STATE OF WISCONSIN
Department of Safety and Professional Services

Industry Services Division
Elevator (Conveyance) Safety Program
141 NW Barstow St, 4th Floor Waukesha,
WI. 53188-3789

Email: dsps@wisconsin.gov
Web: http://dsps.wi.gov

Two-Way Voice Communication in Passenger Elevators and Vertical Platform Lifts

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Subject of revision: Reminder added to requirement 12 regarding monitoring of an elevator telephone line regardless of the type of telephone system (traditional landline, cellular, VoIP, etc.). Note added to requirement 14 regarding problems that may occur when converting traditional landlines to another system. Added section regarding companies and individuals authorized to perform work on elevator and lift telephones and systems. Added new section regarding sharing of telephone lines with other building lines or systems. Added statement to section about authorized personnel answering calls in 24-hour buildings to address answering personnel that may leave the building during an emergency.

Background

This document describes the Wisconsin Administrative Code requirements for telephones in passenger elevators and vertical platform lifts in buildings other than one- or two-family dwellings. It is intended to address the most common issues such as whether a two-way voice communication device is required, the type of device that may be required, how the device is to make calls and how and where calls are to be answered.

Requirements for communication in elevators and lifts have changed considerably over the years due to changes in the adopted national standards and as a result of changes in technology. Codes have also changed in response to cases of passenger entrapments and increased recognition of the needs of the elderly and persons with disabilities when using elevators and lifts without assistance.

Applicable Wisconsin Administrative Codes and Statutes

Wisconsin DSPS Administrative Code Ch. SPS 318, Elevators, Escalators and Lift Devices – currently the April 2021 edition (containing insignificant changes to the May 2020 edition – the last set of significant changes).

Previous DSPS, Comm (Dept. of Commerce), ILHR (Dept. of Industry, Labor and Human Relations) and Ind (Industrial Commission) codes in effect when the elevator, platform lift or two-way communication device was installed.

Adopted ASME A17.1 / CSA B44 Safety Code for Elevators and Escalators - currently the 2016 edition (referred to here as A17.1).

Adopted ASME A18.1 Safety Standard for Platform lifts and Stairway Chairlifts - currently the 2017 edition.

Adopted ICC A117.1 American National Standard for Accessible and Usable Buildings and Facilities – currently the 2009 edition.

Development of Requirements

For many years commercial elevators were operated by trained elevator operators who would open and close the car and landing doors and control the direction of travel to the destination. Once near the destination the operator would slow and stop the elevator level or nearly level with the landing to provide for safe exit and entry of passengers.

Eventually almost all older control systems and elevator operators were replaced by automatic systems responding to pushbutton requests initiated directly by passengers. The August 1926 edition of Ind 4 was

the first Wisconsin elevator code to require elevators having automatic operation to have an alarm bell for passengers to ring if in need of help.

An alarm bell is limited in its effectiveness by the range in which the bell may be heard, by the ability and willingness of individuals who may hear the bell to respond to it appropriately and by the bell not indicating the nature or severity of the problem. To address these limitations, the **October 1976** edition of the Wisconsin Ind 4 code required new elevators and elevators undergoing some modernization projects to be equipped with a means of two-way voice communication in addition to the alarm bell.

Two-way voice communication provides several advantages. Two-way voice communication provides a means to reach personnel trained to provide help in an emergency. Two-way voice communication allows a passenger to describe how the elevator is operating, whether it may be stopped between floors, is moving erratically or running with doors open, as examples. This information may be necessary for dispatching elevator or emergency rescue personnel and for prioritizing the response if there are multiple emergencies in an area at one time (during a widespread power outage for example). If emergency communication is initiated due to a medical emergency, medical care may be dispatched promptly.

Voice communication back into the elevator may alleviate stress or panic for passengers, provide them with information necessary to prevent an attempt at a dangerous or even fatal self-rescue, provide them with updates as to the status of the elevator, instructions for assisting trained personnel in evacuating them or instructions for administering care for a medical condition.

Beginning with the March 1994 edition of the Wisconsin ILHR 18 elevator code, requirements have also included two-way communication for new vertical platform lifts for the same reasons. Like an elevator, a vertical platform lift that has stopped between landings will leave passengers trapped and in need of assistance. Like an elevator, a vertical platform lift may be used at a time and location where no one would hear or properly respond to an alarm bell.

