

PART 1 GENERAL**1.1 RELATED REQUIREMENTS**

- .1 Section 08 71 00 Door Hardware
- .2 Section 08 80 50 Glazing
- .3 Section 26 05 21 Wires and Cables (0-1000 V)
- .4 Section 26 05 34 Conduits, Conduit Fastenings and Conduit Fittings
- .5 Section 26 27 26 Wiring Devices

1.2 REFERENCES

- .1 Definitions:
 - .1 Non-progressive demountable partition: allows removal of individual panels without disturbing adjoining panels.
 - .2 Unitized partition modules: delivered to site ready for installation and are comprised of factory assembled frames with integrated acoustic insulation, wiring and opening according to shop drawings.
 - .3 Component-based wall: delivered to site in parts and ready to be assembled according to planned layout.
- .2 Reference Standards:
 - .1 Aluminum Association Designation System for Aluminum Finishes- 2008
 - .1 Class I, AA-M12C22A44, Colour Anodized Coating.
 - .2 Class II, AA-M12C22A31, Clear Anodized Coating.
 - .2 American National Standards Institute (ANSI)
 - .1 ANSI Z97.1-2015, Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test.
 - .3 American National Standards Institute / Business and Institutional Furniture Manufacturing Association (ANSI/BIFMA)
 - .1 ANSI/BIFMA e3-2014, Furniture Sustainability Standard.
 - .2 ANSI/BIFMA X7.1-R2016, Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating.
 - .3 ANSI/BIFMA X5.6-2016, American National Standard for Office Furnishings - Panel Systems – Tests.

- .4 American National Standards Institute (ANSI) / National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD 3-2005, High-Pressure Decorative Laminates (HPDL).
- .5 ASTM International
 - .1 ASTM A653/A653M-17, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated. (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM B221-14, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - .3 ASTM B221M-13, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
 - .4 ASTM C297/297M-16, Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions.
 - .5 ASTM E72-15, Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
 - .6 ASTM E90-09(2016), Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - .7 ASTM E413-87, Classification for Rating Sound Insulation
- .6 California Air Resources Board's (CARB)
 - .1 CARB Phase 2 part of California's Composite Wood Products Regulation (CWP Regulation).
- .7 Canada Green Building Council (CaGBC), The Leadership in Energy and Environmental Design (LEED) Rating System
 - .1 LEED® Canada-CI Version 1.0, LEED: for Commercial Interiors.
- .8 Canadian General Standards Board (CGSB) / National Standard of Canada
 - .1 CAN/CGSB-12.1-2017, Safety Glazing.
 - .2 CAN/CGSB-44-229 2017, Interconnecting Panel Systems and Supported Components.
- .9 CSA Group
 - .1 CSA B651-12(R2017), Accessible design for the built environment.
 - .2 CSA C22.1-18, Canadian Electrical Code, Part 1 (24th Edition), Safety Standard for Electrical Installations.
 - .3 CSA C22.2 No. 203-16, Modular wiring systems for office furniture.
 - .4 CAN/CSA-Z809-16. Sustainable forest management.

- .10 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001 V5-2 EN 2015, FSC Principle and Criteria for Forest Stewardship.
- .11 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Safety Data sheets (SDS).
- .12 National Particleboard Association / Composite Panel Association
 - .1 NPA A208.2-2009 Medium Density Fiberboard (MDF) for Interior Applications.
- .13 SCS Global Services Standard, Indoor Air Quality Product Performance Standard for Building Interiors
 - .1 SCS-EC10.3.2014 V4.0 2017 Environmental Certification Services Division.
 - .1 Indoor Advantage™ and Indoor Advantage™ Gold.
- .14 Sustainable Forestry Initiative (SFI)
 - .1 SFI 2015-2019 2015, Standards and Rules – Standards, Rules for Label Use, Procedures and Guidance.
- .15 Underwriters Laboratories of Canada (ULC)
 - .1 ULC-S102-2018, Standard Method of Test for Surface Burning Characteristic of Building Materials and Assemblies.
- .16 National Fire Protection Association
 - .1 NFPA 70 National Electrical Code 2020 Edition.

1.3 ACTION SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for demountable partitions and include product characteristics, performance criteria, physical size, finishes and limitations.
 - .2 Submit copies of WHMIS SDS in accordance with Section 01 35 29.06 Health and Safety Requirements and Section 01 47 15 Sustainable Requirements Construction.
- .3 Shop Drawings
 - .1 Submit drawings stamped and signed by a Departmental Representative registered or licensed in Quebec, Canada.
 - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .3 Indicate materials, thicknesses, finishes and hardware.

