

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The requirements of this section apply to the plumbing system.
- B. Provide fixtures specified and shown on the Drawings.

1.02 QUALITY ASSURANCE

- A. Code: Comply with requirements of the Oregon State Plumbing Specialty Code.
- B. Fixture Color: White unless indicated otherwise.
- C. Utility Connections: Make utility and equipment connections and install distribution piping as shown on the Drawings and specified herein. Verify size, location, depth, elevation and arrangement of connection points before bidding or starting work.
- D. Potable Water Valves: Potable water valves not limited to faucets, mixing valves, or pressure reducing valves. Valves shall meet NSF Standard 61, Section 9, for drinking water faucets and shall be brass construction. Brass components which contact water within the faucet shall be from brass which contains no more than 3 percent lead by dry weight.
- E. Field Wiring: Comply with requirements of Section 15050.

PART 2 - PRODUCTS

2.01 PIPING

- A. Piping, fittings, supports and related items as specified in related Sections 15060, 15090, 15100 and 15250.

2.02 SITE WORK MATERIALS

- A. Precast concrete vaults of size required and indicated on the Drawings complete with access suitable for the installation and with suitable inspection plates.

2.03 INTERIOR PLUMBING MATERIALS

- A. Cleanouts:
 - 1. Manufacturer: J.R. Smith, Zurn, Wade, Ancon, or accepted substitute.
 - 2. Types:
 - a. Tile Floor Cleanouts: Smith 4053-U with square heavy-duty nickel bronze top, taper thread, bronze plug, and vandalproof screws.
 - b. Carpeted Floor Cleanout: Smith 4023-U-X with round heavy-duty nickel bronze top, taper thread, bronze plug, carpet clamping device and vandalproof screws.
 - c. Concrete Floor Cleanout: Smith 4023 with round heavy-duty nickel bronze top.
 - d. Wall Cleanouts: Smith 4472-U, bronze ferrule with raised head bronze plug, stainless steel shallow cover and vandalproof screws.
 - e. Outside Area Walks and Drives: Smith 4253-U-G with galvanized cast iron body, top secured with vandalproof screws, taper thread and bronze plug. Install in 18" x 18" x 6" deep concrete pad flush with grade.

- B. Flashing: Minimum 4# sheet lead; to extend horizontally 10" from edge of vent penetrations or rain drain body and vertically 12" minimum up from roof turned over and down into hub of vent or finished with bronze cap providing counterflashing for screwed pipe.
- C. Air Chambers and Shock Arrester: Precharged bellows or sealed piston type manufactured to meet PDI WH-201 and ASSE 1010 Standards. Size in accordance with PDI procedures. Jay R. Smith, PPP, Wade, Zurn, Ancon, or accepted substitute.
- D. Priming Valves: Smith 2699, Wade W8800T, Zurn Z1022, Ancon MS810 or equivalent Precision Plumbing. Locate in closets, under counters or in walls behind Milcor or access panels as specified in Section 15050. Use copper specified in Section 15060, Pipe & Pipe Fittings, for all underground priming lines.
- E. Traps: Except chrome plated fixture traps. Recessed drainage pattern for threaded pipe and same grade as pipe for cast iron pipe; with cleanout plugs in trap body in all above grade locations.

2.04 PLUMBING FIXTURES

- A. Stops: Furnish stop valves for all fixtures. Loose key style, in wall, angle or straight through pattern to fit installation. Kohler, Speedway, Chicago, Eastman, Brasskraft, or accepted substitute.
- B. Water Closets:
 - C. 1.6 Gallon Flush Water Closet, Flush Valve, Vitreous China: Elongated water closet bowl shall be designed for 1.6 gallon siphon jet flushing action.
 - 1. Install each listed water closet with the following:
 - a. Flush Valve: Quiet acting, exposed chrome plated brass with ADA metal oscillating non-hold-open handle, screwdriver check/control stop with vandal resistant cap, cast wall flange, synthetic rubber diaphragm, and vacuum breaker, as recommended by closet manufacturer. Sloan, Zurn.
 - b. Seat: Solid white heavy weight molded plastic seat, with molded in bumpers; open front less cover for elongated bowl with check and self-sustaining hinge. Hinge and hardware to be 300 series stainless steel. Church 295-SSC, Beneke 523-SS/CH-B, or Bemis 1955 SS/C, Zurn Z5956SS-EL-STS.
 - 2. Floor Mounted, Top Spud "WC-1": American Standard 2234.015, Kohler K-4350, or Eljer 111-2125.
 - 3. Floor Mounted, Top Spud 18" High "WC-2": American Standard 3043.102, Kohler K-4368, Eljer 111-2145.
 - D. Urinal, Flush Valve, Vitreous China, "UR-1":
 - 1. Install each listed urinal with the following: Quiet acting, exposed chrome plated brass 0.5 GPF flush valve with **battery powered**, screwdriver check/control stop with vandal resistant cap, cast wall flange, synthetic rubber diaphragm, and vacuum breaker, as recommended by fixture manufacturer. Sloan Optima Plus, 8986-0.5.
 - 2. Wall Hung, Washout: Install with plate-type chair carrier with bearing plate. Zurn, Jay R. Smith, Josam, Wade, Watts. American Standard 6590, equal Kohler or Eljer.
 - 3. For ADA urinal, set urinal at height required by code for the handicapped.
 - E. Lavatory, Vitreous China, "LV-1"
 - 1. Faucet: Sensor activated, battery powered, faucet with chrome plated brass body with vandal resistant 0.5 gpm aerator, mechanical mixing valve, and grid strainer waste. Sloan SF2350, or equal Kohler, Symmons, or Moen.
 - 2. "LV-1": Oval Counter Mounted, Self-rimming, American Standard 0476.028, Kohler K-2196, or Eljer 051-3514.C]

