



OFFICE OF THE ILLINOIS STATE FIRE MARSHAL

"PARTNERING WITH THE FIRE SERVICE TO PROTECT ILLINOIS"

TECHNICAL SERVICES DIVISION
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SPRINKLER PLAN SUBMITTAL FORM

PROPERTY INFORMATION:

Building Name:
Building Address: County:
Owner's Name:
Owner's Address:
Owner's Phone Fax: E-mail:

SYSTEM DESIGNER/CONTRACTOR:

Company Name *Illinois F. S. C. #
Company Address
Contact Person (Designer):
Phone Fax: E-mail:

Was the System Designed and Stamped by an Illinois Registered Professional Engineer? [] Yes [] No

* Fire Sprinkler Contractor licensing is required in Illinois for NFPA 13, and NFPA 13R systems

GENERAL

Indicate if the installation of the proposed fire sprinkler system is (check all that apply):

- [] Required by the State-adopted NFPA Life Safety Code
[] Required for equivalency, alternative level of protection, etc.
[] Required by local ordinances or insurance provider
[] Not required, system is being voluntarily installed
[] Other

NFPA Standard used in the system design and proposed installation:

NFPA 13 Standard for the Installation of Sprinkler Systems Edition:
NFPA 13R Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height Edition:
NFPA 13D Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes Edition:

The proposal represents:

- [] A new system being installed in the building
[] Modifications to an existing system
[] Extension of an existing system
[] Other:

Construction type of building as defined by NFPA Standard #220:

- [] Fire resistive [] Non-combustible [] Ordinary [] Heavy timber [] Wood frame [] Mixed

BUILDING USE AND OCCUPANCY CLASSIFICATION

Occupancy classification (per NFPA Life Safety Code):

- [] Ambulatory health care * [] Day care center [] Health care * [] Mercantile
[] Apartment Building [] Day care home [] Hotel/dormitory [] One- or two-family dwelling
[] Assembly [] Detention and correctional [] Industrial [] Residential board and care
[] Business [] Educational** [] Lodging or rooming house [] Storage

* These sprinkler plans require review and approval from the Illinois Department of Public Health and should NOT be submitted to the OSFM
**Public school sprinkler plans require review and approval from the Illinois School Board of Education and should NOT be submitted to the OSFM

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Fire sprinkler occupancy hazard classification:

- Light hazard Ordinary hazard Group II Extra hazard Group I Storage
 Special occupancy Ordinary hazard Group I Extra hazard Group II

Special occupancy requirements for the system (Flammable/combustible liquids, aircraft hangars, oxidizers, etc.)? Yes No

If a storage occupancy, commodity classification:

- Class I Class II Class III Class IV
 Group A Group B Group C
Storage over 12 feet? Yes No

DESIGN SPECIFICATIONS

Type of system: Hydraulically calculated Pipe schedule (for areas 5,000 Sq. Ft. or less and existing system only)

Requirements For All Hydraulically Calculated Systems

- Yes No Design area of water application specified
 Yes No Minimum rate of water application (density) specified
 Yes No Area per sprinkler specified
 Yes No Total water requirements as calculated, including allowance for inside hose, outside hydrants, and water curtain and exposure sprinklers, specified
 Yes No N/A Limitations (dimension, flow, and pressure) on extended coverage or other listed special sprinklers specified

Additional Requirements For 13 Systems

- Yes No N/A Allowance for in-rack sprinklers provided

Additional Requirements For 13R Systems

- Yes No All sprinklers, up to four, within the most hydraulically demanding compartment included in the design area
 Yes No Minimum density at least 0.05 gpm/ft² to the design sprinklers
 Yes No Areas outside of the dwelling unit, such as garages or lobbies, protected in accordance with the design criteria of NFPA 13 or the specific design criteria of NFPA 13R
 Yes No N/A Domestic demand included, as part of the system demand, for systems with common domestic and fire mains

Additional Requirements For 13D Systems

- Yes No All sprinklers, up to two, within the most hydraulically demanding compartment included in the design area
 Yes No Minimum density at least 0.05 gpm/ft² to the design sprinklers
 Yes No Area per sprinkler specified

Is the Following Information Provided on Plans/Specifications?

- Yes No Total area protected by each system on each floor
 Yes No Number of sprinklers on each riser per floor
 Yes No Piping provisions for flushing
 Yes No Hydraulic data nameplate (for hydraulically designed systems)
 Yes No Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets
 Yes No Most demanding area is calculated
 Yes No Pipe sizes and lengths shown on the plan correspond with the sizes and lengths shown on the hydraulic calculations sheets
 Yes No Minimum rate of water application (density), design area of water application, in-rack sprinkler demand, and water required for inside and outside hose streams

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- Yes No Total quantity of water and pressure required noted at a common reference point for each system
 Yes No Relative elevations of sprinklers, junction points, and supply or reference points
 Yes No Pressure loss for backflow preventor and/or meter included in hydraulic calculations
 Yes No N/A Total number of sprinklers on each dry pipe, preaction, combined dry pipe-preaction, or deluge system
 Yes No N/A Approximate capacity (in gallons) of each dry pipe system
 Yes No N/A Where equipment is to be installed as an addition to an existing system, enough of the existing system indicated to make all conditions clear

Additional Requirements For 13 Systems

- Yes No N/A If room design method is used, all unprotected wall openings throughout the floor protected

Additional Requirements For 13D Systems

- Yes No The minimum pipe size is ¾ in. piping system
 Yes No Minimum rate of water application (density) and design area of water application specified
 Yes No N/A Devices that restrict flow or reduce pressure, such as filtration or water softening, shown
 Multi-purpose
 Yes No N/A If the system is a multipurpose piping system and utilizes ½ in. pipe, the specific design criteria are met for the utilization of this pipe

SPRINKLER TYPE AND COVERAGE

Type of sprinkler system:

- Wet Dry Anti-freeze Preaction Deluge Pre-Engineered (13D)

- Yes No Sprinklers omitted in any area?

