



Department of Emergency Management

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COMMERCIAL FIRE ALARM PLAN REVIEW SUBMITTAL STANDARD

A separate permit is required for each building on the site even if there is only one panel. Permit applications cannot be accepted prior to building permit application. Fire alarms for sprinkler supervision will not be reviewed until the sprinkler permit application has been submitted.

Two copies of each of the following are required to submit for a commercial fire alarm permit. The applicant will receive one stamped copy of the approved plans. If three sets of plans are submitted, the applicant will receive two stamped copies. The maximum number of plans submitted is three. Additional sets will not be stamped.

SITE PLAN:

A site plan is required. The site plan shall meet all of the following:

- Engineering scaled
- Include all buildings on-site
- Identify the building where work will be performed
- Show the location of the main control panel and all sub control panels

TITLE SHEET:

- Name and address of the building owner
- Name and telephone number of the installer
- Fire alarm requirement: sprinkler supervision, required for specific occupancy, required for fire flow, or non-code required system
- Symbol list including manufacturer part number
- Provide a 5" x 5" space at the bottom right corner for approval stamps.
- Number of zones: Addressable systems shall show the equivalent number of zones based on the number of circuits shown on the riser diagram.
 - Exception: If any circuits exceed the following criteria, additional zones will be added. Each floor shall be separately zoned and a zone shall not exceed 22,500 square feet. The length of any zone shall not exceed 300 feet in any direction.

DRAWINGS:

Applies to all sheets:

- All sheets to be the same size ("C" size 24" X 36" is preferred)
- Required scale is 1/8" = 1 foot
- Show compass points
- Provide a key plan for building sections
- Show drawing number, revision and date

Clear and legible plans suitable for photocopying

FIRE ALARM PLAN REVIEW SUBMITTAL STANDARD (continued)

FLOOR PLAN SHEET(s):

- Building floor plan – Shall not be an overlay of other building systems and components.
- Location of all walls and doors
- Intended use of each room e.g. storage, classroom, restroom, vestibule
- Ceiling height & details
- Full height cross section of the building
- Location of FACP, sub panels, booster panels, annunciator panels (if provided)
- Location of all fire alarm detection and notification devices along with temperature and candela ratings if applicable
- Show location of all ancillary devices, i.e. door holders, gas shut-off, fan shutdown, smoke dampers, shunt trips
- Show location of fire sprinkler risers, water flow and ALL tamper switches (including exterior devices), fire pumps and controllers
- Show all access doors and signage for duct detector access
- Show all remote indicators for hidden devices
- Show end-of-lines
- Show zoning if a conventional system
- Provide a full riser diagram showing all devices as connected in the circuit, device addresses, room numbers or names

CALCULATIONS:

- Provide voltage drop calculations for each notification appliance circuit listing wire size, circuit current and voltage drop.
- Provide battery calculations for each control panel, sub panel, and power booster and indicate battery size. List model numbers and quantity of devices included in calculations.
- Standby time shall be for 60 hours except when central station monitoring is provided.
- The following are required **at the time of submittal** to support 24-hour standby time: A copy of UL listing of the central station and a copy of the **completed, signed**, service contract that indicates 2-hour runner service is available 24/7. **Prior to inspection**, submit Central Station Listing for the installation.
- If an emergency generator is supplying backup power, a separate permit may be required for the fuel source. The system shall meet the requirements of NFPA 110. Submit load calculations including everything connected to the generator and fuel supply calculations. The generator shall run 96 hours under load without refueling.

FIRE ALARM PLAN REVIEW SUBMITTAL STANDARD (continued)

SPECIFICATION PACKAGE:

- Provide a test matrix listing all initiating devices (inputs) and all programmed outputs.
- Required manufacturers specifications:
 1. Fire alarm control panel, power supplies and annunciators
 2. Detection devices
 3. Audio/visual devices
 4. System components, modules, relays
 5. Dialer
- Highlight the following information on one copy:
 6. Highlight the standby and alarm current for all components.
 7. Specific model number to be installed
 8. Compatibility listings - document that devices and components are compatible with the panel.
 9. Document devices are compatible with the environment. For example, exterior horn/strobes and FACP's in unheated buildings shall be listed for expected temperature/humidity range. Duct detectors shall be listed for the expected air velocity, etc.

FINAL INSPECTION:

At the time of inspection, the following are required to be on-site in a hardcover binder secured in an approved, obvious location near the FACP. If these are not on site, the system will not be approved and a re-inspection fee will be charged.

- Record of Completion in accordance with NFPA 72
- Set of approved plans including specifications and calculations
- Operation, testing and maintenance manual
- Certificate for Central Station installation if 24-hr standby time was used in the battery calculations