

Plan Check No. _____

A. ELEVATORS

NOTE: In buildings two or more stories in height, served by an elevator, or a building served by an elevator required by Chapter 11A or 11B or a building served by an elevator required for accessibility by Section 101.17, all elevators provided shall accommodate a wheelchair. (1116B.1.1)

1. In buildings two or more stories in height, served by an elevator, or a building served by an elevator required by chapter 11B, or a building served by an elevator required for accessibility by Section 109.1, if more than one passenger elevator is required, each full passenger elevator shall comply with this chapter. The following exceptions may be exercised if applicable to your project.
 - a) In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception to such regulation shall be granted when equivalent facilitation is provided.
 - b) In existing buildings, where existing shaft configuration or technical infeasibility prohibits strict compliance with Section 1116B.1.8, the minimum car plan dimensions may be reduced by the minimum amount necessary, but in no case shall the inside car area be smaller than 48 inches by 48 inches.
 - c) In existing buildings, equivalent facilitation may be provided with an elevator car of different dimensions where it can be demonstrated that a person using a wheelchair can enter and operate the elevator and when all other elements required to be accessible comply with the applicable provisions of Section 1116B.
 - d) These provisions shall not apply to existing buildings when legal or physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See section 109.1
2. Passenger elevators shall be located on a major accessible route and provisions shall be made to assure that they remain accessible and usable at all times the building is occupied. (1124A.2, 1116B.1.15).
3. The car inside shall allow for the turning of a wheelchair. The minimum clear distance between walls or between wall and door, excluding return panels, shall be not less than 80" by 54" for center-opening doors, and 68" by 54" for side-slide opening doors. Minimum distance from wall to return panel shall be not less than 51". (1124A.3.2, 1116B.1.8, Fig 11-7A & Fig 11B-40A)
4. Minimum clear width for elevator doors shall be 36". (1124A.3.2.1, 1116 B.1.4, Fig 11A-7A & Fig 11B-40A).
5. Provide the following note(s) or detail(s) on the plans:
 - a) A handrail shall be provided on one wall of the car, preferably the rear. The rails shall be smooth and the inside surface at least 1-1/2" clear of the walls at a nominal height between 31" and 33" above the floor. 32" is required to reduce interference with car controls where the lowest button is centered at 35" from floor. (1116B.1.11, Fig 11A-7B & Fig 11B-40B)
 - b) The centerline of elevator floor buttons shall be no higher than 54" above the finish floor for side approach and 48" for front approach. Where possible a 48 inch maximum height for elevator floor buttons is preferred. (1124A.3.3.1, 1116B.1.8, Fig. 11A-7B & Fig 11B-40B).
 - c) Floor buttons shall be provided with visual indications to show when each call is registered. The visual indicators shall be extinguished when each call is answered. (1124A.3.3.1, 1116B.1.8, Fig 11A-7B & Fig 11B-40B).
 - d) Except for photo electric tube by-pass switches, emergency controls, including the emergency stop and alarm, shall be grouped in or adjacent to the bottom of the panel and shall be no lower than 2'-11" from the floor. For multiple controls only, one set must comply with these height requirements. (1124A.3.3.1, 1116B.1.8, Fig 11A-7B & Fig 11B-40B)
 - e) The centerline of the hall call buttons shall be no higher than 3'-6" of the floor. The buttons shall be a minimum of 3/4" in size and shall be raised 1/8" + 1/32" above the surrounding surface. Visual indication shall be provided to show each

