

July 1, 2010

SANTA ROSA FIRE DEPARTMENT FIRE PREVENTION BUREAU INSPECTION CHECKLIST



FIRE ALARM SYSTEM INSTALLATION

Address:		Permit #:
Inspector:	Date Inspected:	Status:
Inspector:	Date Inspected:	Status:
A-Approved, R-Re-inspection Required		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

FILE REVIEW

- | | | | |
|----|--------------------------|--------------------------|---|
| | Y | N | |
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Review plans, plan notes and F.D. plan review condition letter. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Review Permits Plus notes and fees prior to final. |

REQUIRED INSPECTIONS:

- | | | | |
|----|--------------------------|--------------------------|---|
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Rough-In (wiring type, size, locations) Inspection-- prior to close in. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Initial Acceptance Testing and Final - NFPA 72, Chapter 10. |

Inspections shall be scheduled a minimum of 48 hours in advance. Directions for scheduling are found at: <http://ci.santa-rosa.ca.us/news/Pages/AutomatedFireInspectionRequestSystem.aspx>

Note: Referenced code numbers represent an NFPA code section unless otherwise specified.

FIRE ALARM ROUGH-IN INSPECTION

- | | | | |
|----|--------------------------|--------------------------|---|
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Review approved plans on site. |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Check wiring type (FPL, FPLR, FPLP, THHN) and conductor size. |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Verify device locations (if installed). |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | Check through penetrations of fire rated assemblies/membranes. |
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | Verify mechanical protection of conductors and method of attachment to the structure. |

FIRE ALARM ACCEPTANCE TEST

- | | | | |
|-----|--------------------------|--------------------------|--|
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | Obtained a copy of the fire alarm installation certification and a Record of Completion from installer, 4.5.2.1. |
|-----|--------------------------|--------------------------|--|

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- | | Y | N | |
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| 11. | <input type="checkbox"/> | <input type="checkbox"/> | Approved plans are on site. |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | Fire alarm control unit (FACU) and remote annunciator (RA) are installed consistent with Approved plans and SFM listing sheet , 4.4.6.1.1. and 7.10. |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | Remote annunciator is located at main entrance to facility with zone and initiating device legend map in a glass frame is provided at the RA. |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | Fire alarm zones are identified on the FACU. |
| 15. | <input type="checkbox"/> | <input type="checkbox"/> | The fire alarm system power supply is a dedicated 120 AC branch circuit, which is labeled, locked closed and in a separate circuit box. Breaker locks are not acceptable. 4.4.1.4.2.2. |
| 16. | <input type="checkbox"/> | <input type="checkbox"/> | Type and gauge of wire or cable(s) for each circuit are consistent with the plans. |
| 17. | <input type="checkbox"/> | <input type="checkbox"/> | Device location and installation are consistent with the plans and NFPA. |
| 18. | <input type="checkbox"/> | <input type="checkbox"/> | Pull stations are double action, installed at the proper height and location, 42 in. to 48 in. and within the 200 ft. maximum travel distance, 5.13 and IFC 907.4.1, .2. |
| 19. | <input type="checkbox"/> | <input type="checkbox"/> | A Contractor Sound Pressure Level (dBA) Pretest Room Log is provided and verified with the use of a sound meter during a sound pressure test. |

OPERATIONAL

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| 20. | <input type="checkbox"/> | <input type="checkbox"/> | Fire alarm audible notification devices sound throughout the occupancy providing a sound pressure level at least a minimum of 15 dBA above the average ambient noise level or 5 dBA above the maximum noise level. For bedrooms with closed door provide at least 75 dBA at the pillow. Verify mini-horns are installed in each dwelling unit of R-1 and R-4 occupancies 7.4.4.1, IFC 907.10.2. |
| 21. | <input type="checkbox"/> | <input type="checkbox"/> | Fire alarm audible devices are a three-pulse temporal pattern unless they were permitted to match existing audible devices, 6.8.6.5.1. |
| 22. | <input type="checkbox"/> | <input type="checkbox"/> | Fire alarm visual notification device intensity (cd) ratings and settings, mounting height (80 in. to 96 in.), and location, are consistent with the plans and required locations. 7.5.4.1. |
| 23. | <input type="checkbox"/> | <input type="checkbox"/> | Emergency voice/ alarm communications systems are tested and documentation is provided documenting the verbal statement(s) are distinguishable and understandable, Table 10.4.2.2.15(b). |
| 24. | <input type="checkbox"/> | <input type="checkbox"/> | In sprinklered buildings, the fire alarm notification devices will activate by operation of the sprinkler flow alarm. |
| 25. | <input type="checkbox"/> | <input type="checkbox"/> | HVAC duct detectors are supervised by the fire alarm system, detectors are all tested to verify fans shut down upon activation, visual and audible status alarm functions. Detector access is identified., Table 10.4.2.2.14(g). |
| 26. | <input type="checkbox"/> | <input type="checkbox"/> | A central, remote or proprietary monitoring service received signals during system tests. Verify correct address is received at central station. |
| 27. | <input type="checkbox"/> | <input type="checkbox"/> | Verify that the correct and distinctive signals are received (alarm, trouble, and supervisory alarms), obtain copies of and file Central Station test results.4.4.3.3, 10.4.1.1 |

Inspection Checklist
Fire Alarm System Installation

OPERATIONAL(Continued)

