

# SANTA ROSA FIRE DEPARTMENT

## FIRE PREVENTION BUREAU STANDARD

July 1, 2010



# AUTOMATIC SPRINKLER INSTALLATIONS FOR TENANT IMPROVEMENTS

## PURPOSE

The Fire Prevention Bureau inspects all modifications to automatic fire sprinkler systems. Modifications involving 7 or more sprinklers are regulated through a plan review process. This standard describes the procedure for completing plan review and field inspection

## CODE REFERENCES

- 2007 California Building Code (CBC)
- 2007 California Fire Code (CFC)
- SRFD Fire Prevention Bureau Standards
- NFPA 13, 2002 Edition

## PERMIT(S) REQUIRED

A Fire Sprinkler System Installation permit is required. Categories and fee amounts are found at: <http://ci.santa-rosa.ca.us/doclib/Documents/IB%20018.pdf>

## ATTACHMENTS

- 1) Plan Review Checklist - Fire Sprinkler Tenant Improvement NFPA 13
- 2) Inspection Checklist – Fire Sprinkler Tenant Improvement NFPA 13

## GENERAL REQUIREMENTS

- Plans shall be submitted for approval and a permit obtained prior to adding or modifying seven (7) or more sprinklers to an existing sprinkler system. Plan submission shall be in accordance with the procedures outlined in Santa Rosa Fire Department Information Bulletin No. 94-042.
- A completed Permit and Plan Review Application Form and fee shall be submitted along with not less than three (3) sets of stamped engineering plans, manufacturer's data sheets and calculations as required. A Santa Rosa Business Tax Certificate, current appropriate contractor's license and proof of Worker's Compensation Insurance shall be provided or on file at time of application.
- NFPA 13 (2002 Edition) Section 16.2.1 requires all work involving sprinkler system interior piping and attachments to be subjected to a hydrostatic test at 200 psi without loss for 2 hours, as determined by a drop in gauge pressure or visual leakage.
  - For modifications to existing automatic sprinkler systems this test shall be required when more than twenty (20) sprinklers are modified or added and when cross mains are tied into or new feed mains are installed.
  - Test pressure may be 50 psi over static for occupied buildings and shall be 200 psi for new buildings.
- Hydraulic calculations are required only when more than twenty (20) sprinklers are added, new connections are made to a feed or cross main, when piping sizes do not meet the pipe schedule guideline for light hazard occupancies or when two (2) or more sprinklers are added from an existing plug or tee without having the sprinklered areas separated by fire resistive construction with construction details noted on the

Standard  
Automatic Sprinkler Installations For Tenant Improvements

plan. A minimum of 1500 square feet shall be calculated unless the room calculation method is chosen. If the room method is used the required fire resistive protection of walls and openings shall be clearly shown on the plan.

**REQUIRED INSPECTIONS:**

- An inspection of the work is required. Piping shall be exposed at the time of inspection and during the hydrostatic test.
- Contact the area inspector for the job location a minimum of twenty-four (24) hours in advance to arrange for a date and time to conduct all required field inspections and testing. Inspections/witnessing of tests are not guaranteed to be scheduled within 24 hours. The date and time will be determined by inspector availability and work schedules.

**REQUIRED INSPECTIONS**

- 1) **Overhead Hydrostatic & Rough-In Inspection**– The system shall be hydrostatically pressurized for two hours with no drop in pressure while piping and bracing is inspected.
- 2) **Fire Sprinkler Final** - A main Drain, Inspector Test and final walk-through of sprinkler coverage shall be performed.
  - a. The main drain valve shall be opened and remain open until the pressure stabilizes.

Inspections shall be scheduled a minimum of 48 hours in advance. Directions for scheduling are found at: <http://ci.santa-rosa.ca.us/news/Pages/AutomatedFireInspectionRequestSystem.aspx>

**SYSTEM MONITORING REQUIREMENTS:**

When monitoring of an existing fire sprinkler system is not present and the following conditions exist, the sprinkler system will be upgraded to include monitoring in compliance with current code.

- Tenant Improvements for Buildings Built After 1979:
  - Whenever there is a T.I. in a building built after November 1979, than all valves and water-flow will be monitored when the number of sprinklers exceed the following:
    - 20 Sprinklers in Group I, Division 1.1 or 1.2 Occupancies.
    - 20 Sprinklers in all occupancies.
- Tenant Improvements in Buildings Built Prior to 1979:
  - Whenever a sprinkler system is in place and tenant improvements to the building exceed 50% of the building floor area, the sprinkler system will be upgraded to include monitoring in accordance with the current code.
- Buildings Built Prior to 1979 With a Change In Occupancy:
  - Anytime there is a change in occupancy to a more intense or hazardous use, than was in existence previously and a sprinkler system is required, the fire sprinkler system will meet the requirements for sprinkler monitoring as in accordance with the current code.
- Buildings Built Prior to 1979 With No T.I. or Occupancy Change:
  - There will be no requirement to upgrade these existing facilities.