



**NASSAU COUNTY FIRE COMMISSION
OFFICE OF THE FIRE MARSHAL**

Nassau County Public Safety Center

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FIRE MARSHAL BULLETIN

August 4, 2022

Elevator Fire Protection Requirements (Revised from March 2021)

To: Licensed Fire Alarm and Smoke Detection System Contractors

Licensed Fire Sprinkler System Contractors

Fire Protection System Engineers and Designers

Where elevator equipment is located, or its enclosure is configured, such that application of water from sprinklers could cause unsafe elevator operation, means shall be provided to automatically disconnect the main line power supply to the affected elevator and any other power supplies used to move the elevator upon or prior to the application of water. (ASME A-17.1, Safety Code for Elevators and Escalators).

1. Plan submissions involving passenger elevators shall include documentation from the engineer or architect of record that the elevator hoistway is non-combustible and the cab enclosure conforms to the requirements of ANSI/ASME A-17.1, and NFPA 13.

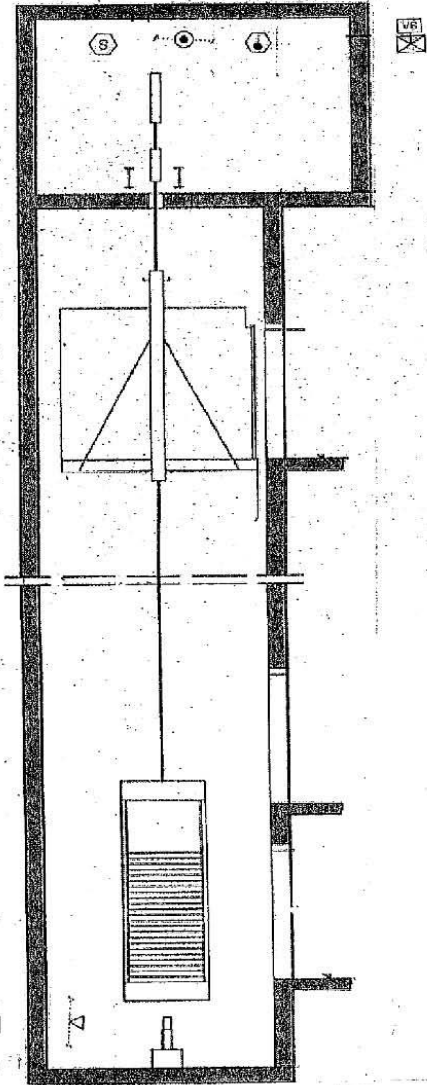
2. If the hoistway / cab enclosure cannot be certified, or the documentation cannot be provided, the elevator shall be protected at the top of the hoistway using upright, pendant, or sidewall discharge heads (ordinary or intermediate temperature) using one of the following options:

- Installation of an approved/listed pre-action system.
- Installation of a normally open solenoid valve (**approved and listed for fire sprinkler use**) in coordination with a smoke detector (to initiate elevator recall), and a heat detector to activate a power shunt to the elevator and solenoid valve.
- The installation of a smoke detector to initiate elevator recall. Installation of a heat detector, located within 2 feet of the sprinkler head, to activate the elevator power shunt trip. Installation of a sprinkler head in the top of the hoistway. The heat detector shall have a lower temperature rating and a higher sensitivity as compared to the sprinkler (e.g. 135° heat detector and a 212° sprinkler head).