- | | Y | N | |
|-----|--|--------------------------|---|
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | Two monitoring circuits, dedicated phone lines, are provided. Both circuits send correct signals to monitoring company within 90 seconds. Disconnect phone line, ensure a supervisory signal is received and alarm signal sends through backup line. Test each line. Table 10.4.2.2.16. |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | Verify proper operation of magnetic door-releasing hardware and/or ventilation shutdown. |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | Sprinkler tamper switch activation transmits a trouble signal at the annunciator panel. |
| 31. | <input type="checkbox"/> | <input type="checkbox"/> | Fire department communications system, if provided, is operational and supervised. |
| 32. | <input type="checkbox"/> | <input type="checkbox"/> | For air sampling and flame detectors, test the device in accordance with the manufacturer instructions. |
| 33. | <input type="checkbox"/> | <input type="checkbox"/> | Restorable heat and smoke detectors and pull stations are tested according to the manufacturer directions. |
| 34. | <input type="checkbox"/> | <input type="checkbox"/> | Trouble condition is created for each circuit and the FACU responds appropriately. |
| 35. | <input type="checkbox"/> | <input type="checkbox"/> | Remote annunciator displays the correct zone and device information after each activation. |
| 36. | <input type="checkbox"/> | <input type="checkbox"/> | Battery load test: the system is switched to battery operation 24 hours before the test and in the presence of the inspector the notification devices are activated and operate for 5 minutes or 15 minutes for emergency voice alarms. |
| 37. | <input type="checkbox"/> | <input type="checkbox"/> | Check battery charger, measure load voltage, and open circuit voltage. Disconnect battery and ensure a trouble signal is sent to the central station. |
| 38. | <input type="checkbox"/> | <input type="checkbox"/> | Test ground-fault monitoring circuit, if provided. |
| 39. | Under primary and secondary power, perform these tests: | | |
| | <input type="checkbox"/> | <input type="checkbox"/> | A. Power light on and in normal condition, trouble signal when on secondary power. |
| | <input type="checkbox"/> | <input type="checkbox"/> | B. Supervisory signals: fire pump power loss or phase reversal, water level/temp, pressure switches, control valves, etc. |
| | <input type="checkbox"/> | <input type="checkbox"/> | C. Silence switch functions. |
| | <input type="checkbox"/> | <input type="checkbox"/> | D. A 2 nd alarm initiating zone overrides system silence switch. |
| | <input type="checkbox"/> | <input type="checkbox"/> | E. Trouble signals and FACU panel lights operate for each circuit tested; disconnect wires from devices and primary power supply to simulate trouble conditions. |
| | <input type="checkbox"/> | <input type="checkbox"/> | F. On secondary power, measure standby and alarm current demand. |
| | <input type="checkbox"/> | <input type="checkbox"/> | G. Trouble and alarm reset switches operate. |
| | <input type="checkbox"/> | <input type="checkbox"/> | H. Emergency voice alarms: the message is clear and distinct. |
| | <input type="checkbox"/> | <input type="checkbox"/> | I. Initiating devices tested, audible sound pressure levels, and visuals operate. |
| | <input type="checkbox"/> | <input type="checkbox"/> | J. Panel lamp test switch operates: if provided. |

Inspection Checklist
Fire Alarm System Installation

OPERATIONAL(Continued)

- | Y | N | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | K. Field zones and device address signals corresponded with panel zones and addresses. |
| <input type="checkbox"/> | <input type="checkbox"/> | L. Elevator(s) recall to designated floor and alternate floor in accordance with the 6.16.3. |
| <input type="checkbox"/> | <input type="checkbox"/> | M. If elevator shaft is sprinklered, a smoke detector shall not be used. A heat detector shall be located to within 2' of the sprinkler and shall trip the shunt-trip with a delay long enough for the cart to reach the bottom. 6.16.4.2. |
| 40. | <input type="checkbox"/> | Other systems activate fire alarm: kitchen hood suppression system, clean agent, etc. |
| 41. | <input type="checkbox"/> | As-builts are required when system installation is not consistent with the plans. |
| 42. | <input type="checkbox"/> | Circuit loop resistance is within specifications and a test may be required if the system wiring has changed from the plans. |
| 43. | <input type="checkbox"/> | Heat and spot smoke detectors are not located within 4 in. of the sidewall, or if on the sidewall, the detector is 4 in. to 12 in. from the ceiling, 5.6.3.1, 5.7.3.2.1. |
| 44. | <input type="checkbox"/> | Visual devices in a room or adjacent space located where two (2) or more devices are located within the field of view shall have the flash synchronized, 7.5.4.1.2(3). Devices in a corridor with more than two (2) devices within the field of view and a maximum spacing of 100 ft. are required to be synchronized, 7.5.4.2.5 and 7.5.4.2.7. |
| 45. | <input type="checkbox"/> | Visual devices are wall mounted 80 in. to 96 in. above the floor level, 7.5.4.1. |
| 46. | <input type="checkbox"/> | Supplemental (extra) visual devices are permitted to be mounted less than 80 in. above the floor, 7.7.2. |
| 47. | <input type="checkbox"/> | Ceiling mounted devices are listed for use and spaced in accordance with Table 7.5.4.1.1(b) and the approved plans. *Note: additional testing criteria is found in NFPA 72: Chapter 10. |
| 48. | <input type="checkbox"/> | Provide keys to the FACP, remote annunciator and manual pull stations. |
| 49. | <input type="checkbox"/> | Signage installed. |