DICKINSON FIRE MARSHAL'S OFFICE

Propane System Installation Guide

1. Types of Propane Containers

DOT Portable Cylinders:

DOT portable cylinders are those types of containers usually sized for 100 pound propane capacity and less and manufactured to the specifications of the U.S. Dept. of Transportation. These cylinders are not filled on site at the customers home but at a propane distribution plant and then transported and installed at the customers home. When the cylinder is empty it is returned to the propane plant for inspection and refilling.

DOT Stationary Cylinders:

DOT stationary cylinders are those types of containers usually sized from 200 to 420 pounds propane capacity and manufactured to the specifications of the U.S. Dept. of Transportation. These cylinders are filled on site at the customer's home from a bulk delivery truck. These cylinders must be inspected and refilled at the customer's home.

ASME Aboveground Tanks:

ASME aboveground tanks are usually sized 120 to 1,000 gallon water capacity, and manufactured to the specifications of the American Society of Mechanical Engineers. These tanks are considered stationary tanks and are installed aboveground on masonry foundations or blocks and filled on site at the customers home from a bulk delivery truck.

ASME Underground Tanks:

ASME underground tanks are usually sized 500 or 1,000 gallon water capacity and manufactured to the specifications of the American Society of Mechanical Engineers. These tanks are considered stationary tanks and are installed underground and filled on site at the customers home from a bulk delivery truck.

2. Separation/Installation Requirements for Propane Containers

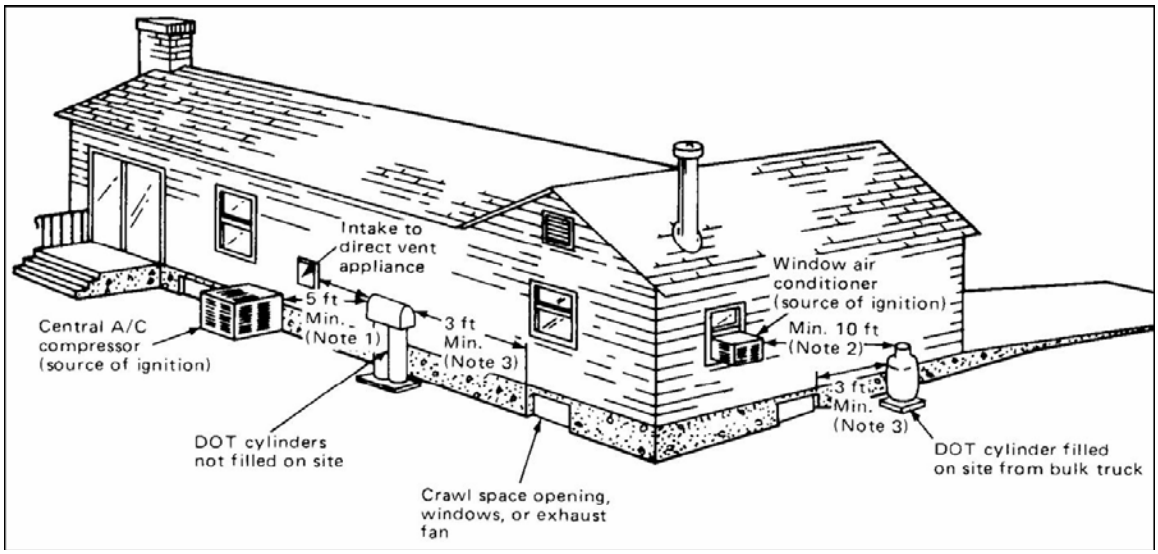
The following figures are provided for informational reference purposes only. The figures are copies of those printed in, Annex I.

Annex I contains Figures I.1 (a) through (c), which illustrate the separation distance required for the installation of LP-Gas containers up to 2000 gallons. The figures incorporate the distances required in Section 6.3 and Table 6.3.1 of the code. Because Table 6.3.1 is the most used item in the code, the need for clarity and unambiguous implementation of the table is of great importance. Figures I.1 (a) through (c) make it much easier for all users to properly apply Section 6.3 and Table 6.3.1. **Actual requirements for the spacing of propane containers will be specified and approved by the federal, state and local codes and regulations and the local *Authority Having Jurisdiction* for the location where the propane container is to be installed and/or utilized.**

"The LP-Gas Code", NFPA 58, 2004 edition

Where necessary to prevent flotation due to possible high flood waters around aboveground or mounded containers, or high water table for those underground and partially underground, containers shall be securely anchored.