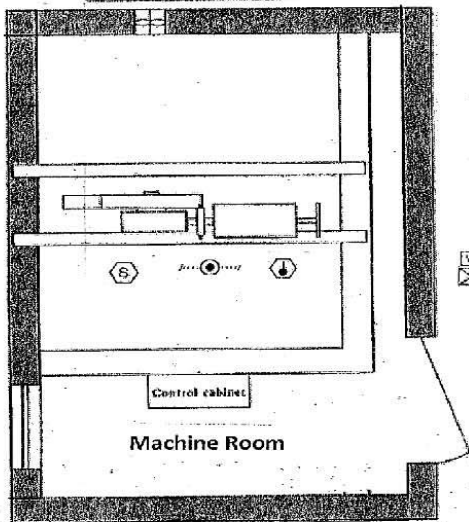
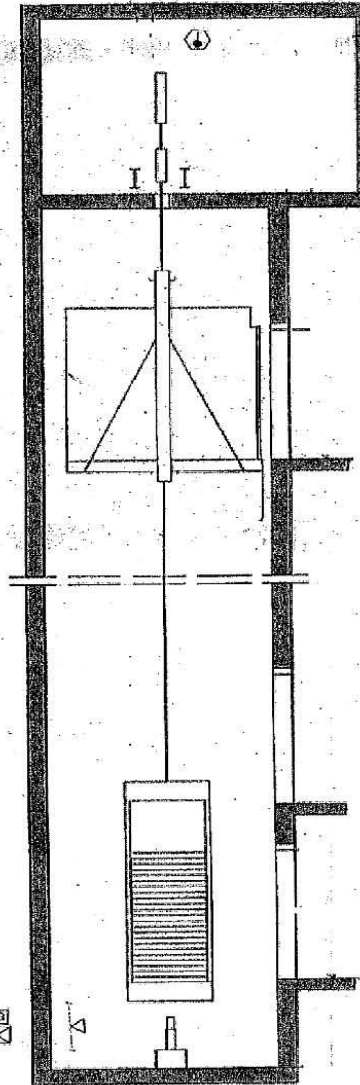
3. All elevator machine rooms shall be protected using one of the above alternative methods.





4. Sidewall sprinkler(s) shall be installed in bottom of each elevator hoist way pit not more than 2 feet above the floor of the pit (hydraulic or traction)
 - A drain point shall be provided for hoist way pit coverage designed as a dry system or pre-action system.
5. Where sprinklers are not present at the top of an elevator hoist way, smoke detection in the top of the hoistway shall not be permitted, unless they are installed to activate the elevator hoistway smoke relief equipment. The detector shall initiate elevator recall. Where smoke relief equipment is not provided, heat detection shall be provided in the top of the hoist way.
6. All freight elevators shall have sprinkler coverage at the top of the hoist way.
7. Limited Use/Limited Application (LU/LA) elevators are exempt from power shutdown requirements. The design of the specific LU/LA elevator enclosure will determine the required fire protection requirements (e.g. sprinkler protection if pit height is six inches or higher; smoke detection if hoist way is enclosed at the top).
8. Provide a monitored shutoff valve outside of the elevator hoistway for sprinkler heads within the hoist way.
9. Provide a monitored shutoff valve outside of the elevator machine room for sprinkler heads within the machine room.
10. All sprinkler risers and returns shall be located outside of the hoistway and machine room. Branch lines in the hoist way shall supply sprinklers at one floor level only.
11. **All elevators serving a building shall be keyed FEO-K1 for fire department access.**
12. Only the elevator lobby, elevator hoistway, elevator machine room, elevator control room smoke detectors (or other automatic detection as permitted by NFPA 72) shall be used to initiate elevator Phase 1 Emergency Recall Operation.
13. A lobby smoke detector shall be located on the ceiling within 21 feet of the centerline of each elevator door within the elevator bank under control of the detector. (Note NFPA 72 exceptions for ceiling heights 15 feet or greater and for ceilings that are other than flat and smooth).
14. Alternate Level Recall shall be provided in the following events:
 - Activation of smoke detectors or other automatic detection located at the designated level lobby
 - Activation of smoke detectors or other automatic detection located in the elevator machine room, elevator machinery space, elevator control space, or elevator control room serving the elevator(s) if such rooms or spaces are located on the designated level.
 - When a sprinkler head is required in an elevator pit a fire detection device(s) shall be installed in the elevator pit as per NFPA 72 section 21.3.7(2). This device is for elevator recall so that the elevator will be recalled up and away from the fire hazard in the elevator pit. A waterflow switch can be used in place of a detection device as per NFPA 72 21.3.3 *Exception*. All the requirements of the exception must be meet. If the ambient conditions prohibit installation of automatic smoke detection used to initiate elevator Phase 1 Emergence Recall, other automatic fire detection initiating devices shall be permitted ar per NFPA 72 section 21.3.9.

Non-Certified –
Hoistway and/or Cab



Certified –
Non-combustible Hoistway
ASME A17.1 Compliant Cab



-  Smoke Detector
-  Heat Detector
-  Sprinkler
-  Valve with Supervisory Switch