

Town of Philipstown

Code Enforcement Office
238 Main Street, PO Box 155
Cold Spring, NY 10516

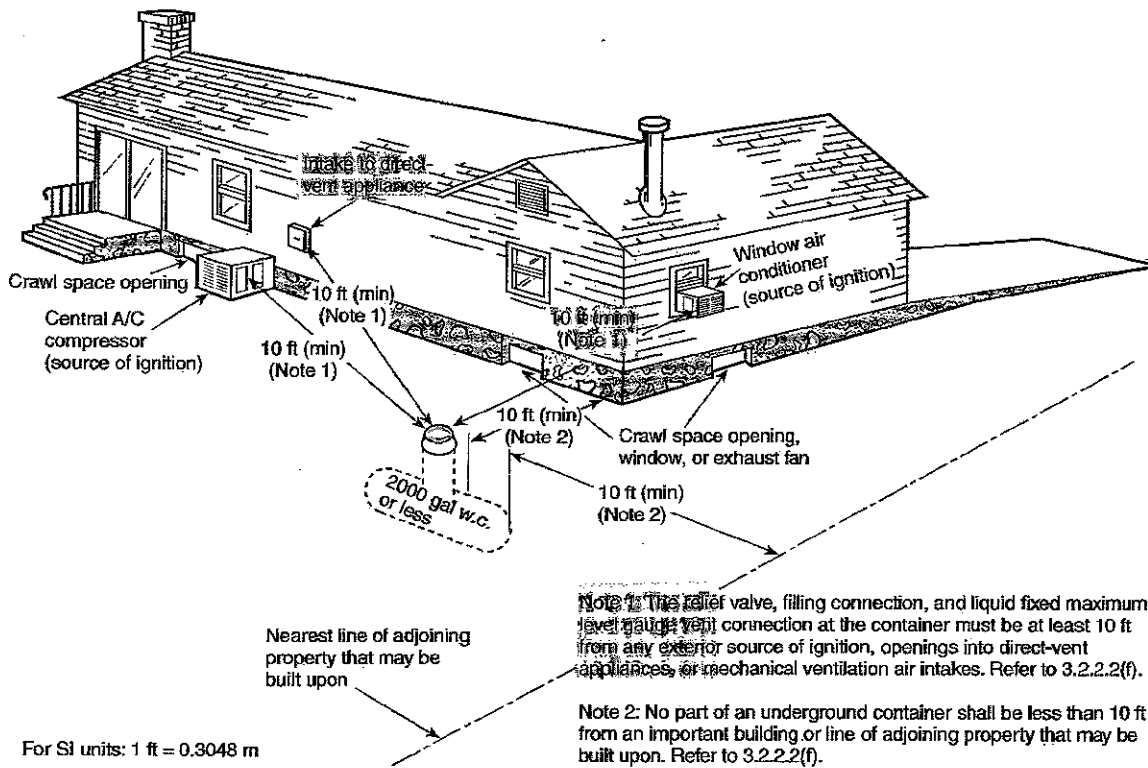
Office (845) 265- 5202 Fax (845) 265-2687

LIQUEFIED PETROLEUM STORAGE TANK BUILDING/ZONING PERMIT PACKAGE

1. **BUILDING/ZONING PERMIT APPLICATION** - The applications must be filled out in sufficient detail and signed by the owner of the property or by an authorized agent/contractor with the submission of the **AGENT AUTHORIZATION FORM** other legal instrument authorizing the applicant to sign and obtain the Building Permit.
2. **CONSTRUCTION DRAWINGS** - Submit two (2) drawings of the proposed installation of liquefied petroleum storage tanks, size, piping and supports.
3. **SITE PLAN** - A plan or survey of the property showing the location of the proposed liquefied petroleum storage tanks and the size the tank, supports and size and type of piping and indicating the setbacks from the property lines in conformance with the Town of Philipstown Zoning Law and NFPA 58. Show. Verify locations within a floodplain. Some commercial projects may require **SITE PLAN APPROVAL** by the Philipstown Planning Board.
4. **PUTNAM COUNTY LICENSED GAS CONTRACTORS** is requires and a copy of the licensed needs to be submitted with the building permit application.
5. **INTERIOR PIPING AND APPLIANCES** – New interior piping and appliances will require the submission of two (2) floor plans locating the size and type of piping and type of appliance and location.
6. **WORKERS' COMPENSATION and EMPLOYEE LIABILITY** – Proof of insurance must be submitted from the contractor at the time of application. **ACORD FORMS** are not acceptable as proof of insurance.
 - Contractor with The State Insurance Fund must submit form U26.3 and DB-120.1.
 - Contractor with Private Insurance must submit form C-105.2 and DB-120.1.
 - Contractor who is self insured must submit form SI-12 or GSI-105.2 and DB-155.
 - Contractors who are exempt from Workers' Compensation must submit form CE-200.
 - An owner applying for the permit who occupies the residence may submit form BP-1 affidavit.
7. **INSPECTIONS:**
 - Underground tanks - require an inspection of the gas piping, slab and anchoring before fill is put around the tank and a final inspection when complete.
 - Above ground tanks - require a final inspection of the gas piping, slab and anchoring when complete.
 - Piping Pressure Test – required to be observed.

