

**SECTION 22 4300  
HEALTHCARE PLUMBING FIXTURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Work includes providing new hospital plumbing fixtures and related work.
- B. Fixtures include:
  - 1. Sitz baths.
  - 2. Hand held shower heads.
  - 3. Bedpan rinse valves.
  - 4. Eyewash fountains.
  - 5. Eyewash/shower fountains.
  - 6. Thermostatic mixing valves.
  - 7. Wrist control lavatories.
  - 8. Surgeons lavatories.
  - 9. Single bowl sinks.
  - 10. Deep, double bowl sinks with drainboard.
  - 11. Emergency showers.
  - 12. Safety deluge showers.
  - 13. Flushing rim disposal service sinks, pedestal type.
  - 14. Surgeons scrub-up sinks.
  - 15. Automatic surgical scrub stations.
  - 16. Wheelchair lavatories.
  - 17. Specimen water closets.
- C. Providing rough-in and making final plumbing connections to equipment furnished under other specification sections.

**1.02 RELATED REQUIREMENTS**

- A. Section 10 2800 - Toilet, Bath, and Laundry Accessories.
- B. Section 11 5300 - Laboratory Equipment.
- C. Section 22 0716 - Plumbing Equipment Insulation.
- D. Section 22 0719 - Plumbing Piping Insulation.
- E. Section 22 1005 - Plumbing Piping: Disinfection of piping.
- F. Section 22 1006 - Plumbing Piping Specialties.
- G. Section 22 3000 - Plumbing Equipment.
- H. Section 22 4000 - Plumbing Fixtures.
- I. Section 26 0583 - Wiring Connections: Electrical characteristics and wiring connections.

**1.03 REFERENCE STANDARDS**

- A. ANSI Z358.1 - American National Standard for Emergency Eyewash and Shower Equipment 2009.
- B. ASME A112.6.1M - Supports for Off-the-Floor Plumbing Fixtures for Public Use 1997 (Reaffirmed 2002).
- C. ASME A112.18.1 - Plumbing Supply Fittings 2012.
- D. ASME A112.19.2 - Ceramic Plumbing Fixtures 2013.
- E. ASME A112.19.3 - Stainless Steel Plumbing Fixtures (Designed for Residential Use) 2008 (R2013).
- F. ASME A112.19.5 - Flush Valves and Spuds for Water Closets, Urinals, and Tanks 2011.
- G. ASSE 1014 - Performance Requirements for Backflow Prevention Devices for Hand-Held Showers 2005.

- H. ICC (IPC) - International Plumbing Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- I. NSF 61 - Drinking Water System Components - Health Effects 2014 (Errata 2015).
- J. NSF 372 - Drinking Water System Components - Lead Content 2011.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog sheets for fixtures, fittings, and accessories.
- C. Manufacturer's Instructions: Fixture installation methods and procedures.
- D. Sustainable Design Documentation: Submit appropriate evidence that materials used in potable water systems comply with the specified requirements.
- E. Operation and Maintenance Manuals: Hospital plumbing fixtures.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.

**PART 2 PRODUCTS**

**2.01 GENERAL**

- A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

**2.02 ELECTRICAL MOTORS, CONTROLLERS, CONTACTORS, AND DISCONNECTS**

- A. Furnish motors, controllers, contactors, and disconnects with their respective pieces of equipment.
- B. Controllers and contractors shall have a maximum of 120-volt control circuits, and auxiliary contacts for use with the controls furnished.

**2.03 PLUMBING FIXTURES, FITTINGS, ACCESSORIES, AND SUPPLIES**

- A. Manufacturers:
  - 1. American Standard, Inc; [\_\_\_\_\_]: [www.americanstandard-us.com/#sle](http://www.americanstandard-us.com/#sle).
  - 2. Kohler Company; [\_\_\_\_\_]: [www.kohler.com/#sle](http://www.kohler.com/#sle).
  - 3. Substitutions: See Section 01 6000 - Product Requirements.
- B. General Requirements:
  - 1. Provide control stop valves on each supply to each fixture.
  - 2. Provide chromium-plated finish on fittings and accessories exposed to view.
  - 3. Fixture fittings and trim: Comply with ASME A112.18.1 and ASME A112.19.5, as applicable.
  - 4. Centerset faucets: Top-mounted with inlets on not greater than 4 inch centers.
  - 5. Separate faucets and combination supply fittings: Provide inlets on 8 inch centers.
  - 6. Zinc-alloy or plastic handles are not permitted for faucets and valves.
  - 7. Provide special roughing-in for wheelchair fixtures.
  - 8. Fixture dimensions specified are nominal.
- C. Bath, Sitz:
  - 1. ASME A112.19.2, vitreous china, pedestal mounted sitz bath.
  - 2. Dimensions: 27 inches long by 23 inches wide with height of back 21 inches and height of rim 14 inches to 16 inches above the floor.
  - 3. Provide with water supply assembly, exposed thermostatic mixing valve with thermometer, vacuum breaker, attached water supply, 5 feet of reinforced rubber hose and wall hook, hand-held shower head, 1-1/2 inch pop-up waste with operating mechanism at the top of the fixture, removable overflow, tailpiece with adjustable cast brass P-trap, and integral overflow fitting.
- D. Hand-Held Shower Head:

