

4101:3-3-01 General regulations.

Chapter 3 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

(A) Modify the exception to section 301.3 to read as follows:

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays are not required to discharge to the *sanitary drainage system* where such fixtures discharge to a recycled water system approved by the “Ohio Environmental Protection Agency” in accordance with Chapter 3745-42 of the Administrative Code or approved by the “Ohio Department of Health” in accordance with Chapter 3701-28 of the Administrative Code.

(B) Modify section 303.3 as follows:

Replace the phrase “...third party certification...” with the word “...listed...”.

(C) Replace section 303.4 to read as follows:

303.4 Approved agency testing and certification. Plumbing products and materials required by the code to be in compliance with a referenced standard are to be *listed* by an *approved agency* as complying with the applicable referenced standards. Products and materials are to be identified in accordance with Section 303.1.

(D) Replace section 303.5 to read as follows:

303.5 Cast-iron soil pipe, fittings and components. Cast-iron soil pipes and fittings, and the couplings used to join these products together, are to be *listed* and *labeled* by an *approved agency*.

(E) Replace section 305.3 to read as follows:

305.3 Pipes and fittings through foundation wall assemblies. Any pipe or fitting making a through penetration of a foundation wall assembly are to be provided with a relieving arch, or a pipe sleeve pipe is to be built into the foundation wall assembly. The sleeve is to be two pipe sizes greater than the pipe or fitting passing through the foundation wall assembly. Pipe joints or fitting joints are not to occur within the exterior foundation wall assembly.

(F) Replace section 305.4.1 to read as follows:

305.4.1 Sewer depth. Deleted.

(G) Modify section 309.2 to replace the list as follows:

1. Water service pipes.
2. Deleted.
3. Deleted.
4. Sanitary drainage piping.
5. Storm drainage piping.
6. Deleted.
7. Other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.
8. Water heaters.
9. Vents and vent systems.

(H) Replace section 311.1 to read as follows:

311.1 General. Deleted.

(I) Replace section 312.1 in its entirety to read as follows:

312.1 Required tests. The owner or owner's representative is to cause the applicable tests and inspections, prescribed in Sections 312.2 through 312.11, to be performed to determine that the work will withstand the prescribed test without leakage and to demonstrate the integrity of the device or assembly. In accordance with OBC Section 108.8, reasonable advanced notice is to be given to the *building official* when the plumbing work is ready for tests. The *building official* may require that the tests be conducted in the presence of the *building official* or certified plumbing inspector. The owner or owner's representative is to keep records of the tests and inspections and submit such records to the *building official* upon request.

312.1.1 New, altered, extended or repaired systems. New *plumbing systems* and parts of existing systems that have been altered, extended, or repaired are to be tested as prescribed herein to disclose leaks and defects, except that testing is not required in the following cases:

1. In any case that does not include addition to, replacement, alteration or relocation of any water supply, drainage or vent piping.
2. In any case where plumbing equipment is set up temporarily for exhibition purposes.

312.1.2 Equipment, material, power and labor for tests. Equipment, material, power and labor necessary for testing a *plumbing system* or part thereof is to be furnished by the owner or the owner's

representative. Required tests are to be conducted by and at the expense of the owner or the owner's representative.

312.1.3 Test gauges. Gauges used for testing are to be as follows:

1. Tests requiring a pressure of 10 pounds per square inch (psi) (69 kPa) or less are to utilize a testing gauge having increments of 0.10 psi (0.69 kPa) or less.
2. Tests requiring a pressure of greater than 10 psi (69 kPa) but less than or equal to 100 psi (689 kPa) are to utilize a testing gauge having increments of 1 psi (6.9 kPa) or less.
3. Tests requiring a pressure of greater than 100 psi (689 kPa) are to utilize a testing gauge having increments of 2 psi (14 kPa) or less.

312.1.4 Test media. All *plumbing system* piping, fittings, and shower liners are to be tested with water.

Exception: *Plumbing system* piping and fittings are permitted to be tested as prescribed in Sections 312.2 to 312.8 with air, another compressed gas, vacuum, or other media or method only when the manufacturer of the proposed piping, fittings and solvent cement (if applicable) allows the alternative method of testing. Where this code does not address or prescribe an alternative test method, an alternative test method prescribed by the manufacturer of the piping, fittings, or solvent cement in the published manufacturer's installation instructions will be acceptable as meeting the requirements of this code.

312.1.5 Reinspection and testing. Where any work or installation does not pass any initial test or inspection, the necessary corrections are to be made to comply with this code.

