br>extent of conflict and submit a written report<br>to Departmental Representative.<br>.2 Departmental Representative will issue<br>additional instructions or revise drawings as<br>required to correct conflict.<br><br>.5 Perform surveys as the work progresses to<br>detect hazards resulting from selective<br>demolition activities. |
| 3.2 UTILITY<br>SERVICES<br><u></u> | .1 Coordinate existing services indicated to<br>remain and protect them against damage during<br>selective demolition operations in accordance<br>with Section 01 14 00.<br><br>.2 Locate, identify, disconnect, and seal or cap<br>off indicated utilities serving areas to be<br>selectively demolished.   |
-

3.2 UTILITY  
SERVICES  
(Cont'd)

- .2 (Cont'd)
  - .1 Arrange to shut off affected utilities with utility companies.
  - .2 If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary utilities that bypass area of selective demolition and that maintain continuity of service to other parts of building.
  - .3 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
  - .4 Cut off pipe or conduit to a minimum of 25 mm below slab, and remove concrete mound. Patch concrete using cementitious grout.
- .3 Coordinate with Electrical Divisions for shutting off, disconnecting, removing, and sealing or capping utilities.
- .4 Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

- .1 Identify and mark all equipment and materials identified to be retained by Departmental Representative or to be re used in subsequent construction. Separate and store items to be retained in an area away from area of demolition and protect from accidental disposal.
  - .2 Post warning signs on electrical lines and equipment that must remain energized to serve other areas during period of demolition.
  - .3 Confirm that all electrical and telephone service lines entering buildings are not disconnected.
  - .4 Do not disrupt active or energized utilities crossing the demolition site.
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3.3 PREPARATION  
(Cont'd)

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- .5 Provide and maintain barricades, warning signs, protection for workmen and the public during the full extent of the Work. Read drawings carefully to ascertain extent of protection required.
- .6 Mark all materials required to be re used, store in a safe place until ready for re installation.
- .7 Adjust all junction boxes, receptacles and switch boxes flush with new wall construction where additional layers to existing construction are indicated.
- .8 Remove permanent marker lines used or found on exposed surfaces and at surfaces indicated for subsequent finish materials. Mechanically remove permanent marker lines and associated substrates where permanent marker lines occur and patch surface. Sealing or priming over permanent marker lines is not acceptable.

3.4 SELECTIVE  
DEMOLITION

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- .1 Demolish and dismantle work in a neat and orderly manner and in strict accordance with all regulations.
  - .2 At end of each day's work, leave Work in safe condition so that no part is in danger of toppling or falling.
  - .3 Demolish in a manner to minimize dusting and to prevent migration of dust.
  - .4 Selling or burning of materials on the site is not permitted.
  - .5 Fill all openings in gypsum board walls with gypsum board and steel framing to match existing, skim coat to make wall smooth and even.
  - .6 Remove doors and / or hardware scheduled for demolition. Cut or rout existing door frames, doors, or wood casing as required to accommodate infrastructure required for new door operators or access control.
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<u>3.6 PROTECTION</u> (Cont'd)	.3	Provide and maintain fire prevention equipment and alarms accessible during demolition.
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<u>3.7 CLEANING</u>	.1	Develop Construction Waste Management Plan related to Work of this Section and Section 01 00 10 General Instructions; Waste Management.
	.2	Waste Management: Separate waste materials for Section 01 00 10 General Instructions; Waste Management, and as follows: .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
	.3	Promptly as the Work progresses, and on completion, clean up and remove from the site all rubbish and surplus material. Remove rubbish resulting from demolition work daily.
	.4	Maintain access to exits clean and free of obstruction during removal of debris.
	.5	Transport material designated for alternate disposal using approved haulers facilities receiving organizations listed in CWM Plan and in accordance with applicable regulations.
	.6	Dispose of materials not designated for alternate disposal in accordance with applicable regulations. .1 Disposal facilities must be those approved of and listed in CWM Plan.



PART 1 - GENERAL

<u>1.1 RELATED REQUIREMENTS</u>	.1	Section 0921 16.08 Gypsum Board Assemblies for Minor Works.
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<u>1.2 REFERENCE STANDARDS</u>	.1	CSA Group (CSA) <ul style="list-style-type: none"><li>.1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.</li><li>.2 CSA O121-17, Douglas Fir Plywood.</li><li>.3 CSA O141-05(R2014), Softwood Lumber.</li><li>.4 CSA O151-17, Canadian Softwood Plywood.</li><li>.5 CAN/CSA-O325-16, Construction Sheathing.</li><li>.6 CAN/CSA-Z809-16, Sustainable Forest Management.</li></ul>
	.2	National Research Council Canada (NRC) <ul style="list-style-type: none"><li>.1 National Building Code of Canada 2015 (NBC).</li></ul>
	.3	Forest Stewardship Council (FSC) <ul style="list-style-type: none"><li>.1 FSC-STD-01-001-V5-2, FSC Principle and Criteria for Forest Stewardship.</li></ul>
	.4	Green Seal Environmental Standards (GS) <ul style="list-style-type: none"><li>.1 GS-11-2015, Paints, Coatings, Stains, and Sealers.</li></ul>
	.5	National Lumber Grades Authority (NLGA) <ul style="list-style-type: none"><li>.1 Standard Grading Rules for Canadian Lumber 2017.</li></ul>
	.6	South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards <ul style="list-style-type: none"><li>.1 SCAQMD Rule 1113-A2011, Architectural Coatings.</li></ul>
	.7	Sustainable Forestry Initiative (SFI) <ul style="list-style-type: none"><li>.1 SFI-2010-2014 Standard.</li></ul>

<u>1.3 ACTION AND INFORMATIONAL SUBMITTALS</u>	.1	Submit in accordance with Section 01 00 10 General Instructions; Submittal Procedures.
	.2	Product Data:

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1.3 ACTION AND INFORMATIONAL SUBMITTALS (Cont'd)	.2 (Cont'd) .1 Submit manufacturer's instructions, printed product literature and data sheets for rough carpentry work and include product characteristics, performance criteria, physical size, finish and limitations.
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1.4 MAINTENANCE MATERIAL SUBMITTALS	.1 Extra Stock Materials: .1 Provide electrical equipment backboards for mounting electrical equipment as indicated. Use 19 mm thick plywood on 19 x 38 mm furring around spacing, perimeter and at maximum 305 mm intermediate
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1.5 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.  .4 Sustainable Standards Certification: .1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809 or FSC or SFI.
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1.6 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:
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- 1.6 DELIVERY,  
STORAGE AND  
HANDLING  
(Cont'd)
- .3 (Cont'd)
    - .1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area, as approved by Departmental Representative.
    - .2 Store and protect wood from nicks, scratches, and blemishes.
    - .3 Replace defective or damaged materials with new.
  - .4 Develop Construction Waste Management Plan related to Work of this Section in accordance with Section 01 00 10 General Instructions; Waste Management.

