

Part 1 General**1.1 REFERENCE STANDARDS**

- .1 Aluminum Association, Inc. (AAI)
 - .1 AAI DAF 45-03 (R2009), Designation System for Aluminum Finishes.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.81-M90, Air Drying and Baking Alkyd Primer for Vehicles and Equipment.
 - .2 CAN/CGSB-1.88-92, Gloss Alkyd Enamel, Air Drying and Baking.
 - .3 CGSB 31-GP-107Ma-90, Non-Inhibited Phosphoric Acid Base Metal Conditioner and Rust Remover.
 - .4 CGSB 41-GP-6M-1983, Sheets, Thermosetting Polyester Plastics, Glass Fibre Reinforced. Reaffirmation of September 1976.
- .3 Green Seal Environmental Standards
 - .1 Standard GS-11-2015, Paints, Coatings, Stains, and Sealers
 - .2 Standard GS-36-2013, Adhesives for Commercial Use
- .4 Federal Identity Program Manual (FIP)
- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Safety Data Sheets (SDS).
- .6 The Master Painters Institute (MPI)
 - .1 Master Painters Institute Architectural Painting Specification Manual - current edition.
 - .1 MPI #76, Quick Dry Alkyd Metal Primer.
 - .2 MPI #96, Quick Dry Enamel Low Gloss.

1.2 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-Installation Meetings: convene pre-installation meeting one week prior to beginning on-site installation, with Departmental Representative in accordance with Section 01 00 10 – General Instructions to:
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Co-ordination with other building sub-trades.
 - .4 Review manufacturer's installation instructions and warranty requirements.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Shop Drawings:
 - .2 Submit shop drawings, catalogue sheets, full size templates.

.3 Indicate materials, thicknesses, sizes, finishes, colours, construction details, removable and interchangeable components, mounting methods, schedule of signs.

.3 Samples:

.1 Submit representative sample of each sign type, sign image and mounting method including, but not limited to: locker, touchdown, workstation and pod numbering; and tactile signs. Show also hardware for projecting brackets.

.2 Submit one (1) complete sample of a MR type office sign.

1.4 INFORMATIONAL SUBMITTALS

.1 Product Data:

.1 Submit manufacturer's printed product literature for directory board signage or components, specifications and data sheet and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures.

1.5 DELIVERY, STORAGE AND HANDLING

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

.2 Packaging Waste Management:

.1 Remove for reuse and return by manufacturer of pallets, crates, padding and packaging materials in accordance with Section 01 74 19 – Waste Management and Disposal

Part 2 Products

2.1 MATERIALS

.1 Aluminum extrusions: to designation AA 6063-T5.

.1 Recycled content: 10% (Post-Consumer + 50% Post-Industrial).

.2 Sheet aluminum: utility quality.

.1 Recycled content: 10% (Post-Consumer + 50% Post-Industrial).

.2 Pre-finished sheet aluminum: utility sheet with manufacturer applied baked enamel finish to designation AA- 0.25 mm thick on face and 0.0076 mm thick on back.

.3 Recycled content: 10% (Post-Consumer + 50% Post-Industrial).

.3 Acrylic sheet: polymethylmethacrylate (PMMA) cast sheet suitable for intended use in sign fabrication, colours as indicated.

.4 Self-stick foam tape: 1.6 mm thick, 352.4 kg/m³ density polyurethane open-cell foam tape for sign purposes, with synthetic self-stick adhesive on both sides.

.1 Width: to suit sign sizes.

2.2 SIGN GRAPHICS

- .1 Sign graphics: well defined, arranged for balanced appearance, and properly word and letter spaced in accordance with the FIP Signage Guidelines.
- .2 Self-stick vinyl film: individual letters and numerals and symbols plotter cut from 0.1 mm thick integral colour, matte finish, interior grade PVC film, with self-stick adhesive backing.
- .3 Decals: silk screened or digitally printed images on 0.025 mm, matte film, with self-stick adhesive backing.
 - .1 Protect image with laminated film overlay of same material as decal base.

2.3 NAMEPLATES

- .1 Interchangeable mounting:
 - .1 Supply wall plates with approved type, semi-concealed, retaining holders that permit quick but vandal-resistant interchange of sign face.
 - .2 Exposed fasteners not permitted.
 - .3 Exposed portions to match sign face.
- .2 Fixed mounting:
 - .1 Prepare wall plates for fixing to wall surfaces and acrylic screen hangers using self-stick foam tape.
- .3 Bracket mounting:
 - .1 Fabricate brackets for wall projecting or ceiling suspended sign plates as detailed of opaque PVC 3mm thick, all edges smooth but not polished.

