

with a minimum safety factor of 1.2 against uplift, overturning, and sliding. Earth coverings shall not be included in the calculations for the foundation structure design.

- (14) Water storage tanks located on the roof shall be installed in well drained locations, and its contents shall be protected from direct sunlight in accordance with Section 607.1.2.
- (15) Transparent tanks shall be coated on the outside with paint to become opaque.
- (16) Underground storage tanks shall be installed in areas that are graded to drain surface water runoff and prevent ponding on top of the storage tank.
- (17) Underground tanks shall be installed on a foundation that is stable and protected from settlement. Such tanks shall be constructed to prevent the infiltration of external water or other contaminants.
- (18) The water supply inlet to the tank shall have an airgap of not less than 15cm (6 in.). The supply outlet shall be not less than 100mm (4 in.) above the bottom of the tank. Inlet and outlet pipes shall be installed such that provision is made for expansion and contraction.
- (19) Fullway valves shall be installed on the water supply inlet to the tank and on the supply outlet for service to enable maintenance or repair.

607.1.5 Vents. Water storage tanks shall be provided with a vent(s). The vent shall have a return bend and screened with mesh having 1mm (0.04 in.) openings, stainless steel, plastic or bronze screen. Vents on above ground tanks shall terminate not less than three pipe diameters above the tank roof. Vents for below ground tanks shall terminate not less than 60cm (24 in.) above grade or tank roof.

607.1.6 Overflows. Water storage tanks shall be provided with an overflow pipe one size larger than that of the supply pipe. Such overflows shall be indirectly connected to the drainage system with an airgap, not less than 15cm (6 in.) and screened with 1.6mm (1/16 in.) mesh stainless steel or bronze screen.

607.1.7 Drains. Water storage tanks shall be provided with a valved drain pipe located at the lowest point and shall discharge through an indirect waste opening with an airgap of twice the diameter of the drain pipe.

607.1.8 Water Supply Inlet. The water supply inlet to a water storage tank shall be controlled

by a float valve or switches as a means to monitor the water level and overflow. The float valve or switch shall be made of noncorrosive material and shall be approved for a temperature rating not less than 50°C (122°F). Such inlet shall be provided with an airgap not less than 15cm (6 in.) above the overflow. Alarms to indicate high and low water levels are indicated.

607.1.9 Covers and Access. Water storage tanks shall be provided with a fitted, solid, water-tight, gasketed cover. Access for cleaning, painting, inspection and maintenance shall be provided. The cover shall be of material that will not transform into a brittle substance and that disintegrates in small fragments where broken. The cover shall prevent the light from entering the tank.

607.1.10 Auxiliary Connection. A pipe connection shall be provided to supply the low level tank from a water tank and the connection from the city mains.

607.1.11 More Than One Tank. Where installing more than one tank, each tank shall be provided with separate inlet, outlet, overflow, and drain pipes.

607.1.12 Disinfection. Water storage tanks shall be disinfected prior to use, after cleaning, repair, or painting in accordance with the following:

- (1) Drain or empty tank.
- (2) Clean interior surfaces to remove dirt and debris.
- (3) Interior surfaces shall be thoroughly disinfected by means of chlorine solutions.
- (4) Dispersion of a chlorine solution of not less than 30mm/L (30ppm).
- (5) Chlorine solution shall remain in contact with interior surfaces for not less than 1 hour.
- (6) Water supply tank shall be flushed with potable water from an approved source until chlorine solution is dispelled.
- (7) Bacteriological test samples shall be collected and analyzed. Where samples are approved by the Authority Having Jurisdiction, the system shall be permitted to be placed in service.
- (8) Where sufficient water is not available, an alternative method for disinfection shall be submitted in writing, describing the proposed disinfection procedure and the need for an alternative procedure to the Authority Having Jurisdiction for approval.