

---

**PART 1 GENERAL**

**1.1 REFERENCES**

- .1 CSA Group
  - .1 CAN/CSA-B45 Series (Latest Edition), Plumbing Fixtures, (Consists of B45.0, B45.1, B45.2, B45.3, B45.4, B45.5, B45.6, B45.7, B45.8 and B45.9).
  - .2 CAN/CSA-B125.3 (Latest Edition), Plumbing Fittings.
  - .3 CAN/CSA-B651 (Latest Edition), Accessible Design for the Built Environment.
- .2 Green Seal Environmental Standards (GSES)
  - .1 Standard GS-36 (Latest Edition), Commercial Adhesives.
- .3 National Research Council Canada (NRC)
  - .1 National Building Code of Canada (NBC)
- .4 South Coast Air Quality Management District (SCAQMD), California State
  - .1 SCAQMD Rule 1168 (Latest Edition), Adhesive and Sealant Applications.

**1.2 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 washroom fixtures and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Indicate fixtures and trim:
    - .1 Dimensions, construction details, roughing-in dimensions.
    - .2 Factory-set water consumption per flush at recommended pressure.
    - .3 For water closets, urinals: minimum pressure required for flushing.

**1.3 CLOSEOUT SUBMITTALS**

- .1 Include:
  - .1 Description of fixtures and trim, giving manufacturer's name, type, model, year, capacity.
  - .2 Details of operation, servicing, maintenance.
  - .3 List of recommended spare parts.

**1.4 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 specified materials from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURED UNITS**

- .1 Fixtures: manufacture in accordance with CAN/CSA-B45 series.
- .2 Trim, fittings: manufacture in accordance with CAN/CSA-B125.3.
- .3 Exposed plumbing brass to be chrome plated.
- .4 Number, locations: as indicated on drawings.
- .5 Fixtures in any one location to be product of one manufacturer and of same type.
- .6 Trim in any one location to be product of one manufacturer and of same type.
- .7 Water closets:
  - .1 WC-2: floor-mounted, flush tank.
    - .1 Bowl: vitreous china, syphon jet, elongated rim, close-coupled combination, bowl and bolt caps.
    - .2 Closet tank: vitreous china with tank liner, flapper type flush valve assembly cycle: 3.8 litres/flush.
- .8 Water Closet Seats.
  - .1 Seat: white, elongated, open front, moulded solid plastic, less cover, stainless steel check hinges, stainless steel or solid brass insert post.
- .9 Urinals:
  - .1 U-1: wall mounted, ultra-low flush, exposed flush valve, top spud.
    - .1 Urinal: vitreous china, washout type, integral flushing rim, extended shields, integral trap, removable stainless steel strainer, back outlet.
  - .2 Urinal Flush Valves:
    - .1 Manual flush valves: chrome plated, non-hold-open, exposed, diaphragm, externally adjustable, with NPS 3/4 angle screwdriver stop, chrome plated oscillating handle, wall and spud flange, vacuum breaker. Ultra low flush cycle: set to 3.8 litres/flush.
- .10 Washroom Lavatories:

- .1 L-1: counter-top:
  - .1 Vitreous China, self-rimming, with front overflow, soap depressions, gasket, swivel clamps, semi-oval or rectangular bowl, supply openings on 100 mm centres. Sizes: 475 x 400 mm outside, 400 x 250 mm nominal inside.
  - .2 L-2: Wall-hung, integral back:
    - .1 Vitreous china, with splash lip, soap depressions, supply openings on 100 mm centres, overflow. Size: 500 x 450 mm.
- .11 Washroom Lavatory Trim:
  - .1 Chrome plated brass, combination supply and waste fittings, mixing spout, washerless, plug and chain, aerator, metal indexed handles.
    - .1 Provide accessories to limit maximum flow rate to 8.35 l/minute at 413 kPa.
    - .2 Waste fitting: pop-up plug and chain.
- .12 Fixture piping:
  - .1 Hot and cold-water supplies to fixtures:
    - .1 Chrome plated flexible supply pipes with angled screwdriver stop, reducers, escutcheon.
  - .2 Waste:
    - .1 Brass P trap with clean out on fixtures not having integral trap.
    - .2 Chrome plated in exposed places.
- .13 Chair carriers:
  - .1 Factory manufactured floor-mounted carrier systems for wall-mounted fixtures.

## **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 washroom fixtures 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 INSTALLATION**

- .1 Mounting heights:
  - .1 Standard: to manufacturer's recommendations, measured from finished floor.
  - .2 Wall-hung fixtures: measured from finished floor.

---

**3.3 ADJUSTING**

- .1 Conform to water conservation requirements specified this section.
- .2 Adjustments:
  - .1 Adjust water flow rate to design flow rates.
  - .2 Adjust pressure to fixtures to ensure no splashing at maximum pressures.
  - .3 Adjust flush valves to suit actual site conditions.
  - .4 Adjust urinal flush timing mechanisms.
  - .5 Set controls of automatic flush valves for WCs and urinals to prevent unnecessary flush cycles.
- .3 Checks:
  - .1 Water closets, urinals: flushing action.
  - .2 Aerators: operation, cleanliness.
  - .3 Vacuum breakers, backflow preventers: operation under all conditions.
- .4 Thermostatic controls:
  - .1 Verify temperature settings, operation of control, limit and safety controls.

**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.

**END OF SECTION**