- .4 Provide hardware schedule and specifications.
- .5 Indicate locations of all electrical components.

- .4 Samples:
 - .1 Submit samples for each colour and texture specified, 75 mm in size.
 - .2 Submit one representative model of each type of partition:
 - .1 Trim and finishes
 - .3 Submit hardware and accessories samples involving color or finish selection.
 - .4 Samples for verification for each type of the following products:
 - .2 Linear trim: 300 mm long.
 - .3 Glazing: manufacturer's standard-size unit, but not less than 75mm square.

1.4 INFORMATION SUBMITTALS

- .1 Test and Evaluation Reports:
 - .1 Submit test reports in accordance with Section 01 45 00 - Quality Control, from approved independent testing laboratory, certifying partition system complies with sound transmission rating, fire hazard classification as specified.
 - .2 Provide upon request, product drawings or reports for vertical shift allowance and seismic bracing for the wall system for review by a Departmental Representative registered or licensed in Quebec, Canada.
 - .3 Provide Seismic Qualification report for wall systems prepared by a Departmental Representative registered in Quebec, Canada.

- .2 Submit acoustic test reports for evaluation.

- .3 Sustainable Design Submittals:
 - .1 Sustainability: products to be certified by independent third-party in accordance with BIFMA e3 - Level 2.
 - .2 Environmental: product must receive one or more points under Section 7.6 of ANSI/BIFMA e3, and not to exceed emissions concentration limits in accordance with ANSI/BIFMA X7.1-SCS Indoor Advantage and Indoor Advantage™ Gold.
 - .3 LEED Contribution: provide complete document for LEED contribution below: (but not limited to)
 - .1 Recycled content.
 - .2 Regional materials.
 - .3 Certified wood: submit manufacturer's Chain-of-

- Custody Certificate number for CAN/CSA-Z809 or FSC or SFI certified wood.
- .4 Low-Emitting materials:
 - .1 Submit listing of paints and coatings used in building, comply with Volatile Organic Compound (VOC) and chemical component limits or restrictions requirements.
 - .2 Submit listing of laminate adhesives used in building, stating that they contain no urea-formaldehyde.
 - .5 Daylight and views.
 - .6 Innovation in design.
 - .7 Materials & Resources.
 - .8 Sustainable purchasing.
- .4 Seismic submittals:
- .1 Submit seismic restraint shop drawings sealed by a professional engineer registered or licensed in Quebec, Canada.
 - .2 Provide signed letter that contracted work has been installed in compliance with approved shop drawings; letter to be signed by a professional engineer registered or licensed in Quebec, Canada.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with module sizes and with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors, in a dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect demountable partition and components from breakage, nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 47 15 – Sustainable Requirements Construction.
- .5 Packaging Waste Management: remove for reuse as specified in Construction Waste Management Plan in accordance with Section

01 74 19 –Waste Management and Disposal and Section 01 47 15
– Sustainable Requirements Construction.

PART 2 PRODUCTS

2.1 SOLID FASCIA WALL SYSTEM

- .1 Wall Types:
 - .1 Monolithic Wall Panel: Solid Panel
 - .2 Segmented Wall Panel: Solid Panel and Clerestory Panel.
- .2 Performance Requirements:
 - .1 Structural performance:
 - .1 Transverse load capacity to: ASTM E72.
 - .1 Capable of sustaining 240 Pa minimum transverse loading with panel deflection no greater than $l/120$.
 - .2 Floor deflection:
 - .1 Able to accommodate minimum of 6mm floor deflection in vertical shift.
 - .2 Provide product drawings or report for vertical shift allowance and seismic bracing for wall system designed by a Departmental Representative registered or licensed in Quebec, Canada.
 - .3 Seismic analysis: ASCE 7
 - .1 Provide seismic qualification report for wall systems prepared by a Professional Engineer registered or licensed in Quebec, Canada to determine permissible loading capacity, anchoring and bracing requirements.
 - .2 Including (but not limited to) connection to concrete slabs, concrete over metal deck, and wood or gypsum board hard ceilings.
- .2 Wall panel load bearing for panel hung components:
 - .1 Provide mounting systems at varying heights on both sides of panel.
 - .2 Provide vertical posts slotted for component attachment at vertical increments of no more than 30mm.
 - .3 Wall panel hung work surface, storage cabinet and shelf loading to: ANSI/BIFMA x 5.6 Mechanical Strength Test for Panel Systems Products.