2.4 BRAILLE AND TACTILE SIGNS

- .1 Meet or exceed the requirements of the ADA Accessibility Guidelines (ADAAG) 4.30 and CSA B651, 4.5.3 for tactile signs. All signs French, English and Grade 2 Braille. Use 3M-3D vacuumed formed process for fabrication.
- .2 Sub-surface graphics and text to eliminate picking off, scratching or tampering. Fade resistant, chip-proof and peel-free.
- .3 Sign surface finish: matte, non-glare.
- .4 Soft-shouldered edges for all raised elements such as pictograms and letters, eliminating the possibility of hurting or scratching fingertips. Dirt and bacteria, which may accumulate surrounding raised features, can be easily wiped clean with isopropyl alcohol or citrus-based cleaning products.
- .5 Surface burning characteristics ASTM E84, flame spread index: 15 and smoke developed index: 110. Level 1, Class A rating and self-extinguishing.
- .6 Pencil hardness: to ASTM D3363, Class H.

2.5 FABRICATION

- .1 Fabricate signs in accordance with details, specifications and shop drawings.
- .2 Build units square, true, accurate to size, free from visual or performance defects.
- .3 Fit and securely join sections to obtain tight, closed joints.

- .4 Allow for thermal movement without distortion of components.
- .5 Exposed fasteners as noted on drawings.
- .6 Polish exposed edges of plastic and metal to smooth, slightly convex profile.

2.6 FINISHES

- .1 All signs, all materials: non-glare, matte finish.
- .2 CAN/CGSB-1.81-M90 Air Drying and Baking Alkyd Primer for Vehicles and Equipment.
- .3 CGSB 1-GP-88M-83 Enamel, Alkyd, Air Drying and Baking, matte or satin
- .4 Baked enamel: one coat of conditioner to CGSB 31-GP-107M, one coat of
- .5 CAN/CGSB-1.81, Type 2 primer and at least two coats of CGSB 1-GP-88M, one coat on interior surfaces. Individually bake each coat.
- .6 FIP Standard Colours
 - .1 FIP Red: Pantone 032; CMYK: 0,100,100,0; RGB: 235-45-55; Hex: FF0000; Vinyl: 3M 7725-13
 - .2 Black: Process Black; Vinyl: 3M 7725-12
 - .3 White: Process White; Vinyl: 3M 93290
 - .4 Pewter Grey: Pantone 429; CMYK: 0,0,0,40; RGB: 150-150-150; Hex: ADAFAA; Vinyl: n/a
 - .5 Light Grey: Pantone 428; CMYK: 0,0,0,25; RGB: 200-200-200; Hex: CCCCCC; Vinyl: 3M VE 3800
 - .6 Dark Grey: Pantone 432; CMYK: 0,0,0,85; RGB: 75-75-75; Hex: 333333; Vinyl: 3M VE-3801
 - .7 Yellow: Pantone 109; CMYK: 0,10,100,0; RGB: 250-215-20; Hex: F9D615; Vinyl: 3M 7725-15
 - .8 Blue: Pantone 301; CMYK: 100,30,0,20; RGB: 0,90,155; Hex: 005B99; Vinyl: 3M 7725-47
 - .9 Green: Pantone 348; CMYK: 100,0,85,25; RGB: 0-135-80; Hex: 008751; Vinyl: 3M 7725-186
 - .10 Safety Red: Pantone 185; CMYK: 0,90,75,0; RGB: 230-15-45; Hex: E8112D; Vinyl: 3M 7725-13
- .7 Project Specific Colours
 - .1 Allow for three pantone colours to selection of Departmental Representative.

3.1 INSTALLATION

- .1 Manufacturer's Instructions:
 - .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheets.

