



CITY OF FORT WORTH, TEXAS FIRE LANE AND FIRE HYDRANT REQUIREMENTS

Based on the International Fire Code (2009 edition) and
The City of Fort Worth Fire Code Amendments (Ordinance 19607-03-2011)
The below sections are not inclusive of all requirements.
Section Numbers reference the Fort Worth Fire Code, unless noted otherwise.

GENERAL (Fire Lanes and Fire Hydrants During Construction)

Reference Section 501.4 Timing of Installation:

When fire access roadways, fire lanes, and fire hydrants are required to be installed for any structure or development, they shall be installed, tested, and approved prior to the time at which construction has progressed beyond completion of the foundation of any structure, unless otherwise approved by the fire code official. Fire lane shall be constructed of asphalt or concrete, unless the fire code official approves of other surfaces for the purpose of vertical construction only via a signed/sealed design by a Licensed Professional Civil Engineer in the State of Texas indicating compliance with all Fort Worth Fire Code requirements for Fire Department Apparatus Access Roads.

{NOTE: Where secondary access is required by the Fire Code, only one approved access is required for the purpose of vertical construction only. No occupancy shall be allowed prior to completion and approval of all required accesses. Fire Apparatus Access roads serve as Emergency Access for purposes other than fire fighting, such as ambulance or construction accident response, hazardous materials response incidents, etc.}

FIRE LANES

Reference Section 503.1.1 Distance to Fire Lane:

Fire lanes shall be provided within **150 ft.** of all portions of the facility, measured along a minimum 5 ft. wide unobstructed pathway around the external walls of the structure. One- and two- family dwellings do not require the 5 ft. pathway for measurement.

Exception: The fire code official has authorized an increase from 150 ft. to 300 ft. hose lay distance when the building is fully sprinklered, subject to the following exceptions:

- a. If the building is classified as a Group H Occupancy (Hazardous per Chapter 27), or is classified as having high-piled combustible storage (Chapter 23), the fire lane shall be within 150 ft., regardless of sprinkler protection.
- b. If the building is more than 55 ft. high, Section 503.1.2.1 below applies.

{This is a measurement tool for establishing fire apparatus access road location requirements — it is not a requirement to set buildings a minimum distance from a property line or other structure.}

Reference Section 503.1.2 Secondary Access:

1. Developments of one- or two-family dwellings having more than 30 units must be provided with two separate and approved fire apparatus access roads. This number may be increased to 40 if an additional access point is provided that will connect with a future development. Approved preliminary plats must be phased such that they do not violate this ruling.
2. Developments of multi-family dwellings having more than 100 units must be provided with two separate and approved fire apparatus access roads.
3. Buildings greater than 55 ft. in height and Group E and H occupancies. For these occupancies only, the two access roads shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

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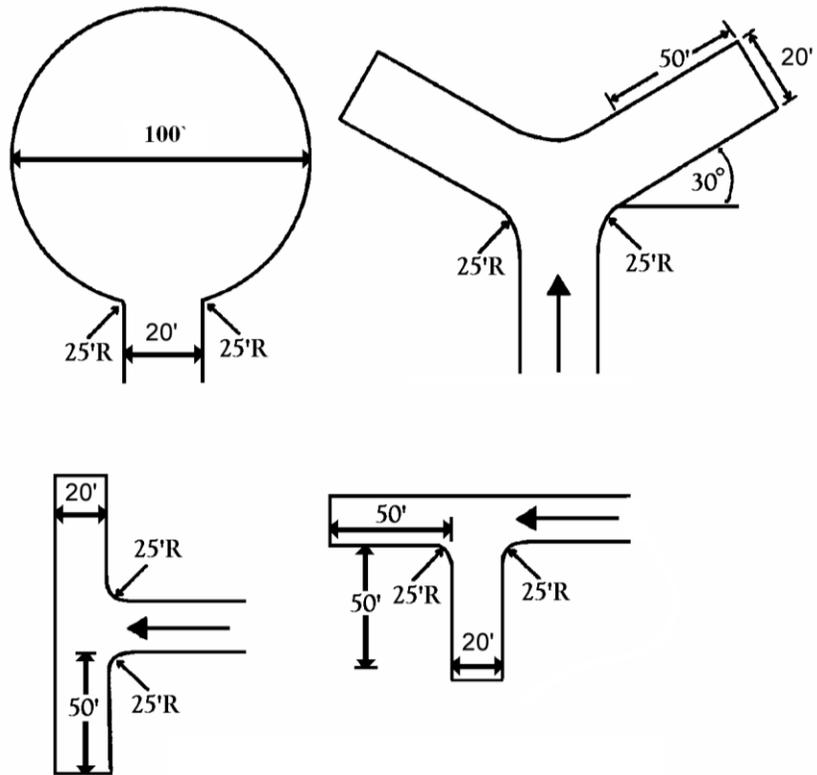
Reference Section 503.1.4 Distance to Fire Lane for Buildings > 55 ft. Height:

