CHAPTER 85

ALTERNATIVE BUILDING STANDARDS FOR JOINT LIVING AND WORK QUARTERS

SECTION 8501 GENERAL

8501.1 Purpose. The purpose of this chapter is to provide alternative building standards for the conversion of Existing Buildings, or portions thereof, from commercial or industrial uses to Joint Living and Work Quarters. The alternative standards are designed to provide a reasonable level of safety to the building occupants, and are in conformance with the provisions of *California Health and Safety Code Section* 17958.11.

8501.2 Application. Nothing in this chapter shall be construed to allow the reduction of the seismic or fire and life safety elements of an Existing Building, where such elements provide a greater level of protection than the minimum requirements established by this chapter.

The alternative building standards of this chapter may be applied when the commercial or industrial uses in an Existing Building are converted (change of use or occupancy) to Joint Living and Work Quarters provided:

A. **General Fire and Life Safety Requirements for All Existing Buildings.** All Existing Buildings that are converted to Joint Living and Work Quarters shall comply or be made to comply with all of the building area, height, number of stories, type of construction, occupancy, means of egress and other fire and life safety requirements of this Code for a new building of the same use or occupancy, except as provided in this chapter.

B. **Structural Requirements for all Existing Buildings.** For all existing buildings, the change of occupancy or use of any portion of an Existing Building to a Joint Living and Work Quarters may be permitted provided the entire building complies or is made to comply with all the structural requirements in Section 8502.12 of this Code.

8501.3 Definition. For the purpose of this Chapter, certain terms are defined as follows:

ARTIST-IN-RESIDENCE. An artist or artists using a space within a building for combined living and artistic working purposes.

EXISTING BUILDING. A building for which a building permit was issued prior to April 1, 1994.

FEMA 352, "RECOMMENDED POST-EARTHQUAKE EVALUATION AND REPAIR CRITERIA FOR WELDED STEEL MOMENT-FRAME BUILDINGS." The June 2000 edition prepared by the partnership of the Structural Engineers Association of California, the Applied Technology Council, and the California Universities for Research in Earthquake Engineering (SAC) Joint Venture for the Federal Emergency Management Agency, Washington, DC.

JOINT LIVING AND WORK QUARTERS. A residential occupancy of one or more rooms or floors used as a dwelling unit with adequate work space reserved for, and regularly used by, one or more persons residing there pursuant to Health and Safety Code (H&S) Section 17958.11(a).

QUALIFIED HISTORICAL BUILDING. Any building deemed of importance to the history, architecture or culture of any area by an appropriate local, state or federal governmental jurisdiction. This shall include designated buildings on, or determined eligible for, official national, state or local historical registers or official inventories, such as the National Register of Historic Places, California Register of Historical Resources, State Historical Landmarks, State Points of Historical Interest, and officially adopted city or county registers, inventories, or surveys of historical or architecturally significant sites, places or landmarks.

STATE HISTORICAL BUILDING CODE. A set of code standards known as Part 8, *Title 24 of the California Code of Regulations and published as the California Historical Building Code.*

8501.4 General. A Joint Living and Work Quarters shall not be used for public sales purposes or for instructional classes when either is inconsistent with residential use. No hazardous activities such as, but not limited to, welding, open flame, or storage of flammable liquids shall occur in the Joint Living and Work Quarters.

Exception: In buildings three stories or less in height, activities such as welding, open flame, or minimal storage of flammable liquids may be allowed provided written approval is obtained from the Fire Department.

All buildings containing a Joint Living and Work Quarters shall have a sign posted in a conspicuous location at each entrance to the building. The sign shall be constructed of a durable weatherproof material and shall meet the requirements of Los Angeles Fire Department Standard No. 58. In the lower white diamond of the sign, a red colored letter "A" shall be placed so as to meet the size and letter thickness specified in the Los Angeles Fire Department Standard No. 58.

If any portion of an Existing Building is converted to a Joint Living and Work Quarters, then the entire building, including any portion not being converted, shall comply with all code requirements for a new building of the same use and type of construction except as provided in this chapter.

