

SECTION 22 4100 - RESIDENTIAL PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Bathtubs.
2. Faucets.
3. Showers.
4. Lavatories.
5. Lavatory Faucets
6. Supply fittings.
7. Waste fittings.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include diagrams for power, signal, and control wiring.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.

PART 2 - PRODUCTS

2.1 BATHTUBS

A. *Bathtubs: Enameled Steel, with shower.*

1. *Enameled Steel Bathtubs:*

a. *Manufacturers:*

- 1) *American Standard*
- 2) *Kohler*
- 3) *Crane Plumbing*
- 4) *Eljer, Inc*

2. Fixture:

- a. Standard: ANSI Z124.1.2 for FRP or PMMA bathtubs.
- b. Bathing Surface: Slip resistant according to ASTM F 462.
- c. ~~Size: 60 by 30 inches (1525 by 762 mm) with front apron.~~
- d. Color: ~~White~~ *As selected by GMHA*

- e. Drain Location: Field verify drain location.
 - f. Drain: NPS 1-1/2 in; chrome-plated-brass, pop-up waste and overflow.
- ~~3. Faucet: See drawing~~
 - 4. Supply Fittings: Included in faucet.
 - ~~5. Tub Filler: Chrome-plated-brass diverter spout.~~
 - 6. Waste Fittings:
 - a. Standard: ASME A112.18.2/CSA B45.125.2.
 - b. Drain: Stainless steel or chrome-plated brass, removable strainer.
 - c. Overflow: Chrome-plated-brass escutcheon with toggle drain-plug device.
 - d. Drain Piping: NPS 1-1/2 (DN 40) cast-brass overflow, P-trap, and waste.
 - e. Drain Piping: Schedule 40 PVC, NPS 1-1/2 (DN 40) P-trap and waste.

2.2 BATHTUB FAUCETS

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.
- B. Bathtub Faucets: Single handle, thermostatic.
 - 1. Thermostatic Faucets:
 - a. Manufacturers:
 - 1) Moen
 - 2) Kohler
 - 3) American Standard
 - 2. Standards: ASME A112.18.1/CSA B125.1 and ASSE 1016.
 - 3. Faucet:
 - a. Body Material: Solid brass.
 - b. Finish: Polished chrome plate.
 - c. Maximum Flow Rate: ~~1.5 gpm unless otherwise~~ *As indicated on drawing.*
 - d. Mounting: Concealed.
 - e. Operation: Single handle, twist or rotate control, with hot- and cold-water indicators.
 - f. Antiscald Device: Integral with mixing valve.
 - g. Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.
 - h. Diverter: In-tub filler spout.
 - ~~i. Supply Connections: NPS 1/2 (DN 15).~~
 - 4. Shower Head:
 - a. Standard: ASME A112.18.1/CSA B125.1.
 - b. Type: ~~Ball joint with arm and flange and Hand shower. Include wall-mounting device. Per Drawings for type and manufacturer/model#~~
 - c. Backflow-Prevention Device: ASSE 1014.
 - d. Shower Head Material: Metallic with chrome-plated finish.
 - e. Spray Pattern: Fixed.

- f. Integral Volume Control: Not required.
- g. Shower-Arm, Flow-Control Fitting: ~~1.5 gpm (5.7 L/min.)~~ *As indicated on drawing.*
- h. Temperature Indicator: Not required.

5. Bathtub Filler Spout: Chrome-plated brass.

2.3 SHOWERS

A. Showers: Roll-in accessible PMMA with base and faucet.

1. PMMA (Acrylic) Showers:

a. Manufacturers:

- 1) Aquatic
- 2) Sterling
- 3) Aqua Bath Company
- 4) American Standard
- 5) Kohler
- 6) Mansfield Plumbing Products
- 7) Clarion Bathware
- 8) Swan Corporation

2. Standard: ANSI Z124.1.2.

~~3. Nominal Size: 62 by 30 inches~~

4. Surround: Sealed, multiple piece.

5. Bathing Surface: Slip resistant according to ASTM F 462.

6. Color: White.

7. Drain Location: Left side.

2.4 SHOWER FAUCETS

A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.

