



CITY OF
SANTA ROSA

Fire Department

955 Sonoma Avenue
Santa Rosa, CA 95404
Phone: (707) 543-3500
Fax: (707) 543-3520

<http://ci.santa-rosa.ca.us/fd/>

**FIRE DEPARTMENT
INFORMATION BULLETIN**

**SUBJECT: RESIDENTIAL FIRE ALARM SYSTEM REQUIREMENTS
(Non High Rise; Non Care Facility; Non R-6)**

Bulletin Number: 039

Date of Issue: February 1, 1997

Code Reference:

1994 Uniform Fire Code (UFC) Article 10

1994 Title 24-CCR, Uniform Building Code (UBC) Section 310

NFPA Standard 72; 1993 Edition

NOTE: This bulletin is a summary of interpretations of City and State Codes. Information contained herein applies to typical instances and may not address all circumstances.

Title 24, CCR and the Uniform Fire Code as adopted by the City of Santa Rosa require apartment houses three (3) or more stories in height or containing 16 or more dwelling units, hotels three (3) or more stories in height, or containing 20 or more guest rooms and congregate residences three (3) or more stories in height or having an occupant load of 20 or more shall be provided with a manual and automatic fire alarm system.

EXCEPTIONS:

1. A manual fire alarm system need not be provided in buildings not over two stories in height when all individual dwelling units and contiguous attic and crawl spaces are separated from each other and public and common areas by at least one-hour fire-resistive occupancy separations and each individual dwelling unit or guest room has an exit directly to a public way, exit court or yard.
2. A separate fire alarm system need not be provided in buildings which are protected throughout by an approved supervised fire sprinkler system conforming with the Building Code and having a local fire alarm to notify all occupants. Occupant notification shall result from actuation of any flow of water or the operation of any manual alarm station. At least one manual station shall be

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installed at a location approved by the Fire Department and in hotels at the telephone operator's workstation. All initiating and indicating devices shall be electrically supervised.

Smoke detectors shall be provided in all common areas and interior corridors serving as a required exit for an occupant load of 10 or more. Dwelling units, congregate residences, hotel or lodging house guest rooms used for sleeping purposes shall have smoke detectors. When actuated, smoke detectors in sleeping areas shall sound an alarm only in the sleeping room in which it is located. Manual fire alarm boxes are not required for interior corridors having smoke detectors installed as noted above.

PERMIT

No person or firm shall install any fire alarm system in the City of Santa Rosa without first submitting plans for review and obtaining a permit from the Fire Prevention Bureau. A minimum of two (2) sets of plans shall be submitted. Submittals shall include all information required by this bulletin. The required permit fee shall be paid at the time of submittal. An electrical permit may also be required from the Santa Rosa Building Department.

GENERAL

The alarm panel shall be located in an area approved by and accessible to Fire Department personnel. Panels mounted on the exterior of the building shall be provided with a UL listed weatherproof enclosure. Such enclosures shall be locked and a sign posted indicating "Fire Alarm Control." An approved key box shall be installed on the premises in a location approved by the Fire Department. Remote annunciation shall be provided as required by the Fire Department.

The alarm system shall be electrically supervised so that failure of the main power supply or failure of an initiating device circuit shall sound a trouble signal. The trouble signal shall be distinctive from an alarm signal and be transmitted to a constantly attended location.

DETECTORS

Each sleeping unit shall have a minimum of one (1) single station smoke detector mounted on the ceiling or wall. In addition there shall be a detector centrally located in the corridor or area giving access to rooms used for sleeping purposes. Separate sleeping areas will require additional detectors. Where sleeping rooms are on an upper level, a detector shall be placed at the center of the ceiling directly above the stairway. All wall-mounted detectors shall be located between six (6) to twelve (12) inches from the ceiling in accordance with the manufacturer's specifications.

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Ceiling mounted detectors shall be no closer than six (6) inches to a sidewall. Detectors shall be located so as to not be adversely affected by air conditioning, heating or ventilating registers, or other heat sources.

Heat detectors shall be provided in all common areas such as recreational rooms, laundry rooms, furnace rooms, and similar areas in accordance with the California Electrical Code. A smoke detector shall be installed in the room in which the alarm control panel is located.

VISUAL SIGNALING DEVICES

Guest rooms for persons with hearing impairments shall be provided with visual and audible alarm-indicating appliances, activated by both the in-room smoke detector and the building fire alarm system.

WIRING

All wiring of fire alarm systems shall conform to the requirements of the National Electrical Code and NFPA 72. Circuit wire shall not be installed in a manner as to exceed the maximum run of wire allowed by the manufacturer of the panel. Wire shall be approved for the service provided.

ELECTRICAL POWER

Fire alarm systems shall be provided with a main and a secondary source of power in accordance with NFPA 72. AC power to the alarm panel shall conform to the National Electrical Code, the California Electrical Code and NFPA 72. Power shall be on an independent circuit. The breaker/switch box shall be identified and secured as required by NFPA 72 and in a manner approved by the Fire Department.

VISIBLE INDICATION (ANNUNCIATION)

The location of any operated initiating device shall be visibly indicated by building, floor, fire zone, or other subdivision by annunciation, printout, or other means approved by the Fire Department. In multi-story structures each floor must be on a separate zone and where the system serves more than one building each building shall be indicated separately. A sufficient number of audible notification devices shall be installed to ensure that all occupants in the building receive simultaneous notification. Audible signals shall be at least 15 dBA above average ambient sound levels. Visual notification devices are required when an evacuation alarm is provided.

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MANUAL BOXES

Manual fire alarm boxes when required shall be of "double action" type, mounted 42" to 54" above finished floor elevation. At least one manual fire alarm box shall be provided on each floor with additional boxes provided so that travel distance to the nearest fire alarm box will not be in excess of 200 feet measured horizontally on the same floor.

TESTING

A satisfactory inspection of the installation and test of the entire alarm system shall be made in the presence of a representative of the Fire Department. The installation shall be in conformance with approved plans, a copy of which shall be available on the jobsite. An inspection shall be made of all concealed wiring prior to covering by wall and/or ceiling construction.

PLAN SUBMITTALS

1. **APPLICATION**

- A. Copy of contractor's license, city business license, evidence of workers comp insurance, permit fees.

2. **DRAWINGS:**

- A. Floor plan to convenient scale or with dimensions showing:
 - 1. Location of all alarm-initiating and -notification devices by type.
 - 2. Control devices.
 - 3. Annunciators.
- B. Point to point system wiring diagram showing:
 - 1. Interconnection of identified devices and controls.
 - 2. Type and size of wire and cable.
 - 3. Conduit connections and sizes.
 - 4. Power connection.
- C. Symbol list and equipment identification showing:
 - 1. Description of symbols used.
 - 2. Quantity of each device installed.

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3. ATTACHMENTS TO DRAWINGS:

A. Alarm circuit load calculations showing:

1. Number of notification devices and current consumption.
2. Length of furthest circuit and resistance of wire.
3. Calculations showing voltage drop.

B. Standby power supply calculations showing:

1. Standby power consumption of all current carrying devices.
2. Standby power consumption of control panel/modules.
3. Alarm power consumption of all current carrying devices.
4. Alarm power consumption of control panel/modules.
5. Calculations showing both standby & alarm requirements.

C. Equipment list showing:

1. Manufacturer, model and specifications of devices used.
2. California Fire Marshal listing sheets for all materials, equipment and devices requiring listing.