

TOWN OF SUFFIELD

83 Mountain Rd, Suffield, CT 06078
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Fire Marshal

Fire Sprinkler System Acceptance Test Checklist

(NFPA-13 & 13R)

Rough-In/Cover

Not Limited To

Installation acceptance testing shall be conducted in the presence of the Fire Marshal Office.

- **Concealment** - No drywall or other coverings shall be permitted to conceal any components of the fire sprinkler system until after the Rough-In/Cover Inspection has been completed and approved by the fire code official.
- **Penetrations** - All piping penetrations through fire rated assemblies have been properly sealed by an approved method. Fire-stopping materials intended for use on nonmetallic piping penetrations shall be investigated for compatibility with the nonmetallic pipe materials.
- **Non-System Components** - Sprinkler piping or hangers shall not be used to support non-system components such as ducting, electrical wiring, cabling and ducting.
- **Sprinkler Obstructions** - Proper clearance of sprinkler heads from obstructions.
- **Painted Sprinklers** - Check to ensure fire sprinklers are not painted.
Painted fire sprinklers shall be replaced, they shall not be cleaned.

Hydrostatic Test

- **High Pressure 2 Hour Test** - 200 psi of pressure for a minimum of 2 hours.
- **FDC Piping** - Piping between the exterior FDC and the check valve in the fire department inlet pipe shall be hydrostatically tested in the same manner as the balance of the system.
- **Release Pressure** - After verifying that the system has maintained the required 200 psi for 2 hours, release pressure and confirm the test gauge returns to zero. (A gauge that does not return to zero could be an indication that the gauge was pegged.)
- **Dry Pipe Systems** - In addition to the standard hydrostatic test, an air pressure leakage test at 40 psi shall be conducted for 24 hours. Any leakage that results in a loss of pressure in excess of 1 ½ psi for the 24 hours shall be corrected. This test will have to be scheduled for a different day to allow for the 24-hour test.

Additions or Modifications

- **20 or Fewer Heads** - Additions or Modifications affecting 20 or fewer sprinklers shall not require testing in excess of system working pressure.
- **More Than 20 Heads** - Additions or Modifications affecting more than 20 sprinklers, the new portions shall be isolated and tested at not less than 200 psi for 2 hours. (Additions or Modifications that cannot be isolated, such as relocated drops, shall not require testing in excess of system working pressure.)
- **Work Affecting FDC** - Repairs or replacements or work affecting the FDC, piping between the exterior and the check valve in the fire department inlet pipe shall be isolated and hydrostatically tested at 150 psi.

Sprinkler Final

- **Fire Alarm** - Acceptance testing for the above ground portions of the sprinkler system will not be conducted unless the fire alarm system is fully operational and is ready for acceptance testing at the same time as the sprinkler system. All sprinkler devices shall be tested with both the sprinkler and fire alarm contractors present.
- **Waterflow Test** - Test waterflow alarm by flowing water from the Inspectors Test Valve. The alarm should sound no earlier than 20 seconds and no later than 90 seconds.
(Wet and dry systems)
- **Access Panels** - A minimum 12" x 36" access panels shall be provided for all valves located inside a wall or concealed space. Signage shall be provided on the outside of access panel indicating type of valve that is concealed within.
- **Exterior Horn/Strobe** - Verify that a listed horn/strobe device is located on the front exterior of the building in an approved location in close proximity to the buildings address. Such device shall be activated by water flow actuation of the automatic sprinkler system.
- **Dry-Type Sprinkler Systems** – Both high and low air pressure are supervised as required. The off-normal signal shall be initiated when the pressure increases or decreases by 10 psi.
- **Supervised Valves** - Close all electrically supervised sprinkler control valves to verify supervisory alarm at the FACP.
- **Calculation Plates** - Hydraulic Design Information Sign (Calculation Plates) shall be provided by the installing contractor. The sign shall be weatherproof metal or rigid plastic secured with corrosion-resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, pre-action valve, or deluge valve supplying the corresponding hydraulically designed area. The sign shall include the following information:
 - Location of the design area or areas

- Discharge densities over the design area or areas
 - Required flow and residual pressure demand at the base of the riser
 - Occupancy classification or commodity classification and maximum permitted storage height and configuration
 - Hose stream allowance included in addition to the sprinkler demand
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- **Door Signs** - Doors leading into rooms that contain controls for fire sprinklers shall be identified with an approved sign. Approved signs shall identify fire protection equipment and be durable materials, red and white in color, permanently installed, and readily visible.