## PART 2 - PRODUCTS

- 2.1 MATERIALS
- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
    - .1 CAN/CSA-0141.
    - .2 NLGA Standard Grading Rules for Canadian Lumber.
    - .3 CAN/CSA-Z809 or FSC or SFI certified.
  - .2 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
    - .1 S2S is acceptable for unexposed elements.
    - .2 Board sizes: "Standard" or better grade.
    - .3 Dimension sizes: "Standard" light framing or better grade.
  - .3 Panel Materials:
    - .1 Douglas fir plywood (DFP): to CSA 0121, standard construction.
  - .4 Primers, Paints, Coatings: in accordance with manufacturer's recommendations for surface conditions:
    - .1 Primer: VOC limit 100 g/L maximum to GS-11SCAQMD Rule 1113.
    - .2 Paint: VOC limit 50150 g/L maximum to GS-11SCAQMD Rule 1113.
    - .3 Coating: VOC limit 100275350650 g/L maximum to GS-11SCAQMD Rule 1113.
-

- 2.2 ACCESSORIES
- .1 Fasteners: to CAN/CSA-G164.
  - .2 Nails, spikes and staples: to CSA B111.
  - .3 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
  - .4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for rough carpentry installation in accordance with manufacturer's written instructions.
    - .1 Visually inspect substrate in presence of Departmental Representative.
    - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
    - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

- 3.2 PREPARATION
- .1 Treat surfaces of material with wood preservative, before installation, if required..

- 3.3 INSTALLATION
- .1 Comply with requirements of National Building Code of Canada (NBC), supplemented by the following paragraphs.
  - .2 Install furring and blocking as required to space-out and support wall and ceiling finishes, and other work as required.
  - .3 Align and plumb faces of furring and blocking to tolerance of 1:600.
-

3.3 INSTALLATION  
(Cont'd)

- .4 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .5 Use caution when working with particle board. Use dust collectors and high quality respirator masks.
- .6 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .7 Countersink bolts where necessary to provide clearance for other work.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 00 10 General Instructions; 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 00 10, General Instructions; Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 General Instructions; Waste Management.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

PART 1 - GENERAL

<u>1.1 RELATED REQUIREMENTS</u>	.1	Section 08 14 16 Flush Wood Doors
	.2	Section 09 91 00.08 Painting for Minor Works
<u>1.2 REFERENCE STANDARDS</u>	.1	American National Standards Institute (ANSI)
	.1	ANSI A208.1-2016, Particleboard.
	.2	ANSI A208.2-2016, Medium Density Fibreboard (MDF) for Interior Applications.
	.3	ANSI/HPVA HP-1-10, American National Standard for Hardwood and Decorative Plywood.
	.4	ANSI/BHMA A156.16 - 2018 Auxiliary Hardware.
	.5	ANSI/ASME 18.6.1 1981 (R2016) Wood Screws (Inch Series).
	.2	Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
	.1	Architectural Woodwork Quality Standards, 2nd edition, 2014.
	.3	ASTM International
	.1	ASTM A 153/A 153M-16a, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
	.2	ASTM E 1333-14 Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber.
	.3	ASTM F 1667-18a Standard Specification for Driven Fasteners: Nails, Spikes and Staples.
	.4	Canadian General Standards Board (CGSB)
	.1	CAN/CGSB-11.3-M87, Hardboard.
	.5	CSA Group (CSA)
	.1	CSA O121-17, Douglas Fir Plywood.
	.2	CSA O151-17, Canadian Softwood Plywood.
	.3	CSA O153:19, Poplar Plywood.
	.4	CAN/CSA-Z809-16, Sustainable Forest Management.
	.6	Forest Stewardship Council (FSC)

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1.2 REFERENCE  
STANDARDS  
(Cont'd)

- .6 (Cont'd)
  - .1 FSC-STD-01-001-V5-2, FSC Principle and Criteria for Forest Stewardship.
- .7 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Safety Data Sheets (SDS).
- .8 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
  - .1 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .9 Sustainable Forestry Initiative (SFI)
  - .1 SFI-2015-2019 Standard.
- .10 Underwriters Laboratories of Canada (ULC)
  - .1 CAN/ULC-S104-15 (R2020), Standard Method for Fire Tests of Door Assemblies.
  - .2 CAN/ULC-S105:2016, Standard Specification for Fire Door Frames.

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions; Submittals.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions, printed product literature, data sheets and catalogue pages for specified products. Include product characteristics, performance criteria, dimensions and profiles, finish and limitations on use.
    - .2 Submit two copies of WHMIS SDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
  - .3 Shop Drawings:
    - .1 Prepare and submit shop drawings in general accordance with AWMAC AWS manual.
    - .2 Indicate profiles and dimensions, assembly techniques, jointing, methods of fastening, terminations and other related details.
    - .3 Indicate materials, thicknesses, finishes and hardware.
    - .4 Include schedule or key plan.
    - .5 Show profiles, elevations and details at scales recommended by AWMAC AWS.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

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- .3 (Cont'd)
  - .6 Where necessary, show location and type of blocking and backing required within supporting assemblies.
- .4 Samples:
  - .1 Submit duplicate 300 mm long representative samples of each typical item of finish carpentry.
    - .1 Panel materials: 300 mm x 300 mm.
  - .2 Shop applied coating samples:
    - .1 For transparent finish, submit duplicate samples of each species and cut of wood veneer to be used, finished to match project sample or as specified.
    - .2 For opaque finish, submit duplicate samples for each colour selection, finished to match project sample or as specified.
  - .3 Samples for site applied finish:
    - .1 Furnish four samples of each finish carpentry item and composite panel material to Contractor for preparation of field applied finish samples.
  - .4 Submit duplicate samples of each hardware item to be left exposed in final construction. Samples will not be returned for incorporation into the work.
- .5 Certifications: submit certificates signed by manufacturer certifying materials comply with specified performance characteristics, physical properties and requirements of referenced standards.
- .6 Test and Evaluation Reports: submit certified test reports for composite wood from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.

1.4 QUALITY  
ASSURANCE

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- .1 Perform Work of this Section by finish carpentry contractor.
  - .2 Mock-ups:
    - .1 Not required.
-



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|--|-------|--|
| 1.5 DELIVERY,<br>STORAGE AND<br>HANDLING | <hr/> | <ul style="list-style-type: none"><li>.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with AWS recommendations and as follows.</li><li>.2 Deliver finish carpentry materials only when area of work is enclosed, plaster and concrete work is dry, area is broom clean and site environmental conditions are acceptable for installation.</li><li>.3 Storage and Handling Requirements:<ul style="list-style-type: none"><li>.1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.</li><li>.2 Maintain indoor temperature and humidity within range recommended by AWS for location of the Work.</li><li>.3 Store products on site as specified for minimum 72 hours prior to installation.</li><li>.4 Store and protect finish carpentry products from moisture, nicks, scratches, and blemishes.</li><li>.5 Replace defective or damaged materials with new.</li></ul></li><li>.4 Waste Management: for packaging and materials, in accordance with Section 01 00 10 - General Instructions; Waste Management.</li></ul> |
|--|-------|--|

## PART 2 - PRODUCTS

- |                                |       |  |
|--------------------------------|-------|--|
| 2.1 REGULATORY<br>REQUIREMENTS | <hr/> | <ul style="list-style-type: none"><li>.1 Wood fire rated frames and panels: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104 NFPA 252for ratings specified or indicated.</li><li>.2 Provide fire labelled frames for openings requiring fire protection ratings. Test products in conformance with CAN4-S104, or NFPA 252 and listed by nationally recognized agency having factory inspection services.</li></ul> |
|--------------------------------|-------|--|
-