- .2 Attend a site visit with the departmental representative to review all site conditions, when all construction and furniture is installed, prior to commencement of installation.
- .3 Mount beside door and top align to 1500 mm from floor unless otherwise indicated on drawings. Signs be laterally positioned within 50mm of door frames or entrance openings. Signs placed beside door closest to latch, knob, handle or opening. Contact consultant for instructions if sign cannot be placed accordingly.
- .4 Base-building pictograms identifying any service that is not intended for public access can have the pictogram/sign centred on the door at 1500mm from the floor. Examples: janitor, electrical or mechanical rooms, pump rooms, etc.
- .5 Large signs including directory boards mount centred at 1500mm from floor.
 - .1 In the case of any sliding door, contractor to contact the consultant.
- .6 Provide structurally rated anchors and hardware as appropriate to the sign size, weight and bearing surface. All necessary tools to be supplied and packaged ie: Matched concrete or drywall anchors, Robertson fasteners and drivers.
- .8 Where double sided adhesive tape is required for fastening only 3M 4950 VHB tape shall be supplied, installed in accordance with 3M's specifications.

3.2 CLEANING

- .1 Proceed in accordance with Section 01 00 10 – General Instructions, “Cleaning”
 - .1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.
 - .2 Leave signs clean.
 - .3 Remove debris from interior of sign boxes.
 - .4 Touch up damaged finishes.

3.3 WARRANTY

- .1 All signage products shall be compatible and warranted for a period of five years, not to cause dis-colouration, deterioration or de-lamination of materials used in fabrication and installation.

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 05 50 00 – Metal Fabrications
- .2 Section 09 51 99 – Acoustic Panel Ceilings
- .3 Section 10 28 00 – Toilet Accessories

1.2 REFERENCE STANDARDS

- .1 ASTM International
 - .1 ASTM A167-99 (2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM A653/A653M-18, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.88-92, Gloss Alkyd Enamel, Air Drying and Baking.
 - .2 CAN/CGSB-1.104-M91, Semigloss Alkyd Air Drying and Baking Enamel.
- .3 CSA Group (CSA)
 - .1 CAN/CSA B651-18, Accessible Design for the Built Environment.
- .4 Green Seal Environmental Standards (GS)
 - .1 GS-11-2015, Standard for Paints and Coatings.
 - .2 GS-36-2013, Standard for Commercial Adhesives.
- .5 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1168-A2017, Adhesives and Sealant Applications.

1.3 ACTION AND INFORMATIONAL 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 metal toilet compartments and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Installation Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of Ontario, Canada.
 - .2 Indicate fabrication details, plans, elevations, hardware, and installation details.
- .4 Samples:

- .1 Submit duplicate 300 x 300 mm samples of panel showing finished edge and corner construction and core construction.
- .2 Submit duplicate representative samples of hardware items, including brackets, fastenings and trim.
- .5 Sustainable Design Submittals:
 - .1 Construction Waste Management:
 - .1 Submit project Construction Waste Management Plan highlighting recycling and salvage requirements.
 - .2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.
 - .2 Recycled Content:
 - .1 Submit listing of recycled content products used, including details of required percentages or recycled content materials and products, showing their costs and percentages of post-industrial, post-consumer content, and total cost of materials for project.
 - .3 Low-Emitting Materials:
 - .1 Submit listing of paints, coatings adhesives, and sealants used in building, comply with VOC and chemical component limits or restriction requirements.

1.4 QUALITY ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Mock-ups:
 - .1 Construct mock-ups in accordance with Section 01 45 00 – Quality Control.
 - .1 Construct full size mock-up including components as follows:
 - .2 Mock-up will be used:
 - .1 To judge quality of work, substrate preparation, and material application.
 - .3 Locate where directed.
 - .4 Allow 24 hours for inspection of mock-up before proceeding with work.
 - .5 When accepted, mock-up will demonstrate minimum standard of quality required for this work.
 - .1 Approved mock-up may remain as part of finished work.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 – Common Product Requirements and with manufacturer’s written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer’s name and address.

- .3 Storage and Handling Requirements:
 - .1 Store materials in dry location, indoors, off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect metal toilet compartments 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 and in accordance with Section 01 74 19 – Waste Management and Disposal.
- .5 Packaging Waste Management: remove for reuse and return by manufacturer of crates, padding, packaging materials pallets, as specified in Construction Waste Management Plan in accordance with Section 01 74 19 – Waste Management and Disposal.

