

## **Fire Detection Systems**

Fire Alarm systems shall be installed in accordance with the Middletown Township Fire Detection Ordinance, International Building Code, International Fire Code and NFPA 70, 72, 101.

### Submittal Requirements

1. Provide three (3) copies of plans and one (1) set of original equipment data sheets or a copy of the UL Directory page. These drawings must be stamped by a licensed architect or professional engineer (Act 45 section 403.42a.c), and contain the name of the person who created the drawings, their phone number and their signature.
2. Provide details for conductors on the plans, including type, size, and manufacturer
3. Drawings shall be legible, scaled with shop number and revision number and date, have compass points, and contain only fire alarm components. The intended use of each room with walls, doors (door swings), and ceiling heights shall also be listed on the plan.
4. Drawings shall include details showing the installation of exterior and underground fire alarm components, transition from exterior to interior, manual fire alarm and strobes with candela rating (including the height) FACP, door hold open devices, heat and smoke devices (indicate type and temperature), fire sprinkler water flow and control valves.
5. All symbols shall conform to NFPA 170 (Fire Safety Symbols) standards where applicable. A symbol key shall be included in the submittal documentation for all symbols.
6. Provide a floor plan indicating the location of devices and appliances, plenum runs, conduit wire runs, conduit sizes, number and size of conductors. The zone indication shall be placed adjacent to the appropriate end of line devices.
7. Provide a point-to-point wiring configuration for each system device and the point of connection at the panel. All initiating and notification circuits shall be identified on these drawings.
8. When two or more zones are required, they shall be designed to assist in providing fire and emergency services with the fire location information. When two or more zones are required, a zone schedule shall be provided in the documentation indicating zone designation, types of devices in the zone, and location information.
9. Provide a supervised remote annunciator panel or FACP, which clearly indicates all conditions adjacent to fire department entry points.
10. Voltage drop calculations, circuit amperage, and power supply calculations to include standby and alarm conditions shall be submitted. Battery calculations shall conform to the type of system being installed.

11. In new construction or alterations, no smoke detection devices shall be installed until the final cleanup of all trades is completed. *Exception: smoke systems may substitute caps. These must be in place prior to any dust creating activities. At the completion of the work the system must be cleaned and certified.*

12. At the completion of the project, a copy of "as built" drawings shall be provided to the owner/ occupant with written operating instructions and maintenance and testing information for the fire alarm system. Such information must be maintained on site and available to the fire marshal's office at all times. A copy of the as built shall also be provided to the fire marshal's office.

13. At the FACP and any remote stations must be labeled with the zones on the system and the monitoring company name and phone number. This label must be typed and protected from water damage.

14. After acceptance testing has been completed an NFPA record of completion and written contactors certification statement shall be provided by the installing contractor to the fire marshal's office.

Not included documents that need to be referenced:

Fire Detection and Suppression Systems