- 2.2 SUSTAINABILITY CHARACTERISTICS
- .1 Solid lumber and composite wood products: in accordance with CAN/CSA-Z809 or FSC or SFI.
  - .2 Composite wood products: formaldehyde emissions within the following limits when tested in accordance with ASTM E 1333.
    - .1 Hardwood plywood with veneer core (HWPW-VC): 0.05 ppm.
    - .2 Hardwood plywood with composite core (HWPW-CC): 0.05 ppm.
    - .3 Particleboard (PB): 0.09 ppm.
    - .4 Medium density fibreboard (MDF): 0.11 ppm.
    - .5 Thin (less than 8 mm) medium density fibreboard (tMDF): 0.13 ppm.
  - .3 Coatings
    - .1 Clear Wood Finishes: VOC limit 350550 g/L maximum to GS-11SCAQMD Rule 1113
    - .2 Paints: VOC limit 50100 g/L maximum to GS-11SCAQMD Rule 1113.
- 2.3 QUALITY GRADE
- .1 Provide all materials and perform all work of this Section in accordance with AWMAC AWS Custom Grade, except as follows:
    - .1 Premium Grade: for all new door frames, casings, and trim.
  - .2 In case of conflict between Contract Documents and AWMAC AWS grade requirements, Contract Documents govern.
- 2.4 MATERIALS
- .1 Softwood and hardwood lumber: Sound lumber to specified AWS grade requirements, kiln-dried to moisture content recommended for location of the Work.
    - .1 Machine stress-rated lumber is acceptable for all purposes.
  - .2 MDF (medium density fibreboard) core: to ANSI A208.2, density 769 kg/m<sup>3</sup>, Grade, 19 mm thick unless indicated otherwise.
    - .1 Use moisture resistant MR grade for countertops and splash-backs to receive plumbing fixtures.
-

2.4 MATERIALS  
(Cont'd)

- .3 Douglas fir plywood (DFP): to CSA 0121, standard construction.
- .4 Canadian softwood plywood (CSP): to CSA 0151 , standard construction.
- .5 Hardwood plywood: to ANSI/HPVA HP-1.
- .6 Poplar plywood (PP): to CSA 0153, standard construction.
- .7 Hardboard: to CAN/CGSB-11.3.

2.5 MANUFACTURED  
FRAMES

- .1 Interior Frames:
  - .1 Grade: Premium
  - .2 Frames to be solid wood, white maple species.
  - .3 Refer to Architectural Drawings for profile

2.6 MANUFACTURED  
TRIM

- .1 Interior Standing and running trim:
  - .1 Material:
    - .1 Solid stock for transparent finish: white maple species.

2.7 MANUFACTURED  
SOLID PANELS

- .1 MDF Panels: 19mm thick, paint finish.

2.8 FASTENINGS

- .1 Provide screws, bolts, expansion shields and other fastening devices required for satisfactory installation.
  - .2 Exposed fasteners to match finish of hardware.
  - .3 Nails and staples: to ASTM F 1677, copper finish.
  - .4 Wood screws: to ANSI/ASME 18.6.1, countersunk flush type unless indicated otherwise, in sizes to suit application, copper or stainless steel for other locations.
  - .5 Splines: wood.
-

- |                                   |    |   |
|-----------------------------------|----|---|
| <u>2.8 FASTENINGS</u><br>(Cont'd) | .6 | Panel adhesive: Type to suit application.<br>.1 VOC limit 50200 g/L maximum to SCAQMD Rule 1168GS-36.   |
| <u>2.9 HARDWARE</u>               | .1 | Use one manufacturer's product for all similar items.   |
|                                   | .2 | Hardware fastenings:<br>.1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation of hardware.<br>.2 Exposed fastening devices to match finish of hardware.<br>.3 Use fasteners compatible with material through which they pass. |

### PART 3 - EXECUTION

- |                         |    |   |
|-------------------------|----|---|
| <u>3.1 EXAMINATION</u>  | .1 | Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for wood products installation in accordance with AWS tolerances and requirements of Contract Documents.<br>.1 Visually inspect substrate in presence of Departmental Representative.<br>.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.<br>.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative |
| <u>3.2 PREPARATION</u>  | .1 | Back prime woodwork before installation, to AWS.  |
| <u>3.3 INSTALLATION</u> | .1 | Install items of finish carpentry in accordance with AWMAC AWS grade specified for respective items.  |
-

- 3.3 INSTALLATION  
(Cont'd)
- .2 In case of conflict between Contract Documents and AWS grade requirements, Contract Documents govern.
  - .3 Install items of finish carpentry at locations shown on drawings.
    - .1 Position accurately, level, plumb straight.
    - .2 Fasten and anchor securely.
  - .4 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
  - .5 Form joints to conceal shrinkage.
- 3.4 CONSTRUCTION
- .1 Fastening:
    - .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
    - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
    - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.
    - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
  - .2 Interior frames:
    - .1 Set frames with plumb sides and level heads and secure.
  - .3 Standing and running trim:
    - .1 Butt and cope internal joints of baseboards to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.
    - .2 Fit backs of baseboards and casing snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.
    - .3 Make joints in baseboard, where necessary using a 45 degrees scarf type joint.
-

- 3.4 CONSTRUCTION  
(Cont'd)
- .3 (Cont'd)
  - .4 Install door and window trim in single lengths without splicing.
  - .4 Panelling:
    - .1 Secure panelling and perimeter trim using adhesive recommended for purpose by manufacturer. Fill nail holes caused by temporary fixing with filler matching wood in colour.
    - .2 Secure panelling and perimeter trim using concealed fasteners.
    - .3 Secure panelling and perimeter trim using counter sunk screws plugged with matching wood plugs.
  - .5 Hardware:
    - .1 Install hardware as required.
- 3.5 CLEANING
- .1 Progress Cleaning: clean in accordance with Section 01 00 10 - General Instructions; 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 00 10 - General Instructions; Cleaning.
  - .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 General Instructions; Cleaning.
- 3.6 TOUCHUP AND PROTECTION
- .1 Fill and retouch all nicks, chips and scratches in factory finishes and substrate materials to AWS standards. Replace damaged items that cannot be repaired to AWS standards.
  - .2 Protect installed products and components from damage during construction.
  - .3 Repair damage to adjacent materials caused by finish carpentry installation.
-

3.6 TOUCHUP AND PROTECTION <u>(Cont'd)</u>	.4	Leave work to be site finished ready for finishing by Section 09 91 00.08 - Painting for Minor Works.
--	----	---

PART 1 - GENERAL

1.1 RELATED  
REQUIREMENTS

- .1 Section 06 20 00 Finish Carpentry.
- .2 Section 08 71 00 Door Hardware.
- .3 Section 09 91 00.08 Painting for Minor Works

