

**Slab Plumbing**

- Hydrostatic testing with 10' head of water. Stack will be shaken to cause water to spill out at time of inspection. (Plastic piping should not be tested using air.) 312.2
- Ensure proper slope on drain pipes. 704.1
- Water supply lines with joints must have gauge on them at time of inspection (gauge must have increments of 1 psi or less). Lines must be tested and proved tight under a water pressure not less than the working pressure of the system. (Plastic piping should not be tested using air.) 312.1.1, 312.5, 312.6
- Insulate (R-3) all buried hot water lines. R403.5.3 IECC
- Any pipe that passes through a foundation wall must be provided with a relieving arch, or a pipe sleeve pipe must be built into the foundation wall. The sleeve must be two pipe sizes greater than the pipe passing through the wall. 305.3
- Seal annular space between pipe and pipe sleeve. 315.1
- Exterior water supply system piping shall be installed not less than 6 inches below the frost line and not less than 12 inches below grade. 305.4
- Rocks encountered during trenching must be removed. 306.2.2
- Backfill must be free from rocks, broken concrete, frozen chunks and other rubble. It must be placed in the trench in 6-inch layers and tamped in place until the crown of the pipe is covered by a minimum of 6 inches of tamped earth. The backfill under and beside the pipe shall be compacted for pipe support. 306.3
- Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) and the sheathing shall be made of plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing. 305.1

**Rough Plumbing**

- Hydrostatic testing with 10' head of water. Stack will be shaken to cause water to spill out at time of inspection. Every joint and pipe in DWV system must be tested. Bathtubs on upper story can be filled with water as an alternative method. (Plastic piping should not be tested using air.) 312.2
- Ensure proper slope on drain pipes. 704.1
- Water supply lines with must have gauge on them at time of inspection (gauge must have increments of 1 psi or less). Plastic lines must be tested and proved tight under a water pressure not less than the working pressure of the system for at least 15 min. (Plastic piping should not be tested using air.) Piping systems other than plastic are tested with at least 50 psi of air for at least 15 minutes.) 312.1.1, 312.5
- Developed length of hot or tempered water piping from the source of hot water to a fixture cannot exceed 50 feet. 607.2
- Insulate (R-3) all  $\frac{3}{4}$ " or larger hot water lines. R403.5.3 IECC
- Mid-story support needed for plumbing 2" or less in diameter. 308.5
- Minimum of two exterior hose bibs per dwelling. One must be located on side or rear of dwelling. 403.1 GA

- The annular space between the outside of a pipe and an opening in a building envelope wall, floor, or ceiling assembly penetrated by a pipe shall be sealed in an approved manner with caulking material, foam sealant or closed with a gasketing system. 315.1
- Protective steel shield plate (16 gage) needed at plumbing penetration where less than 1 ¼" from edge of hole or notch to edge of stud. Shield plate must extend 2" above sole plate and 2" below top plate when plumbing is less than 1 ¼" from edge. 305.6
- Double up studs or add stud shoe on bearing wall where bored hole for DWV piping is 40-60% of width and less than 5/8" from edge of hole to edge of stud. (>60% on interior nonbearing walls). IRC R602.6(1), R602.6(2)
- Insulate (R-3) all water lines in unconditioned areas and exterior walls 305.4, IECC
- Full size cleanout needed at exterior where building drain exits foundation (must be brought up to ground level). 708.1.3 GA, 708.1.10
- There must be at least one vent extending to the outdoors that terminates not less than 10' above highest grade elevation within 10' and not less than 10' from lot line. 903.5, 904.1
- Roof vents must extend at least 6" above roof (7' on flat roof that is used by people) 903.1
- Side wall vent terminals cannot be below vented soffit and must have a screen 903.6
- An open vent terminal from a drainage system shall not be located directly beneath any door, openable window, or other air intake opening of the building or of an adjacent building, and any such vent terminal shall not be within 10 feet horizontally of such an opening unless it is 3 feet or more above the top of such opening. 903.5
- Hangers/strapping cannot promote galvanic action. 308.3
- All piping must be supported per code. 308
- Ensure proper clearances for plumbing fixtures. 405
- Clothes washer standpipe must be at least 2" and extend 18-42" above trap weir. 406.2, 802.4.3
- Floor drains require trap primer or barrier-type trap seal protection device. 1002.4

### Final Plumbing

- Openings around pipes penetrating walls, floors, or ceilings must be sealed with caulking materials or closed with a gasketing system.
- Hose bibs must be secured and sealed at house.
- Vacuum breaker device needed on each exterior hose bib
- Joints formed where fixtures come in contact with walls or floors must be sealed. 405.6
- If used, flexible tail piece must conform to ASME A112.18.2 or ASTM F409. 412.1.2
- Vertical distance from fixture outlet to trap weir cannot exceed 24"
- Length of trap arm from weir to vent must be at least two pipe diameters and must be properly sloped.
- Refrigerator water supply must have shutoff valve on same floor as refrigerator.
- Water hammer arrestors are required on quick closing valves. 604.9
- Dishwasher waste line shall rise and be fastened to the underside of the sink rim or counter top. 409.4
- Where water pressure exceeds 80 psi static, a pressure-reducing valve must be installed to reduce pressure to 80 psi or less. 1302.10
- Slip-joint connections must remain accessible for inspection and repair. 405.9
- Fixtures with hot and cold water must be installed so left-hand side control is for hot water. 607.4

- Branch-type AAVs must connect to a horizontal branch drain and be at least 4" above the drain. 918.4
- Air-admittance valves (AAV) cannot be installed in concealed wall cavities. 918.5
- Upper opening of vent connection must be above trap weir. 909.2
- Fixtures cannot be double trapped. 1002.1
- Storage-type water heaters located in areas where leakage could cause damage must have a drain pan. Required pan must have discharge pipe (except when a unit is replaced and did not have a drain). 504.7
- Thermal expansion device needed at storage-type water heater on cold-water line where cold water passes through a check valve, pressure-reducing valve, or backflow preventor. 607.3
- Water heaters with Temperature & Pressure Relief (TPR) valves must have dedicated discharge pipes that terminate two pipe diameters to 6" above floor/grade in conspicuous locations. 504.6
- When TPR discharge piping goes upward, a thermal expansion control device must be installed on the cold-water distribution or service pipe and provisions must be made to drain the low point of the trapped portion of the discharge pipe. 504.6 GA
- Shutoff valve is needed on cold water branch near water heater 503.1
- A bottom-fed water heater and bottom-fed tank connected to a water heater must have a vacuum relief valve installed on cold water line and positioned higher than top of tank 504.2
- When water heater is in garage, ignition source must be at least 18" above the floor (exception for appliances listed as flammable vapor ignition-resistant [FVIR])
- Bollard or wheel stop required if equipment is subject to mechanical damage from a vehicle. 305.7
- Where well pumps are installed in basements, they must be at least 18" above the basement floor. 602.3.5.1
- All plumbing fixtures and water heaters must be properly installed and operational at time of final plumbing inspection.