



Code & Safety Office

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**COMMENTS OF THE
NATIONAL ELEVATOR INDUSTRY INC.
TO THE
CALIFORNIA BUILDING STANDARDS COMMISSION
REGARDING THE CALIFORNIA BUILDING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2
AND
DESTINATION-ORIENTED ELEVATOR SYSTEMS**

The National Elevator Industry, Inc. (NEII®) would like to offer comments on California's proposed changes to the California Building Code addressing accessibility for destination-oriented elevator systems.

NEII® is the premier trade association representing firms that install, maintain and/or manufacture elevators, escalators, moving walkways, and other building transportation products. NEII® membership includes the top elevator companies in the United States, if not the world, and reports more than 85 percent of the work hours for the industry. Safety for the riding public and industry personnel is one of the association's top priorities.

NEII® has a long history of commitment to building transportation that is accessible to and usable by individuals with disabilities. We developed and published rudimentary accessibility guidelines for elevators in the 1970s which served as the basis for subsequent requirements in the ANSI A117.1 accessibility standard and the federal Minimum Guidelines and Requirements for Accessible Design (MGRAD) and Uniform Federal Accessibility Standards. In the 1990s we submitted proposals for destination-oriented elevator systems to the A117 Accredited Standards Committee and federal ADAAG Advisory Committee which were approved and are now part of the A117.1 accessibility standard and the 2010 ADA Standards for Accessible Design.

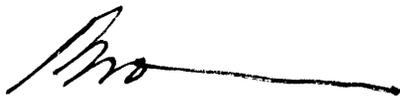
Today we are experiencing a greater demand for destination-oriented systems and more sophisticated technology (*e.g.*, touch screen designs) than that which led to the current destination-oriented accessibility requirements. Up-to-date approaches are needed to meet the need of persons with disabilities, building owners and equipment manufacturers. NEII® is pleased to state that the California Building Standards Commission and Division of the State Architect has moved all of us closer to this goal with the comprehensive and well-written proposal we reviewed.

As our national accessibility standards evolve, we believe this proposal for accessible destination-oriented elevator systems could serve as a starting point for changes in the A117.1 accessibility standard and the ADA Accessibility Guidelines. Frankly, our interest in California's

efforts is somewhat self-serving if we can use your work to effect similar changes in the standards across the US and Canada.

Attached is a matrix containing the text of the proposed requirements with suggested revisions, as well as *NEII*®'s comments and rationale regarding the relevant sections. We hope this provides some direction to your future deliberations and, more importantly, a starting point for the industry to work with the Commission and Division as the final regulations are developed. We believe our industry is uniquely positioned to offer technical expertise on not only elevator system design but how that has historically impacted the accessibility needs of persons with disabilities, and hope you will contact us in the months ahead as you proceed with this important addition to the building code.

Respectfully,

A handwritten signature in black ink, appearing to read 'B. Black', with a long horizontal stroke extending to the right.

Brian Black
NEII® Code & Safety Director

<p>ITEM 11B.31 DIVISION 4: ACCESSIBLE ROUTES</p>	
<p>11B-411 Destination-oriented elevators</p> <p>11B-411.1 General. Destination-oriented elevators shall comply with Section 11B-411 and with ASME A17.1. They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.</p> <p>"11B-411.1.1 Floor designations. In facilities served by destination-oriented elevator systems, floor designations shall be numeric characters only. Floor designations shall be "one" (1) or "zero" (0) at the main entry level and shall increase by one for each successive higher story or level. The initial floor below the main entry level shall be designated "minus one" (-1) and the designation for each successive lower story or level shall decrease by one. Stories or levels shall not be designated by alphabetic characters.</p> <p>Exceptions:</p> <p><u>1. In existing facilities where new elevators are installed or existing elevators are altered into a destination-oriented elevator system, levels within stories, such as mezzanines located above or below the main entry level may shall be permitted to be designated with an alpha-numeric character such as "M2", indicating "mezzanine" and the "story number" in which it is located, provided there is no duplication with alphanumeric designations of elevator cars in the facility.</u></p> <p><u>2. Non-successive floor numbering shall be permitted where a specific floor is number is not used or where a floor is not available for general occupant access (e.g., a machinery/equipment floor).</u></p>	<p>Mandatory language indicates there is no discretion in permitting this option.</p> <p>Allowances for non-successive floor numbering should be made, e.g., where a hotel does not have a 13th floor or a floor contains only generators, HVAC systems, building mechanics, etc.</p>
<p>11B-411.1.2 Car designations. Elevator cars shall be designated with a single alphabetic character.</p> <p>Exception: Elevator systems with more than 26 elevators may shall</p>	<p>Mandatory language indicates there is no discretion in permitting this option. Delete the example to avoid the risk that it becomes an interpreted</p>

