

FIRE DEPARTMENT REGULATIONS

Section A	System Design and Layout
Section B	System Guide Lines
Section C	Radio Boxes
Section D	Knox Box

These requirements are not to be construed to be complete, but only as a guide. For all questions regarding fire, the enclosed shall be directed to the Auburn Fire Department and resolved before proceeding with construction.

SECTION A

System Design and Layout

1 All fire alarm systems installed in the Town of Auburn shall have an application for Fire Alarm from The Auburn Fire Department. A floor plan showing all fire alarm devices, location of radio box, panel and annunciators, a one-line wiring diagram, and battery calculations and annunciator detail showing zone labeling will be required to be submitted before The Auburn Fire Department or Town of Auburn Building Inspector issues an application.

2 The installer shall complete a certificate certifying that the system has been 100% tested and functions in complete compliance with the system specifications and manufacturers recommendations. The certificate shall be signed by the installer, general contractor and the owner. After receipt of the certification, the Fire Chief will conduct an inspection, the installer shall perform the test and shall provide the necessary tools and personnel to perform the test with a representative of the owner. It shall be the responsibility of the owner to inspect 25% of all alarm devices quarterly. The intent is a 100% inspection of the system annually.

3 Additions and modifications to existing systems will require a new application and submittal.

4 All equipment used shall be of a type approved by the Fire Chief. All systems shall be installed in accordance with NFPA 1221, 13A, 70, 72A, B, C, D, E, F, G, H, 90A, 101, IBC 2000, and IRC 2000.

5 All Fire Alarm Panels, Annunciators, Firefighter Telephone and Fire Alarm Pull Stations shall have CAT-30 key locks.

6 All Fire Alarm Panels (FIRE ALARM CONTROL PANEL) shall be stand-alone units. No other functions shall be allowed in the panel (e.g. security systems).

7 All systems shall be DC, supervised, battery stand-by Fire Alarm systems. Multiplex and addressable systems shall not be allowed without special exception after review by the Fire chief.

8 A separate AC circuit disconnect will be provided for the Fire Alarm system with breaker lock and painted RED.

9 The batteries used with the Fire Alarm control panel shall be capable of operating the panel for sixty (60) hours with a five (5) minute ring-down at the end of the sixty (60) hour period. The calculation used to determine battery capacity shall be presented to the Fire Department with the application for Fire Alarm. Stand-by batteries and the charging system shall be supervised.

10 Fire Alarm control panels shall have a sign "Fire Alarm System" of 1" white lettering on a red background.

11 If the Fire Alarm control panel is located in a separate or concealed space, a sign shall be provided on the entrance door or near the concealed space. The sign shall be red with white lettering at least one (1) inch in height and shall read: "Fire Alarm System".

12 Upon activation of any alarm device, the control panel shall sound the evacuation signals, flash the evacuation lights, indicate the zone of activation, and send a signal to a UL approved central station. Elevator recall shall be wired to the State of New Hampshire Elevator Code.

13 All elevators which travel 25 feet or more above the ground level shall be connected to the fire alarm system. Each elevator lobby, at each level and the elevator equipment room shall have a smoke detector with connections to the elevator control system. Smoke detectors activation in an elevator lobby shall prevent the elevator from stopping and/or opening at the lobby. The system shall be wired so that in the event of activation of all lobby smoke detectors, the elevators shall open at a designated level. Elevator recall systems shall reset-set automatically with the resetting-setting of the Fire Alarm Control Panel. All smoke detectors shall be connected to the appropriated zone of the building fire alarm system.

14 All control panels shall have a drill switch to permit fire drills without summoning the Fire department in educational, daycare, nursing homes, group homes, and other occupancies as determined by the Fire Department.

15 City disconnect switches are not allowed on the Fire Alarm control panels. This shall not apply to Radio Box trip units.

16 All zones of the control panel shall have red alarm indicating lamps and yellow trouble lamps. Power lamps shall be green.

