

## **FIRE ALARM SYSTEM REQUIREMENTS**

The mission of the St. Francis Fire Department is to ensure fire safe environments and buildings for its citizens, its businesses' employees and patrons. Specifically, for renovations or for new developments we strive to make a smooth transition from plans to completion; therefore, we provide the following requirements to be addressed prior to any construction.

For this section of the Code, Authority having Jurisdiction (AHJ) shall mean:

"**Authority Having Jurisdiction (AHJ)**" shall be the Fire Chief, or designee of the Fire Chief, to enforce this Code and approving equipment installation, or procedures as outlined in NFPA Standards, Codes and/or Recommended Practices.

- 1) All systems are to be designed in complete accordance with the National Fire Alarm Code (NFPA 72), 2007 edition.
- 2) A Fire Protection System Permit Application must be obtained prior to installation and/or modification of any fire alarm system.
- 3) A Fire Protection System Permit Application will only be issued after the required plans for the fire alarm system have been Conditionally Approved by the Fire Department.
- 4) After receiving State Approval, **Three (3) copies** of State Approved fire alarm plans shall be submitted to the St. Francis Fire Department for review and Conditional Approval prior to any fire alarm system equipment being installed.

**Note: No Installation of the Fire Alarm System shall begin** until the state and municipal plans are reviewed and approved by the respective authority, prior to construction. Non-compliance shall result in **TRIPLE FEES**.

- 5) All fire alarm system submittals must include the following information:
  - a. Name of owner and occupant.
  - b. Location, including street address.
  - c. Device legend.
  - d. Date.
  - e. Name of the person that designed the fire alarm system.
  - f. Name, address and phone number of the company that designed the fire alarm system.
  - g. Name address and phone number of the company that is going to install the fire alarm system.
  - h. Name address and phone number of the fire alarm system monitoring company.
  - i. Floor plan drawings shall be drawn to an indicated scale and shall include the following information:
    - 1) Floor identification.
    - 2) Point of compass.

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- 3) Graphic scale.
- 4) All walls and doors.
- 5) All partitions extending to within 18 in. of the finished ceiling.
- 6) Room descriptions.
- 7) Fire alarm device/component locations.
- 8) Locations office alarm primary power connection(s).
- 9) Locations of monitor/control interfaces to other systems.
- 10) *Riser* locations.
- 11) The location of the electrical panel that has the control panel circuit breaker.

**Note:** The location of annunciator panel(s) shall be approved by the St. Francis Fire Department prior to installation of the Fire Alarm System.

- 6) Fire alarm system riser diagrams shall include the following information:
  - a. General arrangement of the system in building cross section.
  - b. Number of risers.
  - c. Type and number of circuits in each riser.
  - d. Type and number of fire alarm system components/devices on each circuit on each floor or level.
- 7) Control panel wiring diagrams shall be provided for all control equipment (i.e., equipment listed as either a control unit or control unit accessory), power supplies, battery chargers and annunciators and shall include the following information:
  - a. Identification of the control equipment depicted.
  - b. Location(s) of control panels.
  - c. All field wiring terminals and terminal identifications.
  - d. All circuits connected to field wiring terminals and circuit identifications.
  - e. All indicators and manual controls, including the full text of all labels.
  - f. All field connections to supervising station signaling equipment, releasing equipment and fire safety control interfaces.
- 8) Typical wiring diagrams shall be provided for all initiating devices, notification appliances, remote alarm light emitting diodes (LED's), remote test stations and end-of-line and power supervisory devices.
- 9) Audible Notification Appliances shall be installed throughout protected premises.
- 10) Visible Notification Appliances shall be installed throughout protected premises.

Exceptions:

  - a. Closets and/or other similar small storage rooms that do not exceed 50 square feet in floor area and are not normally occupied.

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- b. Normally unoccupied crawl spaces.
  - c. Normally unoccupied attic spaces.
  - d. Any non-accessible area.
  - e. Any area the AHJ deems Visible Notification Appliances are not required.
- 11) Appliances that automatically detect fire and/or products of combustion shall be installed throughout protected premises. The type of appliance used in each specific application and/or area must be appropriate for the applicable conditions and acceptable to the AHJ. The determination of the acceptability of any type of detector (smoke, products of combustion, flame, heat, etc.) shall be based upon occupancy and/or building use.

Exceptions:

- a. Closets and/or other similar small storage rooms that do not exceed fifty (50) square feet in floor area and are not normally occupied.
  - b. Normally unoccupied crawl spaces provided they are constructed of noncombustible construction and no combustibles are present.
  - c. Normally unoccupied attic spaces provided they are constructed of non-combustible construction and no combustibles are present.
  - d. Any non-accessible area provided they are constructed of non-combustible construction and no combustibles are present.
  - e. Any area the AHJ deems appliances that automatically detect fire and/or products of combustion are not required.
- 12) **DO NOT install any smoke detectors until after the construction cleanup of ALL trades is complete** AND a representative of the City of Saint Francis and/or the City of Saint Francis Fire Department has confirmed that the area is clean enough for the installation of the smoke detectors AND authorizes the installation of the smoke detectors.
- 13) Manual Initiating Devices (manual pull stations) are required to be installed in **all** fire alarm and detection systems in the City of St. Francis and shall be located at all points of egress, including all exit doors on every floor and/or building level.
- 14) Water flow detection devices shall be connected to the protected premises fire alarm system to specifically activate the notification appliances upon water flow.
- 15) Fire suppression system activation alarms shall be connected to the protected premises fire alarm system to specifically activate the notification appliances upon system activation. This includes but is not limited to Wet Chemical, CO2, Clean Agent, Water Mist and Dry Chemical Systems.
- 16) Fire control and/or suppression systems supervisory condition indicators shall be connected to and monitored by the protected premise fire alarm system. This specifically

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includes but is not limited to: Valve Supervisory Switches (Tamper Switches), Low Air Switches, Low Water Switches, Low Temperature Switches, Fire Pump Condition Indicators and/or any other situation or condition deem necessary by the AHJ.

- 17) Fire Alarm Systems shall be addressable and capable of indicating the status of all specific components connected to the system.
- 18) All Fire Alarm Systems shall be monitored by a service acceptable to the AHJ. Any monitoring company must be a UL Approved Central Station.
- 19) The Fire Department and/or their representative will inspect all fire alarm system installations. All equipment must be inspected prior to any equipment being installed. The Fire Department must be notified at least 48 hours prior to any fire alarm components being concealed.
- 20) The Fire Department and/or their representative will witness all acceptance tests. The Fire Department must be notified at least 48 hours prior to any testing.
- 21) Two (2) copies of the completed Fire Alarm System Record of Completion required by NFPA 72 must be provided to the Fire Department and/or their representative prior to final system acceptance.
- 22) Permanent records must be provided in accordance with NFPA 72. This includes a completed Fire Alarm System Inspection and Testing Form. A copy of the original tests must be provided to the Fire Department and/or their representative and the owner.
- 23) Inspection, test and maintenance records must be maintained on site for all fire alarm systems.
- 24) All fire alarm systems must be inspected, tested and maintained in accordance with NFPA 72.