TINLEY PARK FIRE PREVENTION

MINIMUM REQUIREMENTS

FIRE PROTECTION BACKFLOW PREVENTION RETROFIT INSTALLATIONS

Pipe Schedule Systems

REQUIRED DOCUMENTS FOR PERMIT

A permit approved by the Tinley Park Fire Prevention Bureau and other Village Departments must be submitted prior to any work being conducted.

All installations must follow the applicable sections of the 2013 NFPA 13, *STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS* and amended Village codes.

The submitted documents along with the permit application must include, but not be limited to the following:

- Equipment specification sheets detailing all equipment that is being proposed to be installed.
- A water flow test conducted within 30 days of the dated permit application. Location of the water flow test must be relevant to the proposed installation. To arrange for this flow test, contact Tinley Park Public Works Department at 708.444.5500.
- A water supply analysis/evaluation must be performed by a qualified person as defined by *225 ILCS 325/Professional Engineering Practice Act of 1989* detailing:
  - A relevant water supply
  - Acceptable flow and minimum residual pressure as detailed TABLE 11.2.2.1 of NFPA 13 (2013 edition)
  - Minimum required pressures:
    - The minimum pressure as stated in TABLE 11.2.2.1.
    - Fixed pressure loss of the proposed backflow prevention device at the required flow.
    - Pressure loss due to elevation.
    - Pressure loss from base of riser to the source of water.
  - A 5 psi or 10% safety factor whichever is greater must be maintained (2016 VoTP CBC Section 707.4.c).
- A rendering of the proposed equipment location detailing accessibility for maintenance, inspection and testing for all the fire protection equipment. Ample space must be provided to allow for all equipment to be properly serviced including fire alarm equipment.

FIRE ALARM EQUIPMENT

A fire alarm permit is required detailing the scope of work and equipment specification sheets for the equipment to be installed.

All control valves must be supervised by the building fire alarm system.

To monitor water flow, the Village of Tinley Park requires a separate water flow interface. An SLC Addressable Relay Module providing Common-Normal Open relay contacts is required. This device shall be configured to activate on WATERFLOW-ONLY, be non-silenceable, and will be interfaced to the Keltron Radio monitoring system.

INSTALLATION & ACCEPTANCE TESTING

Prior to installation and acceptance, the following procedures must be witnessed and by Tinley Park Fire Prevention personnel and working satisfactorily.

The following test results ***must*** be recorded on a *Contractor's Material and Test Certificate for Aboveground Piping* document.

- **Main drain test:** A main drain test must be conducted prior to the removal of the existing device and after the new device has been installed. Static and residual pressures must be recorded. The post-installation main drain test must be completed after all control valves have been exercised.

  During the tests, approved pressure gauges must be installed on both the supply side and system side of the new device and the residual pressure readings from both gauges must documented.
- **Inspector's test:** Alarm activation must occur within 90 seconds of opening this test connection. Manually activating the water flow device does not satisfy this requirement.
- **Dry pipe and pre-action valves:** These valves may need to be trip tested and trip pressures adjusted per manufacturer's guidelines.
- **Exercising of all control valves:** Close and re-open all valves to ensure they operate correctly and the electronic supervisory switch activates properly. A main drain test must be conducted after all valves have been exercised and are in the open position.

48-HOURS ADVANCED NOTICE IS REQUIRED FOR INSPECTIONS AND ACCEPTANCE TESTING. CONTACT FIRE PREVENTION AT 708.444.5200 FOR AN APPOINTMENT.

These are general guidelines for the retrofit installations of approved backflow prevention devices for water based fire suppression systems. Some systems may present unique situations that could alter the permitting and installation requirements. Please contact Tinley Park Fire Prevention Bureau at 708.444.5200 if you have any questions.