17 A trouble signal switch shall silence the trouble audible signal while the trouble visual signal remains illuminated. The trouble silence and drill switches shall have a ring back feature to supervise correct switch position. Alarm signals shall have a resound provision. When a system is "silenced" and subsequent alarms from any other zone shall resound-round the evacuation signals. All control panels shall have a signal silence switch and a system reset switch.

18 Control panels having zone labeling on the outside of the door with zone lamps mounted on an inside panel shall have zone labeling inside the panel also, to indicate zones when door is opened.

19 ALL SYSTEMS shall allow the visual indicators of the evacuation signal to stay illuminated after the alarm silence switch is operated and remain illuminated until the system is reset.

20 All places of assembly and all structures housing 24 or more living units shall require a Voice Fire Alarm system with slow whoop evacuation signal and must have a supervised microphone public address system.

21 All dwelling units shall have a UL listed device (mini-horn) or speaker connected to the buildings fire alarm system. All evacuation and audible devices shall have the same sound.

22 End of the line devices must be installed electrically last beyond any detection device in an alarm circuit. The location of the end of the line device shall be permanently labeled.

23 Detection devices located in concealed areas shall have remote indicators or their location shall be permanently marked in a manner acceptable to the Fire Chief.

24 A system smoke detector and 212 degree sprinkler head (if sprinkled) shall be installed in all main electrical rooms. Installation of equipment shall be in accordance with modern standards of practice. All wiring shall be in accordance with the National Electrical Code, NFPA 72 series pamphlets, and all State and Local codes, and the rules and regulations of The Auburn Volunteer Fire Department.

25 Fire Alarm zones shall protect a maximum of 10,000 square feet.

26 Structures having multiple-tenant outside access shall be zoned by tenant space. (E.g. strip malls shall be zoned by address of each store.)

27 All wiring shall be run in EMT or metallic conduit. All pull boxes shall be red. No wiring shall be exposed. 105 degree centigrade wire may be run without conduit provided it is not exposed, is above seven (7) feet from the floor level and is stapled or supported every twenty four (24) inches. 105 c wire must be labeled 'FPL', 'FPLR' if the cable runs in a plenum. All initiating and audio/visual devices shall be mounted on back of boxes. All wire must be solid.

28 All Alarm initiating devices other than smoke devices shall be wired electrically first before smoke detectors in a class "B" system. All smoke detectors shall be wired electrically grouped together in a class "A" system.

31 If a local alarm system is present, a RED label with White lettering shall be present over the pull stations and is to read: "LOCAL ALARM ONLY. DIAL "911"

30 A remote annunciator shall be located at the main entrance of the building and strategically mounted to allow unpaired access and view at all times. The color shall be predominantly red. All zone labeling shall be in plain English indicating the location of the alarm. Zone indicators WILL NOT be allowed on the annunciator. Units located on the outside of the building shall be back-lit type with sufficient brilliance to be seen in normal direct sunlight. No LED lamps are allowed. Acceptable annunciator labeling will include: Back lit painted window letters or engraved plastic white on red. NOTE: "Dymo" labels will not be allowed.

31 Graphic annunciators shall be required on all buildings of unusual design or with a floor space in excess of 20,000 square feet and all multi-building systems.

32 The building graphic shall show the building in phase with the viewer and shall indicate in red to the viewer "You Are Here".

33 Building outlines shall be "triple thick" black. Within the buildings rooms, corridor, etc. shall be shown "double thick". Other lines of lesser significance such as door swings and windows shall be shown "single thickness". Extraneous building details shall be eliminated to provide a clear and concise plan of the layout depicting only relevant details.

34 Graphics having significant detail should have stairways highlighted or shaded in blue and elevators in yellow to bring attention to these areas. All main corridors and point of egress shall also be clearly indicated.

35 All Fire Alarm and Fire Department control devices and locations shall be shown with red symbols and identification.

36 Zone boundaries shall be shown using a red dashed line when applicable.

37 Permanent "HAZARDOUS MATERIALS" storage locations should be so noted in red.

38 Annunciator panel detail plan and drawing shall be submitted to the Fire Chief for approval before installation.

39 All exterior exit ways and each exit from each floor shall have a pull station within four (4) feet of exit way.

40 All pull stations and horn/light units shall be predominantly red and be labeled "Fire". Any alarm or signal devices located in the building which are not part of the fire alarm system shall be painted a color other than red. If key pull stations are used, a CAT-30 key shall be used.

