

FIRE SPRINKLER – 13 / 13R SYSTEM

Submittal Checklist



For the installation or alteration of an automatic fire sprinkler system associated with any Non-Residential and Multi-Family structures.

The following checklist sets the minimum requirements for a complete application. If you are not providing an item, specify the reason for omission at the end of this document. The submittal will be deemed incomplete if the submittal does not meet the minimum requirements of this checklist.

1	Building and Fire Prevention Application	☐
2	Automatic Fire Sprinkler Plans	☐
3	Hydraulic Calculations	☐
4	Cut Sheets and Equipment Specifications	☐
5	System Designer Certificate	☐
6	Backflow Prevention	☐
7	Water Availability Letter	☐

** Additional materials may be requested during the review process.*

Upload PDF copies of the documents to the City's [Permit Portal](http://portal.cityofedgewood.org) (portal.cityofedgewood.org). Name each item exactly as identified in the table of documents. Include the name of the project and name and address of the applicant on every document. All documents must comply with our [Electronic Document Submittal Standards](#).

DOCUMENT COMPONENTS

1. Building and Fire Prevention Permit Application – A completed and signed [Building and Fire Prevention Application Form](#).
2. Automatic Fire Sprinkler Plans – Plans shall be stamped by a person holding a current Sprinkler Certificate of Competency issued by the State of Washington. Plans must include the following information:
 - a. Outside hookups to utilities, including the underground sprinkler supply line from the meter to the property.
 - b. The location of risers, piping, and sprinklers
 - c. Show all room designations (examples: kitchen, stairwells, bedrooms)
 - d. Location of partitions and fire walls
 - e. Details and legends for the hangars and sprinklers, including sway bracing

- f. Cross-sections showing trusses framing, ceilings, stairs, and location of sprinklers
 - g. If this is an addition to an existing system, show existing risers, piping, and sprinklers in enough detail to demonstrate 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
- 3. Hydraulic Calculations – Calculations shall be stamped by a person holding a current Sprinkler Certificate of Competency issued by the State of Washington. Calculations must include the following information:
 - a. Calculations must be provided on forms sheets and include a summary sheet, detailed worksheet(s) and graph sheet
 - b. Summary sheet must contain date, location, name of owner and occupant, scope of work, building Identification, description of hazard, name and address of contractor or designer, system design requirements, total water requirements with allowances for inside and outside hose streams, in rack sprinkler allowances if present, limitations on extended coverage or any other special sprinklers
 - c. Detailed worksheets must include: sheet number, sprinkler descriptions and discharge constant (K factor), flow in gpm, pipe size, pipe lengths for fitting and devices, total friction loss between reference points, any in-rack sprinkler demand balanced to ceiling demand, elevation head in psi between reference points, velocity and normal pressures if used in calculations, indication of starting points or references to other sheets to clarify data shown, diagram to accompany gridded system calculations to indicate flow quantities and directions for lines with sprinklers operating in the remote area, and combined K-factor calculations for sprinklers on drops, arm overs, or sprigs where calculations do not begin at the sprinkler
 - d. Graph Sheet shall include: a water supply curve, sprinkler system demand, hose (inside and outside) demands, and if required, in-rack sprinkler demands
- 4. Cut Sheets and Equipment Specifications – Provide cut sheets and equipment specifications provided by the manufacturer.
- 5. System Designer Certificate – Provide an electronic copy of the System Designers current factory training certificate issued by the manufacturer of the system.
- 6. Backflow Prevention – Backflow information must include the following:
 - a. A minimum double check detector valve assembly (DCDVA) with an approved Bypass Meter is required for the fire sprinkler system. Fire Department Connections (FDC) not protected by the DCDVA at the riser requires a separate backflow assembly
 - b. The backflow assembly and system riser shall be installed to provide all required clearances for testing and maintenance. The backflow assembly shall be installed horizontally unless specifically approved by Washington State Department of Health (DOH) for vertical installations
 - c. Backflow Assemblies shall be tested at the time of installation, repair, or plumbing

changes, and on an annual basis thereafter. Testing shall be performed by an approved Backflow Assembly Tester. All testing reports shall be submitted to the city via email building@edgewoodwa.gov

7. Water Availability Letter – Please provided a Water Availability Letter indicating the nearest hydrant and fire flow (GPM) available. Water Availability Letters must be completed and signed by the water purveyor.
- a. Information must be included (date of test, test location, flow, static and residual pressures, and who supplied the test data)

ADDITIONAL STEPS

- ☐ Fire Alarm testing shall be performed by a NICET II certified technician
- ☐ Flushing and System testing
 - a. All flushing and testing shall be witnessed by the installer, building owner, or representative, and City of Edgewood staff with the water purveyor present.
 - b. It is the responsibility of permit holder to coordinate with the City inspection staff and the water purveyor to ensure that all parties are present for the flushing and system testing.

If any document is not provided with this application, please explain using the corresponding item number.

Item	Reason for Omission
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