



**KELLER FIRE-RESCUE DEPARTMENT
FIRE PREVENTION DIVISION**

REQUIREMENTS FOR FIRE LANES
2021 IFC Section 503

1. Facilities, buildings, or portions of buildings, hereafter, constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of apparatus weighing up to 85,000 pounds. Buildings 6,000 square feet or larger shall have fire apparatus roads on all four sides of the building to allow for adequate firefighting capabilities. **[Reference 2021 IFC Section D102.1 Access and Loading as amended and adopted.]**
2. Fire lanes require minimum 30 ft. inside turn radius and minimum 54 ft. outside turn radius.
3. Heavily traveled public roadways are not considered for fire apparatus access due to the dangers involved with operating fire apparatus in close proximity to moving traffic.
4. Fire lanes shall be provided to serve all buildings through parking areas to service entrances, loading areas, trash collection areas, and other areas deemed necessary to be available to fire and emergency vehicles.
5. Fire lanes shall include driveways leading onto a public street.
6. *Fire lanes shall have an unobstructed width of not less than 24 feet. An unobstructed vertical clearance of not less than 16 feet is also required.*
7. Fire lane is required to provide access to within 150 feet of all points on the exterior of structures (plus allowance for fire sprinkler system installation). **Fire lanes for buildings in excess of thirty feet in height require a minimum width of twenty-six feet (26').** **[Reference 2021 IFC Section D105.2]**
8. **Proximity to the building.** At least one required access route shall be located within a minimum of 15ft. and a maximum of 30 ft. from the building and shall be positioned parallel to one entire side of the building. The approved location for this section of Fire Lane is the entire East side. [Reference 2021 IFC Section D105.3]
9. *Fire lanes shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities. See details at the end of this document.*
10. *All dead-end fire lanes in excess of 150 feet in length shall be provided with approved provisions for turning around of fire apparatus. (see requirements for fire lane turn-around attached)*



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11. Speed cushions shall not be installed without approval of the Fire Prevention Division. Speed bumps shall meet the following requirements: Dimensions: 3"x 6' x 7', Entrance and Exit Gradient: 1:15, Side Gradient: 1:3, Material: Compression molded 100% recycled natural rubber and polyurethane, Spacing: Minimum spacing of 200 feet between speed cushions, if approved by Fire Marshal.
12. Maximum grade for fire lanes shall be 5% unless specifically approved to be greater.
13. *Fire lanes shall be marked with a 6-inch wide continuous bright red stripe on both sides. Where the curb is available, the striping shall be on both the horizontal and vertical faces of the curb.*
14. *White 4 inch high lettering with a 1 inch stroke centered on red stripe shall read: "NO PARKING FIRE LANE-TOW AWAY" or "FIRE LANE NO PARKING-TOW AWAY". This lettering shall be painted every 25 feet measured from the end of one lettering group to the beginning of the next group with 1 foot spacing between "NO PARKING," "FIRE LANE," and "TOW AWAY".*

Color specification: Bright Red. Note: Red paint shall not be used for any parking lot markings other than fire lanes. The red paint shall meet the Texas Department of Highways and Public Transportation, (TXDOT), specification number TTP-115, chlorinated rubber paint or approved equal.

15. **Fire lanes shall be kept clear and unobstructed at all times.** Marking shall be repainted as necessary to maintain readability.
16. Where required, approved signs or other approved notices shall be provided and maintained to identify fire lanes and prohibit obstruction thereof.
17. Fire lane markings are subject to the field inspection of the Keller Fire Prevention Division. To avoid mistakes, submit plans for review before painting operations.
18. Specify markings "...to Keller Fire Prevention Division specifications".

Note: See also Requirements for Fire Lane Turnarounds below if applicable.



