Subject: B44-00 Update No. 1 Requirements Related to 2.27.1 Emergency Communication for Elevators

Sent to: All Contractors (except Ski Lift)

1. INTRODUCTION
As a result of a significant rewrite to Section 2.27.1 following the release of B44-00 Update No. 1 September 2002, TSSA is issuing the following bulletin as an interpretation and enforcement guideline.

Summary of Sections:
- Section 2.27.1.1.1 specifies the requirement for a communication means between the car and a location in the building which is accessible to authorized and emergency personnel.
- Section 2.27.1.1.2 specifies requirements when on-site building communication locations are not staffed 24 hours per day, and the requirement for an additional communication location to respond.
- Section 2.27.1.1.3 specifies the requirements for the in-car portion of the communications system.
- Section 2.27.1.1.4 specifies additional requirements for the on-site building communication location when the elevator has a travel in excess of 18m.
- Section 2.27.1.1.5 specifies the requirements related to backup power.

2. INTERPRETATION & ENFORCEMENT
Effective immediately, for completed to the B44-00U1-02 code edition, the following interpretation and enforcement shall apply.

2.1. [2.27.1.1.1 & 2.27.1.1.2] (General, Accessibility, & Staffing)
2.1.1. All elevators installed to the B44-00 Update No. 1 September 2002 edition of the Safety Code for Elevators must be provided with an emergency communications system capable of directing calls for assistance, from the car to authorized personnel who are responsible for taking action. Where communications are initiated from within the car and the call is not answered in 30 seconds, the call must automatically transfer to a location capable of providing live voice assistance. Where on-site building communication stations are provided, they should be provided in locations that are readily accessible to designated personnel. Note; for elevators with travel in excess of 18m (60ft) the additional requirements of 2.27.1.1.4 apply.

2.1.2. Enforcement:
- Verify presence of an in-car communication station.
- If an on-site building communication station is provided [optional if travel <=18m, mandatory if travel>18m], verify that either,
  - The on-site building communication station is staffed 24/7 or
  - Elevator calls not answered in 30 second, are transfer to a live voice answering location.

- Elevators that do not have travel exceeding 18m (60ft), will not require an on-site building communication station.

- If an on-site building communication station is provided, it shall be accessible to authorized persons. This means that any location where authorized persons can gain access to, is considered acceptable.

Note: Elevators with travel greater than 18m have different requirements, for access to the location, of the on-site building communication station. See 2.3.2 of this Order.
2.2. [2.27.1.1.3] (In-Car Phone Requirements)

2.2.1. Handset telephones are no longer permitted in the elevators (2.27.1.1.3(g)). Hands free phones are the only type of telephone device that may be used. Mandatory features are as follows:

   a) An indicator light must be provided which activates when the call has been answered. (2.27.1.1.3(c))
   b) The in-car phone must automatically transmit the location of the building and elevator number to authorized personnel on demand. (2.27.1.1.3(d))
   c) After call acknowledgement indicator lights are illuminated, two way voice communication shall be available, and must be with a live voice (2.27.1.1.3(e) & (h)).
   d) The call must not disconnect until authorized personnel outside the car terminate the call. (2.27.1.1.3(f))
   e) The push button to activate the hands free telephone shall be located between 890 mm and 1220 mm above the floor surface of the elevator. (2.27.1.1.3(a) and Appendix E8.3 & E10.1)
   f) The push button to activate the hands free telephone shall be identified by a tactile (raised) telephone symbol. (2.26.12.4, table 2.26.12.1 & Appendix E8.4.4 / E10.2).
   g) Instruction essential for use, if provided shall be both visual and tactile form (Appendix E10.3), and tactile characters shall be duplicated in Braille (Appendix E19.2.1)

2.2.2. Enforcement:
- Verify the functional features and correct installation and operation of requirements a) through g).
- Call initiating buttons that only utilize the wording “HELP” as identification, and do not include a phone symbol, as per (f) above, will be deemed acceptable.