(J) Replace section 312.2 to read as follows:

312.2 Drainage and vent rough-in test. Drainage and vent piping and fittings are to be tested prior to the installation of the *plumbing fixtures* and prior to the installation of wall and ceiling coverings to verify the integrity of the system in accordance with one of the following methods prescribed in Section 312.2.1, 312.2.2, or 312.2.3:

312.2.1 Drainage and vent rough-in water test. A water test is to be applied to the *drainage system* either in its entirety or in sections. If applied to the entire system, all openings in the piping are to be tightly closed, except the highest opening, and the system is to be filled with water to the point of overflow. If the system is tested in sections, each

opening is to be tightly plugged except the highest openings of the section under test, and each section is to be filled with water, but sections are not to be tested with less than a 10-foot (3048 mm) head of water. In testing successive sections, not less than the upper 10 feet (3048 mm) of the next preceding section is to be tested so that no joint or pipe in the building, except the uppermost 10 feet (3048 mm) of the system, is to have been submitted to a test of less than a 10-foot (3048 mm) head of water. This pressure is to be held for not less than 15 minutes. The system is then be tight at all points.

312.2.2 Drainage and vent rough-in air test. When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an air test is to be made by forcing air into the system until there is a uniform gauge pressure of 5 psi (34.5 kPa) or sufficient to balance a 10-inch (254 mm) column of mercury. This pressure is to be held for a test period of not less than 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperatures or the seating of gaskets are to be made prior to the beginning of the test period. Testing is to be done with dual pressure relief valves rated for 7.5 psig.

312.2.3 Alternative drainage and vent rough-in test. When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an alternative method of testing the *drainage and vent system*, such as compressed gas or vacuum, may be permitted to meet the drainage and vent rough-in test requirements of this code as long as the test is conducted strictly in accordance with the requirements published in the manufacturer's installation instructions.

(K) Replace section 312.3 to read as follows:

312.3 Drainage and vent air test. Deleted.

(L) Replace section 312.4 to read as follows:

312.4 Drainage and vent final test. After the *plumbing fixtures* have been set and their *traps* filled with water, the entire *drainage system* is to be subjected to one of the following final tests as prescribed by the *building official*:

312.4.1 Visual and operational final test. All *plumbing fixtures* are to be operated and a visual inspection of accessible piping and joints are to be performed to determine that there are no visible leaks.

312.4.2 Drainage and vent final test. The final test of the completed *drainage and vent systems* is to be made, after the fixtures are connected, as follows:

1. Close all stack openings;
2. A manometer tube is to be placed through a *trap seal* to the system side and water is to be added to a fixture until an equivalent of at least 1 in. water column (248.8 Pa) is read on the manometer gauge or water-can. Water may be added to a water closet bowl or trap tailpiece extension until the water level is at least one inch higher than the original trap seal;
3. Maintain the initial water column for fifteen (15) minutes;
4. After fifteen (15) minutes, the system is to be separated at a *trap seal*, AAV, or other means as directed by the plumbing inspector for verification that the entire system is interconnected.

312.4.3 Alternative drainage and vent final test. Any other testing method equal to the 1 in. water column. Except as provided for in Section 312.4.2, compressed or stored air may be used only if permitted by the manufacturer of piping, fittings, and solvent cement (if part of the plumbing system).

(M) Replace section 312.5 to read as follows:

312.5 Water supply system test. Upon completion of a section of or the entire *water supply system*, the system, or portion completed, is to be tested to verify the integrity of the system in accordance with one of the following methods prescribed in Sections 312.5.1 or 312.5.2:

312.5.1 Water supply working pressure test. A water pressure test is to be performed to prove the system watertight. The test pressure is to be not less than the working pressure under which the system will be used, and the system will hold the test pressure for at least 15 minutes. The water utilized for tests is to be obtained from a potable source of supply.

312.5.2 Water supply air test. When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an air test is to be performed to prove the system airtight. The test pressure is to be not less than 50 psi (344 kPa) and the system will hold the test pressure for at least 15 minutes.

(N) Replace section 312.6 to read as follows:

312.6 Gravity sewer test. Deleted

- (O) Replace section 312.7 to read as follows:**
312.7 Forced sewer test. Deleted.
- (P) Add an exception to section 312.9 to read as follows:**
Exception: The shower liner test is not required for one-, two-, or three-family dwellings unless required by the shower liner manufacturer's installation instructions.
- (Q) Replace section 312.10 to read as follows:**
312.10 Inspection and testing of isolation backflow prevention devices required by this code. Inspection and testing of *isolation backflow prevention devices* is to comply with Sections 312.10.1 and 312.10.2.
Exception: Inspection and testing requirements for *containment backflow prevention devices* required by the water supplier is to be in accordance with rule 3745-95-06 of the Administrative Code and enforced by the water supplier.
- (R) Modify section 313.1 as follows:**
Add the phrase "or Chapter 11 of the *Residential Code of Ohio*" at the end of the sentence.
- (S) Replace section 316.1 and its subsections with the following:**
316.1 Alternative engineered design. See Section 106.5 of the *building code*.
316.1.1 Design criteria. Deleted.
316.1.2 Submittal. Deleted.
316.1.3 Technical data Deleted.
316.1.4 Construction documents. Deleted.
316.1.5 Design approval. Deleted.
316.1.6 Inspection and testing. Deleted.
- (T) Add new section 317 Welding and Brazing to read as follows:**
SECTION 317 WELDING AND BRAZING
317.1 General. Section 4104.44 of the Revised Code governs the requirements for welding and brazing of metallic *building services piping* (including medical gas) systems referenced by this code.