



Fire Sprinkler Systems, Non-Residential and Multi-Family

The requirements for installation of non-residential and multi-family fire sprinkler systems are intended to mitigate certain life-safety issues relating to building and occupancy type, emergency access, water supply and anticipated response times.

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Select: King County | Fire | (Project Type) | (Activity Type) | Fire Sprinkler Systems



Requirements for Non-Residential and Multi-Family Properties

Non-residential and multi-family structures are required to have an automatic fire sprinkler system in the following conditions:

- A. Non-residential and multi-family structures or occupancies as outlined and required in chapter 9 of the international Building and Fire Codes.
- B. Non-residential and multi-family structures in rural zones, and all properties in urban zones, that are not required per section (A) shall meet all of the following or maybe required to be sprinklered:
 - 1. The minimum fire department apparatus access road as defined by the International Fire Code.
 - 2. Water supply from a utility providing a minimum fire flow of 1,500 gallons a minute (GPM) or greater as required by the International Fire Code.
 - 3. Fire hydrants located as follows:
 - (a) 350 feet between hydrants.
 - (b) One (1) fire hydrant located not more than 150 feet from a structure(s), as measured by vehicular travel. **NOTE:** More than one fire hydrant may be required based on the required fire flow for a given structure.
- C. Structures over 10,000-square-feet in floor space regardless of acceptable access and water availability.
- D. Tenant improvements to new and existing structures may require the installation of a fire sprinkler system as outline in chapter 9 of the International Building and Fire Codes.

Temporary and medical hardship mobile homes may be exempt from water, access and sprinkler conditions for a period of one year.

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Fire Access Road Requirements

A fire apparatus access road/fire lane can be a driveway, easement, public or private road that meets all the following requirements: 20-foot wide unobstructed permanent all-weather driving surface with 25-ton (52,000 lbs.) loading capacity.

- A. All portions of the exterior walls the structures (at grade) must be within 150 feet (as a person would walk via an approved route around the building) from an approved fire apparatus access road/fire lane.
- B. Maximum grade of 15-percent at all locations.
- C. Vertical clearance of 13 feet 6 inches.
- D. Minimum of 20-foot inside turning radius and 40-foot outside turning radius at all bends and turns. A fire apparatus access road/fire lane or driveway over 150 feet long is required to have an approved hammerhead turn-around configuration. In some cases, a circular 80 foot diameter turn-around may be acceptable

Water Availability

Applicants may obtain information regarding fire hydrant distances and water supply (fire flow) from the local Water District or utility in the form of a [Water Availability, Certificate of Water Availability](#).

A water supply (fire flow) of 1,500 gallons-per-minute or more as outlined in appendix “B” of the International Fire Code at 20-pounds per-square-inch pressure for two hours or more.

Non-Residential and Multi-family Sprinkler System Requirements

Fire sprinkler systems must be designed by a Washington State certified sprinkler designer and installed in accordance with the National Fire Protection Standard (NFPA) 13, or 13R. A separate permit is required for the sprinkler system. The sprinkler condition on the building permit will not hold up the building permit review process.

Non-Residential and Multi-family Sprinkler System Submittal Requirements

A fire sprinkler system permit submittal package must include:

- A. Fire System Permit application available on [MyBuildingPermit.com](#).
- B. Plan set cover sheet and a set of plans
 - a. Plan cover sheets should include the following information:
 - i. A statement of the scope of work that this permit is intended to cover;
 - ii. Summary of the number of zones, systems, and sprinkler heads;
 - iii. The fire and water districts serving the proposed site.
 - iv. Water supply information.

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- C. Plans must include the following information:
- a. Site plans including the following:
 - i. Outside hookups to utilities, including the underground sprinkler supply line; either from the meter or well serving the property.
 - b. Floor plans, including the following:
 - i. The location of risers, piping, and heads;
 - ii. Show all room designations (examples: kitchen, stairwells, bedrooms);
 - c. Complete riser details;
 - d. Details and legends for the hangars and sprinklers, including sway bracing;
 - e. Cross-sections showing trusses framing, ceilings, stairs and location of sprinklers;
 - f. Hydraulic calculations;
 - g. If this is an addition to an existing system, show existing risers, piping, and heads in enough detail to allow Permitting to determine the adequacy of the existing system;
 - h. If sprinklers are being installed within an existing structure, provide verification that the structure can support the weight of the proposed system;
 - i. Plans and hydraulic calculations shall be stamped by a person holding a current [Sprinkler Certificate of Competency issued by the State of Washington](#).

Obtaining a Non-Residential or Multi-family Fire Sprinkler Permit

Go to MyBuildingPermit.com. The permit type selections are:

Jurisdiction: King County

Application Type: Fire

Project Type: Non-Residential OR Multifamily

Activity Type: (Choose one)

Scope of Work: Fire Sprinkler Systems

Apply On-Line at MyBuildingPermit.com

Select: King County | Fire | (Project Type)|
(Activity Type) | Fire Sprinkler Systems

The logo for MyBuildingPermit.com features a stylized blue roofline icon to the left of the text "MyBuildingPermit" in a blue sans-serif font.

If you have questions or would like to inquire about alternatives, please email DPERWebInquiries@kingcounty.gov.

Additional Resources

King County [Department of Local Services, Permitting Division](#)

[Permit Fees](#)

[Location and office hours](#)

State of Washington

Washington State Patrol, Fire Marshal's Office

[Fire Sprinklers, List of Sprinkler Certificate Holders](#)