Part 2 Products

2.1 MATERIALS

- .1 Metal toilet partitions. Maximum Privacy type head rail braced using full height continuous channels, to eliminate all sightline gaps.
- .2 Sheet steel: commercial quality to ASTM A653/A653M with ZF001 designation zinc coating.
- .3 Minimum base steel thickness:
 - .1 Panels and doors: 0.8 mm.
 - .2 Pilasters: 1.0 mm.
 - .3 Reinforcement: 3.0 mm.
- .4 Stainless steel sheet metal: to ASTM A240/A240M A167
- .5 Headrails: 1.5mm thick, profile 25mm by 41mm extruded aluminum with double ridge and grip design.
- .6 Pilaster: 0.8 mm stainless steel, 75 mm high.
- .7 Attachment: zinc plated steel tamperproof type screws and bolts.

2.2 COMPONENTS

- .1 Hinges:
 - .1 Heavy duty, non-lubricating nylon bushings. Wrap around style and adjustable.
 - .2 Material/finish: chrome plated zinc die casting or stainless steel.
 - .3 Swing: as indicated.
 - .4 Return movement: gravity.
 - .5 Emergency access feature.
- .2 Latch set: built-in, combination latch, door-stop, keeper and bumper, chrome plated zinc die casting or stainless steel.
- .3 Wall and connecting brackets: chrome plated zinc die casting or stainless steel. All panel-to-pilaster, panel-to-wall and pilaster-to-wall connections to be made with full height continuous channels.

- .4 Coat hook: combination hook and rubber door bumper, stainless steel.
- .5 Door pull: barrier-free type suited for out swinging doors, chrome plated zinc die casting or stainless steel.

2.3 FABRICATION

- .1 Doors, panels and screens: 25 mm thick, two steel sheets, faces pressure bonded to rot and vermin proof honeycomb core, set maximum height above floor to align less than or equal to the underside of wall mounted toilet fixtures. Fixtures must not be visible when doors are closed. Minimum 1860mm high.
- .2 Pilasters: 32 mm thick, constructed same as door, length as required.
- .3 Include formed and closed edges for doors, panels and pilasters.
 - .1 Miter and weld corners and grind smooth.
- .4 Include internal reinforcement at areas of attached hardware and fittings.
 - .1 Temporarily mark location of reinforcement for tissue holders and grab bars.
- .5 Construct barrier-free cubicles in Typical Washrooms in accordance with CAN/CSA-B651 2018.
 - .1 Equip outswinging door with pulls on both sides.
 - .2 Design door and hardware so it can be closed and latched with one hand.
- .6 Include 0.8 mm thick type 316 stainless steel protective shields on urinal side of toilet partition panels next to urinals and on urinal screens.
 - .1 Make protective shields 1000 mm high with top of shield 1200 mm above finished floor.
 - .2 Make shields to full width of partition or screen panel.
 - .3 Fasten with stainless steel screws.

2.4 FINISHES

- .1 Clean, degrease and neutralize steel components with phosphate or chromate treatment.
- .2 Spray apply primer to CAN/CGSB-1.81, 1 coat.
 - .1 Primer: VOC limit 250 g/L maximum to SCAQMD Rule 1113 GS-11.
- .3 Spray apply finish enamel to CAN/CGSB-1.104, Type 2, semi-gloss CAN/CGSB-1.88, type 2 gloss, 2 coats and bake to smooth, hard finish 0.025 mm thick.
 - .1 Enamel Finish: VOC limit 50 g/L maximum to SCAQMD Rule 1113, and GS-11.
- .4 Finish: doors and pilaster/panels as selected from manufacturer's range of colours. One colour to be selected.

Part 3 Execution**3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for metal toilet compartment 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 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.

3.3 PREPARATION

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

3.4 ERECTION

- .1 Do work in accordance with CSA B651.
- .2 Do work in accordance with manufacturer's installation instructions.
- .3 Partition erection.
 - .1 Install partitions secure, plumb and square.
 - .2 Leave 12 mm space between wall and panel or end pilaster.
 - .3 Anchor mounting brackets using screws and shields: blocking/backing must be provided to hollow walls using bolts and toggle type anchors, and to steel supports with threaded rods nuts and washers.
 - .4 Attach panel and pilaster to brackets with self-drilling screws with through type sleeve bolt and nut.
 - .5 Allow for adjustment of floor braced variations with screw jack through steel saddles made integral with pilaster.
 - .1 Conceal floor fixings with stainless steel shoes.
 - .6 Equip doors with hinges, latch set, and each stall with coat hook mounted on side wall, mounting heights as indicated.
 - .1 Adjust and align hardware for easy, proper function. Set door open position at full open.
 - .2 Install door bumper wall mounting.
 - .7 Equip outswinging doors with door pulls on inside and outside of door in accordance with CSA B651.
 - .8 Install hardware grab bars.

- .9 Floor supported and overhead braced partition erection.
 - .1 Attach pilasters to floor with pilaster supports and level, plumb, and tighten installation with levelling device.
 - .1 Secure pilaster shoes in position.
 - .2 Secure headrail to pilaster face with not less than two fasteners per face.
 - .3 Set tops of doors parallel with overhead brace when doors are in closed position.
 - .2 Floor supported partition erection.
 - .1 Secure pilasters to floor with pilaster supports anchored with minimum 50 mm penetration in structural floor.
 - .2 Level, plumb and tighten installation with levelling device.
 - .3 Secure pilaster shoes in position.
 - .4 Set tops of doors level with tops of pilasters when doors are in closed position.
 - .3 Screens erection:
 - .1 Include urinal stall screens consisting of panel and pilaster as specified for toilet compartments.
 - .2 Anchor wall-hung screen panels to walls with 3 panel brackets and pilaster complete with floor shoes, anchored to floor.

3.5 ADJUSTING

- .1 Adjust doors and locks for optimum, smooth operating condition.
- .2 Lubricate hardware and other moving parts.

3.6 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.7 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”.
 - .1 Clean surfaces after installation using manufacturer’s recommended cleaning procedures.
 - .2 Clean aluminum with damp rag and approved non-abrasive cleaner.
 - .3 Clean and polish hardware and stainless components.

- .3 Waste Management: separate waste materials for recycling reuse in accordance with Section 01 74 19 – Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.8 PROTECTION

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

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 09 22 16 – Non-Structural Metal Framing
- .2 Section 09 30 13 – Ceramic Tiling
- .3 Section 09 63 40 – Stone
- .4 Section 10 21 13.13 – Metal Toilet Compartments

1.2 REFERENCE STANDARDS

- .1 ASTM International (ASTM)
 - .1 ASTM A167-99 (2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM B456-17, Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
 - .3 ASTM A653/A653M-18, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .4 ASTM A924/A924M-18, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.88-92, Gloss Alkyd Enamel Air Drying and Baking.
 - .2 CGSB 31-GP-107MA-90, Non-inhibited Phosphoric Acid Base Metal Conditioner and Rust Remover.
- .3 CSA Group (CSA)
 - .1 CAN/CSA-B651-18, Accessible Design for the Built Environment.
 - .2 CAN/CSA-G164-18, Hot Dip Galvanizing of Irregularly Shaped Articles.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature and data sheets and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of Ontario, Canada.
 - .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.
- .4 Samples:

- .1 Submit samples for each item.
- .2 Samples will be returned for inclusion into work.

1.4 CLOSEOUT SUBMITTALS

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

1.5 MAINTENANCE MATERIAL SUBMITTALS

- .1 Tools:
 - .1 Provide special tools required for 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 Departmental Representative.

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:
 - .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 toilet and bathroom accessories from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return by manufacturer of packaging materials, crates, pallets, padding, in accordance with Section 01 74 19 – Waste Management and Disposal.

Part 2 Products

2.1 MATERIALS

- .1 Sheet steel: to ASTM A653/A653M with ZF001 designation zinc coating.
- .2 Stainless steel sheet metal: to ASTM A167, Type
- .3 Stainless steel tubing: Type commercial grade, seamless welded, 1.2 mm wall thickness.
- .4 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.
- .5 Size and mounting of all accessories must comply with CAN/CSA B651 for compatibility of size, operation and mounting position.