- .1 Loaded in accordance with Table 1- Test Loads for Surfaces, Disengagement Tests for Panel Mounted Components and applicable tests.
- .3 Acoustic performance: sound transmission requirements
STC: to ASTM E90 and ASTM E413.
 - .1 Partition for ancillary spaces: minimum STC 40.
 - .2 Partition for offices, meeting and conference rooms: minimum STC 43.
 - .3 Conduct STC tests on wall assembly, including components as installed in field with panel adjoining components with minimum of 2440 mm wall span and minimum 2440 mm height.
 - .4 Noise Reduction requirements – NRC:
 - .1 For acoustic panel, manufacturer to provide noise reduction solution for base panel with covering material to obtain a minimum of NRC 0.5.
 - .2 Supporting document for evaluation as requested.
- .4 Flammability to: ULC S102.
 - .1 Flame Spread Rating: not more than 25, unless otherwise specified. ASTM E84
 - .2 Smoke Development: less than 450.
 - .3 Provide FSC Chain of Custody Certification number.
- .3 Wall panel size and requirements:
 - .1 Wall height:
 - .1 Accommodate full height floor to finished ceiling.
 - .2 Provide minimum of 63mm overall vertical height adjustment, or minimum of ± 19 mm for floor and minimum of ± 19 mm ceiling variations.
 - .2 Panel width:
 - .1 As determined by manufacturer's design to suit partition layout using standard width modules from minimum of 203mm to maximum of 1524mm.
 - .2 Provide increments of less than or equal to 6 mm for filler wall modules to meet floor plan requirements.
 - .3 Panel thickness: nominal thickness 100mm maximum.
 - .3 Panel connections: in-line, 90-degree, (L, T and X connection) and 120-degree.
- .4 Transitional wall: full height wall modules transitions between different wall materials must be from same wall series, including

from solid wall module to glazed wall module as well as in-line connection by mullion or post with designed decorative finished covering by manufacturer.

- .5 Segmented panel: can be combination of different wall panel materials from same wall series to form full height wall panel module, with in-line connection by mullion or post with designed decorative finish covering by manufacturer.
- .6 Clerestory height: minimum of 610mm in height or no less than 20% of floor to ceiling height below finished ceiling or according to shop drawings.
- .7 Panel Fascia types:
 - .1 Solid fascia: veneers, MDF, melamine board, fabric cover, acoustic material or metal from manufacturer's standard offering.
 - .1 Sandwiched wall modules can contain recycled core filling materials.
 - .2 Writable surfaces: white board: painted metal, polyethylene terephthalate (PET) wrapped steel, ceramic surface or back painted glass.
 - .1 Back painted glass: minimum 6 mm thick.
 - .3 Glass: tempered or laminated.
 - .1 Glass panel to: CAN/CGSB-12.1-M.

2.2 GLAZED WALL SYSTEM

- .1 Wall Types:
 - .1 Single glazed wall system:
 - .1 Horizontal segmented glazed panel framed: floor to ceiling, with horizontal mullion and vertical post support.
- .2 Performance Requirements:
 - .1 Structural Performance:
 - .1 Transverse load capacity to: ASTM E72.
 - .1 Capable of sustaining 240 Pa minimum transverse loading with panel deflection no greater than $l/120$.
 - .2 Floor deflection:
 - .1 Able to accommodate minimum of 6mm floor deflection in vertical shift.
 - .2 Provide product drawings or report for vertical shift allowance and seismic bracing for wall system designed by a professional engineer registered or licensed in Quebec, Canada.
 - .3 Seismic analysis:

