



City of Gastonia Fire Department
260 N. Myrtle School Rd., Gastonia, NC 28052
Office: (704)-866-6807 Fax: (704) 866-6052



Automatic Fire Suppression Systems Plan Review Submittal Requirements

The NC Fire Prevention Code requires that a construction permit be obtained for the installation of/or modification to automatic fire suppression systems. The code also requires that construction documents be submitted for review and approval prior to system installation. These systems are normally used for the protection of cooking equipment, ventilation and exhaust systems, spray booths, electrical rooms, and areas where an alternative to a required automatic sprinkler system is allowed and approved.

The following information and construction documents are required to be provided with the Fire Department Construction Permit Application for a fire suppression system. Not every project will require the same amount of information, however, the more information that is provided with the plans, the less likelihood that additional information will be needed for the plan review process or the need for modifications being identified during the inspection process. **Some jobs, such as modifications or alterations to an existing system, may not require all of the following information.** If some of the information is not needed, it is important that you call and discuss the circumstances before submitting the Fire Department Construction Permit Application.

1. Two sets of plans, one will be returned. The plans must be drawn to scale, a graphic representation of the scale used, point of compass, and include a floor plan with the descriptive name of the various rooms and spaces.
2. In some cases critical dimensions can be used. However, you should discuss the circumstances before submitting the plans.
3. Include an elevation view.
4. Designer. The plans must include the system designer and the date of the design.
5. Data Sheets. Provide manufactures data sheets, model numbers and listing information for equipment, devices, and materials. *Manufactures specifications must verify compatibility of new equipment with any existing equipment.*
6. Type of extinguishing system. Must identify the type of system and extinguishing agent. Example: NFPA Dry Chemical; NFPA 17A Wet Chemical; NFPA 12 Carbon Dioxide; NFPA 12A Halon 1301; NFPA 2001 Clean Agent; etc.
7. Hoods, plenums, and ducts. The number and dimensions of all hoods, plenums, and exhaust ducts. Must include the location and height of all protection nozzles.
8. Appliances. The number, description, type, and dimensions of all appliances being protected. Must include the location and height of nozzles protecting the appliances.
9. Piping schematic. Include the type of pipe, the size, length, support brackets, nozzle locations, nozzle type, etc.

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10. Cylinder(s). The locations of cylinder(s) or container(s) for the chemical agent. Must state the size of the cylinder(s) or container(s) and the chemical agent. Must include the total number of flow points (nozzles) in order to verify sizing of the cylinder(s) or container(s).
11. Shunt trips, shut-offs, and interlocks. Must include all automatic equipment shunt trips, shut-offs, and interlocks. Provide sequence of operation and identify the equipment they serve.
12. Detection devices. The locations, number, types, and temperature rating of all detection devices. This includes fusible links, heat detectors, smoke detectors, etc.
13. Manual actuation devices. The location of all manual actuation devices. If more than one manual actuation device is present, then they shall be clearly identified as to the system they serve. Show identification placard. Must show location in relation to means of egress and include distances from exhaust system that they serve.
14. Fire alarm and detection . If fire alarm and detection system is present, then indicate the point of connection and how it interfaces with the fire alarm and detection system.
15. Alarms and warning signs. Show the location of all alarms, warning signs, and methods of annunciation.
16. Auxiliary components. Identify and show the location of all auxiliary and supplemental equipment for the system. Include data sheets.
17. Sequence of operation. Certain systems including but not limited to NFPA 12A and NFPA 2001, will need a detailed sequence of operation that includes pre-alarm time, method to abort, etc.

The issuance of a Fire Department Construction Permit from the Gastonia Fire Marshal's Office does not relieve the applicant of any permits required by the City of Gastonia Building Services Department. They can be reached at (704)836-0030.

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