2.2 COMPONENTS

- .1 Toilet tissue dispenser: to accommodate 2 ply, 9cm wide by 228.9m long rolls, stainless steel cabinet, hinged front panel, refill indicator slot, lock and key, cabinet capacity of 1000 tissues.
- .2 Paper towel dispenser with integrated waste receptacle: for paper towel size to accommodate 20.3 by 52.5m roll, and/or 1 ply 20.57cm by 24.13cm folded paper towels, chrome plated, stainless, steel cabinet, hinged front panel, refill indicator slot, lock and key, semi-recessed or fully recessed mounted.
- .3 Soap dispenser: liquid lather push-in valve 64 mm, 102 mm, or 152 mm spout, self contained 1.5 L refillable tank, 340 mL translucent polyethylene or glass, or 1.14 L tank, stainless steel piston and valve assembly, tamper proof filler lock, surface mounted, exposed metal components chrome plated. Must be operable with on hand to dispense soap on the palm of that hand.
- .4 Feminine napkin disposal bin: recessed stainless-steel surface, continuous hinged door, self closing, embossed with universally accepted symbol, removable stainless-steel receptacles fitted with spring clip for deodorizer block.
- .5 Grab bars: 30/32 1.6 mm wall tubing of stainless steel, 38- mm diameter wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Knurl bar at area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN.
- .6 Deodorant block holders: 200 x 75 mm perforated design, chrome plated.
- .7 Coat hook: stainless steel with 75 mm projection.
- .8 Mirror: wall mounted unit, fixed framed mirror 6 mm, stainless steel frame.
- .9 Adult Change Table: Wall mounted electrically adjustable height folding with wall mounted lock, removable washable mesh cover. When fully loaded, it will have a surface height above the finished floor that can be adjusted from between 450 mm and 500 mm at the low range to between 850 mm and 900 mm at the high range and be designed to carry a minimum load of 1.33 kN.
- .10 Stone counters, Section 09 63 40 – Stone.

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 Chrome and nickel plating: to ASTM B456, satin finish.
- .2 Baked enamel: condition metal by applying one coat of metal conditioner to CGSB 31-GP-107Ma, apply one coat Type 2 primer to CAN/CGSB-1.81 and bake, apply two coats Type 2 enamel to CAN/CGSB-1.88 and bake to hard, durable finish. Sand between final coats. Colour selected from standard range by Departmental Representative.
- .3 Manufacturer's or brand names on face of units not acceptable.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrates and surfaces to receive toilet and bathroom accessories previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer s instructions prior to toilet and bathroom accessories installation.
- .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 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 Install grab bars on built-in anchors provided by bar manufacturer.
- .3 Use tamper proof screws/bolts for fasteners.
- .4 Fill units with necessary supplies shortly before final acceptance of building.
- .5 Install mirrors in accordance with Section 08 80 00 – Glazing.

3.3 ADJUSTING

- .1 Adjust toilet and bathroom accessories components and systems for correct function and operation in accordance with manufacturer s written instructions.
- .2 Lubricate moving parts to operate smoothly and fit accurately.

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 recycling reuse in accordance with Section 01 74 19 – Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.5 PROTECTION

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

3.6 SCHEDULE

- .1 Locate accessories where indicated. Exact locations determined by Departmental Representative.
- .2 Toilet tissue dispenser: one in each toilet compartment mounting height
- .3 Soap dispenser: one at each wash basin, or one per two wash basins.
- .4 Feminine napkin disposal bin: one in each female toilet compartment mounting height
- .5 Hand dryer: one in each washroom. Maximum height of dispenser and operable part from floor 1200 mm.
- .6 Grab bar: two in each handicapped toilet compartment.
- .7 Deodorant block holders: one for each urinal.
- .8 Robe hook: one in each bathtub shower stall mounting height 1400 mm above finished floor.
- .9 Mirror: one at each accessible wash basin.

END OF SECTION

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- .1 National Fire Protection Association (NFPA)
 - .1 NFPA (Fire) 10, Standard for Portable Fire Extinguishers, 2018 Edition.
- .2 Underwriters Laboratories of Canada (ULC)
 - .1 ULC S508-2018, Standard for the Rating and Fire Testing of Fire Extinguishers.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

PART 2 - PRODUCTS

2.1 MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS

- .1 Cartridge operated type or Stored pressure rechargeable type with hose and shut-off nozzle, ULC labelled for A, B and C class protection.
 - .1 Sizes 1.14, 2.25, 4.5, 9 and 14 kg or as indicated.

2.2 EXTINGUISHER BRACKETS

- .1 Type recommended by extinguisher manufacturer.

2.3 IDENTIFICATION

- .1 Identify extinguishers in accordance with recommendations of NFPA (Fire) 10 & ULC-S508.
- .2 Attach bilingual tag, bar, code or label to extinguishers, indicating month and year of installation. Provide space for service dates.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

- .1 Install or mount extinguishers in cabinets or on brackets as indicated in accordance with NFPA (Fire) 10.

END OF SECTION