- .1 Provide seismic qualification report for wall systems prepared by a professional engineer registered or licensed in Quebec, Canada showing permissible loading capacity, anchoring and bracing requirements (including but not limited to connection to concrete slabs, concrete over metal deck, and wood or gypsum board hard ceilings).
- .2 Acoustic Performance:
 - .1 Sound transmission requirements STC to: ASTM E90 and ASTM E413.
 - .1 Single Glazed wall system:
 - .1 Framed: minimum STC of 31 – 34.
 - .2 Conduct STC tests on wall assembly, including components as installed in field with panel adjoining components with minimum of 2440 mm wall span and minimum 2440 mm height.
 - .3 Flammability to: ULC S102.
 - .1 Flame spread rating: less than 25
 - .2 Smoke development: less than 450
 - .4 Marking for full height glass wall to: CSA B651.
 - .1 Continuous opaque strips of logos, signs or decorative features such as broken lines or continuous bands is required to increase visibility and provide awareness of presence of glass wall.
- .3 Wall panel size and requirements:
 - .1 Wall height:
 - .1 Accommodate full height floor to finished ceiling.
 - .2 Provide minimum of 63mm vertical adjustment, or minimum of ± 19 mm for floor and minimum of ± 19 mm ceiling variations.
 - .3 Erect and remove with minimal damage to floor and ceiling finishes.
 - .2 Panel width: as determined by manufacturer's design to suit partition layout using standard width modules from minimum of 203mm to maximum of 1524mm.
 - .1 Provide increments of less than or equal to 6 mm for filler wall modules to meet floor plan requirements.
 - .3 Panel thickness: nominal thickness 100mm maximum.
 - .4 Panel connection: in-line, 90-degree, (L, T and X connection) and 120-degree.
- .4 Glass: tempered or laminated.

- .1 Glass panel with minimum 6 mm thick to: CAN/CGSB-12.1-M

2.3 DOOR SYSTEM

- .1 Door types: Sliding / Barn Door.
- .2 Door clear width:
 - .1 In accordance with CSA B651 clear open width of 813 mm and maximum of 1219 mm.
 - .2 Measured between face of door and stop of frame with door open to 90 degrees for swing or pivot doors.
- .3 Performance Requirements:
 - .1 Structural performance to: BIFMA x 5.6 Access door tests.
 - .2 Acoustic performance with minimum STC 25 to: ASTM E90 and ASTM E413.
- .4 Doors:
 - .1 Glass doors:
 - .1 Sliding / Barn Door- Left and Right slide:
 - .1 Glass: tempered or laminated to: CAN/CGSB-12.1.
 - .2 Glass thickness: minimum 13 mm.
 - .3 Door seals: to include brush and foam receiver at closer side for light and sound seal.
 - .4 Glass door hardware to: CSA B651, as supplied by manufacturer or as indicated.
 - .5 Track assembly: manufacturers standard assembly with slow down mechanism.
 - .3 Glass windows / sidelights: tempered to: CAN/CGSB-12.1M.

2.4 MATERIALS AND COMPONENTS

- .1 General: pre-manufactured, non-progressive wall system consisting of framing members, finish panels and glazing, floor, wall and ceiling mounting materials, acoustic fillers, doors, and hardware; fully moveable and reusable in reconfigured layouts and spaces, and as follows:
 - .1 Floor tracks: manufacturers' standard continuous track with carpet grippers or non-slip pads; fabricated to meet project requirements.
 - .2 Wood composite panels: factory finished wood composite panel with finishing material:
 - .1 Select pattern, colour, texture, and finish from manufacturer's full range.

- .3 Panel connections: manufacturers' standard for panel and framing attachments.
- .4 Trim and base: manufacturers' standard for complete installed system.
- .5 Acoustic insulation: to contain post-consumer and post-industrial recycle content.
- .2 Aluminum extrusions to: ASTM B221M and ASTM B221.
 - .1 Finish:
 - .1 Clear anodized coating to Class II, AA-M12C22A31.
 - .2 Colour anodized coating to Class I, AA-M12C22A44.
 - .3 Steel components to: ASTM A653/A653M-13.
 - .4 Flexible plastic components: manufacturer standard PVC-free components including but not limited to ceiling and wall trims and glass retainers.
 - .1 Colour black and custom coloured as selected by Departmental Representative from manufacturers complete range of colours.
 - .5 Medium Density Fibreboard (MDF) to: NPA A208.2.
 - .1 Composed of wood fibres, made with waterproof binders to: CARB Phase 2.
 - .6 Wood, laminated and melamine board to: ULC S102, Class 1 flame spread rated unless otherwise specified.
 - .7 Door frame:
 - .1 Extruded aluminum to: ASTM B221M or ASTM B221:
 - .1 Manufacturer's standard attachment hardware to unitized partition modules.
 - .2 Include continuous vinyl seal on door stop.
 - .2 Aluminum Finish:
 - .1 Clear anodized coating to Class II, AA-M12C22A31.
 - .2 Colour anodized coating Class I, AA-M12C22A44.
 - .3 Hardware reinforcement: factory installed steel backer plates at hinge and strike locations.