- call registered and extinguished when answered. Objects adjacent to and below hall call buttons shall not project more than 4" from the wall. (1124A.4, 1116B.1.10, Fig 11A-7C & Fig 11B-40C).
- f) The emergency telephone handset shall be positioned no higher than 4' above the floor, and the handset cord shall be a minimum of 2'-5" in length. (1124A.3.4, 1116B.1.8)
6. Provide the following note(s) on the plans:
7. If the telephone system is located in a closed compartment, the compartment door hardware shall be of the lever type, conforming to the provisions of Section 1008.1.8, type of lock or latch. Emergency intercommunication shall not require voice communication. (1124A.3.4, 1116B.1.8)
8. A car position indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoist way. As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate, and an audible signal shall sound. (1116B.1.9)
9. Numerals shall be a minimum of 1/2" in height. (1116B.1.9).
10. An audible verbal announcement or signal shall sound to tell passengers that the car is stopping or passing a floor served by the elevator. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz. (1116B.1.9).
11. The minimum illumination at the car controls, threshold, and the landing when the car and landing doors are open shall not be less than 5 foot-candles. (1124A.5, 1116B.1.12).
12. Identification for the visually impaired shall be as follows: (1124A.3.3.2, 1116B.1.9, Fig 11A-7B & Fig 11B-40B).
- a) Passenger elevator car controls shall have a minimum dimension of 3/4" and shall be raised 1/8" + 1/32" above the surrounding surface.
- b) Control buttons shall be illuminated, shall have square shoulders, and shall be activated by a mechanical motion that is detectable.
- c) All control buttons shall be designated by a 5/8" minimum, Arabic numeral, standard alphabet character, or standard symbol immediately to the left of the control button.
- d) A Braille symbol shall be located immediately below the numeral, character, or symbol.
- e) A minimum clear space of 3/8" or other suitable means of separation shall be provided between rows of control buttons.
- f) The raised character shall be white on a black background.
- g) Controls and emergency equipment identified by raised symbols shall include, but not be limited to, "door open", "door close", "alarm bell", "emergency stop", and "telephone".
- h) The call button for the main entry floor shall be designated by a raised star at the left of the floor designation.
- i) A visual and audible signal shall be provided at each hoist way entrance indicating to the prospective passenger the car answering the call and its direction of travel as follows: (1124A.6, 1116B.1.13)
- i) The visual signal for each direction shall be a minimum of 2-1/2" high by 2-1/2" wide, and visible from the proximity of the hall call button.
- ii) The audible signal shall sound once for the "up" direction and twice for the "down" direction or of a configuration which distinguishes between up and down elevator travel.
- iii) The center line of the fixture shall be located a minimum of 6' in height from the lobby floor.
- iv) The use of in-car lanterns, located in or on the car door jambs, visible from the proximity of the hall call button and conforming to Sections. 1124A.6 or 1116B.1.13 will be acceptable. (1110A.6, 1116B.1.13).
- j) The use of arrow shapes is preferred for visible signals. (1124A.6, 1116B.1.13).

- k) Passenger elevator landing jambs on all elevator floors shall have the number of the floor on which the jamb is located designated by raised characters that are a minimum of 2" in height and conform to section 1117B.5.5 and grade 2 Braille that conforms to section 1117.5.6, located 60" on center' above the floor on the jamb panels on both sides of the door so that they are visible from within the elevator. On the grade level, a raised five-pointed star shall be placed to the left of the raised character. The outside diameter of the star shall be 2 inches. Braille shall be placed below the corresponding raised characters. (1124A.8, 1116B.1.14)
- l) Power-operated horizontally sliding car and hoist way doors opened and closed by automatic means shall be provided. (1116B.1.3)
- m) Doors closed by automatic means shall be provided with a door reopening device which will function to stop and reopen a car door and adjacent hoist way door in case the car door is obstructed while closing. This reopening device shall also be capable of sensing an object or person in the path of the closing door without requiring contact for activation at a normal 5" and 29" above the floor. Door reopening devices shall remain effective for a period of not less than 20 seconds. After such an interval the doors may close in accordance with the requirements of ANSI 17.1-86 of the American Society of Mechanical Engineers. (ASME) document ASME 17.1-1990. (1124A.9, 1116B.1.5, Fig 11A-7B & Fig. 11B-40B).
- n) The minimum acceptable time from notification that a car is answering a call (lantern and audible signal) until the doors of the car start to close shall be calculated in accordance with Sections 1124A.7.1 and 1116B.1.6. (1124A.7.1, 1116B.1.6. Fig 11A-7C & Fig 11B-40C).
- o) For cars with in-car lanterns, the total time, T, as calculated in accordance with Section 1116B.1.6, begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. (1124A.7.1, 1116B.1.6, Fig. 11A-7C & Fig. 11B-40C).
- p) The minimum acceptable time for doors to remain fully open shall not be less than 5 seconds. (1124A.7.2, 1116B.1.7).
- q) The elevator shall be automatic and be provided with a self-leveling feature that will automatically bring the car to the floor landings with a tolerance of + 1/2" under normal loading and unloading conditions. This self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct the over-travel or under-travel. The car shall also be maintained approximately level with the landing irrespective of load. The clearance between the car platform sill and the edge of the hoist way landing shall be no greater than 1-1/4". (1124A.10, 1116B.1.2)

B. AREAS OF REFUGE.

NOTE: Area of refuge is an accessible space which is protected from fire and smoke and which facilitates a delay in egress.

NOTE: In alterations of existing buildings, Areas of refuge are not required. (1007.1, Exc.2)

1. Provide at least one accessible means of egress for accessible spaces complying with section 1007. (1007.1)
2. Where more than one means of egress is required by sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number required by sections 1015.1 or 1019.1. All applicable provisions of chapters 11A or 11B shall also be met since accessibility is required for this establishment or structure. (1007.1).
3. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components. (1007.2).
 - a) Accessible routes complying with chapter 11A, sections 1110A.1 and 1120A, or chapter 11B, section 1114B.1.2, as applicable.
 - b) Stairways within vertical exit enclosure complying with sections 1007.3, 1020 and chapter 11A, sections 1123A, or chapter 11B, section 1133B.4, as applicable.