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3. "LV-2": Wall Hung, 20" x 18" Size: Provide with concealed arm hangers and wall backing plate (J.R. Smith, Josam, Wade, Watts, or Zurn). Kohler K-2032,
- F. Service Sump (Mop Basin)"SS-1 ":
1. Faucet exposed, brass body, rough plated, long spout, top brace, hose end spout with bucket hook, vacuum breaker and integral stops in shanks. Chicago 897, T & S B-0665-BSTP, or equal Zurn, Delta Commercial, mounted 24" above rim. Install with 18 gauge type 302, No. 4 finish stainless steel splash on the two walls.
 2. Molded stone 24" x 36" x 10" deep with vinyl bumper guard and 3" brass body strainer outlet. Fiat, Mustee, Swan or approved substitute.
- G. Single Stall Shower, " SH-1 ":
- Install with concealed piping and vandal resistant 1.5 gpm head. Pressure equalizing mixing valve with combination strainer/check stops and temperature limit stop. Moden 8375EP15, or equal Delta, Symmons.
- H. Single Stall Shower, " SH-1 ":
- Install with concealed piping and vandal resistant 1.5 gpm head, handheld shower head with flex hose, vacuum breaker, and wall slide bar for ADA Pressure equalizing mixing valve with combination strainer/check stops and temperature limit stop. Moen 8342EP15, or equal Delta, Symmons.
- I. Hose Bibs:
1. Outside "HB-1": Non-freeze type with vacuum breaker, bronze wall casing and wall clamp. Zurn Z-1310-6, Wade W-8620, Woodford 67 series, Smith 5609-PB, or Watts HY420.
- J. Trench Drains:
1. "TD-1": 2-1/2" wide 3" deep non-sloped, 36" long non sloped trench drain system. 14ga steel body finished with an acid resistant powder epoxy coating. Provide with bottom outlet, and Polypropylene grate. MIFAB T250, or approved equal.
- K. Fixtures Furnished by Owner (and/or Under Another Section): Some fixtures will be furnished by the Owner (and/or under another specification section). Include under this section the required rough-ins, 3/8" chrome plated supplies with stops, 1-1/2" chrome plated cast brass "P" trap (or, on kitchen sinks, 2" cast iron "P" traps) for each sink compartment, and make final connection. For science tables provide rough-in with service valves and CPVC trap. Verify all rough-ins and connection requirements before commencing work.\
- L. Drains: Zurn, Jay R. Smith, Wade and Mifab. Numbers scheduled on drawings represent minimum acceptable standard for locations involved.

PART 3 - EXECUTION

3.01 PIPING

- A. Install in accordance with Section 15060, 15090, 15100 and 15250.
- B. Shock Arrestors and Air Chambers: Install at end of mains, in a battery of three or more flush valve-operated fixtures water header, ahead of quick closing and solenoid operated valves. Size per PDI recommendations where size is not indicated. Provide access panels.
- C. Trap Priming: Traps serving floor drains, floor sinks, catch basins, and similar fixtures shall be primed in accordance with Code requirements.

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3.02 CLEANOUTS

- A. Where required by code, at each change of sewer direction 45 degrees or greater and more than 10' long, at end of each branch or main and spaced not greater than 100' apart, as required by code and/or as shown on Drawings.

3.03 FIXTURE INSTALLATION AND CONNECTION

- A. All exposed fixture connections and piping shall be plated with polished chrome. Where chair carriers or special carrier design are not indicated, provide 3/16" thick by 6" wide steel to waste or vent piping and to available building construction.
- B. All fixtures in contact with finished walls shall be caulked with waterproof, white, non-hardening sealant which will not crack, shrink or change color with age.
- C. All fixtures and component parts shall conform to governing codes.

3.04 FIXTURE CLEANING

- A. Remove construction protection, tags and labels and thoroughly clean all plumbing equipment and trim and scour all fixtures just prior to building acceptance.

3.05 CHEMICAL WATER TREATMENT

- A. Analyze the water condition and determine chemicals required for treatment. Provide sufficient chemicals for the initial fill and provide a list of the chemicals required for the Operating and Maintenance Manuals specified. The list shall include probable quantities of each chemical required for one year, availability of each chemical and the name and address of the supplier.

END OF SECTION