



# #80—RESIDENTIAL LIQUEFIED PETROLEUM TANKS

Storage of liquefied petroleum (LP) gas and the installation of equipment in residential structures shall be in accordance with *International Fire Code* for tanks and *International Residential Code* for piping and equipment.

A Building Permit is required for the installation of any LP gas (propane) tank. Distributors shall not fill an LP gas container unless a permit for installation has been issued and its installation inspected and approved.

Applications to install an LP gas tank shall include a site plan clearly identifying the tank's location with respect to buildings, property lines and sources of ignition.

Containers shall be located with respect to buildings, public ways, and lines of adjoining property in accordance with Table 1 (see Figure 1).

Containers shall also be located with respect to special hazards such as aboveground flammable or combustible liquid tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines.

Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10' from LP gas tanks or containers.

When exposed to probable vehicular damage due to proximity to alleys, driveways or parking areas, LP gas containers, regulators and piping shall be suitably protected with bollards or other approved physical barriers.

*Note: LP gas containers shall not be used in a basement, above-grade underfloor space, pit or similar location where heavier-than-air gas might collect.*

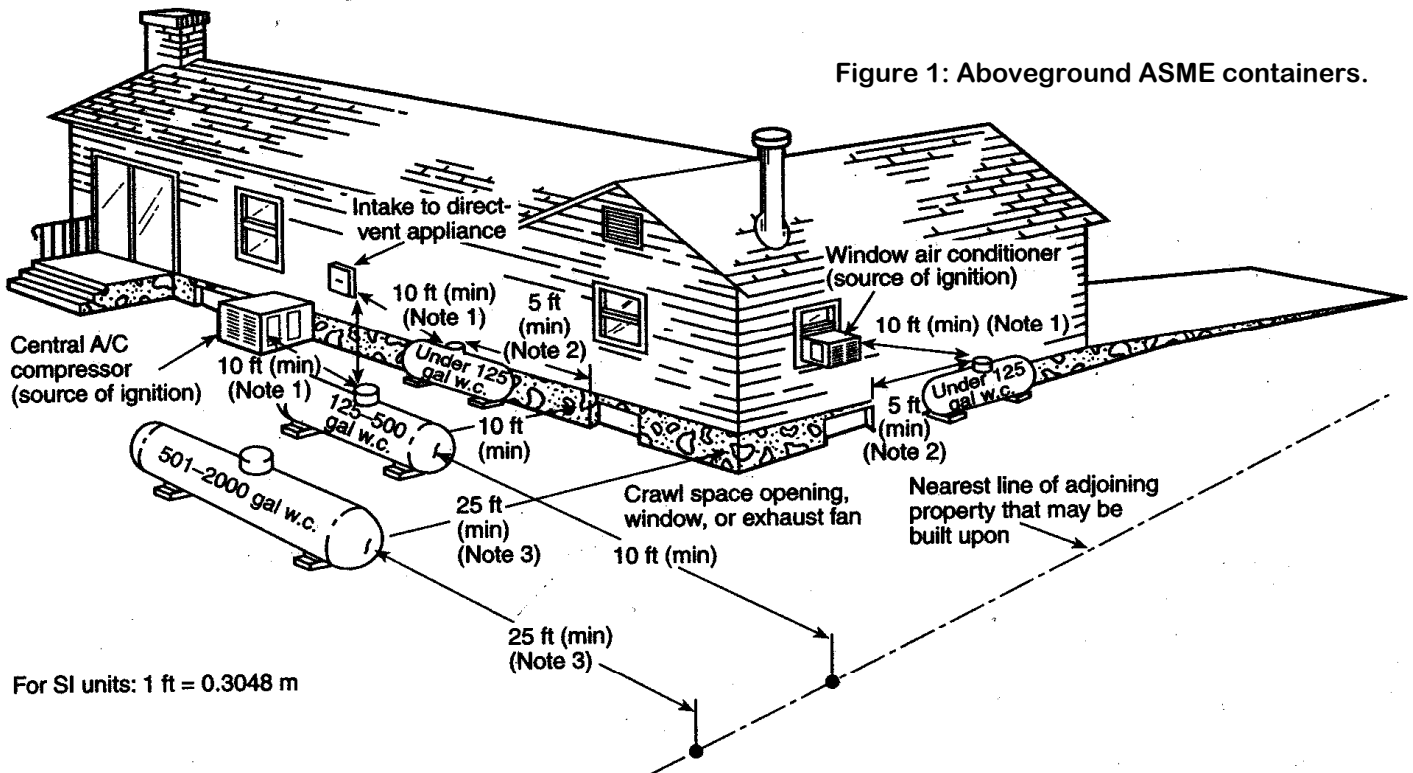


Figure 1: Aboveground ASME containers.