Cylinder - Spacing



Notes:

1: 5 Ft minimum from relief valve in any direction away from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.3.7.

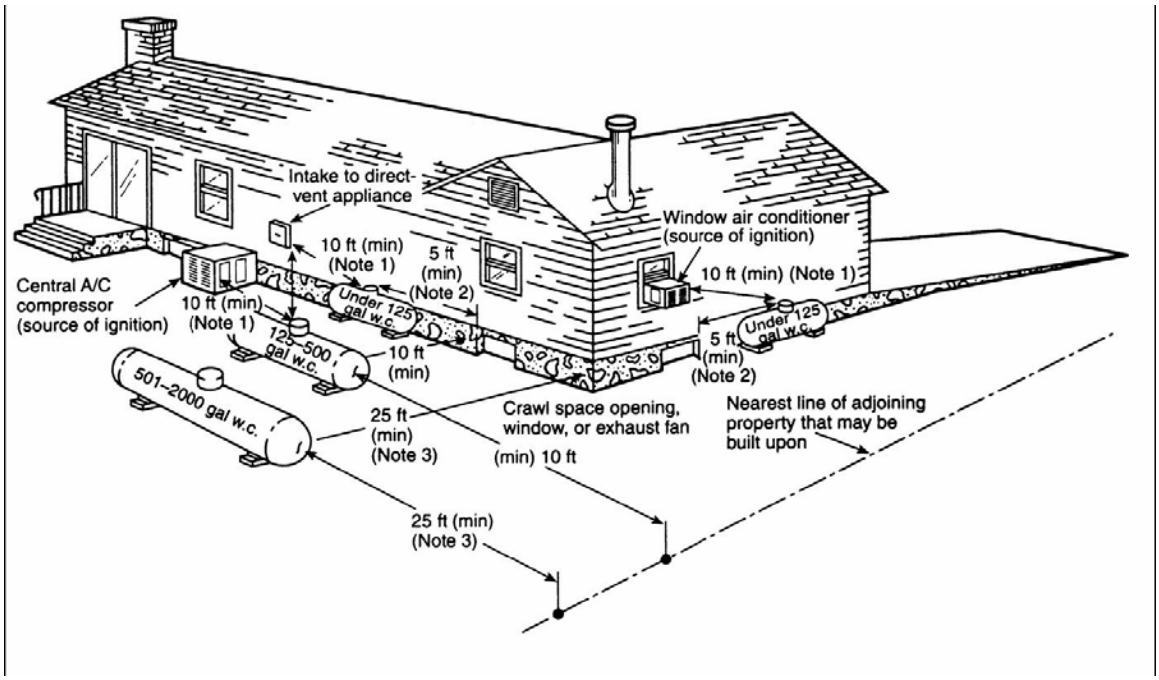
2: If the cylinder is filled on site from a bulk truck, the filling connection and vent valve must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes.

3: Refer to 6.3.7.

NFPA 58, 2004 Edition, Annex I, Figure I.1(a)
Cylinders

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)

Aboveground ASME Tanks - Spacing



Notes:

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 appliances, or intake to a mechanical ventilation system. Refer to 6.3.9.