<p><u>be permitted</u> to use alpha-numeric designations such as "A1".</p>	<p>requirement.</p>
<p>11B-411.2 Elevator landing requirements. Elevator landings shall comply with Section 11B-411.2.</p> <p>11B-411.2.1 Hall call consoles. Hall call consoles shall comply with Sections 11B-411.2.1 and 11B-309.</p>	
<p>11B-411.2.1.1 Location. Hall call consoles shall be wall-mounted. On floors with a building entry, including parking and transfer levels, each hoistway entrance shall be located adjacent to a hall call console. On other floors, a minimum of one hoistway entrance shall be located adjacent to a hall call console.</p> <p>Exception: Hall call consoles beyond those required by 11B-411.2.1.1 may <u>shall be permitted to</u> be provided outside the elevator landing and may be wall-mounted, pedestal-mounted, or mounted on a kiosk or security turnstile.</p>	<p>We note this would require a hall call console between every hoistway opening, not just one per lobby, and suspect this correlates with the adjacency assignment at 11B-411.2.1.7.4.</p> <p>The entry floor calculation does not take into account other means of access, such as security turnstiles, or remote entry systems. This also does not take into account building traffic patterns. The current wording does not seem to align with how conventional dispatching elevators would allot hall call stations. Quantity of hall call stations shall be more than half the amount of hoistway entrances. A figure illustration most likely required to detail this requirement to show opposed and in-line group layouts.</p> <p>There needs to be further discussion on this requirement. NEII suggests the following be discussed: <u>On floors with a building entry, including parking and transfer levels, a minimum of two hall call consoles shall be provided.</u></p> <p>Mandatory language indicates there is no discretion in permitting this option.</p>
<p>11B-411.2.1.2 Required features. Hall call consoles shall include a touch screen or keypad with display screen where provided, an accessibility function button, and audio output loudspeaker.</p>	<p>Unnecessary language.</p>
<p>11B-411.2.1.2.1 Keypads. Keypads shall be in a 12-key ascending telephone keypad layout. Characters and symbols</p>	

<p>shall be centered on the corresponding button. The number five key shall have a single raised dot. The dot shall have a base diameter of 0.118 inch (3mm) minimum and 0.120 inch (3.05 mm) maximum and a height of 0.025 inch (0.6 mm) minimum and 0.037 inch (0.9 mm) maximum. Keypads shall have a star (*) on the lower left button and a minus sign (-) on the lower right button. From any level above and below the main egress level, when the star button is pressed an elevator shall be dispatched to the main egress level.</p>	
<p>11B-411.2.1.2.2 Touch screen. Touch screen display shall comply with Section 11B-411.2.1.2.4. The touch screen shall provide written or visual instruction on the screen as to its use.</p>	<p>It is unnecessary to provide instructions on the general operation of a touch screen. Devices are intuitive in similar ways as keypad operation and are used without instruction in ATMs, cell phones, tablets, etc.</p>
<p>11B-411.2.1.2.3 Accessibility function button. The accessibility function button shall be identified by the International Symbol of Accessibility and a raised indication. The International Symbol of Accessibility shall comply with Section 11B-703. 7.2.1, and shall be 5/8 inch (15.9 mm) minimum in height. The indication shall be three raised dots. Each dot shall have a base diameter of 0.59 inch (1.5 mm) minimum and 0.063 inch (1.6 mm) maximum and a height of 0.025 inch (0.6 mm) minimum and 0.037 inch (0.9 mm) maximum. The dots shall be spaced ¼ inch (6.4 mm), measured center to center, in the form of an equilateral triangle with a vertex pointing up.</p>	
<p>11B-411.2.1.2.4 Display screen. Upon activation of the accessibility function button, the display screen shall display information including but not limited to user input confirmation, elevator assignment characters, direction to the assigned elevator, and error messages. The display screen shall comply with 11B-411.2.1.2.4.</p> <p>Exception: Additional information on display screen may be provided beyond those required by 11B-411.2.1.2.4.</p> <p>11B-411.2.1.2.4.1 Contrast. Display screens shall provide contrast with light characters and symbols on a dark background or dark characters and symbols on a light background. The background shall be solid and static.</p>	<p>Format to avoid the term “information including but not limited to” which implies some discretion on the part of the inspector or permitter to add additional requirements.</p>

