

SECTION 22 1006 - PLUMBING PIPING SPECIALTIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Roof and floor drains.
- B. Cleanouts.
- C. Hose bibs.
- D. Hydrants.
- E. Backflow preventers.
- F. Water hammer arrestors.
- G. Interceptors.
- H. Thermostatic mixing valves.

1.02 RELATED SECTIONS

- A. Drawings and General Provisions of the Contract apply to this section.

1.03 REFERENCES

- A. ASME A112.6.3 - Floor and Trench Drains; The American Society of Mechanical Engineers.
- B. ASME A112.6.4 - Roof, Deck, and Balcony Drains; The American Society of Mechanical Engineers.
- C. ASSE 1011 - Hose Connection Vacuum Breakers; American Society of Sanitary Engineering; (ANSI/ASSE 1011).
- D. ASSE 1012 - Backflow Preventer with Intermediate Atmospheric Vent; American Society of Sanitary Engineering; (ANSI/ASSE 1012).
- E. ASSE 1013 - Reduced Pressure Principle Backflow Preventers and Reduced Pressure Fire Protection Principle Backflow Preventers; American Society of Sanitary Engineering.
- F. ASSE 1019 - Vacuum Breaker Wall Hydrants, Freeze Resistant Automatic Draining Type; American Society of Sanitary Engineering; (ANSI/ASSE 1019).

- G. ASTM C 478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.
- H. ASTM C 478M - Standard Specification for Precast Reinforced Concrete Manhole Sections (Metric).
- I. PDI-WH 201 - Water Hammer Arresters; Plumbing and Drainage Institute.

1.04 SUBMITTALS

- A. Product Data: Provide component sizes, rough-in requirements, service sizes, and finishes.
- B. Shop Drawings: Indicate dimensions, weights, and placement of openings and holes.
- C. Certificates: Certify that grease or oil interceptors meet or exceed specified requirements.
- D. Manufacturer's Instructions: Indicate Manufacturer's Installation Instructions: Indicate assembly and support requirements.
- E. Project Record Documents: Record actual locations of equipment, cleanouts, backflow preventers, water hammer arrestors.
- F. Operation Data: Indicate frequency of treatment required for interceptors.
- G. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years documented experience.

1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Accept specialties on site in original factory packaging. Inspect for damage.

1.07 EXTRA MATERIALS

- A. Supply for Owner's use in maintenance of project:
 - 1. Two loose keys for outside hose bibbs.
 - 2. Two hose end vacuum breakers for hose bibbs.
 - 3. Two service kits for mixing valves.

PART 2 - PRODUCTS

2.01 DRAINS

A. Manufacturers:

1. Josam Company
2. Jay R. Smith Manufacturing Company
3. Zurn Industries, Inc.

B. Roof Drains:

1. Assembly: ASME A112.6.4.
2. Body: Lacquered cast iron with sump.
3. Strainer: Removable polyethylene dome.
4. Accessories: Coordinate with roofing type:
 - a. Membrane flange and membrane clamp with integral gravel stop.
 - b. Adjustable under deck clamp.
 - c. Roof sump receiver.
 - d. Waterproofing flange.
 - e. Controlled flow weir.
 - f. Leveling frame.
 - g. Adjustable extension sleeve for roof insulation.
 - h. Perforated or slotted ballast guard extension for inverted roof.
 - i. Perforated stainless steel ballast guard extension.

C. Roof Overflow Drains:

1. Lacquered cast iron body and clamp collar and bottom clamp ring; pipe extended to 2 inches above flood elevation.

D. Area Drains:

1. Assembly: ASME A112.6.4.
2. Body: Lacquered cast iron with sump.
3. Strainer: Square nickel-bronze.
4. Accessories: Sediment bucket, deep receptor and full size bottom outlet.

E. Floor Drain (FD-1):

1. ASME A112.6.3; lacquered cast iron two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable nickel-bronze strainer.

F. Floor Drain (FD-2):

1. ASME A112.6.3; lacquered cast iron two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable round or square nickel bronze strainer to suit flooring system, with removable perforated sediment bucket.

G. Floor Sink:

1. Square lacquered cast iron body with integral seepage pan, epoxy coated interior, aluminum dome strainer, clamp collar, sediment bucket, nickel bronze frame, full grate.

2.02 CLEANOUTS

A. Manufacturers:

1. Jay R. Smith Manufacturing Company
2. Josam Company
3. Zurn Industries, Inc.

B. Cleanouts at Exterior Surfaced Areas:

1. Round cast nickel bronze access frame and non-skid cover.

C. Cleanouts at Exterior Unsurfaced Areas:

1. Line type with lacquered cast iron body and round epoxy coated gasketed cover.

D. Cleanouts at Interior Finished Floor Areas:

1. Lacquered cast iron body with anchor flange, threaded top assembly, and round gasketed scored cover in service areas and round or square to suit flooring system gasketed depressed cover to accept floor finish in finished floor areas.

E. Cleanouts at Interior Finished Wall Areas:

1. Line type with lacquered cast iron body and round epoxy coated gasketed cover, and round stainless steel access cover secured with machine screw.

