

## POLICY

### MODIFICATIONS OF NFPA 13R 2002 EDITION

**1-1\* Scope:** This standard covers the design and installation of automatic sprinkler systems for protection against fire hazards in residential occupancies up to and including four stories in height.

**2-1.1 Plan Submittal:** Plans submitted shall comply with the "Plan Review Checklist" . Care should be exercised to include all the information required. Three sets of plans and hydraulic calculations are required. A plan check and inspection fee is required to be paid at the time of plan submittal. Checks are to be in the exact amount required and payable to "City of Vista".

**2-1.3.1 Flushing of Underground Connections:** Underground mains and lead-in connections shall be flushed before connection is made to sprinkler piping. Flush must be witnessed by an approved party and documentation provided to the VFD inspector.

**2-1.3.2\* Hydrostatic Testing:** Hydrostatic testing shall be witnessed by the VFD inspector. All fire sprinkler systems shall be isolated from domestic water at the check valve and pressurized to 200 psi for two (2) hours.

**2-1.4 Inspections:** The following must be on-site throughout the installation process and shall be provided during inspections.

- (a) An approved set of Fire Sprinkler plans and hydraulic calculations.
- (b) A copy of the pipe manufacturer's installation pamphlet.
- (c) Building inspection card.
- (d) An approved set of building plans.

Above ground components require two installation inspections:

1. The "Hydro test" and "Piping inspection", shall be completed prior to drywall or insulation being installed.
  - (a) All piping in place with sprinkler heads in place and wrapped to prevent damage.
  - (b) The inspectors test installed according to the approved plans.
  - (c) The system isolated from domestic water and pressurized to 200 psi for 2 hours.
  - (d) All hangers and hold-downs shall be in place.
  - (e) Pressure relief valve (if required) shall be installed after the pressure test.
  - (f) Size and type of underground piping to be inspected prior to bury.
2. The "Final inspection" shall be completed prior to Building Department Final Inspection.
  - (a) "Head Guards" shall be provided on sprinklers subject to mechanical injury.
  - (b) All heads free of protective wraps and with escutcheon plates in place.
  - (c) The alarm bell connected to the flow switch with temporary or permanent power to confirm complete system operation. (Flow switch to activate between 30-45 seconds).
  - (d) Pressure relief valve in normal operating status.
  - (e) All required signs affixed permanently in place.

**2-3.2\* Water Supply Sources:** Connection to a reliable water works system is an acceptable water source. All other proposals require prior approval of the Fire Marshal.

**2-4 Note - Riser Location:** The system riser shall be located with complete access to system components from the exterior of the building or within a riser room with exterior access. Risers shall not be installed on the exterior of the building. Location shall be approved by the Fire Marshal.

**2-4.1.1 Control Valve:** When a common supply main is used to supply both domestic and sprinkler systems, a single listed control valve shall be installed above ground, exterior of the building adjacent to the riser which will shut off both the sprinkler system and the domestic water supply. A separate shutoff valve shall be provided for the domestic system only.

*Exception: The sprinkler system piping shall be permitted to have a separate control valve when supervised in an approved manner.*

**2-4.2 Fire Department Connection:** At least one 1 1/2" (38-mm) or 2 1/2" (64mm) fire department connection shall be provided at a location approved by the Fire Marshal. An FDC is not required in buildings less than 2000 sq. ft.

**2-4.3 Pressure Gauges:** Pressure gauges shall be provided to indicate pressures on the supply and system sides of main check valves and dry-pipe valves, and to indicate pressure on water supply pressure tanks. Pressure gauge shall be a listed 300 psi pressure gauge. At least one water pressure gauge shall be installed on the riser assembly.

**2-4.4 Piping Support:** All piping support shall comply with 1999 NFPA 13 and manufacturer's installation instructions. Plastic piping shall be supported as recommended by the manufacturer. In addition, hold-downs and hangers shall be installed within six (6") inches of sprinkler head drops or uprights to prevent reactive movement when the head is activated.

**2-4.6.4 Waterflow Switch:** Waterflow switch shall be a retarding type with a delay set between 30-45 seconds.

**2-6 Location of Sprinklers:** Exception 6.8.4 is modified by CFC (2007) 903.3.1. 2.1 as follows: Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction.