

# Tank Installation Setbacks

The diagram below represents typical piping installation per NFPA Pamphlet 54.  
(This figure is for illustrative purposes only; code will govern.)

## 3.1 Piping Underground

**3.1.1 Clearances.** Underground gas piping shall be installed with sufficient clearance from any other underground structure to avoid contact therewith, to allow maintenance, and to protect against damage from proximity to other structures. In addition, underground plastic piping shall be installed with sufficient clearance, or shall be insulated from any source of heat so as to prevent the heat from impairing the serviceability of the pipe.

**3.1.2 Protection Against Damage.** Means shall be provided to prevent excessive stressing of the piping where there is heavy vehicular traffic, or soil conditions are unstable and settling of piping your foundation walls could occur. Piping shall be buried or covered in a manner so as to protect the piping from the physical damage. Piping shall be protected from physical damage where it passes through flowerbeds, shrub beds, and other cultivated areas where such damage is reasonably expected.

**(a) Cover Requirements.** Underground piping system shall be installed with at least 18 in. (46 cm) of cover. The cover shall be permitted to be reduced to 12 in. (30 cm) if external damage the pipe is not likely to result. If a minimum of 12 in. (30 cm) of cover cannot be maintained, the pipe shall be installed in conduit or bridged (shielded).

**(b) Trenches.** The trench shall be graded so that the pipe has a firm, substantially continuous bearing on the bottom of the trench.

**(c) Backfilling.** Where flooding of the trench is done to consolidate the backfill, care shall be exercised to see that the pipe is not floated from its bearing on the trench bottom.

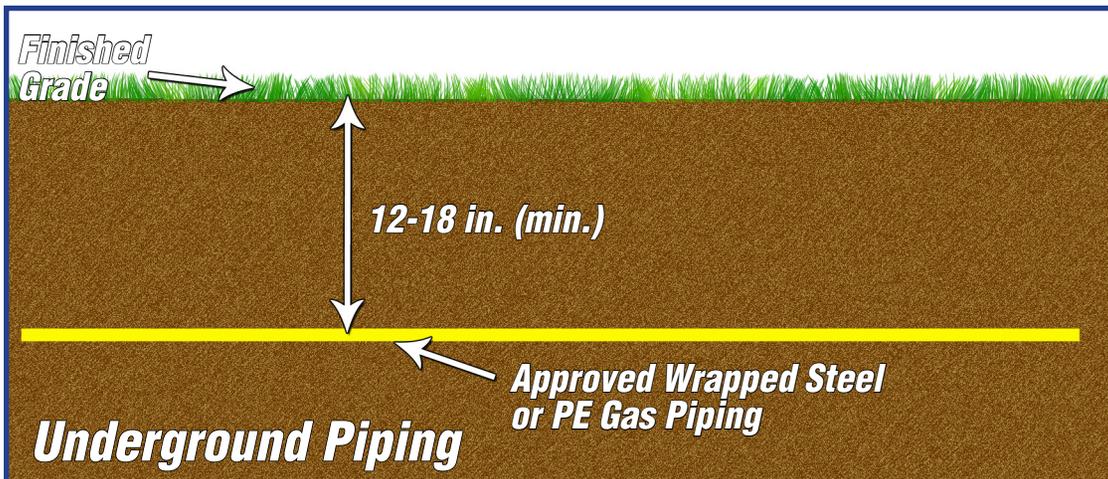
**3.1.3 Protection Against Corrosion.** Gas piping in contact with earth or other material that could corrode the piping shall be protected against corrosion in an approved manner. When dissimilar metals are joined underground, an insulating coupling or fitting shall be used. Piping shall not be laid in contact with cinders. Uncoded threaded or socket welded joints shall not be used in piping in contact with soil or where internal or external crevice corrosion is known to occur.

**3.1.4 Protection Against Freezing.** Where the formation of hydrate or ice is known to occur, piping shall be protected against freezing.

**NOTE:** The gas supplier can be consulted for recommendations.

**3.1.5 Piping Through Foundation Wall.** Underground piping, where installed below grade through the outer foundation or basement wall of the building, shall be encased in a protective pipe. The annular space between the gas piping in the sleeve shall be sealed at the foundation or basement wall to prevent entry of gas or water.

**3.1.6 Piping Underground Beneath Building.** Where the installation of gas piping underground beneath buildings is unavoidable, the piping shall be encased in an approved conduit designed to withstand the superimposed loads. The conduit shall extend into a normally unusable and accessible portion of the building and, at the point where the conduit terminates in the building, the space between the conduit of the gas piping shall be sealed to prevent the possible entrance of any gas leakage. If the end sealing is of a type that will retain the full pressure of the pipe, the conduit shall be designed for the same pressure as the pipe. The conduit shall extend at least 4 in. (10 cm) outside the building, be vented above grade to the outside, and be installed so as to prevent the entrance of water and insects.



