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SECTION 224216.16 - COMMERCIAL SINKS

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Manually operated sink faucets.

Supply fittings.

Waste fittings.

Grout.

* + - * 1. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Retain first subparagraph below for projects that include Section 114000 "Foodservice Equipment" and revise "Kitchen/Utility Sinks" and "Handwash Sinks" articles in this Section correspondingly.

Section 114000 "Foodservice Equipment" for NSF-compliant foodservice and handwash sinks.

Section 224100 "Residential Plumbing Fixtures" for residential sinks.

* + - 1. ACTION SUBMITTALS
				1. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for sinks.

Include rated capacities, operating characteristics[**, electrical characteristics,**] and furnished specialties and accessories.

* + - 1. INFORMATIONAL SUBMITTALS

Retain "Coordination Drawings" Paragraph below if coordination is required for installation of products and materials by separate installers.

* + - * 1. Coordination Drawings: Counter cutout templates for mounting of counter-mounted sinks.
			1. CLOSEOUT SUBMITTALS
				1. Operation and Maintenance Data: For sinks and faucets to include in operation and maintenance manuals.

Retain subparagraph below if automatic, electronic-sensor faucets are required for Project.

In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

Servicing and adjustments for automatic faucets.

* + - 1. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Faucet Washers and O-Rings: Equal to [**10**] <**Insert number**> percent of amount of each type and size installed.

Faucet Cartridges and O-Rings: Equal to [**5**] <**Insert number**> percent of amount of each type and size installed.

1. PRODUCTS
	* + 1. MANUALLY OPERATED SINK FAUCETS

The U.S. Safe Drinking Water Act (SDWA) has required national compliance with less than or equal to 0.25 percent weighted average lead content at wetted surfaces for pipe, fittings, and devices intended to convey or dispense water for human consumption since January 2014. The IPC and the UPC have the same requirements. Items in compliance with NSF 61 and NSF 372 also comply with this requirement. Some manufacturers choose to meet this requirement through independent testing and have "Certified Lead-Free" products, which may or may not have NSF 61 or NSF 372 certification.

* + - * 1. Sink faucets intended to convey or dispense water for human consumption are to comply with the U.S. Safe Drinking Water Act (SDWA), with requirements of the Authority Having Jurisdiction (AHJ), and with NSF 61 and NSF 372, or be certified in compliance with NSF 61 and NSF 372 by an ANSI-accredited third-party certification body, in that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

Copy "Commercial Sink Faucets - Manual Type" Paragraph below and re-edit for each manual-type sink faucet required.

Insert designation. Use these designations in sink description to identify each sink faucet.

* + - * 1. Commercial Sink Faucets - Manual Type: [**Single-control mixing**] [**Single-control nonmixing**] [**Two-handle mixing**] [**Pre-rinse**], <**Insert type**> <**Insert designation**>.

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed.

Basis-of-Design Product: Subject to compliance with requirements, provide **Zurn Industries, LLC; Z843M1-XL** or comparable product by one of the following:

<**Insert manufacturer's name**>

Source Limitations: Obtain sink faucets from single source from single manufacturer.

Standard: ASME A112.18.1/CSA B125.1.

General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and sink receptor.

Option in "Body Type" Subparagraph below must match fixture hole punching.

Body Type: [**Centerset**] [**Widespread**] [**Single hole**] <**Insert type**>.

Body Material: Commercial, solid brass, or die-cast housing with brazed copper and brass waterway.

Finish: [**Chrome plated**] [**Polished chrome plate**] <**Insert finish**>.

Retain first option in "Maximum Flow Rate" Subparagraph below for pre-rinse units. Retain second option for sinks.

Maximum Flow Rate: [**1.0 to 1.28 gpm**] [**1.5 gpm**] <**Insert value**>.

Mounting Type: [**Deck, concealed**] [**Deck, exposed**] [**Back/wall, exposed**].

Valve Handle(s): [**Lever**] [**Cross, four arm**] [**4-inch wrist blade**] [**6-inch wrist blade**] [**Not applicable**] <**Insert handles**>.

Spout Type: [**Rigid**] [**Rigid with wall brace**] [**Swing**] [**Rigid gooseneck**] [**Swivel gooseneck**] <**Insert type**>.

Retain first option in "Vacuum Breaker" Subparagraph below for faucets with hose-thread outlet.

Vacuum Breaker: [**Required**] [**Not required**] for hose outlet.

Spout Outlet: [**Aerator**] [**Laminar flow**] [**Hose thread in accordance with ASME B1.20.7**] [**Plain end**] [**Spray**] <**Insert type**>.

Retain "Pre-Rinse Unit" Subparagraph below if retaining "Pre-rinse" option in "Commercial Sink Faucets - Manual Type" Paragraph.