1. ASME A112.18.1, adjustable spray hand-held shower head with swivel fitting, with ASSE 1014 backflow preventer.
  2. Provide pushbutton flow control.
  3. Include 60 inch minimum flexible polished stainless steel hose and in-line vacuum breaker
  4. Provide 25 inch grab bar with sliding spray holder that locks at any height, allowing use of unit as either a hand-held spray or a fixed shower head.
- E. Rinse Valve, Bedpan:
1. Wall mounted self-closing hand operated mixing valve with integral stops.
  2. Provide with hot and cold water volume control, elevated vacuum breaker, 4 feet of flexible hose, spray nozzle with wall hook, and loose key supply stop valves.
- F. Fountain, Eyewash:
1. ANSI Z358.1, floor mounted, hand operated type.
  2. Provide with quick opening, 1/2 inch chrome plated copper alloy full-flow valves, twin eyewash heads with pop-off dust covers, stainless steel eyewash receptor, and drain.
- G. Fountain, Eyewash/Shower:
1. ANSI Z358.1, pedestal mounted, twin eyewash heads with pop-off dust covers, stainless steel receptor, 1/2 inch chrome plated copper alloy hand operated stay open ball valve, and hand spray unit.
  2. Provide hand spray unit with hose guide bracket, wall mounting flange, 6 feet of coiled reinforced hose with minimum burst strength of 250 psig, noncorrosive spray head, and hand squeeze valve with hold open feature.
- H. Valve, Thermostatic Mixing:
1. Thermostatic mixing valve, assembly with washout hose, for use with portable whirlpool equipment.
  2. Provide thermostatic valve to maintain temperature between 70 and 110 degrees F, with a flow rate of 10 to 20 gallons a minute.
  3. Manufacturers:
    - a. Watts Company; [www.watts.com](http://www.watts.com)
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- I. Lavatory, Wrist Control:
1. ASME A112.19.2, wall mounted, 20 inches long by 18 inches wide, vitreous china, slab type.
  2. Provide with combination faucets with 4 inch wrist control handles, gooseneck spout with laminar flow outlet (Chicago Faucets 786-E29XKABCP), open drain with perforated strainer, angle stops, and 1-1/4 inch cast brass adjustable P-trap with tailpiece.
- J. Lavatory, Surgeon's:
1. ASME A112.19.2, wall mounted, vitreous china, front overflow, 28 inches long by 20 inches wide by 3-5/8 inches deep, with integral back and instrument trays.
  2. Provide with combination faucets, 4 inch wrist control handles, gooseneck spout with spray, open drain with perforated strainer, angle stops, and 1-1/4 inch cast brass adjustable P-trap with tailpiece.
- K. Sink, Single Bowl:
1. ASME A112.19.3, stainless steel, Type 302, 18 gage, 0.05 inch, satin finish, countertop type, polished rim, sound dampened, 25 inches long by 22 inches wide by 7-1/2 inches deep, three faucet holes.
  2. Provide with combination faucet, gooseneck spout, laminar flow outlet, 4 inch wrist control handles, cup strainer, 1-1/2 inch brass tailpiece, and 1-1/2 inch cast brass P-trap.
  3. Manufacturers:
    - a. Chicago Faucets series 786
- L. Sink, Deep, Double Bowl without Drainboard:
1. ASME A112.19.3, stainless steel, Type 304, 18 gage, 0.05 inch, polished finish, sound dampened, ledge-back with right hand drainboard.