1.2 REFERENCE  
STANDARDS

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
    - .1 Quality Standards for Architectural Woodwork 2014.
  - .2 Canadian General Standards Board (CGSB).
    - .1 CAN/CGSB-71.19-M88, Adhesive, Contact, Sprayable.
    - .2 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
  - .3 CSA Group (CSA)
    - .1 CSA A440.2:19/CSA A440.3:19, Energy Performance of Windows and Other Fenestration Systems.
    - .2 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.
    - .3 CAN/CSA-0132.2 Series-90 (R2003), Wood Flush Doors
    - .4 CAN/CSA-0132.5-M1992(R1998), Stile and Rail Wood Doors.
    - .5 CAN/CSA-Z809-16, A Sustainable Forest Management System: Guidance Document.
    - .6 CSA Certification Program for Windows and Doors 00.
  - .4 Environmental Choice Program (ECP).
    - .1 CCD-045-92, Sealants and Caulking Compounds.
    - .2 CCD-046-92, Adhesives.
  - .5 National Fire Protection Association (NFPA).
    - .1 NFPA 80-1999, Standard for Fire Doors and Fire Windows.
    - .2 NFPA 252-1999, Standard Method of Fire Tests of Door Assemblies.
  - .6 Underwriters' Laboratories of Canada (ULC).
-



1.2 REFERENCE  
STANDARDS  
(Cont'd)

- .6 (Cont'd)
  - .1 CAN-4S104M-80(R1985), Fire Tests of Door Assemblies.
  - .2 CAN4-S105M-85 (R1992), Fire Door Frames Meeting the Performance Required by CAN4-S104.
- .7 Forest Stewardship Council (FSC)
  - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .8 Sustainable Forestry Initiative (SFI)
  - .1 SFI-2010-2014 Standard.
- .9 Green Seal Environmental Standards (GS)
  - .1 GS-03-97, Environmental Criteria for Anti-Corrosive Paints.
  - .2 GS-11-2015, Standard for Paints, Coatings, Stains and Sealers.
- .10 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
  - .1 SCAQMD Rule 1113-A2011, Architectural Coatings.
  - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .11 California Air Resources Board (CARB) 93120 Airborne Toxic Control Measure
- .12 American Society for Testing and Materials International (ASTM)
  - .1 ASTM E90-09. Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .13 American National Standards Institute (ANSI)
  - .1 ANSI/WDMA I.S. 1A-13 Industry Standard for Interior Architectural Wood Flush Doors

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Product Data:
    - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 00 10 - General Instructions; Submittals.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

- .1 (Cont'd)
  - .2 Submit two copies of WHMIS SDS - Safety Data Sheets in accordance with Section 01 00 10 - General Instructions; Submittals. Indicate VOC's:
    - .1 For caulking materials during application and curing.
    - .2 For door materials and adhesives.
- .2 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 00 10 - General Instructions; Submittals.
  - .2 Indicate door types, sizes, core construction, and cutouts.
  - .3 Wood Certification: submit vendor's or manufacturer's Chain-of-Custody Certificate number for CAN/CSA-Z809 or FSC or SFI certified wood.
  - .4 Low-Emitting Materials:
    - .1 Submit evidence of adhesives and sealants and paints and coatings used in building, showing compliance with VOC and chemical component limits or restriction requirements.
      - .1 SCAQMD Rule 1113-A2016, Architectural Coatings.
      - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
  - .5 Submit Acoustic Testing Report to ASTM E90-09, prepared by independent laboratory.

1.4 SAMPLES

- .1 Submit samples in accordance with Section 01 00 10 - General Instructions; Submittals.
- .2 Submit one 305 x 305 mm finished sample of wood veneer facing. Paint finish to match existing paint finish of adjacent doors on site.
- .3 Manufacturer's Instructions:
  - .1 Submit manufacturer's installation instructions.

1.5 QUALITY  
ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
-

- |                                     |    |  |
|-------------------------------------|----|--|
| 1.5 QUALITY ASSURANCE<br>(Cont'd)   | .2 | Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.   |
|                                     | .3 | Pre-installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.   |
| 1.6 DELIVERY, STORAGE, AND HANDLING | .1 | Storage and Protection:<br>.1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.<br>.2 Store doors in well ventilated room, off floor, in accordance with manufacturer's recommendations.<br>.3 Protect doors from scratches, handling marks and other damage. Wrap or Crate doors.<br>.4 Store doors away from direct sunlight. |
| 1.7 WASTE MANAGEMENT AND DISPOSAL   | .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.  |
|                                     | .3 | Divert unused adhesive material from landfill to official hazardous material collections site approved by Departmental Representative.   |
|                                     | .4 | Do not dispose of unused paint materials into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.   |

## PART 2 - PRODUCTS

- |                      |    |   |
|----------------------|----|---|
| 2.1 WOOD FLUSH DOORS | .1 | Solid core: to ASI/WDMA 1.S.1A-13<br>.1 Construction: |
|----------------------|----|---|
-

2.1 WOOD FLUSH  
DOORS

(Cont'd)

- .1 (Cont'd)
  - .1 (Cont'd)
    - .1 Stiles: 30mm structural composite lumber with 22mm hardwood matched with faces.
    - .2 Rails: 84mm at top and bottom
    - .3 Core: Sound dampening core
  - .2 Face Panels:
    - .1 Hardwood veneer; veneer grades: Grade I , White Maple, plain sliced, 2-ply.
    - .3 Adhesive: Type I PVA Cross-link for Interior use.
    - .4 STC Rating: 46 as per ASTM E90-09

2.2 FABRICATION

- .1 Vertical edge strips to match face veneer.
- .2 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.

PART 3 - EXECUTION3.1 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-0132.2 Series, Appendix A.
- .2 Install doors and hardware in accordance with manufacturer's printed instructions and CAN/CSA-0132.2 Series, Appendix A.
- .3 Adjust hardware for correct function.

3.3 ADJUSTMENT

- .1 Re-adjust doors and hardware just prior to completion of building to function freely and properly.
-

3.4 CLEANING

- .1 Progress cleaning: Clean in accordance with Section 01 00 10 - General Instructions; Cleaning
  - .1 Leave Work area clean at end of each day.
- .2 Perform cleaning as soon as possible after installation to remove construction and accumulated environmental dirt.
- .3 Remove traces of primer, caulking; clean doors and frames.
- .4 Clean glass and glazing materials with approved non-abrasive cleaner.
- .5 On completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

PART 1 - GENERAL

- |                                 |    |                                    |
|---------------------------------|----|------------------------------------|
| <u>1.1 RELATED REQUIREMENTS</u> | .1 | Section 06 20 00 Finish Carpentry. |
|                                 | .2 | Section 08 14 16 Flush Wood Doors  |

