

SECTION 22 44 00 - PLUMBING FIXTURES AND TRIM

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide all labor, materials, equipment and services to perform operations required for the complete installation and related Work as required in Contract Documents.

1.2 FIXTURE STANDARDS

- A. All work and materials shall conform to and be installed, inspected and tested in accordance with the governing rules and regulations of federal, state and local governmental agencies.
- B. Plumbing systems and all components that are designed and/or intended to deliver potable water for human consumption shall be third-part tested and certified for not exceeding the maximum allowable lead content per the NSF/ANSI 372 standard.
- C. The following is a list of standards each fixture shall conform to.
 - 1. Automatic Clothes Washers: ASME A112.1.2 or A112.1.3
 - 2. Bathtubs: ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.
 - 3. Bidets: ASME A112.19.2/CSA B45.1.
 - 4. Commercial Dishwashing Machines: ASSE 1004 and NSF 3.
 - 5. Residential Dishwashing Machines: NSF 184.
 - 6. Drinking Fountains: ASME A112.19.1/CSA B45.2 or ASME A112.19.2/CSA B45.1 and water coolers shall conform to ASHRAE 18.
 - 7. Emergency Showers and Eyewash Stations: ISEA Z358.1
 - 8. Faucets & Fixture Fittings: ASME A112.18.1/CSA B125.1
 - a) Waste Fittings: ASME A112.18.2/CSA B125.2, ASTM F409
 - b) Hand Showers: ASME A112.18.1/CSA B125.1
 - c) Individual Shower Valves: ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1
 - d) Multiple Showers: ASSE 1069 or CSA B125.3
 - e) Bathtub & Whirlpool Valves: ASSE 1070/ASME A112.1070/CSA B125.70 or CSA B125.3
 - f) Hose-Connected Outlets: ASME A112.18.3 or ASME A112.18.1/CSA

- B125.1
 - g) Temperature-Actuated, Flow-Reduction Devices for Individual Fixture Fittings: ASSE 1062.
 - h) Transfer Valves: ASME A112.18.1/CSA B125.1.
 - i) Water Closet Personal Hygiene Devices: ASME A112.4.2/CSA B45.16.
 - j) Head Shampoo Sink Faucet: ASSE 1070/ASME A112.1070/CSA B125.70.
- 9. Floor and Trench Drains: ASME A112.3.1, ASME A112.6.3 or CSA B79, ASME A112.6.3.
- 10. Floor Sinks: ASME A112.6.7.
- 11. Flushing Devices for Water Closets and Urinals:
 - a) Flush Valves ASSE 1037/ASME A112.1037/CSA B125.37 or CSA B125.3.
 - b) Flush Tank Fill Valves: ASSE 1002/ASME A112.1002/CSA B125.12 or CSA B125.3.
- 12. Food Waste Disposer Units: ASSE 1008 and UL 403.
- 13. Laundry Trays: ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.
- 14. Lavatories: ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.
Faucets: ASSE1070/ASME A112.1070/CSA B125.70 or CSB B125.3
- 15. Manual Food and Beverage Dispensing Equipment: NSF 18.
- 16. Showers: ASME A112.19.2/CSA B45.1 or CSA B45.5/IAPMO Z124.
- 17. Sinks: ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.
- 18. Urinals: ASME A112.19.2/CSA B45.1, ASME A112.19.19 or CSA B45.5/IAPMO Z124.
- 19. Water Closets: ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124.
- 20. Whirlpool Bathtubs: ASME A112.19.7/CSA B45.10 and UL 1785.

1.3 SUBMITTALS

- A. Submit shop drawings for all items specified under "Part 2 - Products" of this Section. Provide dimensional and roughing in information for all plumbing fixtures.

- B. Submit wiring diagrams and manufacturer's electrical requirements for all electronically operated fixtures and trim.
- C. Submit manufacturer's color charts for cabinet finishes and fixture colors.
- D. Submit operations and maintenance information for each fixture, faucet, shower and trim piece. Include this information in the Operations and Maintenance Manual specified in Section 22/B010.

