
ELEVATORS: BUILDING MATERIALS AND SYSTEMS

Disciplines: Fire and Life Safety

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Division of the State Architect (DSA) documents referenced within this publication are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

PURPOSE

The purpose of this Interpretation of Regulations (IR) is to clarify the construction materials and fire protection systems requirements for elevators and associated equipment.

SCOPE

The design, construction, installation, and alteration of elevators and associated operating equipment submitted to, and reviewed by DSA.

1. PROJECT DESIGN REQUIREMENTS

1.1 Designs shall comply with Title 8 (Elevator Safety Orders) and Title 24, California Code of Regulations (CCR). Because the review for construction and operational permitting crosses state agency jurisdictional boundaries, design professionals (dp) are encouraged to consult with the Cal-OSHA Department of Industrial Safety – Elevator Safety Unit for permitting guidance prior to submitting project plans to the DSA for review.

1.1.1 Plans and specifications submitted to the DSA will be reviewed for compliance with Title 24 only.

1.2 Materials

Elevator hoist ways shall be shaft enclosures consisting of fire barriers constructed in accordance with CBC Section 707 and have an hourly fire-resistance-rating as required by CBC Section 713.4. Materials shall be as allowed based on the building type of construction.

1.3 Electrical Wiring

Electrical wiring shall meet the minimum requirements of the California Electrical Code (CEC) for fire resistive construction, with membrane- and through-penetration protection provided in accordance with CBC section 714 and CEC Article 620.21.

1.4 Automatic Fire Sprinkler Systems

Protection by automatic fire sprinklers shall be in accordance with CBC Section 3005.4.1, and NFPA 13 as adopted and amended in CBC Chapter 35.

Fire sprinklers are not required in the hoistway pits of traction or hydraulic elevators.

1.4.1 Shunt trip

Where fire sprinklers are installed in elevator hoistways, elevator machinery rooms, control rooms, and or control spaces, a shunt trip installed in accordance with NFPA 72 Section 24.1 shall be provided to disconnect the main line power supply to the affected elevator.

1.5 Fire Alarm Requirements

Smoke or heat detection is not required at the top of the elevator hoistway if there is no automatic fire sprinkler located at the top of the hoistway, except for that detection associated with Phase I emergency recall.

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Initiating devices shall be provided when required for Phase I emergency recall operations or for the actuation of elevator hoistway smoke relief equipment.

1.5.1 Smoke detectors serving Phase I emergency recall operations shall only be installed in the elevator lobby, hoistway, machine room, machinery spaces, control room, and control spaces.

1.5.2 Smoke and or heat detectors in elevator hoistways must be installed so that servicing and maintenance of the detector can be achieved from outside the hoistway.

1.6 Emergency Medical Service Elevator

Where buildings are provided with elevators, an emergency medical service elevator complying with CBC Sections 3002.4a through 3002.4.6a shall be provided.

1.6.1 Plans shall include an elevator car detail indicating the interior dimensions, and a dimensioned detail reflecting the ability of the elevator car to contain [1] a 24 inch by 84 inch ambulance gurney in the horizontal position, and [2] two 21 inch circular areas for emergency personnel.

REFERENCES:

2022 Title 24, CCR, Part 2 - California Building Code (CBC)
2022 Title 24, CCR, Part 3 - California Electrical Code (CEC)
2022 California Electrical Code: Article 620

This IR is intended for use by DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is subject to revision at any time. Please check DSA's website for currently effective IRs. Only IRs listed on the webpage at www.dgs.ca.gov/dsa/publications at the time of project application submittal to DSA are considered applicable.