



## MILPITAS FIRE DEPARTMENT

### *FIRE PREVENTION DIVISION*

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## FIRE ALARM INSTALL INSPECTION CHECKLIST

### **FILE REVIEW**

1. Review plans, plan notes and F.D. plan review condition letter.
2. Review Permits Plus notes and fees prior to final.

### **REQUIRED INSPECTIONS**

3. Fire Alarm Rough-In (wiring type, size, locations) Inspection--**prior to close in.**
4. Fire Alarm Initial Acceptance Testing and Final.

### **FIRE ALARM ROUGH-IN INSPECTION**

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

### **FIRE ALARM ACCEPTANCE TEST**

10. Obtained a copy of the fire alarm installation certification and a Record of Completion from installer.
11. Approved plans are on site.
12. Fire alarm control unit (FACU) and remote annunciator (RA) are installed consistent with Approved plans and SFM listing sheet.
13. 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. Fire alarm zones are identified on the FACU.
15. 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.

16. Type and gauge of wire or cable(s) for each circuit are consistent with the plans.

17. Device location and installation are consistent with the plans and NFPA.

18. 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.

19. 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**

20. 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.**

21. Fire alarm audible devices are a three-pulse temporal pattern unless they were permitted to match existing audible devices.

22. 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 location.

23. Emergency voice/ alarm communications systems are tested and documentation is provided documenting the verbal statement(s) are distinguishable and understandable.

24. In sprinklered buildings, the fire alarm notification devices will activate by operation of the sprinkler flow alarm.

25. 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.

26. A central, remote or proprietary monitoring service received signals during system tests. Verify correct address is received at central station.

27. Verify that the correct and distinctive signals are received (alarm, trouble, and supervisory alarms), obtain copies of and file Central Station test results.

28. 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.

29. Verify proper operation of magnetic door-releasing hardware and/or ventilation shutdown.

30. Sprinkler tamper switch activation transmits a trouble signal at the annunciator panel.

31. Fire department communications system, if provided, is operational and supervised.

32. For air sampling and flame detectors, test the device in accordance with the manufacturer instructions.

33. Restorable heat and smoke detectors and pull stations are tested according to the manufacturer directions.

34. Trouble condition is created for each circuit and the FACU responds appropriately.

35. Remote annunciator displays the correct zone and device information after each activation

36. 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. Check battery charger, measure load voltage, and open circuit voltage. Disconnect battery and ensure a trouble signal is sent to the central station.

38. Test ground-fault monitoring circuit, if provided.

**39. Under primary and secondary power, perform these tests:**

- A. Power light on and in normal condition, trouble signal when on secondary power.
- B. Supervisory signals: fire pump power loss or phase reversal, water level/temp, pressure switches, control valves, etc.
- C. Silence switch functions.
- D. A 2nd alarm initiating zone overrides system silence switch.
- E. Trouble signals and FACU panel lights operate for each circuit tested; disconnect wires from devices and primary power supply to simulate trouble conditions.
- F. On secondary power, measure standby and alarm current demand.
- G. Trouble and alarm reset switches operate.

- H. Emergency voice alarms: the message is clear and distinct.
- I. Initiating devices tested, audible sound pressure levels, and visuals operate.
- J. Panel lamp test switch operates: if provided.
- K. Field zones and device address signals correspond with panel zones and addresses.
- L. Elevator(s) recall to designated floor and alternate floor.

40. Other systems activate fire alarm: kitchen hood suppression system, clean agent, etc.

41. As-builts are required when system installation is not consistent with the plans.

42. Circuit loop resistance is within specifications and a test may be required if the system wiring has changed from the plans.

43. 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.

44. 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, 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.

45. Visual devices are wall mounted 80 in. to 96 in. above the floor level.

46. Supplemental (extra) visual devices are permitted to be mounted less than 80 in. above the floor.

47. Ceiling mounted devices are listed for use and spaced.

48. Provide keys to the FACP, remote annunciator and manual pull stations

49. Signage installed.