<p>11B-411.2.1.2.4.2 Size. Elevator assignment characters shall be 1 inch high (25 mm) minimum.</p> <p>11B-411.2.1.2.4.3 Duration. Elevator assignment characters shall be displayed for a minimum of 5 seconds.</p>	
<p>11B-411.2.1.2.5 Audio output. Upon activation of the accessibility function button, the audio output shall provide verbal announcements, including but not limited to operating instructions, user input confirmation, announcement of the elevator assignment characters, direction to the assigned elevator, and error messages. Audio output shall be recorded or digitized human speech, and shall be delivered through a loudspeaker. Auditory volume shall be at least 10 dB above ambient sound level, but shall not exceed 80 dB, measured 36 inches (915 mm) in front of the console. At hall call console locations where the ambient sound level varies auditory volume shall be maintained at the required volume by an automatic gain control or shall be set at not less than 75 dB.</p> <p><u>Exception:</u> <u>Additional verbal announcements beyond those required shall be permitted.</u></p>	<p>Format to avoid the term “but not limited to” which implies some discretion on the part of the inspector or permitter to add additional requirements.</p>
<p>11B-411.2.1.3 Arrangement. Hall call console arrangement of required features shall comply with Section 11B-411.2.1.3.</p>	
<p>11B-411.2.1.3.1 Keypad call console arrangement. <u>Where keypads are provided,</u> the display screen shall be located directly above the keypad. The accessibility function button shall be located directly below the keypad at a height of 36" (915 mm) to 42" (1067 mm) above the finish floor.</p>	<p>Provide clarity.</p>
<p>11B-411.2.1.3.2 Touch screen call console arrangement. <u>Where keypads are provided,</u> the accessibility function button shall be touch screens at a height of 36" (915 mm) to 42" (1067 mm) above the finish floor. The touch screen shall be located in close proximity to the accessibility function button.</p>	<p>Provide clarity.</p>