- |                                |     |   |
|--------------------------------|-----|---|
| <u>1.2 REFERENCE STANDARDS</u> | .1  | American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA) |
|                                | .1  | ANSI/BHMA A156.1-2016, American National Standard for Butts and Hinges.                           |
|                                | .2  | ANSI/BHMA A156.2-2017, Bored and Preassembled Locks and Latches.                                  |
|                                | .3  | ANSI/BHMA A156.3-2014, Exit Devices.  |
|                                | .4  | ANSI/BHMA A156.4-2019, Door Controls - Closers.   |
|                                | .5  | ANSI/BHMA A156.5-2020, Auxiliary Locks and Associated Products.                                   |
|                                | .6  | ANSI/BHMA A156.6-2015, Architectural Door Trim.   |
|                                | .7  | ANSI/BHMA A156.8-2015, Door Controls - Overhead Stops and Holders.                                |
|                                | .8  | ANSI/BHMA A156.10-2017, Power Operated Pedestrian Doors.  |
|                                | .9  | ANSI/BHMA A156.12-2018, Interconnected Locks and Latches.   |
|                                | .10 | ANSI/BHMA A156.13-2017, Mortise Locks and Latches Series 1000.                                    |
|                                | .11 | ANSI/BHMA A156.14-2019, Sliding and Folding Door Hardware.  |
|                                | .12 | ANSI/BHMA A156.15-2015, Release Devices - Closer Holder, Electromagnetic and Electromechanical.   |
|                                | .13 | ANSI/BHMA A156.16-2018, Auxiliary Hardware.   |
|                                | .14 | ANSI/BHMA A156.17-2004 (R2010), Self-closing Hinges and Pivots.                                   |
|                                | .15 | ANSI/BHMA A156.18-2016, Materials and Finishes.   |
|                                | .16 | ANSI/BHMA A156.19-2019, Power Assist and Low Energy Power - Operated Doors.                       |
|                                | .17 | ANSI/BHMA A156.20-2017, Strap and Tee Hinges and Hasps.   |
|                                | .18 | ANSI/BHMA A156.21-2019, Thresholds  |
|                                | .19 | ANSI/BHMA A156.22-2017, Door Gasketing and Edge Seal Systems.                                     |
-

1.2 REFERENCE  
STANDARDS  
(Cont'd)

- .2 Canada Green Building Council (CaGBC)
  - .1 LEED Canada-NC Version 1.0-2004, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations (including Addendum 2007).
  - .2 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors.
- .3 Canadian Steel Door and Frame Manufacturers' Association (CSDMA)
  - .1 CSDMA Recommended Dimensional Standards for Commercial Steel Doors and Frames - 2009.

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions; Submittals.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions, printed product literature and data sheets for door hardware and include product characteristics, performance criteria, physical size, finish and limitations.
  - .3 Samples:
    - .1 Submit for review and acceptance of each unit.
    - .2 Samples will be returned for inclusion into work.
    - .3 Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
    - .4 After approval samples will be returned for incorporation in Work.
  - .4 Hardware List:
    - .1 Submit contract hardware list.
    - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
  - .5 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

- .6 Manufacturer's Instructions: submit manufacturer's installation instructions.

1.4 CLOSEOUT  
SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions
- .2 Operation and Maintenance Data: submit operation and maintenance data for door hardware for incorporation into manual.

1.5 MAINTENANCE  
MATERIAL SUBMITTALS

- .1 Extra Stock Materials:
  - .1 Supply maintenance materials in accordance with Section 01 00 10 - General Instructions.
  - .2 Tools:
    - .1 Supply 2 sets of wrenches for door closers and locksets.

1.6 QUALITY  
ASSURANCE

- .1 Regulatory Requirements:
  - .1 Hardware for doors in fire separations and exit doors certified by a Canadian Certification Organization accredited by Standards Council of Canada.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.7 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.
-



1.7 DELIVERY,  
STORAGE AND  
HANDLING  
(Cont'd)

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- .3 Package items of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.
- .4 Storage and Handling Requirements:
  - .1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect door hardware from nicks, scratches, and blemishes.
  - .3 Protect prefinished surfaces with wrapping.
  - .4 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 HARDWARE ITEMS

- .1 Use one manufacturer's products only for similar items.

2.2 DOOR HARDWARE

- .1 Locks and latches:
    - .1 Mortise locks and latches: to ANSI/BHMA A156.13, 40H and 45H series mortise lock by Best, grade 1, designed for function and keyed as stated in Hardware Schedule.
    - .2 Lever handles: 14H design.
    - .3 Roses: round.
    - .4 Normal strikes: box type, lip projection not beyond jamb.
    - .5 Cylinders: key into keying system as directed, GMK, MK, etc..
    - .6 Finished to 613.
  - .2 Butts and hinges:
    - .1 Butts and hinges: to ANSI/BHMA A156.1,, Heavy weight / duty hinge, bronze, 5 knuckle, mortise, concealed ball bearing. Provide non-removable pins for security requirements, finish 613. Acceptable manufacture: Ives Allegion.
  - .3 Door Closers and Accessories:
-

- |                               |   |  |
|-------------------------------|---|--|
| 2.2 DOOR HARDWARE<br>(Cont'd) | .3 (Cont'd)   | .1 Door controls - overhead holders: to ANSI/BHMA A156.8, listed in Hardware Schedule, finished to 613.                    |
|                               |   | .2 Step release kick-down door stop: surface mounted, finished to 613.   |
|                               | .4 Door Operators:  | .1 Power assist and low energy power operated doors: to ANSI/BHMA A156.19, listed in Hardware Schedule, finished to 613.   |
|                               |   | .2 Actuation of operators interconnected with access control (card readers).   |
|                               |   | .3 Actuators as listed in Hardware Schedule.   |
|                               | .5 Auxiliary locks and associated products: to ANSI/BHMA A156.5, listed in Hardware Schedule, finished to 613.  | .1 Electric Strike, finished to 613, listed in Hardware Schedule   |
|                               |   | .2 Cylinders: Provide construction cores. Departmental Representative will provide and install final security cylinders.   |
|                               | .6 Auxiliary hardware: to ANSI/BHMA A156.16, listed in Hardware Schedule  | .1 Door seal: self adhesive weatherstrip for smoke, light and sound control, Acceptable manufacturer / product: Zero 188S. |
|                               | .7 Door bottom seal: heavy duty, door seal of extruded aluminum frame and closed cell neoprene seal, recessed in door bottom, closed ends, adjustable, automatic retract mechanism when door is open, dark bronze anodized finish. Acceptable manufacturer / product: Zero 360 series |  |
- 
- |                |  |
|----------------|--|
| 2.3 FASTENINGS | .1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.                    |
|                | .2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware. |
|                | .3 Exposed fastening devices to match finish of hardware.  |
-

2.3 FASTENINGS  
(Cont'd)

- .4 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.
- .5 Use fasteners compatible with material through which they pass.

2.4 KEYING

- .1 Door locks to be keyed differently in association with existing keying system, as directed. Prepare detailed keying schedule in conjunction with Departmental Representative..
- .2 Supply keys in duplicate for every lock in this Contract.
- .3 Supply 3 master keys for each master key or grand master key group.
- .4 Stamp keying code numbers on keys and cylinders.
- .5 Supply construction cores.
- .6 Hand over permanent cores and keys to Departmental Representative.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
  - .2 Supply wood door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
  - .3 Supply manufacturers' instructions for proper installation of each hardware component.
-

- |                                     |    |   |
|-------------------------------------|----|---|
| <u>3.1 INSTALLATION</u><br>(Cont'd) | .4 | Install hardware to standard hardware location dimensions in accordance with CSDFMA Canadian Metric Guide for Steel Doors and Frames (Modular Construction).  |
|                                     | .5 | Where door stop contacts door pulls, mount stop to strike bottom of pull.   |
|                                     | .6 | Install key control cabinet.  |
|                                     | .7 | Use only manufacturer's supplied fasteners.<br>.1 Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.   |
| <u>3.2 ADJUSTING</u>                | .1 | Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.   |
|                                     | .2 | Lubricate hardware, operating equipment and other moving parts.   |
|                                     | .3 | Adjust door hardware to ensure tight fit at contact points with frames.   |
| <u>3.3 CLEANING</u>                 | .1 | Progress Cleaning: clean in accordance with Section 01 00 10 - General Instructions; Cleaning.<br>.1 Leave Work area clean at end of each day.<br>.2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions.<br>.3 Remove protective material from hardware items where present.<br>.4 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 General Instructions; Cleaning. |
|                                     | .2 | Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 - General Instructions; Waste Management.<br>.1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.   |
-

3.4 DEMONSTRATION

- .1 Keying System Setup and Cabinet:
  - .1 Set up key control system with file key tags, duplicate key tags, numerical index, alphabetical index and key change index, label shields, control book and key receipt cards.
  - .2 Place file keys and duplicate keys in key cabinet on their respective hooks.
  - .3 Lock key cabinet and turn over key to Departmental Representative.
- .2 Maintenance Staff Briefing:
  - .1 Brief maintenance staff regarding:
    - .1 Proper care, cleaning, and general maintenance of projects complete hardware.
    - .2 Description, use, handling, and storage of keys.
    - .3 Use, application and storage of wrenches for door closers, locksets.
- .3 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by door hardware installation.