2.3. [2.27.1.1.4] (Elevators with travel over 18m / 60ft)*

2.3.1. Elevators whose travel exceeds 18m (60ft) are required to conform to the additional requirements specified in 2.27.1.1.4.
   a) An on-site building communications station must be provided to initiate two-way voice communication into each elevator individually without delay and must not require intervention from persons in the car. (2.27.1.1.4(a))
   b) The initiating of communication via the on-site building station location, shall override any communications underway between the car and any communications to outside the building. (2.27.1.1.4(a))
   c) A visual signal shall acknowledge the establishment of this communications link, and extinguish when the link is terminated. Only communication stations other than the in-car station, can terminate an established communications link. (2.27.1.1.4(b) &(c))
   d) Instructions for operation of the two-way voice communication system shall be provided at the on-site building communication station. (2.27.1.1.4(d))

*Note: This requirement relates to the elevator’s travel and should not be confused with the NBCC/OBC definition of high buildings. Some buildings, which do not meet the OBC definition of high buildings, may still require compliance to 2.27.1.1.4, due to the elevator’s travel.

2.3.2. Enforcement:
- Where travel exceeds 18m verify conformance and operation of requirements a) through d).
- An on-site communication station shall be provided, and its location shall be accessible to authorized and emergency personnel as required by 2.27.1.1.1. A locked building manager’s office or a machine room is not an accessible location.

2.4. [2.27.1.1.5] (Back Up Power)

2.4.1. All telephone equipment, both in the elevator (ie the in-car communication station) and at the on-site building communication station (where provided), which are normally connected to the building power supply, must be provided with backup power. The backup power can be from either an emergency power source or via batteries, and must allow operation of the communication system and indicator lights for a minimum of 4 hours should the building lose its regular power supply.

Note that telephones which are not connected to 120V power or transformed power, but rather, are directly connected to the “Public Switched Telephone Network or the Bell Central Office” are battery backed up by their nature and meet the backup requirement.
2.4.2. **Enforcement:**
- Disconnecting the normal power supply to the in-car communication station and to the on-site building communication station (where provided) shall not prevent two way voice communications from being established.
- All visual indications required under normal power shall continue to function under backup power arrangements.

2.4.3. **[2.27.1.2] (Alarm Bells)**
An alarm bell is no longer required on passenger elevators, but is mandatory on freight elevators. If the freight elevator travel is more than 30m (100ft), the alarm bells shall be arranged so that one is on the car and the other at the designated level.

2.4.4. **Enforcement:**
- Verify conformance to above noted requirements.

2.5. **Interpretation of Section 8.7 as Related to Emergency Communications**

2.5.1. The requirements of 2.27.1 are applicable if any of the following Section 8.7 alterations are undertaken:

   a) There is a change in type of service from freight to passenger or passenger to freight. (8.7.2.16.1)
   b) There is a change in the type of motion control [AC, VVVF, DC, SCR, etc.]. (8.7.2.27.5)
   c) There is a change in the operation control [CPPB, Automatic]. (8.7.2.27.6)
   d) There is an alteration being made to the emergency telephone equipment [see 2.5.2 below for details]. (8.7.2.28)

2.5.2. For buildings voluntarily upgrading their emergency telephone equipment, an alteration to telephone equipment per 8.7.2.28 is deemed to have taken place when:

   a) Telephone equipment is being installed where no previous form of communication existed.
   b) Telephone equipment is being installed to replace or supplement an alarm bell.
   c) Telephone equipment is being installed to replace an intercom system.
   d) The power source of the telephone equipment is impacted. If the telephone equipment, which was originally powered by the public telephone system, is being changed to equipment that requires additional AC power to function, this is an alteration and requires additional power backup provisions per 2.27.1.1.5.

Notes:
1) A change from a corded hand set phone to a hands free phone set may be permitted as a repair, provided that the scope of the repair does not include any of the aspects listed in 2.5.2 above.
2) Changes to Car Operating Panels (COP’s) often involve telephone equipment changes. As noted in 2.5.2(d) above, if the power source of the phone is impacted the requirements of 8.7.2.28 apply.

3. **INSTRUCTIONS**
Contractors involved in modernization or alteration work should ensure that the appropriate level of paperwork is submitted for the specific alteration being undertaken. The alterations listed in 2.5.1(a), (b) and (c) above are Major Alterations with a requirement to comply with Section 2.27. The Alteration denoted in 2.5.1(d) above, and described in 2.5.2 above, require a Minor B Notification.

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This Bulletin has been developed in consultation with the TSSA Elevating Devices Advisory Council.