Hurst Fire Department

"Making the Difference"

Above Ground Fuel Tank Guidelines

SCOPE: These provisions apply to all permanent aboveground fuel storage tanks including all other fuel containment devices comprising of diesel fuel with a capacity of 500 gallons or greater or gasoline in excess of 30 gallons.

Permit: An application permit is required to install, operate, repair, or modify a protected aboveground fuel tank used for dispensing and/or storage.

TO OBTAIN A PERMIT: All plan drawings, calculations, and spec sheets must be submitted in PDF format to include verification of all applicable state licenses possessed by the designer, installer, and company performing the work. At least one additional set of hard copy plan drawings must be submitted for Fire Department retention.

The plans shall include the design, details, and specifications of the following:

(a) Quantities and types of liquid to be stored;
(b) Distances from tanks and dispensers to property lines and buildings (site plan);
(c) Emergency equipment access easements;
(d) Location of portable fire protection appliances;
(e) Vehicle impact protection devices;
(f) Protected aboveground tanks and their supports;
(g) Method of storage and dispensing;
(h) Overfill prevention, spill containment, vents, vapor recovery, dispensers and other equipment and accessories;
(i) Seismic designs in accordance with the building code;
(j) Secondary containment provisions;
(k) Diking design and capacity;
(l) Venting;
(m) Piping;
(n) Electrical systems;
(o) Emergency controls; and,
(p) Other information as required by the Fire Marshal.

TANK DESIGN

PROTECTION: Protected aboveground tanks shall meet the requirements of Underwriters Laboratories Standard 2085. Vaulted aboveground tanks in accordance with U.L. 2085 are any U.L. listed standard 142 steel aboveground tank for flammable or combustible liquid all portions of which shall be enclosed in a secondary containment and encased with approved material to obtain a two (2) hour fire resistance rating. All permanent tanks must be in compliance with the International Fire Code, UL 2085, NFPA #30, #30A and be approved by the Fire Marshal.

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PRIMARY TANKS: Primary tanks shall be designed in accordance with Chapter 22 of the International Fire Code as amended and UL 2085 along with all other applicable standards.

VENTS

Atmospheric and emergency venting is required. Approved flame arresters shall be installed in normal vents.

LOCATION

Tanks must be located within one hundred and fifty feet of a public street or fire lane and within five hundred feet of a fire hydrant. Installations of above ground storage tanks are permissible in certain commercial zoning districts as determined by the Fire Chief.

***Aboveground tanks shall NOT be used for retail sales.**

Size

Tanks containing Class I motor fuels shall not exceed ten thousand (10,000) gallons in individual and aggregate capacity. Tanks containing Class II and III-A liquid fuels shall not exceed twelve thousand (12,000) gallons in individual or thirty-six thousand (36,000) in aggregate capacity. The total amount of fuel on any site shall not exceed thirty-six thousand (36,000) gallons.

2206.2.3 Above-ground tanks located outside, above grade

1. Above-grade storage of Class I liquids shall be listed and labeled as protected above-ground tanks and be in accordance with Chapter 34. Such tanks shall be located in accordance with Table 2206.2.3.

2. Must have a minimum 2hr fire resistance rating including stand or footing, which shall be installed at the factory and certified by the manufacturer.

3. Tanks must be of an approved concrete vault design or a double wall, concrete filled steel tank or approved alternative design.

4. Tanks must be UL #2085 listed and must comply with NFPA 30 (Flammable and Combustible Liquids), #30A (Motor Dispensing Facilities and Repair Garages), the International Fire Code as Amended, along with all other applicable standards.

5. Tanks must include secondary containment as an integral part of the tank design.

6. Tanks must be located within one hundred and fifty (150) feet of a public street or fire department access road and within a five hundred (500) foot hose lay of a fire hydrant.

7. Each tank shall have a factory installed liquid level indicating gauge with a fill alarm, have atmospheric venting with a flame arrestor and emergency venting, be properly labeled, and be equipped with a fill limiter that will stop tank filling operations when the tank has reached 90% of its capacity.

8. Tanks shall be equipped with an approved remote fill port or an approved spill containment basin designed to catch any spillage that occurs during tank fill operations.

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9. All tanks shall be installed on a concrete slab. The slab shall be designed to support the full weight of the tank and shall extend a minimum of three (3) feet past all portions of the tank. When required by the fire code official the pad shall have a minimum six (6) inch containment curb with an approved drain valve."

10. Protective posts shall be four (4) inch schedule 40 or better steel posts filled with concrete and set in thirty-six (36) inches of concrete with a footing of at least fifteen (15) inches in diameter.

Posts shall be located at least three (3) feet from the fuel gas equipment, and arranged to reduce interference with maintenance or operations of the equipment.

Posts shall extend aboveground to a minimum height equal to the height of the device being protected, but in no case less than three (3) feet above finish grade at that location.
The number of posts shall be sufficient to protect the fuel system equipment. Posts shall be spaced not more than four (4) feet apart.

11. A three-foot (3') clear space must be maintained around the tank(s).

***Protective post design must meet the requirements within Section 312 of the IFC.**

12. Signage complying with **Section 2205.6 and NFPA 704** shall be installed on each tank and as required by the fire code official.

13. Portable fire extinguishers shall be provided in accordance to NFPA 10 for high hazard classification. A minimum of one 2A:20BC rated fire extinguisher shall be located not closer than twenty-five (20) feet and no further than fifty (75) feet from the dispensing device accessible during hours of pump operations.

14. Dispensing devices shall be located such that nozzles cannot reach within five (5) feet of building openings.

15. Dispensing devices shall be twenty (20) feet from fixed ignition sources.

16. Anti-siphon Devices: Approved anti-siphon devices shall be installed in each external pipe connected to the tank when the pipe extends below the level of the top of the tank.

17. Smoking is prohibited within 50 feet of all storage and dispensing devices. Signage shall state "No Smoking-Stop Engine."

18. Emergency shut-off shall be located no closer than 20 feet to fuel dispenser and no further than 75ft.

19. Warning signs shall be provided in accordance to the IFC 2205.6.

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***If conflict exists between various sections of the code, the more restrictive regulation will prevail.**

(1) The permit becomes null and void if work or construction authorized is not commenced within 60 days, or if construction work is suspended or abandoned for a period of 60 days at any time after work is commenced.

(2) An inspection(s) must be requested at the appropriate stage of work completed by calling (817) 788-7240.