
1.0 GENERAL

1.1 References

- .1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM A 167-99(2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM B 456-03, Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
 - .3 ASTM A 653/A 653M-09, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .4 ASTM A 924/A 924M-09, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- .3 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 Canadian Standards Association (CSA)
 - .1 CAN/CSA-B651-04, Accessible Design for the Built Environment.
 - .2 CAN/CSA-G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.

1.2 Action and Informational Submittals

- .1 Provide submittals in accordance with **Section 01 33 00** and the following requirements:
 - .1 **Shop drawings:** submit a schedule of all toilet and other accessories with shop drawings. Provide manufacturer's printed product literature and data sheets and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 **Extra materials:** special tools and spare parts: provide 2 complete sets of special tools required for maintenance, assembly and disassembly of toilet and bath accessories.

1.3 Coordination

- .1 Coordinate the work of this Section with the other trades concerned as to dimensions, concealed supports, scheduling, etc.

1.4 Waste Management

- .1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

2.0 PRODUCTS

2.1 Toilet and Bath Accessories: will be in stainless steel, commercial quality, heavy-duty and fixed with anti-vandal systems.

- .1 **Mirrors:** minimum 6 mm thick glass, dimensions as shown, in stainless steel frame, without shelf, square corner type, with vandal-proof concealed mounting.
- .2 **Liquid soap dispensers:** Surface mounted, lather push-in valve spout, self-contained 1.2L tank, stainless steel piston and valve assembly, tamper proof filler lock, surface mounted, exposed metal components stainless steel satin finish approximately 120 mm wide x 205 mm high x 90 mm deep.
- .3 **Combination paper towel dispenser and waste receptacle:** Recessed paper towel wall unit, approximately 355 mm wide x 710 high x 60 mm deep. Interior of 0.8 mm galvanized steel, exterior of 0.8mm stainless steel satin finish. Suitable for dispensing folded or roll paper towels. Removable galvanized steel waste receptacle, lockable access door with continuous full height stainless steel hinge.
- .4 **Sanitary napkin disposal bin:** stainless steel satin finish, surface mounted unit, continuous hinged door, self-closing panel covers disposal opening, approximately 190mm wide x 255mm high x 95mm deep.
- .5 **Toilet paper dispenser:** double roll type, surface mounted, cast aluminum, satin finish, plastic spindles, concealed locking device, theft-resistant, capacity of two rolls up to 150 mm diameter (2000 sheets), 155 mm wide x 280 mm high x 150 mm deep.
- .6 **Grab bar:** 38 mm x 1.6 mm wall tubing of stainless steel, 610 mm and 915 mm long, see drawings. 76 mm diameter stainless steel 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. Lengths as indicated on drawings.
- .7 **Individual Hook:** satin finish stainless steel, 30 mm projection, post 55 mm x 30 mm rectangular tubing with radiused corners, stainless steel setscrew for mounting flange and bracket.
- .8 **Mop and broom rack:** 1.2 mm (18 ga), satin finish stainless steel shelf, c/w 4 anti-slip mop holders with spring-loaded rubber cam to grip handles 20 – 30 mm diameter, 915 mm wide x 150 mm high x 205 mm deep.
- .9 **Shelf:** 1.2 mm satin finish stainless steel, 205 mm x 455 mm surface, 18 mm return edges, hemmed front edge, stainless steel setscrew for mounting flange and bracket.

2.2 Materials

- .1 See **Section 05 05 00** for basic metal materials.
 - .2 **Fasteners for toilet and other accessories:** Concealed screws and bolts hot dip galvanized expansion shields, fibre, lead or rubber as recommended by accessory manufacturer for component and its intended use. Exposed fasteners to match colour of accessory.
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2.3 Finishes

- .1 See **Section 05 05 00** for basic metal finishes.
- .2 Stainless steel satin finish
- .3 No element should be labelled or bear the name of the manufacturer on its visible side.

2.4 Anchoring

- .1 Provide all required steel anchor plates and, bolts, plugs and other fasteners for proper installation of accessories on the substrates.

2.5 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 1.6 mm radius bends.
- .4 Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.
- .5 Back paint or separate with neoprene strip any component where contact is made with building finishes to prevent electrolysis.
- .6 Use hot-dip galvanized ferrous metal anchors and concealed fastening devices, as per ASTM A653/A653M.
- .7 Shop assemble components and package complete with anchors and fittings.
- .8 All lockable accessories to be keyed alike.

3.0 EXECUTION

3.1 Installation

- .1 Obtain Departmental Representative's approval for the typical positioning of all accessory types before making the cut-outs in the walls, installing nailing bases and attaching accessories.
- .2 Deliver inserts and rough-in-frames to job site at appropriate time for building-in. Provide templates, rough-in measurements, details and instructions for building-in anchors as required.
- .3 Install plumb and level, at standard heights, or as shown on drawings, according to the manufacturer's written instructions and best accepted practice of the industry.