B. Shower Faucets Single handle, thermostatic, mixing valve.

1. Single-Handle, Thermostatic Faucets:

a. Manufacturers:

- 1) Moen
- 2) Kohler
- 3) American Standard

2. Fixture:

a. Standard: ASME A112.18.1/CSA B125.[and ASSE 1016.

b. General: Include hot- and cold-water indicators; check stops; and hand head complying with ASSE 1014 with arm, flange, hose, and bracket. Coordinate faucet inlets with supplies.

c. Body Material: Solid brass

- d. Finish: Polished chrome plate.
 - e. Maximum Flow Rate: ~~1.5 gpm unless otherwise~~ *As indicated on drawings.*
 - f. Mounting: Concealed.
 - g. Backflow-Prevention Device for Hand-Held Shower: Required.
 - h. Operation: Compression, manual.
 - i. Antiscald Device: Integral with mixing valve
 - j. Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.
- 3. Supply Connections: NPS 1/2 (DN 15).
 - 4. Shower Head:
 - a. Type: ~~Hand-held, slide-bar mounted.~~ *Per Drawings for type and manufacturer/model#*
 - b. Shower Head Material: Metallic with chrome-plated finish.
 - c. Spray Pattern: ~~Fixed.~~ *Per type and manufacturer/model#*
 - d. Integral Volume Control: Required.
 - e. Shower-Arm, Flow-Control Fitting: ~~1.5 gpm (5.7 L/min.)~~ *As indicated on drawings.*

2.5 LAVATORIES

A. Vitreous-China Lavatories, Wall Mounted:

- 1. Manufacturers:
 - a. American Standard
 - b. Kohler Co.
 - c. Mansfield Plumbing Products
 - d. TOTO USA, Inc
- 2. Standard: ASME A112.19.2/CSA B45.1 for vitreous-china lavatories.
- 3. Shape: Rectangular.

2.6 LAVATORY FAUCETS

A. General-Duty, *Solid*-Brass Faucet:

- 1. Manufacturers:
 - a. American Standard
 - b. Moen (*Basis of Design Model 8800F05*)
 - c. Kohler
 - d. Delta Faucet Company
- 2. Standard: ASME A112.18.1/CSA B125.1; solid brass.
- 3. Comply with NSF/ANSI 61, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.
- 4. Type: Center set with inlets on 4-inch (102-mm) centers and ~~without~~ *with* pop-up waste.
- 5. Finish: Polished chrome plate.
- 6. Handle(s): Dual lever.
- 7. Maximum Flow Rate: 0.5 gpm (1.5 L/min.)
- 8. Drain: ~~Grid strainer~~ *Pop-up waste* with NPS 1-1/4 (DN 32) offset waste.

9. Trap: Chrome plated, with slip-joint inlet and wall flange.
10. Supply and Drain Insulation: Soft-plastic covering; removable at stops.

2.7 FITTINGS

A. Supply Fittings:

1. Standards: Comply with NSF/ANSI 61, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water. ASME A112.18.1/CSA B125.1.
2. Supply Piping: Chrome-plated-brass pipe or chrome-plated-copper tube matching water-supply piping size. Include chrome-plated wall flange.
3. Stops: Chrome-plated brass, one-quarter-turn, ball-type or compression stop with inlet connection matching water-supply piping type and size.
4. Risers: ASME A112.18.6, braided- or corrugated-stainless-steel flexible hose riser.

B. WASTE FITTINGS

1. Standard: ASME A112.18.2/CSA B125.2.
2. Drain: Grid type with NPS 1-1/2 (DN 40) straight tailpiece for standard kitchen sinks.
3. Trap Sizes:[NPS 1-1/2 (DN 40).
4. Material: Chrome-plated, two-piece, cast-brass trap and swivel elbow with 0.032-inch-(0.83-mm-) thick brass tube to wall and chrome-plated-brass or -steel wall flange.

2.8 GROUT

- A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink; recommended for interior and exterior applications.
- C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fitting insulation kits on fixtures for people with disabilities.
- B. Install fixtures with flanges and gasket seals.
- C. Install tanks for accessible, tank-type water closets with lever handle mounted on wide side of compartment.
- D. Fasten wall-hanging plumbing fixtures securely to supports attached to building substrate when supports are specified and to building wall construction where no support is indicated.

- E. Fasten floor-mounted fixtures to substrate. Fasten fixtures having holes for securing fixture to wall construction to reinforcement built into walls.
- F. Fasten wall-mounted fittings to reinforcement built into walls.
- G. Secure supplies to supports or substrate within pipe space behind fixture.
- H. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts at fixture.
- I. Install water-supply stop valves in accessible locations.
- J. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes unless otherwise indicated.
- K. Install escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons where required to conceal protruding pipe fittings.
- L. Seal joints between fixtures and walls, floors, and counters using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color.
- M. Install piping connections between plumbing fixtures and piping systems and plumbing equipment. Install insulation on supplies and drains of fixtures for people with disabilities.
- N. Ground equipment.

3.2 CONNECTIONS

- A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
- B. Comply with water piping requirements specified in Section 22 1116 "Domestic Water Piping."
- C. Comply with soil and waste piping requirements specified in Section 22 1316 "Sanitary Waste and Vent Piping."

3.3 ADJUSTING

- A. Operate and adjust plumbing fixtures and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.

3.4 CLEANING AND PROTECTION

- A. After completing installation of plumbing fixtures, inspect and repair damaged finishes.

- B. Clean plumbing fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed plumbing fixtures and fittings.
- D. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 22 4100