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CITY OF CONCORD

New Hampshire's Main Street™
Fire Department

SPRINKLER & STANDPIPE SYSTEM DESIGN SUBMITTAL REQUIREMENTS

Sprinkler and standpipe systems shall be installed when required by codes, ordinances, insurance company requirements or by the request of the property owner.

To provide guidance to those specifying the design of such systems to be installed in the City of Concord NH, the following shall apply.

The standards that will govern the design of these systems shall be as follows:

- NFPA 1: Fire Code Chapter 13, 2018 edition.
- NFPA 13: Standard for the Installation of Sprinkler Systems, 2016 edition.
- NFPA 13D: Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes, 2016 edition.
- NFPA 13R: Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies, 2016 edition.
- NFPA 14: Standard for the Installation of Standpipe and Hose Systems, 2016 edition.
- NFPA 15: Standard for Water Spray Fixed Systems for Fire Protection, 2017 edition.
- NFPA 16: Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems, 2015 edition.
- NFPA 101 Sections 9.7, 9.8, 9.10, 9.11 and 9.13, 2018 edition.
- International Building Code, 2018 edition.

The Authority Having Jurisdiction (AHJ) reserves the right to increase or add to the above standards if in the opinion of the AHJ, it is necessary for adequate fire protection.

The following information will be required for permit submission:

- 2 copies of the plans to scale and hydraulic calculations. **
- 1 copy of the manufacturers cut sheets.
- Working plans shall include **ALL** items detailed in NFPA 13, Chapter 14 Plans and Calculations.
- Location of **GREEN** beacon or strobe shall be indicated on the Fire Alarm and Sprinkler System Plan – Located 13' above finished grade and approved by the AHJ.

- A letter shall be submitted by the engineer of record certifying that the design meets applicable seismic design parameters. If seismic design is required, the calculations shall be submitted for review.
- A flow test within the **past year (12 months)**.
- State of NH Professional Engineer's stamp on the plans and hydraulic calculations for all commercial sprinkler systems.
- NICET Level III certification or higher on all residential sprinkler systems and commercial sprinkler system modifications of 12 heads or less.
- FDC locations and distance to the nearest two hydrants shall be shown. Buildings located in the hydrant district shall have the FDC located within 400' of a hydrant.
- The FDC shall be a 4" Storz adapter.

** One copy shall be hard copy and the second may be in an electronic PDF format. If the designer/contractor wishes to receive a copy of the plans and calculations back after the review, one additional set of plans shall be provided.

No formal plan review will occur without the completion of an application for a Fire Prevention Permit. The permit application can be completed by logging into the City of Concord's Citizen's Self Service Permit Portal:

<http://concordnh.gov/1888/Citizen-Self-Service-Permits>

Request for variance to the aforementioned regulations shall be made by the property owner or the owner's agent in writing to the State Fire Marshal with a copy to Concord Fire Department.

NO authorization shall be granted for construction or installation of any system until plans have been approved. One must allow 7-10 business days for plans review to be completed by the Fire Prevention Bureau. Plan reviews can be expedited for an additional fee and a turnaround time of 2-3 business days. It is the responsibility of the fire suppression contractor to make the general contractor aware of this time frame.

Sprinkler system requirements are as follows:

- Buildings shall have separate zones where there is more than one riser, two or more sprinkled levels, protection of two or more separate occupancies, building larger than 10,000 square feet or required by Code Officials.
- **GREEN** beacon or strobe shall be installed on the outside of the building as specified on the plans and will be located 13' above finished grade. A sprinkler flow shall activate beacon or strobe.
- The sprinkler room shall be labeled "SPRINKLER RISER ROOM" with minimum 1" contrasting letters.
- Flow switch shall be connected to the Fire Alarm System with 0 to 60 second retard devices installed and set at 45 seconds. Dry systems shall activate the alarm in no more than 60 seconds unless otherwise indicated in the adopted edition of NFPA 13, 13R or 13D.
- Tamper switches shall be installed on the riser and street side and connected to the Fire Alarm System.
- Low pressure switch shall be installed on the riser side and connected to the Fire Alarm System.
- The stand pipe 2 ½" and 1 ½" connections shall be NH Standard Thread (also known as NST – National Standard Thread).

The Fire Department requires inspection of the work being completed. The Fire Prevention Bureau shall be notified when work commences and prior to cover-up. The Fire Department requires compliance

with NFPA 13, Chapter 16 Systems Acceptance. The installing contractor shall call the Fire Prevention Bureau a minimum of 72 hours to schedule a time and date for an inspection. The final inspection will require the fire suppression contractor to be onsite to address any installation questions.

Prior to final inspection and request for a Certificate of Occupancy sign off, a copy of the Contractor's Material & Test Certificate of Aboveground and Underground Piping shall be provided.

Effective: January 1, 1992

Revised: November 18, 2004, July 25, 2005, March 7, 2017, December 02, 2019, June 9, 2021, July 17, 2022, October 1, 2022