F. Cleanouts at Interior Unfinished Accessible Areas:

1. Caulked or threaded type. Provide bolted stack cleanouts on vertical rainwater leaders.

2.03 HOSE BIBBS

A. Manufacturers:

1. Jay R. Smith Manufacturing Company
2. Watts Regulator Company
3. Zurn Industries, Inc.

B. Interior Hose Bibbs:

1. Bronze or brass with integral mounting flange, replaceable hexagonal disc, hose thread spout, with handwheel, integral vacuum breaker in conformance with ASSE 1011.

C. Interior Mixing Type Hose Bibbs:

1. Bronze or brass, wall mounted, double service faucet with hose thread spout, integral stops, chrome plated where exposed with handwheels, and vacuum breaker in conformance with ASSE 1011.

2.04 HYDRANTS

A. Manufacturers:

1. Arrowhead Brass Company
2. Jay R. Smith Manufacturing Company
3. Zurn Industries, Inc.

4. Josam Company

B. Wall Hydrants:

1. ASSE 1019, freeze resistant, self-draining type with polished bronze lockable recessed box hose thread spout, lockshield and removable key, and integral vacuum breaker.

2.05 BACKFLOW PREVENTERS

A. Manufacturers:

1. Conbraco Industries
2. Watts Regulator Company
3. Zurn Industries, Inc.
4. Ames Company
5. Wilkins

B. Reduced Pressure Backflow Preventers:

1. ASSE 1013; bronze body with bronze internal parts and stainless steel springs; two independently operating, spring loaded check valves; diaphragm type differential pressure relief valve located between check valves; third check valve that opens under back pressure in case of diaphragm failure; non-threaded vent outlet; assembled with two gate valves, strainer, and four test cocks.

2.06 DOUBLE CHECK VALVE ASSEMBLIES

A. Manufacturers:

1. Conbraco Industries
2. Watts Regulator Company
3. Ames Company
4. Wilkins

B. Double Check Valve Assemblies:

1. ASSE 1012; Bronze body with corrosion resistant internal parts and stainless steel springs; two independently operating check valves with intermediate atmospheric vent.

2.07 WATER HAMMER ARRESTORS

A. Manufacturers:

1. Jay R. Smith Manufacturing Company
2. Watts Regulator Company
3. Zurn Industries, Inc.
4. Precision Plumbing Products
5. Josam
6. Sioux Chief Mfg.

B. Water Hammer Arrestors:

1. Stainless steel or copper construction, bellows type sized in accordance with PDI-WH 201, precharged suitable for operation in temperature range -100 to 300 degrees F and maximum 250 psi working pressure.

2.08 SUMPS AND INTERCEPTORS

A. Manufacturers:

1. Jay R. Smith Manufacturing Company
2. Zurn Industries, Inc.
3. Josam Company

B. Sumps:

1. Epoxy coated fabricated steel with required openings and drainage fittings.
2. Cover: 3/8 inch thick checkered steel plate with gasket seal frames and anchor bolts.

C. Grease Interceptors:

1. Construction:
 - a. Material: Epoxy coated fabricated steel.
 - b. Rough-in: On floor with anchor flange as scheduled.

- c. Accessories: Multi-weir baffle assembly, integral deep seal trap, removable integral flow control, sediment bucket.
 - d. Cover: Steel, epoxy coated, non-skid with gasket, securing handle, and enzyme injection port.
- 2. Unit Rating: As scheduled on the drawings.

2.09 MIXING VALVES

A. Thermostatic Mixing Valves:

- 1. Manufacturers:
 - a. ESBE
 - b. Leonard Valve Company
 - c. Honeywell Water Controls (Sparco)
- 2. Valve: Chrome plated cast brass body, stainless steel or copper alloy bellows, integral temperature adjustment.
- 3. Capacity: As scheduled on the drawings.
- 4. Accessories:
 - a. Check valve on inlets.
 - b. Volume control shut-off valve on outlet.
 - c. Stem thermometer on outlet.
 - d. Strainer stop checks on inlets.
- 5. Cabinet: 16 gage enameled steel, for recessed mounting with keyed lock.

B. Pressure Balanced Mixing Valves:

- 1. Manufacturers:
 - a. Delta Faucet Company
 - b. H.G. Specialties

- c. Taconova
- 2. Valve: Chrome plated cast brass body, stainless steel cylinder, integral temperature adjustment.
 - a. Capacity: As scheduled on the drawings.
- 3. Accessories:
 - a. Volume control shut-off valve on outlet.
 - b. Stem thermometer on outlet.
 - c. Strainer stop checks on inlets.
 - d. Cabinet: 16 gage prime coated steel, for recessed mounting with keyed lock.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- C. Encase exterior cleanouts in concrete flush with grade.
- D. Install floor cleanouts at elevation to accommodate finished floor.
- E. Install approved potable water protection devices on plumbing lines where contamination of domestic water may occur; on boiler feed water lines, janitor rooms, fire sprinkler systems, premise isolation, irrigation systems, flush valves, interior and exterior hose bibs.
- F. Pipe relief from backflow preventer to nearest drain.
- G. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping to lavatories sinks, washing machine outlets, and flush valves.
- H. Install air chambers on hot and cold water supply piping to each fixture or group of fixtures (each washroom). Fabricate same size as supply pipe or 3/4 inch minimum, and minimum 18 inches long.

END OF SECTION 22 1006