Initially, elevator and lift telephones were common wall-mounted telephones having a cord, handset and touch-tone keypad. The emergency number to be dialed was posted on or near the telephone. Although telephones of this type may remain in elevators if code-compliant when first installed, they rarely remained in place due to misuse, damage and theft of the telephone components. The handsets were difficult to lift, hold and dial for persons with arthritis or other limited use of hands or fingers. They were difficult to use for the visually impaired and when lighting may be greatly reduced due to power failure. They did not serve the deaf or hearing-impaired.

In response to the need for durable, tamper-proof emergency telephones usable for a wider range of the elevator and lift-reliant population, single-button programmable telephones were developed and have been required by code for new installations and when replacing existing elevator and lift telephones.

The increasing use of personal cellular telephones has not alleviated the need for telephones in elevators and platform lifts in commercial buildings. The strength of signals from personal cell phones may vary with the provider, building location, model of cell phone, type of elevator or lift or type of building construction. Cell phones may not be adequately charged to operate as long as needed in an emergency. Many people choose not to carry a cell phone or may not have the vision, hearing or manual dexterity necessary to use a cell phone.

How cellular technology may be part of elevator or lift telephone system is addressed in this article.

Current Requirements

Note: The requirements below apply to new telephone installations in new and existing elevators and lifts except requirement 12 applies only in elevators if it applied when the elevator was new or where it is required by ASME A17.1 as part of certain modernizations. Codes in effect at the time a telephone or means of signaling or communication was installed in an older elevator or lift may differ. See Appendix A for codes in effect based on original installation dates.

The adopted national A17.1 standard, section 2.27.1 addresses two-way communications. Most of the A17.1 code is written in *prescriptive* language including how the code requirement is to be measured or achieved. The section of the code addressing emergency communications is written in *performance* language instead, that is, it describes the required outcome but not necessarily how it must be achieved.

The national standard in effect for accessibility for commercial buildings and facilities is the ICC A117.1. This includes additional requirements for use of buildings and elements by persons with a wide range of abilities. A system or device must meet the requirements of both the A17.1 and the ICC A117.1. The

requirements have changed over the years with the current requirements summarized as follows (see each code section referenced for exact code language and details):

1). The device must be activated by one push button. The device may not use a handset. If a user of the telephone must press and hold the button for a length of time other than the time they would expect to bring about any other elevator function, clear instructions must be provided.
A17.1, 2.27.1.1.3 (b) and (g).

2). At one time elevator telephone cabinets with a spring-loaded door and a very small handle were common. Per modern accessibility codes, accessing or operating the button must be performed without requiring tight grasping or pinching with the hand or twisting of the wrist. The force required to activate shall be 5.0 lbs maximum. This prohibits locating a new emergency telephone in an older cabinet with a door requiring such force to open.
ICC A117.1, 309.4.

3). The button must be located in or adjacent to the car operating panel. The highest operable part must be between 35" and 48" above the floor of the passenger elevator or vertical platform lift.
A17.1, 2.27.1.1.3 (b) and ICC A117.1, 407.4.10.1.

4). The button must be identified as "PHONE" using tactile characters and symbols. All operating instructions must be included in both formats.
A17.1, 2.27.1.1.3 (b) and (i) and ICC A117.1, 407.4.10.2.

5). Actuating the device must initiate a call for help and establish two-way voice communication with authorized personnel who can take appropriate action. The device may not reach an answering system. The answering system may not require the person placing the call to listen to voice prompts including but not limited to “Say: *Emergency*” or “Say: *Inspection*” to avoid hang-up. The person could have a hearing impairment and not hear such a prompt. The answering system may not hang up on the caller until the person answering has established communication to light the visual indication in Item 8. below, has evaluated the situation and has taken appropriate action.
A17.1, 2.27.1.1.2 (a) and 2.27.1.1.3 (b) and (h).

6). If the device does not reach authorized personnel within 45 seconds, the call must automatically be directed to another on- or off-site location to reach authorized personnel.
A17.1, 2.27.1.1.2 (b).
By combining the information in requirements 5). and 6)., it is acceptable for the device to reach an automated system as long as the device reaches authorized personnel within 45 seconds.

7). The two-way voice communication means must provide the authorized personnel with the location of the building, the elevator (or lift) number (or location) and a request for assistance. Note: This is typically on a message recorded in the telephone and played for the authorized personnel once the call is answered.
A17.1, 2.27.1.1.3 (d).

8). The authorized personnel must activate a visual indication on the "PHONE" panel in the elevator or platform lift acknowledging that the call has been established. Note: This is mostly for the benefit of the hearing impaired.
A17.1, 2.27.1.1.3 (c).