- c) Exterior exit stairways complying with sections 1007.3, 1023 and chapter 11A, section 1115 A or chapter 11B, section 1133B.4, as applicable.
 - d) Elevators complying with sections 1007.4, and chapter 11A, section 1124A, or chapter 11B, section 1116B.1, as applicable.
 - e) Platform lifts complying with section 1007.5, and chapter 11A, section 1124A, or chapter 11B, section 1116B.2 or section 1116B.3, as applicable.
 - f) Horizontal exits complying with section 1022.
 - g) Ramps complying with sections 1010 and chapter 11A, sections 1114A and 1122A, or chapter 11B, section 1133B.5, as applicable.
 - h) Areas of refuge complying with section 1007.6
4. In buildings where a required accessible floor is four or more stories above or below a level of exit discharge, at least one required accessible means of egress shall be an elevator complying with section 1007.4. (1007.2.1)
5. When exit stairways serve as a part of the required accessible means of egress, they shall have a clear width of 48 inches minimum between handrails; furthermore, exit stairways must incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with section 1007.6 or a horizontal exit. In addition, exit stairways shall comply with sections 1115A and 1123A, or section 1133B.4, as applicable. (1007.3)
6. Elevators being considered as an accessible means of egress shall comply with emergency operation and signaling device requirements of section 2.27 of ASME A17.1. Standby power shall be provided in accordance with section 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with section 1007.6 or a horizontal exit. (1007.4).
7. Platform (wheelchair) lifts shall not serve as part of an accessible means of egress (except where allowed as part of a required accessible route in section 1121A or 1116B.2.1 through 1116B.2.1 through 1116B.2.4, as applicable). (1007.5)
- a) Standby power shall be provided in accordance with section 2702.2.6 for platform lifts permitted to serve as part of means of egress.
 - b) Show conformance with section 1116B.3 for additional accessible means of egress requirements at platform or special access lifts.
 - c) Platform lifts on an accessible means of egress shall not be installed in a fully enclosed hoist way.
8. Every required area of refuge shall be accessible from the space it serves by an accessible means of egress, and must comply with the following: (1007.6)
- a) The maximum travel distance from any accessible space to an area of refuge shall not exceed the travel distance permitted for the occupancy in accordance with section 1016.1.
 - b) Every required area of refuge shall have direct access to an enclosed stairway complying with sections 1007.3, and 1020.1 or an elevator complying with section 1007.4.
 - c) The proposed elevator lobby is being used as an area of refuge, the elevator shaft and lobby shall comply with section 1020.1.7 for smoke proof enclosures, unless the elevator is in an area of refuge formed by a horizontal exit or smoke barrier.
 - d) Areas of refuge shall comply with the requirements of the 2008 Los Angeles Building Code, and shall adjoin an accessible route of travel complying with section 1114B.1.2.
 - e) Each area of refuge shall be sized to accommodate two wheel chair spaces that are not less than 30 inches by 48 inches. (1007.6.1)
 - f) The total number of wheelchair spaces within the area of refuge shall not be less than one for every 200 persons of calculated occupant load served by the area of refuge. The total minimum number of wheelchair spaces within an area of refuge may not be less than two, regardless of the occupant load being served by the area of refuge. (1007.6.1)