<p>11B-411.2.1.3.3 Proximity of required elements. Required features shall be provided on a hall call console assembly or as individual elements grouped in close proximity. The top of the hall call console assembly or the top of the touch screen and each control or group of controls shall be sloped away from the user at 45° to 25 degrees from the vertical plane.</p>	<p>We appreciate that sloping the hall call console or display screen may provide a better level of visibility for low-vision individuals, but are concerned that a screen mounted with the highest “operable part” at 48 inches at an angle 15 to 25 degrees from the vertical plane may result in a glare that makes the screen unreadable for someone sitting in a wheelchair. Permitting a range of 7 to 25 degrees will allow the designer to adjust the angle to ensure readability for persons sitting in wheelchairs with an eye level lower than the top of the screen.</p>
<p>11B-411.2.1.4 Additional features. Hall call console additional features, if provided, shall comply with 11B-309.</p>	
<p>11B-411.2.1.4.1 Hall call console additional buttons. <u>Physical</u> Hhall call console buttons provided in addition to the accessibility function button and keypad buttons shall comply with 11B-411.2.1.4.1. Buttons in addition to the accessibility function button are not permitted on hall call consoles using a touch screen.</p>	<p>Clarify this applies only to physical buttons, not “buttons” on touch screens.</p>
<p>11B-411.2.1.4.1.1 Arrangement. <u>Physical</u> Bbuttons shall be arranged in columns to the right of the keypad with horizontal spacing 1.5 times minimum the horizontal spacing between the numeric keys and with the same vertical spacing as the numeric keys.</p>	<p>Clarify this applies only to physical buttons, not “buttons” on touch screens.</p> <p>This could make additional, convenience buttons like “Banquet Level”, “Pool”, or “Parking” unworkable. Because the raised lettering/braille should not be on the buttons so as to prevent actuation when reading the words, the tactile lettering will have to be next to the buttons and could take 3+ inches of space.</p>
<p>11B-411.2.1.4.1.2 Identification. <u>Physical</u> Bbuttons shall be identified by raised characters and symbols, white on a black background, complying with Section 11B-703.2 and Braille complying with 703.3</p>	<p>Clarify this applies only to physical buttons, not “buttons” on touch screens.</p>
<p>11B-411.2.1.4.2 Security or access controls. <u>Where located in elevator lobbies,</u> Ssecurity or access control system card readers <u>associated with the elevator</u> shall</p>	<p>In some buildings security card systems may be located elsewhere in the building (e.g., at a building entrance or turnstile). In these instances the controls cannot be located near the hall call consoles. The text should also</p>

<p>be located in close proximity to each hall call console and in a consistent location throughout the facility.</p>	<p>clarify that it is only elevator-related controls being regulated.</p>
<p>11B-411.2.1.5 Button requirements. Keypad buttons, the accessibility function button, and additional <u>physical</u> hall call console buttons shall comply with 11B-411.2.1.5.</p>	<p>Clarify this applies only to physical buttons, not “buttons” on touch screens.</p>
<p>11B-411.2.1.5.1 Size. Buttons shall have square shoulders, be ¾ inch (19.1 mm) minimum in the smallest dimension and shall be raised 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm) above the surrounding surface. The <u>physical</u> buttons shall be activated by a mechanical motion that is detectable.</p>	<p>Clarify this applies only to physical buttons, not “buttons” on touch screens.</p>
<p>11B-411.2.1.5.2 Color. Characters and symbols on buttons, where provided, shall be white on a black background.</p>	
<p>11B-411.2.1.6 Identification of floors served. In buildings with two or more elevator banks, each serving a different group of specific floors, hall call consoles located on floors with a building entry, including parking and transfer levels, shall be provided with signage complying with Section 11B-703.2 and 11B-703.3 on the surface of or above the hall call console stating "FLOORS n1 - n2", where n1 - n2 represents the range of floors served.</p>	
<p>11B-411.2.1.7 Elevator car assignment. <u>When the accessibility function button is pressed,</u> Elevator car assignment shall comply with Section 11B-411.2.1.7.</p>	
<p>11B-411.2.1.7.1 Assignment by keypad hall call console. When the accessibility function button is pressed, The audio output shall provide a verbal announcement of the floors served by the elevator group and an instruction for the user to enter a destination floor. <u>The audio output shall also provide a verbal announcement of the floors served by the elevator group at the entry floor of the building or at sky lobbies.</u> The selected destination floor shall be confirmed by verbal announcement and on the display screen. Verbal and visible indication of an invalid input shall be provided. The display screen shall indicate the elevator assignment characters and a verbal announcement shall be made of the assigned elevator responding to the call. Visual and verbal direction to the assigned elevator shall be provided.</p>	<p>Elevator grouping (low rise, mid rise, high rise) occurs in the building entry level lobby where passengers need to choose which group to access depending on which floor they are travelling to. A single set of elevators will serve the 5th, 25th or 45th floor, so verbal announcements of the floors serves would be unnecessary and confusing.</p> <p>The one exception to this is where a high rise may have a sky lobby there the elevator groups converge to permit transfers from one group to another.</p>