3. Piping shall be removed from the ground. **Exception:** Piping is allowed to be abandoned in place where the code enforcement official determines that removal is not practical. Abandoned piping shall be capped and safeguarded by filling with concrete.
 4. Tank openings shall be capped or plugged, leaving a 0.125-inch to 1/4-inch-diameter (3.2 mm to 6.4 mm) opening for pressure equalization.
 5. Tanks shall be purged of vapor and inerted prior to removal.
 6. All exterior above-grade fill and vent piping shall be permanently removed. **Exception:** Piping associated with bulk plants, terminal facilities and refineries.010311
4. **PUTNAM COUNTY LICENSED CONTRACTORS & SUBCONTRACTOR** a copy of the Putnam County Licensed is to be submitted with the building permit application.
 5. **WORKERS' COMPENSATION** – Proof of insurance must be submitted from the contractor at the time of application. **ACORD FORMS** are not acceptable proof of insurance.
 - Contractor with The State Insurance Fund must submit form U26.3 and DB-120.1.
 - Contractor with Private Insurance must submit form C-105.2 and DB-120.1.
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FIGURE L1(c) Underground ASME containers. (This figure for illustrative purposes only; code shall govern.)



Appendix J Referenced Publications

J.1 The following documents or portions thereof are referenced within this code for informational purposes only and are thus not considered part of the requirements of this code unless also listed in Chapter 13. The edition indicated here for each reference is the current edition as of the date of the NFPA issuance of this code.

J.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 10, *Standard for Portable Fire Extinguishers*, 1998 edition.

NFPA 30, *Flammable and Combustible Liquids Code*, 2000 edition.

NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, 1998 edition.

NFPA 50, *Standard for Bulk Oxygen Systems at Consumer Sites*, 2001 edition.

NFPA 50A, *Standard for Gaseous Hydrogen Systems at Consumer Sites*, 1999 edition.

NFPA 51, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes*, 1997 edition.

NFPA 54, *National Fuel Gas Code*, 1999 edition.

NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities*, 1999 edition.

NFPA 68, *Guide for Venting of Deflagrations*, 1998 edition.

NFPA 77, *Recommended Practice on Static Electricity*, 2000 edition.

NFPA 80, *Standard for Fire Doors and Fire Windows*, 1999 edition.

NFPA 251, *Standard Methods of Tests of Fire Endurance of Building Construction and Materials*, 1999 edition.

NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*, 1999 edition.

NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 1997 edition.

NFPA 1192, *Standard on Recreational Vehicles*, 1996 edition.

J.1.2 Other Publications.

J.1.2.1 API Publications. American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005.

API 620, *Design and Construction of Large, Welded, Low-Pressure Storage Tanks*, 1996.

API 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*, 1996.

API 2510, *Design and Construction of LP-Gas Installations*, 1995.

API-ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases.

J.1.2.2 ASCE Publication. American Society of Civil Engineers, United Engineering Center, 345 East 47th St., New York, NY 10017.

ASCE 56, *Sub-Surface Investigation for Design and Construction of Foundation for Buildings*.

J.1.2.3 ASME Publication. American Society for Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

ASME Boiler and Pressure Vessel Code, 1998.

ASME Code Case Interpretations and Addenda.



LIQUEFIED PETROLEUM TANKS

Storage of liquefied petroleum (LP) gas and the installation of equipment in structures shall be in accordance with *Fire Code of New York State* for tanks, *Fuel Gas Code of New York State* for piping and equipment in commercial structures, and *Residential Code of New York State* for residential 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.

