

February 2015, Rev 01

22 4000 – Plumbing Fixtures

PART 1. GENERAL

1.01 Work Includes

A. Base bid:

1. Plumbing Contractor provides water closets, urinals, lavatories trim, supports and carriers specified and indicated on the drawings.

1.02 Section Includes

- A. Water closets
- B. Urinals
- C. Lavatories

1.03 Related Requirements

- A. Section 07 9005 - Joint Sealers: Seal fixtures to walls and floors.
- B. Section 22 1005 - Plumbing Piping.
- C. Section 22 1006 - Plumbing Piping Specialties.
- D. Section 22 3000 - Plumbing Equipment.

1.04 Reference Standards

- A. ASME A112.6.1M - Supports for Off-the-Floor Plumbing Fixtures for Public Use; The American Society of Mechanical Engineers; 1997 (Reaffirmed 2002).
- B. ASME A112.18.1 - Plumbing Supply Fittings; the American Society of Mechanical Engineers; 2005.
- C. ASME A112.19.2 - Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals; the American Society of Mechanical Engineers; 2008.
- D. ASME A112.19.5 - Trim for Water-Closet Bowls, Tanks and Urinals; the American Society of Mechanical Engineers; 2005.

1.05 Submittals

- A. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
- B. Maintenance Data: Include fixture trim exploded view and replacement parts lists.

- C. Warranty: Submit manufacturer warranty and ensure forms have been completed in NIU's name and registered with manufacturer.
 - D. Maintenance Materials: Furnish the following for NIU's use in maintenance of project.
 - 1. Extra Toilet Seats: One of each type and size.
 - 2. Flush Valve Service Kits: One for each type and size.
- 1.06 Quality assurance
- A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
 - 1. Substitutions approved through A&E Services.
 - B. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- 1.07 Delivery, Storage and Handling
- A. Accept fixtures on site in factory packaging. Inspect for damage.
 - B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

PART 2. PRODUCTS

2.01 Flush Valve Water Closets

- A. Water Closets: Vitreous china, ASME A112.19.2, elongated rim, wall hung, siphon jet flush action.
 - 1. Flush Volume: 1.6 gallon, minimum.
 - 2. Flush Valve: Exposed (top spud).
 - 3. Flush Operation: Sensor operated.
 - 4. Supply Size: 1-1/2 inches.
 - 5. Manufacturers:
 - a). American Standard Inc: www.americanstandard.com.
 - b). Kohler Company: www.kohler.com.
 - c). Crane: www.cranepumbing.com.
 - d). Substitutions: Of equal or greater quality. Contact A&E Services.
- B. Flush Valves: ASME A112.18.1, complete with vacuum breaker stops and accessories.

1. Left side handle convertible to IR Hands-free or;
2. Sensor-Operated Type: Solenoid operator, battery powered, infrared sensor and over-ride push button.
3. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.
4. Manufacturers:
 - a). Sloan Valve Company: www.sloanvalve.com.
 - b). Zurn Industries, Inc: www.zurn.com.
 - c). Moen Incorporated: (must be pre-approved by NIU Plumbing Shop or Physical Plant Director) www.moen.com
 - d). Substitutions: Of equal or greater quality. Contact A&E Services.

C. Seats:

1. Manufacturers:
 - a). Bemis Manufacturing Company: www.bemismfg.com.
 - b). Church Seat Company: www.churchseats.com.
 - c). Zurn industries, Inc: www.zurn.com.
 - d). Substitutions: Of equal or greater quality. Contact A&E Services.
2. Solid white antimicrobial plastic, open front, extended back, brass bolts, without cover.

D. Water Closet Carriers:

1. Carriers shall be 4 bolt carriers wall hung.
2. Manufacturers:
 - a). Wade Manufacturing Company: www.wadedrains.com.
 - b). Zurn Industries, Inc: www.zurn.com.
 - c). Jay R. Smith Manufacturing Company: www.jayrsmith.com.
 - d). Substitutions: Of equal or greater quality. Contact A&E Services.

2.02 Wall Hung Urinals

A. Wall Hung Urinal Manufacturers:

1. American Standard Inc: www.americanstandard.com.
2. Kohler Company: www.kohler.com.
3. Crane: www.cranepumbing.com.
4. Substitutions: Of equal or greater quality. Contact A&E Services

B. Urinals: Vitreous china, ASME A112.19.2, wall hung with side shields and concealed carrier.

1. Flush Volume: 1.0 gallon, Minimum
2. Flush Style: Washout.
3. Flush Valve: Exposed (top spud).
4. Flush Operation: Sensor operated.
5. Trap: Integral.
6. Supply Size: 3/4 inch.
7. Outlet Size: 2 inches.

C. Flush Valves: ASME A112.18.1, complete with vacuum breaker stops and accessories.

1. Sensor-Operated Type: Solenoid operator, battery powered, infrared sensor and over-ride push button.
2. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.

D. Manufacturers:

1. Sloan Valve Company: www.sloanvalve.com
2. Zurn Industries, Inc: www.zurn.com
3. Moen Incorporated: (must be pre-approved by NIU Plumbing Shop or Physical Plant Director) www.moen.com
4. Substitutions: Of equal or greater quality. Contact A&E Services.

E. Urinal Carriers:

1. Manufacturers:

- a). Wade Manufacturing Company: www.wadedrains.com
- b). Zurn Industries, Inc: www.zurn.com
- c). Jay R. Smith Manufacturing Company: www.jayrsmith.com
- d). Substitutions: Of equal or greater quality. Contact A&E Services.

2. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

2.03 Lavatories

A. Lavatory bowl is integral with countertop.

B. Hands-free lavatory:

1. Moen 8554
2. Substitutions: Of equal or greater quality. Contact A&E Services.

C. Accessories:

1. Metering/Mixing Lavatory faucets:

- a). Chicago 3300
- b). Substitutions: Of equal or greater quality. Contact A&E Services.

PART 3. EXECUTION

3.01 Examination

- A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.

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. Provide chrome plated rigid or flexible supplies to fixtures with screwdriver stops, reducers, and escutcheons.
- C. Install components level and plumb.
- D. Install and secure fixtures in place with wall carriers and bolts.
- E. Seal fixtures to wall and floor surfaces with sealant, color to match fixture.

3.04 Adjusting

- A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.05 Cleaning

- A. Clean plumbing fixtures and equipment.

3.06 Protection

- A. Protect installed products from damage due to subsequent construction operations.
- B. Do not permit use of fixtures by construction personnel.
- C. Repair or replace damaged products before Date of Substantial Completion.



End of Division 22 4000

This section of the NIU Design and Construction Standards establishes minimum requirements only. It should not be used as a complete specification.