2.8.2.2 Ducts shall be permitted to be installed in the hoistway, machine room, and machinery space for the purpose of heating, cooling, ventilating, and venting these areas only and shall not encroach upon the required clearances.

2.8.2.3 Sprinkler systems conforming to NFPA 13 or the NBCC, whichever is applicable (see Part 9), shall be permitted to be installed in the hoistway, machine room, and machinery spaces, subject to the requirements of 2.8.2.3.1 through 2.8.2.3.4.

2.8.2.3.1 All risers and returns shall be located outside these spaces. Branch lines in the hoistway shall supply sprinklers at not more than one floor level. When the machine room is located above the roof of the building, risers, return pipes, and branch lines for the machine room sprinkler(s) shall be permitted to be located in the hoistway between the top floor and the machine room.

(05a) **2.8.2.3.2** In jurisdictions not enforcing the NBCC, means shall be provided to automatically disconnect the main line power supply to the affected elevator upon or prior to the application of water from sprinklers located in the machine room or in the hoistway more than 600 mm (24 in.) above the pit floor.

(a) This means shall be independent of the elevator control and shall not be self-resetting.

(b) Heat detectors and sprinkler flow switches used to initiate main line elevator power shutdown shall comply with the requirements of NFPA 72.

(c) The activation of sprinklers outside of the hoistway or machine room shall not disconnect the main line elevator power supply.

2.8.2.3.3 Smoke detectors shall not be used to activate sprinklers in these spaces or to disconnect the main line power supply.

2.8.2.3.4 In jurisdictions not enforcing the NBCC, when sprinklers are installed in the hoistway, all electrical equipment, except earthquake protective devices conforming to 8.4.10.1.2(d), located less than 1 225 mm (48 in.) above the pit floor, shall be

(a) weatherproof (NEMA4)

(b) wiring shall be identified for use in wet locations in accordance with the requirements in NFPA 70

2.8.2.4 Other pipes or ducts conveying gases, vapors, or liquid and not used in connection with the operation of the elevator shall not be installed in any hoistway, machine room, or machinery space. Where a machine room or hoistway, or both, extend above the roof of a building, pipes shall be permitted from roof drains to the closest point where they can be diverted out of this space. Pipes shall be covered to prevent leakage or condensate from entering the machine room or hoistway.

2.8.2.5 Where permitted and provided, pipes, drains, and tanks, or similar equipment that contains liquids, shall not be located directly above the elevator equipment and shall not encroach upon the required clearances in the hoistway, machine room, or machinery spaces.

2.8.3 Electrical Heaters

Listed/certified electrical heaters shall be permitted.

2.8.4 Air Conditioning

Air conditioning equipment is permitted to be installed in machine rooms or machinery spaces for the purpose of cooling these areas only, subject to the requirements of 2.8.4.1 through 2.8.4.5.

2.8.4.1 Air conditioning equipment shall not be located directly above elevator equipment.

2.8.4.2 The clear headroom below suspended air conditioning equipment shall conform to 2.7.4.

2.8.4.3 Means shall be provided to collect and drain condensation water from these spaces. Condensation drains shall not be located directly above elevator equipment. Drains connected directly to sewers shall not be installed.

2.8.4.4 Safe and convenient access within the elevator machine room shall be provided to the air-conditioning equipment for servicing and maintaining.

2.8.4.5 There shall be no exposed gears, sprockets, belts, pulleys, or chains.

NOTES (2.8.4):
(1) See 2.8.2.2 for requirements for duct work.
(2) These requirements do not pertain to air-conditioning equipment used to cool selective elevator equipment.

2.8.6 Miscellaneous Equipment (05a)

Enclosed moving, rotating, hanging machinery, equipment, stationary decorative lighting, stationary signage or other stationary special effects devices, securely attached to either one or more of the car, counterweight, or hoistway shall be permitted, provided that the elevator, including the equipment and devices, conforms to 2.4, 2.5, 2.8.1, 2.14.2.1.1, 2.15.7, 8.2.2.1, and 8.2.9.1. Any unenclosed moving, rotating, or hanging machinery or equipment, attached to the exterior of the car or counterweight, interior of the hoistway, exterior of the car, or any other elevator equipment in the hoistway is prohibited unless it is used in conjunction with the designed use of the elevator.

SECTION 2.9
MACHINERY AND SHEAVE BEAMS, SUPPORTS, AND FOUNDATIONS

2.9.1 Beams and Supports Required

2.9.1.1 Machines, machinery, and sheaves shall be so supported and maintained in place as to prevent

when Phase I Emergency Recall Operation is in effect.

