PART 1 GENERAL

1.1 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures.

.2 Section 01 74 00 – Cleaning & Waste Management

.3 Section 07 90 00 - Joint Sealants.

.4 Section 08 71 00 - Door Hardware.

.5 Section 09 91 23 - Interior Painting.

1.2 REFERENCES

.1 American Society for Testing and Materials (ASTM)

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

.2 Canadian General Standards Board (CGSB)

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

.2 CGSB 41-GP-19Ma, Rigid Vinyl Extrusions for Windows and Doors.

.3 Canadian Standards Association (CSA)

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

.2 CSA W59, Welded Steel Construction (Metal Arc Welding).

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

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

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

.5 National Fire Protection Association (NFPA)

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

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

.6 Underwriters' Laboratories of Canada (ULC)

.1 CAN4-S104M, Fire Tests of Door Assemblies.

.2 CAN4-S105M, Fire Door Frames Meeting the Performance Required by CAN4-S104.

.3 CAN/ULC-S701, Thermal Insulation, Polystyrene, Boards and Pipe Covering.

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

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

1.3 DESIGN REQUIREMENTS

.1 Design door assembly to withstand minimum 1,000,000 swing cycles in accordance with ANSI A151.1, with no failure of any design features of the door.

.2 Design exterior frame assembly to accommodate to expansion and contraction when subjected to minimum and maximum surface temperature of -35°C to 35°C.

.3 Maximum deflection for exterior steel entrance screens under wind load of 1.2 kPa not to exceed 1/175th of span.

.4 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104 and NFPA 252 for ratings specified or indicated.

.5 Provide fire labelled frames for openings requiring fire protection ratings. Test products in conformance with CAN4-S104 and NFPA 252 and listed by nationally recognized agency having factory inspection services and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.

1.4 SUBMITTALS

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

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

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

.4 Submit one 300 x 300 mm top corner sample of each type door.

.5 Submit one 300 x 300 mm corner sample of each type of frame.

.1 Show butt cutout, glazing stops.

1.5 DELIVERY STORAGE AND HANDLING

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

.2 Deliver, handle and store doors and frames at the job site in such a manner as to prevent damage.

.3 Store doors and frames under cover with doors stored in a vertical position on blocking, clear of floor and with blocking between doors to permit air circulation.

1.6 QUALITY ASSURANCE

.1 Conform to requirements to ANSI A117.1

.2 Company specializing in manufacturing products specified with a minimum of five (5) years documented experience.

1.7 WARRANTY

.1 Provide a written warranty for work of this section from manufacturer for failure due to defective materials and from contractor for failure due to defective installation workmanship, for one (1) year respectively from the date of Substantial Completion.

PART 2 PRODUCTS

2.1 MATERIALS

.1 Hot dipped galvanized steel sheet: to ASTM A653/A653M, ZF75, minimum base steel thickness in accordance with CSDMA Table 1 - Thickness for Component Parts.

.2 Reinforcement channel: to CSA G40.20/G40.21, Type 44W, coating designation to ASTM A653/A653M, ZF75.

2.2 DOOR CORE MATERIALS – INTERIOR DOORS

.1 Stiffened: face sheets welded honeycomb core.

.2 Honeycomb construction:

.1 Structural small cell, 24.5 mm maximum kraft paper 'honeycomb', weight: 36.3 kg per ream minimum, density: 16.5 kg/m³ minimum sanded to required thickness.

2.3 DOOR CORE MATERIALS – EXTERIOR DOORS

.1 Stiffened: face sheets welded insulated core.

.1 Expanded polystyrene: CAN/ULC-S701, density 16 to 32 kg/m^3.

.2 Polyurethane: to CAN/ULC-S704 rigid, modified polyisocyanurate, closed cell board. Density 32 kg/m^3.

.2 Temperature rise rated (TRR): core composition to limit temperature rise on unexposed side of door to 250°C at 60 minutes. Core to be tested as part of a complete door assembly, in accordance with CAN4-S104, ASTM E152 or NFPA 252, covering Standard Method of Tests of Door Assemblies and listed by nationally recognized testing agency having factory inspection service.