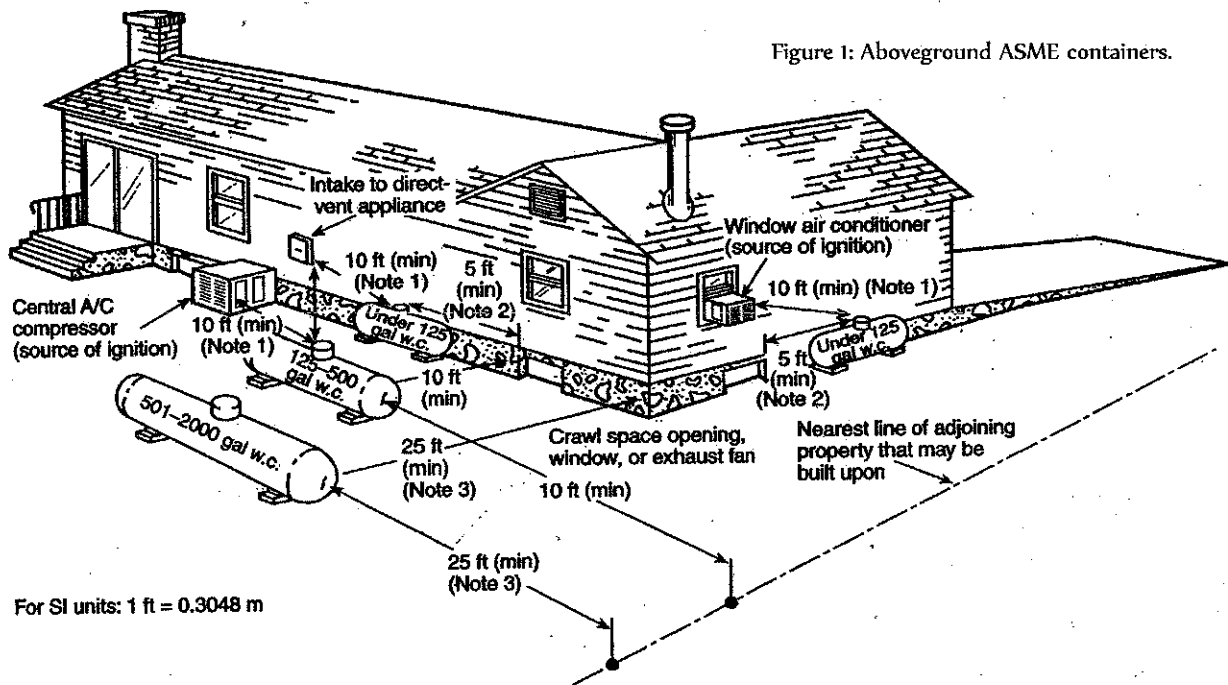


Figure 1: Aboveground ASME containers.

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 m³) 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 m³) 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) ^{2,3}
	Mounded or Underground Containers (feet) ¹	Aboveground Containers (feet) ²	
Less than 125 "	10	5'	None
125 to 250	10	10	None
251 to 500	10	10	3
501 to 2,000	10	25 "	3
2,001 to 30,000	50	50	5
30,001 to 70,000	50	75	(0.25 of sum of diameters of adjacent containers)
70,001 to 90,000	50	100	
90,001 to 120,000	50	125	

- 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 For other than installations in which the overhanging structure is 50' or more above the relief valve discharge outlet. 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.
- 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.

New and Substantially Improved Buildings
Fuel Systems



FLOOD RESISTANT FUEL SYSTEM CHECKLIST

Property ID:		Property Contact:	
Property Name:		Interviewed:	
Property Address:		Phone:	
Surveyed By:		Date Surveyed:	
DFE:			
<ul style="list-style-type: none"> • What type of fuel system supplies the building? 			
<input type="checkbox"/> Above ground Is tank anchored to the ground properly? <input type="checkbox"/> Y <input type="checkbox"/> N Are fuel lines protected from impact? <input type="checkbox"/> Y <input type="checkbox"/> N Is the tank support structure designed to handle velocity flow? <input type="checkbox"/> Y <input type="checkbox"/> N		<input type="checkbox"/> Below ground Is tank protected from buoyancy forces properly? <input type="checkbox"/> Y <input type="checkbox"/> N Is the fuel tank top protected from impact? <input type="checkbox"/> Y <input type="checkbox"/> N Are fuel lines protected from impact? <input type="checkbox"/> Y <input type="checkbox"/> N	
<input type="checkbox"/> Inside the building Is tank anchored to the floor properly? <input type="checkbox"/> Y <input type="checkbox"/> N Are tank and fuel lines protected from impact? <input type="checkbox"/> Y <input type="checkbox"/> N Is the tank properly distanced from the wall and ignition sources? <input type="checkbox"/> Y <input type="checkbox"/> N		<input type="checkbox"/> Natural Gas Line Is the incoming natural gas line protected from impact? <input type="checkbox"/> Y <input type="checkbox"/> N What type of gas line is used? Is the gas meter protected from inundation by floodwaters? <input type="checkbox"/> Y <input type="checkbox"/> N	
Is a fuel storage tank located at the building? <input type="checkbox"/> Y <input type="checkbox"/> N: What type of fuel does it contain?			
Is the fuel storage tank of double-walled design? <input type="checkbox"/> Y <input type="checkbox"/> N			
Describe the tank anchoring system:			
Is the fuel system venting extended to above the DFE? <input type="checkbox"/> Y <input type="checkbox"/> N			
<ul style="list-style-type: none"> • What components are located below the DFE? 			
<input type="checkbox"/> Tank	<input type="checkbox"/> Fuel Lines	<input type="checkbox"/> Gas Meters	<input type="checkbox"/> Other: <input type="checkbox"/> Other:

Table 3.2.5: Checklist for flood resistant fuel system design