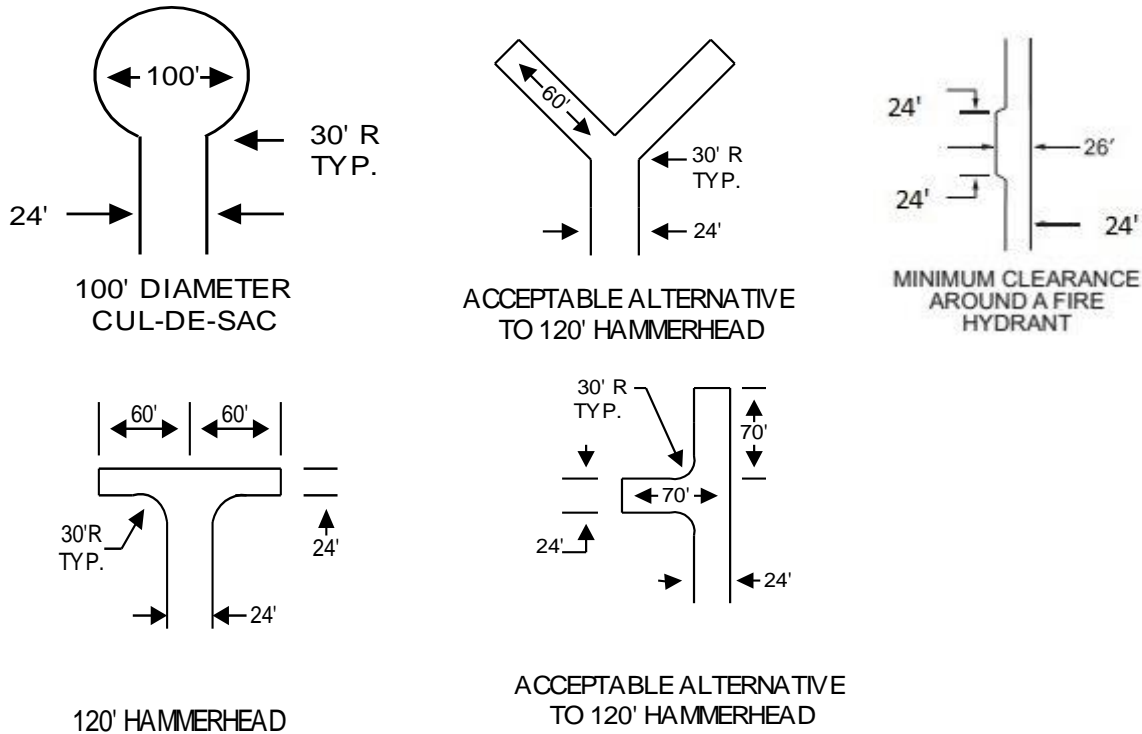
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- ✓ *Dead end fire lanes in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus. Dead end fire lanes more than 150 feet in length but less than 750 feet in length shall use one of the following turn around configurations [Reference Table D103.1 as Amended and adopted]*
- ✓ *When constructed, the fire lane must be marked to Keller Fire-Rescue specifications. The fire lane must be kept free of all obstructions.*

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	24	None required
151-500	24	120-foot Hammerhead, 60-foot "Y" or 100-foot diameter cul-de-sac in accordance with Figure
501-750	26	120-foot Hammerhead, 60-foot "Y" or 100-foot diameter cul-de-sac in accordance with Figure
Over 750	Special approval required	

Table D103.1



Pavement Design



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A geotechnical investigation to determine the level of lime or cement to be added for soil stabilization may be required if deemed necessary by the Director of Public Works. The Developer or Contractor will be responsible for all costs associated with this geotechnical investigation and tests.

Standard pavement sections are established and are included in this manual in Table No. 6, "Minimum Standard Street Pavement Design." Unusual design conditions may be encountered which will preclude the use of Table No. 6. The proposed pavement will be designed in accordance with the geotechnical investigation or Table No. 6, whichever is more restrictive.

TABLE NO. 6
MINIMUM STANDARD STREET PAVEMENT DESIGN

TYPE OF STREET	CONCRETE THICKNESS (IN)	COMPRESSIVE PAVEMENT STRENGTH AT 28 DAYS (PSI)	REBAR SIZE AND SPACING	MINIMUM SUBGRADE TREATMENT *
Alley	6	3,600	No. 3 18" longitudinal 12" traverse	6" lime or cement treated material
Driveway (Commercial Drive and Residential Approaches)	6	3,600	No. 3 18" longitudinal 18" traverse	6" lime or cement treated material
Fire Lanes	7	3,600	No. 4 18" longitudinal 18" traverse	8" lime or cement treated material
Residential (local)	6	3,600	No. 3 18" longitudinal 18" traverse	6" lime or cement treated material
Collector	7	3,600	No. 4 18" longitudinal 18" traverse	8" lime or cement treated material
Arterial	8	3,600	No. 4 18" longitudinal 18" traverse	9" lime or cement treated material

* Site specific per geotechnical report, subject of review and approval by the Public Works Director.

The developer or contractor is required to furnish a geotechnical report indicating soil tests on the subgrade soils at four hundred foot (400') intervals, or more frequently if material changes are encountered. Such data will include, but is not necessarily limited to Liquid Limit, Plasticity Index (P.I.), and Percent Passing No. 200 sieve. All soil tests will be performed by an independent testing laboratory, approved by the City of Keller, at the developer's or contractor's expense.



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All subgrade soils will be stabilized with lime or cement treated base material to at least one foot behind the proposed curb, regardless of the type of soil encountered. The amount and type of stabilization will be in accordance with the geotechnical investigation recommendation or as shown in Table No. 6, whichever is more restrictive. Subgrade stabilization of residential driveways is recommended but shall be considered optional and the decision to comply with this recommendation shall be at the discretion of the builder or developer.

The street curb will not be more than six inches (6") wide at the top and seven and one-half inches (7-1/2") wide at the base and six inches (6") high. The gutter will be a minimum of twenty-four inches (24") wide. Mountable curbs do not create an acceptable side roadway barrier and will not be allowed.

An additional 1" (one inch) of concrete in lieu of lime stabilization is not permitted in the City of Keller. Please refer to the table above for approved concrete thickness and stabilization.