9). After the call has been established and the acknowledgement sent to the car or platform, two-way voice communication shall be available between the car or platform and the authorized personnel. The volume must be adequate, considering background noise, to provide for the required communication.
A17.1, 2.27.1.1.3 (e).

10). The two-way voice communications shall be ended only when the authorized personnel terminate the call or after a minimum of 3 minutes. See this section for details.
A17.1, 2.27.1.1.3 (f).

11). The visual indicator described in requirement 8). above may be extinguished only after the two-way voice communication is terminated.

A17.1, 2.27.1.1.3 (c).

12). For elevators only (not required for vertical platform lifts) a means shall be provided to verify the operability of the means of two-way voice communications. The verification must occur automatically and at least daily. This is required regardless of the type of telephone system in the building.
A17.1, 2.27.1.1.6 and SPS 318.1802(10)

13 a). For elevators having travel of *less than 60 feet* and for vertical platform lifts, any need to re-establish two-way voice communication once a call has been terminated is only required to be available to persons in the elevator or lift.

13 b). For elevators having travel of *60 feet or more*, a means must be provided for emergency personnel within the building to establish two-way voice communication to each elevator individually. This must occur without action by a person in the elevator. This must override attempts by a person in the elevator to re-establish two-way voice communication to authorized personnel outside the building.
A17.1, 2.17.1.1.4

The 60 foot travel is an important distinction. For elevators and platform lifts described in requirement 13 a), there is no requirement for a means to call back into the elevator or platform lift. If two-way voice communication is to be re-established, it is only required to be re-established by a person in the elevator or lift. This makes use of a line-seizure device or similar switching system more likely to comply and makes a dedicated telephone line for the elevator or lift (and associated cost) less likely to be necessary.

For elevators described in requirement 13 b). with travel of 60 feet or more, the need to provide a means for personnel on-site to re-establish voice communication to each elevator may require dedicated telephone lines or other switching means or unique equipment to allow establishing two-way communication.

The 60 foot travel limit is not affected by the number of stories or the location of the stories related to grade level for the building or structure. Travel is measured from the lowest landing served to the uppermost landing served.

Note: See below for more information about sharing telephone lines.

14). If any components necessary for the operation of the two-way voice communication system are powered by commercial power, transfer to an alternate power source must take place upon failure of the normal power source. The alternate power source must provide for operation of the two-way voice communication system as described in requirements 1 through 13 for at least 4 hours.
A17.1, 2.27.1.1.5.

Note: A traditional landline (POTS/PSTN) or newer cellular, VoIP (Voice over Internet Protocol), PBX (Private Branch Exchange), satellite or other technology may be utilized. Changing from one of these systems to another must not negatively affect the operation of the elevator or lift telephone and must maintain compliance with these requirements. Common problems have included the inability to meet requirement 12 for telephone line monitoring if required at the time of the telephone installation, difficulty providing operating voltage for normal telephone operation and difficulty meeting requirement 14 for 4-hour alternate power operation. Changing the telephone system from one type to another may require replacing an existing telephone with a compatible telephone.

Licensing Requirements to Work on Elevator and Lift Telephones and Telephone Systems

Only properly licensed individuals employed by properly licensed elevator contractors or individuals having elevator mechanic-restricted or lift mechanic-restricted licenses and employed by the elevator owner may perform work inside elevator or lift car or platform operating panels or work in elevator or lift controller enclosures.

Companies and individuals may alter building telephone systems without elevator contractor and individual licenses if they are only working outside elevator or lift controller and car or platform operating panels and controller enclosures.

Sharing Elevator or Lift Telephone Lines with Other Elevators or Lifts

Whether an elevator or lift may share a line with another elevator or lift is not addressed in the code. The operation of telephones that share a line is not part of acceptance or periodic testing. The telephones are tested one at a time so each telephone will pass inspection if it functions as required.

Sharing Elevator or Lift Telephone Lines with Other Building Telephones, Devices or Systems

The activation of an elevator or lift telephone may cause the telephone to seize or capture a line normally used for other telephone use, a fax machine or another device or system. An elevator or lift telephone may *not* seize a line required to be dedicated to a fire alarm system, an area or refuge or another emergency system. Conversely, those systems or devices may not seize a line for an elevator or lift telephone. This has been particularly problematic with some of the newer telephone systems.