A building which is more than 55 feet in height shall be accessible by a dedicated street or fire apparatus access road that is not less than 15 feet nor more than 25 feet from the inside curb to the building face along at least one-half of the length of two sides of the building.

Reference Sections 503.2.1, 503.2.3, 503.2.4, 503.2.5, 503.2.7 Fire Lane Specifications:

1. Minimum width of fire lane ≥ 20 ft., except multi-family complexes ≥ 26 ft.
2. Minimum vertical clearance ≥ 14 ft.
3. Minimum capacity $\geq 12,500$ Lbs. wheel loading with asphalt or concrete driving surface.
4. Minimum inside turning radius ≥ 25 ft.
5. Minimum outside turning radius ≥ 45 ft., except multi-family complexes ≥ 51 ft.
6. Maximum grade $\leq 6\%$.
7. Maximum dead-end without turnaround ≤ 150 ft.
8. Turnarounds shall comply with Figure 503.2.5.

Figure 503.2.5



503.3 Marking. Approved striping or signs shall be provided and maintained for fire apparatus roads to identify such roads and prohibit the obstruction thereof. Signs and striping shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

1. **Striping.** Fire apparatus access roads shall be marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE" shall appear in four inch (4") white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping is preferred to be on the vertical face of the curb but is not required.
2. **Signs.** Shall read "NO PARKING FIRE LANE" and shall be twelve inches (12") wide and eighteen inches (18") high with a companion sign twelve inches (12") wide and six inches (6") high stating "TOW AWAY ZONE." Signs shall be painted on a white background with letters and borders in red, using not less than two inch (2") lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6',6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart. Signs may be installed on permanent buildings or walls or as approved by the code official."

FIRE DEPARTMENT – BUREAU OF FIRE PREVENTION

ACCESS

503.6 Security gates. Except as prohibited by other ordinances, the installation of security gates that restrict fire department access to a property or access to the fire apparatus access road require approval by the fire code official. Where security gates are installed, an approved means of emergency operation is required. The security gates and approved means of emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be *listed* in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200

503.6.1 Manual Gates. Manually operated gates shall have an approved lock installed to allow fire department access. A hold-open device shall be installed, such that the gate will remain in the open position until manually released to close.

503.6.2 Electric Gates. Electrically operated gates shall be operated with an approved key switch. The key switch shall be installed on the column or post near the electrical control box (preferably on the right hand side). When the key switch is operated, the gate shall remain in the open position until manually reset. A mechanical manual release or a "fail safe" gate operating mechanism shall be provided for electrically operated gates in case of power failure.

Electric gate operators shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

An Access Control Permit from the fire department is required for electrically operated gates. For multi-family occupancies where gates are provided that obstruct fire apparatus access roads, at least one gate shall be electric and comply with the requirements of this section.