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- .4 Comply with NBC and CAN/CSA-B651 requirements for barrier-free access and use of toilets by the handicapped.
 - .5 Install and secure fixtures rigidly in place as follows:
 - .1 Stud walls: install galvanised fastening bases to studs prior to drywall finish.
 - .6 Install grab bars on built-in anchors provided by the manufacturer.
 - .7 Use tamper proof theft proof stainless steel screws/bolts for exposed fasteners, and corrosion resistant type for concealed fasteners.
 - .8 Fill units with necessary supplies shortly before final acceptance of building.

3.2 Cleaning

- .1 Perform cleaning as per **Section 01 74 11**.
- .2 Clean and polish all metal and glass surfaces.

End of Section

1.0 GENERAL

1.1 References

- .1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.
- .2 Federal Identity Program Manual (PCIM) 4.3B Installation of tactile signage and installation of tactile signage
 - .1 CAN/CSA-B651-95 Barrier-Free Design Standard Installation Requirements for Tactile Signage (see website <https://www.canada.ca/en/treasury-board-secretariat/services/government-communications/federal-identity-program/manual-pdf-format.html>)
- .3 CGSB 109-GP-5M, Signage materials, Interior and Exterior.
- .4 CGSB 109.1M, Exterior signs fabricated from extruded aluminum blades
- .5 CAN/CSA-B651-12 (R2017) - Accessible design for the built environment
- .6 Accessible Signage Guidelines, 2016, Braille Literacy Canada

1.2 Action and Informational Submittals

- .1 Provide submittals in accordance with **Section 01 33 00** and the following requirements:
 - .1 **Shop drawings** : The shop drawings must clearly indicate, at high scale, the dimensions, the nature of the materials, thickness, size, colors, details of construction, finishes, interchangeable and removable elements, anchors, construction, classification and assembly.
 - .2 **Product sample**: submit full scale sample of each type of signage detailed on **architecture drawings**. If requested, the samples will be returned to the Contractor for installation on site.
 - .1 Door identification
 - .2 Service signage
 - .3 Exterior signage
 - .4 Tactile signage
 - .5 Security signage
 - .6 Egress signage
 - .7 Building address

1.3 Waste Management

- .1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

2.0 PRODUCTS

2.1 General

- .1 All signage of the same type shall be from a single manufacturer in order to have a consistent appearance.
- .2 See **Section 05 50 00** for basic metal materials and finishes.

2.2 Service and tactile signage

- .1 General:
 - .1 Fabricated using a vacuum system from plastic material complying with CGSB-109-GP-5MP and suitable for interior and exterior applications and compliant to :
 - .1 Fire retardation: Surface-burning characteristics NFPA of 255
 - .2 Flame spread index: 15
 - .3 Smoke developed index 110, Level 1, Class A rating.
 - .4 Self-extinguishing
 - .5 Pencil hardness: H (ASTM 03363-92)
 - .6 Shear strength: High
- .2 Material:
 - .1 Base: Expanded rigid homogeneous PVC, 3mm
 - .2 Raised Surface (Text and Pictogram): Cut-out, dimensional vinyl protected with clear matte laminate over full surface, vacuum applied.
- .3 Finish:
 - .1 Base: Satin
 - .2 Raised Surface: Clear matte laminate
- .4 Color:
 - .1 Base: White
 - .2 Raised Surface: by the Departmental Representative
- .5 Dimensions: as per **architecture drawings**
- .6 Graphic: Cut-out. All tactile surfaces are raised above the panel background by the uniform amount of 0.8mm (1/32"). The leading edges of all raised surfaces shall be rounded or radius not sharp or cylindrical.
- .7 Braille: Embossed on raised surface. The standard for braille is Unified English Braille, uncontracted
- .8 Installations: Mount above composite with full surface adhesive to base.

2.3 Door identification, egress signage and vinyl cut out installed on doors and furniture as per drawings

- .1 Material: vinyl film coated with transparent, pressure sensitive adhesive that is protected by a removable liner, 2 mil. Ensure that the film product is appropriate for each type of surface on which it will be installed.
- .2 Film color: by the Departmental Representative

- .3 Text color: by the Departmental Representative
- .4 Dimensions: as per **architecture drawings**
- .5 Graphic:
 - .1 Font: Helvetica Neue LT Standard Bold Condensed
 - .2 Size: 60 points
- .6 Installations of door identification: Install on every doorframe, on latch side facing door, align to door opening.
- .7 Installation of egress signage: Install on push side of all doors with a 3/15 alarm, in centre of door glazing, at height to be coordinated on site with Departmental Representative.
- .8 **Vinyl cut out installed on doors and furniture as per drawings:** provide laser cutting by the manufacturer. Digital drawing of artwork will be provided by Departmental Representative.