- Yes No N/A If yes, allowed per **NFPA 13** Omitted area(s) _____

- Yes No N/A If yes, allowed per **NFPA 13R** Omitted area(s) _____

- Yes No N/A If yes, allowed per **NFPA 13D** Omitted area(s) _____

- 13D Yes No System is a multipurpose or network system

- 13D Yes No All wet piping in areas that are maintained above 40°F

Area of coverage:

- Total Partial Special hazard Other _____

- Yes No All wet piping in areas that are maintained above 40° F

FIRE PUMP

- Yes No Fire pump provided

- Yes No Gallon per minute and pressure rating of the pump specified _____

Type of fire pump:

- Electric Diesel Gasoline LPG/LNG Steam

- Yes No Pump layout is in accordance with NFPA 20

WATER SUPPLY

Is the following information provided?

- Yes No Water test location

- Yes No Date and time of test

- Yes No Static pressure, residual pressure, and flow in gpm

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- Yes No Flow test "conducted by" contact information on plans
- Yes No Size of main indicated:
 - Dead-end main Looped main

Other sources of water supply, with pressure or elevation: _____

PRIVATE FIRE SERVICE MAINS

Is the following information provided?

- | | | | | | |
|------------------------------|-----------------------------|----------------------------------|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes of mains | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes, types, and locations of valves |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Pipe lengths | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes, types, and locations of valve indicators |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Pipe locations | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes, types, and locations of regulators |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Weights | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes, types, and locations of meters |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Pipe materials | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Sizes, types, and locations of valve pits |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Point of connection to city main | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Depth of top of pipe laid below grade |

Is the following information provided on plans/specification?

- Yes No Scale used
- Yes No Location of partitions
- Yes No Location and size of concealed spaces, closets, attics, and bathrooms
- Yes No Full-height cross-sectional of structural and ceiling construction (Except 13D)
- Yes No Location of fire walls (Except 13D)

SPRINKLER COMPONENTS: *Is the following information provided on plans/specification?*

Requirements For All Systems:

- Yes No Make, type, model, nominal K-factor of sprinklers, and sprinkler identification number
- Yes No Temperature rating and location of high-temperature sprinklers
- Yes No Pipe type and schedule of wall thickness
- Yes No Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions)
- Yes No Location and size of riser nipples
- Yes No Type of fittings and joints and location of all welds and bends
- Yes No Specifications of any sections to be shop welded and type of fittings or formations to be used
- Yes No Type and location of hangers, sleeves, braces, and methods of securing sprinklers when applicable
- Yes No All control valves, check valves, drain pipes, and test connections
- Yes No Manufacturer, size, type of backflow preventers
- Yes No Is a pressure gauge indicated on the system and the supply
- Yes No N/A Make, type, model, and size of alarm, dry pipe, preaction, or deluge valves
- Yes No N/A Size and location of standpipe risers, hose outlets, hand hose, monitor nozzles, and related equipment
- Yes No N/A Calculation of loads for sizing and details of sway bracing
- Yes No N/A Setting for pressure-reducing valves
- Yes No N/A Type and amount of antifreeze solution used

Additional Requirements For 13R Systems

- Yes No N/A If there is a separate control valve for the sprinkler system, is it supervised

Additional Requirements For 13D Systems

- Yes No N/A If an FDC is provided, pipe meets the minimum pressure rating
- Yes No N/A If there is a separate control valve for sprinkler system it is supervised
- Yes No N/A If a pressure tank is used, a pressure gauge installed to indicate tank pressure
- Yes No N/A If the system is dry, a pressure gauge indicated on the system to indicate air pressure

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FIRE DEPARTMENT CONNECTION(S), ALARMS, FIRE HYDRANTS

Is the following information provided on plans/specification?

Required for All Systems:

- Yes No Size, location, and piping arrangement of fire department connections
- Yes No Size and location of hydrants (showing size and number of outlets and whether outlets to be equipped with independent gate valves)
- Yes No Kind and location of alarm bells
- Yes No N/A Fire alarm system connection

Additional Requirements For 13 Systems

- Yes No N/A Whether hose houses and equipment are to be provided
- Yes No N/A If the system is a multipurpose piping system, a sign warning of water restricting devices is specified

Additional Requirements For 13R Systems

- Yes No N/A For building exceeding 2,000 ft² or greater than a single story, the size, location, and piping arrangement of the fire department connections indicated

NOTES / ADDITIONAL COMMENTS:

Number of sprinklers _____

Signature of Submitter

Printed Name

Date