3.6 SCHEDULE

- .1 Refer to Hardware Schedule, Appendix "A".

PART 1 - GENERAL

1.1 RELATED  
REQUIREMENTS

- .1 Section 06 08 99 Rough Carpentry for Minor Works.
- .2 Section 09 91 00.08 Painting for Minor Works.

1.2 REFERENCE  
STANDARDS

- .1 ASTM International (ASTM)
    - .1 ASTM C 1396/C 1396M-17, Standard Specification for Gypsum Wallboard.
    - .2 ASTM C 475/C 475M-17, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
    - .3 ASTM C 514-04(2020), Standard Specification for Nails for the Application of Gypsum Board.
    - .4 ASTM C 645-18, Standard Specification for Nonstructural Steel Framing Members.
    - .5 ASTM C 754-20, Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
    - .6 ASTM C 840-20, Standard Specification for Application and Finishing of Gypsum Board.
    - .7 ASTM C 954-18, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.122 in. (2.84 mm) in Thickness.
    - .8 ASTM C 1002-18, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
    - .9 ASTM C 1047-19, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
    - .10 ASTM C 1178/C 1178M-18, Standard Specification for Glass Mat Water-Resistant Gypsum Backing Board.
  - .2 Underwriters' Laboratories of Canada (ULC)
    - .1 CAN/ULC-S102:2018, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions; Submittals.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for gypsum, framing, sealants, access hatches and include product characteristics, performance criteria, physical size, finish and limitations.

1.4 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 off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store materials inside, level, under cover. Protect from weather, damage from construction operations and other causes, in accordance with manufacturer's printed instructions.
  - .3 Handle materials to prevent damage to edges or surfaces. Protect metal accessories and trim from being bent or damaged.
  - .4 Store and protect partition materials from nicks, scratches, and blemishes.
  - .5 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Performance / Design Criteria:
    - .1 Partition assembly to be non-combustible construction.
  - .2 Non-structural Metal Framing:
-

2.1 MATERIALS  
(Cont'd)

- .2 (Cont'd)
  - .1 Non-load bearing channel stud framing: to ASTM C 645, 92mm stud size, roll formed from 0.53 mm thickness hot dipped galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres.
  - .2 Floor and ceiling tracks: to ASTM C 645 , in widths to suit stud sizes, 32 mm flange height.
- .3 Gypsum Board:
  - .1 Standard board: to ASTM C 1396/C 1396M regular, 16 mm thick mm thick, 1200 mm wide x maximum practical length, ends square cut, edges tapered.
  - .2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
  - .3 Steel drilltapping screws: to ASTM C 514ASTM C 954ASTM C 1002.
  - .4 Casing beads, corner beads, control joints and edge trim: to ASTM C 1047, zinc-coated by hot-dip process or zinc-coated by electrolytic process , 0.5 mm base thickness, perforated flanges, one piece length per location.
- .4 Seamless Glass Fiber Reinforced Gypsum Access Panels:
  - .1 to ASTM E84-80; Flame Spread: 0; Smoke Index: 0; Non-Combustible.
  - .2 Composed of Glass-fiber reinforcing and high strength alpha hemi-hydrate gypsum cement and expanded glass granules
  - .3 Consisting of a frame and pop-out door; 500mm x 500mm with radiused corners;
  - .4 Smooth natural white gypsum colour, ready for field paint finishing.

2.2 ACCESSORIES

- .1 Acoustical insulation: semi-rigid mineral wool.
  - .2 Acoustical Sealants: to ASTM C 475.
    - .1 VOC limit 250 g/L maximum to SCAQMD Rule 1168.
-



### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions prior to partition installation.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative

#### 3.2 ERECTION OF FRAMING

- .1 Install steel framing members to receive screw-attached gypsum board in accordance with ASTM C 754 except where specified otherwise.
  - .2 Align partition tracks at floor and ceiling and secure at 610 mm on centre maximum.
  - .3 Place studs vertically at 400 mm on centre and maximum of 50 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
  - .4 Erect metal studding to tolerance of 1:1000.
  - .5 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.
  - .6 Include 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.
-

3.2 ERECTION OF  
FRAMING

(Cont'd)

- .7 Install heavy gauge single jamb studs at openings.
- .8 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.
- .9 Include 40 mm stud or furring channel secured between studs for attachment of fixtures behind lavatory basins, toilet and bathroom accessories, and other fixtures including grab bars and towel rails, attached to steel stud partitions.
- .10 Install steel studs or furring channel between studs for attaching electrical and other boxes.
- .11 Extend partitions to ceiling height except where indicated.
- .12 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use double track slip joint.
- .13 Install continuous insulating strips to isolate studs from uninsulated surfaces.
- .14 Install insulating strip under studs and tracks around perimeter of sound control partitions.
- .15 Locate access panels within view of equipment and ensure equipment is accessible for operating, inspecting, adjusting, servicing without using special tools. Install framing or solid wood blocking to support access panel frames as per manufacturer's directions.

3.3 ERECTION OF  
GYPSUM BOARD AND  
ACCESSORIES

- .1 Do application and finishing of gypsum board in accordance with ASTM C 840 except where specified otherwise.
  - .2 Install acoustical insulation and sealant in partitions.
-

3.3 ERECTION OF  
GYPSUM BOARD AND  
ACCESSORIES  
(Cont'd)

- .3 Install gypsum boards in direction that will minimize number of end-butt joints. Stagger end joints 250 mm minimum.

3.4 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work are approved.
- .2 Apply single layer gypsum board to metal furring or framing using screw fasteners. Maximum spacing of screws 300 mm on centre.

3.5 INSTALLATION

- .1 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.
  - .2 Install casing beads around perimeter of suspended ceilings.
  - .3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.
  - .4 Install insulating strips continuously at edges of gypsum board and casing beads abutting metal window and exterior door frames, to provide thermal break.
  - .5 Install access panels to electrical and mechanical fixtures specified in respective sections.
    - .1 Rigidly secure frames to furring or framing systems.
  - .6 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 and onto access panel frames.
-

3.5 INSTALLATION  
(Cont'd)

- .7 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.
- .8 Finish joint between face panel and access panel frame with two coats of joint compound and one coat of taping compound, feathered out on to panel frames according to manufacturer's directions.
- .9 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.
- .10 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

3.6 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 00 10 - General Instructions; 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 00 10 - General Instructions; Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 General Instructions; Cleaning.

