

SECTION 22 42 00 - COMMERCIAL PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. **KROGER DIRECT BUY PROGRAM:** Owner supplied/Contractor installed.
 - a. The Kroger Company will supply the following commercial plumbing fixtures complete with drain and faucet as indicated on Drawings:
 - 1) Lavatories: (LOCATED IN FOOD PREPARATION AREAS).
 - 2) Seafood sink.
 - 3) Deli Dept. product sink.
 - 4) Pharmacy sink.
 - 5) Floral sink.
 - 6) Break room sink.
 - 7) Three-compartment sink (Produce, Meat, Deli, Seafood and Bakery).
 - b. Comply with requirements in Division 00 Section "General Conditions."
 2. Contractor supplied items: Contractor furnished/Contractor installed.
 - a. Other commercial plumbing fixtures not provided by Owner and as specified in Part 2.
 - b. Fasteners and other items not provided by Owner necessary for a complete installation.
 3. Contractor installed items:
 - a. All Commercial plumbing fixtures and accessories.
 - b. Provide installation and final connections.
- B. Refer to Division 06 Section "Miscellaneous Carpentry" for solid surface counters with integral sink bowls.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Closeout Submittals:
1. Operation and Maintenance Data: For flushometer valves and electronic sensors to include in operation and maintenance manuals.

- C. Direct Buy Submittals: The Owner will provide the following submittals for the Contractor's review. The Contractor shall review and return submittals as specified in Division 00 Section "General Conditions."

- 1. Product Data: For each Direct Buy product indicated.

1.3 QUALITY ASSURANCE

- A. NSF Standard: Comply with NSF 61, "Drinking Water System Components--Health Effects," for fixture materials that will be in contact with potable water.
- B. ANSI Standard: Comply with ANSI Z358.1 "Standard for Plumbed and Portable Eyewash Stations" for eyewash stations.
- C. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Water Flow and Consumption Rates: Comply with requirements in Public Law 102-486, "Energy Policy Act," for water flow and consumption rates for plumbing fixtures.
- C. Accessibility Requirements: For accessible commercial plumbing fixtures, comply with the DOJ's "2010 ADA Standards for Accessible Design" or ICC A117.1 and requirements of authority having jurisdiction.

2.2 DIRECT BUY PLUMBING FIXTURES:

- A. Refer to Division 01 Section "Vendor Contact List" for contact information on plumbing fixtures, faucets and accessories provided by Owner.
 - 1. Provide drains, p-traps with clean outs, and associated fittings and piping for a complete installation of direct buy owner furnished products.

2.3 CONTRACTOR PROVIDED PLUMBING FIXTURES

A. Vitreous China Fixtures

1. Products:

	American Standard	Zurn	Kohler
Water Closet	Madera 3451.001	Z5665-BML1	Wellcomme K-4350
Water Closet Accessible	Madera 3461.001	Z5665-BWL1	Highcliff K-4368
Urinal	Washbrook 6590.125	-Z5755-U	Bardon K-4904-ET

2. Water Closets: Floor mounted, bottom outlet, top spud.

a. Bowl:

- 1) Standards: ASME A112.19.2/CSA B45.1 and ASME A112.19.5.
- 2) Material: Vitreous china.
- 3) Type: Siphon jet.
- 4) Style: Flushometer valve.
- 5) Height: Standard or handicapped/elderly, complying with ICC/ANSI A117.1, as indicated.
- 6) Rim Contour: Elongated.
- 7) Water Consumption: 1.6 gal. (6 L) per flush.
- 8) Spud Size and Location: NPS 1-1/2 (DN 40); top.
- 9) Color: White.
- 10) Bowl-to-Drain Connecting Fitting: ASTM A 1045 or ASME A112.4.3.

b. Flushometer Valve: Sensor/automatic, diaphragm type, polished, chrome plated. Include compatible transformer(s) per manufacturer requirements for hardwired models. See Drawings for locations and ensure proper access.

1) Products:

- a) Sloan Valve Company; Royal 111-1.6 SFSM HW for hard wired (new construction), Royal 111-1.6 SFSM (battery powered for remodels where hard wired is not applicable).
- 2) Standard: ASSE 1037.
 - 3) Minimum Pressure Rating: 125 psig (860 kPa).
 - 4) Features: Include mechanical override flush button, integral check stop and backflow-prevention device.
 - 5) Material: Brass body with corrosion-resistant components.
 - 6) Exposed Flushometer-Valve Finish: Chrome plated.
 - 7) Consumption: 1.6 gal. (6 L).
 - 8) Minimum Inlet: NPS 1 (DN 25).
 - 9) Minimum Outlet: NPS 1-1/4 (DN 32) to NPS 1-1/2 (DN 38) as required.