SECTION 8502
ALTERNATIVE STANDARDS

8502.1 Use or occupancy. When applying this chapter, Joint Living and Work Quarters shall be classified as Group R-2 occupancy and comply with all Group R-2 occupancy requirements of this Code, except as provided in this Chapter.

8502.1.1 Ceiling height. Existing ceiling height within a Joint Living and Work Quarters may be maintained, provided the ceiling height is not less than 7 feet (2133.6 mm), except that the ceiling height above a mezzanine may be 6 feet 6 inches (2011.68 mm) to any structural projections from the ceiling.

8502.1.2 Emergency escape. Every room below the fourth story where occupants sleep in Joint Living and Work Quarters shall be provided with an emergency escape or rescue window or door, which complies with the requirements of CBC Section 1030.

Exception: The emergency escape or rescue window or door may open directly into an existing court, provided:

A. The court is accessible to the Fire Department.

B. The court is provided with a minimum of one direct exit to a corridor, exit stairway, exit passageway, exterior exit stairway, exterior exit balcony, or exterior exit ramp, or existing fire escape. The existing fire escape shall be structurally sound and shall not serve as an exit for an assembly use.

C. All openings in walls surrounding the court shall be protected as required by CBC Section 705.3 or be provided with an approved water curtain.

8502.2 Exterior wall and exterior opening protection. Existing construction of the exterior walls may be maintained without complying with current exterior fire resistive wall construction.

Existing unprotected exterior openings, which are not allowed or are required to be protected due to their proximity to a property line, may be maintained without complying with the requirements of CBC Section 705.8 provided the openings are protected with an approved water curtain. Openings in the exterior walls that are not allowed by CBC Section 705.8 due to their proximity to a property line, may not be used to satisfy other code requirements, such as light and ventilation, smoke control or emergency escape.

8502.3 Smoke control system. Existing high-rise buildings shall provide a smoke control system in all portions of the building including basements. The smoke control system shall meet the requirements of CBC Section 909 or all the requirements of this section.

Exception: The following areas are exempt:

A. New or existing rooms less than 50 square feet (4.64 m^2) in area.

B. New or existing rooms located at or above grade level provided the room has a direct exit to the exterior of the building.

C. Floor levels with operable windows or breakable tempered glass panels in the exterior walls. The area of the operable windows or breakable tempered glass panels shall be a minimum of 20 square feet (1.86 m^2) in area. The operable windows or breakable tempered glass panels shall be located in the exterior walls around the perimeter of the floor no more than 50 linear feet (15.24 m).

8502.3.1 Capacity. Smoke-control systems shall provide at least six air changes per hour for all areas within the building including basements, provide exhaust to the exterior of the building, and provide an adequate makeup air supply that is uniformly distributed.

8502.3.2 Smoke dampers. If a smoke-control system serves more than one floor, then smoke dampers shall be installed in the main exhaust air ducts and the main supply air ducts serving each floor and shall comply with the activation requirements of CBC Section 717.3.3. The smoke dampers shall be installed in a manner that will prevent the movement of smoke from one floor to another floor when the dampers are closed. The vertical risers of the main exhaust air duct shall be installed in metal ducts complying with the requirements for product-conveying ducts in Chapters 5 and 6 of the Mechanical Code.

In the firefighter's control panel, all smoke dampers within the same smoke-control zone shall be actuated by one On-Auto-Off switch in accordance with CBC Section 909.16.3, except that an alternate actuation method may be allowed when approved by both the Fire Department and the Department.

Combination fire and smoke dampers shall be listed to conform to UL 555 and UL 555S and smoke dampers shall be listed to conform to UL 555S and they shall be accessible for inspection, service and repair. Pneumatic tubing to operate these dampers shall be of noncombustible materials.

8502.3.3 Firefighter's control panel. The firefighter's control panel shall comply with all the requirements of CBC Section, 909.16, except that graphically depicted representation of the building may be omitted when accepted by the Fire Department. The firefighter's control panel shall monitor and be capable of overriding the Mechanical Test Panel. The Mechanical Test Panel is a separate control panel that provides controls and displays the status of the ventilation fans, dampers, and other smoke control devices as required by CBC Section 909 and shall be located in the same room as the Firefighter's Control Panel.