.3 Thermal Insulation material must:

.1 Not require being labelled as poisonous, corrosive, flammable or explosive under the Consumer Chemical and Container Regulations of the Hazardous Products Act.

.2 Be manufactured using a process that uses chemical compounds with the minimum zone depletion potential (ODP) available.

2.4 ADHESIVES

.1 Polystyrene and polyurethane cores: heat resistant, epoxy resin based, low viscosity, contact cement.

2.5 PRIMER

.1 Touch-up prime CAN/CGSB-1.181.

2.6 ACCESSORIES

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

.2 Exterior top and bottom caps steel.

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

.4 Door bottom seal: Section 08 71 00 – Door Hardware.

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

.6 Fire labels: metal riveted.

.7 Sealant: Section 07 92 00 – Joint Sealants.

.8 Provide low expanding, single component polyurethane foam sealant installed at head and jamb perimeter of door frame for sealing to building air barrier, vapour retarder and door frame. Foam sealant width to be adequate to provide required air tightness and vapour diffusion control to building air barrier and vapour retarder foam interior. Refer to Section 07 21 20 – Low Expanding Foam Sealant.

.9 Glazing: Section 08 80 50 – Glazing.

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

.1 Provide removable stainless steel glazing beads for dry glazing of snap-on type.

.2 Design exterior glazing stops to be tamperproof.

.11 Finish Painting: to Section 09 91 13 – Exterior Painting and Section 09 91 23 – Interior Painting.

2.7 FRAMES FABRICATION GENERAL

.1 Fabricate frames in accordance with CSDMA specifications.

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

.3 Exterior frames: 1.2 mm welded, thermally broken type construction.

.4 Interior frames: 1.2 mm welded type construction.

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

.6 Protect mortised cutouts with steel guard boxes.

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

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

.9 Conceal fastenings except where exposed fastenings are indicated.

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

.11 Insulate exterior frame components with polyurethane insulation.

2.8 FRAME ANCHORAGE

.1 Shim and anchor new doors in accordance with CAN/CSA A440.4.

.2 Provide appropriate anchorage to floor and wall construction.

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

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

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

2.9 FRAMES: WELDED TYPE

.1 Welding in accordance with CSA W59.

.2 Accurately mitre or mechanically joint frame product and securely weld on inside of profile.

.3 Cope accurately and securely weld butt joints of mullions, transom bars, centre rails and sills.

.4 Grind welded joints and corners to a flat plane, fill with metallic paste and sand to uniform smooth finish.

.5 Securely attach floor anchors to inside of each jamb profile.

.6 Weld in 2 temporary jamb spreaders per frame to maintain proper alignment during shipment.

2.10 DOOR FABRICATION GENERAL

.1 Doors: swing type, flush, with provision for glass and/or louvre openings as indicated.

.2 Exterior doors: insulated, hollow steel construction. Interior doors: honeycomb hollow steel construction.

.3 Fabricate doors with longitudinal edges locked seam. Seams: grind welded joints to a flat plane, fill with metallic paste filler and sand to a uniform smooth finish.

.4 Doors: manufacturers' proprietary construction, tested and/or engineered as part of a fully operable assembly, including door, frame, gasketing and hardware in accordance with ASTM E330.

.5 Blank, reinforce, drill doors and tap for mortised, templated hardware and electronic hardware.

.6 Factory prepare holes 12.7 mm diameter and larger except mounting and through-bolt holes, on site, at time of hardware installation.

.7 Reinforce doors where required, for surface mounted hardware. Provide flush steel top caps to exterior doors. Provide inverted, recessed, spot welded channels to top and bottom of interior doors.

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

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

.10 Manufacturer's nameplates on doors are not permitted.

2.11 HOLLOW STEEL CONSTRUCTION

.1 Form each face sheet for exterior doors from 1.2 mm sheet steel.

