



SOUTH KING FIRE & RESCUE

31617 1st Ave S
Federal Way, WA 98003
Prevention: 253-946-7348
Inspection Request: 253-946-7318
Email: prevention.web@southkingfire.org

ACCESS ROADS FOR FIRE APPARATUS

FIRE PREVENTION GUIDELINES

SCOPE AND PURPOSE

To provide a policy for Fire Apparatus Access Roads within the City of Federal Way and the City of Des Moines.

CODE AUTHORITY

International Fire Code.

SPECIAL PROVISIONS

1. 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 extend to within one-hundred-fifty (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 Marshal is authorized to increase the dimension of one-hundred-fifty (150') feet where:

- a. The building is equipped throughout with an approved automatic sprinkler system. A twenty (20) percent increase in the dimension is permitted.
 - b. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
 - c. This policy may be modified for Group R-3 occupancies with an approved sprinkler system and Group U occupancies as approved by the Fire Marshal.
2. 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.
 3. Fire apparatus access roads shall have an unobstructed width of not less than twenty (20') feet exclusive of shoulders, and an unobstructed vertical clearance of not less than thirteen feet six (13'6") inches. Security gates when installed shall be in accordance with Administrative policies 10.001 and 10.003.
 4. The Fire Marshal shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.
 5. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities. A paved surface is not required by the fire department. The roadway must support 75,000 lbs. gross vehicle weight. Current apparatus weighs 69,500 pounds. That is 22,640 lbs. on the front axle and 46,860 lbs. on the rear tandem axles. Outrigger point load of 45,000 lbs. applied on an 18"x18" inch area.

Note: Grass Crete—The only product currently approved is Presto Geosystems. When Grass Crete is used, the driving surface must be clearly discernible as a drivable surface.

6. The required turning radius of a fire apparatus access road shall be thirty-two (32') feet inside and forty (40') feet outside radius.
7. Dead-end fire apparatus access roads in excess of one-hundred-fifty (150') feet in length shall be provided with a cul-de-sac at the dead-end. All such cul-de-sacs shall not be less than eighty (80') feet in diameter. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this policy may be modified by the Fire Marshal.



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8. 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 Marshal.
9. The grade of the fire apparatus access road shall be within the limits established by the Fire Marshal based on the fire department's apparatus:
 - a. 12% commercial property
 - b. 15% residential property
10. Where required, approved fire lanes shall be established and marked in accordance with applicable City Codes.
11. The maximum angles of approach, departure and ground clearance for fire apparatus access roads are as follows:
 - a. Angle of departure (A): 5.5 degrees
 - b. Angle of approach (B): 6.5 degrees
 - c. Ground Clearance* (D): 8 inches

*Tire-to-tire floor contact (C) ranges from 152" – 220"