Authorized Personnel for Answering Passenger Elevator or Vertical Platform Lift Calls

Telephones in elevators and vertical platform lifts to reach persons trained to take appropriate action in an emergency.

In Buildings With 24-Hour Staffing

In buildings where authorized personnel are trained to respond to an emergency in an elevator or vertical platform lift at any time (24 hours/day, 7 days/week including holidays), calls are required to reach those trained individuals. Such authorized personnel are common in hospitals (information desk or building superintendent for example), nursing homes (nurse's station), hotels (front desk), some office and apartment buildings (security desk) and college campuses and other campuses (campus police or campus security).

Such calls may *not* be directed to one of these locations if the personnel at that location will leave the building during a fire event without first ensuring all elevator telephone calls have been responded to and the elevators have been evacuated.

In Buildings Without 24-Hour Staffing

In buildings that do not have authorized personnel on site 24 hours/day, 7 days/week including holidays, calls from elevators and vertical platform lifts must reach someone trained to take appropriate action in an emergency. For after hours calls to reach someone who can take appropriate action, such calls must go to authorized personnel off-site, commonly to a telephone answering service, security company or elevator company.

Elevator or platform lift calls may <u>not</u> go only to an individual or telephone number affiliated with the owner or the organization for multiple reasons.

1). Individual(s) at that number may be unavailable at times. This has been suggested where a church has a pastor, caretaker or trustee willing to take such calls. This has been suggested where an apartment building or other building has an on-site or off-site manager. An individual intending to be available 24/7 via a personal cellular telephone or with call forwarding may not always be available, may not have cell service everywhere or may have a discharged battery.

2). Individual(s) expected to answer all calls from the elevator or lift telephone may be the person(s) stuck in the elevator or lift after hours.

3). Individual(s) not part of an answering service may be pre-occupied and unable to locate the appropriate elevator personnel to respond appropriately to the call. A delay in receiving or responding to an emergency call is not taking appropriate action.

911 or Other Local Emergency Service as Authorized Personnel

A local police or fire department may *with permission* accept calls from elevator or platform lift emergency telephones. Many local services may accept such calls while others may have an ordinance or policy prohibiting such calls. Permission to direct calls to the local emergency service would include the number the service would require the call to go to. In some communities, calling 911 from an elevator or lift telephone may be a misdemeanor and subject to fines or other penalties.

Appendix A

Wisconsin Elevator Communications History
August 12, 1926 – December 31, 2008

For installations of new elevators and lifts or new communication means in existing elevators and lifts, the code requirements on a particular date were in effect until the date of the next code change.

August 12, 1926, Elevator Code Order 475(b):

Every automatic push button elevator shall be provided with an emergency call bell in the caretaker's office, with a properly placarded push button in the car.

October 1930, Elevator Code Order 475(b):

Every automatic push button elevator shall be provided with an emergency call bell at some point within hearing range of a caretaker, with a properly placarded push button in the car.

September 1944, Elevator Code 475(b)

Every automatic push button elevator shall be provided with an emergency call bell with a properly placarded push button in the car.

April 1957, Ind 4.75(2):

Every automatic push button elevator shall be provided with an emergency call bell with a properly placarded push button in the car.

October 1964, Ind 4.75(2):

Every automatic push button elevator shall be provided with an emergency call bell with a properly placarded push button in the car. This call bell shall not be less than 6" in diameter located inside the building and audible outside the hoistway. Only one bell is required for a group of elevators if operable from all cars in the group.

October 1976, Ind 4.75(4) New installations:

Elevators which are operated at any time without a designated operator in the car shall be provided with the following signal devices.

(a) In all buildings other than private residences, such elevators shall be provided with signal systems conforming to 1. and 2.

1. An electric bell operable from the car, not less than 6" in diameter located inside the building and audible outside the hoistway. Only one bell operable from all cars shall be permitted to be used for a group of elevators.

2. Means of two-way conversation from each elevator to a readliy-accessible point outside the hoistway.

a. *Exception:* Elevators in buildings having a height from the lowest to the highest elevator landing of not more than 70 feet providing the distance between any adjacent landings does not exceed 15 feet.

b. *Exception:* When the means of communication with an approved service permits two-way conversation.

3. The bell and/or means of two-way conversation required by 1. and 2. shall automatically transfer from the normal building power supply to an approved source of emergency power within 10 seconds after the normal building supply power fails. The emergency power source shall be capable of providing for the operation of the bell for at least one hour and the means of two-way conversation for at least 4 hours.