<p>11B-411.2.1.7.2 Assignment by touch screen hall call console. When the accessibility function button is pressed <u>The audio output shall provide a verbal announcement of the floors served by the elevator group and instruction for the user to press the accessibility function button as a response to verbal direction in order to select the destination floor. The audio output shall also provide a verbal announcement of the floors served by the elevator group at the entry floor of the building or at sky lobbies.</u> The selected destination floor shall be confirmed by verbal announcement and on the display screen. Verbal and visible indication of an invalid input shall be provided. The display screen shall indicate the elevator assignment characters and a verbal announcement shall be made of the assigned elevator responding to the call. Visual and verbal direction to the assigned elevator shall be provided.</p> <p>Exception. In addition to assignment by Section 11B-411.2.1.7.2, an option to select an additional gesture-based mode of operation may <u>shall be permitted to</u> be provided. When selected, operation shall be by contact with the touch screen, without specific contact with an icon, and using established non-proprietary gestures for selection and input, including but not limited to tapping, sliding, and tap-hold contact-release to select. Verbal direction and indication of floor selection options from the audio output is required for use of the touch screen until assignment to the elevator is given by the audio output.</p>	<p>Elevator grouping (low rise, mid rise, high rise) occurs in the building entry level lobby where passengers need to choose which group to access depending on which floor they are travelling to. A single set of elevators will serve the 5th, 25th or 45th floor, so verbal announcements of the floors serves would be unnecessary and confusing.</p> <p>The one exception to this is where a high rise may have a sky lobby there the elevator groups converge to permit transfers from one group to another.</p>
<p>11B-411.2.1.7.3 Assignment by security credential. If a security system or other form of access control system is provided <u>and security systems associated with the elevator are in effect</u>, when the accessibility function button is pressed, the audio output shall provide a verbal announcement such as "present security credential". Upon presentation of security credential, the destination floor shall be confirmed by verbal announcement and on the display screen. The display screen shall indicate the elevator assignment characters and a verbal announcement shall be made of the assigned elevator responding to the call. Visual and verbal direction to the assigned elevator shall be provided.</p>	<p>This phrase covers when the elevator security system is not activated.</p> <p>This is already required in 411.2.1.7.1 and 411.2.1.7.2, above.</p>

<p>Exception: Verbal announcements are not required when the <u>security credential identifies persons that do not require the announcements.</u></p>	<p>Verbal announcements may be unnecessary for some users and the system will be able to identify these users. Avoids unnecessary noise.</p>
<p>11B-411.2.1.7.4 Adjacency assignment. <u>When the accessibility function is pressed, the system shall assign the user to an elevator.</u> The elevator car immediately to the left or right of the hall call console shall be assigned.</p> <p>Exception: The most adjacent elevator serving the selected floor shall be assigned by hall call consoles located outside the elevator landing.</p>	<p>The text appears to be a definition rather than a requirement. Suggest rewording.</p>
<p>11B-411.2.2 Elevator car identification at elevator landings. Elevator car identification shall comply with Section 11B-411.2.2.</p>	
<p>1B-411.2.2.1 Visible identification. Above or adjacent to each elevator car entrance there shall be a visible identification fixture with a car designation character. The identification fixture shall be 80 inches (2032 mm) minimum above the finish floor or ground to the bottom of the fixture <u>car designation character</u>. The character on the fixture shall be upper case with a height of 4 (102 mm) inches minimum complying with 11B-703.5.1, 11B-703.5.3, 11B-703.5.4, and 11B-703.5.7.</p> <p>Exception: Existing buildings may <u>shall be permitted to</u> have a visible identification fixture with a car designation character adjacent to each elevator car entrance centered at 72 inches (1829 mm) above the finish floor or ground. The character on the fixture shall be upper case with a height of 2 1/2 (64 mm) inches minimum complying with 11B-703.5.1, 11B-703.5.3, 11B-703.5.4, and 11B-703.5.7.</p>	<p>Measurement to the character itself is more critical than measurement to the fixture.</p> <p>Mandatory language indicates there is no discretion in permitting this option.</p>
<p>1B-411.2.2.2 Verbal identification. <u>When the accessibility function button has been pressed,</u> Verbal announcement of the car designation shall be provided at the elevator car entrance upon arrival. Audio output shall be recorded or</p>	<p>Clarify that the verbal announcement is a response to the use of the accessibility function button and that the elevator car entries do not need to speak 24/7.</p>

