



Fire Department Access

Fire Lanes/Fire Apparatus Access Roads

Scope and Purpose

The following information applies to commercial and/or industrial projects where the buildings do not exceed 30 feet in vertical distance between grade plane and the highest roof surface of the building. The highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater. If the proposed building exceeds 30 feet in vertical distance, please see *Aerial Fire Apparatus Access*.

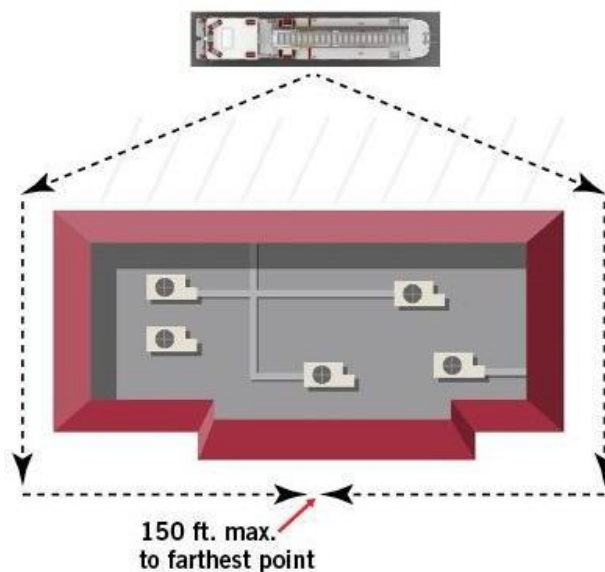
Definition

Fire Lane – A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

Fire Apparatus Access Road – A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public-street, private-street, parking lot drive aisle, and access roadway.

Required Access

Fire Apparatus shall have access to within 150 feet of all portions of a facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of a facility or building.



Exception: When there are not more than two Group R-3 (Single Family Dwelling) being served by a private access, the Fire Code Official is authorized to increase the access drive's longitudinal dimension of 150 feet where all of the following apply:

- The building is equipped throughout with an approved automatic sprinkler system.
- Fire apparatus access roads cannot be installed because of location of property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
- There are not more than two Group R-3 or Group U occupancies.

Surface

Approved Fire Apparatus Access roads shall be constructed of asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

Vertical Clearance

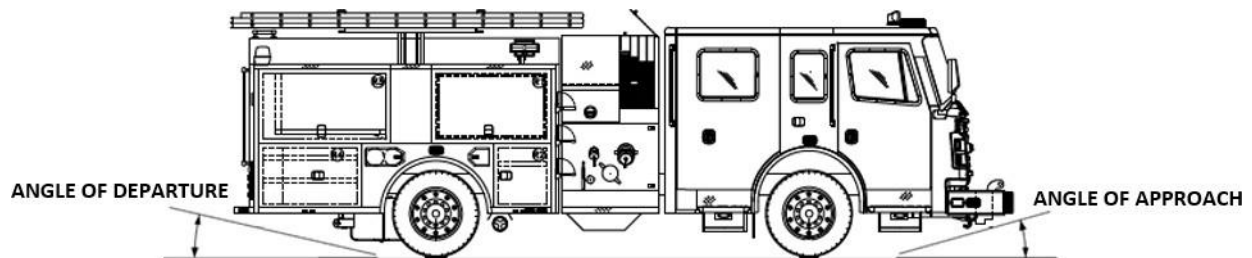
Fire Apparatus Access Roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

Grade

Fire apparatus access roads shall not exceed 10 percent (10%) in grade longitudinally.

Cross Slope of a road section or within a turnaround area shall not exceed five percent (5%).

