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PUBLIC WORKS

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DEVELOPMENT ASSISTANCE BROCHURE #6
Fire Access Roads

The City of Kent Engineering Department has prepared this brochure to supplement its adopted Construction Standards. The information below may clarify those standards, and offer practical advice on City of Kent procedures. The Director of Public Works has authority to give needed interpretations for Construction Standards, and this document also reflects those interpretations.

Fire access roads are required for all buildings with exterior walls more than 150 feet from the curb line of a public street. This distance may not be measured as a direct line if obstructions exist, but rather as the most direct route that a fire hose could be advanced. Fire access roads are also required to serve properties such as wrecking yards, lumber yards, parking lots, and similar uses even where buildings may not exist.

1. The access road must extend to a point within 150 feet of travel distance to all portions of the building.

2. All fire access roads shall be a minimum of 20 feet in width, and shall have an unobstructed height of no less than 13.5 feet.

3. The minimum inside turning radius for a fire access road is 23.2 feet for both left and right turns, and the minimum outside turning radius is 45 feet. (A standard Residential Street cul-de-sac design has a minimum left and right turning radius of 25 feet and a minimum outside turning radius of 45 feet.)

4. Any fire access road longer than 150 feet shall be provided with a turnaround at the end with either a cul-de-sac having a radius of 45 feet, or another approved looped return to the public street system. A City of Kent shunt or hammerhead turnaround may be used in lieu of a full cul-de-sac with the approval of the Fire Marshal. See the Fire Marshal's Standard Detail for Fire Access Road Turnarounds.

5. Fire access roads must support emergency vehicles on an all weather basis. This means that it must have a firm gravel base with graded crushed surfacing rock, or asphalt concrete pavement, or cement concrete pavement above the gravel base, and it must be designed so that it will not deteriorate under adverse weather conditions and fire vehicle traffic. The Fire Marshal will determine when paved fire access roads are required in lieu of gravel surface roads, and when roughened cement concrete pavement is required in lieu of asphalt pavement.

6. The maximum grade for gravel surface fire access roads is 8 percent; and the maximum grade for paved surface fire access roads is 12 percent, unless otherwise approved by the Fire Marshal. (Homes that have roads of 12 percent grade or steeper are required to have sprinkler systems.)

7. Paved fire access roads for residential structures may be accepted up to a maximum grade of 15 percent when all structures have sprinklers, PROVIDED that in the professional opinion of the Fire Marshal, fire fighting and rescue operations will not be impaired.

8. The fire access road must be constructed prior to the construction of combustible portions of the building, or the storage of combustibles on non-building lots.

9. One and two-family structures (duplexes) shall be constructed no more than 600 feet from the closest fire hydrant. Multi-family structures shall be constructed no more than 300 feet from a fire hydrant.

10. Construction of 5,000 square feet or more of impervious surface (gravel, asphalt or concrete) for a fire access road will require approval from the Department of Public Works for Detailed Drainage Plans prepared by a professional civil engineer licensed by the State of Washington. These plans will include provisions for detention, conveyance, and stormwater treatment facilities and will require execution of Declaration of Stormwater Facility Maintenance Covenants prepared by the Property Management Section of the Department of Public Works. See CITY OF KENT DEVELOPMENT ASSISTANCE BROCHURE (DAB) #5-3, Detailed Drainage Plans, for additional information on drainage plans.

11. Exceptions or deviations to these standards may be made at the sole discretion of the Fire Marshal. Exceptions are not generally considered unless the proposed building will have sprinklers throughout although it's not otherwise required to have sprinklers, or when special site conditions would make full compliance with these standards extremely impractical or unreasonable.

NOTE: One and two-family structures (duplexes) require flows from fire hydrants of at least 1,000 gpm with 20 psi residual pressure. All other structures including multi-family residential structures require fire flows of not less than 1500 gpm with 20 psi residual pressure, or higher fire flows as determined by the Fire Marshal.