1.4 DESCRIPTION OF FIXTURES

- A. All fixtures, trim and fixture accessories shall be similar and equal to the manufacturer's plate numbers specified in this section. All fixtures and supply trim shall meet the requirements of the New York State Department of Environmental Conservation and shall be listed by that Agency. All exposed parts of fixture trim shall have a polished chrome finish. All tubular drainage products ("P" traps, nipples, etc.) for sinks, electric water coolers, drinking fountains and lavatories shall be 17 gauge brass.
- B. All fixtures, trim and fixture accessories shall be subject to compliance with the specified requirements and shall be manufactured by the following:
 - 1. Water Closets, Urinals and Lavatories: American Standard, Crane, Eljer, Kohler, Mansfield, Universal Rundle.
 - 2. Stainless Steel Sinks: Elkay, Just.
 - 3. Mop Service Sinks: Fiat, Mustee, Stern-Williams.
 - 4. Faucets: Chicago, Symmons, Moen, Kohler, T&S Brass.
 - 5. Flush Valves: Delany, Sloan "Regal", Zurn.
 - 6. Water Closet Seats: Bemis, Church
 - 7. Electric Water Coolers: EBCO, Elkay, Halsey-Taylor, Haws, Sunroc.
 - 8. Fixture Supports and Carriers: Jay R. Smith, Josam, Wade, Zurn.
 - 9. Shower Brass and Trim: Powers, Speakman, Symmons.
 - 10. Stainless Steel Shower Units: Acorn, Bradley.
 - 11. Shower Stalls: Clarion, Aker, Universal Rundle.
 - 12. Lavatory, Sink and Water Cooler Trim: Brass-Craft, Cambridge, EBCO, McGuire.
- C. Fixture Cuts: Submit shop drawings in folders with cuts of all fixtures, brass trim and accessories before placing order for fixtures. Provide roughing sheets for all fixtures. Provide dimensions for all fixtures, trim and accessories.
- D. Samples: Submit fixture and accessory samples when requested by Owner and/or Owner's Representative.
- E. Roughing Sheets: Submit roughing sheets in duplicate for each type of fixture when requested.
- F. Provide the Owner with special wrenches, tools and devices necessary for servicing plumbing fixtures and trim in a quantity of one device for each 5 (five)

fixtures (provide a minimum of one device if fixture quantity is less than five)
Provide the Owner with shower and faucet repair kits complete with all parts in a quantity of 1 (one) kit for each 20 (twenty) faucets and showers (provide a minimum of one kit for each faucet and shower if fixture quantity is less than twenty).

PART 2 – PRODUCTS

**REFER TO THE FIXTURE SCHEDULES ON THE PLUMBING DRAWINGS
FOR FIXTURE TYPES, MAKES AND MODELS TO BE USED ON THIS PROJECT.**

**THE INFORMATION BELOW GIVES ADDED DIRECTION, EQUIPMENT AND ASSOCIATED TRIM THAT
WOULD ACCOMMODATE THE FIXTURE SELECTIONS FOUND ON THE CONTRACT DRAWINGS.**

2.1 WATER CLOSETS (WC)

- A. Provide floor mounted flush valve water closets fitted with following:
 - 1. Cast iron closet flange with stainless steel bolts and wax setting ring.
 - 2. China bolt caps.
 - 3. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.

2.2 LAVATORIES (LAV)

- A. Provide wall hung lavatories fitted with following:
 - 1. McGuire No. 155-WC chrome plated P.O. plug with open grid strainer and offset 1-1/4 inch, 17 gauge tailpiece.
 - 2. McGuire No. 8902 chrome plated, 17 gauge, 1-1/4 inch x 1-1/2 inch "P" trap with cleanout plug and metal, chrome plated set screw wall escutcheon.
 - 3. McGuire #167LK, 3/8 in. chrome plated wall supplies with loose key angle stops, cast brass set screw escutcheons and 12 in. long flexible risers.
 - 4. Jay R. Smith Series 0700 concealed arm floor mounted carrier with locking device, leveling screw and welded base.
 - 5. Provide Brocar 500R insulated coverings on waste and supply piping, (trap wrap kit).

6. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.
- B. Provide countertop lavatories fitted with following:
1. McGuire No. 155-WC chrome plated P.O. plug with open grid strainer and offset 1-1/4 inch, 17 gauge tailpiece
 2. McGuire No. 8902 chrome plated, 17 gauge, 1-1/4 inch x 1-1/2 inch "P" trap with cleanout plug and metal, chrome plated set screw wall escutcheon.
 3. McGuire #167LK, 3/8 in. chrome plated wall supplies with loose key angle stops, cast brass set screw escutcheons and 12 in. long flexible risers.
 4. Provide Brocar 500R insulated coverings on waste and supply piping, (trap wrap kit).
 5. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.

2.3 SINKS (SINK)

- A. Provide countertop sinks fitted with following:
1. McGuire #151A stainless steel strainer with removable cup, 1-1/2 inch tailpiece.
 2. McGuire #8912 Semi-cast brass, adjustable "P" trap, 1-1/2 inch x 1-1/2 inch, with cleanout plug.
 3. McGuire #2169 1/2 in. supplies with 3/8 in. flexible risers, loose key stops and metal, chrome plated escutcheons.
 4. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.
- B. Provide single floor mount, flushing rim sinks, fitted with the following:
1. 28 inch by 12 inch by 10-inch high, terrazzo base with center hole for waste piping. Make: stem Williams or approved equal.
 2. American Standard No. 8345.110 exposed wall mount faucet with vacuum breaker and bottom fork brace.
 3. Jay R. Smith series 0914,0195 floor mounted support.
 4. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.

- C. Provide laundry tub sinks fitted with the following:
1. Trim, strainer, legs and hose fitting.
 2. Cast brass strainer, tailpiece, trap, and wall escutcheons.
 3. Chrome plated supply pipes and stops.

2.4 MOP SERVICE SINK (MSS)

- A. Provide mop service sink fitted with the following:
1. 3 inch brass drain assembly - chrome plated brass drain body, chrome plated cast brass lock-nut, neoprene sealing washers, flat strainer and stainless steel screws.
 2. Provide check valves in supply piping.
 3. Hose and hose bracket.
 4. Stainless steel mop hanger.
 5. Sealant on all wall seams at building walls.
 6. Drain gasket.
 7. Rigid vinyl bumper guards. Provide on all sides of sink not adjacent to walls.

2.5 ELECTRIC WATER COOLER (EWC)

- A. Provide wall hung electric water coolers fitted with the following:
1. Vandal-resistant, stainless steel construction.
 2. Surfaces and materials in contact with water to be certified lead free per EPA regulations.
 3. Provide floor mounted carrier for each electric water cooler. Jay R. Smith Series 0823.
 4. Where noted on the Architectural Plans, provide fixture in compliance with all ADA required clearances and dimensions.
 5. If the wall can not be patched to match existing, provide stainless steel wall covering as needed to cover demolition work behind electric water cooler.

2.6 SHOWERS (SHR)

- A. Provide one piece seamless, gelcoated, fiberglass-reinforced ADA, showers fitted with the following:
1. Integral mounting flange and slip-resistant floor.
 2. Factory install all accessories with additional reinforcement.
 3. Provide 1-1/2 inch diameter, stainless steel L-shaped grab bar. Provide 1-1/2 inch diameter 18 inch long on valve wall. Grab bars shall be installed at the factory per ADA requirements.
 4. Provide 32" Fold down seat with stainless steel frame. Seat shall be installed at the factory per ADA requirements.
 5. Pressure balancing mixing valve with all working parts constructed of brass, bronze and stainless steel, with adjustable stop screw to limit handle turn, model super shower head with arm and flange, hand held shower on 24 inch slide bar, flexible metal hose, in-line vacuum breaker, wall connection and flange.
 6. Mount shower controls on the opposite wall of the seat.
 7. Provide stainless steel curtain rod with curtain hook.
 8. Provide soap dish mounted on valve wall.
 9. Provide glide bar shower head within the unit
 10. Mount all hardware and controls as directed by the Architect. Provide fixture in compliance with all ADA required clearances and dimensions.
 11. Provide 2" shower drain equal to Zurn model FD-2250.
- B. Walls of shower unit shall be tiled by G.C. P.C. shall provide shower head, controls and floor drain as noted.
1. Pressure balancing mixing valve with integral thermometer, adjustable stop screw, integral service stops, separate lever diverter with volume control for shower head and spray hose, stainless steel brackets, 5'-0" flex hose and head, integral vacuum breaker and slide bar.
 2. Mount all hardware and controls as directed by the Architect. Provide fixture in compliance with all ADA required clearances and dimensions.
 3. Provide fiberglass base with drain. Selection by Architect.