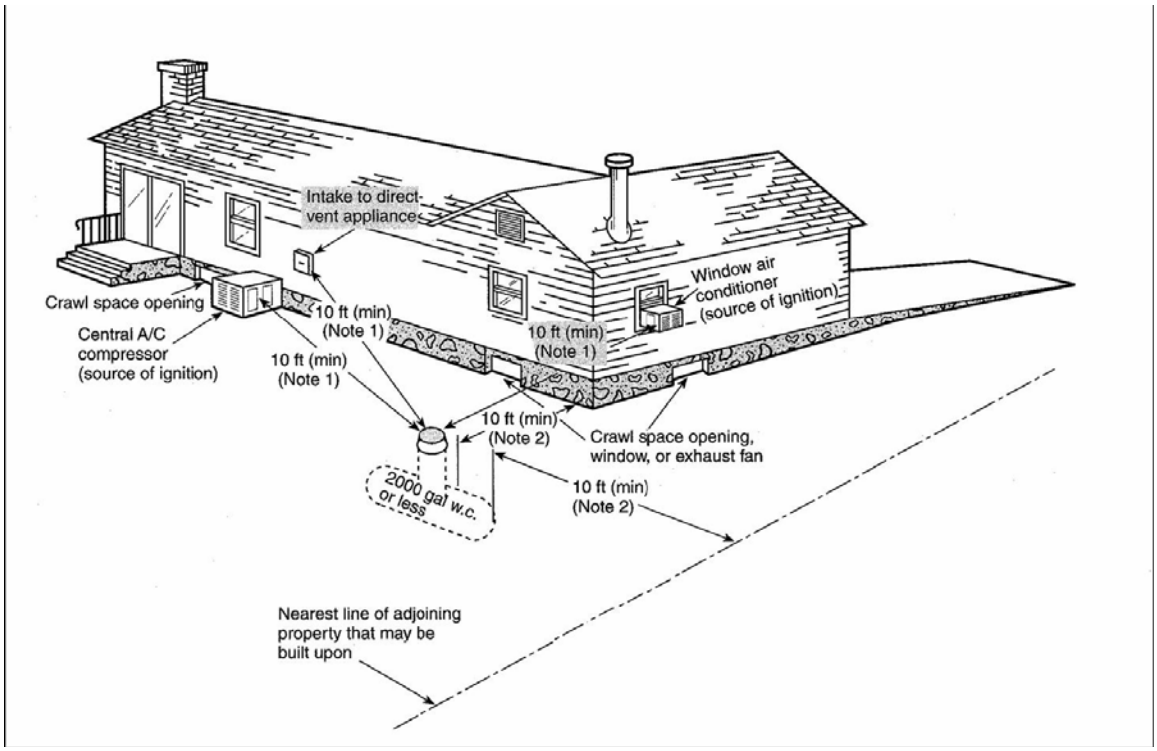
2: Refer to 6.3.9.

3: This distance may be reduced to no less than 10 ft for a single container of 1200 gallon water capacity or less, provided such container is at least 25 ft from any other LP-Gas container of more than 125 gallons water capacity. Refer to 6.3.3.

NFPA 58, 2004 Edition, Annex I, Figure I.1(b)
Aboveground ASME Containers

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)

Underground ASME Tanks - Spacing



Notes:

1: The relief valve, filling connection, and liquid fixed maximum level gauge vent connection at the container must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.3.4.

2: No part of an underground container shall be less than 10 ft from an important building or line of adjoining property that can be built upon. Refer to 6.3.4.

NFPA 58, 2004 Edition, Annex I, Figure I.1(c)
Underground ASME Containers

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)

"The LP-Gas Code", NFPA 58, 2004 edition

Where necessary to prevent flotation due to possible high flood waters around aboveground or mounded containers, or high water table for those underground and partially underground, containers shall be securely anchored.

City of Dickinson Code of Ordinances

Sec. 14-155. Floodways.
Floodways located within areas of special flood hazard established in section 14-107 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters, which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

(1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within a flood hazard area unless certification by a professional registered engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels within the city during the occurrence of the base flood discharge.

(2) If subsection (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this division.

(Ord. No. 509-2003, § 1, 1-13-04)

Sec 14-156. Standards for areas in B zone.
All installations in Zone B shall elevated at least eighteen (18) inches above the highest adjacent grade.
(Ord. No. 509-2003, § 1, 1-13-04)

Sec 14-157. Standards for areas in zone A.
All installations in zone A areas shall be elevated to a minimum of one (1) foot above the base flood elevation shown on the latest edition of the FIRM.
(Ord. No. 509-2003, § 1, 1-13-04)

Minimum storage tank footing requirements

Installation of above ground tanks shall have footings constructed with a minimum three thousand (3,000) psi strength Portland cement concrete, with a four (4) inch minimum thickness, with six-inch by six-inch (6" × 6"), six (6) gauge welded wire mesh reinforcement or #3 rebar 16" c.c., supported by chairs.