- g) Wheel chair spaces within the area of refuge may not reduce the required means of egress width. (1007.6.1)
 - h) Access to any of the required wheelchair spaces in an area of refuge shall not be obstructed by more than one adjoining wheelchair space. (1007.6.1)
9. Each area of refuge shall be separated from the remainder of the story by a smoke barrier complying with section 709 of the 2008 Los Angeles Building Code, or a horizontal exit complying with section 1022. Each area of refuge shall be designed to minimize the intrusion of smoke. (Exception applies to areas of refuge located within a vertical exit enclosure). (1007.6.2)
10. Areas of refuge shall be provided with a two-way communication system between the area of refuge and a central control point. Location of central control point shall be approved by the Fire Department. (1007.6.3)
11. The central control point must be constantly attended, or area of refuge must have controlled access to a public telephone system. The two-way communication system shall include both audible and visible signals. (1007.6.3)
12. The required visible signals shall be provided between the area of refuge and the central control point. As such, a button complying with section 1117B.6 in the area of refuge shall activate both a light in the area of refuge indicating that rescue has been requested and a light at the central point indicating that rescue is being requested. A button at the central control point shall activate both a light at the central control point and a light in the area of refuge indicating that the request has been received. (1007.6.3.1)
13. In areas of refuge that have a two-way emergency communication system, instructions on the use of the area under emergency conditions shall be posted adjoining the communication system. The instructions shall include all of the following and shall comply with section 1117.B.5.1, item 2. (1007.6.4)
- a) Directions to find other means of egress.
 - b) Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
 - c) Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
 - d) Directions for use of the emergency communications system.
14. Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign complying with section 1117B.5.1, item 2, stating: "AREA OF REFUGE", and including the international symbol of accessibility. Provide illumination for the area of refuge sign when exit sign illumination for the door leading to the area of refuge is required by section 1011.2. Additionally, provide tactile signage complying with section 1117B.5.1. It shall be located at each door to an area of refuge. (1007.6.5)
15. At exit and elevators serving a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress. Such signs shall comply with chapter 11A or chapter 11B, section 1117B.5.1, items 2 and 3, as applicable. (1007.7)
16. The exterior area for assisted rescue must be open to the outside air and meet the requirements of section 1007.6.1; furthermore, separation walls must comply with the requirements of section 704 for exterior walls and the provisions below: (1007.8)
- a) Where walls or openings are between the area for assisted rescue and the interior of the building, the building exterior walls within 10 feet horizontally of a non-rated wall or unprotected openings shall have fire-resistance rating of not less than 1 hour. (1007.8)
 - b) Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet above the floor level of the area for assisted rescue or to a roof line, whichever is lower. (1007.8)
 - c) The exterior area for assisted rescue shall be at least 50 percent open, and the open area above

the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases. (1007.8.1)

- d) Exterior exit stairways that are part of the means of egress for the exterior area for assisted rescue shall provide a clear width of 48 inches between handrails. (Exception applies when building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1 or 903.3.1.2). (1007.8.2)
 - e) Exterior areas for assisted rescue shall have identification as required for area of refuge that complies with section 1007.6.5. (1007.8.3)
17. If emergency warning systems are required, (by any provision in section 1007, chapter 11A or chapter 11B), they shall activate a means of warning the hearing impaired. Emergency warning systems as part of the fire-alarm system shall be designed and installed in accordance with NFPA 72 as amended in chapter 35. (1007.9)
19. In new construction, the minimum size of landings specified in this section shall be 60 inches by 60 inches (1524 mm by 1524 mm). Other dimensions may be substituted where it can be demonstrated that a person using a wheelchair measuring 30 inches by 48 inches (762 mm by 1219 mm) can enter and operate the lift safely. (1116B.2.4.1)

C. WHEELCHAIR LIFTS

Special access (wheelchair) lifts may be provided between levels in lieu of passenger elevators when the vertical distance between landings, as well as the structural design and safeguards, are as allowed by ASME A18.1, Safety Standard for Platform Lifts and Stairway Chair Lifts; the State of California, Division of the State Architect- Access Compliance; the Department of Industrial Relations, Division of Occupational Safety and Health and any applicable safety regulations of other administrative authorities having jurisdiction.

When lifts are provided, they shall be designed and constructed to facilitate unassisted entry, operation and exit from the lift and shall comply with the restrictions and enhancements of this section in conjunction with Title 8 of the California Code of Regulations.

18. Lifts must be a part of the accessible route only for the following conditions:
- a) To provide an accessible route to a performing area in an assembly occupancy, or to a speaking area or similar space (such as dais or “head table”) in an assembly or group B occupancy. (1116B.2.1)
- b) To comply with the wheelchair viewing position line-of-sight and dispersion requirements of Section 1104B.3.5. (1116B.2.2)
 - c) To provide access to incidental occupiable spaces and rooms which are not open to the general public and which house no more than five persons, including, but not limited to, equipment control rooms and projection booths. (1116B.2.3)
 - d) To provide access where existing site constraints or other constraints make use of a ramp or an elevator infeasible. (1116B.2.4)
20. The level and clear floor areas or landings as specified in this section shall be part of “ path of travel” requirements. The exceptions outlined in this section can not be used or applied to your project. If you wish to further discuss this comment, please contact your plan check examiner. (1116B.2.4.2)
21. Special access (wheelchair) lifts, when provided as a component in an accessible means of egress, shall conform to the requirements of Section 1116B.3, as specified below: (1116B.3)
- a) To ensure continued operation in case of primary power loss, special access (wheelchair) lifts shall be provided with standby power or with self-rechargeable battery power that provides sufficient power to operate all platform lift functions for a minimum of five upward and downward trips. (1116B.3.1)
 - b) Special access (wheelchair) lifts, when provided per Section 1116B.2.2, are permitted to be a component of an accessible means of egress when the area served by the special access lift does not serve more than four wheelchair viewing positions and where any one of the following condition exist. (1116B.3.2)
 - i) The building has a supervised automatic sprinkler system.

