

**SECTION 224000 – PLUMBING FIXTURES**

- 1.0 The number and types of plumbing fixtures shall be based on the minimum Code requirements. The breakdown of male and female population is generally assumed to be a 50/50 percent split.
- 2.0 Similar plumbing fixtures installed within a building shall be of one (1) manufacturer to reduce stocking costs of replacement parts.
- 3.0 Selection of fixtures, trim, and hardware shall be approved by the University Engineering Department.
- 4.0 Control-stop valves shall be provided in each supply to each fixture. The finish of fittings, accessories, and supplies exposed to view shall be chromium-plated.
- 5.0 Flush valve type water closets shall be white vitreous china, wall mounted type (Basis of Design: Zurn model Z5615-BWL) with siphon jet flush valve, elongated bowl and white solid plastic elongated open-front seat. The flushing volume of the flush valve (Basis of Design: Sloan Model 111-1.28SMOM or Zurn Model ZER6000AV-HET-CPM) and water closet combination shall be 1.28 gallons per flush.
- 6.0 Tank type water closets shall be white vitreous china, floor-mounted type with floor or wall outlet, elongated bowl and white solid plastic elongated open-front seat. The flushing volume shall be 1.6 gallons per flush. Non-float swing type flush valves are not acceptable.
- 7.0 Wheelchair water closets shall be the same as above except the water closet height to top of seat shall be 17 to 19 inches above the floor in accordance with ICC A117.1.
- 8.0 Flush valve type urinals shall be white vitreous china, (Basis of Design: Zurn Model Z5755-U) wall mounted, wall outlet, siphon jet, integral trap and extended side shields. Water flushing volume of flush valve (Basis of Design: Sloan Model 186-0.5SMO or Zurn Model Zer6003AV-EWS-CPM) and urinal combination shall be 0.5 gallon per flush.
- 9.0 Wheelchair flush valve type urinals shall be white vitreous china, wall-mounted, wall outlet, blowout action, integral trap elongated projected bowl 20 inches long from wall to front of flare. Water flushing volume of flush valve and urinal combination shall not exceed .5 gallon per flush. Front rim of urinal shall be mounted a maximum of 17 inches above floor and flush valve handle a maximum of 44 inches above floor in accordance with ICC A117.1.
- 10.0 Lavatories shall be white enamel cast-iron with concealed arm carrier support, shelf back type have a minimum dimensions of 20 inches wide by 18 inches front to rear. Lavatories shall have copper alloy center set faucets (Basis of Design: Chicago Model 116.201.AB.1 or Chicago Model 116.211.AB.1 or Sloan Model EAF-150) with aerator, pop-up drain fittings or perforated grid strainers, 1 1/4 inch adjustable P-traps and concealed chair carriers.
- 11.0 Countertop lavatories, white enamel cast-iron, minimum oval dimensions of 19 inches wide by 16 inches front to rear, self-rimming type. Lavatories shall have copper alloy center set faucets with aerator, pop-up drain fittings or perforated grid strainers, 1 1/4 inch adjustable P-traps.
- 12.0 Lavatories for wheelchairs shall be the same as the wall-mounted or countertop lavatories except for the following, copper alloy center set faucets, gooseneck spout with aerator 5 inches above rim, 4 inch wrist action handles and perforated grid strainers with offset tailpiece in accordance with ICC A117.1.
- 13.0 Service sinks, white vitreous china with integral back and wall hanger support, having minimum dimensions of 22 inches wide by 20 inches front to rear, floor supported wall outlet cast iron P-trap,

- stainless steel rim guards and exposed sink faucet with vacuum breaker, integral stops, level handles, spout with pail hook and hose end and top brace.
- 14.0 Mop sinks shall be terrazzo made of marble chips cast in white Portland cement in accordance with IAPMO PS99. Provide with floor outlet copper alloy body drains, cast integral with terrazzo, with nickel, polished stainless steel strainer and exposed sink faucet with vacuum breaker, integral stops, level handles, spout with pail hook and hose end and top brace.
- 15.0 Plastic shower stall units shall be white with slip-resistant bathing surfaces and three walls integrally molded in one piece or made in sections. Provided with brass body drains with nickel bronze perforated grid strainers and 2 inch adjustable P-trap and pressure balance mixing valve with single handle, volume control showerhead and adjustable high temperature limit stop.
- 16.0 Plastic bathtubs units shall be white with slip-resistant bathing surfaces and three walls integrally molded in one piece or made in sections. Provided with brass body drains with nickel bronze perforated grid strainers and 2 inch adjustable P-trap and pressure balance mixing valve with single handle, volume control showerhead, adjustable high temperature limit stop, and diverter tub spout.
- 17.0 Electric water coolers shall be ADA compliant, wall-mounted or recessed combined rapid water bottle filling station/ bubbler style drinking fountain, with a high efficiency cooler, integral filter, and automatic filter reset. The unit shall have a minimum chilling capacity of 8.0 gph, with stainless steel splash receptor and cabinet. Manufactures shall be Elkay or Halsey/Taylor.
- 18.0 Water coolers that require the delivery of five-gallon bottles are not to be used. If filtered tap water dispensers are wanted, they should be Quench or Aqua Pure machines.
- 19.0 Where required, emergency showers and eye wash stations shall be supplied by a pressure compensated tempered water supply, with system temperature held between 60 and 95 degrees F for all emergency showers and emergency eye wash stations. The system shall be sized to include the full flow of at least one emergency shower and emergency eye wash station for not less than 15 minutes.
- 20.0 Non-freeze wall hydrants shall be provided on exterior walls of the building at doorways, at washdown areas, at areaways and at stairwells.
- 21.0 Lab sinks shall be provided with casework furniture.
- 22.0 Animal Holding room hose stations (where required) shall be fully recessed, sealed housing type shall be provided as required for holding room washdown with 140 degrees F (max.) hot water. Stations will be provided with integral check valves. Refer to Section 221119.
- 23.0 Isolation valves shall be installed on all utilities at each lab or room, each branch from mains, and at each floor to maximize system isolation.
- 24.0 All floor drains shall be provided with trap primers. Rubber boot type seals are unacceptable.

- 25.0 Flush valves and faucets for bathroom fixtures:
- A. Flush valves shall be Sloan, Zurn, Delany, or Josam.
  - B. Faucets shall be Delta, American Standard, or Chicago.
  - C. Sensor faucets shall be provided by Sloan, Bradley, or Josam.
  - D. Sensor flush valves shall be provided by Sloan or Josam.