3.7 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by partition installation.

PART 1 - GENERAL

1.1 RELATED  
REQUIREMENTS

- .1 Section 06 20 00 Finish Carpentry.
- .2 Section 08 14 16 Flush Wood Doors.
- .3 Section 09 21 16.08 Gypsum Board Assemblies  
For Minor Works

1.2 REFERENCE  
STANDARDS

- .1 Green Seal Environmental Standards (GS)
  - .1 GS-11-2015, Edition 3.2, Paints,  
Coatings, Stains and Sealers
- .2 Health Canada/Workplace Hazardous Materials  
Information System (WHMIS)
  - .1 Safety Data Sheets (SDS).
- .3 The Master Painters Institute (MPI)
  - .1 Architectural Painting Specification  
Manual - current edition.
  - .2 Maintenance Repainting Manual - current  
edition.
- .4 National Research Council Canada (NRC)
  - .1 National Building Code of Canada 2015  
(NBC).

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 -  
General Instructions; Submittals.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions,  
printed product literature and data sheets for  
paint and coating products and include product  
characteristics, performance criteria,  
physical size, finish and limitations.
    - .2 Submit 2 copies of WHMIS SDS in  
accordance with Section 01 35 29.06 - Health  
and Safety Requirements.
  - .3 Samples:
    - .1 Submit for review and acceptance of each  
unit.
    - .2 Samples will be returned.
-

1.3 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

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- .3 (Cont'd)
  - .3 Submit duplicate 200 x 305 mm sample panels of each paint, stain, clear coating finish with paint or coating in colours, gloss/sheen and textures to match existing finishes on site and to MPI Painting Specification Manual standards.
- .4 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.4 DELIVERY,  
STORAGE AND  
HANDLING

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- .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 Provide and maintain dry, temperature controlled, secure storage.
  - .2 Store painting materials and supplies away from heat generating devices.
  - .3 Store materials and equipment in well ventilated area within temperature as recommended by manufacturer.
- .4 Fire Safety Requirements:
  - .1 Supply 19 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 (NFC) requirements.

1.5 SITE CONDITIONS

- .1 Heating, Ventilation and Lighting:
-

- 1.5 SITE CONDITIONS .1 (Cont'd)
- 
- (Cont'd)
- .1 Ventilate enclosed spaces.
  - .2 Coordinate use of existing ventilation system with Departmental Representative and ensure its operation during and after application of paint as required.
  - .3 Provide minimum lighting level of 323 Lux on surfaces to be painted.
- .2 Temperature, Humidity and Substrate Moisture Content Levels:
- .1 Apply paint finishes when ambient air and substrate temperatures at location of installation can be satisfactorily maintained during application and drying process, within MPI and paint manufacturer's prescribed limits.
  - .2 Test concrete, masonry and plaster surfaces for alkalinity as required.
  - .3 Apply paint to adequately prepared surfaces, when moisture content is below paint manufacturer's prescribed limits.
- .3 Additional application requirements:
- .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 in occupied facilities during silent hours only. Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.

## PART 2 - PRODUCTS

- 2.1 MATERIALS
- .1 Supply paint materials for paint systems from single manufacturer.
  - .2 Conform to latest MPI requirements for painting work including preparation and priming.
-

2.1 MATERIALS  
(Cont'd)

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- .3 Materials in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual "Approved Product" listing.
  - .1 Use MPI listed materials having E2E3 rating where indoor air quality requirements exist.
  - .2 Primer: VOC limit 100 g/L maximum to GS-11SCAQMD Rule 1113.
  - .3 Paint: VOC limit 100 g/L maximum to GS-11SCAQMD Rule 1113.
  
- .4 Colours:
  - .1 Submit proposed Colour Schedule to Departmental Representative for review.
  - .2 Base colour schedule on selection of 5 base colours and 3 accent colours.
  
- .5 Mixing and tinting:
  - .1 Perform colour tinting operations prior to delivery of paint to site, in accordance with manufacturer's written recommendations. Obtain written approval from Departmental Representative for tinting of painting materials.
  - .2 Use and add thinner in accordance with paint manufacturer's recommendations.
    - .1 Do not use kerosene or similar organic solvents to thin water-based paints.
  - .3 Thin paint for spraying in accordance with paint manufacturer's written recommendations.
  - .4 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.
  
- .6 Gloss/sheen ratings:
  - .1 Paint gloss is defined as sheen rating of applied paint, in accordance with following values:

Gloss Level-Category	Gloss @ 60 degrees	Sheen @ 85 degrees
Gloss Level 1 - Matte Finish	Max. 5	Max. 10
Gloss Level 2 - Velvet	Max.10	10 to 35
Gloss Level 3 - Eggshell	10 to 25	10 to 35
Gloss Level 4 - Satin	20 to 35	min. 35
Gloss Level 5 - Semi-Gloss	35 to 70	
Gloss Level 6 - Gloss	70 to 85	
Gloss Level 7 - High Gloss	More than 85	

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- 2.1 MATERIALS  
(Cont'd)
- .6 (Cont'd)
    - .2 Gloss level ratings of painted surfaces as indicated and as noted on Finish Schedule.
  - .7 Interior painting:
    - .1 Dressed Lumber: doors, door and window frames, casings, mouldings, etc.:
      - .1 INT 6.3A - Latex semi-gloss finish.
    - .2 Plaster and gypsum board: gypsum wallboard, drywall, "sheet rock" type material, etc.
      - .1 INT 9.2A - Latex eggshell finish (over latex sealer).
      - .2 INT 9.2C - Alkyd insert gloss
  - .8 Interior re-painting:
    - .1 Plaster and Gypsum Board: gypsum wallboard, drywall, "sheet rock" type material, etc.
      - .1 RIN 9.2A - Latex eggshell finish.

### PART 3 - EXECUTION

- 3.1 GENERAL
- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheets.
  - .2 Perform preparation and operations for interior painting in accordance with MPI - Architectural Painting Specifications Manual and MPI - Maintenance Repainting Manual except where specified otherwise.
- 3.2 EXAMINATION
- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Departmental Representative damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.
-

<u>3.2 EXAMINATION</u> (Cont'd)	.2	Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "cover patch test". Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.
------------------------------------	----	--

<u>3.3 PREPARATION</u>	.1	Protection of in-place conditions: .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 Departmental Representative. .2 Protect items that are permanently attached such as Fire Labels on doors and frames. .3 Protect factory finished products and equipment.
	.2	Surface Preparation: .1 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. .2 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress. .3 Place "WET PAINT" signs in occupied areas as painting operations progress. Signs to approval of Departmental Representative. .4 Clean and prepare surfaces in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual specific requirements and coating manufacturer's recommendations. .5 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.

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3.3 PREPARATION  
(Cont'd)

- .2 (Cont'd)
  - .6 Where possible, prime non-exposed surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.
    - .1 Apply vinyl sealer to MPI #36 over knots, pitch, sap and resinous areas.
    - .2 Apply wood filler to nail holes and cracks.
    - .3 Tint filler to match stains for stained woodwork.
  - .7 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.
  - .8 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.
  - .9 Touch up of shop primers with primer as specified.