2.27.3.1.6 When a "FIRE RECALL" switch is in the "ON" position all cars controlled by the switch shall operate as follows:

(a) A car traveling towards the designated level shall continue nonstop to the designated level and power-operated doors shall open and remain open.

On cars with two entrances, if both entrances can be opened at the designated level, only the doors serving the lobby where the "FIRE RECALL" switch is located shall open and remain open.

(b) A car traveling away from the designated level shall reverse at or before the next available landing without opening its doors and proceed to designated level.

(c) A stopped car shall have the in-car stop switch (see 2.26.2.21) and the emergency stop switch in the car (see 2.26.2.5) when provided, rendered inoperative as soon as the car moves away from the landing. A moving car shall have the in-car stop switch and the emergency stop switch in the car when provided, rendered inoperative without delay. Once the emergency stop switch in the car and the in-car stop switch have been rendered inoperative, they shall remain inoperative while the car is on Phase I Emergency Recall Operation. All other stop switches required by 2.26.2 shall remain operative.

(d) A car standing at a landing other than the designated level, with the doors open and the in-car stop switch and the emergency stop switch in the car when provided, in the run position, shall conform to the following:

(1) Elevators having automatic power-operated horizontally sliding doors shall close the doors without delay and proceed to the designated level.

(2) Elevators having power-operated vertically sliding doors provided with automatic or momentary pressure closing operation per 2.13.3.4 shall have the closing sequence initiated without delay in accordance with 2.13.3.4.1, 2.13.3.4.2, 2.13.3.4.3, and 2.13.3.4.5, and the car shall proceed to the designated level.

(3) Elevators having power-operated doors provided with continuous pressure closing operation (see 2.13.3.2), or elevators having manual doors, shall be provided with a visual and audible signal system [see 2.27.3.1.6(h)] to alert an operator to close the doors and shall, when the doors are closed, proceed to the designated level. Sequence operation, if provided, shall remain effective.

(e) Door reopening devices for power-operated doors that are sensitive to smoke or flame shall be rendered inoperative without delay. Door reopening devices not sensitive to smoke or flame (e.g., mechanically actuated devices) are permitted to remain operative. Door closing for power-operated doors shall conform to 2.13.5.

(f) All car and corridor call buttons shall be rendered inoperative. All call-registered lights and directional lanterns shall be extinguished and remain inoperative. Car position indicators, where provided, shall remain operative. Where provided, landing position indicators shall be extinguished and remain inoperative, except at the designated level and the building fire control station, where they shall remain operative.

(g) Where provided on elevators with vertically sliding doors, corridor door open and door close buttons shall remain operative.

(h) An illuminated visual and audible signal system shall be activated. The visual signal shall be one of the symbols shown in Fig. 2.27.3.1.6(h) and located on the car-operating panel. The entire circular or square area or the outline of the hat, or the outline of the area shown in Fig. 2.27.3.1.6(h) shall be illuminated. The visual signal shall remain activated until the car is restored to automatic operation. When the door is open, the audible signal shall remain active until the door is closed. When the door is closed, the audible signal shall remain active for a minimum of 5 s. The audible signal shall not be active when the car is at the recall level. (04)

(i) A car stopped at a landing shall have the in-car door open button rendered inoperative as soon as the car moves away from the landing. The in-car door close button shall remain inoperative when a car stops to reverse direction. Once the in-car door open button has been rendered inoperative, it shall remain inoperative until the car has returned to the designated level.

(j) Where an additional "FIRE RECALL" switch is provided, both "FIRE RECALL" switches shall be in the "ON" position to recall the elevator to the designated level if the elevator was recalled to the alternate level (see 2.27.3.2.4).

(k) To remove the elevator(s) from Phase I Emergency Recall Operation, the "FIRE RECALL" switch shall be rotated first to the "RESET," and then to the "OFF" position, provided that

(1) the additional two-position "FIRE RECALL" switch, where provided, is in the "OFF" position

(2) no fire alarm initiating device is activated (see 2.27.3.2).

(l) Means used to remove elevators from normal operation, other than as specified in this Code, shall not prevent Phase I Emergency Recall Operation.

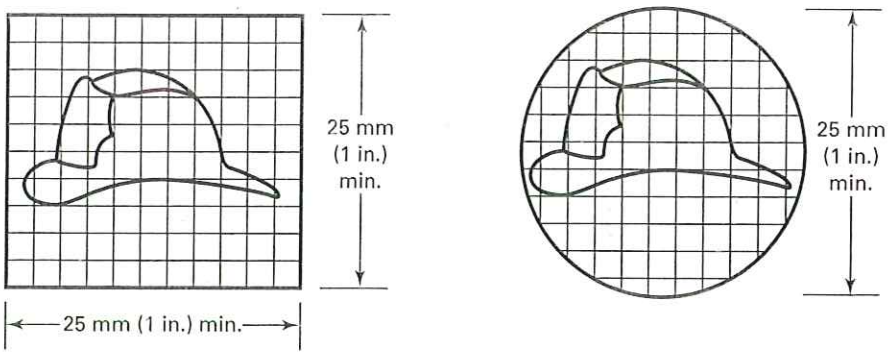
(m) No device, which measures load, shall prevent operation of the elevator at or below the capacity and loading required in 2.16.

