



Lake Havasu City Fire Department

Fire Prevention Bureau

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FD Specification #15

2018 IFC, Ch. 3, 5, 57, 61

Rev. 9/01/2021

Standards for Installation of Vehicle Impact Protection

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PURPOSE

This Fire Department specification establishes the standard for protecting locations where a moving vehicle could strike a piece of equipment that contains fuel, or is fuel fired, or fire protection equipment, which is subject to mechanical impact.

SCOPE

This specification applies to locations where vehicle impact protection is required to protect: Aboveground liquid storage tanks; Fire protection equipment, LP-Gas tanks, gas meters, and piping; Gas cylinder exchange stations and other locations where the Fire Marshal (FM) deems vehicle impact protection necessary.

REQUIREMENTS

1. Vehicle Impact Protection – Specifications:

- a. Vehicle impact protection must be provided, where required, by posts that comply with IFC [§312.2](#) or by other *approved* physical barriers that comply with [§312.3](#) and as follows:

Vehicle Impact Protection Guard Posts must comply with all of the following requirements and in accordance with the detail on page 2 of this specification:

1. Constructed of steel not less than 4-inches in diameter and concrete filled.
2. Spaced not more than 4-feet between posts on center.
3. Set not less than 3-feet deep in a concrete footing of not less than a 15-inch diameter.
4. Set with the top of the posts not less than 3 feet above ground.
5. Located not less than 3 feet from the protected object.
6. The steel pipe above ground must be painted with a minimum of two coats of 5200 System Rust-Oleum Acrylic Primer and the finish coat must be Rust-Oleum® Specialty Model #7449502, Caterpillar Yellow Gloss Farm Equipment Paint or equivalent, as approved by the FM.
7. In lieu of guard posts, other barriers may be used as approved by the FM. Physical barriers must be a minimum of 36-inches in height and must resist a force of 12,000 pounds applied 36-inches above the adjacent ground surface.

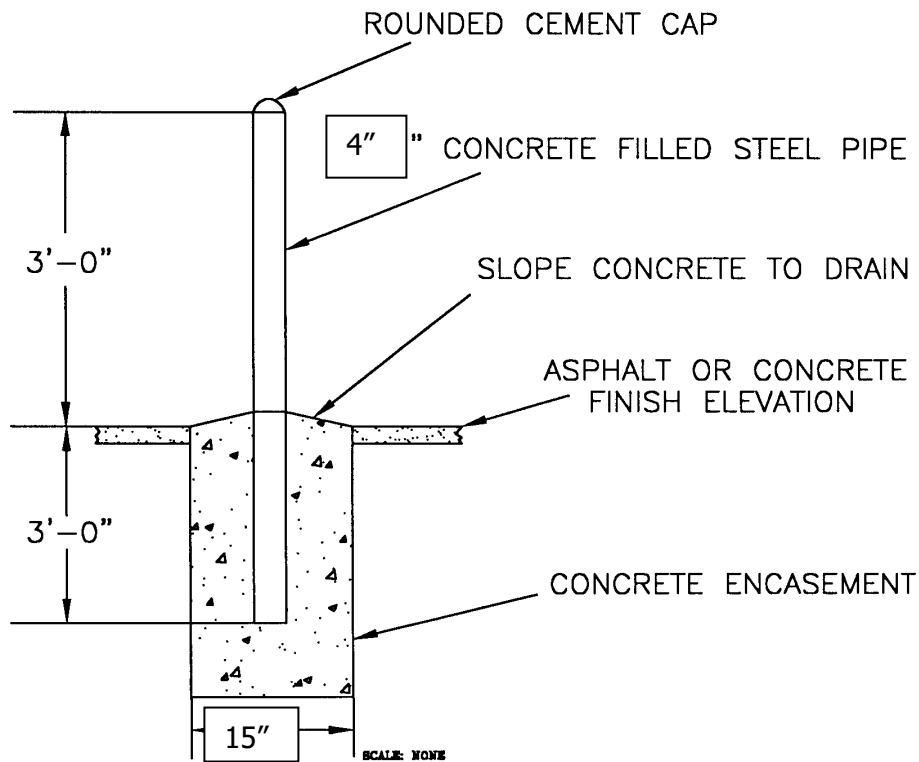
Exception: Cylinder Exchange Stations may be installed in areas with a 6-inch curb, not closer than 3-feet to the station, when approved by the FM.

- b. **Protected Aboveground Storage Tanks and Vaults:** Where protected above-ground flammable or combustible liquid storage tanks, piping, electrical conduit, dispensers or vaults are subject to vehicular impact, they must be protected there-from, either by

having the impact protection incorporated into the system by design, in compliance with the impact test protocol of UL 2085 *Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids* or by meeting the provisions of IFC [§312](#), or where necessary, a combination of both. Where guard posts or other approved barriers are provided, they must be independent of each aboveground tank.

- c. **LP-Gas Containers:** Where exposed to vehicular damage due to proximity to alleys, driveways, or parking areas, LP-gas containers, regulators and piping must be protected in accordance with IFC [§312](#).
- d. **Fire Protection Equipment:** Where fire hydrants, and other fire protection components, are subject to impact by a motor vehicle, guard posts or other *approved* means must comply with [Section 312](#).

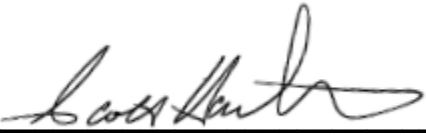
VEHICLE IMPACT PROTECTION GUARD POSTS



REFERENCES

- 2018 International Fire Code, Ch. 3, §312 *Vehicle Impact Protection*
- 2018 International Fire Code, Ch. 5, §507 *Fire Protection Water Supplies*
- 2018 International Fire Code, Ch. 57 §5704.2.8.6 & §5704.2.9.7.4 *Vehicle Impact Protection*
- 2018 International Fire Code, Ch. 61, §6107.4 *Protecting LP-Gas Containers from Vehicles*

Note: This FD specification is intended to be a guide only. For full installation, fire-flow, location, distribution, and maintenance requirements, refer to the references above. Where conflicts exist between this document and the applicable codes and standards, the above references must supersede.

APPROVED:  DATE: September 01, 2021
Scott Hartman, Fire Marshal