8502.3.4 Performance test. Upon completion and before final approval of the installation of a smoke-control system required by this Code, a smoke control performance test, complying with the testing procedures of CBC Section 909.18, shall be used to verify the rate of air-flow and proper operation as specified in this chapter. Tests shall be conducted in the presence of both the Fire Department and the Department.

Prior to conducting the required smoke control performance test, a preliminary performance report shall be sub-

mitted to the Department by a person, holding a Certificate of Qualification as required by CBC Section 909.18, verifying that the performance criteria of the Department have been met.

8502.3.5 Additional smoke control requirements. Existing air conditioning and ventilation systems may be used as part of the smoke-control system. Existing return air plenum and approved fiberglass air ducts may be used as part of the smoke-control system. A smoke exhaust system shall be designed in a manner that will prevent smoke from going from one room to another, except when two or more rooms are connected together by means of a permanent unobstructed opening at least 20 square feet with a minimum three feet dimension, then the rooms shall be considered as one room for the purpose of designing the smoke-control system.

8502.4 Fire-extinguishing system. Fire sprinkler system, standpipe system, and water storage tank shall be provided as required for a new building of the same height, type of construction and occupancy, except that a high-rise building for which a building permit was issued prior to July 1, 1974 may comply with the fire safety standards of Section 8604 of this Code.

The fire sprinkler system, if required, shall be installed in accordance with NFPA 13 as adopted by the Plumbing Code.

8502.5 Fire alarm system. If a fire alarm system is required by CBC Section 907.2.9 or 403.4.2 for a new building of the same type of construction and occupancy, or installed at the option of the owner, then the entire building shall have fire alarm systems that are in full compliance with CBC Section 907.2.9. In a high-rise building, the fire alarm systems shall be supplied by a generator used as an emergency system in accordance with CBC Section 403.4.8. For all other buildings, an alternate source of power may be used provided it is approved by both the Fire Department and the Department.

High-rise buildings shall be provided with a central control station (fire command center) that complies with all the requirements of CBC Section 403.4.6 and LAMC Section 57.508, including the minimum room dimensions of 10 feet (3048 mm).

8502.6 Fire pumps and generator (combustion engines and gas turbines) rooms. In high-rise buildings, diesel or/and electric fire pumps shall be provided as required for a new building, except that a high-rise building for which a building permit was issued prior to July 1, 1974 may comply with Section 8604.6.5.

Fire pump and generator (combustion engines and gas turbines) rooms shall be separated with a minimum one hour occupancy separation from adjoining rooms and from each other.

Combustion air and room ventilation air shall be required by the Building and Mechanical Codes, except that the room ventilation exhaust may be considered as environmental air.

In rooms containing diesel fire pumps and generators, a flue venting system shall be provided which complies with the requirements of Chapter 8 of the *Los Angeles Mechanical Code*, except that:

A. Clearance from the flue venting system to any combustible material may be reduced to 6 inches (152.4 mm) if the vent is wrapped with an approved insulation equivalent to two hour fire-rated assembly for high-rise buildings and one hour fire-rated assembly for all other types of buildings, and

B. The flue venting system may terminate at the exterior wall when installed in compliance with the exhaust system termination in NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines.*

C. The flue venting system may terminate under the roof overhang, provided the exhaust outlet is located lower than the overhang by a distance equal to the projection of the overhang.

8502.7 Means of egress. The portion of the building converted to a Joint Living and Work Quarters shall be provided with means of egress as required by Chapter 10 of this Code for a new building, except that the alternative requirements of Sections 8502.7.1 through 8502.7.5 may be used in lieu of the requirements in Chapter 10 of this Code. An existing fire escape which is in good operating condition, may be used as a second means of egress, provided the fire escape does not serve as an exit for an assembly occupancy.

8502.7.1 Corridors. All public corridors serving the occupants of the Joint Living and Work Quarters shall comply with all the requirements of CBC Section 1020, except as follows:

1. Existing nonconforming fire-resistive walls and ceiling of a corridor constructed of wood lath and plaster, which are in good condition, may be acceptable as equivalent to the required one-hour fire-resistive construction.
2. Existing doors between the corridor and the Joint Living and Work Quarters that are part of the historic fabric of a Qualified Historical Building may be allowed to remain, provided approved smoke gaskets and self-closing and latching devices to prevent smoke penetration are installed on the door, or the existing door shall be replaced with a door conforming to the requirements of CBC Section 716.2.2.1.