<p>digitized human speech, and shall be delivered through a loudspeaker. The verbal annunciator shall have a frequency of 300Hz minimum and 3000Hz maximum. Auditory volume shall be at least 10 dB above ambient sound level, but shall not exceed 80 dB, measured 36 inches (915 mm) in front of the elevator entrance and at 48" above the floor. At elevator entrances where the ambient sound level varies, auditory volume shall be maintained at the required volume by an automatic gain control or shall be set at not less than 75 dB.</p>	
<p>11B-411.2.3 Signs on jambs of elevator hoistway entrances. Signs on jambs of elevator hoistway entrances shall comply with Section 11B-411.2.3.</p>	
<p>11B-411.2.3.1 Floor designation signs. Floor designation signs complying with Sections 11B-703.2 and 11B-703.4.1 shall be provided on both jambs of elevator hoistway entrances. Signs shall be provided in both raised characters and Braille. Raised characters shall be 2 inches (51 mm) high. A raised star placed to the left of the floor designation, shall be provided on both jambs at the main entry level. The outside diameter of the star shall be 2 inches (51 mm) and all points shall be of equal length. Raised characters, including the star, shall be white on a black background. Braille complying with Section 11B-703.3 shall be placed below the corresponding raised characters and the star. The Braille translation for the star shall be "MAIN". Applied plates are acceptable if they are permanently fixed to the jamb.</p>	
<p>11B-411.2.3.2 Car designation signs. Car designation signs complying with Sections 11B-703.2 and 11B-703.4.1 shall be provided on both jambs of the hoistway immediately below the floor designation. Signs shall be provided in both raised characters and Braille. Raised characters shall be 2 inches (51 mm) high. Raised characters shall be white on a black background. Braille complying with Section 11B-703.3 shall be placed below the corresponding raised characters. Applied plates are acceptable if they are permanently fixed to the jamb.</p>	
<p>11B-411.3 Elevator door requirements. Hoistway and car doors shall comply with Section 11B-411.3.</p> <p>11B-411.3.1 Type. Elevator door type shall comply with Section 11B-407.3.1.</p>	

<p>11B-411.3.2 Operation. Elevator hoistway and car doors shall open and close automatically</p> <p>11B-411.3.3 Reopening device. Elevator doors shall be provided with a reopening device complying with Section 11B-411.3.3 that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person.</p> <p>11B-411.3.3.1 Height. The height of the reopening device shall comply with Section 11B-407.3.3.1.</p> <p>11B-411.3.3.2 Contact. The device contact shall comply with Section 11B-407.3.3.2.</p> <p>11B-411.3.3.3 Duration. The door reopening device duration shall comply with Section 11B-407.3.3.3.</p> <p>11B-411.3.4 Door delay. Door delay shall comply with Section 11B-407.3.5.</p> <p>11B-411.3.5 Width. The width of elevator doors shall comply with Table 11B-407.4.1.</p>		
<p>11B-411.4 Elevator car requirements. Elevator cars shall comply with Section 11B-411.4.</p> <p>11B-411.4.1 Car dimensions. Inside dimensions of elevator cars and clear width of elevator doors shall comply with Section 11B-407.4.1.</p> <p>11B-411.4.2 Floor surfaces. Floor surfaces in elevator cars shall comply with 11B-407.4.2.</p> <p>11B-411.4.3 Platform to hoistway clearance. Platform to hoistway clearance shall comply with Section 11B-407.4.3.</p> <p>11B-411.4.4 Leveling. Elevator car leveling shall comply with Section 11B-407.4.4.</p> <p>11B-411.4.5 Illumination. The level of illumination at the car controls shall comply with Section 11B-407.4.5.</p>		

