



## FIRE ALARM SYSTEMS INITIATING DEVICES

CITY OF LACONIA FIRE PREVENTION DIVISION  
848 NORTH MAIN STREET, LACONIA, NH 03246  
Call (603) 524-6881 for appointments and information

FIRE  
PREVENTION  
Fire Alarms

200-6

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Initiating devices shall be located and installed in accordance with the applicable Code requirements. Electrical grade "back boxes" shall be used to mount all devices. Any apparent conflict shall be resolved by the Authority Having Jurisdiction [AHJ].

### Manual Pull Stations:

Manual Pull Station shall be provided within five [5] feet of each exit, at a height of between 42" and 54" the above finished floor, measured to the top of the station.

Where required in residential occupancies, one [1] Manual Pull Station shall be located at the primary means of egress where all of the following conditions are met:

No common hallway, common entrance, or common porch is present.

Each occupancy has a separate, ground level exit leading directly to the outside.

Each occupancy is designed and utilized as a permanent living unit, under individual ownership or control.

Manual Pull Stations shall be able to be reset using a standard straight blade screwdriver, or be keyed to a "CAT 30" key. Where proprietary locks are used, keys shall be provided to the LFD and secured in the site Knox Box. Keys shall be labelled.

### Heat Detectors: (Other than one and two-family residential structures)

Where required, heat detection shall be provided in all enclosed spaces and in all common areas.

An enclosed space is defined as any accessible space that is not permanently communicable with an occupied space. This typically includes bathrooms, restrooms, partial basements, crawl spaces and attics.

Detector spacing and type shall be determined using the recommendations of NFPA 72 and the NFPA *Fire Alarm Signaling Systems Handbook*.

135 Degrees Fahrenheit – Rate-of-Rise detection shall be installed in all locations except as listed below, and by special permission:

194 Degree Fahrenheit – Fixed Temperature detectors may be installed in attics, heating appliance rooms, garages, and any other area subject to rapid heating or cooling.

194 Degree Fahrenheit – Fixed Temperature detectors may be installed in industrial occupancies where processes and/or special conditions preclude Rate of Rise detection.

The location of all Rate-of-Rise Heat Detectors shall be coordinated with the Mechanical Systems contractor to prevent detector locations adjacent to, or directly above or below HVAC outlets or heating appliances.

Combination rate of rise and one hundred thirty-five degree (135°) to one hundred forty degree (140°) F. fixed temperature heat detectors shall be installed in spaces of twenty-four inches (24") or more above suspended ceilings and in accordance with NFPA 72 — *Initiating Devices*, and shall be on a separate zone from the area below the ceiling.

Residential Smoke Detection: (See also Residential Smoke Detection 200-2)

Smoke detection shall be provided in accordance with all applicable code requirements.

LOCAL [Non-system connected] smoke detection shall be located to meet the requirements of the State of New Hampshire depending on the classification of the occupancy, and in accordance with NFPA 72.

Smoke detectors shall be powered by the buildings electrical system.

Multiple Detectors within a single occupancy unit shall be connected in tandem.

Detectors shall be located on each level of living, including basements, and in each sleeping area.

Detectors shall contain a battery back-up system to maintain detection in the event of power failure.

SYSTEM CONNECTED Smoke Detection as required in accordance with the applicable codes as determined by the Laconia Fire Department.

In all common areas of all structures.

In all HVAC ducts with airflow in excess of 1500 CFM. Remote alarm indication and remote test capability shall be required for all duct detection. Remote contracts shall be provided as required to shut down the air handler as determined by the Authority Having Jurisdiction [AHJ].

In all special hazard areas as may be determined by the applicable Codes, or as determined by the Authority Having Jurisdiction [AHJ].

Alarm Indication/Notification:

Indication/Notification of an alarm condition shall be provided in accordance with the applicable Codes.

Interior alarm notification devices shall be mounted a minimum of six [6] feet above finished floor (AFF).

All interior notification signals shall be both audible and visual, powered by the standby battery in the control panel. Special timing sequences such as March Time, may be required in special occupancies to distinguish the Fire signals from other signals that may be used in the occupancy.

The audible signal shall provide a minimum sound level + 15 db above the average ambient sound level of the occupancy, or 65 dbA minimum, whichever is greater. This shall be measured with the fixtures in place, and all doors closed. In residential occupancies, a minimum of 75 dbA shall be provided in all sleeping areas at a height of 30" above the floor with all interior doors closed.

The visual signal shall be a WHITE or CLEAR lens strobe with a minimum of 8000 peak candlepower for all interior signals within residential properties. Commercial and/or industrial occupancies may require greater power. The NFPA –72 for specific requirements.

Health Care Facilities and Handicapped occupancies may request a variance to these requirements where the facility is supervised at ALL times by qualified personnel. A request for a variance shall be submitted in writing, addressed to the Fire Chief, Laconia Fire Department, 848 North Main Street, Laconia, New Hampshire 03246.

An external strobe, RED in color, to indicate an alarm condition shall be provided for each individual occupancy within a multi-occupancy residential structure, where the occupancy has direct outside access, and the occupancy is properly fire separated from other occupancies within the structure.

The strobe light shall be located near the primary EXIT and placement coordinated with the Laconia Fire Department.

The strobe light shall be powered from the control panel and standby battery serving the occupancy.

Multiple structures served by one [1] Master Box or DACT, shall be provided with a 24 VDC strobe **RED** in color for each structure. The strobe shall be mounted near the roofline in a location determined by the Authority Having Jurisdiction [AHJ].

The strobe light is in addition to any strobe light(s) required under any other section of these regulations.

The strobe light shall have a effective candlepower of 250 minimum and a peak candlepower of 750,000 minimum. This requirement can be met using a Federal Signal Corporation, Model FB2PST or equivalent.

#### Alarm Annunciation:

Site-specific annunciation requirements shall be determined on a case-by-case basis by the Fire Chief. All annunciation devices shall be mounted using an electrical grade back box for outside use and installed accordingly.

Remote annunciation of an alarm condition MAY be required by the Authority Having Jurisdiction [AHJ]. Specific requirements will vary based on the size, complexity and hazard of the particular site. Large sites, and/or multiple buildings may require Graphic Annunciation.

## Trouble Annunciation:

Audible and visual trouble signals shall be provided for all Fire Alarm Control Panels [FACP]

When remote trouble indication is required, the indicator device shall be mounted using an electrical grade back box suitable for the environment in which it is installed.

The signal provided within the Control Panel shall be considered acceptable for control panels located in normally occupied space.

Control Panels located in remote locations, including but not limited to garages, basements, mechanical rooms, and closets shall be provided with a remote trouble indicator. The remote indicator shall be audible and visual, be located in a normally occupied space, and be clearly marked with instructions for notification of the responsible party, the Lakes Region Mutual Fire Aid Association Communications Center [LRMFAACC] at 603 524-2386, and the Laconia Fire Department at 603 524-6881.

Installations with more than one [1] Fire Alarm Control Panel [FACP] shall be provided with remote trouble indication for each panel at the Main Control Panel, indicating the location of the Fire Alarm Control Panel [FACP] in trouble. This indication shall meet the requirements of Section 8.4.2 of these regulations in the event the Main Control Panel is not located in a normally occupied space.

Installations in which the Main Control Panel is located in an unoccupied, remote building, shall be provided with a 24 VDC strobe light, **YELLOW** in color and located on the outside of the building. Instructions shall be provided adjacent to the strobe light, using permanent marking.