2.4 Exterior and Security signage

- .1 Material – Plate: 12 gauge aluminium plate, as per typical circulation signage. Provide protective film on back surface if required.
- .2 Material – Film: Vinyl, flexible, enclosed lens, retroreflective, engineer grade film, 7 mil, as per typical circulation signage.
- .3 Dimensions: as per **architecture drawings**
- .4 Graphics: as per **architecture drawings**.
- .5 Film color: by the Departmental Representative
- .6 Text color: by the Departmental Representative
- .7 Installation:
 - .1 Exterior signage installed on wall /Mural: Mechanically fastened to wall exterior with self-tapping fasteners, refer to **architecture drawings** for location.
 - .2 Exterior signage on post: Mounted on Galvanized steel U channel post of 8 feet. 1.375" channel depth, 3.125" width, as per **Section 05 50 00**, Refer to **architecture drawings** for location.

2.5 Exterior signage – building identification and building number

- .1 Material: Stainless steel plates in accordance with ASTM A711 / A711M and ASTM 167, Type 316L, of thickness and shapes as shown in **architecture drawings**. Filed or ground to a smooth surface, united and non-cutting
- .2 Finish: Finish no.4
- .3 Dimensions: as per **architecture drawings**

- .4 Graphics:
 - .1 Cut-out, the numerical file will be transmitted by Department Representative prior to fabrication. The leading edges of all cut surfaces shall be rounded or radius not sharp or cylindrical.
- .5 Installations: Provide and install anchoring hardware adequate for the wall surface on which it will be installed. The hardware must be invisible / dissimulated. Coordinate required hardware with laying surface and drawings. Provide and plan for adequate nailing strips.

2.6 Fabrication

- .1 CAD files of the signage will be transmitted to the Contractor at the shop drawing stage.
 - .1 Product sample must be approved by Departmental Representative before the beginning of production.
 - .2 Cutting : Use water jet or laser cutting machine to create the graphic elements
 - .3 Panels shall be manufactured in accordance with the details provided, specifications and shop drawings. They must be made plumb, squared, to the prescribed dimensions, free of apparent defects and execution defects.

3.0 EXECUTION

3.1 Installation

- .1 Use only adhesives and fasteners recommended by manufacturer.
- .2 Install architecture signage as indicated on the drawings, in accordance with the manufacturer's instructions and in compliance to the applicable regulations.

3.2 Cleaning

- .1 Perform cleaning as per **Section 01 74 11**.

End of Section

1.0 GENERAL

1.1 References

- .1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.

1.2 Design Criteria

- .1 Flagpole, bases and anchorage devices to resist minimum wind velocity of 145 km/h unflagged, 125 km/h flagged.
- .2 Dead load of post and flag: as per manufacturer's standards.

1.3 Submittals

- .1 Provide submittals in accordance with **Section 01 33 00** and the following requirements:
 - .1 **Shop drawings:** indicate adequate mounting method, anchors and ties, shoe base and concrete foundation. Shop drawings shall be signed by a qualified engineer, member of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG).
 - .2 **Extra materials, special tools and spare parts:** supply 2 complete sets of specialized tools required for installation and operation, if applicable.

1.4 Waste Management

- .1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

2.0 PRODUCTS

2.1 Flagpoles

- .1 **Flag poles, in aluminum:** commercial grade, tilt-up base, tapered, as per ANSI/NAAMM FP 100197, with the following characteristics:
 - .1 Height: 9145 mm.
 - .2 Butt diameter: to satisfy the design criteria mentioned **above**.
 - .3 Top diameter: to satisfy the design criteria mentioned **above**.
 - .4 Wall thickness: to satisfy the design criteria mentioned **above**.
 - .5 Recommended flag size: 915 mm x 1830 mm.
 - .6 Spun aluminum base cover.
- .2 **Rigging system:** stainless steel internal halyard full-length cable routed through the interior of the pole with removable hand crank and secured using a cam cleat, access to the latter protected by a locked door; with a revolving ball top.

2.2 Materials and Finishes

- .1 **Aluminum anodized extruded tubes:** AA.6063-T6 alloy and temper, seamless, - See **Section 05 50 00**.

.2 Concrete: see **Division 03 – Structure**.

2.3 **Accessories**

.1 Grout: Type – See **Division 03 – Structure**.

.2 Joint sealer – See **Section 07 92 00**

2.4 **Fabrication**

.1 Manufacture flagpoles as per manufacturer's standards.

3.0 **EXECUTION**

3.1 **Installation**

.1 Install flagpoles and accessories in accordance with manufacturer's instructions and reviewed shop drawings.

.2 Install foundation sleeve in concrete footing.

.3 Center pole in sleeve using steel wedges; plumb with hardwood wedges. Fill sleeve with clean, dry sand; top off with grout.

.4 Install collar to conceal sleeve.

.5 Apply joint sealer around pole at top of grout and collar.

3.2 **Cleaning**

.1 Perform cleaning as per **Section 01 74 11**.

End of Section