**ICC PLUMBING CODE SECTION 606 INSTALLATION OF THE BUILDING WATER DISTRIBUTION SYSTEM

606.1 Location of full-open valves.**
Full-open valves shall be installed in the following locations:

1. On the building water service pipe from the public water supply near the curb.

2. On the water distribution supply pipe at the entrance into the structure.

3. On the discharge side of every water meter.

4. On the base of every water riser pipe in occupancies other than multiple-family residential *occupancies* that are two stories or less in height and in one- and two-family residential *occupancies.*

5. On the top of every water down-feed pipe in *occupancies* other than one- and two-family residential *occupancies.*

6. On the entrance to every water supply pipe to a dwelling unit, except where supplying a single fixture equipped with individual stops.

7. On the water supply pipe to a gravity or pressurized water tank.

8. On the water supply pipe to every water heater.

**606.2 Location of shutoff valves.**
Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture other than bathtubs and showers in one- and two-family residential *occupancies,* and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar *occupancies.*

2. On the water supply pipe to each sillcock.

3. On the water supply pipe to each appliance or mechanical equipment.

**606.3 Access to valves.**  *Access* shall be provided to all full-open valves and shutoff valves.  **606.4 Valve identification.**
Service and hose bibb valves shall be identified. All other valves installed in locations that are not adjacent to the fixture or appliance shall be identified, indicating the fixture or appliance served.  **606.5 Water pressure booster systems.**
Water pressure booster systems shall be provided as required by Sections 606.5.1 through 606.5.10.

**606.5.1 Water pressure booster systems required.**
Where the water pressure in the public water main or individual water supply system is insufficient to supply the minimum pressures and quantities specified in this code, the supply shall be supplemented by an elevated water tank, a hydropneumatic pressure booster system or a water pressure booster pump installed in accordance with Section 606.5.5.

**606.5.2 Support.**
All water supply tanks shall be supported in accordance with the *International Building Code.*

**606.5.3 Covers.**
All water supply tanks shall be covered to keep out unauthorized persons, dirt and vermin. The covers of gravity tanks shall be vented with a return bend vent pipe with an area not less than the area of the down-feed riser pipe, and the vent shall be screened with a corrosion-resistant screen of not less than 16 by 20 mesh per inch (630 by 787 mesh per m).

**606.5.4 Overflows for water supply tanks.**
A gravity or suction water supply tank shall be provided with an overflow with a diameter not less than that shown in Table 606.5.4. The overflow outlet shall discharge at a point not less than 6 inches (152 mm) above the roof or roof drain; floor or floor drain; or over an open water-supplied fixture. The overflow outlet shall be covered with a corrosion-resistant screen of not less than 16 by 20 mesh per inch (630 by 787 mesh per m) and by 1/4-inch (6.4 mm) hardware cloth or shall terminate in a horizontal angle seat check valve. Drainage from overflow pipes shall be directed so as not to freeze on roof walks.  **TABLE 606.5.4 SIZES FOR OVERFLOW PIPES FOR WATER SUPPLY TANKS**

|  |  |
| --- | --- |
| **MAXIMUM CAPACITY OF WATER SUPPLY LINE TO TANK (gpm)**  | **DIAMETER OF OVERFLOW PIPE (inches)**  |
| 0 – 50 | 2 |
| 50 – 150 | 21/2  |
| 150 – 200 | 3 |
| 200 – 400 | 4 |
| 400 – 700 | 5 |
| 700 – 1,000 | 6 |
| Over 1,000 | 8 |

|  |
| --- |
| For SI: 1 inch = 25.4 mm, 1 gallon per minute = 3.785 L/m. |

**606.5.5 Low-pressure cutoff required on booster pumps.**
A low-pressure cutoff shall be installed on all booster pumps in a water pressure booster system to prevent creation of a vacuum or negative pressure on the suction side of the pump when a positive pressure of 10 psi (68.94 kPa) or less occurs on the suction side of the pump.

**606.5.6 Potable water inlet control and location.**
Potable water inlets to gravity tanks shall be controlled by a fill valve or other automatic supply valve installed so as to prevent the tank from overflowing. The inlet shall be terminated so as to provide an *air gap* not less than 4 inches (102 mm) above the overflow.

**606.5.7 Tank drain pipes.**
A valved pipe shall be provided at the lowest point of each tank to permit emptying of the tank. The tank drain pipe shall discharge as required for overflow pipes and shall not be smaller in size than specified in Table 606.5.7.  **TABLE 606.5.7 SIZE OF DRAIN PIPES FOR WATER TANKS**

|  |  |
| --- | --- |
| **TANK CAPACITY (gallons)**  | **DRAIN PIPE (inches)**  |
| Up to 750 | 1 |
| 751 to 1,500 | 11/2  |
| 1,501 to 3,000 | 2 |
| 3,001 to 5,000 | 21/2  |
| 5,000 to 7,500 | 3 |
| Over 7,500 | 4 |

|  |
| --- |
| For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L. |

**606.5.8 Prohibited location of potable supply tanks.**
Potable water gravity tanks or manholes of potable water pressure tanks shall not be located directly under any soil or waste piping or any source of contamination.

**606.5.9 Pressure tanks, vacuum relief.**
All water pressure tanks shall be provided with a vacuum relief valve at the top of the tank that will operate up to a maximum water pressure of 200 psi (1380 kPa) and up to a maximum temperature of 200ºF (93ºC). The size of such vacuum relief valve shall be not less than 1/2inch (12.7 mm).  **Exception:** This section shall not apply to pressurized captive air diaphragm/bladder tanks.

**606.5.10 Pressure relief for tanks.**
Every pressure tank in a hydropneumatic pressure booster system shall be protected with a pressure relief valve. The pressure relief valve shall be set at a maximum pressure equal to the rating of the tank. The relief valve shall be installed on the supply pipe to the tank or on the tank. The relief valve shall discharge by gravity to a safe place of disposal.

**606.6 Water supply system test.**
Upon completion of a section of or the entire water supply system, the system, or portion completed, shall be tested in accordance with Section 312.  **606.7 Labeling of water distribution pipes in bundles.**
Where water distribution piping is bundled at installation, each pipe in the bundle shall be indentified using stenciling or commercially available pipe labels. The identification shall indicate the pipe contents and the direction of flow in the pipe. The interval of the identification markings on the pipe shall not exceed 25 feet (7620 mm). There shall be not less than one identification label on each pipe in each room, space or story.