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**PART 1 - GENERAL**

1.1 RELATED REQUIREMENTS

- .1 Section 04 03 44 - Historic - New Marble Finishes and Repair of Existing Marble.
- .2 Section 05 50 10 - Specialized Metal Fabrications

1.2 REFERENCES

- .1 ASTM International
  - .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.
  - .5 ASTM B254 - 92(2009) Standard Practice for Preparation of and Electroplating on Stainless Steel
- .2 CSA International
  - .1 CAN/CSA-B651-04, Accessible Design for the Built Environment.
  - .2 CAN/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.

1.3 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 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.
  - .2 Provide a description of the methods proposed for custom modifications and disassembly/reassembly methods for electroplating.
- .4 Samples:
  - .1 Submit samples for review.
  - .2 Samples will be returned for inclusion into work.

1.4 CLOSEOUT SUBMITTALS

- .1 Provide maintenance data for toilet 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 indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect toilet 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 pallets, crates, padding, and packaging materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**PART 2 - PRODUCTS**

2.1 MATERIALS

- .1 Sheet steel: to ASTM A 653/A 653M with ZF001 designation zinc coating.
- .2 Stainless steel sheet metal: to ASTM A 167.
- .3 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.
- .4 Solid steel bars to diameter indicated.
- .5 Extruded aluminum angle, size as indicated

2.2 COMPONENTS

- .1 Toilet tissue dispenser: single roll type, surface mounted; round, stainless steel housing; capacity of a single 250 mm diameter roll. Provide key access and viewing slot on front face. Outer cover hinged to allow refilling. 271 mm diameter x 115 mm deep.
- .2 Soap dispenser: liquid push-in valve recessed, 160 x 185mm faceplate, exposed metal components stainless steel.

- .3 Hand dryer: listed under re-examination service of ULC and CSA approved.
  - .1 Mounting: surface.
  - .2 Wall box: 16 gauge steel.
  - .3 Cover: stainless steel.
  - .4 Motor shall be a thermally protected, 110/120V, 12.5 Amp, 60 Hz, series commutated, through-flow discharge vacuum motor/blower (5/8 hp / 20,000 rpm) which provides air velocity of up to 19,000 lfm (linear feet per minute) at the air outlet and 16,000 lfm at the hands (102 mm below air outlet).
  - .5 Heating element (970 w) is constructed of Nichrome wire and mounted inside the blower housing, thereby being vandal proof. It shall be protected by an automatic resetting thermostat, which shall open whenever air flow is cutoff and shall close when flow of air is resumed. It shall produce an air temperature of up to 57°C at a 22°C ambient room temperature at the hands 102 mm below air outlet.
  - .6 Control assembly is activated by an infrared optical sensor located next to the air outlet. The dryer shall operate as long as hands are under the air outlet.
- .4 Grab bars: Custom fabricated 30 mm diameter solid bar, concealed screw attachment as indicated. Grab bar material and anchorage to withstand downward pull of 1.3 kN. Mitered corners with flush mounting component. Solid steel mounting plates with countersunk stainless steel fasteners as indicated. Provide knurled finish where indicated.
- .5 Robe hook: cast bronze with 75 mm projection.
- .6 Waste receptacle: Type semi-recessed, size 390 x 705 mm x 125 mm deep, stainless steel. Rectangular, with flat profile and square edges. Hinged opening for waste removal. Fully welded assembly.

### 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 Co-operate with Section 05 50 10 - Specialized Metal Fabrications, who will disassemble accessories provided under this Section, apply nickel plating, and re-assemble.

## 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 Hollow masonry units, existing plaster or drywall: use toggle bolts drilled into cell or wall cavity.
- .2 Install grab bars on recessed, built-in anchors as indicated. Cooperate with Section 04 03 44 - Historic - New Marble Finishes and Repair of Existing Marble, for installation coordination of grab bar mounting plates with cored openings in marble cladding. Conduct trial fittings as required to ensure the installation is coordinated.
- .3 Fill units with necessary supplies shortly before final acceptance of building.

### 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 74 11 - 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 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in

accordance with Section 01 74 21 - Construction/Demolition 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 Provide accessories as indicated on drawings.
- .2 Provide one additional toilet paper dispenser to use for mockups of electroplating.

END OF SECTION