.2 Form each face sheet for interior doors from 1.2 sheet steel.

.3 Reinforce doors with vertical stiffeners, securely welded to each face sheet at 150 mm on centre maximum.

.4 Fill voids between stiffeners of exterior doors with insulation as specified.

.5 Fill voids between stiffeners of interior doors with honeycomb core.

2.12 THERMALLY BROKEN DOORS AND FRAMES

.1 Fabricate thermally broken doors by using insulated core and separating exterior parts from interior parts with continuous interlocking thermal break.

.2 Thermal break: rigid polyvinyl chloride extrusion conforming to CGSB 41-GP-19Ma.

.3 Fabricate thermally broken frames separating exterior parts form interior parts with continuous interlocking thermal break.

.4 Apply insulation.

PART 3 EXECUTION

3.1 INSTALLATION GENERAL

.1 Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise.

.2 Install doors and frames to CSDMA Installation Guide.

3.2 FRAME INSTALLATION

.1 Set frames plumb, square, level and at correct elevation.

.2 Secure anchorages and connections to adjacent construction.

.3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.

.4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

.5 Caulk perimeter of frames between frame and adjacent material.

.6 Maintain continuity of air barrier and vapour retarder.

3.3 DOOR INSTALLATION

.1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 00 - Door Hardware.

.2 Provide even margins between doors and jambs and doors and finished floor as follows.

- .1 Hinge side: 1.0 mm.
- .2 Latch side and head: 1.5 mm.
- .3 Finished floor: 13 mm.

.3 Adjust operable parts for correct function.

.4 Install louvres.

3.4 FINISH REPAIRS

.1 Touch up with primer finishes damaged during installation.

.2 Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

3.5 GLAZING

.1 Install glazing for doors and frames in accordance with Section 08 80 50 - Glazing.

3.6 COMMISSIONING

.1 Contractor to instruct maintenance personnel in operation and maintenance of doors and hardware.

.2 Confirm operation and function for all doors and hardware.

.3 Commissioning will be witnessed by Owner's Representative and Certificate will be signed by Contractor and Owner's Representative.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work

.1 Section 08 11 14 - Steel Doors & Frames.

1.2 Reference Standards

.1 Standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames prepared by Canadian Steel Door and Frame Manufactures' Association, ANSI/NFPA 80 and ANSI/BHMA.

.2 ANSI/BHMA A156.1-2006, Butts and Hinges.

.3 ANSI/BHMA A156.3-2001, Exit Devices.

.4 ANSI/BHMA A156.4-2000, Door Controls (Closers).

.5 ANSI/BHMA A156.5-2001, Auxiliary Locks and Associated Products.

.6 ANSI/BHMA A156.6-2005, Architectural Door Trim.

.7 ANSI/BHMA A156.7-2009, Template Hinge Dimensions.

.8 ANSI/BHMA A156.8-2005, Door Controls - Overhead Holders.

.9 ANSI/BHMA A156.13-2005, Mortise Locks and Latches.

.10 ANSI/BHMA A156.16-2002, Auxiliary Hardware.

.11 ANSI/BHMA A156.18-2006, Materials and Finishes.

.12 ANSI/BHMA A156.21-2009, Thresholds.

1.3 Requirements Regulatory Agencies

.1 Hardware for doors in fire separations and exit doors certified by a Canadian Certification Organization accredited by Standards Council of Canada.

1.4 Hardware List

.1 Submit contract hardware list in accordance with Section 01 33 00 - Submittal Procedures.

.2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.

.3 Include with hardware list, product data cuts for all hardware specified noting manufacturer, and model number.

1.5 Maintenance Data

.1 Provide operation and maintenance data for door closers, locksets, door holders and fire exit hardware for incorporation into manual specified in Section 01 78 00 -Closeout Submittals.

.2 Brief maintenance staff regarding proper care, cleaning, and general maintenance.

1.6 Maintenance Materials

.1 Provide maintenance material and spare parts and tools in accordance with Section 01 78 00 - Closeout Submittals.