(b) Elevators which are not provided with a telephone connected to a central exchange system or internal exchange system which is manned 24 hours a day shall in addition to (a) be provided with at least one of the emergency signal devices specified in 1. or 2.

1. An electrical alarm bell not less than 6" in diameter operable from inside the car and enclosed in a weather proof enclosure marked ELEVATOR EMERGENCY – CALL POLICE in letters not less than 2" high. The alarm bell shall be mounted on the outside of the building near the main entrance and located so that the sign can be read from the adjacent sidewalk. One outside alarm bell operable from all cars shall be permitted to be used for a group of elevators.

2. Means within the car for communicating with or signaling to a police, fire, security or similar dispatch service which operates 24 hours each day.

3. An emergency power system conforming to the requirements of (a) 3. shall be provided to supply the bell and / or means of communication specified in 1. and 2.

4. *Exception:* Paragraph (b) shall not apply to apartment, hotel or other buildings in which attendants or tenants are continuously in the building and available to take action in case the emergency signal required by (a) is operated.

January 1983, ASME A17.1 (1980), 211.1, Car Emergency Signaling Devices

Elevators shall be provided with the following signaling devices:

(a) In all buildings the elevator shall be provided with the following:

(1) An audible signaling device, operable from the emergency stop switch and from a switch marked "ALARM" which are located in or adjacent to each car operating panel. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.

(2) Means of two-conversation between each elevator and a readily assessable point outside the hoistway (Telephone, intercom, etc.)
If the audible signaling device, or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of emergency power within 10 seconds after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device for at least 1 hr. and the means of two-way conversation for at least 4 hr.

***Exception #1,* [Ind 4.35(1)]**: Elevators having a height from the lowest to the highest landing of not more than 70 feet providing the distance between any adjacent landing does not exceed 15 feet.

***Exception #2,* [Ind 4.35(2)]**: When the means of communication with an approved service permits two-way conversation.

(b) In buildings in which a building attendant, building employee or watchman is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with <u>one</u> of the following emergency signaling devices:

(1) A telephone connected to a central exchange system.

(2) A weatherproof signaling device with a minimum sound rating of 80 db operated from the alarm switch and the emergency stop switch inside the car and identified "ELEVATOR EMERGENCY – CALL POLICE", in letters not less than 2 in. high. The device shall be mounted on the outside of the building near the main entrance and located so that the sign can be read from the entrance sidewalk. Only one outside signal is required if operable from all cars of the type specified within the building.
An emergency power system shall be provided conforming to the requirements of Rule 211.1(a).

(3) Means within the car for communicating with or signaling to an approved emergency service which operates 24 hours each day.

August 1988, ASME A17.1, 211.1 (1984), Car Emergency Signaling Devices (no changes to these requirements in ILHR 18.33)

Elevators shall be provided with the following signaling devices:

(a) In all buildings the elevator shall be provided with the following:

(1) An audible signaling device, operable from the emergency stop switch and from a switch marked "ALARM" which are located in or adjacent to each car operating panel. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.

(2) Means of two-conversation between each elevator and a readily assessable point outside the hoistway (Telephone, intercom, etc.).

(3) If the audible signaling device, or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of stand-by (emergency) power within 10 seconds after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device for at least 1 hr. and the means of two-way conversation for at least 4 hr.

(b) In buildings in which a building attendant, building employee or watchman is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with one of the following emergency signaling devices:

(1) A telephone connected to a central exchange system.

(2) A weatherproof signaling device with a minimum sound rating of 80 db operated from the alarm switch and the emergency stop switch inside the car and identified "ELEVATOR EMERGENCY – CALL POLICE", in letters not less than 2 in. high. The device shall be mounted on the outside of the building near the main entrance and located so that the sign can be read from the entrance sidewalk. Only one outside signal is required if operable from all cars of the type specified within the building.
A stand-by (emergency) power system shall be provided conforming to the requirements of Rule 211.1(a).

(3) Means within the car for communicating with or signaling to an approved emergency service which operates 24 hours each day.

March 1994, ASME A17.1, 211.1 (1990), Car Emergency Signaling Devices

Elevators shall be provided with the following signaling devices:

(a) In all buildings the elevator shall be provided with the following:

(1) An audible signaling device, operable from the emergency stop switch and from a switch marked "ALARM" which are located in or adjacent to each car operating panel. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.

(2) Means of two-conversation between each elevator and a readily assessable point outside the hoistway (Telephone, intercom, etc.).

