

Conveyance Program

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Requirements for Sprinklers and Fire Initiating Devices

The reason for any deviation from these requirements must be provided by the local fire authority to OPS in writing

ASME A17.1-2019 – Sec 2.8.3.3 SPRINKLERS ALLOWED: In machine Room/Space In hoistway Must conform to NFPA 13 NFPA 13-2019 NFPA 13-2019

NFPA 13-2019 TRACTION ELEVATOR SPRINKLERS REQUIRED in pit unless:

Sec 9.3.6.2

 Elevator hoistway is non-combustible and doesn't contain hydraulic fluid

SPRINKLERS REQUIRED in machine room and top of hoistway unless:

Sec 9.3.6.3

- Area is dedicated to and only used to store elevator equipment
- Protected by smoke detector or other automatic fire protection per NFPA 72
- Separated by fire rated construction Sec 9.3.6.7
- Non-circular suspension means (belts), if present, meets UL 62 FT-1 rating

NFPA 13-2019 HYDRAULIC ELEVATOR SPRINKLERS REQUIRED in pit:

Sec 9.3.6.1

FIRE INITIATING DEVICES

ASME A17.1-2019 – Sec 2.27.3.2

DEVICES REQUIRED to initiate Phase 1 Recall:

- In each lobby served by an elevator
- In machine Room/Space
- In hoistway when sprinklers are present
- Must be installed according to NFPA 72

NFPA 72-2019

Sec 21.2 and 21.3

- Emergency control interface must be within 3 ft (1 m) of component controlling function
- Wiring between control unit & emergency control interface must be Class A, B, D, N or X
- Smoke detectors must be listed for the environment
- Heat detectors may replace smoke detectors in pits & hoistways & shall replace smoke detectors in un-sprinkled hoistways
- If ambient conditions prohibit use of smoke detector, heat detector is permitted
- Connected to fire command or designated as fire recall control
- Only lobby, machine room and hoistway device shall recall elevator
- Smoke detectors shall be located in lobby, 21 ft from centerline of each elevator within a bank
- Upon activation of water, visual annunciation at fire control & elevator
- Visual warning at building control or fire control unit
- AHJ approval = supervisory signal instead of alarm signal

NFPA 13-2019

SPRINKLERS REQUIRED in machine room and top of hoistway unless:

Sec 9.3.6.5

 Elevator car and Hoistway are of non- or limited combustibility

SHUNT TRIP

ASME A17.1-2019

Sec 2.8.3.3.2

If sprinklers could affect the elevator operation, a "means" (heat detector or flow switch) complying with NFPA Sec 21.4 are required to automatically disconnect mainline power (shunt trip) upon or prior to the application of water.

NFPA 13-2019

IF SPRINKLERS ARE INSTALLED:

Sec 9.3.6.1

 In <u>pit</u>: sidewall type at ≤ 24" (waterproof wiring per ASME A17.1 – 2.8.3.3.4)

Sec 9.3.6.4 & 9.3.6.5

- In machine room or top of hoistway:
 - Ordinary or intermediate temp type
 - o Upright pendent or sidewall type

NFPA 72-2019

Sec 21.4

 Heat detectors used to shunt shall have lower temp and

higher sensitivity than sprinklers

 When a heat detector is used in hoistway, there may be a delay in activation of the shunt trip to allow the car to return to the designated level prior to water initiation