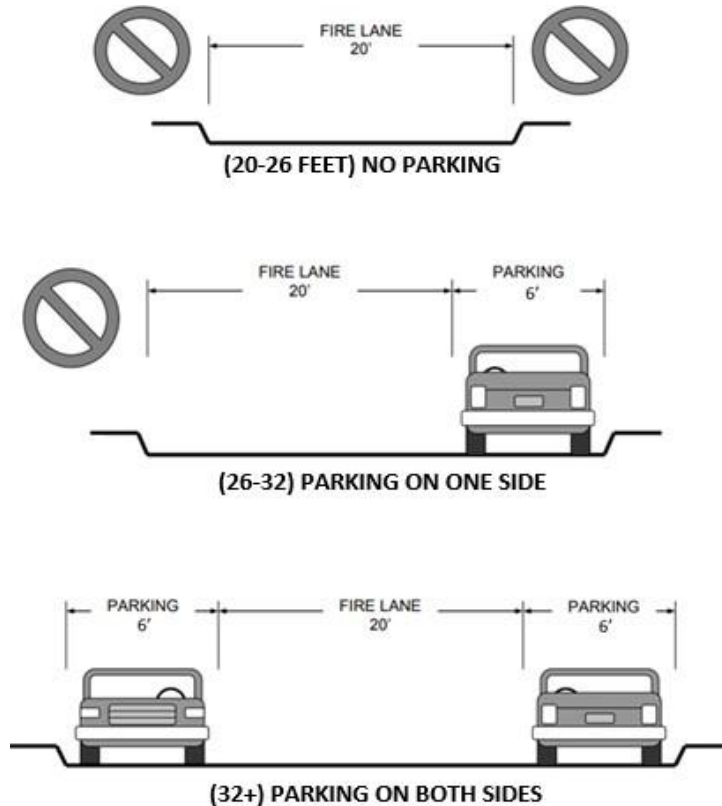
In order to accommodate proper angles of approach and departure, the gradient in fire access roads shall not exceed a five percent (5%) change along any ten (10) foot section.



Width

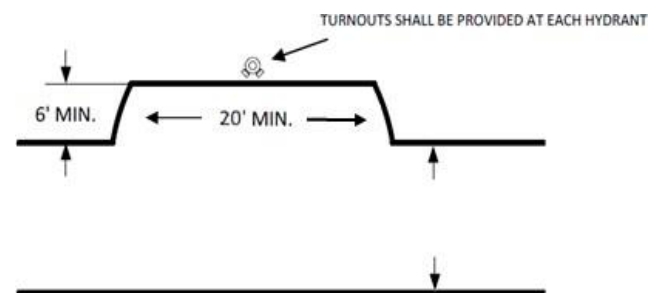
A Fire apparatus access roads shall have a minimum unobstructed width (exclusive of shoulder) of not less than the following:

WIDTH (FEET)		
No parking	Parking on One Side (Parallel)	Parking on Both Sides (Parallel)
20	26	32



Exceptions:

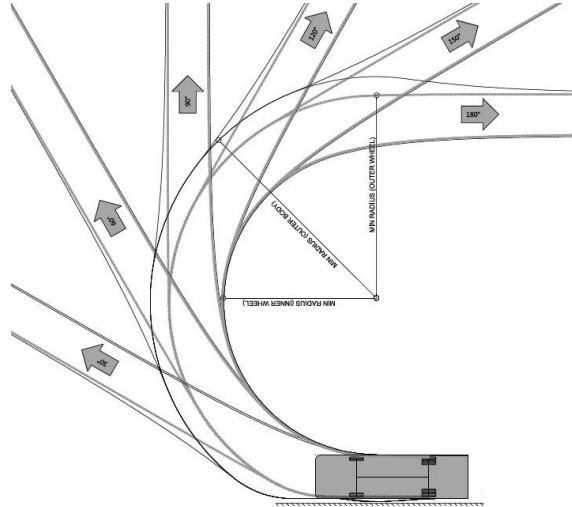
- Dead-end fire apparatus access roads in excess of 501 feet shall be a minimum unobstructed width of 26 feet. (See “Dead Ends & Turnarounds”)
- Where Aerial Fire Apparatus Access Roads are required, see *Aerial Fire Apparatus Access*.
- Where a fire hydrant is located on a fire apparatus access road, the minimum unobstructed road width shall be 26 feet. Please see illustration



Turning Radius

Fire apparatus access road shall be designed to accommodate the following turning radius;

- 35 foot minimum inside turning radius
- 55 foot minimum outside turning radius.