(3) If the audible signaling device, or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of stand-by (emergency) power within 10 seconds after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device for at least 1 hr. and the means of two-way conversation for at least 4 hr.

(b) In buildings in which a building attendant, building employee or watchman is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with one of the following emergency signaling devices:

(1) A telephone connected to a central exchange system.

(2) A weatherproof signaling device with a minimum sound rating of 80 db operated from the alarm switch and the emergency stop switch inside the car and identified "ELEVATOR EMERGENCY – CALL POLICE", in letters not less than 2 in. high. The device shall be mounted on the outside of the building near the main entrance and located so that the sign can be read from the entrance sidewalk. Only one outside signal is required if operable from all cars of the type specified within the building.
An emergency power system shall be provided conforming to the requirements of Rule 211.1(a).

(3) Means within the car for communicating with or signaling to an approved emergency service which operates 24 hours each day.

Comm 18.31(1) This is a department rule in addition to the requirements of A17.1, 211.1(b): Emergency two-way communication systems within cars shall comply with ch. Comm 69, ADAAG 4.10.14.

November 1999, ASME A17.1, 211.1 (1996), Car Emergency Signaling Devices (no changes to these requirements in Comm 18)

Elevators shall be provided with the following signaling devices:

(a) In all buildings the elevator shall be provided with the following:

(1) An audible signaling device, operable from the emergency stop switch, where required by Rule 210.2(e), and from a switch marked "ALARM" which are located in or adjacent to each car operating panel. The switch marked "ALARM" shall illuminate when activated. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.

The audible signal device shall:

(a) have a rated sound pressure rating of not less than 80 dBA at 10 ft.;

(b) respond without delay after the switch has been activated;

(c) be located inside the building and be audible outside the hoistway;

(d) for elevators with a travel greater than 100 ft, be duplicated as follows:

(1) one device shall be mounted on the car, and;

(2) a second device shall be placed on the designated level;

(e) One signaling device may be used for a group of elevators.

(2) Means of two-conversation between the car and a readily assessable point outside the hoistway which is available to emergency personnel (telephone, intercom, etc.). The means to activate the two-way conversation system does not have to be provided in the car.

(3) If the audible signaling device(s), or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of stand-by 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 the operation of the audible signaling device and illumination of the alarm switch for at least 1 hr. and the means of two-way conversation for at least 4 hr.

(b) In buildings in which a building attendant, building employee or watchman is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with a means within the car for communicating with or signaling to a service which is capable of taking appropriate action when a building attendant is not available

An emergency power system shall be provided conforming to the requirements of Rule 211.1(a)(3).

March 2004, ASME A17.1, 2.27.1 (2000), Car Emergency Signaling Devices (no changes to these requirements in Comm 18)

2.27.1.1. Each elevator shall conform to 2.27.1.1.1 through 2.27.1.1.3.

2.27.1.1.1. An audible signaling device shall be provided. It shall be operable from the emergency stop switch, where required by 2.26.2.5, and from a switch identified as "ALARM" which shall be provided in or adjacent to each car operating panel. The switch marked "ALARM" or visual identification shall illuminate when the "ALARM" switch is activated. One audible signaling device shall be permitted to be used for a group of elevators.

The audible signal device shall:

(a) have a rated sound pressure rating of not less than 80 dBA and no more than 90 dBA at 10 ft.;

(b) respond without delay after the switch has been activated;

(c) be located inside the building and be audible inside the car and outside the hoistway; and:

(d) for elevators with a travel greater than 100 ft, be duplicated as follows:

(1) one device shall be mounted on the car, and;

(2) a second device shall be placed at the designated level;

2.27.1.1.2. Where the elevator travel is 60 ft. or more, a means of two-conversation (telephone, intercom, etc.) shall be provided between the car and a readily assessable point outside the hoistway, within the building, that is available to emergency personnel. The means to activate the two-way conversation system shall not be required to be provided in the car.

2.27.1.1.3. The audible signaling device(s) and the means of two-way conversation, when provided, shall remain operable during a failure of the normal building power supply. The power source shall be capable of providing for the operation of

(a) the audible signaling device and illumination of the alarm switch and visual identification for at least 1 hr.;and

(b) the means of two-way conversation for at least 4 hr.

2.27.1.2 In buildings where authorized personnel are not continuously available, the elevators shall be provided with a means within the car for communicating with or signaling to authorized personnel responsible for taking appropriate action.

The signaling and communication means shall conform to 2.27.1.1.3.