41 Signal levels shall not be less than 84 dB or exceed 100 dB as measured four (4) feet above the floor throughout each coverage area. Levels shall be measured using an ANSI Type 1 sound level meter set for "A" weighting and "slow" meter response. For signals with varying levels, the signal shall be deemed to be the maximum level indicated. The signal level requirement shall be met for all required signals. Tests shall be conducted with doors closed between rooms.

42 The Town of Auburn assumes no responsibility for the correct operation of the fire alarm systems.

43 The Auburn Fire Department maintains a "Knox Box" key depository system. All commercial, industrial, non-residential and multi-family buildings are required to install "Knox Box" systems. See section D of these regulations for additional information and requirements.

SECTION B
Fire Alarm System Guidelines

1 All single family and two (2) family homes shall be equipped with 110 volt hard wire smoke detectors, with a minimum of one per floor and is to include the attic. All smoke detector circuits will be tied into a common light circuit.

2 All multi-family dwellings from 3 to 6 units shall contain 110 volt smoke detectors in all common hallways, attic area and basement area. These shall all be connected together and connected to a common light circuit. Each unit shall be equipped with not less than one (1) smoke detector per floor and shall be connected to a common light circuit with-in the unit.

3 All multi-family dwellings from 7 to 9 units shall meet all specifications as listed above in section 2. However, pull stations shall be install with-in four (4) feet of all common exits and shall be labeled local alarm as specified in the System Design and Layout section 29.

4 All multi-family dwellings from 10 units on up shall meet all requirements as listed above in section 3. However, said alarm system shall be equipped with a Radio Box Fire Alarm System and shall meet all requirements as listed for Equipment Design and layout and the section on Radio Boxes which can be found in Section C.

5 All commercial and industrial buildings shall contain a complete fire alarm system as specified in the System Design and Layout.

6 All commercial and industrial buildings, up to 8,000 square feet shall be monitored by a Digital Dialer and shall be monitored by a UL approved monitoring company.

7 All commercial and industrial buildings greater than 8,000 square feet shall be monitored by a radio Box transmitter which will be monitored by the Town of Derry.

8 All places of assembly will be monitored by a Radio Box Transmitter that will be monitored by the own of Derry.

9 Buildings undergoing renovations must be brought up to compliance as defined in this document.

10 All smoke detectors shall be UL approved and not less than three (3) percent activation.

SECTION C Radio Boxes

1 All Radio Boxes installed in The Town of Auburn shall be of a type approved by the Fire Chief.

2 Radio Boxes shall be pedestal or wall mounted at the main entrance of the building, or internally mounted next to the Fire Alarm Panel. Internally mounted Radio Boxes shall require a Knox Box at the main entrance of the building.

3 Radio Box batteries shall be float charged from an AC source in the Fire Alarm Control Panel, fused at both ends of the charged circuit.

4 Radio Master Box Interface will be mounted adjacent to the Fire Alarm control Panel and have its trouble signal wired to the common system trouble. Fire Alarm panels with UL listed Radio Box trip modules do not require interface panels.

5 All Radio Box Locks shall be a CAT-30 lock and key.

6 All Radio Box locations must be approved prior to installation.

7 All Radio Boxes shall remain completely covered during construction to prevent accidental use.

8 All keys to the Radio Box shall be turned over to the Fire Chief after system acceptance.

9 All equipment shall be made available for test and inspection when required by the Fire Department.

1 The Auburn Fire Department reserves the right to disconnect service to the Radio Box at any time for non-compliance with the Fire Department regulations or in case of system trouble which might endanger the proper operation of the Town alarm system. The owner will be notified of any disconnections.

SECTION D
Knox Box

Any building having an alarm system must have a "Knox Box" mounted within 10 feet of main entrance.

Applications can be obtained from the building inspector or fire chief.