

TYPICAL HOUSE PLUMBING REQUIREMENTS

WATER

- 1) Copper water services shall be 1" (minimum) type K-copper and shall be protected where it penetrates concrete. Code approved polyethylene (PE) water services can be used if prior approval by the City Public Works Dept. M.H.D. 4715.0510 and 4715.1700 and City policy. If polyethylene water service is used, a #12 GA. solid copper wire shall be installed with the service line from the curb Stop to the water meter for future tracing capability. (Verify with electrical contractor the grounding requirement for the electrical panel if poly water service is used.)
- 2) All water meters shall have an outdoor remote reader installed. The City Water Dept. will provide the remote reader, but the contractor must install it on the house. Locate the reader near the gas and electric meters. Contractor needs to verify that the wire from the meter to the remote is installed prior to insulating and sheetrocking.
- 3) The use of 50/50 solder on potable water lines is prohibited. M.H.D. 4715.0820
- 4) Shut-off valves shall be provided (M.H.D. 4715.1800):
 - a) before each fixture,
 - b) before the 3/4" sill cock,
 - c) before and after the water meter.
- 5) Temperature and pressure (T&P) valves shall be provided with pipe extension to within 18" of the floor from water heaters. M.H.D. 4715.2200.
- 6) No more than 3 fixtures can be serviced from 1/2" water line. M.H.D. 4715.1730.
- 7) An air gap two times the pipe diameter/but not less than 1-1/2" shall be provided on the water softener drain line. M.H.D. 4715.5300.

Every water softener installation shall include the installation of a bypass valve which would allow the equipment to be serviced or removed without the need for shutting off the water service completely. M.H.D. 4715.5200
- 8) Vacuum breakers are required at sill faucets - M.H.D. 4715-1800 Sub p. 7 and 4715.2110
- 9) Effective January 1, 1993, water closets (floor mounted) may not have a flush volume of more than 1.6 gallons. MN Statutes 326.37 Subd. 2.
- 10) The Minnesota Energy Code requires the hot and cold lines to be insulated within 8'-0" of the water heater. As an alternative, we suggest use an "S" trap for these lines.

- 11) Boilers require an approved reduced pressure zone, or double check valve assembly or intermediate atmospheric vent. We recommend the fill line not be connected directly to a potable water line.
M.H.D. 4715.1940. If a direct connection to a cold water line is used, the intermediate atmospheric vent (Watts 9D) may be used. If Glycol is used, the reduced pressure zone (RPZ) backflow preventer must be used. M.H.D. 4715.1030 and 4715.1010.
- 12) A.N.S.I. approved anti-scald valves are now required on all showers or combination units. Both pressure balanced and thermostatically controlled type valves are permitted. M.H.D. 4715.1380 Subp. 5.

WASTE DRAIN AND VENT

- 1) A 4" sanitary service with cleanout is required, typically within 10' from where it enters the building, and full size at the end of the underground run. M.H.D. 4715.1030 and 4715.1010.
- 2) Cleanouts are to be provided at the base of all waste stacks. M.H.D. 4715.1000.
- 3) A.B.S. and P.V.C. piping are not compatible, with the exception of Mechanical Coupling Connection. (Mission, Fernco or approved threaded connections) M.H.D. 4715.0810.
- 4) It is preferred that one air test be inspected when the underground and rough-in is complete through the roof. M.H.D. 4715.2820.
- 5) P.V.C. pipe installation requires two steps - priming and gluing. GLUING ALONE IS NOT ACCEPTABLE. The colored primer is required for inspection visibility. At visible locations, clear primer may be approved by the Building Official upon request. M.H.D. 4715.0810.
- 6) Wet venting is acceptable on the same floor level only. M.H.D. 4715.2550.
- 7) Caulk the base of the water closet. M.H.D. 4715.1220.
- 8) Rough-ins for future basement fixtures requires roughing in a 2" vent, higher than the upstairs fixtures flood rim. M.H.D. 4715.2540.
- 9) Minimum dimensions for underground drainage is 2". M.H.D. 4715.2350.
- 10) "P" traps cannot be made up with fittings. M.H.D. 4715.0960.
- 11) Where vent pipes connect to a horizontal waste, the angle of the vent shall be 45 degrees or greater vertical, and shall not run horizontal until it is 6" above the flood level rim. M.H.D. 4715.2540.

- 12) Sanitary "T's" cannot be used from horizontal to horizontal waste, nor can they be placed on their backs in vertical to horizontal waste direction changes. M.H.D. 4715.2410
- 13) The vent pipe opening from a waste pipe, (except for water closets), shall not be below the weir of the trap. M.H.D. 4715.2620 Subp. (2).
- 14) Access panels are required to all bath bays and whirlpools. M.H.D. 4715.0900. Coordinate location with general contractor.
- 15) Clearwater sump drainage shall not discharge into the sanitary sewer.
- 16) Floor drains for garages, must enter into a dry pan piped into the house, trapped, vented and then discharged into the sanitary sewer. We suggest clean outs near the trap to easily remove sand and objects from the trap. M.H.D. 4715.1300
- 17) Jetted whirlpools must be U.L. approved. M.H.D. 4715.1240
- 18) On all exterior walls and the garage/house firewall, insulation, poly and sheetrock must be installed prior to the fiberglass bath bay installation. MN S.B.C. 7670 (Energy Code)
- 19) Waste lines for clothes washers shall be minimum 2" size. M.H.D. 4715.2300 Subp 3.

* For specific language reference the following:

M.H.D. = MN Health Dept. - Plumbing Code 1994 w/1998 amendments

Mn.S.B.C. = MN State Building Code 1998

U.M.C. = Uniform Mechanical Code 1991 w/State amendments

U.B.C. = Uniform Building Code 1997