MOBILE FIRE - RESCUE DEPARTMENT
FIRE CODE ADMINISTRATION

2012 Internationl Fire Code
Access Road Requirements

Section 502 Definition

Fire Apparatus Access Road is 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 a fire lane, a public street, a private street, a parking lot lane and an access roadway.

Section 503 Fire Apparatus Access Roads

Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.

Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the 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 the building or facility.

Exception: The fire code official is authorized to increase the dimension of 150 feet where:

1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.

2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

3. There are not more than two Group R-3 or Group U occupancies.

Additional access. The fire code official 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.

High-piled storage. Fire department vehicle access to buildings used for high-piled combustible storage shall comply with the applicable provisions of Chapter 23.

Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.

Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

Authority. The fire code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced with asphalt or concrete so as to provide all weather driving capabilities.

Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official.

Dead ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official.

Grade. The grade of the fire apparatus access road shall be within the limits established by the fire code official based on the fire department's apparatus.

Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus.

Marking. Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING-FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the

obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and is replaced or repaired when necessary to provide adequate visibility.

Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503 shall be maintained at all times.

Required gates or barricades. 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 access ways, not including public streets, alleys or highways.

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.

Secured gates and barricades. When required, gates and barricades shall be secured in an approved manner. Roads, trails and other access ways that have been closed and obstructed in the manner prescribed by Section 503 shall not be trespassed on or used unless authorized by the owner and the fire code official.

Exception: The restriction on use shall not apply to public officers acting within the scope of duty.

Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire code official. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the 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.

Appendix D Fire Apparatus Access Roads

Section D101 General

Scope: Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the International Fire Code.

Section D102 Required Access

Access and loading: 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 or concrete surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

Section D103 Minimum Specifications

Access road width with a hydrant: Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet, exclusive of shoulders (see Figure DI03).

Grade: Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire code official.

Turning radius: The minimum turning radius shall be determined by the fire code official.

Dead-ends: Dead-end fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with Table DI03.4.

Table D103.4 Requirements for Dead-End Fire Apparatus Access Roads

Length in Feet	Width in Feet	Turn-a-rounds required
0-150	20	None Required
151-500	20	120' Hammerhead, 60' "Y" or 96' dia. cul-de-sac
501-750	26	120' Hammerhead, 60' "Y" or 96' dia. cul-de-sac
Over 750	Special Approval	Special Approval