 - **Valve Signs** - All control, drain, and test connection valves shall be provided with a weatherproof metal or rigid plastic identification sign, secured with corrosion resistant wire, chain, or other approved means. The sign shall identify the portion of the building served.

 - **Painted Heads** - Where sprinklers or cover plates on concealed sprinklers have been painted by other than the sprinkler manufacturer, they shall be replaced.

 - **Listings** - Escutcheons used with recessed, flush-type, or concealed sprinklers shall be part of a listed sprinkler assembly and be metallic or shall be listed for use around a sprinkler. No caulking or glue shall be used to seal penetrations or to affix the components of a recessed escutcheon or concealed cover plate.

 - **Spare Sprinkler Cabinet** - Spare Sprinkler cabinet, sprinkler wrench, and spare sprinklers shall be provided. The stock of spare sprinklers shall include all types and ratings installed and shall be as follows:
 - Facilities having under 300 sprinklers – no fewer than six sprinklers
 - Facilities having 300 to 1000 sprinklers – no fewer than 12 sprinklers
 - Facilities having over 1000 sprinklers – no fewer than 24 sprinklers (Where dry sprinklers of different lengths are installed, spare dry sprinklers shall not be required, provided that a means of returning the system to service is furnished.)

- **Sprinkler List** - A list of the sprinklers installed in the property shall be posted in the spare sprinkler cabinet. The list shall include the following:
 - Sprinkler Identification Number (SIN) if equipped; or the manufacturer, model, orifice, deflector type, thermal sensitivity, and pressure rating
 - General description
 - Quantity of each type to be contained in the cabinet
 - Issue or revision date of the list

- **Sprinkler Guards** - Sprinklers subject to mechanical injury shall be protected with listed guards.

Fire Department Connection (FDC)

- **Assessable/Orientated** - The FDC shall be assessable and arranged/orientated so that a hose line can be attached to the inlets without interference.
- **Clear Space** - A clear working space not less than 36 inches in width, 36 inches in depth and 78 inches in height shall be provided.
- **Caps** - Fire department connections shall be equipped with approved plugs/caps.
- **Signs** - Verify that a sign complying with the following has been provided:
 - Metal sign with raised letters not less than 1 inch in sized.
 - Signs shall read AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or combination thereof as applicable.
 - Where the FDC does not serve the entire building, a sign shall be provided indicating the portions of the building served. (Address, Location, Zone...)
 - A metal or durable FDC reflective sign must be installed above FDC at least 6-7 feet above grade, visible from access road. FDC sign must have a red background with white 6-inch block style letters. If sign cannot be visible, a directional sign with an arrow shall be installed in the location of the FDC.



Post Indicator Valve (PIV)

- **Accessible** - Both Remote Post Indicator Valves and Wall Post Indicator Valves shall be easily accessible, and the Open/Closed indicator shall be visible at all times.
- **Cutable Lock** - The PIV shall be provided with a cutable padlock.
- **Clear Space** - A clear working space not less than 36 inches in width, 36 inches in depth and 78 inches in height shall be provided.

System in Full Operation

- **Systems Normal** - Ensure all systems are normal.
- **NFPA 13 Report** - The installer shall complete and sign the NFPA 13 Contractor's Material and Test Certificate for Aboveground Piping prior to final approval of the system. (If the building is also equipped with a standpipe system the installer shall also complete and sign the NFPA 14 Contractor's Material and Test Certificate for Aboveground Piping prior to final approval of the system.)
- **Keys for Knox Box** - Keys for the Fire Sprinkler Room and PIV(s) shall be provided so they may be placed into the Knox Box.