- c. Toilet Seat:
 - 1) Product: Church Seat Co., a division of Bemis Manufacturing Co.; model 295CT. Specify store number and address when ordering.
 - a) No substitutions allowed.
 - 2) Material: Heavy weight injection molded solid plastic.
 - 3) Type: Commercial (Heavy duty).
 - 4) Shape: Elongated rim, open front.
 - 5) Hinge: Check.
 - 6) Hardware: Stainless steel.
 - 7) Color: White.
- 3. Urinal: Wall hung, back outlet, blowout.
 - a. Fixture:
 - 1) Product:
 - 2) Standards: ASME A112.19.2/CSA B45.1 and ASME A112.19.5.
 - 3) Material: Vitreous china.
 - 4) Strainer or Trapway: Manufacturer's standard strainer with integral trap.
 - 5) Water Consumption: 0.125 gal. (0.5 L) per flush.
 - 6) Spud Size and Location: NPS 3/4 (DN 19); top.
 - 7) Outlet Size and Location: NPS 2 (DN 50); back.
 - 8) Color: White.
 - b. Flushometer Valve: Sensor operated, diaphragm type, chrome plated. Include compatible transformer(s) per manufacturer requirements for hardwired models. See Drawings for locations and ensure proper access.
 - 1) Product:
 - a) Sloan Valve Company; Royal 186 SFSM-0.125 HW for hard wired (new construction), Royal 186 SFSM-0.125 (battery powered) for remodels where hard wired is not applicable and 0.125 gpf urinal is used, Royal 186 SFSM-0.5 (battery powered) for remodels with existing urinals not compatible with 0.125 gpf .
 - 2) Features: Include mechanical override flush button, integral check stop and backflow-prevention device.
 - 3) Material: Brass body with corrosion-resistant components.
 - 4) Exposed Flushometer-Valve Finish: Chrome plated.
 - 5) Actuator: Solenoid complying with UL 1951; listed and labeled as defined in NFPA 70.
 - 6) Trip Mechanism: Electronic sensor complying with UL 1951; listed and labeled as defined in NFPA 70.
 - 7) Consumption: 0.125 gal. (0.5 L) per flush for new or existing 0.125 gpf urinals, 0.5 gal for existing urinal not compatible with 0.125 gpf.

- c. Concealed Urinal Carrier: ASME A112.6.1M, Type I, urinal carrier with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.

- 1) Manufacturers:

- a) Josem Company
- b) Tyler Pipe, Wade Division
- c) J. R. Smith Mfg. Co.

B. Stainless Steel Fixtures:

1. Countertop Lavatories for Restrooms

- a. Fixture: Stainless steel bowl with overflow.

- 1) Products:

- a) Elkay Mfg. Co.; Asana Model ELUH1511.
- b) Hamat USA; Halo Model HAL-OFA-1814LU.
- c) Houzer, Inc.; Opus Model CHO-1800-1.
- d) Just Manufacturing Co.; Model UOIF1619-J.

- 2) Standards:

- a) ASME A112.19.3/CSA B45.4.
- b) ADA & ICC A117.1.

- 3) Type: Undermount.

- 4) Material: Stainless steel, Type 304, 18 gage thick.

- 5) Inside Bowl Dimensions: Approximately 15-1/2 by 11-3/8 inches (394 by 289 mm).

- 6) Mounting Materials: Brackets, bracket bolt, mildew resistant silicone sealant as recommended by manufacturer.

- b. Sensor Activated Faucet and Drain: Include compatible transformer(s) per manufacturer requirements for hardwired models.

- 1) Products:

- a) Sloan; SF-2400 (hard wired for new construction), SF-2450 (battery powered for remodels if hardwired is not applicable)
- b) Zurn; 6950-XL-S (hard wired for new construction, battery for remodels if hardwired is not applicable)

- 2) Type: Commercial with single center hole, ADA compliant. (include trim plate for 4-inch (102 mm) centerset sink if applicable)

- 3) Pedestal Depth: 4 to 6 inch (102 to 152 mm).

- 4) Aerator: Vandal resistant.

- 5) Flow Rate: Aerator limited to maximum 0.5 gpm at 60 psi (1.9 L/min at 414 kPa).

- 6) Drain: 1-1/4-inch (32-mm) integral grid.
- 7) Trap: 1-1/4-inch (32-mm) cast P-trap w/ CO.
- 8) Shutoff Valves: Include manual hand wheel type shutoff valves and connecting stem pipes.
- 9) Finish: Chrome.