3.4 APPLICATION

- .1 Paint only after prepared surfaces have been accepted by Departmental Representative
  - .2 Use method of application approved by Departmental Representative.
    - .1 Conform to manufacturer's application recommendations.
  - .3 Apply coats of paint in continuous film of uniform thickness.
    - .1 Repaint thin spots or bare areas before next coat of paint is applied.
  - .4 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
  - .5 Sand and dust between coats to remove visible defects.
  - .6 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.
-

3.4 APPLICATION  
(Cont'd)

- .7 Finish inside of cupboards and cabinets as specified for outside surfaces.
- .8 Finish closets and alcoves as specified for adjoining rooms.
- .9 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.
- .10 Mechanical/Electrical Equipment:
  - .1 Paint conduits, piping, hangers, ductwork and other mechanical and electrical equipment exposed in finished areas, to match adjacent surfaces, except as indicated.
  - .2 Do not paint over nameplates.
  - .3 Keep sprinkler heads free of paint.
  - .4 Paint fire protection piping red.
  - .5 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
  - .6 Paint natural gas piping yellow.
  - .7 Paint both sides and edges of backboards for telephone and electrical equipment before installation.
    - .1 Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 00 10 - General Instructions; 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 00 10 - General Instructions; Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 General Instructions; Cleaning.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
- .4 Place paints, stains, primer defined as hazardous or toxic waste, including tubes and containers, in containers or areas designated for hazardous waste.

# **Appendix A**

**Door and Frame Schedule  
Door Hardware Schedule**

**MP SUITES – DOOR OPERATORS PROJECT**

**PWGSC,  
Ottawa, Ontario**

**Project No. R.112395.001**

**ISSUED FOR TENDER**

**July 27, 2020**

DOOR AND FRAME SCHEDULE

DOOR		OPENING		PANEL			FRAME			RATED MIN.	STC RATING	HARDWARE GROUP	REMARKS	REV
NO.	FROM / TO	SIZE (not incl. sidelts)		TYPE	MAT.	FIN.	TYPE	MAT.	FIN.				Note: Doors & frames to be prepared to receive all security devices. ES = Electric Strike. Refer to security package for complete device list. All existing doors and frames to be repainted as noted by "P" designation	
CONFEDERATION BUILDING														
D176A	178	176	902 x 2121 x 51	--	--	--	--	--	--	NA	NA	HG3		1
D178A	Corridor	178	902 x 2115 x 44	--	--	--	--	--	--	NA	NA	HG1		1
D180A	178	180	902 x 2115 x 44	1B/A101	SD	P	2/A03	WD	P	NA	46	HG2	New Door and Frame	1
D782A	784	782	902 x 2127 x 44	--	--	--	--	--	--	NA	NA	HG3		1
D784A	Corridor	784	902 x 2127 x 51	--	--	--	--	--	--	NA	NA	HG1		1
D786A	784	786	914 x 2127 x 44	1B/A107	SD	P	--	--	P	NA	46	HG2	New Door	1
JUSTICE BUILDING														
D211	Corridor	211	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG4		1
D211A	211	211A	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG5		1
D211B	211	211B	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG5		1
D611	Corridor	611	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG4		1
D611A	611	611A	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG5		1
D611B	611	611B	902 x 2108 x 44	--	--	--	--	--	--	NA	NA	HG5		1
VALOUR BUILDING														
D570	Corridor	570	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG6		1
D570A	570	570A	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG7		1
D570B	570	570B	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG7		1
D670	Corridor	670	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG6		1
D670A	670	670A	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG7		1
D670B	670	670B	902 x 2286 x 44	--	--	--	--	--	--	NA	NA	HG7		1
Note: Revisions to the schedule are shown in bold.														
END OF DOOR AND FRAME SCHEDULE														
ABBREVIATIONS														
SC=Solid Core Wood Door   SD=Sound Dampening Core Wood Door   WD = Wood   P = Paint   NA = Not Applicable														

HARDWARE SCHEDULE

HARDWARE GROUP	ITEMS										REMARKS	REV
	operation	hinges	stop	closer	strike	seal	bottom	threshold	bolts	other		
CONFEDERATION												
HG 1	Existing to be retained	Existing to be retained	Hold Open: 4040SEH PULL 690 24VAC (CO0471) (pull side mount) (Or Similar)	Closer: Hunter HA8-SP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	blank plate to be installed over latch							Latching function of door knob mortise set to be disabled. Include all accessories as required to permit installation of operator and hold open on the pull side
HG 2	Office function mortise lockset, BEST 45H-7A-14H-613 with "T" function	Butt Hinges, 1.5 Pair, NRP	Step-release kick down door stop, 613 finish	Hunter HA8-SP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM	Sound	Recessed Auto					
HG 3	Office function mortise lockset, BEST 45H-7A-14H-613	Existing to Remain	Step-release kick down door stop, 613 finish	Hunter HA8-SP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM							
JUSTICE												
HG 4	Existing electrified mortise to remain	Existing to Remain	Hold Open: 4040SEH PULL 690 24VAC (CO0471) (pull side mount) (Or Similar)	Closer: Hunter HA8-LP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM						CR, REX, DC, LM	Include all accessories as required to permit installation of operator and hold open on the pull side
HG 5	Office function mortise lockset, BEST 40H T Function, 613 Finish	Existing to Remain	Step-release kick down door stop, 613 finish	Closer: Hunter HA8-LP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM							

HARDWARE SCHEDULE

HARDWARE GROUP		ITEMS										REMARKS	REV	
		operation	hinges	stop	closer	strike	seal	bottom	threshold	bolts	other	security		
VALOUR BUILDING														
HG 6	Existing electrified mortise to remain	Existing to Remain	Hold Open: 4040SEH PULL 690 24VAC (CO0471) (pull side mount) (Or Similar)	Closer: Hunter HA8-LP or Similar in Dark Bronze  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM							CR, REX, DC, LM	Magnet to be removed from strike plate. Include all accessories as required to permit installation of operator and hold open on the pull side	
HG 7	Office function mortise lockset, BEST 40H T Function, 613 Finish	Existing to Remain	Step-release kick down door stop, 613 finish	Closer: Hunter HA8-LP or Similar in Dark Bronze, c/w 1" Spindle "Hockey Stick" arm  Actuators: A156.19 H/C Engraved 102mm Square x DPDT 613	HES 4500 LBSM							CR, REX, DC, LM	Magnet to be removed from strike plate	
NOTE: Revisions to the schedule are shown in bold.														
General Notes:														
1. Security hardware includes CR-card readers, REX (Request to Exit, DC (Door Contact) and LM (Latch Monitor) Security device installation and final connections are by Departmental Representative. Refer also to Electrical drawings for rough-in requirements.														
2. All Conduits, Fasteners, etc. for hardware both mechanical and electronic must be concealed unless otherwise noted in the drawing package														
3. General Contractor to prepare all doors and frames for new door hardware, including Client's security hardware. Refer to drawings for locations and rough in requirements.														
4. General Contractor to supply and install locking hardware.														
5. General Contractor to supply and install construction cylinders. Final cylinders by tenant.														
6. All finishes to be bronze to match existing on site														
7. Lever style to match existing unless otherwise noted.														
END OF HARDWARE SCHEDULE														