Colorado Department of Labor and Employment
Division of Oil and Public Safety – Conveyance Program
633 17th Street, Suite 500
Denver, CO 80202-3610

Phone: 303-318-8525
Fax: 303-318-8534
Email: cdle_conveyance@state.co.us
Web: www.colorado.gov/ops

Requirements for Sprinklers and Fire-Initiating Devices

The local fire authority must provide the reason for any deviation from these requirements to OPS in writing.

SPRINKLERS

ASME A17.1-2013
Section 2.8.3.3

SPRINKLERS ALLOWED
- In machine room/space
- In hoistway

Must conform to **NFPA 13**

NFPA 13-2016
Sections 8.15.5.2, 8.15.5.3 and 8.15.5.7

TRACTION ELEVATOR

SPRINKLERS REQUIRED in pit unless elevator hoistway is non-combustible and doesn't contain hydraulic fluid

SPRINKLERS REQUIRED in machine room and top of hoistway unless:
- 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
- Non-circular suspension means (belts), if present, meets UL 62 FT-1 rating

NFPA 13-2016
Section 8.15.5.1

HYDRAULIC ELEVATOR

SPRINKLERS REQUIRED in pit

NFPA 13-2016
Section 8.15.5.5

SPRINKLERS REQUIRED in machine room and top of hoistway unless elevator car and hoistway are of non- or limited combustibility

NFPA 13-2016
Sections 8.15.5.1, 8.15.5.4 and 8.15.5.5

IF SPRINKLERS ARE INSTALLED:
- In **pit**: sidewall type at ≤ 24" (waterproof wiring per ASME A17.1 Section 2.8.3.3.4)
- In **machine room or top of hoistway**:
  - Ordinary or intermediate temp type
  - Upright pendent or sidewall type

FIRE INITIATING DEVICES

ASME A17.1-2013
Section 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 72-2016
Sections 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 unsprinkled 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

SHUNT TRIP

ASME A17.1-2013
Section 2.8.3.3.2

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

NFPA 72-2016
Section 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 (Annex 21.4.2)