2. Provide with combination faucet, swing spout, laminar flow outlet, 4 inch wrist control handles, cup strainers, 1-1/2 inch brass tailpieces and 1-1/2 inch cast brass P-trap.
  3. Size of sink shall be as indicated.
  4. Manufacturers:
- M. Sink, Deep, Double Bowl with Drainboard:
1. ASME A112.19.3, stainless steel, Type 304, 18 gage, 0.05 inch, polished finish, sound dampened, ledge-back with right hand drainboard.
  2. Provide with combination faucet, swing spout, laminar flow outlet, 4 inch wrist control handles, cup strainers, 1-1/2 inch brass tailpieces and 1-1/2 inch cast brass P-trap.
  3. Size of sink shall be as indicated.
- N. Shower, Emergency:
1. ANSI Z358.1; stainless steel ceiling shower with 8 inch self-cleaning head with integral flange for flush mounting.
  2. Provide with a one inch slow closing, self-closing valve operated by a heavy chain extending to and attached to the floor.
  3. The shower head shall provide not less than 25 gallons per minute at 30 pounds per square inch of pressure.
- O. Shower, Deluge, Safety:
1. ANSI Z358.1; complete combination emergency station consisting of a free-standing drench shower; self-cleaning, nonclogging eye and face wash with 1/2 inch quick opening, hand operated, copper alloy, full-flow valves; and stainless steel eye and face wash receptor with twin eyewash heads with pop-off covers.
  2. Provide a chrome-plated brass one inch stay-open ball valve operated by a stainless steel pull rod for the drench shower.
- P. Sink, Service, Disposal, Flushing Rim:
1. Vitreous china pedestal type, 20 by 20 inches, with flushing rim and siphon jet flushing action.
  2. Provide 1-1/2 inch top inlet spud and a minimum rim to floor height of 18 inches, with stainless steel rim guards on front and both sides, and elongated open-front seat.
  3. Provide ANSI large diaphragm (not less than 2.625 inches upper chamber inside diameter at the point where the diaphragm is sealed between the upper and lower chambers), nonhold open flush valve of chrome plated copper alloy, including vacuum breaker and angle (control-stop) valve with back check.
- Q. Scrub Station, Surgical, Automatic:
1. Wall mounted, 14 gage, 0.0781 inch, Type 304, welded stainless steel scrub sink with 2 automatic scrub stations.
  2. Provide each station with volume regulator, thermostat controlled water temperature selector, solid state electronic timer with automatically timed scrub period, gooseneck spout with full arm wash/rinse spray, laminar flow outlet, automatic water shut-off, built-in detergent dispenser, foot controls, perforated strainer, 1-1/2 inch tailpieces, and 1-1/2 inch cast brass P-trap.
  3. Provide plastic splash shields between scrub stations.
  4. Temperature controls and timing devices: Watertight and enclosed to prevent tampering.
  5. Provide 1/2 inch lines with hot and cold water at a pressure between 20 psi and 50 psi and 120 volt, 60 hertz, single phase power to an internal junction box.
- R. Lavatory, Wheelchair:
1. ASME A112.19.2, wall mounted, vitreous china, 20 inches long by 27 inches wide, slab type.
  2. Provide with combination lavatory faucets, gooseneck spout, 4 inch wrist control handles, open drain with perforated strainer, angle stops, and 1-1/4 inch cast brass adjustable P-trap with tailpiece.
- S. Water Closet, Specimen:

1. ASME A112.19.2, floor mounted with wax gasket, vitreous china, siphon jet, elongated bowl, and 1-1/2 inch brass top spud, elongated bowl and 1-1/2 inch back inlet spud, with concealed elongated open-front seat.
2. Provide ANSI large diaphragm (not less than 2.625 inches upper chamber inside diameter at the point where the diaphragm is sealed between the upper and lower chambers), nonhold-open flush valve of chrome plated copper alloy, including vacuum breaker and angle (control-stop) valve with back check, with lever operator.
3. Bowl shall be capable of receiving a full size bedpan.
4. Seat: Elongated, of white solid plastic, open front without cover.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that fixtures and accessories are of the correct type and size prior to installation.
- B. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- C. Verify that electric power is available and of the correct characteristics.

#### **3.02 PREPARATION**

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

#### **3.03 INSTALLATION**

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Install fixtures and fittings in accordance with the manufacturer's instructions and in accordance with the applicable codes.
- C. When fixtures require both hot water and cold water supplies, provide the hot water supply to the left of the cold water supply.
- D. Install off-the-floor supports to comply with ASME A112.6.1M.
- E. Adjust water flow rates to comply with manufacturer's rating of the fixture.

#### **3.04 FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. General Requirements:
  1. Before final acceptance of the work, test each fixture as in service to demonstrate compliance with the contract requirements. Perform the following tests in addition to the tests specified in the applicable codes.
  2. Correct all defects in the work provided by the Construction Manager, and repeat the tests until the work is in compliance with contract requirements.
  3. Furnish equipment, instruments, connecting devices, and personnel for the tests.
- C. Operational Tests: Upon completion and sterilization of plumbing systems, conduct operating tests to demonstrate satisfactory, functional, and operating efficiency.
  1. Submit report for each test on each fixture, including the following information:
    - a. Time, date, and duration of test.
    - b. Statement of conclusions, including remedial work performed to make fixtures operate satisfactorily.
    - c. Operation of all fixtures and fixture trim.
    - d. Operation of all valves, flush valves, and faucets.
    - e. Operation of all floor and shower drains by flooding with water.
    - f. Operation of vacuum breakers.
    - g. Complete operation of automatic scrub station, including water temperature, water pressure, and electronic timer.

#### **3.05 CLEANING**

- A. Thoroughly clean plumbing fixtures and equipment.

**3.06 PROTECTION**

- A. Protect installed products from damage due to subsequent construction operations.
- B. Repair or replace damaged products before Date of Substantial Completion.

**END OF SECTION**