PART 3 - EXECUTION

3.1 FIXTURES, EQUIPMENT AND SYSTEMS

- A. Install fixtures, trim, accessories, equipment and systems as shown on the Drawings or as specified herein in accordance with the provisions of each applicable Section of these Specifications and in compliance with all Federal, State and Local codes having jurisdiction.

3.2 FIXTURES

- A. Install all fixtures on chair carriers except as specified. Vitreous china to be fired before and after glaze is applied (twice fired) and shall be without decoration unless otherwise noted.
- B. Chromium Plating:
 - 1. All supply and drainage trim and accessories shall have a minimum thickness of 0.002 inch chromium applied over a nickel plating having a minimum thickness of 0.0002 inch.
- C. Screws, Bolts and Nuts:
 - 1. All screws, nuts and bolts shall be of size, type and finish to fit requirements and to harmonize with adjacent material.
 - 2. Nut and bolt heads exposed at fixtures shall be hexagon with bonnet cap and chromium plated brass.
- D. Erection:
 - 1. Properly install fixtures and associated supply and drainage piping and securely support.
 - 2. Carefully drill holes for thru-bolts to avoid chipping blocks or plaster where required over plates.
 - 3. Except where chair carriers are specified, attach fixtures with hangers or brackets. Attach to walls as follows:
 - a) Masonry construction:
 - (1) Secure fixture hangers to partition by thru-bolts extending through a steel plate on opposite side of partition.
 - (2) Carefully drill holes to avoid chipping.
 - (3) Obtain Owner's Representative's approval prior to work.

- b) Metal stud construction:
 - (1) Anchor backing for fixtures or equipment to 1/8 inch x 12 inch steel plate bolted or riveted to at least three studs.
 - (2) Obtain Owner's Representative's approval prior to work.
- E. Protection: Immediately after installation, thoroughly cover metal trimmings and fixture to prevent damage or scratches. Condition of all fixtures is the responsibility of the Division 22 contractor until the Owner takes final possession of the Project.
- F. Cleaning: At completion of Work, clean all fixtures complete with their trimmings; put in working order and in first-class condition and appearance.
- G. Installation:
 - 1. Exact mounting height to be determined by Owner's Representative, Architectural Drawings and (where applicable) all ADA requirements.
 - 2. Perimeter of fixtures in contact with wall to be caulked with DAP white flexible "Kwik-Seal" tub and tile caulk. Caulk shall be non-shrinking type.
 - 3. Countertop sinks and lavatories: Set countertop mounted sinks and lavatories in a bed of approved setting compound, which will cover the entire perimeter of the sink or lavatory that comes in contact with the countertop.
 - 4. Chair carriers:
 - a) Anchor chair carriers to concrete floor with 1/2 inch x 3 inch anchors or thru-bolts and washers. Quantity of anchors: Water Closets - 4, Lavatories and Urinals - 8. Provide for drilling of floor and installation of expansion shields.
 - b) Use thru-bolts to attach fixtures to wooden floors (where applicable).
- H. Floor Mounted Water Closets: Set floor mounted water closets in a bed of approved setting compound which will cover the entire perimeter of the water closet that comes in contact with the floor. Setting compound shall be equal to "Black Swan," "S.O.S." plasti-putti bowl setting compound.

END OF SECTION

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