

Automatic Fire Sprinkler Systems

Requirements

Fire sprinkler system requirements can be found in Section [F]902.3 of the Geneva Building Code amendments.

Submittals

Submittals to the Fire Department are required on all new automatic fire sprinkler systems and alterations to existing fire sprinkler systems.

Submittals are not required for routine maintenance or testing of systems provided no changes or alterations are being performed.

Systems shall be designed and calculated to the latest appropriate NFPA Standard. The highest anticipated hazard within the structure shall be the guide for the design parameters. Submittals should include:

Three sets of scaled floor plans including:

- A site plan showing the building footprint, streets and incoming water mains and fire hydrants.
- Wall sections showing ceiling and roof heights.
- 4" Storz fire department connection. Storz connections shall have a 30° downward angle from the face of the building.
- Manufacturer's specifications sheets on piping and equipment to be installed.
- Hydraulic calculations.
- A photocopy of the Fire Sprinkler Contractor license issued by the Office of the State Fire Marshal.

Water Supply

A combined potable water and fire service main may be brought into the building. Mains shall be adequately sized to accommodate the combined fire sprinkler requirements and highest anticipated potable demand.

Flow test information is available by contacting the Fire Department at 630-232-2530.

Backflow Preventers

Standard wet and dry fire sprinkler systems shall be equipped with double detector check valves. Bypass meters shall be measured in gallons.

Systems which utilize chemical additives shall be equipped with reduced pressure zone (RPZ) backflow preventers.

Alarms

Water flow, tamper, high and low air pressure switches and fire pumps shall be monitored by the building fire alarm system.

A ten-inch bell, activated by the sprinkler flow switch shall be mounted above the FDC.

Fees

Fees for plan reviews and inspections are collected at the time the building permit is issued. However, if the plans are beyond the capability of in-house review, the submitting contractor shall be responsible for all costs associated with third party review.

Testing

The two hour, 200 psi hydrostatic test shall be witnessed by the Fire Department. All labels and placards must be present at the time of the test. Alterations to systems which involve installation or relocation of 20 or more sprinkler heads shall be subject to hydrostatic testing.

Main drain, wet and dry trip testing shall be witnessed by the Fire Department. All connections to the automatic Fire Alarm system must be completed and the alarm system monitoring connection in place.

These tests must be performed prior to occupancy of the building.

Tests must be scheduled at least 24 hours in advance by calling 630-232-2530.

After the initial acceptance test, annual testing shall be performed in accordance with NFPA Standard 25 by a contractor licensed with the Office of the State Fire Marshal.

Annual test reports shall be submitted to the Fire Department at 200 East Side Drive, Geneva, IL 60134 or emailed to gfd@geneva.il.us

Technical Submittal

State of Illinois Law now requires that the attached Automatic Fire Sprinkler System Technical Submission Form be completed by a **Licensed Design Professional (licensed through the Illinois Department of Professional Regulation)** and returned with any building permit application for any work that is being done in a building that has a fire suppression system.

(225 ILCS 325/3) (from Ch. 111, par. 5203) Professional Engineering Practice Act of 1989.

(d) A building permit for a building that requires a fire suppression system shall not be issued without the submission of a technical submission prepared and sealed by a licensed design professional. Fire protection system layout documents do not require an engineering seal if prepared by a technician who holds a valid NICET level 3 or 4 certification in fire protection technology, automatic sprinkler system layout. An authority having jurisdiction may not accept fire protection system layout documents in lieu of technical submissions. Fire protection system layout documents may be submitted as supporting documents to supplement technical submissions. However, in the event the fire protection system layout documents materially alter the technical submissions, the authority having jurisdiction shall return both the fire protection layout documents and technical submissions to the licensed design professional for review.

The attached form lists the information required for a compliant submittal.