Pre-Rinse Unit:

Retain and insert appropriate features based on pre-rinse unit application such as pre-rinsing only, rinsing produce or meats, or filling glasses, kettles, or pots.

Style: [**Flexible hose**] [**Rigid**] [**Combination rigid/flexible**] <**Insert type**>.

Riser: [**18-inch rigid riser**] <**Insert type**>.

Hose: [**44-inch flexible stainless steel with heat-resistant handle**] <**Insert type**>.

Spray valve: <**Insert type**>.

Wall bracket.

* + - 1. SUPPLY FITTINGS
				1. NSF Standard: Comply with NSF 61 and NSF 372 for supply-fitting materials that will be in contact with potable water.
				2. Standard: ASME A112.18.1/CSA B125.1.
				3. Supply Piping: Chrome-plated brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated brass or stainless steel wall flange.
				4. Supply Stops: Chrome-plated brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.

Retain "Wheel handle" option in "Operation" Paragraph below for one-quarter-turn, ball-type stops.

* + - * 1. Operation: [**Loose key**] [**Wheel handle**] <**Insert type**>.
				2. Risers:

[**NPS 3/8**] [**NPS 1/2**].

[**Chrome-plated, rigid-copper pipe**] [**Chrome-plated, soft-copper flexible tube**] [**ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose**].

* + - 1. WASTE FITTINGS
				1. Standard: ASME A112.18.2/CSA B125.2.
				2. Drain: Grid type with NPS 1-1/2 offset and straight tailpiece.
				3. Trap:

Size: NPS 1-1/2.

Material:

Chrome-plated, [**two-piece, cast-brass trap and swivel elbow with 17-gauge brass tube to wall**] [**two-piece, cast-brass trap and ground-joint swivel elbow with 17-gauge brass tube to wall**] [**one-piece, cast-brass trap with swivel 17-gauge tubular brass wall bend**] <**Insert trap type**>; and chrome-plated brass or steel wall flange.

* + - 1. GROUT

Retain this article if floor-mounted service sinks are included.

* + - * 1. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
				2. Characteristics: Nonshrink; recommended for interior and exterior applications.
				3. Design Mix: 5000 psi, 28-day compressive strength.
				4. Packaging: Premixed and factory packaged.
1. EXECUTION
	* + 1. EXAMINATION
				1. Examine roughing-in for water-supply piping and sanitary drainage and vent piping systems to verify actual locations of piping connections before sink installation.
				2. Examine walls, floors, and counters for suitable conditions where sinks will be installed.
				3. Proceed with installation only after unsatisfactory conditions have been corrected.
			2. INSTALLATION
				1. Install sinks level and plumb in accordance with rough-in drawings.
				2. Install supports, affixed to building substrate, for wall-hung sinks.

Indicate on Drawings those sinks that are required to be accessible.

* + - * 1. Install wall-mounted sinks at accessible mounting height in accordance with ICC A117.1.
				2. Set floor-mounted sinks in leveling bed of cement grout.
				3. Install water-supply piping with stop on each supply to each sink faucet.

Exception: Use ball or gate valves if supply stops are not specified with sink. Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."

Install stops in locations where they can be easily reached for operation.

* + - * 1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220500 "Common Work Results for Plumbing."
				2. Seal joints between sinks and counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

Indicate on Drawings those sinks that are required to be accessible.

* + - * 1. 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."
			1. PIPING CONNECTIONS

Coordinate piping installations and specialty arrangements with Drawings and with requirements specified in piping systems. If Drawings are explicit enough, these requirements may be reduced or omitted.

* + - * 1. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
				2. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
				3. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
			1. ELECTRICAL CONNECTIONS
				1. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
				2. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."
				3. Install electrical devices furnished by manufacturer, but not factory mounted in accordance with NFPA 70 and NECA 1.
				4. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.

Retain one of two subparagraphs below. First subparagraph cross-references Section 260553 "Identification for Electrical Systems" and should be retained for consistent electrical identification. Second subparagraph is an abbreviated version of the product specified in Section 260553 "Identification for Electrical Systems."

Nameplate shall be laminated acrylic or melamine plastic signs, as specified in Section 260553 "Identification for Electrical Systems."

Nameplate shall be laminated acrylic or melamine plastic signs with a black background and engraved white letters at least [**1/2 inch**] <**Insert dimension**> high.

* + - 1. ADJUSTING
				1. Operate and adjust sinks and controls. Replace damaged and malfunctioning sinks, fittings, and controls.
				2. Install new batteries in battery-powered, electronic-sensor mechanisms.
			2. CLEANING AND PROTECTION
				1. After completing installation of sinks, inspect and repair damaged finishes.
				2. Clean sinks, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
				3. Provide protective covering for installed sinks and fittings.
				4. Do not allow use of sinks for temporary facilities unless approved in writing by Owner.

END OF SECTION 224216.16