C. Service Sink: Molded plastic composite stone floor sink

1. Basis of Design Product: Fiat Products, a division of Crane Plumbing; model MSB-2424 and #830-AA faucet with vacuum breaker or a comparable product by one of the following:
 - a. Florestone Products Co., Inc.
 - b. Mustee, E. L., & Sons, Inc.
 - c. Swan Corporation (The).
 - d. Zurn Industries, LLC; Light Commercial Specialty Plumbing Products.
2. Size: 24-inches by 24 inches by 10-inches (610-mm by 610-mm by 254-mm) high.
3. Drain: 3-inch (76-mm) drain, with "P" trap.

D. Wall-Mounted Eyewash:

1. Products:
 - a. Encon Safety Products, Inc.; Model 01-0304-01
 - b. Speakman Company; Model SE580.
2. Provide complete with high visibility yellow ABS or polyethylene catch basin 10.8 inch (275 mm) diameter, self-adjusting regulator to flow at 3.2 gpm (12.1 lpm), stay open valve, and wall bracket.
3. Refer to Section 22 11 00 "Facility Water Distribution" for emergency tempering valve (ETV) to be installed with emergency eyewash.

E. Electric Water Cooler: Wall mounted, wheelchair accessible.

1. Manufacturers: Provide the Basis-of-Design product specified by Oasis International or a comparable product approved by Owner by one of the following:
 - a. Elkay Manufacturing Co.
 - b. Halsey Taylor.
2. Products:
 - a. Single level without bottle filler located on mezzanine near restrooms and in rear of building near associates' restroom.
 - 1) Basis-of-Design: Oasis International; Model P8AC
 - b. Bi-level without bottle filler located near TLC or Pharmacy restrooms:
 - 1) Basis-of-Design: Oasis International; Model P8ACSL

- c. Bi-level with bottle filler located near main public restrooms, in rear of building near associates' restroom, & near Pharmacy restroom
 - 1) Basis-of-Design: Oasis International; Model P8SBFSL
- 3. Cabinet: Bi-level as indicated with attached cabinets, powder-coated paint or vinyl-covered galvanized steel with stainless-steel top.
- 4. Bubbler: One, with adjustable stream regulator, located on each cabinet deck.
- 5. Bottle Filling Station: Manufacturer's standard, mounted on lower unit.
- 6. Control: Push button or bar.
- 7. Cooling System: Electric, with hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.
 - a. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- 8. Capacities and Characteristics:
 - a. Cooled Water: 8 gph (0.0084 L/s).
 - b. Ambient-Air Temperature: 90 deg F (32 deg C).
 - c. Inlet-Water Temperature: 80 deg F (27 deg C).
 - d. Cooled-Water Temperature: 50 deg F (10 deg C).
 - e. Electrical Characteristics:
 - 1) Volts: 115-120-V ac.
 - 2) Phase: Single.
 - 3) Hertz: 60.
 - 4) Full-Load Amperes: 4.0
- 9. Support: ASME A112.6.1M, Type II water-cooler carrier.
- 10. Shutoff Valves: Include manual hand wheel type shutoff valves and connecting stem pipes.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install per manufacturer's instructions and recommendations.
- B. Install accessible wall-mounted fixtures at handicapped/elderly mounting height according to ICC/ANSI A117.1.
 - 1. Bi-Level Electric Water Coolers: Install so lower unit is at handicapped/elderly mounting height.
- C. Install off-floor supports, affixed to building substrate, for wall-mounting fixtures.
- D. Install back-outlet, wall-mounting fixtures onto waste fitting seals and attach to supports.

- E. Install floor-mounting fixtures on closet flanges or other attachments to piping or building substrate.
- F. Install wall-mounting fixtures with tubular waste piping attached to supports.
- G. Install counter-mounting fixtures attached to countertop.
 - 1. Install countertop undermount stainless-steel fixtures with brackets, bracket bolts, and mildew resistant silicone sealant as recommended by solid surface countertop and fixture manufacturer.
- H. Install fixtures level and plumb according to roughing-in drawings.
- I. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
- J. Install flushometer valves for accessible water closets with handle sensor mounted on wide side of compartment. For water closets and urinals, install required transformer and wiring from transformer to flush valves for all hardwired units. Verify locations with Drawings and Architect.
- K. Install toilet seats on water closets.
- L. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- M. Sensor Faucets: Install transformer and wiring from transformer to each hardwired unit. Coordinate location of mixing valves and transformers for proper access.
- N. Install traps on fixture outlets.
 - 1. Exception: Omit trap on fixtures with integral traps.
 - 2. Exception: Omit trap on indirect wastes, unless otherwise indicated.
- O. Install escutcheons at piping wall and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings.
- P. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color.
- Q. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

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.

3.3 FIELD QUALITY CONTROL

- A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.
- B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
- E. Install fresh batteries in sensor-operated mechanisms.

3.4 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.
- B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 22 42 00

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