503.6.3 Dimensions. All gates crossing fire apparatus access roads shall have a minimum twenty (20) feet clear width when opened.

503.6.4 Existing gates. All manual gates restricting fire department access that are locked shall comply with Section 503.6.1. All electric gates restricting fire department access shall comply with Section 503.6.2. Section 503.6.3 may be applied retroactively when required by the fire code official where it is determined that fire department access is restricted by such gate(s). When an electric gate operator must be replaced, such replacement shall comply with all requirements of Section 503.6.

506.1 Key boxes. In any building which contains an elevator, any building or complex which contains a fire alarm system, or when access to or within a structure or an area is unduly difficult because of secured openings, or where immediate access is necessary for life saving or firefighting purposes, a key box shall be installed. The key box shall be a type approved by the fire_code official and shall contain keys to gain necessary access to any areas required by the code official. Keys to elevators, fire alarm control panels, and safety data sheets shall be included in the key box. When installed for the primary purpose of providing access to the fire alarm system serving an apartment complex, the key box shall be placed at the exterior entrance of the property manager's office and shall be suitably marked as such.

506.2 Key box maintenance. The operator of the building shall immediately notify the fire code official and provide the new key when a lock is changed or rekeyed. the key to such lock shall be secured in the key box.

506.3 Location. Key box shall be located at the front of the building six (6) to eight (8) feet above grade level and within five (5) feet of the right side of the main entrance as viewed from the outside, unless an alternate location is approved or directed by the fire code official."

{NOTE: Visit www.knoxbox.com and reference Fort Worth Fire Dept when ordering. Approved key switch is model KS-3502.}

FIRE HYDRANTS

Reference Sections 507.5.1, 507.5.4 and 5 Fire Hydrants:

All fire hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 503. Fire hydrants shall be installed in accordance with the following criteria:

1. R-3 and Group U Occupancies:
 - a. \leq 1,000 ft. (500 ft. radius) of space between hydrants along a direct horizontal line, and
 - b. \leq 600 ft. hose lay distance to all points of building.
2. All other occupancies:
 - a. \leq 600 ft. (300 ft. radius) of space between hydrants along a direct horizontal line.
 - b. \leq 500 ft. hose lay distance to all points of building.
3. Maximum distance from Fire Department Connection (FDC):
 - a. \leq 150 ft. for a standpipe system, and
 - b. \leq 300 ft. for a sprinkler and/or combined system.
4. \geq 2 ft., but \leq 9 ft., from curb of fire lane, or provide bollard protection per Section 312.
5. \geq 3 ft. clear space required around circumference of fire hydrants.
6. \geq 40 ft. from building, or as approved by fire code official.
7. Fire hydrant steamer outlet \geq 18 inches, but \leq 48 inches, above grade level.
8. Only National Standard Thread, three-way hydrants that **open in the clockwise direction** are acceptable, per Water Department specifications.
9. All private hydrants shall be painted red and shall be properly maintained by the property owner. Public hydrants shall be painted aluminum, per Water Department specifications.
10. Construction Permit required from Fire Department for all private underground fire mains.

Reference Sections 903.3.7.1, 905.1.1, 912.2 Fire Department Connections:

New Fire Department Connection (FDC) installations shall be equipped with locking FDC caps as approved by the code official. Existing FDC's will require approved locking FDC caps to be installed when directed by the code official.

The FDC shall be located within 50 ft. of a dedicated street or fire apparatus access road and shall be within 300 ft. hose lay distance of the nearest fire hydrant. For standpipe systems, the FDC shall be within 150 ft. of the fire hydrant. Each building shall be equipped with its own FDC.

Please reference Appendix I of the Fort Worth Fire Code Amendments with regard to all Fire Department Construction Permit Fees.

Contact the Bureau of Fire Prevention with any questions at 817-392-6830, or visit our website at www.fortworthtexas.gov/fire (then click on Bureau of Fire Prevention) for permit applications, to view the Fire Code amendments, or for more information.