2.5 INTEGRATED ELECTRICAL AND COMMUNICATION SYSTEMS REQUIREMENTS

- .1 Electrical systems and components to: CSA C22.1 and listed by Standards Council of Canada accredited certification organizations.
- .2 Unitized partition modules:

- .1 Wiring devices: standard electrical switches and outlets, thermostats, communications systems to: CSA B651 in accordance with Section 26 27 26 – Wiring Devices provide integrated, factory installed electrical including
 - .1 Outlets and devices: As indicated.
 - .2 Outlets: 5-15R, USB, and other special receptacles as indicated.
 - .3 Communication systems components including 8P8C-(RJ45)
Ethernet socket with category 7 or better as indicated.
 - .4 Provide connectors for ease of panel reconfiguration.
- .2 Modular wiring systems: to CSA C22.2 No. 203
- .3 Wires and cables: in accordance with Section 26 05 21- Wires And Cables (0-1000 V) to accommodate power of 120V with 12 AWG wiring for 15/20 amp circuitry, lighting control typical 120V unless specified or low voltage and single and double gang receptacles and switches.
- .4 Metal conduit raceway and pull wire: in accordance with Section 26 05 34 – Conduits, Conduit Fastenings And Conduit Fittings

PART 3 EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates and surfaces to receive post and panel demountable partitions previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's 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 from Departmental Representative

3.2 INSTALLATION

- .1 Install partitions after floor finishes by in accordance with manufacturer's instructions.
- .2 Install partitions plumb, square and level.
 - .1 Accurately fit and fasten to abutting surfaces.

- .2 Do not allow see-through gaps in vertical slotted uprights after installation.
- .3 Anchoring may vary according to seismic requirements.
- .3 Install partitions with minimal damage to finished flooring and underside of existing suspended ceiling, to minimize repair in future work.
- .4 Glazed panel frameless - without structural vertical post support:
 - .1 Connect glazed panels to each other using self-adhesive silicone tape or non-structural support elements.
- .5 Glazed panel framed - with vertical post support:
 - .1 Connect glazed panels to each other with structural vertical post support elements.
- .6 Horizontal segmented glazed panel framed - with horizontal mullion and vertical post support:
 - .1 Join segmented wall panels in accordance with manufacturer's instructions, to form full height wall between horizontal segments and vertical structural support elements between panels.
- .7 Double glazed panel:
 - .1 Glazed panel on front and back faces of wall system.
- .8 Install electrical devices and components to: CSA C22.1 and in accordance with manufacturer's instructions.
 - .1 Standard electrical switches and outlets, thermostats, communications systems:
 - .1 Prepare partition modules for light switches, thermostats as indicated.
 - .2 Mounted to be accessible.
 - .3 Locate operating controls in range between 400mm and 1200mm from floor.
 - .2 Modular wiring systems:
 - .1 Ensure wiring is fully accessible from either side to allow for direct access to interior cavity space with connectors.
 - .2 Ensure modules can be electrified by floor and top feed power harness.
 - .3 When panel design does not allow ease of access to interior cavity, supply factory installed internal raceways with pull string to fish cables through base cavity of panel after installation to accommodate future routing of electrical and data cables.

- .4 Supply power to module via ceiling terminating at height in accordance with CSA B651
 - .1 Locate above finished floor or to module base as indicated.
- .5 Provide cut-outs and reinforcements to accept electrical, communications, mechanical and security system components.
- .6 Provide whip/pigtail length.
- .7 Provide outlet boxes and device.

- .8 Future Work: ensure installed partition module can accommodate future electrical and communication upgrades with minimal wall damage.
- .9 Provide blank plates as indicated.
- .10 Glaze partitions in accordance with Section 08 80 50 – Glazing.
- .11 Drilling acceptable in accordance with Division 02.

3.3 ADJUSTING

- .1 Adjust demountable partition system to fit accurately in accordance with manufacturer's written recommendations.

3.4 CLEANING

- .1 In accordance with Section 01 74 00 – Cleaning.
 - .1 Progress cleaning: leave work area clean at end of each day.
 - .2 Final cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by work when required.

END OF SECTION