.2 Supply two sets of wrenches for door closers, locksets and fire exit hardware.

1.7 Delivery and Storage

.1 Store finishing hardware in locked, clean and dry area.

.2 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.

PART 2 - PRODUCTS

2.1 Hardware Items

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

.2 Hardware to CAN/CGSB/ANSI/BHMA standards listed, or where none exists material to be qualified for similar use.

2.2 Door Hardware

.1 Mortise Locksets:
- .1 Noted in Hardware Schedule as Function only (use the following lever or knob, with related function per schedule):
  - .1 Heavy duty mortise locksets to ANSI A156.13, series 1000, security grade 1.
  - .2 Functions as follows:
    - .1 ANSI F07 - Storeroom or Service Function.
- .2 All locksets above to be lever function as noted in hardware schedule, and finished in Satin chrome.
- .3 Round rose, satin chrome.
- .4 ANSI Standard Strikes with ANSI box.
- .5 Trim Design:
  - .1 Lever design: solid handle, round bar contoured in a "C" shape with angle return, similar in design and style as the Sargent "J" Level, Schlage "93" or Corbin "Lustra", Dorex DM Series, Cornell.
- .6 Cylinders and keying: Cylinders from same manufacturer as lockset, 6 pin mortised unit, keyed into existing building system.
- .7 Finished to ANSI 626.
- .8 UL/ULC listed for use on fire rated doors as per Door and Frame Schedule.
- .9 Acceptable product: Sargent 8200, Schlage L9000, Corbin-Russwin ML2000, Dorex DM Series.
  - .1 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tender's Form.

.2 Butts and hinges to ANSI/BHMA A 156.1. 3 Butts per door panel up to 1000mm in width, 4 Butts per door over 1001mm in width:
- .1 Steel base polished and plated, full mortise, templated, 5 knuckle, 2 permanently lubricated ball bearings, 114 x 102 x 3.4mm, finished to ANSI 626.
  - .1 Acceptable product: Stanley FBB 179, Hager BB1279 or McKinney TA2714, Dorex Pro 179 Series.
    - .1 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tender's Form.

.3 Door Closers:
- .1 Door controls (closers): to ANSI/BHMA A156.4, Grade 1, standard duty, non handed, parallel arm, aluminum body with high impact acrylic cover, adjustable through ranges 1 to 4, adjustable backcheck and delayed action, finished to ANSI 689.
- .2 Acceptable product: Sargent 1431-O, LCN 1460T, Dorex 5600 Series.
- .3 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tender's Form.

.4 Auxiliary Trim & Devices:

.5 Door Stops:

.1 Wall stop to ANSI/BHMA A156.8, solid cast brass or bronze, circular shape, rubber insert, concealed mounting, 45 mm diameter, finished to ANSI 626.

.2 Acceptable product: Hager 241F/243F, Standard Metal Hardware Manufacturing S101/S103, Canaropa General Hardware T200 / T218.

.3 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tender's Form.

2.3 Fastenings

.1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.

.2 Exposed fastening devices to match finish of hardware.

.3 Use fasteners compatible with material through which they pass.

2.4 Keying

.1 All keying shall be in masterkey format, keyed into Owner supplied schedule.

.2 Provide three keys per cylinder.

PART 3 - EXECUTION

3.1 Installation Instructions

.1 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.

.2 Furnish manufacturers' instructions for proper installation of each hardware component.

.3 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.

3.2 Schedule

.1 Service doors to be equipped with the following hardware:

3 Hinges: FBB 179
1 Lockset: Function F07
1 Door Closer: 1430
1 Door Stop: 241F/243F

PART 1 - GENERAL

1.1 Related Sections

.1 Section 10 28 00 Toilet and Bath Accessories.

1.2 References

.1 ASTM A 167-99(2009) Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

.2 ASTM D 1044-08 Standard Test Method for Resistance of Transparent Plastics to Surface Abrasion

.3 CAN/CSA-B651-M95 Barrier-Free Design.

