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SECTION 221319 - SANITARY WASTE PIPING SPECIALTIES

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

Cleanouts.

* + - * 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 076200 "Sheet Metal Flashing and Trim" for metal roof flashing assemblies.

Section 077200 "Roof Accessories" for preformed flashings.

Section 078413 "Penetration Firestopping" for through-penetration firestop assemblies.

Section 221323 "Sanitary Waste Interceptors" for metal and concrete interceptors outside the building, grease interceptors, grease-removal devices, oil interceptors, and solids interceptors.

Section 221423 "Storm Drainage Piping Specialties" for trench drains for storm water, channel drainage systems for storm water, roof drains, and catch basins.

Section 224300 "Healthcare Plumbing Fixtures" for plaster sink interceptors.

Section 334200 "Stormwater Conveyance" for storm drainage piping and piping specialties outside the building.

* + - 1. DEFINITIONS

Retain terms that remain after this Section has been edited for a project.

* + - * 1. ABS: Acrylonitrile butadiene styrene.
				2. PVC: Polyvinyl chloride.
			1. ACTION SUBMITTALS
				1. Product Data: For each type of product.
				2. Shop Drawings:

Retain subparagraph below if retaining "Frost-Resistant Vent Terminals" Paragraph in "Miscellaneous Sanitary Drainage Piping Specialties" Article.

Show fabrication and installation details for frost-resistant vent terminals.

* + - 1. INFORMATIONAL SUBMITTALS

Retain "Field quality-control reports" Paragraph below if Contractor is responsible for field quality-control testing and inspecting.

* + - * 1. Field quality-control reports.
			1. CLOSEOUT SUBMITTALS
				1. Operation and Maintenance Data: For sanitary waste piping specialties to include in emergency, operation, and maintenance manuals.
1. PRODUCTS
	* + 1. ASSEMBLY DESCRIPTIONS
				1. Sanitary waste piping specialties shall bear label, stamp, or other markings of specified testing agency.
				2. Comply with NSF 14 for plastic sanitary waste piping specialty components.
			2. CLEANOUTS

Copy this article and re-edit for each product.

* + - * 1. Cast-Iron Exposed Floor Cleanouts :

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; Z1400** or comparable product by one of the following:

<**Insert manufacturer's name**>

Standard: ASME A112.36.2M for [**adjustable housing**] [**cast-iron soil pipe with cast-iron ferrule**] [**heavy-duty, adjustable housing**] [**threaded, adjustable housing**] cleanout.

Size: Same as connected branch.

Type: [**Adjustable housing**] [**Cast-iron soil pipe with cast-iron ferrule**] [**Heavy-duty, adjustable housing**] [**Threaded, adjustable housing**].

Body or Ferrule: Cast iron.

Clamping Device: [**Not required**] [**Required**].

Outlet Connection: [**Inside calk**] [**Spigot**] [**Threaded**].

Closure: [**Brass plug with straight threads and gasket**] [**Brass plug with tapered threads**] [**Cast-iron plug**] [**Plastic plug**].

Adjustable Housing Material: [**Cast iron**] [**Plastic**] <**Insert material**> with [**threads**] [**setscrews or other device**].

Frame and Cover Material and Finish: [**Nickel-bronze, copper alloy**] [**Painted cast iron**] [**Polished bronze**] [**Rough bronze**] [**Stainless steel**] <**Insert material and finish**>.

Frame and Cover Shape: [**Round**] [**Square**] <**Insert shape**>.

Top-Loading Classification: [**Extra Heavy**] [**Heavy**] [**Light**] [**Medium**] Duty.

Riser: ASTM A74, [**Extra-Heavy**] [**Service**] Class, cast-iron drainage pipe fitting and riser to cleanout.

1. EXECUTION
	* + 1. INSTALLATION

Additional instructions may be required for special applications. Show locations of specialties in plans, details, and schematics on Drawings.

* + - * 1. Install backwater valves in building drain piping.

For interior installation, provide cleanout deck plate flush with floor and centered over backwater valve cover, and of adequate size to remove valve cover for servicing.

* + - * 1. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:

Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.

Locate at each change in direction of piping greater than 45 degrees.

Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.

Locate at base of each vertical soil and waste stack.

* + - * 1. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.
				2. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.

Air-admittance valves in first two paragraphs below cannot replace all vent piping. They should be used only where normal venting is difficult. If used, they should be indicated on Drawings.

* + - * 1. Install fixture air-admittance valves on fixture drain piping.
				2. Install stack air-admittance valves at top of stack vent and vent stack piping.
				3. Install air-admittance-valve wall boxes recessed in wall.
				4. Assemble open drain fittings and install with top of hub [**1 inch**] [**2 inches**] <**Insert dimension**> above floor.
				5. Install deep-seal traps on floor drains and other waste outlets, if indicated.
				6. Install floor-drain, trap-seal primer fittings on inlet to floor drains that require trap-seal primer connection.

Exception: Fitting may be omitted if trap has trap-seal primer connection.

Size: Same as floor drain inlet.

* + - * 1. Install air-gap fittings on draining-type backflow preventers and on indirect-waste piping discharge into sanitary drainage system.
				2. Install sleeve and sleeve seals with each riser and stack passing through floors with waterproof membrane.

Retain first paragraph below to reduce vandalism.

* + - * 1. Install vent caps on each vent pipe passing through roof.

Retain first paragraph below for freezing climates. These units may be used to prevent frost closure instead of increasing vent size if permitted by authorities having jurisdiction.

* + - * 1. Install frost-resistant vent terminals on each vent pipe passing through roof. Maintain 1-inch clearance between vent pipe and roof substrate.
				2. Install expansion joints on vertical stacks and conductors. Position expansion joints for easy access and maintenance.

Retain first paragraph below for freezing climates. These units may be used to prevent frost closure instead of increasing vent size if permitted by authorities having jurisdiction.

* + - * 1. Install frost-proof vent caps on each vent pipe passing through roof. Maintain 1-inch clearance between vent pipe and roof substrate.
				2. Install wood-blocking reinforcement for wall-mounting-type specialties.
				3. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.
			1. PIPING CONNECTIONS

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

* + - * 1. Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.
				2. Install piping adjacent to equipment, to allow service and maintenance.
			1. LABELING AND IDENTIFYING
				1. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit.

Nameplates and signs are specified in Section 220553 "Identification for Plumbing Piping and Equipment."

* + - 1. PROTECTION
				1. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
				2. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221319