<p>11B-411.4.6 Elevator car controls. Where provided. Elevator car controls shall comply with Sections 11B-411.4.6 and 11B-309.4.</p> <p>11B-411.4.6.1 Location. Controls shall be located within one of the reach ranges specified in Section 11B-308.</p> <p>11B-411.4.6.2 Buttons. Car control buttons shall comply with Sections 11B-407.4.6.2.1 and 11B-407.4.6.2.4. The car shall not have non-functional, exposed floor buttons.</p>	
<p>11B-411.4.6.3 Emergency controls. Emergency controls shall comply with Section 11B-407.4.6.4.</p>	
<p>11B-411.4.7 Designations and indicators of car control buttons. Designations and indicators of car control buttons shall comply with Section 18-411.4.7.</p> <p>11B-411.4.7.1 Type. Control button type shall comply with Section 11B-407.4.7.1.1.</p> <p>11B-411.4.7.2 Location. Raised characters or symbols and Braille designations shall comply with Section 11B-407.4.7.1.2.</p> <p>11B-411.4.7.3 Symbols. The control button for the emergency stop, alarm, door open, door close, and phone, shall be identified with raised symbols and Braille as shown in Table 11B- 407.4.7.1.3.</p> <p>1B-411.4.7.4 Button spacing. Button spacing shall comply with Section 11B-407. 4.7.1.5.</p>	
<p>11B-411.4.8 Car position indicators. Audible and visible car position indicators shall be provided in elevator cars.</p>	
<p>11B-411.4.8.1 Visible indicators. Visible indicators shall comply with Section 11B-411.4.8.1.</p> <p>11B-411.4.8.1.1 Size. Characters shall comply with Section 11B-407.4.8.1.1.</p>	

<p>11B-411.4.8.1.2 Location. Location of indicators shall comply with Section 11B-407.4.8.1.2.</p>	
<p>11B-411.4.8.2 Audible indicators. Audible indicators shall comply with Section 11B-411.4.8.2.</p> <p>11B-411.4.8.2.1 Signal type. The signal shall be an automatic verbal annunciator which announces the floor at which the car is about to stop.</p> <p>11B-411.4.8.2.2 Signal level. The verbal annunciator signal/eve/ shall comply with Section 11B-407.4.8.2.2.</p> <p>11B-411.4.8.2.3 Frequency. The verbal annunciator frequency shall comply with Section 11B-407.4.8.2.3.</p>	
<p>11B-411.4.9 Emergency communication. Emergency communication shall comply with Section 11B-407.4.9.</p> <p>11B-411.4.10 Support rail. Support rails complying with Section 11B-407.4.10 shall be provided on at least one wall of the car.</p> <p>11B-411.4.11 Floor destination indicators. There shall be on each elevator car doorjamb a visual display indicating floor destinations.</p> <p>11B-411.4.11.1 Height. Floor destination characters shall be 4 inch (25 mm) <u>5/8 inch (16 mm)</u> high minimum complying with 11B-703.5.3.</p> <p>11B-411.4.11.2 Contrast. Visual display shall provide contrast with light characters on a dark background or dark characters on a light background. The background shall be solid and static.</p> <p>11B-411.4.11.3 Duration. Floor destination characters shall be displayed upon elevator car arrival at the input floor and shall not extinguish until the elevator car arrives at the destination floor.</p> <p><u>Exception: Floor designation characters on the car door jamb shall be permitted to extinguish during door closing operation if an additional floor designation character that complies with</u></p>	<p>Consistent with draft 2014 A117.1 and Canadian Standards Association requirements. The 5/8 inch is larger than what is required by the ADA Standards for Accessible Design. Having a pecial size in California adds additional costs with no demonstrable increase in accessibility.</p> <p>The alternative provides equivalent access.</p>