.4 CSA O112 Series-M1977 CSA Standards for Wood Adhesives.

.5 CSA O121-08) Douglas Fir Plywood.

.6 CSA O151-04 Canadian Softwood Plywood.

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

1.3 Samples

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

.2 Submit duplicate 300 x 300mm samples of panel showing finish on both sides, two finished edges and core construction.

.3 Submit duplicate representative samples of each hardware item, including brackets, fastenings and trim.

1.4 Shop Drawings

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

.2 Indicate fabrication details, plans, elevations, hardware, and installation details.

1.5 Closeout Submittals

.1 Provide maintenance data for plastic laminate for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.6 Storage and Protection

.1 Deliver, store, handle and protect materials in accordance with Section 01 33 00 - Submittal Procedures.

.2 Protect finished laminated plastic surfaces during shipment and installation. Do not remove until immediately prior to final inspection.

PART 2 - PRODUCTS

2.1 Materials

.1 Stiles, Panels, Doors, and Screens:
- .1 Solid phenolic material constructed of solidly fused plastic laminate with matte-finish melamine surfaces, colored face sheets, and black phenolic-resin core that are integrally bonded. Edges shall be black. Brown edges shall not be acceptable. Color and pattern as selected by Departmental Representative from manufactures standard colors.
- .2 Solid phenolic material shall meet National Fire Protection Association and International Building Code Interior Wall and Ceiling Finish Class A, Uniform Building Code Class I, ASTM E-84 Fire Resistance Standards; flame spread 20, smoke density 95.
- .3 Finish Thickness:
  - .1 Stiles and doors shall be 19mm.
  - .2 Panels shall be 13mm.

.2 Hardware:
- .1 All hardware to be 18-8, type-304 stainless steel with satin-finish.
- .2 All hardware shall be concealed inside compartments with the exception of out swing doors.
  - .1 Latch
    - .1 Sliding door latch shall be 2mm and shall slide on nylon track.
    - .2 Sliding door latch shall require less than 5-lb force to operate. Twisting latch operation will not be acceptable.
    - .3 Latch track shall be attached to door by flathead machine screws into factory installed threaded brass inserts.
    - .4 Latch handle shall have rubber bumper to act as door stop.
    - .5 Latch shall allow door to be lifted over 4.4mm keeper for emergency access.
    - .6 Metal-to-metal connection shall withstand a direct pull of over 750kg per screw.

.2 Hinges:
- .1 Hinge shall be 1.6mm continuous piano-hinge.
- .2 All doors shall be equipped with self-closing hinge.
- .3 Continuous piano-hinge shall be attached to door and stile by theft-resistant , one-way, stainless steel machine screws into threaded brass inserts.
- .4 Door shall be furnished with two 3mm vinyl-coated door stops to resist door from being kicked out of compartment.
- .5 Door stops and keeper shall be secured with stainless steel, one-way, machine screws from inside of compartment to threaded brass inserts.

.3 Mounting brackets shall be 1.2mm stainless steel and extend full height of panel. U-channels shall be furnished for panel to stile mounting. Angle brackets shall be furnished for stile-to-wall and stile-to-panel mounting. Angle brackets shall be furnished for panel-to-wall mounting.

.3 Acceptable Products: Global Partitions

PART 3 - EXECUTION

3.1 Installation

.1 Ensure supplementary anchorage, if required, is in place.

.2 Do work in accordance with CAN/CSA-B651.

3.2 Erection

.1 Partition erection.
- .1 Install partitions secure, plumb and square.
- .2 Leave 12 mm space between wall and panel or end pilaster.
- .3 Anchor mounting channels to masonry or concrete surfaces using screws and shields: to hollow walls using bolts and toggle type anchors, to steel supports with bolts in threaded holes.
- .4 Attach panel and pilaster to channel with through type sleeve bolt and nut.
- .5 Provide for adjustment of floor variations with screw jack through steel saddles made integral with pilaster. Conceal floor fixings with stainless steel shoes.
- .6 Provide templates for locating threaded studs through finished ceilings.
- .7 Equip each door with hinges, latch set, and each stall with coat hook mounted on door, mounting heights 1900 mm. Adjust and align hardware for proper function. Set door open position at 30° to inside and 30° to outside for Barrier Free.
- .8 Equip outswinging Barrier Free doors with door pulls on inside of door in accordance with CAN/CSA-B651-M95.
- .9 Install hardware.