For SI units: 1 ft = 0.3048 m

**Note 1:** Regardless of its size, any ASME container filled on site must be located so that the filling connection and fixed maximum liquid level gauge are at least 10 ft from any external source of ignition (e.g., open flame, window A/C, compressor), intake to direct-vented gas appliance, or intake to a mechanical ventilation system. Refer to 3.2.2.2(d).

**Note 2:** Refer to 3.2.2.2(c)

**Note 3:** This distance may be reduced to no less than 10 ft for a single container of 1200 gal (4.5 m<sup>3</sup>) water capacity or less, provided such container is at least 25 ft from any other LP-Gas container of more than 125 gal (0.5 m<sup>3</sup>) water capacity. Refer to 3.2.2.2(e).

**TABLE 1: LOCATION OF CONTAINERS.**

Container Capacity (water gallons)	Minimum Separation Between Containers and buildings, public Ways, or Lines of Adjoining Property That Can Be Built Upon		Minimum Separation Between Containers (feet) <sup>2,3</sup>
	Mounded or Underground Containers (feet) <sup>1</sup>	Aboveground Containers (feet) <sup>2</sup>	
Less than 125 <sup>3,4</sup>	10	5 <sup>5</sup>	None
125 to 250	10	10	None
251 to 500	10	10	3
501 to 2,000	10	25 <sup>5,6</sup>	3

**1** Minimum distance for underground containers shall be measured from the pressure-relief device and the filling or liquid level gauge vent connection at the container, except that all parts of an underground container shall be 10' or more from a building or line of adjoining property which can be built upon.

**2** In applying the distance between buildings and American Society of Mechanical Engineers (ASME) containers of a 125-gallon or more water capacity, a minimum of 50% of this horizontal distance shall also apply to all portions of the building which project more than 5' from the building wall and which are higher than the relief valve discharge outlet. This horizontal distance shall be measured from a point determined by projecting the outside edge of such overhanging structure vertically downward to grade or other level upon which the container is installed. Distances to the building wall shall not be less than those prescribed in this table. Exception: Installations in which the overhanging structure is 50' or more above the relief valve discharge outlet.

**3** When underground and multicontainer installations are comprised of individual containers having a water capacity of 125 gallons or more, such containers shall be installed so as to provide access at their ends or sides to facilitate working with cranes or hoists.

**4** At a consumer site, if the aggregate water capacity of a multicontainer installation, comprised of individual containers having a water capacity of less than 125 gallons is 500 gallons or more, the minimum distance shall comply with the appropriate portion of this table, applying the aggregate capacity rather than the capacity per container. If more than one such installation is made, each installation shall be separated from other installations by at least 25'. Minimum distances between containers need not be applied.

**5** The following shall apply to aboveground containers installed alongside buildings:

- A. Containers less than a 125-gallon water capacity are allowed next to the building they serve when in compliance with items 2, 3, and 4.
- B. Department of Transportation (DOT) specification containers shall be located and installed so that the discharge from the container pressure relief device is at least 3' horizontally from building openings below the level of such discharge and shall not be beneath building unless the space is well ventilated to the outside and is not enclosed for more than 50% of its perimeter. The discharge from container pressure relief devices shall be located not less than 5' from exterior sources of ignition, openings into direct-vent (sealed combustion system) appliances or mechanical ventilation air intakes.
- C. ASME containers of less than a 125-gallon water capacity shall be located and installed such that the discharge from pressure relief devices shall not terminate in or beneath buildings and shall be located at least 5' horizontally from building openings below the level of such discharge and not less than 5' from exterior sources of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes.
- D. The filling connection and the vent liquid level gauges on either DOT or ASME containers filled at the point of installation shall not be less than 10' from exterior sources of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes.

**6** This distance is allowed to be reduced to not less than 10' for a single container of 1,200-gallon water capacity or less, provided such container is at least 25' from other LP gas containers of more than 125 gallon water capacity.