<p><u>Section 11B-411.4.11 is provided elsewhere in the car.</u></p>	
<p>RELATED ITEM 11B.31.1</p> <p>CHAPTER 2 Definition of CALL CONSOLE</p> <p>HALL CALL CONSOLE. An elevator call user interface exclusive to a destination-oriented elevator system that requires the user to select a destination floor prior to entering the elevator car.</p>	
<p>RELATED ITEM 11B.31.2</p> <p>CHAPTER 2 Definition of DESTINATION-ORIENTED ELEVATOR</p> <p>DESTINATION-ORIENTED ELEVATOR. Destination-oriented elevators are operated by the user selecting a destination floor at a hall call console located at or near an elevator landing. The destination-oriented elevator system then assigns an elevator car which transports the user to the selected destination floor. Destination-oriented elevators do not provide floor selection within elevator cars.</p>	
<p>RELATED ITEM 11B.31.3</p> <p>CHAPTER 2 Definition of ACCESSIBILITY FUNCTION BUTTON</p> <p>ACCESSIBILITY FUNCTION BUTTON. A button on an elevator hall call console in a destination-oriented elevator system that when pressed will activate a series of visual and verbal prompts and announcements providing instruction regarding hall call console operation and direction to an assigned elevator.</p>	
<p>RELATED ITEM 11B.31.4</p> <p>CHAPTER 11B</p>	

DIVISION 2: SCOPING REQUIREMENTS

11B-206 Accessible routes

11B-206.6 Elevators. Elevators provided for passengers shall comply with *Section 11B-407*. Where multiple elevators are provided, each elevator shall comply with *Section 11B-407*.

Exceptions:

1. In a building or facility permitted to use the exceptions to *Section 11B-206.2.3* or permitted by *Section 11B-206.7* to use a platform lift, elevators complying with *Section 11B-408* shall be permitted.
2. Elevators complying with *Section 11B-408* or *11B-409* shall be permitted in multi-story residential dwelling units. *Elevators provided as a means of access within a private residence shall be installed so that they are not accessible to the general public or to other occupants of the building.*
3. *Destination-oriented elevators complying with Section 11B-411 shall be permitted.*

11B-206.6.1 Existing elevators. Where elements of existing elevators are altered, the same element shall also be altered in all elevators that are programmed to respond to the same hall call control as the altered elevator and shall comply with the requirements of *Section 11B-407* for the altered element.

Exception: Where a group of existing elevators are altered into a destination-oriented elevator system, or where elements of existing destination-oriented elevators are altered, the same elements shall also be altered in all elevators that are programmed to respond to the same call console or group of call consoles and shall comply with the requirements of Section 11B-411 for the altered elements.

RELATED ITEM 11B.31.5

**CHAPTER 11B
DIVISION 4: ACCESSIBLE ROUTES**

11B 407 Elevators

11B 407.1 General. Elevators shall comply with *Section 11B-407* and with ASME A17.1. They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

11B-407.1.1 Combined passenger and freight elevators. *When the only elevators provided for use by the public and employees are combination passenger and freight elevators, they shall comply with Section 11B-407 and with ASME A17.1.*

11B-407.2 Elevator landing requirements. Elevator landings shall comply with *Section 11B-407.2*.

11B-407.2.1 Call controls. Where elevator call buttons or keypads are provided, they shall comply with *Sections 11B-407.2.1 and 11B-309.4*.

Exception: Reserved.

11B-407.2.1.1 Height. Call buttons and keypads shall be located within one of the reach ranges specified in *Section 11B-308*, measured to the centerline of the highest operable part.

Exception: Reserved.

11B-407.2.1.2 Size and shape. Call buttons shall *have square shoulders, be $\frac{1}{8}$ inch (19.1 mm) minimum in the smallest dimension and shall be raised $\frac{1}{16}$ inch (3.2 mm) plus or minus $\frac{1}{32}$ inch (0.8 mm) above the surrounding surface. The buttons shall be activated by a mechanical motion that is detectable.*

Exception: Reserved.

11B-407.2.1.3 Clear floor or ground space. A clear floor or ground space complying with *Section 11B-305* shall be provided at call controls.

11B-407.2.1.4 Location. The call button that designates the up direction shall be located above the call button that designates the down direction.

~~Exception: Reserved. Destination-oriented elevators shall not be required to comply with Section 11B 407.2.1.4.~~

11B-407.2.1.5 Signals. Call buttons shall have visible signals *that will activate* when each call is registered and *will extinguish* when each call is answered. *Call buttons shall be internally illuminated with a white light over the entire surface of the button.*