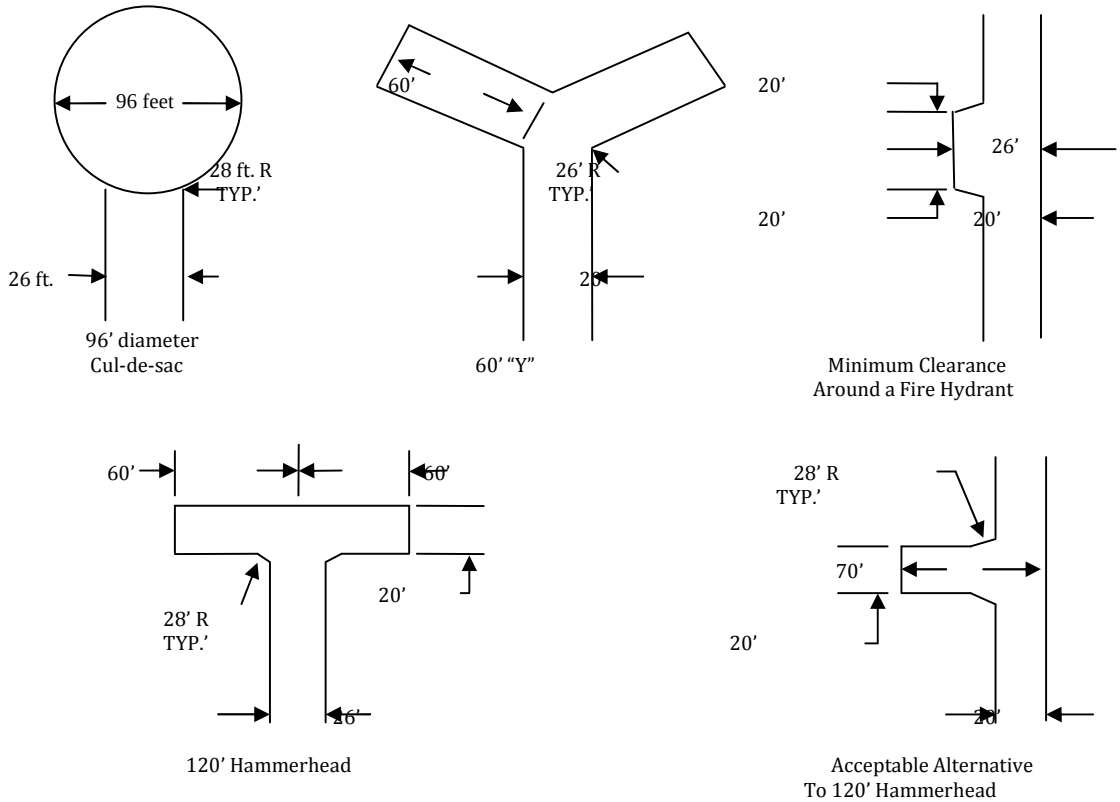

Figure D103.1 Fire Apparatus Access Road Turn-a-Round

Fire Apparatus Access Road Gates: Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet.

2. Gates shall be of the swinging or sliding type.

3. Construction of gates shall be of materials that allow manual operation by one person.

4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.

5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.

6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.

7. Locking device specifications shall be submitted for approval by the fire code official.

8. Electric gate operators, where provided, shall be listed in accordance with UL 325.

9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Signs: Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING-FIRE LANE signs complying with Figure DI03.6.

Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section DI03.6.1 or DI03.6.2.

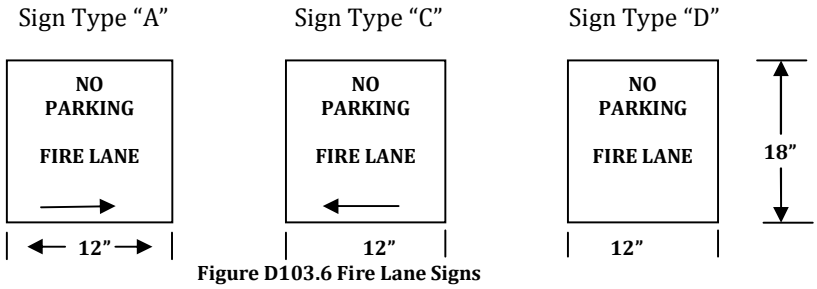

Figure D103.6 Fire Lane Signs

Roads 20 to 26 feet in width: Fire apparatus access roads 20 to 26 feet wide shall be posted on both sides as a fire lane.

Roads more than 26 feet in width: Fire apparatus access roads more than 26 feet wide to 32 feet wide shall be posted on one side of the road as a fire lane.

Section D104 Commercial and Industrial Developments

Buildings exceeding three stories or 30 feet in height: Buildings or facilities exceeding 30 feet or three stories in height shall have at least two means of fire apparatus access for each structure.

Buildings exceeding 62,000 square feet in area: 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.

Exception: Projects having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

Remoteness: Where two 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 property or area to be served, measured in a straight line between accesses.

Section D105 Aerial Fire Apparatus Access Roads

Where required: Buildings or portions of buildings or facilities exceeding 30 feet in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

Width: Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of any building or portion of building more than 30 feet in height.

Proximity to building: At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.

Section D106 Multiple-Family Residential Developments

Projects having more than 100 dwelling units: Multiple- family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and 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 installed in accordance with Section 903.

Projects having more than 200 dwelling units: Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

Section D107 One- or Two-Family Residential Developments

One- or two-family dwelling residential developments: Developments of one- or two family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads and shall meet the requirements of Section D104.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.

2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.