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“Smoke Detectors Save Lives”

Commonly Occurring Installation Violations and Overlooked Requirements

This document is not a plan review approval or disapproval. It is merely a compilation of some of the most commonly occurring installation violations and overlooked requirements. All fire alarm system requirements can be found in the *Rhode Island Uniform Fire Code (RIUFC)* Chapter 13 and NFPA72, 2002 edition.

1. A copy of the quarterly testing and maintenance contract agreement with a qualified contractor is required at time of final inspection. (RIUC 13.8.10.9.2)
2. Provide a minimum of forty eight (48) hours notice when scheduling final inspections (RIUC 13.8.10.9.4).
3. A cable-cutting tool with controlled depth of cut shall be used in all MC cable installations. UL listed type MC cable connectors with insulated bushings shall be used in all MC cable installations. (RIUFC 13.8.10.6.2.3).
4. All conductors shall be minimum #16 gauge solid copper, type thhn, thwn or tfn. All wiring shall be run **continuously** from device to device. (RIUFC 13.8.10.6.2.1)
5. The minimum separation between the outgoing and return circuits shall be a minimum of one foot vertically and four feet horizontally. (RIUFC 13.8.10.6.2.2).
6. All fire alarm control panels installed shall be configured or programmed such that when an alarm is silenced or acknowledged, the municipal connection shall be restorable, allowing any subsequent alarm to transmit. (RIUFC 13.8.10.5.16).
7. Smoke detectors shall not be installed until after the construction clean –up of all trades is complete and final. (RIUFC 13.8.10.6.7)
8. Smoke detectors shall not be located directly in the air stream of supply registers. (NFPA 72 5.7.5.3.2). As a rule of thumb, locate smoke detectors a minimum of three (3) feet from supply air diffusers or registers.

9. Prior to the final operational acceptance test, a pre-test report and NFPA Record of Completion in accordance with NFPA 72:4.5.2.1 shall be submitted to the owner and AHJ. (RIUFC 13.8.10.8.5).
10. Sprinkler inspectors test valves shall be provided per NFPA 13 and RIUFC (Add) 13.7.1.1.1.1. Flow switches shall activate the fire alarm system within 90 seconds. (RIUFC Add 13.8.10.5.5).
11. Pull stations shall be marked "**LOCAL ALARM NOT CONNECTED TO FIRE DEPT**" for local systems only. (RIUFC 13.8.10.4.1.3).
12. Pull stations shall be keyed the same as the fire alarm control panel. (RIUFC 13.8.10.5.2).
13. All notification appliances used for building evacuation shall be of the distinctive three-pulse temporal pattern. (RIUFC 13.8.10.5.3.1).
14. Fixed temperature heat detectors shall be installed in spaces of 24 in. above suspended ceilings and shall be on a separate zone. (RIUFC 13.8.10.4.2.2.1).
15. Primary AC power circuits shall be on a dedicated branch circuit. Circuit breaker shall be labeled "fire alarm" and locked. Location of circuit breaker shall be permanently identified at the fire alarm control panel. (RIUFC 13.8.10.6.4).
16. The fire alarm system owner shall provide a twenty-four (24) hour emergency telephone number of the owner or owner's representative in the event of an alarm or trouble condition posted at the F.A.C.P. In addition a twenty-four (24) hour emergency number of the fire alarm maintenance company shall be posted at the F.A.C.P. Answering machines or voice-mail are not acceptable methods of contacting authorized maintenance companies. (RIUFC 13.8.10.9.1.1).