## 3.1.7 Plastic Pipe.

(a) Connection of Plastic Piping. Plastic pipe shall be installed outside, underground only.

**Exception No. 1:** Plastic pipe shall be permitted to terminate aboveground where an anodeless riser is used.

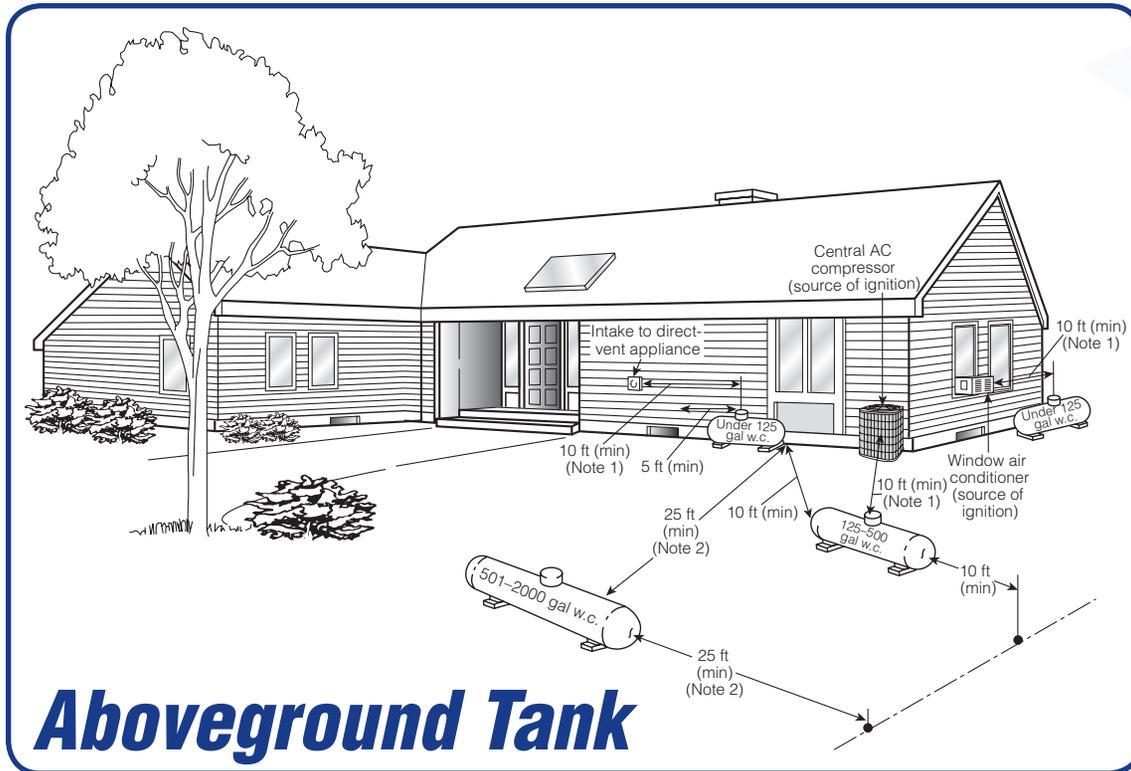
**Exception No. 2:** Plastic pipe shall be permitted to terminate with a wall-head adapter above ground in buildings, including basements, where a plastic pipe is inserted in a piping material permitted for use in buildings.

(b) Connection made outside and underground between metallic and plastic piping shall be made only with Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings, ASTM D 251, Category I transition fittings.

(c) An electrically continuous corrosion-resistant tracer wire (min. AWG 14) or tape shall be buried with the plastic pipe to facilitate locating. One end shall be brought aboveground at a building wall or riser.

## **Tank Installation Setbacks**

The diagram below represents a typical aboveground ASME container installation per NFPA Pamphlet 58.  
(This figure is for illustrative purposes only; code shall govern.)



The location of the container is important. Specific rules about the placement of liquid containers can be found in the National Fire Protection Association's (NFPA) 58. There are standards for ASME aboveground containers, ASME underground containers, and DOT cylinders.

One of the most important dimensions given is the distance to a source of ignition. In most cases, this should be at least 10 feet. Verify that the containers you inspect are properly located in accordance with NFPA-58. Also verify that the container location is accessible for safe filling from the bulk delivery truck.

The container should be resting on a firm, non-combustible foundation, and cleared of weeds and grass from under or around the container.

Be sure to check with your local fire and building authorities for additional installation requirements.

Consult with your local **Blue Star Gas** office for complete details on location and tank setbacks.