8502.7.2 Dead-end corridors. An existing dead-end corridor which exceeds 20 feet (6.09 m) in length and serves the occupants of a Joint Living and Work Quarters may remain, provided the dead-end corridor complies with all of the following:

A. The dead-end corridor shall be constructed as described above in Section 8502.7.1 for the full length of the dead-end corridor.

B. The dead-end corridor shall not exceed 40 feet (12.192 m) in length.

C. A door with a magnetic hold-open device shall be placed across the corridor to create a vestibule located furthest from the open end of the dead-end

corridor. The placement of the door shall be located not more than 20 feet (6.09 m) from the open end of the dead-end corridor and the occupant load of the vestibule shall be less than 10 occupants.

8502.7.3 Means of egress illumination and exit signs. Means of egress illumination, exit signs, floor-level exit signs and exit path markings serving a Joint Living and Work Quarters shall comply with CBC Sections 1013, and 1008.

8502.7.4 Exit stairway. All exit stairways shall be enclosed and shall comply with all the requirements of CBC Section 1023. Existing exit stairway enclosures may be allowed to pass through the first-floor elevator lobby, provided an approved fire-rated smoke-sealed door is placed in front of the elevator door on the first floor or there is another exit stairway enclosure leading directly to the public way.

8502.7.5 Pressurization of exit stairway enclosure. If pressurization of exit stairway enclosure is required, then a mechanical ventilation system shall be provided. The mechanical ventilation system shall provide a uniform air velocity of not less than 50 feet (15.24 m) per minute while maintaining a positive pressure (not exceeding 25 pounds force on an interior door) relative to the adjacent areas and discharging this air to the outside of the building.

The mechanical ventilation system shall be activated simultaneously with the fire sprinkler system or the smoke detector system. The mechanical ventilation system shall be supplied with primary and secondary sources of power. The primary power shall be provided by the power system supplied by the public utilities. The secondary power shall be from an approved standby source complying with the Electrical Code.

8502.8 Accessibility (disabled access). The conversion of an Existing Building or portion thereof to a Joint Living and Work Quarters shall be in compliance with the accessibility standards of CBC Chapters 11A and/or 11B, whichever is applicable.

8502.9 Interior environment. All habitable rooms in the Joint Living and Work Quarters shall be provided with natural light and ventilation by means of exterior glazed openings.

8502.9.1 Light. Windows or skylights with a total area not less than one fifteenth of the floor area of the room may be used to satisfy the natural light requirements. Kitchens may be provided with artificial light. In lieu of required exterior glazed openings, artificial light may be provided in accordance with CBC Section 1204.3.

8502.9.2 Ventilation. Habitable rooms shall be provided with natural ventilation by means of openable exterior openings with an area of not less than one thirtieth of the floor area of the room. In lieu of required openable exterior openings, a mechanical ventilation system in accordance with the California Mechanical Code may be provided.

Public corridors or hallways shall be provided with an adequate ventilation system when all the habitable rooms in the Joint Living and Work Quarters on the floor do not have openable exterior openings that comply with the requirements of CBC Section 1202.1.

An adequate ventilation system for the public corridors shall mean either an operable exterior window or a permanent exterior opening having a minimum area of 5 square feet (.046 m^2), or a mechanical ventilation system that complies with the requirements of Section 8502.14 and CBC Section 1203.1.

8502.9.3 Light and ventilation court. A window may open into an existing court for light and ventilation, provided, the court has adequate access at the bottom of the court for cleaning purposes. Every court more than two stories in height shall be provided with a horizontal air intake at the bottom of the court from the court to the exterior of the building, unless the court opens to a yard or public way.

The horizontal air intake shall not be less than 10 square feet (.929 m^2) in cross-sectional area and shall lead to the exterior of the building. The construction of the horizontal air intake shall be as required for the court walls of the building, but in no case shall be less than one-hour fire-resistive construction. A mechanical ventilation system complying with the Mechanical Code may vent the court in lieu of the horizontal air intake.