**GENEVA FIRE DEPARTMENT
AUTOMATIC SPRINKLER SYSTEM TECHNICAL SUBMITTAL**

Project name _____ Date _____

Project address _____

Owner _____

Occupant _____

Codes and Standards referenced

NFPA 13(ed._____) NFPA 13D (ed._____) NFPA 14(ed._____) NFPA 20(ed._____))

NFPA 72 (ed._____) IBC 2003

Local amendments –YES _____ Other _____

Water Flow Test information

Date ____/____/____ Location _____ Performed by _____

Static pressure ____ psi Residual pressure ____ psi Flow _____ GPM

Water quality investigation (MIC or other) _____ Results _____

Building Size

Building footprint _____ square Building height _____

Number of stories _____ Floor to floor height _____

Water Supply Same as domestic yes / no Size _____

Type of pipe which can be used _____

Risers _____ Bulk main _____

Cross main _____ Branch lines _____

Type of fittings which can be used _____

Backflow device/s required _____

Location _____

Fire department connection

Type _____ Location _____

Fire pump and controller

Size _____ gpm @ _____ psi Type of drive _____ Voltage _____

Location of service _____ Generator required _____

Water storage tank required _____ Type of tank _____

Location of tank _____ Size of tank _____

Standpipes required yes /no

Class _____ Type _____ Location/s _____

Required flows _____ Top most outlet _____ Most remote _____ Total flow _____

Required valves 1 ½ _____ 2 ½ _____

Prepared by _____

Signature _____

State of Illinois Licensed Design Professional License Number _____ (Seal)

Area # 1 _____ Type of system _____

Description of use of area or hazard _____

Hazard classification _____ Commodity _____

Design criteria _____ gpm over _____ square feet

Area per sprinkler _____ square feet Stand pipe flow _____

Hose _____ gpm Outside hydrants _____ Special gpm _____

In rack or special sprinklers _____ gpm Total flow required _____

Fire pump required _____ Submit graph sheet _____ gpm at _____ psi

Area # 2 _____ Type of system _____

Description of use of area or hazard _____

Hazard classification _____ Commodity _____

Design criteria _____ gpm over _____ square feet

Area per sprinkler _____ square feet Stand pipe flow _____

Hose _____ gpm Outside hydrants _____ Special gpm _____

In rack or special sprinklers _____ gpm Total flow required _____

Fire pump required _____ Submit graph sheet _____ gpm at _____ psi

Area # 3 _____ Type of system _____

Description of use of area or hazard _____

Hazard classification _____ Commodity _____

Design criteria _____ gpm over _____ square feet

Area per sprinkler _____ square feet Stand pipe flow _____

Hose _____ gpm Outside hydrants _____ Special gpm _____

In rack or special sprinklers _____ gpm Total flow required _____

Fire pump required _____ Submit graph sheet _____ gpm at _____ psi

Storage Areas

Type of system _____

Description of use of area or hazard _____

Type of storage and maximum height

Pallet _____ Bulk _____ Shelf _____

Bin box _____ Rack _____

Minimum aisles width _____ Maximum rack depth _____

Commodity classification _____ Encapsulated _____

Rack type Single row _____ Double row _____ Multiple row _____ Other _____

Flue spaces Longitudinal required _____ size _____ Transverse required _____ size _____

Ceiling design criteria _____ gpm over _____ square feet

Area per sprinkler _____ square feet Stand pipe flow _____

Other water flow

Hose _____ gpm Outside hydrants _____ Special _____ gpm

In rack or special sprinklers _____ gpm Number of levels _____

Location _____ Type _____ Temp rating _____ Orifice size _____

Fire pump required yes / no Submit graph sheet _____ gpm at _____ psi

Required accommodations for building structure _____

Storage Areas

Type of system _____

Description of use of area or hazard _____

Type of storage and maximum height

Pallet _____ Bulk _____ Shelf _____

Bin box _____ Rack _____

Minimum aisles width _____ Maximum rack depth _____

Commodity classification _____ Encapsulated _____

Rack type Single row _____ Double row _____ Multiple row _____ Other _____

Flue spaces Longitudinal required _____ size _____ Transverse required _____ size _____

Ceiling design criteria _____ gpm over _____ square feet

Area per sprinkler _____ square feet Stand pipe flow _____

Other water flow

Hose _____ gpm Outside hydrants _____ Special _____ gpm

In rack or special sprinklers _____ gpm Number of levels _____

Location _____ Type _____ Temp rating _____ Orifice size _____

Fire pump required yes / no Submit graph sheet _____ gpm at _____ psi

Required accommodations for building structure _____