2.27.3.2 Phase I Emergency Recall Operation by Fire Alarm Initiating Devices

2.27.3.2.1 In jurisdictions not enforcing the NBCC, fire alarm initiating devices used to initiate Phase I Emergency Recall Operation shall be installed in conformance with the requirements of NFPA 72, and shall be located

(a) at each floor served by the elevator

(b) in the associated elevator machine room



GENERAL NOTE: Grid is for scaling purposes only.

Fig. 2.27.3.1.6(h) Visual Signal

(c) in the elevator hoistway, when sprinklers are located in those hoistways

2.27.3.2.2 In jurisdictions enforcing the NBCC, automatic Emergency Recall Operation shall be permitted when the following devices, complying with the requirements in the NBCC, initiate the operation:

(a) smoke detectors installed in each elevator lobby, or the building fire alarm system

(b) smoke detectors installed in the elevator lobby at the designated level, if that floor area is not sprinklered throughout

(c) smoke detectors installed in the machine room if the machine room is sprinklered

2.27.3.2.3 Phase I Emergency Recall Operation to the designated level shall conform to the following:

(a) The activation of a fire alarm initiating device specified in 2.27.3.2.1 or 2.27.3.2.2(a) at any floor, other than at the designated level, shall cause all elevators that serve that floor, and any associated elevator of a group automatic operation, to be returned nonstop to the designated level.

(b) The activation of a fire alarm initiating device specified in 2.27.3.2.1(b) or 2.27.3.2.2(c) shall cause all elevators having any equipment located in that machine room, and any associated elevators of a group automatic operation, to be returned nonstop to the designated level. If the machine room is located at the designated level, the elevator(s) shall be returned nonstop to the alternate level.

(c) The activation of a fire alarm initiating device specified in 2.27.3.2.1(c) shall cause all elevators having any equipment in that hoistway, and any associated elevators of a group automatic operation, to be returned nonstop to the designated level, except that initiating device(s) installed at or below the lowest landing of recall shall cause the car to be sent to the upper recall level.

(d) The Phase I Emergency Recall Operation to the designated level shall conform to 2.27.3.1.6(a) through (m).

2.27.3.2.4 Phase I Emergency Recall Operation to an alternate level (see 1.3) shall conform to the following:

(a) the activation of a fire alarm initiating device specified in 2.27.3.2.1(a) or 2.27.3.2.2(b) that is located at the designated level, shall cause all elevators serving that level to be recalled to an alternate level, unless Phase I Emergency Recall is in effect (05a)

(b) the requirements of 2.27.3.1.6(f), (j), and (m)

(c) the requirements of 2.27.3.1.6(a), (b), (c), (d), (e), (g), (h), (i), (k), and (l), except that all references to the "designated level" shall be replaced with "alternate level"

2.27.3.2.5 The recall level shall be determined by the first activated fire alarm initiating device for that group [see 2.27.3.2.1 or 2.27.3.2.2]. (05a)

If the car(s) is recalled to the designated level by the "FIRE RECALL" switch(es) [see also 2.27.3.1.6(j)], the recall level shall remain the designated level.

2.27.3.2.6 When a fire alarm initiating device in the machine room or hoistway initiates Phase I Emergency Recall Operation, as required by 2.27.3.2.3 or 2.27.3.2.4, the visual signal [see 2.27.3.1.6(h) and Fig. 2.27.3.1.6(h)] shall illuminate intermittently only in a car(s) with equipment in that machine room or hoistway. When activated, heat detector [2.27.3.2.1(d)] in the machine room shall cause the visual signal [see 2.27.3.1.6(h) and Fig. 2.27.3.1.6(h)] to illuminate intermittently only in a car(s) with equipment in that machine room. (04)

2.27.3.3 Phase II Emergency In-Car Operation. A three-position ("OFF," "HOLD," and "ON," in that order) key-operated switch shall be labeled "FIRE OPERATION"; provided in an operating panel in each car; and shall be readily accessible. The label "FIRE OPERATION" lettering shall be a minimum of 5 mm (0.25 in.) high in red or a color contrasting with a red