Exception: When approved by the Superintendent of Building, an existing court may be deemed adequate for the purpose of providing light and ventilation based upon the area and height of the court.

8502.10 Sound transmission insulation. Existing construction may remain without complying with the sound transmission insulation requirements for any newly created Joint Living and Work Quarters. All new construction shall comply with sound transmission requirements of CBC Section 1206.

8502.11 Energy conservation. All new HVAC and new lighting systems shall comply with the current energy conservation requirements contained in Part 6 of Title 24 of the California Code of Regulations (*California Energy Code*). An Existing Building with a Joint Living and Work Quarters need not comply with the Building Envelope requirements of the *California Energy Code*, if the Building Envelope is not altered in anyway due to compliance with other code requirements.

8502.12 Structural design requirements (seismic provision). The conversion of any portion of an Existing Building to a Joint Living and Work Quarters shall be analyzed for 75 percent of the Design Earthquake Ground motion, as defined in CBC Section 1613.2 and as specified in CBC Section 1613.3, but in no event shall there be a reduction in the capacity of the seismic force resisting system where that system provides a greater level of protection than the minimum requirements established by this chapter.

Exception: Unreinforced Masonry Bearing Wall Buildings (URM). The conversion of any portion of an existing URM building shall comply with of Appendix Chapter A1 of Part 10 of the California Code of Regulations Title 24 (*California Existing Building Code*).

Performance-based engineering analysis and design procedures may be used to evaluate the existing structure and the design of strengthening elements when approved by the Superintendent of Building. All structural elements of the building shall be strengthened to meet the minimum design analysis as specified in Sections 8502.12.1 through 8502.12.3 or new structural elements shall be added when required. All new structural elements shall meet current detailing requirements of CBC Section 1604.

Other types of buildings not mentioned in this section, such as Steel Frame Buildings with Semi-Rigid Beam-Column Connections, Dual Systems with Steel Moment Frames and Concrete Shear Walls, or Steel Frame Buildings with Steel Bracing, shall comply with the standards developed by the Department.

8502.12.1 Reinforced concrete buildings and concrete frame buildings with and without masonry infill walls. Reinforced concrete buildings or concrete frame buildings with or without masonry infill walls and that are within the scope of Section 9502, shall comply with all the provisions of Chapter 95 of this Code.

8502.12.2 Steel frame buildings with masonry infill walls. Steel frame buildings with masonry infill walls shall be made to comply with the standards as developed by the Department and all the relevant provisions of the *Los Angeles Existing Building Code*.

8502.12.3 Welded steel moment-frame (WSMF) buildings. All buildings constructed prior to March 7, 1995 utilizing WSMF as their primary lateral force resisting system shall be evaluated by the standards developed by the Department.

All existing WSMF buildings, which have experienced greater than 0.25g-peak ground acceleration and which were constructed prior to March 7, 1995, shall be evaluated using procedures and repair criteria of FEMA 352, "Recommended Post-earthquake Evaluation and Repair Criteria for Welded Steel Moment-Frame Buildings." An engineering report shall be submitted to the Department. The engineering report shall either substantiate that the existing steel moment framed connections are in good condition, or recommend repair procedures for the welded steel moment-frame connections that are cracked or otherwise compromised.

8502.13 Electrical systems. All electrical systems and installations for a Joint Living and Work Quarters and other alterations in adjoining areas shall be designed in accordance with the Electrical Code except that the general lighting in the Joint Living and Work Quarters shall be installed based on the unit load of 4.0 volt-amperes per square foot. The load calculation and wiring installation in a Joint Living and Work Quarters shall be as required for the residential occupancy.

8502.14 Mechanical systems. All mechanical systems shall comply with the requirements of the Mechanical Code.

8502.15 Elevators. Existing elevators need not comply with the requirements of Chapter 30 of the LABC, except where required to comply with the State Elevator Safety Order of Subchapter 6, of Chapter 4, Division 1 of Title 8 of the California Code of Regulations.

8502.16 Historical building provisions. Qualified Historical Buildings may use the State Historical Building Code.