



CHELMSFORD FIRE DEPARTMENT
FIRE PREVENTION OFFICE

50 Billerica Road – Chelmsford, MA 01824

(978) 251-4288

"Smoke Detectors Save Lives"



**AUTOMATIC SPRINKLER AND
STANDPIPE REQUIREMENTS**

Revision v5.1

Issued August 12, 2020

1. PERMITTING/PLAN REVIEWS

- 1.1. All proposals for performing modifications of an existing fire sprinkler system or installation of a new fire sprinkler system shall be subject to review by the Fire Prevention Office. Anyone who performs work on a sprinkler system shall be licensed by the Commonwealth of Massachusetts as a sprinkler fitter and shall produce their license upon request.
- 1.2. Persons performing work must also possess a permit to impair or shut down the sprinkler system and the fire alarm system on the premises, regardless of the presence of a master box.
- 1.3. Shut down permits must be obtained from the CFD online permitting system. The contractor shall call CFD dispatch at (978) 250-5265 when the system is to be impaired and again when the system has been placed in service.
- 1.4. Placing a fire alarm in test with a monitoring company or closing a tamper valve shall be considered impairment of a system, and requires a permit.
- 1.5. Any person who impairs or trips a sprinkler or fire alarm system without a valid permit shall be subject to fines of up to \$1000 according to 527 CMR 1 and MGL Ch. 148A.
- 1.6. Permit/plan review cost shall be based on square footage of the work area.
 - 1.6.1. Up to 7,499 sq. feet \$50
 - 1.6.2. 7,500 to 24,999 sq. feet \$100
 - 1.6.3. Over 25,000 sq. feet \$150

2. EMERGENCY REPAIRS

- 2.1. In an emergency, repairs may be undertaken before the permits are in hand, but in no event shall a system be worked on or tampered with without calling dispatch at (978) 250-5265 to avoid a false alarm

3. PERMITTING/PLAN REVIEW DOCUMENT REQUIREMENTS

- 3.1. All permitting and plan reviews shall be applied for using the Town of Chelmsford online permitting system.
- 3.2. The following documentation shall be uploaded to the permitting system to obtain a permit and plan review for sprinkler work
 - 3.2.1. Narrative for proposed work
 - 3.2.2. Fire protection narratives
 - 3.2.3. Hydraulic calculations
 - 3.2.4. Cut sheets for sprinkler heads, devices, and hardware to be installed
 - 3.2.5. Valid Massachusetts sprinkler fitter's license.
 - 3.2.6. Electronic drawings in PDF format
- 3.3. All documents shall be submitted electronically. Contact the fire prevention office for instructions.
- 3.4. Projects that propose to relocate/add more than 20 heads, propose an occupancy/hazard change, or propose a reconfiguration/addition to an existing sprinkler system shall be required to submit updated hydraulic calculations stamped by a MA licensed Fire Protection Engineer.

3.4.1. EXCEPTIONS – Exceptions to documentation submission requirements must be specifically approved by this office on a case by case basis. For example, small interior fit ups may be approved if a sketch is submitted depicting the construction layout and existing and proposed layout.

3.4.2. Replacement of existing equipment at the same locations

3.5. Hydrostatic testing shall be performed in any instances where practical.

4. INSTALLATION REQUIREMENTS

4.1. All automatic fire sprinkler systems shall comply with the Massachusetts State Building Code 780 CMR, applicable NFPA codes, and the requirements of the Town of Chelmsford.

4.2. Changes in hazard coverage or discharge density shall not be undertaken without approval from Chelmsford Fire Prevention

4.3. All work must be performed according to plans and calculations submitted to this office for approval.

4.4. New fire department connections shall be 4" Storz.

4.4.1. All new buildings and projects involving Level II work and above shall require upgrade to the 4" Storz connection.

4.4.2. Fire Department Connections shall be marked with appropriate signage and shall be visible from the street.

4.4.3. In new buildings and buildings undergoing significant Level III renovation where standpipes are required by the MSBC, a dry, manual, temporary standpipe shall be installed with outlets at one location on every floor.

4.4.3.1. *In lieu of a temporary standpipe, the permanent standpipe may be installed which functions as a temporary standpipe.*

4.4.4. The location of all Fire Department Connections, whether permanent or temporary in nature, shall be approved by the Fire Prevention Office.

4.5. Standpipes outlets shall be provided with 2 ½" NH thread outlets with reducers to 1 ½" NH standard threads.

4.6. *Sprinkler Hardware/Devices Required*

4.6.1. Floor/Zone Controls with tampers

4.6.2. Flow switches

4.6.3. Electric bell

4.6.4. Tamper switches on all shut off valves.

4.6.5. Spare heads, box, and wrench according to NFPA 13.

4.6.6. Tamper switches, pressure switches, and low-air switches may be transmitted as supervisory signals, UNLESS:

4.6.6.1. *A master box is the only method of monitoring*

4.6.6.2. *The fire alarm control panel or the central station equipment is incapable of transmitting supervisory signals.*

4.6.6.2.1. In this case, tamper switches, pressure switches, and low air switches shall be transmitted as an alarm.

4.7. Valve locations shall be indicated at the system riser and at the location of the valve by an informational sign.

4.7.1. Informational signs, shall be approved by the fire prevention office and have either red lettering on a white background or white lettering on a red on a red background.

5. **INSPECTIONS**

5.1. Above ceiling inspection by licensed fire protection engineer completed in the presence of the fire prevention officer on projects that require a fire protection engineer's stamp is required. Notify the fire prevention office when this inspection will take place.

5.2. A Final Inspection and test performed in the presence of Fire Prevention shall be required. At minimum, inspection will consist of:

5.2.1. Operation of all tamper and flow switches,

5.2.2. Demonstration of the low air switch on a dry sprinkler system

5.2.3. Inspection of all affected areas.

5.2.4. Operation of all installed valves.

5.2.5. All escutcheon plates shall be in place.

5.2.6. Hydraulic plates and spare head box with heads and wrench are required.

5.3. Rooms containing sprinkler equipment shall be marked with appropriate signage.

5.3.1. Lettering shall be at minimum 2 ½" tall and shall be red on a white background or white on a red background.

5.4. *Closeout paperwork required:*

5.4.1. An affidavit stating that all work was completed in accordance with the applicable NFPA standard shall be provided at a minimum.

5.4.2. Aboveground piping certificate

5.4.3. Final Fire Protection Affidavits

5.4.4. As built drawings, PDF form.

5.4.4.1. *Drawings may be submitted electronically to the Fire Prevention Office prior to inspection.*

6. **MAINTENANCE**

6.1. Work on and installation of sprinkler system components shall be performed according to NFPA 13, NFPA 13R, or NFPA 13D as applicable according to the current building code.

6.2. All sprinkler systems shall be inspected at least annually according