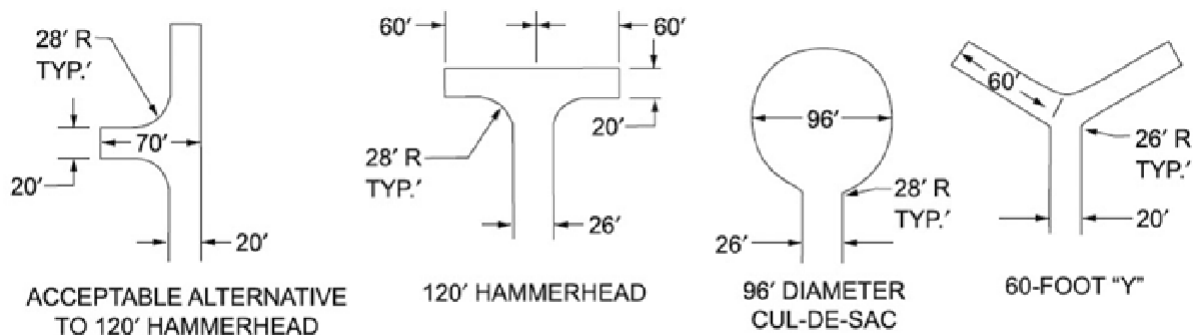
Turnarounds

A Dead-end fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with International Fire Code Table D103.4 & D103.1.

**TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS**

LENGTH (FEET)	WIDTH (FEET)			TURNAROUNDS
	No Parking	Parking on One Side (Parallel)	Parking on Both Sides (Parallel)	
0-150	20	26	32	Not Required
151-500	20	26	32	Required
501-750	26	32	38	Required
Over 750	Special Approval Required			

**TABLE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND**



Signs & Markings

See *GFFR Fire Lane Guide*

Gates

- The *fire code official* is authorized to require the installation and maintenance of gates or other *approved* barricades across fire apparatus access roads, trails or other accessways, not including public streets, alleys or highways.
- Where required, gates and barricades shall be secured in an *approved* manner.
- Roads, trails and other accessways that have been closed and obstructed in the manner prescribed, shall not be trespassed on or used unless authorized by the *owner* or *fire code official*.
- The installation of security gates across a fire apparatus access road shall be *approved* by the *fire code official*.

Two or More Means of Access

- Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.
- Multiple-family residential projects having more than 100 dwelling units shall have two separate approved fire apparatus access roads.
 - **Exception:** Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems.
- One- or two-family developments where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.
 - **Exception:** When all dwelling units are equipped throughout with an approved automatic sprinkler system.
- The Fire Marshal is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.
- Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Alternate Paving Materials

Alternative paving materials such as “Grass Crete” turf block or similar type materials may be used for Fire Department Access Roads under certain conditions. When submitting for permits the applicant shall include cut sheets of the proposed alternative material and the design criteria based upon the imposed load of fire apparatus weighing at least 75,000 pounds. The following shall comply:

- Paving shall be structurally sound to preclude movement or disbanding with soil movement.
- The paving shall be field tested by the contractor in the presence of the Fire Code Official. Testing may include driving the access road by a weight-verified vehicle. Prior to testing, the soil shall be soaked for three days in a row.
- Prior to final approval, the engineer of record (civil or soils engineer) shall certify the installation.

During Construction

All required Fire Department Access Roads shall be installed to an extent that will provide all-weather paved access for emergency vehicles prior to combustibles being brought to the site or combustible construction taking place. The Fire Code Official shall determine the adequacy of the access roads during construction. Prior to final approval for any development project, fire department access roads shall be completed with all markings, signage and striping.