



**Section 2.27**

**EMERGENCY OPERATION AND SIGNALING DEVICES**

Note (2.27): Additional requirements, including those for firefighters' communications systems, may be found in the building code.

**2.27.1 Car Emergency Signaling Devices**

**2.27.1.1 Emergency Communications**

**2.27.1.1.1** A two-way communications means between the car and a location staffed by authorized personnel shall be provided.

**2.27.1.1.2**

- a) Two-way communications shall be directed to a location(s) staffed by authorized personnel who can take appropriate action
- b) If the call is not acknowledged [2.27.1.1.3(c)] within 45 s, the call shall be automatically directed to an alternate on or off-site location.

**2.27.1.1.3** The two-way communication means within the car shall comply with the following requirements:

- a) In jurisdictions enforcing NBCC, Appendix E of ASME A17.1/CSA B44, or in jurisdictions not enforcing NBCC, ICC/ANSI A117.1
- b) A push button to actuate the two-way communication means shall be provided in or adjacent to a car operating panel. The push button shall be visible and permanently identified with the "PHONE" symbol (see 2.26.12.1). The identification shall be on or adjacent to the "PHONE" push button. When the push button is actuated, the emergency two-way communication means shall initiate a call for help and establish two-way communications.
- c) A visual indication on the same panel as the "PHONE" push button shall be provided, that is activated by authorized personnel, to acknowledge that two-way communications link has been established. The visual indication shall be extinguished when the two-way communication link is terminated.
- d) The two-way communication means shall provide on demand to authorized personnel, information that identifies the building location and elevator number and that assistance is required.
- e) After the call acknowledgement signals are sent [2.27.1.1.3(c)], the two way voice communications shall be available between the car and authorized personnel.
- f) The two-way communications, once established, shall be disconnected only when authorized personnel outside the car terminate the call or timed termination occurs. A timed termination by the two-way communication means in the elevator, with the ability to extend the call by authorized personnel, is permitted if voice notification is sent a minimum of 3 min after communication has been established. Upon notification, authorized personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 s of the voice notification.
- g) The two-way communication means shall not use a handset in the car.
- h) The two-way communications shall not be transmitted to an automated answering system. The call for help shall be answered by authorized personnel.
- i) Operating instructions shall be incorporated with or adjacent to the "PHONE" push button.

**2.27.1.1.4** Where the elevator rise is 18 m (60 ft) or more, a two-way voice communication means within the building accessible to emergency personnel shall be provided and comply with the following requirements:

- a) The means shall enable emergency personnel within the building to establish two-way voice communications to each car individually. Two-way voice communication shall be established without any intentional delay and shall not require intervention by a person within the car. The means shall override communications to outside of the building.
- b) Two-way voice communications, once established, shall be disconnected only when emergency personnel outside the car terminates the call or a timed termination occurs. A timed termination by the two-way communication means in the elevator, with the ability to extend the call by authorized personnel, is permitted if voice notification is sent a minimum of 3 min after communication has been established. Upon notification, authorized personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 s of the voice notification.
- c) Once the two-way voice communication has been established, the visual indication [see 2.27.1.1.3(c)] within the car shall illuminate. The visual indication shall be extinguished when the two-way communication is terminated.





d) Operating instructions shall be incorporated with or adjacent to the two-way voice communication outside the car. Instructions shall conform to 2.27.7.3.

**2.27.1.1.5** If the two-way communications means is normally connected to the building power supply, it shall automatically transfer to a source of standby or emergency power as required by the applicable building code or, where applicable, Standard for Health Care Facilities (ANSI/NFPA-99), after the normal power supply fails. The power source shall be capable of providing for illumination of the visual indication [see 2.27.1.1.3(c)] within the car, and the means of two-way communications for at least 4 h; and the audible signaling device (see 2.27.1.2) for at least 1 h.

**2.27.1.1.6**

a) The two-way communications means within the car shall include a means to verify operability of the telephone line, where

- 1) verification of the telephone line operability shall be automatically performed
- 2) verification may be continuous or periodic
- 3) periodic verification shall be at least on a daily basis
- 4) verification shall not require activation of the two-way communication link(s)

If means other than a telephone line (e.g., VOIP, network, intercom, etc.) is used for the two-way communications, similar verification of this equivalent means shall be performed.

b) If the verification means in 2.27.1.1.6(a) determines that the telephone line or equivalent means is not functional, an audible and illuminated visual signal shall be activated. A minimum of one visual and one audible signal shall be provided for each group of elevators controlled by a "FIRE RECALL" switch.

- 1) The visual indicator shall
  - a) be located at the designated landing in the vicinity of the "FIRE RECALL" switch and visible to elevator user(s)
  - b) be labeled "ELEVATOR COMMUNICATIONS FAILURE" in red letters a minimum of 5 mm (0.25 in.) high
  - c) illuminate intermittently
  - d) continue illuminating intermittently until the telephone line or equivalent means is functional
- 2) The audible signal shall
  - a) be 10 dBA minimum above ambient, but shall not exceed 80 dBA measured at the designated landing "FIRE RECALL" switch
  - b) sound at least once every 30 s with a minimum duration of half a second
  - c) continue to sound until silenced by authorized personnel or the telephone line or equivalent means is functional
- 3) A means to silence the audible signal shall be provided and shall be accessible only to authorized personnel. The signal when silenced shall remain silent for a period of no less than 12 hr or until activated by the next failed periodic verification [see 2.27.1.1.6(a)(3)].
- 4) The verification means in 2.27.1.1.6(a) shall continue to monitor the operability of the telephone line or equivalent means while the telephone line or equivalent means is not functional on a continuous basis or periodically with intervals of not more than 5 min.

When the verification determines that the operability of the telephone line or equivalent means has been restored after being nonfunctional, the audible signal shall be silenced unless the signal has already been silenced in accordance with 2.27.1.1.6(b)(3) and the illuminated visual signal shall be extinguished.

**2.27.1.2 Emergency Stop Switch Audible Signal**

When an emergency stop switch (2.26.2.5) is provided, an audible signaling device shall be provided. The audible signaling device shall

- a) have a rated sound pressure rating of not less than 80 dBA nor greater than 90 dBA at 3 m (10 ft)
- b) respond without delay after the switch has been activated
- c) be located inside the building and audible inside the car and outside the hoistway
- d) for elevators with a rise greater than 30 m (100 ft), be duplicated as follows:
  - 1) one device shall be mounted on the car
  - 2) a second device shall be placed at the designated level

