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SECTION 224223 - COMMERCIAL SHOWERS

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

Group showers.

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.

Section 224100 "Residential Plumbing Fixtures" for residential showers.

Section 224300 "Healthcare Plumbing Fixtures" for healthcare showers.

Section 224500 "Emergency Plumbing Fixtures" for emergency showers.

Section 224600 "Security Plumbing Fixtures" for security showers.

* + - 1. DEFINITIONS
				1. FRP: Fiberglass-reinforced plastic.
				2. PMMA: Polymethyl methacrylate; also known as "acrylic."
			2. ACTION SUBMITTALS
				1. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for showers[ **and basins**].

Include rated capacities, operating characteristics, and furnished specialties and accessories.

* + - 1. CLOSEOUT SUBMITTALS
				1. Maintenance Data: For shower valves to include in maintenance manuals.
			2. 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.

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

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

1. PRODUCTS
	* + 1. PERFORMANCE REQUIREMENTS

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. Shower valves 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.
			1. GROUP SHOWERS

Copy "Group Wall-Mounted Showers" Paragraph below and re-edit for each type of shower required.

Insert drawing designation. Use these designations on Drawings to identify each group wall-mounted shower.

* + - * 1. Group Wall-Mounted Showers: <**Insert drawing 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; Z7500** or comparable product by one of the following:

<**Insert manufacturer's name**>

Source Limitations: Obtain showers from single source from single manufacturer.

Description: Stainless steel, wall-mounted, surface-enclosure shower fixture with individual nozzles.

Standards: ASME A112.18.1/CSA B125.1 and ASSE 1016/ASME A112.1016/CSA B125.16.

Metal Nominal Thickness: [**0.050 inch minimum**] [**0.063 inch**].

Number of Shower Nozzles: [**Two**] [**Three**].

Height to Nozzles: [**66 inches**] [**72 inches**] <**Insert dimension**>.

Control:

Retain one of first two subparagraphs below. Many option combinations exist besides those below.

[**Thermostatic**] [**Pressure-balance**] valve with individual hot- and cold-water mixing-valve operation.

Thermostatic valve with individual, tempered-water supply and push-button operation.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC. Shower head flows for Green Globes prescriptive compliance limited to 2.0 gpm (7.6 L/min.).

Flow-Control Fitting: [**Not required**] [**1.5 gpm**] [**2.0 gpm**] [**2.5 gpm**] for each shower head.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling required for LEED v4 and IgCC.

EPA WaterSense: Required.

Liquid Soap Dispenser: [**Not required**] [**Required**] for each shower head.

Soap Dish: [**Not required**] [**Required**] for each shower head.

Mounting: Wall bracket.

Supplies: NPS 3/4 copper tubing with valves.

* + - 1. GROUT
				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 rough-in of water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before shower installation.
				2. Examine walls and floors for suitable conditions where showers will be installed.
				3. Proceed with installation only after unsatisfactory conditions have been corrected.
			2. INSTALLATION
				1. Assemble shower components according to manufacturers' written instructions.
				2. Install showers level and plumb.
				3. Install ball[ **or gate**] valves in water-supply piping to the shower if supply stops are specified with the shower valve. Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping"[ **and Section 220523.15 "Gate Valves for Plumbing Piping."**] Install valves in locations that are accessible for ease of operation.
				4. Install shower flow-control fittings with specified maximum flow rates in shower arms.
				5. Set [**shower receptors**] [**and**] [**shower basins**] in leveling bed of cement grout.
				6. 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 escutcheons requirements specified in Section 220500 "Common Work Results for Plumbing."

Retain paragraph below if sealants are not specified in Section 079200 "Joint Sealants."

* + - * 1. Seal joints between showers and 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."
			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 traps and soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
			1. ADJUSTING
				1. Operate and adjust showers and controls. Replace damaged and malfunctioning showers, fittings, and controls.
				2. Adjust water pressure at shower valves to produce proper flow.
			2. CLEANING AND PROTECTION
				1. After completing installation of showers[ **and basins**], inspect and repair damaged finishes.
				2. Clean showers[ **and basins**], shower valves, and other fittings with manufacturers' recommended cleaning methods and materials.
				3. Provide protective covering for installed fixtures and fittings.
				4. Do not allow use of showers[ **and basins**] for temporary facilities unless approved in writing by Owner.

END OF SECTION 224223