PART 1 - GENERAL

1.1 Related Work

.1 Section 10 21 20 – Solid Plastic Toilet Partitions.

1.2 References

.1 ASTM A 167-99(2009), Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

.2 CAN/CGSB-12.5-M86, Mirrors, Silvered.

.3 CAN/CSA-B651-M95, Barrier-Free Design.

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

1.3 Shop Drawings

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

.2 Indicate size and description of components, base material, surface finish inside and out, hardware and locks, attachment devices, description of rough-in-frame, building-in details of anchors for grab bars.

1.4 Samples

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

.2 Samples to be returned for inclusion into work.

1.5 Closeout Submittals

.1 Provide maintenance data for toilet and bath accessories for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.6 Extra Materials

.1 Provide special tools required for accessing, assembly/disassembly or removal for toilet and bath accessories in accordance with requirements specified in Section 01 78 00 - Closeout Submittals.

.2 Deliver special tools to Engineer.

PART 2 - PRODUCTS

2.1 Materials

.1 Stainless steel sheet metal: to ASTM A 167, Type 302, with No. 4 satin finish.

.2 Fasteners: concealed screws and bolts hot dip galvanized, exposed fasteners to match face of unit. Expansion shields fibre, lead or rubber as recommended by accessory manufacturer for component and its intended use.

2.2 Components

.1 Item #1: Surface toilet paper holder: Double roll, 2000 sheet roll capacity, cast aluminum housing, satin finish, 320 mm wide x 125 mm projection from wall.
- .1 Acceptable material: model B-2740 as manufactured by Bobrick Washroom Equipment Of Canada Ltd., model 0264-1A by Watrous Inc. or an approved equal. Bradley Model No. 5241.
- .2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.2 Item #2: semi-recessed waste receptacle for 102 mm walls, satin finish stainless steel door, removable stainless steel waste receptacle.
- .1 Acceptable material: model B-3644 as manufactured by Bobrick Washroom Equipment Of Canada Ltd., model 0458 by Watrous Inc. or an approved equal. Bradley Model No. 344.
- .2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.3 Item #3: soap dispenser: Surface mounted, satin finish, 1.2l capacity, 180 x 155mm.
- .1 Acceptable material: model B-4112 as manufactured by Bobrick Washroom Equipment Of Canada Ltd. Bradley Model No. 6542.
- .2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.4 Item #4: single clothes hook, polished type 304 stainless steel, 50 mm x 50 mm, projects 50 mm from wall.
- .1 Acceptable material: model B-671 as manufactured by Bobrick Washroom Equipment Of

Canada Ltd., model 7340 by Watrous or an approved equal. Bradley Model No. 9114.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.5 Item #5: Shelf with 3 mop holders and 2 hooks, 1.2 mm type 304 stainless steel; 205 mm deep, 150mm high.

.1 Acceptable manufacturer: model B-224 x 30 as manufactured by Bobrick, model 1315-3 by Watrous Inc. or an approved equal. Bradley Model No. 9983.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.6 Item #6: Grab bar; 40 mm dia x 0.8 mm wall x 610 mm tubing of stainless steel, 80 mm diameter wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Peen bar at area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN.

.1 Acceptable material: model 6806.99x24 by Bobrick, model 3224 by Watrous or approved equal. Bradley Model No. 812-7 x 24.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.7 Item #7 Grab Bar; ; 40 mm dia x 0.8 mm wall 762mm tubing of stainless steel, 80 mm diameter wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Peen bar at area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN..

.1 Acceptable material: 6806.99 x 30 by Brobrick, Model 3230 by Watrous, Bradley 812-7 x 30.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.8 Item #8: Grab bar; 40 mm dia x 0.8 mm wall x 910 mm tubing of stainless steel, 80 mm diameter wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Peen bar at area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN.

.1 Acceptable material: model 6806.99x36 by Bobrick, model 3236 by Watrous or approved equal. Bradley 812-7 x 36.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.9 Item #9: Grab bar; 40 mm dia x 0.8 mm wall x 305 mm tubing of stainless steel, 80 mm diameter wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Peen bar at area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN.

.1 Acceptable material: model 6806.99x42 by Bobrick, model 3236 by Watrous or approved equal. Bradley 812-7 x 42.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.10 Item #10: Surface mounted paper towel dispenser: Cabinet holds 525 multi-fold towels, type 304 stainless steel, satin finish, piano hinge door with lock, 275 x 375 x 100 mm.

.1 Acceptable material: model B-262 by Bobrick, model 0210 by Watrous or approved equal. Bradley Model No. 250-15.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.11 Item #11: Semi recessed sanitary napkin disposal, type 304 stainless steel, spring loaded self closing door.

.1 Acceptable material: model B-35303 by Bobrick, model 0473 by Watrous or an approved equal. Bradley Model No. 4737.

.2 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

.12 Item #12: Mirror: type 304 stainless steel frame, satin finish, no. 1 quality 6 mm glass mirror electrolytically copper plated, size as indicated.

.13 Item #13: Curtain rod: ceiling mounted extruded aluminium hospital cubicle curtain style track 35 mm wide x 19 mm high, secured to ceiling with tamper proof TORX screws at drywall ceiling supports, maximum 400 mm centres. Acceptable product: System 100 track by Mono-Q-Portway or approved equal.

.1 Carriers: Solid nylon cove glides with s.s. hooks, supply sufficient number for spacing, maximum 200 mm centers. Acceptable product: #504 by Mono-Q-Portway or an approved equal.

.2 Shower Curtain: Full height, floor to ceiling length, less 150 mm, PVC 0.2 mm thickness suede embossed colour fast, with shower ring grommets reinforced with aluminium, exposed at header. Curtain to be clear at top and bottom with embossed non-see-thru at centre panel of 800 mm. Acceptable product: Frost, Watrous, Bobrick Pride Contract or an approved alternate.

.3 Alternative Materials: Approved by addendum in accordance with approval of Alternate Materials clause in the Special Instructions to Tenders's Form.

2.3 Fabrication

.1 Weld and grind joints of fabricated components flush and smooth. Use mechanical fasteners only where approved.

.2 Wherever possible form exposed surfaces from one sheet of stock, free of joints.

.3 Brake form sheet metal work with 1.5 mm radius bends.

.4 Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.

.5 Back paint components where contact is made with building finishes to prevent electrolysis.

.6 Hot dip galvanize concealed ferrous metal anchors and fastening devices to CAN/CSA-G164.

.7 Shop assemble components and package complete with anchors and fittings.

.8 Deliver inserts and rough-in frames to job site at appropriate time for building-in. Provide templates, details and instructions for building in anchors and inserts.

.9 Provide steel anchor plates and components for installation on studding and building framing.

2.4 Finishes

.1 Manufacturer's or brand names on face of units not acceptable.

.2 Satin polished stainless steel or polished stainless steel as specified.

PART 3 - EXECUTION

3.1 Installation

.1 Install and secure accessories rigidly in place as follows:
- .1 Stud walls: install steel back-plate to stud prior to plaster or drywall finish. Provide plate with threaded studs or plugs.
- .2 Hollow masonry units or existing plaster/drywall: use toggle bolts drilled into cell/wall cavity.
- .3 Solid masonry or concrete: use bolt with lead expansion sleeve set into drilled hole.

.2 Use tamper proof stainless steel screws/bolts for fasteners.

.3 Fill units with necessary supplies shortly before final acceptance of building.

3.2 Locations

.1 Locate accessories where indicated on drawings.